

Gold King Mine Spill Community Sheet

IN GENERAL:

- Short-term the Gold King Mine spill was quickly diluted and metals settled in the river sediment.
- Long-term health and environmental impacts of the Gold King Mine spill are not well understood.
- Currently different agencies and universities are trying to understand what are the overall impacts.

The Bottom Line Answer

Why was the water yellow after the spill?

When rocks made up of minerals and metals found deep in mines come into contact with water and air acid mine drainage is created. This rock-acid mixture causes the metals in the rocks to seep out into the water. The Gold King Mine spill turned a yellow orange color because there was iron present. When acid mine drainage from the **spill came into contact with fresh river water** it made the mixture less acidic and **caused the iron to settle out**.

How will the spill affect people's health?

Not enough information has been gathered to determine what the health impacts are or will be for people living near waterways affected by the Gold King Mine spill. Tribal, federal, state, and local agencies as well as universities are currently studying the potential short- and long-term effects by collecting water, soil, and animal samples. At this point, drinking water sources have been determined to be safe to drink by federal and state authorities.

How are crops or gardens affected by the spill?

Soon after the Gold King Mine spill, irrigation intakes at the Animas and San Juan Rivers were turned off. Because this happened quickly, agencies suggested that crops were not impacted. In some cases, the intakes were not turned off promptly. Many local farmers lost their crops due to a lack of water during the hottest time of the year. On April 15, 2016, irrigation canals on the Navajo Nation were reopened after a public meeting. It is **generally recommended** that farmers or gardeners growing crops **call the local extension office for specific advice**.

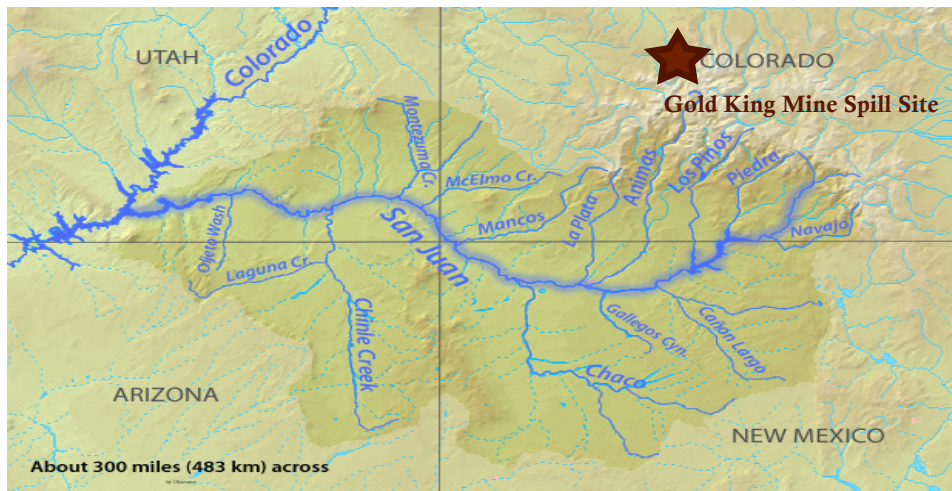
Can the spill affect livestock and wildlife?

In August 2015, the Colorado and Utah Departments of Agriculture lifted warnings on the use of water from the San Juan River for livestock (no jurisdiction over tribal lands). Yet, local Navajo Chapters advise against the use of this water on agriculture activities such as livestock. The **Navajo Nation has worked with federal and local agencies to install 2,000 gallon water tanks for livestock** owners to haul water. However, **there have not been enough studies conducted** to know for certain that livestock was not impacted by the spill. Cattle ranchers in areas where the Gold King Mine spill occurred should check with veterinarians or extension personnel regarding the potential impacts. When it comes to wildlife, there are studies being completed to find out the impacts of the spill. Different government and local groups are involved in field studies to find out how individual species have been exposed.

This is a community summary of the "Understanding the Gold King Mine Spill" document available at: <https://goo.gl/ZmliRT>

What happened at the Gold King Mine on August 5, 2015?

On August 5, 2015, when the U.S. Environmental Protection Agency was investigating the old, abandoned Gold King Mine in Silverton, Colorado, digging machines loosened a soil plug that caused mine water under pressure to gush out and eventually travel to Cement Creek, a tributary of the Animas River. It is estimated that three million gallons or nine football fields with one foot deep of mine water spilled out. This mine water contained acid, salts, and toxic metals such as lead and arsenic. The Gold King Mine spill took place in the Colorado River Basin. A total of six states, 12 Native American tribes, and 11 Navajo Chapters are involved in resolving the impacts to rivers.



What was done and is being done to control the Gold King Mine spill?

The Gold King Mine spill was diluted by the river water as the initial acid mine drainage traveled downstream. The U.S. Environmental Protection Agency Region 6 was involved in waterways from the Gold King Mine to the boundaries of the Navajo Nation, while Region 9 (jurisdiction over Tribal lands) and Navajo Environmental Protection Agency work in the tribal waterways. Currently, this acid mine drainage is being treated in a series of man-made ponds to decrease the acidity using lime and remove metals from the water. Since February 2016, the Bonita Peak Mining District (where the Gold King Mine is located) is being considered for the Superfund National Priority List that would provide long-term federal monies to monitor and treat contamination.

I would like to talk to someone about the Gold King Mine spill and...

Community Organizing - Janene Yazzie, Sixth World Solutions, (928) 245-1352

Crop/Garden - Mónica Ramírez-Andreotta, Soil, Water and Environmental Science, (520) 621-0091

Drinking Water - Janick Artiola, Soil, Water and Environmental Science, (520) 621-3516

Human Health - Clark Lantz, Cellular Biology and Anatomy, (520) 626-6716

Livestock - Gerald Moore, Navajo Nation Extension Agent, (928) 871-7686

NIEHS Gold King Mine Exposure Project - Karletta Chief, Soil, Water and Environmental Science (520) 222-9801

Who are involved in studying the impacts of the Gold King Mine spill?

There are various tribal, federal, state, and local agencies as well as universities studying the impacts of the Gold King Mine spill. The following is a list of the major groups involved (this list keeps growing!):

Tribal Agencies

Navajo Nation, Navajo Environmental Protection Agency, Southern Ute Indian Tribe Water Quality Program, local Navajo Chapters (e.g., Upper Fruitland, Nenahnezad, Hogback, San Juan, Shiprock, Gaad'di'ai', Aneth-Montezuma Creek, Beclabito, Teecnospos, Oljeto, Navajo Mountain, etc.)

Federal Agencies

U.S. Environmental Protection Agency, U.S. Geological Survey, U.S. Agency for Toxic Substances and Disease Registry, Bureau of Indian Affairs, U.S. Department of the Interior

State Agencies

AZ Department of Environmental Quality, NM Environmental Department, CO Fish and Wildlife Conservation Office, CO Department of Public Health and the Environment

Universities

University of Arizona, Northern Arizona University, Rice University, University of New Mexico, University of Colorado Boulder, New Mexico State University, New Mexico Institute of Mining and Technology, Diné College, Fort Lewis College

Non-governmental organizations

Water Defense and Sixth World Solutions

As a community member, it is important to ask questions! Researchers involved in these studies should follow up with you and your community about the results and what they mean. Information is important for everyone impacted by environmental contamination. You and others can use results from these studies to make informed decisions.