

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).

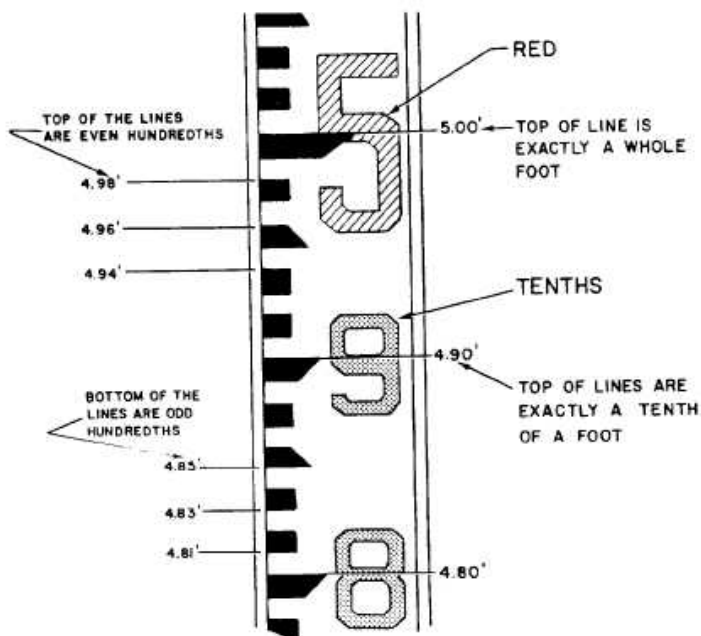
Some staff gages are placed in stilling wells so the water level remains constant. If the water level fluctuates, take the reading at the mid-point range between the high and low water levels.

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

EL DORADO IRRIGATION DISTRICT

#A-40 PYRAMID CREEK NEAR TWIN BRIDGES, CA.

2007 WY

Rating Table 17 from 10/02/2005 00:00

Scale Offset = 0.30

new low end below 1.50 ght.

DISCHARGE IN CUBIC FEET PER SECOND

ght	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09	1st diff	2nd diff
0.8									.240*	.259		
0.9	.280*	.304	.329	.356	.385	.416	.449	.483	.520	.559	.320	
1.0	.600*	.643	.688	.736	.787	.840	.896	.955	1.02	1.08	.550	.230
1.1	1.15*	1.22	1.28	1.36	1.43	1.51	1.59	1.68	1.76	1.85	.800	.250
1.2	1.95*	2.05	2.15	2.25	2.36	2.47	2.59	2.71	2.84	2.97	1.15	.350
1.3	3.10*	3.23	3.36	3.49	3.63	3.77	3.92	4.07	4.22	4.38	1.45	.297
1.4	4.55	4.72	4.89	5.07	5.25	5.44	5.63	5.83	6.03	6.24	1.90	.456
1.5	6.45*	6.66	6.87	7.09	7.31	7.53	7.77	8.00	8.25	8.49	2.30	.395
1.6	8.75	9.01	9.27	9.54	9.82	10.1	10.4	10.7	11.0	11.3	2.85	.554
1.7	11.6*	11.9	12.1	12.4	12.6	12.9	13.2	13.5	13.7	14.0	2.72	-.128
1.8	14.3	14.6	14.9	15.2	15.5	15.8	16.1	16.5	16.8	17.1	3.12	.400
1.9	17.4	17.8	18.1	18.5	18.8	19.2	19.5	19.9	20.3	20.6	3.55	.429
2.0	21.0*	21.3	21.7	22.0	22.4	22.7	23.1	23.4	23.8	24.1	3.49	-.066
2.1	24.5	24.9	25.2	25.6	26.0	26.4	26.7	27.1	27.5	27.9	3.83	.343
2.2	28.3	28.7	29.1	29.5	29.9	30.4	30.8	31.2	31.6	32.1	4.18	.356
2.3	32.5*	33.0	33.5	34.0	34.6	35.1	35.6	36.2	36.7	37.3	5.32	1.13
2.4	37.8	38.4	38.9	39.5	40.1	40.7	41.3	41.9	42.5	43.1	5.88	.561
2.5	43.7	44.3	44.9	45.6	46.2	46.9	47.5	48.2	48.8	49.5	6.47	.591
2.6	50.2	50.8	51.5	52.2	52.9	53.6	54.3	55.1	55.8	56.5	7.09	.620
2.7	57.3	58.0	58.8	59.5	60.3	61.0	61.8	62.6	63.4	64.2	7.74	.650
2.8	65.0*	66.0	67.0	68.0	69.0	70.1	71.1	72.2	73.3	74.4	10.5	2.71
2.9	75.5	76.6	77.7	78.8	80.0	81.1	82.3	83.5	84.7	85.9	11.6	1.19
3.0	87.1	88.3	89.6	90.8	92.1	93.4	94.7	96.0	97.3	98.7	12.9	1.27
3.1	100.0	101.4	102.7	104.1	105.5	107.0	108.4	109.8	111.3	112.8	14.3	1.36
3.2	114.3	115.8	117.3	118.8	120.4	122.0	123.5	125.1	126.7	128.4	15.7	1.45
3.3	130.0*	132.4	134.8	137.3	139.8	142.4	145.0	147.6	150.2	152.9	25.7	9.97
3.4	155.7	158.5	161.3	164.2	167.1	170.0	173.0*	176.0	179.0	182.0	29.4	3.75
3.5	185.1	188.3	191.4	194.7	197.9	201.3	204.6	208.0	211.5	215.0	33.4	3.94
3.6	218.5	222.1	225.7	229.4	233.2	236.9	240.8	244.7	248.6	252.6	38.1	4.74
3.7	256.6	260.7	264.9	269.1	273.3	277.6	282.0	286.4	290.9	295.4	43.4	5.25
3.8	300.0*	303.8	307.6	311.5	315.4	319.4	323.4	327.4	331.5	335.6	39.7	-3.64
3.9	339.7	343.9	348.1	352.4	356.7	361.1	365.5	369.9	374.4	378.9	43.7	3.95
4.0	383.4	388.0	392.7	397.3	402.1	406.8	411.6	416.5	421.4	426.3	47.9	4.22
4.1	431.3	436.4	441.4	446.6	451.7	457.0	462.2	467.5	472.9	478.3	52.4	4.50
4.2	483.7	489.2	494.8	500.4	506.0	511.7	517.5	523.3	529.1	535.0	57.2	4.80
4.3	541.0	546.9	553.0	559.1	565.2	571.4	577.7	584.0	590.4	596.8	62.3	5.10
4.4	603.3	609.8	616.4	623.0	629.7	636.4	643.2	650.1	657.0	664.0	67.7	5.41
4.5	671.0	678.1	685.2	692.4	699.7	707.0	714.3	721.8	729.3	736.8	73.5	5.74
4.6	744.4	752.1	759.8	767.6	775.5	783.4	791.4	799.4	807.6	815.7	79.5	6.07
4.7	824.0	832.3	840.6	849.1	857.6	866.1	874.7	883.4	892.2	901.0	85.9	6.42
4.8	909.9	918.9	927.9	937.0	946.2	955.4	964.7	974.1	983.5	993.0	92.7	6.78
4.9	1,003	1,012	1,022	1,032	1,042	1,052	1,062	1,072	1,082	1,092	99.9	7.15
5.0	1,102	1,113	1,123	1,134	1,145	1,155	1,166	1,177	1,188	1,199	107.4	7.53
5.1	1,210	1,221	1,232	1,244	1,255	1,267	1,278	1,290	1,301	1,313	115.3	7.92
5.2	1,325	1,337	1,349	1,361	1,374	1,386	1,398	1,411	1,423	1,436	123.6	8.32
5.3	1,449	1,462	1,475	1,488	1,501	1,514	1,527	1,541	1,554	1,568	132.4	8.74
5.4	1,581	1,595	1,609	1,623	1,637	1,651	1,665	1,679	1,694	1,708	141.5	9.17
5.5	1,723	1,737	1,752	1,767	1,782	1,797	1,812	1,828	1,843	1,858	151.1	9.61
5.6	1,874	1,890	1,905	1,921	1,937	1,953	1,969	1,986	2,002	2,019	161.2	10.1
5.7	2,035	2,052	2,069	2,085	2,103	2,120	2,137	2,154	2,172	2,189	171.7	10.5

