Harbor Safety Committee Of the San Francisco Bay Region

Report of the U.S. Army Corps of Engineers, San Francisco District July 14, 2022

1. CORPS O&M DREDGING PROGRAM

The FY22 project schedules are included in this report. The FY22 Consolidated Appropriations Act was signed into law on March 15th providing funds to the Corps to execute this year's dredging program. Planning for the FY22 dredging program has been completed and we are now transitioning to execution mode as all projects have achieved at least the bid opening stage.

FY 2022 DREDGING

- **a. Richmond Inner Harbor** Bid opening for the dredging contract solicitation was held on May 13. The contract was awarded to Pacific Dredge on May 27. Dredging is estimated to start mid-July.
- **b.** San Joaquin River (Port of Stockton) Bid opening for the dredging contract solicitation was held on May 31. The contract was awarded to Ross Island Sand & Gravel on June 10. The earliest dredging can begin is on August 1 when the environmental window opens.
- c. Sacramento River Deep Water Ship Channel Bid opening for the dredging contract solicitation was held on June 6. The contract was awarded to The Dutra Group on June 21. The earliest dredging can begin is on August 1 when the environmental window opens.
- d. Suisun Bay Channel (and New York Slough) Bid opening for the dredging contract solicitation was held on June 13. The contract was awarded to Camenzind Dutra JV on June 24. The earliest dredging can begin is on August 1 when the environmental window opens. However, dredging is estimated to start mid-August. On June 6, the U.S. Coast Guard notified the Corps of a hazardous shoal on the approach to the Union Pacific Railroad Bridge crossing in Bulls Head Reach of Suisun Bay Channel. The Essayons was transiting from the SF Main Ship Channel to Richmond Outer Harbor when the Corps diverted it to Bulls Head to remove the hazards. Dredging took place from June 15 to 16.
- e. San Rafael Creek Bid opening for the dredging contract solicitation was held on June 23. The contract was awarded to Camenzind Dutra JV on July 7. Dredging is estimated to start mid to late August. Dredging will be performed in both the Inner Canal and Across-the-Flats reaches of the project. The project was last dredged in 2011.
- **f.** Oakland Harbor Bid opening for the dredging contract solicitation was held on June 30. Contract award is tentatively scheduled for mid-July and dredging estimated to start late August. Half of the dredged material is planned for in-bay disposal while the other half will be beneficially reused at a site of the contractor's choosing.
- g. Napa River Bid opening for the dredging contract solicitation was held on July 11. Contract award is tentatively scheduled for late July and dredging estimated to start early September. Dredging will be performed in the upper reaches only. The project was previously dredged in 2016.

- h. SF Main Ship Channel The Government Hopper Dredge Essayons arrived on station and began dredging at the Main Ship Channel on June 2. The Essayons completed work on Jun 14 and was diverted to Bulls Head Reach of the Suisun Bay Channel to conduct emergency dredging operations in that location.
- i. Richmond Outer Harbor (and Richmond Long Wharf) Following completion of the Main Ship Channel and emergency dredging at Bulls Head, the Essayons moved on to Richmond Outer Harbor and started dredging there on June 16 and finished on July 1.
- **j.** San Pablo Bay (Pinole Shoal) Dredging is deferred to FY23 to remain in compliance with the Water Quality Certification for SF Bay Area Dredging.
- **k.** Redwood City Harbor This project is currently on a 2-year cycle and dredging last occurred in FY21. An assessment was recently done comparing advance maintenance to annual dredging. The result of the analysis supports switching to annual dredging beginning in FY23.

2. EMERGENCY (URGENT & COMPELLING) DREDGING: In early June, hydrosurveys revealed the presence of hazardous shoaling at Bulls Head Reach of Suisun Bay Channel. Emergency dredging procedures were activated leading to the diversion of the Essayons to remove the hazard as mentioned earlier.

3. DEBRIS REMOVAL –Debris removal for June was 2.5 tons. Dillard: 2.5 tons, including 1 abandoned vessel; Raccoon: 0 tons. Average debris removal for June from 2012 to 2021 is 61 tons (Range: 7-114.5).

