NWS FORM E-5 (11-88) **(PRES. by NWS Instruction 10-924)** **U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL WEATHER SERVICE**	HYDROLOGIC SERVICE AREA (HSA) **WFO Midland, Texas**
MONTHLY REPORT OF HYDROLOGIC CONDITIONS	REPORT FOR: MONTH **July** YEAR **2009**
TO: Hydrometeorological Information Center, W/OH2 NOAA / National Weather Service 1325 East West Highway, Room 7230 Silver Spring, MD 20910-3283	SIGNATURE **J. DeBerry** In Charge of HSA DATE **August 15, 2009**

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)

☐ **An X inside this box indicates that no river flooding occurred within this hydrologic service area.**

July was a wet month for the Midland HSA, especially Southeast New Mexico, the Upper Trans Pecos, the Western Low Rolling Plains, and the Permian Basin. This was due to the upper ridge shifting west of Texas, allowing northwest flow aloft, which allows convective systems to develop and rotate around the northeast periphery of the ridge.

On Independence Day, thunderstorms developed over much of the HSA due to daytime heating over an inverted trough. Storms flooded parts of Midland in Midland County, where up to 8" of runoff flowed across several city streets.

On July 7th, the Rio Grande briefly rose above flood stage at Candelaria (CDET2, FS=8.5') due to excessive rainfall over El Paso's HSA the previous week.

On the 15th, thunderstorms developed along a thermal ridge in New Mexico and moved southeast into Eddy County, resulting in minor street flooding in south Carlsbad.

Early in the morning of July 18th, a mesoscale convective system (MCS) developed and moved south through Midland, and Odessa in Ector County. Numerous roadways flash flooded in each city/county, and high water rescues of stranded motorists, as well.

On the 22nd, another MCS rolled into Southeast New Mexico, dumping up to over 4.5" of rainfall in the vicinity of Artesia in Eddy County. This resulted in street flooding of up to 1' of runoff in both Artesia and Carlsbad…with numerous stalled vehicles in both cities. Numerous arroyos flash flooded, causing minor rises on the Pecos, Black, and Delaware Rivers.

Early in the morning of July 23rd, training showers and thunderstorms developed north of an old frontal boundary and flash flooded much of the Permian Basin. Widespread street flooding and stalled vehicles were reported in Midland and Odessa.

On the evening of the 28th, a MCS developed over western New Mexico and moved into Southeast New Mexico, flooding parts of Carlsbad. The MCS then rolled into the Permain Basin on the morning of July 29th, rendering some roadways in Odessa, and later some in Midland, impassable.

Later that afternoon, a complex of thunderstorms developed over the Big Bend Region of West Texas, and extended well south of the Rio Grande into Chihuahua, Mexico. This resulted inflash flooding of several roadways with up to 2' of runoff in Big Bend National Park in Brewster County. Several vehicles were unable to pass low water crossings. Alamito Creek, Terlingua Creek, and other tributaries of the Rio Grande filled quickly, leading to sharp rises on the Rio Grande. The river

briefly rose above flood stage 7 miles northwest of Presidio (PIOT2, FS=9.0').

Later that evening and into the 31st, a MCS developed over central New Mexico and evolved into a mesoscale convective vortex (MCV) over Southeast New Mexico. This flash flooded streets in Carlsbad before moving into Lea County, where roadways in Jal were reported to have 2-3' of runoff flowing over them. Convection then moved into the Western Low Rolling Plains and Permian Basin. Roads in Andrews in Andrews County were inundated with up to 1' of runoff, and one submerged vehicle was reported. Midland and Odessa quickly flash flooded, and numerous roadways were rendered impassable under several feet of water. Numerous high water rescues were needed, especially in Odessa. Flooding was so bad in Odessa, even rescue crews had trouble getting around.

Precipitation amounts from area ASOS:

City	ASOS ID	July	June
Carlsbad, NM	CNM	5.90"	2.07"
Fort Stockton	FST	1.19"	3.22"
Guadalupe Pass	GDP	2.71"	1.75"
Midland Int'l	MAF	6.55"	2.33"
Odessa	ODO	7.67"	2.57"
Terrell County	6R6	0.11"	1.50"
Wink	INK	1.06"	1.12"

Precipitation amounts from area AWOS:

City	ASOS ID	July	June
Alpine	E38	1.09"	1.33"
Artesia, NM	ATS	2.41"	0.25"
Big Spring	BGP	1.71	1.38"
Gaines County	GNC	2.02"	2.50"
Marfa	MRF	2.03"	3.11"
Midland Airpark	MDD	0.49"	1.20"
Pecos	PEQ	0.01"	0.01"
Snyder	SNK	1.71"	0.87"

Some other locations in the HSA that received notable amounts of precipitation for July were:

Lenorah, Martin County 5.99"
Andrews, Andrews County 6.46"
Knapp, Scurry County 6.64"
Caprock, Lea County 8.40"

110 locations reported rainfall for the month of July, for an average of 3.32".

Normal July precipitation for Midland International Airport is 1.89". Total precipitation for Midland International Airport for the year ending August 1st was 10.44", or 2.79" above normal. July 2009 was Midland's 5th wettest July on record since 1930.

Due to July's abundant rainfall, most of the the HSA is out of drought, albeit probably only temporary. Only the northwestern half of Eddy County remains abnormally dry, with the extreme northwest portion in moderate drought.

Average reservoir levels across the HSA averaged 40% of conservation capacity at the end of July.

Reservoir (County, State)	**July Conserv Cap (%)**	**June Conserv Cap (%)**
JB Thomas (Scurry, TX)	7	7
Colorado City (Mitchell, TX)	64	68
Champion Creek (Mitchell, TX)	22	23
Natural Dam Salt Lake (Howard, TX)	49	49
Moss Creek (Howard, TX)	65	72
Brantley (Eddy, NM)	53	1
Avalon (Eddy, NM)	36	24
Red Bluff (Reeves, TX)	24	23

Non-Routine Products Issued for July:

Flash Flood Watches (FFA): 5
Flash Flood Warnings (FFW): 24
Flash Flood Statements (FFS): 34
Flood Warnings (FLW): 2
Flood Statements (FLS): 65

Total Non-Routine Products Issued: 130

cc: email: COE ABQ, HIC, IBWC ELP, IBWC PRD, LCRA, NWS ABQ, NWS EPZ, NWS LBB, NWS MAF, NWS SJT, SRH, TAMU, TCEQ, USGS CNM, USGS SJT, WGRFC