

12200500 SKAGIT RIVER NEAR MOUNT VERNON, WA

Puget Sound Basin
Lower Skagit Subbasin

LOCATION.--Lat 48°26'42", long 122°20'03" referenced to North American Datum of 1927, in SE ¼ SE ¼ sec.7, T.34 N., R.4 E., Skagit County, WA, Hydrologic Unit 17110007, on right bank 220 ft downstream of bridge on U.S. Highway 99, 1.5 mi north of Skagit Valley Junior College in Mount Vernon, and at mile 15.7.

DRAINAGE AREA.--3,093 mi², of which 400 mi² is in Canada.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1940 to current year. Monthly discharge only October 1940, published in WSP 1316.

REVISED RECORDS.--WSP 1932: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. Supplementary water-stage recorder in bridge pier 0.2 mi downstream from base gage from Dec. 3, 1957, to Oct. 15, 1964. Water-stage recorder located on downstream pier of the Highway 99 bridge from Oct. 15, 1964, to Jan. 6, 1993.

REMARKS.--Records good. Flow regulated by Ross Reservoir (station 12175000), Diablo Reservoir (station 12176500), Gorge Reservoir (station 12177700), Baker Lake (station 12191600), and Lake Shannon (station 12193000). Small diversions for domestic and municipal use. Chemical analyses July 1959 to September 1971, October 1973 to September 1994. Prior to November 1962, published as "at Lawrence." U.S. Geological Survey satellite telemeter at station. Specific conductance February 1974 to November 1981. Water temperature July 1962 to August 1970, February 1974 to November 1981.

AVERAGE DISCHARGE FOR PERIOD OF RECORD.--66 years (water years 1941-2006), 16,540 ft³/s, 11,990,000 acre-ft, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 152,000 ft³/s, Nov. 25, 1990, elevation, 37.37 ft, from floodmarks; minimum discharge, 2,740 ft³/s, Oct. 26, 1942, elevation, 7.37 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1906 reached a stage of 37 ft, from Great Northern Railway high-water profile, discharge 180,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50,000 ft³/s and (or) maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan 11	0630	*60,300	*25.85
No other peak greater than base discharge			

Minimum discharge, 4,380 ft³/s, Sep 4, gage height, 9.85 ft.

