SOUNDINGS IN FEET

12312

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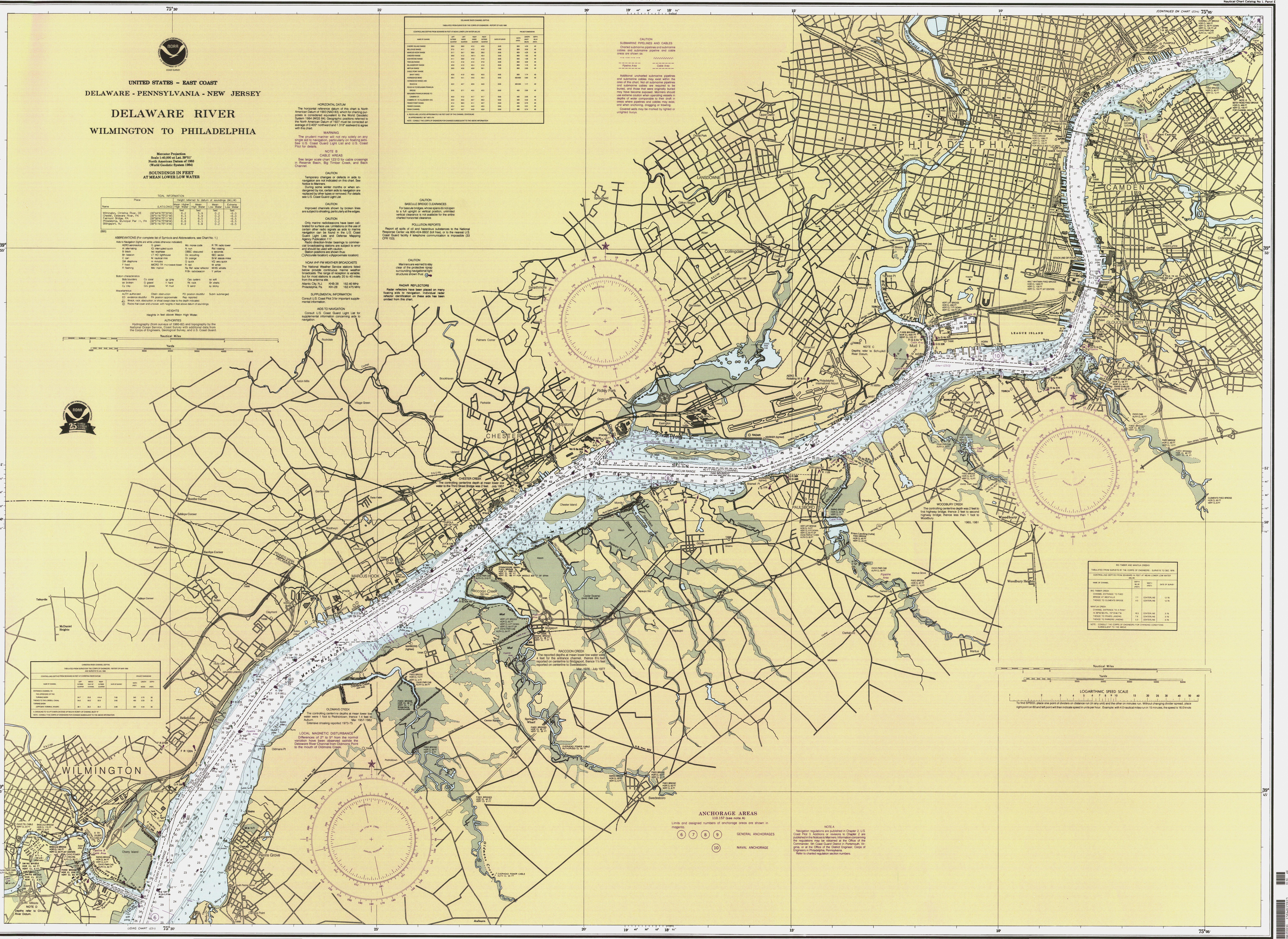
Nautical Chart Catalog No 1, Panel E



