

SECTION I

Chart 11490 (Upper Panel)

NM 32/11

ST. JOHNS RIVER CHANNEL DEPTHS TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT OF APR 2006 AND SURVEYS TO MAR 2011								
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)
ST. JOHNS BAR CUT RANGE, EAST SECTION	36.6	36.6	42.8	36.5	11-10;2,3-11	800	3.2	42
ST. JOHNS BAR CUT RANGE, WEST SECTION	34.0	37.4	36.9	35.6	11-10;2,3-11	750-800	1.6	40
MAYPORT ENTRANCE CHANNEL	39.5	41.0	40.5	40.8	3-11	500	0.8	42
PILOT TOWN CUT RANGE	22.5	40.8	42.6	41.5	11-10;2-11	850-900	0.9	40

NOTES-(1) THE RANGE LIGHTS DO NOT IN EVERY INSTANCE MARK THE CENTERLINE OF THE CHANNEL.
NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

Chart 11491 (Side A)

NM 32/11

ST. JOHNS RIVER CHANNEL DEPTHS TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT OF APR 2006 AND SURVEYS TO MAR 2011								
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)
ST. JOHNS BAR CUT RANGE, EAST SECTION	36.6	39.6	42.8	36.5	11-10;2,3-11	800	3.2	42
ST. JOHNS BAR CUT RANGE, WEST SECTION	34.0	37.4	36.9	35.6	11-10;2,3-11	750-800	1.6	40
MAYPORT ENTRANCE CHANNEL	39.5	41.0	40.5	40.8	3-11	500	0.8	42
PILOT TOWN CUT RANGE	22.5	40.8	42.6	41.5	11-10;2-11	850-900	0.9	40
MAYPORT CUT RANGE	42.7	43.3	42.7	41.7	11-10	1025	0.5	40
SHERMAN CUT RANGE	42.6	43.1	42.9	35.9	11-10;2-11	625	0.4	40
MILE POINT LOWER RANGE AND TURN	41.2	40.8	38.3	25.3	11-10;2-11	625	0.8	40
TRAINING WALL REACH	40.7	41.3	38.3	39.2	11-10	475-625	1.2	40
SHORT CUT TURN	39.7	42.1	42.6	41.8	11-10	525-575	0.5	40
WHITE SHELLS CUT RANGE	39.7	40.3	42.2	42.2	11-10	525-900	0.7	40
ST. JOHNS BLUFF REACH	39.3	39.4	38.7	36.6	11-10;2-11	600-750	0.7	40
DAMES PT.-FULTON CUTOFF	36.6	39.8	40.4	40.3	11-10	475-875	2.5	40
DAMES PT. TURN	40.3	42.2	41.8	40.9	12-10	875-1175	0.4	40
QUARANTINE I. UPPER RANGE	39.7	41.8	42.7	35.7	12-10	525-950	0.8	40
BRILLS CUT RANGE	35.9	41.9	41.1	34.2	12-10;2-11	425-600	1.0	40
BROWARD POINT TURN	14.8	36.9	42.0	40.9	11-10;2-11	475-825	0.8	40
BLOUNT ISLAND CHANNEL	29.5	35.1	33.9	31.2	12-10;2-11	300-1000	1.8	38
BLOUNT ISLAND EAST CHANNEL	20.5	21.7	19.5	15.5	12-10	300	0.9	30

NOTE: THE RANGE LIGHTS DO NOT IN EVERY INSTANCE MARK THE CENTERLINE OF THE CHANNEL.
NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

Chart 11491 (Side B)

NM 32/11

ST. JOHNS RIVER CHANNEL DEPTHS TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT OF APR 2006 AND SURVEYS TO FEB 2011								
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)
QUARANTINE I. UPPER RANGE	39.7	41.8	42.7	35.7	12-10	525-950	0.8	40
BRILLS CUT RANGE	35.9	41.9	41.1	34.2	12-10;2-11	425-600	1.0	40
BROWARD POINT TURN	14.8	36.9	42.0	40.9	11-10;2-11	475-825	0.8	40
DRUMMOND CREEK RANGE	36.5	41.7	41.8	39.8	11-10;2-11	375-850	1.3	38-40
TROUT RIVER CUT RANGE	40.1	41.7 A	40.7	38.1	11-10	400-850	1.0	38
CHASEVILLE TURN	40.9	42.9	42.4	42.0	11-10	500-800	0.6	38
LONG BRANCH RANGE	38.0	40.1	39.6	34.6	11-10	650-1325	0.6	38
TERMINAL CHANNEL	23.8	27.6	22.7	18.7	12-10	550-1325	3.1	30-38

