10109000 LOGAN RIVER ABOVE STATE DAM, NEAR LOGAN, UT

LOCATION.--Lat 41°44'36", long 111°46'55", in NW¼NW¼NE¼ sec. 36, T. 12 N., R. 1 E., Cache County, Hydrologic Unit 16010203, on left bank 0.5 mi upstream from State dam, and 2.5 mi east of Logan.

DRAINAGE AREA.--214 mi^2.

PERIOD OF RECORD.--June 1896 to current year. Published as Logan River near Logan prior to 1913. Records from May 1913 to November 1970 equivalent to earlier records, if records for Utah Power & Light Co.'s tailrace near Logan (station 10108000) are added. Monthly discharge only for some periods, published in WSP 1314.

REVISED RECORDS.--WDR UT-74-1: Drainage area. WDR UT-96-1:1995, Combined discharge of Logan River Above State Dam and Logan, Hyde Park and Smithfield Canal at Head. WDR UT-04-1:1995, Logan River above State Dam, near Logan, Ut; Combined discharge of Logan River above State Dam and Logan, Hyde Park and Smithfield Canal at Head.

GAGE.--Water-stage recorder. Elevation of gage is 4,680 ft above NGVD of 1929, from topographic map. Prior to May 7, 1913, nonrecording gage at various sites within 0.5 mi downstream at different datums. May 7, 1913, to September 3, 1938, water-stage recorder at present site at different datums.

REMARKS.--Records good. Flow affected by regulation and diversions above station for power, irrigation, and municipal culinary supply. Utah Power and Light Co. stopped diverting water from river November 1970 at which time the tailrace station (station 10108000) was discontinued. During 1963, site for gaging station for Logan, Hyde Park and Smithfield Canal (station 10108400) was relocated. Records for combined flow since that time are equivalent to previous records. For record of combined flow, see following page.

AVERAGE DISCHARGE.--River only: 91 years (water years 1914-2004), 155 ft^3/s 112,300 acre-ft/yr. Combined river and canal: 107 years, 268 ft^3/s 194,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--River only: Maximum discharge, 2,000 ft^3/s, Mar 21, 1916, gage height, 5.6 ft; minimum, 5.2 ft^3/s, Feb 26, 1986, result of hydro-electric plant testing. Combined river and canal: Maximum discharge observed, 2,480 ft^3/s, May 24, 1907; minimum daily, 50 ft^3/s, Jan 21, 1935.

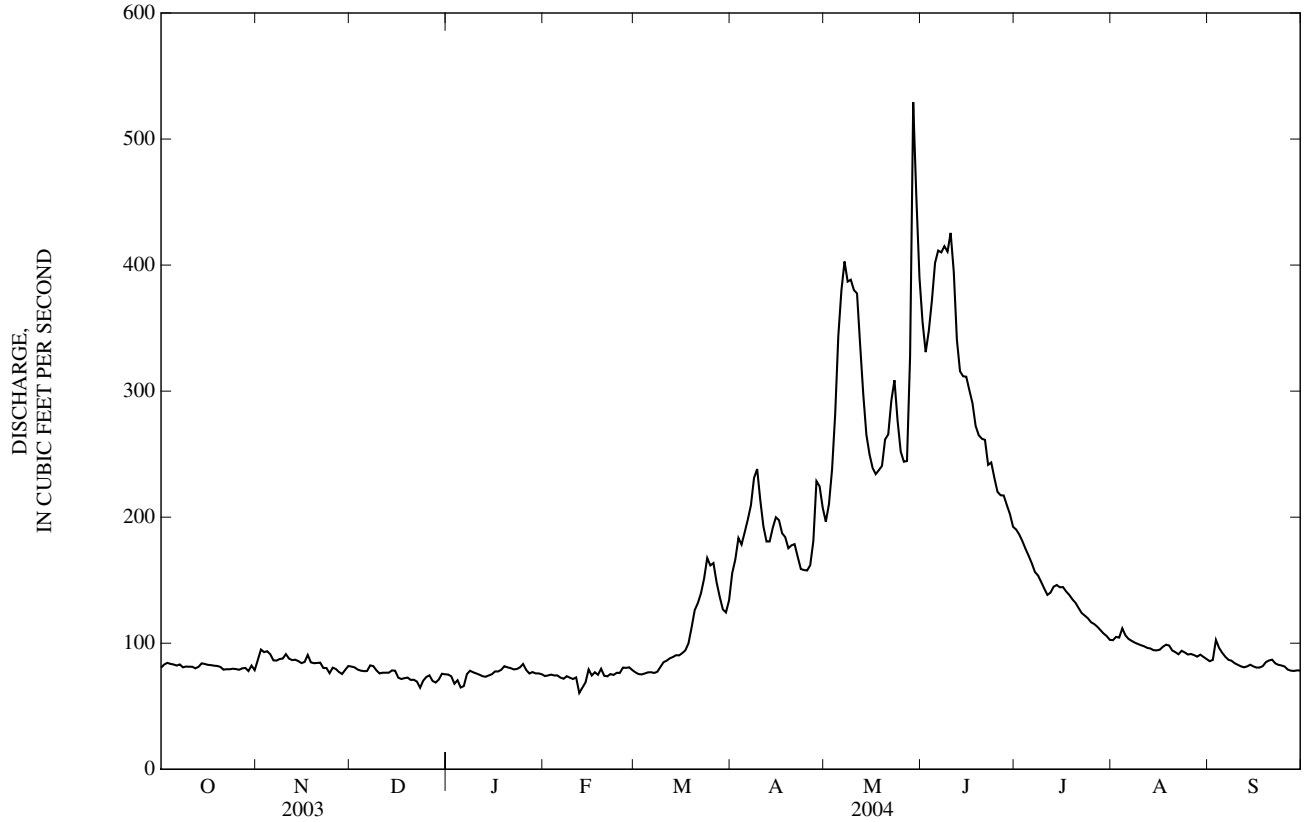
EXTREMES FOR CURRENT YEAR.--River only: Maximum discharge, 572 ft^3/s, May 29, gage height, 3.87 ft; minimum daily discharge, 61 ft^3/s, Feb 12. Combined river and canal: Maximum daily discharge 562 ft^3/s, May 29; minimum daily discharge 61 ft^3/s, Feb 12.