12200500 SKAGIT RIVER NEAR MOUNT VERNON, WA—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	16,000	21,500	13,000	22,600	27,700	17,300	11,300	14,100	20,100	18,900	8,640	5,950
2	12,300	21,600	13,600	20,300	29,200	15,200	11,700	13,700	26,100	19,200	8,480	4,880
3	9,910	20,900	11,700	19,000	27,100	16,000	10,500	13,300	27,900	18,800	8,240	4,700
4	8,640	21,700	9,910	17,700	28,100	14,700	8,890	11,200	22,800	19,600	8,750	4,700
5	7,190	21,200	11,600	18,900	28,400	13,000	9,100	12,100	29,100	19,900	7,540	6,170
6	6,390	21,500	12,300	31,000	24,600	12,800	9,160	13,500	29,000	19,100	6,360	5,560
7	9,760	19,900	12,100	38,800	22,500	15,400	9,210	15,300	25,600	18,400	7,970	5,450
8	13,000	18,900	11,700	33,300	21,400	14,700	8,990	16,000	25,600	17,900	8,350	5,450
9	8,900	17,600	12,100	31,000	20,700	15,800	9,800	15,300	23,100	17,600	8,250	5,670
10	7,900	18,600	10,600	46,000	19,700	15,500	10,200	13,600	20,900	18,100	8,400	6,150
11	8,190	25,600	10,100	57,400	18,700	13,300	10,100	11,000	20,800	18,000	8,850	5,370
12	8,450	23,100	10,600	49,300	18,600	12,500	9,600	12,300	22,000	16,200	7,460	6,640
13	8,310	21,700	9,680	39,900	18,200	12,700	10,900	13,200	26,800	17,600	6,480	7,650
14	8,950	22,100	10,000	37,800	17,900	12,100	13,100	11,700	27,300	16,200	7,670	7,670
15	8,390	17,900	11,100	31,200	17,400	12,300	14,900	15,100	26,400	15,100	7,760	6,810
16	8,780	16,000	11,600	27,200	17,000	13,600	12,600	21,600	24,000	12,800	7,800	5,140
17	15,600	13,700	11,000	34,200	16,700	13,900	11,100	31,100	25,600	12,000	7,260	5,650
18	20,700	14,700	9,560	31,400	16,500	11,900	10,200	37,500	24,500	11,900	7,720	5,510
19	16,000	13,800	8,600	26,600	15,000	10,200	9,640	38,700	19,200	11,700	8,630	6,510
20	17,100	14,300	10,100	25,400	14,800	10,600	9,540	33,600	18,200	10,900	7,860	6,550
21	16,000	15,700	16,400	23,800	15,800	10,900	10,500	30,200	16,500	10,500	7,450	7,420
22	14,000	15,900	23,100	21,900	15,000	10,800	11,000	26,300	16,000	12,600	8,530	7,810
23	13,200	16,800	28,700	20,900	15,600	9,880	10,200	26,800	15,200	13,300	8,580	6,660
24	13,100	16,100	31,000	20,500	17,300	11,000	10,000	24,100	14,600	12,900	8,420	5,700
25	12,600	15,300	43,900	20,400	16,300	11,400	11,300	20,300	15,800	13,000	8,290	5,440
26	12,300	16,000	35,500	19,700	13,600	12,600	12,500	19,800	21,600	11,900	7,950	5,360
27	12,400	13,200	31,700	19,500	14,200	13,700	11,900	20,100	25,900	11,300	8,340	5,150
28	12,400	14,500	27,600	19,900	16,700	12,100	11,800	16,400	25,400	11,400	8,410	5,240
29	13,500	14,600	27,100	20,200	---	9,660	14,100	15,200	20,700	8,880	7,850	5,240
30	14,200	12,600	23,600	30,200	---	8,710	16,200	16,300	18,800	7,820	7,190	5,170
31	17,300	---	23,600	31,500	---	11,200	---	18,200	---	8,710	5,500	---
Total	371,460	537,000	533,150	887,500	544,700	395,450	330,030	597,600	675,500	452,210	244,980	177,370
Mean	11,980	17,900	17,200	28,630	19,450	12,760	11,000	19,280	22,520	14,590	7,903	5,912
Max	20,700	25,600	43,900	57,400	29,200	17,300	16,200	38,700	29,100	19,900	8,850	7,810
Min	6,390	12,600	8,600	17,700	13,600	8,710	8,890	11,000	14,600	7,820	5,500	4,700
Ac-ft	736,800	1,065,000	1,058,000	1,760,000	1,080,000	784,400	654,600	1,185,000	1,340,000	897,000	485,900	351,800

