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## **HISTORY OF FLOODING AT COLORADO STATE UNIVERSITY**

**(1902, 1938, 1951, 1992 AND 1997)**

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**WAYNE A. CHARLIE, Ph.D., P.E.  
PROFESSOR OF CIVIL ENGINEERING  
COLORADO STATE UNIVERSITY  
FORT COLLINS, COLORADO 80523**

**SEPTEMBER 1998**

**FINAL REPORT TO COLORADO STATE UNIVERSITY  
REPORT NUMBER - GEOTECH 1998-100  
DEPARTMENT OF CIVIL ENGINEERING**

**Colorado  
State  
University**

(1902, 1938, 1951, 1992 AND 1997)

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## HISTORY OF FLOODING AT COLORADO STATE UNIVERSITY

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### ABSTRACT

Newspaper reports, photos, rainfall, and damage estimates are presented for the floods of 1902, 1938, 1951 and 1997 which impacted the campus of what is now know as Colorado State University. The September 20 and 21, 1902 flood caused no reported damage to the campus probably because the few buildings built west of the railway track were on high ground. The September 2 and 3, 1938 flood caused flood damage to the Library, Heating Plant, College Avenue Gym/Field House, Physics Building, Museum, steam tunnels, Johnson Hall (Student Union) and flooding of the Oval and Tennis Courts. Over \$10,000 (1938 dollars) of flood damage to the museum alone was reported. The August 3, 1951 flood caused flood damage to the Library, Heating Plant, College Avenue Gym/Field House, Electrical Engineering (formally the Museum), Physics, steam tunnels, Johnson Hall (Student Union), Old Braiden Hall Kitchen and flooding of the Oval and Tennis Courts. The 1951 campus flood resulted in \$270,000 (1951 dollars) of flood damage to the campus. The June 24, 1992 flood caused some flood damage to Forestry, Heating Plant and the Administration Annex. The 1992 campus flooding resulted in \$75,000 (1992 dollars) of flood damage on campus. The July 28, 1997 flood caused major flood damage to the Heating Plant, College Avenue Gym/Field House, Gibbons (formerly the Museum and the Electrical Engineering Building), Occupational Therapy (formerly the Physics Building), steam tunnels, Johnson Hall, Administration Annex, Morgan Library, Lory Student Center, Engineering, Education, Eddy, International House, University Health Services, Old Dog Colony and flooding of the Oval, Tennis Courts/parking lot north of Engineering. The 1997 flood resulted in \$100 million (1997 dollars) of flood damage to the campus.

Several campus buildings and areas have flooded several times. The old Library (Music), Heating Plant, College Avenue Gym/Field House, Gibbons (old Museum and Electrical Engineering), Occupational Therapy (formerly Physics) and Johnson Hall (old Student Union) flooded in the 1938, 1951 and 1997 floods. These six buildings were constructed after the 1902 flood. Morgan Library, Lory Student Center, Engineering, Education, Eddy, International House, University Health Services and the Old Dog Colony were constructed after the 1951 flood.

### ACKNOWLEDGMENTS

We gratefully acknowledge the help given by Gerard Bomotti, V.P. for Admin. Service; Linda Wardlow, Asst. to V.P. for Admin. Service; John Morris, Manager - Facilities Operations; James Hansen, Prof. of History; John Newman, Prof. and University Archivist; Fredell Boston, Engr. Sciences Branch Library; Rheba Massey, Local History, Fort Collins Library; Marsha Hilmes, Floodplain Administrator; and others with the University and the City.



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## **HISTORY OF FLOODING AT COLORADO STATE UNIVERSITY**

**(1902, 1938, 1951, 1992 AND 1997)**

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### **INTRODUCTION**

The City of Fort Collins and the campus of Colorado State University have a long history of flooding. Table 1 lists historical (1884 to 1997) floods, sources of floods and drainage areas. Fort Collins was founded because in 1864 the Cache la Poudre River flooded the military camp located in Laporte. The flooding resulted in the camp being moved to higher ground. Flooding of the Poudre River in 1904 caused over one million dollars of damage to Fort Collins. Urban flash flooding in 1997 caused over two hundred million dollars of damage to the City of Fort Collins and Colorado State University. Campus buildings damaged during the flash floods of 1902, 1938, 1951 and 1997 are listed in Table 2. Reported flood damage to campus buildings was none in 1902, \$10,000 in 1938, \$270,000 in 1951, \$28,461 in 1992 and over \$100,000,000 in 1997.

Table 3 lists the greatest 1-day and 2-day precipitation totals for 1889 to 1997 as measured at the Campus Weather Station. The drainage ways coming into the campus are shown on Figure 1 and include Federal, University and City of Fort Collins lands.

Newspaper reports, rainfall, flood damaged buildings and damage estimates to the campus are presented in the following Appendices for the campus floods of 1902, 1938, 1951 and 1997.

- APPENDIX A - CAMPUS FLOOD OF SEPTEMBER 20 AND 21, 1902**
- APPENDIX B - CAMPUS FLOOD OF SEPTEMBER 2 AND 3, 1938**
- APPENDIX C - CAMPUS FLOOD OF AUGUST 3, 1951**
- APPENDIX D - CAMPUS FLOOD OF JUNE 24, 1992**
- APPENDIX E - CAMPUS FLOOD OF JULY 28, 1997**

### **SUMMARY**

There have been repeated floods on campus. The Oval and the buildings around the Oval experienced flooding in 1902, 1938, 1951 and 1997. Newspaper reports, photographs and other sources indicate that the Oval flooded to approximately the same depth in the 1938, 1951 and 1997 floods. The flood depth from the 1902 flood is unknown. The flood levels are controlled by the amount of flood water entering the west side of campus and the amount of flood water exiting the east side of campus. The railway tracks east of the Oval controls the downstream flow. Surface water reaching the Oval exits through the Pedestrian Tunnel under the railway. The tunnel was built around 1925 and may have replace a wooden bridge with a larger flow capacity. In summary, there have been three, possibly four, floods in the Oval area of campus since 1902 (95 years). Many campus building have experienced repeated flooding.

Table 1. Historical floods, source of floods, and drainage area of source: Fort Collins and Colorado State University.  
(References- City of Fort Collins, Stormwater Utility Report, 1995; Colorado State University records; and various newspaper articles.)

FORT COLLINS FLOODING									
YEAR OF FLOOD	Poudre River Flooding  (1,129 sq. miles)	Dam Failure (Poudre) Flooding	Dry Creek Flooding  (65 sq. miles)	Fossil Creek Flooding  (21 sq. miles)	Boxelder 4 Cooper Creeks Flooding  (251 sq. miles)	Colorado State University Flooding			YEAR OF FLOOD
						Spring Creek Flooding  (30 sq. miles)	Urban Flash Flooding  (Intense Rain on Smaller Drainage Basin.)	Colorado State University Flooding  (Less than 10 sq. miles)	
1844	1844								1844
1864	1864								1864
1884	1884								1884
1891	1891	1891							1891
1902				1902		1902	1902	1902	1902
1904	1904		1904		1904	1904			1904
1909					1909				1909
1922					1922				1922
1923	1923								1923
1924			1924		1924				1924
1930	1930								1930
1933					1933		1933		1933
1937					1937				1937
1938	1938			1938		1938	1938	1938	1938
1947					1947				1947
1949						1949			1949
1951	1951					1951	1951	1951	1951
1961	1961				1961				1961
1963					1963				1963
1965				1965	1965				1965
1967					1967				1967
1969					1969				1969
1975						1975			1975
1977				1977		1977	1977		1977
1979				1979					1979
1983	1983								1983
1985							1985		1985
1988							1988		1988
1992							1992	1992	1992
1995	1995								1995
1997				1997		1997	1997	1997	1997

NOTE: The main cause of flooding in Fort Collins is intense rainfall which normally occurs between May and September. The Cache La Poudre River flooding also increases in May and June as a result of snowmelt. The main cause of flooding at Colorado State University is intense rainfall West of campus.

For more information on historical floods in Fort Collins, contact Marsha M. Hilmes, Floodplain Administrator, City of Fort Collins, Stormwater Utility, PO Box 580, Fort Collins, Colorado 80522 Phone 970 224-6036

For information on pre-historic floods on the Cache La Poudre River, contact Ellen E. Wohl, Associate Professor of Earth Resources, Colorado State University, Fort Collins, Colorado 80523 Phone 970 491-5661



Table 2

BUILDINGS DAMAGED DURING MAJOR CAMPUS FLOODS

<u>1938 Flood</u>	<u>1951 Flood</u>	<u>1997 Flood</u>
Library (significant basement flooding)	Library (significant basement flooding)	Music (significant basement flooding)
Heating Plant (significant flooding)	Heating Plant (significant flooding)	Heating Plant (significant flooding)
College Gym/Field House (first floor flooded)	College Gym/Field House (first floor flooded)	South College Gym/Fieldhouse (significant flooding)
Museum (first floor flooded)	Electrical Engineering (first floor flooded)	Gibbons Building (first floor flooded)
Physics (first floor flooded)	Physics (first floor flooded)	Occupational Therapy (first floor flooded)
Steam Tunnels (flooded)	Steam Tunnels (flooded)	Steam Tunnels (flooded)
Oval and Tennis Courts (flooded)	Oval and Tennis Courts (flooded)	Oval and Tennis Courts/parking lots (flooded)
{ Johnson Hall (no mention of flooding)	Johnson Hall (first floor flooded)	Johnson Hall (first floor flooded)
{ Student Union (no mention of flooding)	Student Union (basement flooded)	??
no mention of flooding	Botany Building (basement flooded)	??
no mention of flooding	Old Braiden Hall Kitchen	Admin. Annex (basement flooded)
no mention of flooding	Old Main (basement)	no longer in existence
not yet constructed	not yet constructed	Morgan Library (significant basement flooding)
not yet constructed	not yet constructed	Lory Student Center (significant basement flooding)
not yet constructed	not yet constructed	Engineering Building (significant basement flooding)
not yet constructed	not yet constructed	International House (significant first floor flooding)
not yet constructed	not yet constructed	Education (first floor flooded)
not yet constructed	not yet constructed	Eddy (first floor flooded)
not yet constructed	not yet constructed	University Health Services (significant basement flooding)

**1902 Flood**

Buildings listed above not yet constructed (Oval area probably flooded)

Table 3 Greatest 1-day and 2-day precipitation totals (1889 to 1997)

Colorado Climate Center  
(970) 491-8545

SEP 12 1997

Colorado  
State  
University

Office of the President  
for Administrative Services

Department of  
Atmospheric Science  
Fort Collins, Colorado 80523-1371  
(970) 491-8360  
FAX: (970) 491-8449

September 11, 1997

Linda Wardlow  
c/o Gerard Bomotti's Office  
Vice President for Administrative Services  
309 Administration Building  
Campus Mail

Here is a list of the greatest 1-day, and 2-day precipitation totals 1889-present as measured at the CSU Campus Weather Station. Also, I enclosed a few of the heaviest short-duration storms that we identified in a study a few years ago following a severe June downpour. Please note that in any storm such as the rain of July 28, 1997, here in the Fort Collins area, there are almost always going to be areas that receive more and less precipitation than at the campus weather station. Also note that these records are for 24 hour periods ending at 7 p.m. MST. Because of this, some storms that occurred during the evening hours may be split into two days, even though they may have only lasted a few hours. This is why we also provide 2-day rainfall totals for comparison.

**1-Day Precipitation Totals**  
(totals in inches for 24 hours ending at 1900 MST)

Rank	Amount	Date
1)	4.63"	7/29/1997
2)	4.43	7/25/1977
3)	4.34	9/21/1902
4)	3.54	9/3/1938
5)	3.54	6/4/1949
6)	3.48	3/6/1990 (this was predominantly snow)
7)	3.21	5/13/1961
8)	3.06	8/3/1951
9)	3.02	5/2/1904
10)	3.01	8/4/1951
11)	2.98	7/10/1918
12)	2.97	5/13/1982
13)	2.85	6/8/1974
14)	2.71	6/17/1965

**2-Day Precipitation Totals (inches)**


Rank	Amount	Date
1)	6.22"	9/20-21/1902
2)	6.17	7/28-29/1997
3)	6.07	8/3-4/1951
4)	4.76	7/24-25/1977
5)	4.68	9/2-3/1938
6)	4.09	5/12-13/1982
7)	3.83	3/6-7/1990 (primarily snow)
8)	3.80	5/2-3/1904
9)	3.73	6/3-4/1949
10)	3.70	5/21-22/1901

**Greatest Short-Duration Rainfalls (not in ranked order)**

9/3/1938	intensity unknown, but remarks indicate high intensity rain West of Fort Collins. Very heavy rains ("cloudbursts") were reported again one week later west of town (near Masonville).
8/3/1951	1.62" in one hour, 2.59" in 2 hours (3+ inches of rain had already fallen the previous day).
8/18/1961	2.33" in one hour, 2.45" in 2 hours.
6/17/1965	2.31" in one hour, 2.41" in 2 hours.
8/3/1988	1.2" in less than 15 minutes, 1.45" in 2 hours.
6/24/1992	2.30" in one hour, 2.49" in 2 hours -- probably undermeasurement due to hail and high wind. Adjacent gauge without inside funnel measured 2.97".
7/28/1997	2.31" in one hour, 3.78" in 2 hours, (flood waters damaged recording raingauge chart, so these values were estimated from Fischer-Porter recording gauge in combination with storm total from standard manual raingauge). Much heavier rainfall was known to have fallen immediately West and Southwest of the campus weather station.

Also enclosed is a packet of preliminary information on the rainfall that was distributed to various community users.

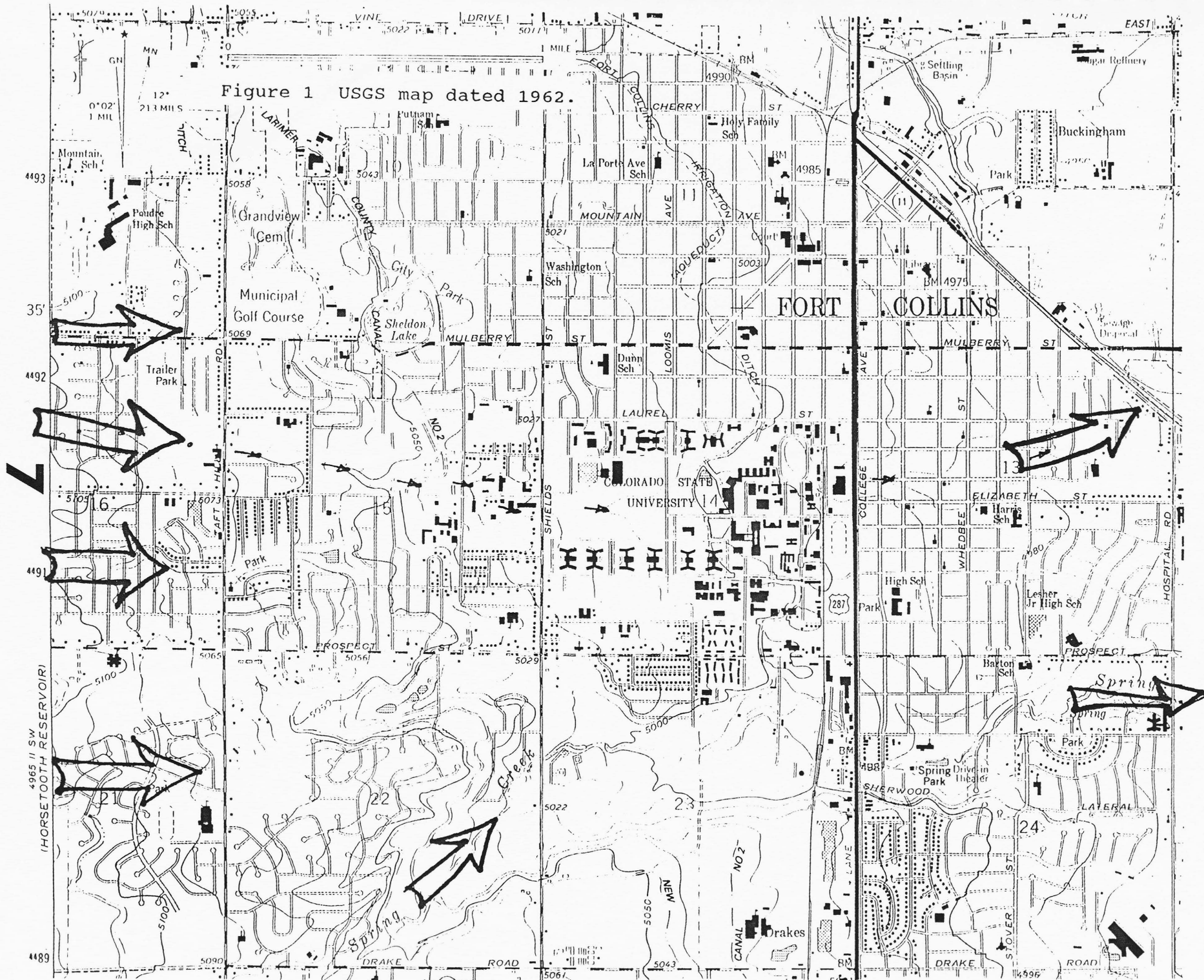
Let me know if you need additional information.



Nolan J. Doesken  
Assistant State Climatologist



Figure 1 USGS map dated 1962.



# AGRICULTURAL FRONTIER TO ELECTRONIC FRONTIER:

## A HISTORY OF COLORADO STATE UNIVERSITY

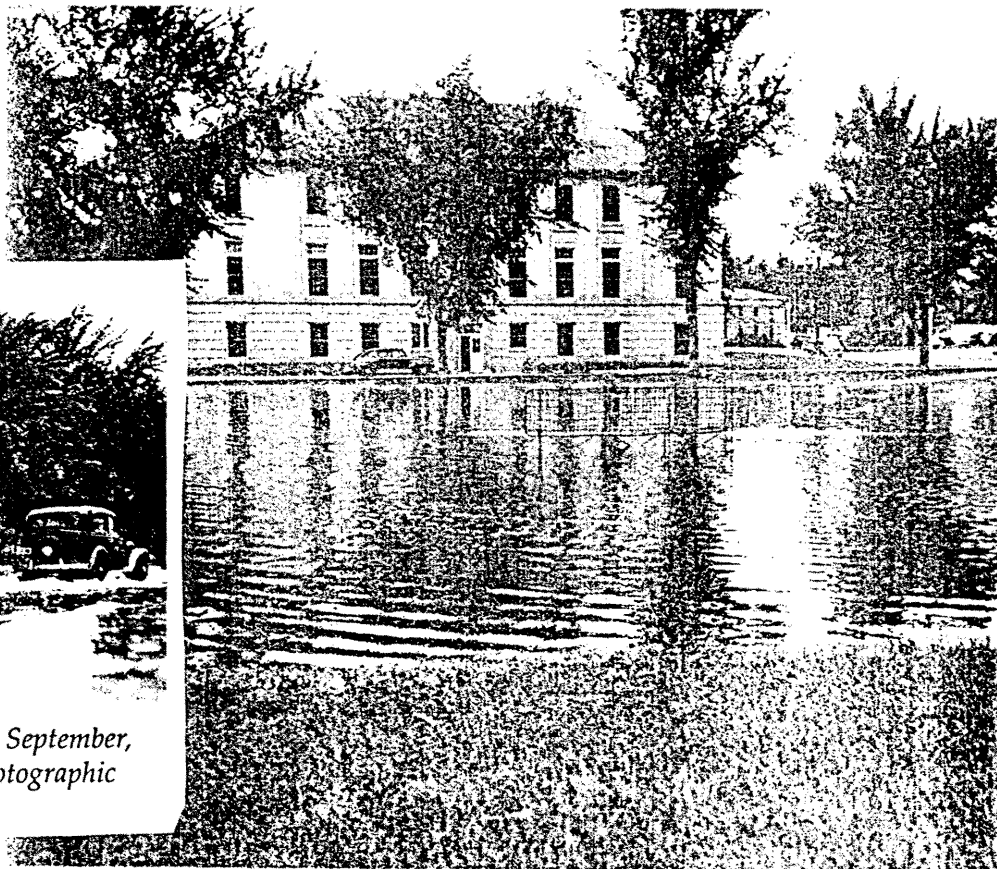
### LIBRARIES, 1870-1995

*Douglas J. Ernest*



From 1938 through 1945, librarians at A&M participated in three events of more than ordinary significance. First, on September 2, 1938, flood waters washed across the Oval after a severe storm dumped up to five inches of rain in the Fort Collins area. Although Charles Lory announced that overall damage was light, certain buildings, most notably the college museum, did suffer from the inundation. The library itself at one time had water to five feet in depth, with pumps running to keep the level from rising. Years later, Makepeace remembered that water came up to the second level on the main floor and that damaged books were dried by placing paper towels between the pages. Given the extent of flooding, losses were surprisingly light; but the episode gave librarians cause to reflect. The location of the building, between the Oval—originally a swamp—and the Arthur's Ditch irrigation canal to the west, was perhaps not the best.<sup>42</sup>

The second event was more pleasant. In 1941, the library celebrated the acquisition of its 100,000th volume.



*The Oval inundated by flood waters, September, 1938 (Colorado State University Photographic Services)*

*Flood waters, August, 1951 (Colorado State University Photographic Services)*



Shortly before the encounter with David Morgan, the library staff struggled with an equally stressful episode, a flood similar to that of September 1938. Early in August, heavy rains culminated in a cloudburst that sent water surging across the Oval. A student passing by noticed water threatening the library about 2:00 A.M. and called Dean Morgan, who, in turn, rang Hodgson. The latter drove to the library, assessed the situation, then roused Makepeace and had her phone dormitories and fraternities to obtain student volunteers to move books. Hodgson then returned to campus, where he flagged down a motorist who notified campus engineer Harry Hepting of the impending disaster. Hepting appeared with a crew of workers about the time that Makepeace, having failed to assemble any students on such short notice, arrived on her own recognizance. Hepting's crew rigged emergency electrical lines to power pumps, while simultaneously moving books from the lowest shelves in the basement. When morning came, students were hired to reshelve additional books, but Hepting's pumps worked efficiently enough to remove almost all of the water within thirty-six hours. Thanks to this quick work, the damage to library materials was minimized despite the severity of the storm, which killed several people in Larimer County.<sup>15</sup>

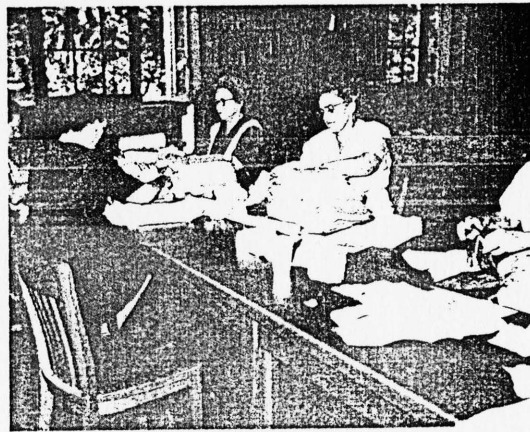


Though the main library escaped intact, the Electrical Engineering Department library and the Veterinary Medicine branch were not so fortunate—flood waters in both kept some books immersed for as long as thirty hours. Irene Coons mobilized library staff, private citizens (sought as volunteers through radio announcements), Girl Scouts, and members of the Veterinary Medicine School in a “drying party.” Many items were salvaged, though slightly more than two thou-

*James Hodgson, August, 1951 flood  
(Colorado State University Photographic Services)*

sand dollars worth of books from all three libraries eventually had to be written off.<sup>16</sup>

Hodgson found one piece of humor in this event. The night of the flood, a college photographer caught Hodgson moving library books barefoot and with his pants rolled up. The resulting photo appeared in the local newspaper, prompting a faculty member to remark, “Jim didn’t have his pants rolled up far enough.” The library director could only respond, “Just why should SHE be interested in my legs.”<sup>17</sup>



*Book drying “party,” August, 1951 (Colorado State University Photographic Services)*

The flood was cause for sober reflection, however. The water table was so close to the surface in the Oval that seepage in the library basement had begun as early as 1936 and worsened after the 1938 flood. The 1951 deluge cracked the basement floor, making the building even less waterproof. At some point, a new building would have to be constructed on a less-hazardous site.<sup>18</sup>

# APPENDIX A

CAMPUS FLOOD OF SEPTEMBER 20 AND 21, 1902  
(NO REPORTED DAMAGE - 6.22 INCHES RAIN IN 48 HOURS)

Very few structures west of the railroad.

Mechanical Building (Industrial Sciences), Commercial, and Horticultural Hall only buildings West of railway tracks.

Buildings around Oval not yet built.

