Water-Data Report 2008

15478040 PHELAN CREEK NEAR PAXSON, AK

Tanana River Basin
Delta River Subbasin

LOCATION.--Lat 63°14′27″, long 145°28′03″ referenced to North American Datum of 1927, in SW ¼ sec.28, T.19 S., R.12 E., Southeast Fairbanks Division, AK, Hydrologic Unit 19040504, (Mt.Hayes A-3 quad), on left bank about 1 mi downstream from terminus of Gulkana Glacier and 14.5 mi north of Paxson, Alaska.

DRAINAGE AREA.--12.2 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1966 to September 1978, annual maximums, water years 1984-85, October 1989 to current year. Water year 1994 not published, daily mean values of discharge are available from the computer files of the Alaska Science Center. Prior to October 1968, published as Gulkana Creek near Paxson.

GAGE.--Water-stage recorder. Datum of gage is 3,690 ft above sea level.

REMARKS.--Records are fair except for estimated daily discharges which are poor. Streamflow augmented by Gulkana Glacier and other glaciers that cover 7.5 mi^2 and 1.1 mi^2, respectively, of the drainage basin. A recording air temperature and precipitation gage at 4,860 ft above sea level, plus 3 snow and ice balance measurement sites, are located in the basin. Combined snow, ice, and water balances of the basin are published in other reports of the Geological Survey. GOES satellite telemetry at station.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	26	e8.0	e7.0	e6.5	e5.5	e4.0	e2.5	e2.5	e120	96	166	112
2	24	e7.5	e7.0	e6.5	e5.0	e4.0	e2.5	e2.5	e170	127	174	95
3	e22	e7.5	e7.0	e6.5	e5.0	e4.0	e2.5	e2.5	e200	165	194	101
4	e20	e7.5	e7.0	e6.5	e5.0	e4.0	e2.5	e2.5	e200	216	171	115
5	19	e7.5	e7.0	e6.5	e5.0	e3.5	e2.5	e2.5	e170	281	190	116
6	17	e7.5	e7.0	e6.5	e5.0	e3.5	e2.5	e2.5	e140	265	145	106
7	e15	e7.5	e7.0	e6.5	e4.5	e3.5	e2.5	e2.5	e100	250	112	151
8	e14	e7.5	e7.0	e6.5	e4.5	e3.5	e2.5	e2.5	124	210	104	133
9	e13	e7.5	e7.0	e6.5	e4.5	e3.5	e2.5	e2.5	162	211	100	120
10	e13	e7.5	e7.0	e6.5	e4.5	e3.5	e2.0	e2.5	179	202	99	87
11	e12	e7.0	e7.0	e6.5	e4.5	e3.5	e2.0	e3.0	171	199	102	50
12	e12	e7.0	e7.0	e6.5	e4.0	e3.5	e2.0	e3.0	178	226	98	59
13	e12	e7.0	e7.0	e6.5	e4.0	e3.5	e2.0	e3.5	201	230	107	72
14	e11	e7.0	e7.0	e6.5	e4.0	e3.5	e2.0	e4.0	193	221	109	67
15	e11	e7.0	e7.0	e6.5	e4.0	e3.5	e2.0	e5.0	203	243	114	62
16	e11	e7.0	e7.0	e6.5	e4.0	e3.5	e2.0	e7.0	219	220	121	53
17	e10	e7.0	e7.0	e6.5	e4.0	e3.5	e2.0	e8.0	207	328	123	93
18	e10	e7.0	e7.0	e6.5	e4.0	e3.5	e2.0	e10	205	369	137	63
19	e10	e7.0	e7.0	e6.5	e4.0	e3.5	e2.0	e14	209	214	147	50
20	e9.0	e7.0	e7.0	e6.5	e4.0	e3.5	e2.0	e20	221	187	140	45
21	e9.0	e7.0	e6.5	e6.5	e4.0	e3.5	e2.0	e30	280	148	113	42
22	e9.0	e7.0	e6.5	e6.5	e4.0	e3.5	e2.5	e40	248	164	142	39
23	e9.0	e7.0	e6.5	e6.0	e4.0	e3.5	e2.5	e55	208	152	151	38
24	e9.0	e7.0	e6.5	e6.0	e4.0	e3.0	e2.5	e70	196	125	140	36
25	e8.0	e7.0	e6.5	e6.0	e4.0	e3.0	e2.5	e80	171	143	140	33
26	e8.0	e7.0	e6.5	e6.0	e4.0	e3.0	e2.5	e90	187	156	114	31
27	e8.0	e7.0	e6.5	e6.0	e4.0	e3.0	e2.5	e90	158	151	120	32
28	e8.0	e7.0	e6.5	e5.5	e4.0	e3.0	e2.5	e100	136	147	110	30
29	e8.0	e7.0	e6.5	e5.5	e4.0	e3.0	e2.5	e100	113	136	127	e28
30	e8.0	e7.0	e6.5	e5.5	---	e3.0	e2.5	e100	99	182	117	e26
31	e8.0	---	e6.5	e5.5	---	e3.0	---	e100	---	159	102	---
Total	383.0	215.5	211.5	195.0	125.0	106.5	69.0	957.5	5,368	6,123	4,029	2,085
Mean	12.4	7.18	6.82	6.29	4.31	3.44	2.30	30.9	179	198	130	69.5
Max	26	8.0	7.0	6.5	5.5	4.0	2.5	100	280	369	194	151
Min	8.0	7.0	6.5	5.5	4.0	3.0	2.0	2.5	99	96	98	26
Ac-ft	760	427	420	387	248	211	137	1,900	10,650	12,140	7,990	4,140
Cfsm	1.01	0.59	0.56	0.52	0.35	0.28	0.19	2.53	14.7	16.2	10.7	5.70
In.	1.17	0.66	0.64	0.59	0.38	0.32	0.21	2.92	16.37	18.67	12.29	6.36

