

TIDAL BENCH MARKS

B. M. 8801A at EUREKA, HUMBOLDT BAY, CALIFORNIA

The bench mark is a disk on the top of a copper coated steel rod set to a depth of 51 feet encased in a pipe projecting 8 inches.

7.5 feet NE of telephone pole.

23 feet ENE of center line of 2nd Street.

165 feet NNW of intersection of 2nd and Commercial Streets

88 feet N of NE corner of Vista Del Mar Seafoods Building

7 feet WSW of western most railroad track

	Date			Above zero of Tide Staff	Above B. M.	Remarks
	Year	Month	Day	Feet	Feet	
Established by R. A. Morris PTP	1977	Aug	17	23.570		New installation. Rod stop @ 25.000'
Recovered by R. A. Morris	1978	March	26	23.568	23.575	Six-month levels
R. A. Morris	1978	Oct.	5	23.577		
F. Mc Gough	1979	April	29	23.572		Rod stop @ 25.000'
R. Edwing	1980	Feb.	12	23.590		Removal. Rod stop @ 25.020

TIDAL BENCH MARKS

B. M. 8801B at EUREKA, HUMBOLDT BAY, CALIFORNIA

The bench mark is a deep rod mark driven to a depth of 44 feet. The mark is below grade, and enclosed in concrete and white PVC pipe, which extends 0.4 ft above grade. 113 ft NNE of NE corner of NWP RR Eureka office, 43 ft ESE of SE corner of "Eureka Ice & Cold Storage", 26.5 NNW of N mast RR track, 5 ft S of a telephone pole.

	Date			Above zero of Tide Staff	Above B. M. <u>A</u>	Remarks
	Year	Month	Day	Feet	Feet	
Established by PTP R.A. Morris	1978	April	7	22.963	-0.605	
Recovered by R.A. Morris	1978	Oct.	5	22.966	-0.611	
E. McGough	1979	April	29	22.962	-0.610	
R.A. Morris	1980	Feb.	12	22.981	-0.609	
R. Edwing						

TIDAL BENCH MARKS

B. M. EF-45 at EUREKA, HUMBOLDT BAY, CALIFORNIA

The bench mark is NOS reference mark disk stamped "EF-45" located at the SW corner of "A" and 2nd Streets.

3.8 feet E of telephone pole.

7.7 feet NE of NE corner of building (Baker & Stanton Furniture)

38 feet south of center of intersection

	Date			Above zero of Tide Staff	Above B. M. <u>A</u>	Remarks
	Year	Month	Day	Feet	Feet	
Established by <u>R. A. Morris</u> PTP	1977	Aug.	17	23.625	0.055	New installation.
Recovered by <u>R. A. Morris</u>	1978	March	26	23.626	0.058	
<u>R. A. Morris</u>	1978	Oct.	5	23.625	0.048	
<u>F. McGough</u>	1979	April	29	23.621	0.049	
<u>R. Edwing</u>	1980	Feb.	12	23.638	0.048	
N65	88	8	30			Elevations this date relative to PBM only.

TIDES: BENCH MARKS FOR PERMANENT FILE

B. M. 21 at Eureka, (Buhne's Dock) Humboldt Bay, California.

Original and Supplementary Descriptions

The elevation of this bench mark is approximately _____ feet above mean tide level. The bench mark is
a U.S.C. & G. Survey standard disc, stamped B M 1, set horizontally in the concrete surface of the foundation of the Humboldt National Bank at the corner of 4th and E Streets. Entering the bank on the E Street entrance the B.M. is right of the steps and right of a pillar to the right of the steps. It is set in the concrete base of the pillar on the right of the entrance to the bank.

Oct. 23, 1929. Recovered as described, except that the Humboldt National Bank is now called the "Bank of Italy".

Nov. 20, 1945, H. C. Warwick--Recovered as described in good condition. Change "Bank of Italy" to "Bank of America." Mark is stamped B.M. 1 1921 14.911

above B.M. 4

5
-14.437

15407 ft. above SLD, Supplementary Adj: 9 1929

14.911 ft above S.L. datum - See list "Arcata-Ukiah" 1/14/34
15.456 ft ABOVE SLD (1967 LEVELLING) ADJ

Gauge
Reading

ABOVE
B.M. #4

Remarks

Established by	Year	Month	Day	Feet		Remarks
E.H. Pagenhart	1921	Oct.	-	23.94	-14.40	
Recovered by						
A. P. Ratti	1929	Oct	23	21.477	-14.432	
H. C. Warwick	1945	Nov.	20	Above staff "0"	Above B.M. #4	19.183 ft. above MLI
R. A. Morris	1977	Aug.	17	32.581	9.011	New installation
R. A. Morris	1978	Apric	1	32.575	9.007	8.949
F. Mc Gough	1979	Apric	29	32.580	9.008	8.959
R. Edwing	1980	Feb.	12	32.606	9.016	8.968
NGS	88	8	30	-	-	8.994 ✓

