



Colorado Department
of Public Health
and Environment

*“To protect and improve
the health and environment
of the people of Colorado.”*

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303-692-2021

FACTSHEET

Foothills Water Treatment Plant and Public Health

March 31, 2010

PUBLIC HEALTH UPDATE

Asbestos Inspection: The Colorado Department of Public Health and Environment led a multi-agency inspection of the Foothills Water Treatment Plant property on March 30, 2010. Inspectors from the state Hazardous Materials and Waste Management, Air Pollution Control and Water Quality Control divisions, along with personnel from the Tri-County Health Department and Douglas County found no evidence of improper burial of asbestos. In addition, no evidence was found to justify invasive soil sampling at the site. An official report will be released upon completion.

Eleven inspectors systematically canvassed Denver Water property looking for evidence of possible asbestos-containing material on the surface. No asbestos-containing material was found, except for cement-asbestos pipe and collars stored in the Materials Storage Area located in the middle of the property. Asbestos fibers are tightly bound within the concrete of these pipes, and do not pose an exposure risk. The inspectors also looked for evidence of disturbed soil and debris that would indicate undocumented subsurface disposal areas, and found none. The inspection covered areas of the property bordering residential neighborhoods, the Materials Storage Area, sludge drying beds and associated staging areas, the onsite landfill for water treatment residuals, and onsite drainage areas and stormwater features. If asbestos-containing materials were present, these areas would have represented the greatest potential for a release.

This fact sheet updates a May 2005 fact sheet about solid waste management practices at the Foothills Water Treatment Plant. The earlier fact sheet discusses management of residual alum sludge produced by the water treatment process, and is available online at [May 2005 Foothills Water Treatment Plant Fact Sheet](#). This update provides information about asbestos-related health risks; regulations that apply to asbestos in water, air and soil; and how the Colorado Department of Public Health and Environment protects public health and the environment.

ASBESTOS

Uses and Risks: Asbestos is the name given to a group of naturally occurring minerals. Asbestos fibers are very stable, and are resistant to both heat and chemicals. Asbestos is added to more than 3,000 different products, especially building products, to improve strength and durability.

Asbestos in building materials is not a risk to human health unless it is disturbed. Inhalation of asbestos fibers may lead to increased risk for one or more diseases, including asbestosis, lung cancer and mesothelioma. The greater the exposure and the longer it lasts, the greater the risk of developing an asbestos-related disease. The goal, therefore, is to minimize one's exposure to asbestos over a lifetime. Typically, asbestos-related diseases take a long time to develop, and symptoms may not appear for 15 to 25 years after exposure, sometimes longer. If you have specific health questions, you should contact your personal physician.

For more information on asbestos, see this link:

<http://www.cdphe.state.co.us/ap/asbestos/AsbestosGeneralInfo.pdf>

WATER

Background: Drinking water produced at the Foothills plant currently meets all Safe Drinking Water Act standards and requirements. The public is not at risk from drinking this water. Asbestos does not dissolve in water and does not move through soil, so buried cement-asbestos pipe generally will not contaminate ground water. Cement-asbestos pipe is not considered a hazardous waste.

Regulations: The U.S. Environmental Protection Agency's National Primary Drinking Water Standards set a maximum contaminant level for asbestos in drinking water of seven million fibers longer than 10 micrometers per liter of water. The potential health effects from exposure above the maximum contaminant level would be an increased risk of developing benign (non-cancerous) intestinal polyps.

The Water Quality Control Division of the Colorado Department of Public Health and Environment enforces EPA and state standards for drinking water. The division regularly inspects water treatment plants, including the Foothills Plant, and has confirmed that the water produced by the plant is safe to drink.

AIR

Background: The greatest health risk from asbestos comes from inhaling microscopic asbestos released into the air by "friable" asbestos, i.e., material that can be easily crumbled to a powder. Undamaged products that contain asbestos do not present a health risk.