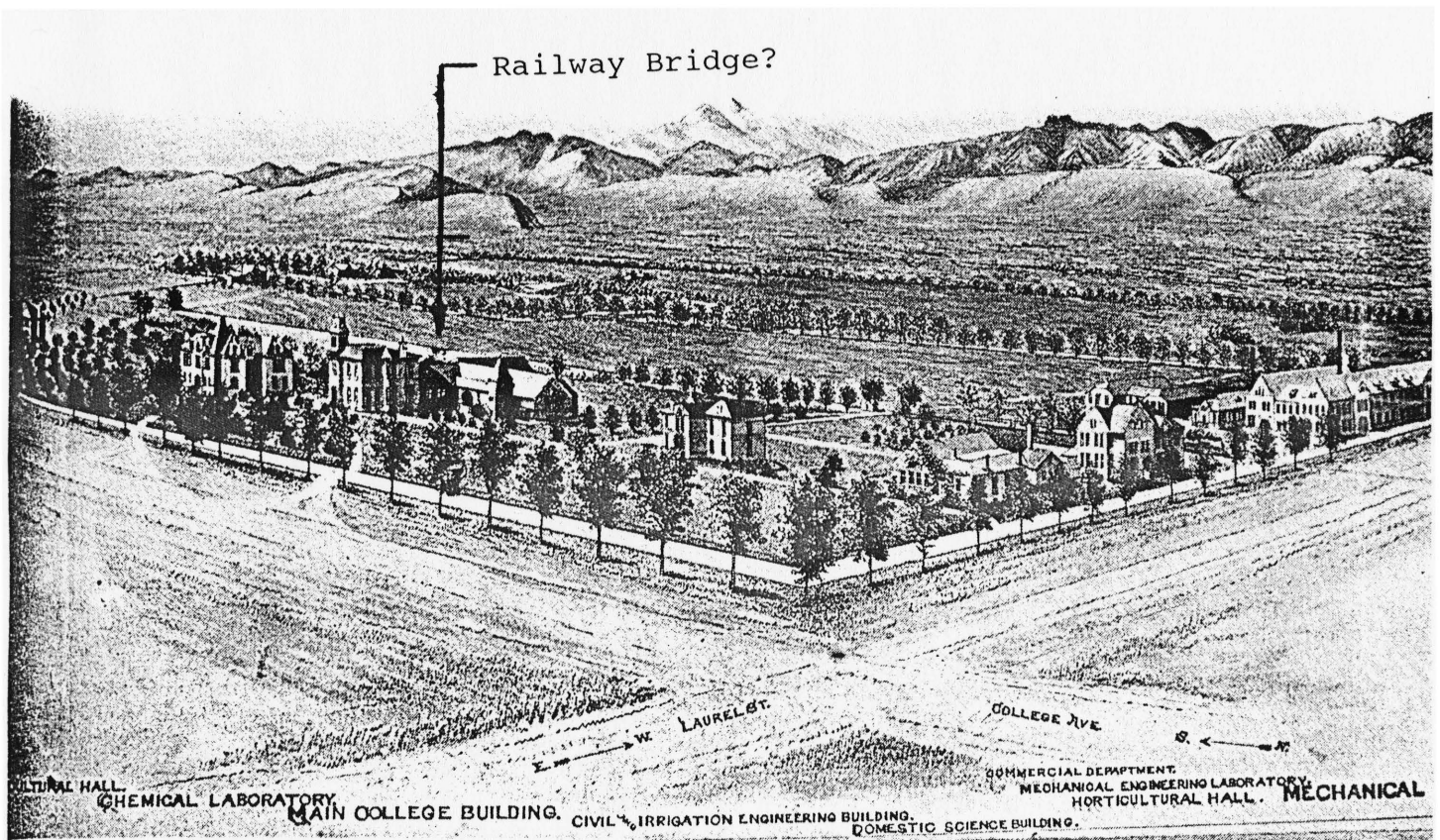
Electrical Engineering (Gibbons) Building not yet built.

Heating Plant not yet built.

Physics (Occupational Therapy) Building not yet built.

Library (Music) Building and Johnson Hall not yet built.

The Railroad fill (East of the Oval) probably had a wooden bridge or culvert in 1902 to drain the low area which is now the Oval. Picture taken in 1929 shows Heating Plant and concrete tunnel under railway. (The current pedestrian tunnel was constructed around 1925).



Artist's view of Agricultural College Campus c.1895.

FORT COLLINS YESTERDAYS by Evadene Burris Swanson, 1975

# THE DAILY NEWS:

DENVER, COLORADO.

MONDAY, SEPTEMBER 22, 1902.

Special to The News.

FORT COLLINS, Colo., Sept. 21.—The rain which commenced falling here yesterday at 4:30 o'clock continued to come down steadily all last night, and kept up its work until late this afternoon, making twenty-four hours of rain, which amounted to six and a quarter inches. This is the heaviest rainfall for one day that has occurred here since the agricultural experiment station commenced keeping records. The farmers are happy. The ground is in fine shape for fall plowing, and the immense sugar beet crop will be easily gathered because of the ground being wet deep down.

The reservoirs were able to catch considerable flood water. Fossil creek reservoir, by reason of its large watershed, caught more water than any other reservoir. From 5:30 o'clock yesterday evening to 4:30 o'clock to-day the water in this reservoir measured fourteen feet, which amounts in round numbers to not less than 44,000,000 cubic feet of water. Fossil creek is now running into the reservoir about 500 cubic feet of water per second, and if no more rain falls to-night the water in the reservoir will measure nineteen feet by morning.

LOVELAND, Colo., Sept. 21.—We have had a steady downpour here for nearly twenty-four hours. This steady soaking rain will be a great help to farmers in digging their beets, as the ground was so hard they could hardly work it. It will also help the fruit growers in putting down their raspberries. The roads were getting to be very dusty.

ROCKY MOUNTAIN COLLEGE, Vol. 12, No. 1, Monday October 6, 1902, pp 6 & 9.

SOCIETY NOTES THE COLUMBIAN LITERARY SOCIETY

"On September 20th (1902), few of us caring to swim, and boats being scarce, there was no meeting. Last Saturday night, the first since the flood,...." p6.

"The rainfall on the 20th, 21th and 22d amounted to 6.84 inches. This is nearly half the annual rainfall." p9.



# WORST SEPTEMBER STORM IN 31 YEARS

## CLOUDBURST AT BELLEVUE— CACHE LA POUDE RAGING

Fort Collins, Colo., Sept. 20.—Fort Collins and vicinity received a thorough soaking this afternoon and evening, settling the dust, which had interfered with mountain travel, in all directions. No great damage was done to crops in this vicinity.

A cloudburst is reported at Bellevue, seven miles northwest of Fort Collins. The Cache La Poudre river is raging tonight as a result and many irrigating ditches overflowed and burst and a number of bridges across them were wrecked. Beets and onions on the river bottom at Bellevue suffered greatly.

## WEATHER PROPHET SEES NO SPECIAL SIGNIFICANCE

All previous September weather records in Denver have been broken by the unprecedented fall of moisture since Saturday evening. Never since the establishment of the local weather bureau, thirty-one years ago, has there been such a wet September. The precipitation during the past forty-eight hours was 2 inches and 73-100. Since the storm began Saturday evening the downfall has been incessant. This is an exceptional occurrence at any time except during the spring months.

"There is no special significance in the storm," said F. H. Brandenburg, the local weather forecaster. "The conditions were favorable to an extended storm, which is liable to occur at any time. The main reason it has clung here so persistently is that there has been a continued low pressure in the Texas Panhandle, but a rise in the temperature has been reported and the storm will blow over here either this afternoon or evening."

Much benefit has been derived throughout the state from the rain. There seems to be no doubt but that every forest fire in Colorado and Wyoming has been extinguished. The timely precipitation not only saved millions of feet of valuable timber, but it also assured an adequate water supply to the city by saving the watersheds which were threatened with destruction. The fires that were not completely obliterated by the rain were checked to such an extent that the government rangers quenched them. A four-inch fall of moisture was reported from Boulder and its vicinity. Cheyenne received 3 inches and 16-100, and nearly every point in the state reports a heavy fall of moisture.

"Besides suppressing the forest fires," said Mr. Brandenburg, "it will replenish the water supply in the ground. The last season was so dry that nearly all the ground water was used up, so that while it came too late to help the farmers this season, still it is an excellent thing for the soil. During the past twenty-four hours rain has fallen on the middle eastern slope, in Texas, Oklahoma, the middle Missouri valley and the upper Mississippi valley."

The next wettest September was in 1875, when 2.89 inches of precipitation fell during the month, slightly in excess of what has fallen in the past forty-eight hours. The next greatest is September, 1896, when 1.81 inches fell during the thirty days.

"There have been a great number of rainstorms," said Mr. Brandenburg, "during the spring season which have continued for several days successively and when the moisture was in excess of this, but, as I remarked before, this is the first September storm of such magnitude."

## LAST SATURDAY'S STORM A RECORD BREAKER.

The drouth is most effectually broken. The forest fires have been extinguished the dust laid, the earth's all pervading thirst satisfied and the people generally are happy. The tremendous down pour of rain on Saturday and Sunday did it all just as easy as going to sleep. It was a record breaker. No such fall of water during two September days can be recalled by the oldest old-timer. But the down pour was needed and a most welcome visitor when it came.

The heavens began to cloud over about the middle of the afternoon on Saturday. Later the clouds grew denser and blacker and peal after peal of thunder gave warning that something was going to be doing and that right soon. The warning did not hold out false hopes. The rumbling resembling threats of heaven's artillery were redeemed and carried into execution. The storm broke in full fury about 5 o'clock in the evening, and the rain came down in sheets. Between that hour and 7 o'clock on Sunday morning, over 4 inches of water fell, and at 12 o'clock Monday noon the instruments at the agricultural college registered a total precipitation of 6.84 inches during the storm.

For over an hour on Saturday evening the rain came down in torrents, flooding the streets and converting them into veritable rivers. Water in the streets was a foot deep in places and getting about without wading was an impossibility. Here in the city, beyond flooding a few cellars but little damage was done. The country west of town, however, fared worse. At Bellvue a cloud-burst is reported. The water ran down through the principal street of the village in a solid mass three feet deep, carrying away ditch banks, bridges, culverts and everything loose. A number of houses were flooded and women and children had to be carried out of them. About \$100 worth of lumber and posts belonging to Mr. Robbins, the Bellvue storekeeper, was carried away by the flood and scattered all over the surrounding country. The most of this can be recovered.

S. E. Tilton of Bellvue, lost the most of his onion crop. The onions had been pulled and topped and were lying in piles in the field ready to be hauled away. The water covered the field and carried the crop off and hid it under mud and debris. It is reported also, that Mr. Geo. Bear lost a good share of his crop of onions.

The rush of water down through Bellvue filled the river with a mixture of mud and moisture and this has been coming into the city mains, much to the disgust of housekeepers and others.

The river is still carrying a good volume of water, which is running into the storage reservoirs.

THE EVENING COURIER (Fort Collins, CO) Tuesday September 23, 1902 p1

### CAMPUS

On account of the muddy condition of the campus Monday, the cadets were drilled in giving commands in the armory.

### Bellvue.

From our Special Correspondent.

Sept. 21.—A heavy rain storm struck Bellvue Saturday, washing out the roads and doing a great deal of damage. The Rist Canon road is completely washed out. It is impossible for a horse to get up over the road. Those living back in the mountains will be obliged to come out on foot for some time.

# THE EVENING COURIER.

FORT COLLINS, COLORADO, THURSDAY, SEPTEMBER 25, 1902.

The college library now contains more than 15,000 volumes, nearly all of which are stored in three small rooms. Every inch of space available is used; shelves over the windows and doors; great stacks higher than one's head piled with books occupy most of the floor, and yet every book has a definite place and all are arranged according to the regular system. The service in the library is the best that it has ever been and the students are coming to use it more freely. This library is being developed into one of the finest scientific libraries in the west.

THE EVENING COURIER (Fort Collins, CO) Saturday September 27, 1902

At the last meeting of the state board of agriculture held on Thursday, it was almost unanimously decided to introduce a complete course of electrical engineering into the course of studies at the agricultural college. A new and substantial building will be erected as soon as possible and all of the necessary equipments will be in place ready for the opening of college, September 1, 1903. The size and cost of the building have not been decided upon, but it was deemed advisable to provide amply for the rapid growth which the college is experiencing.

It was also decided by the board to locate in this building a central heating plant for the entire college, thus economizing in the amount of fuel and labor required in heating the college buildings.

The question of putting in an electric light plant for the college was favorably discussed. If this is done there is no doubt but that it will be placed in the new building in connection with the electrical course. Besides being a means of economy, the lighting plant would be of great practical value to the students. The new building will be located just west of the railroad track and south of the new lavatory.

The definite action of the board in the matter of the electrical course was brought about by the constant requests of college students to have such a course established. The question had been pending for eight years or more, but the board felt unable to push the matter on account of lack of funds, but at last the requests of the students became so numerous and urgent that the authorities felt it advisable to go ahead.

With the addition of this new course, the agricultural college will furnish eight complete courses of study, namely: civil engineering, ladies' course, mechanical engineering, commercial, veterinary, agricultural, architectural, and electrical engineering. Military science is made a special feature. The study of French, German and Spanish have already been introduced and Latin and Greek are taught, although not required by the college. An extra year has been added to the courses leading to B. S. degree, so that high school graduation is required for entrance to the freshman year. With this new addition the college will afford the most complete course of studies along the line of agriculture and the mechanic arts to be found in the west.

# APPENDIX B

## CAMPUS FLOOD OF SEPTEMBER 2 and 3, 1938

Flood damage exceeds \$10,000 (1938 dollars) – 4.68 inches of rain in 48 hours, 3.07 inches overnight

### Six buildings and Oval flooded

**Heating Plant:** 11 feet water depth in basement, 6 inches above ground floor

**Physics Building:** water five feet deep in basement

**College Avenue Gym/Field House:** flooded

**Museum:** flooded; photos indicate water depth greater than 3 feet on first floor

**Library:** basement flooded five feet deep

**Johnson Hall (Student Union):** flooded several feet deep

### Steam Tunnels: flooded

Phone and electrical out throughout campus

The current pedestrian tunnel under the railroad tracks was constructed around 1925. A photo taken in 1929 shows a concrete tunnel under railway fill east of Heating Plant. Concrete tunnel probably replaced wooden bridge or culvert that was installed when railway was constructed.

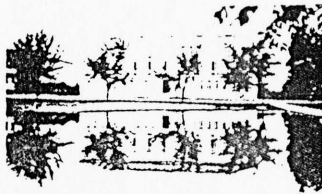


*Photographic Services Archives*

Oval (after flood).

Yes - It rains in Colorado  
- sometimes

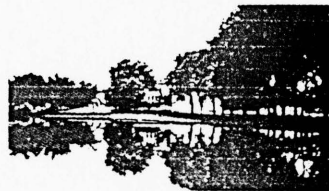
## The Flood on the Campus September, 1938



Library



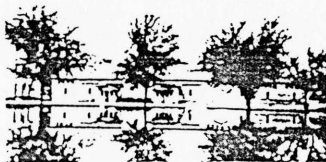
Veterinary Bldg.



Administration Bldg.



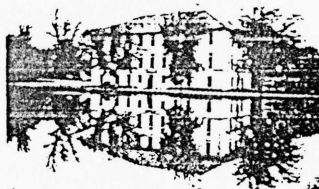
Heating Plant - Smokestack  
(This shows how far the  
Smokestack "goes" into  
the ground)



Cafeteria



Ammons Hall



Physics Bldg.

*Photographed by President and Mrs. Lory - 6 a.m. - September 4, 1938*

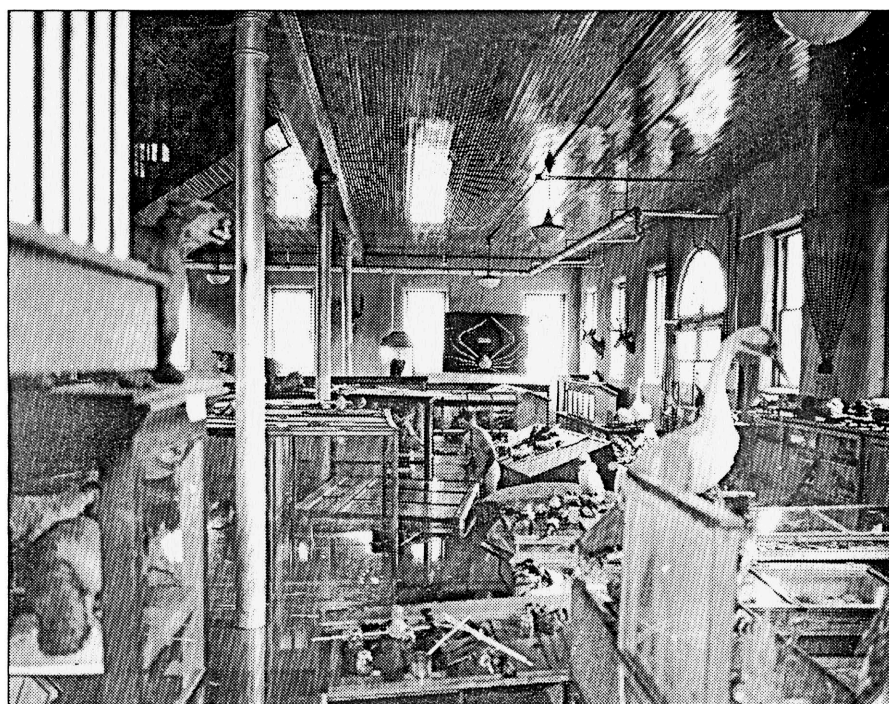
(Photographic Services Archives)





*Photographic Services Archives*

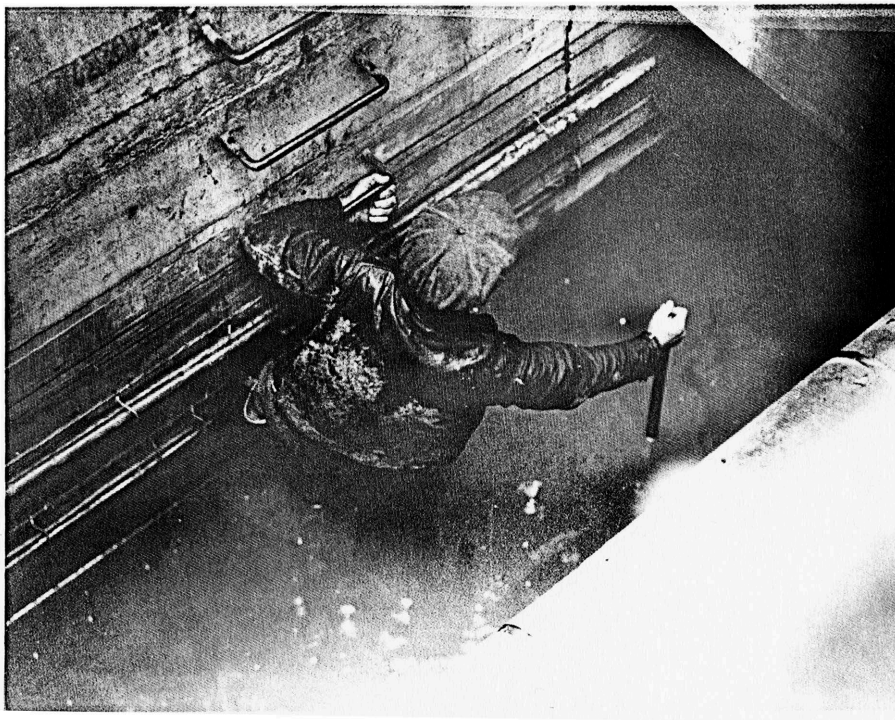
Museum (Gibbons) and Heating Plant (after flood).



*Photographic Services Archives*

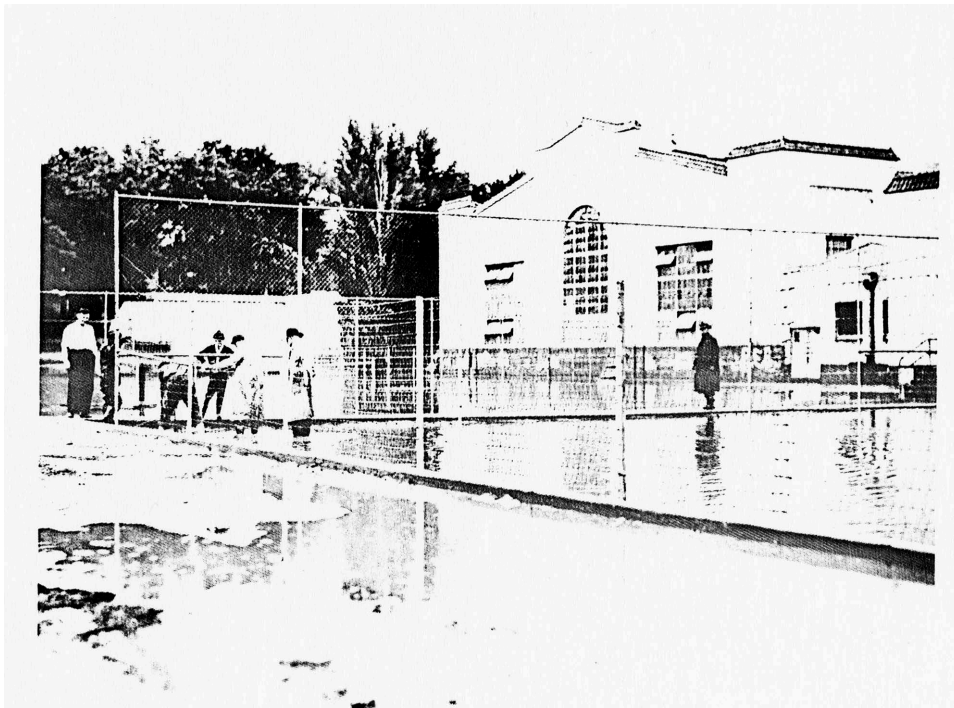
Museum (after flood).

September 2 and 3, 1938 Campus Flood



(Photographic Services Archives)

Steam Tunnel (after flood)



(Photographic Services Archives)

College Avenue Gym (after flood).

September 2 and 3, 1938 Campus Flood



VOLUME XLVIII

## Worst Flood In History Of College Stops Power Service And Inundates Buildings On Colorado State Campus

Many Valuable Exhibits In Museum Are Completely Soaked By Five Feet Of Water And Curator M. T. James Estimates Loss At \$10,000

Northern Colorado's worst flood since 1902 struck the Aggie campus Friday, September 2, disrupting telephone and light service and damaging campus property to an extent which has yet to be determined, according to E. G. Whitehead, building superintendent.

The heating plant, museum, physics building, library, and entire oval were inundated about five o'clock Friday afternoon when the irrigation ditch in the pasture to the west of the campus was swollen beyond its capacity by the cloudburst and overflowed its banks.

Damage to the college buildings will not be as much as was anticipated at first, according to Mr. Whitehead although no real estimate can be made until the flooded buildings have been completely dried out and the floors examined.

Mr. M. T. James, curator at the Aggie museum, placed a tentative value of \$10,000 on the property destroyed in his building. Five feet of water filled the exhibition room completely soaking many of the specimens, although some of the most valuable exhibits, such as the three seals, floated on the water.

The animals and birds have all been removed to the upper floor

of the museum, the cafeteria, and the basement of Old Main. Skins have been spread out to dry and will have to be remounted if they can be saved at all. Many of the records of specimens have been lost thus making reidentification necessary, according to Mr. James.

Water stood eleven feet deep at one time in the basement of the heating plant, completely filling the heat tunnels and cutting off the telephone and light service in some parts of the campus from Friday until Tuesday. Much of the telephone cable was ruined by the water but the light wires were so laid that they suffered no appreciable damage.

Pumps were run all day Saturday in the Physics building Library where the water reached depths of five feet. The pump-house behind the library had to be pulled out and engine removed because it was under water. Pulleys were hooked to the pump and run by a tractor which was driven onto the tennis courts house.

Most of the damage has been repaired already and the campus will be ready for class next week, according to Mr. Whitehead.

# LOSSES IN FLOODS

## Fort Collins Express-Courier

ESTABLISHED 1873

FORT COLLINS, COLORADO,

SUNDAY MORNING,

SEPTEMBER 4, 1938

5 CENTS

### 6 Dead, Others Missing as Floods Wipe Out 2 Resort Towns, Damage Roads of East Slope

#### Heavy Rains Flood Wide Area

None of the excessive water came from the Cache la Poudre river, freshets from smaller canons and run-off from hillsides being responsible for the damage. In the Poudre valley's last serious flood in 1923, damage was done by water from the river.

#### College, Farm Areas, Bellvue, Hatchery Hit Hardest in Storm

E. G. Whitehead, Colorado State college building superintendent, with a crew of eight men worked all night Friday, attempting to save specimens from the college museum and abate other flood damage.

#### Ten Feet of Water in Heating Plant

Ten feet of water was reported in the heating plant, the gymnasium and field house were flooded, and there was five feet of water in the physics building basement. Pumpers at the physics building, where the water was within two feet of the main floor, were able to gain only about an inch an hour on the water level there.

Heart-broken were the only words to describe Maurice James, curator of the Colorado State college museum, as a result of damage there from water. The Osterhout bird collection, including 600 skins and mounted specimens of birds of the Rocky Mountain region were floating in five feet of water. Among other things in the museum was a copy of the first edition of the Fort Collins Express, published April 26, 1873, the only copy known to be still in existence, but it came through without damage, being a foot above the water.

"We are unable to estimate the extent of the damage to electrical equipment at the college," H. G. Jordan, professor of electrical engineering said Saturday.

"The electrical equipment in the central heating plant, the basement of the men's gymnasium, and the museum is submerged. Our underground transformers and high tension cables are sheathed in lead which should be protection in normal circumstances, but these are not normal circumstances, and we just can't say."

"We do know that the telephone and electrical system are disrupted. Whether the damage to the equipment is disastrous or insignificant we can't tell until the first of the week."

It was believed that if the lines were soaked through it would take 30 days to restore service, and that temporary lines might have to be established.



September 7, 1938

# LOSSES IN FLOODS ARE HEAVY HERE

## Fort Collins Express-Courier

ESTABLISHED 1873

FORT COLLINS, COLORADO,

SUNDAY MORNING,

SEPTEMBER 4, 1938

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#### Heavy Rains Flood Wide Area From Wyoming Line to Pueblo

Damage to Big Thompson Canon Highway Estimated At \$100,000—Many Other Roads Badly Cut Up—Greeley Authorities Expect Flood Crest Today

Survey by Associated Press

Flood waters that virtually destroyed two mountain resort towns in central Colorado, did thousands of dollars damage to highways and bridges, and left at least six persons dead, moved onward Saturday night along the eastern slope of the Rockies.

Heavy rains continued in most sections and rivers and creeks continued flowing bankful in several places.

With the recovery of six bodies, CCC and WPA workers were to join volunteers at daybreak Sunday in a foot-by-foot search of Bear creek canon southwest of Denver for additional victims of the double cloudburst of Friday night.

At the same time WPA workers were to resume the gigantic task of mopping up wreckage left at Morrison, resort town 15 miles southwest of Denver that was almost completely wiped out by the swift waters.

ELDORADO SPRINGS BUILDINGS TORN AWAY

That center of 100 permanent residents was hardest hit by floods that covered a front of more than 20 miles on the eastern slope of the Colorado Rockies.

Eldorado Springs, famous mountain recreation rendezvous for more than a quarter of a century, suffered widespread damage when caught in swirling waters of South Boulder creek.

