

How to Read a Staff Gage

Staff gages are used for a quick visual indication of the surface level in reservoirs, rivers and streams. A staff gage is similar to the typical household yard stick but with measurements displayed both to the nearest foot (one foot intervals) and to the nearest tenth of a foot. A typical staff gage associated with Project 184 is a Style C enamel gage plate that is 2.5 inches wide by 3.33 inches long. The gage plates are stacked with various lengths depending on the depth of water. The measurements are graduated to hundredth of a foot with the larger numbers marking the nearest one foot intervals and the smaller numbers marking the tenth of a foot interval (see graphic 1).

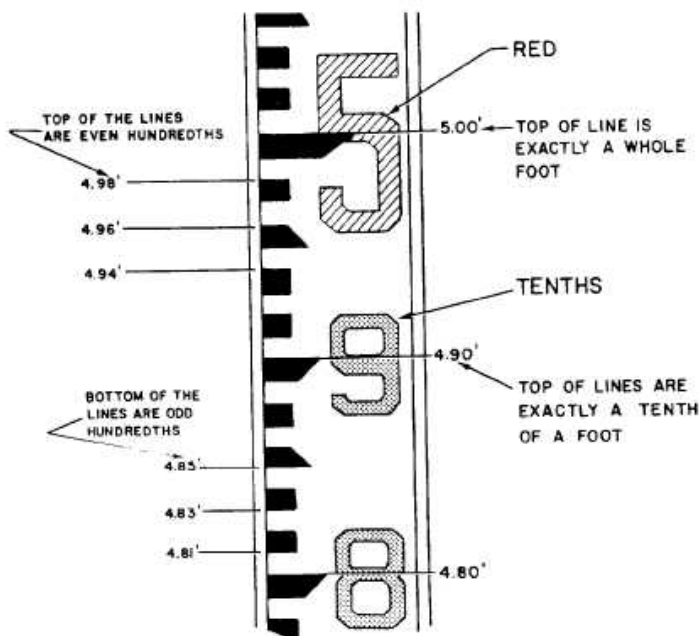
Some staff gages are placed in stilling wells so the water level remains constant. If the water level fluctuates, take the reading at the mid-point range between the high and low water levels.

How to Read a Rating Table

The rating tables can be used to convert the staff gage reading to cfs. The vertical axis under ght (gage height) corresponds to tenth of a foot interval (e.g., 2.4, 2.5, 2.6 etc.) and the horizontal axis corresponds to hundredth of a foot interval (e.g., .00, .01, etc.). In the example below, a staff gage reading of 2.43 (yellow) corresponds to 1.24 cfs (in blue).

ght	.00	.01	.02	.03	.04	.05
	2.4	1.08*	1.13	1.18	1.24	1.29

Example data, each table is different.



Graphic 1

A-12: SF American River near Kyburz (Rating 24)

Station Number: 11439500 SF AMERICAN R NR KYBURZ(RIVER ONLY) CA Source Agency :
 Latitude: 38.7636111111111 Longitude: -120.3275
 Date Processed: 2021-03-17 11:17:53 UTC-08:00 By eparvin
 Rating for Discharge (ft³/s)
 Created by "eparvin" on 2021-03-15 16:19:02 [UTC], Updated by "eparvin" on 2021-03-15 17:48:33 [UTC]
 Remarks:

