APPENDIX B

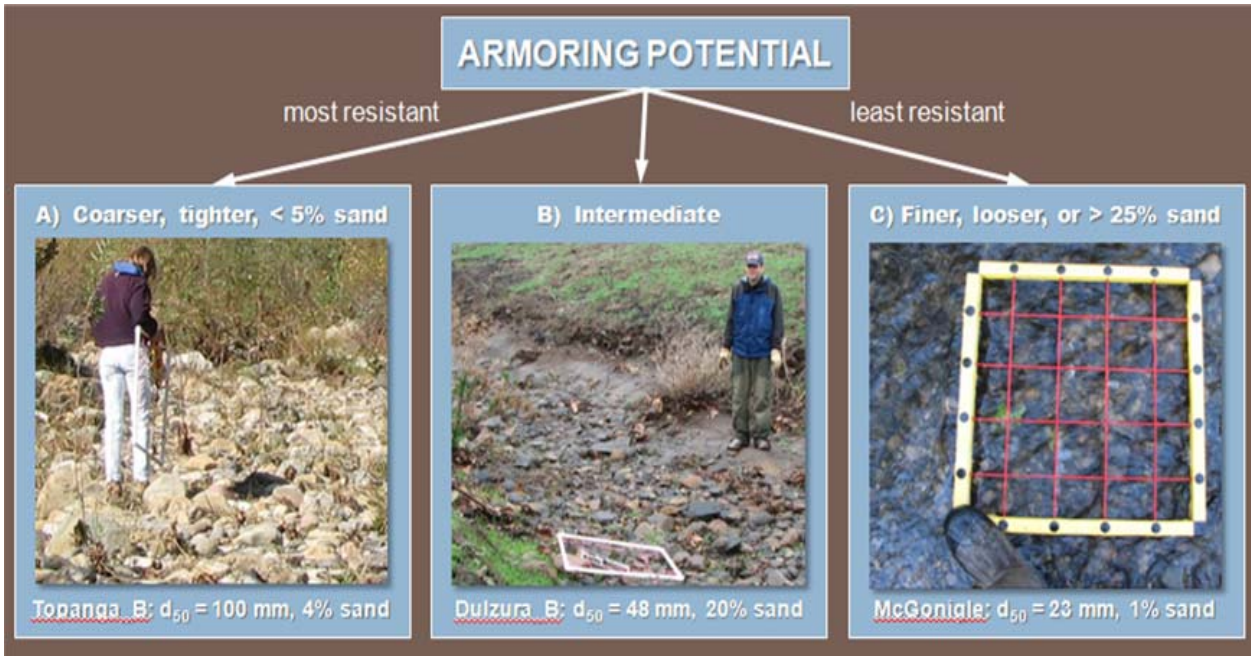
SCCWRP FIELD SCREENING DATA

Form 3 Support Materials

Form 3 Checklists 1 and 2, along with information recording in Form 3 Table 1, are intended to support the decisions pathways illustrated in Form 3 Overall Vertical Rating for Intermediate/Transitional Bed.

Form 3 Checklist 1: Armoring Potential

□	A	A mix of coarse gravels and cobbles that are tightly packed with <5% surface material of diameter <2 mm
X	B	Intermediate to A and C or hardpan of unknown resistance, spatial extent (longitudinal and depth), or unknown armoring potential due to surface veneer covering gravel or coarser layer encountered with probe
□	C	Gravels/cobbles that are loosely packed or >25% surface material of diameter <2 mm

