Harbor Safety Committee Of the San Francisco Bay Region

Report of the U.S. Army Corps of Engineers, San Francisco District April 8, 2021

1. CORPS O&M DREDGING PROGRAM

The following report covers the FY 2021 dredging program for San Francisco Bay. The FY21 Work Plan was released to the public on January 19 and the Corps team is currently working on the planning phase for all dredging projects that received funding. The attached 2021 O&M Dredging Plan contains the list of funded projects, estimated procurement milestones, and dredging timelines.

FY 2021 DREDGING

- a. Oakland Harbor Planning for the FY21 dredging episode is currently underway with contract award tentatively scheduled for end of April and dredging estimated to start beginning of June. Solicitation currently being advertised on beta.sam.gov. Bids due April 15.
- **b.** Redwood City Harbor Planning for the FY21 dredging episode is currently underway with contract award tentatively scheduled for early May and dredging estimated to start mid-June. Solicitation currently being advertised on beta.sam.gov. Bids due April 19.
- c. San Pablo Bay (Pinole Shoal) Planning for the FY21 dredging episode is currently underway with dredging tentatively scheduled for first half of June by Government Hopper Dredge Essayons. We continue to be limited to only one hopper dredge project per year by the Water Quality Certification. Pinole Shoal is being dredged this year while Richmond Outer Harbor will be deferred until FY22.
- **d.** San Joaquin River (Port of Stockton) Planning for the FY21 dredging episode is currently underway with contract award tentatively scheduled for early July and dredging estimated to start mid-August.
- e. Sacramento River Deep Water Ship Channel Planning for the FY21 dredging episode is currently underway with contract award tentatively scheduled for second late June and dredging estimated to start early July.
- f. SF Main Ship Channel Planning for the FY21 dredging episode is currently underway with contract award tentatively scheduled for first half of April. The work will be advertised via the West Coast Hopper Contract managed by the Portland District. Dredging is estimated to start beginning of August. Placement of sand will be by pump-ashore to the Ocean Beach site.
- g. Suisun Bay Channel (and New York Slough) Planning for the FY21 dredging episode is currently underway with contract award tentatively scheduled for first half of July and dredging estimated to start mid-August.
- **h. Richmond Inner Harbor** Planning for the FY21 dredging episode is currently underway with contract award tentatively scheduled for end of July and dredging estimated to start mid-September.

- i. Richmond Outer Harbor (and Richmond Long Wharf) We continue to be limited to only one hopper dredge project per year by the Water Quality Certification. Pinole Shoal is being dredged this year while Richmond Outer Harbor will be deferred until FY22.
- **2. DEBRIS REMOVAL** Debris removal for March 2021 was 90.5 tons. Dillard: 52.5 tons, including 1 abandoned vessel, 1 whale; Raccoon: 10 tons, including 1 abandoned vessel; other boats: 28 tons, including 14 abandoned vessels. Average for March from 2011 to 2020 is 79 tons (Range: 11-231.5).

BASEYARD DEBRIS COLLECTION TOTALS:

MONTH	RACCOON	DILLARD	MISC	TOTAL
2021	TONS	TONS	TONS	TONS
JAN	37	48	14	99
FEB	29	30.5	65	124.5
MAR	10	52.5	28	90.5
APR				
MAY				
JUN				
JUL				
AUG				
SEP				
OCT				
NOV				
DEC				

YR TOTAL	
314	

March 2021 Debris Removal:









Photo Credit: Marty Plisch (USACE 2021)

3. UNDERWAY OR UPCOMING HARBOR IMPROVEMENTS

Oakland Harbor Turning Basins Widening Study: This study will investigate and determine if there is a technically feasible, economically justifiable, and environmentally acceptable recommendation for federal participation in a navigation improvement project to the existing -50-foot Oakland Harbor Federal Navigation Project. The existing federal navigation channel was designed for a 6,500 twenty-foot equivalent units (TEU) capacity ship with a 1,139-foot length overall, 140-foot beam, and 48-foot draft as part of the Oakland Harbor Navigation Improvement (-50-Foot) Deepening Project. The vessels routinely calling on the harbor today are longer and wider. The Port of Oakland and the San Francisco District are investigating inefficiencies currently experienced by vessels in harbor where the current fleet exceeds the maximum dimensions of the constructed project. The investigation includes alternatives to improve both the inner and the outer turning basins.

