

	<p><b>WATER MANAGEMENT MONTHLY REPORT</b></p> <p><b><u>Information Exchange Bulletin</u></b></p> <p><b>Vol. No. <u>09 – 12</u></b></p> <p><b>Date: 08 January 2010</b></p> <p>Prepared by: U.S. Army Engineer Division, Great Lakes and Ohio River, 550 Main St. #10032, Cincinnati, OH 45202-3222</p>
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**RESERVOIR OPERATION AND SYSTEM STATUS FOR DECEMBER 2009**

**HIGHLIGHTS** – The Ohio River at Cairo began the month at a stage of 25.47 feet. The Cairo stage crested at 40.35 feet on the 31<sup>st</sup> just before finishing at 40.32 feet. Flood stage at Cairo is 40 feet. A flood control operation was initiated on 26 December as heavy rainfall impacted the Ohio Valley from 23-26 December with moist soil conditions.

**WEATHER** – During December, the Ohio Valley’s weather was generally wetter than normal in the east and drier than normal in the west. Precipitation departures in the basin ranged from 0.55 inches below normal at Nashville, TN to 1.54 inches above normal at Charleston, WV.

The weather was also colder than normal basin-wide, especially in the eastern half. Temperature departures in the basin ranged from -0.5 degrees below normal at Indianapolis, IN to -1.8 degrees below normal at Charleston, WV.

Significant weather events during December in addition to the 23-26 December rainfall include a major winter storm for the east coast on the 18<sup>th</sup> and 19<sup>th</sup> that also impacted the eastern half of the Ohio Valley, especially the Appalachians with heavy snowfalls of 1-2 feet in the mountains and 2-6 inches in the eastern half of the basin west of the mountains. A major rainfall in the Cumberland and Tennessee Valley on the 8<sup>th</sup> of the month helped to establish moist soil conditions with rainfalls of 2-3 inches.

**TEMPERATURE AND PRECIPITATION – DECEMBER 2009**

STATION	TEMPERATURE		PRECIPITATION	
	OBSERVED DEGREES F	DEPARTURE FROM NORMAL	OBSERVED INCHES	DEPARTURE FROM NORMAL
Pittsburgh, PA	31.1	-1.4	3.53	+0.67

Charleston, WV	35.7	-1.8	4.86	+1.54
Columbus, OH	32.1	-1.5	3.34	+0.50
Cincinnati, OH	33.2	-1.5	2.80	-0.38
Louisville, KY	36.6	-1.0	2.85	-0.84
Indianapolis, IN	31.1	-0.5	3.30	+0.27
Evansville, IN	35.0	-0.6	3.63	+0.09
Nashville, TN	39.3	-1.2	3.99	-0.55

**STREAMFLOW** – The monthly average flows ranged from a low of 115% of normal at Pittsburgh, PA to a high of 172% of normal at Paducah, KY. Daily flows ranged from a low of 34% of normal at Evansville, IN to a high of 270% of normal at Louisville, KY. The following table presents the flow data summary for the Ohio River Index Stations:

**FLOW DATA – DECEMBER 2009**

STATION	AVERAGE MONTHLY FLOW  CUBIC FEET/SECOND	PERCENT LONG-TERM NORMAL		
		MONTHLY	DAILY	
			HIGH	LOW
Pittsburgh, PA	43,000	115	254	40
Huntington, WV	101,000	126	259	40
Cincinnati, OH	133,300	133	258	41
Louisville, KY	164,000	150	270	42
Evansville, IN	176,000	131	242	34
Paducah, KY	423,000	172	262	59

**RESERVOIRS** – December began with 2.9% utilization of the total system flood control storage and ended the month at 2.6%. System-wide augmentation storage availability began the month at 91.1% and was at 95.9% by the end of the month.

The following table depicts storage change by tributary reservoir subsystem for December:

<b>CHANGE IN STORAGE TRIBUTARY-RESERVOIR SUBSYSTEM</b>	<b>(ACRE-FEET)</b>
Allegheny-Monongahela-Beaver	+34,200
Muskingum-Little Kanawha-Hocking-Kanawha-Guyandotte	-34,000
Twelvepole-Big Sandy-Little Sandy-Scioto	-100
Little Miami-Licking-Mill Creek-Great Miami	-11,300
Kentucky-Salt-Green-Wabash	-68,600
Cumberland	+39,100
<b>TOTAL</b>	<b>-40,700</b>

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