

DATE: February 16, 1982

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

TIDE NOTE FOR HYDROGRAPHIC SHEET

Processing Division: Atlantic Marine Center:

Hourly heights are approved for

Tide Station Used (NOAA Form 77-12): 863-9428 Sandbridge, Virginia

Period: June 13-November 9, 1981

HYDROGRAPHIC SHEET: H-9978

OPR: D103

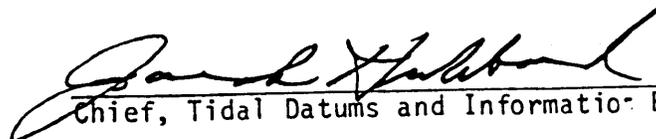
Locality: Delmarvance

Plane of reference (mean lower low water): 2.59 ft.

Height of Mean High Water above Plane of Reference is 3.60 ft.

REMARKS: Recommended zoning:

Apply - 10 minute time correction and x 1.06 range ratio.


Chief, Tidal Datums and Information Branch

FIELD TIDE NOTE ✓

Field tide reduction of soundings were based on predicted tides from Hampton Roads, Virginia which were corrected in accordance with the rezoning scheme provided with the 1980 Project Instructions and was interpolated by the PDP 8/E computer utilizing program AM 500. All times of both predicted and recorded tides are Greenwich Mean Time.

Two tide stations were in operation during hydrography performed by PEIRCE. Station Sandbridge, Virginia (863-9428) was installed and maintained by personnel from PEIRCE. Station Duck, North Carolina (#865-1370) was operational and under the jurisdiction of Atlantic Marine Center, Tides and Water Levels Branch throughout the survey. The location and period of operation of both stations are as follows:

<u>Site</u>	<u>Location</u>	<u>Period of Operation</u>
Sandbridge Pumping Pier Sandbridge, VA	36°41'30" N 075°55'12" W	11 Jun 1981 - 10 Nov 1981
Army Corps of Engineers Pier Duck, NC	36°10'54" N 075°45'00" W	Permanent Station (Primary)

Sandbridge Pumping Pier - Metercraft Model 7602, S/N 705-108 gage was installed on 11 June 1981 and began operation on 12 June 1981. The staff was installed during the 1980 field season and was leveled on 12 June 1981. Fisher-Porter ADR, Model 1551, S/N 6511A5632M2, gage was installed on 11 June 1981 and began operations on 12 June 1981. The same staff, leveled 12 June 1981, was used for both gages.

On 25 June 1981, the ADR gage failed. The paper jammed in the punch block assembly and as a result the punch pins were bent. The gage was removed and returned to A.M.C. for repairs on 28 June 1981. The ADR gage was reinstalled at Sandbridge, VA and commenced operating on 29 June 1981.

On 1 August 1981, the recording paper jammed in the punch block assembly and bent the pins in the gage. On 4 August the problem was corrected by replacing the punch block and a modified strip plate in the field. Total down time for the gage was 63.5 hours. During the down time of the ADR gage, the Metercraft bubbler gage was operational.

On 7 August 1981, the punch block assembly jammed in the ADR gage. The gage was removed and returned to A.M.C. for inspection. On 10 June, a new Fisher-Porter gage was installed at the site (S/N 7601A1469M23). During the replacement time of the new ADR gage, the bubbler gage was operational. Annotations on the bubbler gage marigrams are questionable for this period of time. A copy of a letter regarding the bubbler gage annotations sent to the Chief, Tide Requirements & Acquisitions Branch, Rockville, Maryland accompanies this tide note.

On 7 September 1981, the bubbler gage failed during hydrographic operations. During the down time of the bubbler gage, the ADR gage was operational. Upon inspection of

the gage on 12 September 1981, it was discovered that the orifice was buried below 6" of sand. The problem was rectified by remounting the orifice 2.5 feet above the ocean bottom. The gage was restored to operations on 12 September 1981.

On 16 September 1981 during inspection of the ADR gage, it was found that the gage was punching 12 minutes fast. The conclusion was that the problem resulted from excessive vibration of the pier and partially by the take-up spring on the gage. The spring was readjusted and the gage commenced operating on 17 September 1981.

On 30 October 1981, the punch block jammed on the ADR gage. The gage was removed and returned to AMC for repair. The punch block assembly was replaced and the gage reinstalled at Sandbridge that same day.

All tidal records were removed from the tide station at Sandbridge, VA on 11 November 1981. The tide station operation was discontinued due to completion of the hydrographic field season by PEIRCE.

Levels: Four spirit level runs were made at the Sandbridge station: (1) on 12 June 1981, to establish tide station prior to hydrographic operations; (2) on 19 August 1981, station releveled by personnel from Tides and Water Levels Branch at AMC; (3) on 1 October 1981, to check the elevation of the tide staff after the passage of Hurricane Dennis; and (4) on 16 November 1981, to level at the removal of the tide station. All information and data was forwarded to Tides and Water Levels Branch, Rockville, Maryland.

Zoning: Zoning is based on the pre-zoning scheme noted in the Project Instructions with correctors of -2 hours 30 minutes applied to times of high and low tides and a tide value multiplier of 1.30 applied to heights of the tides.

Duck, North Carolina - A check level was performed on this station on the 5 June 1981 prior to commencement of hydrographic operations. The gage was again leveled on 19 November 1981 at the end of the field season. All data was forwarded to Tide and Water Levels Branch, Rockville, Maryland.

Hampton Roads, Virginia - Reference station number 863-8610.

APPENDIX C

GEOGRAPHIC NAMES LIST