UNITED STATES - EAST COAST

DELAWARE - PENNSYLVANIA - NEW JERSEY

DELAWARE RIVER

WILMINGTON TO PHILADELPHIA

Mercator Projection
Scale 1:40,000 at Lat. 39°51'
North American Datum of 1983
(World Geodetic System 1984)

SOUNDINGS IN FEET
AT MEAN LOWER LOW WATER

TIDAL INFORMATION

Place		Height referred to datum of soundings (MLLW)			
Name	(LAT/LONG)	Mean Higher High Water	Mean High Water	Mean Low Water	Extreme Low Water
		feet	feet	feet	feet
Wilmington, Christina River, DE	(39°44'N/75°33'W)	6.2	5.9	0.2	-6.0
Chester, Delaware River, PA	(39°51'N/75°21'W)	6.3	5.9	0.2	-6.0
Fairmont Bridge, PA	(39°58'N/75°11'W)	6.4	6.0	0.2	-6.5
Philadelphia, Municipal Pier 11, PA	(39°57'N/75°08'W)	6.8	6.3	0.2	-6.5
Billingsport, NJ	(39°51'N/75°14'W)	6.2	5.8	0.2	-6.5

(895)

ABBREVIATIONS (For complete list of Symbols and Abbreviations, see Chart No. 1.)

Aids to Navigation (lights are white unless otherwise indicated):

AERO aeronautical	G green	Mo morse code	R TR radio tower
Al alternating	IQ interrupted quick	N nun	Rot rotating
B black	Iso isophase	OBSC obscured	s seconds
Bn beacon	LT HO lighthouse	Oc occulting	SEC sector
C can	M nautical mile	Or orange	St M statute miles
DIA diaphone	m minutes	Q quick	VQ very quick
F fixed	MICRO TR microwave tower	R red	W white
Fl flashing	Mkr marker	Ra Ref radar reflector	WHIS whistle
		R Bn radiobeacon	Y yellow

Bottom characteristics:

Blds boulders	Co coral	gy gray	Oys oysters	so soft
bk broken	G gravel	h hard	Rk rock	Sh shells
Cy clay	Grs grass	M mud	S sand	sy sticky

Miscellaneous:

AUTH authorized	Obstn obstruction	PD position doubtful	Subm submerged
ED existence doubtful	PA position approximate	Rep reported	

21 Wreck, rock, obstruction, or shoal swept clear to the depth indicated.
(2) Rocks that cover and uncover, with heights in feet above datum of soundings.

HEIGHTS
Heights in feet above Mean High Water.

AUTHORITIES
Hydrography (from surveys of 1980-82) and topography by the National Ocean Service, Coast Survey with additonal data from the Corps of Engineers, Geological Survey, and U.S. Coast Guard.

Nautical Miles: 1 ½ 0 1 2 3

Yards: 1000 0 1000 2000 3000 4000 5000

HORIZONTAL DATUM
The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83), which for charting purposes is considered equivalent to the World Geodetic System 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 must be corrected an average of 0.405" northward and 1.318" eastward to agree with this chart.

WARNING
The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.

NOTE B
CABLE AREAS
See larger scale chart 12313 for cable crossings in Reserve Basin, Big Timber Creek, and Back Channel.

CAUTION
Temporary changes or defects in aids to navigation are not indicated on this chart. See Notice to Mariners.
During some winter months or when endangered by ice, certain aids to navigation are replaced by other types or removed. For details see U.S. Coast Guard Light List.

CAUTION
Improved channels shown by broken lines are subject to shoaling, particularly at the edges.

CAUTION
Only marine radiobeacons have been calibrated for surface use. Limitations on the use of certain other radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and Defense Mapping Agency Publication 117.
Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution.
Station positions are shown thus:
⊙(Accurate location) ○(Approximate location)

NOAA VHF-FM WEATHER BROADCASTS
The National Weather Service stations listed below provide continuous marine weather broadcasts. The range of reception is variable, but for most stations is usually 20 to 40 miles from the antenna site.

