

actions also supported efforts to minimize the migration of contaminated sediments and impacts on drinking water supplies.

1.1 Request for Financial Reimbursement

The NMED, on behalf of itself and other New Mexico agencies, is requesting **\$1,505,155** in federal funding as reimbursement for emergency response actions related to the GKM spill between August 5, 2015 and December 31, 2015.

Indirect costs for the GKM response action funding application were calculated at the State FY16 rate of 19.29%. The indirect base for remedial action tasks was calculated on the total of actual personnel salaries and employee benefits costs.

An administrative fee of \$189,616, calculated at 20% of the total sub grantees' expenditures, is included in NMED's overall request to cover expenses related to record keeping and/or other administrative costs.

CATEGORY	NMED	NMED Admin (20% of Sub Grantee Total):	NMED Sub Grantees:	GRAND TOTAL
PAYROLL	\$127,600			\$127,600
BENEFITS	\$46,149			\$46,149
TOTAL PAYROLL	\$173,749			\$173,749
TRAVEL	\$36,941			\$36,941
EQUIPMENT	\$0			\$0
SUPPLIES	\$30,762			\$30,762
CONTRACTUAL	\$92,490			\$92,490
CONSTRUCTION	\$0			\$0
OTHER	\$0	\$189,616	\$948,081	\$1,137,697
TOTAL DIRECT COSTS	\$333,942	\$189,616	\$948,081	\$1,471,639
INDIRECT RATE				\$0
FY16 = 19.29% (rounded)	\$33,516			\$33,516
TOTAL INDIRECT COSTS	\$33,516			\$33,516
GRAND TOTAL COSTS	\$367,458	\$189,616	\$948,081	\$1,505,155

NM Environment Department (Excluding Admin Fee)	\$367,458		
City of Aztec			\$153,307
City of Farmington			\$408,381
NM Geology & Mineral Resources			\$25,244
NM Department of Agriculture			\$34,981
NM Department of Game & Fish			\$69,076
NM Department of Homeland Security & Emergency Management			\$14,362
NM Department of Health			\$45,846
NM Livestock Board			\$5,647
NM Office of the State Engineer			\$39,380
NM State University - Agriculture Experiment Station			\$28,842
NM State University - Cooperative Extension Service			\$12,596
San Juan County			\$93,970

NM Department of Military Affairs			\$16,449	
Admin Fee		\$189,616		
GRAND TOTAL	\$367,458	\$189,616	\$948,081	\$189,616

1.2 Site Description

The Gold King Mine is a historic gold mine at an elevation of approximately 11,300 feet above mean sea level located in the upper Animas River watershed near the town of Silverton in the San Juan Mountains of southwestern Colorado. The mine was operated from approximately 1887 until 1922 and is one of some 400 abandoned or inactive mines in the San Juan Mountains.

Acid rock drainage (ARD) forms when geologic sulfide minerals undergo oxidation and release sulfuric acid and dissolved metals into water. ARD from the ore bodies and from some of the mine workings has impacted water quality in the Animas River and in many of its tributaries. The GKM, however, was not recognized as a source of ARD when mining operations ceased in 1922. Seepage of ARD from the GKM began after bulkheads were installed in other mine workings in the area, in the late 1990s to early 2000s, in an effort to control ARD discharges. The bulkheads caused groundwater to become impounded and rise up into previously unsaturated natural geologic fractures and mine workings. Flooded mine workings, such as at the GKM, became sources of ARD seepage that did not exist prior to installation of the bulkheads. The U.S. Environmental Protection Agency and the State of Colorado took actions to investigate and alleviate these newly created seeps of ARD.

On August 5, 2015, an EPA work crew excavating the GKM Level 7 adit triggered a blowout and continuous discharge of impounded mine water. The EPA reported that more than 3 million gallons of acidic mine water containing sediment, heavy metals, and other chemicals discharged into Cement Creek, which flows into the Animas River, and into New Mexico where the Animas River joins the San Juan River before flowing into the Navajo Nation and Utah.

1.3 Potential Human Exposure Pathways

A conceptual illustration of the Animas River hydrologic system is shown in Figure 1 below. Many of the potential pathways for contaminant migration discussed in this document are identified on this image.