4. EMERGENCY (URGENT & COMPELLING) DREDGING

None to report.

5. OTHER WORK

Regional Dredge Material Management Plan: Comments have been received on the draft final Project Management Plan (PMP) and the Corps is working to incorporate these comments into the final PMP. Information on the RDMMP and draft final PMP can be found on our website: https://www.spn.usace.army.mil/Missions/Projects-and-Programs/Regional-Dredge-Material-Management-Plan/.

USACE Work Plan Web Address: http://www.usace.armv.mil/Missions/Civil-Works/Budget/

Water Resources Development Act (WRDA) of 2020: The Office of the Assistant Secretary of the Army for Civil Works (ASA(CW)) is issuing this notice for a comment period for stakeholders and other interested parties to provide input and recommendations to the ASA(CW) on any provisions in the Water Resources Development Act (WRDA) of 2020. The Office of the ASA(CW) will consider all comments received by May 7, 2021 before any implementation guidance is issued.

Five stakeholder sessions starting on March 16 and concluding on April 13 will be held to enable the public to provide input on any provisions in WRDA 2020. Commenters can provide information on any provision of interest during each session. We encourage stakeholders with specific interests to a U.S. Army Corps of Engineers (Corps) mission area to participate in the session aligned with that mission area. The ASA(CW) and the Corps will co-host focused sessions using webinars/teleconferences.

WRDA 2020 passed and can be found at:

https://transportation.house.gov/imo/media/doc/BILLS-116s1811-SUS.pdf

As the U.S. Army Corps of Engineers, Civil Works (USACE CW) begins to work on implementation guidance for applicable WRDA provisions, we intend to gather feedback from our partners. Five partner sessions will be held every Tuesday starting on March 16 and concluding on April 13 from 1:00 to 3:00 pm Eastern. For more information on these sessions and the public comment period to gather input on WRDA provisions, visit: https://www.usace.army.mil/Missions/Civil-Works/Project-Planning/Legislative-Links/wrda_2020/

6. HYDROGRAPHIC SURVEY UPDATE

Address of Corps' web site for completed hydrographic surveys:

http://www.spn.usace.army.mil/Missions/Surveys,StudiesStrategy/HydroSurvey.aspx

The following surveys are posted:

Alameda Naval Navigation Channel: Condition survey of November 23 and 24, 2020.

Berkeley Marina (Entrance Channel): Condition survey of April 30, 2020.

Islais Creek Channel: Condition survey of April 15, 2020. Larkspur Ferry Channel: Condition survey of April 8, 2020. Mare Island Strait: Condition survey of June 24, 2020.

Marinship Channel (Richardson Bay): Condition survey of June 23, 2020.

Napa River: Condition survey of March 11-15, 2021.

Northship Channel: Condition survey of April 21-24, 2020. Oakland Inner Harbor: Condition survey of February 24, 2021.

Oakland Inner Harbor (Brooklyn Basin): Condition survey of 15-20 January 2021.

Oakland Outer Harbor: Condition survey of February 25, 2021.

Petaluma River (Across-the-Flats): Post-dredge condition survey of December 15, 2020.

Petaluma River (Main Channel): Post-dredge survey of October 10, 12, and 16 2020.

Petaluma River (Extended Channel): Post-dredge survey of October 10, 12, and 16 2020.

Pinole Shoal Channel: Condition survey of March 24, 2021.

Redwood City Harbor: Condition survey of March 10-11, 2021.

Richmond Inner Harbor: Condition survey of March 2, 2021.

Richmond Inner Harbor (Santa Fe Channel): Condition survey of December 20, 2016.

