general rains over northern California, with heavy amounts beginning in Shasta County on the 27th. On the morning of the 28th, an intensive secondary cyclonic center was located about 150 miles southwest of the San Francisco Bay, and during its slow advance northward that day, winds of gale force occurred in the open valleys. At the Sacramento Municipal Airport a current velocity of 52 miles an hour was registered, while at the city office 41 miles represented the extreme velocity.

The high winds caused some damage to power and telephone lines, trees, farm buildings, etc., locally in the San Joaquin and Sacramento Valleys.

The upper Sacramento River began to rise rapidly on the morning of the 28th, and flood warnings were issued during the day for the river from Red Bluff to the mouth of Stony Creek. On March 1 the crest stage at Red Bluff was 25.6 feet, or 2.6 feet above the flood stage and 0.9 foot above that which occurred in the early part of February this year.

Stony Creek was especially high, as indicated by the unusually high stage of 12.4 feet at St. John. This represents the highest water there since the record high of 13.9 feet which occurred just 1 year ago. This creek was responsible for the washing out of the east approach of the bridge over Stony Creek on the Orland-Chico highway.

Despite the fact that both the Sacramento River at Red Bluff and Stony Creek at St. John carried more water than they did during the flood of the forepart of February, the resultant maximum gage heights at Hamilton City and Colusa were slightly lower than in the first February freshet this year. This is mainly true, it is believed, because the east-side creeks, such as Deer, Mill, and Antelope, were not discharging so heavily.

On March 2 it was reported that a 50-foot break occurred in the east-side levee at Goodman Ranch, about 5 miles north of Butte City, allowing water from the Sacramento River to escape more rapidly into the already heavily flooded Butte Basin.

During the peak of the flood Butte City was isolated because of the flooding of the highways in that vicinity. The town of Tehama also suffered a similar experience. Many highways throughout the valley were temporarily closed either by overflow water or the accumulation of local drainage in low places.

The State Highway Department reported that cloudburst conditions in mountain areas caused heavy damage locally by washing out highway embankments. The principal areas affected were the Feather River Canyon, the Sacramento River Canyon, and the highway along Willow Creek, in Shasta County, on the road from Reading to Weaverville. Other damage was done in places by mountain streams.

Excessive run-off during the present flood period occurred only in the upper Sacramento drainage area. The American and Feather Rivers, as was the case in previous floods this season, were not exceptionally high.

However, on March 3, the slowly rising river at Sacramento occasioned the closing of the flood-control gages on Highway 40 at North Sacramento. The Sacramento River reading at that time was 26.2 feet, but about 1 foot of water had been held back along the low section of the highway by the use of sand bags.

The lower San Joaquin River reached its peak on March 6 with a stage of 15.5 feet at Lathrop, or 1.5 feet below the flood stage there. In the vicinity of Durham Ferry bridge, mostly on the River Junction Farms, there was considerable flooding of lowland, caused by old levee breaks (those of previous years) which had not been repaired. The actual losses sustained in this area were not heavy because the water was not high enough to affect farm houses and also because crop planting, in general, had purposely been delayed.

The flooded lowlands throughout the valleys represented approximately the same areas that were previously flooded this season, including the island tracts of Little Holland, Liberty, and Prospect in the Yolo bypass. As the earlier flood waters had only partially receded, the actual additional damage to inundated lands was comparatively light, although the resultant loss due to the continuously water-covered areas, thus delaying and preventing the planting of seasonal crops, was considerable and difficult to evaluate. Also the sustained high water on the levees resulted in seepage conditions that killed fruit trees in many lowland orchards adjacent to the river.

The total losses have been estimated at about $600,000.

TABLE OF FLOOD LOSSES AND SAVINGS DURING MARCH 1941

River and drainage	Tangible property	Matured crops	Prospective crops	Livestock and other movable farm property	Suspension of business	Total losses	Savings as result of flood warnings
EAST GULF OF MEXICO DRAINAGE							
Tombigbee River	$1,000				$1,000	$2,000	$2,500
Pascagoula River					10,000	10,000	6,000
Pearl River					3,000	3,000	1,500
MISSISSIPPI SYSTEM							
Upper Mississippi Basin							
Zumbro-Whitewater Rivers	2,215		$285			2,500	
Missouri Basin							
Milk River in Montana						10,000	
Red Basin							
Ouachita River				$500	1,000	1,500	5,500
WEST GULF OF MEXICO DRAINAGE							
Guadalupe River							1,200
GULF OF CALIFORNIA DRAINAGE							
Salt River [1]							5,000
PACIFIC SLOPE DRAINAGE							
San Joaquin River	8,000	$2,130	20,000			30,130	
Sacramento River	450,000	40,000	70,000		5,000	565,000	5,000

[1] Figures on losses not available.

FLOOD-STAGE REPORT FOR MARCH 1941

River and station	Flood stage	Above flood stages—dates		Crest	
		From—	To—	Stage	Date
ATLANTIC SLOPE DRAINAGE	*Feet*			*Feet*	
Neuse: Smithfield, N. C	13	29	(1)	13.8	30
Savannah: Clyo, Ga	11	16	18	11.2	17
EAST GULF OF MEXICO DRAINAGE					
Tombigbee:					
Lock No. 4, Demopolis, Ala	39	9	14	44.2	12
Lock No. 3, Whitfield, Ala	33	7	17	46.4	12
Lock No. 2, Pennington, Ala	46	9	15	48.0	13
Lock No. 1, Salitpa, Ala	31	9	18	33.4	14–15
Chickasawhay: Shubuta, Miss	26	8	9	27.0	9
Pascagoula: Merrill, Miss	22	11	13	22.4	12
Pearl:					
Jackson, Miss	18	8	19	22.4	15
		21	24	19.8	22
Pearl River, La	12	11	18	13.6	14
MISSISSIPPI SYSTEM					
Upper Mississippi Basin					
Rock: Moline, Ill	10	22	27	10.6	24
Missouri Basin					
Floyd: James, Ia	14			16.6	6
Big Sioux: Akron, Ia	12			13.2	13
				13.2	25
Red Basin					
Ouachita: Camden, Ark	26	8	15	29.5	11
Sulphur:					
Ringo Crossing, Tex	20	(2)	1		
		6	10	28.5	8
Naples, Tex	22	2	17	27.6	11
WEST GULF OF MEXICO DRAINAGE					
Sabine: Logansport, La	25	11	14	25.8	13
Trinity:					
Trinidad, Tex	28	(2)	13	32.2	10
Long Lake, Tex	40	1	4	40.9	3
		12	16	41.0	14
Liberty, Tex	24	(2)	2	24.3	1
		7	26	26.2	13
Guadalupe: Victoria, Tex	21	19	20	22.2	19
		20	23	25.9	22
PACIFIC SLOPE DRAINAGE					
Sacramento Basin					
Stony Creek: St. John, Calif	12	1	1	12.4	1
Sacramento:					
Red Bluff, Calif	23	(2)	2	25.55	1
Hamilton City, Calif	20	1	1	20.1	1
Knights Landing, Calif	30	1	8	31.7	4
Eel Basin					
Eel: Fernbridge, Calif	17.5	1	2	18.05	1

[1] Continued into next month. [2] Continued from preceding month.