Offset1: 1.3

Expanded Rating Table: 24

Gage height (ft)	Discharge (ft ³ /s)											Diff In Q Per .1 Units
	0	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09		
1.3	0.0000*	0.0600*	0.1803	0.3432	0.5419	0.7722	1.031	1.317	1.628	1.963	2.321	
1.4	2.321	2.7	3.1	3.52	3.959	4.417	4.894	5.388	5.9	6.429	6.921	
1.5	6.974	7.536	8.113	8.706	9.315	9.938	10.58	11.23	11.9	12.58	13.27	
1.6	13.27	13.98	14.71	15.44	16.19	16.95	17.73	18.52	19.32	20.13	20.94	
1.7	20.96	21.8	22.65	23.51	24.38	25.27	26.16	27.07	27.99	28.92	29.87	
1.8	29.87	30.82	31.79	32.76	33.75	34.75	35.75	36.77	37.8	38.84	39.89	
1.9	39.89	40.95	42.02	43.1	44.2	45.3	46.41	47.53	48.66	49.8	50.95	
2	50.95	52.11	53.28	54.46	55.65	56.85	58.06	59.27	60.5	61.74	62.96	
2.1	62.98	64.24	65.50*	67.21	68.95	70.71	72.49	74.3	76.13	77.99	79.86	
2.2	79.86	81.77	83.69	85.64	87.62	89.61	91.63	93.68	95.75	97.84	99.96	
2.3	99.96	102.1	104.3	106.5	108.7	110.9	113.2	115.5	117.8	120.1	122.5	
2.4	122.5	124.8	127.2	129.7	132.1	134.6	137.1	139.7	142.2	144.8	147.4	
2.5	147.4	150	152.7	155.4	158.1	160.8	163.5	166.3	169.1	171.9	174.8	
2.6	174.8	177.7	180.6	183.5	186.4	189.4	192.4	195.4	198.5	201.6	204.7	
2.7	204.7	207.8	211	214.1	217.3	220.6	223.8	227.1	230.4	233.7	237.1	
2.8	237.1	240.5	243.9	247.3	250.7	254.2	257.7	261.3	264.8	268.4	272	
2.9	272	275.7	279.3	283	286.7	290.4	294.2	298	301.8	305.6	309.5	
3	309.5	313.4	317.3	321.3	325.2	329.2	333.2	337.3	341.4	345.5	349.6	
3.1	349.6	353.7	357.9	362.1	366.3	370.6	374.9	379.2	383.5	387.9	392.3	
3.2	392.3	396.7	401.1	405.6	410.1	414.6	419.1	423.7	428.3	432.9	437.5	

Gage height (ft)	Discharge (ft ³ /s)											Diff In Q Per .1 Units
	0	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09		
3.3	437.5	442.2	446.9	451.6	456.4	461.2	466	470.8	475.7	480.5		48
3.4	485.5	490.4	495.4	500.3	505.4	510.4	515.5	520.6	525.7	530.8		50.5
3.5	536	541.2	546.5	551.7	557	562.3	567.6	573	578.4	583.8		53.3
3.6	589.3	594.7	600.2	605.7	611.3	616.9	622.5	628.1	633.8	639.5		55.9
3.7	645.2	650.9	656.7	662.5	668.3	674.1	680	685.9	691.8	697.8		58.6
3.8	703.8	709.8	715.8	721.9	728	734.1	740.2	746.4	752.6	758.8		61.3
3.9	765.1	771.4	777.7	784	790.4	796.8	803.2	809.6	816.1	822.6		64
4	829.1	835.7	842.3	848.9	855.5	862.2	868.9	875.6	882.3	889.1		66.8
4.1	895.9	902.7	909.6	916.5	923.4	930.3	937.3	944.3	951.3	958.4		69.5
4.2	965.4	972.6	979.7	986.8	994	1001	1008	1016	1023	1030		72.6
4.3	1038	1045	1053	1060	1067	1075	1082	1090*	1098	1106		76
4.4	1114	1122	1130	1138	1146	1154	1162	1170	1179	1187		81
4.5	1195	1203	1212	1220	1229	1237	1245	1254	1263	1271		85
4.6	1280	1288	1297	1306	1314	1323	1332	1341	1350	1358		87
4.7	1367	1376	1385	1394	1403	1412	1422	1431	1440	1449		91
4.8	1458	1468	1477	1486	1496	1505	1514	1524	1533	1543		94
4.9	1552	1562	1572	1581	1591	1601	1611	1620	1630	1640		98
5	1650	1660	1670	1680	1690	1700	1710	1720	1730	1740		101
5.1	1751	1761	1771	1781	1792	1802	1812	1823	1833	1844		103
5.2	1854	1865	1876	1886	1897	1908	1918	1929	1940	1951		108
5.3	1962	1973	1984	1995	2006	2017	2028	2039	2050	2061		110
5.4	2072	2084	2095	2106	2117	2129	2140	2152	2163	2175		114
5.5	2186	2198	2209	2221	2233	2244	2256	2268	2280	2292		117
5.6	2303	2315	2327	2339	2351	2363	2375	2388	2400	2412		121
5.7	2424	2436	2449	2461	2473	2486	2498	2511	2523	2536		124
5.8	2548	2561	2573	2586	2599	2611	2624	2637	2650	2663		128
5.9	2676	2689	2702	2715	2728	2741	2754	2767	2780	2793		131
6	2807	2820	2833	2846	2860	2873	2887	2900	2914	2927		134
6.1	2941	2954	2968	2982	2996	3009	3023	3037	3051	3065		138
6.2	3079	3093	3107	3121	3135	3149	3163	3177	3191	3206		141
6.3	3220	3234	3249	3263	3277	3292	3306	3321	3335	3350		145

