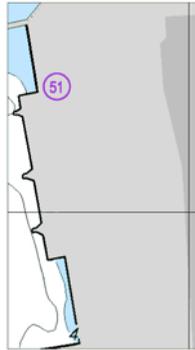


Chart 44443 NM N40/11



SECTION I

NM 40/11

Chart 11322 (Side B)

NM 40/11

FREEPORT HARBOR CHANNEL DEPTHS								
TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT OF JUL 2011								
CONTROLLING DEPTHS FROM SEAWARD IN FEET AT MEAN LOW TIDE (MLT)						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)
OUTER BAR CHANNEL	40.4	43.6	44.3	42.5	7-11	400	4.92	47
JETTY CHANNEL	42.2	43.0	42.9	40.7	7-11	400	1.35	45
LOWER TURNING BASIN	46.0	47.6	46.7	44.5	7-11	750	0.13	45
CHANNEL TO BRAZOSPORT TURNING BASIN	47.9	49.4	49.5	48.9	7-11	400-600	0.48	45
BRAZOSPORT TURNING BASIN CHANNEL TO UPPER TURNING BASIN	50.4	49.8	49.3	48.7	7-11	500-1000	0.28	45
UPPER TURNING BASIN	47.1	47.8	48.1	45.9	7-11	280-750	1.03	45
BRAZOS HARBOR APPROACH CHANNEL	46.2	48.2	49.2	47.6	7-11	600-1190	0.18	45
BRAZOS HARBOR TURNING BASIN	36.4	38.0	39.2	39.5	7-11	200-650	0.53	36
CHANNEL TO STAUFFER TURNING BASIN	33.6	37.4	38.3	39.5	7-11	750	0.11	36
STAUFFER TURNING BASIN	17.0	19.0	19.0	17.5	11-88	200	1.0	25
	18.0	18.0	18.0	16.0	11-88	500	0.1	25

INFORMATION IN THIS TABULATION HAS BEEN PROVIDED TO NOAA BY THE U.S. ARMY CORPS OF ENGINEERS. DEPTHS ARE REFERENCED TO A LOCAL DREDGING REFERENCE CALLED MEAN LOW TIDE. FOR AN APPROXIMATE CONVERSION TO MEAN LOWER LOW WATER, ADD 1 FOOT TO EACH DEPTH IN THE TABULATION.

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

Chart 11323

NM 40/11

GALVESTON BAY ENTRANCE - CHANNEL DEPTHS								
TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT OF JUL 2011								
CONTROLLING DEPTHS FROM SEAWARD IN FEET AT MEAN LOW TIDE (MLT).						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 CHANNEL	44.0	49.0	49.0	41.0	5-11	800-1000	8.6	47
OUTER BAR CHANNEL	42.0	49.0	49.0	50.0	4-11	800	1.7	47
INNER BAR CHANNEL	42.0	49.0	49.0	40.0	4-11	800	3.3	47
ANCHORAGE BASIN A	39.1	37.9	35.9	30.2	4-11	3100	1.9	34

INFORMATION IN THIS TABULATION HAS BEEN PROVIDED TO NOAA BY THE U.S. ARMY CORPS OF ENGINEERS. DEPTHS ARE REFERENCED TO A LOCAL DREDGING REFERENCE CALLED MEAN LOW TIDE. FOR AN APPROXIMATE CONVERSION TO MEAN LOWER LOW WATER, ADD 1 FOOT TO EACH DEPTH IN THE TABULATION.