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	81	87	81	75	74	77	156	196	355	190	102	86
2	83	95	81	74	74	76	166	210	331	186	105	87
3	84	93	79	68	75	75	183	238	348	181	104	103
4	84	94	78	71	74	76	178	282	372	175	112	96
5	83	91	78	65	74	77	188	344	402	169	106	92
6	82	86	78	66	73	77	198	380	412	163	103	89
7	83	86	82	75	72	76	209	403	410	157	102	87
8	81	87	82	78	74	77	231	387	415	154	100	86
9	81	88	78	77	73	81	238	388	411	149	99	84
10	81	91	76	76	72	85	214	380	426	143	98	83
11	81	88	77	75	73	86	193	378	395	138	98	82
12	80	87	77	74	61	88	181	337	341	140	96	81
13	81	87	77	73	65	89	181	298	316	145	96	82
14	84	86	78	74	69	90	192	265	312	146	94	83
15	84	84	78	75	79	90	200	250	311	144	94	82
16	83	85	73	78	74	92	198	239	301	145	95	81
17	83	91	72	78	77	94	187	234	290	141	97	81
18	82	85	72	79	75	100	184	237	272	138	99	82
19	82	84	73	82	80	113	175	241	265	135	98	85
20	81	84	71	81	74	126	178	262	262	132	94	86
21	79	85	71	80	74	132	179	266	261	128	93	87
22	79	80	70	79	76	140	169	293	241	124	91	84
23	79	80	65	80	75	151	159	309	243	122	94	83
24	80	76	70	81	77	168	158	276	231	120	93	82
25	79	81	73	84	76	162	158	252	220	117	91	82
26	79	80	74	79	81	164	162	244	217	115	91	79
27	80	77	70	76	80	148	181	245	217	113	91	78
28	80	76	69	77	81	137	229	328	210	110	89	78
29	78	79	71	76	79	127	225	529	202	108	91	78
30	82	82	76	76	---	124	208	454	192	106	89	78
31	79	---	75	75	---	134	---	390	---	103	87	---
TOTAL	2,518	2,555	2,325	2,357	2,161	3,332	5,658	9,535	9,181	4,337	2,992	2,527
MEAN	81.2	85.2	75.0	76.0	74.5	107	189	308	306	140	96.5	84.2
MAX	84	95	82	84	81	168	238	529	426	190	112	103
MIN	78	76	65	65	61	75	156	196	192	103	87	78
AC-FT	4,990	5,070	4,610	4,680	4,290	6,610	11,220	18,910	18,210	8,600	5,930	5,010

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 2004, BY WATER YEAR (WY)

MEAN	136	130	116	109	108	135	248	554	647	315	176	144
MAX	247	213	186	161	205	369	615	1,072	1,413	691	337	267
(WY)	(1984)	(1984)	(1984)	(1985)	(1986)	(1986)	(1986)	(1997)	(1986)	(1984)	(1983)	(1986)
MIN	67.4	71.9	69.0	63.1	61.6	78.9	109	131	113	77.9	63.6	61.1
(WY)	(1978)	(1993)	(1993)	(1993)	(1993)	(1991)	(1977)	(1977)	(1992)	(1992)	(1992)	(1992)

10109000 LOGAN RIVER ABOVE STATE DAM, NEAR LOGAN, UT—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1971 - 2004	
ANNUAL TOTAL	52,832		49,478			
ANNUAL MEAN	145		135		235	
HIGHEST ANNUAL MEAN					440	1986
LOWEST ANNUAL MEAN					99.6	1992
HIGHEST DAILY MEAN	716	May 31	529	May 29	1,870	Jun 6, 1986
LOWEST DAILY MEAN	64	Feb 8	61	Feb 12	55	Jan 21, 1991
ANNUAL SEVEN-DAY MINIMUM	70	Dec 22	70	Feb 8	58	Sep 24, 1992
ANNUAL RUNOFF (AC-FT)	104,800		98,140		170,400	
10 PERCENT EXCEEDS	251		265		537	
50 PERCENT EXCEEDS	92		88		143	
90 PERCENT EXCEEDS	79		74		83