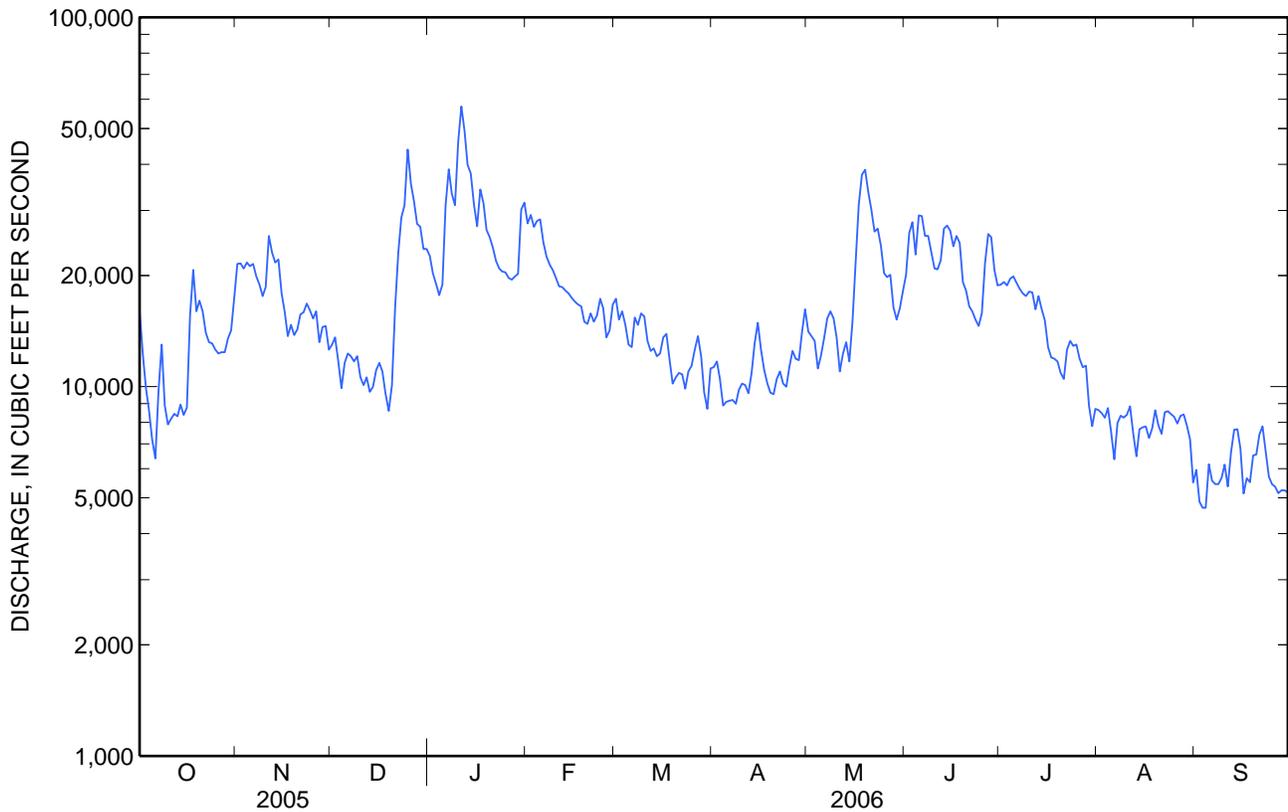
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2006, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	12,410	18,150	18,670	17,910	16,710	14,220	15,010	20,250	24,350	19,900	11,610	9,380
Max	27,970	52,550	37,930	28,630	31,140	27,010	23,360	36,530	43,460	37,650	21,890	17,540
(WY)	(2004)	(1991)	(1976)	(2006)	(1951)	(1972)	(1943)	(1946)	(1972)	(1972)	(1999)	(1959)
Min	4,323	6,592	8,358	7,636	7,626	6,856	8,857	12,460	11,720	9,310	6,441	5,023
(WY)	(1943)	(1944)	(2001)	(1942)	(1942)	(1942)	(1973)	(1970)	(2005)	(1977)	(1941)	(1942)

12200500 SKAGIT RIVER NEAR MOUNT VERNON, WA—Continued

SUMMARY STATISTICS

	Calendar Year 2005		Water Year 2006		Water Years 1941 - 2006	
Annual total	4,867,390		5,746,950			
Annual mean	13,340		15,750		16,540	
Highest annual mean					23,140	1991
Lowest annual mean					10,500	2001
Highest daily mean	62,700	Jan 19	57,400	Jan 11	142,000	Nov 25, 1990
Lowest daily mean	5,350	Sep 5	4,700	Sep 3	3,050	Oct 26, 1942
Annual seven-day minimum	5,670	Sep 23	5,270	Sep 2	3,530	Oct 22, 1942
Annual runoff (ac-ft)	9,654,000		11,400,000		11,990,000	
10 percent exceeds	20,200		26,900		27,200	
50 percent exceeds	12,000		13,800		14,500	
90 percent exceeds	7,410		7,510		7,880	



12200500 SKAGIT RIVER NEAR MOUNT VERNON, WA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962-70, 1974-82.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: February 1974 to November 1981.

WATER TEMPERATURE: July 1962 to August, February 1974 to November 1981.

SEDIMENT CONCENTRATION: March 9, 2006 to September 30, 2006.