From 15 to 20 homes in the community of 200 residents were torn away. A large dance pavilion, swimming pool, and several commercial buildings were destroyed.

Initially, in Bear creek canon above Morrison, lost several homes in the flood.

Jefferson county officials said Saturday night it was possible others died in the Bear Creek flood, which hurled down the canon at a terrific rate, fed by two successive cloudbursts that

#### The Weather

COLORADO—Partly cloudy and warmer Sunday, local showers east portion, Monday partly cloudy.

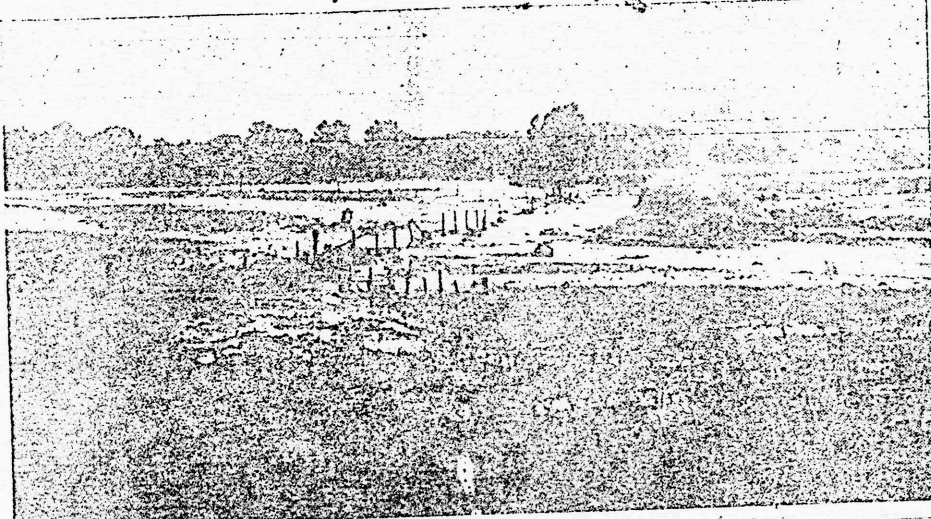
daughter, Georgia, 14, missing Saturday night, met death in the flood that killed her mother. She was known to have been riding with Mrs. Goodrich in an automobile when the latter met her death.

Heavy rains were reported over a wide area from near the Wyoming line south past Denver, Colorado Springs and Pueblo. Rain still fell over a larger part of the area Saturday night, but authorities expressed confidence serious flood damage was past unless new cloudbursts came.

The Griggs creek and the Pass districts west of Colorado Springs were isolated Saturday night.

Several principal highways that were blocked by rock slides

Dry Creek Becomes Torrent



Dry creek immediately south of Bellvue, ordinarily as dry as its name implies, became a torrent Friday afternoon when drenching rain sent the Highline ditch over its bank west of the village. Here the water is shown spreading out over the flats before flowing into the Cache la Poudre river. Hogs belonging to C. O. Brubaker were swept from a lot at the extreme right of this picture. (Staff photograph and engraving.)

#### Electric Rates Here 4th Low

Fort Collins electric rates for householders are fourth lowest in Colorado, figures compiled by C. L. Flower, Public Utilities commission rate engineer, show.

A customer who uses 50 kilowatt hours a month gets it for \$1.50 in Fort Collins. Lower rates prevail in Fort Morgan, where 50 kilowatt hours cost \$1.25, Colorado Springs, \$1.45, and Englewood, \$1.50. Fort Collins, Colorado Springs, and Fort Morgan have municipally owned and operated light plants.

Prices in other towns, where

#### Orin Smith, Swept Into Lake By Wall of Water, is Rescued

The story of how a man was swept one-fourth mile by a wall of water that rushed through Dixon canon, eight miles southwest of Fort Collins late Friday night and how he clung for life on a tree in a reservoir at the base of the canon for three hours was related Saturday night.

#### Business Gain Largest Here

Records from the bureau of foreign and domestic commerce in Washington, D. C. show that Fort Collins reported the largest gain from June to July in retail sales in dollar volume of any city in Colorado.

Retail sales of 152 independent stores in Colorado revealed a decrease of 15 percent for July, 1937, as compared to the same month. Fort Collins showed an increase in July sales as compared to those of June of 201 percent, the biggest gain in the state.

### College, Farm Areas, Bellvue, Hatchery Hit Hardest in Storm

Receding flood waters Saturday left the Fort Collins region bedraggled and seriously damaged in scattered spots.

Some of the places where uncontrolled waters struck were the Colorado State college campus, Bellvue, the state fish hatchery south of Bellvue, Soldier canon, the No. 10 district, and Spring canon.

None of the excessive water came from the Cache la Poudre river, fishets from smaller canons and run-off from hillsides being responsible for the damage. In the Poudre valley's last serious flood in 1923, damage was done by water from the river.

With exactly five inches of rain measured at the Colorado State college weather station from the start of the storm about 4 a. m. Thursday until 7 p. m. Saturday, 63 hours, rain continued and the weather forecast for the state was "partly cloudy and warmer Sunday, local showers east portion, Monday partly cloudy."

All precipitation records for September except 1902 had been exceeded and the total rainfall since Jan. 1 had been brought to 15.30 inches as compared to the 50-year average of 14.70 inches for an entire year.

In 1902, 6.81 inches of rain fell in 48 hours between Sept. 20 and 22. The month's rainfall in that year was 7.12 inches. September, 1938, now has exceeded all others in total rainfall, the next highest being September, 1916, when the month's total was 3.23 inches. Records are complete for the last 50 years.

#### Peak of Poudre is 1,700 Feet

The Cache la Poudre river reached a peak flow of 1,500 second-foot at 1 p. m. Saturday after mounting steadily through the night and morning. Flood stage is not reached until more than 5,000 second-foot fill the river. Rain was reported all the way up Poudre canon.

Reservoirs of the region "picked up" enough water to considerably brighten the storage outlook for next year, irrigation authorities reported. Although almost all ditches had to be shut off at the river to keep them from breaking their banks, drainage kept most of them full.

No accurate estimate of the amount of water added to storage in reservoirs was available, but the region will go into the winter with considerable water in storage, something it has not had in the last several years of drought, it was pointed out. Many water users will not irrigate further this season as a result of the heavy rain.

Water was being stored in Douglass and Fossil Creek reservoirs Saturday.

The Big Thompson flow was 4,000 second-foot through Loveland Saturday, the largest flow on record other than for "flash" floods. The Little Thompson flow was 1,500 second-foot but was swelled as it neared Johnston to an estimated 4,000 second-foot. It was reported 200 yards wide southeast of Johnston.

Flood lands, dumps, and farm land at the southwest edge of Loveland were under water and water spread over flat land west of Loveland.

The report that the Buckhorn reservoir was at the breaking point was found Saturday to be erroneous. Loveland sources declared there was no danger of its breaking.

E. G. Whitehead, Colorado State college building superintendent, with a crew of eight men worked all night Friday, at



mountain recreation resorts for more than a quarter of a century, suffered widespread damage when caught in swirling waters of South Boulder creek. From 15 to 20 homes in the community of 200 residents were torn away. A large dance pavilion, swimming pool, and several concession stands were destroyed.

Ibidale, in Bear creek canon above Morrison, lost several homes in the flood.

Jefferson county officials said Saturday night it was possible others died in the Bear Creek flood, which hurled down the canon at a terrific rate, fed by two successive cloudbursts that were quickly emptied by steep gullies into the flooded creek.

Bodies recovered and identified Saturday night were:

Thomas H. Clennan, Denver political figure and former county jail warden; Mrs. Clennan, their two grandchildren, 9-year-old Thomas Clennan and Barbara Pedley, 10, both of Denver.

Mrs. Cecil Goodrich, of Evergreen, Colo., a real estate operator.

Mrs. Kathleen Boyd, 30, wife of a Louisville, Colo., physician.

Officers feared Mrs. Goodrich

flood that killed her husband, was known to have been riding with Mrs. Goodrich in an automobile when the latter met her death.

Heavy rains were reported over a wide area from near the Wyoming line, south past Denver, Colorado Springs and Pueblo. Rain still fell over a large part of the area Saturday night, but authorities expressed confidence serious flood damage was past unless new cloudbursts came.

The Cripple Creek and Ute Pass districts west of Colorado Springs were isolated Saturday night.

Several principal highways that were blocked by rockslides and washouts were opened Saturday. The main roads remaining closed Saturday night were:

The Big Thompson canon highway in northern Colorado.

U. S. Highway 83 between Pierce and Nunn on the Denver-Cheyenne road.

U. S. Highway 285 in the Morrison vicinity.

The highway department reported U. S. 87 through Long.

Concluded on Page 6, Col. 3

### Temperatures

#### IN FORT COLLINS

Friday maximum 71; mean 61.2; normal mean 63.4; Saturday minimum 54.0; maximum 69.5; mean 57.3; normal mean 61.3.

Readings taken from the Express-Courier's recording thermometer:

Friday		Saturday	
2 p. m.	72	2 p. m.	55
4 p. m.	66	4 p. m.	56
6 p. m.	57	6 p. m.	55
Saturday		Saturday	
2 a. m.	53	2 p. m.	58
4 a. m.	53	4 p. m.	56
6 a. m.	53	6 p. m.	57
8 a. m.	55	8 p. m.	56
10 a. m.	55	10 p. m.	57
12 noon	56	12 m.	57

Fort Collins electric rates for householders are fourth lowest in Colorado, figures compiled by C. L. Flower, Public Utilities commission rate engineer, show.

A customer who uses 30 kilowatt hours a month gets it for \$1.50 in Fort Collins. Lower rates prevail in Fort Morgan, where 20 kilowatt hours cost \$1.25, Colorado Springs, \$1.45, and Englewood, \$1.50. Fort Morgan, Colorado Springs, and Fort Collins have municipally owned and operated light plants.

Rates in other towns where the plants are municipally owned are higher. Loveland being eleventh from the standpoint of low rates on a list of both public and private plants with a price of \$2.29 for 20 kilowatt hours. Longmont is 17th at \$2.40, and Lamar is 18th at \$2.50.

Denver Fifth

Denver, supplied by the Public Service company, is fifth on the list. Its price of \$1.50 for 20 kilowatt hours is the same as Fort Collins but its rates for heavier users is higher.

A householder who uses 50 kilowatt-hours a month—the class which may run a washer, range, refrigerator, irons by electricity in a fairly large house—buys his current for \$1.75 in Fort Morgan, \$2.35 in Colorado Springs, \$2.50 in Englewood, \$2.70 in Fort Collins, and \$2.90 in Denver.

A householder who uses 100 kilowatt-hours a month pays \$2.75 in Fort Morgan, \$4.00 in Colorado Springs, \$4.25 in Greeley, \$4.21 in Boulder, \$4.66 in Sterling, \$4.10 in Fort Collins, \$5.19 in Longmont, \$4.35 in Loveland, \$5.15 in Englewood, and \$5.40 in Denver.

the extreme right of this picture. (Start photograph and engraving.)

## Orin Smith, Swept Into Lake By Wall of Water, is Rescued

The story of how a man was swept one-fourth mile by a wall of water that rushed through Dixon canon eight miles southwest of Fort Collins late Friday night and how he clung for life on a tree in a reservoir at the base of the canon for three hours was revealed Saturday night.

Orin Smith, 40, contends that he owes his life to Archie Christie, 30, who lives on a ranch near the mouth of the canon.

Hears Humbling

Mr. Smith lives at Mrs. Macbel Parker's ranch a short distance from the mouth of Dixon canon. Friday night he was backing his car from a frame garage when he heard a "terrible humbling." Just as he leaped from the car a 10-foot wall of water crushed the building and carried him and his car one-fourth mile to a reservoir that had become filled with the onrushing water near the base of the canon.

Here he clung half dazed for three hours shouting for assistance. Christie was corralling his cattle a short distance from the reservoir when he heard the shouts. He began a search along the banks of the reservoir and finally located Smith in the tree. Wading through waist-deep water, he brought Smith to shore.

"It was a miracle how Smith escaped," Christie declared. "His car was found later near the bank of the reservoir completely demolished. Traces of the garage have never been found. Smith was 'frozen' to the tree and was scared to death. I had to pry his hands loose. He acted dazed and didn't know where he was."

Struck by Logs

"After we brought him into the house he told us that he had been knocked unconscious by the logs and other debris in the wall of water and that was all he could remember."

Mr. Smith was taken to his home where he was found to be suffering head bruises. His condition was reported Saturday night as "fine."

Reports from the bureau of foreign and domestic commerce in Washington, D. C. show that Fort Collins reported the largest gain from June to July in retail sales in dollar volume of any city in Colorado.

Retail sales of 432 independent stores in Colorado revealed a decrease of 15 percent for July, 1935, as compared to the same 1934 month. Fort Collins showed an increase in July sales as compared to those of June of 23.1 percent, the biggest gain in the state.

Associated Press dispatches revealed that Greeley showed the smallest decrease in total sales from July, 1937, with a loss of about eight percent. Other changes ranged up to a decrease of about 21 percent for Pueblo.

Total sales reported in the state in July was \$2,581,100 as compared to \$2,523,200 in June of this year and \$3,042,900 for July, 1937.

## Damage to Highways in County Heavy; Traffic Halted on Many

Andrew L. Johnson, chairman of Larimer county commissioners, estimated Saturday that damage to highways in Buckhorn, Masonville, Bellvue, Poudre, and Spring canon districts will amount to \$15,000.

Portions of bridges have been washed out in these districts and in many cases the roads have been completely inundated.

The Poudre canon highway was open and residents there reported the road in fair condition.

Courtesy Patrolman Matt Giron said that travel east and west of Fort Collins was hazardous and persons should not attempt to drive either way from the city. Shoulders of roads have been carved in by the swirling water and bridges, although most remain standing, have had their foundations undermined.

Block Travel

Highway crews are blocking travel in all parts of the county where water has eaten into the sides of the roads. Bridges and gravel roads in Dixie canon, Soldier canon, Spring canon, and Dixon canon were reported demolished and traffic in these sections was at a standstill.

Travel between Fort Collins and Denver on Highway 87 was resumed Saturday after being Friday night. Patrolman Matt Giron announced, but portions of the road were still covered with water.

Friday night the patrolman telephoned Denver to stop all cars from proceeding on Highway 87. Bridges were reported in weakened conditions and water was streaming across sections of the pavement. A lake of water was reported standing on

the water level there.

Heartbroken were the only words to describe Maurice James, curator of the Colorado State college museum, as a result of damage there from water. The Osterhout bird collection, including 600 skins and mounted specimens of birds of the Rocky Mountain region were floating in five feet of water. Among other things in the museum was a copy of the first edition of the Fort Collins Express, published April 26, 1873, the only copy known to be still in existence, but it came through without damage, being a foot above the water.

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"We are unable to estimate the extent of the damage to electrical equipment at the college," H. G. Jordan, professor of electrical engineering said Saturday.

"The electrical equipment in the central heating plant, the basement of the men's gymnasium, and the museum is submerged. Our underground transformers and high tension cables are sheathed in lead which should be protection in normal circumstances, but these are not normal circumstances, and we just can't say."

"We do know that the telephone and electrical system are disrupted. Whether the damage to the equipment is disastrous or insignificant we can't tell until the first of the week."

It was believed that if the lines were soaked through it would take 30 days to restore service, and that temporary lines might have to be established.

### Bellvue is Twice Hit

Flood waters rushed through the little Bellvue community northwest of Fort Collins Friday afternoon for the second time in 24 hours, subsiding Saturday to leave a heavy loss particularly in the Bellvue state fish hatchery, where 150,000 fingerling trout followed the previous night's loss of 50,000 fish.

Bellvue was virtually isolated Saturday, telephone service being disrupted, and roads in the vicinity submerged to a state of impassability. Basements in the town were filled with water, and the hogs of C. O. Erubaker were swept into the Cache la Poudre river.

Mike Benallo, superintendent of the fish hatchery, estimated the damage to be in excess of \$5,000. Much damage was avoided when Mr. Benallo and his assistant, Clifford Metheny, cut a ditch through the north bank of a three-acre reserve reservoir west of the hatchery, relieving the pressure and allowing the dirt basin to drain and spread over the hatchery area slowly.

Several thousand fish were reported swept away from the fish farm of G. H. Vittecoet one-half mile southeast of Fort Collins on the Spring canon creek late Friday night when a seven-foot wall of water, coming from the canon, hit the lowland area.

Mr. Vittecoet said that corals, feed grounds and meadow lands were completely inundated with flood water. "Twenty or more hogs, cattle, and horses were reported swept away when the wall of water ripped through farms at the base of the canon. Cameron Herring, who has a ranch near the canon, reported 800 turkeys drowned by the raging waters."

Several school children were held at the No. 10 school west

Concluded on Page 6, Col. 3

## Many Telephone Lines Disrupted

Telephone switchboards have been swamped with calls about twice the normal load both locally and for long distance since the flood started Friday afternoon. T. C. Turner, district manager of the Mountain States Telephone and Telegraph company said.

The company expected that virtually all telephones on which service was interrupted would be repaired Saturday night, except for those on underground cables. The highest lack of telephone service was on the Colorado State college campus.

### Livermore Line Out

Livermore lines were down for a short time Saturday morning. Much of the delay in getting through on long distance calls was not because lines were out but because of the great number of calls by persons who wanted to find out about relatives or to let them know they were safe.

### Lines Wet

Mr. Turner explained that the telephones out of order varied a great deal, so that it was possible for a house to have two telephones, one of which would work, the other being dead. This is caused by the fact that only a single pair of wires might be wet in a circuit, he explained.

Repair men and line crews worked night and day to re-establish service, and expected to continue through Saturday night. Extra telephone operators were put on duty to handle the large volume of calls. He explained that line repair work was of such a nature that only trained men could handle it and substitutes could not be used.

## Democratic Committee Balks At Plea of FDR for Liberals

WASHINGTON, D. C. (AP)—The Democratic congressional campaign committee served notice Friday that it would not go along with President Roosevelt if he campaigned this fall for the election of "liberal" Republicans over anti-new deal Democrats.

In a statement issued within 24 hours after the president had told a press conference that a "good liberal" running on the Republican ticket would serve the country better than a conservative Democrat, Victor Harding, secretary of the committee declared:

"The Democratic national congressional campaign committee has taken and will take no part in any primary or nonprimary convention. As soon as a candidate is nominated for representative in congress this committee considers him to be the choice of the Democratic voters

### Quote and Unquote

"Having lived in California 10 years I would say we are having very unusual weather."—Lloyd Richards.

"Larimer county did very well in the state fair exhibits and the Boyd sisters of Loveland made a particularly fine showing with their 2-year-old bull being named grand champion."—D. L. McMillen, Larimer county agent.

"A survey of our work during the last fiscal year shows a much gloomier picture than that of the year previous."—Capt. Alice Askew of the Salvation army, whose report on the fiscal year just ended will be completed early this week.

"Sheriff Carl Gooch and his deputies, Clarence Jones, general road supervisor, and the road men who worked answering calls for help, barricading roads, and warning persons of danger and so forth, are to be complimented for their splendid work during the heavy rain Friday night."—Henri McClelland, county commissioner.

In virtual seclusion at the White house Saturday, the president prepared for a week end journey into Maryland, where he is trying to unseat Democratic Sen. Milford E. Tydings, who has voted against some major administration enactments. Tydings is opposed for the Democratic senatorial nomination by Rep. David J. Lewis.

Mr. Roosevelt worked on a major address to be delivered Monday afternoon on the peninsula that is known as Maryland's eastern shore. Addressed to a nation-wide audience from a shaded square of the little town of Denton, the speech will be preceded by extemporaneous talks at several other Maryland points.

POLITICS  
LET 'EM BLOW  
HOT AND LET 'EM  
BLOW COLD

With Rodney Ditcher in Washington  
Alva Seavin in Denver  
Marvin Russell in Fort Collins, and Star Re-  
porters of the A. P.  
covering Hitler, Hen-  
lein and Halifax, the  
Express-Courier  
keeps you informed.

THURSDAY EVENING, SEPTEMBER 8, 1938

## Quote and Unquote

"If you had arrived two or three days earlier we could have given you lessons in boating." — Dr. Charles A. Lory, president of Colorado State college, as he welcomed 500 new students to the campus Thursday.

FORT COLLINS EXPRESS-COURIER  
Monday September 12, 1938

Swept by flash floods for the second time within eight days this poultry house on the Francis C. Goodell property in Spring canon seven miles southwest of Fort Collins was badly damaged. The west end and part of the south side were torn off and the northwest corner was twisted sideways. Before Sept. 2, Mr. Goodell owned 800 prize-winning White Leghorns. In this picture are seen almost all the chickens that remained after Saturday night's high water. Flood waters were five feet deep in the foreground. (Staff photograph and engraving.)

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## Flash Floods Twice Strike, Drown Hens by Hundreds

Muddy, swirling destruction struck the Francis C. Goodell poultry farm in Spring canon, seven miles southwest of Fort Collins, for the second time within eight days Saturday night. A flash flood Friday, Sept. 2, depleted his flock of White Leghorn chickens by 300 and he could not yet make any estimate of the number washed away Saturday night, although he said the damage would probably be greater.

The flood, result of extremely heavy rains farther up the canon, struck the Goodell property

between 7 and 8 p. m. Mr. and Mrs. Goodell and their daughter, Lois, 15, a high school pupil, were at home.

The water came with such force that a number of brooder houses, undamaged the week before, were swept away. They were filled with chickens. Other buildings were caved in, and some sidewalks went down in the current.

### Watched, Helpless

The farm yard was swept by water five feet deep. Mr. Goodell.

Concluded on Page 2, Col. 5

FORT COLLINS EXPRESS-COURIER  
Sunday September 11, 1938

## Value of Ditch Cover Shown by Recent Flood

Basements near the business section of Fort Collins would have been flooded during the high water last week end if the town ditch were not covered, said Burgis Coy, city engineer, Saturday.

He cited the overflow of water in Ditch No. 2, which was swollen by Mercer ditch in addition to the flood water. It poured down four blocks to Shields street, rushing into basements, before it could be handled by the storm sewers.

### Covered in 1934

The town ditch, long a menace to health in Fort Collins, was covered in 1934, except for a stretch along the west side of the Colorado State college campus from Laurel street south. It overflowed there and swept the campus, causing thousands of dollars worth of damage to equipment last week.

The Express-Courier conducted an editorial campaign for years to have the town ditch covered and it was finally successful. The channel had previously bisected the city and was a constant source of annoyance to property owners.

It not only seeped into basements, keeping them damp and hazardous to health, but also claimed the lives of a number of children, who fell into the muddy waters while at play. Every street and alley in the city was marked by a bridge over the ditch, and replacement and repairs to those bridges took an annual slice from the city's revenues.

# Fort Collins Express-News

ESTABLISHED 1873

FORT COLLINS, COLORADO, MONDAY EVENING, SEPTEMBER 5, 1938

8 PAGES

## All Roads Here Opened Today

### Workers Clearing Debris From College Buildings; Streams Recede

Highways in all directions from Fort Collins were open for travel Monday, Sheriff Carl Gooch reported, and Larimer county was in the process of "drying out" after heavy rains late last week.

Debris and mud was being scraped from the basements of six buildings on the Colorado State college campus and it was expected all water would be pumped from the grounds within the next few days.

Electric light service at the college was expected to be resumed Monday night, but it was not known when telephone service could be re-established.

#### Transformers Replaced

H. G. Jordan, professor of electrical engineering, said two transformers which were covered with water Saturday had been replaced so that electric service could be resumed.

E. G. Whitehead, college building superintendent, was unable to estimate in dollars the damage to the six flooded buildings—the heating plant, the gymnasium, the library, the physics building, the museum, and the student union building.

Max James, curator of the college museum, estimated damage there at \$10,000.

#### Big Thompson Open

The Big Thompson highway to Estes Park, closed Saturday, was repaired and re-opened. The Poudre highway, never closed, was reported in good condition.

Telephone service to all points through the Fort Collins exchange except the college had been restored. Bus and train service was back to normal although trains were running slightly late because of "slow track" conditions.

Both the Cache la Poudre and Big Thompson rivers were down the Cache la Poudre's flow being 7 1/2 second-feet early Monday. The water remained extremely muddy. Reservoir storage had been halted.

#### WPA Men to Work

Joe Collopy, zone supervisor of the Works Progress administration, prepared to put between 200 and 300 men to work repairing bridges on secondary roads in the county.

In District No. 10, a survey of damage showed that the flood waters had swept over the Maxwell, Mitchell, Scrymgeour, Hagler, and Williams property, tearing out fences and ruining strawberry and raspberry patches. Tomatoes were also victims of the current.

### Flood-Waters Submerge Highway at Burlington

COLORADO SPRINGS, (AP)—Traffic on U. S. Highway 121 was blocked Sunday night when a lake was formed by flood waters backing up against the Rock Island railroad tracks five miles west of Burlington, Colo., 125 miles east of here.

Although water was 16 feet deep on the highway Monday the road itself was not believed seriously damaged. Rock Island station in Colorado Springs

## Toll of Floods Is Boosted to 7

Survey by Associated Press Rain-swollen streams slowly subsided Monday in areas ravaged by floods which took seven lives in north-central Colorado.

Labor crews began the slow work of repairing damage wrought by a series of floods which roared down mountain canyons and lashed streams into devastating fury following cloud-bursts along much of the eastern slope.

Searchers Sunday found the body of the seventh victim in Bear creek canon near flood-wrecked Morrison, little resort town 15 miles west of Denver.

#### Caught in Car

The battered body of Miss George Goodrich, 17, almost buried in silt, was recovered one and one-half miles west of the spot where the victim's mother, Mrs. Cecil Goodrich, Evergreen, Colo., real estate operator, was found Saturday.

The two women were driving in Bear creek canon when their automobile was caught in the swift waters which hurtled down the canon Friday night and virtually destroyed Morrison, several miles below.

Four other victims of the Bear creek flood were recovered and identified Saturday. Another woman drowned north of Denver Friday night when an automobile sank into a hole washed in the highway by flood waters.

