



# National Weather Service

## Storm Data and Unusual Weather Phenomena



February 1998

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
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### CALIFORNIA, South Central

#### Fresno County

Fresno	01 25	0000PST 1200PST			0	0	1.6M	1.8M	Heavy Rain
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#### Kern County

Bakersfield	01 25	0000PST 1200PST			0	0	12.5M	5.4M	Heavy Rain
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#### Kings County

Hanford	01 25	0000PST 1200PST			0	0	20K	1M	Heavy Rain
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#### Merced County

Merced	01 25	0000PST 1200PST			0	0	2M	1.4M	Heavy Rain
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#### Tulare County

Visalia	01 25	0000PST 1200PST			0	0	13.9M	1.5M	Heavy Rain
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The following figures reflect estimated losses from the much above-normal rains and flooding of February. Subsequent months with normally increasing agricultural field operations were more significantly impacted by above normal rainfall. Consider this February list abridged and estimated in many respects (note Madera County is omitted, for example). The total rain/flood damage to area agriculture from the cooler and wetter spring in Central California is presented in the May Storm data figures

Fresno County	Ag Loss \$1.8M	Property \$1.6M
Kern County	Ag Loss \$5.4M	Property \$12.5M
Kings County	Ag Loss \$1.0M	Property \$20K
Merced County	Ag Loss \$1.4M	Property \$2.0M
Tulare County	Ag Loss \$1.5M	Property \$13.9M

Fresno County was hit by a series of storms that brought heavy rainfall to the Coast Range Mountains to the west and high wind and heavy rainfall to the Central San Joaquin Valley floor. Runoff from the Coast Range caused flooding in West Fresno County affecting agricultural areas around Mendota, Firebaugh, and Cantua Creek. Approximately 9,300 acres of farmland flooded. High wind from early February storms downed approximately 25,000 almond trees in Fresno County alone. Fields were muddied for the upcoming cotton planting date in early March, deciduous trees diseased, and dairy cows stressed to the point of limited milk production.

In Kern County agricultural losses occurred due to flooding and erosion of fields that were planted and to many almond trees blown down by high wind. Other losses were attributed to livestock injury, buildings and equipment damage, and employees unable to work. Areas most severely impacted are Arvin-Lamont and McFarland, although flooding has occurred in the Lebec-Frazier Park-Cuddy Valley and Kern River Valley areas

In Kings County about \$1.0M in flood protection costs was expended to try to protect ag land with an additional \$20K in damages due to high water in local communities in the county. No February monthly summary reports for agriculture in Merced, Tulare, or Madera Counties.

To place in perspective the month's above normal rainfall for the agricultural area, consider the following:

Fresno(Fresno)	Normal Rainfall 1.80" Received 5.10"
Bakersfield(Kern)	Normal Rainfall 1.03" Received 5.36"
Hanford(Kings)	Normal Rainfall 1.45" Received 4.26" (4.42" in Lemoore)
Oakhurst (foothills of Madera County)	Received 17.05"

Late January and the month of February saw record amounts of precipitation due to the influence of El Nino. The Sacramento 8-station index for the 1998 water year increased 4.6 million acre-feet from 13.7 MAF to 18.3 MAF. January precipitation was 214% of average with the February amount at 265%! For the 8 reference stations, average precipitation is 7.9" but Feb 1998 had 20.9". The statewide snowpack water content by the end of February was running at 160% of normal



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### CALIFORNIA, South Central

#### CAZ022

<b>01</b>	<b>1800PST</b>				<b>0</b>	<b>0</b>			<b>Heavy Snow</b>
<b>03</b>	<b>1800PST</b>								

At Mammoth Mountain 12" snow by 0600 PST on 2/2/98 and totalling 48" by 1800 PST 2/3/98. Fish Camp had 4" snow at 5000 feet MSL by 1550 PST 2/1/98...with another 4" by 1350 PST on 2/2/98. At the higher elevations of Madera County 2 to 2.5 feet of new snow had fallen at high elevations in the previous 36 hours.

