



State of Nevada

Nevada Division of Environmental Protection

Bureau of Corrective Actions

901 So. Stewart Street, Suite 4001, Carson City NV 89701-5249

Defining a Perchlorate Drinking Water Standard

Toxicological studies on animals, human test subjects and studies from human populations where perchlorate occurs naturally are used to determine what amount or dose should be considered safe (reference dose (RfD)). A drinking water standard is determined by the toxicological studies for the substance and the dose that makes it toxic. Such studies can be contradictory and controversial as has been the case for perchlorate.

In 1999, based on perchlorate toxicological studies on animals and humans the U.S. Environmental Protection Agency (EPA) established interim guidance and a provisional clean-up level / action level in water with a range of 4 to 18 parts per billion (ppb). **The Nevada Division of Environmental Protection established 18 ppb as a provisional action level based upon EPA guidance.**

The National Academy of Sciences, National Research Council (NRC) established a panel of experts to assess the health implications of perchlorate ingestion. The panel included pediatricians, thyroid specialists, industry specialists, and researchers. The NRC at the request of the DoD, DOE, NASA and the U.S. EPA, addressed a number of charge questions covering key scientific issues associated with perchlorate risk, and in January 2005 recommended a reference dose of 0.0007 mg/kg per day (NRC 2005a). The NRC findings were summarized in the 2005 "Report in Brief: Health Implications of Perchlorate Ingestion" which is freely available online (NRC 2005b (<http://www.nap.edu/books/0309095689/html>)). The U.S. EPA adopted the NRC recommended reference dose in February 2005 and established an official reference dose (RfD) of 0.0007 mg/kg/day for perchlorate.

The EPA may use this information to derive and establish a promulgated drinking water standard known as a Maximum Contaminant Level (MCL); however, this process can take several years to finish. In the meantime many states have or are in the process of establishing their own standards for perchlorate in water. Revised guidance from the EPA, which is based upon the new RfD, is expected soon.

June 18, 1999 — [Interim Assessment Guidance for Perchlorate \(US EPA\)](#)

January 22, 2003 — [Status of EPA's Interim Assessment Guidance for Perchlorate \(US EPA\)](#)

Related Information — May 2005, PERCHLORATE A System to Track Sampling and Cleanup Results Is Needed - GAO Report ([80 Pages 2.2MB](#)) 

NDEP Monitoring Data

- [Northshore Road Sampling Point \(NDEP — December 2008 update\)](#) 

- [Willow Beach, AZ Sampling Point \(NDEP — December 2008 update\)](#) 

- [Perchlorate Monitoring Results — Henderson, Nevada to the Lower Colorado River December 2005 Report \(US EPA\)](#) 



Back To— [Southern Nevada Perchlorate Cleanup Project](#)

[Home Page – Corrective Actions](#)

[Site Index](#) — [Topic Index](#)

[NDEP Home Page](#)



Last updated 08/16/2011 13:39:10