Richmond Outer Harbor (Longwharf): Condition survey of March 17, 2021.

Richmond Outer Harbor (Southampton Shoal): Condition survey of March 16, 2021.

Sacramento River Deep Water Ship Channel: Condition Survey of February 3-6, 2021.

San Bruno Shoal: Condition survey of February 26, 2021.

San Francisco Main Ship Channel: Condition survey of 20-21 Jan 2021.

San Leandro Marina (and Channel): Condition survey of March 30 and April 1, 2015.

San Rafael (Across-the-Flats): Condition survey of February 9, 2021.

San Rafael (Creek): Condition survey of February 9, 2021.

Stockton Ship Channel: Condition survey of January 25-26, 28-29, February 1, 2021.

Suisun Bay Channel: Condition survey of January 21, and February 2, 2021.

Suisun Bay Channel (Bullshead Reach): Condition survey of January 21, and February 2, 2021.

Suisun Bay Channel (New York Slough): Condition survey of January 21, and February 2, 2021.

Disposal Site Condition Surveys:

SF-08 (Main Ship Channel Disposal Site): Condition survey of April 14, 2020.

SF-09 (Carquinez): Condition survey of March 29, 2021.

SF-10 (San Pablo Bay): Condition survey of March 29, 2021.

SF-11 (Alcatraz Island): Condition survey of April 1, 2021.

SF-16 (Suisun Bay Disposal Site): Condition survey of May 17, 2020.

SF-17 (Ocean Beach Disposal Site): Condition survey of April 14, 2020.

Requested Surveys:

Pre/Post-dredge and condition surveys are scheduled to occur throughout the year for all of San Francisco District's in-bay projects which are planned to be dredged in FY21.

Channel Condition Report (CCR):

Attached is the Channel Condition Report (CCR) for all Corps maintained channels dated 5 Apr 2021. The CCR is generated by the USACE eHydro database and is not a substitute for the controlling depths set by the SF Bar Pilots. Please see the respective bathymetric plots for locations (highlighted in red) of the shoaliest soundings reports in the CCR.

				202	21 C)&M	DRI	ED	GINC	PL	.AN	t					
Project	Bid Open	Award	FEB	MAR	APR		JUN 2021	JUL	AUG	SEP	ОСТ	_	DEC FY202	 FEB	Estimated CY	Dredge Type	Placement Site
Oakland Harbor	15-Apr (S)	29-Apr (S)			•										1000kcy	Contract Clam Shell	SF-DODS
Redwood City Harbor	19-Apr (S)	3-May (S)			•	•									350kcy 125kcy	Contract Clam Shell	SF-11 Upland
San Joaquin River (Port of Stockton)	18-Jun (S)	2-Jul (S)					•		///						300kcy	Contract Pipeline	Various Upland
Sacramento River (30 Foot Project)	18-Jun (S)	28-Jun (S)					•								150kcy	Contract Pipeline	Various Upland
Suisun Bay Channel	24-Jun (S)	8-Jul (S)					•	•						_	175kcy	Contract Clam Shell	SF-16
Richmond Inner Harbor	10-Jul (S)	23-Jul (S)						•	•						250kcy	Contract Clam Shell	SF-DODS
Humboldt Bar & Entrance Channels	N/A	N/A													1100kcy	Govt Hopper	HOODS
San Pablo Bay (Pinole Shoal)	N/A	N/A													250kcy	Govt Hopper	SF-9/ SF-10
SF Main Ship Channel	22-Mar (S)	9-Apr (S)		•	•										350kcy	WCHC (Portland)	Ocean Beac
						W	ork Pla	n Pro	jects								
Humboldt Interior Channels	N/A	N/A													150kcy	Govt Hopper	HOODS
*	Solicitation Bid Opening Contract Awar Hopper Dredg									Mobili New S	onment ization SPN Co ed for P	ntract					
* Program execution is based on	the FY21 Work	plan plus FY20	Carry	over.											Date o	of Last Update:	4/5/202