MONTH	RACCOON	DILLARD	MISC	TOTAL
2022	TONS	TONS	TONS	TONS
JAN	0	374	0	374
FEB	0	37	3	40
MAR	0	23	0	23
APR	0	21	0	21
MAY	0	7	0	7
JUN	0	2.5	0	2.5
JUL				
AUG				
SEP				
OCT				
NOV				
DEC				

BASEYARD DEBRIS COLLECTION TOTALS:

YR TOTAL	
467.5	

4. 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 scope of the tentatively selected plan includes expansion of both inner and outer basins for a 1,310-foot design vessel. This expansion is expected to meet the needs of the future fleet. A NED waiver to continue with a Comprehensive Benefits Plan (CBP), which includes electric dredging, was submitted to the Assistant Secretary of the Army (ASA) by USACE Headquarters. The Final decision by the ASA to continue with the CBP is pending after their assessment of the public review comments.

The Draft Integrated Feasibility Report (IFR) was released on 17 December 2021 for public comment. The Agency Decision Milestone (ADM) is scheduled for May 12th. The 3x3x3 feasibility study is on track and on budget. However, 3X3X3 compliance will need to be reassessed after public comments are received.

5. OTHER WORK

Regional Dredge Material Management Plan: Following public and stakeholders' outreach for the PMP, the project is now in phase 1 gap analysis to address the key issues as identified by the stakeholders from the virtual charrettes held in July 2020. SFEI has been contracted to perform this phase and is coordinating with the Interagency Working Group (IWG) to provide expert advice and review of work products associated with the RDMMP Gaps Analysis, including prioritizing the knowledge gaps identified by the project team and reviewing the scopes of work produced to address those knowledge gaps. 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.army.mil/Missions/Civil-Works/Budget/

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 October 14, 2021. Berkeley Marina (Entrance Channel): Condition survey of April 22, 2021. Islais Creek Channel: Condition survey of August 26, 2021. Larkspur Ferry Channel: Condition survey of April 8, 2020. Mare Island Strait: Condition survey of September 29, 2021. Marinship Channel (Richardson Bay): Condition survey of June 23, 2020 and April 20, 2021. Napa River: Condition survey of June 14-15, 2022. Northship Channel: Condition survey of September 20, 21, & 28, 2021. Oakland Inner Harbor: Condition survey of May 11, 2022. Oakland Inner Harbor (Brooklyn Basin): Condition survey of 15-20 January 2021. Oakland Outer Harbor: Condition survey of May 12, 2022. Petaluma River (Across-the-Flats): Condition survey of 16 November 2021 – 29 March 2022. Petaluma River (Main Channel): Condition survey of 16 November 2021 – 29 March 2022. Petaluma River (Extended Channel): Condition survey of 16 November 2021 – 29 March 2022. Pinole Shoal Channel: Condition survey of April 27, May 4, and May 10, 2022. Redwood City Harbor: Condition survey of March 15-16, 2022. Richmond Inner Harbor: Condition survey of June 8-10, 2022. Richmond Inner Harbor (Santa Fe Channel): Condition survey of December 20, 2016. Richmond Outer Harbor (Longwharf): Condition survey of June 8, 2022.

Richmond Outer Harbor (Southampton Shoal): Condition survey of June 8, 2022.
Sacramento River Deep Water Ship Channel: Condition Survey of April 20-28, 2022.
San Bruno Shoal: Condition survey of February 26, 2021.
San Francisco Main Ship Channel: After dredge survey of June 22-23, 2022.
San Leandro Marina (and Channel): Condition survey of March 30 and April 1, 2015.
San Rafael (Across-the-Flats): Condition survey of April 12-13, 2022.
San Rafael (Creek): Condition survey of April 12-13, 2022.
Stockton Ship Channel: Condition survey of April 1-4, 2022.
Suisun Bay Channel: Condition survey of May 15-17, 2022.
Suisun Bay Channel (Bullshead Reach): After dredge survey of June 16, 2022.
Suisun Bay Channel (New York Slough): Condition survey of April 1-4, 2022.

Disposal Site Condition Surveys:

SF-08 (Main Ship Channel Disposal Site): Condition survey of May 24, 2022.
SF-09 (Carquinez): Condition survey of March 17, 2022.
SF-10 (San Pablo Bay): Condition survey of March 17, 2022.
SF-11 (Alcatraz Island): Condition survey of June 10, 2022.
SF-16 (Suisun Bay Disposal Site): Condition survey of October 20, 2021.
SF-17 (Ocean Beach Disposal Site): Condition survey of May 24, 2022.

Requested Surveys:

Pre/Post-dredge and condition surveys have been completed for all of San Francisco District's in-bay projects dredged in FY21.

Channel Condition Report (CCR):

Attached is the Channel Condition Report (CCR) for all Corps maintained channels dated **11 JUL 2022**. 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.