#### Kern County

##### 22 SSW Bakersfield

<b>02</b>	<b>0852PST</b>				<b>0</b>	<b>0</b>			<b>Flash Flood</b>
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Heavy rainfall led to runoff and water over State Highway 166...a road typically affected by this type of runoff scenario

#### CAZ021-024

<b>02</b>	<b>1145PST</b>				<b>0</b>	<b>1</b>			<b>High Wind (G52)</b>
<b>03</b>	<b>1500PST</b>								

High gradient wind caused widespread damage throughout the Southern San Joaquin Valley from the late hours of 2/2/98 until mid-day on 2/3/98. A tree was reported uprooted at 2140 PST in Bakersfield by high wind...with numerous other reports of trees and powerlines down by 2225 PST...and roof damage to a trailer roof in Southeast Bakersfield at 2230 PST on Monday, 2/2/98. Roof damage was reported in Wasco and more reports of trees downed in Bakersfield at 0020 PST on 2/3/98; wind at Meadows Field was reported at 42Kts from the southeast with gusts to 50Kts at 0100 PST. Over 15,000 electric utility customers lost their power in the Shafter, Bakersfield, Lamont areas of Kern County by 1530 PST on 2/3/98. In Kings County just outside of Lemoore a woman was injured when a tree fell on her at 0705 PST. Numerous trees and powerlines were downed within this county. Wind speed was measured at 48 Kts at the Hanford Airport at 0830 PST and shingles peeled off the roof of the NWS Office at 0810 PST. Tulare County also experienced numerous trees downed, including the Metropolitan Visalia area with trees downed at 0658 PST. In the Pixley-Earlimart area many agricultural plantings of trees were damaged or felled. Average wind speeds in the Kern County Mountains were 30-40Kts with one peak at 53Kts at 1145 PST on 2/2/98 at the Mountain Valley Airport. A Glennville spotter reported steady wind between 30-40Kts at 0710 on 2/3/98.

#### Kern County

##### Lamont

<b>02</b>	<b>1200PST</b>				<b>0</b>	<b>0</b>			<b>Urban/Sml Stream Fld</b>
<b>04</b>	<b>1200PST</b>								

In the first 3 days of February Bakersfield received 1.62" of rain. With saturated soils a base level of 100CFS stream flow was already being observed from normally dry Caliente Creek down toward Lamont in the Southern San Joaquin Valley early on 2/4/98. No specific reports of damage but ponding basins were filled and water flows were simply routed by town on city streets and adjacent farm land.

#### CAZ022

<b>03</b>	<b>0405PST</b>				<b>0</b>	<b>0</b>			<b>Flood</b>
<b>04</b>	<b>0200PST</b>								

Along the Merced River 8 miles north of Mariposa very small tributaries flowed across State Highway 140 due to persistent and locally heavy rain.

#### Fresno County

##### 3 W Coalinga

<b>03</b>	<b>0417PST</b>				<b>0</b>	<b>0</b>			<b>Flash Flood</b>
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Water and rocks over the roadway from heavy rain in higher terrain above the road.

#### Fresno County

##### Coalinga

<b>03</b>	<b>0435PST</b>				<b>0</b>	<b>0</b>			<b>Urban/Sml Stream Fld</b>
	<b>0700PST</b>								

Local city streets with standing water due to heavy rain overwhelming the city drainage system. Local creeks handled the runoff well from the mountains.



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					Killed	Injured	Property	Crops	

### CALIFORNIA, South Central

#### Tulare County

<b>Dinuba</b>	<b>03</b>	<b>0800PST 1000PST</b>			<b>0</b>	<b>0</b>			<b>Urban/Sml Stream Fld</b>
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About 6 commercial buildings were threatened by high water due to locally heavy rains in downtown Dinuba

#### CAZ020

	<b>03</b>	<b>1159PST 2000PST</b>			<b>0</b>	<b>0</b>			<b>Flood</b>
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Heavy rain in the Coast Range Mountains west of the San Joaquin Valley brought runoff into west valley areas...including flooding across crop land in West Fresno County about 15 miles SW of Mendota. The estimated flow at Interstate-5 and Panoche Creek was estimated at 17,000 CFS at 0930 PST at a USGS gauge height of 13.6 feet. The flooding occurred on the west side between Belmont and Nees...NW of Mendota. In the Cantua Creek area 240 acres of farmland was flooded by contributions from Arroyo Hondo and Cantua Creek.

