

Death by Chemical

Forestry Herbicides



Along with the increase of clear-cutting in California's forests is the [increase of herbicide](#) use. Most citizens know very little about the timber industries use of herbicides, which are [defoliating California's forests](#). Combined with clear-cutting, herbicides represent a one-two punch to our future. After land has been clear-cut, a massive campaign of herbicide spraying ensues. Using airplanes and helicopters, the chemicals soak the land and kill the native vegetation. Frequently, a napalm type mixture is then dropped and set afire. What remains of a diverse forest filled with abundant wildlife resembles a barren war zone or moonscape.

Known as chemical defoliants, herbicides have an insidious history from DDT to Agent Orange, having killed countless wildlife and humans alike. Even though tens of thousands of US soldiers suffer from suspected Agent Orange poisoning from the Vietnam war, almost no public knowledge exists about the millions of US forest acres that were subjected to the same Agent Orange horror. Though Agent Orange is no longer used against the forest life, newer and even more toxic chemicals are in use today.

Herbicides are also used to control hundreds of thousands of California acres of tree plantations where amazing forests once stood. The uniform tree farms are managed through repeated herbicide use to minimize all competing vegetation. The applications can re-occur for a decade or more. And the heavy use of herbicides is not limited to private lands. [California's Department of Forestry](#) dumps more chemicals into our environment than in any other national forest lands of this nation. More startling is the cavalier attitude of our legislators by not having any long term monitoring of this policies affects by a public agency. The chief regulating agency, the California Department of Pesticide Regulation reports that in 2003 forestry pesticide were significantly higher than the decades average. As of this narrative the 2004 and 05 report are unavailable. But with an increase of clear-cutting and logging in general it is prudent to anticipate higher usages of herbicides than ever before.



[The Forest Service uses herbicides](#) to kill native hardwoods and montane chaparral species, competition to conifer tree plantations. The agencies rhetoric includes claims that herbicides are essential for fire safety.

The need for herbicides to manage plantations and fight wildfires is disputed widely by the public. In a typically bureaucratic way, state and federal agencies pour significant dollars into both saving Oaks, like Sudden Oak Death research, and killing oaks through relentless spraying to subsidize the timber industry.

Most California conservation organizations are opposed to the use of herbicides on native vegetation and wildlife. And just like clear-cutting, it is likely that most Californians do not accept the Forest Services claims that timber production is so urgent that aerial and ground-based herbicide application is necessary at all.

Probably the main concern that comes to mind is the contamination of our water shed. The timber industry and legislators who support clearcutting maintain herbicides are isolated to the harvest areas, despite evidence that pesticide particulates can drift up to 50 miles from their intended drop.

Herbicides are used throughout the clear-cutting process. Glyphosate, the main chemical in Round Up, is often sprayed on land as part of the site preparation in order to kill off underbrush. After all trees and other plant life have been removed, the site, is again saturated with chemicals. Hexazinone, a long-lasting and water-soluble chemical, is commonly used after harvest to discourage any competition to the newly-planted seedlings. Chemicals such as atrazine and 2,4D are also used. As the young trees in clear-cut plantations grow, timber operators often come back for years after harvest to spray additional times to assure that only the plantation trees are able to grow. Species such as black oaks which are still alive at the end of harvesting often subsequently die as herbicides continue to take their toll.

In 2001, Red Emmerson and his Sierra Pacific Industries, used herbicides that contained the following active chemicals: atrazine, imazapyr, triclopyr, glyphosate, clopyralid, simazine, and hexazinone. Only four of those (glyphosate, hexazinone, triclopyr, and clopyralid) are approved for use on neighboring national forest lands. Within just two counties (Tuolumne County and Calaveras County), SPI applied herbicides across 6,930 acres during 2001. In Tuolumne County, SPI sprayed 1,505 gallons of herbicide and applied 4,712 pounds of herbicide. In Calaveras, SPI sprayed 1,302 gallons and applied 427 pounds of herbicide. *(Source-Central Sierra Environmental Resource Center)*

Ironically, in 2001, the California Department of Pesticide Regulation released a report showing that hexazinone could be detected up to two years after spraying in buckbrush shoots that had taken in the chemical. Glyphosate lasted up to 65 weeks in bracken fern roots, and triclopyr lasted up to 80 weeks in buckbrush shoots. What this and other research shows is that the 2,800 gallons of sprayed chemicals and over 5,000 pounds of non-fluid herbicides not only killed off vegetation at the time of treatment, but the chemicals persist in the soil or in vegetation for between 1 to 2 years or longer in the treated environment.

When the timber industry is finished with their physical and chemical devastation, the once-diverse and vital forest is reduced to a sterile and barren moonscape. The wildlife that once lived in a living network are either killed or displaced. Challenges to wildlife include the initial physical disruption from harvest and deep tilling as well as chemical poisoning, loss of habitat, and food destruction from herbicides.

Herbicide usage in California is not monitored in any meaningful or appropriate manner by regulatory agencies or the legislature. Agencies record the amount of used but do not measure environmental effects nor exercise control regardless of how much usage increases. Especially since around the year 2000, clear-cutting on California's private forestlands and evidence is revealing what would be expected, an equally dramatic rise in herbicides in forested counties. The change in one year from 2001 to 2002 is one such indicator.

California's State report on "Total pounds of pesticide active ingredients reported in each county during 2001 and 2002" reveals a nearly 14% increase in herbicide usage across the state in 2002 over 2001. During this same twelve-month period, a time during which Sierra Pacific Industries in particular increased its clearcutting and concomitant herbicide activities, the increase in chemicals applied throughout many affected Sierra counties far outstripped the statewide increase. In these counties there was no other notable change in activity that would account for this rapid change. The following chart details these alarming increases in eight Sierra counties:

County	Increases from 2001-2002	County Rank (total pounds)
El Dorado	almost 19%	(46 to 45)

Shasta	nearly 26%	(40 to 38)
Yuba	over 47%	(29 to 28)
Nevada	nearly 52%	(50 to 48)
Tuolumne	over 52%	(49 to 46)
Sierra	99.8%	(57 to 55)
Calaveras	149%	(51 to 49)
Plumas	nearly 203%	(55 to 51)

And the increases continue. The latest available data from the California Department of Pesticide Regulation reports that in 2003 forestry pesticide use was significantly higher than the decade's average.

Recent Data

[SPI Forest Pesticide Applications 2004 Tuolumne County](#)
[Forestry Herbicide Use in California's Forests](#)

Herbicide Fact Sheet:

[Glyphosate Fact Sheet](#)
[Atrazine Fact Sheet](#)
[2,4 D Fact Sheet](#)

Reports:

[Pesticide Use By County](#)
[Atrazine Feminizes Frogs](#)
[Atrazine Linked to Prostate Cancer](#)
[Recognizing Illnesses Related To Forestry Herbicides](#)
[Identifying ingredients in spray cocktails](#)
[How To Stop A Timber Company's Spray Project](#)
[Pesticides and Illness](#)
[Pesticides and Lymphoma](#)
[Pesticides in Rain](#)

Articles

[Overview of Herbicide Use in Private and State Forests](#)
[LA Times Article on 2,4D](#)
[Herbicide Use on Federal Forest Lands in California](#)
[Roundup Article By Julia Olmstead](#)
[Stop Using Pesticides At Home](#)