Gage height (ft)	Discharge (ft ³ /s)											Diff In Q Per .1 Units
	0	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09		
6.4	3365	3379	3394	3409	3424	3438	3453	3468	3483	3498		148
6.5	3513	3528	3543	3558	3573	3588	3604	3619	3634	3649		152
6.6	3665	3680	3696	3711	3726	3742	3758	3773	3789	3804		155
6.7	3820	3836	3852	3867	3883	3899	3915	3931	3947	3963		159
6.8	3979	3995	4011	4027	4044	4060	4076	4092	4109	4125		162
6.9	4141	4158	4174	4191	4207	4224	4241	4257	4274	4291		166
7	4307	4324	4341	4358	4375	4392	4409	4426	4443	4460		170
7.1	4477	4494	4511	4529	4546	4563	4581	4598	4615	4633		173
7.2	4650	4668	4685	4703	4721	4738	4756	4774	4791	4809		177
7.3	4827	4845	4863	4881	4899	4917	4935	4953	4971	4989		181
7.4	5008	5026	5044	5062	5081	5099	5118	5136	5155	5173		184
7.5	5192	5210	5229	5248	5266	5285	5304	5323	5342	5361		188
7.6	5380	5398	5418	5437	5456	5475	5494	5513	5532	5552		191
7.7	5571	5590	5610	5629	5649	5668	5688	5707	5727	5746		195
7.8	5766	5786	5806	5825	5845	5865	5885	5905	5925	5945		199
7.9	5965	5985	6005	6025	6046	6066	6086	6106	6127	6147		203
8	6168	6188	6208	6229	6250	6270	6291	6312	6332	6353		206
8.1	6374	6395	6416	6436	6457	6478	6499	6520	6542	6563		210
8.2	6584	6605	6626	6648	6669	6690	6712	6733	6755	6776		214
8.3	6798	6819	6841	6862	6884	6906	6928	6950	6971	6993		217
8.4	7015	7037	7059	7081	7103	7125	7147	7170	7192	7214		221
8.5	7236	7259	7281	7304	7326	7349	7371	7394	7416	7439		226
8.6	7462	7484	7507	7530	7553	7576	7598	7621	7644	7667		228
8.7	7690	7714	7737	7760	7783	7806	7830	7853	7876	7900		233
8.8	7923	7947	7970	7994	8017	8041	8065	8088	8112	8136		237
8.9	8160	8184	8207	8231	8255	8279	8303	8327	8352	8376		240
9	8400*	8423	8447	8470	8494	8517	8541	8564	8588	8612		235
9.1	8635	8659	8683	8707	8731	8755	8778	8802	8826	8850		239
9.2	8874	8899	8923	8947	8971	8995	9019	9044	9068	9092		243
9.3	9117	9141	9166	9190	9215	9239	9264	9289	9313	9338		246
9.4	9363	9388	9412	9437	9462	9487	9512	9537	9562	9587		249