#### Madera County

<b>Madera</b>	<b>03 04</b>	<b>1240PST 0600PST</b>			<b>0</b>	<b>0</b>			<b>Urban/Sml Stream Fld</b>
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Flooded intersections due to locally heavy rain overwhelming drainage systems. Subsequent runoff through small streams led to levees breaking on Cottonwood creek in the LaVina area south of Madera.

#### Fresno County

<b>Mendota</b>	<b>03</b>	<b>1300PST 2200PST</b>			<b>0</b>	<b>0</b>			<b>Urban/Sml Stream Fld</b>
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Runoff from Panoche/Silver Creek began to arrive at Mendota but damage was minimized by use of ditches and channelling through town.

#### CAZ020

	<b>03</b>	<b>0630PST 1800PST</b>			<b>0</b>	<b>0</b>	<b>500K</b>		<b>Flood</b>
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From Garzas Creek, flooding damaged 2 structures and 2 chicken farms by 0630 PST. Over 100K head of poultry died at this location 4 miles west of Gustine in West Merced County. By 1015 PST, 5 structures were flooded in Gustine from Garzas Creek. At a location 5 miles WNW of Los Banos 3 structures were flooded at 1000 PST with another 3 on the west side of Los Banos at 1100 PST from San Luis Creek. Los Banos area received 3.16 inches of rain in the previous 24 hours by 1000 PST on 2/3/98. In northeast Merced County numerous instances of stream flooding were occurring by 1116 PST. Los Banos Creek by midnight of 2/2/98 reached a flow of 14,480CFS into the Los Banos Creek Reservoir exceeding the 11,500CFS record flow set in 1955

#### CAZ021

	<b>03</b>	<b>0643PST 1800PST</b>			<b>0</b>	<b>0</b>			<b>Flood</b>
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Persistent and locally heavy rain with saturated soils is seeing the resurgence of "swamp-like" conditions on the west side of the Southern San Joaquin Valley 17 miles southwest of Bakersfield. Standing water in the old lake bed affecting many roads

#### CAZ022

	<b>03</b>	<b>0800PST 1200PST</b>			<b>0</b>	<b>0</b>			<b>High Wind (G61)</b>
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At Coarsegold wind during the morning hours were consistently gusty at speeds of 30 to 40 MPH with a peak of 64 MPH at 0800 PST on 2/3/98. Wind speed measured at Badger Pass Ski Resort at 0900 PST reached 61Kts (70MPH). Over 50 trees were downed in the Chinquapin area 19 miles NE of Mariposa and in Yosemite National Park from the high gradient winds. Southeast wind was also reported at Yosemite Lakes consistently at 30MPH gusts to 50MPH during the episode



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### CALIFORNIA, South Central

#### CAZ020

	03	0825PST 1600PST			0	0			<b>High Wind (G50)</b>
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Much like the Southern San Joaquin Valley but not quite as widespread, high wind in the Central San Joaquin Valley was also experienced...especially for Fresno County. Trees were uprooted in the Caruthers, Riverdale, and Easton areas at 0825 PST...with numerous autos and houses damaged in Selma by downed trees at 0855 PST. Powerlines were downed by felled trees causing power outages...over 22,000 electric customers in Fresno County were without power due to the high wind with several roads also closed due to wind-downed obstructions. The highest wind at the Fresno ASOS was a southeast wind gust to 37 Kts at 0949 PST. Some wind damage was still being reported at 1600 PST in the Clovis area. This gradient high wind episode accompanied the occurrence on 2/3/98 of the lowest Fresno February sea level pressure reading of 29.26" Hg eclipsing the old record of 29.32" Hg set in 1981.

#### Kern County

2 NNE Cantil

	03	1015PST 1215PST			0	0			<b>Flash Flood</b>
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After the fact by 7 hours but water cut a 20-foot section of the Redrock-Randsburg Road in the Kern Desert due to locally heavy rains. No injuries or vehicles involved.

