The Fort Collins Flash Flood
28 July 1997
Weather and Societal Impacts

Matt Kelsch
UCAR/COMET
kelsch@comet.ucar.edu
WAS*IS Workshop
9 November 2005
The Meteorology

Pattern similar to other flash floods of the Rockies and Appalachians.

Atypical moisture amounts and replenishment.

Regenerative local storm complex.
The Meteorology

Low level flow into the terrain (upslope).
Dewpoints of 60+ (a big deal for Colorado).
The Radar View

Radar Reflectivity (0.5° Tilt Angle) with 15-Min Lightning Strikes (Pink), Rivers, and Major Motorways at (0136 UTC 29 July 1997).
The Localized Nature

Localized area of extreme rain on SW side of town.

Spring Creek watershed (13 sq miles) takes the bulk.

Water surges eastward along west-east roads.
The Runoff

Fire fighters wade through high water in the Johnson Mobile Home Park during the flood.

Swiftly moving runoff during the Fort Collins urban flood of 28 July 1997.

Urban flood runoff on Elizabeth Street appx. 10:30 PM two blocks west of the CSU campus.
Timetable of Flood Events

5:30  Rain begins, Flash Flood Watch is in Effect
8:00  EOC Activated
8:30  Ponds Overflowing, rapid water rescues begin
9:00  Most intense rain commences
9:40  NWS Flash Flood Warning
10:30 Storm begins to dissipate and move northeast
10:55 Trailer Park Flooding, Fires, Train Derailment
1:20  Declared City Disaster
The Impact

5 dead, major destruction along Spring Creek
Worst area just downstream of detention pond.
Over $100 million in damages at CSU.

Looking southeast at the debris jam at College Avenue underpass in Creekside Park the morning after the flood. Note the still swollen creek.
Our Trip There