Chart 12371 NM 13/09

NEW HAVEN HARBOR CHANNEL DEPTHS

TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT OF NOV 2008 AND SURVEYS TO MAR 2008

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	32.3	36.1	35.6	34.8	3-08	500	1.1	35
LIGHTHOUSE POINT REACH	31.3	35.0	35.5	31.4	3-08	400-500	2.9	35
NEW HAVEN REACH	30.1	32.9	31.6	30.6	3-08	800-500	1.0	35
EAST HAVEN REACH	15.8	17.6	16.7	14.9	10-00; 3-08	500-100	0.1	18
QUINNIPIAC RIVER								
FERRY ST. BRIDGE REACH	14.2	16.1	16.3	11.7	10-00	200	0.6	18
GRAND AVE. BRIDGE REACH	10.9	11.5	10.1	10.8	10-00	200	0.5	16-12
MILL RIVER								
ENTRANCE CHANNEL	8.1	A 6.5	B 9.9	7.1	10-00	200	0.3	12
EAST FORK	C 6.2	C 6.1	D 6.1	E 7.9	10-00	100	0.2	12
WEST FORK	2.6	5.3	4.9	4.9	10-00	125	0.3	12

A. EXCEPT SHOALING TO 5.5 FEET WITHIN 25 FEET OF CHAPEL ST. BRIDGE FENDER.
B. EXCEPT SHOALING TO 9.2 FEET WITHIN 10 FEET OF CHAPEL ST. BRIDGE FENDER.
C. EXCEPT SHOALING TO 2.2 FEET IN LAST 430 FEET OF REACH.
D. EXCEPT SHOALING TO 0.6 FEET IN LAST 430 FEET OF REACH.
E. EXCEPT SHOALING TO 0.5 FEET IN LAST 430 FEET OF REACH.
NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

Chart 18521 NM 13/09

COLUMBIA RIVER CHANNEL DEPTHS
ENTRANCE TO MILLER SANDS RANGE

TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT OF JAN 6, 2009

* 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	49	48	47	9-08	2640	3.3	48
SAND ISLAND RANGE (CLATSOP SPIT)	48	48	49	47	9-08	2640	2.2	48
LOWER DESDEMONA SHOAL	45	47	49	44	12-08	600	3.4	40
UPPER DESDEMONA SHOAL	41	44	46	44	12-08	600	3.6	40
TANSY POINT TURN AND RANGE	41	43	44	34	12-08	600	4.8	40
ASTORIA RANGE	41	43	43	39	12-08	600	2.7	40
TONGUE POINT CHANNEL	43	44	44	44	12-08	600	2.2	40
HARRINGTON POINT RANGE	42	43	42	39	12-08	600	2.6	40
MILLER SANDS RANGE	43	47	43	40	12-08	600	2.2	40

* 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. PROJECT LENGTHS ARE IN STATUTE MILES.
NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

Chart 18523 NM 13/09

COLUMBIA RIVER CHANNEL DEPTHS
MILLER SANDS RANGE TO GULL ISLAND TURN AND CHANNEL
TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT OF JAN 6, 2009

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	43	47	43	40	12-08	600	2.2	40
PILLAR ROCK LOWER RANGE	40	42	41	40	12-08	600	3.0	40
PILLAR ROCK UPPER RANGE	37	43	43	42	12-08	600	1.9	40
WELCH ISLAND REACH	46	45	43	39	12-08	600	3.2	40
SKAMOKAWA CHANNEL	44	46	46	46	12-08	600	3.3	40
STEAMBOAT REACH	51	49	46	44	11,12-08	600	1.4	40
PUGET ISLAND RANGE AND TURN	38	41	41	38	11-08	600	3.5	40
WAUNA RANGE	41	41	39	37	11-08	600	2.0	40
DRISCOLL RANGE	40	44	42	44	11-08	600	1.7	40
WESTPORT TURN AND RANGE	41	41	44	43	11-08	600	2.0	40
WESTPORT CHANNEL	38	40	40	39	11,12-08	600	2.4	40
EUREKA LOWER CHANNEL	47	47	46	48	12-08	600	2.1	40
EUREKA UPPER CHANNEL	44	43	40	41	12-08	600	0.8	40
OAK POINT CHANNEL	43	43	41	40	12-08	600	3.0	40
GULL I TURN AND CHANNEL	46	46	42	40	12-08	600	2.2	40

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

Chart 18524 (Left Panel) NM 13/09

COLUMBIA RIVER CHANNEL DEPTHS
GULL ISLAND TURN AND CHANNEL TO SAINT HELENS TURN
TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT OF JAN 6, 2009