In February 2009, Denver Water reported a minor asbestos spill to the Colorado Department of Public Health and Environment's Air Pollution Control Division that occurred inside a portion of the Foothills Water Treatment Plant that had been shut down for maintenance. Activities inside the plant had inadvertently damaged some asbestos-containing gaskets. Inspectors from the Air Pollution Control Division's Asbestos Unit worked with an independent consultant from a registered asbestos consulting firm to identify the extent of the spill and to design a work plan to clean the affected area. Although the spill did not trigger regulatory requirements, Denver Water chose to hire a certified asbestos contractor to perform the cleanup. All work was done in accordance with state asbestos regulations. Subsequent air sampling confirmed that asbestos was not detected inside the plant.

Regulations: The Air Pollution Control Division enforces EPA and state standards for air quality, including asbestos remediation. When an asbestos release occurs, the responsible party must report it to the division, which approves the remediation plan. Plans are implemented by certified asbestos contractors.

SOIL AND SOLID WASTE

Background: Construction and maintenance crews throughout the state periodically encounter asbestos on or in the ground. Asbestos on the surface is either removed or covered with clean soil and vegetation. Buried asbestos does not migrate through soil or ground water, and does not pose a health risk unless it is disturbed and released to the air. The safest thing to do often is to leave buried asbestos in place and implement controls to limit human exposure in accordance with state regulations, as described below. When asbestos in or on the ground must be disturbed for project purposes, it should be done carefully to avoid releasing asbestos fibers into the air or spreading the contamination.

Landfill Operations at Foothills Water Treatment Plant: Some community members have raised concerns about earth-moving activities on the Denver Water Foothills Water Treatment Plant property. Denver Water is allowed to dispose of water treatment plant residuals on the 626-acre site under a permit issued by Douglas County and approved by the Colorado Department of Public Health and Environment. The water treatment process produces waste sludge with naturally occurring minerals removed from the untreated water. (See [May 2005 Foothills Water Treatment Plant Fact Sheet](#) for more details.) At the Foothills Plant, the sludge is dried and buried on the plant's property in disposal cells. This disposal activity must provide maximum protection and safeguards for the environment and for people living nearby. The residuals are buried in 12-foot-deep disposal cells covered with a four-foot clay cap plus a one-foot layer of topsoil, which is revegetated. The disposal cells must be at least 200 feet within the plant's property boundary. The disposal area is inspected by the Colorado Department of Public Health and Environment and Douglas County. The most recent inspection took place on May 20, 2009, and the operation was found to be in substantial compliance with permit requirements and solid waste regulations. State inspectors have not observed asbestos in the soil or the disposal cells at this site.

Regulations: The Hazardous Materials and Waste Management Division of the Colorado Department of Public Health and Environment regulates asbestos in soil. Anyone who is about to disturb known or suspected asbestos in or on the ground must notify the division and conduct any soil-disturbing activities according to a state-approved plan designed to protect workers, neighbors and the environment. Plans routinely include personal protective equipment, air monitoring, wetting, wind fencing, work stoppage during windy conditions and on-site visual inspection. **Regulations do not require removal of undisturbed buried asbestos. Asbestos on the surface must be removed, covered with clean material, or otherwise managed to prevent human exposure or release to the environment.**

NEXT STEPS

The Colorado Department of Public Health and Environment, Tri-County Health Department and Douglas County have conducted a site inspection of the Foothills Water Treatment Plant property and found no evidence of asbestos-containing material. An official report will be posted on www.cdphe.state.co.us when it is completed.

FOR FURTHER INFORMATION

Contact the communications office at the Colorado Department of Public Health and Health and Environment at (303) 692-2021.

See also

- Denver Water: www.denverwater.org/AboutUs/PressRoom/6E546A75-E02C-D119-046944D368666969
- Douglas County: <http://blogs.douglas.co.us/newsroom/2010/03/19/commissioners-respond-to-foothills-treatment-plant-issue>