To: Navigation Interests	From: US Army Corps of Engineers San Francisco District 450 Golden Gate Ave								
		San Fra	incisco, C	A 9410)2				
RIVER/HARBOR NAME AND STATE CRESCENT CITY CALIFORNIA					MINIMUM DEPTHS IN EACH 1/4 WIDTH OF CHANNEL ENTERING FROM SEAWARD				
		AUTHO	ORIZED PR	OJECT	LEFT	LEFT	RIGHT	RIGHT	
NAME OF CHANNEL	DATE OF SURVEY	WIDTH (feet)	LENGTH (miles)	DEPTH (feet)	OUTSIDE QUARTER (feet)	INSIDE QUARTER (feet)	INSIDE QUARTER (feet)	OUTSIDE QUARTER (feet)	
Crescent City		200							
Entrance Channel	02-08-2021	320	0.42	20	18.1	19.4	19.0	17.2	
Crescent City		200							
Inner Harbor Basin Channel	02-08-2021		0.39	15	14.8	14.8	15.0	13.8	
Crescent City		228							
Marina Access Channel	02-08-2021	170	0.22	15	4.8	10.6	12.2	9.5	

To: Navigation Interests	From:		ny Corps Iden Gat	_	neers Sar	Francisc	o District	
			incisco, C		12			
RIVER/HARBOR NAME AND STATE HUMBOLDT BAY CALIFORNIA		341111		<i>3</i> (3)110	MINIM	IUM DEPT I OF CHAI FROM SE		-
		AUTH	ORIZED PR	OJECT	LEFT	LEFT	RIGHT	RIGHT
NAME OF CHANNEL	DATE OF SURVEY	WIDTH (feet)	LENGTH (miles)	DEPTH (feet)	OUTSIDE QUARTER (feet)	INSIDE QUARTER (feet)	INSIDE QUARTER (feet)	OUTSIDE QUARTER (feet)
Humboldt Bay Bar and Entrance Channel	01-29-2021	500 2113	2.60	48	27.1	36.9	38.3	35.1
Humboldt Bay Eureka Channel	02-06-2021	400 416	1.69	26	3.1	4.4	13.7	7.3
Humboldt Bay		300						
Fields Landing Channel	02-04-2021		2.35	26	13.4	27.0	25.6	19.5
Humboldt Bay North Bay Channel	02-02-2021	400 657	3.04	38	33.6	35.4	34.3	22.9
Humboldt Bay	02-02-2021	400	3.04	36	33.0	33.4	34.3	22.5
Samoa Channel	02-07-2021		1.83	38	33.2	34.8	34.8	18.1

To: Navigation Interests	From: US Army Corps of Engineers San Francisco District 450 Golden Gate Ave San Francisco, CA 94102								
RIVER/HARBOR NAME AND STATE NAPA RIVER CALIFORNIA		incisco, C	<u>.A 9410</u>	MINIMUM DEPTHS IN EACH 1/4 WIDTH OF CHANNEL ENTERING FROM SEAWARD					
NAME OF CHANNEL	DATE OF SURVEY	WIDTH	DRIZED PRO	DEPTH				RIGHT OUTSIDE QUARTER	
Mare Island Strait Causeway to Asylum Slough	03-12-2021	(feet) 75 245	(miles) 3.19	(feet)	(feet) No Data	(feet) 9.6	(feet) 9.2	(feet) No Data	
Napa River Asylum Slough to Napa City	03-12-2021	102 183	9.92	6	No Data	2.6	2.1	No Data	

To: Navigation Interests	From: US Army Corps of Engineers San Francisco District 450 Golden Gate Ave San Francisco, CA 94102								
RIVER/HARBOR NAME AND STATE NOYO RIVER CALIFORNIA		incisco, C	<u>.A 9410</u>	MINIM	UM DEPT I OF CHAI FROM SE	NNEL EN			
NAME OF CHANNEL	DATE OF				LEFT OUTSIDE	LEFT INSIDE	RIGHT INSIDE	RIGHT OUTSIDE	
	SURVEY	WIDTH (feet)	LENGTH (miles)	DEPTH (feet)	QUARTER (feet)	QUARTER (feet)	QUARTER (feet)	QUARTER (feet)	
Noyo River Entrance Channel	02-10-2021	97 150	0.67	10	6.1	9.6	10.6	7.6	
Noyo River		97			No				
Channel	02-10-2021	150	0.67	10	Data	9.9	10.5	3.6	

