

Purgatoire and Arkansas Rivers

May 18-20, 1955

Rainfall and Streamflow Rating:

Damage Estimate: The Corps of Engineers estimated damage to be \$4,310,000.
The city of Trinidad alone sustained an estimated \$1,198,600 in damage.

Deaths: At least 1

On May 17, a cold front moved into southeastern Colorado. Heavy rain fell from May 18-20 over a belt up to 150 miles wide extending into the Sangre de Cristo Range of Colorado, westward into southwestern Kansas and southward into northeastern New Mexico. The most intense rains fell late on May 18 and the early part of May 19. The rainfall was heaviest near the mountains and along the east slope of the mountains. The heaviest precipitation fell from Pueblo southward to just south of Trinidad. The largest rainfall total, 13.5 inches, was centered at Lake Maloya, New Mexico, which is south of Trinidad and is very near the headwaters of the Purgatoire River.

The resulting flood on the Arkansas River above the mouth of the Purgatoire River was the greatest flood since 1921. In addition, record discharges occurred at all Purgatoire River gauging stations downstream from Trinidad. However, below the mouth of the Purgatoire on the Arkansas, the flood was controlled by the John Martin Dam. The reservoir, which was dry prior to the event, reduced discharge on the Arkansas from a peak inflow of about 90,000 cfs to a controlled release of 630 cfs. Large flooding also occurred in the Raton Creek basin in Colorado.

Flood damage was concentrated along the main stem of the Arkansas River between Pueblo and John Martin Reservoir. Much of the lowlands below Pueblo were flooded, however the flooding was most severe downstream at Rocky Ford, La Junta and Las Animas. Flooding occurred along the Purgatoire River from Weston to Alfalfa, and from Ninemile Dam to the mouth. Major flooding of the lowlands all along the river occurred. The flooding was especially severe on the Purgatoire at Trinidad "where the flood was practically of a flash nature". The north part of the city was entirely isolated from the south portion for a several hour period. In addition, utilities in the city were significantly disrupted. Flooding also occurred along Raton Creek from Morley to the mouth and lowland flooding was reported along the St. Charles and Huerfano Rivers.

Two people lost their lives and 2,800 people were evacuated from their homes. One death was reported to have occurred during the flood at Trinidad, but conflicting reports indicate it was not directly due to the flood. A second death occurred at Trinidad after the flood had began to subside when a motorist drove his vehicle through a street barricade and into the Purgatoire River where a bridge had been washed out. Other damages include inundated farmlands, damaged crops, and many drowned cattle. Several railroads and highways were severely damaged. In addition, dozens of irrigation ditches and bridges were washed out and telephone facilities were disrupted.

Rainfall Data:

Date	Location	Peak Rainfall
5/18	Coaldale	2.25" in 24 hrs.
5/18	Cucharas Dam (13 mi. NE of Walsenburg)	2.57" in 24 hrs.
5/18	Elk Creek (10 mi. S of Evergreen)	2.01" in 24 hrs.
5/18	Monument 2 WSW	2.26" in 24 hrs.
5/18	Pueblo WSO AP	2.17" in 24 hrs.
5/18	Walsenburg	3.81" in 24 hrs.
5/18	White Rock (19 mi. SW of Fowler)	2.45" in 24 hrs.
5/19	Cucharas Dam	2.21" in 24 hrs.
5/19	Walsenburg	2.41" in 24 hrs.
5/17-20	Beulah	6.5" in 24 hrs. (exact date unclear)

Date	Location	Storm Total Precipitation
5/17-20	Rye	9.92"
5/17-20	Lake Moraine (5 mi. SW of Manitou Spgs.)	7.76"

Stream Flow Peaks:

Date	Location	Peak Discharge (cfs)
5/19	Purgatoire River at Ninemile Dam	80,000
5/19	Purgatoire River at Trinidad	28,000
5/20	Arkansas River at La Junta	50,000
5/20	Arkansas River inflow into John Martin Reservoir	90,000

Sources:

- Geological Survey Water Supply Paper 1455-A, "Floods of May 1955 in Colorado and New Mexico".
- Storm Data, May 1955
- Climatological Data, May 1955