

APPENDIX 5.2: Dry Creek Habitat Enhancement Project

Effectiveness Monitoring Data

Collected 2020

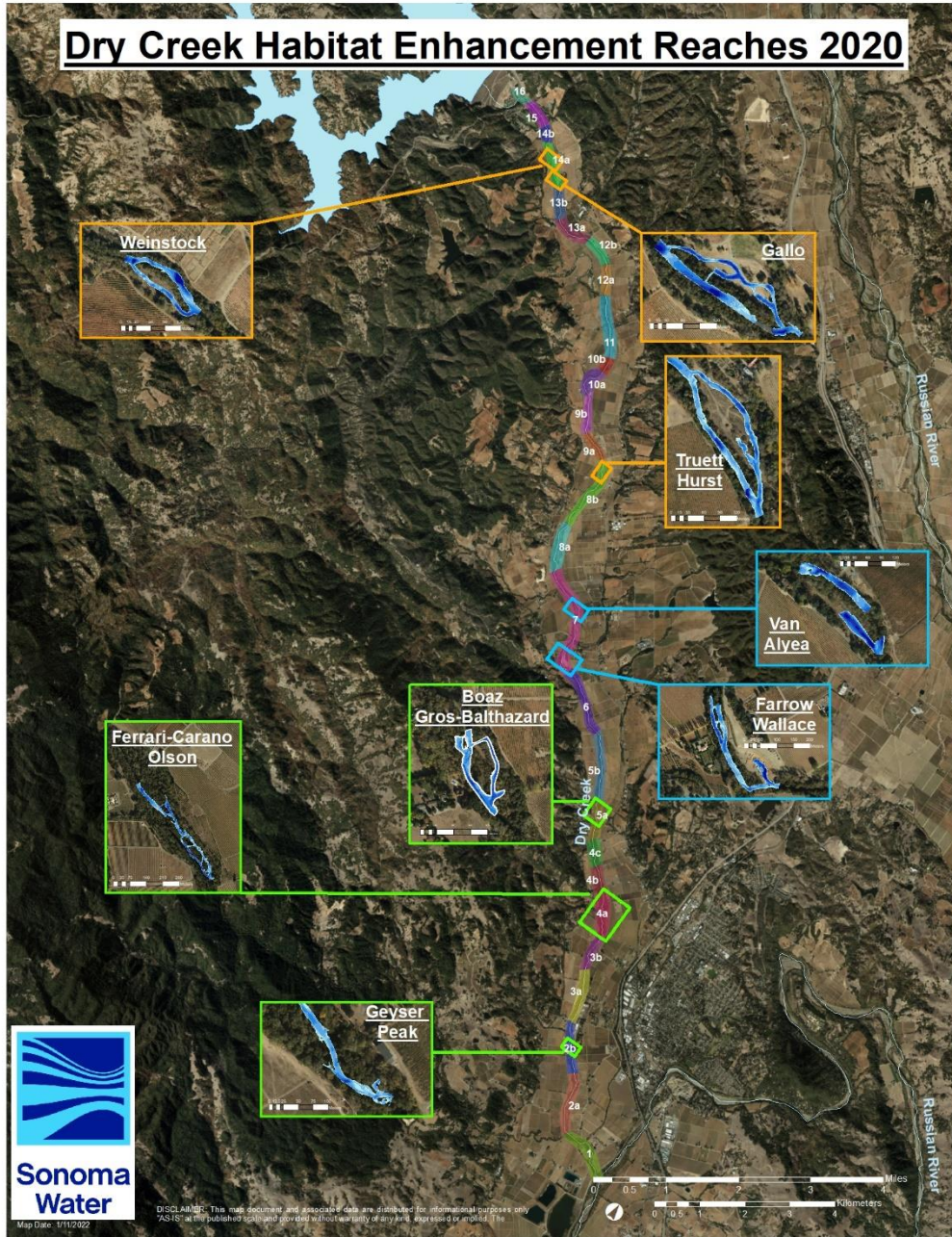


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Pre-enhancement, 2020

Boaz Gros-Balthazard, May 2020

Depth and Velocity

Table 1. Areas and percentages of: wetted area, optimal depth and velocity, and optimal hydraulic habitat within the Boaz Gros-Balthazard enhancement reach, May 2020.

Boaz Gros-Balthazard Pre-enhancement May 2020	Wetted area (ft ²)	0.5 – 2.0 ft (ft ²)	2.0 – 4.0 ft (ft ²)	Total (ft ²)	< 0.5 ft/s (ft ²)	0.5 – 2.0 ft < 0.5 ft/s (ft ²)	2.0 – 4.0 ft < 0.5 ft/s (ft ²)	Total (ft ²)
Main channel area	37,946	26,098	7,339	33,437	10,356	5,701	1,799	7,500
Main channel % of wetted area	100%	69%	19%	88%	27%	15%	5%	20%

Boaz Gros-Balthazard Enhancement Reach

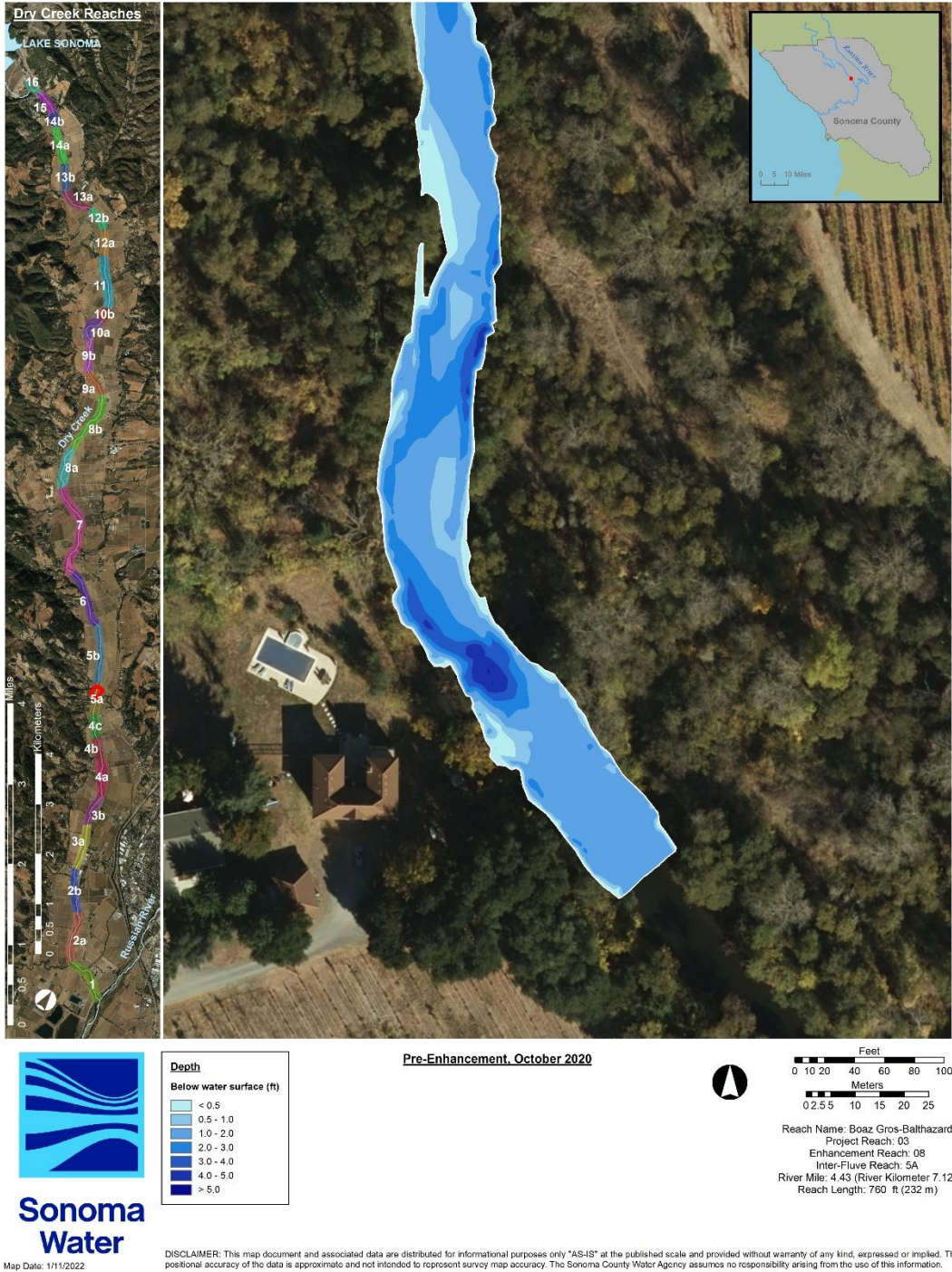


Figure 1. Measured water depth within the Boaz Gros-Balthazard enhancement reach, May 2020.

Boaz Gros-Balthazard Enhancement Reach

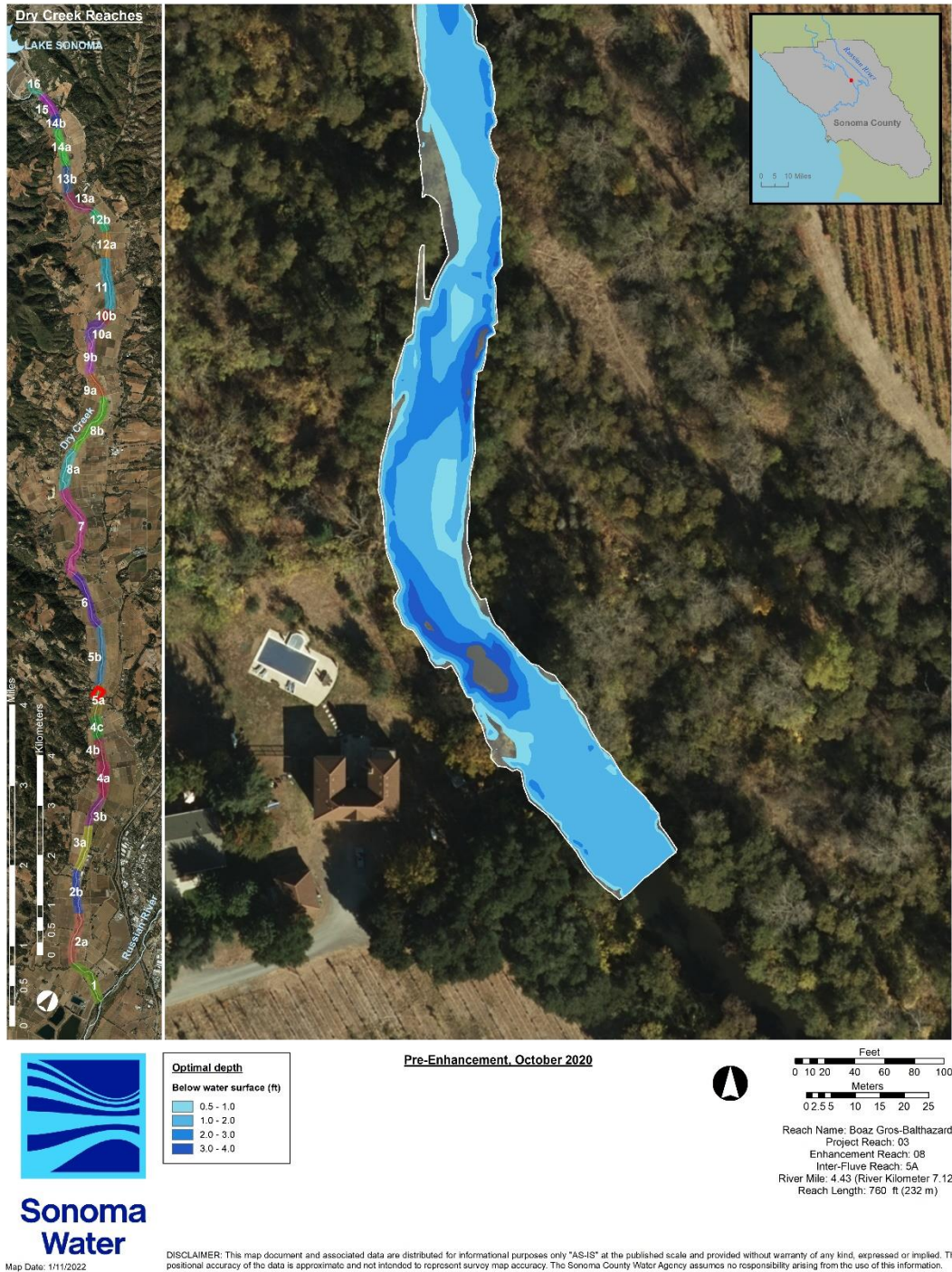


Figure 2. Optimal water depth for fry (0.5-2.0 ft) and parr (2.0-4.0 ft) within the Boaz Gros-Balthazard enhancement reach, May 2020.

Boaz Gros-Balthazard Enhancement Reach

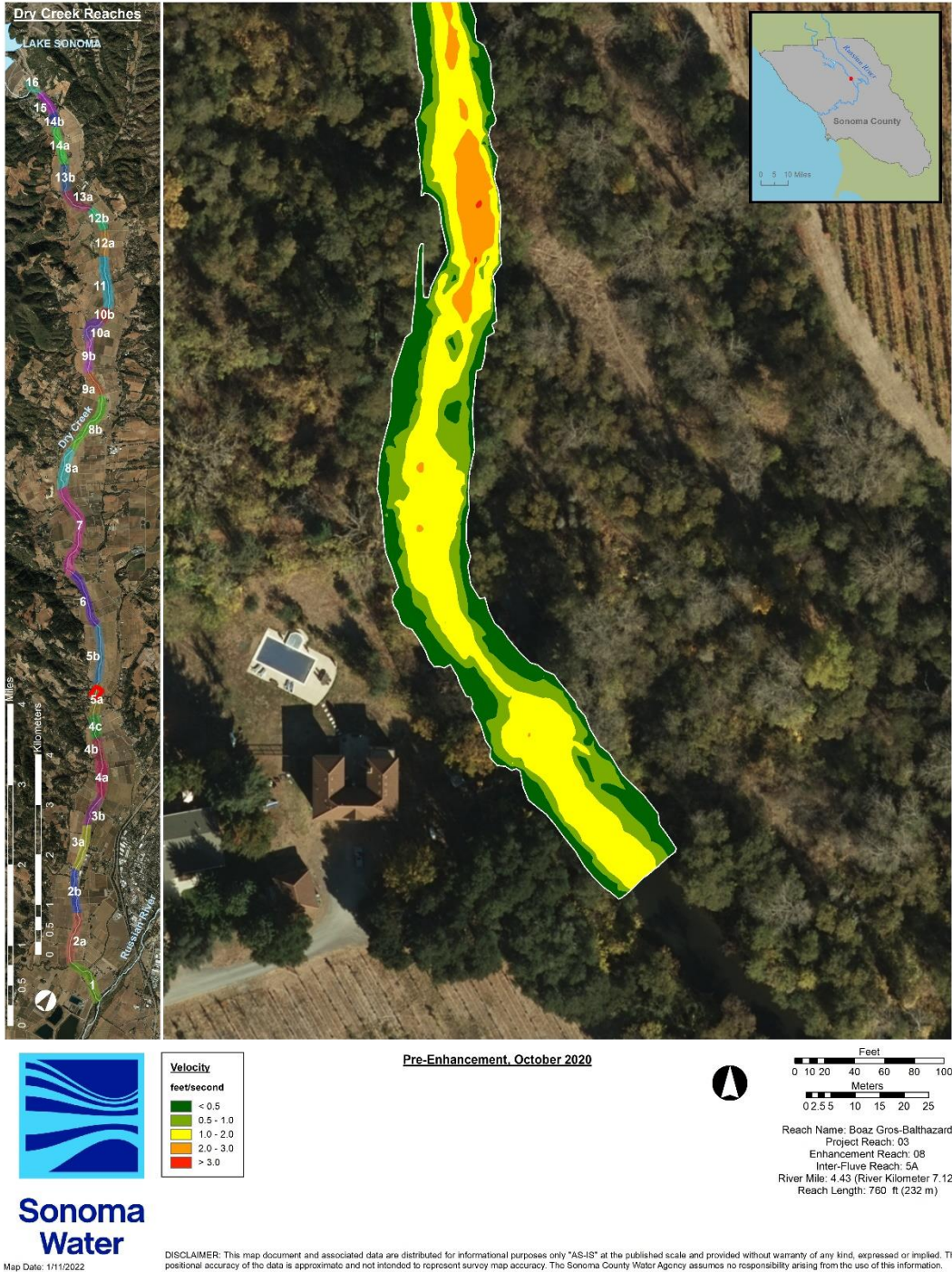


Figure 3. Measured water velocity within the Boaz Gros-Balthazard enhancement reach, May 2020.

Boaz Gros-Balthazard Enhancement Reach

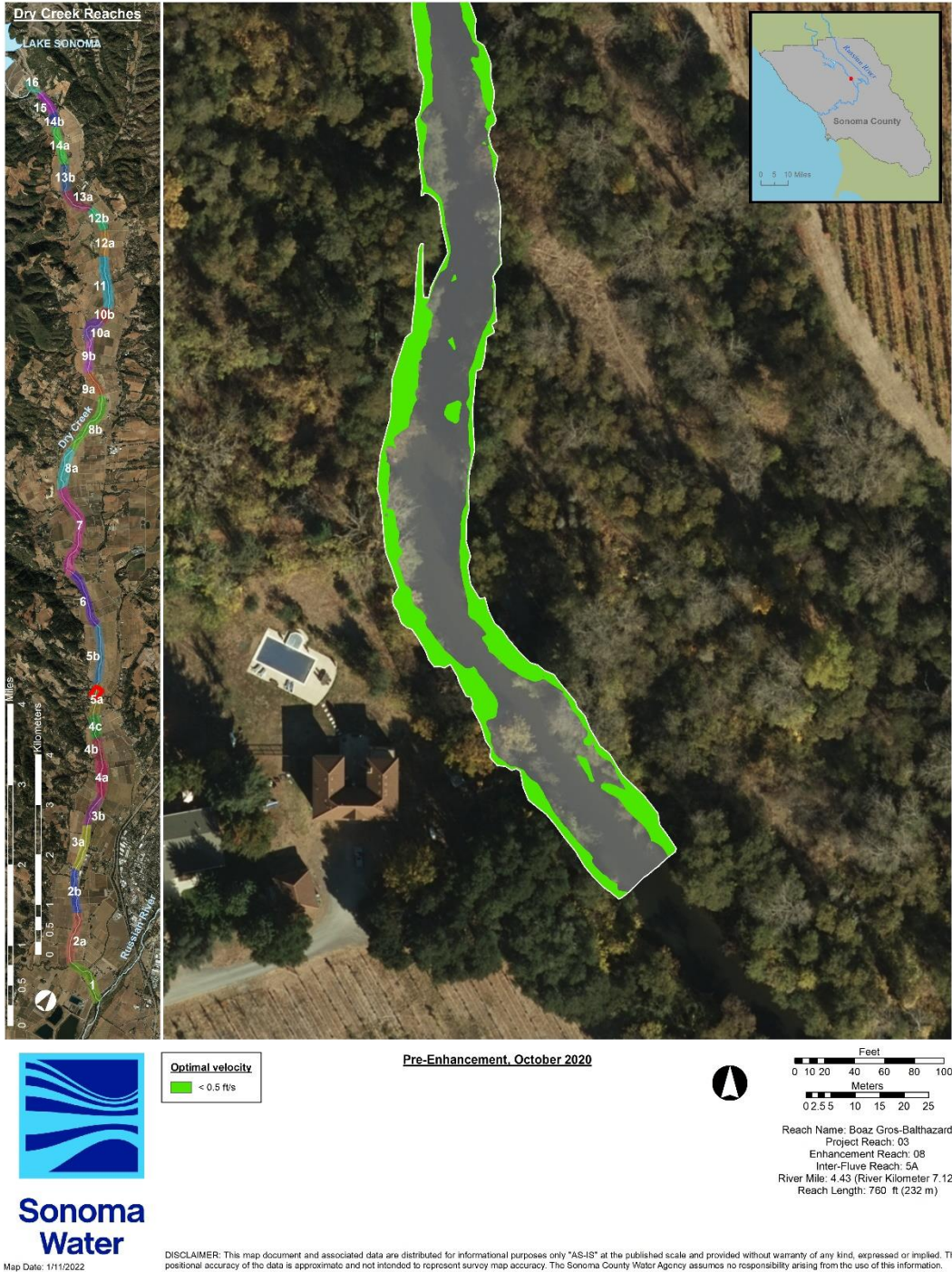


Figure 4. Optimal water velocity for fry and parr (< 0.5 ft/s) within the Boaz Gros-Balthazard enhancement reach, May 2020.

Boaz Gros-Balthazard Enhancement Reach

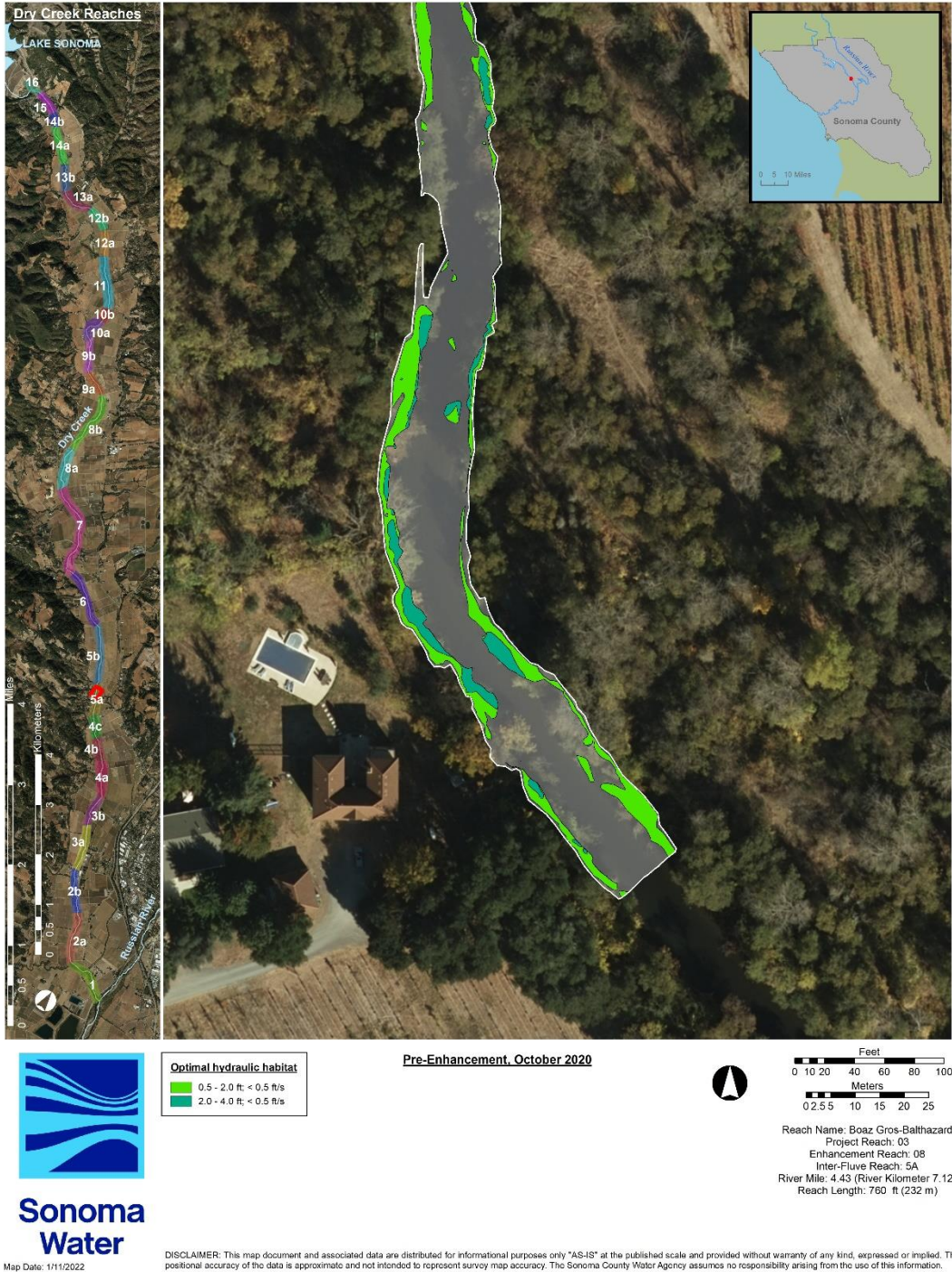


Figure 5. Optimal hydraulic habitat for fry (<0.5 ft/s, 0.5-2.0 ft) and parr (<0.5 ft/s, 2.0-4.0 ft) within the Boaz Gros-Balthazard enhancement reach, May 2020.

Habitat Types and Shelter Values

Table 2. Habitat, types, shelter value, percent cover, and shelter score for main channel habitat units within the Boaz Gros-Balthazard enhancement reach, May 2020.

Habitat Unit #	Habitat Type	Shelter Value	Percent Cover	Shelter Score
HU01	Flatwater	2	30	60
HU02	Pool	3	45	135
HU03	Flatwater	3	45	135
HU04	Flatwater	3	70	210
HU05	Riffle	3	45	135
HU06	Flatwater	3	30	90
HU07	Riffle	3	25	75
Pool: riffle	1: 2 (0.50)			Avg = 120

Boaz Gros-Balthazard Enhancement Reach

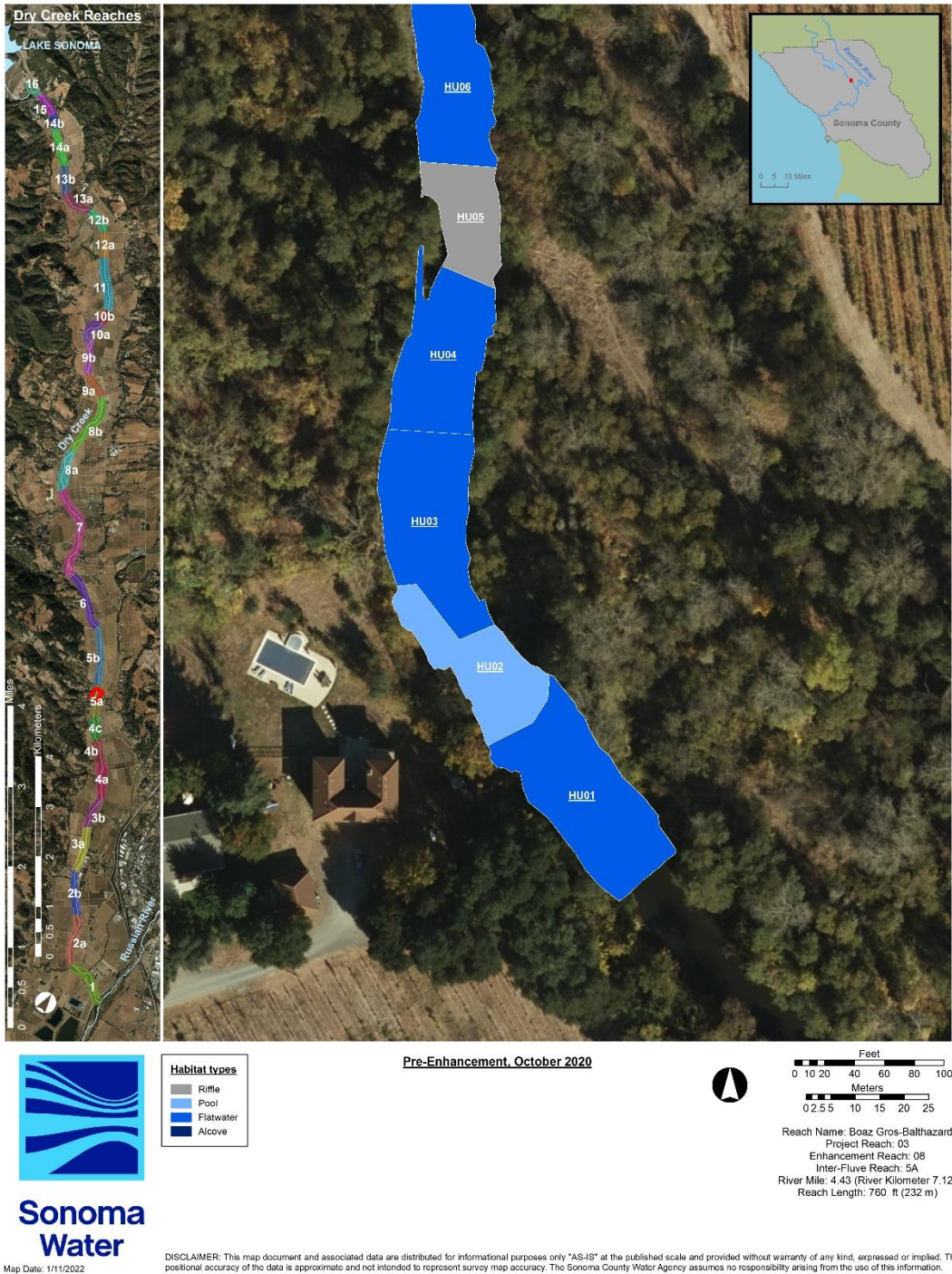


Figure 6. Habitat unit number and type within the Boaz Gros-Balthazard enhancement reach, May 2020.

Boaz Gros-Balthazard Enhancement Reach



Figure 7. Habitat unit shelter scores within the Boaz Gros-Balthazard enhancement reach, May 2020.

Habitat Unit, Site, and Reach Ratings

Table 3. Habitat unit ratings for the Boaz Gros-Balthazard enhancement reach May 2020.