To: Navigation Interests	From: US Army Corps of Engineers San Francisco District 450 Golden Gate Ave								
RIVER/HARBOR NAME AND STATE OAKLAND HARBOR CALIFORNIA		incisco, C	CA 9410	MINIMUM DEPTHS IN EACH 1/4 WIDTH OF CHANNEL ENTERING FROM SEAWARD					
NAME OF CHANNEL	DATE OF SURVEY	AUTHORIZED PROJECT WIDTH LENGTH DEPTH			LEFT OUTSIDE QUARTER	LEFT INSIDE	RIGHT INSIDE	RIGHT OUTSIDE QUARTER	
	JORVET	(feet)	(miles)	(feet)	(feet)	(feet)	(feet)	(feet)	
Brooklyn Basin Brooklyn Basin	01-15-2021	147 1501	0.94	35	6.2	8.0	17.3	7.2	
Brooklyn Basin		250					No	No	
Brooklyn Basin	01-15-2021		2.74	35	8.4	3.9	Data	Data	
Oakland Harbor Oakland Outer Channel	02-25-2021	296 1761	2.52	50	48.4	49.2	49.3	47.5	
	I				1		1		

To: Navigation Interests	From:	US Army Corps of Engineers San Francisco District 450 Golden Gate Ave								
			incisco, C		12					
RIVER/HARBOR NAME AND STATE OTHER CALIFORNIA		3411114		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	MINIM	CH 1/4 FERING				
NAME OF CHANNEL	DATE OF SURVEY	AUTHO WIDTH (feet)	DRIZED PRO LENGTH (miles)	DEPTH (feet)	LEFT OUTSIDE QUARTER (feet)	LEFT INSIDE QUARTER (feet)	RIGHT INSIDE QUARTER (feet)	RIGHT OUTSIDE QUARTER (feet)		
San Bruno Shoal San Bruno Shoal	02-26-2021	500	5.66	30	28.9	31.1	31.6	30.5		
Richardson Bay/Marinship Richardson Bay/Marinship	06-23-2020	300	2.11	20	No Data	6.0	6.4	No Data		
Islais Creek Islais Creek	07-17-2018	500	1.71	40	30.6	38.7	39.2	24.8		
Alameda Naval Air Alameda Naval Air	12-27-2019	1000	2.90	37	12.0	No Data	19.5	17.7		
Mare Island Strait Mare Island Strait	06-24-2020	400	3.37	6	26.7	28.6	31.3	31.7		
Larkspur Channel Larkspur Channel	07-11-2019	231	2.37	13	6.5	10.0	9.7	8.0		
Northship Channel Northship Channel	06-27-2019	3576	5.97	45	23.3	39.1	39.0	36.1		
Berkeley Marina Berkeley Marina	07-17-2019	100 142	1.36	15	3.6	3.5	4.1	4.2		
Bodega Bay Bodega Bay	08-11-2020	100	3.46	12	3.6	11.0	11.0	7.5		
Moss Landing Moss Landing	01-15-2021	120	0.98	15	13.2	12.0	11.2	10.9		
Jan 1 1 1										