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	· · · · · ·		FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ост	NOV	DEC	JAN	FEB	Estimated	· · · · · · · · · · · · · · · · · · ·	Placement
Project	Bid Open	Award	<u> </u>	<u>, </u>	<u> </u>	FY20		<u>*-</u>					FY2023		<u> </u>	CY	Dredge Type	
	Dia ope	Fitters		CONT	RACT			R CI'	JTTERHE	EAD P	PELIN						Dicage i jes	- Site
Richmond Inner Harbor	13-May (A)	27-May (A)				• •		I	7777							410kcy	Contract Clam Shell	SF-DODS
San Joaquin River (Port of Stockton)	31-May (A)	10-Jun (A)														180kcy	Contract Pipeline	Various Upland
Sacramento River (30 Foot Project)	6-Jun (A)	21-Jun (A)					••	Ì								80kcy	Contract Pipeline	Various Upland
Suisun Bay Channel	13-Jun (A)	24-Jun (A)					••				<u>/</u>					120kcy	Contract Clam Shell	Upland
San Rafael Creek	23-Jun (A)	7-Jul (A)														235kcy 25kcy	Contract Clam Shell	SF-10 SF-DODS
Oakland Harbor	30-Jun (A)	14-Jul (S)						•								375kcy 375kcy	Contract Clam Shell	SF-11 Upland
Napa River	11-Jul (A)	25-Jul (S)						• •	•			\mathbb{Z}				55kcy	Contract Clam Shell	Coombs
					WE	ST COP	ST HO	PEP	R CONTR	RACT								
Humboldt Bar & Entrance Channels	9-Mar (A)	28-Mar (A)		• •				wo			Ĺ_'	<u> </u>	<u> </u>		<u> </u>	1100kcy	WCHC (Portland)	HOODS
						GOVE	RNME	<u>H TV</u>	HOPPER									
Humboldt Interior Channels	N/A	N/A	<u> </u>									YAQ ((TBD)		<u> </u> '	150kcy	Govt Hopper	HOODS
SF Main Ship Channel	N/A	N/A					E	S5								350kcy	Govt Hopper	OBDS/SF-8
Bulls Head Emergency Dredging	N/A	N/A					E	S 5								15kcy	Govt Hopper	SF-16
Richmond Outer Harbor	N/A	N/A	['	['	['			ES	is				['		['	300kcy	Govt Hopper	SF-11/SF-10
Solicitation WCH West Coast Hopper Contract Environmental Window Image: Bid Opening YAQ Gov't Dredge Yaquina Mobilization Image: Contract Award ESS Gov't Dredge Essayons Physical Dredging Image: Hopper Dredging Hopper Dredging Image: Contract Award Ess																		
* Program execution is based on	the FY22 Presi	dent's Budget	and Wr	ork Pla	.n.			_								Date c	of Last Update:	7/12/2022

To: Navigation Interests	From: US Army Corps of Engineers San Francisco District 450 Golden Gate Ave									
RIVER/HARBOR NAME AND STATE NAPA RIVER CALIFORNIA		San Fra	Francisco, CA 94102 MINIMUM DEPTHS IN EA WIDTH OF CHANNEL EN FROM SEAWARD							
NAME OF CHANNEL	DATE OF SURVEY	WIDTH	DRIZED PR	DEPTH		LEFT INSIDE QUARTER	RIGHT INSIDE QUARTER	RIGHT OUTSIDE QUARTER		
Mare Island Strait Causeway to Asylum Slough	06-14-2022	(feet) 75 245	(miles) 3.19	(feet) 15	(feet) 4.8	(feet) 9.0	(feet) 9.0	(feet) 7.3		
Napa River Asylum Slough to Napa City	06-14-2022	102 183	9.92	10	0.5	1.6	1.2	0.6		

To: Navigation Interests	From: US Army Corps of Engineers San Francisco District 450 Golden Gate Ave									
RIVER/HARBOR NAME AND STATE OAKLAND HARBOR CALIFORNIA	I	San Francisco, CA 94102 MINIMUM DEPTHS IN EAC WIDTH OF CHANNEL ENTE FROM SEAWARD								
NAME OF CHANNEL	DATE OF SURVEY	AUTH WIDTH (feet)	ORIZED PR LENGTH (miles)	OJECT DEPTH (feet)	LEFT OUTSIDE QUARTER (feet)	LEFT INSIDE QUARTER (feet)	RIGHT INSIDE	RIGHT OUTSIDE QUARTER (feet)		
Brooklyn Basin Brooklyn Basin	01-15-2021	147 1501	0.94	35	6.2	8.0	17.3	7.2		
Brooklyn Basin Brooklyn Basin	01-15-2021	250 1010	2.74	35	8.4	3.9	3.0	3.0		
Oakland Harbor Oakland Inner Harbor	05-11-2022	544 1997	4.62	50	47.2	48.5	48.5	47.4		
Oakland Harbor Oakland Outer Channel	05-12-2022	296 1761	2.52	50	48.3	48.9	48.9	48.5		

