

## **Let's Leave the Plastic Age behind us!**

Recently, a small group of citizens spent their Saturday morning working together to clear up two truckloads worth of plastic debris from a Mesket Field property in Hoopa. These volunteers were concerned that future tenants, lacking the means (or will) to dispose of the trash at the transfer station, would resort to burning it.



*One of two trucks loaded down with plastic trash saved from being burned. Neighbors worked together in gathering it for transport to Hoopa's transfer station.*

Plastic is a remarkable material. It is light-weight, strong, durable, corrosion-resistant and a good electrical- and thermal insulator. And it is everywhere. The annual production of plastic, which is highly energy-intensive, now tops 260 million tons. Virtually anything used to package food uses plastic, even if it looks like paper. Most clothing, unless it is 100% cotton or wool, includes a form of plastic. Twenty percent of a car's weight is plastic. Most of the

construction materials in a mobile home include plastic, from the paneling to flooring.

### Health Effects of Dioxin Exposure

- Liver disorders.
- Many forms of cancer.
- Neurological disorders (attention deficit, impaired decision-making)
- Immune system deficiencies.
- Birth defects, such as cleft palate and others.
- Reproductive system disorders. (Dioxin has been associated with endometriosis, ovarian dysfunction, reduced sperm count, and decreased testis size. Frogs exposed to dioxin develop both male and female parts at the same time, while male fish begin laying eggs.)
- Interferes with the endocrine gland system which secretes hormones regulating many organs, for instance influencing sexual development and fertility.
- Dioxin can be transmitted from mother to child during pregnancy and nursing.

Plastic was first invented in 1862, at a time when the Hupa people were fighting an all-out war for their home. Today, the Hoopa Valley is once again ‘under attack’, but this time by plastic. When anyone in our community burns plastic, extremely toxic and resilient chemicals – called dioxins – are released into the air. Dioxins formed an active ingredient in the deadly Agent Orange used during the Vietnam War which devastated the lives of many Southeast Asian people and American veterans. Organisms breathing air contaminated with burning plastic can also suffer very serious health problems, in addition to just the primary effects of headache, coughing and shortness of breath, asthma and lung disease (see sidebar). Dioxin is a teratogenic and mutagenic chemical, meaning that it can cause birth defects and genetic damage. Some of the effects of exposure have been documented in the children and even the grandchildren of those exposed.

Hoopa’s dumping charges are the lowest in the county. “In our mind there’s really no reason why anybody could not get their garbage to the dump”, tribal EPA officer Curtis Miller told the *TRT*. Working together as a community to get plastic yard trash to landfills instead of burning it is just the beginning,

however. Today, plastic makes up about 10% of solid trash, much of it in the form of 'disposable' packaging, which is becoming banned in more and more countries and communities all over our planet. Because most plastic will take over 10 human generations to fully degrade, it is accumulating in environments on land, in the open ocean, in the deep sea, and on shorelines of the remotest islands. Future archaeologists will probably agree that plastic accumulation represents one of the most pervasive and long-lasting changes to the surface of our planet. Tiny plastic particles, ground fine through years of abrasion, are even making their way up food chains and *into* human bodies! The time has come to start carefully planning and acting to defeat the threat of plastic in our Valley, gardens and homes.

**Send your science questions to:  
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