To: Navigation Interests	From: US Army Corps of Engineers San Francisco District 450 Golden Gate Ave San Francisco, CA 94102									
RIVER/HARBOR NAME AND STATE PETALUMA RIVER CALIFORNIA		San Fra	incisco, C	A 9410	MINIMUM DEPTHS IN EACH 1/4 WIDTH OF CHANNEL ENTERING FROM SEAWARD					
NAME OF CHANNEL	DATE OF SURVEY	AUTHO WIDTH (feet)	ORIZED PRO LENGTH (miles)	OJECT DEPTH (feet)	LEFT OUTSIDE QUARTER (feet)	LEFT INSIDE QUARTER (feet)	RIGHT INSIDE QUARTER (feet)	RIGHT OUTSIDE QUARTER (feet)		
Petaluma River Main Channel	08-28-2020	100	4.06	8	+2.8	+1.1	+3.7	+3.8		
Petaluma River ATF Across the Flats	12-15-2020	200 206	5.68	8	6.3	8.8	8.3	8.2		

To: Navigation Interests	From: US Army Corps of Engineers San Francisco District 450 Golden Gate Ave San Francisco, CA 94102								
RIVER/HARBOR NAME AND STATE PINOLE SHOAL CALIFORNIA		Sairria	incisco, c	JA 3410	MINIMUM DEPTHS IN EACH 1/4 WIDTH OF CHANNEL ENTERING FROM SEAWARD				
NAME OF CHANNEL	DATE OF SURVEY	WIDTH LENGTH DEPTH						RIGHT OUTSIDE QUARTER	
Pinole Shoal Channel Pinole Shoal Channel	03-24-2021	(feet) 600 1644	(miles) 10.36	(feet)	(feet) 30.2	(feet) 35.2	(feet) 36.1	(feet) 32.5	

To: Navigation Interests	From: US Army Corps of Engineers San Francisco District 450 Golden Gate Ave San Francisco, CA 94102								
RIVER/HARBOR NAME AND STATE REDWOOD CITY CALIFORNIA		Juli i i		<i>3</i> 77 3 4 1 0	MINIMUM DEPTHS IN EACH 1/4 WIDTH OF CHANNEL ENTERING FROM SEAWARD				
NAME OF CHANNEL	DATE OF SURVEY	WIDTH LENGTH DEPTH C			LEFT OUTSIDE QUARTER	LEFT INSIDE QUARTER	RIGHT INSIDE QUARTER	RIGHT OUTSIDE QUARTER	
Redwood City Harbor		(feet) 300	(miles)	(feet)	(feet)	(feet)	(feet)	(feet)	
Redwood City Harbor	03-10-2021	943	3.94	6	18.1	26.4	26.2	23.7	

To: Navigation Interests	From:	US Army Corps of Engineers San Francisco District 450 Golden Gate Ave								
					12					
RIVER/HARBOR NAME AND STATE RICHMOND HARBOR CALIFORNIA	•	San Francisco, CA 9410				MINIMUM DEPTHS IN EACH 1/4 WIDTH OF CHANNEL ENTERING FROM SEAWARD				
		AUTHORIZED PROJECT			LEFT	LEFT	RIGHT	RIGHT		
NAME OF CHANNEL	DATE OF SURVEY	WIDTH (feet)	LENGTH (miles)	DEPTH (feet)	OUTSIDE QUARTER (feet)	INSIDE QUARTER (feet)	INSIDE QUARTER (feet)	OUTSIDE QUARTER (feet)		
Richmond Inner Harbor	02 02 2024	809	0.00	20						
Entrance Channel	03-02-2021		0.96	38	36.1	36.1	36.4	35.9		
Richmond Inner Harbor Approach Channel	03-02-2021	809 1201	3.09	38	33.7	35.0	35.7	35.2		
Richmond Inner Harbor		195						No		
Santa Fe Channel	02-26-2019	509	0.37	38	33.7	35.4	36.4	Data		
Richmond Outer Harbor Richmond Outer Harbor	03-16-2021	600 1291	3.25	6	41.5	44.5	44.6	42.5		