Project Reach	3	3	3	3	3	3	3	
Enhancement Reach	8	8	8	8	8	8	8	
Colloquial Name	BG	BG	BG	BG	BG	BG	BG	
nmddy	51820	51820	51820	51820	51820	51820	51820	
Survey Type	PRE	PRE	PRE	PRE	PRE	PRE	PRE	
HABITAT UNIT NUMBER		HU01	HU02	HU03	HU04	HU05	HU06	HU07
Habitat Type	Flatwater	Pool	Flatwater	Flatwater	Riffle	Flatwater	Riffle	
PROJECT SITE NUMBER		1	1	1	1	1	1	
Project Site Type	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	
11e	% Area of habitat unit within 0.5 -2.0 ft depth	91%	33%	74%	48%	67%	75%	78%
11f	% Area of habitat unit within 2.0 -4.0 ft depth	1%	49%	19%	42%	9%	14%	4%
14.	Instream shelter value in the habitat unit : 0, 1, 2, 3	2	3	3	3	3	3	3
15.	Percent of habitat unit covered by shelter: %	30	45	45	70	45	30	25
17b	a. Calculate the shelter rating for the habitat unit : 0-300	60	135	135	210	135	90	75
28.	Percent of habitat unit within targeted velocity (see above): (%)	24%	46%	20%	34%	9%	31%	22%
36e	% habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	18%	19%	10%	18%	1%	20%	9%
36f	% habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	1%	19%	3%	7%	0%	3%	0%
HABITAT UNIT NUMBER		HU01	HU02	HU03	HU04	HU05	HU06	HU07
11e	% area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	3	4	4	4	4	4
11f	% area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	4	1	4	0	1	0
		4	5	5	5	5	5	5
		2	3	3	4	3	2	2
		2	4	4	5	4	3	2
28.	% area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	2	4	2	3	0	3	2
36e	% area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	1	1	1	1	0	2	0
36f	% area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	1	0	0	0	0	0
HABITAT UNIT NUMBER		HU01	HU02	HU03	HU04	HU05	HU06	HU07
HABITAT UNIT RATING	Habitat unit quantitative rating (out of 35)	15	25	20	26	16	20	15
	Habitat unit qualitative rating: Excellent (≥28), Good (≥21), Fair(≥14), Poor (≥7), Fail (<7)	Fair	Good	Fair	Good	Fair	Fair	Fair

Boaz Gros-Balthazard Enhancement Reach

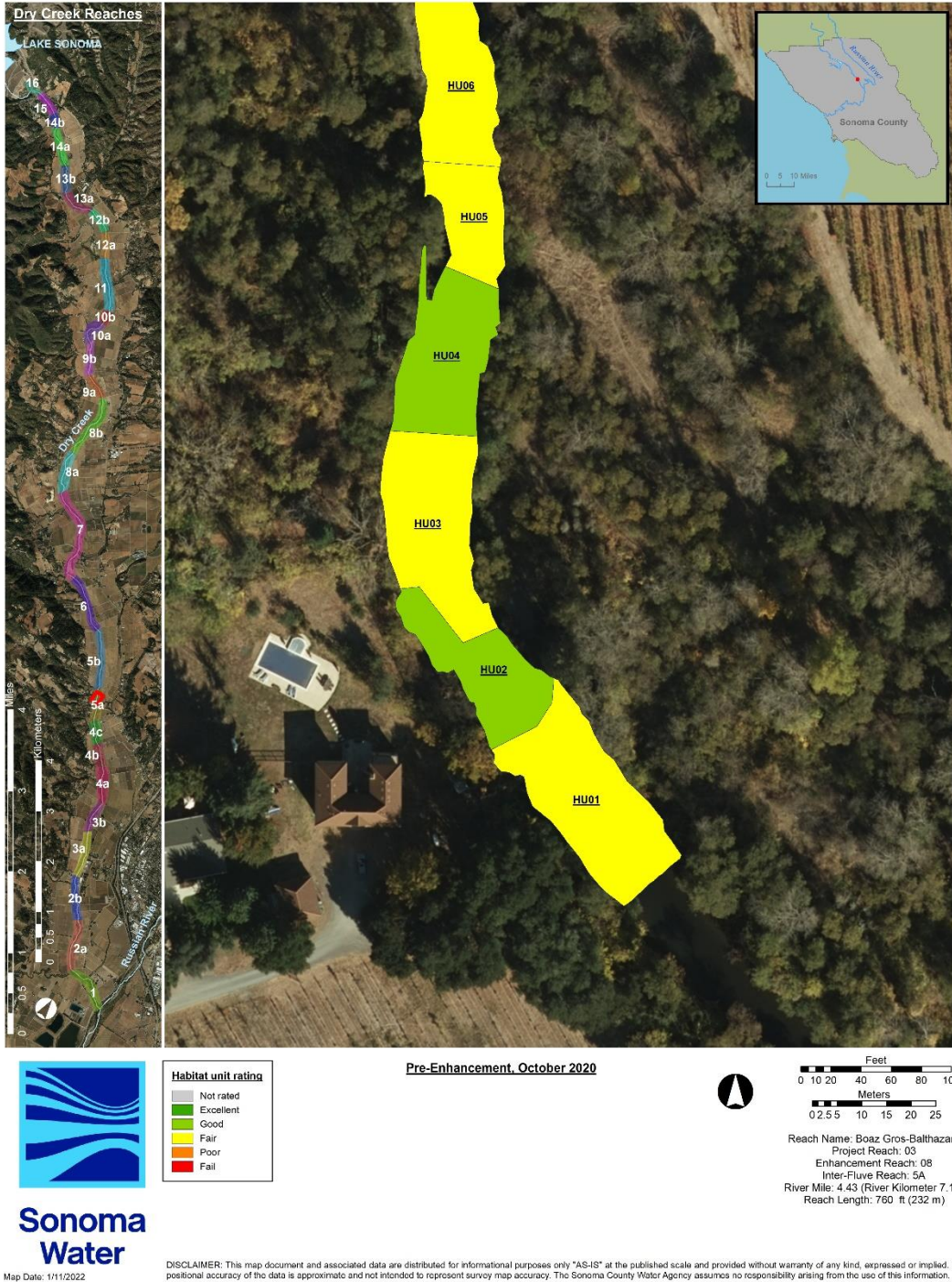


Figure 8. Habitat unit ratings for the Boaz Gros-Balthazard enhancement reach, May 2020.

Table 4. Pre-enhancement average feature, habitat unit, site, and reach ratings for the for the Boaz Gros-Balthazard enhancement reach, May 2020.

	Project Reach	3
	Enhancement Reach	8
	ENHANCEMENT REACH NAME	BG
	mmddy	51820
	Survey Type	PRE
	PROJECT SITE NUMBER	1
	Project Site Type	MainChan
	PROJECT SITE NUMBER	1
SITE AVERAGE FEATURE RATING	Site average feature quantitative rating (out of 15; bold indicates excluded from site rating)	0
	Site average feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3), Not rated (not used to rate site)	Not rated
	PROJECT SITE NUMBER	1
SITE AVERAGE HABITAT UNIT RATING	Site average habitat unit quantitative rating (out of 35; bold indicates excluded from site rating)	20
	Site average qualitative rating Excellent (>=28), Good (>=21), Fair(>=14), Poor (>=7), Fail (<7), Not rated (not used to rate site)	Fair
	PROJECT SITE NUMBER	1
SITE RATING	Site quantitative rating (sum of site average feature and habitat unit ratings) (out of 50; bold indicates rating excludes feature or habitat unit rating and scoring out of 15 or 35)	20
	Site qualitative rating: Excellent (>=28), Good (>=21), Fair(>=14), Poor (>=7), Fail (<7)	Fair
	ENHANCEMENT REACH NAME	BG
ENHANCEMENT REACH RATING	Enhancement reach quantitative rating (average of site ratings) (out of 35)	20
	Enhancement reach qualitative rating: Excellent (>=28), Good (>=21), Fair(>=14), Poor (>=7), Fail (<7)	Fair

Boaz Gros-Balthazard Enhancement Reach

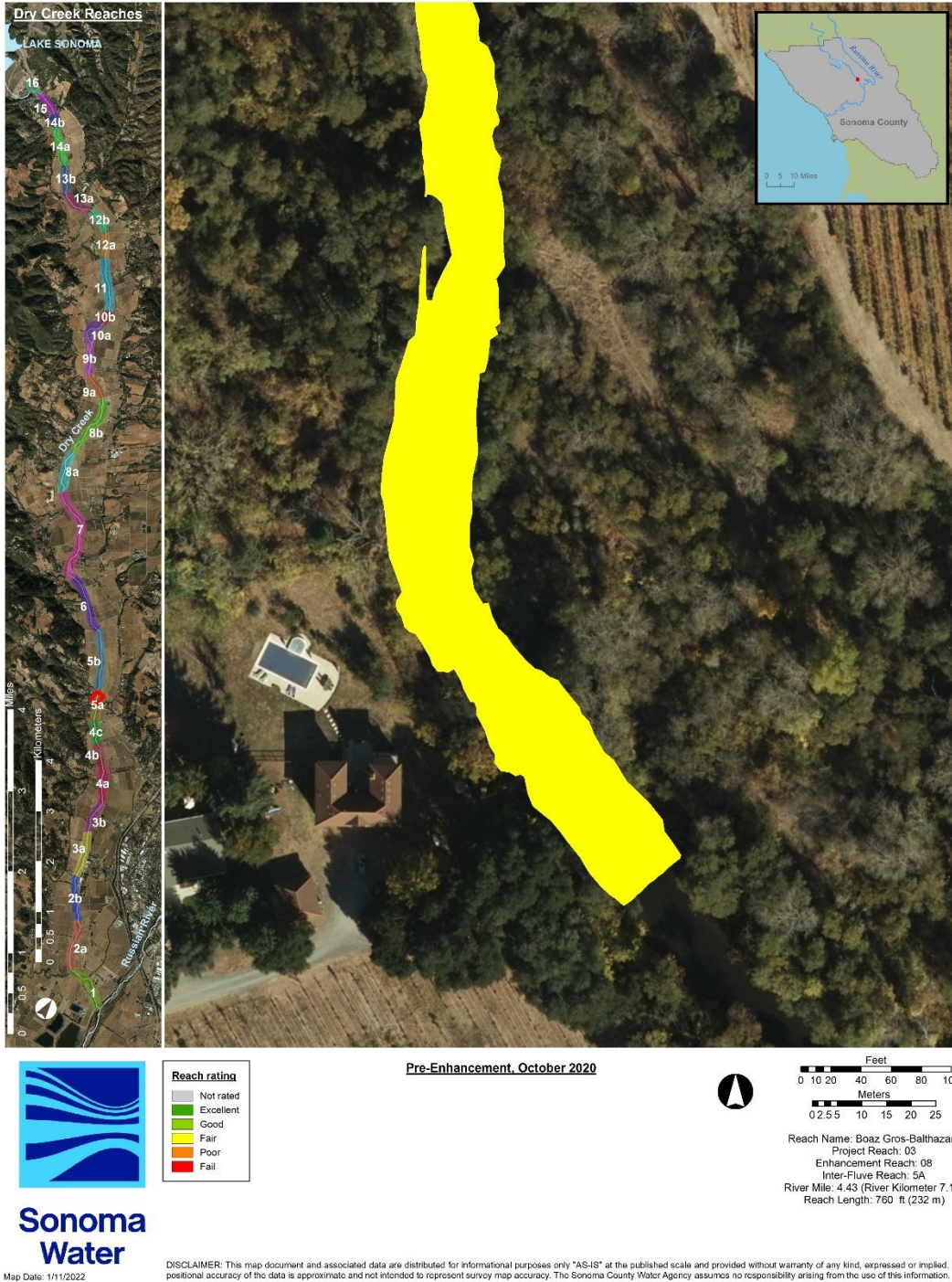


Figure 9. Pre-enhancement site and reach rating for the Boaz Gros-Balthazard enhancement reach May 2020.

Feature and Habitat Unit Checklists

Table 5. Pre-enhancement Adaptive Management Plan targeted checklist for the Boaz Gros-Balthazard enhancement reach, May 2020.

Project Reach	3	3	3	3	3	3	3
Enhancement Reach	8	8	8	8	8	8	8
Colloquial Name	BG	BG	BG	BG	BG	BG	BG
mmddyy	51820	51820	51820	51820	51820	51820	51820
Survey Type	PRE	PRE	PRE	PRE	PRE	PRE	PRE
Project Site Number	1	1	1	1	1	1	1
Project Site Type	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan
Project Feature Number	NA	NA	NA	NA	NA	NA	NA
Feature Type Code	NA	NA	NA	NA	NA	NA	NA
Habitat Unit	HU01	HU02	HU03	HU04	HU05	HU06	HU07
Habitat Type	Flatwater	Pool	Flatwater	Flatwater	Riffle	Flatwater	Riffle
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	NA	NA	NA	NA	NA	NA	NA
5a. Are problems with the feature visible?	NA	NA	NA	NA	NA	NA	NA
6a. Is the feature still in its original location?	NA	NA	NA	NA	NA	NA	NA
6b. Is the feature still in its original position?	NA	NA	NA	NA	NA	NA	NA
6d. Is the feature still in its original orientaton?	NA	NA	NA	NA	NA	NA	NA
8. If an objective, did the feature create the targeted instream habitat type?	NA	NA	NA	NA	NA	NA	NA
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	NA	NA	NA	NA	NA	NA	NA
11e. % Area of habitat unit within 0.5 -2.0 ft depth	91%	33%	74%	48%	67%	75%	78%
11f. % Area of habitat unit within 2.0 -4.0 ft depth	1%	49%	19%	42%	9%	14%	4%
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	2	3	3	3	3	3	3
15. Percent of habitat unit covered by shelter: %	30	45	45	70	45	30	25
17a. If an objective, did the feature increase instream shelter rating?	NA	NA	NA	NA	NA	NA	NA
17b. a. Calculate the shelter rating for the habitat unit: 0-300	60	135	135	210	135	90	75
19a. If an objective, did the feature increase LWD count in the habitat unit?	NA	NA	NA	NA	NA	NA	NA
21a. If an objective, did the feature lead to the targeted channel conditions?	NA	NA	NA	NA	NA	NA	NA
25. Did the feature achieve the targeted velocity?	NA	NA	NA	NA	NA	NA	NA
28. Percent of habitat unit within targeted velocity (see above): (%)	24%	46%	20%	34%	9%	31%	22%
36e. % habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	18%	19%	10%	18%	1%	20%	9%
36f. % habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	1%	19%	3%	7%	0%	3%	0%
FEATURE NUMBER	NA	NA	NA	NA	NA	NA	NA
HABITAT UNIT NUMBER	HU01	HU02	HU03	HU04	HU05	HU06	HU07
SITE NUMBER	1	1	1	1	1	1	1
ENHANCEMENT REACH NAME	BG	BG	BG	BG	BG	BG	BG
4. Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	0	0	0	0	0	0	0
5a. Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	0	0	0	0	0	0	0
6a. Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0
6b. Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0
6d. Is the feature still in its original orientaton? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0
8. If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0
9. Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	0	0	0	0	0	0	0
11e. % area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	3	4	4	4	4	4
11f. % area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	4	1	4	0	1	0
14. Instream shelter value in the habitat unit: 0, 1, 2, 3 (3 = 5 pts; 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	4	5	5	5	5	5	5
15. % hab unit covered by shelter (≥80 = 5pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)	2	3	3	4	3	2	2
17a. If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0
17b. a. Calculate the shelter rating for the habitat unit: 0-300	2	4	4	5	4	3	2
19a. If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0
21a. If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0
25. Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0
28. % area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	2	4	2	3	0	3	2
36e. % area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	1	1	1	1	0	2	0
36f. % area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	1	0	0	0	0	0

Table 6. Pre-enhancement Adaptive Management Plan full checklist for the Boaz Gros-Balthazard enhancement reach, May 2020.

	3	3	3	3	3	3	3
Project Reach	3	3	3	3	3	3	3
Enhancement Reach	8	8	8	8	8	8	8
Colloquial Name	BG	BG	BG	BG	BG	BG	BG
nmddy	51820	51820	51820	51820	51820	51820	51820
Survey Type	PRE	PRE	PRE	PRE	PRE	PRE	PRE
Project Site Number	1	1	1	1	1	1	1
Project Site Type	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan
Project Feature Number	NA	NA	NA	NA	NA	NA	NA
Feature Type Code	NA	NA	NA	NA	NA	NA	NA
Habitat Unit	HU01	HU02	HU03	HU04	HU05	HU06	HU07
Habitat Type	Flatwater	Pool	Flatwater	Flatwater	Riffle	Flatwater	Riffle
1. Length of targeted treatment (ft)	NA	NA	NA	NA	NA	NA	NA
2. Width of targeted treatment (ft)	NA	NA	NA	NA	NA	NA	NA
3. Estimate area of the targeted feature: (ft ²)	NA	NA	NA	NA	NA	NA	NA
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	NA	NA	NA	NA	NA	NA	NA
5a. Are problems with the feature visible?	NA	NA	NA	NA	NA	NA	NA
5b. Types: ANC, BBB, CRF, MAT, SHF, STR, SWA, UND, UNS, WSH, OTH, NON	NA	NA	NA	NA	NA	NA	NA
6a. Is the feature still in its original location?	NA	NA	NA	NA	NA	NA	NA
6b. Is the feature still in its original position?	NA	NA	NA	NA	NA	NA	NA
6c. If yes: LBK, MDC, RBK, SPN, OTH	NA	NA	NA	NA	NA	NA	NA
6d. Is the feature still in its original orientation?	NA	NA	NA	NA	NA	NA	NA
6e. If yes: DNS, MUL, PRL, PRP, UPS, OTH	NA	NA	NA	NA	NA	NA	NA
7. Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	FLT	POO	FLT	FLT	RIF	FLT	RIF
8. If an objective, did the feature create the targeted instream habitat type?	NA	NA	NA	NA	NA	NA	NA
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	NA	NA	NA	NA	NA	NA	NA
10. Mean water depth in habitat unit: ft	1.4	2.4	1.4	1.8	1.0	1.4	1.1
11a. Maximum water depth in habitat unit: ft	2.4	5.0	3.3	5.0	3.8	2.8	2.4
11b. Area of habitat unit within 0.5 -2.0 ft depth: (ft ²)	7206.6	1472.1	5173.8	2754.4	2108.0	4651.5	2731.7
11c. Area of habitat unit within 2.0 -4.0 ft depth: (ft ²)	92.0	2199.6	1355.9	2411.8	271.4	882.4	126.2
11d. Area of habitat unit within 0.5-4.0 ft depth: (ft ²)	7298.6	3671.7	6529.7	5166.2	2379.3	5533.9	2857.9
11e. % Area of habitat unit within 0.5 -2.0 ft depth	91%	33%	74%	48%	67%	75%	78%
11f. % Area of habitat unit within 2.0 -4.0 ft depth	1%	49%	19%	42%	9%	14%	4%
11g. % Area of habitat unit within 0.5-4.0 ft depth	93%	81%	94%	90%	75%	89%	82%
11h. If an objective, did the feature increase/decrease water depth in the treatment area?	NA	NA	NA	NA	NA	NA	NA
12a. Targeted depth or range (ft) in habitat unit	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0
12b. Estimate area of feature within targeted depth or range ft ² :	NA	NA	NA	NA	NA	NA	NA
13. Were there any unintended effects of the feature on the water depth? If Y, comment.	NA	NA	NA	NA	NA	NA	NA
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	2	3	3	3	3	3	3
15. Percent of habitat unit covered by shelter: %	30	45	45	70	45	30	25
16a. 1st dominant cover in habitat unit: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	TVG	SWD	TVG	TVG	TVG	TVG	TVG
16b. 2nd dominant in habitat unit: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	SWD	OTH	SWD	SWD	SWD	SWD	LWD
17a. If an objective, did the feature increase instream shelter rating?	NA	NA	NA	NA	NA	NA	NA
17b. a. Calculate the shelter rating for the habitat unit: 0-300	60	135	135	210	135	90	75
18a. Large woody debris count in habitat unit: D >1', L 6-20'	0	3	0	2	1	3	1
18b. Large woody debris count in habitat unit: D >1', L >20'	0	0	0	0	0	0	0
19a. If an objective, did the feature increase LWD count in the habitat unit?	NA	NA	NA	NA	NA	NA	NA
19b. LWD recruitment mechanisms in habitat unit: ANC, EXC, EXH, INT, RPR, UNA, OTH	NON	NR	NON	NR	NR	NR	NR
20. Current stream channel problems in the habitat unit: AGG, BRD, FLO, GRC, HDC, INC, NAR, SCU, STT, WID, NON, OTH	OTH	OTH	NON	NON	NON	NON	NON
21a. If an objective, did the feature lead to the targeted channel conditions?	NA	NA	NA	NA	NA	NA	NA
21b. Overall Offchannel Condition (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	NA	NA	NA	NA	NA	NA	NA
21c. Outlet Conditions (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	NA	NA	NA	NA	NA	NA	NA
21d. Inlet Conditions (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	NA	NA	NA	NA	NA	NA	NA
22. Were there any unintended effects on the stream channel at the feature? If Y, comment.	NA	NA	NA	NA	NA	NA	NA
23. If an objective, did the feature decrease/increase velocity in the treatment area?	NA	NA	NA	NA	NA	NA	NA
24. Targeted velocity/range in the habitat unit: (ft/sec)	0.5	0.5	0.5	0.5	0.5	0.5	0.5
25. Did the feature achieve the targeted velocity?	NA	NA	NA	NA	NA	NA	NA
26a. Measured minimum velocity (ft/sec) in habitat unit	0	0	0	0	0	0	0
26b. Measured max velocity (ft/sec) in habitat unit	2.1	2.0	2.2	2.8	3.3	2.8	3.9
26c. Measured mean velocity (ft/sec) in habitat unit	1.0	0.6	1.0	0.9	1.7	1.1	1.8
27. Area of habitat unit within targeted velocity: (ft ²)	1920.9	2078.0	1395.2	1972.3	278.7	1951.7	759.6
28. Percent of habitat unit within targeted velocity (see above): (%)	24%	46%	20%	34%	9%	31%	22%
29. Were there any unintended effects of feature on velocity? If Y, comment.	NA	NA	NA	NA	NA	NA	NA
30a. 1st/2nd dominant substrate in habitat unit: BED, BOL, COB, GRV, SND, SLC, OTH	GRV	SND	GRV	GRV	GRV	GRV	GRV
30b. 2nd dominant substrate in habitat unit: BED, BOL, COB, GRV, SND, SLC, OTH	SND	SLC	SND	SND	UNK	SND	COB
31. If an objective, did the feature achieve the targeted substrate composition?	NA	NA	NA	NA	NA	NA	NA
32. % Canopy Measurement:	NR	NR	NR	NR	NR	NR	NR
33. Photopoint data collected: YES /NO	NR	NR	NR	NR	NR	NR	NR
34. Temperature Profile: YES /NO	NR	NR	NR	NR	NR	NR	NR
35. Dissolved Oxygen Profile: YES/NO	NR	NR	NR	NR	NR	NR	NR
36a. Total habitat unit area where targeted depth, velocity and shelter criteria overlap	1522.4	1750.5	955.1	1469.4	30.0	1455.6	316.6
36b. Total habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	1445.4	875.3	720.7	1043.9	30.0	1271.2	314.1
36c. Total habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	77.0	875.2	234.5	425.6	0.0	184.4	2.5
36d. % habitat unit area where targeted depth, velocity and shelter criteria overlap	19%	39%	14%	26%	1%	23%	9%
36e. % habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	18%	19%	10%	18%	1%	20%	9%
36f. % habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	1%	19%	3%	7%	0%	3%	0%
37. Does this feature need: DEC, ENH, MNT, REP, NON, OTH	NA	NA	NA	NA	NA	NA	NA
38. Are additional restoration treatments recommended at this site?	NA	NA	NA	NA	NA	NA	NA

Post-effective Flow, 2020

Weinstock, November 2020

Depth and Velocity

Table 7. Areas and percentages of: wetted area, optimal depth and velocity, and optimal hydraulic habitat within the Weinstock enhancement reach, November 2020.

Weinstock Post-effective flow November 2020	Wetted area (ft ²)	0.5 – 2.0 ft	2.0 – 4.0 ft	Total	< 0.5 ft/s	0.5 – 2.0 ft < 0.5 ft/s	2.0 – 4.0 ft < 0.5 ft/s	Total
Main channel area	34,250	12,709	12,130	24,839	15,025	5,331	3,692	9,022
Side channel area	12,119	6,581	4,385	10,966	4,580	2,391	1,091	3,482
Total area	46,369	19,290	16,516	35,805	19,605	7,722	4,782	12,505
Main channel % of wetted area	74%	37%	35%	73%	44%	16%	11%	26%
Side channel % of wetted area	26%	54%	36%	90%	38%	20%	9%	29%
Total % of wetted area	100%	42%	36%	77%	42%	17%	10%	27%

Weinstock Enhancement Reach

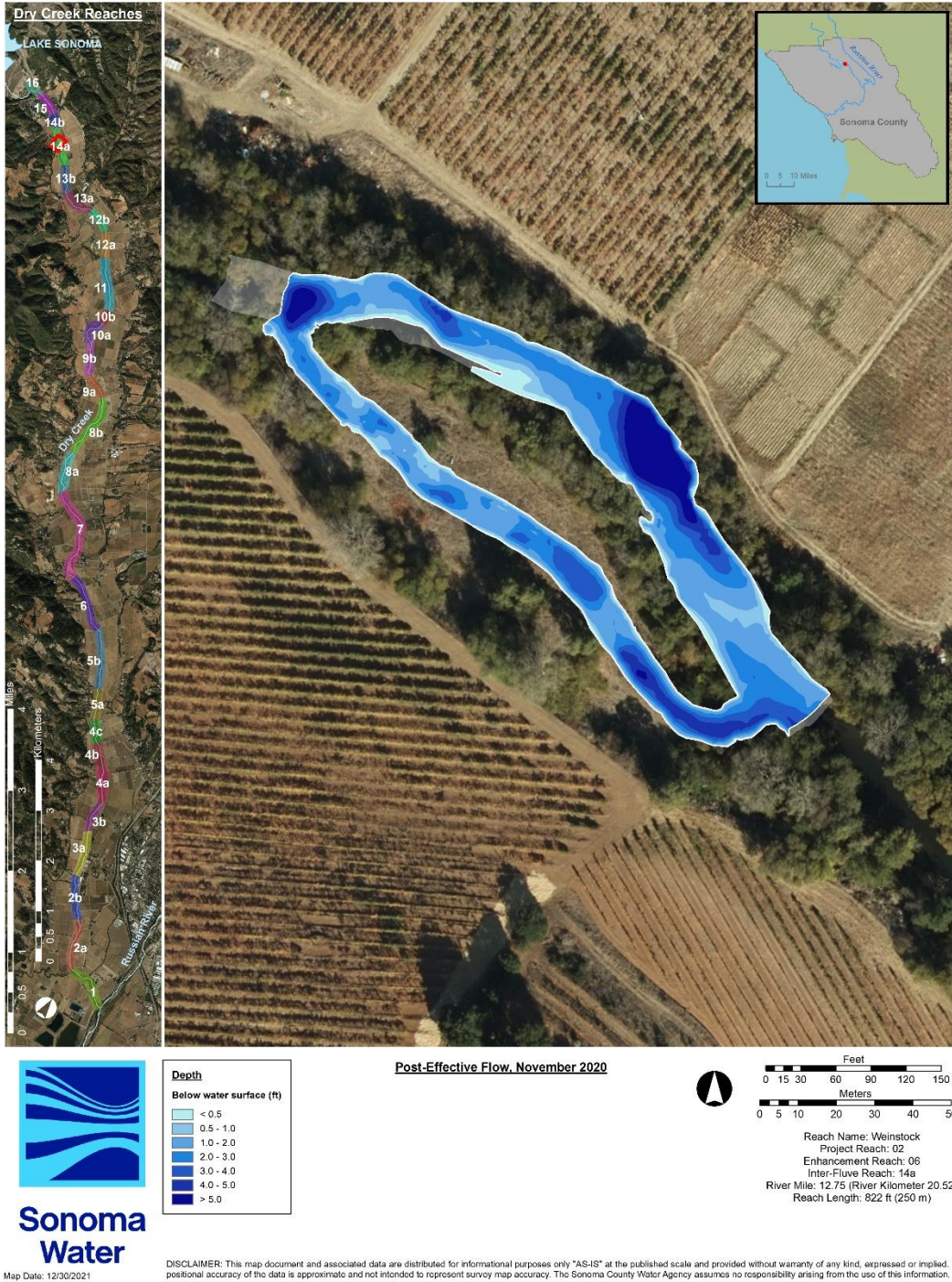


Figure 10. Measured water depth within the Weinstock enhancement reach, November 2020.