Atlantic City, N.J.	KHB-38	162.40 MHz
Philadelphia, Pa.	KIH-28	162.475 MHz

SUPPLEMENTAL INFORMATION
Consult U.S. Coast Pilot 3 for important supplemental information.

AIDS TO NAVIGATION
Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation.

DELAWARE RIVER CHANNEL DEPTHS

TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT OF AUG 1995

CONTROLLING DEPTHS FROM SEAWARD IN FEET AT MEAN LOWER LOW WATER (MLLW)						PROJECT DIMENSIONS		
NAME OF CHANNEL	LEFT OUTSIDE QUARTER	LEFT INSIDE QUARTER	RIGHT INSIDE QUARTER	RIGHT OUTSIDE QUARTER	DATE OF SURVEY	WIDTH (FEET)	LENGTH (NAUT. MILES)	DEPTH MLLW (FEET)
CHERRY ISLAND RANGE	38.6	38.9	41.0	40.9	8-95	800	4.33	40
BELLEVUE RANGE	37.5	41.1	41.3	41.8	4-95	800	3.05	40
MARCUS HOOK RANGE	31.7	34.7	36.8	38.0	8-95	800	4.25	40
CHESTER RANGE	38.8	41.2	A41.1	40.4	5-95	800	1.82	40
EDDYSTONE RANGE	41.1	39.9	41.8	41.8	6-95	800	1.08	40
TINICUM RANGE	41.4	41.9	41.5	37.9	8-95	800	3.03	40
BILLINGSPORT RANGE	40.9	41.3	42.4	41.0	8-95	800	1.15	40
MIFFLIN RANGE	39.9	40.8	40.8	39.1	7-95	800	2.83	40
EAGLE POINT RANGE (NAVY YARD)	40.8	41.9	40.5	40.0	8-95	800	1.74	40
HORSESHOE BEND	38.4	44.1	44.6	43.4	8-95	500-800	0.80	40
HORSESHOE RANGE AND REACH M	40.2	42.7	42.9	44.9	6-95	400-500	1.17	40
REACH M TO BENJAMIN FRANKLIN BRIDGE	30.9	37.1	40.5	40.5	6-95	400	2.95	40
BENJAMIN FRANKLIN BRIDGE TO CAMBRIA ST.	40.0	41.2	41.7	41.7	6-95	400	2.00	40
CAMBRIA ST. TO ALLEGHENY AVE.	40.0	40.0	40.7	39.2	6-95	400	0.42	40
FISHER POINT RANGE	41.4	39.3	41.1	40.7	5-94	400	0.70	40
FISHER CHANNEL	40.4	44.4	44.0	43.5	5-94	400	0.31	40
DRAW CHANNEL	40.7	43.7	44.8	43.9	5-94	400	0.74	40

A. ROCKS ARE LOCATED APPROXIMATELY 60 FEET EAST OF THE CHANNEL CENTERLINE IN APPROXIMATELY 39~49'51.4"N
NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

CAUTION
BASCULE BRIDGE CLEARANCES
For bascule bridges, whose spans do not open to a full upright or vertical position, unlimited vertical clearance is not available for the entire charted horizontal clearance.

POLLUTION REPORTS
Report all spills of oil and hazardous substances to the National Response Center via 800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

CAUTION
Mariners are warned to stay clear of the protective riprap surrounding navigational light structures shown thus:

RADAR REFLECTORS
Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.

CAUTION
SUBMARINE PIPELINES AND CABLES
Charted submarine pipelines and submarine cables and submarine pipeline and cable areas are shown as:

Pipeline Area — Cable Area

Additional uncharted submarine pipelines and submarine cables may exist within the area of this chart. Not all submarine pipelines and submarine cables are required to be buried, and those that were originally buried may have become exposed. Mariners should use extreme caution when operating vessels in depths of water comparable to their draft in areas where pipelines and cables may exist, and when anchoring, dragging or trawling.
Covered wells may be marked by lighted or unlighted buoys.