#### Platte in Banks

Northeastern Colorado residents in the vicinity of the South Platte returned to their homes when it appeared the river would for the most part stay within its banks.

Several Morrison residents headed by Otis A. Pike, former mayor, debated the advisability of moving the town site to higher ground as a safeguard against future floods.

Sengster, Schwegel, ...

## Floods Cause Big Damage in County

Continued from Page 1.

of Fort Collins when rain began to descend heavily Friday afternoon and some spent the night at homes in the immediate vicinity of the school.

An area estimated at 1,000 acres surrounding the school was covered by water and many in basement homes were forced to stay with neighbors.

Rainfall totals for the storm were reported Saturday as 4.25 inches at Berthoud; 3.15 at Watertale in the foothills west of Loveland; 3.26 at Loveland. During the 24 hours preceding 8 a. m. Saturday, 2.5 inches fell at Timnath and 1.97 at Wellington.

No crop damage in the Fort Collins region had been reported to Great Western Sugar company fieldmen Saturday. Harvey Hiddell, a fieldman, said he believed the water stayed largely within gulches.

#### GREELEY BUSES

##### ARE REROUTED

Buses to Denver were being run normally Saturday.

The bus from Fort Collins to Greeley was being rerouted on the Ault highway by way of Boxelder, Timnath, Windsor and the old highway, because of a bridge washout east of Fort Collins.

The Union Pacific overland buses from Denver to Cheyenne, normally routed by way of Greeley, were being sent through Fort Collins instead because of a bridge out at Pierce. Five such buses went through Fort Collins Saturday.

#### RAILROAD SERVICE

##### HALTED 24 HOURS

It was expected that railroad service from Denver on the Colorado and Southern railway to Fort Collins would be re-established Saturday evening after 21 hours without service.

A train was sent from Denver at 8:25 p. m. Friday, getting as far as Broomfield when it was turned back. Washouts were reported at Loveland, Berthoud, and Louisville, with the worst at Fort Collins passenger station.

The Union Pacific lines had little trouble, nearly normal service being maintained, their station representatives reported. Chief difficulty was with high water near Milliken.

Washouts at Pierce and near Sterling Friday night were re-

ported cleared up Saturday.

#### WPA MEN WILL WORK ON ROADS

The Red Cross reported to Judge Albert P. Fischer from Denver Saturday that it was "ready, willing, and able" to come into this section with flood relief if needed, but Judge Fischer reported aid was not needed at present.

Joe Collopy, Works Progress administration zone supervisor, was given authority from the Denver office to send WPA employees to distressed sections at any time with the usual limit on their hours removed.

Men from Boulder county were being sent to Lafayette where the water line was washed out, but no emergencies had been reported to him in Larimer county, Mr. Collopy said. More than 200 men will work on bridges on secondary roads throughout the county next week, he said.

City Engineer Burgess Coy said there was no danger to Fort Collins' water supply because most of the flood water reached the Cache la Poudre river below the city's filter plant and transmission lines from there are sealed deep in the ground, beyond the reach of channel-cutting water currents.

At 7 p. m. Friday, police spread a warning through Buckingham place for residents to be ready to leave their homes if the river should show indications of rising rapidly, but the rise did not come.

#### STEWART STREET IS WASHED OUT

A few yards east of the home of Mr. and Mrs. R. D. Kimball, Spring creek washed out a part of Stewart street at the southeast edge of Fort Collins when stumps and timbers caught on the end of a culvert tile, damming the creek for a short time until it broke the top with such force it tore the road surface away and closed it to travel.

Spring creek at that point is normally four feet across but reached a spread of 200 feet Friday night. The muddy torrents ripped out a section of fence on the Kimball property but did not cause crop damage and did not reach the corral.

#### NO. 2 DITCH NEAR OVERFLOW

Residents along the No. 2 ditch at the west city limits of Fort Collins spent an anxious night as water lapped over the ditch edge. Many of those in the neighborhood turned out to help divert overflowing water into Mountain avenue and Oak street where the water ran into storm sewer openings at each corner as far east as Shields street.

Twelve city works department employees aided there and controlled the entire city up to midnight, keeping sewer inlets free of refuse. City Engineer Coy explained the water in ditches did not come from the Cache la Poudre river, the ditch inlets being shut off. Most of the water cascaded into the No. 2 and Mercey ditches from Soldier canon, he explained.

Water seeped through the foundation of the L. H. Simmel home at 416 Locust street, flooding the basement apartment occupied by Mr. and Mrs. W. B. Bjornstad. The storm sewer at the Locust and Whetsee street intersections would not accommodate the water and the road and sidewalks were covered, city water department workmen having to wade knee deep in an attempt to open the sewer. Drains were opened in the morning and although water seeped into the apartment during the day, it was carried off as fast as it was brought in. Water stood two or three inches deep in several rooms of the basement Saturday morning.

It was reported that all basements in houses on the 800 block on Whetsee street were flooded, as were basements in

the 500 block of Pitkin Street.

# APPENDIX C

## CAMPUS FLOOD OF AUGUST 3, 1951

Flood damage exceeds \$270,000 (1951 dollars) – 6.06 inches of rain in 27 hours, 3 inches in 3 hours

### Seven buildings and Oval flooded

**Heating Plant:** basement flooded; 5-1/2 feet above ground floor

**Physics Building:** basement flooded; 5 feet deep above ground floor

**College Avenue Gym/Field House:** 3 feet deep

**Electrical Engineering Building:** flooded; 4 feet deep; library books damaged

**Library:** 2 feet of water in basement; water level controlled by pumping; library books damaged

**Johnson Hall (Student Union):** Lower level flooded with several feet of water. Bookstore flooded.

**Old Braiden Hall:** kitchen flooded

### Steam Tunnels: flooded

Phone and electrical out throughout campus.

Many basements and first floors of houses located east of campus were flooded during this flood.

*FORT COLLINS COLORADOAN*, Thursday, August 9, 1951

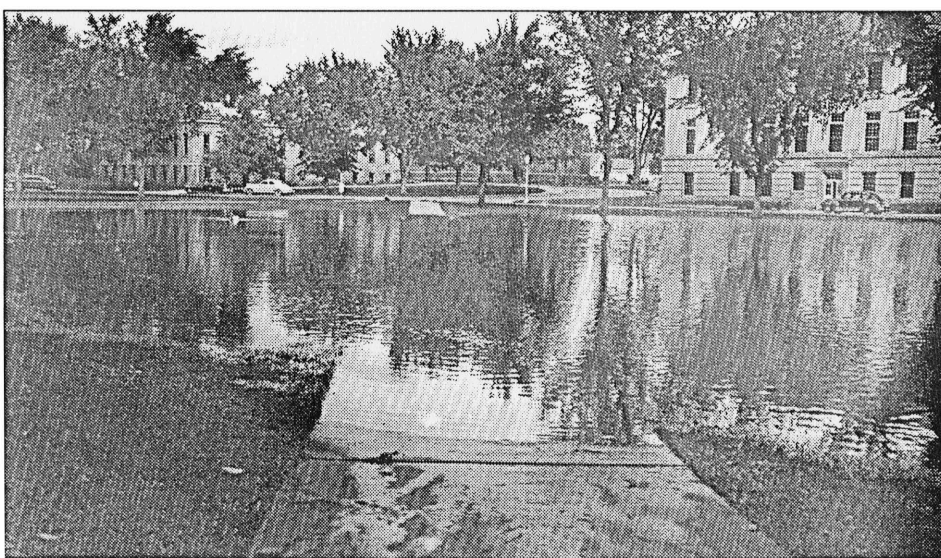
### SEWER DISCUSSED

“Also discussed among state, college, and city officials . . . was the possibility of **building a large storm sewer to drain campus** by way of the low-lying area along Locust and Plum Streets and Eastdale Drive, heavily flooded by last Friday’s storm . . . . A possible sewer project would be undertaken after the flood repairs are completed.”

*ROCKY MOUNTAIN COLLEGIAN*, Friday, September 21, 1951

### TUNNEL BLOCKED WATER

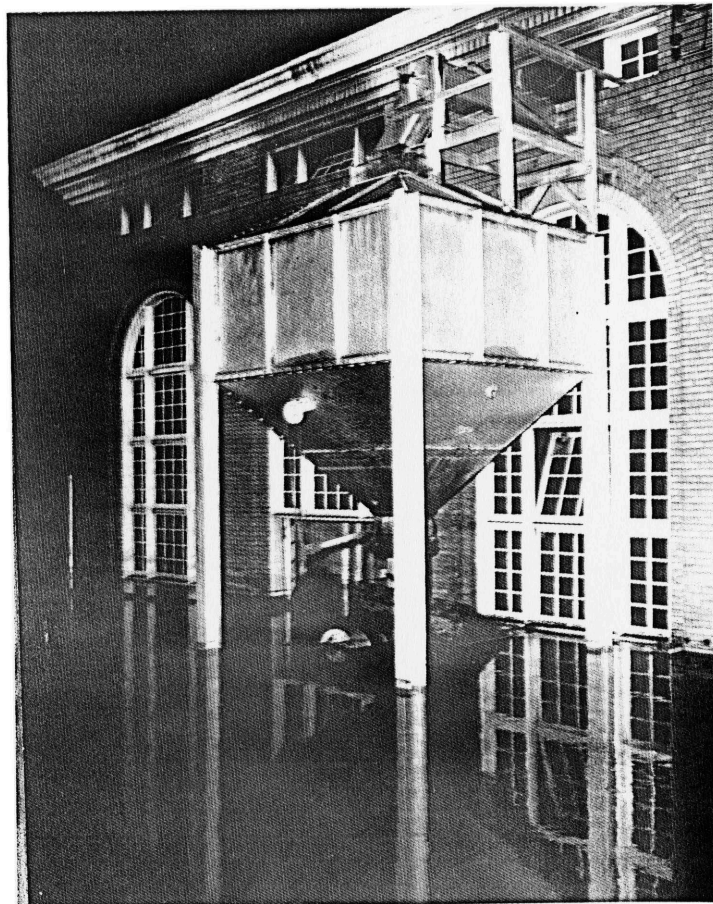
“The flood would have caused less damage, says Mr. Dotson, vice-president, if the water had not become impounded at the pedestrian tunnel under the railroad tracks.”



*Photographic Services Archives*

Physics (now Occupational Therapy), 1951 flood.

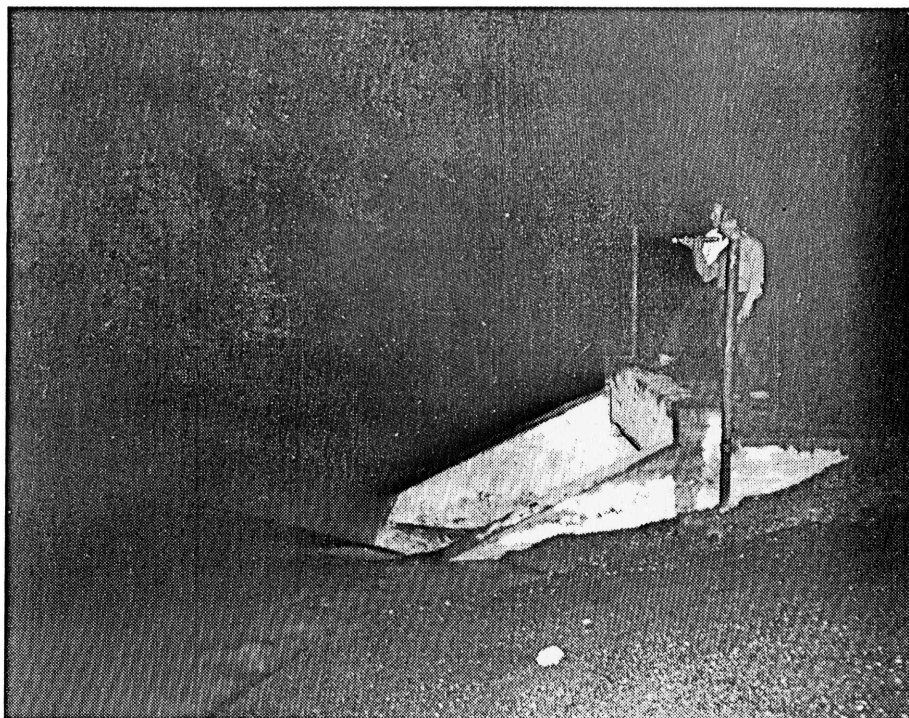




Heating Plant (during flood)  
( flooded. 5 1/2 feet above ground floor)

CAMPUS FLOOD OF AUGUST 3, 1951





*Photographic Services Archives*

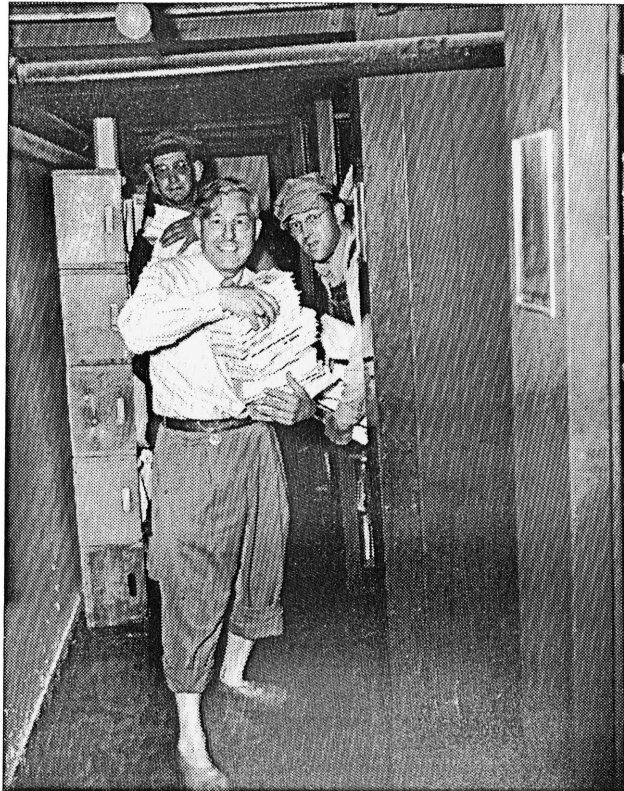
Flow into pedestrian tunnel under railway track (during flood).



*Photographic Services Archives*

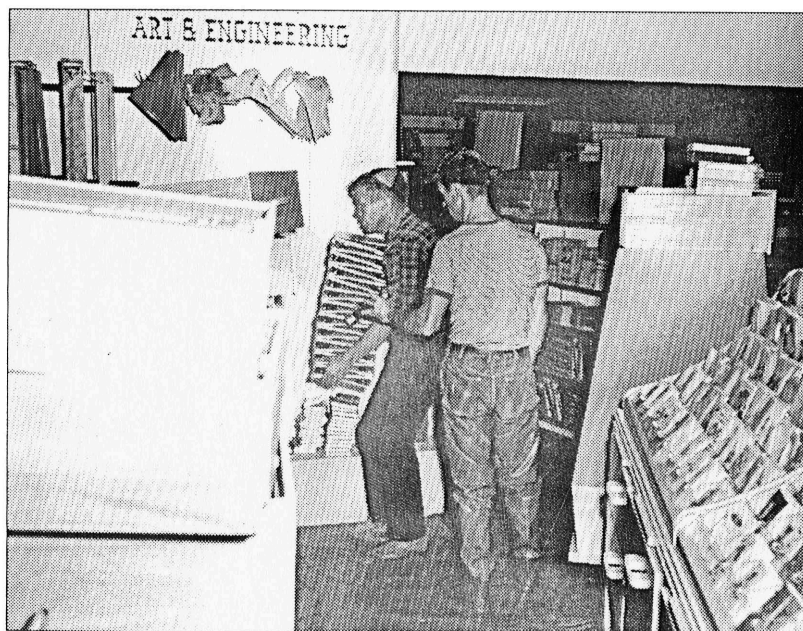
Johnson Hall (during flood).

August 3, 1951 Campus Flood



*Photographic Services Archives*

Removing books from Library.



*Photographic Services Archives*

Removing books from Book Store.

August 3, 1951 Campus Flood

# Campus Damaged By Rising Waters of Summer Flood

And it rained; and it rained; and it rained for forty days—well maybe not quite. Anyhow the A & M faculty will long remember August 2 and 3 when the campus was hit by over six inches of rain in less than thirty-six hours. This in itself doesn't seem too harmful, but circumstances combined to produce a flood, the like of which this campus has never seen, and one which every faculty member and employee fervently hopes never happens again.

Once before, on September 4, 1938, the campus experienced a flood. At this time water stood six inches high in the Heating Plant. Compare that with the five and a half feet of water standing on the first floor of the Heating Plant the night of August 3rd. The flood was much more severe for a number of reasons. West of Ft. Collins the Horsetooth Lake, formed by a series of three dams, provides a stopping-off place for some of the excess moisture. However, between here and the foothills there is no barrier and any water rushes for the lowlands. This runoff combined, in this case, with the surplus water from storms higher up in the mountains, running in the Arthur irrigation ditch from the Poudre River. As the water reached the campus, it overran the ditch—in one place by the pig pens the ditch was completely lost under the water—and started its way into the lower parts of the campus.

## Tunnel Blocked Water

"The flood would have caused less damage," says Mr. Dotson, vice-president, "if the water had not become impounded at the pedestrian tunnel under the railroad tracks." As it was, the water backed up onto the campus where it reached four feet in the first floor of the Physics building, about the same height in the Electrical Engineering building, and ran over the window sills of the Student Union. One of the funniest sights was witnessed in the Student Union cafeteria where the cafeteria chairs could be seen bobbing up and down with the tide.

Also affected was the new Stu-

dent Union with two foot deep water in the Recreation room and bowling alley, the old billiard room where the water was up to the pockets on the tables, and the gymnasium with approximately six inches covering the floor. Water of course filled all the basements of the buildings in the lower part of the campus and all the underground service tunnels containing heating pipes and telephone lines.

## Much Damage in Basements

The buildings most seriously affected were the Library, Physics building, Electrical Engineering building, Heating Plant, Student Union and new Student Union, old Braiden Hall kitchen, Gymnasium, Field House, and Entomology Green house. Other buildings and lands affected by the torrential rainfall and water runoff were the old gym in Old Main, where the floor buckled to a height of two feet and the boards popped off in all directions, the basement of the Botany building, the Agronomy farm east of Circle Drive, the farm land west of the campus where the crops were damaged and fences washed down, and the campus walks, shrubs, and lawns, which were damaged.

The biggest damage, however, was found in the items stored in the basements of the buildings. Because of limited building space, the basements of campus buildings had been used for the storage of departmental supplies, scientific equipment, furniture, and fixtures—all of which were damaged, some completely. Loss of scientific equipment was especially heavy in the Physics and E. E. building, and the store supplies in the Student Union book store were a total loss. Much of the furniture, such as wooden desks and cabinets stored in the basements, were water-soaked and when they were dried out, joints cracked and the desks practically fell apart. Also damaged were motors and transformers for heating—some beyond repair, thus necessitating replacement.

That more damage did not result was due to the efforts of the faculty members and A & M employees. When it became apparent about 11:00 on August 3, that the flood waters were going to rise to a dangerous height, faculty members and employees were notified so they could move as much

of their supplies and equipment as possible to higher floors. Mr. Harry Hepting, college engineer, and Mr. Dotson as well, were all night trying to protect campus properties under flood conditions. President Morgan was also on hand, lending a hand in the emergency.

Many thanks go to the Ft. Collins Fire Department, the Department of Public Works, and the Police Department for assisting with their equipment in pumping water out of college buildings. As Mr. Dotson puts it, "The college is most grateful for their assistance at this time of emergency." Additional help came from Dr. Harry Grant's portable pumping and irrigation equipment.

Also in line for thanks are the telephone company, who got the telephones back in operation in record time, and Prof. Jordan of the Electrical Supply Section, the Public Service Company, and the city electricians, who got electricity reestablished on a temporary basis by Thursday. Special tribute goes to Mr. Hepting and his staff who rendered outstanding service in reestablishing services and buildings on the campus.

## Repair Work Begun

It is very difficult for us students to imagine what the campus must have looked like after the flood, when we see the appearance of the buildings and grounds now. That is because trucks began hauling the debris out and repair work was started immediately. Carpenters started replacing the floors of the Physics buildings, and doors, woodwork, and stairways are being worked on as labor crews permit. Mr. Dotson estimates, however, that it will be the first of the year before all repairs are completed.

One project which has been postponed is replacing the gym floor. Since it would take 120 days to do the job when the gym is needed the most, and since the concrete base of the substructure has been damaged, construction of the floor was put off. It has been refinished as well as possible for use during the fall and winter terms.

## State Provides Funds

The problem of funds for this repair work was solved by the state. Since A & M had no funds for an emergency of this nature, the State Planning Commission inspected all the buildings and

Dotson, "total costs of damages are undetermined at this time, but will be determined by December 31st."

of indebtedness to the amount of \$170,000 be authorized immediately. This request was approved shortly. "However," concluded Mr.

grounds to see the damage. With a previous total estimate of \$270,000, the commission recommended to Gov. Thornton that certificates

(Continued on page 2)





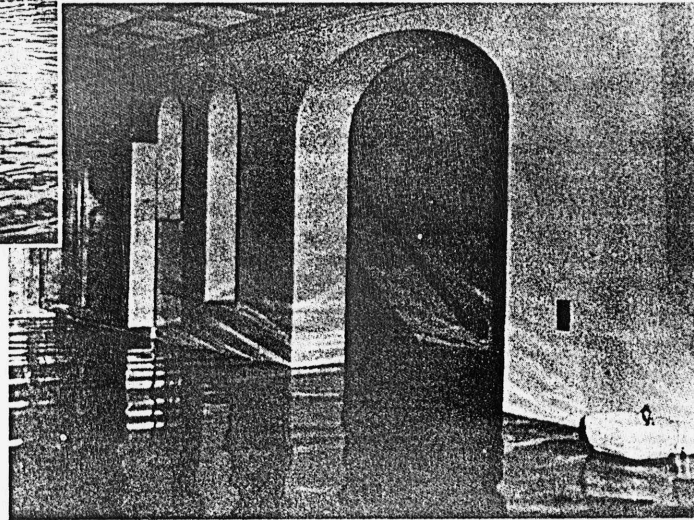
Shown above are photos taken of the flood which engulfed the Aggie campus this summer. Left upper to right lower are: C. O. Simonds and Mrs. Delores Campbell helping to clean up the ruin left in the Student Union Building; receding water on the first floor of the Student Union; flood waters outside the Heating Plant; flood waters outside the Student Union; Aggie students who tirelessly labored to salvage equipment in the Student Union building; and flood waters outside the Men's Gymnasium.





My Hero!

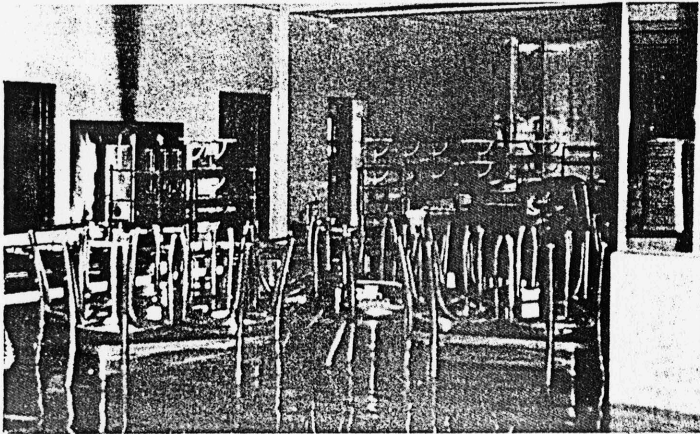
CAMPUS FLOOD OF AUGUST 3, 1951



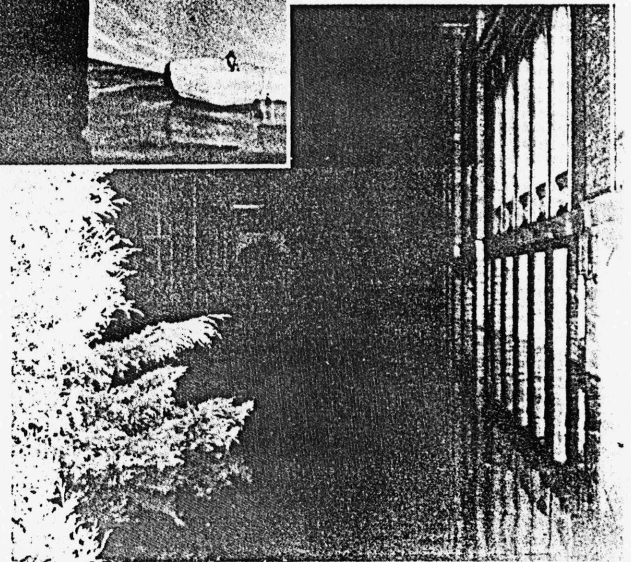
Care for a drink?

# Flood

## The 1952 SILVER SPRUCE



Kitchen with running water.



Water out of control.

THE 1952 SILVER SPRUCE volume 47,  
compiled by The Associated Students  
of Colorado A&M College at Fort  
Collins, Colorado  
Becky King, Editor, 1952



Pool Enthusiasts???

A NEWSPAPER  
FOR THE HOME

Information and Enjoyment  
for Every Member  
of the Family

# FORT COLLINS COLORADOAN

Continuing Fort Collins Express-Courier

ESTABLISHED 1873.

FORT COLLINS, COLORADO, SUNDAY MORNING, AUGUST 5, 1951

26 PAGES

5 CENTS

## Floods Take Seven Lives in Co

### Ridgway Suspends Parleys, Accuses Reds of Bad Faith

TOKYO, Sunday (AP)—Gen. Matthew B. Ridgway today broke off Korean truce talks, in a stiff message accusing the Reds of "flagrant violations" of their promise to keep armed Communists out of Kaesong.

General Ridgway accused the Reds of welsing on their pledge of July 11 to keep clear of troops the area five miles in radius from the center of Kaesong. He told the Communists the talks would be resumed only if they could give a "satisfactory explanation" of the presence of troops in Kaesong Saturday.