Weinstock Enhancement Reach

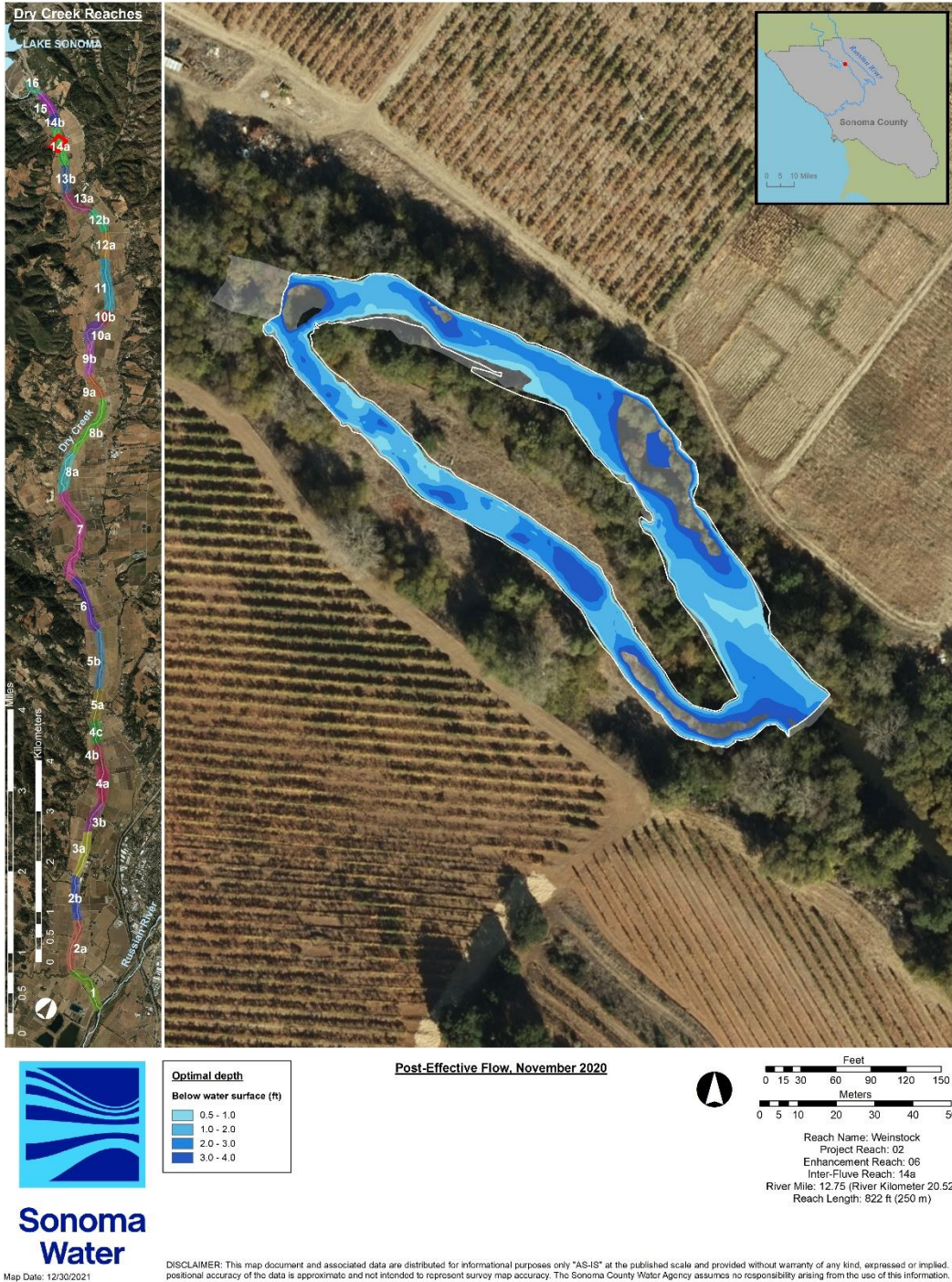


Figure 11. Optimal water depth for fry (0.5-2.0 ft) and parr (2.0-4.0 ft) within the Weinstock enhancement reach, November 2020.

Weinstock Enhancement Reach

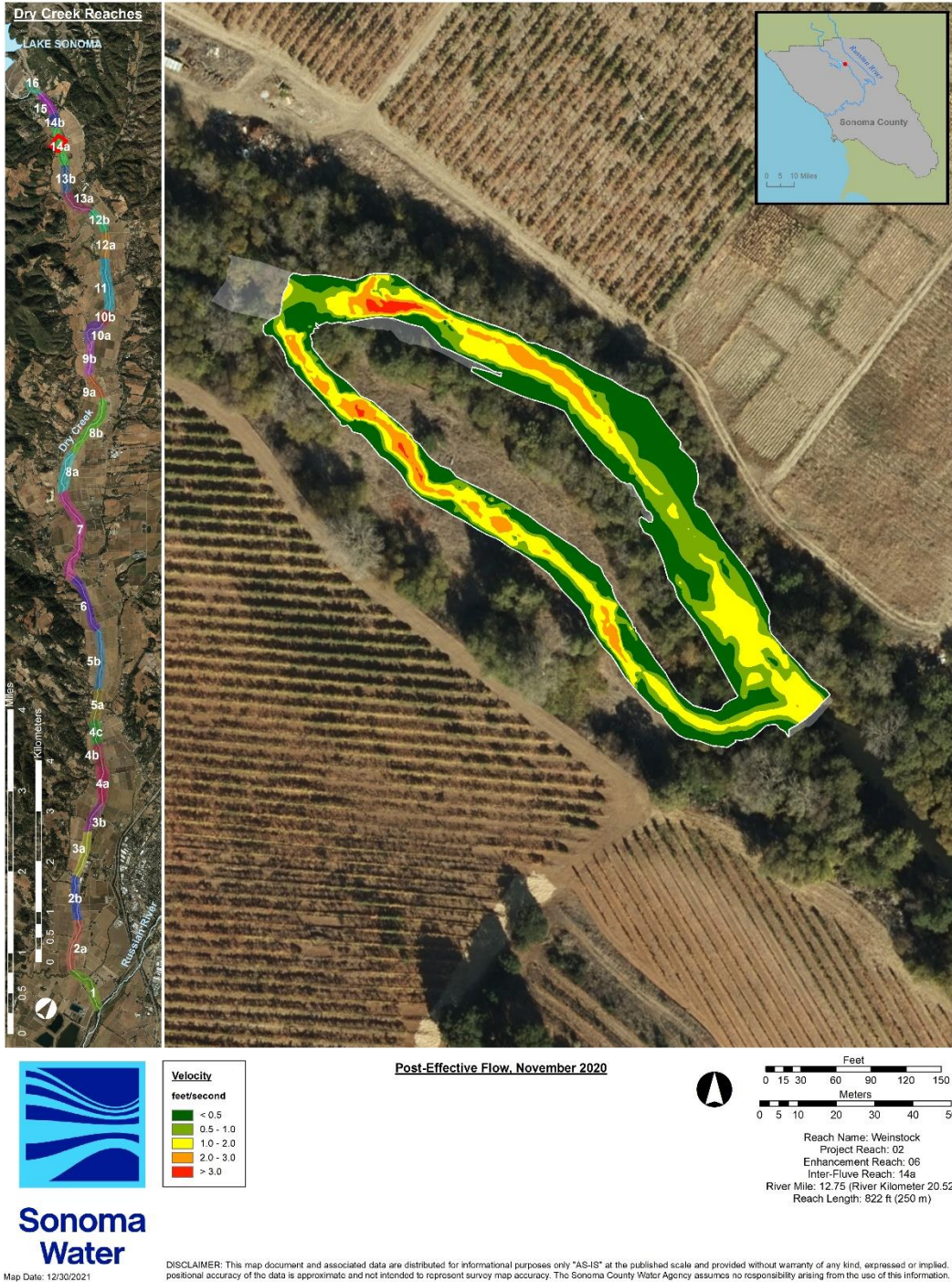
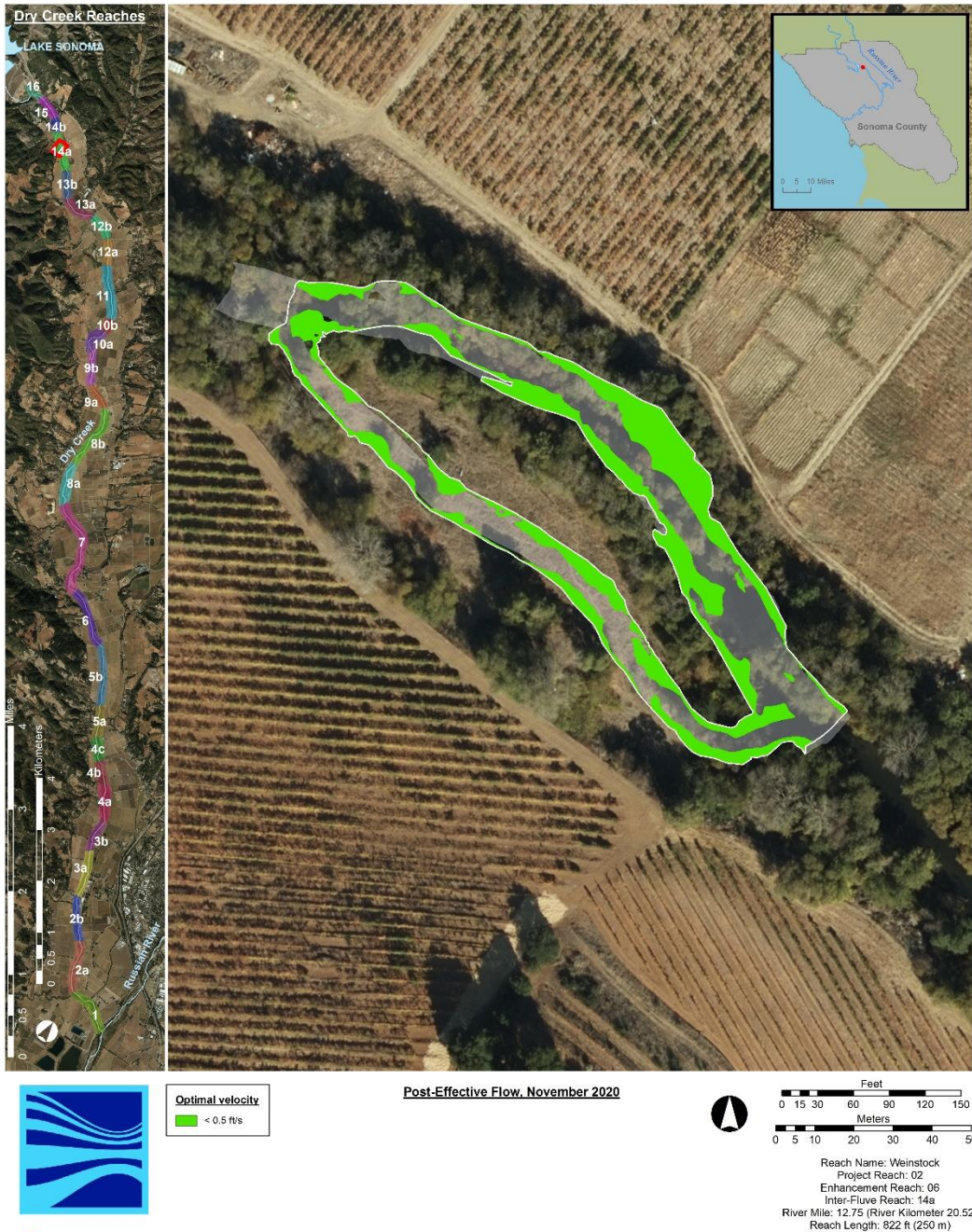


Figure 12. Measured water velocity within the Weinstock enhancement reach, November 2020.

Weinstock Enhancement Reach



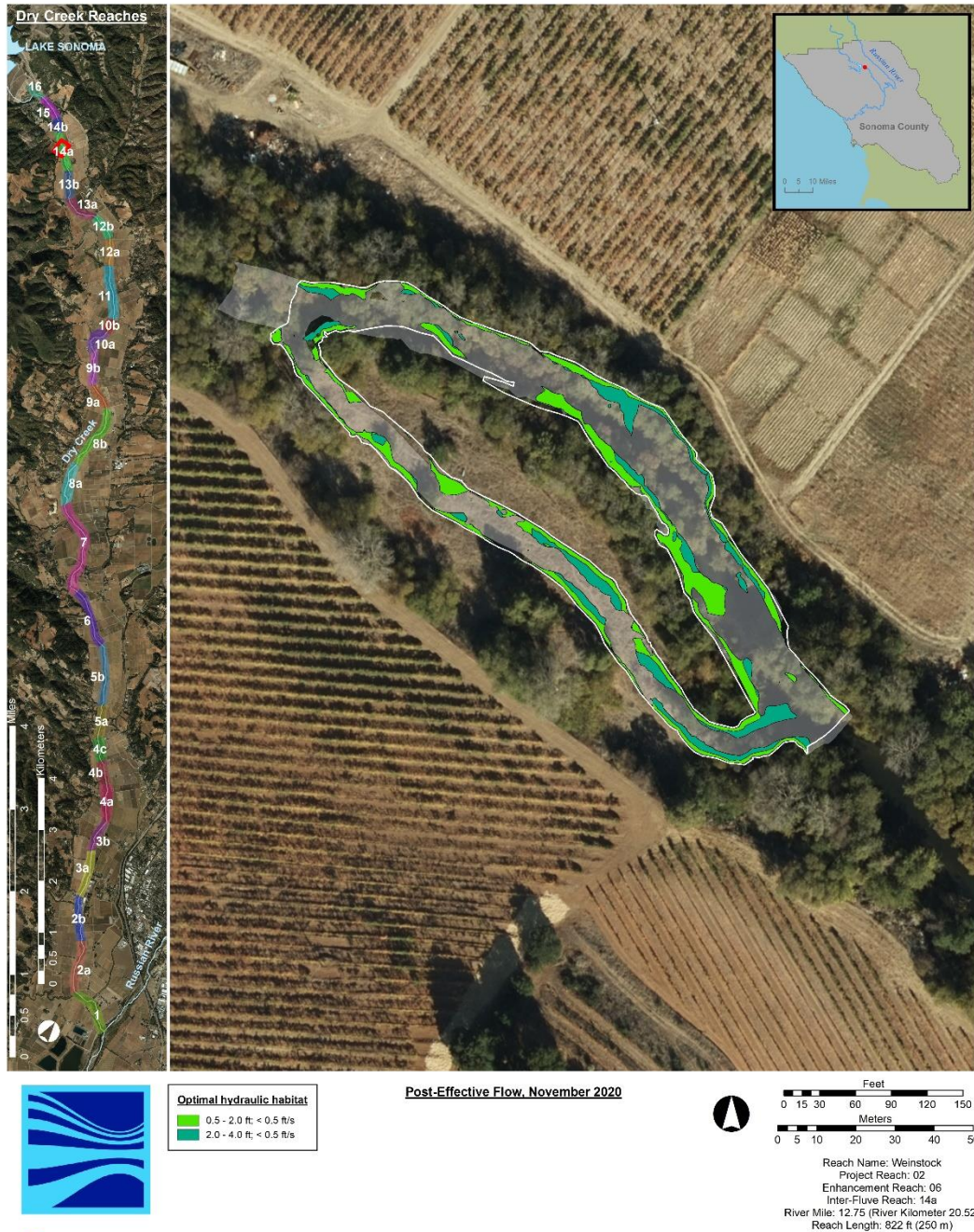
Sonoma Water

Map Date: 12/30/2021

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Figure 13. Optimal water velocity for fry and parr (< 0.5 ft/s) within the Weinstock enhancement reach, November 2020.

Weinstock Enhancement Reach



Sonoma Water

Map Date: 12/30/2021

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Figure 14. Optimal hydraulic habitat for fry (<0.5 ft/s, 0.5-2.0 ft) and parr (<0.5 ft/s, 2.0-4.0 ft) within the Weinstock enhancement reach, November 2020.

Habitat Types and Shelter Values

Table 8. Habitat, types, shelter value, percent cover, and shelter score for habitat units within the Weinstock enhancement reach, November 2020.

Habitat Unit #	Habitat Type	Shelter Value	Percent Cover	Shelter Score
HU01	Pool	3	50	150
HU02	Riffle	3	20	60
HU03	Pool	3	35	105
HU04	Pool	3	15	45
HU05	Flatwater	2	10	20
HU06	Pool	3	15	45
HU07	Riffle	3	20	60
HU08	Pool	3	40	120
HU09	Riffle	1	10	10
HU10	Pool	2	10	20
HU11	Flatwater	3	40	120
HU12	Flatwater	2	45	90
HU13	Pool	3	25	75
HU14	Flatwater	1	10	10
HU15	Pool	1	15	15
HU16	Riffle	3	40	120
HU17	Pool	3	45	135
Pool: riffle	11:4 (2.75)			Avg = 71

Weinstock Enhancement Reach

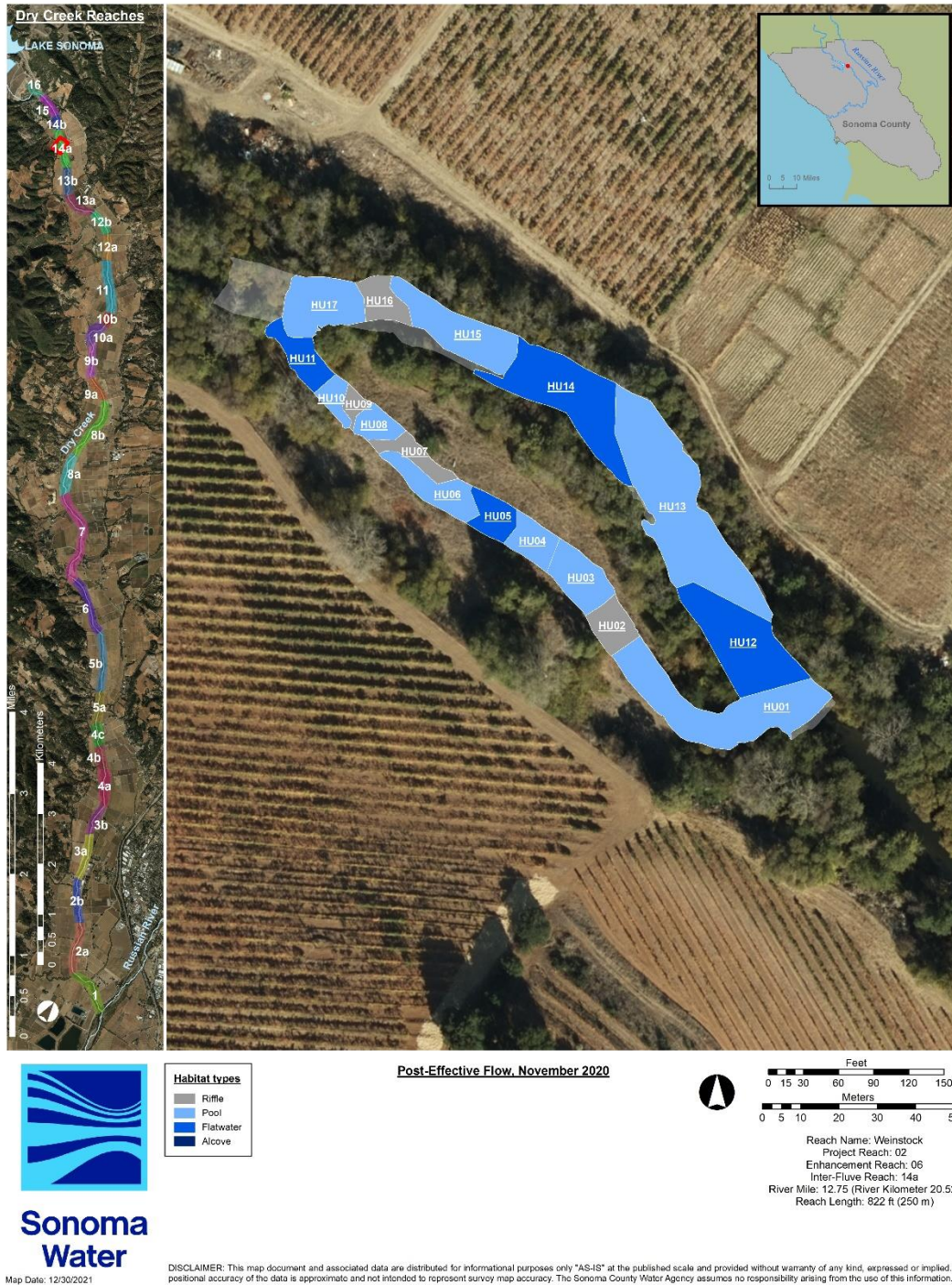


Figure 15. Habitat unit number and type within the Weinstock enhancement reach, November 2020.

Weinstock Enhancement Reach

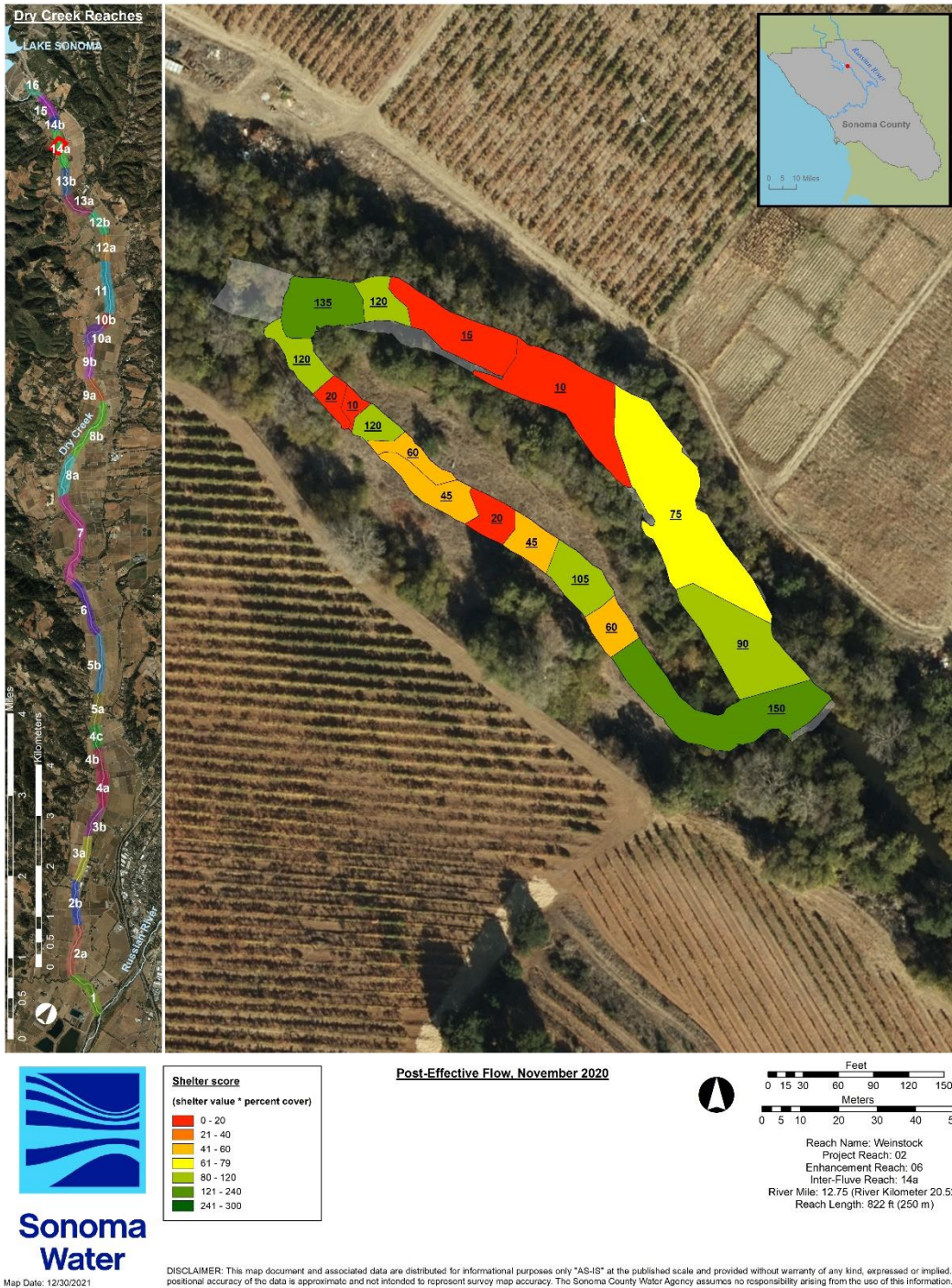


Figure 16. Habitat unit shelter scores within the Weinstock enhancement reach, November 2020.

Feature, Habitat Unit, Site, and Reach Ratings

Table 9. Post-effective flow feature ratings for the Weinstock enhancement reach November 2020.

		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Project Reach		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Enhancement Reach		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Colloquial Name		WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS
nmddy		110220	110220	110220	110220	110220	110220	110220	110220	110220	110220	110220	110220	110220	110220	110220	110220	110220	110220
Survey Type		PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
PROJECT SITE NUMBER		1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
PROJECT FEATURE NUMBER		S1-01	S2-01	S2-02	S2-03	S2-04	S2-05	S2-06	S2-07	S2-08	S2-09	S2-10	S2-11	S2-12	S2-13	S2-14	S2-15	S2-16	S2-17
Feature Type Code		PWH	BWW	SCW	HW	SCW	HW	SCW	HW	HW	R	HW	SCW	FW	HW	SCW	HW	SCW	FW
Habitat Unit		HU18 W	HU01 2	HU01 2	HU01 2	HU01 2	HU01 2	HU01 2	HU01 2	HU02	HU11	HU03	HU03	HU01 D	HU04	HU04	HU05	HU06	HU07
Habitat Type		Pool	Pool	Pool	Pool	Pool	Pool	Pool	Pool	Riffle	Flatwater	Pool	Pool	Dry	Pool	Pool	Flatwater	Pool	Riffle
4.	Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	GOOD	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL
5a	Are problems with the feature visible?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
6a	Is the feature still in its original location?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6b	Is the feature still in its original position?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6d	Is the feature still in its original orientation?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
8.	If an objective, did the feature create the targeted instream habitat type?	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES
9.	Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
17a	If an objective, did the feature increase instream shelter rating?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
19a	If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
21a	If an objective, did the feature lead to the targeted channel conditions?	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES
25.	Did the feature achieve the targeted velocity?	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES
PROJECT FEATURE NUMBER		S1-01	S2-01	S2-02	S2-03	S2-04	S2-05	S2-06	S2-07	S2-08	S2-09	S2-10	S2-11	S2-12	S2-13	S2-14	S2-15	S2-16	S2-17
4.	Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	4	4	5	5	5	5	5	5	5	1	5	5	5	5	5	5	5	5
5a	Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0	1
6a	Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6b	Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6d	Is the feature still in its original orientation? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8.	If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1
9.	Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1
17a	If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
19a	If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21a	If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1
25.	Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1
PROJECT FEATURE NUMBER		S1-01	S2-01	S2-02	S2-03	S2-04	S2-05	S2-06	S2-07	S2-08	S2-09	S2-10	S2-11	S2-12	S2-13	S2-14	S2-15	S2-16	S2-17
FEATURE RATING																			
Feature quantitative rating out of 15		13	13	14	14	14	14	14	14	14	5	14	14	14	14	14	13	14	14
Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)		Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Poor	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent

Table 9. Post-effective flow feature ratings for the Weinstock enhancement reach November 2020.

		2	2	2	2	2	2	2	2	2	2	2
Project Reach		2	2	2	2	2	2	2	2	2	2	2
Enhancement Reach		6	6	6	6	6	6	6	6	6	6	6
Colloquial Name		WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS
nmddyy		110220	110220	110220	110220	110220	110220	110220	110220	110220	110220	110220
Survey Type		PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
PROJECT SITE NUMBER		2	2	2	2	2	2	2	2	2	2	2
PROJECT FEATURE NUMBER		SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
Feature Type Code		S2-18	S2-19	S2-20	S2-21	S2-22	S2-23	S2-24	S2-25	S2-26	S2-27	S2-28
Habitat Unit		SCW	SCW	HW	R	HW	HW	HW	HW	HW	HW	AW
Habitat Type		HU06	HU08	HU10	HU02	HU11	HU11	HU11	HU11	HU11	HU11	HU17 2
Habitat Type		Pool	Pool	Pool	Riffle	Flatwater	Flatwater	Flatwater	Flatwater	Flatwater	Flatwater	Pool
4.	Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	EXCL	EXCL	EXCL	FAIL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	GOOD
5a	Are problems with the feature visible?	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO
6a	Is the feature still in its original location?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6b	Is the feature still in its original position?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6d	Is the feature still in its original orientaton?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
8.	If an objective, did the feature create the targeted instream habitat type?	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES
9.	Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO
17a	If an objective, did the feature increase instream shelter rating?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
19a	If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
21a	If an objective, did the feature lead to the targeted channel conditions?	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES
25.	Did the feature achieve the targeted velocity?	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES
PROJECT FEATURE NUMBER		S2-18	S2-19	S2-20	S2-21	S2-22	S2-23	S2-24	S2-25	S2-26	S2-27	S2-28
4.	Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	5	5	5	1	5	5	5	5	5	5	4
5a	Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	1	1	1	0	1	1	1	1	1	1	1
6a	Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1
6b	Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1
6d	Is the feature still in its original orientaton? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1
8.	If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	1	1	1	0	1	1	1	1	1	1	1
9.	Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	1	1	1	0	1	1	1	1	1	1	1
17a	If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1
19a	If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0
21a	If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	1	1	1	0	1	1	1	1	1	1	1
25.	Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	1	1	0	1	1	1	1	1	1	1
PROJECT FEATURE NUMBER		S2-18	S2-19	S2-20	S2-21	S2-22	S2-23	S2-24	S2-25	S2-26	S2-27	S2-28
FEATURE RATING	Feature quantitative rating out of 15	14	14	14	5	14	14	14	14	14	14	13
	Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)	Excellent	Excellent	Excellent	Poor	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent

Weinstock Enhancement Reach

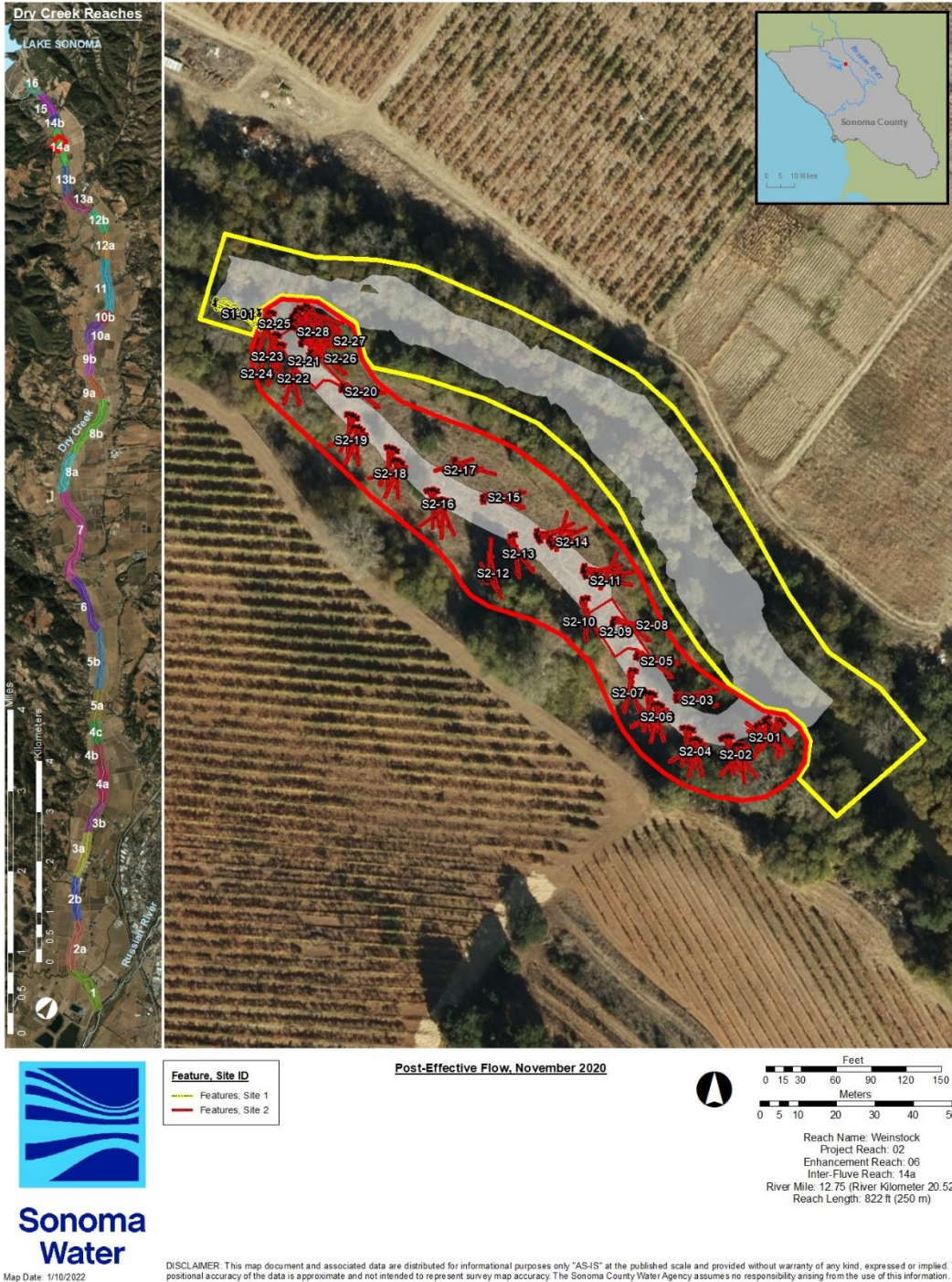


Figure 17. Enhancement sites and features within the Weinstock enhancement reach, November 2020.

