

Attachment 1 - North Shore Road Data

NDEP Sampling Data Northshore Road Sampling Point Las Vegas Wash downstream of Lake Las Vegas at or near Northshore Road Real-Time Flow Values						Note: Number and position of gage have changed over time. The position of the gage has remained within approximately one-half mile of Northshore Bridge.
USGS Gage Notes	Sample Date/Time	Real Time Flow Rate (cfs)	Perchlorate Concentration (ug/L)	Perchlorate Loading (lbs/day)	12 Month Rolling Average of Perchlorate Loading (lbs/day)	Present Location: 36°07' 20" N by 114°54' 15" W
Gage # 09419790	1/30/98 8:30	230	818	1,013		Del Mar Laboratory
	2/14/98 10:35	215	815	947		
	3/30/98 14:31	275	667	989		
	4/27/98 10:02	186	989	995		
	5/26/98 13:58	234	459	579		
	6/19/98 9:49	140	873	658		
	7/20/98 10:05	639	68	236		
	8/31/98 9:30	268	447	647		
	9/25/98 13:50	253	672	916		
	10/23/98 10:37	194	1,200	1,256		
	11/6/98 12:10	206	645	715		
	12/30/98 13:30	228	684	840	816	
	1/29/99 11:50	215	670	779	796	
	2/25/99 11:12	223	680	820	786	
	3/26/99 13:30	232	670	837	773	
	4/30/99 13:10	642	180	624	742	
	5/27/99 13:24	215	950	1,104	786	
	6/25/99 11:15	305	700	1,151	827	
	7/22/99 9:12	300	710	1,149	903	
	8/26/99 9:10	528	710	2,024	1,018	
	9/21/99 9:01	146	820	646	995	Laboratory Change to NEL Laboratory
	10/29/99 9:10	175	760	719	951	
	11/29/99 9:29	240	520	673	947	
	12/27/99 13:00	253	560	763	941	
	1/27/00 9:45	215	569	661	931	
	2/28/00 9:10	238	720	923	940	
	3/29/00 10:00	190	870	892	944	
	4/27/00 14:30	248	750	1,005	976	
	5/29/00 12:00	213	740	851	955	
	6/28/00 13:00	184	410	408	893	
	7/27/00 11:00	188	650	660	852	
	8/28/00 9:15	184	510	508	726	
	9/27/00 8:00	183	430	424	707	
No discharge data for 9:30. Used data collected at 8:15.	10/26/00 9:30	244	340	448	684	
No discharge data for 8:20. Used data collected at 7:00.	11/29/00 8:20	221	370	442	665	
	12/26/00 12:45	205	320	355	631	
No discharge data for 7:45. Used data collected at 7:00.	1/25/01 7:45	192	280	290	600	
	2/27/01 14:00	207	350	391	556	
	3/26/01 8:50	217	480	562	529	
	4/26/01 14:10	319	320	550	491	
	5/29/01 14:50	183	240	236	439	
	6/27/01 10:20	198	400	426	441	
	7/25/01 9:25	161	550	478	426	
	8/27/01 9:50	198	420	448	421	
	9/27/01 8:20	213	460	529	430	
	10/29/01 9:15	211	420	479	432	
No discharge data for 11/27/01 9:00. Used 11/29/01 10:30.	11/27/01 9:00	281	810	1,229	498	
	12/20/01 8:55	229	440	544	514	
	1/29/02 9:15	231	510	637	543	
	2/26/02 12:00	232	470	589	559	
	3/26/02 9:15	173	430	403	546	
	4/25/02 9:30	223	360	434	536	
	5/29/02 12:30	179	610	589	565	
	6/29/02 8:45	138	630	468	569	
	7/26/02 9:30	314	430	729	590	
	8/27/02 9:00	108	520	302	578	
	9/26/02 11:30	190	450	461	572	
	10/28/02 9:30	213	630	725	592	
	11/26/02 9:30	177	480	459	528	
	12/26/02 9:20	215	530	615	534	Laboratory Change to Alpha Analytica
	1/28/03 9:30	197	590	627	533	
Gage # 09419800 No discharge data available for 11:30. 4:00 AM data used.	2/28/03 11:30	326	390	686	541	Change in USGS gage location and gage number