A: EXCEPT FOR A 36 FT OBSTRUCTION LOCATED BY AN NOS SURVEY AT 30°23'37.1" N, 081°37'25.6" W
NOTE: THE RANGE LIGHTS DO NOT IN EVERY INSTANCE MARK THE CENTERLINE OF THE CHANNEL.
NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

SECTION I

NM 32/11

Chart 11493

NM N32/11

ST. MARYS ENTRANCE AND CUMBERLAND SOUND CHANNEL DEPTHS TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT OF APR 2006 AND SURVEYS TO MAR 2011								
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)
ENTRANCE CHANNEL	44.0	46.1	49.0	42.1	2,3-11	500	8.3	46
RANGE A	42.6	47.0	46.2	42.5	3-11	482	1.34	42
RANGE A1, A2	44.9	44.2	42.0	38.2	3-11	591-834	0.66	42
RANGE B	46.8	47.0	47.0	40.3	3-11	582-655	0.55	42
RANGE C	31.8	42.3	45.8	43.1	3-11	498	1.19	42
RANGE D	33.8	41.3	40.4	41.3	3-11	489-498	1.35	42
RANGE E	43.6	43.1	42.9	38.4	3-11	512	0.87	42
RANGE F (WARRIOR REACH)	36.3	43.9	44.5	40.2	3-11	564-836	0.25	42
RANGE G (SOUTH TURNING BASIN)	23.1	39.0	42.7	43.0	3-11	661-1161	0.49	42
RANGE H (TENNESSEE REACH)	19.5	41.7	40.2	40.1	3-11	482-1197	0.83	42
RANGE I (NORTH TURNING BASIN)	42.6	43.2	43.5	23.4	3-11	493-1425	0.46	42

NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

Chart 11494

NM N32/11

ST. MARYS ENTRANCE AND CUMBERLAND SOUND CHANNEL DEPTHS TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT OF APR 2006 AND SURVEYS TO MAR 2011								
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)
ENTRANCE CHANNEL	44.0	46.1	49.0	42.1	2,3-11	500	8.3	46
QUARANTINE REACH **	---	---	---	---	10/2003	400-1100	1.67	35
RANGE A	42.6	47.0	46.2	42.5	3-11	482	1.34	42
RANGE A1, A2	44.9	44.2	42.0	38.2	3-11	591-834	0.66	42
RANGE B	46.8	47.0	47.0	40.3	3-11	582-655	0.55	42
RANGE C	31.8	42.3	45.8	43.1	3-11	498	1.19	42
RANGE D	33.8	41.3	40.4	41.3	3-11	489-498	1.35	42
RANGE E	43.6	43.1	42.9	38.4	3-11	512	0.87	42

NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

Chart 11503

NM 32/11

ST. MARYS ENTRANCE AND CUMBERLAND SOUND CHANNEL DEPTHS TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT OF APR 2006 AND SURVEYS TO MAR 2011								
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)
ENTRANCE CHANNEL	44.0	46.1	49.0	42.1	2,3-11	500	8.3	46
RANGE A	42.6	47.0	46.2	42.5	3-11	482	1.34	42
RANGE A1, A2	44.9	44.2	42.0	38.2	3-11	591-834	0.66	42
RANGE B	46.8	47.0	47.0	40.3	3-11	582-655	0.55	42
RANGE C	31.8	42.3	45.8	43.1	3-11	498	1.19	42
RANGE D	33.8	41.3	40.4	41.3	3-11	489-498	1.35	42
RANGE E	43.6	43.1	42.9	38.4	3-11	512	0.87	42
RANGE F (WARRIOR REACH)	36.3	43.9	44.5	40.2	3-11	564-836	0.25	42
RANGE G (SOUTH TURNING BASIN)	23.1	39.0	42.7	43.0	3-11	661-1161	0.49	42
RANGE H (TENNESSEE REACH)	19.5	41.7	40.2	40.1	3-11	482-1197	0.83	42
RANGE I (NORTH TURNING BASIN)	42.6	43.2	43.5	23.4	3-11	493-1425	0.46	42

NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

SECTION I

NM 32/11

Chart 11506

NM 32/11

BRUNSWICK HARBOR CHANNEL DEPTHS								
TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT OF MAY 2011								
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 (MILES)	DEPTH (MLLW) (FEET)
ENTRANCE THRU TURTLE RIVER								
ST. SIMONS RANGE (A)	J35.5	J38.0	38.0	35.0	5-11	500	9.7	38
PLANTATION CREEK RANGE (B)	35.5	40.0	42.0	40.0	5-11	400	1.8	36
JEKYLL ISLAND RANGE (C)	39.0	38.5	38.5	37.0	5-11	400	1.9	36
CEDAR HAMMOCK RANGE (D)	36.5	37.0	36.0	33.0	5-11	400	1.4	36
BRUNSWICK POINT CUT RANGE	35.5	36.0	38.0	37.0	5-11	400	2.4	36
TURTLE RIVER LOWER RANGE	36.0	37.5	37.0	37.0	5-11	400	1.8	36
BLYTHE ISLAND RANGE	30.0	29.0	27.0	28.5	5-11	300	1.5	30
TURTLE RIVER UPPER RANGE	30.5	30.0	28.0	27.0	5-11	300	2.7	30
EAST RIVER (E)								
ENTRANCE TO SECOND AVE (F)	37.5	38.0	38.5	37.0	5-11	400	1.2	37-41
SECOND AVE TO MAYOR'S POINT	K38.0	38.0	38.0	38.0	5-11	400	1.0	36
SOUTH BRUNSWICK RIVER (G & H)	35.0	37.0	37.0	36.0	5-11	400	1.3	36

A. THE ST. SIMONS RANGE WIDENER LEAST DEPTH WAS 33.0 FEET, LOCATED 50 FEET INSIDE THE CHANNEL LIMIT FROM THE RIGHT SIDE.

B. THE WIDENER AT INTERSECTION OF PLANTATION CREEK RANGE AND JEKYLL ISLAND RANGE LEAST DEPTHS WERE 44.5 FEET, LOCATED 100 FEET INSIDE THE CHANNEL LIMIT, AND 52.0 FEET, LOCATED 400 FEET INSIDE THE CHANNEL LIMIT FROM THE LEFT SIDE.

C. THE WIDENER AT INTERSECTION OF JEKYLL ISLAND RANGE AND CEDAR HAMMOCK RANGE LEAST DEPTH WAS 38.0 FEET, LOCATED 75 FEET INSIDE THE CHANNEL LIMIT FROM THE RIGHT SIDE.

D. THE WIDENER AT INTERSECTION OF CEDAR HAMMOCK RANGE AND BRUNSWICK POINT CUT RANGE LEAST DEPTH WAS 36.5 FEET, LOCATED 50 FEET INSIDE THE CHANNEL LIMIT FROM THE RIGHT SIDE.

E. THE EAST RIVER TURNING BASIN LEAST DEPTHS WERE 39.0 FEET 100 FEET FROM BACKSIDE, 39.0 FEET 400 FEET FROM BACKSIDE AND 38.0 FEET 600 FEET FROM BACKSIDE.

F. THE EAST RIVER ENTRANCE TO SECOND AVE WIDENER LEAST DEPTHS WERE 26.0 FEET LOCATED 50 FEET INSIDE THE CHANNEL LIMIT AND 35.5 FEET LOCATED 150 FEET INSIDE THE CHANNEL LIMIT FROM THE LEFT SIDE, AND 41.0 FEET LOCATED 50 FEET INSIDE THE CHANNEL LIMIT FROM THE RIGHT SIDE.

G. THE SOUTH BRUNSWICK RIVER TURNING BASIN LEAST DEPTHS WERE 41.0 FEET, 100 FEET AND 40.0 FEET, 400 FEET FROM THE LEFT SIDE AND 40.5 FEET, 100 FEET AND 40 FEET, 400 FEET FROM THE RIGHT SIDE.

