NWS FORM E-5 U.S. DEPARTMENT OF COMMERCE (11-88) NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (PRES. by NWS Instruction 10-924) NATIONAL WEATHER SERVICE	HYDROLOGIC SERVICE AREA (HSA) NWFO NEW ORLEANS/BATON ROUGE, LOUISIANA
MONTHLY REPORT OF RIVER AND FLOOD CONDITIONS	REPORT FOR: MONTH <b>DECEMBER</b> YEAR <b>2004</b>
TO: Hydrometeorological Information Center, W/OH2 NOAA / National Weather Service 1325 East West Highway, Room 7230 Silver Spring, MD 20910-3283	SIGNATURE Paul S. Trotter, Meteorologist-In-Charge DATE January 15, 2005

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)

## ...Weather Potpourri for the Lower Mississippi River Valley in December 2004...

December 2004 was a mixed bag of weather. During the first week of the month, conditions alternated between cooler, dry weather under the influence of high pressure to warm, humid conditions as a warm front pushed from the Gulf of Mexico. Showers mainly developed over southern Mississippi, where areal rainfall amounts were between 0.7 and 1.0 inch.

The warm, moist air set the stage for turbulent weather during the week from December 6<sup>th</sup> through December 12<sup>th</sup>. Bouts of severe weather in squall-line thunderstorms started on December 6<sup>th</sup>. More severe weather, induced by a cold front, developed on December 8<sup>th</sup> and 9<sup>th</sup>. Flash floods occurred over several locations during the week. Areal rainfall amounts ranged from 1.30 inches over southeast Louisiana to over 2.0 inches for southwest Mississippi.

In Louisiana, the heavy rain produced lengthy floods on the Atchafalaya River at Morgan City and on the Lower Pearl River at Bogalusa and Pearl River. The Atchafalaya River crested 1.6 feet above its 4.0 feet flood stage at Morgan City. However, the flooding continued into January 2005. The Lower Pearl River crested 2.7 feet above its flood stage of 18.0 feet at Bogalusa. The Lower Pearl River crested 2.0 feet above the 14.0 feet flood stage at Pearl River. The floods lasted until around Christmas Day. In Mississippi, the Bogue Chitto River briefly flooded at Tylertown; the river crested 4.8 feet above its flood stage of 15.0 feet on December 11<sup>th</sup>.

Cold temperatures set in over the area starting December 13<sup>th</sup>, as a large dome of high pressure dominated the weather. A few light rain showers developed on December 17<sup>th.</sup> Areal rainfall amounts were generally zero, with departures from normal of 0.98 inch to 1.14 inch.

In Louisiana, the Bogue Chitto River briefly flooded on December 13<sup>th</sup>, when waters from earlier flooding upstream reached Bush. The river crested 0.2 feet above its flood stage of 11 feet. Waters from upstream pushed the Lower Mississippi River into flood at Red River Landing. The river crested 2.3 feet above the 48 feet flood stage. This flood lasted almost until Christmas Day.

Starting December 20<sup>th</sup>, cold temperatures dipped into the region as a large dome of high pressure expanded through the nation's mid-section. By December 23<sup>rd</sup>, the cold Canadian air settled over southeastern Louisiana and southern Mississippi behind a strong cold front. A weak wave pushed north from the Gulf of Mexico into southern Louisiana and produced snow flurries on Christmas Eve. By Christmas morning, snow, sleet, and freezing rain all mixed with rain to produce a "white" Christmas over southern Louisiana. A record snowfall of 0.5 inch was set at New Orleans, Louisiana on Christmas Day. Areal average rainfall amounts for the week ranged from 0.51 inch over south-central Louisiana to 1.16 inches over southeast and east-central Louisiana.

Fair conditions dominated the remainder of the month, with areal rainfall amounts of less than 0.25 inch. The year ended with above normal precipitation over the Lower Mississippi River Valley.