Troops armed with rifles, pistols, grenades, automatic weapons and mortars were seen within 100 yards of the conference house, General Ridgway said. He estimated the number as "approximately an infantry company"—about 150.

The supreme allied commander said the UN truce team would remain inside its own lines until a "satisfactory explanation of this violation and assurance of non-recurrence are received."

The decision was announced after an extraordinary six-hour conference at General Ridgway's headquarters, ending in the predawn hours.

His message was broadcast to the Communists by the armed services radio. It was addressed to the Chinese and Red Korean commanders, Gen. Peng Teh-Huai and Gen. Kim Il Sung.

Ready to Return  
Vice-Adm. C. Turner Joy, chief UN delegate, followed up General Ridgway's demand this morning with a radio telephone message to the chief Red dele-

### Ready to Fight, Says Sen. Duff

Senator Challenges Grundy Republicans To Convention Fight

WASHINGTON (AP)—Senator Duff (R-Ia) Saturday issued an angry challenge to an opposing GOP group to do battle over Pennsylvania's delegation to the 1952 presidential nominating convention.

Senator Duff, plugging for Gen. Dwight D. Eisenhower as the nominee, said if a group headed by G. Mason Owlett, GOP national committeeman, and former Sen. Joseph H. Grundy want a "knock-down and drag-out fight" they can have it.

His statement capped a series of developments showing sharp splits in both major parties as they prepared for the 1952



### A&M Camp Of City Sw

Larimer county's worst floods in many years took the lives of at least seven persons Friday evening and caused damage estimated at close to \$1,000,000.

Three persons were drowned at Bellvue eight miles west here. They were Aden E. Webb, 86, George Post, 50, and his wife, Annabelle Post, 41, all of the Bellvue area.

The wife and three daughters of a Denver man, Harold Johnson, were drowned when their automobile was swept off a highway about 1 1/2 miles west of Loveland by a huge wave of water about 10 p. m. Friday.

The victims were Mrs. Sally Johnson, 41, Miss Beverly Johnson, 19, and Mildred and Mabel Johnson, 14-year-old twins.

An estimated \$270,000 damage occurred at Colorado A & M college here. (See story on page 4). Great damage to highways, communication and power lines and private property occurred throughout the county, with many buildings and basements flooded.

Near Cloudburst  
The floods stemmed from a near-cloudburst which struck the area about 7:30 p. m. Friday and continued almost without interruption to about 10 p. m. Almost three inches of rain fell here during the storm, which was accompanied by a violent electric storm.

Three dead: Aden E. Webb and Mr. and Mrs. George Post, all of the Bellvue area, swept away when a flash flood in Dry creek, which runs through Bellvue, engulfed their homes.

Losses: Possibly half a million dollars or more, including a preliminary estimate of \$270,000 for Colorado A & M college, and many thousands of dollars' worth of damage to homes flooded and automobiles damaged in many parts of Fort Collins.

Police Chief C. K. Steffen said Mr. Johnson's

### 3 Dead Here, Flood Damage Half Million

Here is a summary of the death and damage resulting from Friday night's rainstorm and floods in the Fort Collins area:

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Mr. Post's body was cast east through Bellvue, past state fish hatchery and across the Colorado & Southern road tracks about one-half mile east and slightly south of the Bellvue store. It was found before noon Saturday by a local Stoker.

Mr. and Mrs. Johnson's three daughters were their way from Denver to a cabin, "Grandpa's Retreat," Big Thompson canyon where their automobile became stuck close to the plaster mill of Loveland.

Sought Help  
Police Chief C. K. Steffen said Mr. Johnson's

#### CITY WATER IS OK

Fort Collins city water not contaminated by the recent floods and is pure drink, City Manager Guy Palmes said Saturday at checking.

Health authorities advised persons drawing water from



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**Losses:** Possibly half a million dollars or more, including a preliminary estimate of \$270,000 for Colorado A & M college, and many thousands of dollars worth of damage in homes flooded and automobiles damaged in many parts of Fort Collins and in lowlands near the Cache la Poudre river.

**Rainfall:** Precipitation of 3.11 inches in 24 hours up to 7 a.m. Saturday—following 2.95 inches reported Friday morning at Colorado A & M college weather station.

**River flow:** Flow of the Cache la Poudre river was estimated Saturday by W. G. Wilkinson, district water commissioner, at 8,000 second-feet, compared with 1,500-foot Friday and 750 feet Thursday. His actual measurement at Poudre canyon mouth Saturday morning was 5,600 second-feet.

**Ditches broken:** Reports to Mr. Wilkinson told of two breaks in the North Poudre, two in the Highline, two in the Water ditch, and one in the



WATER LEVEL AT HEATING PLANT



# College Disaster Recalls Similar Flood of 1938

Friday night's flooding of the Colorado A & M college campus, with a preliminary loss estimate of \$270,000, recalls a similar flood of Sept. 2 and 3, 1938.

Maxwell Parshall, local meteorologist, pointed out Saturday that the floods of Thursday and Friday resulted in a total rainfall of 6.06 inches, occurring in approximately 27 hours.

The storm of Sept. 2, 1938, nearly 13 years ago, deposited 4.68 inches in 48 hours.

Mr. Parshall also commented on the possibly record intensity of the early portions of both Thursday's and Friday's storms.

Thursday night's storm, he said, had a maximum rate of accumulation in a 15-minute period of .75 inch at the beginning.

Friday night's storm had a maximum 15-minute accumulation of 1.10 inches, beginning at 8:40 p.m.

Thursday's storm started at 7:25 p.m. and continued until 8:15 p.m., Mr. Parshall said, reviewing his records. At that time the rate was reduced. The rain stopped about 10 a.m. Friday morning with a total of 3.06 inches.

Friday's rainfall started at 7:30 p.m. and continued until 10:45 p.m. with a total accumulation of 3 inches.

Because of a lack of rain

gauge records, the meteorologist went on, other high rainfall rates in past years must be estimated. He gave these figures:

June 14, 1899—Total of 1.74 inches in 40 minutes.

Sept. 20 and 21, 1902—6.22 inches in 48 hours.

May 2 and 3, 1904—3.80 inches in 48 hours.

Aug. 2, 1933—2.70 inches in three hours.

Sept. 2 and 3, 1938—4.68 inches in 48 hours, 3.07 inches overnight.

June 3 and 4, 1949—3.72 inches in 48 hours.

## Weather

Fort Collins: Partly cloudy today; few scattered afternoon and evening thundershowers; little change in temperature. Expected high temperature today, near 85 degrees.

The maximum temperature Friday was 78 degrees, the minimum early Saturday 63 degrees. Precipitation in the 24 hours ending at 7 a.m. Saturday was 3.11 inches.

The temperature downtown at midnight Saturday was 64 degrees. Maximum temperature during the day was 80 degrees.

Sunrise Monday 5:05 a.m., sun set 7:06 p.m.



# Twin Floods Started in Small Area, Survey Shows: Overflow Of Ditches Inundates Campus

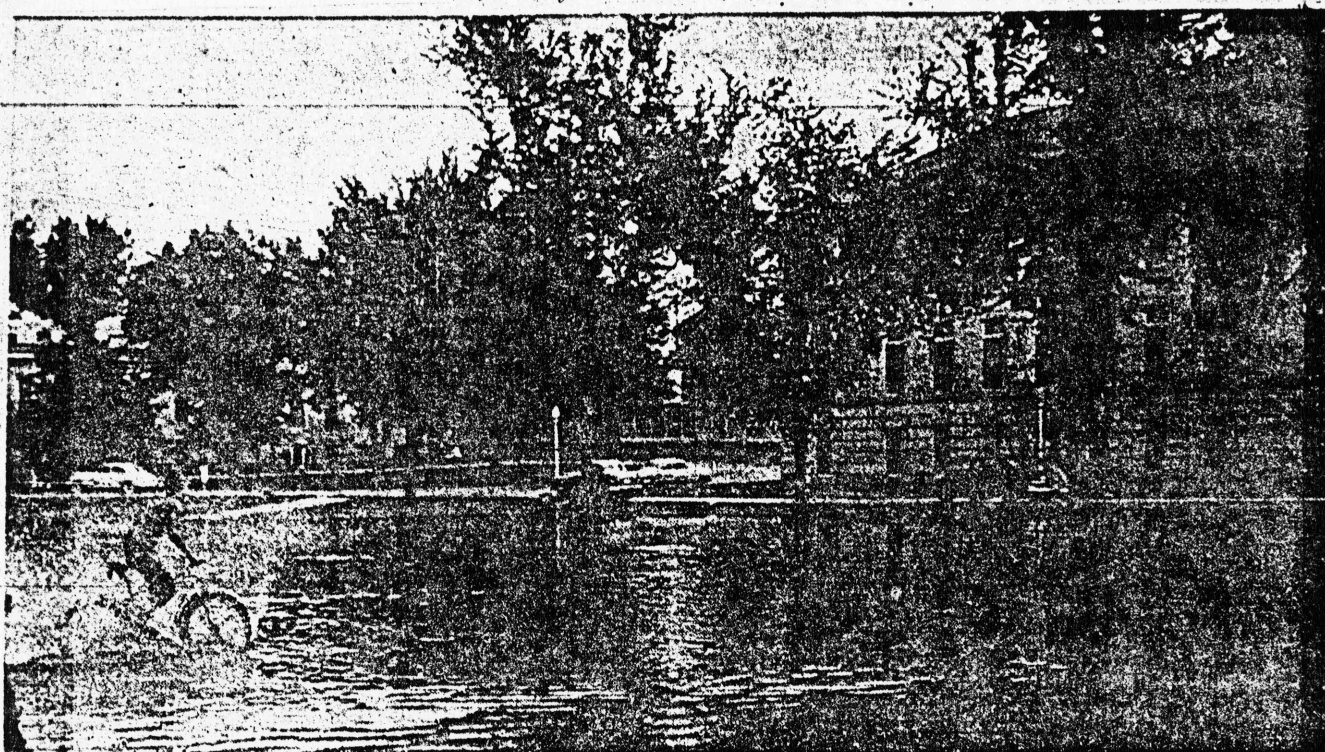
Incoming water handicapped efforts of city firemen to drain the water from the physics building at A & M college Saturday. Fire Chief T. P. Treadwell reported.

## Effort Futile

Chief Treadwell said 50,000 gallons of water were pumped out of the building without the waterline being lowered an inch. The building still had nine feet of water in it when the firemen stopped, filling the basement and the first floor up to table level.

The fire chief also said efforts to pump out a store at Elizabeth and Peterson streets proved futile. There was about three feet of water in the building, and the water was backed up for about a block behind the structure.

Residents two blocks away complained, while the firemen were pumping out the store, that the firemen were putting the water into the gutter and it was running into their basements.



**CAMPUS OVAL FLOODED**—Two days' accumulation of floodwaters left this lake on the A & M college oval, in front of the flooded

physics building. A small boy on a bicycle tests the lake's depth.



**OUTSIDE SWIMMING POOL**—This was the spectacle presented by the South College avenue front of the Colorado A & M college gymnasium about 3 a.m. Saturday, following

Friday night's flood. The water flowed into and around the gym through a culvert under the nearby C&S tracks, through which water on the Aggie oval was drained.





37

**RESCUE AT LIBRARY**—James G. Hodgson, Colorado A & M college librarian, and Miss Laura Makepeace, executive librarian, start rescuing books in the flooded basement of the college library.

# College Counts Flood Loss At \$270,000; Classes Slated

FORT COLLINS COLORADOAN  
Sunday August 5, 1951 p4

Colorado A & M college officials gave a preliminary estimate of \$270,000 damage to the A & M campus, buildings and facilities Saturday, as a result of Friday night's downpour of 3.11 inches of rain.

As water from overflowing irrigation ditches west of the campus overflowed, it ran down the same channel which carried a damaging flood 13 years ago. The muddy waves were stopped at the Colorado & Southern railroad embankment on the east half of the campus, forming lakes on the college oval and on pastureland to the west.

Water from Thursday night's 2.95-inch flood still covered the oval when the new flood struck. The water dashed furiously through a large concrete culvert under the C & S tracks to form another lake around the men's gymnasium and field house, then passed on across South College avenue to Locust street.

## Buildings Flooded

The A & M campus buildings flooded included both old and new sections of the Student Union, the men's gymnasium, the physics and electrical engineering buildings, the campus power plant and heating tunnels, and the library. It is expected the early estimate of damage may be increased materially when checking is complete.

Most members of the college administrative staff — including President W. E. Morgan, Vice-President Harry L. Dotson, Joseph M. Whalley and Harry

Hepting, engineer, worked all night trying to minimize flood damage and check on danger spots. They were aided by many students.

## Cleanup Begun

Campus personnel was in the throes Saturday of cleaning up after the flood, which deposited a thin layer of silt wherever it spread. The work was handicapped, however, by absence of electricity as the result of the flooding of the power plant.

Not only basements and, in the Student Union and physics buildings, the first floors, had to be cleaned, but steam tunnels also had to be cleared. These contained telephone and power wires. The campus was without telephone service Saturday.

## Classes to Continue

Regularly scheduled college classes and other activities will be held Monday, President Morgan announced. Although some shifts in room assignments may be made, damage to classrooms was limited.

The greatest degree of damage was concentrated in the Student Union building. The new bookstore there was under three feet of water at the height of the flood about 2 a.m. Saturday. Loss of paper, supplies and books was estimated at more than \$5,000.

The Student Union offices, coffee shop, lunchroom, dining room and kitchen were inundated. Even the new addition, on higher ground than the old, had several feet of water in its basement. Union dining facilities will be closed the rest of the summer.

## Equipment Damaged

About five feet of water stood on the ground floor of the physics building. In the physics and electrical engineering buildings several valuable pieces of equipment were damaged, some perhaps beyond repair.

The college power plant was under nearly five feet of water at the height of the flood. Oil drums went afloat and broke open, doing extensive damage. It was said the plant will be out of commission for a week or longer.

At 11 a.m. Saturday it was reported water was rising in the A & M library at the rate of an inch hourly. One tier of books had been moved upstairs by the staff and another was being moved.

## Waist Deep

Water stood on the men's gymnasium floor to a depth of eight inches. In the adjoining fieldhouse, which has a floor below ground level, the water was waist deep. Ironically, a printed sign hanging on the gymnasium's front door said, "Swim today."

Flood damage to research installations on the college farm had not been determined Saturday and may not be evident for weeks.

College employees moved the farm's swine to higher ground before midnight Friday. Among the animals moved were four sows with litters, plus a dozen or more 6-month-old gilts and a boar, pastured in the swale west of the college barns. Two of the litters swam out, but Prof. Melvin Hazaleus, Lamar Esplin, Fred Betz and Walter Sinton carried out two litters in waist-deep water.



### Sidewalks Broken

Agronomy department men said full extent of the damage to the agronomy farm southeast of the city had not been determined Saturday.

Sidewalks in many sections of the campus were washed out

or broken during the flood, which dug holes in ground throughout the area.

The chemistry building, although it stands next to the flooded library, escaped flooding because of banks built around it. Except for slight seepage in basements, Lory and Rockwell halls, the Faculty apartments and the Civil engineering building escaped damage. So did Veterans' village and the Valhalla trailer camp.

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# FORT COLLINS COLORADOAN

Continuing Fort Collins Express-Courier

ESTABLISHED 1873

FORT COLLINS, COLORADO, MONDAY EVENING, AUGUST 6, 1951

10 PAGES 5 CENTS

## THE WEATHER

COLORADO: Generally fair tonight and Tuesday with few afternoon or evening thunderstorms. Mostly hazy; little change in temperature.  
WYOMING: Generally fair tonight, partly cloudy Tuesday; few afternoon showers or thunderstorms. Mainly today and scattered over state Tuesday; cooler southeast Tuesday.

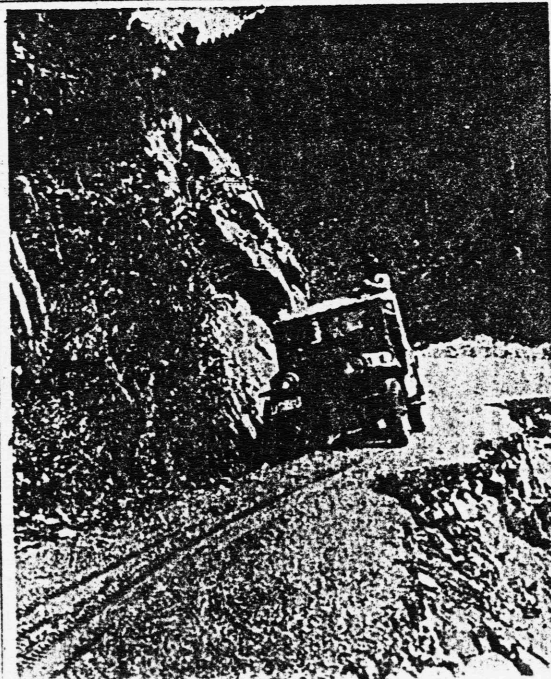
# Apologize to Ridgway, Ask Talk Continue County Fair Cancelled for 1951; College Hunts Repair Money

## Blaik Suggests Probe at Point

Academy Coach Says  
Ousted Men All of  
Excellent Character

WASHINGTON (AP) — Members of a Senate committee decided today to look into the dismissal of 90 West Point cadets accused of cribbing on examinations. Senator Hoyer (D-NC) said an inquiry will be made by agents of the Senate investigations subcommittee which he heads.

WEST POINT, N. Y. (AP) — Earl (Red) Blaik, head football coach at the U. S. Military academy, said today he would welcome a congressional investigation of the recent cadet dismissals "so that the true character of the boys and true relationship of football to life at the academy can be brought before the country."



## Flood Loss Up To 3 Millions

City Employees and  
Volunteers Carry On  
With Mop-up Job Here

Damage estimates for the northern Colorado floods of last Friday night and early Saturday rose to \$3,000,000 today, with possibly \$1,000,000 accounted for in the area of Fort Collins, Laporte and Bellvue.

The Associated Press listed other damage estimates as \$100,000 at Loveland as a result of a flood wall turned loose in the Big Thompson river by the breaking of the Buckhorn reservoir dam 10 miles northwest of the city Friday night.

At Longmont the loss figure was put at \$50,000, and at Lyons \$35,000—all as a result of the overflowing of the South St. Vrain river. Another esti-

## No Cash Available In 'Close' Budget

Colorado A&M college, being mopped up today after last Friday night's flood which inflicted an estimated \$270,000 damage to buildings and equipment, faced two pressing financial questions.

1—Where is the money coming from to pay for cleaning and repairing buildings and equipment and replacing other equipment damaged beyond repair? The college already was working on a "close" budget for ordinary operations, and has no funds for such emergencies as those caused by the flood.

2—What will now be done to provide adequate damage for the central portion of the campus, which bore the brunt of the flood?

A proposal made several years ago for installation of a 54-inch storm sewer to run down Locust and Plum streets, in which the city and college would have cooperated, did not materialize—partly because the college had no funds to meet its estimated \$100,000 share of the cost.

### Report Sent Governor

These questions have had no official airing as yet. But they were suggested in a report which A&M President William E. Morgan made to Governor

dent union and the power and heating plants. As water flowed through a large culvert under the C&S tracks, it flooded the men's gymnasium and field house on the east side, then flowed down Locust street in the city.

### Floor Buckled

A plan to start boilers in the heating plant was delayed this morning when it was found that pressure from water in the basement had buckled the con-

## Will Carry Out Home Ec Show

Most Fair Buildings  
Badly Damaged and  
Grounds in Mess

LOVELAND (Special)—Larimer county's 1951 county fair was cancelled today as a result of last Friday night's flood, which wreaked heavy damage at the fairgrounds here.

This was announced here this morning after an inspection of the fairgrounds by the county commissioners, members of the Loveland city council, and officials of the Loveland Chamber of Commerce and the Larimer County Fair and Rodeo association.

It was estimated that \$15,000 to \$20,000 worth of damage was inflicted on the fairgrounds and buildings. The officials said that, to make repairs and replace-



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## Report Sent Governor

These questions have had no official airing as yet. But they were suggested in a report which A&M President William E. Morgan made to Governor Thornton the morning after the flood. Mr. Morgan told the governor that the college faced a serious problem and that its annual budget, trimmed by the state Legislature below the college requests, made no allowance for emergencies.

As the college staff continued its flood cleanup work into the

dent union and the power and heating plants. As water flowed through a large culvert under the C & S tracks, it flooded the men's gymnasium and field house on the east side, then flowed down Locust street in the city.

## Floor Buckled

A plan to start boilers in the heating plant was delayed this morning when it was found that pressure from water in the basement had buckled the concrete floor on which one of the boilers stands.

The physics building was expected to be cleared of water this afternoon. Here, as in other buildings, the problem of clearing out muddy sediment and drying out and repairing equipment and furnishings will still remain.



lege requests, made no allowance for emergencies.

As the college staff continued its flood cleanup work into the third day this morning, water from Friday's flood stood ceiling-high in the basements of several buildings. The heating tunnels, which carry telephone and power lines throughout the campus area, were still waterlogged today.

### Some Power Restored

By means of new connections, power was restored to buildings on the outer perimeter of the campus, but buildings in the flooded area around the college oval were still without power. Partial restoration of telephone service permitted outgoing telephone calls, but no incoming ones.

The central power plant, also flooded, contained switch and fuse boxes, transformers and breakers for the entire campus. Harry Hepting, college engineer, said he expected pumps would clear the basements of the power and heating plants today.

A city fire engine was pumping out the physics building this morning.

### Dike Torn Out

The veritable lake which covered the college oval Saturday had diminished to a large puddle this morning, and the rest of the surface of the campus was drying out. The area was flooded after a flash flood overflowed irrigation canals west of the campus, broke an eight-foot dike west of the hydraulics laboratory at the west end of the campus, and was backed up by the Colorado & Southern railroad embankment.

The backed-up waters flooded the physics and electrical buildings, the north half of the Stu-

clearing out muddy sediment and drying out, and repairing equipment and furnishings will still remain.

The college library basement contained about two feet of water, as a result of seepage developing since the flood.

The gymnasium and fieldhouse suffered severe damage, and it was feared the gymnasium floor might be so warped as to require replacement.

### Classes Held

College classes went ahead on schedule today. But the summer session commencement, which had been scheduled for next Friday on the now muddy oval, has been moved to the Old Main auditorium, undamaged.

## State Aid for College Seen

Gov. Dan Thornton said in Denver today that the state government will "help all we can" in solving Colorado A & M college's financial problems resulting from last Friday's flood.

He told the Associated Press he had not received a report on the flood, which A & M President W. E. Morgan sent him Saturday. In his report the president pointed out that the college, with a limited budget, faces a financial emergency resulting from estimated flood damage of \$270,000.

The governor said he was trying to reach President Morgan by telephone to discuss the emergency and help needed.

In case of great need, Mr. Thornton said, the state may issue certificates of indebtedness, but otherwise "it is a matter for the state Legislature entirely."



FORT COLLINS COLORADOAN  
Monday August 6, 1951 p2

Colorado A & M  
heating plant showing water  
where trucks usually stand to  
load ashes from the hopper  
above on the south end of the  
plant.



High  
Water  
Mark

# State Committee Will Inspect A&M

Members of the building subcommittee of the State Planning commission will be on the campus of Colorado A&M college Wednesday morning to inspect damage inflicted there by last week's floods.

College officials were informed to that effect this morning, following a statement by Governor Thornton Monday that the state government would assist the college in rehabilitation of its campus.

Harry L. Dotson, vice-president of the college, is chairman of the commission's subcommittee. Other members are M. B. Daniels of Colorado Springs, Lt. Gen. Henry L. Larsen of Denver, director of the state civil defense organization, and Price Briscoe of Idaho Springs, state institutional director.

Following its inspection of the A & M campus, the subcommittee is scheduled to report its findings to Governor Thornton. Thereafter, it is expected, the state's finance officials will decide on the means of financing the repair of the flood damage.

Mr. Dotson said today that the flood damage — now estimated at \$270,000—is not expected to

hamper the scheduled opening of the college's fall term Sept. 17.

Damage to classrooms was not extensive and it is expected that service facilities can be repaired sufficiently by then that there will be no interference with the college activities.

Classes of the A & M summer session were resumed Monday and were continuing on schedule today.

In his statement of Monday, Governor Thornton suggested that, if necessary, the state can issue certificates of indebtedness to meet any deficit incurred by the college in repairing flood damage. He pointed out, however, that final decisions on financial aid lie with the state Legislature, whose next regular session begins next January.



## Group Tours College Area

Five men making up a special committee from the State Planning commission arrived at Colorado A & M college this morning to survey damage sustained in last Friday's flood.

Commission members on the committee included M. I. Signer of Golden, chairman; W. M. Williams of Denver, director of the commission; H. A. Storey of Denver, assistant director, and M. B. Daniels of Colorado Springs, vice-chairman.

State Sen. Edwin A. Rogers of Westcliffe accompanied the committee on the tour. The party also included City Manager Guy H. Palmes and City Commissioner Ben Wilkinson. The group spent the morning on a tour of the campus, viewing flood-damaged buildings, supplies and equipment. Conducting the commissioners through the campus were President W. E. Morgan, Vice-President H. L. Dotson and Harry Hepting, college engineer.

### To Tour Farms

Scheduled for the committee this afternoon were a tour of the college farm and pasture land, which were inundated by the high water, and a meeting with other college officials to discuss damage.

The special commission was asked by Governor Thornton to survey the damage to the college campus and buildings and report findings to him. President Morgan initially estimated the damage to college facilities at \$270,000.

## Volunteers Help Library Flood Job

With the help of volunteer workers and members of the Colorado A & M college library staff, books and pamphlets damaged in last week's flood have been salvaged. James G. Hodgson, college librarian, reported today.

The library itself was vitally undamaged by the high water which inundated much of the campus, Mr. Hodgson said, but about 200 volumes in the electrical engineering building were soaked. Copies of the magazine Electronics, which would be difficult to replace, were also in the flooded section of the building.