H. THE SOUTH BRUNSWICK RIVER GPA DOCK LEAST DEPTHS WERE 33.0 FEET ALONG THE DOCK AND 32.0 FEET ON THE RIGHT SIDE.

J. EXCEPT FOR A 35 FEET OBSTRUCTION LOCATED BY A NOS SURVEY OF JUL 2006 AT 31°04'15.5"N, 081°16'57.4"W.

K. EXCEPT FOR A DANGEROUS WRECK LOCATED IN APPROXIMATE POSITION 31°08'49.8"N, 81°29'59.3"W.

NOTE - FOR THE LEFT OUTSIDE AND RIGHT OUTSIDE QUARTERS, DEPTHS GIVEN REPRESENT CONDITIONS 50 FEET INSIDE THE CHANNEL LIMITS. (EXCEPT FOR THE EAST RIVER TURNING BASIN)

NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

Chart 14815

NM 32/11

ROCHESTER HARBOR CHANNEL DEPTHS							
TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS APR 2011							
CONTROLLING DEPTHS FROM SEAWARD IN FEET AT GREAT LAKES LOW WATER DATUM (LWD)						PROJECT DIMENSIONS	
NAME OF CHANNEL	LEFT OUTSIDE QUARTER	MIDDLE HALF	RIGHT OUTSIDE QUARTER	DATE OF SURVEY	WIDTH (FEET)	LENGTH (FEET)	DEPTH (LWD) (FEET)
A. LAKE APPROACH CHANNEL	16.9	17.5	17.9	4-11	300	2800	22
B. ENTRANCE CHANNEL	10.6	15.3	12.6	4-11	200-600	4400	21
C. LOWER TURNING BASIN	3.8	4.6	10.8	4-11	200-600	4400	21
D. GENESEE RIVER	4.6	2.9	3.0	4-11	150-270	10800	21
E. UPPER TURNING BASIN		NOT SOUNDED			0-500	800	
F. GENESEE RIVER, UPSTREAM 1200 FEET OF NAVIGATION	11.4	11.9	10.0	4-11	150	1200	
G. UPPER TURNING BASIN	3.4	14.8	16.2	4-11	0-200	1150	21

NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

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NM 32/11

Chart 14835

NM 32/11

ERIE HARBOR CHANNEL DEPTHS								
TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT TO MAY 2011 AND SURVEYS TO MAY 2011								
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 (FEET)	DEPTH MLLW (FEET)
ENTRANCE CHANNEL A	22.9	23.4	22.9	13.0	4,5-11	500-220	10400(a)	29
ENTRANCE CHANNEL B	26.8	27.1	27.3	25.3	4,5-11	250-300	1500	28
NORTHEAST INNER HARBOR	18.2	23.9	24.3	22.8	4,5-11	2200	2200	28
SOUTHEAST INNER HARBOR	22.0	24.1	23.3	23.3	4,5-11	800	1200	27
MIDDLE INNER HARBOR	17.6	19.1	19.5	19.3	4,5-11	2400	1500	21
WEST INNER HARBOR	15.3	15.6	16.3	16.8	4,5-11	900-550	2000	18

(a) - LENGTH VARIES DEPENDING ON THE LOCATION OF THE 29 FOOT CONTOUR IN LAKE ERIE.
NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

Chart 14867 (Inset Saginaw River)

NM 32/11

SAGINAW RIVER CHANNEL DEPTHS							
TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO MAY 2011							
CONTROLLING DEPTHS FROM SEAWARD IN FEET AT GREAT LAKES LOW WATER DATUM (LWD)						PROJECT DIMENSIONS	
NAME OF CHANNEL	LEFT OUTSIDE QUARTER	MIDDLE HALF OF CHANNEL	RIGHT OUTSIDE QUARTER	DATE OF SURVEY	WIDTH (FEET)	LENGTH (STAT. MILES)	DEPTH LWD (FEET)
ENTRANCE CHANNEL	17.4	20.5	17.5	10-03;9-04;11-06;8-10	350	13.70	27
THENCE TO BUOY 28	23.2	24.5	22.9	4-10	200	0.47	26
THENCE TO ESSEXVILLE TURNING BASIN	24.6	23.4	18.6	5-11	200	2.27	25
ESSEXVILLE TURNING BASIN	19.5	20.4	13.7	5-11	630	0.37	25-20
THENCE TO RR BRIDGE AT MILE 4.94	21.0	21.9	20.7	5-11	200	2.05	25
THENCE TO AIRPORT TURNING BASIN	18.8	21.9	18.6	6,11-10, 5-11	200	3.90	22
THENCE TO BUOY 64	16.8	20.9	17.4	7-04; 6,8-10	200	3.20	22
THENCE TO N 43°28'52.4" W 83°54'48.0"	18.4	21.4	20.3	6,8-10	200	2.75	22
THENCE TO 6TH ST TURNING BASIN	18.6	20.7	16.2	7-09; 6,8-10	200	3.10	22
6TH ST TURNING BASIN	12.9	14.6	15.6	8-10	650	0.20	22
THENCE TO C&O RR BRIDGE	14.2	14.7	12.0	9-04; 8-10	200	0.17	22
THENCE TO CARROL ST.	15.4	15.6	13.0	10-77	200	0.30	16

NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

Chart 18502

NM 32/11

GRAYS HARBOR							
TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT OF SEP 2006 AND SURVEYS TO JUL 2009							
CONTROLLING DEPTHS FROM SEAWARD IN FEET AT MEAN LOWER LOW WATER (MLLW)						PROJECT DIMENSIONS	
NAME OF CHANNEL	LEFT OUTSIDE QUARTER	MIDDLE HALF OF CHANNEL	RIGHT OUTSIDE QUARTER	DATE OF SURVEY	WIDTH (FEET)	LENGTH (NAUT. MILES)	DEPTH MLLW (FEET)
BAR CHANNEL	45.1	46.2	44.9	7-09	1000	4.6	46
ENTRANCE CHANNEL	36.7	37.6	32.5	7-09	900-600	1.8	42
PT CHEHALIS REACH	33.6	35.1	29.3	7-09	600	1.2	40
SOUTH REACH	35.0	36.6	36.1	3,5-03; 7-09	600-350	4.1	36
CROSSOVER CHANNEL	35.0	37.4	36.1	11,12-04; 2,5-05	350-450	2.5	36
NORTH CHANNEL	37.1	37.5	33.0	1-05	450-350	2.4	36
HOQUIAM REACH	37.7	37.8	36.7	1-05	350	1.9	36
COW POINT REACH	34.4	36.0	31.3	11-04; 1-05	350-900	1.8	36
ABERDEEN REACH	28.2	31.4	28.6	6-99;8-01;2-03;11-04	550-200	2.6	32
TURNING BASIN	32.7	33.5	24.2	1-04	200-550	.3	32
THENCE TO COSMOPOLIS	26.5	26.9	27.7	1-02; 2-03	200	.8	32

NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

SECTION I

Chart 18521

NM 32/11

COLUMBIA RIVER CHANNEL DEPTHS ENTRANCE TO MILLER SANDS RANGE TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT OF MAR 31, 2011						
* SEE FOOTNOTES					PROJECT DIMENSIONS	
NAME OF CHANNEL	LEFT OUTSIDE QUARTER	LEFT INSIDE QUARTER	RIGHT INSIDE QUARTER	RIGHT OUTSIDE QUARTER	DATE OF SURVEY	WIDTH LENGTH DEPTH (FEET) (STAT. MILES) (FEET)
ENTRANCE RANGE	53	47	46	44	3-11	640 3.3 48
SAND ISLAND RANGE	54	48	48	44	3-11	640 2.2 48
LOWER DESDEMONA SHOAL	46	47	48	43	12-10	600 3.4 43
UPPER DESDEMONA SHOAL	41	44	45	44	3-11	600 3.6 43
TANSY POINT TURN AND RANGE	41	43	43	36	2-11	600 4.8 43
ASTORIA RANGE	43	44	44	43	2-11	600 2.7 43
TONGUE POINT CHANNEL	40	43	44	42	2-11	600 2.2 43
HARRINGTON POINT RANGE	41	42	42	36	2-11	600 2.6 43
MILLER SANDS RANGE	42	45	44	41	2-11	600 2.2 43

* CONTROLLING DEPTHS ROUNDED TO THE NEAREST FOOT
 * CONTROLLING DEPTHS IN CHANNELS ENTERING FROM SEAWARD IN FEET AT MEAN LOWER LOW WATER FROM THE ENTRANCE TO HARRINGTON POINT AND COLUMBIA RIVER DATUM ABOVE THAT POINT.
 NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

