Communities for Clean Water

A Northern New Mexico Network

Water Pollution at LANL

Overview:

LANL Streams are not Meeting Water Quality Standards:

- There are many tributary streams to the Rio Grande, either partially or wholly on LANL property, that are designated as polluted by the New Mexico Environment Department. Most of the streams are polluted with PCBs, gross alpha, and selenium. Pueblo Canyon is also polluted with mercury. Water quality standards are being exceeded for all of these pollutants. *

- Unlike Rio Grande tributaries on LANL property, the Rito de los Frijoles and Capulin Creek are **not** polluted for selenium, gross alpha or PCBs. Both are tributaries to the Rio Grande from the Pajarito Plateau.

PCBs Levels in LANL Streams are Dangerously High:

- PCBs have been detected in LANL waters at levels more than 25,000 times over the water quality standard that is protective of human health and 1,000 times over the water quality standard that is protective of wildlife habitat!

- PCBs have been found in LANL surface waters at levels more than 8,000 times more than the average PCB concentrations found in the Rio Grande above LANL at Otowi Bridge.

- High levels of PCBs in humans can cause liver damage, neurological and endocrine disorders, retarded infant development, stunted intellectual function and are a probable human carcinogen.

- Total PCB concentrations in sediment samples from canyons at LANL are extremely high. Samples have shown PCB concentrations on LANL property to be as high as 2,464,497 nanogram per kilogram (ng/kg) while samples taken from other locations in the Rio Grande watershed are typically not higher than 1000 ng/kg.

Stormwater Problems:

- The Rio Grande from Cochiti Reservoir to the San Ildefonso Pueblo boundary is impaired for turbidity. Too much turbidity and sediment are often associated with polluted stormwater runoff. The EPA and the New Mexico Environment Department have found serious problems with stormwater pollution control at LANL. ^

* All data was provided by the New Mexico Environment Department. The PCB data was collected using EPA Method 1668A analyses.

^ There was one sample taken from the San Jose Drain in Albuquerque that had PCB concentrations of 196,140 ng/kg.

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Details:

Pueblo Canyon – Polluted With PCBs, Gross Alpha, Selenium and Mercury:

Pueblo Canyon from Los Alamos Canyon to its headwaters is not meeting water quality standards for gross alpha, selenium and mercury. The New Mexico Environment Department has identified a number of probable causes of this pollution, such as contaminated sediments, impervious surface water runoff, inappropriate waste disposal, industrial site stormwater discharge, post-development erosion and sedimentation, RCRA hazardous waste sites, and watershed runoff following forest fire. On June 10th, 2000 a stream sediment sample taken in Pueblo Canyon show PCB concentrations at 8878.9 ng/kg. Samples taken on January 23rd, 2001 in Graduation Canyon, a tributary of Pueblo Canyon, show PCB concentrations in stream sediment ranging from 309,852 – 723,032 ng/kg.

Mortandad, Water, Los Alamos, and Guaje Canyons- Polluted with PCBs, Gross Alpha and Selenium:

Mortandad, Water, Los Alamos, and Guaje Canyons are polluted with gross alpha and selenium. The probable causes of pollution identified by the state include inappropriate waste disposal, industrial stormwater discharge, natural sources, post-development erosion, and watershed runoff following a forest fire. Because of these impairments, two designated uses are not being supported – livestock watering and wildlife habitat. Stormwater sampling done in 2003 shows high levels of PCBs in Los Alamos Canyon. On August 25th, 2003 the NMED DOE Oversight Bureau collected stormwater runoff samples that had concentrations of PCBs at 14,178 nanogram per liter (ng/L) or parts per trillion (ppt). The NM water quality standard for wildlife habitat is 14 ng/L and the human health standard is .64 ng/L. On August 23rd, 2003 a stormwater runoff sample taken from Los Alamos Canyon upstream from DP Canyon had PCB concentrations of 16,900 ng/L. Stormwater data from 2003 shows high levels of PCBs in Mortandad Canyon.

Sandia Canyon –Polluted with PCBs:

Sandia Canyon from the San Ildefonso Pueblo boundary to its headwaters is polluted with PCB-1254 and PCB-1260. Because of this pollution, the wildlife habitat designated use is not being met for Sandia Canyon. The New Mexico Environment Department has identified atmospheric deposition, inappropriate waste disposal, landfills and post-development erosion and sedimentation as probable causes of the contamination. On January 10th, 2001 a stream sediment sample taken in Sandia Canyon show PCB concentrations ranging from 611,471 – 2,464,497 ng/kg.

Rito de los Frijoles and Capulin Creek:

These two streams are tributaries to the Rio Grande from the Pajarito Plateau, but are not on LANL property. They are not currently impaired for selenium, gross alpha, or PCBs. The designated use wildlife habitat is fully supported and the livestock watering use has not been assessed for both of these streams. The Rito de los Frijoles is impaired for DDT, fecal coliform, temperature and turbidity. Capulin Creek is impaired for sedimentation/siltation and for benthic macroinvertabrates. The New Mexico Environment Department lists watershed runoff following forest fire as the probable source of impairment.