Chart 11372 (Side B) NM 49/10

GULFPORT HARBOR CHANNELS

TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT OF AUG 2010

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)
GULFPORT BAR CHANNEL (D)	38.0	38.0	38.0	7,8,9,10-09	300	10.03	38
GULFPORT SOUND CHANNEL (D)	33.5	A34.4	32.4	9,10-09	220	10.63	36
ANCHORAGE BASIN	C29.0	C30.4	B31.2	8-10	1110-1220	0.93	32-36

A. EXCEPT FOR A REPORTED OBSTRUCTION LOCATED IN APPROXIMATE POSITION 30°20'00.0"N, 89°04'06.0"W.
B. EXCEPT FOR A REPORTED OBSTRUCTION LOCATED IN APPROXIMATE POSITION 30°21'00.0"N, 89°05'00.0"W.
C. EXCEPT FOR A SUBM BREAKWATER LOCATED APPROXIMATELY FROM 30°21'04.6"N, 89°05'21.6"W TO 30°21'01.9"N, 89°05'08.6"W.
D. SHOALING EXISTS IN BEND WIDENING AREA
NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

Chart 11373 NM 49/10

GULFPORT HARBOR CHANNELS

TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT OF AUG 2010

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)
GULFPORT BAR CHANNEL (D)	38.0	38.0	38.0	7,8,9,10-09	300	10.03	38
GULFPORT SOUND CHANNEL (D)	33.5	A34.4	32.4	9,10-09	220	10.63	36
ANCHORAGE BASIN	C29.0	C30.4	B31.2	8-10	1110-1220	0.93	32-36

A. EXCEPT FOR A REPORTED OBSTRUCTION LOCATED IN APPROXIMATE POSITION 30°20'00.0"N, 89°04'06.0"W.
B. EXCEPT FOR A REPORTED OBSTRUCTION LOCATED IN APPROXIMATE POSITION 30°21'00.0"N, 89°05'00.0"W.
C. EXCEPT FOR A SUBM BREAKWATER LOCATED APPROXIMATELY FROM 30°21'04.6"N, 89°05'21.6"W TO 30°21'01.9"N, 89°05'08.6"W.
D. SHOALING EXISTS IN BEND WIDENING AREA
NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

Chart 12225 NM 49/10

RAPPAHANNOCK SHOAL CHANNEL DEPTHS

TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO MAR 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 (MILES)	DEPTH MLLW (FEET)
RAPPAHANNOCK SHOAL CHANNEL	47.0	49.0	50.0	47.0	3-10	1000A	12.7	50

A. CHANNEL WIDTH MAINTAINED TO 800 FEET.
NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

Chart 12226 NM 49/10

RAPPAHANNOCK SHOAL CHANNEL DEPTHS

TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO MAR 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 (MILES)	DEPTH MLLW (FEET)
RAPPAHANNOCK SHOAL CHANNEL	47.0	49.0	50.0	47.0	3-10	1000A	12.7	50

A. CHANNEL WIDTH MAINTAINED TO 800 FEET.
NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

Chart 12324 (Side A) NM 49/10

SANDY HOOK BAY, SHREWSBURY AND NAVESINK RIVERS CHANNEL DEPTHS
TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO MAY 2010

CONTROLLING DEPTHS FROM SEAWARD IN FEET AT MEAN LOWER LOW WATER (MLLW)

NAME OF CHANNEL	MIDDLE HALF (FEET)	WIDTH (FEET)	DATE OF SURVEY
SANDY HOOK BAY			
TERMINAL CHANNEL	A45.0	400-1050	12-02
SHREWSBURY RIVER			
HIGHLANDS REACH	10.2	150	7,8-09; 5-10
RUMSON REACH	7.4	150	7,8-09; 5-10
LONG BRANCH REACH	6.8	150	7,8-09
NAVESINK RIVER			
BARLEY POINT REACH	2.1	150	5-10
FAIR HAVEN REACH	4.1	150	7,8-09
RED BANK REACH	5.9	150	7,8-09