#### Kern County

4 WSW Lost Hills

	03	1108PST 2000PST			0	0			<b>Flash Flood</b>
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Heavy and steady rain on the Eastern Slopes of the Coast Range Mountains led to State Highway 33 being affected by numerous flows from State Highway 46 south to McKittrick in West Kern County. Some minor flow of water was observed over Highway 33 at 1046 PST but the main flow at 1108 PST trapped some cars. No injuries reported.

#### CAZ024

	03	1530PST			0	0			<b>Flood</b>
	04	0600PST							

Continued steady and locally heavy rain provided small stream flow over low lying roads near Loraine in the extreme Southern Sierra Nevada and eastern Tehachapi Mountains in Kern County.

#### CAZ020

	03	1837PST			0	0			<b>Flood</b>
	04	0200PST							

With substantial rain again in eastern Merced and western Mariposa Counties over the headlands of east Merced stream groups, Bear Creek again flooded. Creek banks were breached downstream of Merced to relieve pressure and direct flooding...no structures were involved but again agricultural land was flooded near Thornton 2 miles southwest of town. On Miles Creek and at a point 1 mile southwest of Planada, one structure was flooded at 1611 PST as a part of this overall event.

#### CAZ021

	06	0410PST 1400PST			0	0			<b>High Wind (G46)</b>
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Gradient wind from the southeast reached 46Kts (53MPH)...no damage reported.

#### CAZ020>022

	06	0600PST 1700PST			0	0			<b>High Wind (G56)</b>
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A Coarsegold spotter in Madera County reported 56Kt wind at 1120 AM...Mariposa County wind was reported at 40 MPH during the day. Wind in the Madera County mountains began as early as 1745 PST 2/5/98 and peaking on the 6th...over 1800 electric utility customers were still without power in the Oakhurst area by the morning of the 7th. Strong southeast wind felled a tree into a house in the Caruthers area of Fresno County around 1000 PST on 2/6/98. Over 32,000 electric utility customers were without power in Merced, Madera, Fresno, Tulare, and Kings Counties. Strong southeast gradient wind again brought damage to Southern San Joaquin Valley locations beginning around 0600 PST. Powerlines and trees felled led to the loss of power to over 32,000



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### CALIFORNIA, South Central

customers in the Kings, Tulare, and Fresno County areas, including 2000 in the Lemoore area of Kings County and 3500 in Dinuba in Tulare County.

#### CAZ022

<b>06</b>	<b>0600PST</b>								
<b>10</b>	<b>0600PST</b>				<b>0</b>	<b>0</b>			<b>Heavy Snow</b>

12 inches of snow in the 1st 24 hours ending by 0600 on the 7th...an additional 18-24" by the 8th...then another 8" by the morning of 9th...and then an additional 8" by the morning of the 10th at Mammoth Mountain (Over 4 feet in 4 days). Badger Pass in Yosemite National Park received 6" of new snow in the early morning hours of the 6th with an additional 12" of new snow in the early morning hours of the 7th. At Fish Camp in Mariposa County at the 5000-foot level, a spotter reported over 30" of snow fell primarily on calendar day 2/7/98.

#### CAZ021

<b>06</b>	<b>0715PST</b>								
	<b>1400PST</b>				<b>0</b>	<b>0</b>			<b>High Wind (G83)</b>

At the CHP weigh-station at the base of the Tehachapi Mountain Grapevine, 25 miles south of Bakersfield, wind was measured at 96 MPH. No damage reported.

#### CAZ021

<b>06</b>	<b>1000PST</b>								
	<b>1500PST</b>				<b>0</b>	<b>0</b>	<b>100K</b>		<b>High Wind</b>

In the Dinuba area, a number of structures were also impacted by the area-wide high wind. The wind damage began at 1000 PST with a few small roofs damaged, trees blown over, and a large number of powerlines downed. PG&E reported 74 poles, 11 transformers, and three miles of wire down in the Tulare, Fresno, Madera, Merced, and Kings County area from the 2/3 and 2/6/98 wind storms.