To: Navigation Interests	From: US Army Corps of Engineers San Francisco District 450 Golden Gate Ave San Francisco, CA 94102								
RIVER/HARBOR NAME AND STATE SAN FRANCISCO CALIFORNIA	San Francisco, CA 9410				MINIMUM DEPTHS IN EACH 1/4 WIDTH OF CHANNEL ENTERING FROM SEAWARD				
NAME OF CHANNEL	NAME OF CHANNEL DATE OF	AUTHORIZED PROJ		OJECT DEPTH	LEFT OUTSIDE	LEFT INSIDE	RIGHT INSIDE	RIGHT	
	SURVEY	(feet)	(miles)	(feet)	QUARTER (feet)	(feet)	(feet)	QUARTER (feet)	
San Francisco Mainship San Francisco Mainship	01-20-2021	2000	4.96	55	50.6	55.3	55.1	53.8	

To: Navigation Interests	From:	US Army Corps of Engineers San Francisco District 450 Golden Gate Ave San Francisco, CA 94102							
RIVER/HARBOR NAME AND STATE SAN LEANDRO CALIFORNIA	1			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	MINIMUM DEPTHS IN EACH 1/4 WIDTH OF CHANNEL ENTERING FROM SEAWARD				
NAME OF CHANNEL	DATE OF SURVEY	AUTHO WIDTH (feet)	DRIZED PRO LENGTH (miles)	DEPTH (feet)	LEFT OUTSIDE QUARTER (feet)	LEFT INSIDE QUARTER (feet)	RIGHT INSIDE QUARTER (feet)	RIGHT OUTSIDE QUARTER (feet)	
SAN LEANDRO MARINA Approach Channel	03-30-2015	200	3.50	7	2.8	3.6	3.4	3.2	
SAN LEANDRO MARINA North Arm	03-15-2010	170	0.30	7	2.7	3.6	3.8	3.9	
SAN LEANDRO MARINA South Arm	03-15-2010		0.30	7	3.3	4.7	4.6	4.8	
	03 13 2010	150	0.50	,	3.3				

To: Navigation Interests	From: US Army Corps of Engineers San Francisco District 450 Golden Gate Ave								
RIVER/HARBOR NAME AND STATE SAN RAFAEL CALIFORNIA	San Francisco, CA 9410 E AND STATE				MINIMUM DEPTHS IN EACH 1/4 WIDTH OF CHANNEL ENTERING FROM SEAWARD				
NAME OF CHANNEL	DATE OF	AUTHORIZED PROJECT		LEFT OUTSIDE	LEFT INSIDE	RIGHT INSIDE	RIGHT OUTSIDE		
	SURVEY	WIDTH (feet)	LENGTH (miles)	DEPTH (feet)	QUARTER (feet)	QUARTER (feet)	QUARTER (feet)	QUARTER (feet)	
San Rafael ATF Across the Flats	02-09-2021	100	2.25	8	2.4	4.2	4.0	2.3	
San Rafael River		60							
Inner Canal Channel	02-09-2021	160	1.55	6	0.7	1.6	0.9	1.4	

To: Navigation Interests	From: US Army Corps of Engineers San Francisco District 450 Golden Gate Ave								
	San Francisco, CA 94102								
RIVER/HARBOR NAME AND STATE SUISUN BAY CALIFORNIA					MINIMUM DEPTHS IN EACH 1/4 WIDTH OF CHANNEL ENTERING FROM SEAWARD				
		AUTHORIZED PROJECT			LEFT LEFT RIGHT RIGHT				
NAME OF CHANNEL	DATE OF SURVEY				OUTSIDE	INSIDE	INSIDE	OUTSIDE	
NAME OF CHANNEL		WIDTH (feet)	LENGTH (miles)	DEPTH (feet)	QUARTER (feet)	QUARTER (feet)	QUARTER (feet)	QUARTER (feet)	
Suisun Bay Channel		300							
Suisun Bay Channel	01-21-2021	350	13.86	35	32.8	34.1	33.9	31.0	
Suisun Bay Channel Anchorage						No	No	No	
Suisun Bay Channel Anchorage	01-21-2021	400	0.90	35	36.3	Data	Data	Data	
New York Slough		400							
Stockton Ship Channel	01-25-2021	411	4.42	35	33.8	34.1	34.9	32.5	