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

SECTION I

NM 40/11

Chart 11325

NM 40/11

HOUSTON SHIP CHANNEL DEPTHS							
TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT OF JUL 2011							
CONTROLLING DEPTHS FROM SEAWARD IN FEET AT MEAN LOW TIDE (MLT).						PROJECT DIMENSIONS	
NAME OF CHANNEL	LEFT OUTSIDE QUARTER	LEFT INSIDE QUARTER	RIGHT INSIDE QUARTER	RIGHT OUTSIDE QUARTER	DATE OF SURVEY	WIDTH (FEET)	DEPTH MLLV (FEET)
HOUSTON SHIP CHANNEL: EXXON OIL CO. SLIP							
TO CARPENTERS BAYOU (A)	36.0	48.0	45.0	36.0	3-11	400-525	45
CARPENTER BAYOU TO GREENS BAYOU (B)	41.0	43.0	40.0	40.0	3-11	400-300	40-45
ENTRANCE TO GREENS BAYOU TO FIRST BEND ABOVE MOUTH	37.6	39.0	39.4	34.2	4-11	500-175	0.37 36
GREENS BAYOU TO HUNTING BAYOU (UPPER BEND)	35.0	38.0	40.0	36.0	4-11	300	2.20 40
TURNING POINT AT HUNTING BAYOU	32.2	35.3	40.0	40.0	4-11	600	0.26 40
HUNTING BAYOU TO SOUTHERN PACIFIC SLIP	32.9	36.7	39.1	32.4	4-11	300	3.50 40
TURNING POINT AT CLINTON ISLAND	32.0	36.0	36.0	33.0	4-11	700	0.30 40
SOUTHERN PACIFIC SLIP TO TURNING BASIN WHARF 15	36.0	36.0	36.0	36.0	4-11	300	2.98 36
TURNING POINT AT BRADY ISLAND	38.0	38.0	38.0	38.0	4-11	422	0.21 36
HOUSTON TURNING BASIN	33.0	33.0	31.0	29.0	4-11	250-1000	0.58 36
UPPER TURNING BASIN	31.0	31.0	34.0	32.0	4-11	150	0.26 36

A. CHANNEL WIDENS 125 FEET IN LEFT OUTSIDE QUARTER IN VICINITY OF EXXON OIL CO.
B. CHANNEL NARROWS IN VICINITY OF THE SHELL OIL CO. SLIP.

INFORMATION IN THIS TABULATION HAS BEEN PROVIDED TO NOAA BY THE U.S. ARMY CORPS OF ENGINEERS. DEPTHS ARE REFERENCED TO A LOCAL DREDGING REFERENCE CALLED MEAN LOW TIDE. FOR AN APPROXIMATE CONVERSION TO MEAN LOWER LOW WATER, ADD 1 FOOT TO EACH DEPTH IN THE TABULATION.

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

Chart 12222

NM 40/11

NORFOLK HARBOR AND APPROACHES							
TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO MAR 2011							
CONTROLLING DEPTHS FROM SEAWARD IN FEET AT MEAN LOWER LOW WATER (MLLV)						PROJECT DIMENSIONS	
NAME OF CHANNEL	LEFT OUTSIDE QUARTER	LEFT INSIDE QUARTER	RIGHT INSIDE QUARTER	RIGHT OUTSIDE QUARTER	DATE OF SURVEY	WIDTH (FEET)	DEPTH (NAUT. MILES) MLLV (FEET)
THIMBLE SHOAL CHANNEL (A)	48.2	50.4	50.7	45.3	4,5,7-09	1000	13.0 55
NORTH AUXILIARY CHANNEL (B)						450	32
SOUTH AUXILIARY CHANNEL (B)						450	32
NORFOLK HARBOR							
ENTRANCE REACH	50.0	52.4	52.6	51.8	7-10	1000-1440	1.4 50
NORFOLK HARBOR REACH	48.4	48.5	49.6	47.2	10,11,12-09	1250-800	3.8 55
CRANEY ISLAND REACH	48.9	48.5	49.9	49.0	10,11,12-09	800	2.1 55
LAMBERT BEND	43.0	43.0	43.0	41.6	1-10	750	0.3 45
LAMBERT BEND TO PINNER POINT	42.6	43.0	43.0	40.4	1-10	750	1.0 45
PINNER POINT TO TOWN PT REACH	37.2	40.0	40.0	39.2	1-10	750	1.0 45
NEWPORT NEWS CHANNEL	47.7	49.7	49.4	48.8	4-10	800	4.2 55
CAPE HENRY CHANNEL	44.6	48.6	47.9	44.0	10,11,12-10; 3-11	1000	4.0 50
YORK SPIT CHANNEL	45.0	49.0	49.0	47.0	5-08	1000D	18.4 50