TIDES: BENCH MARKS FOR PERMANENT FILE

B. M. 2 at Eureka (Buhne's Dock) Humboldt Bay, California.

Original and Supplementary Descriptions

The elevation of this bench mark is approximately _____ feet above mean tide level. The bench mark is a U.S.C. & G. Survey standard disc, stamped B M 2 1921, set in the concrete retaining wall in the back of the Eureka Post Office at the corner of 5th and H Streets.

Nov. 20, 1945, H. C. Warwick--Recovered in good condition. Change description to read: "Set in the top of the concrete retaining wall surrounding the basement entrance to the post office building at Fifth and H, Streets, on the west side of the building, at the north end of the retaining wall, 6 inches from the west wall of the building and at about the middle of the west side." Mark is stamped "B, M, 2 1921 43.422" ✓

43.986 ft above SLD (67 LEVelling) ADJ 68 (73 adj)
43.914 ft above SLD, Supplementing Adj. 9 1929
43.422 above S.L. datum - See list "Arcata-Ukiah" 1/16/34

about
Bm 4
+14.072 ✓

Chief of Party	Date			Gauge Reading	Above B.M. 4	Remarks
Established by	Year	Month	Day	Feet		
E. H. Pagenhart	1921	Oct.	-	52.397	14.057	14.058
Recovered by						
A. P. Ratti	1929	Oct.	23	49.969	14.060	
H. C. Warwick	1945	Nov.	20	Above staff 0	Above B.M. 4	47.686 ft. above M.L.
R. A. Morris	1977	Aug	17	61.126	37.514 37.556	ABOVE SF New installation 37.501
NGS	88	8	30	—	—	37.538 ✓

DROPPED FROM PUBLISHED LIST
TIDES: BENCH MARKS FOR PERMANENT FILE

B. M. B.2 at Eureka (Buhne's Dock), Humboldt Bay, California.

Original and Supplementary Descriptions

The elevation of this bench mark is approximately ----- feet above mean tide level. The bench mark is the top of a copper nail driven in concrete at the intersection of 3rd and E Streets. The nail is 1 foot below the street level and is protected by an iron cover which sets flush with the street level. This B.M. is one of several of the City of Eureka B.Ms., and is known as B.M.2 in the Eureka City Engineers' Office.

Nov. 20, 1945, H. C. Warwick--Recovered as described in good condition. After "copper nail" change "driven" to "set", before "Third and E Sts" insert "center line." ✓

DROPPED FROM PUBLISHED LIST

Chief of Party	Date			Gauge Reading	Above B.M. #4	Remarks
Established by E. H. Pagenhart	Year	Month	Day	Feet		
	1921	Oct	-	19.86	- 18.48	} - 18.512
Recovered by A. P. Ratti	1929	Oct	23	17.365	- 18.544	
H. C. Warwick	1945	Nov.	20			15.100 ft. above MLLW ✓

DROPPED FROM PUBLISHED LIST

	Date			Above Staff "O"	Above B.M. A	Above B.F.
D. A. Morris	1977	Aug.	17	28.511	4.941	4.886 New installation
R. A. Morris	1978	March	26	28.507	4.939	4.881
F. Mc Gough	1979	April	29	28.505	4.933	4.884
R. Edwing	1980	Feb.	12	28.535	4.945	4.897
NBS	88	8	30	—	—	4.927 ✓

TIDES: BENCH MARKS FOR PERMANENT FILE

B. M. 5 at EUREKA, HUMBOLDT BAY, CALIFORNIA.

Original and Supplementary Descriptions

The elevation of this bench mark is approximately feet above mean tide level. The bench mark is the top of a hydrant at the S. W. corner of "J" and 2nd Streets.

Chief of Party	Date			Gauge Reading	Remarks
Established by	Year	Month	Day	Feet	
R. R. Lukens	1919	Oct.	17	38.66 ✓	Staff at Knight's Wharf
Recovered by					

TIDES: BENCH MARKS FOR PERMANENT FILE.

B. M. 6 at EUREKA, HUMBOLDT BAY, CALIFORNIA.

Original and Supplementary Descriptions

The elevation of this bench mark is approximately _____ feet above mean tide level. The bench mark is the top of the hydrant at the S. W. corner of 2nd and "H" Streets.

