

February 21, 1984

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

Marine Center: Pacific

OPR: P114

Hydrographic Sheet: H-10091

Locality: Southern Cook Inlet, Alaska

Time Period: June 14-August 10, 1983

Tide Station Used:

945-5452 Flat Island, Alaska
945-6463 Oil Point, Alaska

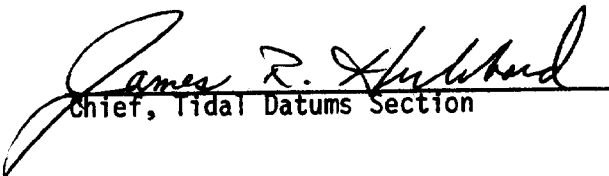
Plane of Reference (Mean Lower Low Water):

945-5452 = 13.38 ft.
945-6463 = 15.15 ft.

Height of Mean High Water Above Plane of Reference:

945-5452 = 15.3 ft.
945-6463 = 13.3 ft.

Remarks: Recommended Zoning: (See pages 2 thru 5)


Chief, Tidal Datums Section

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A. South of Latitude 59°20.0

1. For a zone bordered at the corners by the following points:

- a. 152°35.0' 59°17.0'
- b. 152°35.0' 59°12.0'
- c. 152°00.0' 59°12.0'
- d. 152°23.0' 59°17.0'

Zone on 945-5452 and apply x0.84 range ratio.

2. Northeast of the previous zone to a zone bordered at the corners by the following points:

- a. 152°35.0' 59°20.0'
- b. 152°12.0' 59°20.0'
- c. 151°56.5' 59°13.0'
- d. 152°00.0' 59°12.0'
- e. 152°23.0' 59°17.0'
- f. 152°35.0' 59°17.0'

Zone on 945-5452 and apply x0.87 range ratio.

3. Northeast of the previous zone to a zone bordered at the corners by the following points:

- a. 152°12.0' 59°20.0'
- b. 152°06.0' 59°20.0'
- c. 151°56.5' 59°15.0'
- d. 151°56.5' 59°13.0'

Zone on 945-5452 and apply x0.91 range ratio.

4. Northeast of the previous zone to a zone bordered at the corners by the following points:

- a. 150°06.0' 59°20.0'
- b. 152°01.0' 59°20.0'
- c. 151°56.5' 59°17.0'
- d. 151°56.5' 59°15.0'

Zone on 945-5452 and apply x0.95 range ratio.

5. Northeast of the previous zone, zone on 945-5452 and apply x0.98 range ratio.

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B. North of Latitude 59°20.0' to 59° 28.0'

1. East of longitude 152°35.0' to a zone bordered at the corners by the following points:

- a. 152°24.0' 59°28.0'
- b. 152°12.0' 59°20.0'

Zone on 945-5452 and apply x0.87 range ratio.

2. East of the previous zone to a zone bordered at the corners by the following points:

- a. 152°14.5' 59°28.0'
- b. 152°06.0' 59°20.0'

Zone on 945-5452 and apply x0.91 range ratio.

3. East of the previous zone to a zone bordered at the corners by the following points:

- a. 152°08.5' 59°28.0'
- b. 152°01.0' 59°20.0'

Zone on 945-5452 and apply x0.95 range ratio.

4. East of the previous zone to a zone bordered at the corners by the following points:

- a. 152°04.0' 59°28.0'
- b. 151°56.5' 59°20.0'

Zone on 945-5452 and apply x0.98 range ratio.

5. East of the previous zone, zone on 945-5452 and apply x1.02 range ratio.

C. North of latitude 59°28.0' to 59°36.0'

1. West of longitude 152°29.0' zone on 945-6463. apply a -10-minute time correction and x1.01 range ratio.

2. East of 152°29.0' to a zone bordered at the corners by the following points:

- a. 152°22.0' 59°36.0'
- b. 152°14.5' 59°28.0'

Zone on 954-5452, apply +10 minute time correction and x0.91 range ratio.

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3. East of the previous zone to a zone bordered at the corners by the following points:

- a. $152^{\circ}15.0'$ $59^{\circ}36.0'$
- b. $152^{\circ}08.5'$ $59^{\circ}28.0'$

Zone on 945-5452, apply +10 minute time correction and x0.95 range ratio.