A. CHANNEL IS RESTRICTED TO EXCLUDE VESSELS AND TOWS DRAWING LESS THAN 25 FEET. CHANNEL MAINTAINED TO 50 FEET.
B. PROJECT MAINTENANCE DISCONTINUED
C. 51 FOOT OBSTRUCTION LOCATED AT 36°57'12.4"N, 76°24'45.1"W.
D. CHANNEL WIDTH MAINTAINED TO 800 FEET

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

SECTION I

Chart 12245

NM 40/11

NORFOLK HARBOR AND NEWPORT NEWS CHANNEL DEPTHS TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO JUL 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 (NAUT. MILES)	DEPTH MLLW (FEET)
NORFOLK HARBOR ENTRANCE REACH	50.0	52.4	52.6	51.8	7-10	1000-1440	1.4	50
NORFOLK HARBOR REACH	49.4	49.5	49.6	47.2	10,11,12-09	1250-800	3.8	55
CRANEY ISLAND REACH	48.9	48.5	49.9	49.0	10,11,12-09	800	2.1	55
NEWPORT NEWS CHANNEL	47.7	A49.7	49.4	48.8	4-10	800	4.2	55
A. 51 FOOT OBSTRUCTION LOCATED AT 36°57'12.4"N, 76°24'45.1"W. NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION								

Chart 12256

NM 40/11

NORFOLK HARBOR AND APPROACHES TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO JUL 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 (NAUT. MILES)	DEPTH MLLW (FEET)
THIMBLE SHOAL CHANNEL (A)	48.2	50.4	50.7	45.3	4,5,7-09	1000	13.0	55
NORTH AUXILIARY CHANNEL (B)						450		32
SOUTH AUXILIARY CHANNEL (B)						450		32
NORFOLK HARBOR ENTRANCE REACH	50.0	52.4	52.6	51.8	7-10	1000-1440	1.4	50
A. CHANNEL IS RESTRICTED TO EXCLUDE VESSELS AND TOWS DRAWING LESS THAN 25 FEET. CHANNEL MAINTAINED TO 50 FEET. B. PROJECT MAINTENANCE DISCONTINUED NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION								

Chart 12273

NM 40/11

CHESAPEAKE AND DELAWARE CANAL CHANNEL DEPTHS TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT OF MAY 2011								
CONTROLLING DEPTHS IN FEET AT LOCAL MEAN LOWER LOW WATER *						PROJECT DIMENSIONS		
NAME OF CHANNEL	LEFT OUTSIDE QUARTER	MIDDLE HALF OF CHANNEL	RIGHT OUTSIDE QUARTER	DATE OF SURVEY	WIDTH (FEET)	LENGTH (NAUT. MILES)	DEPTH (FEET)	
3400 YARDS SOUTH OF POOLES ISLAND TO THE SOUTH END OF POOLES ISLAND	36.2	37.1	37.0	5-11	400	1.88	35	
SOUTH END OF POOLES ISLAND TO WORTON POINT	36.6	36.2	35.0	4-11	400	4.28	35	
WORTON POINT TO HOWELL POINT	37.3	38.1	38.3	4-11	400	4.75	35	
HOWELL POINT TO GROVE POINT	37.0	38.3	37.1	4-11	400	3.37	35	
GROVE POINT TO TURKEY POINT	36.1	34.0	30.1	4-11	400	3.40	35	
TURKEY POINT TO OLD TOWN POINT WHARF	33.2	35.0	30.4	4-11	400	5.45	35	
OLD TOWN POINT WHARF TO BULL MINNOW POINT	33.5	35.0	35.6	4-11	400	1.79	35	
BULL MINNOW POINT TO CHESAPEAKE CITY BRIDGE	A25.2	32.0	A25.8	3-11	400	3.53	35	
CHESAPEAKE CITY BRIDGE TO BETHEL	30.9	32.1	28.9	3-11	400	1.52	35	
* ENTERING FROM CHESAPEAKE BAY. A. SOUNDINGSS ARE 25 FEET NEAR THE EDGE. NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION								