A. FEDERAL PROJECT DEPTH IS 45 FEET IN THE CHANNEL AND TURNING BASIN EXCEPT AROUND PIERS 2 AND 3 WHERE THE PROJECT DEPTH IS 35 FEET.
NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGING CONDITIONS SUBSEQUENT TO THE ABOVE

Chart 12327 NM 49/10

ARTHUR KILL, KILL VAN KULL, NEWARK BAY, PORT NEWARK AND PORT ELIZABETH CHANNEL DEPTHS
TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT OF JUL 2010
AND SURVEYS TO APR 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)
ARTHUR KILL (A)								
OUTERBRIDGE REACH	33.1	35.2	35.6	34.4	5-09;4-10	600	0.85	35
PORT SOCONY REACH	31.8	34.5	34.5	33.0	4-09	600-800	0.87	35
PORT READING REACH	28.3	34.4	34.6	28.2	4-09	500-850	1.80	35
FRESH KILLS REACH	30.3	34.6	35.9	34.0	4-09	500	1.65	35
TREMLEY POINT REACH	30.5	35.6	36.3	29.2	4-09	500	0.85	35
PRALLS ISLAND REACH	31.9	33.6	35.2	27.0	4-09	500	1.13	35
GULFPORT REACH	32.6	36.2	37.0	30.3	4,12-09;1-10	500-600	1.03	35
ELIZABETHPORT REACH	40.9	43.6	43.4	40.7	12-09;1-10	600-800	0.91	35
NORTH OF SHOOTERS ISLAND REACH	40.8	42.2	40.9	38.4	12-09;1-10	600	0.97	35
SOUTH OF SHOOTERS ISLAND REACH	B6.5	B13.8	B14.5	B10.1	11-04	400	0.94	30
KILL VAN KULL (A)								
BERGEN POINT WEST REACH	50.2	52.5	52.1	49.6	12-09;1-10	800-1150	1.12	45
BERGEN POINT EAST REACH	48.9	53.0	52.9	50.5	12-09;1-10	800	1.09	45
CONSTABLE HOOK REACH	44.6	46.2	46.9	44.4	12-09;1-10	800-2000	2.52	45
NEWARK BAY								
SOUTH REACH	45.1	47.7	45.9	42.7	12-09	1000-1775	1.32	45
REACH B : MIDDLE REACH	36.8	42.9	41.3	34.5	12-09	800-1700	0.88	45
REACH B1 : MIDDLE REACH	38.9	39.3	34.0	28.4	12-09	560-800	0.53	40
NORTH REACH	17.5	22.4	10.3	6.8	12-09	500-1030	1.36	35
TURNING BASIN	22.2	22.4	19.3	8.4	12-09	900	0.26	35
PORT NEWARK								
BRANCH REACH	27.4	36.2	36.5	31.3	1-10	400-1775	0.37	40
INSHORE REACH	33.7	32.2	30.3	30.3	1-10	400	1.06	40
PORT ELIZABETH CHANNEL REACH	40.6	41.2	41.3	39.0	1-10	500-800	1.26	45

A. CONTROLLING DEPTHS IN ARTHUR KILL AND KILL VAN KULL ARE REFERENCED FROM SEAWARD WHEN ENTERING FROM LOWER BAY.
B. NUMEROUS WRECKS AND OBSTRUCTIONS WITH MINIMUM DEPTH TO 4 FEET WITHIN CHANNEL LIMITS.

