



NEW MEXICO ENVIRONMENT DEPARTMENT



HEALTH ADVISORY FOR PRIVATE WELLS WITHIN THE SAN MATEO CREEK BASIN

Advisory

The New Mexico Environment Department ("NMED") cautions all present and future owners and users of private wells within the San Mateo Creek basin (see Figure 1) that your well water could contain some contaminant concentrations in excess of federal drinking water standards.

Possible contaminants that may occur in concentrations exceeding federal drinking water standards include chloride, gross alpha, lead, manganese, nitrate, pH, radium₂₂₆+radium₂₂₈, selenium, sulfate, total dissolved solids ("TDS"), and uranium; additional contaminants that have been detected for which federal drinking water standards have not been established include, iron, molybdenum, thorium₂₃₀, and vanadium. The sources of these contaminants in part may include naturally-occurring ore deposits within this portion of the "Grants uranium belt," as well as former uranium mines and mills within the basin that historically accessed these deposits.

Health risks for long-term exposure to gross alpha, lead, nitrate, radium, selenium, sulfate, thorium, and uranium contaminants that have been documented could include cancer; kidney, spleen, and liver damage; birth defects; systemic mineral imbalance; and digestive problems. Information regarding these contaminants in drinking water can be found at the U.S. Environmental Protection Agency (EPA) website, <http://www.epa.gov/safewater/dwh/>, and at the Agency for Toxic Substances and Disease Registry (ATSDR) website, <http://www.atsdr.cdc.gov/toxfaqs/index.asp>. Other contaminants listed above may cause only aesthetic effects to the appearance or taste of ground water.

Current and future private well owners and users are urged to have their well water sampled for concentrations of these contaminants. Persons who are considering installing a private well within the Advisory Area are urged to test well water for these contaminants. A list of certified laboratories for drinking water analyses can be found on the Internet at <https://www.env.nm.gov/dwb/Labs/>.

These recommendations only apply to private domestic wells. Public water supply systems for municipalities, and for some smaller communities such as some trailer parks, are regulated by the NMED Drinking Water Bureau and are routinely tested for regulated contaminant concentrations (*i.e.*, those for which EPA has established primary Maximum Contaminant Levels ["MCLs"]) to identify any exceedances of federal drinking water standards. Information on regulated drinking water supply systems can be found on the Internet at <https://www.env.nm.gov/dwb/tools/Index.htm>.

NMED is also in the early stages of investigations within the San Mateo basin in order to better understand, and potentially address, possible ground water contamination from past uranium mining and milling activities.

Additional information

The majority of information about ground water quality, as well as most current human consumptive usage, comes from private wells in subdivisions that are located in the southern part of this basin, within Cibola County north of the City of Milan. Other areas of this basin are sparsely populated, and little current data on ground water quality exist outside of former uranium mine and mill sites. Since the 1970's, the U.S. Nuclear Regulatory Commission ("NRC") has required remediation of ground water contamination at the Homestake Mining Company uranium millsite. Under NRC regulatory authority,

background concentrations of site-related contaminants have been established for the affected aquifers, and accepted by NMED and EPA. These background levels generally exceed MCLs, indicating that ground water contamination in excess of federal drinking water standards also exists upgradient of the Homestake facility from contaminant sources other than the Homestake facility, including both natural (e.g., ground or surface water passing through rocks from which naturally-occurring minerals become dissolved into the water), and potential manmade sources (e.g., both ground or surface water passing through and dissolving components of mine or mill wastes, and ground water that has been impacted by mine or mill effluents). Homestake is required to remediate site-related contaminants to the approved background contaminant concentrations in the aquifers affected by contamination from its millsite. However, ground water background contaminant concentrations in excess of federal primary MCLs within the San Mateo Creek basin are expected to persist after Homestake completes its remedial activities.

Limited recent ground water quality data from samples that have been collected in and near abandoned uranium mine shafts in the Ambrosia Lake area also indicate the occurrence of contaminants in concentrations exceeding MCLs within this area of the basin.

ALL PRESENT AND FUTURE OWNERS AND USERS OF PRIVATE WELLS THAT ARE LOCATED WITHIN THE ADVISORY AREA ARE ADVISED TO SAMPLE THEIR WELLS TO ENSURE THAT THE QUALITY OF WELL WATER DOES NOT POSE HEALTH CONCERNS.

For more information about public water supply systems, please contact:

New Mexico Environment Department
Drinking Water Bureau
(877) 654-8720 (toll-free)
<https://www.env.nm.gov/dwb/index.htm>

For more information about ground water abatement activities, please contact:

New Mexico Environment Department
Ground Water Quality Bureau
(800) 219-6157
(505) 827-2918
<https://www.env.nm.gov/gwb/>

For more information about the potential health effects of ground water contaminants, please contact:

New Mexico Department of Health
Epidemiology and Response Division
(888) 878-8992 (toll-free)
(505) 827-0006
<http://www.health.state.nm.us/index.html>

Figure 1: Private well health advisory area—San Mateo Creek Basin