SECTION I

NM 40/11

Chart 12274

NM 40/11

CHESAPEAKE AND DELAWARE CANAL CHANNEL DEPTHS							
TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT OF MAY 2011							
CONTROLLING DEPTHS IN FEET AT LOCAL MEAN LOWER LOW WATER *					PROJECT DIMENSIONS		
NAME OF CHANNEL	LEFT OUTSIDE QUARTER	MIDDLE HALF OF CHANNEL	RIGHT OUTSIDE QUARTER	DATE OF SURVEY	WIDTH (FEET)	LENGTH (NAUT. MILES)	DEPTH (FEET)
SOUTH END OF POOLIS ISLAND TO WORTON POINT	36.6	36.2	35.0	4-11	400	4.28	35
WORTON POINT TO HOWELL POINT	37.3	38.1	36.3	4-11	400	4.75	35
HOWELL POINT TO GROVE POINT	37.0	38.3	37.1	4-11	400	3.37	35
GROVE POINT TO TURKEY POINT	36.1	34.0	30.1	4-11	400	3.40	35
TURKEY POINT TO OLD TOWN POINT WHARF	33.2	35.0	30.4	4-11	400	5.45	35
OLD TOWN POINT WHARF TO BULL MINNOW POINT	33.5	35.0	35.6	4-11	400	1.79	35
BULL MINNOW POINT TO CHESAPEAKE CITY BRIDGE	A25.2	32.0	A25.8	3-11	400	3.53	35
CHESAPEAKE CITY BRIDGE TO BETHEL	30.9	32.1	26.9	3-11	400	1.52	35

* ENTERING FROM CHESAPEAKE BAY.
A. SOUNDINGS ARE 25 FEET NEAR THE EDGE.
NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

Chart 12277

NM 40/11

CHESAPEAKE AND DELAWARE CANAL CHANNEL DEPTHS							
TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT OF MAY 2011							
CONTROLLING DEPTHS IN FEET AT LOCAL MEAN LOWER LOW WATER *					PROJECT DIMENSIONS		
NAME OF CHANNEL	LEFT OUTSIDE QUARTER	MIDDLE HALF OF CHANNEL	RIGHT OUTSIDE QUARTER	DATE OF SURVEY	WIDTH (FEET)	LENGTH (NAUT. MILES)	DEPTH (FEET)
TURKEY POINT TO OLD TOWN POINT WHARF	33.2	35.0	30.4	4-11	400	5.45	35
OLD TOWN POINT WHARF TO BULL MINNOW POINT	33.5	35.0	35.6	4-11	400	1.79	35
BULL MINNOW POINT TO CHESAPEAKE CITY BRIDGE	A25.2	32.0	A25.8	3-11	400	3.53	35
CHESAPEAKE CITY BRIDGE TO BETHEL	30.9	32.1	26.9	3-11	400	1.52	35
BETHEL TO GUTHRIES RUN	30.8	33.4	30.5	3-11	400	1.13	35
GUTHRIES RUN TO SUMMIT BRIDGE	31.3	33.8	32.7	3-11	400	1.02	35
SUMMIT BRIDGE TO CONRAIL BRIDGE	34.6	33.4	31.2	3-11	400	1.65	35
CONRAIL BRIDGE TO ST. GEORGES BRIDGE	33.0	36.8	33.4	3-11	400	2.27	35
ST. GEORGES BRIDGE TO BIDDLE POINT	30.3	33.9	32.4	3-11	400	1.87	35
BIDDLE POINT TO REEDY POINT BRIDGE	32.2	35.2	35.0	3-11	400	1.68	35
REEDY POINT BRIDGE TO DELAWARE RIVER	33.2	33.1	31.1	3-11	400	1.63	35

* ENTERING FROM CHESAPEAKE BAY.
A. SOUNDINGS ARE 25 FEET NEAR THE EDGE.
NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

SECTION I

Chart 14926 (Page 25)