#### CAZ020>021

<b>07</b>	<b>2000PST</b>								
<b>08</b>	<b>2300PST</b>				<b>0</b>	<b>0</b>	<b>2.5M</b>	<b>1M</b>	<b>Flood</b>

In Bakersfield significant rain again led to ponding water and flooding on many secondary roadways by 2130 PST on 2/7/98. Stream flow from Panoche/Silver Creek crested at 13,000CFS on 2/7/98 at 2000 PST at a gauge height of 12 feet. The resulting flooding downstream peaked in Mendota around 1800 PST on 2/8/98. Some flooding affected State Highway 198 west of Interstate-5 in far western Fresno County. In Merced County on the 7th, 0.77" of rain occurred in the Los Banos area on the 7th with flooding south of Gustine from breached banks in Quento and Garzas Creeks and water flow across highways into homes. High water from a canal into Los Banos Creek caused some minor flooding around the City of Los Banos by 1700 PST 2/8/98. Overwhelmed drainage systems also led to significant ponded water and street flooding in Hanford in Kings County by 1800 PST on 2/8/98. The first 8 days in February for Central California were extremely wet...rainfall in the Southern Sierra Nevada and Kern County Mountains ranged from 6-12" with snowfall accumulations of 3-6 feet. The Central and Southern San Joaquin Valley received anywhere from 2-7" of rain in the same period. A few of the large totals by county are listed: Wawona in Mariposa County had 12.88"...Los Banos in Merced County had 6.55"...In Madera County Oakhurst had 10.04" while Madera had 2.60"...In Fresno County Bass Lake had 8.83" and Fresno 2.32"...Lemoore in Kings County had 2.13" of rain...In Tulare County Visalia had 2.09"...and in Kern County Frazier Park had 8.38" and Bakersfield had 2.02". Normals for this time period would have had only 0.32" of rain on the valley floor and roughly double that in the mountains! Merced County had assessed the first 10 days of February causing \$1.8M damage in that area alone!

#### Mariposa County 2 NNE Usona

<b>07</b>	<b>2030PST</b>								
					<b>0</b>	<b>0</b>	<b>50K</b>		<b>Lightning</b>

A lightning strike with thunderstorms caused electrical damage to homes due to a power surge through 8 area homes. Heavy rain and small hail also accompanied the lightning activity.



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### CALIFORNIA, South Central

#### CAZ022

	14	0100PST			0	0			<b>Heavy Snow</b>
	17	0600PST							

Again in the upper elevations of the Southern Sierra Nevada represented by Mammoth Mountain...8" of snow fell by 0600 on the 14th...another 16" by 0600 on the 15th...and 17" by 0600 on the 17th. Badger Pass in Mariposa County received 11" of new snow overnight by the morning of the 15th.

#### Merced County

5 E Los Banos

	14	1325PST 1326PST	0.1	5	0	0			<b>Tornado (F0)</b>
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Storm spotter videotaped a very brief touchdown of a funnel from a wall cloud in rural Merced County. No damage occurred

#### Fresno County

2 WNW Firebaugh to  
1 ESE Firebaugh

	14	1441PST 1450PST	3	20	0	0	100K		<b>Tornado (F1)</b>
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Hail up to 1" hail occurred just after the storm. Several structures were damaged in downtown Firebaugh as the tornado passed. Roof damage, broken windows, trees uprooted, small structures destroyed, and moved trailers were all observed with its passage

#### Tulare County

3 WNW Porterville

	14	1800PST 1805PST			0	0			<b>Funnel Cloud</b>
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Spotter observed funnel to the WNW of Porterville High School. Classic 'V' shape about 1/3 of the way toward the ground. No damage occurred in the area.

#### CAZ021

	14	1400PST			0	0			<b>Flood</b>
	15	1800PST							

Locally heavy rain with some thundersorm activity on the 14th and residual showers on the 15th provided continued runoff on the Southern San Joaquin Valley floor in and around Lamont. The runoff head arrived in Lamont at 1130 PST on 2/15/98. Some flooding occurred in West Kern County near Elk Hills from convective activity at 1400 PST on 2/14/98.