To: Navigation Interests	From: US Army Corps of Engineers San Francisco District 450 Golden Gate Ave										
		San Fra	ncisco, C	CA 9410)2						
RIVER/HARBOR NAME AND STATE					MINIM	UM DEPT	THS IN EA	CH 1/4			
OTHER					WIDTH	I OF CHAI	NNEL ENT	FERING			
CALIFORNIA						FROM SE	EAWARD				
		AUTH	ORIZED PR	OJECT	LEFT	LEFT	RIGHT	RIGHT			
NAME OF CHANNEL	DATE OF				OUTSIDE	INSIDE	INSIDE	OUTSIDE			
	SURVEY	WIDTH (feet)	LENGTH (miles)	DEPTH (feet)	QUARTER (feet)	QUARTER (feet)	QUARTER (feet)	QUARTER (feet)			
San Bruno Shoal		(,	((,	(1001)	(1001)	(1001)	(icety			
San Bruno Shoal	10-28-2021	500	5.66	30	28.7	30.2	31.1	29.5			
Richardson Bay/Marinship	10 20 2021	300	5.00		2017	0012	0111	2010			
Richardson Bay/Marinship	06-23-2020		2.11	20	4.6	6.0	6.4	6.4			
Islais Creek	30 23 2020	500	<u> </u>			0.0	0.1	0.1			
Islais Creek	08-27-2021	1424	1.71	40	30.7	37.5	37.5	23.9			
Alameda Naval Air	00 27-2021	1000	1./1		30.7	57.5	57.5	23.5			
Alameda Naval Air Alameda Naval Air	10-14-2021	4178	2.90	37	11.5	12.5	19.0	17.2			
	10-14-2021		2.90	57	11.5	12.5	19.0	17.2			
Mare Island Strait	00 20 2021	400	2.27	20	27.2	20.1	21.0	22.1			
Mare Island Strait	09-29-2021	606	3.37	30	27.3	29.1	31.8	32.1			
Larkspur Channel		231			6.5	40.0	0.7				
Larkspur Channel	07-11-2019		2.37	13	6.5	10.0	9.7	8.0			
Northship Channel		3576									
Northship Channel	09-20-2021	4769	5.97	45	23.1	38.2	37.8	35.2			
Berkeley Marina		100									
Berkeley Marina	04-22-2021	142	1.36	6	3.5	3.8	4.3	4.3			
Bodega Bay		100									
Bodega Bay	09-24-2021	400	3.46	12	3.4	10.0	10.5	7.9			
Moss Landing		120									
Moss Landing	03-31-2021	405	0.98	6	13.2	12.3	11.1	10.9			

To: Navigation Interests	From: US Army Corps of Engineers San Francisco District 450 Golden Gate Ave										
					17						
RIVER/HARBOR NAME AND STATE PETALUMA RIVER CALIFORNIA		Jail Fla	incisco, (<u>,A 9410</u>	MINIM	IUM DEPT I OF CHAI FROM SI	NNEL EN				
		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)			
Petaluma River Main Channel	03-29-2022	100 361	4.06	8	4.2	7.3	5.2	1.6			
Petaluma River ATF		200									
Across the Flats	12-15-2020		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									
			incisco, C		12					
RIVER/HARBOR NAME AND STATE PINOLE SHOAL CALIFORNIA					MINIM	MINIMUM DEPTHS IN EACH 1 WIDTH OF CHANNEL ENTERIN FROM SEAWARD				
		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)		
Pinole Shoal Channel		600								
Pinole Shoal Channel	04-27-2022	1644	10.40	35	30.1	35.3	36.1	33.3		

To: Navigation Interests	From: US Army Corps of Engineers San Francisco District 450 Golden Gate Ave									
			incisco, C		12					
RIVER/HARBOR NAME AND STATE REDWOOD CITY CALIFORNIA	1	301110		<u>,A 9410</u>	MINIM	IUM DEP I OF CHAI FROM SI				
		AUTH	ORIZED PR	OJECT	LEFT	LEFT	RIGHT	RIGHT		
NAME OF CHANNEL	DATE OF SURVEY	WIDTH (feet)	LENGTH (miles)	DEPTH (feet)	OUTSIDE	INSIDE	INSIDE	OUTSIDE QUARTER (feet)		
Redwood City Harbor		300								
Redwood City Harbor	03-15-2022		3.94	30	20.4	29.4	29.2	27.8		