4. East of the previous zone to a zone bordered at the corners by the following points:

- a. $152^{\circ}09.5'$ $59^{\circ}36.0'$
- b. $152^{\circ}04.0'$ $59^{\circ}28.0'$

Zone on 945-5452, apply +10 minute time correction and x0.98 range ratio.

5. East of the previous zone to a zone bordered at the corners by the following points:

- a. $152^{\circ}04.0'$ $59^{\circ}36.0'$
- b. $151^{\circ}58.0'$ $59^{\circ}28.0'$

Zone on 954-5452, apply +10 minute time correction and x1.02 range ratio.

6. East of the previous zone, zone on 945-5452, apply +10 minute time correction and x1.06 range ratio.

D. North of latitude $59^{\circ}36.0'$

1. West of 2 points located at:

- a. $152^{\circ}28.0'$ $59^{\circ}44.0'$
- b. $152^{\circ}22.0'$ $59^{\circ}36.0'$

Zone on 945-6463 and apply x1.05 range ratio.

2. East of the previous zone to a zone bordered at the corners by the following points:

- a. $152^{\circ}20.0'$ $59^{\circ}44.0'$
- b. $152^{\circ}15.0'$ $59^{\circ}36.0'$

Zone on 945-5452, apply +20 minute time correction and x0.95 range ratio.

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3. East of the previous zone to a zone bordered at the corners by the following points:

- a. $152^{\circ}15.0'$ $59^{\circ}44.0'$
- b. $152^{\circ}09.5'$ $59^{\circ}36.0'$

Zone on 945-5452, apply +20 minute time correction and x0.98 range ratio.

4. East of the previous zone by a zone bordered at the corners by the following points:

- a. $152^{\circ}09.5'$ $59^{\circ}44.0'$
- b. $152^{\circ}04.0'$ $59^{\circ}36.0'$

Zone on 945-5452, apply +20 minute time correction and x1.02 range ratio.

5. East of the previous zone to a zone bordered at the corners by the following points:

- a. $152^{\circ}04.5'$ $59^{\circ}44.0'$
- b. $151^{\circ}58.5'$ $59^{\circ}36.0'$

Zone on 945-5452, apply +20 minute time correction and x1.06 range ratio.

6. East of the previous zone, zone on 945-5452 apply +20 minute time correction and x1.09 range ratio.

Field Tide Note

Field tide reduction of soundings for survey H-10091 was based on predicted tides from Seldovia, Alaska (945-5500). Corrections were obtained from Preliminary Tidal Zoning OPR-P114-RA-83. The predicted tides were derived using program AM 500. The reference station at Seldovia was leveled to at the beginning of survey operations on May 24, 1983. Three permanent benchmarks (including the primary mark) were connected to the tide staff. Final levels were run on August 12, 1983 to five permanent benchmarks. Two subordinate stations provided data for survey H-10091:

A bubbler tide gage was installed on May 24, 1983 at the historical gage site on Flat Island (945-5452), $59^{\circ} 19.8' N$, $151^{\circ} 59.8' W$. Five permanent benchmarks were recovered and leveled to on May 25, 1983. The staff value of the zero line on the analog tide record is +4.2 feet. The gage operated well throughout the period of hydrography. Final levels were run August 11, 1983 to five permanent benchmarks.

The second bubbler tide gage was installed on June 2, 1983 at the historical site near Oil Point (945-6463), $59^{\circ} 38.4' N$, $153^{\circ} 15.7' W$. Five permanent benchmarks were recovered and leveled to on June 1, 1983. The staff value of the zero line on the analog tide record is +9.18 feet. The gage operated well throughout the period of hydrography. In addition to the two subordinate stations installed for this survey, there was another tide station operating concurrently for adjacent survey operations:

A bubbler tide gage was installed on June 4, 1983 at the historical site near Burr Point on Augustine Island (945-6537), $59^{\circ} 25.2' N$, $153^{\circ} 25.5' W$. Five permanent benchmarks were recovered and leveled to on June 5, 1983. The staff value of the zero line on the analog tide record is +12.8 feet. The gage operated well throughout the period of hydrography. At the completion of survey H-10091, the two subordinate stations used to control hydrography for this survey were maintained to support the remaining hydrographic surveys of OPR-P114-RA-83. Final levels of all benchmarks at the Burr and Oil tide gages will be run at a later date. The time meridian used for records annotation at all sites was 0° (UTC).