



U. S. COAST AND GEODETIC SURVEY.

J. M. Thorn, Superintendent.

State: *Wash. Ter.*

DESCRIPTIVE REPORT.

Hydrographic Sheet No. 1815

LOCALITY:

Padilla Bay.

1887.

CHIEF OF PARTY:

Lt. C. T. Force, U. S. N.

ADDRESS THE DIRECTOR
U. S. COAST AND GEODETIC SURVEY

AND REFER TO NO.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
WASHINGTON

December 27, 1926.

Hydrographic Sheet 1815

To: The Chief, Division of Tides and Currents.
From: L. P. Shidy, Associate Mathematician.
Subject: Plane of Reference for Hydrographic Sheet 1815.

This sheet, No. 1815, covers Padilla Bay, Washington, and was made by party of Lieutenant C. T. Forse, U. S. N., and Assistant in the Coast and Geodetic Survey, between August 8 and October 28, 1887. The tides were observed near the southern extremity of east side of Guemes Island.

The plane of reference used for the reduction of soundings was the mean of the following selected lowest low waters observed

| | |
|---------------|---------|
| Aug. 16, 1887 | 9.4 ft. |
| " 17, " | 9.1 " |
| " 18, " | 8.8 " |
| " 19, " | 8.8 " |
| " 20, " | 9.0 " |

5 | 45.1

9.0 = plane used for reduction of soundings.

Under date of November 5, 1901, a correction of -1.3 feet was furnished, in order to reduce the soundings to the Harmonic Tide Plane, which was then in use, but has since been discarded; so that this correction is of no further interest.

Under date of October 4, 1906, a correction of +1.4 feet was reported, in order to reduce the soundings to the plane of mean lower low water. This value, of +1.4 ft., was based upon the direct results obtained from reduction of the tides, without correction for the longitude of the moon's node, and should be discarded.

Under date of June 1, 1920, a correction of +1.1 ft. was reported, as the difference between the plane of selected lowest lows and mean lower low water. This value is based upon the original results from reduction of tides as corrected for the longitude of the moon's node. It is the best value that can be obtained, and should be used to the exclusion of all other values.

Approved
Shidy

Chief, Division of Tides and Currents

L. P. Shidy

L. P. Shidy.

VHC
Nov. 6, 1915.

GUEMES ISLAND, PADILLA BAY, WASHINGTON.

Description of Tide Gauge and Bench Mark.

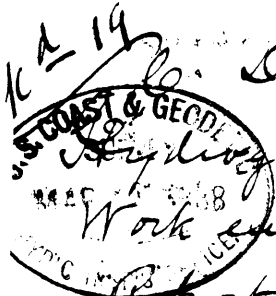
A plain wooden tide staff, was nailed to a pile in small bight on east side of Guemes Island, nears its southern end. It was directly west of Huckleberry Island. Tides were observed between July 30 and October 26, 1907, by party of Lieut. C.T. Forse, U.S.N., and Asst. C. & G. Survey



Bench Mark 1 is a cross + cut half an inch deep into the north side of a large boulder at high water mark near point at south side of bight in which gauge was located. The horizontal line of the cross is the reference mark, corresponding to a reading of 21.00 feet on tide staff.

| Tide Planes | Readings on Staff of 1887 ft. | Elevation of Bench Mark above Tide Planes ft. |
|------------------------|----------------------------------|---|
| Highest tide observed | 18.50 | 2.50 |
| Mean higher high water | 17.96 | 3.04 |
| Mean high water | 17.41 | 3.59 |
| Mean tide level | 15.00 | 6.00 |
| Mean low water | 12.59 | 8.41 |
| Mean lower low water | 10.40 | 10.60 |
| *Plane of reference | 9.00 | 12.00 |
| Lowest tide observed | 8.70 | 12.30 |
| Mean range of tides | 4.82 | |

*The plane of reference for Hydrographic Sheet 1315 is the mean of the 5 lowest tides observed, or 9 feet on staff. The plane of reference for charts of this locality is mean lower low water, or 10.40 ft. on staff.



No. Descriptive Report, to accompany
 Hydrographic Sheet No. 1815 of Padilla Bay, W.T.
 Work executed by Lieut. C. T. Force U.S.N.
 Report by Lieut. H. T. Mayo, U.S.N.

In this Sheet is embraced the Hydrography of
 Padilla, Fidalgo, and Sanish Bays, connecting
 with Rosario Strait sheets in Ship Harbor and
 in Channel between Vendovi and Sinclair Is.

The sheet is $11\frac{1}{2}$ miles long and from 3 to
 $8\frac{1}{2}$ miles wide covering about 57 square
 miles of Hydrography. The work was begun on
 Aug. 8 and finished Oct. 28, 1887.

Angles (double) taken 2653; Soundings 14155,
 Miles run 466.55.

The greater portion of the sheet is covered
 by extensive flats of sand and mud.

In general terms, all of Fidalgo Bay, and all of
 Padilla Bay east and south of a line ^{from} north pt. to
 West Id., thence to Point William may be considered
 as flats and only navigable at High Water.

The same may be said of the entire Eastern
 portion of Sanish Bay.

The deepest water found, 63 fms, was

between Vendovi Id. and Yiti Rks.

To the S. the water shoals until the Flats of Spanish Bay are reached.

Spanish River and Edison Slough are only available for use at high water.

A strong tide current is found in Ship Harbor and a strong current sets around S. E. end of Gunnis Id. At the N. end of Gunnis Id. the current takes nearly an E. and W. direction and this is also noticeable off the N. and S. sides of Vendovi Id. In other portions of the Strait the currents are what would naturally be looked for.

Anchorage.

There are no really good anchorages on the Strait and all are exposed to currents. Vessels can anchor, without protection, anywhere along the edges of the flats, finding bottom in from 7 to 10 fms. with room to clear the shoal water.

The bight near the S. end of East side of Gunnis Id., where the Earnest anchored, affords fair protection for a small vessel.

Off Atlanta, N. of Point William, good anchorage and protection are found but

Care must be taken not to go too far to the E^d and so run onto the flats

Dangers.

Aside from the extensive flats, there are no dangers to navigation on the sheet, although there are small rocks and boulders along the beaches.

Trade, etc.

The trade of this region is carried on by steamers almost entirely. Two lines run regular steamers from Seattle to Whatcom three times per week, and smaller steamers run to various points as occasion requires. There are Post-offices at Anacortes, Fidalgo, Bay View, Atlanta and Edison.

Very respectfully,
H. T. Mayo,
Lieut. U. S. N.

To the
Superintendent C. & G. Survey.