Chart 18523

NM 32/11

COLUMBIA RIVER CHANNEL DEPTHS MILLER SANDS RANGE TO GULL ISLAND TURN AND CHANNEL TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT OF MAR 31, 2011						
CONTROLLING DEPTHS FROM SEAWARD IN FEET AT COLUMBIA RIVER DATUM (CRD) * SEE FOOTNOTE					PROJECT DIMENSIONS	
NAME OF CHANNEL	LEFT OUTSIDE QUARTER	LEFT INSIDE QUARTER	RIGHT INSIDE QUARTER	RIGHT OUTSIDE QUARTER	DATE OF SURVEY	WIDTH LENGTH DEPTH (FEET) (STAT. MILES) (FEET)
MILLER SANDS RANGE	42	45	44	41	2-11	600 2.2 43
PILLAR ROCK LOWER RANGE	42	44	43	40	2-11	600 3.0 43
PILLAR ROCK UPPER RANGE	37	46	46	44	3-11	600 1.9 43
WELCH ISLAND REACH	45	48	45	36	3-11	600 3.2 43
SKAMOKAWA CHANNEL	40	44	43	37	3-11	600 3.3 43
STEAMBOAT REACH	46	45	45	41	3-11	600 1.4 43
PUGET ISLAND RANGE AND TURN	39	40	41	40	3-11	600 3.5 43
WAUNA RANGE	40	43	43	41	3-11	600 2.0 43
DRISCOLL RANGE	40	41	44	43	3-11	600 1.7 43
WESTPORT TURN AND RANGE	38	42	43	43	3-11	600 2.0 43
WESTPORT CHANNEL	38	42	41	40	3-11	600 2.4 43
EUREKA LOWER CHANNEL	44	43	46	46	3-11	600 2.1 43
EUREKA UPPER CHANNEL	42	43	43	42	3-11	600 0.8 43
OAK POINT CHANNEL	44	44	43	39	3-11	600 3.0 43
GULL ISLAND TURN AND CHANNEL	48	47	45	40	3-11	600 2.2 43

* CONTROLLING DEPTHS ROUNDED TO THE NEAREST FOOT
 NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES TO THE ABOVE INFORMATION

SECTION I

NM 32/11

Chart 18525

NM 32/11

COLUMBIA RIVER CHANNEL DEPTHS SAINT HELENS TURN TO TOMAHAWK BAR TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT OF MAR 31, 2011								
CONTROLLING DEPTHS IN FEET AT COLUMBIA RIVER DATUM (CRD) * SEE FOOTNOTE						PROJECT DIMENSIONS		
NAME OF CHANNEL	LEFT	LEFT	RIGHT	RIGHT	DATE OF SURVEY	WIDTH	LENGTH	DEPTH
	OUTSIDE	INSIDE	INSIDE	OUTSIDE		(FEET)	(STAT. MILES)	CRD (FEET)
QUARTER	QUARTER	QUARTER	QUARTER	QUARTER				
ST. HELENS TURN	42	41	43	39	3-11	600	1.7	43
WARRIOR ROCK RANGE	41	45	45	44	3-11	600	1.3	43
DUCK CLUB TURN	40	45	44	45	3-11	600	1.4	43
HENRICI RANGE	40	43	43	41	3-11	600	2.6	43
FALES CHANNEL	43	43	42	41	3-11	600	1.1	43
KNAPP POINT CHANNEL	42	44	43	42	3-11	600	1.8	43
WILLOW LOWER RANGE	42	43	42	40	3-11	600	2.1	43
WILLOW UPPER RANGE	41	43	43	44	3-11	600	1.1	43
MORGAN BAR	43	48	49	50	3-11	600	1.0	43
MORGAN CHANNEL	46	46	45	44	3-11	600	1.5	43
VANCOUVER LOWER CHANNEL	47	48	48	49	3-11	500	1.0	43
VANCOUVER RANGE	45	43	43	43	3-11	500	1.3	43
VANCOUVER UPPER CHANNEL	47	46	44	45	3-11	500	0.9	43
VANCOUVER LOWER TURNING BASIN	33	39	45	44	3-11	800	1.0	43
VANCOUVER UPPER TURNING BASIN	28	27	27	28	3-11	800	0.9	35
TOMAHAWK BAR	17	17	17	18	9-10	300	3.7	27