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USGS Gage Notes	Sample Date/Time	Real Time Flow Rate (cfs)	Perchlorate Concentration (ug/L)	Perchlorate Loading (lbs/day)	12 Month Rolling Average of Perchlorate Loading (lbs/day)	Present Location: 36°07' 20" N by 114°54' 15" W
	3/28/03 9:15	115	460	285	532	
No discharge data available on or near sampling time. See note on right.	4/28/03 9:30	150	500	405	529	Note: Pabco Rd gage (USGS Gage #09419700) was used for discharge data for 4/28/03 sampling event. A one-hour travel time was assumed from Pabco Road gage to Northshore Road gage; therefore, the discharge value for 8:30 am is listed.
	5/28/03 9:30	228	400	492	521	
	6/27/03 9:15	214	230	266	504	
	7/28/03 9:30	274	220	325	471	
	8/26/03 9:15	200	270	291	470	
	9/30/03 9:15	209	270	304	457	
	10/28/03 9:30	192	260	269	419	
	11/25/03 14:45	280	170	257	402	
	12/30/03 9:00	256	200	276	374	
	1/27/04 9:00	171	220	203	338	
	2/24/04 8:45	359	190	368	312	Note: Frequent rain events for the Las Vegas Wash drainage basin have been occurring for the last three days.
	3/30/04 9:30	183	210	207	305	
	4/27/04 9:15	214	160	185	287	
	5/25/04 8:45	175	140	132	257	
	6/29/04 8:00	209	140	158	248	
	7/27/04 9:15	167	140	126	231	
	8/31/04 9:00	175	140	132	218	
	9/28/04 8:30	159	140	120	203	
	10/26/04 9:15	196	130	137	192	Note: Rain events in Las Vegas Valley 10/19/04 through 10/21/04
	11/30/04 10:15	195	160	168	184	Note: Rain events in the Las Vegas Valley 11/20/04 through 11/22/04
	12/28/04 10:45	164	120	106	170	Note: Rain events in Las Vegas Valley 12/28/04 through 12/29/04
	1/25/05 10:30	169	140	128	164	
	2/22/05 8:00	1670	28	252	154	Note: Heavy to Moderate rain events in the Las Vegas Valley on 02/18, 19, 21, & 22
	3/29/05 9:00	229	140	173	152	
	4/26/05 8:30	143	130	100	144	
	5/31/05 9:00	147	130	103	142	
	6/28/05 9:00	186	150	151	141	
	7/26/05 9:00	229	130	161	144	
	8/30/05 9:00	169	130	119	143	
	9/27/05 9:30	164	134	119	143	
	10/25/05 9:15	196	139	147	144	
	11/29/05 9:15	159	144	124	140	
	12/27/05 9:45	191	129	133	142	
	1/31/06 9:15	251	121	164	145	Note: At time of sampling, water level was noticeably decreasing. The following 15 min increment flow measurement was 53 cfs. As on 02/21/06, no correction by the USBS to the flow data has been made.
	3/1/06 9:00	201	111	120	134	Note: Sample collection did not occur on the last Tuesday of the month. The sample was collected the following Wednesday due to scheduling conflicts
	3/28/06 15:00	360	73.9	144	132	Note: Sampling was conducted in the afternoon due to scheduling conflicts
	4/25/06 9:45	196	119	126	134	
	5/29/06 11:00	196	143	151	138	
	6/27/06 9:45	206	103	114	135	
	7/25/06 8:15	210	88.2	100	130	
	8/28/06 8:30	215	98.7	115	130	
	9/26/06 11:45	230	114	141	132	
	10/26/06 10:00	210	129	146	132	
	11/27/06 11:15	256	126	174	136	
	12/29/06 10:30	215	107	124	135	
	1/30/07 12:30	288	100	155	134	Note: Sample collected during group visit to sampling location. Location ID listed as LVW 0.55. Tronox to conduct future sampling.
	2/19/07 7:30	235	67	85	131	
	3/19/07 9:00	201	84	91	127	
	4/16/07 9:00	191	82	85	124	
	5/21/07 8:00	201	80	87	118	
	6/19/07 7:15	210	59	67	114	
	7/16/07 7:30	206	77	86	113	Chuck Savard (USGS) 564-4543 provided July 16th provision flow data as of 9-4-07
	8/20/07 7:45	196	51	54	108	
	9/17/07 0:00	225	59	72	102	
	10/15/07 8:30	235	59	75	96	
	11/19/07 9:45	210	59	67	87	
	12/17/07 8:15	168	60	54	81	
	1/14/08 9:30	201	66	72	74	Chuck Savard (USGS) 564-4543 provided January 14th provision flow data as of 2-26-08
	2/20/08 9:45	196	73	77	74	
	3/17/08 8:15	220	68	81	73	
	4/21/08 8:45	155	67	56	71	Chuck Savard (USGS) 564-4543 provided April 21 provisional flow data as of 5-5-08
	5/19/08 6:45	225	61	74	69	Suzanne Crowley (USGS - by e-mail) provided May 19th provisional flow as of 5-19-08

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	6/16/08 8:45	177	61	58	69	Suzanne Crowley (USGS - by e-mail) provided June 16th provisional flow as of 6-30-08
	9/15/08 10:45	210	78	88	70	Suzanne Crowley (USGS - by e-mail) provided Sept 15th provisional flow as of 11-17-08
	12/15/08 7:15	251	46	62	69	Flow from the USGS site - retrieved 12-23-08
	4/6/09 8:00	210	54	61	68	Flow from the USGS site - retrieved 4-23-09
	7/6/09 9:00	182	56	55	68	Flow from the USGS site - retrieved 7-21-09
	10/5/09 9:15	168	65	59	67	Flow from the USGS site - retrieved 11-5-09
	1/4/10 8:00	235	50	63	66	Flow from the USGS site - retrieved 4-26-10
	2/1/10 8:00	215	61	71	65	Flow from the USGS site - retrieved 4-26-10
	4/5/10 7:45	215	58	67	66	Flow from the USGS site - retrieved 4-26-10
	7/5/10 7:15	220	56	66	65	Flow from the USGS site - retrieved 10-26-10
	10/18/10 7:30	288	44	68	66	Flow from the USGS site - retrieved 11-22-10