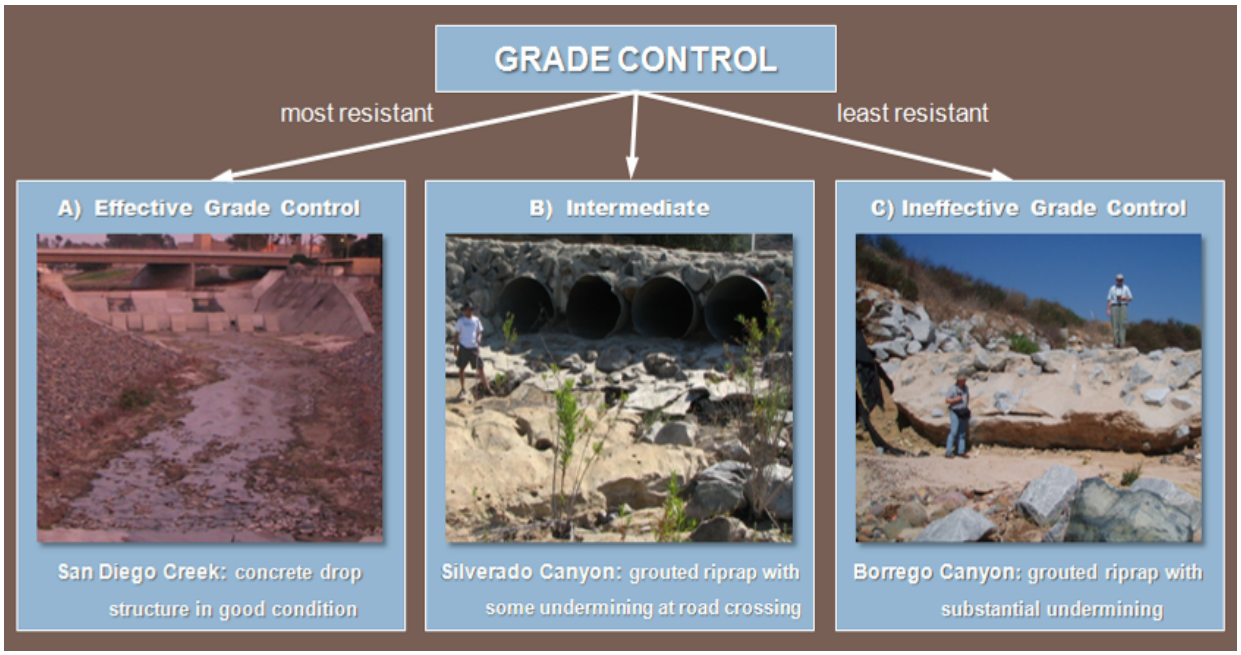


Form 3 Figure 2. Armoring potential photographic supplement for assessing intermediate beds ($16 < d_{50} < 128$ mm) to be used i**n conjunction with Form 3 Checklist 1.**

REACH 1 THROUGH 3 RESULTS

Form 3 Checklist 2: Grade Control

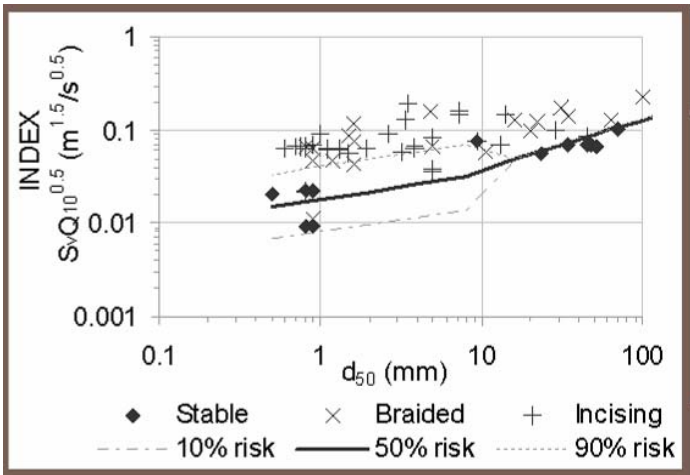
☒	A	Grade control is present with spacing <50 m or $2/S_v$ m • No evidence of failure/ineffectiveness, e.g., no headcutting (>30 cm), no active mass wasting (analyst cannot say grade control sufficient if mass-wasting checklist indicates presence of bank failure), no exposed bridge pilings, no culverts/structures undermined • Hard points in serviceable condition at decadal time scale, e.g., no apparent undermining, flanking, failing grout • If geologic grade control, rock should be resistant igneous and/or metamorphic; For sedimentary/hardpan to be classified as 'grade control', it should be of demonstrable strength as indicated by field testing such as hammer test/borings and/or inspected by appropriate stakeholder
☐	B	Intermediate to A and C – artificial or geologic grade control present but spaced 2/Sv m to 4/Sv m or potential evidence of failure or hardpan of uncertain resistance
☐	C	Grade control absent, spaced >100 m or $>4/S_v$ m, or clear evidence of ineffectiveness



Form 3 Figure 3. Grade-control (condition) photographic supplement for assessing intermediate beds ($16 < d_{50} < 128$ mm) to be used in conjunction with Form 3 Checklist 2.

Regionally-Calibrated Screening Index Threshold for Incising/Braiding

For transitional bed channels (d_{50} between 16 and 128 mm) or labile beds (channel not incised past critical bank height), use Form 3 Figure 3 to determine Screening Index Score and complete Form 3 Table 1.



Model Type	d_{50} (mm)	50% Risk $S_vQ_{10}^{0.5}$ ($m^{1.5}/s^{0.5}$)
Logistic Regression $d_{50} \geq 16$ mm	128	0.145
	96	0.125
	80	0.114
	64	0.101
	48	0.087
	32	0.070
	16	0.049
Logistic Reg. $d_{50} < 16$ mm	8	0.031
	4	0.026
	2	0.022
	1	0.018
	0.5	0.015

Form 3 Figure 4. Probability of incising/braiding based on logistic regression of Screening Index and d_{50} to be used in conjunction with Form 3 Table 1.

Form 3 Table 1. Values for Screening Index Threshold (probability of incising/braiding) to be used in conjunction with Form 3 Figure 4 (above) to complete Form 3 Overall Vertical Rating for Intermediate/Transitional Bed (below).. Screening Index Score: A = <50% probability of incision for current Q_{10}, valley slope, and d_{50}; B = Hardpan/d_{50} indeterminate; and C = ≥50% probability of incising/braiding for current Q_{10}, valley slope, and d_{50}.

d_{50} (mm) *From Form 2*	$S_v{*}Q_{10}^{0.5}$ ($m^{1.5}/s^{0.5}$) *From Form 1*	$S_v{*}Q_{10}^{0.5}$ ($m^{1.5}/s^{0.5}$) *50% risk of incising/braiding from table in Form 3 Figure 3 above*	Screening Index Score (A, B, C)

Overall Vertical Rating for Intermediate/Transitional Bed

Calculate the overall Vertical Rating for Transitional Bed channels using the formula below. Numeric values for responses to Form 3 Checklists and Table 1 as follows: A = 3, B = 6, C = 9.

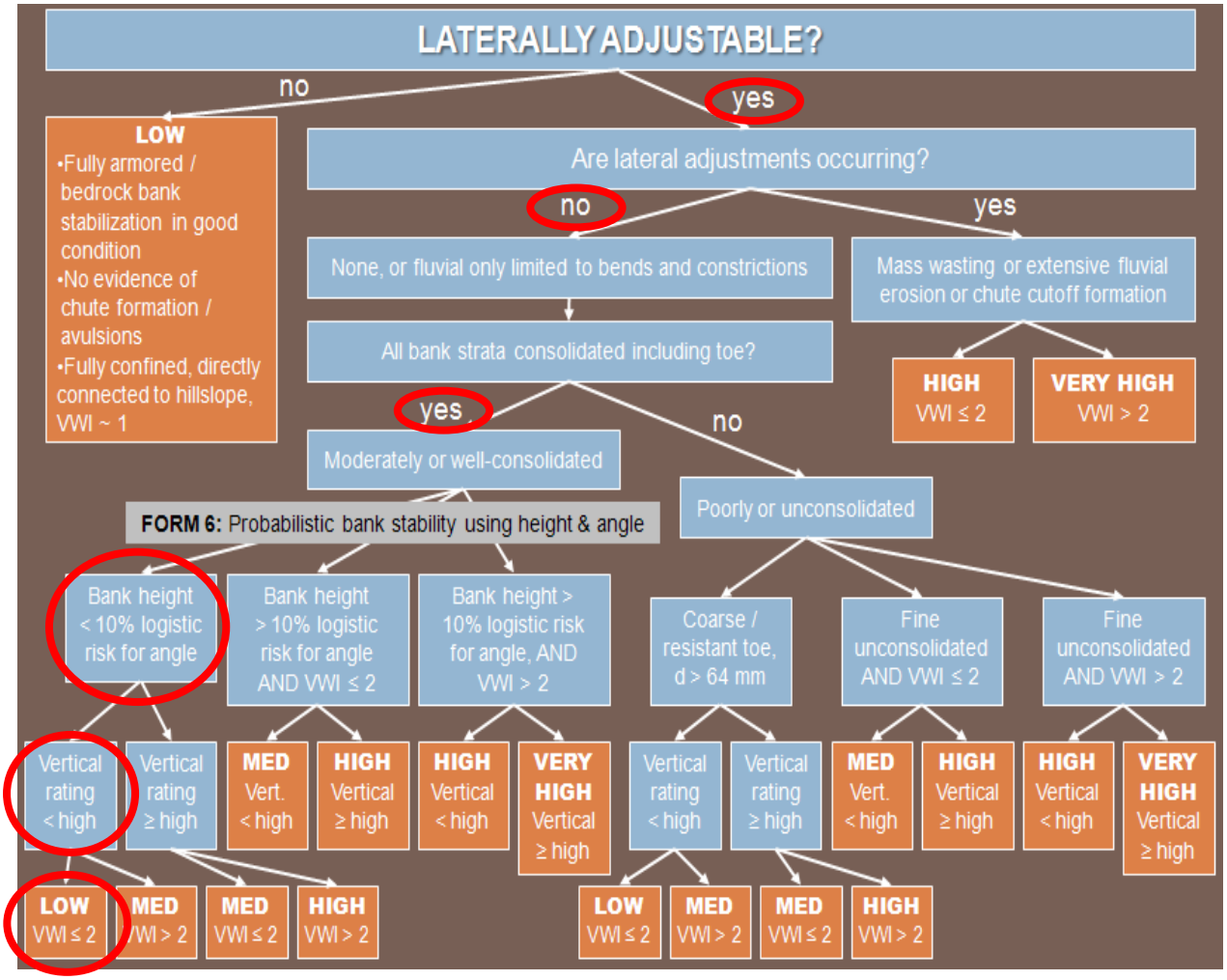
$$Vertical\ Rating = \sqrt{\{(\sqrt{armoring} * grade\ control) * screening\ index\ score\}}$$

6 x 3 x 3 = 3.6

Vertical Susceptibility based on Vertical Rating: <4.5 = LOW; 4.5 to 7 = MEDIUM; and >7 = HIGH.

FORM 4: LATERAL SUSCEPTIBILTY FIELD SHEET

Circle appropriate nodes/pathway for proposed site
OR use sequence of questions provided in Form 5.



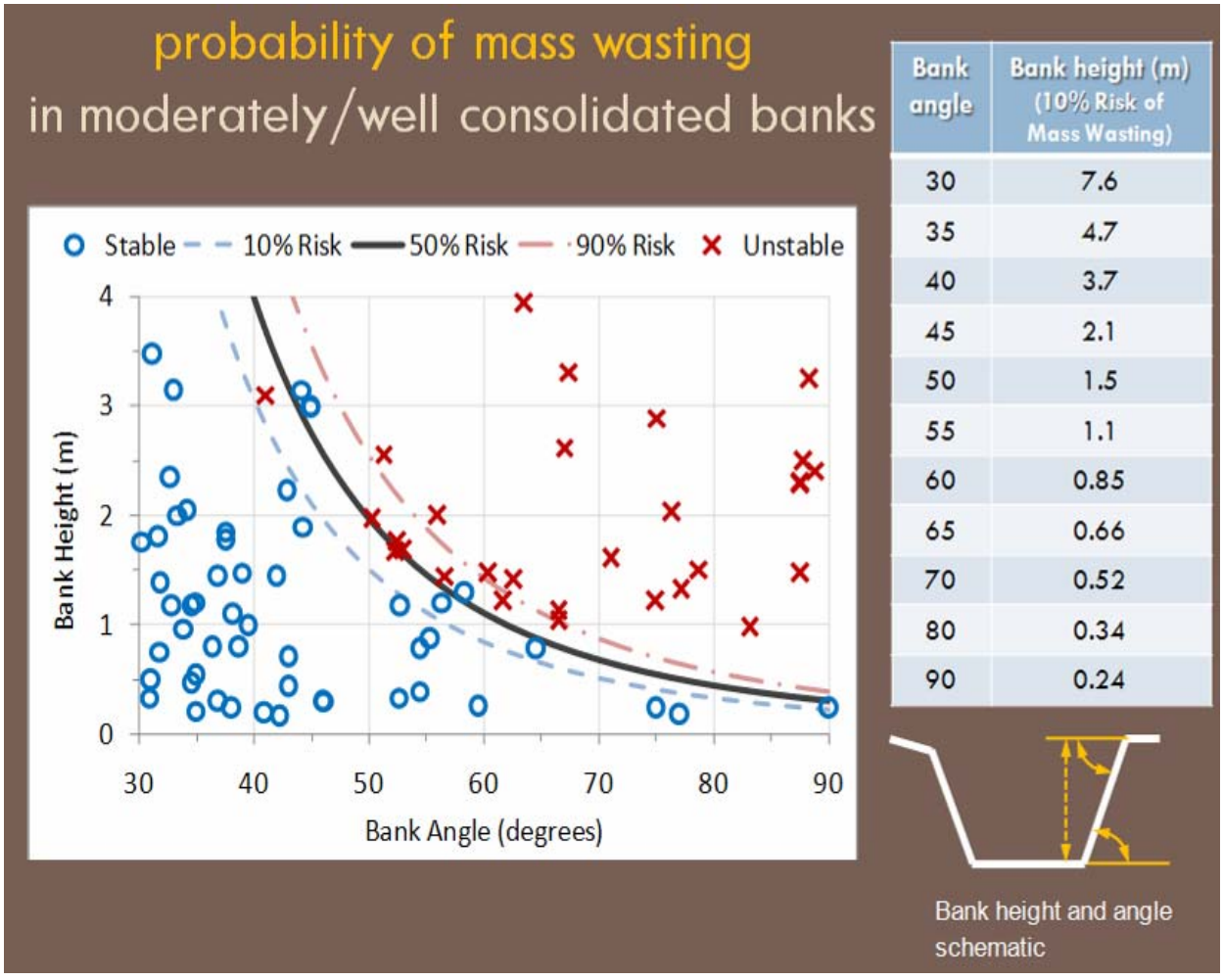
(Sheet 1 of 1)

REACH 1 THROUGH 3 RESULTS

FORM 6: PROBABILITY OF MASS WASTING BANK FAILURE

If mass wasting is not currently extensive and the banks are moderately- to well-consolidated, measure bank height and angle at several locations (i.e., at least three locations that capture the range of conditions present in the study reach) to estimate representative values for the reach. Use Form 6 Figure 1 below to determine if risk of bank failure is >10% and complete Form 6 Table 1. Support your results with photographs that include a protractor/rod/tape/person for scale.

	Bank Angle (degrees) *(from Field)*	**Bank Height (m)** *(from Field)*	**Corresponding Bank Height for 10% Risk of Mass Wasting (m)** *(from Form 6 Figure 1 below)*	**Bank Failure Risk** *(<10% Risk)* *(>10% Risk)*
Left Bank	26.6 degrees (2:1) ---	---	---	<10%
Right Bank	26.6 degrees (2:1) ----	---	---	<10%



Form 6 Figure 1. Probability Mass Wasting diagram, Bank Angle:Height/% Risk table, and Band Height:Angle schematic.

(Sheet 1 of 1)

REACH 1 THROUGH 3 RESULTS

Find

Map data provided by OpenStreetMap

Map Details

Result View

CRITICAL STRESS CALCULATOR RESULTS FOR REACH 1 AND 2

Define Drainage Basins

Basin: Tributary to Los Coches Creek Project: Lake Jennings Market Place

Start | Project | Basin | POC | Export

Manage Your Point of Compliance (POC)

Analyze the receiving water at the 'Point of Compliance' by completing this form. Click Edit and enter the appropriate fields, then click the Update button to calculate the critical flow and low-flow threshold condition. Finally, click Save to commit the changes.

Channel Susceptibility: LOW

Low Flow Threshold: 0.5Q2

Cancel Save Update

Channel Assessed: Yes

Watershed Area (ac): 125.28

Vertical Susceptibility: Low (Vertical)

Lateral Susceptibility: Low (Lateral)

Material: Vegetation

Roughness: 0.100

Channel Top Width (ft): 9

Channel Bottom Width (ft): 2

Channel Height (ft): 1.5

Channel Slope: .0059

Large View

Result View

CRITICAL STRESS CALCULATOR RESULTS FOR REACH 3

Define Drainage Basins

Basin: Tributary to Los Coches Creek

Project: Lake Jennings Market Place

Start | Project | Basin | POC | Export

Manage Your Point of Compliance (POC)

Analyze the receiving water at the 'Point of Compliance' by completing this form. Click Edit and enter the appropriate fields, then click the Update button to calculate the critical flow and low-flow threshold condition. Finally, click Save to commit the changes.

Channel Susceptibility: LOW

Low Flow Threshold: 0.5Q2

Cancel Save Update

Channel Assessed: Yes

Watershed Area (ac): 127.09

Vertical Susceptibility: Low (Vertical)

Lateral Susceptibility: Low (Lateral)

Material: Vegetation

Roughness: 0.100

Channel Top Width (ft): 12

Channel Bottom Width (ft): 4

Channel Height (ft): 2

Channel Slope: .0115

Large View

PEBBLE COUNT

#	Reach 1 Diameter, mm	Reach 2 Diameter, mm	Reach 3 Diameter, mm
1	2.8	2.8	2.8
2	2.8	2.8	2.8
3	4	4	2.8
4	4	4	4
5	4	4	4
6	5.6	4	4
7	5.6	5.6	5.6
8	5.6	5.6	5.6
9	8	5.6	5.6
10	8	8	5.6
11	8	8	5.6
12	8	8	8
13	8	8	8
14	8	8	8
15	11	8	8
16	11	11	8
17	11	11	8
18	11	11	8
19	11	11	8
20	11	11	8
21	11	11	11
22	11	16	11
23	16	16	11
24	16	16	11
25	16	16	11
26	16	16	11
27	16	16	11
28	16	16	11
29	16	16	11
30	16	22.6	11
31	16	22.6	11
32	16	22.6	16
33	16	22.6	16
34	22.6	22.6	16
35	22.6	22.6	16
36	22.6	22.6	16
37	22.6	22.6	16
38	22.6	22.6	16
39	22.6	22.6	16
40	22.6	22.6	16
41	22.6	22.6	16
42	22.6	22.6	16
43	22.6	22.6	16

#	Reach 1 Diameter, mm	Reach 2 Diameter, mm	Reach 3 Diameter, mm	
44	32	22.6	16	
45	32	32	16	
46	32	32	16	
47	32	32	16	
48	32	32	16	
49	32	32	16	
50	32	32	16	D50
51	32	32	16	
52	32	32	16	
53	32	32	16	
54	32	32	22.6	
55	32	32	22.6	
56	32	32	22.6	
57	32	45	22.6	
58	32	45	22.6	
59	45	45	22.6	
60	45	45	22.6	
61	45	45	22.6	
62	45	45	22.6	
63	45	45	22.6	
64	45	45	22.6	
65	45	45	22.6	
66	45	45	22.6	
67	45	45	22.6	
68	45	45	22.6	
69	45	45	22.6	
70	45	45	22.6	
71	45	45	22.6	
72	45	64	32	
73	45	64	32	
74	45	64	32	
75	45	64	32	
76	45	64	32	
77	64	64	32	
78	64	64	32	
79	64	64	32	
80	64	64	32	
81	64	64	32	
82	64	90	32	
83	64	90	32	
84	64	90	32	
85	64	90	32	
86	90	90	32	
87	90	90	32	
88	90	90	32	

#	Reach 1 Diameter, mm	Reach 2 Diameter, mm	Reach 3 Diameter, mm
89	90	90	32
90	90	90	32
91	90	90	32
92	90	90	45
93	90	128	45
94	90	128	45
95	128	128	45
96	128	128	45
97	128	128	45
98	128	128	64
99	128	180	64
100	128	180	90