Weinstock Enhancement Reach

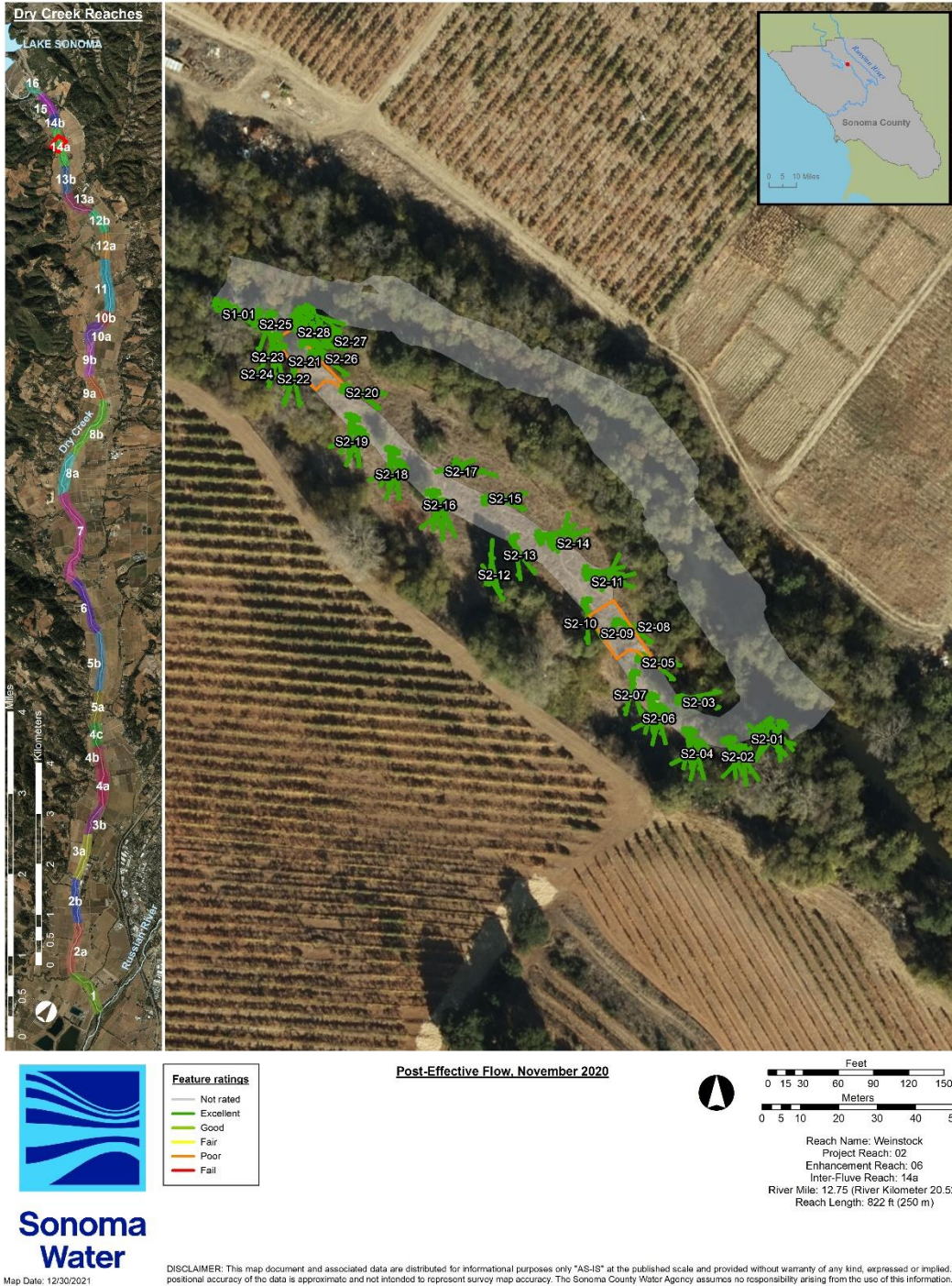


Figure 18. Feature ratings for the Weinstock enhancement reach, November 2020.

Table 10. Post-effective flow habitat unit ratings for the Weinstock enhancement reach September 2020.

Project Reach	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Enhancement Reach	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Colloquial Name	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS
nmddyy	110220	110220	110220	110220	110220	110220	110220	110220	110220	110220	110220	110220	110220	110220	110220	110220	110220	110220	110220	110220
Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
HABITAT UNIT NUMBER	HU01	HU02	HU03	HU04	HU05	HU06	HU07	HU08	HU09	HU10	HU11	HU12	HU13	HU14	HU01 D	HU01 2	HU15	HU16		
Habitat Type	Pool	Riffle	Pool	Pool	Flatwater	Pool	Riffle	Pool	Riffle	Pool	Flatwater	Flatwater	Pool	Flatwater	Dry	Pool	Pool	Riffle		
PROJECT SITE NUMBER	1	2	2	2	2	2	2	2	2	2	2	1	1	1	2	2	1	1	1	1
Project Site Type	MainChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	MainChan	MainChan	MainChan	SideChan	SideChan	MainChan	MainChan		
11e	% Area of habitat unit within 0.5 -2.0 ft depth	22%	77%	21%	32%	86%	58%	85%	49%	87%	45%	44%	74%	23%	42%	0%	22%	37%	84%	
11f	% Area of habitat unit within 2.0 -4.0 ft depth	52%	12%	72%	60%	6%	35%	0%	41%	0%	44%	44%	19%	31%	40%	0%	52%	48%	0%	
14.	Instream shelter value in the habitat unit : 0, 1, 2, 3	3	3	3	3	2	3	3	3	1	2	3	2	3	1	0	3	1	3	
15.	Percent of habitat unit covered by shelter: %	50	20	35	15	10	15	20	40	10	10	40	45	25	10	0	50	15	40	
17b	a. Calculate the shelter rating for the habitat unit : 0-300	150	60	105	45	20	45	60	120	10	20	120	90	75	10	0	150	15	120	
28.	Percent of habitat unit within targeted velocity (see above): (%)	44%	31%	63%	41%	22%	28%	46%	32%	19%	37%	35%	25%	60%	49%	0%	44%	27%	11%	
36e	% habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	14%	18%	21%	20%	14%	17%	33%	15%	9%	24%	22%	16%	17%	22%	0%	14%	13%	2%	
36f	% habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	22%	2%	35%	13%	1%	4%	9%	0%	2%	2%	1%	2%	12%	10%	0%	22%	4%	0%	
HABITAT UNIT NUMBER	HU01	HU02	HU03	HU04	HU05	HU06	HU07	HU08	HU09	HU10	HU11	HU12	HU13	HU14	HU01 D	HU01 2	HU15	HU16		
11e	% area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	2	4	2	3	4	4	4	4	4	4	4	2	4	0	2	3	4		
11f	% area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	1	4	4	0	3	0	4	0	4	4	1	3	4	0	4	4	0	
14.	Instream shelter value in the habitat unit : 0, 1, 2, 3 (3 = 5 pts; 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	5	5	5	5	4	5	5	5	3	4	5	4	5	3	0	5	3	5	
15.	% hab unit covered by shelter (≥80 = 5pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)	3	2	2	1	1	1	2	3	1	1	3	3	2	1	0	3	1	3	
17b	a. Calculate the shelter rating for the habitat unit : 0-300	5	2	4	1	0	1	2	4	0	0	4	3	2	0	0	5	0	4	
28.	% area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	3	4	4	2	2	4	3	1	3	3	2	4	4	0	4	2	1	
36e	% area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	1	1	2	2	1	1	3	1	0	2	2	1	1	2	0	1	1	0	
36f	% area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	2	0	3	1	0	0	0	0	0	0	0	1	1	0	2	0	0		
HABITAT UNIT NUMBER	HU01	HU02	HU03	HU04	HU05	HU06	HU07	HU08	HU09	HU10	HU11	HU12	HU13	HU14	HU01 D	HU01 2	HU15	HU16		
HABITAT UNIT RATING	Habitat unit quantitative rating (out of 35)																			
	26	18	26	21	12	17	20	24	9	18	25	18	20	19	0	26	14	17		
	Habitat unit qualitative rating: Excellent (≥28), Good (≥21), Fair(≥14), Poor (≥7), Fail (<7)																			
	Good	Fair	Good	Good	Poor	Fair	Fair	Good	Poor	Fair	Good	Fair	Fair	Fair	Not rated	Good	Fair	Fair		

Table 10. Post-effective flow habitat unit ratings for the Weinstock enhancement reach September 2020.

Project Reach	2	2	2	
Enhancement Reach	6	6	6	
Colloquial Name	WS	WS	WS	
mmddyy	110220	110220	110220	
Survey Type	PEF	PEF	PEF	
	HABITAT UNIT NUMBER	HU17	HU18 W HU17 2	
Habitat Type	Pool	Pool	Pool	
	PROJECT SITE NUMBER	1	2	
Project Site Type	MainChan	MainChan	SideChan	
11e	% Area of habitat unit within 0.5 -2.0 ft depth	26%	0%	26%
11f	% Area of habitat unit within 2.0 -4.0 ft depth	34%	0%	34%
14.	Instream shelter value in the habitat unit : 0, 1, 2, 3	3	0	3
15.	Percent of habitat unit covered by shelter: %	45	0	45
17b	a. Calculate the shelter rating for the habitat unit : 0-300	135	0	135
28.	Percent of habitat unit within targeted velocity (see above): (%)	47%	0%	47%
36e	% habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	13%	0%	13%
36f	% habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	11%	0%	11%
	HABITAT UNIT NUMBER	HU17	HU18 W HU17 2	
11e	% area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	2	0	2
11f	% area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	3	0	3
14.	Instream shelter value in the habitat unit : 0, 1, 2, 3 (3 = 5 pts; 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	5	0	5
15.	% hab unit covered by shelter (≥80 = 5pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)	3	0	3
17b	a. Calculate the shelter rating for the habitat unit : 0-300	4	0	4
28.	% area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	0	4
36e	% area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	1	0	1
36f	% area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	1	0	1
	HABITAT UNIT NUMBER	HU17	HU18 W HU17 2	
HABITAT UNIT RATING	Habitat unit quantitative rating (out of 35)	23	0	23
	Habitat unit qualitative rating: Excellent (>=28), Good (>=21), Fair(>=14), Poor (>=7), Fail (<7)	Good	Not rated	Good

Weinstock Enhancement Reach

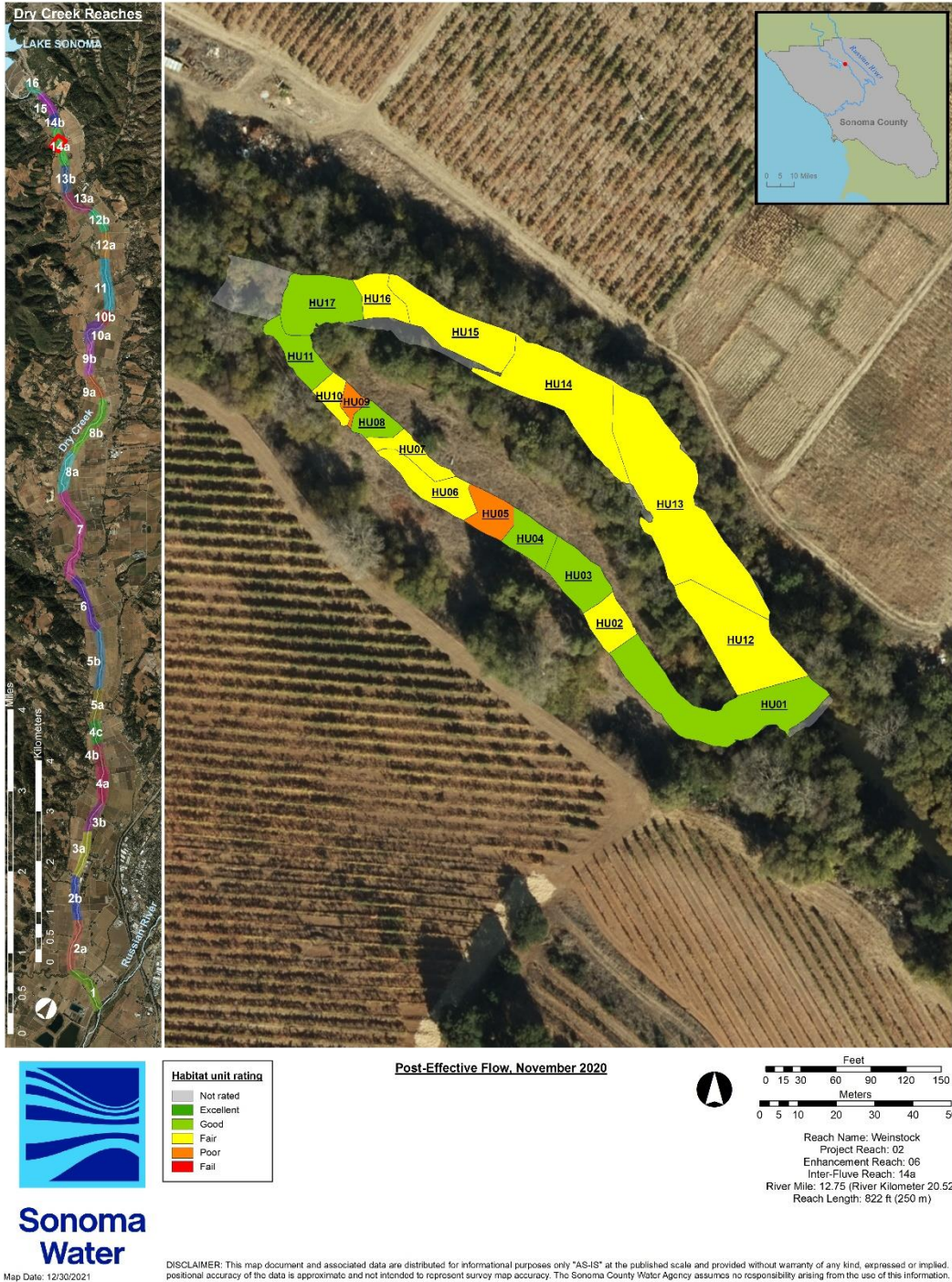


Figure 19. Habitat unit ratings for the Weinstock enhancement reach, November 2020.

Table 11. Post-effective flow average feature, average habitat unit, site, and reach ratings for the Weinstock enhancement reach, November 2020.

	Project Reach	2	2
	Enhancement Reach	6	6
	ENHANCEMENT REACH NAME	WS	WS
	mmddy	110220	110220
	Survey Type	PEF	PEF
	PROJECT SITE NUMBER	1	2
	Project Site Type	MainChan	SideChan
	PROJECT SITE NUMBER	1	2
SITE AVERAGE FEATURE RATING	Site average feature quantitative rating (out of 15; bold indicates excluded from site rating)	13	13
	Site average feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3), Not rated (not used to rate site)	Excellent	Excellent
	PROJECT SITE NUMBER	1	2
SITE AVERAGE HABITAT UNIT RATING	Site average habitat unit quantitative rating (out of 35; bold indicates excluded from site rating)	20	20
	Site average qualitative rating Excellent (>=28), Good (>=21), Fair(>=14), Poor (>=7), Fail (<7), Not rated (not used to rate site)	Fair	Fair
	PROJECT SITE NUMBER	1	2
SITE RATING	Site quantitative rating (sum of site average feature and habitat unit ratings) (out of 50; bold indicates rating excludes feature or habitat unit rating and scoring out of 15 or 35)	33	33
	Site qualitative rating: Excellent (>=40), Good (>=30), Fair(>=20), Poor (>=10), Fail (<10)	Good	Good
	ENHANCEMENT REACH NAME	WS	
ENHANCEMENT REACH RATING	Enhancement reach quantitative rating (average of site ratings) (out of 50)	33	
	Enhancement reach qualitative rating: Excellent (>=40), Good (>=30), Fair(>=20), Poor (>=10), Fail (<10)	Good	

Weinstock Enhancement Reach



Figure 20. Post effective flow site ratings for the Weinstock enhancement reach, November 2020.

Weinstock Enhancement Reach

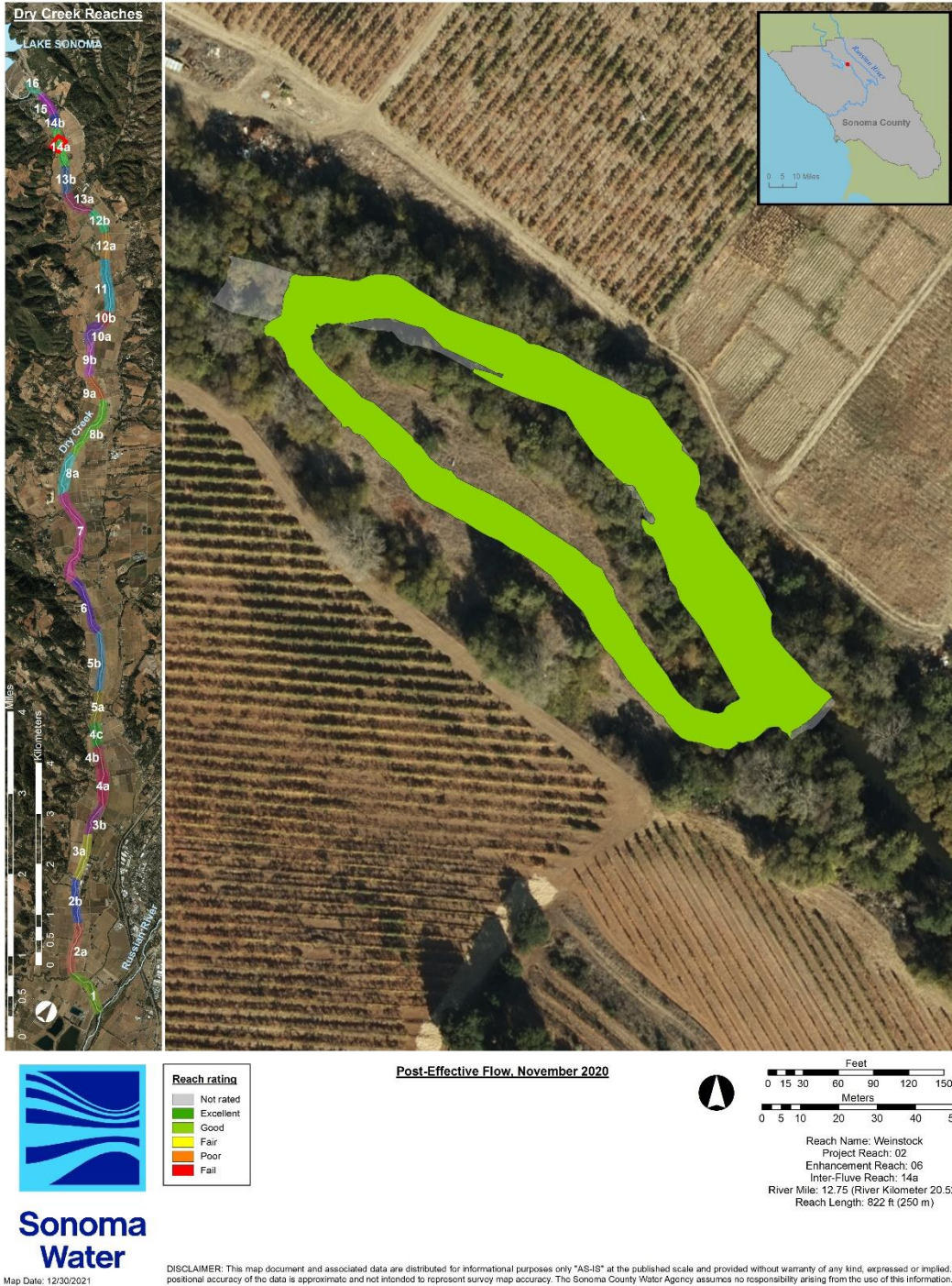


Figure 21. Post-effective flow reach rating for the Weinstock enhancement reach, November 2020.

Feature and Habitat Unit Checklists

Table 12. Adaptive Management Plan targeted checklist for the Weinstock enhancement reach, November 2020.

	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Project Reach	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Enhancement Reach	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Colloquial Name	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS
mmddyy	110220	110220	110220	110220	110220	110220	110220	110220	110220	110220	110220	110220	110220	110220	110220	110220	110220	110220	110220	110220	110220
Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
Project Site Number	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Project Site Type	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
Project Feature Number	NA	NA	NA	NA	NA	NA	NA	NA	NA	S1-01	NA	S2-01	S2-02	S2-03	S2-04	S2-05	S2-06	S2-07	S2-08	S2-09	S2-10
Feature Type Code	NA	NA	NA	NA	NA	NA	NA	NA	NA	PWH	NA	BWW	SCW	SCW	SCW	SCW	SCW	SCW	SCW	SCW	SCW
Habitat Unit	HU01	HU12	HU13	HU14	HU15	HU16	HU17	HU18_W	HU09	HU01_2	HU01_2	HU01_2	HU01_2	HU01_2	HU01_2	HU01_2	HU01_2	HU01_2	HU02	HU11	HU03
Habitat Type	Pool	Flatwater	Pool	Flatwater	Pool	Riffle	Pool	Pool	Riffle	Pool	Pool	Pool	Pool	Pool	Pool	Pool	Pool	Pool	Riffle	Flatwater	Pool
4. Structural condition of feature : EXCL, GOOD, FAIR, POOR, FAIL	NA	NA	NA	NA	NA	NA	NA	GOOD	NA	GOOD	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL
5a. Are problems with the feature visible?	NA	NA	NA	NA	NA	NA	NA	NA	NO	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO
6a. Is the feature still in its original location?	NA	NA	NA	NA	NA	NA	NA	YES	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6b. Is the feature still in its original position?	NA	NA	NA	NA	NA	NA	NA	YES	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6d. Is the feature still in its original orientation?	NA	NA	NA	NA	NA	NA	NA	YES	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
8. If an objective, did the feature create the targeted instream habitat type?	NA	NA	NA	NA	NA	NA	NA	YES	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	NA	NA	NA	NA	NA	NA	NA	NO	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO
11e. % Area of habitat unit within 0.5 -2.0 ft depth	22%	74%	23%	42%	37%	84%	26%	0%	87%	22%	22%	22%	22%	22%	22%	22%	22%	22%	77%	44%	21%
11f. % Area of habitat unit within 2.0 -4.0 ft depth	52%	19%	31%	40%	48%	0%	34%	0%	0%	52%	52%	52%	52%	52%	52%	52%	52%	52%	12%	44%	72%
14. Instream shelter value in the habitat unit : 0, 1, 2, 3	3	2	3	1	1	3	3	0	1	3	3	3	3	3	3	3	3	3	3	3	3
15. Percent of habitat unit covered by shelter: %	50	45	25	10	15	40	45	0	10	50	50	50	50	50	50	50	50	50	20	40	35
17a. If an objective, did the feature increase instream shelter rating?	NA	NA	NA	NA	NA	NA	NA	YES	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
17b. a. Calculate the shelter rating for the habitat unit : 0-300	150	90	75	10	15	120	135	0	10	150	150	150	150	150	150	150	150	150	60	120	105
19a. If an objective, did the feature increase LWD count in the habitat unit ?	NA	NA	NA	NA	NA	NA	NA	NO	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
21a. If an objective, did the feature lead to the targeted channel conditions?	NA	NA	NA	NA	NA	NA	NA	YES	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES
25. Did the feature achieve the targeted velocity?	NA	NA	NA	NA	NA	NA	NA	YES	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES
28. Percent of habitat unit within targeted velocity (see above): (%)	44%	25%	60%	49%	27%	11%	47%	0%	19%	44%	44%	44%	44%	44%	44%	44%	44%	44%	31%	35%	63%
36e. % habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	14%	16%	17%	22%	13%	2%	13%	0%	9%	22%	14%	14%	14%	14%	14%	14%	14%	14%	18%	22%	21%
36f. % habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	22%	2%	12%	10%	4%	0%	11%	0%	0%	22%	22%	22%	22%	22%	22%	22%	22%	22%	2%	1%	35%
FEATURE NUMBER	NA	NA	NA	NA	NA	NA	NA	S1-01	NA	S2-01	S2-02	S2-03	S2-04	S2-05	S2-06	S2-07	S2-08	S2-09	S2-10	S2-11	
HABITAT UNIT NUMBER	HU01	HU12	HU13	HU14	HU15	HU16	HU17	HU18_W	HU09	HU01_2	HU01_2	HU01_2	HU01_2	HU01_2	HU01_2	HU01_2	HU01_2	HU02	HU11	HU03	
SITE NUMBER	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2
ENHANCEMENT REACH NAME	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS
4. Structural condition of feature : EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	0	0	0	0	0	0	0	4	0	4	5	5	5	5	5	5	5	5	1	5	5
5a. Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	0	0	0	0	0	0	0	1	0	1	1	1	1	1	1	1	1	1	1	0	1
6a. Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1
6b. Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1
6d. Is the feature still in its original orientation? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1
8. If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	1	0	1	1	1	1	1	1	1	1	1	1	0	1
9. Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	0	0	0	0	0	0	0	1	0	1	1	1	1	1	1	1	1	1	1	0	1
11e. % area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	2	4	2	4	3	4	2	0	4	2	2	2	2	2	2	2	2	2	4	4	2
11f. % area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	1	3	4	4	0	3	0	0	4	4	4	4	4	4	4	4	4	1	4	4
14. Instream shelter value in the habitat unit : 0, 1, 2, 3 (3 = 5 pts, 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	5	4	5	3	3	5	5	0	3	5	5	5	5	5	5	5	5	5	5	5	5
15. % hab unit covered by shelter (≥80 = 5pts, ≥60 = 4 pts, ≥40 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	3	3	2	1	1	3	3	0	1	3	3	3	3	3	3	3	3	3	2	3	2
17a. If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1
17b. a. Calculate the shelter rating for the habitat unit : 0-300	5	3	2	0	0	4	4	0	0	5	5	5	5	5	5	5	5	5	2	4	4
19a. If an objective, did the feature increase LWD count in the habitat unit ? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21a. If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	1	0	1	1	1	1	1	1	1	1	1	1	0	1
25. Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	1	0	1	1	1	1	1	1	1	1	1	1	0	1
28. % area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	2	4	4	2	1	4	0	1	4	4	4	4	4	4	4	4	4	3	3	4
36e. % area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	1	1	1	2	1	0	1	0	0	1	1	1	1	1	1	1	1	1	2	2	2
36f. % area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	2	0	1	1	0	0	1	0	0	2	2	2	2	2	2	2	2	2	0	0	3

Table 12. Adaptive Management Plan targeted checklist for the Weinstock enhancement reach, November 2020.

