



CLEAN WATER ACTION
CALIFORNIA



Pesticides & Groundwater

The Pesticide Contamination Prevention Act (PCPA) was enacted in 1985 to protect groundwater aquifers from further pesticide pollution. It directs DPR to create and maintain a "Groundwater Protection List", i.e., a list of pesticides with "the potential to pollute groundwater." The Act further requires that DPR monitor the soil and groundwater in areas where pesticides on the Groundwater Protection List are applied to determine whether these pesticides have migrated to deep soil or groundwater.

Why it's not working:

Lack of Adequate Monitoring for Pesticides in Groundwater: The PCPA requires DPR to monitor each pesticide on the Groundwater Protection List within one year after the pesticide is placed on the List. In 2010, DPR monitored groundwater for only 6 of the 98 pesticides on the Groundwater Protection List, and relied on data provided by the Department of Public Health (DPH) for 37 more pesticides. For the remaining 55 pesticides, no monitoring was conducted. DPR has no soil monitoring program, despite the requirement of the PCPA.

Solution: Require that DPR comply with the PCPA and monitor the soil and groundwater in areas where pesticides on the Groundwater Protection List are applied to determine whether these pesticides have migrated to deep soil or groundwater.

DPR registers pesticides without having methods to detect their presence in groundwater. DPR does not have methods to detect many of the pesticides and their degradate products found on the Groundwater Protection List, even after years of widespread use.

Solution: Revise PCPA to require manufacturers of pesticides on DPR's Groundwater Protection List to develop and submit to DPR an analytic method of detection for potential pesticide-related groundwater quality contaminants, and pay for more intensive, early monitoring to detect potential degradation of water quality.

DPR is not required to monitor groundwater contamination for degradates of pesticides or chemicals that are not "active" ingredients: DPR is only required to collect information about active ingredients when compiling its Groundwater Protection List, regardless of the fact that many of the inactive ingredients or degradates can be dangerous groundwater contaminants. For an example, see 1,2,3-trichloropropane (TCP), on the reverse side of this page.

Solution The PCPA should regulate both active and inert ingredients and degradates in the same manner.



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Carcinogen 1,2,3-TCP remains unregulated in California's water supplies.

What is it?

Groundwater is contaminated from the historical application of two soil fumigants (nematocides) under the trade names of D-D and Telone (or Telone II), which contain 1,2,3-Trichloropropane (TCP) as an inactive ingredient. TCP was also used as an industrial solvent and a cleaning and degreasing agent, and in the production of paint thinners and varnish removers. Currently, TCP is still used as an intermediate in the production of other chemicals, such as polymers, polysulfides, and chlorinated compounds like dichloropropene. TCP also occurs as a byproduct in the manufacture of other chemicals.

In 1999, 1,2,3-Trichloropropane (1,2,3-TCP) was added to the list of chemicals known to the State of California to cause cancer. As of July 1, 2009, detections of 1,2,3-TCP in two or more samples were reported in 335 sources, belonging to 86 water systems in 17 counties in the state. In 2009, the Office of Environmental Health and Hazard Assessment adopted a Public Health Goal for 1,2,3-TCP in water of .0007 parts per billion

THE ISSUE: California Department of Public Health has not yet established an MCL to protect drinking water. Without a drinking water standard, water providers are not required to take contaminated wells out of service, remediate contamination, or even provide consumers with a public health notification that their water contains the carcinogen. DPH estimates that it will take 4 more years to establish an MCL for 1,2,3-TCP.

In 1999, the Department established a drinking water notification level for 1,2,3-TCP of 0.005 micrograms per liter ($\mu\text{g/L}$). Because TCP is a potential carcinogen, its response level is set at 100 times the notification level, or 0.5 $\mu\text{g/L}$ (ppb). It is unknown how many sources have exceeded this response level because the vast majority of small systems have not conducted monitoring using the appropriate analytic method. DPH recommends but does not require that water systems take action to notify customers or remove the well from served at these levels.

Solution: Legislative oversight of the process for developing a drinking water standard is needed to ensure that the current schedule is met.

THE ISSUE: Department of Pesticide Regulation (DPR) has still not placed 1,2,3-TCP on its Groundwater Protection List.

Solution: Require DPR to add 1,2,3-TCP on its Groundwater Protection List and conduct monitoring as required.