Chief of Party	Date			Gauge Reading	Remarks
Established by	Year	Month	Day	Feet	
R. R. Lukens	1919	Oct.	17	38.21	Staff at Knight's Wharf
Recovered by					

TIDES: BENCH MARKS FOR PERMANENT FILE

B. M. 63 at Eureka, California.

Original and Supplementary Descriptions

The bench mark is a small copper bolt set in a concrete post 6 inches below the surface of the street at the intersection of the center lines of Fourth and Q Streets. Access to the bench mark is had through an iron cover about 8 inches in diameter.

Nov. 20, 1945, H. C. Warwick-- Recovered as described in good condition. ✓

DROPPED FROM PUBLISHED LIST

Recovered as described Dec. 1971

36.730 ft. above SLD (1967 Levelling) adj. '68 / (73 adj)

36.142 ft. above SLD, Supplementary Adj. 9/1929

Elevation: *35.650* ft. above M. S. L., F-O Level net from list "Arcata-Ukiah" Date: *1/16/34*

*Above
BM 4
6.300*

Chief of Party	Date			Above zero of Tide Staff	Above B.M.	Remarks
Established by	Year	Month	Day	Feet	Feet	
City of Eureka						
Recovered by						
Division of Geodesy	1931					
H. C. Warwick	1945	Nov.	20			39.910 ft. above MLLW ✓
DROPPED FROM PUBLISHED LIST						
NBS	88	8	30	—	—	29.792

¹⁰ ~~10~~ ^{440.55} TIDES: BENCH MARKS FOR PERMANENT FILE
B. M. ~~USGS~~ at Eureka, Humboldt Bay, Calif

Original and Supplementary Descriptions

The elevation of this bench mark is approximately ----- feet above mean tide level. The bench mark is an aluminum tablet, stamped "B B 1906 20 44" set in a granite post on the west side of the steps to the north approach to the courthouse.

Nov. 20, 1945, H. C. Warwick--Recovered in good condition. Change description to read: "Set vertically in the north side of the western one of two ornamental concrete posts at the bottom of the steps to the north approach of Humboldt County Courthouse at Fourth and J Sts." Mark is stamped "B 19 1906 42.470" ✓

SEPT. 1967 The Courthouse at Eureka has been rebuilt. MARK DESTROYED
C. SYMNS.

above
Bm 4

+13.12

✓
42.963 ft. above SCD ~~1929~~ Supplementary Adj. 91929
42.470 ft. above SL datum - See list "Arcata - Ukiah" 1/16/34

WS 2/19/42

Chief of Party	Date			Gauge Reading	Above B.M. #1	Remarks
Established by	Year	Month	Day	Feet		
U. S. Geological Survey	--	--	--	--		
Recovered by						
A. P. Ratti	1929	Oct	23	49.019	13.110	
H. C. Warwick	1945	Nov.	20 ¹			46.739 ft. above MLLW

DROPPED FROM PUBLISHED LIST

TIDES: BENCH MARKS FOR PERMANENT FILE

B. M. 68 at Eureka, California.

Original and Supplementary Descriptions

The bench mark is a small copper bolt set in a concrete post 6 inches below the surface of the street at the intersection of the center lines of Fourth Street and ^(U.S. Highway 101) Broadway. Access to the bench mark is had through an iron cover about 8 inches in diameter.

Nov. 20, 1945, H. C. Warwick--Recovered as described in good condition. ✓
DEC. 1971 Recovered By C. Symms AS DESCRIBED

DROPPED FROM PUBLISHED LIST

6.601 ft. above SLD, Supplementary Adj. 9/1929
Elevation: ~~6.601~~ ft. above M. S. L., F-O Level net, from list "Arcata-U. Grab", Date: 1/16/34
~6.542 ft. ABOVE SLD (67 levelling) '68 ADJ. (73 body)

Chief of Party	Date			Above zero of Tide Staff	Above B.M.	Remarks
Established by	Year	Month	Day	Feet	Feet	
City of Eureka						
Recovered by						
Div. of Geodesy	1931					
H. C. Warwick	1945	Nov.	20			10.320 ft. above MLLW ✓