NM 40/11

CALUMET HARBOR CHANNEL DEPTHS						
TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO JUL 2010						
CONTROLLING DEPTHS FROM SEAWARD IN FEET AT GREAT LAKES LOW WATER DATUM (LWD)					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 LWD (FEET)
ENTRANCE TO BKW S END LT	25.0	27.0	27.0	28.0	7-10	3000-3200 2.24 29
BKW S END LT TO RIVER ENTR LT	B24.0	25.0	24.0	23.0	9-09; 7-10	300-3000 2.00 28
RIVER ENTR LT TO INTERSTATE 90 BRIDGE	12.0	11.0	24.0	14.0	9-09; 7-10	100-300 1.44 27
INTERSTATE 90 BRIDGE TO 106th ST BRIDGE	C14.0	25.0	27.0	14.0	9-09; 7-10	160-320 1.09 27
106th ST BRIDGE TO TURNING BASIN NO 3 (A)	10.0	24.0	26.0	D14.0	7-10	160-400 1.95 27
TURNING BASIN NO 3 TO TURNING BASIN NO 5	E13.0	24.0	25.0	21.0	7-10	200-650 1.47 27
TURNING BASIN NO 5 TO SLIP NO 1	F22.0	26.0	25.0	G21.0	7-10	400-1200 .98 27
SLIP NO 1 TO END	H21.0	I22.0	J23.0	K20.0	7-10	1000-1200 .37 27

A. USACE ONLY MAINTAINS A WIDTH OF 200 FEET FROM 41°42'08.6"N 87°32'48.1"W TO 41°41'59.3"N 87°33'05.8"W.
 B. SHOALING TO 18.0 FEET IN OUTSIDE 20 FEET OF QUARTER.
 C. SHOALING TO 10.0 FEET IN OUTSIDE 20 FEET OF QUARTER.
 D. SHOALING TO 9.0 FEET IN OUTSIDE 20 FEET OF QUARTER.
 E. SHOALING TO 9.0 FEET IN OUTSIDE 20 FEET OF QUARTER
 F. SHOALING TO 10.0 FEET IN OUTSIDE 35 FEET OF QUARTER.
 G. SHOALING TO 11.0 FEET IN OUTSIDE 20 FEET OF QUARTER.
 H. SHOALING TO 7.0 FEET IN OUTSIDE 100 FEET OF QUARTER AND WITHIN LAST 50 FEET OF QUARTER.
 I. SHOALING TO 4.0 FEET WITHIN LAST 100 FEET OF QUARTER.
 J. SHOALING TO 4.0 FEET WITHIN LAST 100 FEET OF QUARTER.
 K. SHOALING TO 12.0 FEET IN OUTSIDE 15 FEET OF QUARTER AND WITHIN LAST 20 FEET OF QUARTER.

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

Chart 14929

NM 40/11

CALUMET HARBOR CHANNEL DEPTHS						
TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO JUL 2010						
CONTROLLING DEPTHS FROM SEAWARD IN FEET AT GREAT LAKES LOW WATER DATUM (LWD)					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 LWD (FEET)
ENTRANCE TO BKW S END LT	25.0	27.0	27.0	28.0	7-10	3000-3200 2.24 29
BKW S END LT TO RIVER ENTR LT	B24.0	25.0	24.0	23.0	9-09; 7-10	300-3000 2.00 28
RIVER ENTR LT TO INTERSTATE 90 BRIDGE	12.0	11.0	24.0	14.0	9-09; 7-10	100-300 1.44 27
INTERSTATE 90 BRIDGE TO 106th ST BRIDGE	C14.0	25.0	27.0	14.0	9-09; 7-10	160-320 1.09 27
106th ST BRIDGE TO TURNING BASIN NO 3 (A)	10.0	24.0	26.0	D14.0	7-10	160-400 1.95 27
TURNING BASIN NO 3 TO TURNING BASIN NO 5	E13.0	24.0	25.0	21.0	7-10	200-650 1.47 27
TURNING BASIN NO 5 TO SLIP NO 1	F22.0	26.0	25.0	G21.0	7-10	400-1200 .98 27
SLIP NO 1 TO END	H21.0	I22.0	J23.0	K20.0	7-10	1000-1200 .37 27

A. USACE ONLY MAINTAINS A WIDTH OF 200 FEET FROM 41°42'08.6"N 87°32'48.1"W TO 41°41'59.3"N 87°33'05.8"W.
 B. SHOALING TO 18.0 FEET IN OUTSIDE 20 FEET OF QUARTER.
 C. SHOALING TO 10.0 FEET IN OUTSIDE 20 FEET OF QUARTER.
 D. SHOALING TO 9.0 FEET IN OUTSIDE 20 FEET OF QUARTER.
 E. SHOALING TO 9.0 FEET IN OUTSIDE 20 FEET OF QUARTER
 F. SHOALING TO 10.0 FEET IN OUTSIDE 35 FEET OF QUARTER.
 G. SHOALING TO 11.0 FEET IN OUTSIDE 20 FEET OF QUARTER.
 H. SHOALING TO 7.0 FEET IN OUTSIDE 100 FEET OF QUARTER AND WITHIN LAST 50 FEET OF QUARTER.
 I. SHOALING TO 4.0 FEET WITHIN LAST 100 FEET OF QUARTER.
 J. SHOALING TO 4.0 FEET WITHIN LAST 100 FEET OF QUARTER.
 K. SHOALING TO 12.0 FEET IN OUTSIDE 15 FEET OF QUARTER AND WITHIN LAST 20 FEET OF QUARTER.