Project Reach	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Enhancement Reach	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Colloquial Name	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS
mmddyy	110220	110220	110220	110220	110220	110220	110220	110220	110220	110220	110220	110220	110220	110220	110220	110220	110220	110220	110220
Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
Project Site Number	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Project Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
Project Feature Number	S2-12	S2-13	S2-14	S2-15	S2-16	S2-17	S2-18	S2-19	S2-20	S2-21	S2-22	S2-23	S2-24	S2-25	S2-26	S2-27	S2-28	S2-28	S2-28
Feature Type Code	FW	HW	SCW	HW	SCW	FW	SCW	SCW	HW	R	HW	HW	HW	HW	HW	HW	HW	HW	AW
Habitat Unit	HU01_D	HU04	HU04	HU05	HU06	HU07	HU06	HU08	HU10	HU02	HU11	HU11	HU11	HU11	HU11	HU11	HU11	HU11	HU17_2
Habitat Type	Dry	Pool	Pool	Flatwater	Pool	Riffle	Pool	Pool	Pool	Riffle	Flatwater	Flatwater	Flatwater	Flatwater	Flatwater	Flatwater	Flatwater	Flatwater	Pool
4. Structural condition of feature : EXCL, GOOD, FAIR, POOR, FAIL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	GOOD
5a. Are problems with the feature visible?	NO	NO	NO	YES	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO
6a. Is the feature still in its original location?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6b. Is the feature still in its original position?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6d. Is the feature still in its original orientation?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
8. If an objective, did the feature create the targeted instream habitat type?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO
11e. % Area of habitat unit within 0.5 -2.0 ft depth	0%	32%	32%	86%	58%	85%	58%	49%	45%	77%	44%	44%	44%	44%	44%	44%	44%	44%	26%
11f. % Area of habitat unit within 2.0 -4.0 ft depth	0%	60%	60%	6%	35%	0%	35%	41%	44%	12%	44%	44%	44%	44%	44%	44%	44%	44%	34%
14. Instream shelter value in the habitat unit : 0, 1, 2, 3	0	3	3	2	3	3	3	3	2	3	3	3	3	3	3	3	3	3	3
15. Percent of habitat unit covered by shelter: %	0	15	15	10	15	20	15	40	10	20	40	40	40	40	40	40	40	40	45
17a. If an objective, did the feature increase instream shelter rating?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
17b. a. Calculate the shelter rating for the habitat unit : 0-300	0	45	45	20	45	60	45	120	20	60	120	120	120	120	120	120	120	120	135
19a. If an objective, did the feature increase LWD count in the habitat unit ?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
21a. If an objective, did the feature lead to the targeted channel conditions?	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES
25. Did the feature achieve the targeted velocity?	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES
28. Percent of habitat unit within targeted velocity (see above): (%)	0%	41%	41%	22%	28%	46%	28%	32%	37%	31%	35%	35%	35%	35%	35%	35%	35%	35%	47%
36e. % habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	0%	20%	20%	14%	17%	33%	17%	15%	24%	18%	22%	22%	22%	22%	22%	22%	22%	22%	13%
36f. % habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	13%	13%	1%	4%	0%	4%	9%	2%	2%	1%	1%	1%	1%	1%	1%	1%	1%	11%
FEATURE NUMBER	S2-12	S2-13	S2-14	S2-15	S2-16	S2-17	S2-18	S2-19	S2-20	S2-21	S2-22	S2-23	S2-24	S2-25	S2-26	S2-27	S2-28	S2-28	S2-28
HABITAT UNIT NUMBER	HU01_D	HU04	HU04	HU05	HU06	HU07	HU06	HU08	HU10	HU02	HU11	HU11	HU11	HU11	HU11	HU11	HU11	HU11	HU17_2
SITE NUMBER	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
ENHANCEMENT REACH NAME	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS
4. Structural condition of feature : EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	4
5a. Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	1	1	1	0	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1
6a. Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6b. Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6d. Is the feature still in its original orientation? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8. If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1
9. Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1
11e. % area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	2
11f. % area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	4	4	0	3	0	3	4	4	1	4	4	4	4	4	4	4	4	3
14. Instream shelter value in the habitat unit : 0, 1, 2, 3 (3 = 5 pts, 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	0	5	5	4	5	5	5	5	4	5	5	5	5	5	5	5	5	5	5
15. % hab unit covered by shelter (≥80 = 5pts, ≥60 = 4 pts, ≥40 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	1	1	1	1	2	1	3	1	2	3	3	3	3	3	3	3	3	3
17a. If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
17b. a. Calculate the shelter rating for the habitat unit : 0-300	0	1	1	0	1	2	1	4	0	2	4	4	4	4	4	4	4	4	4
19a. If an objective, did the feature increase LWD count in the habitat unit ? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21a. If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1
25. Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1
28. % area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	4	4	2	2	4	2	3	3	3	3	3	3	3	3	3	3	3	4
36e. % area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	2	2	1	1	3	1	1	2	1	2	2	2	2	2	2	2	2	1
36f. % area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1

Gallo, September 2020

Depth and Velocity

Table 14. Areas and percentages of: wetted area, optimal depth and velocity, and optimal hydraulic habitat within the Gallo enhancement reach, September 2020.

Gallo Post-enhancement September 2020	Wetted area (ft²)	0.5 – 2.0 ft	2.0 – 4.0 ft	Total	< 0.5 ft/s	0.5 – 2.0 ft < 0.5 ft/s	2.0 – 4.0 ft < 0.5 ft/s	Total
Main channel area	49,177	18,907	17,256	36,163	20,406	6,818	6,216	13,034
Side channel area	34,399	12,613	11,707	24,319	23,838	7,282	8,304	15,587
Total area	83,576	31,520	28,963	60,483	44,244	14,100	14,521	28,621
Main channel % of wetted area	59%	38%	35%	74%	41%	14%	13%	27%
Side channel % of wetted area	41%	37%	34%	71%	69%	21%	24%	45%
Total % of wetted area	100%	38%	35%	72%	53%	17%	17%	34%

Gallo Enhancement Reach

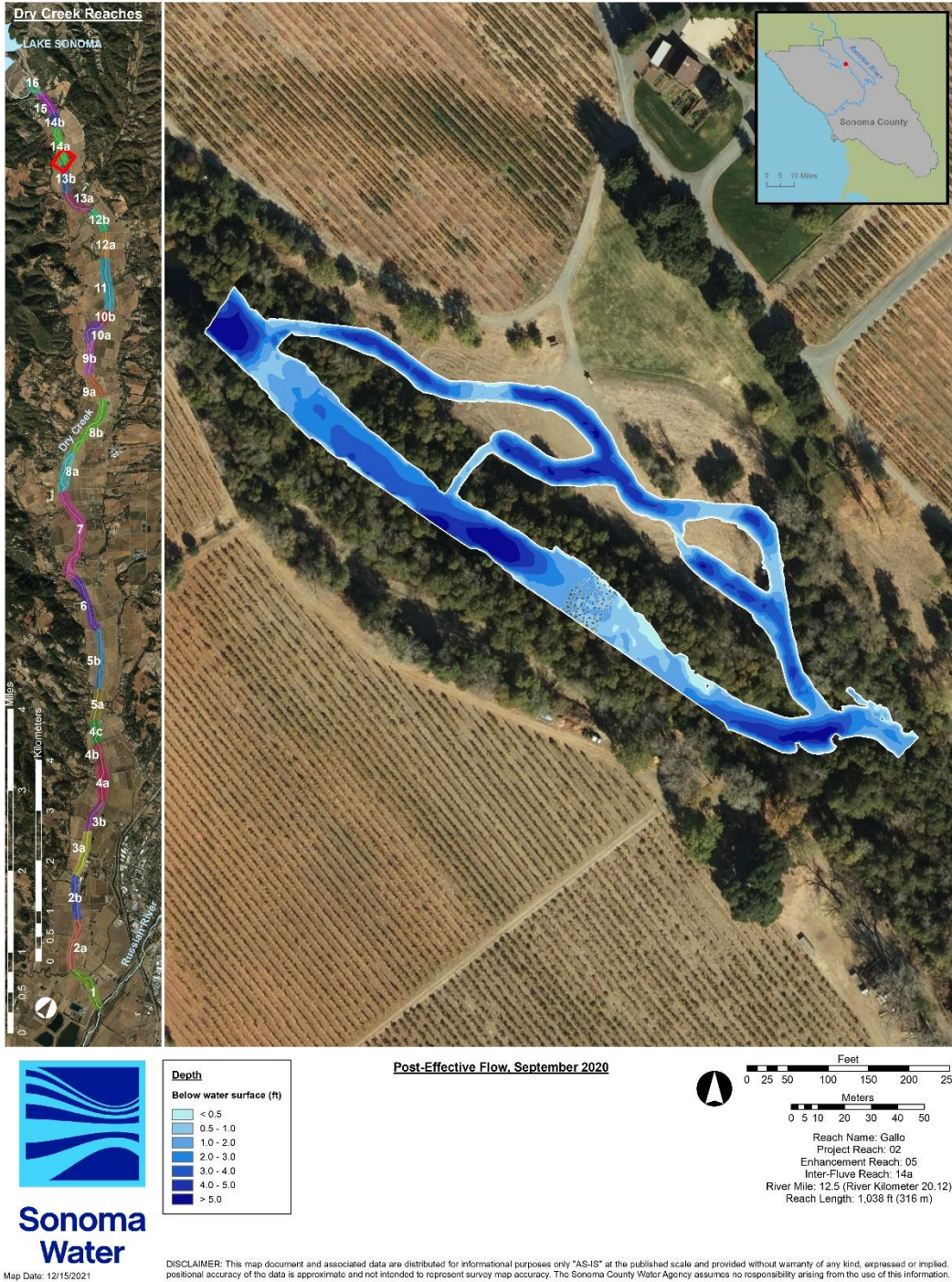


Figure 22. Measured water depth within the Gallo enhancement reach, September 2020.

Gallo Enhancement Reach

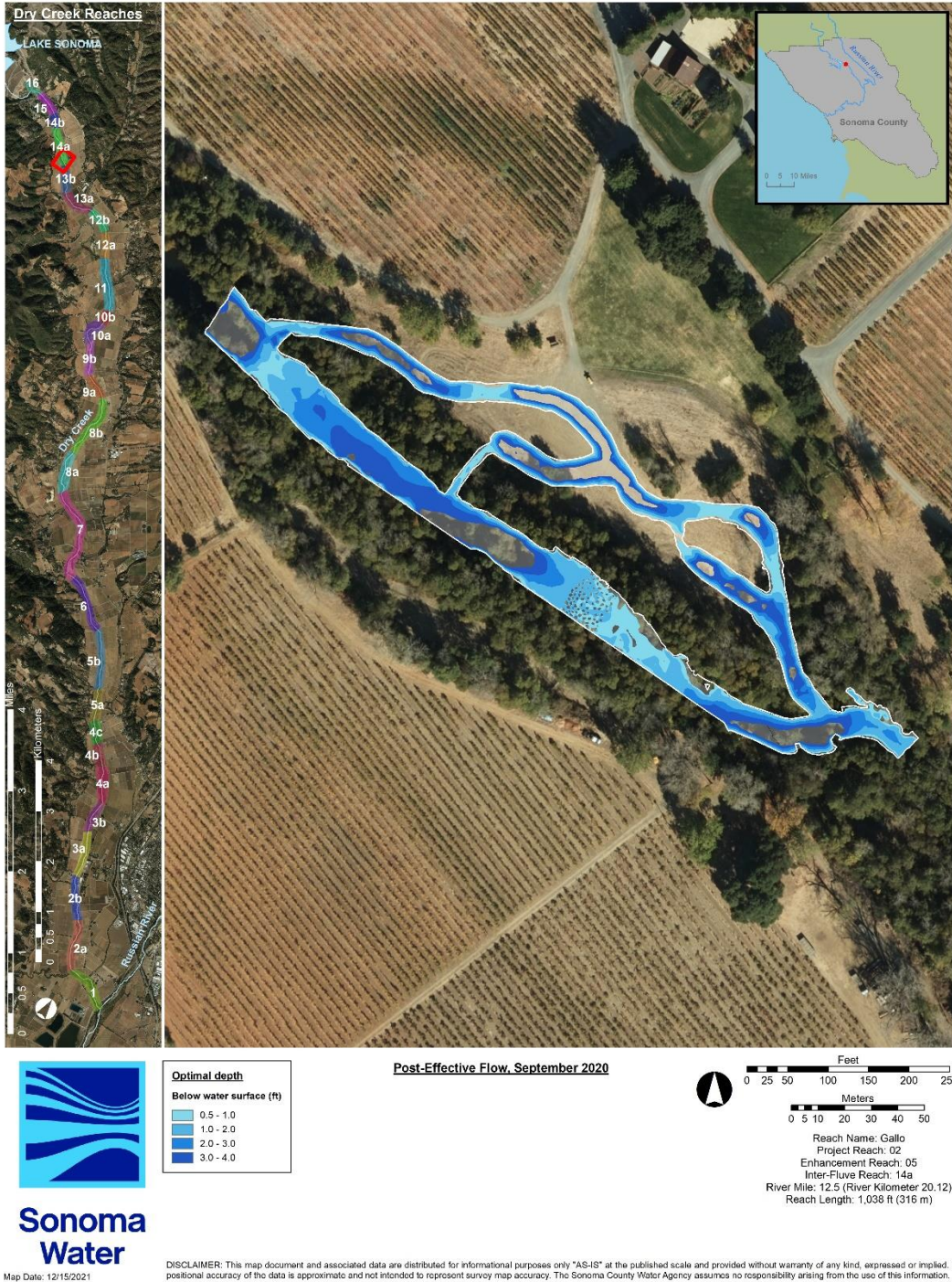


Figure 23. Optimal water depth for fry (0.5-2.0 ft) and parr (2.0-4.0 ft) within the Gallo enhancement reach, September 2020.

Gallo Enhancement Reach

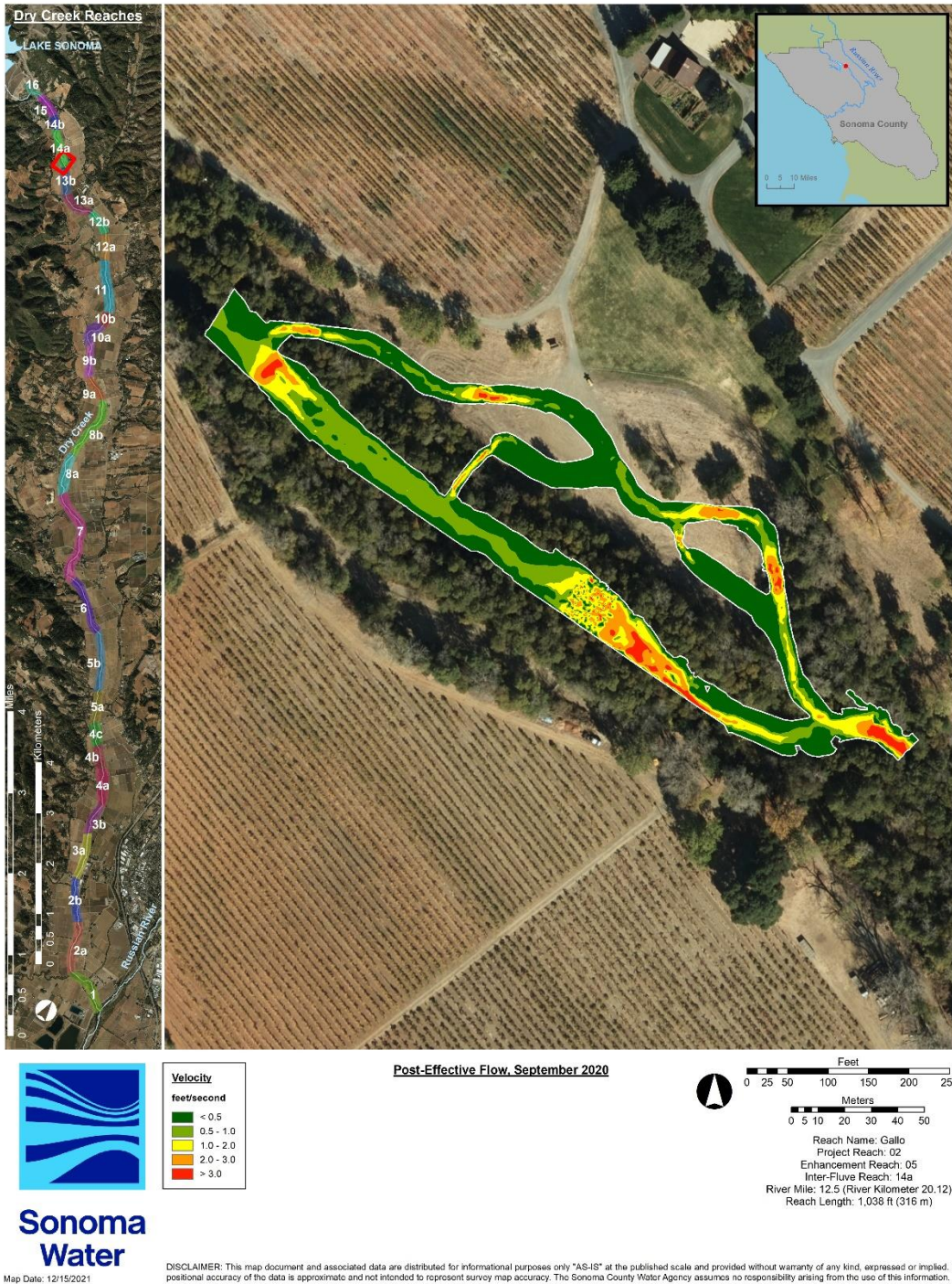


Figure 24. Measured water velocity within the Gallo enhancement reach, September 2020.

Gallo Enhancement Reach

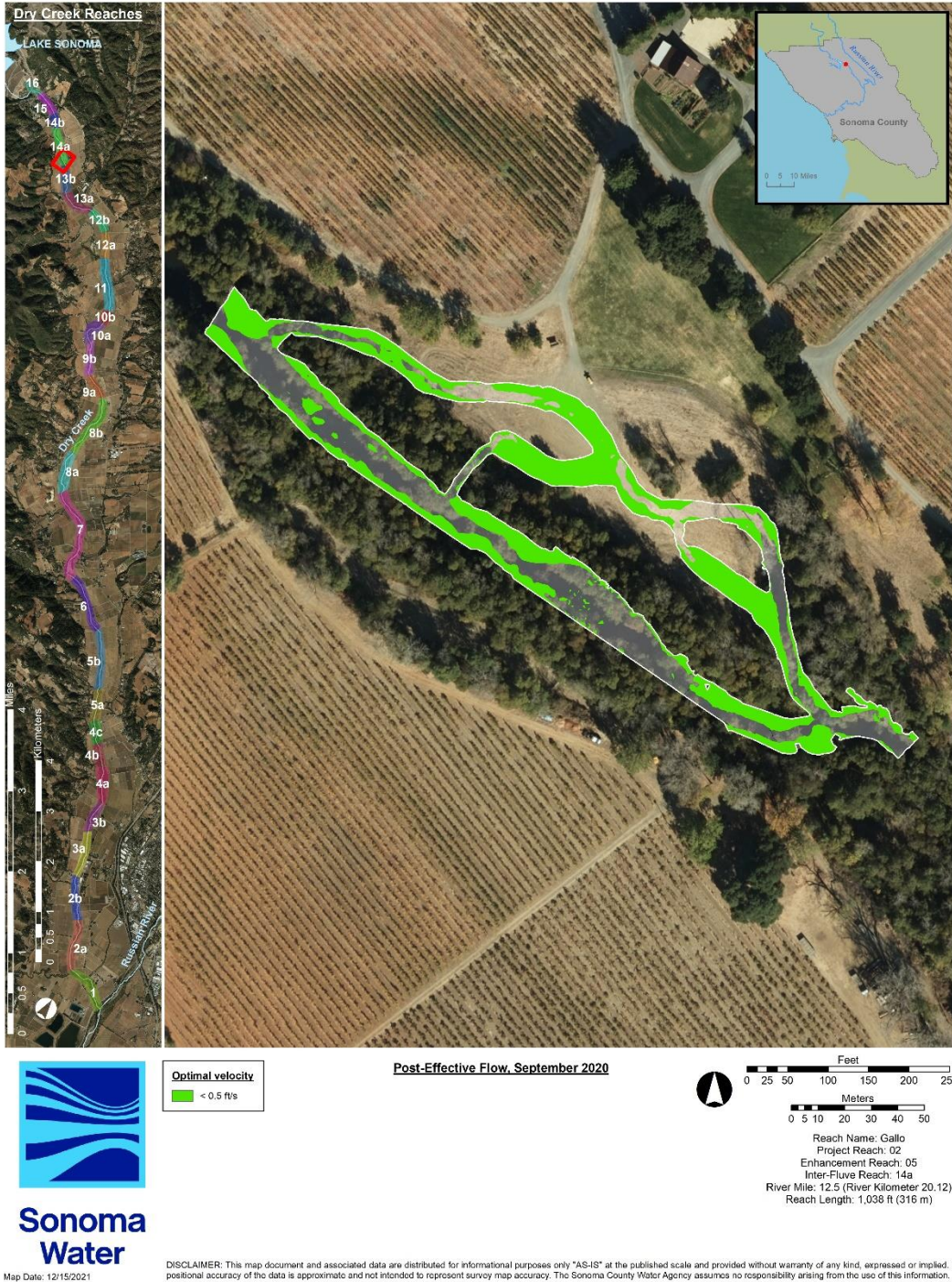


Figure 25. Optimal water velocity for fry and parr (< 0.5 ft/s) within the Gallo enhancement reach, September 2020.

Gallo Enhancement Reach

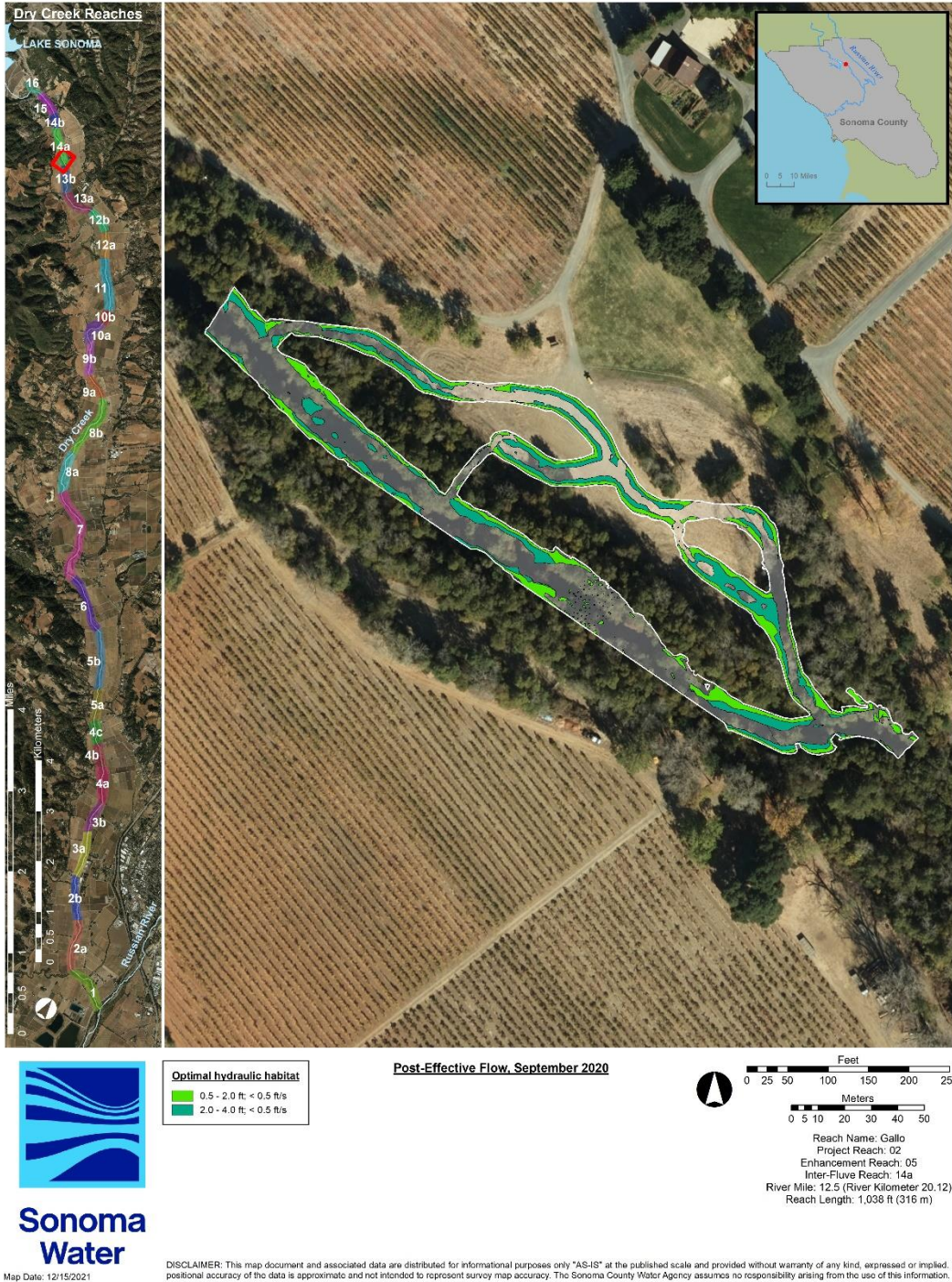


Figure 26. Optimal hydraulic habitat for fry (<0.5 ft/s, 0.5-2.0 ft) and parr (<0.5 ft/s, 2.0-4.0 ft) within the Gallo enhancement reach, September 2020.

Habitat Types and Shelter Values

Table 15. Habitat, types, shelter value, percent cover, and shelter score for habitat units within the Gallo enhancement reach, September 2020.

Habitat Unit #	Habitat Type	Shelter Value	Percent Cover	Shelter Score
HU01	Riffle	2	15	30
HU02	Pool	3	45	135
HU03	Alcove	3	80	240
HU04	Riffle	3	30	90
HU05	Riffle	2	25	50
HU06	Pool	3	30	90
HU07	Riffle	1	5	5
HU08	Pool	3	30	90
HU09	Pool	3	80	240
HU10	Riffle	1	10	10
HU11	Pool	3	30	90
HU12	Riffle	1	5	5
HU13	Pool	3	90	270
HU14	Riffle	2	20	40
HU15	Riffle	3	55	165
HU16	Riffle	2	25	50
HU17	Pool	3	65	195
HU18	Riffle	2	35	70
Pool: riffle	7:10 (0.70)			Avg = 104

Gallo Enhancement Reach

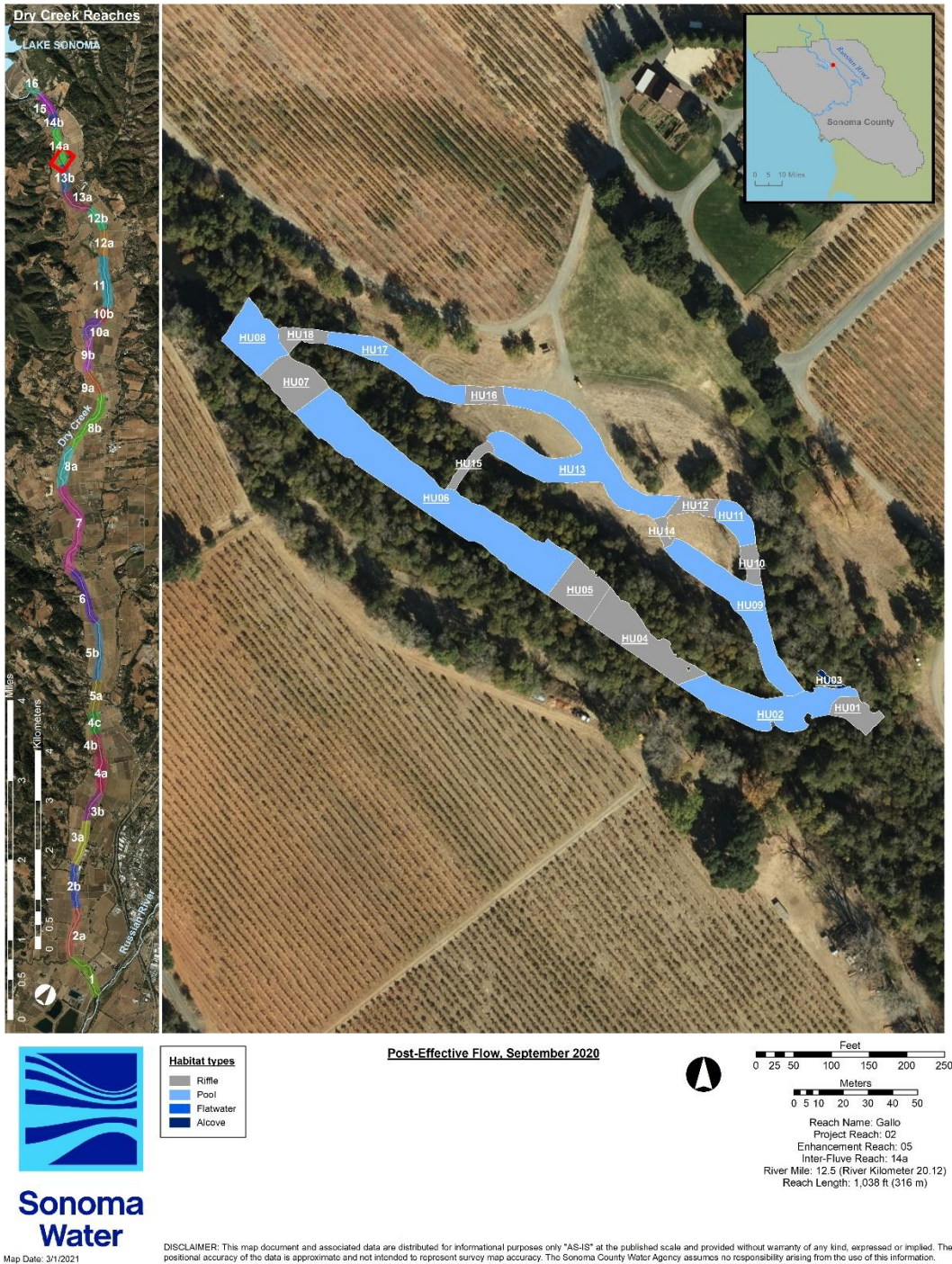


Figure 27. Habitat unit number and type within the Gallo enhancement reach, September 2020.