INSTRUMENTATION.--Water quality monitor July 1962 to Aug. 1970 and Feb. 1971 to Nov. 1981. Automatic pumping sampler Mar. 9, 2006 to Sept. 30, 2006.

REMARKS.--In addition to the water-quality monitor record, EDI samples were collected on an event driven basis.

EXTREMES OUTSIDE PERIOD OF DAILY RECORD.--A water temperature of 17.8 °C was observed on Aug. 3, 1961.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum observed, 95 microsiemens Mar. 15, 1978; minimum, 25 microsiemens July 7, 1975, Feb. 27 and Dec. 27, 1980.

WATER TEMPERATURE: Maximum, 19.0 °C, Aug. 12, 1977; minimum 1.0 °C, Jan. 28 to Feb. 1, 1969.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATION: Maximum daily mean, 665 mg/L, May 18; minimum daily mean 15 mg/L, Sept. 17.

SEDIMENT DISCHARGE: Maximum daily 67,400 ton/day, May 18; minimum daily 227 tons/day, Sept. 17.

12200500 SKAGIT RIVER NEAR MOUNT VERNON, WA—Continued

(00060), DD #21 (80154), DD #22 (80155)
SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006

Day	Mean discharge (ft ³ /s)	Mean concentration (mg/l)	Sediment discharge (tons/day)	Mean discharge (ft ³ /s)	Mean concentration (mg/l)	Sediment discharge (tons/day)	Mean discharge (ft ³ /s)	Mean concentration (mg/l)	Sediment discharge (tons/day)
	October			November			December		
1	16,000	---	---	21,500	---	---	13,000	---	---
2	12,300	---	---	21,600	---	---	13,600	---	---
3	9,910	---	---	20,900	---	---	11,700	---	---
4	8,640	---	---	21,700	---	---	9,910	---	---
5	7,190	---	---	21,200	---	---	11,600	---	---
6	6,390	---	---	21,500	---	---	12,300	---	---
7	9,760	---	---	19,900	---	---	12,100	---	---
8	13,000	---	---	18,900	---	---	11,700	---	---
9	8,900	---	---	17,600	---	---	12,100	---	---
10	7,900	---	---	18,600	---	---	10,600	---	---
11	8,190	---	---	25,600	---	---	10,100	---	---
12	8,450	---	---	23,100	---	---	10,600	---	---
13	8,310	---	---	21,700	---	---	9,680	---	---
14	8,950	---	---	22,100	---	---	10,000	---	---
15	8,390	---	---	17,900	---	---	11,100	---	---
16	8,780	---	---	16,000	---	---	11,600	---	---
17	15,600	---	---	13,700	---	---	11,000	---	---
18	20,700	---	---	14,700	---	---	9,560	---	---
19	16,000	---	---	13,800	---	---	8,600	---	---
20	17,100	---	---	14,300	---	---	10,100	---	---
21	16,000	---	---	15,700	---	---	16,400	---	---
22	14,000	---	---	15,900	---	---	23,100	---	---
23	13,200	---	---	16,800	---	---	28,700	---	---
24	13,100	---	---	16,100	---	---	31,000	---	---
25	12,600	---	---	15,300	---	---	43,900	---	---
26	12,300	---	---	16,000	---	---	35,500	---	---
27	12,400	---	---	13,200	---	---	31,700	---	---
28	12,400	---	---	14,500	---	---	27,600	---	---
29	13,500	---	---	14,600	---	---	27,100	---	---
30	14,200	---	---	12,600	---	---	23,600	---	---
31	17,300	---	---	---	---	---	23,600	---	---
Total	371,460	---	---	537,000	---	---	533,150	---	---

12200500 SKAGIT RIVER NEAR MOUNT VERNON, WA—Continued

(00060), DD #21 (80154), DD #22 (80155)
SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006