DROPPED FROM PUBLISHED LIST

No.	Location	Elev.	No.	Location	Elev.
1	Third & B.	8.431	17	Twelfth & L.	82.080
2	" " " <i>15.37</i>	14.825	18	" " "	56.800
3	" " " "	35.110	19	Eastwood & H.	98.317
4	" " " "	31.833	20	Third & O.	38.676
5	" " " "	61.192	21	" " "	26.850
6	Sixth & X.	52.50	22	Alvin & S.	40.553
7	" " " "	50.075	23	Grant & Pine	13.320
8	" " " "	19.084	24	" " "	57.600
9	" " " "	30.540	25	Whipple & B.	58.900
10	" " " "	23.625	26	" " "	31.543
11	Ninth & X.	50.606	27	" " " Union	17.020
12	" " " "	65.860	28	Third & W.	13.050
13	" " " "	51.087	29	Marble Ave. near 6th	29.220
14	" " " "	68.034	30	" " & East Ave.	48.026
15	Twelfth & X.	74.200	31	" " " Harrison	25.330
16	None set		32	Wabash & Broadway	13.500

No.	Location	Elev.	No.	Location	Elev.
33	Wabash & Albee	35.360	49	Carson & H.	141.660
34	" " " California	47.340	50	" " " "	146.290
35	" " " C.	74.950	51	Russ & S.	147.930
36	" " " E.	107.850	52	" " " P.	147.285
37	" " " H.	109.120	53	" " " M.	153.050
38	Trinity & L.	None set	54	Harris & L.	151.150
39	" " " "	132.560	55	" " " "	142.870
40	" " " "	126.285	56	" " " "	135.080
41	" " " "	92.810	57	" " " California	112.840
42	" " " California	76.250	58	Hodgson & S.	151.132
43	Hawthorn & Albee	44.820	59	" " " "	157.216
44	" " " Broadway	14.505	60	" " " "	30.12?
45	Broadway	16.155			
46	Dollison & California	99.820			
47	" " " C.	112.810			
48	" " " E.	127.180			

Benches City of America Calif. Oct. 192

TIDES: BENCH MARKS FOR PERMANENT FILE

DESTROYED

DESTROYED

B. M. *A-3* at EUREKA, HUMBOLDT BAY, CALIFORNIA.

Original and Supplementary Descriptions

The elevation of this bench mark is approximately feet above mean tide level. The bench mark is the floor of the northeast corner of the Pacific Coast Steamship Company's warehouse. *nail in floor (see note, 766 915 55, p. 676).*

June 4, 1929. Not recovered. Bench Mark was destroyed when new floor was put in warehouse of Nelson Steamship Company (warehouse formerly was owned by Pacific Coast Steamship Co. A. P. Ratti.

DESTROYED

DESTROYED

DESTROYED

Chief of Party	Date			Gauge Reading	Remarks
Established by	Year	Month	Day	Feet	
U.S.A. Engineers	(1906)	(prior to)		11.59	above LLW of U.S. Engineers.
				10.69	" CITY DATUM
Recovered by				8.21	" MSL of U.S. Geological S.
					<i>8.273 - see note on p. 676, Bull. No. 766, "Spirit Leveling in Calif"</i>
					1929.- Bench Mark destroyed.

TIDES: BENCH MARKS FOR PERMANENT FILE
B. M. 4 ²⁰⁵⁶⁵⁻³¹ at EUREKA, HUMBOLDT BAY, CALIFORNIA. *Destroyed*

Original and Supplementary Descriptions

The elevation of this bench mark is approximately feet above mean tide level. The bench mark is a U.S. Geological Survey standard metal plate bench mark set in the granite coping on the north side of the steps of the Eureka City Hall.

Its elevation is 34.3 feet above the datum of mean lower low water, as determined by the U.S.A. Engineers prior to April, 1906, when the San Francisco fire destroyed many of the records of the Engineers.

N. S. Leach, Survey, Eureka, 34.2 ft. above MSL. Elev. = 30.9 34/7

Nov. 20, 1945, H. C. Warwick--Recovered as described in good condition.
Mark is stamped "B 18 1906 29.350" ✓

Sept. 1967 Thorough search made for THIS mark but IT WAS NOT recovered by C. Symms
DESTROYED

✓ 29.842 ft. above SLD, Supplementary Adj: 91929

~~29.350~~ ft. above S.L. datum - See list, "Arcata - Ukiah", 1/6/34

WS. 2/17/42

Chief of Party	Date			Gauge Reading	Remarks
Established by	Year	Month	Day	Feet	
U.S. Geological Survey				34.3	above LLW of U.S. Engineers
Recovered by U.S.A. Engineers	1911			34.3	gauge at foot of G street.
R. R. Lukens	1919	Oct.?	17	36.62	Gauge at Knight's Wharf
E. H. Pagenhardt	1921	Oct.	28	38.34	" " Buhne's Dock
A. P. Ratti	1929	Oct.	23	35.909	
H. C. Warwick	1945	Nov.	20/		33.628 ft. above MLLW ✓