

0213903612 CATAWBA RIVER AT CALVIN, NC

LOCATION.--Lat 35°44'23", long 81°43'43", Burke County, Hydrologic Unit 03050101, on right bank at City of Morganton's water intake, 0.5 mi upstream from Canoe Creek, and 0.5 mi north of Calvin.

DRAINAGE AREA.--508 mi².

PERIOD OF RECORD.--July 1991 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,002.40 ft above NGVD of 1929 (levels by City of Morganton). Satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. City of Morganton diverted about 11.4 ft³/s from Catawba River for municipal water supply. Considerable regulation, at times, caused by Lake James (station 02138519), 6.5 mi upstream. Maximum discharge for current water year and period of record from rating curve extended above 26,000 ft³/s, by logarithmic plotting, maximum gage-height, 26.30 ft, from high-water mark at gage. Minimum discharge for period of record and current water year affected by regulation. Minimum discharge for current water year also occurred Aug. 21.

EXTREMES FOR CURRENT YEAR.--Peak discharges associated with the remnants of Hurricanes Frances and Ivan:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Sep 9	unknown	52,600	26.30	Sep 18	0445	14,300	14.86

REVISIONS.--The maximum discharges for some water years have been revised, as shown in the following table. They supersede figures published in the reports for 1994, 1995, 1996, and 2003.

Water Year	Date	Discharge (ft ³ /s)	Gage height (ft)	Water Year	Date	Discharge (ft ³ /s)	Gage height (ft)
1994	Aug. 18, 1994	16,200	16.40	1996	Oct. 5, 1995	8,280	8.50
1995	Jan. 15, 1995	11,300	11.72	2003	Apr. 18, 2003	7,770	8.02

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	938	499	1,290	987	489	762	896	727	596	747	449	413
2	927	493	1,300	1,050	911	759	857	753	587	792	434	1,510
3	942	487	1,320	1,000	1,060	894	833	884	582	763	457	2,310
4	952	571	1,340	1,000	1,010	688	836	641	594	730	620	1,740
5	932	605	1,720	994	957	918	992	622	606	737	620	1,710
6	934	786	1,720	999	1,570	909	256	617	580	662	605	1,760
7	947	777	1,700	985	1,090	891	640	605	586	637	360	834
8	970	733	1,920	1,010	623	880	639	534	582	630	359	e29,900
9	985	746	2,340	1,030	881	666	640	583	586	622	360	e34,700
10	963	765	1,410	753	1,150	662	641	640	579	616	579	e9,910
11	880	733	1,620	754	1,030	658	641	609	577	613	598	5,740
12	738	1,060	2,500	720	979	864	761	593	581	615	311	4,060
13	930	761	2,430	730	1,020	565	1,460	605	660	644	648	3,260
14	967	740	2,510	716	1,080	564	831	627	627	567	608	2,770
15	933	748	2,450	729	1,090	575	735	639	658	760	601	2,490
16	925	746	2,410	740	742	679	833	616	1,470	595	609	2,410
17	943	759	2,430	724	722	667	626	524	726	379	594	6,370
18	965	756	2,390	757	714	640	596	537	905	470	606	12,800
19	668	1,000	2,060	760	699	1,050	754	525	909	993	591	7,710
20	928	2,480	1,670	1,050	722	1,030	747	578	857	938	587	4,960
21	637	2,290	1,690	1,040	611	1,010	740	629	894	541	461	3,720
22	639	1,720	1,480	991	605	1,000	347	792	1,480	1,610	461	3,080
23	651	1,620	1,020	1,000	606	1,000	348	526	1,040	989	594	2,650
24	648	1,500	1,040	727	598	998	556	740	960	430	632	2,470
25	650	1,450	1,040	732	592	394	552	622	939	476	638	2,410
26	635	1,380	1,010	1,030	616	645	571	569	973	441	614	2,400
27	1,020	1,320	1,010	1,030	600	566	773	573	676	457	705	2,420
28	782	1,320	1,010	684	787	557	728	587	659	854	422	3,310
29	649	1,390	1,010	424	761	560	715	601	636	737	431	2,760
30	600	1,340	1,040	1,030	---	651	716	608	638	469	418	2,570
31	589	---	1,000	485	---	694	---	605	---	463	409	---
TOTAL	25,867	31,575	50,880	26,661	24,315	23,396	21,260	19,311	22,743	20,977	16,381	165,147
MEAN	834	1,052	1,641	860	838	755	709	623	758	677	528	5,505
MAX	1,020	2,480	2,510	1,050	1,570	1,050	1,460	884	1,480	1,610	705	34,700
MIN	589	487	1,000	424	489	394	256	524	577	379	311	413
†	-100	+348	-483	-162	+351	+20	+157	+21	+10	-92	-81	+318

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2004, BY WATER YEAR (WY)

MEAN	580	657	850	1,131	1,124	1,146	1,080	834	669	801	922
MAX (WY)	1,943 (1996)	1,615 (1993)	1,700 (1993)	2,438 (1995)	2,659 (1998)	2,093 (1993)	2,259 (2003)	1,627 (2003)	1,716 (1992)	2,078 (2003)	5,505 (1994)
MIN (WY)	227 (2003)	294 (2001)	298 (1999)	327 (2002)	291 (2002)	409 (1999)	437 (1999)	322 (2002)	355 (2001)	380 (2001)	200 (2002)

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SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1991 - 2004	
ANNUAL TOTAL	493,317		448,513 ‡1247		885 (UNADJUSTED)	
ANNUAL MEAN	1,352		1,225		1,230 1993	
HIGHEST ANNUAL MEAN					376 2002	
LOWEST ANNUAL MEAN					34,700 Sep 9, 2004	
HIGHEST DAILY MEAN	5,490	Apr 19	34,700	Sep 9		
LOWEST DAILY MEAN	249	Jan 1	256	Apr 6	36 Sep 12, 2002	
ANNUAL SEVEN-DAY MINIMUM	317	Jan 27	453	Aug 6	112 Oct 10, 1993	
MAXIMUM PEAK FLOW			52,600*	Sep 9	52,600* Sep 9, 2004	
MAXIMUM PEAK STAGE			26.30*	Sep 9	26.30* Sep 9, 2004	
INSTANTANEOUS LOW FLOW			121*	Aug 9	2.1* Sep 12, 2002	
10 PERCENT EXCEEDS	2,370		1,810		1,740	
50 PERCENT EXCEEDS	1,320		746		624	
90 PERCENT EXCEEDS	528		536		270	

† Change in contents, equivalent in cubic feet per second, in Lake James, provided by Duke Power Company.

‡ Adjusted for change in contents.

* See REMARKS.

e Estimated.

