Field Tide Note
High Island, Alaska
Station Number 946-5173
June to August, 1988

Field tide reduction of sounding data for surveys H-10276 and H-10277 was based on predicted tides from Hagemeister Island, Alaska (946-5089), and corrected to the survey area. Tide correctors were interpolated by PDP/8e computer using AM 500.

The calculated correctors shown below were based on preliminary zone correctors specified by project instructions.

Survey	Time Correction High Water	Time Correction Low Water	Height Correction Range Ratio
North of 58°45'00"N			
H-10276	-0h 20m	-0h 40m	x 1.07
Between 58°40'00"N and 58°45'00"N			
H-10276	0h 00m	-0h 20m	x 1.03
South of 58°40'00"N			
H-10276	-0h 40m	-0h 30m	x 1.03
H-10277	-0h 40m	-0h 30m	x 1.03

All times of predicted and reported tides are expressed in Coordinated Universal Time. Predicted tides were inadequate for hydrography due to discrepancies in the raw data attributed to tidal errors.

Two Bristol Gas-Purged Pressure Recording Tide Gages, Model 15 (gage A s/n 63A2920, gage B s/n 68A14940), range 0 to 30 feet, were installed in support of surveys H-10276 and H-10277. Location and dates of operation are as follows:

Site	Location	Dates of Operation
High Island, Alaska	58°43'15"N 160°25'27"W	June 02 to August 17

High Island

The tide gages, staff, and orifices were installed at High Island, Alaska, on June 1 (due to steep terrain, the station was located farther north than specified in the project instructions). A three-hour observation on June 2 confirmed consistent gage-to-staff differences. Data collection began on June 2 at 1930 and continued until August 17 at 2230, when the gages and

staff were removed. The orifices were left due to time and weather constraints.

The following minor problems occurred during tidal data collection:

The chart drive on gage A was replaced twice, on June 16 and June 17, with only short gaps in the tidal record. Gage B was set to the incorrect time from July 27 at 2305 (recorded as 1505) to July 31 at 1830; corrected times are noted on the marigram. A gap in the tidal record occurred on gage B from June 29 at 1530 to 2341 when the paper ran out.

The staff was misread on July 11, resulting in a one-foot discrepancy in the gage-to-staff comparison for both gages. A three-hour comparison and dive investigation confirmed that the orifice had not moved; gage records are corrected to show the accurate staff reading.

Both traces show the effects of a storm surge on August 10 from approximately 0350 to 0600.

The zero mark on the tide staff corresponds to 13.9 feet on gage A, 13.2 feet on gage B.

Levels

The comparison between opening and closing level runs indicates no significant staff movement.

Zoning Recommendations

Tidal zoning was inaccurate for the survey area and should be revised. Due to the complexity of the tides in this area, however, an accurate analysis is beyond the scope of this report and no recommendations are offered.

Approval

Submitted by:

Michael Lemon
Ensign, NOAA

Reviewed by:

Paul J. Ruiz
Lieutenant, NOAA
Field Operations Officer (Acting)

Date:

6 Sep 88

Field Tide Note
Northeast Side, Summit Island, Alaska
Station Number 946-5283
May to August, 1988

Field tide reduction of sounding data for survey H-10276 was based on predicted tides from Hagemeister Island, Alaska (946-5089), and corrected to the survey area. Tide correctors were interpolated by PDP/8e computer using AM 500.

The calculated correctors shown below were based on preliminary zone correctors specified by project instructions.

Survey	Time Correction High Water	Time Correction Low Water	Height Correction Range Ratio
North of 58°45'00"N			
H-10276	-0h 20m	-0h 40m	x 1.07
South of 58°45'00"N			
H-10276	0h 00m	-0h 20m	x 1.03

All times of predicted and reported tides are expressed in Coordinated Universal Time. Predicted tides were inadequate for hydrography due to discrepancies in the raw data attributed to tidal errors.

Two Bristol Gas-Purged Pressure Recording Tide Gages, Model 15 (gage A s/n 73A233; gage B s/n 64A11033), range 0 to 30 feet, were installed in support of survey H-10276. Location and dates of operation are as follows:

Site	Location	Dates of Operation
Northeast Side, Summit Island, Alaska	58°50'48"N 160°12'36"W	May 31 to August 14

Northeast Summit Island

The tide gages, staff and orifices were installed on the northeast side of Summit Island, Alaska, on May 30. A three-hour observation on June 02 confirmed consistent gage-to-staff differences. Data collection began on June 02 at 1745 and continued until August 14 at 2240, when the gages and staff were removed; the orifices were left due to time and weather constraints.

Gaps in the tidal record of more than three days occurred on gage A during the following periods:

July 05 at 0630 to July 08 at 1706 (out of ink);
July 21 at 0230 to July 27 at 2120 (paper jammed);
July 28 at 0700 to August 02 at 1718 (paper jammed);
August 04 at 0220 to August 07 at 1850 (paper jammed)

Gage B zeroed on June 08 due to a leak in the orifice tubing. The tubing was replaced on June 08, which resulted in a gap in the tidal record from June 7 at 1729 to June 8 at 0320; a three-hour observation on June 16 confirmed consistent gage-to-staff differences.

A 0.4 ft discrepancy in the gage-to-staff comparisons for both gages occurred on June 08 due to an error in reading the staff.

Both traces show the effects of a storm surge (during low water) on August 10 from 0415 to 0715.

The zero mark on the tide staff corresponds to 8.9 feet on gage A, 5.8 feet on gage B.

Levels

The comparison between opening and closing level runs indicates no significant staff movement.

Zoning Recommendations

Tidal zoning was inaccurate for the survey area and should be revised. Due to the complexity of the tides in this area, however, an accurate analysis is beyond the scope of this report and no recommendations are offered.

Approval

Submitted by:

Michael Lemon
Ensign, NOAA

Reviewed by:

Paul J. Ruiz
Lieutenant, NOAA
Field Operations Officer (Acting)

Date:

9-6-88