

WSFO Lubbock, Texas

MONTHLY REPORT OF RIVER AND FLOOD CONDITIONS

REPORT FOR:

MONTH

September

YEAR

1991

SIGNATURE

John W. Lipe

In Charge of River District

DATE

10/15/91

TO: Hydrologic Services Division, W22
National Weather Service
National Oceanic and Atmospheric Administration
Silver Spring, Maryland 20910

When no flooding occurs, include miscellaneous river conditions, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (NWS Instruction 10-924)

 No flood stages were reached in this river district for the month indicated above.

Major flooding occurred along the Rio Grande River in Southwest Texas during the month of September. Flooding along the Rio Grande began at Presidio where the Rio Conchos enters, and continued downstream to Amistad reservoir near Del Rio. The flooding along the river reached major proportions from Presidio downstream to near Lajitas.

Preliminary estimates taken from rating tables, show the flow past Presidio is the seventh greatest on record since 1904. It should be noted however, that three large reservoirs on the Rio Conchos in Mexico completed in 1916, 1949, and 1968 help protect the Presidio area from floods of the magnitude once experienced. Most local residents compared this flood to the flood in September 1978 which breached levees built to protect both Presidio and the Mexican town of Ojinaga located immediately across the river.

Flooding was initiated by an unusually prolonged summer monsoon over northern Mexico beginning about mid July that lasted through mid September. The monsoon worked to completely fill two of the three primary reservoirs located on the Rio Conchos in Mexico. The two reservoirs that were filled, do not maintain a flood control capacity. After these two reservoirs filled, spillage from them combined to begin filling Luis Leon reservoir located closest to the Texas border. Releases from Luis Leon during this time induced minor flooding along the Rio Grande from Presidio to Lajitas on September 9th. Flood warnings for minor flooding were made well in advance on the 4th of September. The possibility of major flooding was also mentioned.

On September 18th, a strong cold front, an upper level low located over Baja California, and a dissipating Tropical Storm on the southwestern Mexican Coast combined to produce torrential rains over Mexico south of Chihuahua. Very few rainfall reports were available from Mexico, but because the rain had to pass through the three reservoirs before reaching the Rio Grande, flood warnings for major flooding were made possible well in advance. Coordination with Mexico in getting the appropriate reservoir and water release data was extremely helpful. The warnings made possible by this data, helped to save lives and much property along the Texas border.

During the flooding, major damage was done to the railroad bridge linking

Presidio and Ojinaga. The International Boundary and Water Commission (IBWC) reported only slight damage to the levees protecting Presidio, however they reported over one million dollars in damage to the flood plain between the levee and the river. Highway 170 which follows the Rio Grande from Presidio to Lajitas, was flooded for a number of days, cutting off the community of Redford. The flooding cut through levees protecting large areas of farmland causing not only major damage to their levees, but also destroying many of the crops on which their economy is based.

Further downstream from Lajitas through Big Bend National Park, flooding caused significant damage to campgrounds and some roads along the river. However, early warnings made significant protective actions possible and allowed Park officials and others to warn the many people who plan trips down the river. No known lives were lost to this flood.

In summary, the early warnings made possible by the reservoir storage and release data provided by the Mexican government, were extremely valuable and helped to save lives and much property to United States citizens.

CC: W/SR2 FVC FTW IBWC EL PASO
RFC TUL USGS IBWC PRESIDIO
USCE