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 I TURN AND CHANNEL	46	46	42	40	12-08	600	2.2	40
STELLA RANGE	37	40	39	38	12-08	600	3.0	40
FISHER I CHANNEL	41	44	44	41	12-08	600	0.8	40
WALKER I CHANNEL	41	44	42	41	12-08	600	1.4	40
BARLOW PT. CHANNEL	44	45	44	40	12-08	600	1.6	40
SLAUGHTERS CHANNEL	40	40	39	39	12-08	600	2.2	40
SLAUGHTERS TURN AND CHANNEL OPPOSITE THE TURNING BASIN	38	39	38	38	12-08	600	1.7	40
COTTONWOOD ISLAND LOWER RANGE	46	48	45	43	12-08	600	1.7	40
COTTONWOOD ISLAND TURN	46	47	45	42	12-08	600	2.7	40
COTTONWOOD ISLAND UPPER RANGE	44	46	46	47	12-08	600	1.6	40
KALAMA LOWER RANGE	44	46	46	35	12-08	600	1.8	40
KALAMA UPPER RANGE	43	43	44	43	12-08	600	2.2	40
BYBEE LEDGE CHANNEL	43	44	43	43	12-08	600	2.1	40
MARTIN ISLAND CHANNEL	45	46	46	43	12-08	600	2.0	40
MARTIN ISLAND RANGE	41	45	46	42	12-08	600	1.4	40
COLUMBIA CITY CHANNEL	43	44	44	41	12-08	600	1.2	40
ST. HELENS RANGE	43	43	43	39	12-08	600	2.0	40
ST. HELENS TURN	45	45	42	39	12-08	600	1.7	40

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

Chart 18525 NM 13/09

COLUMBIA RIVER CHANNEL DEPTHS
SAINT HELENS TURN TO TOMAHAWK BAR

TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORTS OF JAN 6, 2009

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	45	45	42	39	12-08	600	1.7	40
WARRIOR ROCK RANGE	39	41	41	41	12-08	600	1.3	40
DUCK CLUB TURN	44	46	46	42	12-08	600	1.4	40
HENRICI RANGE	43	44	44	43	12-08	600	2.6	40
FALES CHANNEL	45	44	44	43	12-08	600	1.1	40
KNAPP POINT CHANNEL	43	44	43	42	12-08	600	1.8	40
WILLOW LOWER RANGE	41	43	42	41	12-08	600	2.1	40
WILLOW UPPER RANGE	41	43	44	45	12-08	600	1.1	40
MORGAN BAR	43	48	50	50	12-08	600	1.0	40
MORGAN CHANNEL	45	46	44	41	12-08	600	1.5	40
VANCOUVER LOWER CHANNEL	48	48	52	49	11-08	500	1.0	40
VANCOUVER RANGE	46	46	43	42	11-08	500	1.3	40
VANCOUVER UPPER CHANNEL	41	46	41	39	11-08	500	0.9	40
VANCOUVER LOWER TURNING BASIN	34	39	46	47	11-08	800	1.0	40
VANCOUVER UPPER TURNING BASIN	32	26	26	26	11-08	800	0.9	35
TOMAHAWK BAR	18	18	18	19	4-08	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 13/09

COLUMBIA RIVER CHANNEL DEPTHS
MORGAN CHANNEL TO TOMAHAWK BAR

TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT OF JAN 6, 2009

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)
MORGAN CHANNEL	45	46	44	41	12-08	600	1.5	40
VANCOUVER LOWER CHANNEL	48	48	52	49	11-08	500	1.0	40
VANCOUVER RANGE	46	46	43	42	11-08	500	1.3	40
VANCOUVER UPPER CHANNEL	41	46	41	39	11-08	500	0.9	40
VANCOUVER LOWER TURNING BASIN	34	39	46	47	11-08	800	1.0	40
VANCOUVER UPPER TURNING BASIN	32	26	26	26	11-08	800	0.9	35
TOMAHAWK BAR	18	18	18	19	4-08	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 18650 NM 13/09

OAKLAND OUTER AND INNER HARBORS

TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO SEP 2008

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	48.0	45.0	45.0	48.0	8,9-08	1000-930	0.57	42
OUTER HARBOR ENTRANCE CHANNEL	48.0	49.0	49.0	43.0	6-08	900-600	0.91	42
OUTER HARBOR	39.0	39.0	39.0	39.0	6-08	1575-600	1.40	42
INNER HARBOR								
ENTRANCE CHANNEL	45.0	45.0	45.0	45.0	5,9-08	2100-480	1.10	42
INNER HARBOR REACH	44.0	46.0	45.0	38.0	12-07;5-08	1325-480	2.27	42
GROVE ST PIER TO								
BROOKLYN BASIN	A24.0	32.0	33.0	B24.0	12-07	600	1.30	42
BROOKLYN BASIN SOUTH CHANNEL	C15.0	22.0	23.0	D13.0	12-07	600-500	0.90	42
PARK ST BRIDGE REACH	13.0	22.0	23.0	11.3	7-86;12-07	500-275	0.42	42

A. A DEPTH OF 31.0 FEET WAS AVAILABLE IN THE INSIDE HALF OF THE QUARTER.
B. A DEPTH OF 33.0 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