* CONTROLLING DEPTHS ROUNDED TO THE NEAREST FOOT
NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

Chart 18526

NM 32/11

COLUMBIA RIVER CHANNEL DEPTHS MORGAN CHANNEL TO TOMAHAWK BAR TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT OF MAR 31, 2011								
CONTROLLING DEPTHS FROM SEAWARD IN FEET AT COLUMBIA RIVER DATUM (CRD) * SEE FOOTNOTE						PROJECT DIMENSIONS		
NAME OF CHANNEL	LEFT	LEFT	RIGHT	RIGHT	DATE OF SURVEY	WIDTH	LENGTH	DEPTH
	OUTSIDE	INSIDE	INSIDE	OUTSIDE		(FEET)	(STAT. MILES)	CRD (FEET)
QUARTER	QUARTER	QUARTER	QUARTER	QUARTER				
MORGAN CHANNEL	46	46	45	44	3-11	600	1.5	43
VANCOUVER LOWER CHANNEL	47	48	48	49	3-11	500	1.0	43
VANCOUVER RANGE	45	43	43	43	3-11	500	1.3	43
VANCOUVER UPPER CHANNEL	47	46	44	45	3-11	500	0.9	43
VANCOUVER LOWER TURNING BASIN	33	39	45	44	3-11	800	1.0	43
VANCOUVER UPPER TURNING BASIN	28	27	27	28	3-11	800	0.9	35
TOMAHAWK BAR	17	17	17	18	9-10	300	3.7	27

* CONTROLLING DEPTHS ROUNDED TO THE NEAREST FOOT
NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

Chart 18584

NM 32/11

UMPQUA RIVER CHANNEL DEPTHS								
TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT OF MAR 2011 AND SURVEYS TO MAR 2011								
CONTROLLING DEPTHS FROM SEAWARD IN FEET AT MEAN LOWER LOW WATER (MLLW)						PROJECT DIMENSIONS		
NAME OF CHANNEL	LEFT OUTSIDE QUARTER	MIDDLE HALF OF CHANNEL	RIGHT OUTSIDE QUARTER	DATE OF SURVEY	WIDTH (FEET)	LENGTH (MILES)	DEPTH MLLW (FEET)	
UMPQUA RIVER ENTRANCE								
ENTRANCE CHANNEL	19	22	24	1-11	—	1.2	26	
UMPQUA RIVER TURN	18	23	23	1-11	200	1.3	22	
SALMON HARBOR REACH	22	21	21	3-11	200	2.1	22	
BARRETT'S RANGE	19	20	20	3-11	200	2.0	22	
MILE SIX BAR	21	21	21	3-11	200	2.2	22	
CANNERY SANDS								
JCT TO LEEDS ISLAND LIGHT	15	16	14	10-10	200	1.8	22	
GARDINER CHANNEL	13	12	10	11-09	200	1.2	22	
TURNING BASIN	7	3	3	11-09	—	0.2	22	
REEDSPORT REACH								
CHANNEL (9.65-10.8)	16	17	17	10-10	200	1.15	22	
TURNING BASIN	22	25	24	10-10	600	0.2	22	
CHANNEL (11.0-11.8)	12	12	7	10-10	200	0.8	22	
WINCHESTER BAY								
WEST CHANNEL	10	11	12	1-11	100	0.9	16	
EAST CHANNEL (0.0-0.7)	15	12	14	1-11	100	0.9	16	
EAST CHANNEL (0.7-0.9)	—	5	—	1-11	75	—	12	

NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

Chart 18649

NM 32/11

RICHMOND HARBOR AND SOUTHAMPTON SHOAL CHANNEL DEPTHS								
TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO JAN 2011								
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)
SOUTHAMPTON SHOAL CHANNEL	44	45	46	44	3-10	600	1.1	45
RICHMOND HARBOR								
ENTRANCE CHANNEL	36	36	36	36	12-10; 1-11	600-550	1.0	38
POINT POTRERO REACH	35	36	36	34	12-10; 1-11	500-600	1.4	38
POINT POTRERO TURN	36	37	37	37	5-10	600-1250	0.6	38
HARBOR CHANNEL	37	38	37	37	5-10	850-200	0.5	38
SANTA FE CHANNEL	27	29	29	26	9-09; 5-10	200	0.5	38-30
TURNING BASIN	27	28	27	21	9-09	200-500	0.16	30

NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

Chart 18649

NM 32/11

OAKLAND OUTER AND INNER HARBORS								
TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO MAR 2011								
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)
BAR CHANNEL	46.0	47.0	48.0	47.0	11-10; 1,3-11	1000-930	0.57	50
OUTER HARBOR ENTRANCE CHANNEL	48.0	48.0	48.0	48.0	2,3-11	900-600	0.91	50
OUTER HARBOR	39.0	40.0	40.0	39.0	2-10; 2,3-11	1575-600	1.40	50
INNER HARBOR								
ENTRANCE CHANNEL	45.0	47.0	46.0	38.0	11-10; 1,3-11	2100-480	1.10	50
INNER HARBOR REACH	48.0	48.0	48.0	36.0	1,3-11	1325-480	2.27	50
GROVE ST PIER TO								
BROOKLYN BASIN	A26.0	31.0	32.0	B27.0	2,12-10; 1-11	600	1.30	35
BROOKLYN BASIN SOUTH CHANNEL	C12.0	21.0	23.0	D15.0	12-10	600-500	0.90	35
PARK ST BRIDGE REACH	11.0	22.0	23.0	11.3	7-88; 12-10	500-275	0.42	35