Assisting library staff members in the salvage work were Mr. and Mrs. Waldo Riffenburgh, Mrs. H. G. Jordan, Mrs. Grant Eddy, Mrs. Bertha Peterson, Mrs. J. T. Strate, Miss Barbara Strate, Miss JoAnne Strate, Dr. and Mrs. Walter Horlacher, Mrs. Jessie Coons, Dr. Rue Jensen, Dr. A. A. Goodman, Alfred R. Williams and W. H. Woodard.

The workers spent many hours placing paper towels between the dampened pages of the books and magazines. Books printed on glossy paper were the greatest problem, Mr. Hodgson said.

When the wet pages dried, they stuck together. To separate the pages, library staff members had to re-soak the books in pails of water.



**CHECK DAMAGE AT COLLEGE**—A special committee of the State Planning commission toured Colorado A & M college Wednesday to inspect damage caused by last week's floods. Members of group and college officials are pictured here in a room in the physics building, which was considerably damaged, along with much valuable equipment. From left in the picture are W. M. Williams of Denver, director of the commission; President W. E. Morgan of the college; M. I. Signer of Golden, chairman of the special committee; Harry Hepting, the college engineer, and State Sen. Edwin A. Rogers of Westcliffe, who accompanied the committee.

Members of the state committee who inspected the A & M campus Wednesday agreed that the preliminary estimate of \$270,000 in flood damage may be increased.

Although the college's building mill-levy fund contains about \$100,000, Director W. M. Williams of the state planning board said the inspecting group recommended issuance of the state certificates rather than dipping into the mill-levy fund.

#### Sewer Discussed

It was not indicated what further steps would be taken to meet any excess of repair costs above the initial \$170,000 in state assistance.

Also discussed among the state, college and city officials who accompanied the inspecting party was the possibility of building a large storm sewer to drain the campus by way of the low-lying area along Locust and Plum streets and Eastdale drive, heavily flooded by last Friday's storm.

It was indicated informally that a survey of a possible sewer project would be undertaken after the flood repairs are completed. If definite recommendations result from the survey, it was suggested they will be laid before the State Legislature for approval and appropriation.

#### Power Restored

The report of the planning board's committee was submitted to Governor Thornton this morning by Lt. Gen. Henry L. Larsen, state civil defense director, and Director Williams.

They reported that 75 per cent of the electric service had been restored in college buildings and the rest will be ready in another day or two.

The flood, they reported, was greater than any which had struck the campus. Previously, the most severe flood—in 1938—covered the floor of the heating plant six inches deep. Last week's flood covered it to a depth of five feet six inches.



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## Flood Loss Here Believed Reduced By Horsetooth

Much greater flood damage probably would have occurred in the Fort Collins area from the destructive storm of Aug. 3, if it were not for Horsetooth reservoir west of here, a report by a Reclamation bureau official indicated today.

C. E. Klingensmith, engineer in charge of the bureau's office here, said the bureau official who measures the water at Horsetooth estimates the water level in the reservoir was raised 2½ feet by the rainstorm Aug. 3 and the one that preceded it Aug. 2.

### 1,570 Acre Feet

The official estimates 1,570-acre-feet of water ran into the reservoir from the hills and gullies west of it during the two storms, Mr. Klingensmith said.

The water gauges at Horsetooth were read July 31, prior to the storm, Aug. 4 and again about Aug. 7. In making calculations, the bureau allowed for water carried into the reservoir by the Horsetooth feeder canal during the period.

If it were not for the reservoir, Mr. Klingensmith pointed out, the 1,570 acre-feet of water would have drained out through gullies and streams onto the flat-lands east of the foothills.

# APPENDIX D

CAMPUS FLOODING OF JUNE 24, 1992

(\$28,461 in insurance water damage claims - 2.49 inches of rain in two hours)

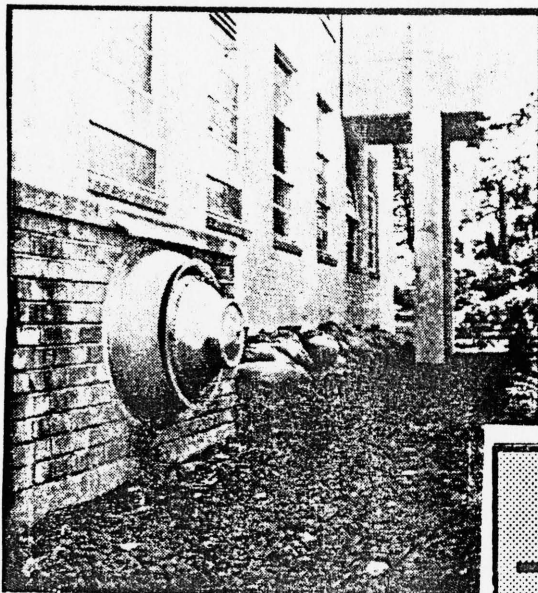
Surface water damage to :

Forestry - basement flooded with four feet water - 15 personal computers ruined.  
Heating Plant

Administration Annex

Engineering - Water level outside of A-Wing about 2 feet above ground floor level.  
etc. (Gibbins?)

"A" Parking Lot North of Engineering - Water level 2 to 4 feet deep.



- Forestry Building CSU Campus

## FLOOD DAMAGE ASSESSMENT RESULTS

City of Fort Collins	\$13,000
Larimer County	28,000
Colorado State University	75,000
51 Homes (estimated)	250,000
16 Businesses (estimated)	100,000
Total Estimated Flood Damages	\$466,000

*Flood Damage Results*



Storm soaks city

# Old Town swamped

By ROBERT BAUN  
The Coloradoan

As rain started to saturate downtown streets Wednesday afternoon, Tim Van Schmidt was working in the studio that adjoins his basement store, Small Differences, at 113 Linden St.

But when he heard the sound of water gurgling in the pipes of the studio's sink, Van Schmidt knew there could be trouble.

The noises had occurred before when heavy rains backed up in the underground drainage pipes. When Van Schmidt looked out, water was building up rapidly in the stairwell outside his front door.

Water soon seeped into the store through the door and walls. Finally, pressure from the flooding pushed the wall in and Van Schmidt was nearly up to his knees in water.

"I tried sealing the door, but that didn't work," Van Schmidt said while peering down into the stairwell. "There were little fissures in the wall. It was like a Roman bath with water pouring out of the ceiling."

Van Schmidt said the water level reached nearly four feet before the wall

caved in. But the wall stood long enough to allow Van Schmidt, an employee and a friend to raise most of his artwork to higher ground.

"This is a disaster, but it's not the end of the business," said Van Schmidt, 35, who makes ceramic miniatures for doll houses.

Van Schmidt's basement shop has a history of flooding. A previous owner was flooded four years ago, Van Schmidt said.

"The landlord warned me about flooding, but I just didn't think it could happen to us," he said.

Ironically, the police officer guarding Van Schmidt's business was Heidi Nash, whose mother was one of the owners of a business in the same spot that was flooded in 1988.

Van Schmidt said it would take at least four days to reopen the shop.

Most downtown businesses with basements experienced some flooding, said Brian Soukup, co-owner of the Old Town Square plaza and owner of Foxfire Property Management. Foxfire manages numerous commercial buildings in the downtown district, as well as the Old Town plaza.

Soukup said Foxfire's steam cleaning crew would work through the night.

The Safeway store at the corner of Mulberry Street and College Avenue experienced some of the worst flooding. An underground parking lot and a truck loading bay were filled with water, Soukup said.

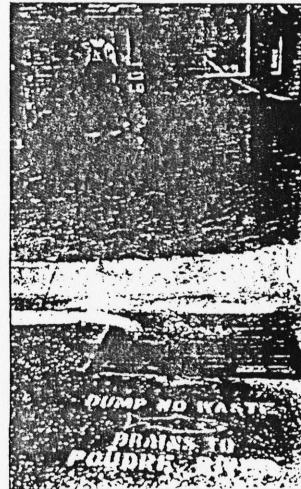
Holly Wright, co-owner of The Wright Life, 200 Linden St., said her store experienced minor basement flooding. But she called it the most intense street flooding she had seen in 11 years of business.

"The storm drains were not plugged; they just couldn't drain fast enough," Wright said. She said water covered the top step of the Linden Hotel, located across the street from The Wright Life.

Water also reached the top step of the Stone Lion and flooded the basement of the bookstore.

Soukup, who toured Old Town during the storm, said water was knee-high in the center of the plaza.

"You couldn't tell the difference between the fountain and the plaza," he said. "Some lady walked right into the fountain and just about drowned herself."



Jason Coontz/The Coloradoan

**PUMPING OUT:** Firefighters use gasoline-powered pumps to suck water out of an Old Town basement into a storm drain on Mountain Avenue.

## Weary residents bail out homes

By TONY BALANDRAN  
The Coloradoan

Charles Hart stood at the top of the steps leading to his basement apartment Wednesday and gawked at a pit of murky water.

"I've lost everything," an angry Hart said as firefighters used a pump to siphon his home.

"I don't believe this s---. It came up to my chest."

Along the 300 block of East Locust Street, residents recovered from a torrential rainstorm that unleashed a flash flood in their neighborhood, leaving damaged homes and dampened spirits in its wake.

"You could not see the street," resident Carol Place said. "It was a lake."

Using shovels and sticks, neighbors worked to clear the debris from a drain in the middle of the block.

Youngsters watched the whirlpool suck the dark water down into the sewer as Eric Olson assessed his 1984 Porsche, which he kept secured in his garage.

Friends helped him push the glistening red vehicle out of 18 inches of rainwater. Engine components were flooded, and its vinyl seats were soaked.

The car, uninsured for a flood, slowly drained on Olson's gravel driveway.

"He's pretty bummed," said Olson's girlfriend, Kelly Montgomery. "He takes very good care of his cars. ... He throws a blanket on them whenever it rains."

Next door, Robert McCormick



Pat Kramer/The Coloradoan

**BASEMENT BAILOUT:** Firefighters clear a stairwell Wednesday at 313½ E. Locust St.

used a vacuum to finish draining the six inches of water that drenched his law office.

Last year, he said, residents on the block had petitioned the city to improve the drainage system in the area.

"They said it wasn't a high priority," McCormick recalled.

From a window, he overlooked his back yard, which Mother Nature temporarily transformed into a swamp about 5 feet deep.

Like his neighbors, McCormick's basement was lined

with a few inches of water. It was damage that was nothing compared to Hart's — just two houses away.

"A few inches," Hart said. "I wish I just had a few inches."

The clothes can be washed, he said, but some items cannot be easily fixed: a television, furniture, a stereo and a personal computer. He did not have renter's insurance.

Hart was sitting in his living room watching television when his girlfriend noticed water seeping under the door.

Water had begun to fill the stairwell and was applying pressure on the front door.

At that point, Hart and his friends crawled out the kitchen window onto the muddy driveway. Moments later, the door collapsed and water began rushing into his home.

It was the second time Hart was flooded out this year. The first incident was in March when a water main broke a few blocks away.

The city paid for most of the damage then, and Hart is blaming the city again for Wednesday's flood.

"I guess this is what happens when there isn't proper storm drainage," he said. "Something has to be done."

Meanwhile, he struggles to keep his sense of humor.

"I guess we all have to wipe our eyes and keep on going," Hart said. "I think I'll be looking for a nice third-story apartment."



Michael Madrid/The Coloradoan

**WATER DAMAGED WALL:** Bret Cooperrider crawls through the damaged storefront of Tim Van Schmidt's Small Differences store in Old Town. Water from Wednesday's storm pushed in the exterior wall and flooded the store.

## Storm damage appears minor

By ROBERT BAUN  
The Coloradoan

After property managers and insurance companies took score Thursday, the damage from Wednesday's deluge in Fort Collins appeared to be minor.

"The loss is less severe than we had anticipated," said David Parker, a manager for Galyardt, Harvey and Riedman Insurance, a leading policy writer for businesses in Fort Collins. "The way the storm was raging, I was surprised the resulting damages haven't been greater."

State Farm Insurance Co. had received 70 damage claims for cars and houses by late Thursday, indicating a low rate of property damage. About half of the State Farm claims were the result of hail that came with the rain, said Dimitria Argo, assistant communications manager for State Farm's regional office in Greeley.

Argo said the company would come up with a damage total by Monday. State Farm insures about 25 percent of Colorado's cars and about 20 percent of its houses.

But some damage from the flooding may be difficult to account for. Most home policies do not cover flood damage. And renters in basement apartments who suffered damage to their personal property can collect only if they have rental policies.

"The real problem we're faced with

is trying to explain to our tenants that the owner is not responsible for damage to their personal effects," said Bob McGlasson, vice president of residential property for Horizon West property management company.

He said owners carry hazard insurance for their buildings, but renters must cover their personal property, a policy that costs about \$100 per year.

McGlasson estimated Horizon West's cleanup costs at \$5,000.

Brian Soukup, owner of Foxfire property management, said his cleanup costs would also be "in the thousands." The major expense will come from cleaning or replacing carpets and touching up damaged paint, he said.

Tim Van Schmidt, owner of Small Differences, a basement gift store in downtown Fort Collins, may have sustained the most damage from the storm. About 10 percent of his merchandise was ruined, he said.

The front wall to the store, which is at the bottom of a stairwell, caved in Wednesday after four feet of water built up in the well. Van Schmidt said he wasn't ready to calculate the cost of the damage.

But friends who heard about Van Schmidt's trials showed up at the store Thursday to help clean up.

"They just showed up and volunteered," he said. "You couldn't ask for better support than that."



Rich Abrahamson/The Coloradoan

**RAINY DAY BLUES:** Shawn Hoven, 21, left, and Mark Skipper, 23, brace against a driving rain while walking across Mountain Avenue just west of Old Town.

### All wet

Spotters for Mountain States Weather Services recorded a variety of rainfall totals at different locations in and around Fort Collins following Wednesday's storm:

- 3.09 inches near the intersection of Overland Trail and Vine Drive.
- 2.5 three blocks south of City Park.
- 2.49 at the city's official weather station on the Colorado State University campus.
- 2.1 on the east side of City Park.
- 1.76 three miles west of the main weather station at CSU.
- 1.59 at Mountain States Weather Services in east Fort Collins.
- 1.54 1 1/2 miles northwest of Bellvue.
- 1.5 one mile south of Bellvue.
- 1.46 in Bellvue.
- 1.17 5 1/2 miles west-northwest of Wellington.
- 1.00 near the intersection of Lemay Avenue and Columbia Road.
- .45 near the intersection of Horsetooth Road and Shields Street.
- .25 in Wellington.
- .22 at the inlet bay at Horsetooth Reservoir.

# 51

## Poor drainage puts crews in over their heads

By J. LEWANDOWSKI  
The Coloradoan

City crews worked late into the night Wednesday to clear street storm drains and pump water from basements of homes and businesses.

Wednesday's intense rain overwhelmed stormwater drains and caused flooding, mainly in the older sections of Fort Collins north of Prospect Road and downtown. Crews had to pump water from the basements of about 25 buildings.

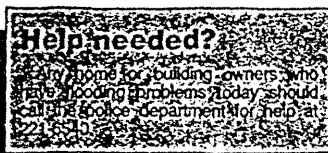
"When you get a rain like this, the storm water intakes can only take so much water," said Larry Schneider, city streets superintendent.

Many streets and intersections throughout the city flooded when the drains backed up.

About a month ago, city crews cleared all storm drain intakes. But even clear drains couldn't handle the water Wednesday.

"It caught us by surprise. We weren't supposed to get this," Schneider said.

Flooding was especially bad downtown because the storm drain system is antiquated in that area, said Bob Smith, storm water utility manager.



"It's an old system, and it's inadequate," Smith said.

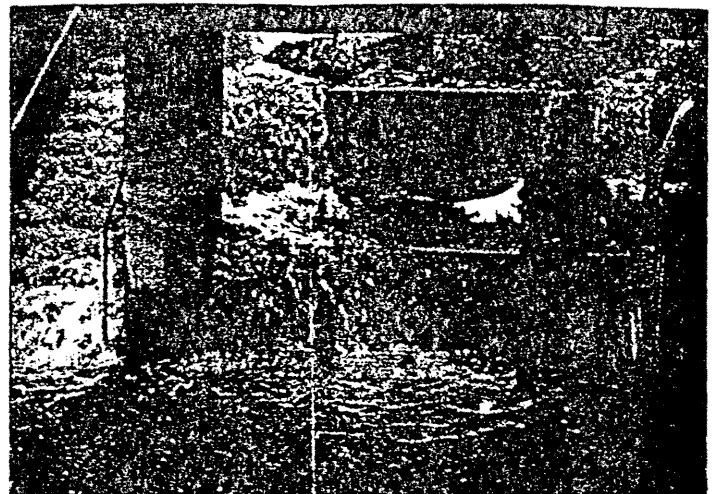
The city has studied improving the drainage system, but money for the work is not available, Smith said. Cost estimates range from \$3 million to \$4 million for the work.

"The newer parts of town have a better system," Smith said. "But the storm wasn't as intense down there."

Crews had to clear water from streets before they could start working in buildings, Smith said.

"You can't pump out the basements until the streets are cleared. We had to start at the streets and work in," he said.

Smith asked that anyone who took pictures of flooding take them to his department. The pictures could help the city with improvement projects.



Michael Madrid/The Coloradoan

**WATERFALL:** Linda Kaiser of Nevada carries a handful of hailstones as water rushes into the lower level of the parking garage at College Avenue and Mulberry Street.

# City of Fort Collins Flood Hazard Mitigation Plan

"The June 24, 1992 Flood"

City of Fort Collins  
and  
Colorado Office of Emergency Management  
Disaster Preparedness Improvement Grant Program

By  
Jeff Brislawn  
and  
Robert L. Kistner

October 15, 1992

Acknowledgement of Federal Emergency Management Agency (FEMA) Support - Federal funds from the Federal Emergency Management Agency under assistance agreement award identification number 92-6-9200-4174-2-9081. The contents do not necessarily reflect the views and policies of the Federal Emergency Management Agency, nor does mention of trade names or commercial products constitute an endorsement or recommendation for use.

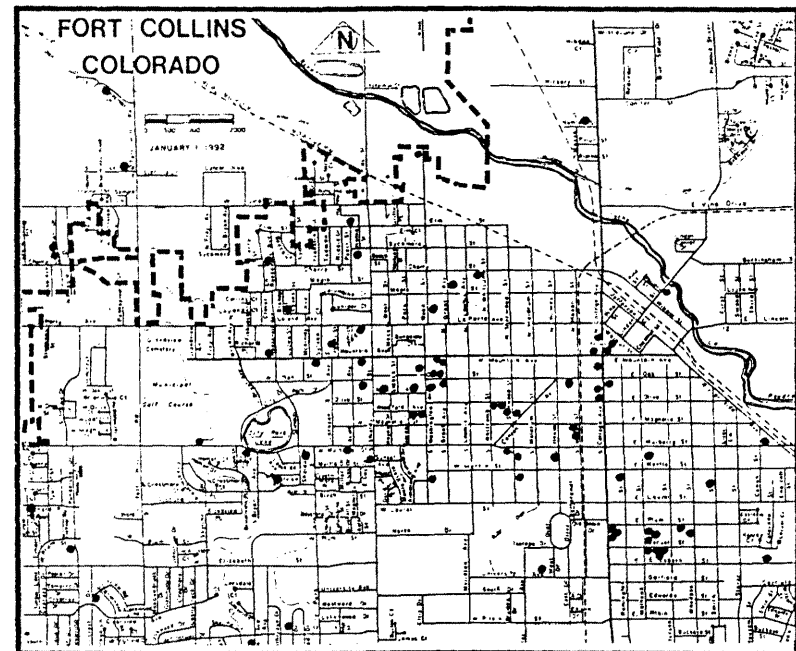


Figure 4 - Damage Sites Homes and Businesses

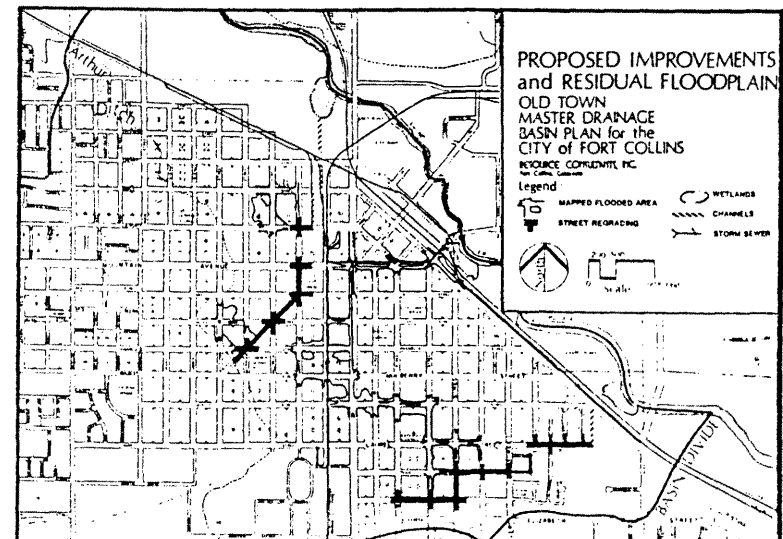


Figure 15 - Flood Inundation After Improvements



# The June 24, 1992 Flood

\$466,000 cost estimated for the June 24, 1992 storm.

Fort Collins is vulnerable to flooding, as was most recently demonstrated during a severe thunderstorm on June 24, 1992. The effects of future floods can be reduced through community awareness, mitigation, and preparedness. The lessons learned from this flood were used to outline this plan for the mitigation of future flood problems in Fort Collins.

The downtown business district and surrounding residential area of Fort Collins experienced flash flooding from an intense thunderstorm on the afternoon of June 24, 1992. The storm began suddenly, shortly after 3 p.m., and dumped 2.49 inches of rain in a little over an hour. Storm sewers, unable to handle the volume of water, caused many streets to flood. Several businesses and private residences sustained flood damage, mainly to basement levels. In addition to flooding, damage was caused from hail and lightning strikes, and many flat roofed buildings leaked water into upper levels.

The flooding was a result of an abrupt change in climatic conditions that led to one of the most intense rainfalls in Fort Collins history. On the morning of June 24th, downslope winds blew dry, hot air into the foothills and plains, with temperatures warming to the mid-eighties by afternoon. A front moved into Fort Collins early in the afternoon from the northeast, creating an upslope. The warm air rose quickly, and the upslope conditions created an explosion of moisture right over the center of Fort Collins.

The worst flooding occurred in the older sections of Fort Collins. This area has an antiquated storm drain system and received the most rain. The city storm intakes had been cleared a month previously, but even the unobstructed drains could not handle the volume of water that fell that Wednesday. The presence of many high-crowned roads in this part of town diverted water into the overloaded drains.

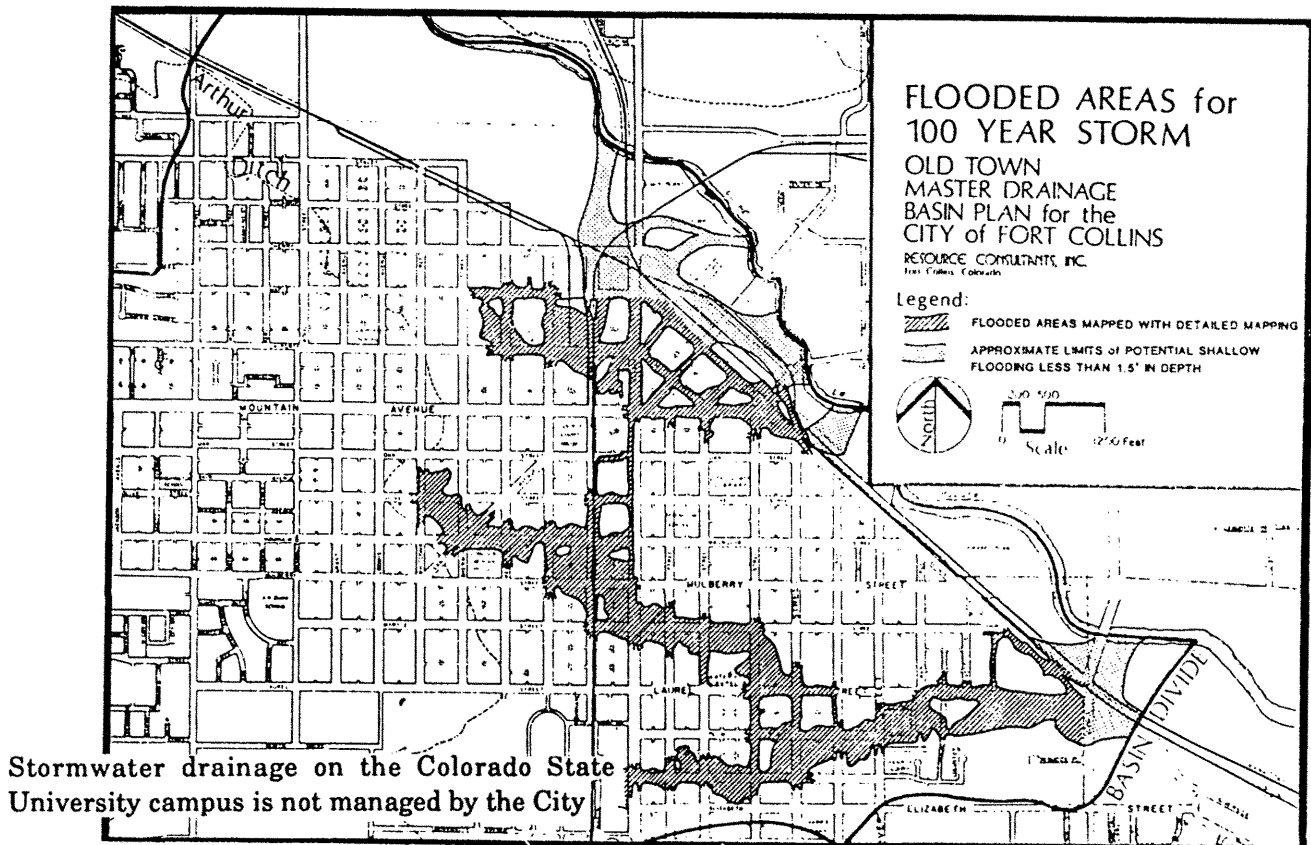


Figure 14 - Old Town 100 Year Flood Inundation **53**

# APPENDIX E

## CAMPUS FLOODING OF JULY 28, 1997

(Flood damage exceeds \$100 million (1997 dollars) - 4.63 inches of rain in 24 hours. Flooding closed 36 buildings. Sixteen buildings received major flood damage.)