Gallo Enhancement Reach

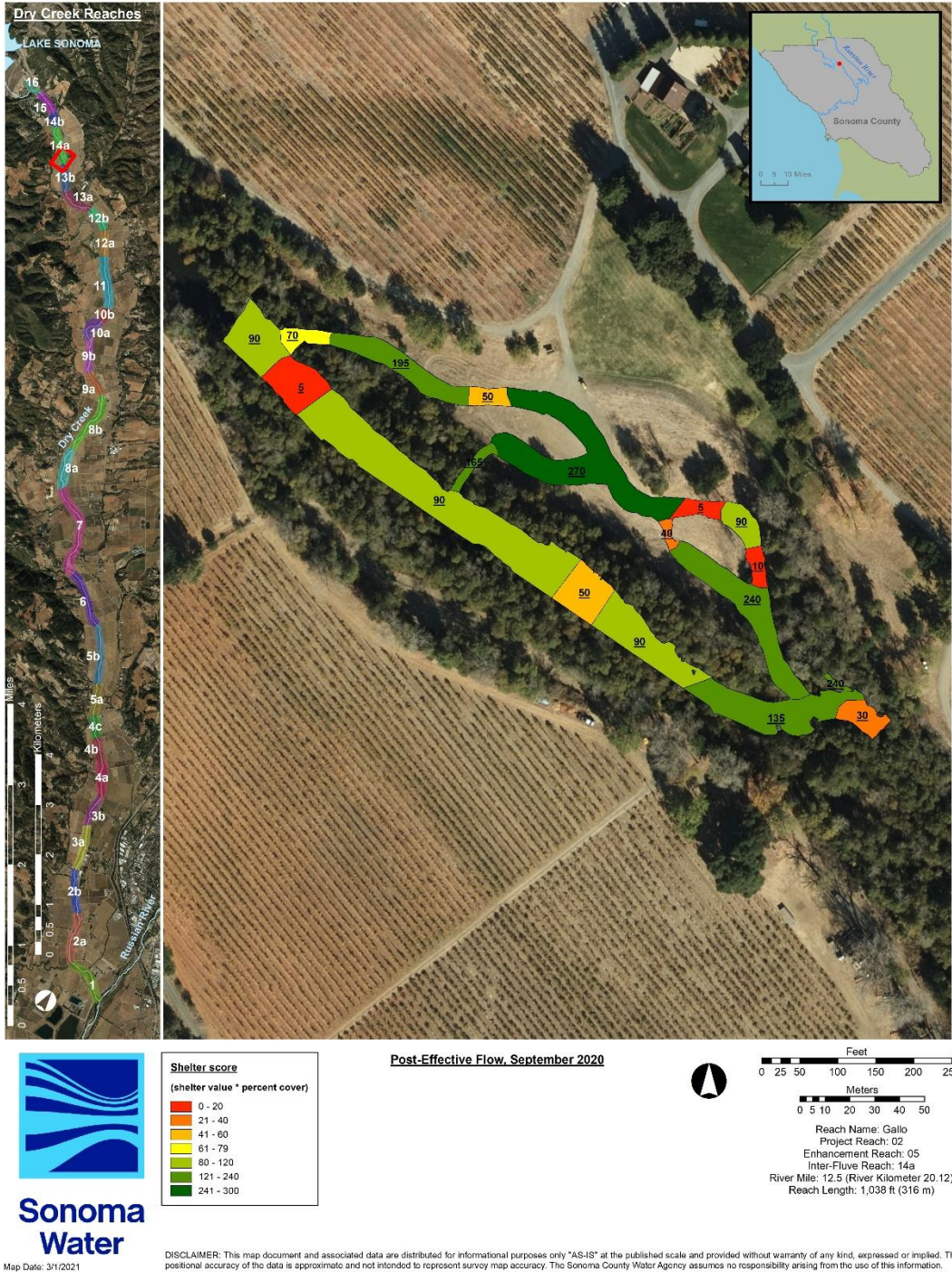


Figure 28. Habitat unit shelter scores within the Gallo enhancement reach, September 2020.

Feature, Habitat Unit, Site, and Reach Ratings

Table 16. Post-enhancement feature ratings for the Gallo enhancement reach September 2020.

		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Project Reach		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Enhancement Reach		5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name		GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA
nmddy		91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520
Survey Type		PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
PROJECT SITE NUMBER		1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Project Site Type		MainChan	MainChan	MainChan	MainChan	MainChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
PROJECT FEATURE NUMBER		S1-01	S1-02	S1-03	S1-04	S1-06	S2-01	S2-02	S2-03	S2-04	S2-05	S2-06	S2-07	S2-08	S2-09	S2-10	S2-11	S2-12	S2-13	
Feature Type Code		BF	PWL	PWL	R	NA	BWW	HW	SCW	BWW	HW	HW	R	BWW	HW	HW	HW	SCW	HW	
Habitat Unit		HU05	HU06	HU06	HU07	HU06	HU09	HU09	HU09	HU09	HU09	HU09	HU10	HU09	HU09	HU02 D	HU11	HU11	HU11	HU11
Habitat Type		Riffle	Pool	Pool	Riffle	Pool	Pool	Pool	Pool	Pool	Pool	Pool	Riffle	Pool	Pool	Dry	Pool	Pool	Pool	Pool
4.	Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL
5a	Are problems with the feature visible?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
6a	Is the feature still in its original location?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6b	Is the feature still in its original position?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6d	Is the feature still in its original orientaton?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
8.	If an objective, did the feature create the targeted instream habitat type?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES
9.	Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
17a	If an objective, did the feature increase instream shelter rating?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES
19a	If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
21a	If an objective, did the feature lead to the targeted channel conditions?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
25.	Did the feature achieve the targeted velocity?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
PROJECT FEATURE NUMBER		S1-01	S1-02	S1-03	S1-04	S1-06	S2-01	S2-02	S2-03	S2-04	S2-05	S2-06	S2-07	S2-08	S2-09	S2-10	S2-11	S2-12	S2-13	
4.	Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
5a	Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6a	Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6b	Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6d	Is the feature still in its original orientaton? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8.	If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1
9.	Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
17a	If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1
19a	If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21a	If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
25.	Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
PROJECT FEATURE NUMBER		S1-01	S1-02	S1-03	S1-04	S1-06	S2-01	S2-02	S2-03	S2-04	S2-05	S2-06	S2-07	S2-08	S2-09	S2-10	S2-11	S2-12	S2-13	
FEATURE RATING	Feature quantitative rating out of 15	14	14	14	14	14	14	14	14	14	14	14	14	14	14	12	14	14	14	
	Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent

Table 16. Post-enhancement feature ratings for the Gallo enhancement reach September 2020.

		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Project Reach		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Enhancement Reach		5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name		GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA
nmddy		93019	93019	93019	93019	93019	93019	93019	93019	93019	93019	93019	93019	93019	93019	93019	93019	93019	93019	93019
Survey Type		POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS
PROJECT SITE NUMBER		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Project Site Type		SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
PROJECT FEATURE NUMBER		S2-14	S2-15	S2-16	S2-17	S2-18	S2-19	S2-20	S2-21	S2-22	S2-23	S2-24	S2-25	S2-26	S2-27	S2-28	S2-29	S2-30	S2-31	
Feature Type Code		FW	HW	HW	HW	HW	R	SCW	SCW	HW	BWW	HW	HW	BWW	SCW	HW	HW	HW	HW	
Habitat Unit		HU13	HU13	HU12	HU12	HU10	HU11	HU12	HU12	HU12	HU12	HU12	HU12	HU12	HU12	HU12	HU12	HU12	HU12	
Habitat Type		Rifle	Rifle	Pool	Pool	Pool	Rifle	Pool	Pool	Pool	Pool	Pool	Pool	Pool	Pool	Pool	Pool	Pool	Pool	
4.	Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	
5a	Are problems with the feature visible?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
6a	Is the feature still in its original location?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
6b	Is the feature still in its original position?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
6d	Is the feature still in its original orientaton?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
8.	If an objective, did the feature create the targeted instream habitat type?	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
9.	Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
17a	If an objective, did the feature increase instream shelter rating?	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
19a	If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
21a	If an objective, did the feature lead to the targeted channel conditions?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
25.	Did the feature achieve the targeted velocity?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
PROJECT FEATURE NUMBER		S2-14	S2-15	S2-16	S2-17	S2-18	S2-19	S2-20	S2-21	S2-22	S2-23	S2-24	S2-25	S2-26	S2-27	S2-28	S2-29	S2-30	S2-31	
4.	Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
5a	Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
6a	Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
6b	Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
6d	Is the feature still in its original orientaton? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
8.	If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
9.	Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
17a	If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
19a	If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
21a	If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
25.	Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
PROJECT FEATURE NUMBER		S2-14	S2-15	S2-16	S2-17	S2-18	S2-19	S2-20	S2-21	S2-22	S2-23	S2-24	S2-25	S2-26	S2-27	S2-28	S2-29	S2-30	S2-31	
FEATURE RATING	Feature quantitative rating out of 15	14	12	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	
	Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	

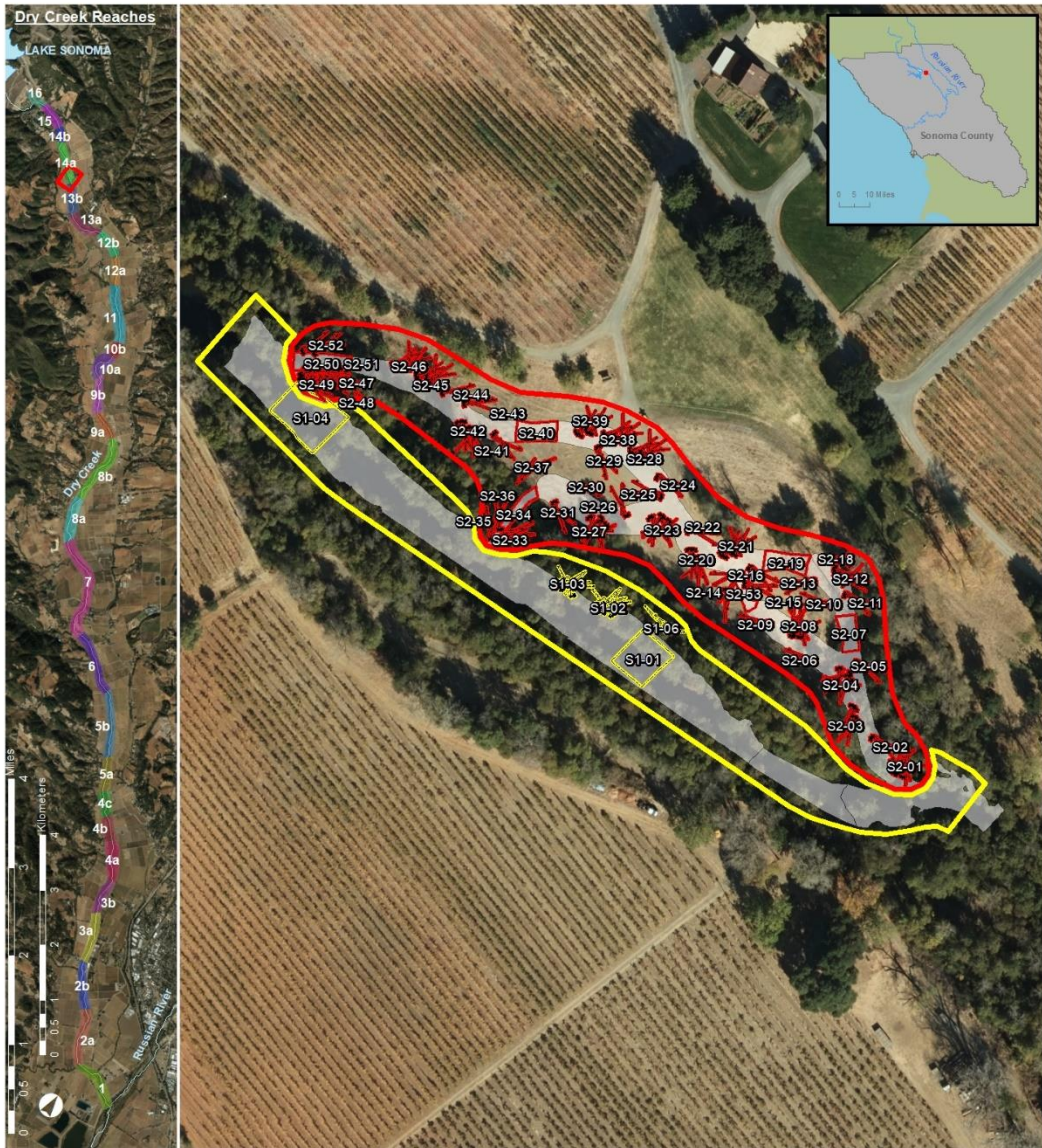
Table 16. Post-enhancement feature ratings for the Gallo enhancement reach September 2020.

		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Project Reach		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Enhancement Reach		5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name		GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA
mmddyy		91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520
Survey Type		PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
PROJECT SITE NUMBER		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Project Site Type		SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
PROJECT FEATURE NUMBER		S2-32	S2-33	S2-34	S2-35	S2-36	S2-37	S2-38	S2-39	S2-40	S2-41	S2-42	S2-43	S2-44	S2-45	S2-46	S2-47	S2-48	S2-49	
Feature Type Code		HW	HW	R	HW	HW	FW	SCW	SCW	R	HW	SCW	HW	SCW	SCW	SCW	HW	HW	AW	
Habitat Unit		HU15	HU15	HU15	HU15	HU15	HU02 D	HU13	HU13	HU16	HU17	HU17	HU17	HU17	HU17	HU17	HU17	HU18	HU18	HU18
Habitat Type		Riffle	Riffle	Riffle	Riffle	Riffle	Dry	Pool	Pool	Riffle	Pool	Pool	Pool	Pool	Pool	Pool	Riffle	Riffle	Riffle	
4.	Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL
5a	Are problems with the feature visible?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
6a	Is the feature still in its original location?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6b	Is the feature still in its original position?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6d	Is the feature still in its original orientaton?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
8.	If an objective, did the feature create the targeted instream habitat type?	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
9.	Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
17a	If an objective, did the feature increase instream shelter rating?	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
19a	If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
21a	If an objective, did the feature lead to the targeted channel conditions?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
25.	Did the feature achieve the targeted velocity?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
PROJECT FEATURE NUMBER		S2-32	S2-33	S2-34	S2-35	S2-36	S2-37	S2-38	S2-39	S2-40	S2-41	S2-42	S2-43	S2-44	S2-45	S2-46	S2-47	S2-48	S2-49	
4.	Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
5a	Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6a	Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6b	Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6d	Is the feature still in its original orientaton? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8.	If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1
9.	Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
17a	If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1
19a	If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21a	If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
25.	Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
PROJECT FEATURE NUMBER		S2-32	S2-33	S2-34	S2-35	S2-36	S2-37	S2-38	S2-39	S2-40	S2-41	S2-42	S2-43	S2-44	S2-45	S2-46	S2-47	S2-48	S2-49	
FEATURE RATING	Feature quantitative rating out of 15	14	14	14	14	14	12	14	14	14	14	14	14	14	14	14	14	14	14	
	Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent

Table 16. Post-enhancement feature ratings for the Gallo enhancement reach September 2020.

Project Reach	2	2	2	2	
Enhancement Reach	5	5	5	5	
Colloquial Name	GA	GA	GA	GA	
mmddyy	91520	91520	91520	91520	
Survey Type	PEF	PEF	PEF	PEF	
PROJECT SITE NUMBER					
Project Site Type	2	2	2	2	
PROJECT FEATURE NUMBER					
Feature Type Code	SideChan	SideChan	SideChan	SideChan	
Habitat Unit	S2-50	S2-51	S2-52	S2-53	
Habitat Type	R	HW	HW	R	
	HU18	HU18	HU18	HU18	
	Rifle	Rifle	Rifle	Rifle	
4.	Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	EXCL	EXCL	EXCL	EXCL
5a	Are problems with the feature visible?	NO	NO	NO	NO
6a	Is the feature still in its original location?	YES	YES	YES	YES
6b	Is the feature still in its original position?	YES	YES	YES	YES
6d	Is the feature still in its original orientaton?	YES	YES	YES	YES
8.	If an objective, did the feature create the targeted instream habitat type?	YES	YES	YES	YES
9.	Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	NO	NO	NO
17a	If an objective, did the feature increase instream shelter rating?	YES	YES	YES	YES
19a	If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO
21a	If an objective, did the feature lead to the targeted channel conditions?	YES	YES	YES	YES
25.	Did the feature achieve the targeted velocity?	YES	YES	YES	YES
PROJECT FEATURE NUMBER					
	S2-50	S2-51	S2-52	S2-53	
4.	Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	5	5	5	5
5a	Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	1	1	1	1
6a	Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	1	1	1	1
6b	Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	1	1	1	1
6d	Is the feature still in its original orientaton? (YES = 1 pt, NO = 0 pt)	1	1	1	1
8.	If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	1	1	1	1
9.	Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	1	1	1	1
17a	If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	1	1	1
19a	If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0
21a	If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	1	1	1	1
25.	Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	1	1	1
PROJECT FEATURE NUMBER					
	S2-50	S2-51	S2-52	S2-53	
FEATURE RATING	Feature quantitative rating out of 15	14	14	14	14
	Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)	Excellent	Excellent	Excellent	Excellent

Gallo Enhancement Reach

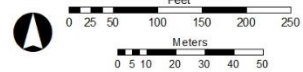


Sonoma Water

Map Date: 1/10/2022

Feature_Site ID
Features, Site 1
Features, Site 2

Post-Effective Flow, September 2020



Reach Name: Gallo
 Project Reach: 02
 Enhancement Reach: 05
 Inter-Fluve Reach: 14a
 River Mile: 12.5 (River Kilometer 20.12)
 Reach Length: 1,036 ft (316 m)

DISCLAIMER: This map document and associated data are distributed for informational purposes only "AS-IS" at the published scale and provided without warranty of any kind, expressed or implied. The positional accuracy of the data is approximate and not intended to represent survey map accuracy. The Sonoma County Water Agency assumes no responsibility arising from the use of this information.

Figure 29. Enhancement sites and features within the Gallo enhancement reach, September 2020.

Gallo Enhancement Reach

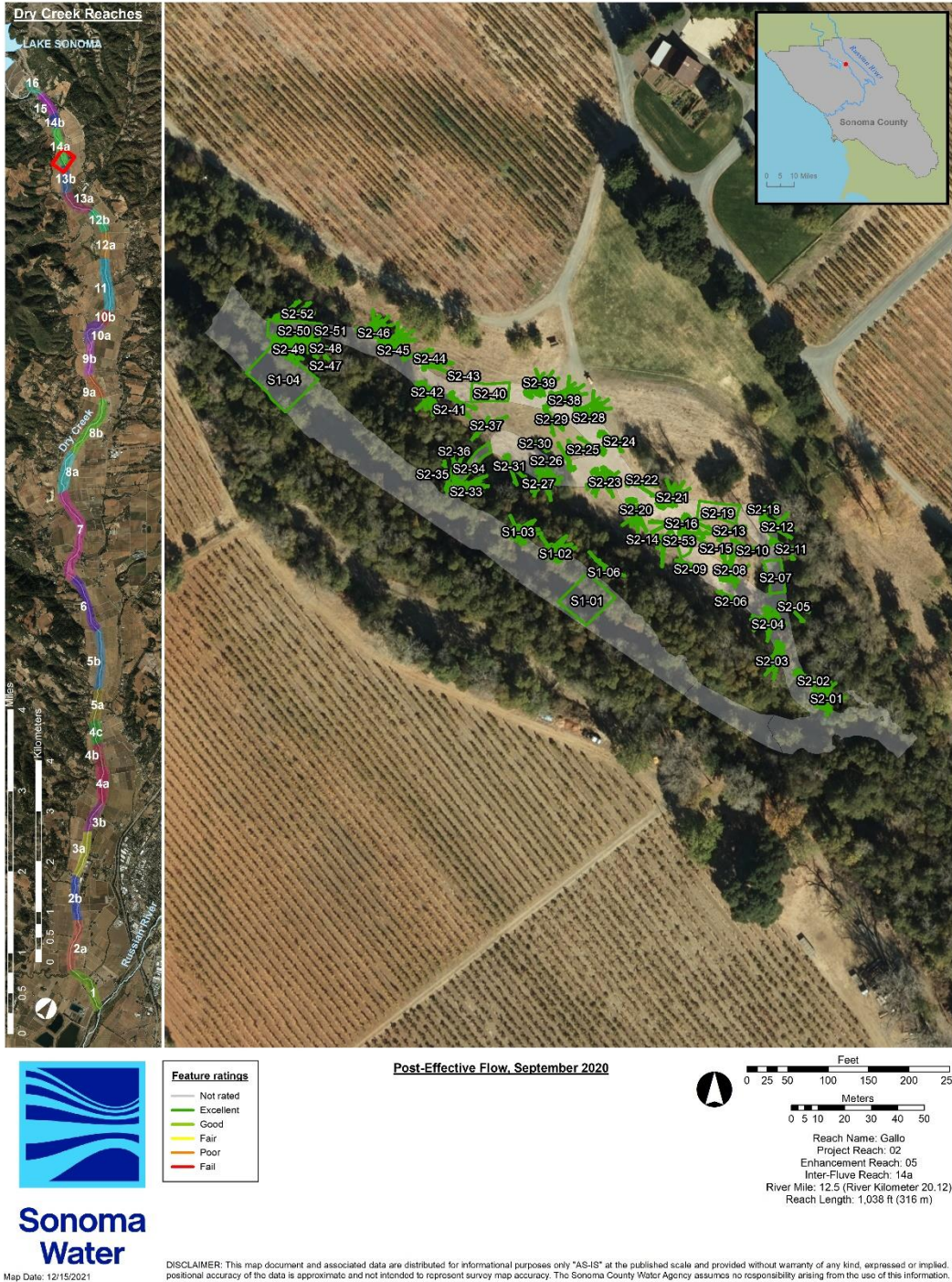


Figure 30. Feature ratings for the Gallo enhancement reach, September 2020.

Table 17. Post-enhancement habitat unit ratings for the Gallo enhancement reach September 2020.

Project Reach	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Enhancement Reach	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA
mmddyy	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520
Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
HABITAT UNIT NUMBER	HU01	HU02	HU03	HU04	HU05	HU06	HU07	HU08	HU09	HU10	HU11	HU12	HU13	HU14	HU02 D	HU15	HU16	HU17	HU18	
Habitat Type	Riffle	Pool	Alcove	Riffle	Riffle	Pool	Riffle	Pool	Pool	Riffle	Pool	Riffle	Pool	Riffle	Dry	Riffle	Riffle	Pool	Riffle	
PROJECT SITE NUMBER	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	
Project Site Type	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	
11e	% Area of habitat unit within 0.5 -2.0 ft depth	70%	22%	61%	72%	77%	20%	90%	12%	32%	74%	38%	81%	24%	63%	0%	73%	75%	28%	68%
11f	% Area of habitat unit within 2.0 -4.0 ft depth	16%	44%	0%	4%	0%	57%	4%	30%	52%	0%	40%	0%	34%	0%	0%	0%	42%	17%	
14.	Instream shelter value in the habitat unit : 0, 1, 2, 3	2	3	3	3	2	3	1	3	3	1	3	1	3	2	0	3	2	3	2
15.	Percent of habitat unit covered by shelter: %	15	45	80	30	25	30	5	30	80	10	30	5	90	20	0	55	25	65	35
17b	a. Calculate the shelter rating for the habitat unit : 0-300	30	135	240	90	50	90	5	90	240	10	90	5	270	40	0	165	50	195	70
28.	Percent of habitat unit within targeted velocity (see above): (%)	21%	58%	100%	21%	13%	46%	22%	62%	75%	14%	60%	24%	85%	31%	0%	37%	28%	75%	41%
36e	% habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	11%	19%	61%	9%	8%	15%	17%	8%	26%	1%	26%	10%	21%	15%	0%	14%	10%	25%	19%
36f	% habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	23%	0%	0%	0%	17%	0%	18%	34%	0%	20%	0%	28%	0%	0%	0%	0%	29%	9%
HABITAT UNIT NUMBER	HU01	HU02	HU03	HU04	HU05	HU06	HU07	HU08	HU09	HU10	HU11	HU12	HU13	HU14	HU02 D	HU15	HU16	HU17	HU18	
11e	% area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	2	4	4	4	2	4	1	3	4	3	4	2	4	0	4	4	2	4
11f	% area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	1	4	0	0	0	4	0	3	4	0	3	0	3	0	0	0	4	1	
14.	Instream shelter value in the habitat unit : 0, 1, 2, 3 (3 = 5 pts; 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	4	5	5	5	4	5	3	5	5	3	5	3	5	4	0	5	4	5	4
15.	% hab unit covered by shelter (≥80 = 5pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)	1	3	5	2	2	2	0	2	5	1	2	0	5	2	0	3	2	4	2
17b	a. Calculate the shelter rating for the habitat unit : 0-300	0	4	5	3	1	3	0	3	5	0	3	0	5	1	0	5	1	5	2
28.	% area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	2	4	4	2	1	4	2	4	4	1	4	2	4	3	0	3	2	4	4
36e	% area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	1	1	4	0	0	1	1	0	2	0	2	0	2	1	0	1	1	2	1
36f	% area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	2	0	0	0	1	0	1	3	0	1	0	2	0	0	0	0	2	0
HABITAT UNIT NUMBER	HU01	HU02	HU03	HU04	HU05	HU06	HU07	HU08	HU09	HU10	HU11	HU12	HU13	HU14	HU02 D	HU15	HU16	HU17	HU18	
HABITAT UNIT RATING	Habitat unit quantitative rating (out of 35)	13	25	27	16	12	22	10	19	31	9	23	9	28	15	0	21	14	28	18
	Habitat unit qualitative rating: Excellent (≥28), Good (≥21), Fair(≥14), Poor (≥7), Fail (<7)	Poor	Good	Good	Fair	Poor	Good	Poor	Fair	Excellent	Poor	Good	Poor	Excellent	Fair	Fail	Good	Fair	Excellent	Fair

Gallo Enhancement Reach

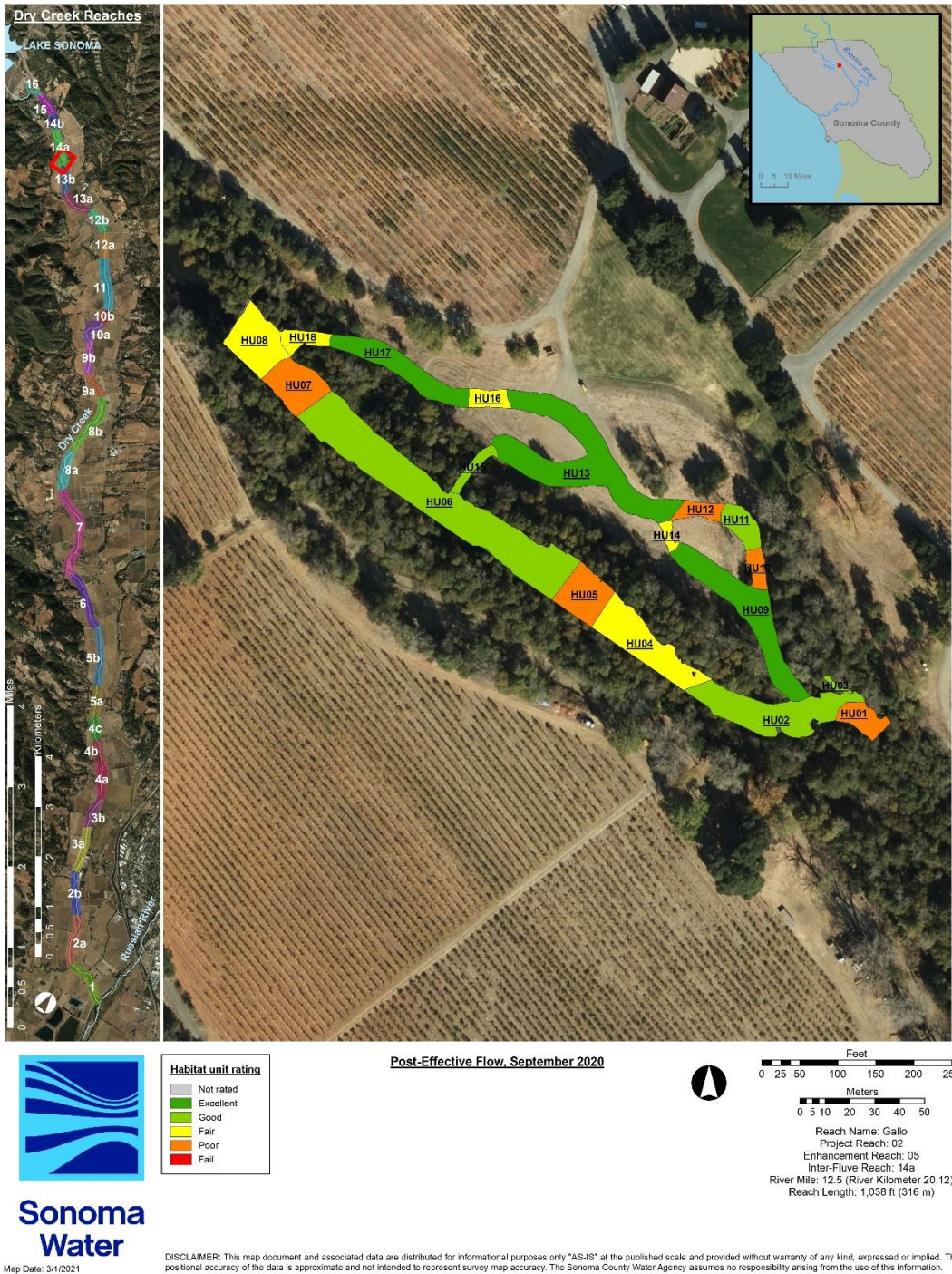


Figure 31. Habitat unit ratings for the Gallo enhancement reach, September 2020.

Table 18. Post-enhancement average feature, average habitat unit, site, and reach ratings for the Gallo enhancement reach, September 2020.