A. A DEPTH OF 31.0 FEET WAS AVAILABLE IN THE INSIDE HALF OF THE QUARTER.
 B. A DEPTH OF 32.0 FEET WAS AVAILABLE IN THE INSIDE HALF OF THE QUARTER.
 C. A DEPTH OF 18.0 FEET WAS AVAILABLE IN THE INSIDE HALF OF THE QUARTER.
 D. A DEPTH OF 19.0 FEET WAS AVAILABLE IN THE INSIDE HALF OF THE QUARTER.
 NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

SECTION I

Chart 18650

NM 32/11

OAKLAND OUTER AND INNER HARBORS								
TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO MAR 2011								
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)
BAR CHANNEL	46.0	47.0	48.0	47.0	11-10;1,3-11	1000-930	0.57	50
OUTER HARBOR ENTRANCE CHANNEL	48.0	48.0	48.0	48.0	2,3-11	900-600	0.91	50
OUTER HARBOR	39.0	40.0	40.0	39.0	2-10; 2,3-11	1575-600	1.40	50
INNER HARBOR								
ENTRANCE CHANNEL	45.0	47.0	46.0	38.0	11-10; 1,3-11	2100-480	1.10	50
INNER HARBOR REACH	48.0	48.0	48.0	38.0	1,3-11	1325-480	2.27	50
GROVE ST PIER TO BROOKLYN BASIN	A26.0	31.0	32.0	B27.0	2,12-10; 1-11	600	1.30	35
BROOKLYN BASIN SOUTH CHANNEL	C12.0	21.0	23.0	D15.0	12-10	600-500	0.90	35
PARK ST BRIDGE REACH	11.0	22.0	23.0	11.3	7-86;12-10	500-275	0.42	35

A. A DEPTH OF 31.0 FEET WAS AVAILABLE IN THE INSIDE HALF OF THE QUARTER.
 B. A DEPTH OF 32.0 FEET WAS AVAILABLE IN THE INSIDE HALF OF THE QUARTER.
 C. A DEPTH OF 18.0 FEET WAS AVAILABLE IN THE INSIDE HALF OF THE QUARTER.
 D. A DEPTH OF 19.0 FEET WAS AVAILABLE IN THE INSIDE HALF OF THE QUARTER.
 NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

Chart 18653

NM 32/11

RICHMOND HARBOR AND SOUTHAMPTON SHOAL CHANNEL DEPTHS								
TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO JAN 2011								
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)
SOUTHAMPTON SHOAL CHANNEL	44	45	46	44	3-10	600	1.1	45
RICHMOND HARBOR								
ENTRANCE CHANNEL	36	36	36	36	12-10; 1-11	600-550	1.0	38
POINT POTRERO REACH	35	36	36	34	12-10; 1-11	500-600	1.4	38
POINT POTRERO TURN	36	37	37	37	5-10	600-1250	0.6	38
HARBOR CHANNEL	37	38	37	37	5-10	850-200	0.5	38
SANTA FE CHANNEL	27	29	29	26	9-09; 5-10	200	0.5	38-30
TURNING BASIN	27	28	27	21	9-09	200-500	0.16	30

NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

Chart 18773

NM 32/11

SAN DIEGO HARBOR CHANNEL DEPTHS								
TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO OCT 2010								
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 (FEET)	DEPTH MLLW (FEET)
SAN DIEGO HARBOR								
ENTRANCE CHANNEL	45.8	46.6	46.2	A45.0	8-09	800	12,700	47
NORTH BAY CHANNEL	B42.7	46.9	46.9	42.0	8-09, 10-10	600-900	24,900	47

A. SHOALING TO 37.7 FEET IN THE OUTER 100 FEET OF QUARTER.
 B. SHOALING TO 38.0 FEET IN THE OUTER 50 FEET OF QUARTER FROM 32°43'06.0"N, 117°11'32.7"W TO 32°42'38.8"N, 117°10'46.0"W.
 NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION