

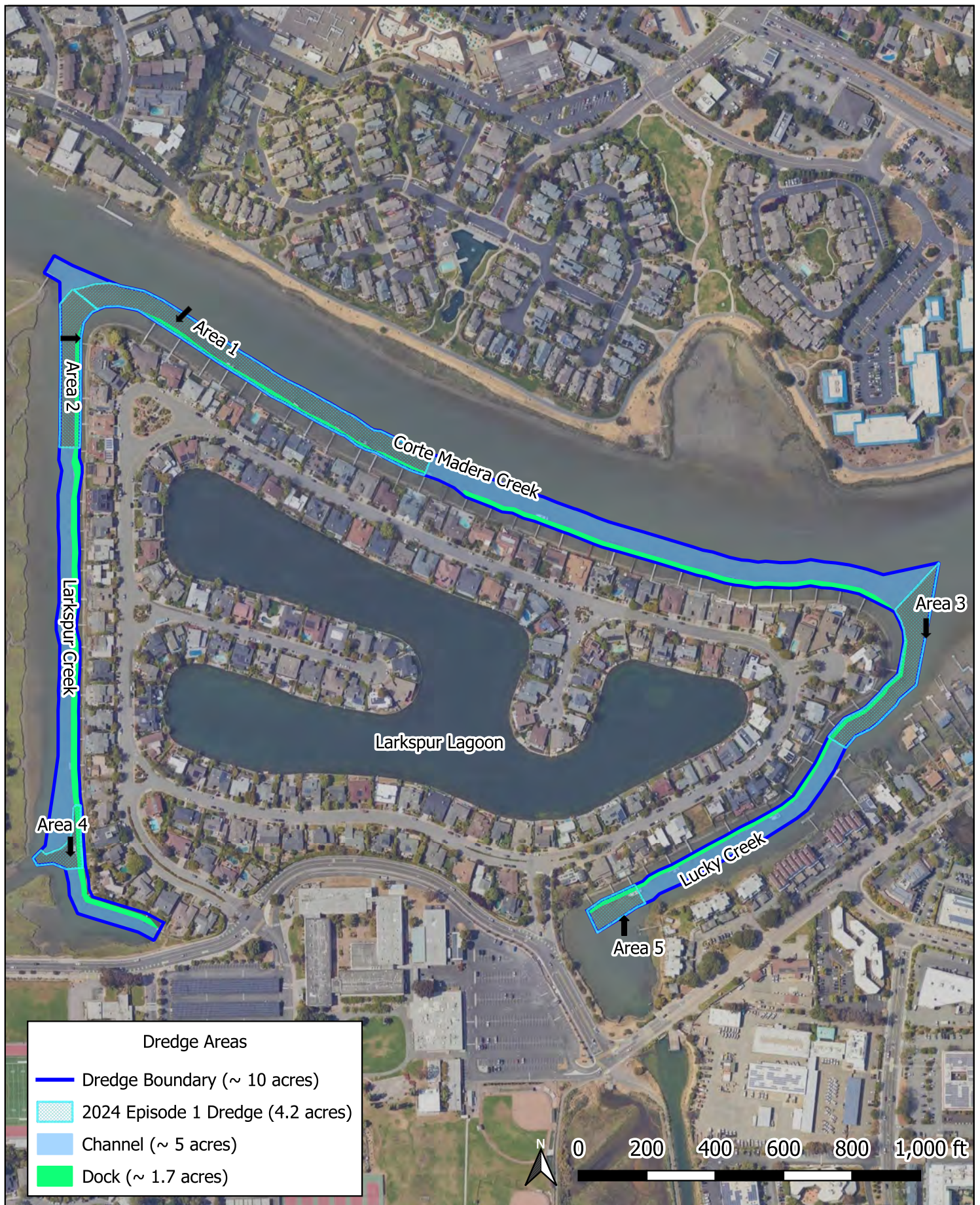


Source: Aerial Image Google Satellite 2024

Prepared by CVance January 19, 2024

Figure 1. Project Vicinity Map

Larkspur Marina, Larkspur, California



Source: Aerial Image Google Satellite 2024

Prepared By CVance January 19, 2024

Figure 2. 2024 Episode 1 Dredge Areas



Source: Aerial Image Google Satellite 2024

Prepared by CVance January 19, 2024

Figure 3. Project Land Ownership

Larkspur Marina, Larkspur, California



Source: Aerial Image Google Satellite 2024

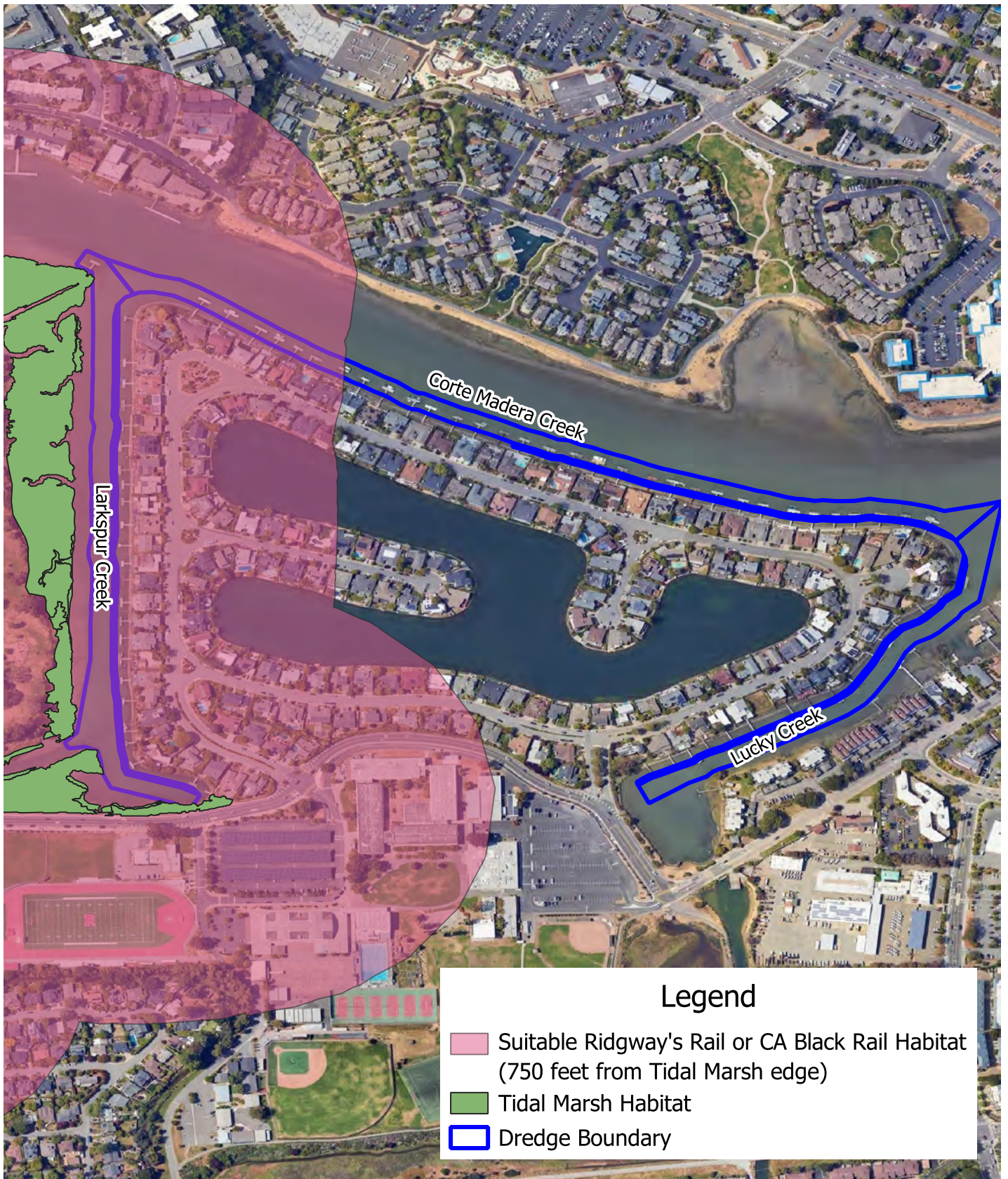
Prepared by CVance January 19, 2024

Figure 4. BCDC Jurisdiction

Larkspur Marina, Larkspur, California



SUNSET ECOLOGICAL
SOLUTIONS
 BIOLOGY, PERMITTING, AND COMPLIANCE



Source: ESRI Google Satellite, Marin County Fine Scale Vegetation 2018

Prepared By CVance December 15, 2023

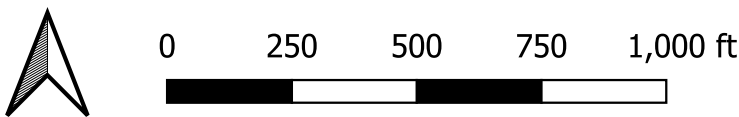
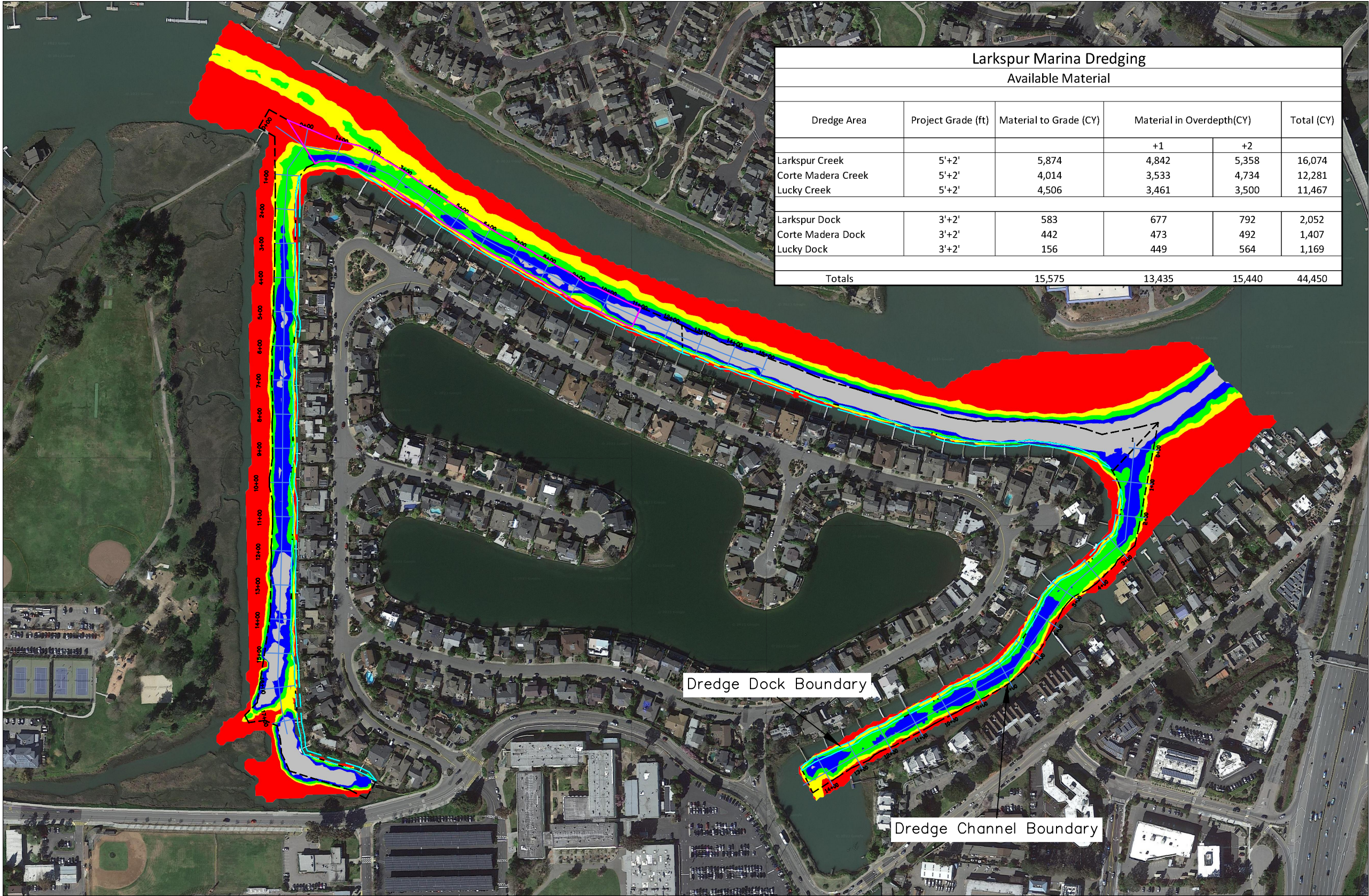


Figure 5. Vegetative Habitats and Ridgway's Rail Buffer
Larkspur Marina, Larkspur, Marin County, CA

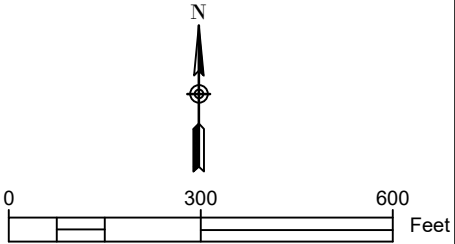
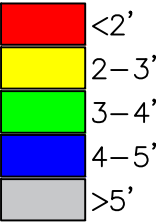


Larkspur Marina Dredging					
Available Material					
Dredge Area	Project Grade (ft)	Material to Grade (CY)	Material in Overdepth(CY)		Total (CY)
			+1	+2	
Larkspur Creek	5'+2'	5,874	4,842	5,358	16,074
Corte Madera Creek	5'+2'	4,014	3,533	4,734	12,281
Lucky Creek	5'+2'	4,506	3,461	3,500	11,467
Larkspur Dock	3'+2'	583	677	792	2,052
Corte Madera Dock	3'+2'	442	473	492	1,407
Lucky Dock	3'+2'	156	449	564	1,169
Totals		15,575	13,435	15,440	44,450

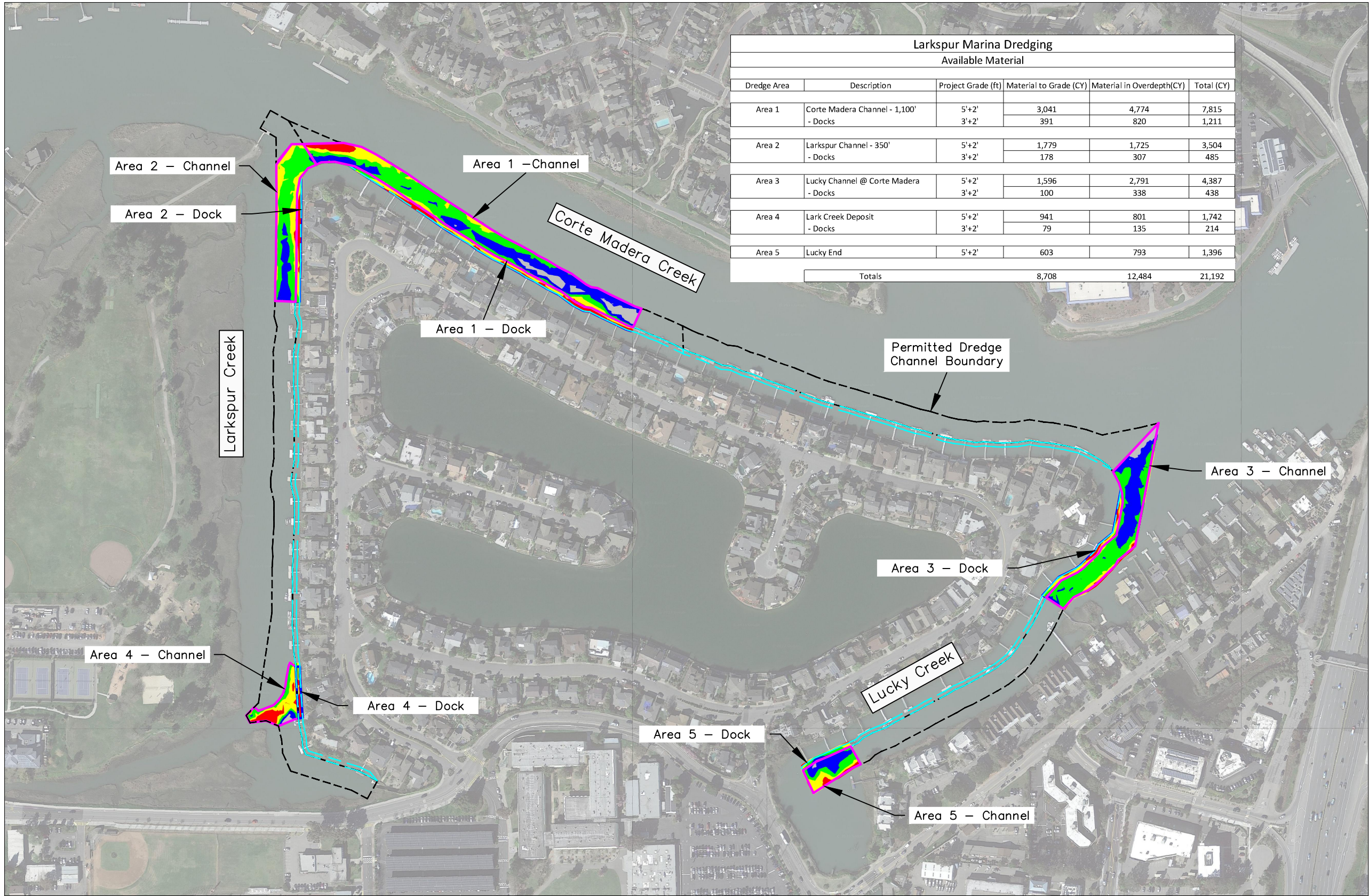
Survey Notes:

- Survey Dates: February 24 and 25, March 23 2023.
- Horizontal Datum: NAD83, California Zone 3 U.S. Foot.
- Vertical Datum: MLLW, U.S. Foot.
- Project Benchmark: NOAA Tide Station ID: 9414874 - Corte Madera Creek, CA. 4874 D 1977.
- Positions were collected using a Dual-Band GNSS antennae in RTK Fixed mode.
- Soundings were collected using a 4D single-beam sonar operating at 200 kHz.
- This survey represents conditions at the time of the survey.

Elevation ft MLLW



Scale 1" = 300'

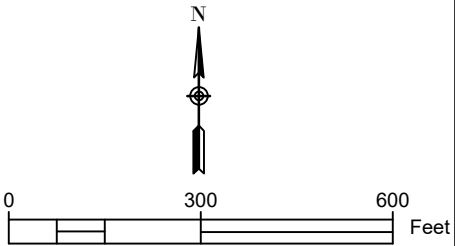
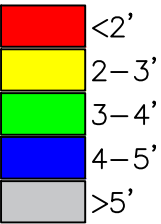


Larkspur Marina Dredging					
Available Material					
Dredge Area	Description	Project Grade (ft)	Material to Grade (CY)	Material in Overdepth(CY)	Total (CY)
Area 1	Corte Madera Channel - 1,100' - Docks	5'+2'	3,041	4,774	7,815
		3'+2'	391	820	1,211
Area 2	Larkspur Channel - 350' - Docks	5'+2'	1,779	1,725	3,504
		3'+2'	178	307	485
Area 3	Lucky Channel @ Corte Madera - Docks	5'+2'	1,596	2,791	4,387
		3'+2'	100	338	438
Area 4	Lark Creek Deposit - Docks	5'+2'	941	801	1,742
		3'+2'	79	135	214
Area 5	Lucky End	5'+2'	603	793	1,396
	Totals		8,708	12,484	21,192

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Elevation ft MLLW



Scale 1" = 300'



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(415)999-8319 www.pchsurreysf.com

Date: 24 March 2023

Drawn by: dsg

Project No:

Rev. 29 January 2024

Rev.

Darren Gewant
Certified Hydrographer #343

DREDGE MATERIAL
VOLUME CALCULATIONS

CONDITION HYDROGRAPHIC
SURVEY

LARKSPUR MARINA

LARKSPUR, CA 94939

T-1

SHEET 1 OF 1

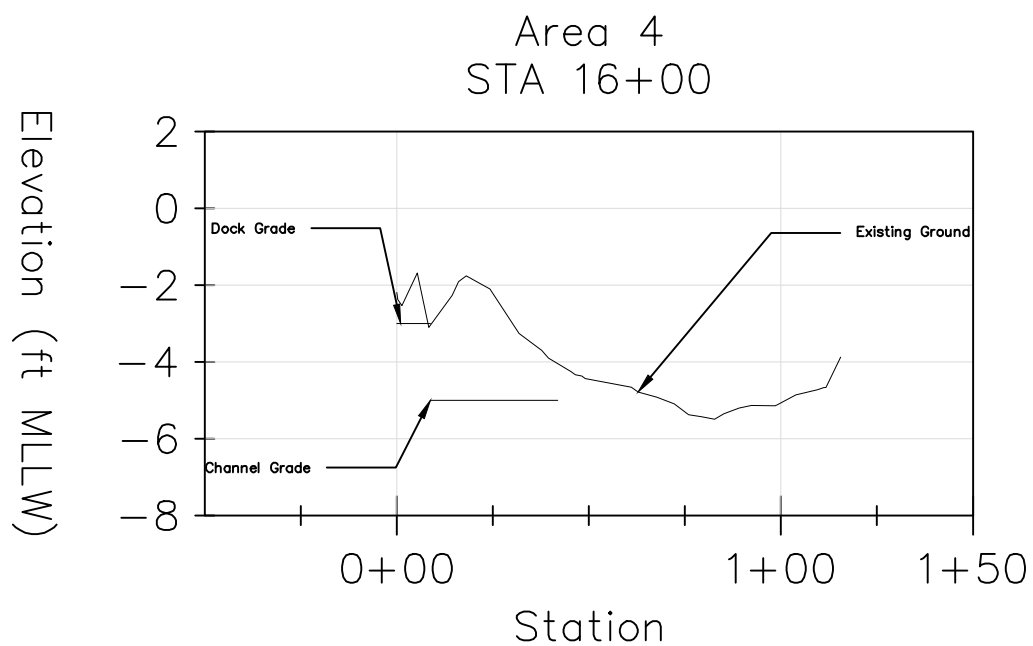
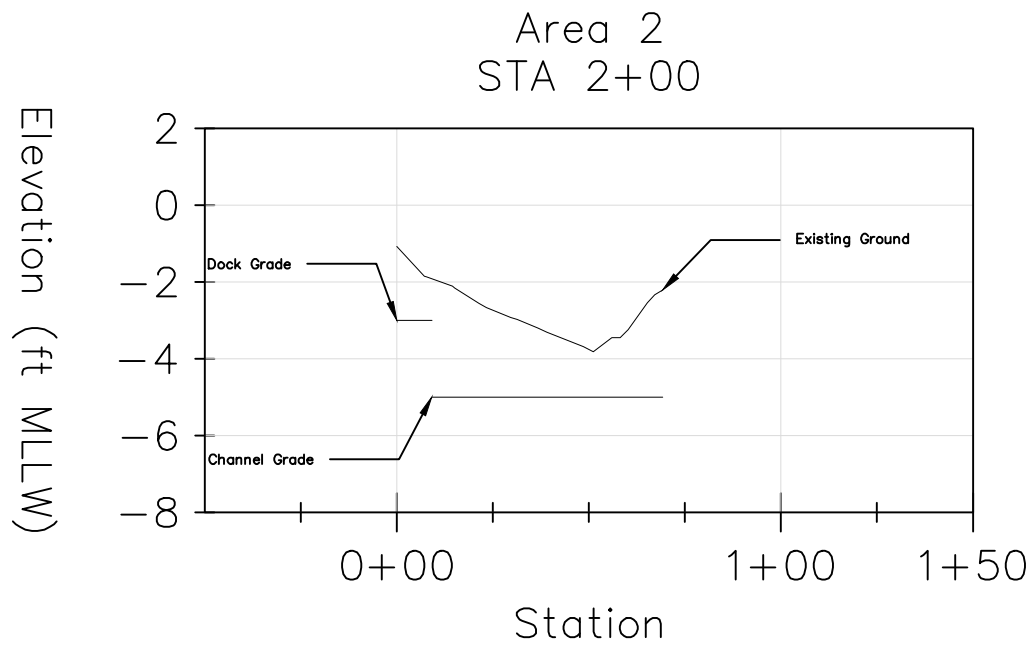


Figure 1: Cross Sections on Larkspur Channel
Project: Larkspur Marina
Date: July 6, 2023

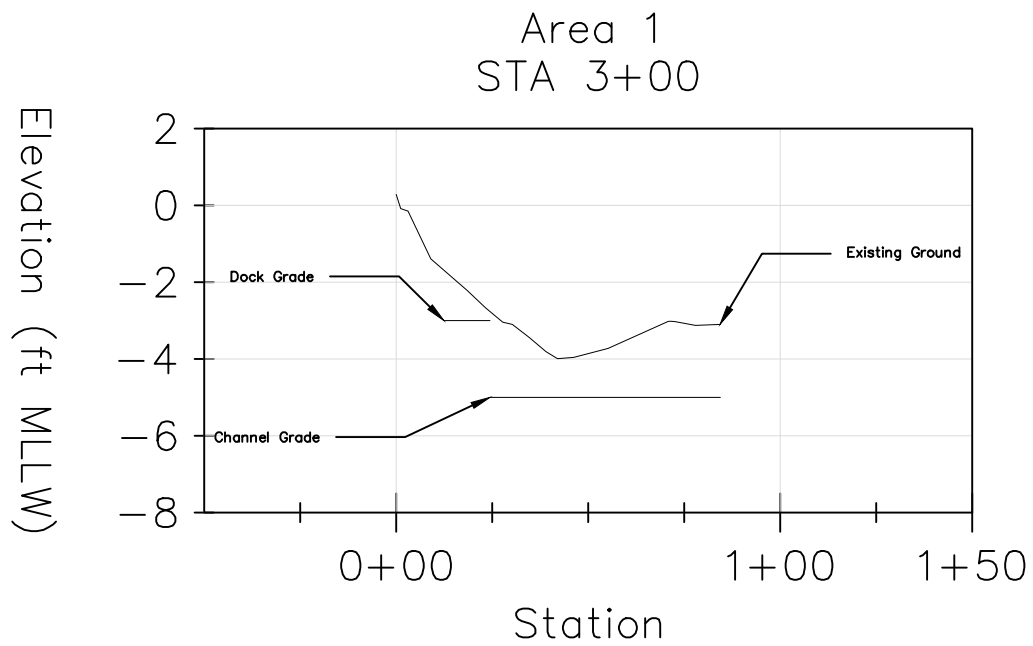


Figure 2: Cross Sections on Corte Madera Creek
Projec: Larkspur Marina
Date: July 16, 2023

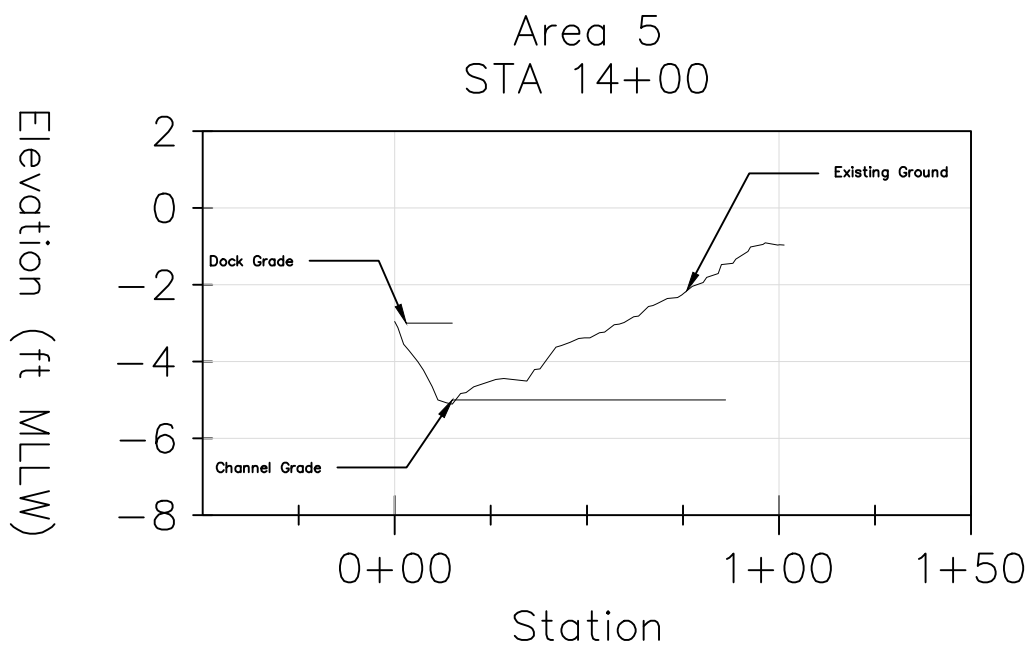
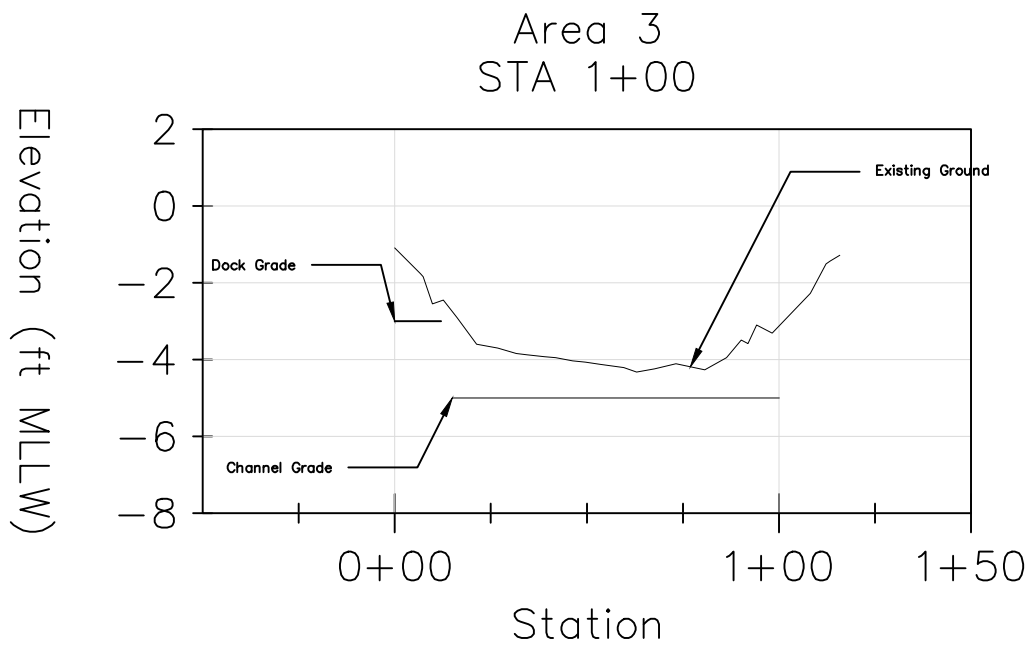


Figure 3: Cross Sections on Lark Creek
Project: Larkspur Marina
Date: July 16, 2023