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

Chart 12327 NM 49/10

LOWER BAY, CHAPEL HILL, RARITAN BAY AND RIVER CHANNEL DEPTHS
TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT OF AUG 2010
AND SURVEYS TO JUN 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)
LOWER BAY:								
AMBROSE CHANNEL	39.9	45.9	45.8	41.7	4-03	2000	9.2	45
SANDY HOOK CHANNEL (EAST)	35.8	40.9	37.5	35.2	8-08; 9-09	800-2150	4.5	35
SANDY HOOK CHANNEL (BAYSIDE)	30.7	39.1	37.8	31.6	8-08; 9-09	800	2.3	35
TERMINAL CHANNEL (NAVY)	45.0	45.0	45.0	45.0	9-09	400-1050	0.8	A45
TURNING BASIN (NAVY)	45.0	45.0	45.0	45.0	9-09	400-2300	0.6	A45
CHAPEL HILL:								
SOUTH CHANNEL (B)	*28.0	*28.5	*29.6	*24.3	11,12-09	1000	2.6	30
NORTH CHANNEL (B)	*28.8	*29.3	*27.3	*27.6	11,12-09	1000	2.2	30
RARITAN BAY:								
EAST REACH	33.3	38.2	37.6	33.5	5-09	600	3.9	35
WEST REACH	32.3	39.7	39.5	32.5	5-09	600	2.4	35
SEGUINE POINT BEND	30.2	34.5	35.8	21.1	5-09;4-10	600-1000	1.2	35
RED BANK REACH	33.0	40.5	40.2	33.1	4-10	600	1.02	35
WARD POINT BEND (EAST)	29.7	38.6	36.3	27.9	4-10	600-800	0.82	35
WARD POINT BEND (WEST)	34.4	35.3	32.8	29.7	4-10	600	1.35	35
WARD POINT SECONDARY CHANNEL	18.8	18.8	18.8	18.2	4-10	400	0.83	30
CUTOFF (C)	11.4	16.9	18.6	17.1	6-10	600-1740	1.0	20
RARITAN RIVER:								
GREAT BEDS REACH (D)	19.6	21.5	21.5	17.4	7-09	300	0.76	25
SOUTH AMBOY REACH (D)	20.4	19.8	19.8	17.2	7-09	300	1.2	25

A. PROJECT DEPTHS IN THE TERMINAL CHANNEL AND TURNING BASIN ARE 45 FEET, EXCEPT AROUND PIERS 2 AND 3 WHERE THE PROJECT DEPTH IS 35 FEET. DEPTHS SHOALER THAN PROJECT DEPTHS ARE CHARTED IN CHANNELS.
B. AN * DENOTES A SHOAL OBSTRUCTION. SPORADIC SHOAL OBSTRUCTIONS EXIST WITHIN THE CHANNEL BUT ARE NOT CHARTED. CONSULT CORPS OF ENGINEERS FOR LOCATION OF OBSTRUCTIONS.
C. CONTROLLING DEPTHS ARE REFERENCED FROM SEAWARD WHEN ENTERING FROM RARITAN RIVER.
D. THE CORPS OF ENGINEERS REPORTS MIDDLE HALF OF CHANNEL.
NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

Chart 12331 NM 49/10

RARITAN BAY, ARTHUR KILL AND RARITAN RIVER CHANNEL DEPTHS
TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT OF AUG 2010
AND SURVEYS TO JUN 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)
RARITAN BAY								
EAST REACH	33.3	38.2	37.6	33.5	5-09	600	3.9	35
WEST REACH	32.3	39.7	39.5	32.5	5-09	600	2.4	35
SEGUINE POINT BEND	30.2	34.5	35.8	21.1	5-09;4-10	600-1000	1.2	35
RED BANK REACH	33.0	40.5	40.2	33.1	4-10	600	1.02	35
WARD POINT BEND (EAST)	29.7	38.6	36.3	27.9	4-10	600-800	0.82	35
WARD POINT BEND (WEST)	34.4	35.3	32.8	29.7	4-10	600	1.35	35
WARD POINT SECONDARY CHANNEL	18.8	18.8	18.8	18.2	4-10	400	0.83	30
CUTOFF (A)	11.4	16.9	18.6	17.1	6-10	600-1740	1.0	20
ARTHUR KILL								
OUTERBRIDGE REACH	33.1	35.2	35.6	34.4	5-09;4-10	600	1.6	35
PORT SOCONY REACH	31.8	34.5	34.5	33.0	4-09	600-800	0.87	35
PORT READING REACH	28.3	34.4	34.6	28.2	4-09	500-850	1.8	35
FRESH KILLS REACH	30.3	34.6	35.9	34.0	4-09	500	1.65	35
RARITAN RIVER:								
GREAT BEDS REACH (B)	19.6	21.5	21.5	17.4	7-09	300	0.76	25
SOUTH AMBOY REACH (B)	20.4	19.8	19.8	17.2	7-09	300	1.2	25

A. CONTROLLING DEPTHS ARE REFERENCED FROM SEAWARD WHEN ENTERING FROM RARITAN RIVER.
B. THE CORPS OF ENGINEERS REPORTS MIDDLE HALF OF CHANNEL.
NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

Chart 12332 NM 49/10

RARITAN BAY AND ARTHUR KILL CHANNEL DEPTHS
TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT OF AUG 2010
AND SURVEYS TO JUN 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)
RARITAN BAY:								
WARD POINT BEND (EAST)	29.7	38.6	36.3	27.9	4-10	600-800	0.82	35
WARD POINT BEND (WEST)	34.4	35.3	32.8	29.7	4-10	600	1.35	35
WARD POINT SECONDARY CHANNEL	18.8	18.8	18.8	18.2	4-10	400	0.83	30
CUTOFF (A)	11.4	16.9	18.6	17.1	6-10	600-1740	1.0	20
AUTHUR KILL:								
OUTERBRIDGE REACH	33.1	35.2	35.6	34.4	5-09;4-10	600	1.6	35

A. CONTROLLING DEPTHS ARE REFERENCED FROM SEAWARD WHEN ENTERING FROM RARITAN RIVER.
NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

Chart 18521 NM 49/10

BAKER BAY WEST CHANNEL

TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO JUL 2009 AND REPORTS TO AUG 2010

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)
ENTRANCE (0.0 - 0.7)	3	15	16	6-10	200	0.7	15
ENTRANCE TO FORT CANBY (0.7 - 1.9)	12	14	14	6-10	150	1.2	16
FT CANBY TO ILWACO (1.9 - 3.2)	7	6	2	6-10	150	1.3	16
MOORING BASIN A B	4	4	4	6-08	-	-	-

A. SHOALING TO 2 FEET ON RIGHT HALF, BETWEEN THE BREAKWATERS.
B. BASIN LOCALLY MAINTAINED.

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

Chart 18521 NM 49/10

COLUMBIA RIVER CHANNEL DEPTHS
ENTRANCE TO MILLER SANDS RANGE

TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT OF AUG 25, 2010

* 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	54	48	47	43	4-10	640	3.3	48
SAND ISLAND RANGE	52	51	47	43	4-10	640	2.2	48
LOWER DESDEMONA SHOAL	46	47	49	46	7-10	600	3.4	40
UPPER DESDEMONA SHOAL	42	44	45	44	7-10	600	3.6	40
TANSY POINT TURN AND RANGE	41	43	44	34	7-10	600	4.8	40
ASTORIA RANGE	41	42	43	43	7-10	600	2.7	40
TONGUE POINT CHANNEL	42	44	44	42	7-10	600	2.2	40
HARRINGTON POINT RANGE	42	42	41	36	7-10	600	2.6	40
MILLER SANDS RANGE	42	45	42	33	6-10	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.
NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

Chart 18523 NM 49/10

COLUMBIA RIVER CHANNEL DEPTHS
MILLER SANDS RANGE TO GULL ISLAND TURN AND CHANNEL
TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT OF AUG 25, 2010