#### Kings County

Lemoore

	14	1610PST 1640PST			0	0	50K		<b>Thunderstorm Wind</b>
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Afternoon convective activity on the 14th provided wind gusts to 40 MPH at 1610 PST damaging powerlines and dropping service to 1800 electric customers in the Lemoore area.

#### Tulare County

Dinuba to  
Visalia

	14	1630PST 1700PST			0	0	50K		<b>Thunderstorm Wind</b>
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Knocking down trees into powerlines, thunderstorm wind left 3100 customers without power in areas of Northwest Tulare County, including the Dinuba area.

#### Madera County

Chowchilla Arprt

	14	1400PST 1520PST			0	0			<b>Heavy Rain</b>
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A large thunderstorm brought 1" of rain within an hour to the Chowchilla area...with a 24-hour storm total of 1.5 inches since 0800 PST. The convective activity also provided locally heavy thundershowers for the adjacent mountain areas...a North Fork spotter indicated 1/4" hail with a 1604 PST thunderstorm.

#### Fresno County

3 NW (Fat) Air Termina

	14	1700PST			0	0	5K		<b>Lightning</b>
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Lightning strike on a traffic signal at Cedar/Shaw in North Fresno

#### Fresno County

Fresno

	14	1700PST			0	0	1K		<b>Thunderstorm Wind (G50)</b>
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Thunderstorm wind downed a tree at Van Ness and Garland in Fresno.



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### CALIFORNIA, South Central

Between 1700 PST and 1900 PST thunderstorms accompanied by gusty wind downed trees and powerlines taking out power to 3500 utility customers in Fresno, Clovis, Selma, and Auberry in Fresno County. Wind speed estimated.

#### CAZ024

	<b>14</b>	<b>1800PST</b>			<b>0</b>	<b>0</b>			<b>High Wind (G90)</b>
	<b>15</b>	<b>0400PST</b>							

Locally strong wind funneled by terrain reached 90Kts reported by a spotter 4 miles west of Tehachapi in the Kern County Mountains. Gusts to 41Kts at Mountain Valley Airport were reported at 1852 PST. Near Lake Isabella at Mountain Mesa "strong" wind was reported by spotters after 2230 PST on 2/14/98.

#### Madera County

##### Nipinnawassee

	<b>19</b>	<b>0600PST</b>			<b>0</b>	<b>0</b>			<b>Heavy Rain</b>
	<b>20</b>	<b>0600PST</b>							

#### Tulare County

##### Springville

	<b>19</b>	<b>0600PST</b>			<b>0</b>	<b>0</b>			<b>Heavy Rain</b>
	<b>20</b>	<b>0600PST</b>							

While not necessarily excessive in the previous 24 hours...rainfall accumulations in Central California were very impressive by 02/20/98. For example...Nipinnawassee in the Madera County foothills of the Southern Sierra Nevada accumulated 13.17" of rain in the first 3 weeks of February. In the Tulare County foothills of the Southern Sierra Nevada Springville had 27.62" of rain by early 02/20/98. While only specifically mentioning reports from Madera and Tulare Counties here...Mariposa/Merced/Fresno/Kings/ and Kern County figures also had much above normal rainfall by 02/20/98

#### CAZ022>024

	<b>19</b>	<b>1500PST</b>			<b>0</b>	<b>0</b>			<b>Heavy Snow</b>
	<b>20</b>	<b>1200PST</b>							

Significant snowfall occurred throughout the Central California Mountain Areas beginning 2/19 and into 2/20/98. Mammoth Mountain reported 10" of new snow...Fish Camp in Mariposa County had 16" of new snow in the 24 hours preceding 0750 PST 02/20/98 and still snowing at 0944 PST 02/20/98 at Wawona. Sierra Summit in Fresno County had 15" of new snow overnight by 0705 PST 2/20/98. Badger Pass snow depth by this time in excess of 114" of packed snow. In the Tehachapi Mountains of Kern County 5" of new snow fell and accumulated in the Tehachapi Valley by 0645 PST 02/20/98.