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 RICHMOND HARBOR CALIFORNIA		San Fra	incisco, C	<u>.A 941(</u>	MINIM	UM DEPT I OF CHAI FROM SE	NNEL EN	TERING		
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	RIGHT OUTSIDE		
Richmond Inner Harbor Entrance Channel	06-08-2022	809 1021	0.96	38	35.1	36.0	36.4	35.8		
Richmond Inner Harbor Approach Channel	06-08-2022	809 1201	3.09	38	33.6	34.9	35.7	34.3		
Richmond Inner Harbor Santa Fe Channel	02-26-2019	195 509	0.37	38	33.7	35.4	36.4	36.0		
Richmond Outer Harbor Richmond Outer Harbor	06-08-2022	600 1291	3.25	45	40.8	44.2	43.9	42.4		
Richmond Outer Harbor Longwharf Turning Basin	06-06-2022	2188 5598	0.88	45	26.3	No Data	No Data	No Data		

To: Navigation Interests	From: US Army Corps of Engineers San Francisco District 450 Golden Gate Ave									
			ncisco, C)2					
RIVER/HARBOR NAME AND STATE SAN FRANCISCO CALIFORNIA		0011110			MINIM	IUM DEPT I OF CHAI FROM SE				
		AUTH	AUTHORIZED PROJECT			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)		
San Francisco Mainship										
San Francisco Mainship	06-22-2022	2000	4.96	55	51.5	54.9	55.2	53.9		

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		<u>San Fra</u>	incisco, C	<u>CA 9410</u>	MINIMUM DEPTHS IN EACH 1/4 WIDTH OF CHANNEL ENTERING FROM SEAWARD					
		AUTH	ORIZED PR	OJECT	LEFT	LEFT	RIGHT	RIGHT		
NAME OF CHANNEL	DATE OF SURVEY	WIDTH (feet)	LENGTH (miles)	DEPTH (feet)	OUTSIDE		INSIDE	OUTSIDE		
SAN LEANDRO MARINA Approach Channel	03-30-2015	200	3.50	7	2.8	3.6	3.4	3.2		
	03-30-2013	200	3.50	/	2.0	5.0	5.4	5.2		
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	150	0.30	7	3.3	4.7	4.6	4.8		

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				MINIMUM DEPTHS IN EACH 1/4 WIDTH OF CHANNEL ENTERING FROM SEAWARD					
NAME OF CHANNEL	DATE OF SURVEY	AUTHORIZED PROJECT			LEFT OUTSIDE	LEFT INSIDE	RIGHT	RIGHT OUTSIDE		
		WIDTH (feet)	LENGTH (miles)	DEPTH (feet)			QUARTER (feet)			
San Rafael ATF Across the Flats	04-12-2022	100	2.25	8	2.8	3.9	3.3	2.6		
San Rafael River	01122022	60	2.25		2.0	0.0	0.0	2.10		
Inner Canal Channel	04-12-2022		1.55	6	1.4	1.6	1.0	0.8		

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 SUISUN BAY CALIFORNIA		<u>.A 941(</u>	02 MINIMUM DEPTHS IN EACH 1/4 WIDTH OF CHANNEL ENTERING FROM SEAWARD						
NAME OF CHANNEL	DATE OF SURVEY	AUTHORIZED PROJECT			LEFT OUTSIDE	LEFT INSIDE	RIGHT INSIDE	RIGHT OUTSIDE	
		WIDTH (feet)	LENGTH (miles)	DEPTH (feet)	QUARTER (feet)	QUARTER (feet)	QUARTER (feet)	QUARTER (feet)	
Suisun Bay Channel									
Suisun Bay (0+00 to 150+00)	05-17-2022	300	2.84	35	35.0	33.9	32.3	32.3	
Suisun Bay Channel Suisun Bay (150+00 to 733+45)	05-17-2022	300	11.10	35	33.7	33.7	33.5	29.4	
Suisun Bay Channel Anchorage						No	No	No	
Suisun Bay Channel Anchorage	05-17-2022	400	0.90	35	34.3	Data	Data	Data	
New York Slough New York Slough (0+00 to 232+03)	04-01-2022	400 411	4.42	35	33.5	33.7	35.2	34.9	