Day	Mean discharge (ft ³ /s)	Mean concentration (mg/l)	Sediment discharge (tons/day)	Mean discharge (ft ³ /s)	Mean concentration (mg/l)	Sediment discharge (tons/day)	Mean discharge (ft ³ /s)	Mean concentration (mg/l)	Sediment discharge (tons/day)
	January			February			March		
1	22,600	---	---	27,700	---	---	17,300	---	---
2	20,300	---	---	29,200	---	---	15,200	---	---
3	19,000	---	---	27,100	---	---	16,000	---	---
4	17,700	---	---	28,100	---	---	14,700	---	---
5	18,900	---	---	28,400	---	---	13,000	---	---
6	31,000	---	---	24,600	---	---	12,800	---	---
7	38,800	---	---	22,500	---	---	15,400	---	---
8	33,300	---	---	21,400	---	---	14,700	---	---
9	31,000	---	---	20,700	---	---	15,800	---	---
10	46,000	---	---	19,700	---	---	15,500	152	6,360
11	57,400	---	---	18,700	---	---	13,300	120	4,290
12	49,300	---	---	18,600	---	---	12,500	97	3,270
13	39,900	---	---	18,200	---	---	12,700	78	2,660
14	37,800	---	---	17,900	---	---	12,100	62	2,030
15	31,200	---	---	17,400	---	---	12,300	77	2,560
16	27,200	---	---	17,000	---	---	13,600	108	3,990
17	34,200	---	---	16,700	---	---	13,900	113	4,270
18	31,400	---	---	16,500	---	---	11,900	113	3,630
19	26,600	---	---	15,000	---	---	10,200	111	3,050
20	25,400	---	---	14,800	---	---	10,600	105	3,010
21	23,800	---	---	15,800	---	---	10,900	127	3,770
22	21,900	---	---	15,000	---	---	10,800	66	1,880
23	20,900	---	---	15,600	---	---	9,880	44	1,170
24	20,500	---	---	17,300	---	---	11,000	80	2,380
25	20,400	---	---	16,300	---	---	11,400	121	3,760
26	19,700	---	---	13,600	---	---	12,600	128	4,460
27	19,500	---	---	14,200	---	---	13,700	230	8,670
28	19,900	---	---	16,700	---	---	12,100	108	3,650
29	20,200	---	---	---	---	---	9,660	90	2,340
30	30,200	---	---	---	---	---	8,710	79	1,860
31	31,500	---	---	---	---	---	11,200	101	3,090
Total	887,500	---	---	544,700	---	---	395,450	---	---

12200500 SKAGIT RIVER NEAR MOUNT VERNON, WA—Continued

(00060), DD #21 (80154), DD #22 (80155)
SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006

Day	Mean discharge (ft ³ /s)	Mean concentration (mg/l)	Sediment discharge (tons/day)	Mean discharge (ft ³ /s)	Mean concentration (mg/l)	Sediment discharge (tons/day)	Mean discharge (ft ³ /s)	Mean concentration (mg/l)	Sediment discharge (tons/day)
	April			May			June		
1	11,300	93	2,860	14,100	140	5,410	20,100	50	2,730
2	11,700	90	2,850	13,700	87	3,190	26,100	55	3,930
3	10,500	87	2,490	13,300	68	2,450	27,900	182	13,600
4	8,890	61	1,450	11,200	64	1,930	22,800	242	14,900
5	9,100	54	1,320	12,100	53	1,720	29,100	142	11,000
6	9,160	53	1,320	13,500	61	2,240	29,000	125	9,820
7	9,210	52	1,290	15,300	66	2,740	25,600	92	6,370
8	8,990	41	1,000	16,000	89	3,830	25,600	70	4,880
9	9,800	63	1,660	15,300	83	3,430	23,100	70	4,360
10	10,200	57	1,570	13,600	79	2,880	20,900	59	3,330
11	10,100	65	1,780	11,000	74	2,190	20,800	51	2,860
12	9,600	57	1,480	12,300	39	1,260	22,000	53	3,150
13	10,900	69	2,040	13,200	30	1,050	26,800	116	8,720
14	13,100	279	10,200	11,700	18	578	27,300	176	13,000
15	14,900	373	15,100	15,100	66	2,800	26,400	96	6,890
16	12,600	175	5,990	21,600	138	8,460	24,000	71	4,580
17	11,100	80	2,430	31,100	442	37,500	25,600	63	4,360
18	10,200	55	1,500	37,500	665	67,400	24,500	72	4,750
19	9,640	51	1,330	38,700	506	52,900	19,200	89	4,630
20	9,540	51	1,310	33,600	333	30,300	18,200	64	3,140
21	10,500	51	1,440	30,200	227	18,600	16,500	51	2,270
22	11,000	51	1,510	26,300	172	12,300	16,000	49	2,110
23	10,200	50	1,380	26,800	137	9,950	15,200	42	1,720
24	10,000	50	1,360	24,100	117	7,620	14,600	37	1,480
25	11,300	51	1,570	20,300	111	6,070	15,800	34	1,440
26	12,500	62	2,090	19,800	104	5,590	21,600	41	2,410
27	11,900	53	1,700	20,100	124	6,770	25,900	78	5,520
28	11,800	54	1,740	16,400	100	4,430	25,400	182	12,400
29	14,100	114	4,430	15,200	90	3,670	20,700	217	12,100
30	16,200	224	9,770	16,300	68	2,990	18,800	171	8,690
31	---	---	---	18,200	53	2,630	---	---	---
Total	330,030	---	87,960	597,600	---	314,878	675,500	---	181,140