#### CAZ022

	<b>21</b>	<b>1500PST</b>			<b>0</b>	<b>0</b>			<b>Heavy Snow</b>
	<b>22</b>	<b>1000PST</b>							

Mammoth Mountain in eastern Madera County reported 18 inches of new snow overnight.

#### Kern County

##### Lamont

	<b>22</b>	<b>2300PST</b>			<b>0</b>	<b>0</b>			<b>Urban/Sml Stream Fld</b>
	<b>25</b>	<b>0800PST</b>							

#### Kern County

##### Weed Patch

	<b>23</b>	<b>2000PST</b>			<b>0</b>	<b>0</b>			<b>Urban/Sml Stream Fld</b>
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Rain in the Kern County area continued to have the Lamont area in the Southeast San Joaquin Valley plagued by runoff from Caliente and other area small streams. Pounded water in addition to small flows were already causing nuisance flooding with some damage to homes and small businesses by late afternoon and early evening of the 23rd. Near continuous rain through the month of February saturated soils throughout Central California. While not exceptionally heavy rain had not occurred in the 24 hours previous to 2/23/98...small stream flows were beginning to overburden downstream communities' ability to handle any runoff. Only 50CFS out of Caliente Creek was overtaxing drainage basins by 2300 PST on 2/22/98 in Lamont although the rain was not yet over in the Kern County area. Note other flooding areas on and around this date in Central California. More substantial flow was yet to come later in the evening of the 23rd and on the 24th for the Lamont area. Additional flooding was also reported in Weedpatch (south-Central Bakersfield Metro area) by late in the evening of the 23rd due to heavy rainfall contributing to substantial ponded water and runoff.



# National Weather Service

## Storm Data and Unusual Weather Phenomena



February 1998

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
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### CALIFORNIA, South Central

#### Madera County

<b>Oakhurst</b>	<b>23</b>	<b>1316PST 1330PST</b>			<b>0</b>	<b>0</b>	<b>10K</b>		<b>Thunderstorm Wind</b>
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Thunderstorm activity through Central California included the mountain area. An Oakhurst spotter in Eastern Madera County reported a TSTM with 50 MPH wind and locally heavy rain early in the afternoon of 2/23/98

#### Fresno County

<b>3 NNE (Fch) Chandler A</b>	<b>23</b>	<b>1330PST 1400PST</b>			<b>0</b>	<b>0</b>	<b>100K</b>		<b>Thunderstorm Wind</b>
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As a thunderstorm gust front swept through Fresno, trees and powerlines were downed. Over 18,000 electric utility customers went without power in the area and a tree was toppled onto a house near San Joaquin Memorial High School in north-Central Fresno beginning at 1:30 PM PST. With the thunderstorm activity some small hail was also reported...sizes less than 3/4" were reported at Selma in south-Central Fresno County near the same time. As a precursor to this event, gusty wind to 50 MPH was reported in the West Merced County area of Pacheco Pass at 1015 PST...but no damage was reported at that time in the area.

#### CAZ022

	<b>23 24</b>	<b>1430PST 0600PST</b>			<b>0</b>	<b>0</b>		<b>Heavy Snow</b>
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In the High Southern Sierra represented by Mammoth Mountain in Eastern Madera County, 20" of new snow fell in the 18 hours prior to 0600 PST on 2/24/98.

#### Kern County

<b>4 NE Mojave to 8 NE Mojave</b>	<b>23</b>	<b>1500PST 1800PST</b>			<b>0</b>	<b>0</b>	<b>10K</b>	<b>Flash Flood</b>
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State Highway 14 closed from 4 miles northeast of Mojave to 8 miles northeast of Mojave due to water over the roadway caused by locally heavy rain in the adjacent Tehachapi Mountains. Cache Creek flooded from the Mojave area receiving 2.2" of rain in the previous 2 days on already moist soils.