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	42	45	42	33	6-10	600	2.2	40
PILLAR ROCK LOWER RANGE	40	42	41	39	6-10	600	3.0	40
PILLAR ROCK UPPER RANGE	21	40	44	44	8-10	600	1.9	40
WELCH ISLAND REACH	47	49	45	39	8-10	600	3.2	40
SKAMOKAWA CHANNEL	43	46	44	40	7-10	600	3.3	40
STEAMBOAT REACH	46	46	44	42	7-10	600	1.4	40
PUGET ISLAND RANGE AND TURN	44	44	42	41	7-10	600	3.5	40
WAUNA RANGE	40	42	43	45	8-10	600	2.0	40
DRISCOLL RANGE	41	43	42	41	8-10	600	1.7	40
WESTPORT TURN AND RANGE	40	42	42	45	7-10	600	2.0	40
WESTPORT CHANNEL	40	41	40	40	7-10	600	2.4	40
EUREKA LOWER CHANNEL	45	45	44	45	7-10	600	2.1	40
EUREKA UPPER CHANNEL	44	43	41	42	7-10	600	0.8	40
OAK POINT CHANNEL	43	44	44	43	7-10	600	3.0	40
GULL ISLAND TURN AND CHANNEL	48	49	45	40	7-10	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 49/10

COLUMBIA RIVER CHANNEL DEPTHS
GULL ISLAND TURN AND CHANNEL TO SAINT HELENS TURN
TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT OF AUG 25, 2010

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	48	49	45	40	7-10	600	2.2	40
STELLA RANGE	36	39	40	39	7-10	600	3.0	40
FISHER ISLAND CHANNEL	39	41	44	38	8-10	600	0.8	40
WALKER ISLAND CHANNEL	40	42	42	36	8-10	600	1.4	40
BARLOW POINT CHANNEL	46	46	47	46	8-10	600	1.6	40
SLAUGHTERS CHANNEL	42	43	43	44	7-10	600	2.2	40
SLAUGHTERS TURN AND TURN BASIN	39	42	39	39	7-10	600	1.7	40
COTTONWOOD ISLAND LOWER RANGE	41	41	42	39	8-10	600	1.7	40
COTTONWOOD ISLAND TURN	38	42	44	40	8-10	600	2.7	40
COTTONWOOD ISLAND UPPER RANGE	41	43	44	43	8-10	600	1.6	40
KALAMA LOWER RANGE	40	42	39	31	8-10	600	1.8	40
KALAMA UPPER RANGE	40	39	41	41	8-10	600	2.2	40
BYBEE LEDGE CHANNEL	41	42	44	44	8-10	600	2.1	40
MARTIN ISLAND CHANNEL	43	44	41	40	8-10	600	2.0	40
MARTIN ISLAND RANGE	41	44	43	43	8-10	600	1.4	40
COLUMBIA CITY CHANNEL	40	41	43	43	8-10	600	1.2	40
ST. HELENS RANGE	41	43	42	39	8-10	600	2.0	40
ST. HELENS TURN	42	43	41	39	8-10	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 49/10

COLUMBIA RIVER CHANNEL DEPTHS
SAINT HELENS TURN TO TOMAHAWK BAR
TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT OF AUG 25, 2010

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	42	43	41	39	8-10	600	1.7	40
WARRIOR ROCK RANGE	42	45	44	47	8-10	600	1.3	40
DUCK CLUB TURN	41	45	46	46	8-10	600	1.4	40
HENRICI RANGE	39	44	41	41	8-10	600	2.6	40
FALES CHANNEL	44	44	43	42	8-10	600	1.1	40
KNAPP POINT CHANNEL	43	42	42	39	8-10	600	1.8	40
WILLOW LOWER RANGE	40	42	40	39	8-10	600	2.1	40
WILLOW UPPER RANGE	40	42	44	45	8-10	600	1.1	40
MORGAN BAR	43	48	49	50	8-10	600	1.0	40
MORGAN CHANNEL	44	45	44	40	8-10	600	1.5	40
VANCOUVER LOWER CHANNEL	47	48	51	50	8-10	500	1.0	40
VANCOUVER RANGE	45	44	44	42	8-10	500	1.3	40
VANCOUVER UPPER CHANNEL	42	46	45	43	8-10	500	0.9	40
VANCOUVER LOWER TURNING BASIN	32	39	44	46	8-10	800	1.0	40
VANCOUVER UPPER TURNING BASIN	25	25	26	26	8-10	800	0.9	35
TOMAHAWK BAR	16	17	17	18	4-09	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 49/10