12200500 SKAGIT RIVER NEAR MOUNT VERNON, WA—Continued

(00060), DD #21 (80154), DD #22 (80155)
SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006

Day	Mean discharge (ft ³ /s)	Mean concentration (mg/l)	Sediment discharge (tons/day)	Mean discharge (ft ³ /s)	Mean concentration (mg/l)	Sediment discharge (tons/day)	Mean discharge (ft ³ /s)	Mean concentration (mg/l)	Sediment discharge (tons/day)
	July			August			September		
1	18,900	89	4,510	8,640	35	816	5,950	25	401
2	19,200	81	4,210	8,480	25	585	4,880	23	297
3	18,800	83	4,190	8,240	25	545	4,700	21	269
4	19,600	84	4,440	8,750	28	664	4,700	23	300
5	19,900	82	4,420	7,540	29	586	6,170	33	563
6	19,100	63	3,220	6,360	29	505	5,560	26	389
7	18,400	77	3,800	7,970	34	729	5,450	46	675
8	17,900	52	2,520	8,350	42	941	5,450	46	681
9	17,600	42	1,980	8,250	43	951	5,670	41	628
10	18,100	43	2,090	8,400	39	876	6,150	46	763
11	18,000	28	1,380	8,850	33	796	5,370	40	578
12	16,200	31	1,350	7,460	26	526	6,640	36	645
13	17,600	39	1,890	6,480	28	482	7,650	42	858
14	16,200	43	1,900	7,670	25	524	7,670	37	767
15	15,100	39	1,590	7,760	30	621	6,810	28	526
16	12,800	81	2,800	7,800	40	828	5,140	21	289
17	12,000	163	5,270	7,260	31	621	5,650	15	227
18	11,900	223	7,190	7,720	35	728	5,510	48	716
19	11,700	274	8,630	8,630	51	1,200	6,510	159	2,810
20	10,900	115	3,470	7,860	65	1,370	6,550	76	1,340
21	10,500	68	1,950	7,450	63	1,260	7,420	70	1,410
22	12,600	76	2,580	8,530	65	1,500	7,810	72	1,520
23	13,300	78	2,780	8,580	106	2,460	6,660	70	1,270
24	12,900	121	4,240	8,420	81	1,840	5,700	52	803
25	13,000	176	6,140	8,290	54	1,200	5,440	51	754
26	11,900	121	3,930	7,950	41	872	5,360	50	723
27	11,300	113	3,440	8,340	68	1,520	5,150	50	690
28	11,400	92	2,850	8,410	32	724	5,240	49	698
29	8,880	95	2,300	7,850	27	572	5,240	49	689
30	7,820	73	1,540	7,190	48	949	5,170	48	662
31	8,710	50	1,180	5,500	35	512	---	---	---
Total	452,210	---	103,780	244,980	---	28,303	177,370	---	22,941