### (Flooded Buildings built before 1951 flood)

Heating Plant Flood depth: Basement flooded. 83 inches above first floor (north)  
58 inches above first floor (south)

Occupational Therapy (Old Physics) Flood depth: Basement flooded.  
66 inches above first floor.

College Avenue Gym/Field House Flood depth: About 2 feet above ground floor.

Gibbons (Old Museum/Electrical Engr.) Flood depth: 82 inches above ground floor.

Music (Old Library) Flood depth: Basement flooded. First floor East not flooded.  
6 inches above first floor West.

Johnson Hall (North) Flood depth: 53 inches above north ground floor.

Johnson Hall (South/Old Student Center) Flood depth: 24 inches above ground floor.

Forestry Flood depth: Basement flooded to ceiling. No first floor flooding.

Administration Annex Lower level flooded.

Weber Flood depth: 6 inches above lower level floor, west side of building.

Heating tunnels flooded.

### (Flooded Buildings built after 1951 flood)

Morgan Library Flood depth: Basement flooded to depth of 8 1/2 feet.  
425,000 library books underwater.

Lory Student Center Flood depth: 95 inches deep in lower level.  
Bookstore flooded: all textbooks underwater.

Engineering Flood depth: Lower level A & B Wings: 27 inches  
Lower level C & D Wings and Arcade: 2 to 4 inches.

Education Flood depth: 83 inches above ground floor.

Eddy Flood depth: 91 inches above ground floor.

International House Flood depth: Ground floor flooded.

University Health Services Flood depth: Basement flooded.

Old Dog Colony Flood depth: Ground floor flooded to ceiling.

### (Other flood damage)

Several other buildings suffered minor flood damage.

Horticulture Greenhouses suffered major flood damage.

Oval, Tennis Courts and Parking Lot North of Engineering flooded.

Phone and electrical out in part of campus.

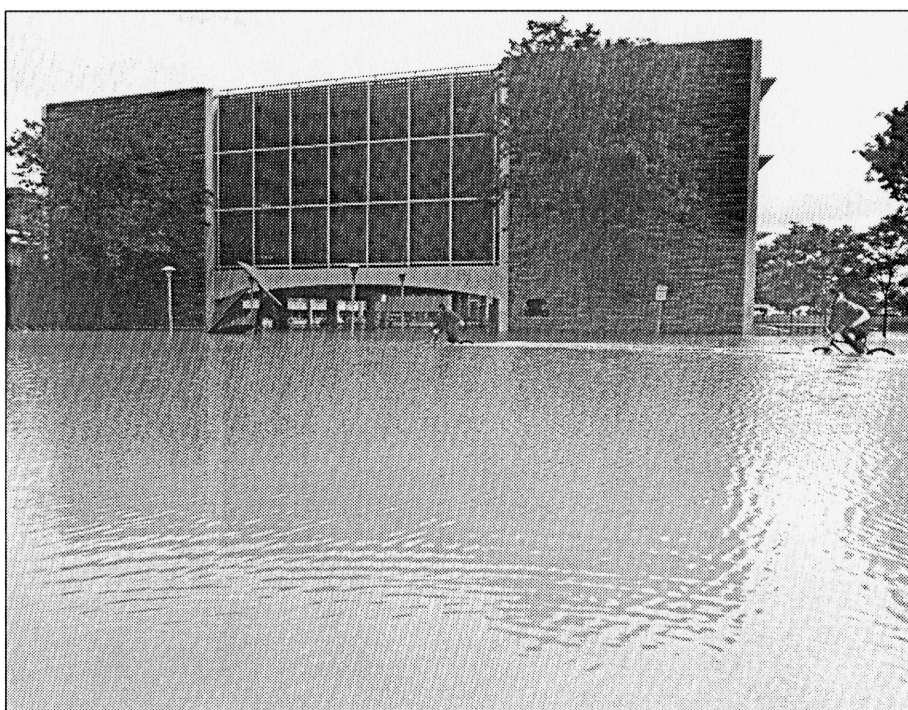
Arthur's Ditch: The ditch was covered from South Drive to Pitkin during 1962.  
It appears that the ditch was covered south of Pitkin during 1969.

Area East of Campus: Many basements and first floors of houses located east of campus were flooded.



*Photographic Services Archives*

Morgan Library (west side – day after flood).

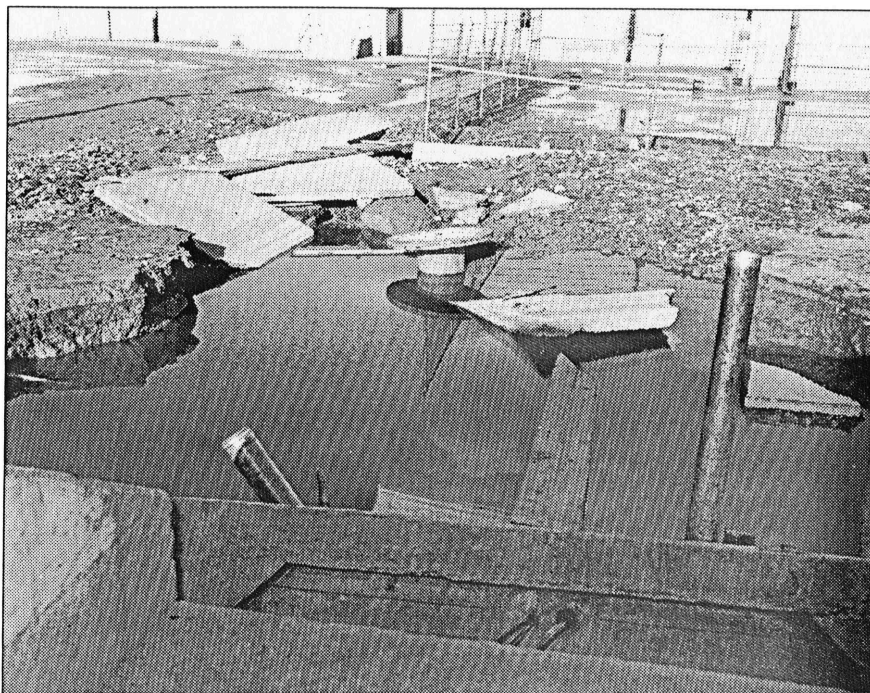


*Photographic Services Archives*

Eddy Hall (day after flood).

July 28, 1997 Campus Flood





*Photographic Services Archives*

Downstream side of pedestrian tunnel (after flood).

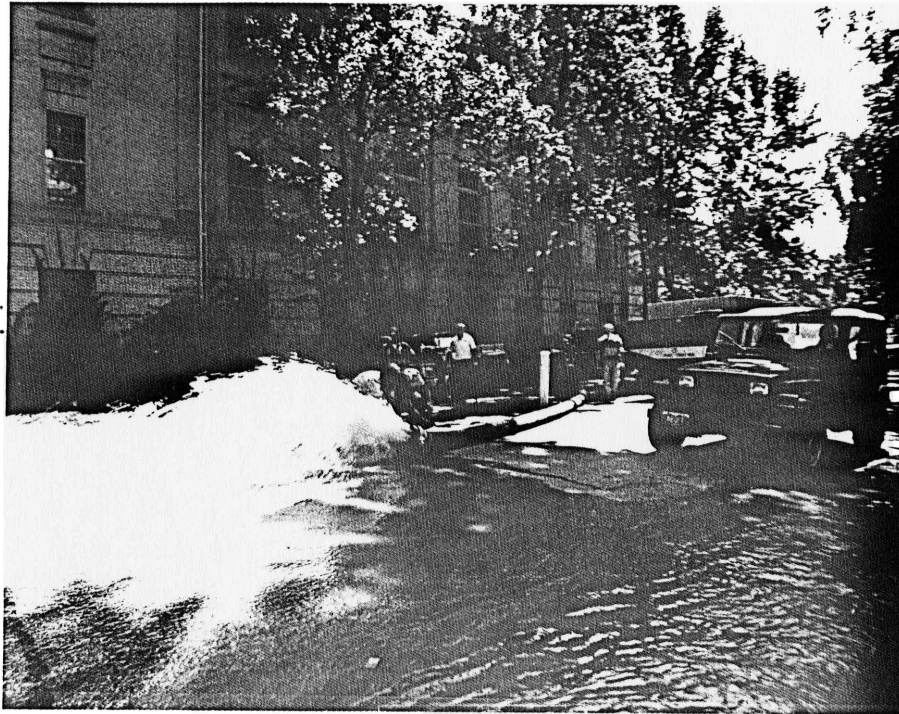
August 3, 1951 Campus Flood



*Photographic Services Archives*

Downstream side of pedestrian tunnel and College Gym (after flood).

July 28, 1997 Campus Flood



Occupational Therapy (old Physics) Building (after flood).



(Photographic Services Archives)

Heating Plant and pumping water from steam tunnels (day after flood).

July 28, 1997 Campus Flood



Inside Heating Plant (day after flood)  
(flood depth - 83 inches above ground floor)



Outside Lory Student Center - North side (during flood)  
July 28, 1997 Campus Flood



"All the News  
That's Fit to Print"

# The New York Times

VOL. CXLVI... No. 50,869

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WEDNESDAY, JULY 30, 1997

FORT COLLINS

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An emergency worker cleared debris from a main phone line bundle after a flash flood yesterday in Fort Collins, Colo.

## At Two Colorado Trailer Parks, A Soothing Rain Becomes Deadly

By JAMES BROOKE

FORT COLLINS, Colo., July 29 — A freak flash flood roared through two trailer parks here early today, derailed a freight train and tossed houses like beer cans, injuring 40 residents and killing at least five people.

As rain poured through the night, residents, some in their pajamas, clung to trees and huddled on rooftops, before rescuers in rubber rafts could reach them. This evening, after a full day of searching the abnormally swollen, chocolate-colored waters of Spring Creek, at least 15 people were still missing.

"Trailers were swirling around us," Suzanne Faustino-Camacho recalled of the nightmarish two and half hours she endured early this morning marooned with her three small children and 11 other people in the bed of a pickup truck. "Standing

in the truck, the water came up to my shoulders."

As the torrent swept by on both sides, Mrs. Faustino-Camacho said, a neighbor screamed that she was trapped in her trailer home, with an air pocket only one foot high.

"After the rescuers pulled her out her window, they got a man out of a tree, then they got us," Mrs. Faustino-Camacho said. She was taken to safety in an inflatable raft powered by an outboard motor, and today, she was one of about 90 people rendered homeless by the flood who had registered at a Red Cross emergency center. A sling stabilized her right shoulder, dislocated in Monday night's chaos when a neighbor hauled her and her 1-year-old baby, Ruby, into the relative safety of the pickup truck.

Monday night, many residents of the two adjacent trailer parks went to bed, lulled to sleep by the sound of rain drumming on their roofs. They did not know that as much as 10 inches would fall in five hours — roughly the amount that falls on this part of Colorado in six months. Because the soils of Eastern Colorado's plains are typically dry, the region does not absorb water easily. The downpour came after rains had soaked the area over the weekend. Flash flood warnings were broadcast

Sunday evening.

The mass of water destroyed the trailer parks, 90 flimsy homes in a low gully, between College Avenue, one of the state's busiest traffic arteries, and the 15-foot-high embankment of the Burlington Northern Railroad tracks.

Today, the flood site looked as if a petulant child had kicked his toy town.

Dozens of trailers and cars lay scattered haphazardly. A strip mall staircase had snagged three floating steel dumpsters. At Break Point Aerobic and Weight Lifting Club, stationary bicycles and stair-climbing machines were strewn about like folding chairs. A muddy highway mark rose to inches of a wall clock, frozen at 11:05, the time when the flood's full force hit here.

Downstream, at Johnson Park, an overturned blue jeep blocked Spring Creek's bicycle path and another car was caught in the decorative arch of a pedestrian bridge. The manicured lawn of this city park was littered with flood-borne detritus — a sewing machine, a tool belt, two bicycles still chained together. Swept off their moorings, five trailers had gone on a wild, 500-yard ride, bumping and bouncing off cottonwood trees until they finally stopped, wedged, half-submerged below the College Avenue highway bridge.

"I felt like I was on the ocean," Chris Gonzales, a 20-year-old construction worker recalled today of his dreamy awakening to a midnight nightmare. "Then, I heard a lot of screaming, scared children, people up in the trees."

Today, the disaster site was alive with the diesel roar of backhoes, dump trucks and tow trucks as crews raced menacing skies to clear the mounds of debris that was blocking water behind the College Avenue bridge. Despite forecasts of rain,



A flash flood has devastated parts of Fort Collins, Colo.

none had fallen by nightfall.

Through the morning, searchers could be heard breaking glass as they searched, trailer by trailer, for survivors or the missing. Confronted with deep mud, they used probing rods and search dogs.

After one body was found two miles downstream, divers searched stream banks along the three-mile stretch from the flood site and to the point where the creek empties into Cache la Poudre, the region's largest river. Of the fatal victims, all women, only one was identified, Rosemary Rodriguez.

With red spray paint, workers marked the trailers. "Clear," "No Entry," "Not Search" and "Live Cats."

Jim Pietrangelo, one of the first

firefighters on the scene, recalls encountering "pure mayhem." As trailers burned from cooking gas fires, residents struggled to escape death by drowning.

"Dozens of people were screaming," recalled Mr. Pietrangelo, who added that he was able to save three people. "Men were screaming: 'You've got to go in and get my babies or I'm going to get them.'"

To one resident, there was plenty of reason for panic.

"Our neighbors were still in their beds, and I was yelling 'get out, get out,'" said Chris Woodward, a 27-year-old warehouse employee. "Then I saw the freights hit the mobile homes."

The water backed up behind the railroad embankment, then broke over tracks, sweeping off the freight train and cascading down into the trailer parks.

Today, railroad crews worked to right the train and to repair the track.

While many of the trailer home residents considered their homes and cars total losses, others around this city of 108,000 people tried to assess damages.

"The water went clear up to the keyboards," said Marilyn Zuniga, as she surveyed the water logged showroom of the store where she works, Colorado Piano and Keyboard. Pointing to a waterlogged shipping crate, she said: "That piano over there was worth \$20,000."

Half a mile north of the Spring Creek flood site, officials at Colorado State University reviewed what they called tens of millions of dollars of damage to the century-old land grant college.

Water flooded through about 20 buildings, damaging dormitory rooms, the student union, and the old college gymnasium. Water destroyed dozens of engineering projects, hundreds of computers and thousands of fall semester textbooks, which were stored at the campus

bookstore. At the library, where books were stored in the basement for a summer renovation project, about 1 million books were damaged. On the university's historic Oval Drive, students waded waist deep through a caramel-colored lagoon, and the chairman of the Music Department listed the contents of his building's flooded basement: pianos, musical instruments, band uniforms and sheet music dating back to the 1920's and 1930's.

Federal disaster aid will be requested by state and local officials, Roy Romer, Colorado's Governor, said after flying over the area in a National Guard helicopter.

"I know that creek well," Mr. Romer said, adding that he had lived for four years only four blocks from what is now the disaster site. "It just catches your breath to see that amount of damage in the center of a city coming from a creek."

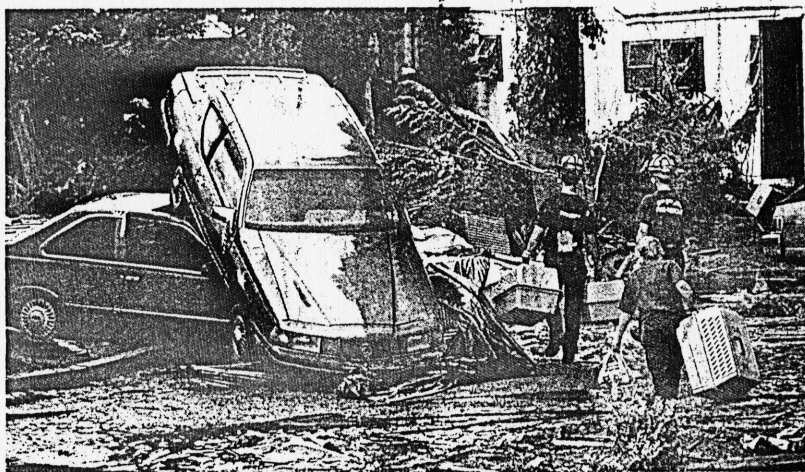
Spring Creek is normally a docile stream only five feet wide.

Weather experts sometimes call late summer Colorado's "monsoon season" — a time of heavy, localized rains.

Monday's rains also hit Denver about 60 miles south of here. Falling around rush hour, the deluge knocked out traffic lights, briefly trapped office workers in elevators, washed out several roads and snarled traffic around the metropolitan area of two million people. The rain delayed for 75 minutes the Colorado Rockies' baseball game with the Montreal Expos. One man standing outside Coors Field was startled, but not injured, when lightning hit his umbrella.

The Fort Collins flood came two days short of the anniversary of the state's worst flood in modern history, the July 31, 1976, flood of the Big Thompson River. Coursing through a canyon about 20 miles southwest of here, that flood killed 145 people. Several bodies were never recovered.

THE NEW YORK TIMES NATIONAL WEDNESDAY, JULY 30, 1997



Rescue workers removed pet carriers from a trailer park devastated by rain through the night and a flash flood yesterday in Fort Collins, Colo.

## Flash Flood in Colorado Kills At Least 5 and Injures 40

Continued From Page A1

Kevin Mooney for The New York Times

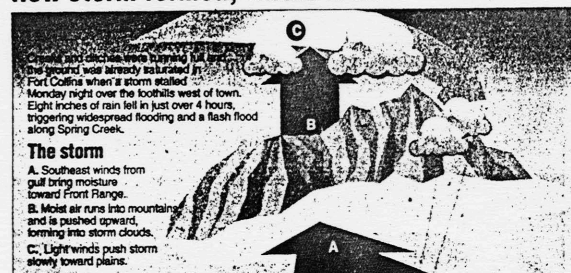
Kevin Mooney for The New York Times

Continued on Page A10

THE DENVER POST  
**FORT COLLINS FLOOD 1997**

July 30, 1997

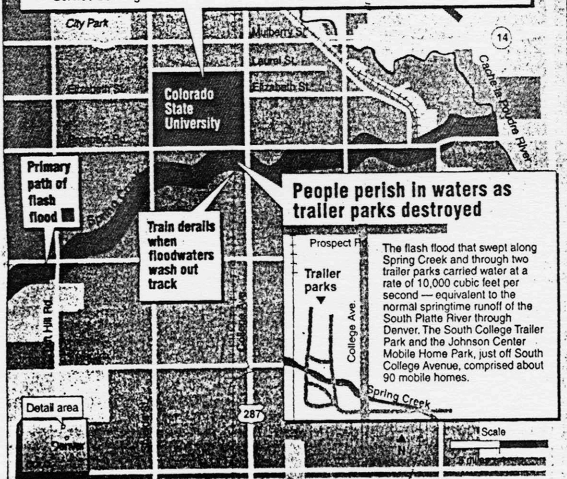
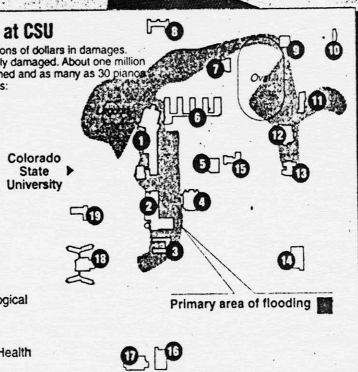
**How storm formed, where it hit**



**Estimated damage at CSU**

University suffers tens of millions of dollars in damages. Twenty to 25 buildings severely damaged. About one million books lost, computer labs ruined and as many as 30 pianos destroyed. Damaged buildings:

1. Lory Student Center
2. Morgan Library
3. Eddy Building
4. Clark Building
5. Natural Resources
6. Engineering
7. Music
8. Rockwell Hall
9. Printing Service
10. Sprague Hall
11. Gibbons Building
12. Johnson Hall
13. Student Services
14. General Services
15. Forestry
16. Molecular and Radiological Biosciences
17. Gifford Hall
18. Aylesworth Hall N.E.
19. Hartshorn University Health Service Building



Sources: Colorado State University and Mike Nelson and Nick Carter, KUSA-Channel 9 The Denver Post / Blair Hamill and Jonathan Moore

# 'Complete devastation'

## 5 die, 7 missing as city digs out

By Steve Lipsker  
Denver Post Staff Writer

FORT COLLINS — As sunshine sifted through woolen clouds Tuesday, residents here fought through tears and mud to reclaim their town from a devastating flash flood that left at least five dead and scores homeless, their spirits and belongings equally dampened. Morning's light revealed an intense path of destruction along normally placid Spring Creek through the center of town, deep pools of standing water throughout Colorado State University and debris scattered everywhere in the wake of a violent thunderstorm that stalled over town Monday night.

"It's pretty complete devastation. There isn't much that's salvageable," said Gov. Roy Romer, who toured the area in the afternoon and attempted to comfort victims with the hope of local, state and federal disaster aid.

"We're probably fortunate we didn't lose more lives," he said. As it is, five people — all adult women — were confirmed dead by the Larimer County coroner's office. Seven people were unaccounted for and a search of the demolished areas was halted at 8:30 p.m. The search will resume this morning.

The dead were identified as Sarah Payne, Cindy Schultz, Marie "Rosemary" Rodriguez, Joann Roth and Estafana Guarnieros.

At Poudre Valley Hospital, 40 people were treated for flood-related injuries ranging from cuts to exposure. Additionally, five elderly patients were admitted with symptoms including chest pain, pneumonia and hypothermia, although all were reported in either fair or good condition, said hospital spokesman Armi Hall.

The hardest-hit areas included the CSU campus — which suffered damage to buildings, books, supplies and computers in the tens of millions of dollars — and two mobile-home parks built in the floodplain of Spring Creek, a 5-mile outlet from Horseshoe Reservoir.

"The entire city was absolutely inundated," said Glenn Levy, battalion chief of the Poudre Fire Department. "We had water in virtually every ditch, every creek, every river. They were all out of their banks."

According to the National Weather Service, 8.41 inches of rain fell between 6 p.m. and 10:30 p.m. on an area about 1 1/2 miles west of the CSU campus.

Please see FLOOD on 10A.



Cars and mobile homes were tossed about like bathtub toys in a mobile home park on South College Avenue in Fort Collins.

## A raging nightmare for rescuers

By Mark Eddy  
Denver Post Staff Writer

FORT COLLINS — The rain was falling so fast they sometimes couldn't see 5 feet in front of them.

A raging river rushed over what earlier that day had been a peaceful side street. Three mobile homes were burning. Natural gas lines were broken. Power lines were down and worst of all, parents were shouting that their children were stranded in trees.

This was the nightmarish scene that greeted firefighters Jim Pietreangelo, Jeff Gillespie and Rob Weber when they responded to a call just after 9 at two mobile home parks in the heart of this city Monday night.

"We had people that were in trailers. We had people that were on the mobile homes themselves. We had people yelling at us to get their babies out of trees, and there were only three of us," Pietreangelo recalled Tuesday as he prepared to search for more survivors of Monday night's deadly flash flood.

"It's one of those experiences you hate to experience," Pietreangelo and his two fellow firefighters were on

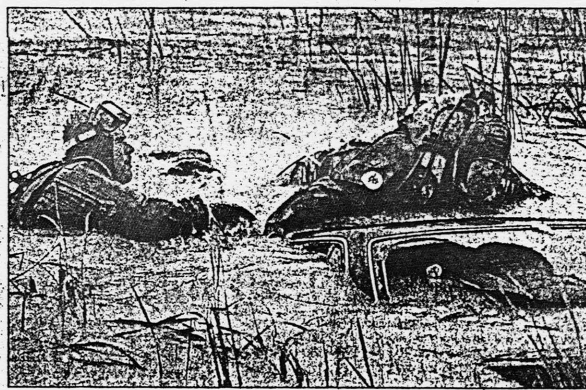
cause other units were cut off from the area by floodwaters that covered many parts of this university town. By far the hardest-hit area here was just east of 1800 S. College Ave. at the Johnson Mobile Home Park and the South College Mobile Home Park where Spring Creek swept at least five people to their deaths and left muddy destruction in its wake.

"This was a huge, raging river," the 33-year-old Pietreangelo said as he pointed to a mud-covered street that snaked through the mobile home parks. "It was one of those sights where you couldn't believe your eyes."

When they arrived, several dozen people — who had escaped to safety before the floodwaters cut off other residents of the 90 mobile homes — were screaming for the three firefighters to save friends and family.

"There were so many emergencies we were overwhelmed," Pietreangelo said. "I've never seen anything like it."

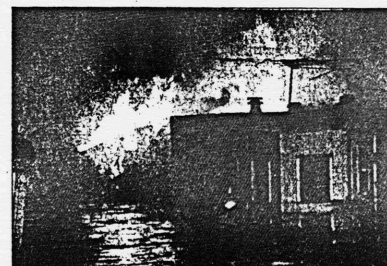
Pietreangelo, Gillespie and Weber found a way across the new river upstream from the mobile home park. They then made their way down along the



Kevin Lindstrom, right, checks a car on Timberline Road southeast of Fort Collins. The vehicle was empty.

We had people yelling at us to get their babies out of trees, and there were only three of us.

Jim Pietreangelo, firefighter



## COVERAGE

MEASURE OF FATE: Life and death along Spring Creek was a matter of inches, writes columnist Mark Obmascik. 6A

FROM THE TOP: There's a lot more damage than first appears. We've only just begun to see the aftermath of this. Gov. Romer says during a tour of the area that suffered widespread damage from the flood. 6A

ON CAMPUS: Monday night's flood roared through the campus of CSU, seriously damaging between 20 and 25 buildings, destroying computer equipment, and muddying at least 1 million books and journals in the campus library. 6A

THE DEAD: Mobile home park survivors fondly remember two of the women who fell victim to the raging floodwaters. 12A

HAPPY BIRTHDAY: Nellie White experiences a major flood on the same day she celebrates her 107th birthday. And through it all, she still gets cake. 10A

PATH OF A FLOOD: In the middle of the night, Spring Creek exploded, rising 15 feet and widening to more than 100 yards. 11A

HOTLINE: For information on people still missing, contact the Red Cross at (970) 226-5728.