	Project Reach	2	2
	Enhancement Reach	5	5
	ENHANCEMENT REACH NAME	GA	GA
	mmddy	91520	91520
	Survey Type	PEF	PEF
	PROJECT SITE NUMBER	1	2
	Project Site Type	MainChan	SideChan
	PROJECT SITE NUMBER	1	2
SITE AVERAGE FEATURE RATING	Site average feature quantitative rating (out of 15; bold indicates excluded from site rating)	14	14
	Site average feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3), Not rated (not used to rate site)	Excellent	Excellent
	PROJECT SITE NUMBER	1	2
SITE AVERAGE HABITAT UNIT RATING	Site average habitat unit quantitative rating (out of 35; bold indicates excluded from site rating)	18	20
	Site average qualitative rating Excellent (>=28), Good (>=21), Fair(>=14), Poor (>=7), Fail (<7), Not rated (not used to rate site)	Fair	Fair
	PROJECT SITE NUMBER	1	2
SITE RATING	Site quantitative rating (sum of site average feature and habitat unit ratings) (out of 50; bold indicates rating excludes feature or habitat unit rating and scoring out of 15 or 35)	32	34
	Site qualitative rating: Excellent (>=40), Good (>=30), Fair(>=20), Poor (>=10), Fail (<10)	Good	Good
	ENHANCEMENT REACH NAME	GA	
ENHANCEMENT REACH RATING	Enhancement reach quantitative rating (average of site ratings) (out of 50)	33	
	Enhancement reach qualitative rating: Excellent (>=40), Good (>=30), Fair(>=20), Poor (>=10), Fail (<10)	Good	

Gallo Enhancement Reach

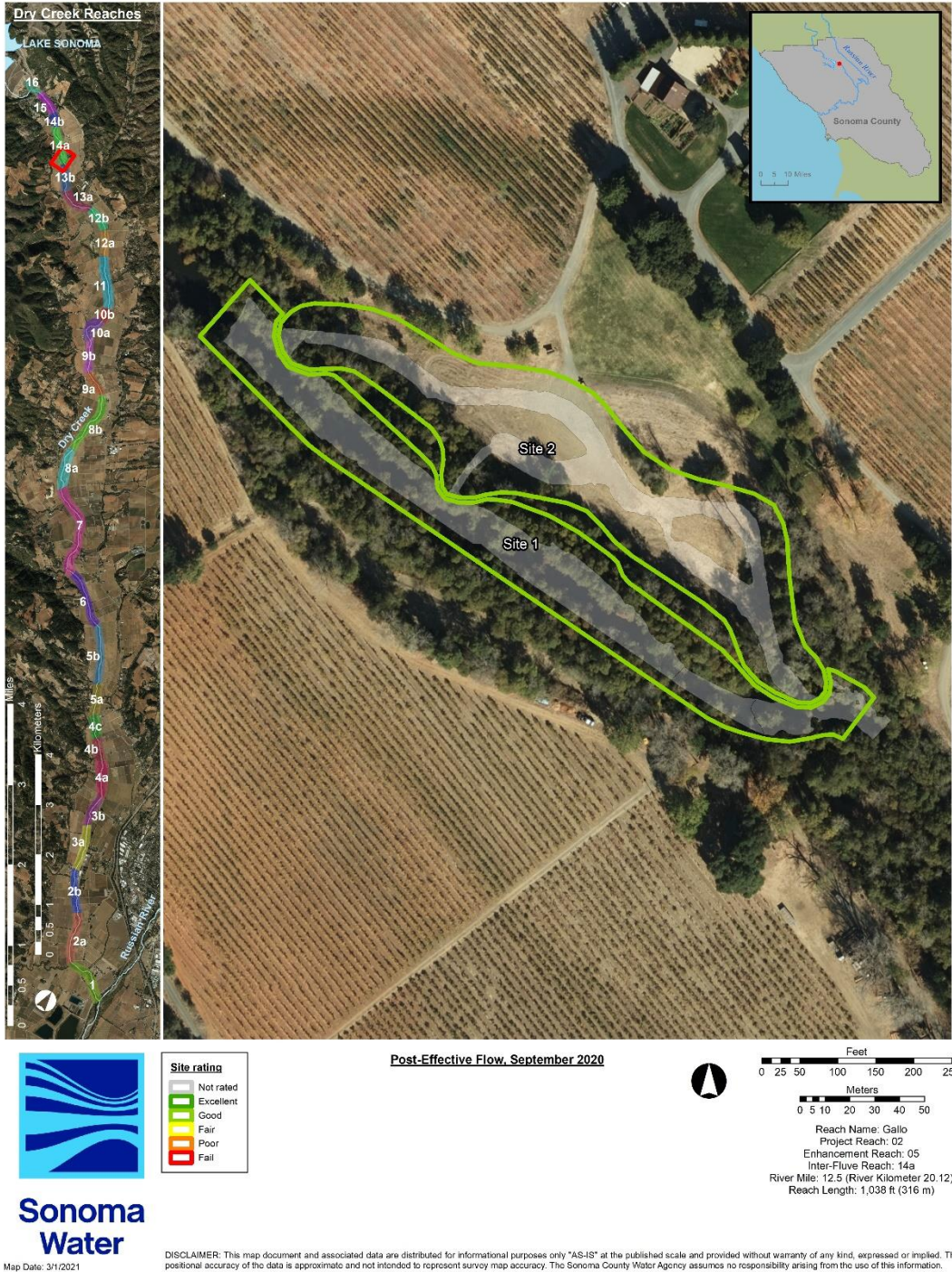


Figure 32. Post enhancement site ratings for the Gallo enhancement reach, September 2020.

Gallo Enhancement Reach

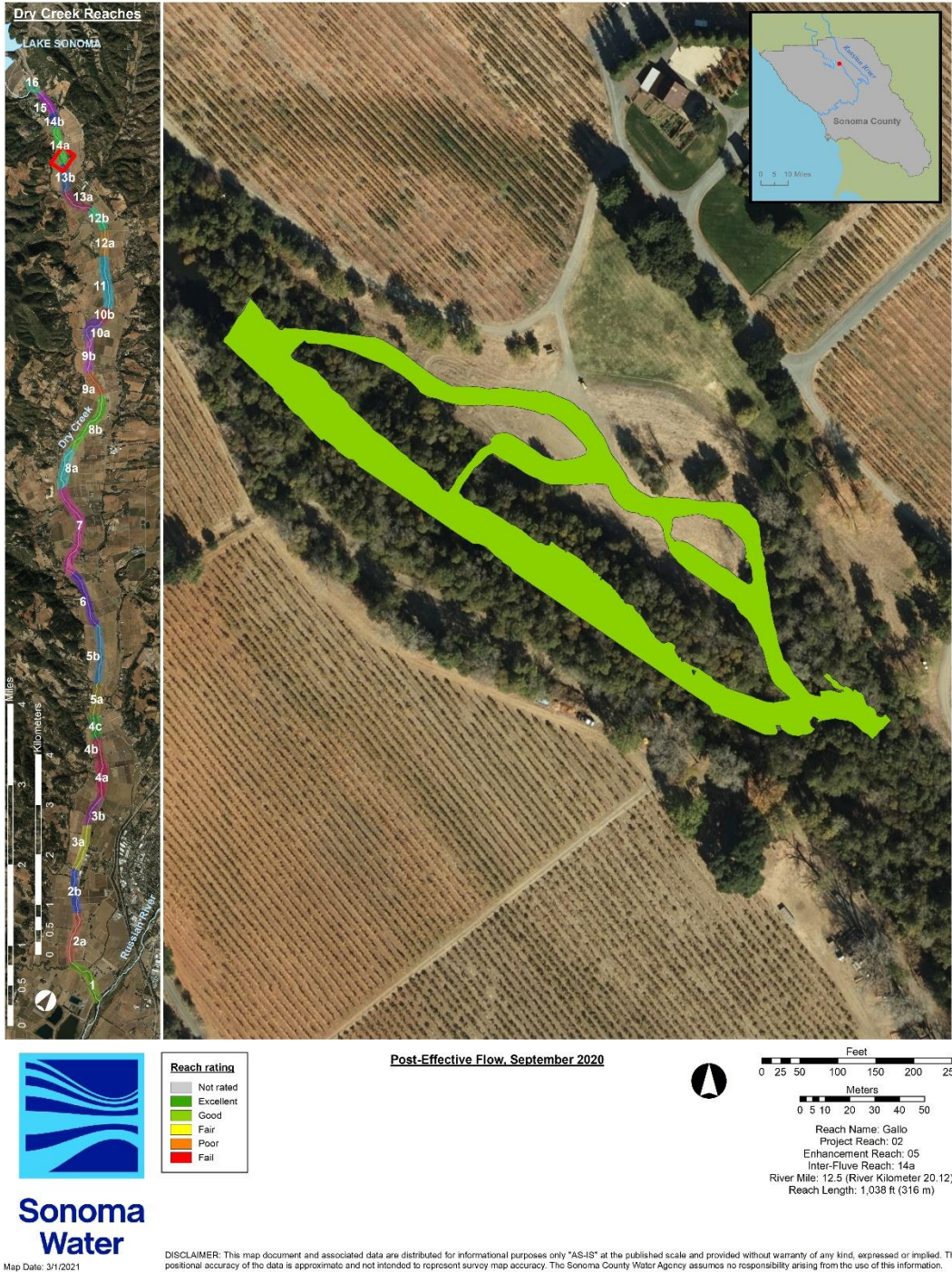


Figure 33. Post-enhancement reach rating for the Gallo enhancement reach, September 2020.

Feature and Habitat Unit Checklists

Table 19. Adaptive Management Plan targeted checklist for the Gallo enhancement reach, September 2020.

	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Project Reach	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Enhancement Reach	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA
mmddy	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520
Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
Project Site Number	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Project Site Type	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
Project Feature Number	NA	NA	NA	NA	NA	S1-01	S1-02	S1-03	S1-04	S1-06	S2-01	S2-02	S2-03	S2-04	S2-05	S2-06	S2-07	S2-08	
Feature Type Code	NA	NA	NA	NA	NA	BF	PWL	PWL	R	NA	BWW	HW	SCW	BWW	HW	HW	R	BWW	
Habitat Unit	HU01	HU02	HU03	HU04	HU08	HU05	HU06	HU06	HU07	HU06	HU09	HU09	HU09	HU09	HU09	HU09	HU10	HU09	
Habitat Type	Riffle	Pool	Alcove	Riffle	Pool	Riffle	Pool	Pool	Riffle	Pool	Pool	Pool	Pool	Pool	Pool	Pool	Riffle	Pool	
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	NA	NA	NA	NA	NA	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	
5a. Are problems with the feature visible?	NA	NA	NA	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
6a. Is the feature still in its original location?	NA	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
6b. Is the feature still in its original position?	NA	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
6d. Is the feature still in its original orientation?	NA	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
8. If an objective, did the feature create the targeted instream habitat type?	NA	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	NA	NA	NA	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
11e. % Area of habitat unit within 0.5 -2.0 ft depth	70%	22%	61%	72%	12%	77%	20%	20%	90%	20%	32%	32%	32%	32%	32%	32%	74%	32%	
11f. % Area of habitat unit within 2.0 -4.0 ft depth	16%	44%	0%	4%	30%	0%	57%	57%	4%	57%	52%	52%	52%	52%	52%	52%	0%	52%	
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	2	3	3	3	3	2	3	3	1	3	3	3	3	3	3	3	3	1	
15. Percent of habitat unit covered by shelter: %	15	45	80	30	30	25	30	30	5	30	80	80	80	80	80	80	10	80	
17a. If an objective, did the feature increase instream shelter rating?	NA	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
17b. a. Calculate the shelter rating for the habitat unit: 0-300	30	135	240	90	90	50	90	90	5	90	240	240	240	240	240	240	10	240	
19a. If an objective, did the feature increase LWD count in the habitat unit?	NA	NA	NA	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
21a. If an objective, did the feature lead to the targeted channel conditions?	NA	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
25. Did the feature achieve the targeted velocity?	NA	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
28. Percent of habitat unit within targeted velocity (see above): (%)	21%	58%	100%	21%	62%	13%	46%	46%	22%	46%	75%	75%	75%	75%	75%	75%	14%	75%	
36e. % habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	11%	19%	61%	9%	8%	8%	15%	15%	17%	15%	26%	26%	26%	26%	26%	26%	1%	26%	
36f. % habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	23%	0%	0%	18%	0%	17%	17%	0%	17%	34%	34%	34%	34%	34%	34%	0%	34%	
FEATURE NUMBER	NA	NA	NA	NA	NA	S1-01	S1-02	S1-03	S1-04	S1-06	S2-01	S2-02	S2-03	S2-04	S2-05	S2-06	S2-07	S2-08	
HABITAT UNIT NUMBER	HU01	HU02	HU03	HU04	HU08	HU05	HU06	HU06	HU07	HU06	HU09	HU09	HU09	HU09	HU09	HU09	HU10	HU09	
SITE NUMBER	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	
ENHANCEMENT REACH NAME	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	
4. Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	0	0	0	0	0	5	5	5	5	5	5	5	5	5	5	5	5	5	
5a. Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	
6a. Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	
6b. Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	
6d. Is the feature still in its original orientation? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	
8. If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	
9. Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	
11e. % area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	2	4	4	1	4	2	2	4	2	3	3	3	3	3	3	4	3	
11f. % area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	1	4	0	0	3	0	4	4	0	4	4	4	4	4	4	4	0	4	
14. Instream shelter value in the habitat unit: 0, 1, 2, 3 (3 = 5 pts; 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	4	5	5	5	5	4	5	5	3	5	5	5	5	5	5	5	3	5	
15. % hab unit covered by shelter (≥80 = 5pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)	1	3	5	2	2	2	2	2	0	2	5	5	5	5	5	5	1	5	
17a. If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	
17b. a. Calculate the shelter rating for the habitat unit: 0-300	0	4	5	3	3	1	3	3	0	3	5	5	5	5	5	5	0	5	
19a. If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
21a. If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	
25. Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	
28. % area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	2	4	4	2	4	1	4	4	2	4	4	4	4	4	4	4	1	4	
36e. % area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	1	1	4	0	0	0	1	1	1	1	2	2	2	2	2	2	0	2	
36f. % area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	2	0	0	1	0	1	1	0	1	3	3	3	3	3	3	0	3	

Table 19. Adaptive Management Plan targeted checklist for the Gallo enhancement reach, September 2020.

	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Project Reach	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Enhancement Reach	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA
mmddy	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520
Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
Project Site Number	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Project Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
Project Feature Number	S2-09	S2-10	S2-11	S2-12	S2-13	S2-14	S2-15	S2-16	S2-17	S2-18	S2-19	S2-20	S2-21	S2-22	S2-23	S2-24	S2-25	S2-26	S2-26	
Feature Type Code	HW	HW	HW	SCW	HW	FW	HW	HW	HW	HW	R	SCW	SCW	HW	BWW	HW	HW	HW	HW	HW
Habitat Unit	HU09	HU02 D	HU11	HU11	HU11	HU14	HU14	HU12	HU13	HU11	HU12	HU13	HU13	HU13	HU13	HU13	HU13	HU13	HU13	HU13
Habitat Type	Pool	Dry	Pool	Pool	Pool	Riffle	Riffle	Riffle	Pool	Pool	Riffle	Pool	Pool	Pool	Pool	Pool	Pool	Pool	Pool	Pool
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL
5a. Are problems with the feature visible?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
6a. Is the feature still in its original location?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6b. Is the feature still in its original position?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6d. Is the feature still in its original orientaton?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
8. If an objective, did the feature create the targeted instream habitat type?	YES	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
11e. % Area of habitat unit within 0.5 -2.0 ft depth	32%	0%	38%	38%	38%	63%	63%	81%	24%	38%	81%	24%	24%	24%	24%	24%	24%	24%	24%	24%
11f. % Area of habitat unit within 2.0 -4.0 ft depth	52%	0%	40%	40%	40%	0%	0%	0%	34%	40%	0%	34%	34%	34%	34%	34%	34%	34%	34%	34%
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	3	0	3	3	3	2	2	1	3	3	3	3	3	3	3	3	3	3	3	3
15. Percent of habitat unit covered by shelter: %	80	0	30	30	30	20	20	5	90	30	5	90	90	90	90	90	90	90	90	90
17a. If an objective, did the feature increase instream shelter rating?	YES	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
a. Calculate the shelter rating for the habitat unit: 0-300	240	0	90	90	90	40	40	5	270	90	5	270	270	270	270	270	270	270	270	270
19a. If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
21a. If an objective, did the feature lead to the targeted channel conditions?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
25. Did the feature achieve the targeted velocity?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
28. Percent of habitat unit within targeted velocity (see above): (%)	75%	0%	60%	60%	60%	31%	31%	24%	85%	60%	24%	85%	85%	85%	85%	85%	85%	85%	85%	85%
36e. % habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	26%	0%	26%	26%	26%	15%	15%	10%	21%	26%	10%	21%	21%	21%	21%	21%	21%	21%	21%	21%
36f. % habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	34%	0%	20%	20%	20%	0%	0%	0%	28%	20%	0%	28%	28%	28%	28%	28%	28%	28%	28%	28%
FEATURE NUMBER	S2-09	S2-10	S2-11	S2-12	S2-13	S2-14	S2-15	S2-16	S2-17	S2-18	S2-19	S2-20	S2-21	S2-22	S2-23	S2-24	S2-25	S2-26	S2-26	
HABITAT UNIT NUMBER	HU09	HU02 D	HU11	HU11	HU11	HU14	HU14	HU12	HU13	HU11	HU12	HU13	HU13	HU13	HU13	HU13	HU13	HU13	HU13	HU13
SITE NUMBER	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
ENHANCEMENT REACH NAME	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA
4. Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
5a. Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6a. Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6b. Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6d. Is the feature still in its original orientaton? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8. If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	1	0	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1
9. Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
11e. % area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	3	0	3	3	3	4	4	4	2	3	4	2	2	2	2	2	2	2	2	2
11f. % area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	0	3	3	3	0	0	0	3	3	0	3	3	3	3	3	3	3	3	3
14. Instream shelter value in the habitat unit: 0, 1, 2, 3 (3 = 5 pts; 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	5	0	5	5	5	4	4	3	5	5	3	5	5	5	5	5	5	5	5	5
15. % hab unit covered by shelter (≥80 = 5pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)	5	0	2	2	2	2	2	0	5	2	0	5	5	5	5	5	5	5	5	5
17a. If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
a. Calculate the shelter rating for the habitat unit: 0-300	5	0	3	3	3	1	1	0	5	3	0	5	5	5	5	5	5	5	5	5
19a. If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21a. If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
25. Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
28. % area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	0	4	4	4	3	3	2	4	4	2	4	4	4	4	4	4	4	4	4
36e. % area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	2	0	2	2	2	1	1	0	2	2	0	2	2	2	2	2	2	2	2	2
36f. % area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	3	0	1	1	1	0	0	0	2	1	0	2	2	2	2	2	2	2	2	2

Table 19. Adaptive Management Plan targeted checklist for the Gallo enhancement reach, September 2020.

Project Reach	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Enhancement Reach	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA
mmddy	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520
Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
Project Site Number	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Project Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
Project Feature Number	S2-27	S2-28	S2-29	S2-30	S2-31	S2-32	S2-33	S2-34	S2-35	S2-36	S2-37	S2-38	S2-39	S2-40	S2-41	S2-42	S2-43	S2-44	S2-44	S2-44
Feature Type Code	BWW	SCW	HW	HW	HW	HW	HW	R	HW	HW	FW	SCW	SCW	R	HW	SCW	HW	SCW	HW	HW
Habitat Unit	HU13	HU13	HU13	HU13	HU13	HU15	HU15	HU15	HU15	HU15	HU02_D	HU13	HU13	HU16	HU17	HU17	HU17	HU17	HU17	HU17
Habitat Type	Pool	Pool	Pool	Pool	Pool	Pool	Riffle	Riffle	Riffle	Riffle	Dry	Pool	Pool	Riffle	Pool	Pool	Pool	Pool	Pool	Pool
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL
5a. Are problems with the feature visible?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
6a. Is the feature still in its original location?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6b. Is the feature still in its original position?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6d. Is the feature still in its original orientation?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
8. If an objective, did the feature create the targeted instream habitat type?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
11e. % Area of habitat unit within 0.5 -2.0 ft depth	24%	24%	24%	24%	24%	73%	73%	73%	73%	73%	0%	24%	24%	75%	28%	28%	28%	28%	28%	28%
11f. % Area of habitat unit within 2.0 -4.0 ft depth	34%	34%	34%	34%	34%	0%	0%	0%	0%	0%	0%	34%	34%	0%	42%	42%	42%	42%	42%	42%
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	3	3	3	3	3	3	3	3	3	3	0	3	3	2	3	3	3	3	3	3
15. Percent of habitat unit covered by shelter: %	90	90	90	90	90	55	55	55	55	55	0	90	90	25	65	65	65	65	65	65
17a. If an objective, did the feature increase instream shelter rating?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES
17b. a. Calculate the shelter rating for the habitat unit: 0-300	270	270	270	270	270	165	165	165	165	165	0	270	270	50	195	195	195	195	195	195
19a. If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
21a. If an objective, did the feature lead to the targeted channel conditions?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
25. Did the feature achieve the targeted velocity?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
28. Percent of habitat unit within targeted velocity (see above): (%)	85%	85%	85%	85%	85%	37%	37%	37%	37%	37%	0%	85%	85%	28%	75%	75%	75%	75%	75%	75%
36e. % habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	21%	21%	21%	21%	21%	14%	14%	14%	14%	14%	0%	21%	21%	10%	25%	25%	25%	25%	25%	25%
36f. % habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	28%	28%	28%	28%	28%	0%	0%	0%	0%	0%	0%	28%	28%	0%	29%	29%	29%	29%	29%	29%
FEATURE NUMBER	S2-27	S2-28	S2-29	S2-30	S2-31	S2-32	S2-33	S2-34	S2-35	S2-36	S2-37	S2-38	S2-39	S2-40	S2-41	S2-42	S2-43	S2-43	S2-44	S2-44
HABITAT UNIT NUMBER	HU13	HU13	HU13	HU13	HU13	HU15	HU15	HU15	HU15	HU15	HU02_D	HU13	HU13	HU16	HU17	HU17	HU17	HU17	HU17	HU17
SITE NUMBER	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
ENHANCEMENT REACH NAME	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA
4. Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
5a. Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6a. Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6b. Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6d. Is the feature still in its original orientation? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8. If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1
9. Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
11e. % area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	2	2	2	2	2	4	4	4	4	4	0	2	2	4	2	2	2	2	2	2
11f. % area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	3	3	3	3	3	0	0	0	0	0	0	3	3	0	4	4	4	4	4	4
14. Instream shelter value in the habitat unit: 0, 1, 2, 3 (3 = 5 pts; 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	5	5	5	5	5	5	5	5	5	5	0	5	5	4	5	5	5	5	5	5
15. % hab unit covered by shelter (≥80 = 5pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)	5	5	5	5	5	3	3	3	3	3	0	5	5	2	4	4	4	4	4	4
17a. If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1
17b. a. Calculate the shelter rating for the habitat unit: 0-300	5	5	5	5	5	5	5	5	5	5	0	5	5	1	5	5	5	5	5	5
19a. If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21a. If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
25. Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
28. % area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	4	4	4	4	3	3	3	3	3	0	4	4	2	4	4	4	4	4	4
36e. % area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	2	2	2	2	2	1	1	1	1	1	0	2	2	1	2	2	2	2	2	2
36f. % area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	2	2	2	2	2	0	0	0	0	0	0	2	2	0	2	2	2	2	2	2

Table 19. Adaptive Management Plan targeted checklist for the Gallo enhancement reach, September 2020.

	2	2	2	2	2	2	2	2	2	2
Project Reach	2	2	2	2	2	2	2	2	2	2
Enhancement Reach	5	5	5	5	5	5	5	5	5	5
Colloquial Name	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA
mmddy	91520	91520	91520	91520	91520	91520	91520	91520	91520	91520
Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
Project Site Number	2	2	2	2	2	2	2	2	2	2
Project Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
Project Feature Number	S2-45	S2-46	S2-47	S2-48	S2-49	S2-50	S2-51	S2-52	S2-53	S2-53
Feature Type Code	SCW	SCW	HW	HW	AW	R	HW	HW	R	R
Habitat Unit	HU17	HU17	HU18	HU18	HU18	HU18	HU18	HU18	HU18	HU18
Habitat Type	Pool	Pool	Riffle	Riffle	Riffle	Riffle	Riffle	Riffle	Riffle	Riffle
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL
5a. Are problems with the feature visible?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
6a. Is the feature still in its original location?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6b. Is the feature still in its original position?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6d. Is the feature still in its original orientaton?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
8. If an objective, did the feature create the targeted instream habitat type?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
11e. % Area of habitat unit within 0.5 -2.0 ft depth	28%	28%	68%	68%	68%	68%	68%	68%	68%	68%
11f. % Area of habitat unit within 2.0 -4.0 ft depth	42%	42%	17%	17%	17%	17%	17%	17%	17%	17%
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	3	3	2	2	2	2	2	2	2	2
15. Percent of habitat unit covered by shelter: %	65	65	35	35	35	35	35	35	35	35
17a. If an objective, did the feature increase instream shelter rating?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
17b. a. Calculate the shelter rating for the habitat unit: 0-300	195	195	70	70	70	70	70	70	70	70
19a. If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
21a. If an objective, did the feature lead to the targeted channel conditions?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
25. Did the feature achieve the targeted velocity?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
28. Percent of habitat unit within targeted velocity (see above): (%)	75%	75%	41%	41%	41%	41%	41%	41%	41%	41%
36e. % habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	25%	25%	19%	19%	19%	19%	19%	19%	19%	19%
36f. % habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	29%	29%	9%	9%	9%	9%	9%	9%	9%	9%
FEATURE NUMBER	S2-45	S2-46	S2-47	S2-48	S2-49	S2-50	S2-51	S2-52	S2-53	S2-53
HABITAT UNIT NUMBER	HU17	HU17	HU18	HU18	HU18	HU18	HU18	HU18	HU18	HU18
SITE NUMBER	2	2	2	2	2	2	2	2	2	2
ENHANCEMENT REACH NAME	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA
4. Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	5	5	5	5	5	5	5	5	5	5
5a. Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	1	1	1	1	1	1	1	1	1	1
6a. Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1
6b. Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1
6d. Is the feature still in its original orientaton? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1
8. If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1
9. Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	1	1	1	1	1	1	1	1	1	1
11e. % area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	2	2	4	4	4	4	4	4	4	4
11f. % area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	4	1	1	1	1	1	1	1	1
14. Instream shelter value in the habitat unit: 0, 1, 2, 3 (3 = 5 pts; 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	5	5	4	4	4	4	4	4	4	4
15. % hab unit covered by shelter (≥80 = 5pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)	4	4	2	2	2	2	2	2	2	2
17a. If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1
17b. a. Calculate the shelter rating for the habitat unit: 0-300	5	5	2	2	2	2	2	2	2	2
19a. If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0
21a. If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1
25. Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1
28. % area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	4	4	4	4	4	4	4	4	4
36e. % area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	2	2	1	1	1	1	1	1	1	1
36f. % area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	2	2	0	0	0	0	0	0	0	0

Table 20. Adaptive Management Plan full checklist for the Gallo enhancement reach, September 2020.

