

## VIRGIN RIVER BASIN

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## 09405500 NORTH FORK VIRGIN RIVER NEAR SPRINGDALE, UT

LOCATION.--Lat  $37^{\circ}12'35''$ , long  $112^{\circ}58'40''$ , in NW $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 22, T. 41 S., R. 10 W., Washington County, Hydrologic Unit 15010008, Zion National Park, on right bank 0.2 mi downstream from point of diversion of Springdale Canal, 0.5 mi downstream from Pine Creek, and 1.9 mi northeast of Springdale.

DRAINAGE AREA.--344 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1913 to June 1914, June to November 1923, April to June, August and September 1925 (fragmentary), October 1925 to current year. Published as Zion Creek near Springdale 1913-14, and as Mukuntuweap River near Springdale 1923 and 1925-32. Published as combined flow of river and Springdale canal 1932-88.

GAGE.--Water-stage recorder. Crest-stage gage since May 31, 1995. Elevation of gage is 3,970 ft above NGVD of 1929, from topographic map. May 13, 1913 to June 30, 1914, nonrecording gage at site 3.8 mi downstream at different datum. June 6, 1923 to August 20, 1932, nonrecording gage at site 0.8 mi upstream. November 3, 1932 to December 14, 1949, nonrecording gage 50 ft downstream at datum 0.34 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are poor. Some regulation of low flows by Kolob Reservoir (20 mi upstream) and several diversions for irrigation upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,150 ft<sup>3</sup>/s, Dec 6, 1966, gage height, 12.98 ft, from rating curve extended above 2,000 ft<sup>3</sup>/s on basis of drift measurement at gage height, 6.7 ft, and slope-area measurement at gage height, 10.25 ft; minimum estimated, less than 5.0 ft<sup>3</sup>/s, Apr 12, 1995, result of landslide 1.0 mi upstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft<sup>3</sup>/s and maximum (\*):

	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)		Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
	Jul 15	1930	*1,480	*4.43					No other peak greater than base discharge.

Minimum daily discharge, 26 ft<sup>3</sup>/s, on several days in Aug and Sep.

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	27	40	42	44	39	56	139	146	49	32	39	26
2	30	39	42	50	41	64	167	160	47	32	40	26
3	50	41	40	57	51	62	188	170	45	32	40	26
4	38	40	40	43	46	60	142	175	44	32	40	28
5	34	39	47	34	46	54	157	176	43	31	39	28
6	32	40	46	36	41	53	203	161	43	31	42	28
7	31	40	45	42	44	61	208	144	41	30	40	27
8	30	39	55	47	47	69	180	131	40	29	38	26
9	30	39	37	46	42	76	163	119	e38	29	35	26
10	31	44	37	47	44	81	163	111	e39	30	33	30
11	30	44	41	47	44	82	124	101	e39	30	34	31
12	30	75	41	47	42	79	116	91	e38	28	34	30
13	30	84	38	47	40	81	133	85	e37	27	37	28
14	30	46	43	46	46	82	146	81	e38	27	47	27
15	30	45	41	47	47	83	130	79	37	93	42	26
16	30	46	34	47	47	81	139	76	37	52	46	26
17	31	45	34	45	47	82	144	71	38	37	45	27
18	34	44	40	45	48	86	146	68	39	35	43	29
19	34	44	44	47	48	89	121	67	37	33	35	73
20	33	44	45	46	47	95	113	65	35	31	31	42
21	34	44	48	42	51	107	112	63	35	33	31	35
22	37	42	46	42	61	119	110	61	34	38	31	33
23	34	32	42	43	77	135	108	61	33	37	29	32
24	34	38	45	45	71	148	116	59	33	37	28	31
25	33	44	119	47	58	149	126	57	33	42	28	31
26	32	37	130	39	90	143	137	55	35	41	28	30
27	33	37	41	39	91	111	146	53	34	43	28	29
28	34	39	38	47	70	99	154	52	40	42	27	31
29	34	42	38	47	62	92	164	57	39	39	27	43
30	34	43	47	47	---	98	140	58	35	38	26	47
31	37	---	49	48	---	117	---	53	---	40	26	---
TOTAL	1,021	1,316	1,475	1,396	1,528	2,794	4,335	2,906	1,155	1,131	1,089	952
MEAN	32.9	43.9	47.6	45.0	52.7	90.1	144	93.7	38.5	36.5	35.1	31.7
MAX	50	84	130	57	91	149	208	176	49	93	47	73
MIN	27	32	34	34	39	53	108	52	33	27	26	26
AC-FT	2,030	2,610	2,930	2,770	3,030	5,540	8,600	5,760	2,290	2,240	2,160	1,890

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2004, BY WATER YEAR (WY)

MEAN	48.0	52.7	51.6	58.4	67.7	109	185	230	94.2	51.4	45.8	46.9
(WY)	(1999)	(1999)	(1994)	(1997)	(1995)	(1995)	(1993)	(1993)	(1995)	(1995)	(1995)	(1998)
MAX	79.8	75.5	73.5	96.3	110	271	644	813	404	113	71.1	115
(WY)	(2004)	(1990)	(1990)	(1991)	(1990)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(1989)
MIN	32.9	35.9	36.6	39.0	47.8	48.0	43.6	30.8	24.2	24.5	22.9	24.8

## VIRGIN RIVER BASIN

09405500 NORTH FORK VIRGIN RIVER NEAR SPRINGDALE, UT—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 1989 - 2004
ANNUAL TOTAL	18,106	21,098	
ANNUAL MEAN	49.6	57.6	
HIGHEST ANNUAL MEAN			86.8
LOWEST ANNUAL MEAN			207
HIGHEST DAILY MEAN	165	May 16	1993
LOWEST DAILY MEAN	24	Jul 12	2002
ANNUAL SEVEN-DAY MINIMUM	24	Jul 10	38.5
ANNUAL RUNOFF (AC-FT)	35,910	41,850	1,140
10 PERCENT EXCEEDS	80	122	May 4, 1993
50 PERCENT EXCEEDS	44	43	Aug 5, 1994
90 PERCENT EXCEEDS	29	30	Aug 12, 2002

e Estimated