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

SECTION I

NM 40/11

Chart 18521

NM 40/11

COLUMBIA RIVER CHANNEL DEPTHS ENTRANCE TO MILLER SANDS RANGE								
TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT OF JUL 19, 2011								
* SEE FOOTNOTES						PROJECT DIMENSIONS		
NAME OF CHANNEL	LEFT OUTSIDE QUARTER	LEFT INSIDE QUARTER	RIGHT INSIDE QUARTER	RIGHT OUTSIDE QUARTER	DATE OF SURVEY	WIDTH (FEET)	LENGTH (STAT. MILES)	DEPTH CRD (FEET)
ENTRANCE RANGE **	50	48	47	45	7-11	640	3.3	48
	57	56	54	52	7-11	2000	3.3	55
SAND ISLAND RANGE **	49	47	46	44	7-11	640	2.2	48
	54	56	53	51	7-11	2000	2.2	55
LOWER DESDEMONA SHOAL	46	47	49	47	6-11	600	3.4	43
UPPER DESDEMONA SHOAL	43	44	45	43	6-11	600	3.6	43
TANSY POINT TURN AND RANGE	38	41	42	35	7-11	600	4.8	43
ASTORIA RANGE	42	43	44	43	7-11	600	2.7	43
TONGUE POINT CHANNEL	39	42	43	42	7-11	600	2.2	43
HARRINGTON POINT RANGE	40	41	41	33	7-11	600	2.6	43
MILLER SANDS RANGE	41	44	42	36	6-11	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.
** CHANNEL WIDTH IS 2640 FEET WITH TWO CONTROLLING DEPTHS, NORTHERN WIDTH IS 2000 FEET AND SOUTHERN WIDTH IS 640 FEET.
NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

Chart 18523

NM 40/11

COLUMBIA RIVER CHANNEL DEPTHS MILLER SANDS RANGE TO GULL ISLAND TURN AND CHANNEL								
TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT OF JUL 19, 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 (FEET)	LENGTH (STAT. MILES)	DEPTH CRD (FEET)
MILLER SANDS RANGE	41	44	42	36	6-11	600	2.2	43
PILLAR ROCK LOWER RANGE	38	40	41	39	6-11	600	3.0	43
PILLAR ROCK UPPER RANGE	17	40	44	41	6-11	600	1.9	43
WELCH ISLAND REACH	45	47	41	21	6-11	600	3.2	43
SKAMOKAWA CHANNEL	41	43	42	37	6-11	600	3.3	43
STEAMBOAT REACH	45	47	46	42	6-11	600	1.4	43
PUGET ISLAND RANGE AND TURN	40	42	42	40	6-11	600	3.5	43
WAUNA RANGE	40	42	42	39	6-11	600	2.0	43
DRISCOLL RANGE	40	41	42	43	6-11	600	1.7	43
WESTPORT TURN AND RANGE	38	40	43	43	7-11	600	2.0	43
WESTPORT CHANNEL	37	38	37	37	7-11	600	2.4	43
EUREKA LOWER CHANNEL	45	46	46	47	6-11	600	2.1	43
EUREKA UPPER CHANNEL	41	44	43	42	6-11	600	0.8	43
OAK POINT CHANNEL	44	44	43	40	4-11	600	3.0	43
GULL ISLAND TURN AND CHANNEL	46	50	46	39	6-11	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

Chart 18524 (Left Panel)