#### CAZ024

	<b>23 25</b>	<b>1730PST 0800PST</b>			<b>0</b>	<b>0</b>		<b>Flood</b>
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Steady rainfall in the Tehachapi Mountains led to Cuddy Creek flowing strong and high damaging homes along its path in Lake-of-the-Woods in Southwest Kern County. Unofficial reports were received of 6" of rain in 3 days (21st/22nd/and 23rd) causing problems by the afternoon of the 23rd along Cuddy Creek. In the Lake Isabella area...Bodfish Creek and Clear Creek flooded the Caliente-Bodfish Road and Erskine Creek just above the town of Lake Isabella washed over one lane of Lake Isabella Blvd by 1730 PST on Monday evening, 2/23/98. In the Weldon and Onyx area east of Lake Isabella, Kelso Creek began to flow heavily on the 23rd. Just above Weldon 1.5" of rain was observed on 2/22, an additional 1.75" on the 23rd, and the snowmelt runoff/lag was observed as a time delay of 12 hours by Tuesday morning the 24th with 1600CFS of flow at Weldon. Highway 178 was closed due to runoff over the roadway between East Lake Isabella and Walker Pass for a brief time on the 23rd.

#### CAZ021

	<b>23 25</b>	<b>2000PST 0800PST</b>			<b>0</b>	<b>0</b>	<b>18M</b>	<b>Flood</b>
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Caliente Creek progressed from nuisance flow to flooding by the wee hours of the morning of 2/24/98. The flow climbed to a peak estimated at 6000CFS at Bena (in the foothills of the Tehachapi Mountains and upstream of Lamont) by 0230 PST on 2/24/98. Evacuation of Lamont was begun at 2000 PST on 2/23/98 in anticipation of flooding due to the steady accumulation of rain. Bakersfield Spotter Bob Niebel reported 0.88" of rain by 1822 PST on 2/23/98 and a seasonal total of 10.27" (normal yearly rain for Bakersfield is only near 5.72")...Meadows Field reported a rain total of 1.26" on 2/22 and 2/23. Further downstream of Lamont, water from Caliente Creek flooded and closed State Highway 99 northbound lanes at Herring Road 8 miles south of Bakersfield by 0800 PST on the 24th.

The White River in Southwest Tulare County had 700 CFS flow in its shallow channel by midnight on the 23rd. By 0130 PST on Tuesday 2/24/98, the White had breached its banks and flooded the town of Earlimart at an estimated loss of \$13.7M, in addition to closing State Highway 99 through the town. Up to 250 homes were impacted by the flooding, with 50 homes having 3' or more of





# National Weather Service

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### CALIFORNIA, South Central

water in them...220 people were forced to evacuate. All the tributaries of the White River (Speas, Chalaney, Coho, and Tyler Gulch Creeks) were all flowing heavy to raise the White River to flooding by late on the 23rd. Lewis Creek near Tonyville and Frazier Creek near Strathmore overflowed early on Tuesday the 24th causing an estimated \$1.5M in damage to area homes and businesses. Rainfall in the 24 hours prior to flooding early on the 24th was estimated at 1-1.5" in the lower Tulare County Mountain foothills. Seasonal rainfall 10 miles NE of Springville in Tulare County was 28.86" by 0740 PST on the 23rd! Yokohl Creek east of Exeter in Tulare County had minor flooding reported in CA Zone 21 by 0825 PST on the 24th.

Poso Creek in northwest Kern County breached its banks late the night of the 23rd with a flow estimate of 7000CFS by 0100 PST on 2/24/98 and flooded the Kern County town of McFarland (112 homes) at a cost of \$2.5M by 1300 PST on the 24th. The Poso Creek high water also threatened some rural homes downstream near Wasco later on the 24th.

#### CAZ025

<b>24</b>	<b>0200PST</b>				<b>0</b>	<b>0</b>	<b>50K</b>	<b>Flood</b>
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Runoff from the nearby Tehachapi Mountains produced sheet flow flooding down into the Kern Desert community of Rosamond. Two homes and roads were damaged by the water flow early in the morning of the 24th.

#### CAZ021

<b>24</b>	<b>0700PST</b>				<b>1</b>	<b>0</b>		<b>Fog</b>
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With flood waters present on and near State Highway 99 3 miles south of McFarland, the fatality occurred at 0805 PST as dense fog shielded stopped traffic and inbound traffic was unable to stop due to water-slickened roads.

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