CHRISTINA RIVER CHANNEL DEPTHS

TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT OF MAR 1995 AND SURVEYS TO JUL 1995

CONTROLLING DEPTHS FROM SEAWARD IN FEET AT CHRISTINA RIVER DATUM					PROJECT DIMENSIONS		
NAME OF CHANNEL	LEFT OUTSIDE QUARTER	MIDDLE HALF OF CHANNEL	RIGHT OUTSIDE QUARTER	DATE OF SURVEY	WIDTH (FEET)	LENGTH MILES)	DEPTH (FEET)
ENTRANCE CHANNEL TO THE UPPER END OF THE TURNING BASIN	24.7	25.8	A14.4	7-95	340	0.70	38
THENCE TO THE LOBDELL CANAL	34.6	30.6	32.9	3-95	400	0.33	35
TURNING BASIN (OPPOSITE TERMINAL WHARF)	36.1	35.2	35.4	3-95	320	0.34	38

A. SHOALING TO 12.5 FT EXISTS ON EDGE OF ROQ IN VICINITY OF CHANNEL BUOY "2"
NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

BIG TIMBER AND MANTUA CREEKS

TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO DEC 1976

CONTROLLING DEPTHS FROM SEAWARD IN FEET AT MEAN LOWER LOW WATER (MLLW)			
NAME OF CHANNEL	DEPTH MLLW (FEET)	WIDTH (FEET)	DATE OF SURVEY
BIG TIMBER CREEK			
CHANNEL ENTRANCE TO FIXED BRIDGE AT WESTVILLE	7.7	CENTERLINE	12-76
THENCE TO CLEMENTS BRIDGE	4.5	CENTERLINE	12-76
MANTUA CREEK			
CHANNEL ENTRANCE TO A POINT IN 39°50'36.4"N., 75°13'48.7"W.	16.5	CENTERLINE	3-76
THENCE TO FRIARS LANDING	7.6	CENTERLINE	3-76
THENCE TO PARKERS LANDING	5.3	CENTERLINE	3-76

NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGING CONDITIONS SUBSEQUENT TO THE ABOVE

Nautical Miles: 1 ½ 0 1 2 3

Yards: 1000 0 1000 2000 3000 4000 5000

LOGARITHMIC SPEED SCALE
1 2 3 4 5 6 7 8 9 10 15 20 25 30 40 50 60
To find SPEED, place one point of dividers on distance run (in any unit) and the other on minutes run. Without changing divider spread, place right point on 60 and left point will then indicate speed in units per hour. Example: with 4.0 nautical miles run in 15 minutes, the speed is 16.0 knots

ANCHORAGE AREAS
110.157 (see note A)
Limits and assigned numbers of anchorage areas are shown in magenta.

(6) (7) (8) (9) GENERAL ANCHORAGES

(10) NAVAL ANCHORAGE

NOTE A
Navigation regulations are published in Chapter 2, U.S. Coast Pilot 3. Additions or revisions to Chapter 2 are published in the Notices to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 5th Coast Guard District in Portsmouth, Virginia, or at the Office of the District Engineer, Corps of Engineers in Philadelphia, Pennsylvania.
Refer to charted regulation section numbers.

45th Ed., Sept. 16/95

12312

CAUTION
This chart has been corrected from the Notice to Mariners published weekly by the Defense Mapping Agency Hydrographic/Topographic Center and the Local Notice to Mariners issued periodically by each U.S. Coast Guard district to the date shown in the lower left hand corner.

This nautical chart has been designed to promote safe navigation. The National Ocean Service encourages users to submit corrections, additions, or comments for improving this chart to the Chief, Marine Chart Division (N/CS2), National Ocean Service, NOAA, Silver Spring, Maryland 20910-3282.

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

SOUNDINGS IN FEET

FATHOMS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
FEET	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102

METERS: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

(Delaware River, Wilmington to Philadelphia)
SOUNDINGS IN FEET-SCALE 1:40,000

12312

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