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COLUMBIA RIVER CHANNEL DEPTHS GULL ISLAND TURN AND CHANNEL TO SAINT HELENS TURN TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT OF JUL 19, 2011								
CONTROLLING DEPTHS 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 (FEET)	LENGTH (STAT. MILES)	DEPTH CRD (FEET)
GULL ISLAND TURN AND CHANNEL	46	50	46	39	6-11	600	2.2	43
STELLA RANGE	37	39	39	39	6-11	600	3.0	43
FISHER ISLAND CHANNEL	41	42	41	37	4-11	600	0.8	43
WALKER ISLAND CHANNEL	42	44	42	35	4-11	600	1.4	43
BARLOW POINT CHANNEL	47	47	47	45	4-11	600	1.6	43
SLAUGHTERS CHANNEL	42	43	42	42	4-11	600	2.2	43
SLAUGHTERS TURN AND TURN BASIN	43	42	44	40	4-11	600	1.7	43
COTTONWOOD ISLAND LOWER RANGE	38	35	36	38	6-11	600	1.7	43
COTTONWOOD ISLAND TURN	45	45	41	39	7-11	600	2.7	43
COTTONWOOD ISLAND UPPER RANGE	41	40	41	39	7-11	600	1.6	43
KALAMA LOWER RANGE	41	46	44	36	7-11	600	1.8	43
KALAMA UPPER RANGE	37	38	40	40	7-11	600	2.2	43
BYBEE LEDGE CHANNEL	41	43	47	45	6-11	600	2.1	43
MARTIN ISLAND CHANNEL	43	41	41	38	7-11	600	2.0	43
MARTIN ISLAND RANGE	38	44	42	43	7-11	600	1.4	43
COLUMBIA CITY CHANNEL	38	40	40	39	7-11	600	1.2	43
ST. HELENS RANGE	40	44	40	35	6-11	600	2.0	43
ST. HELENS TURN	38	39	40	37	7-11	600	1.7	43

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

Chart 18525

NM 40/11

COLUMBIA RIVER CHANNEL DEPTHS SAINT HELENS TURN TO TOMAHAWK BAR TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT OF JUL 19, 2011								
CONTROLLING DEPTHS 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 (FEET)	LENGTH (STAT. MILES)	DEPTH CRD (FEET)
ST. HELENS TURN	38	39	40	37	7-11	600	1.7	43
WARRIOR ROCK RANGE	39	42	43	44	7-11	600	1.3	43
DUCK CLUB TURN	38	46	46	45	7-11	600	1.4	43
HENRICI RANGE	39	44	41	41	7-11	600	2.6	43
FALES CHANNEL	43	43	41	40	7-11	600	1.1	43
KNAPP POINT CHANNEL	43	42	41	40	6-11	600	1.8	43
WILLOW LOWER RANGE	42	42	41	37	6-11	600	2.1	43
WILLOW UPPER RANGE	41	42	43	40	6-11	600	1.1	43
MORGAN BAR	43	44	48	50	6-11	600	1.0	43
MORGAN CHANNEL	45	45	46	44	6-11	600	1.5	43
VANCOUVER LOWER CHANNEL	47	49	51	43	6-11	500	1.0	43
VANCOUVER RANGE	45	44	43	41	6-11	500	1.3	43
VANCOUVER UPPER CHANNEL	47	45	43	41	6-11	500	0.9	43
VANCOUVER LOWER TURNING BASIN	33	40	33	44	5-11	800	1.0	43
VANCOUVER UPPER TURNING BASIN	34	37	29	26	5-11	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

SECTION I

NM 40/11

Chart 18526

NM 40/11

COLUMBIA RIVER CHANNEL DEPTHS MORGAN CHANNEL TO TOMAHAWK BAR TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT OF JUL 19, 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 (FEET)	LENGTH (STAT. MILES)	DEPTH CRD (FEET)
MORGAN CHANNEL	45	45	46	44	8-11	600	1.5	43
VANCOUVER LOWER CHANNEL	47	49	51	43	8-11	500	1.0	43
VANCOUVER RANGE	45	44	43	41	8-11	500	1.3	43
VANCOUVER UPPER CHANNEL	47	45	43	41	6-11	500	0.9	43
VANCOUVER LOWER TURNING BASIN	33	40	33	44	5-11	800	1.0	43
VANCOUVER UPPER TURNING BASIN	34	37	29	26	5-11	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