

**CITY OF SPOKANE,
WASHINGTON**

CSO FLOW MONITORING PROJECT

FLOW, FREQUENCY AND DURATION

SEWER MAINTENANCE

**Monthly Report
February 2009**

April 7, 2009
CSOMonthly2009-02.doc

OVERFLOW EVENTS

Table 1 – Flow-Frequency-Duration, provides a summary of the flow volume calculated for the overflow pipes at each site for each event recorded. The flow calculations are based on flow monitor recorded level and velocity measurements. See Attachment A for a summary of the precipitation volumes.

Table 1 – Flow-Frequency-Duration

	Location	CSO#	Freq.	Date of Event ¹	Estimated ² Total Flow (Gallons)	Event Duration (Minutes)	Comments
1.	AL Parkway Storage (West)	2	None				
2.	NW Blvd @ Kiernan	6	2	Total	246,414	290	Missing data 2/9 08:40 to 2/9 08:45
				2/6	9,400	135	
				2/23	237,014	155	
3.	Columbia @ Downriver	7	1	Total	48,009	60	
				2/23	48,009	60	
4.	Nettleton @ York/Buckeye	10	1	Total	3,278	110	
				2/23	3,278	110	
5.	Nora @ Pettet	12	2	Total	310,093	715	Missing data 2/9 09:30 to 2/9 09:35
				2/5	932	310	
				2/22	309,161	405	
6.	Sherwood @ Summit	14	2	Total	23,870	1,315	Missing data 2/9 09:40 to 2/9 09:45
				2/6	1,363	210	
				2/23	22,507	1,105	
7.	Nettleton @ Ohio	15	1	Total	11,502	190	Missing data 2/9 09:55 to 2/9 10:00
				2/23	11,502	190	

¹ Designation as an event means that both a level and velocity reading were recorded concurrently. Not all level and velocity readings that were coincident are included in this report, however. The level and velocity readings that appear to be “background noise” from the electronic equipment are not included in the table.

² The flows presented in this column are calculated from measurements of velocity and depth of flow by electronic devices inserted in the water stream. These measurements are subject to singular and possibly cumulative errors. These errors result from limitations inherent in the measuring devices and from the introduction of a measuring device in to the physical flow stream. Also, error in velocity and depth measurements may be and typically are introduced by the physical conditions of each site. The flow numbers presented in this table are estimates only.

	Location	CSO#	Freq.	Date of Event ¹	Estimated ² Total Flow (Gallons)	Event Duration (Minutes)	Comments
8.	A @ Linton	16B	None				Missing data 2/9 14:00 to 2/9 14:05
9.	7 th @ Inland Empire	19	None				
10.	3500 High Drive	20	None				Missing data 2/2 09:35 to 2/2 09:40 Missing data 2/26 10:45 to 2/26 10:50
11.	Main @ Oak	22B	None				Missing data 2/9 13:40 to 2/9 13:45
12.	Cedar @ Ide	23	1	Total	151,509	125	Missing data 2/9 10:40 to 2/9 10:45
				2/23	151,509	125	
13.	Riverside @ Cedar	24A	1	Total	1,288,495	250	
				2/23	1,288,495	250	
14.	Riverside @ Cedar	24B	1	Total	1,489	50	
				2/23	1,489	50	
15.	Cedar @ Main	25	1	Total	185,053	85	
				2/23	185,053	85	
16.	Riverside @ Lincoln	26	1	Total	1,302,774	190	
				2/23	1,302,774	190	
17.	Arthur @ 5 th	33A	1	Total	2,918	80	
				2/23	2,918	80	
18.	Perry @ 3 rd	33B	1	Total	937,304	70	
				2/23	937,304	70	
19.	Arthur @ 3 rd	33C	1	Total	2,862	60	Missing data 2/2 14:45 to 2/2 14:50
				2/23	2,862	60	
20.	Arthur @ 1 st	33D	1	Total	32,132	145	
				2/23	32,132	145	
21.	Riverside @ Napa/Crestline	34	1	Total	1,172,946	165	Missing data 2/2 14:10 to 2/2 14:15
				2/23	1,172,946	165	
22.	S. Riverton @ Magnolia	38	1	Total	8,340	120	Missing data 2/2 14:00 to 2/2 14:05
				2/23	8,340	120	
23.	S. Riverton @ Altamont	39	None				Missing data 2/25 14:50 to 2/25 14:55
24.	S. Riverton @ Regal	40	1	Total	3,798	70	Missing data 2/2 13:35 to 2/2 13:40
				2/23	3,798	70	

	Location	CSO#	Freq.	Date of Event ¹	Estimated ² Total Flow (Gallons)	Event Duration (Minutes)	Comments
25.	Rebecca @ Upriver	41	1	Total	46,099	115	
				2/23	46,099	115	
26.	Riverton @ Surro	42	None				Missing data 2/19 11:30 to 2/24 14:20 due to construction of weir modification.
	Monthly Total		22		5,778,885	4,205	No Dry Weather Overflows