# CSU library, buildings hit hard in deluge

By Robert Kowalski  
Denver Post Staff Writer

FORT COLLINS — Monday night's flood roared through the campus of Colorado State University, seriously damaging between 20 and 25 buildings, destroying computer equipment, and inundating at least 1 million books and journals in the campus library.

By midday Tuesday, water still poured from the campus bookstore in the Lory Student Center and remained in a large muddy pool inside the oval parkway on the northeast quadrant of the campus. The force of the flood was so great, it shattered the glass doors of the bookstore and carried books, papers and other items hundreds of yards away.

Even bowling pins from the student center's bowling alley were washed out the doors.

"It's unbelievable how much damage we have," said CSU spokeswoman Carrie Schafer. "I just looked outside earlier today, and the water had moved cement parking blocks."

The damage will cost tens of millions of dollars to repair, said acting CSU President Jud Harper.

It's unbelievable how much damage we have.

Carrie Schafer,  
CSU spokeswoman

Jerry Bomotti, CSU's vice president for administration, said the university is covered by state government flood insurance.

Harper said no one on campus was injured. There are 7,000 students taking summer courses and various groups using campus facilities, including 3,600 members of the International Youth Conference. Members of the youth group had to spend Monday night in Moby Arena because of a power outage in their dorm rooms.

The university was closed Tuesday, but Harper said summer-school classes will resume Thursday and some employees will re-

turn to work today. Fifteen buildings will remain closed until the university can assess the level of damage.

Harvey Whitfield, a 23-year-old student who hopes to complete his studies in the next two weeks, said the scene was chaotic.

"It was crazy. People were freaking out," he said. "Even the cops were scared."

Harper said the library was the worst of the buildings damaged. He said he hoped the library collection could be salvaged by freeze-drying the waterlogged books.

The library was renovated recently, which was part of the rea-

son so many books — half of CSU's library collection — were stored in the basement, Harper said.

Harper also said the offices of the campus newspaper and television station were "a total loss."

Surveying some of the damage Tuesday morning was Louise Moreno, office manager for the continuing-education program housed in Spruce Hall on the north end of the campus. The flood destroyed all the program's newly arrived brochures detailing fall courses, Moreno said.

"We just got our shipment in," she said. "Whole boxes are down there, just ruined."



Manson Street on the Colorado State University campus was washed out during Monday night's flooding. The university shut down on Tuesday as officials tried to assess the damage.

The Denver Post / Dave Buresh

## Precautions can save lives

Safety tips include:

■ It does not have to rain at one location flooding to occur there. Thunderstorms and lightning mountain streams can cause flooding downstream.

■ Never camp on ground next to mountain streams.

■ Do not cross flood roadways on vehicles or foot. It takes only 6 to 12 inches of moving water to sweep most vehicles to become big ant. Also, the roadbed may be washed out under the water.

■ If the vehicle stalls, abandon it immediately and move to higher ground.

■ Be cautious at night when it is more difficult to recognize flood dangers.

■ Get out of areas subject to flooding, including dry washes, spots, canyons, dry washes.

■ If advised to evacuate by local authorities, do so immediately.

■ Do not allow children to play around high water or storm drains.

Source: National Weather Service

Though much of the water had retreated by noon, it was still possible to see a water-and-mud print 4 feet up on the walls of the Occupational Therapy Building.

Also inundated were several laboratories and the campus steam and power plant, Harper said.

Untouched by the flood was a collection of dozens of human and animal skulls and skeletons in the office of Michael Charney in an 1880s stone building.

Charney, a forensic anthropologist, has had experience with previous floods. In a file cabinet, which also wasn't damaged in Monday night's flood, he keeps cop-

ies of the reports he made while identifying the bodies of 139 victims of the 1976 Big Thompson flood.

"We were lucky. We were expecting 2,000 dead," he said of the flood. "People don't understand the weight of water, and the pressure



**SUNDAY**

August 3, 1997

# FORT COLLINS COLORADOAN

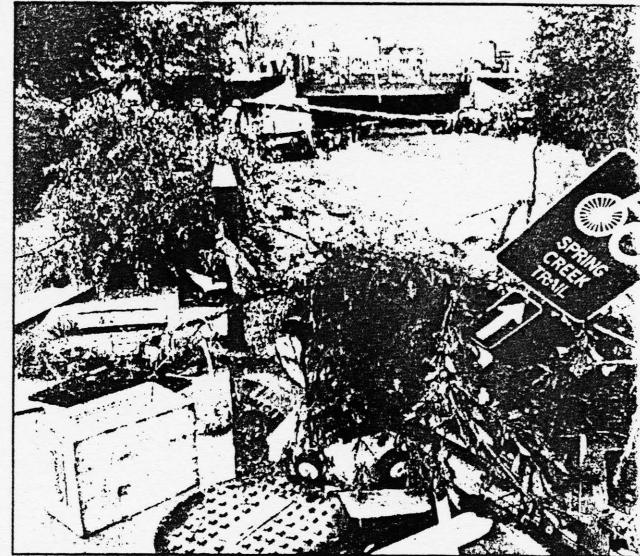
TO



FLOOD OF '97

## The storm that tore city's hearts, homes

Without warning, it ransacked and raided



By KEVIN VAUGHAN  
The Coloradoan

Mike Goodwin's voice was amazingly calm.

"Johnny's Liquor has just erupted in natural gas," the Fort Collins police officer said into his radio.

The city's worst natural disaster was exploding near

**Cleanup help/B1**  
**Our views/B4**

the corner of College Avenue and Prospect Road.

Raging floodwaters swept a train off the tracks. Ruptured gas lines exploded. Mobile homes and cars bobbed in the water, then were swept away. Their residents clung to sturdy elms and cottonwoods, waiting for help.

What only a couple hours before had been little more



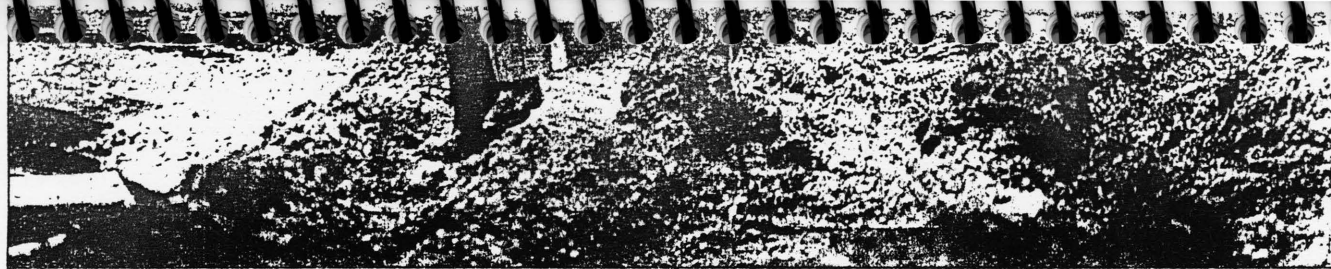
Goodwin's call came at exactly 11 p.m. Monday, July 28, 1997 — a date that will long be remembered in Fort Collins. All around him, mayhem reigned. Even people caught in the storm were stunned by the ferocity of the water.

"When it came up, it came up quick," said Scott Gillespie, who helped pull several people to safety at the two trailer parks along South College Avenue that took the brunt of the storm.

It put firefighters, police officers, paramedics and dive rescue teams in the awkward position of having to decide who got their attention first.

"We had to look at people who were on top of trailers

See **STORM**, Page 2



**PICKING UP:** Fort Collins police officer Jim Hoyne helps Manuel Arreola carry his belongings at the Johnson Center Mobile Home Park on Thursday as Olivia Abeyta-Gor

## Disaster shocks even us hardened journalists

Journalists are a different breed.

We thrive on tragedy. But that's not to say we like it.

When disaster strikes anywhere in the world, it piques our interest. Some say we're born with this

sixth (or shall we say sick) sense.

But when disaster strikes in our back yard, it hurts.

Our jobs, however, don't allow us much time to be shocked or saddened by the events unfolding around us.

For instance:

When Monday night's pounding rainstorm stalled over the city, the police scanner in the newsroom began ringing out with calls of closed roads, flooded houses and stranded motorists.

Shortly after 10 p.m., reporter Kevin Vaughan and photographer Rich Abrahamson left to troll the waterways once known as Prospect, Taft Hill and Shields. Shouting to people from his truck window, Vaughan

began his interviews while Abrahamson waded through waist-deep water for photos.

The calls over the scanner got worse. Explosion. Train derailed. Mobile home par

See **JOURNALISTS**, Page 2

## Too much rain too fast sent system over edge

By **KEVIN DUGGAN**  
The Coloradan

Spring Creek may never be the same for Fort Collins residents.

Monday night, the normally picturesque creek was transformed into a torrent that killed five people, injured dozens and swamped countless homes and businesses.

But as bad as the flooding along Spring Creek was, it could have been worse, Fort Collins officials say.

"The amount of rainfall we're hearing about is comparable to what happened in the Big Thompson in 1976," said Bob Smith, director of the city's Stormwater Utility. "We could have had a real catastrophe."

Urban storm drainage systems are designed to

handle a 100-year flood, an event that has a 1 percent chance of occurring. The storm that ravaged the city Monday night created what officials describe as a 500-plus year flood.

In the Fort Collins area, a 100-year flood would be caused by a rainfall of 3 inches in one hour, Smith said. Although the official tally for rainfall in Fort Collins in the 24 hours that ended at 8 p.m. Tuesday was 4.63 inches, westside residents reported receiving 8 to 14 inches.

Witnesses report the storm came in two surges, Smith said. The first downpour, which started around 6 p.m., filled to capacity the drainage system and irrigation canals that lace the west side of town.

When the next surge came about an hour later — and persisted for about three hours — there was no place for the water to go.

Runoff roared down

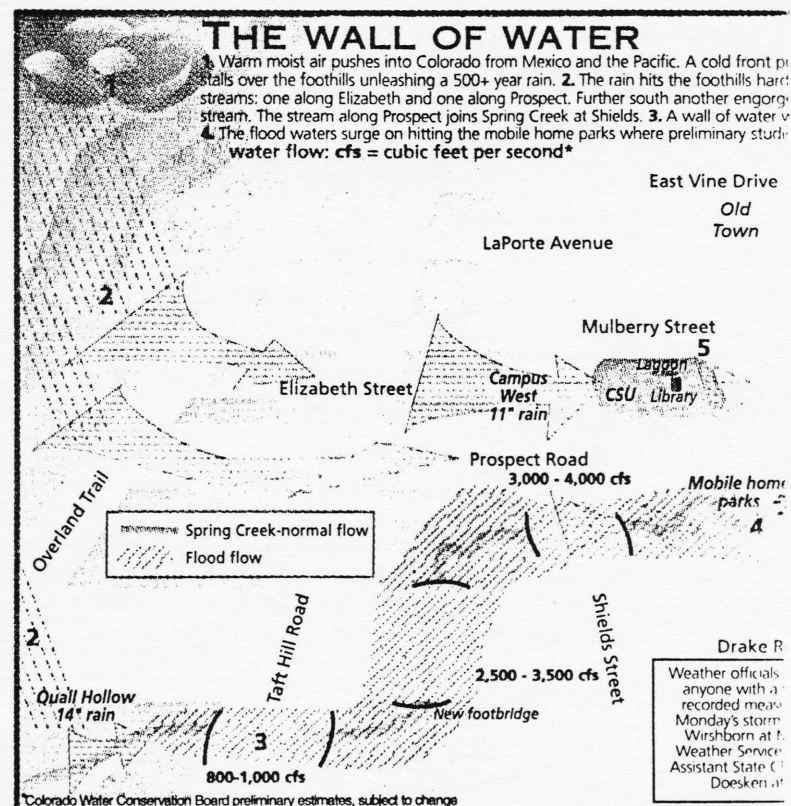
streets and saturated the ground and began moving from west to east in three distinct flows, Smith said. One cascaded down Spring Creek as another moved down Prospect Road.

The third flow swept along West Elizabeth Street and into the campus of Colorado State University.

Part of that flow, which was running about 4 feet high, moved east on Locust Street on its way to the Poudre River. Some of it might have gone south over the top of Prospect Road and added to the Spring Creek water that was surging across South College Avenue.

Officials are still trying to measure the magnitude of the extraordinary storm, Smith said.

Debris left along Spring Creek near the intersection of Drake and Taft Hill roads indicates water flowed



Sunday  
0 40901 02102 5

See **RAIN**, Page 2

Coloradoan Aug 3, 1997 PA1  
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**Collegian**  
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COLORADO STATE UNIVERSITY, FORT COLLINS



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**Monday** August 25, 1997

**Inside today:**

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Rams fly high in preseason polls



Sports Monday

**Weather**

**Today:**

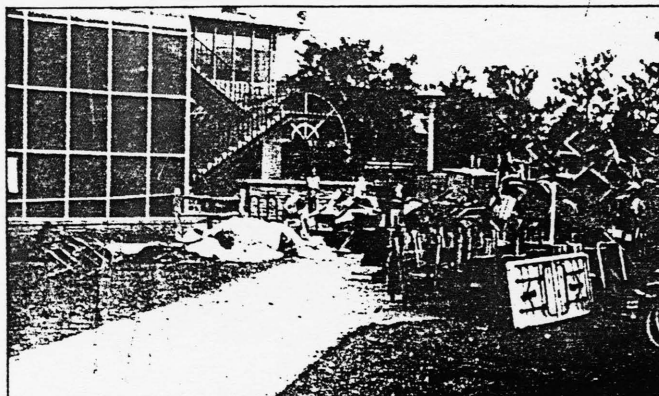
Sunny with chance of afternoon showers.

**Tomorrow:**

High of 93, low of 80



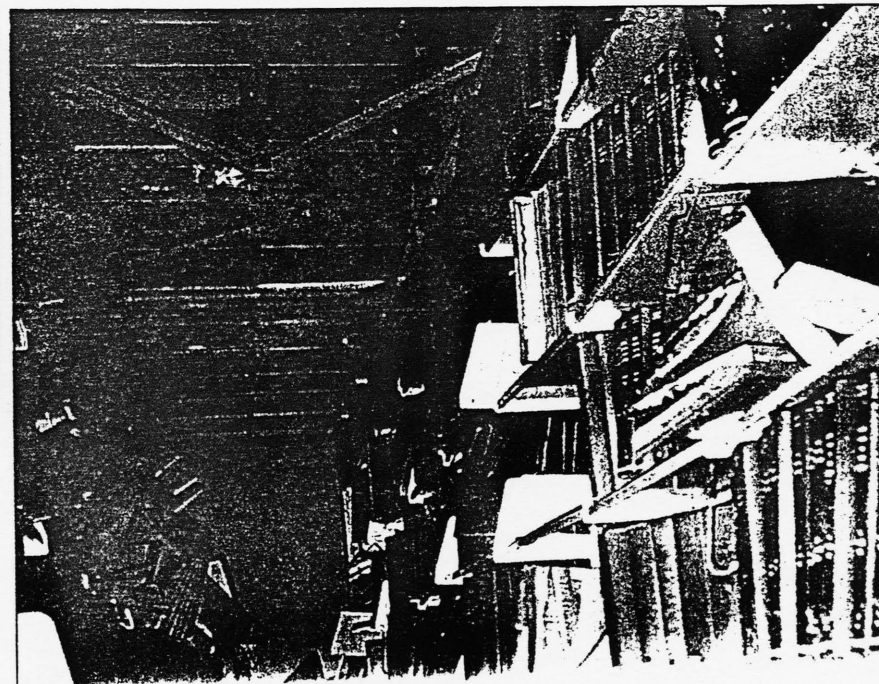
# Water churns CSU



JON WAGNER/THE COLLEGIAN  
 Furniture adorns the West Lawn of the Lory Student Center Wednesday, July 30. Most of the contents of the Lory Student Center basement were damaged by the flood.

## CSU recovering in murky mess

BY CHRIS WALSH





At 10 p.m. on July 28 the basement of the Lory Student Center and Morgan Library began filling with dirty, brown rain water.

At 10:59 p.m. Johnny's Liquors erupted from a natural gas explosion, causing its doors to blow off. At 1:25 a.m. televisions and radios

At 3:30 a.m. the first body was found.

The rain fell so hard that 8 1/2 inches of water accumulated in just three hours, causing Spring Creek to overflow onto the streets of Fort Collins.

Five people died on the night of July 28 and hundreds of homes and businesses were

"When I woke up there was like a foot of water outside."

A 20-foot wall of water swept through the Johnson Center Mobile Home Park, uprooting trailers and cars. Some trailers were found stacked on top of each other two or three high.

The flood damaged 25 buildings on campus, portions of which are still closed.

"We estimate about \$35 million in damages done to the Student Center," John Perry, bookstore director, said. "As for the bookstore, we lost somewhere between 200,000 to 400,000 titles. That's a lot of books to lose."

A temporary bookstore has been set up in the east side of the new addition to the student center.

Morgan Library lost around 425,000 books and its basement was destroyed.

About 90 percent of the books are being shipped to Texas where they will be freeze-dried. The University expects that 80 percent of the books going through this process will be restored.

A shuttle bus has been set up to take students to libraries around the state.

The flood did over \$100 million in damage to Colorado



Books cover the floor between the aisles of Morgan Library the morning following the flood. An estimated 450,000 books were damaged by floodwaters.

State University, most of which will be covered by the university's insurance compa-

suffered damages ranging from \$800,000 to \$1.2 million.

Although the flood damaged much of CSU, all of the buildings on campus will be open today.

### How to help:

The university is asking that employees and students not engage in clean-up activities. If you would like to help in another way or make a contribution, call University Advancement at 491-7328.

ny.

"We are working closely with state, federal and insurance officials and believe most damages will be covered through these sources," CSU President Albert C. Yates said in a press release.

The *Collegian*, KCSU, CTV and *Silver Spruce* were all destroyed by the flood and

"We have every intention to start the fall semester on time and with no major problems," Gerry Bomotti, vice president for Administrative Services, said in a press release.

Some sections of the Student Center, Morgan Library, Eddy and other buildings will remain closed.

JOSH HOPPE/THE COLLEGIAN

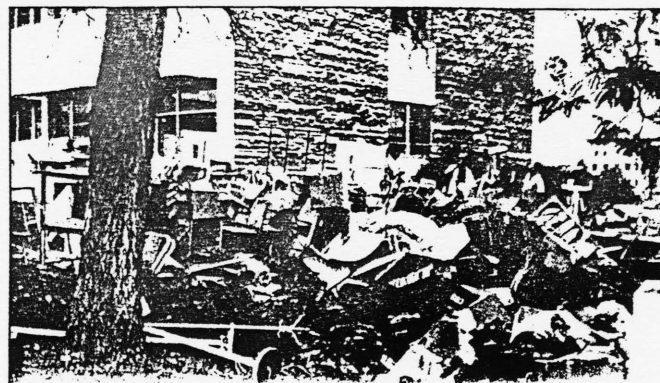
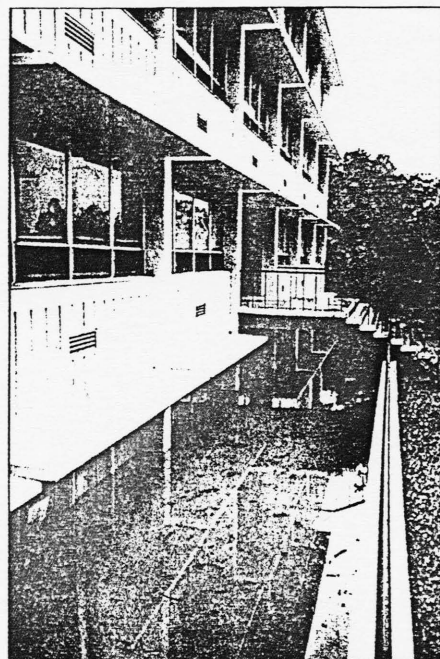
Above left: Water fills the window wells of the Eddy Building Tuesday, July 29. The basement remains closed and offices have been relocated.

JON WAGNER/THE COLLEGIAN

Left: Furniture and even refrigerators were scattered across the lawn of the Hartshorn University Health Services Building the week following the flood.

JOSH HOPPE/THE COLLEGIAN

Right: A man walks through water in the entrance to Marshak's House of Fantasy on West Elizabeth Street the night of Monday, July 28. Many of the business-



# Professor: Other floods have struck campus

By JIM FOSTER 1/24/96  
The Coloradoan P1

After the 1997 flood, one Colorado State University professor looked to the past to predict the future.

And the future for the university looks wet, said Wayne Charlie, a civil engineering professor.

"I looked back at newspaper articles about floods on campus, and I found the Oval has flooded in 1938 and 1951," said Charlie, who presented a report on his findings at a flood conference held at the university in October. "And the depths the buildings flooded in those years were approximately the same depth as the recent flood."

During his research he also found a serious flood hit the campus in 1902. But a comparison would be difficult, he said, because the

See FLOODS, Page A9

## Damage count

## Floods

Continued from Page A1

buildings currently around the Oval didn't exist in 1902.

"We've had three floods now, not including the one in 1902," Charlie said. "If we don't make some changes, we will have another flood in the future. It is where we live, and when the rains come through, this can happen."

The flood, which officials have declared a 500-year flood, seems to happen at CSU a few times a century, according to Charlie's research. But the flood designation could change in the future.

The city has formed a Storm Precipitation Advisory Committee to look at the data from past storms in Fort Collins.

"We hope to take the data and see if what is considered now a 100-year storm is realistic," said Don Heyse, a laboratory technician at CSU who will serve on the committee. "We expect to start meeting within . . . two weeks."

Charlie also points out that Fort Collins was founded because of a flood. In the 1800s, a military camp was established in what is now Laporte. After about six months, the Cache la Poudre River flooded, forcing the camp to be moved to higher ground, to what is now downtown Fort Collins.

"They moved away from the river flooding," Charlie said. "But at the time, I don't think they realized the water would travel over land, down the foothills, when the rains are heavy."

Almost six months ago, flood waters inundated Colorado State University and caused more than \$100 million in damage. Of that, approximately \$30 million of the damage was to books in the Morgan Library basement. An additional \$30-plus million was for items in buildings, such as computers and furniture. The remaining \$30-plus million was damage to the buildings themselves. The building repair estimates do not include the cleanup costs (work immediately after the flood to get the water out, demolish the damaged areas, clean, disinfect and dry the buildings). The estimates also exclude telecommunications repair estimates.

Overall damage estimates to specific campus buildings:

- Administrative Annex — \$170,000
- Atmospheric Science — \$25,000
- Aylesworth Hall — \$10,000
- Center for Disease Control —

\$5,000

- Dog Colony — \$250,000
- Eddy Building — \$1.98 million
- Education Building — \$1.095 million
- Engineering Building — \$25,000
- Foothills Landfill — \$83,000
- Forestry — \$50,000
- Greenhouses — \$500,000
- Hartshorn Health Service — \$1.19 million
- Heating Plant — \$1.5 million
- International House — \$1.2 million
- Hughes Stadium — \$20,000
- Johnson Hall — \$350,000
- L.L. Gibbons — \$635,449
- Morgan Library — \$5.9 million
- Natural Resources — \$25,000
- Music Building — \$52,000
- Occupational Therapy Building — \$734,465
- South College Gym — \$525,000
- Spruce Hall — \$24,000
- Webber Building — \$12,000
- Total telecommunication repairs for all buildings — \$955,853.

# FLOOD OF 97

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Department of Natural Resources  
Department of Local Affairs - Division of Local Government  
Office of Emergency Management - Camp George West  
15075 South Golden Road, Golden, Colorado 80401-3979

PURPOSE
INTRODUCTION
DESCRIPTION OF EVENT
SURFACE AND HYDROLOGY
DAMAGE IMPACTS
HISTORY OF FLOOD MITIGATION IN COLORADO
FORT COLLINS FLOODPLAINS
HAZARD MITIGATION OBJECTIVES & ACCOMPLISHMENTS
COLORADO NATURAL HAZARDS MITIGATION COUNCIL
SMART GROWTH AND DEVELOPMENT INITIATIVE
RECOMMENDATIONS
FEDERAL AGENCY PROGRAMS
STATE RESOURCES
ACRONYMS
PARTICIPANTS

#### LEAD AGENCIES:

Local jurisdictions, fire departments and districts, emergency management offices, Local Emergency Planning Committees

#### FUNDING:

EPA, FEMA, USDA, Local jurisdictions, partnerships with the private sector

#### SCHEDULE:

Immediate and on-going

#### CODES AND STANDARDS

#### ISSUE:

**CS-1** Lack of master drainage plans for state colleges and universities, institutions, cultural facilities, and other large local public facilities including hospitals, nursing homes, public safety facilities, etc.

#### BACKGROUND:

Universities, colleges, institutions, cultural facilities, and other large local public facilities including hospitals, nursing homes, public safety facilities, etc. in Colorado periodically experience (or face the threat of) flooding drainage problems. These entities may or may not know the level of threat at their location and the range of strategies that can be implemented to deal with it. Public officials and managers, as stewards of these facilities, must increase protective and risk management activities.

#### RECOMMENDATIONS:

Encourage preparation and implementation of a drainage floodplain master plan for every essential public facility. Master plans should include mitigation alternatives and recommendations for implementation. Encourage that all buildings within the 100 - 500-year floodplain be identified. Any building with a basement and/or a lowest floor lower than the 500-year flood elevation needs an inventory of everything (books, artwork, furniture, computers, etc.) that is kept below that flood level.

#### LEAD AGENCY:

All Colorado Executive Departments with the CWCB

#### FUNDING:

All Colorado Executive Departments with the CWCB

#### SCHEDULE:

One year



# FORT COLLINS FLOOD 1997

## Assessing the July 28, 1997 Extreme Event that Hit Fort Collins and Colorado State University

### Conference Proceedings

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Water Center  
Colorado State University  
Fort Collins, Colorado 80523  
November 6, 1997