COLUMBIA RIVER CHANNEL DEPTHS
MORGAN CHANNEL TO TOMAHAWK BAR
TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT OF AUG 25, 2010

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	44	45	44	40	8-10	600	1.5	40
VANCOUVER LOWER CHANNEL	47	48	51	50	8-10	500	1.0	40
VANCOUVER RANGE	45	44	44	42	8-10	500	1.3	40
VANCOUVER UPPER CHANNEL	42	46	45	43	8-10	500	0.9	40
VANCOUVER LOWER TURNING BASIN	32	39	44	46	8-10	800	1.0	40
VANCOUVER UPPER TURNING BASIN	25	25	26	26	8-10	800	0.9	35
TOMAHAWK BAR	16	17	17	18	4-09	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 18531 (Lower Panel) NM 49/10

COLUMBIA RIVER CHANNEL DEPTHS
TOMAHAWK BAR TO BONNEVILLE LOCKS
TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT OF AUG 25, 2010

CONTROLLING DEPTHS IN FEET AT COLUMBIA RIVER DATUM (CRD) * SEE FOOTNOTE					PROJECT DIMENSIONS		
NAME OF CHANNEL	LEFT OUTSIDE QUARTER	MIDDLE HALF OF CHANNEL	RIGHT OUTSIDE QUARTER	DATE OF SURVEY	WIDTH (FEET)	LENGTH (STAT. MILES)	DEPTH CRD (FEET)
TOMAHAWK BAR	16	17	18	4-09	300	3.7	27
AIRPORT BAR	16	16	17	3-09	300	2.8	27
GOVERNMENT ISLAND LOWER RANGE	17	17	16	3-09	300	1.0	27
GOVERNMENT ISLAND MIDDLE RANGE	16	16	17	3-09	300	1.7	27
FISHER QUARRY CHANNEL	29	24	22	3-09	300	1.0	27
GOVERNMENT ISLAND RANGE	23	27	29	3-09	300	1.1	27
GOVERNMENT ISLAND UPPER RANGE	17	20	23	4-09	300	0.8	27
LADY ISLAND RANGE	21	23	28	4-09	300	2.1	27
LADY ISLAND CHANNEL AND UPPER RANGE	28	29	21	4-09	300	0.9	27
WASHOUGAL LOWER RANGE	19	27	30	4-09	300	1.5	27
WASHOUGAL UPPER RANGE	22	20	28	4-09	300	1.1	27
GARY ISLAND CHANNEL	17	16	16	4-09	300	0.8	27
REED ISLAND CHANNEL	19	16	14	4-09	300	2.5	27
TUNNEL POINT CHANNEL	25	26	28	4-09	300	0.8	27
ROOSTER ROCK CHANNEL	27	24	25	4-09	300	1.5	27
CAPE HORN CHANNEL	34	33	35	4-09	300	2.1	27
CANDIANA CHANNEL	23	40	35	4-09	300	1.0	27
FASHION REEF LOWER RANGE	11	14	17	7-10	300	2.4	27
MULTNOMAH FALLS RANGE	12	21	21	7-10	300	1.1	27
MULTNOMAH FALLS TURN	13	16	21	7-10	300	0.8	27
MULTNOMAH FALLS UPPER RANGE	19	24	27	4-09	300	3.2	27
MCGOWANS CHANNEL	35	28	25	4-09	300	1.1	27
WARRENDALE LOWER RANGE	20	21	23	4-09	300	0.9	27
WARRENDALE UPPER RANGE	24	28	22	4-09	300	0.7	27
HAMILTON ISLAND REACH	20	29	28	4-09	300	1.0	27
ENTRANCE TO BONNEVILLE LOCKS	19	21	19	4-09	300	1.2	27

* CONTROLLING DEPTHS ROUNDED TO THE NEAREST FOOT

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