ght	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09	1st diff	2nd diff
5.8	2,207	2,225	2,242	2,260	2,279	2,297	2,315	2,334	2,352	2,371	182.7	11.0
5.9	2,390	2,408	2,427	2,447	2,466	2,485	2,505	2,524	2,544	2,564	194.2	11.5
6.0	2,584	2,604	2,624	2,644	2,665	2,685	2,706	2,727	2,748	2,769	206.2	12.0
6.1	2,790	2,811	2,833	2,854	2,876	2,898	2,920	2,942	2,964	2,986	218.7	12.5
6.2	3,009	3,031	3,054	3,077	3,100	3,123	3,146	3,170	3,193	3,217	231.8	13.0
6.3	3,240	3,264	3,288	3,313	3,337	3,361	3,386	3,411	3,436	3,461	245.3	13.6
6.4	3,486	3,511	3,537	3,562	3,588	3,614	3,640	3,666	3,692	3,719	259.4	14.1
6.5	3,745	3,772	3,799	3,826	3,853	3,880	3,908	3,936	3,963	3,991	274.1	14.7
6.6	4,019	4,048	4,076	4,105	4,133	4,162	4,191	4,220	4,250	4,279	289.4	15.3
6.7	4,309	4,339	4,369	4,399	4,429	4,459	4,490	4,521	4,552	4,583	305.3	15.9
6.8	4,614	4,645	4,677	4,709	4,741	4,773	4,805	4,838	4,870	4,903	321.7	16.5
6.9	4,936	4,969	5,002	5,036	5,069	5,103	5,137	5,171	5,205	5,240	338.8	17.1
7.0	5,275	5,309	5,344	5,380	5,415	5,451	5,486	5,522	5,558	5,595	356.5	17.7
7.1	5,631	5,668	5,705	5,742	5,779	5,816	5,854	5,892	5,930	5,968	374.9	18.4
7.2	6,006	6,045	6,083	6,122	6,161	6,201	6,240	6,280	6,320	6,360	393.9	19.0
7.3	6,400*											

* skeletal rating point