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2008, BY WATER YEAR (WY)#

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	13.3	6.44	4.53	3.57	2.99	2.56	2.46	20.3	156	319	259	64.0
Max	36.6	15.1	8.67	6.29	5.38	4.71	4.18	72.4	414	536	516	129
(WY)	(2004)	(2003)	(2003)	(2008)	(2007)	(2004)	(2006)	(2005)	(2004)	(2004)	(2004)	(1995)
Min	5.55	2.50	2.00	1.48	1.00	1.00	1.00	2.39	72.9	181	73.6	14.3
(WY)	(1999)	(1978)	(1978)	(1967)	(1967)	(1967)	(1967)	(1992)	(1975)	(1991)	(1992)	(1992)

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SUMMARY STATISTICS

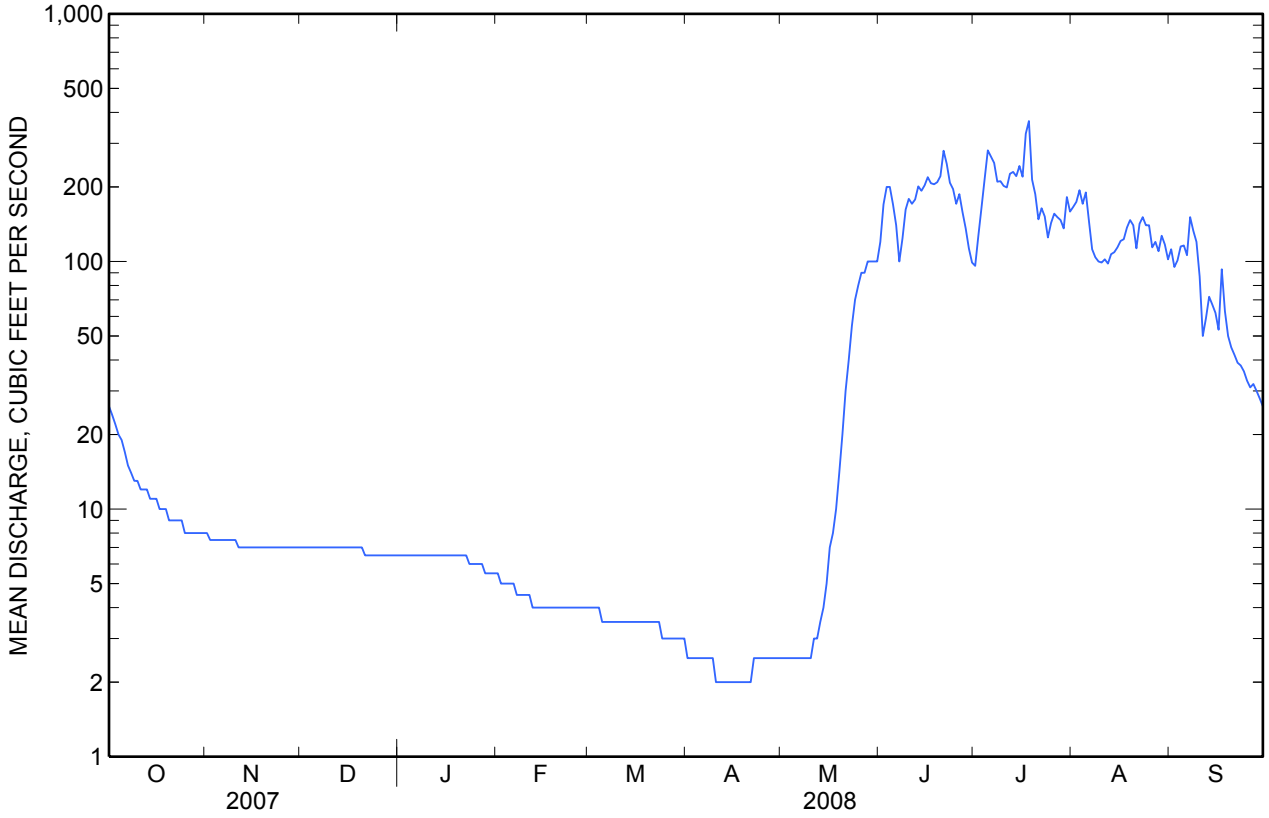
	Calendar Year 2007		Water Year 2008		Water Years 1967 - 2008[#]	
Annual total	35,756.5		19,868.0			
Annual mean	98.0		54.3		71.9	
Highest annual mean					136	2004
Lowest annual mean					43.0	1973
Highest daily mean	669	Jul 3	369	Jul 18	1,330	Aug 13, 1997
Lowest daily mean	[a]2.0	Mar 4	[b]2.0	Apr 10	[c]1.0	Jan 16, 1967
Annual seven-day minimum	2.0	Mar 4	2.0	Apr 10	1.0	Jan 16, 1967
Maximum peak flow			771	Jul 18	2,320	Aug 13, 1967
Maximum peak stage			9.44	Jul 18	11.51	Aug 13, 1967
Maximum peak stage					[d,f]14.70	June 1, 1967
Annual runoff (cfsm)	8.03		4.45		5.89	
Annual runoff (inches)	109.03		60.58		80.02	
10 percent exceeds	380		178		261	
50 percent exceeds	7.0		7.0		6.5	
90 percent exceeds	3.0		2.5		2.0	

[#] See Period of Record; breaks in record.

[a] From Mar. 4-19

[b] From April 10-21

[c] For many days in the winter and spring during water years 1967, 1969, 1978, and 1991

[d] Backwater from snow and ice

[f] Occurred in early June as a result of flow over ice.