Gage height (ft)	Discharge (ft ³ /s)											Diff In Q Per .1 Units
	0	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09		
9.5	9612	9637	9663	9688	9713	9738	9764	9789	9814	9840		253
9.6	9865	9891	9916	9942	9967	9993	10020	10040	10070	10100		255
9.7	10120	10150	10170	10200	10230	10250	10280	10300	10330	10360		260
9.8	10380	10410	10430	10460	10490	10510	10540	10570	10590	10620		260
9.9	10640	10670	10700	10720	10750	10780	10800	10830	10860	10890		270
10	10910	10940	10970	10990	11020	11050	11070	11100	11130	11160		270
10.1	11180	11210	11240	11260	11290	11320	11350	11370	11400	11430		280
10.2	11460	11480	11510	11540	11570	11590	11620	11650	11680	11710		270
10.3	11730	11760	11790	11820	11850	11870	11900	11930	11960	11990		290
10.4	12020	12040	12070	12100	12130	12160	12190	12210	12240	12270		280
10.5	12300	12330	12360	12390	12410	12440	12470	12500	12530	12560		290
10.6	12590	12620	12650	12680	12700	12730	12760	12790	12820	12850		290
10.7	12880	12910	12940	12970	13000	13030	13060	13090	13120	13150		300
10.8	13180	13200	13230	13260	13290	13320	13350	13380	13410	13440		290
10.9	13470	13500	13530	13560	13590	13630	13660	13690	13720	13750		310
11	13780	13810	13840	13870	13900	13930	13960	13990	14020	14050		300
11.1	14080	14110	14140	14180	14210	14240	14270	14300	14330	14360		310
11.2	14390	14420	14450	14490	14520	14550	14580	14610	14640	14670		320
11.3	14710	14740	14770	14800	14830	14860	14900	14930	14960	14990		310
11.4	15020	15050	15090	15120	15150	15180	15210	15250	15280	15310		320
11.5	15340	15380	15410	15440	15470	15500	15540	15570	15600	15630		330
11.6	15670	15700	15730	15770	15800	15830	15860	15900	15930	15960		330
11.7	16000	16030	16060	16090	16130	16160	16190	16230	16260	16290		330
11.8	16330	16360	16390	16430	16460	16490	16530	16560	16590	16630		330
11.9	16660	16700	16730	16760	16800	16830	16860	16900	16930	16970		340
12	17000*	17030	17060	17090	17130	17160	17190	17220	17250	17280		310
12.1	17310	17340	17380	17410	17440	17470	17500	17530	17570	17600		320
12.2	17630	17660	17690	17720	17760	17790	17820	17850	17880	17920		320
12.3	17950	17980	18010	18040	18080	18110	18140	18170	18210	18240		320
12.4	18270	18300	18340	18370	18400	18430	18460	18500	18530	18560		320

Gage height (ft)	Discharge (ft ³ /s)											Diff In Q Per .1 Units
	0	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09		
12.5	18590	18630	18660	18690	18730	18760	18790	18820	18860	18890	330	
12.6	18920	18960	18990	19020	19050	19090	19120	19150	19190	19220	330	
12.7	19250	19290	19320	19350	19390	19420	19450	19490	19520	19550	340	
12.8	19590	19620	19650	19690	19720	19750	19790	19820	19850	19890	330	
12.9	19920	19960	19990	20020	20060	20090	20120	20160	20190	20230	340	
13	20260	20290	20330	20360	20400	20430	20460	20500	20530	20570	340	
13.1	20600	20640	20670	20700	20740	20770	20810	20840	20880	20910	350	
13.2	20950	20980	21010	21050	21080	21120	21150	21190	21220	21260	340	
13.3	21290	21330	21360	21400	21430	21470	21500	21540	21570	21610	350	
13.4	21640	21680	21710	21750	21780	21820	21850	21890	21920	21960	360	
13.5	22000	22030	22070	22100	22140	22170	22210	22240	22280	22310	350	
13.6	22350	22390	22420	22460	22490	22530	22570	22600	22640	22670	360	
13.7	22710	22740	22780	22820	22850	22890	22920	22960	23000	23030	360	
13.8	23070	23110	23140	23180	23210	23250	23290	23320	23360	23400	360	
13.9	23430	23470	23510	23540	23580	23620	23650	23690	23730	23760	370	
14	23800*	23840	23880	23920	23950	23990	24030	24070	24110	24150	390	
14.1	24190	24220	24260	24300	24340	24380	24420	24460	24500	24540	380	
14.2	24570	24610	24650	24690	24730	24770	24810	24850	24890	24930	400	
14.3	24970	25010	25050	25080	25120	25160	25200	25240	25280	25320	390	
14.4	25360	25400	25440	25480	25520	25560	25600	25640	25680	25720	400	
14.5	25760	25800	25840	25880	25920	25960	26000	26040	26080	26120	400	
14.6	26160	26200	26240	26280	26320	26360	26400	26440	26490	26530	410	
14.7	26570	26610	26650	26690	26730	26770	26810	26850	26890	26930	400	
14.8	26970	27020	27060	27100	27140	27180	27220	27260	27300	27340	420	
14.9	27390	27430	27470	27510	27550	27590	27630	27680	27720	27760	410	
15	27800*											

* indicates a rating descriptor point

ID Starting Date Ending Aging Comments
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