Project Reach	2	2	2	2	2	2	2	2	2
Enhancement Reach	5	5	5	5	5	5	5	5	5
Colloquial Name	GA	GA	GA	GA	GA	GA	GA	GA	GA
mmddyy	91520	91520	91520	91520	91520	91520	91520	91520	91520
Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
Project Site Number	2	2	2	2	2	2	2	2	2
Project Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
Project Feature Number	S2-45	S2-46	S2-47	S2-48	S2-49	S2-50	S2-51	S2-52	S2-53
Feature Type Code	SCW	SCW	HW	HW	AW	R	HW	HW	R
Habitat Unit	HU17	HU17	HU18	HU18	HU18	HU18	HU18	HU18	HU18
Habitat Type	Pool	Pool	Riffle	Riffle	Riffle	Riffle	Riffle	Riffle	Riffle
1. Length of targeted treatment (ft)	22	22	37	33	36	54	30	35	40
2. Width of targeted treatment: (ft)	22	20	12	17	30	15	21	22	10
3. Estimate area of the targeted feature: (ft ²)	484	440	444	561	1080	810	630	770	400
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL
5a. Are problems with the feature visible?	NO	NO	NO	NO	NO	NO	NO	NO	NO
5b. Types: ANC, BBB, CRF, MAT, SHF, STR, SWA, UND, UNS, WSH, OTH, NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
6a. Is the feature still in its original location?	YES	YES	YES	YES	YES	YES	YES	YES	YES
6b. Is the feature still in its original position?	YES	YES	YES	YES	YES	YES	YES	YES	YES
6c. If yes: LBK, MDC, RBK, SPN, OTH	LBK	LBK	RBK	RBK	RBK	SPN	RBK	RBK	SPN
6d. Is the feature still in its original orientation?	YES	YES	YES	YES	YES	YES	YES	YES	YES
6e. If yes: DNS, MUL, PRL, PRP, UPS, OTH	UPS	UPS	DNS	DNS	UPS	DNS	DNS	DNS	OTH
7. Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	POO	POO	RIF	RIF	RIF	RIF	RIF	RIF	RIF
8. If an objective, did the feature create the targeted instream habitat type?	YES	YES	YES	YES	YES	YES	YES	YES	YES
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	NO	NO	NO	NO	NO	NO	NO	NO
10. Mean water depth in habitat unit: ft	2.6	2.6	1.3	1.3	1.3	1.3	1.3	1.3	1.3
11a. Maximum water depth in habitat unit: ft	5.1	5.1	3.9	3.9	3.9	3.9	3.9	3.9	3.9
11b. Area of habitat unit within 0.5 -2.0 ft depth: (ft ²)	1419.0	1419.0	937.4	937.4	937.4	937.4	937.4	937.4	937.4
11c. Area of habitat unit within 2.0 -4.0 ft depth: (ft ²)	2118.4	2118.4	238.2	238.2	238.2	238.2	238.2	238.2	238.2
11d. Area of habitat unit within 0.5-4.0 ft depth: (ft ²)	3537.4	3537.4	1175.6	1175.6	1175.6	1175.6	1175.6	1175.6	1175.6
11e. % Area of habitat unit within 0.5 -2.0 ft depth	28%	28%	68%	68%	68%	68%	68%	68%	68%
11f. % Area of habitat unit within 2.0 -4.0 ft depth	42%	42%	17%	17%	17%	17%	17%	17%	17%
11g. % Area of habitat unit within 0.5-4.0 ft depth	70%	70%	85%	85%	85%	85%	85%	85%	85%
11h. If an objective, did the feature increase/decrease water depth in the treatment area?	YES	YES	YES	YES	YES	YES	YES	YES	YES
12a. Targeted depth or range (ft) in habitat unit	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0
12b. Estimate area of feature within targeted depth or range ft ² :	141	103	25	35	123	77	7	9	400
13. Were there any unintended effects of the feature on the water depth? If Y, comment.	NO	NO	NO	NO	NO	NO	NO	NO	NO
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	3	3	2	2	2	2	2	2	2
15. Percent of habitat unit covered by shelter: %	65	65	35	35	35	35	35	35	35
16a. 1st dominant cover in habitat unit: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	AVG	AVG	AVG	AVG	AVG	AVG	AVG	AVG	AVG
16b. 2nd dominant in habitat unit: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	RTW	RTW	RTW	RTW	RTW	RTW	RTW	RTW	RTW
17a. If an objective, did the feature increase instream shelter rating?	YES	YES	YES	YES	YES	YES	YES	YES	YES
17b. a. Calculate the shelter rating for the habitat unit: 0-300	195	195	70	70	70	70	70	70	70
18a. Large woody debris count in habitat unit: D >1', L 6-20'	0	0	0	0	0	0	0	0	0
18b. Large woody debris count in habitat unit: D >1', L >20'	0	0	0	0	0	0	0	0	0
19a. If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	NO	NO	NO	NO	NO
19b. LWD recruitment mechanisms in habitat unit: ANC, EXC, EXH, INT, RPR, UNA, OTH	NON	NON	NON	NON	NON	NON	NON	NON	NON
20. Current stream channel problems in the habitat unit: AGG, BRD, FLO, GRC, HDC, INC, NAR, SCU, STT, WID, NON, OTH	NON	NON	NON	NON	NON	NON	NON	NON	NON
21a. If an objective, did the feature lead to the targeted channel conditions?	YES	YES	YES	YES	YES	YES	YES	YES	YES
21b. Overall Offchannel Condition (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	STB	STB	STB	STB	STB	STB	STB	STB	STB
21c. Outlet Conditions (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	STB	STB	STB	STB	STB	STB	STB	STB	STB
21d. Inlet Conditions (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	STB	STB	STB	STB	STB	STB	STB	STB	STB
22. Were there any unintended effects on the stream channel at the feature? If Y, comment.	NO	NO	NO	NO	NO	NO	NO	NO	NO
23. If an objective, did the feature decrease/increase velocity in the treatment area?	DEC	DEC	DEC	DEC	DEC	DEC	DEC	DEC	INC
24. Targeted velocity/range in the habitat unit: (ft/sec)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
25. Did the feature achieve the targeted velocity?	YES	YES	YES	YES	YES	YES	YES	YES	YES
26a. Measured minimum velocity (ft/sec) in habitat unit	0	0	0	0	0	0	0	0	0
26b. Measured max velocity (ft/sec) in habitat unit	2.5	2.5	3.1	3.1	3.1	3.1	3.1	3.1	3.1
26c. Measured mean velocity (ft/sec) in habitat unit	0.3	0.3	1.0	1.0	1.0	1.0	1.0	1.0	1.0
27. Area of habitat unit within targeted velocity: (ft ²)	3742.7	3742.7	570.0	570.0	570.0	570.0	570.0	570.0	570.0
28. Percent of habitat unit within targeted velocity (see above): (%)	75%	75%	41%	41%	41%	41%	41%	41%	41%
29. Were there any unintended effects of feature on velocity? If Y, comment.	NO	NO	NO	NO	NO	NO	NO	NO	NO
30a. 1st/2nd dominant substrate in habitat unit: BED, BOL, COB, GRV, SND, SLC, OTH	SLC	SLC	GRV	GRV	GRV	GRV	GRV	GRV	GRV
30b. 2nd dominant substrate in habitat unit: BED, BOL, COB, GRV, SND, SLC, OTH	GRV	GRV	COB	COB	COB	COB	COB	COB	COB
31. If an objective, did the feature achieve the targeted substrate composition?	YES	YES	YES	YES	YES	YES	YES	YES	YES
32. % Canopy Measurement:	NR	NR	NR	NR	NR	NR	NR	NR	NR
33. Photopoint data collected: YES /NO	NR	NR	NR	NR	NR	NR	NR	NR	NR
34. Temperature Profile: YES /NO	NR	NR	NR	NR	NR	NR	NR	NR	NR
35. Dissolved Oxygen Profile: YES/NO	NR	NR	NR	NR	NR	NR	NR	NR	NR
36a. Total habitat unit area where targeted depth, velocity and shelter criteria overlap	2700.1	2700.1	382.9	382.9	382.9	382.9	382.9	382.9	382.9
36b. Total habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	1230.6	1230.6	260.7	260.7	260.7	260.7	260.7	260.7	260.7
36c. Total habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	1469.5	1469.5	122.2	122.2	122.2	122.2	122.2	122.2	122.2
36d. % habitat unit area where targeted depth, velocity and shelter criteria overlap	54%	54%	28%	28%	28%	28%	28%	28%	28%
36e. % habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	25%	25%	19%	19%	19%	19%	19%	19%	19%
36f. % habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	29%	29%	9%	9%	9%	9%	9%	9%	9%
37. Does this feature need: DEC, ENH, MNT, REP, NON, OTH	NON	NON	NON	NON	NON	NON	NON	NON	NON
38. Are additional restoration treatments recommended at this site?	NO	NO	NO	NO	NO	NO	NO	NO	NO

Truett Hurst, August 2020

Depth and Velocity

Table 21. Areas and percentages of: wetted area, optimal depth and velocity, and optimal hydraulic habitat within the Truett Hurst enhancement reach, August 2020.

Truett Hurst Post-effective flow August 2020	Wetted area (ft ²)	0.5 – 2.0 ft	2.0 – 4.0 ft	Total	< 0.5 ft/s	0.5 – 2.0 ft < 0.5 ft/s	2.0 – 4.0 ft < 0.5 ft/s	Total
Main channel area	39,854	23,093	8,971	32,064	10,599	4,357	1,789	6,146
Side channel area	25,055	12,689	2,868	15,556	18,393	8,983	2,716	11,699
Side channel alcove area	978	549	34	583	978	549	34	583
Total area	65,887	36,331	11,873	48,204	29,970	13,889	4,540	18,429
Main channel % of wetted area	60%	58%	23%	80%	27%	11%	4%	15%
Side channel % of wetted area	38%	51%	11%	62%	73%	36%	11%	47%
Side channel alcove area % of wetted area	1%	56%	3%	60%	100%	56%	3%	60%
Total % of wetted area	100%	55%	18%	73%	45%	21%	7%	28%

Truett Hurst Enhancement Reach

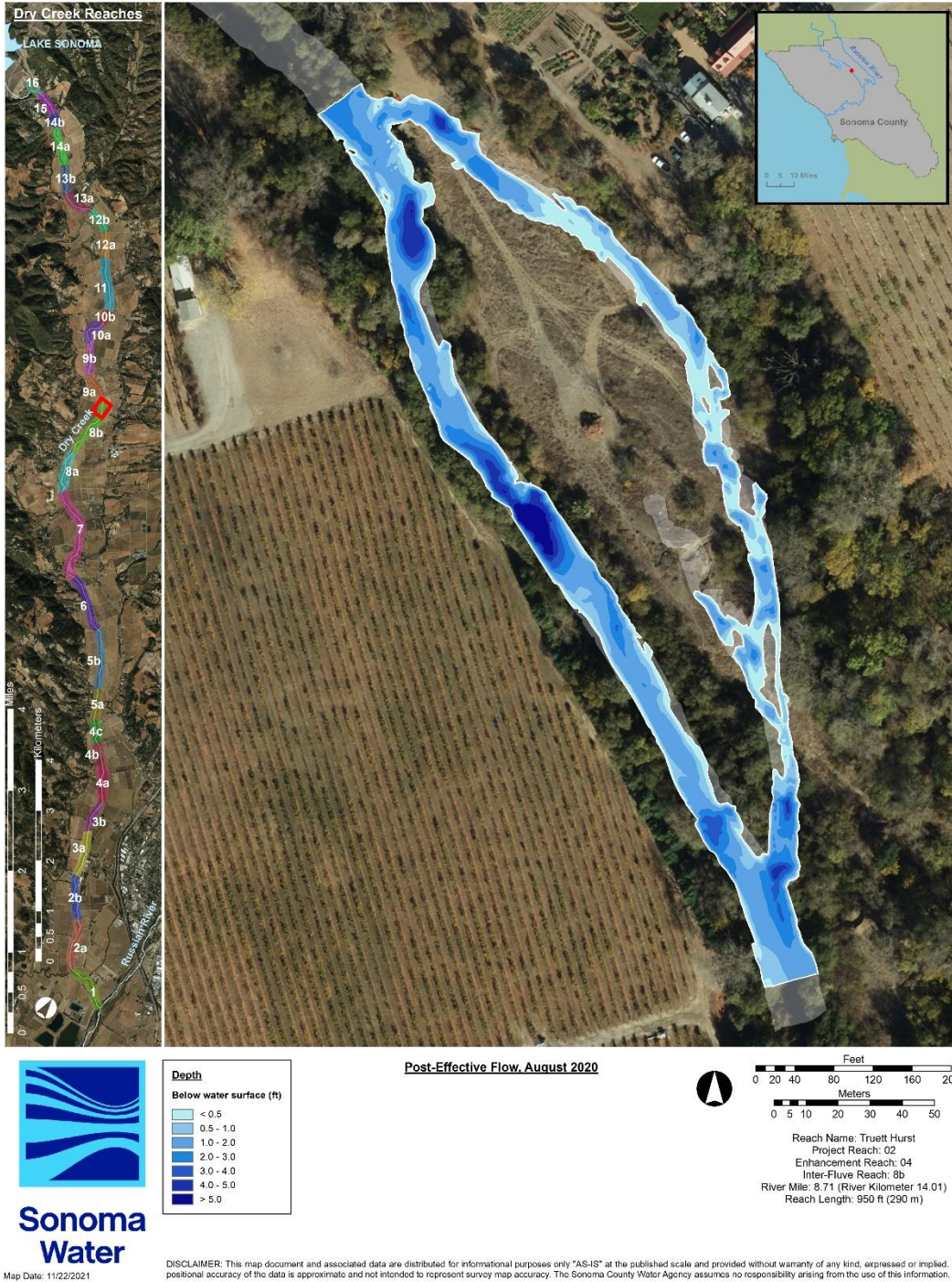


Figure 34. Measured water depth within the Truett Hurst enhancement reach, August 2020.

Truett Hurst Enhancement Reach



Sonoma Water

Map Date: 11/22/2021

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Figure 35. Optimal water depth for fry (0.5-2.0 ft) and parr (2.0-4.0 ft) within the Truett Hurst enhancement reach, August 2020.

Truett Hurst Enhancement Reach

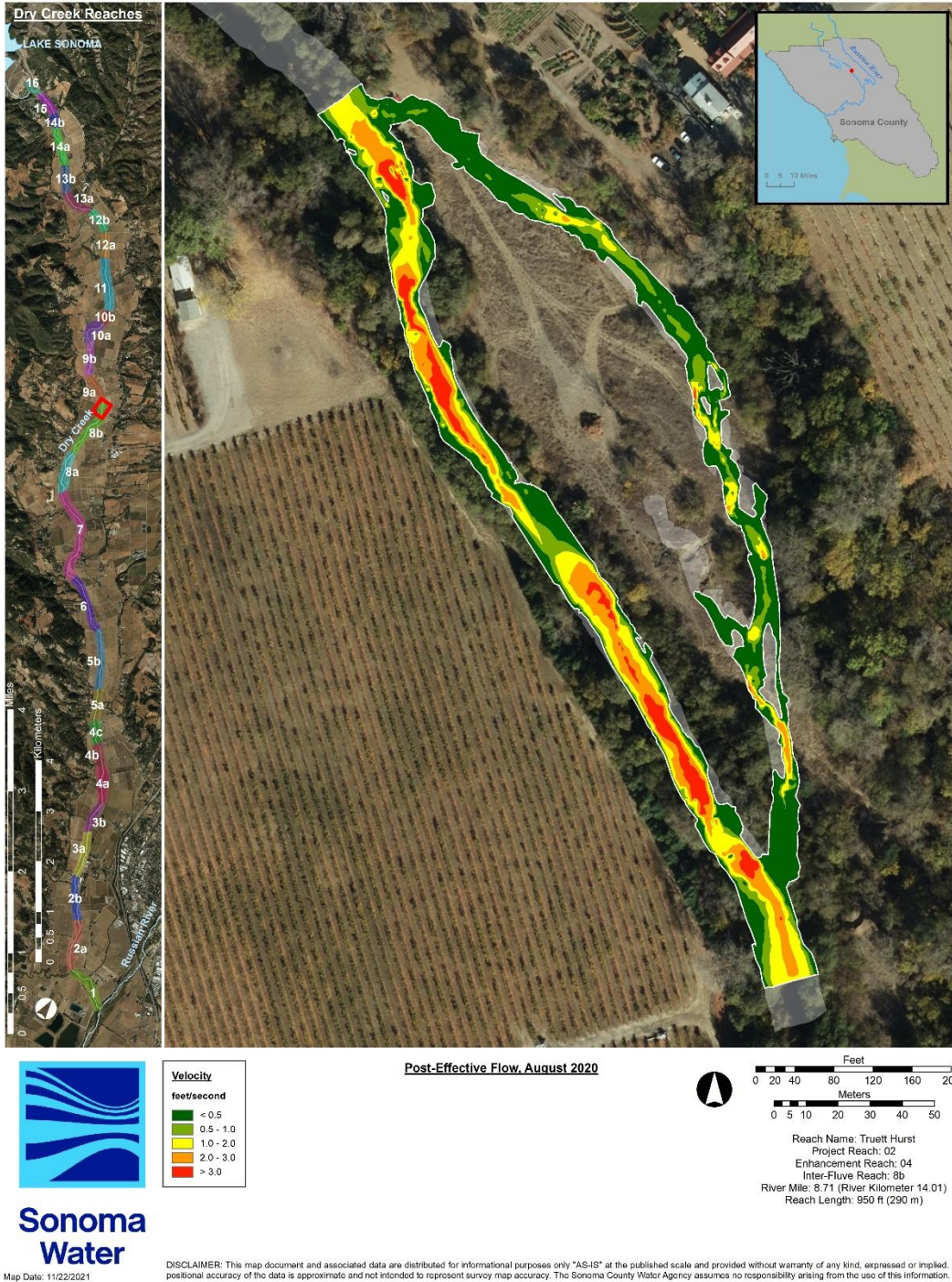


Figure 36. Measured water velocity within the Truett Hurst enhancement reach, August 2020.

Truett Hurst Enhancement Reach

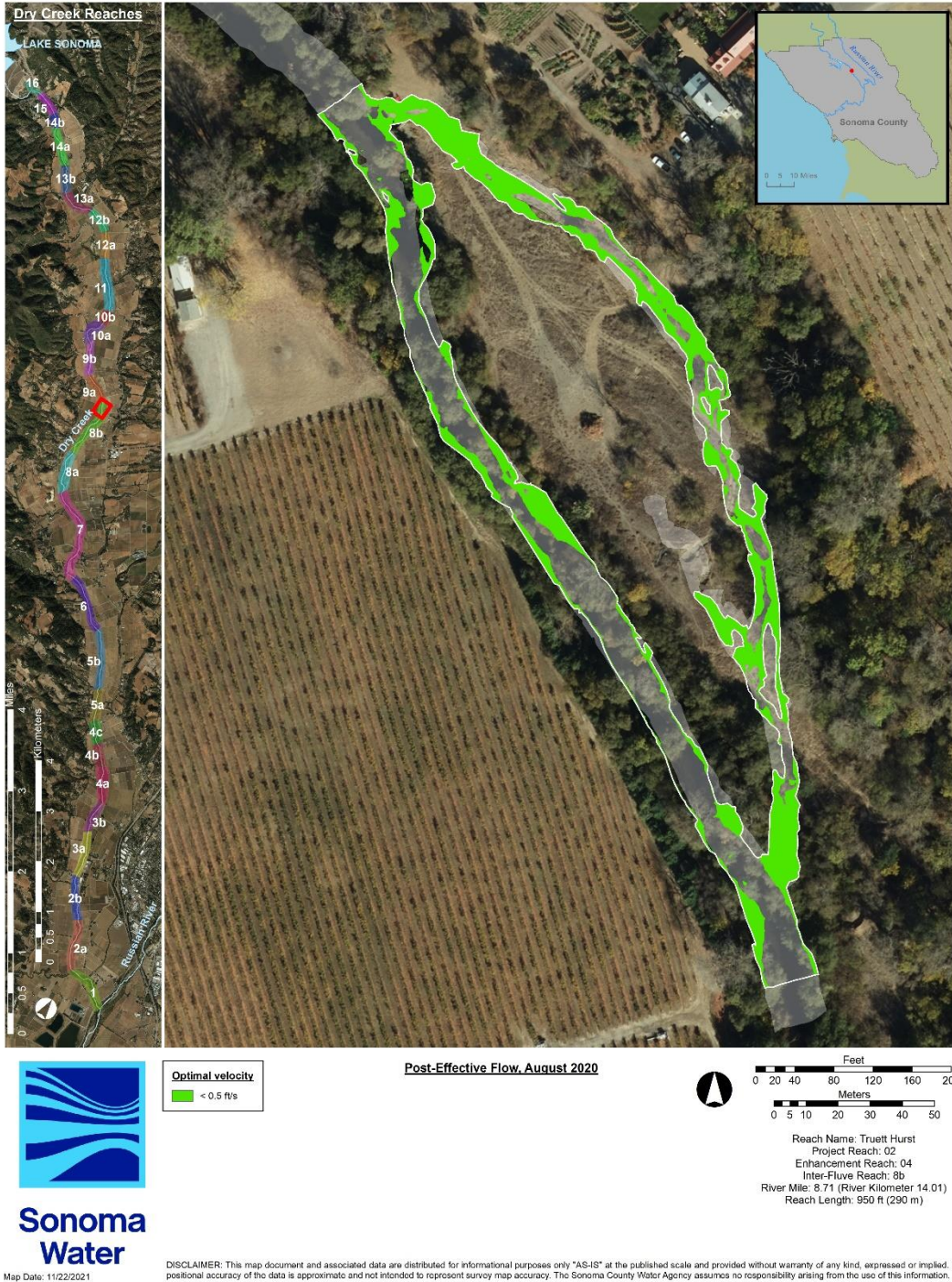


Figure 37. Optimal water velocity for fry and parr (< 0.5 ft/s) within the Truett Hurst enhancement reach, August 2020.

Truett Hurst Enhancement Reach



Sonoma Water

Map Date: 11/22/2021

DISCLAIMER: This map document and associated data are distributed for informational purposes only "AS-IS" at the published scale and provided without warranty of any kind, expressed or implied. The positional accuracy of the data is approximate and not intended to represent survey map accuracy. The Sonoma County Water Agency assumes no responsibility arising from the use of this information.

Figure 38. Optimal hydraulic habitat for fry (<0.5 f/s, 0.5-2.0 ft) and parr (<0.5 f/s, 2.0-4.0 ft) within the Truett Hurst enhancement reach, August 2020.

Habitat Types and Shelter Values

Table 22. Habitat, types, shelter value, percent cover, and shelter score for habitat units within the Truett Hurst enhancement reach, August 2020.

HU01	Flatwater	1	10	10
HU02	Riffle	2	20	40
HU03	Pool	2	25	50
HU04	Riffle	1	5	5
HU05	Flatwater	1	10	10
HU06	Pool	3	60	180
HU07	Riffle	2	20	40
HU08	Pool	1	10	10
HU09	Pool	3	15	45
HU10	Riffle	2	20	40
HU11	Flatwater	1	25	35
HU12	Pool	3	70	210
HU13	Riffle	1	25	25
HU14	Pool	3	45	135
HU15	Riffle	1	20	20
HU16	Pool	3	30	90
HU17	Pool	3	40	120
HU18	Riffle	3	45	135
HU19	Alcove	3	50	150
HU20	Riffle	1	30	30
HU21	Pool	3	20	60
HU22	Alcove	3	90	270
HU23	Riffle	2	15	30
HU24	Pool	3	25	75
HU25	Riffle	1	10	10
HU26	Flatwater	3	50	150
HU27	Riffle	3	15	45
HU28	Pool	3	30	90
HU29	Riffle	3	35	105
HU30	Pool	3	30	90
HU31	Pool	3	35	105
HU32	Flatwater	3	35	105
Pool: riffle	13:12 (1.08)			Avg = 78

Truett Hurst Enhancement Reach

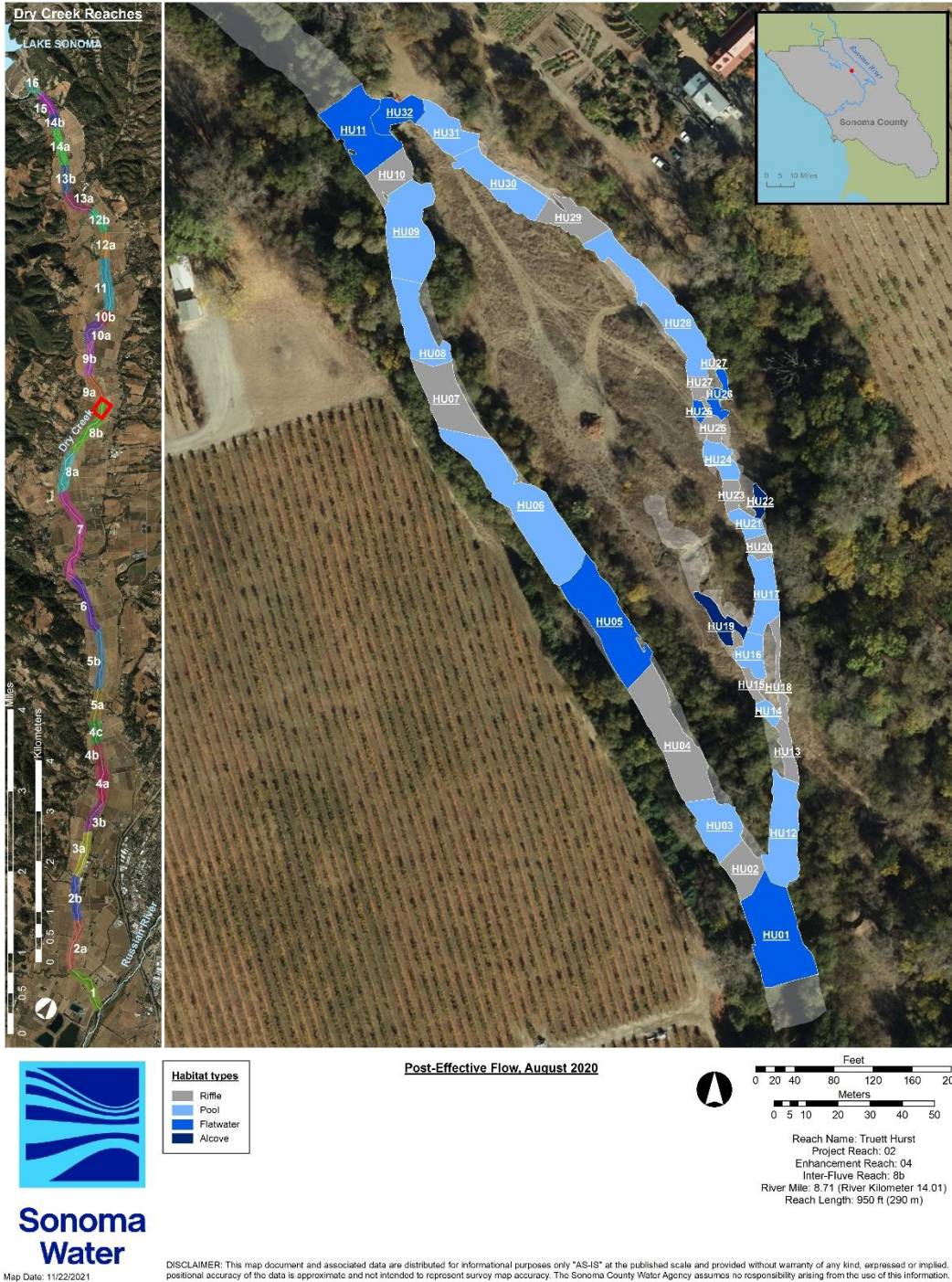


Figure 39. Habitat unit number and type within the Truett Hurst enhancement reach, August 2020.

Truett Hurst Enhancement Reach

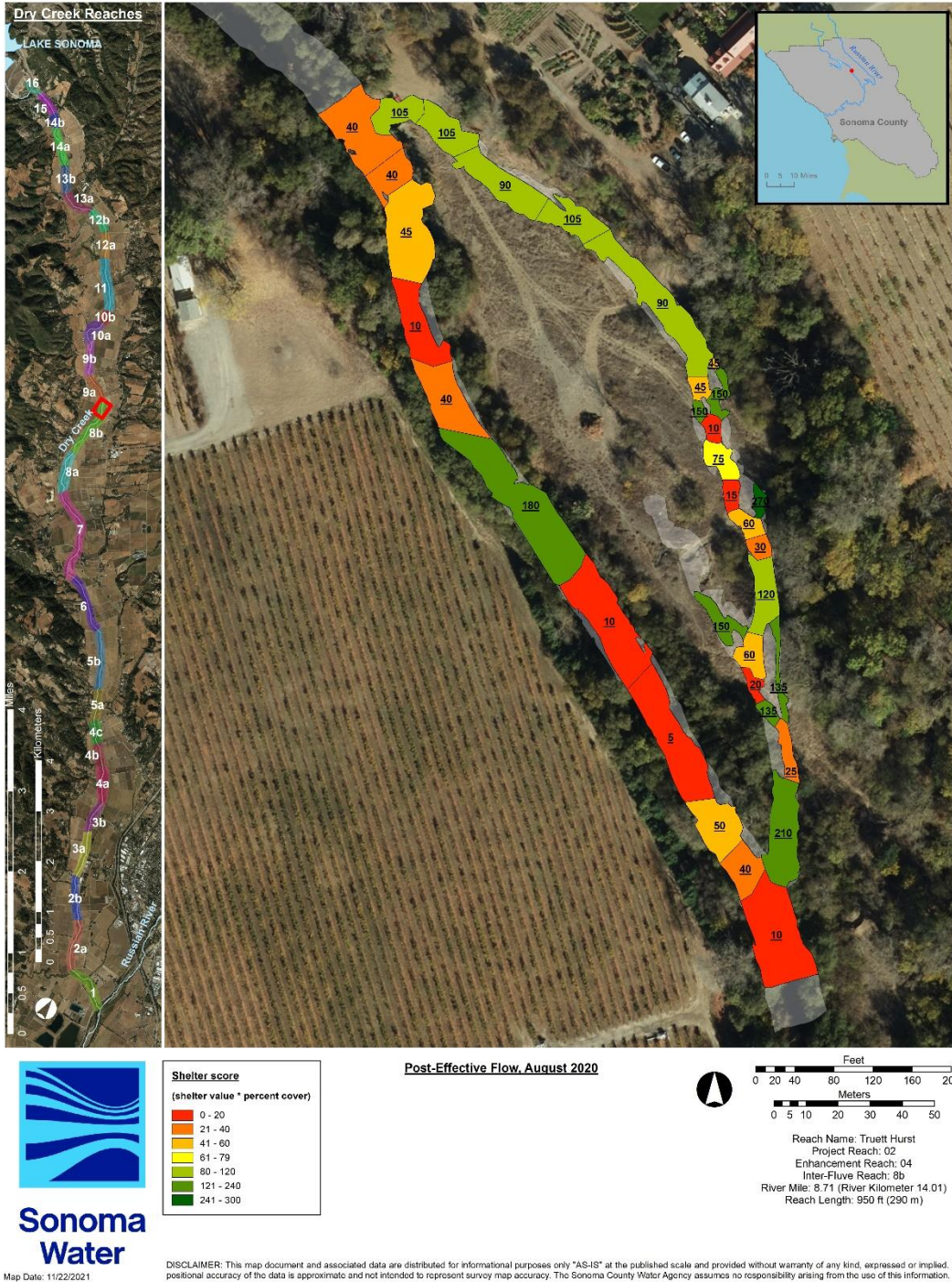


Figure 40. Habitat unit shelter scores within the Truett Hurst enhancement reach, August 2020.

Feature, Habitat Unit, Site, and Reach Ratings

Table 23. Post-effective flow feature ratings for the Truett Hurst enhancement reach August 2020.

Project Reach	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Enhancement Reach	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Colloquial Name	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH
nmddy	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820
Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
PROJECT SITE NUMBER	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Project Site Type	MainChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
PROJECT FEATURE NUMBER	NA	S2-01	S2-02	S2-03	S2-04	S2-05	S2-06	S2-07	S2-08	S2-09	S2-10	S2-11	S2-12	S2-13	S2-14	S2-15	S2-16	S2-17	S2-17	
Feature Type Code	NA	BCW	HW	HW	SCW	R	HW	HW	SCW	SCW	HW	HW	HW	SCW	SCW	SCW	SCW	HW	HW	HW
Habitat Unit	HU01	HU12	HU12	HU12	HU12	HU13	HU14	HU18	HU17	HU17	HU17	HU20	HU21	HU22	HU22	HU24	HU24	HU24	HU24	HU24
Habitat Type	Flatwater	Pool	Pool	Pool	Pool	Riffle	Pool	Riffle	Pool	Pool	Pool	Riffle	Pool	Alcove	Alcove	Pool	Pool	Pool	Pool	Pool
4.	Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	NA	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	FAIR	GOOD	GOOD	GOOD
5a	Are problems with the feature visible?	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO
6a	Is the feature still in its original location?	NA	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6b	Is the feature still in its original position?	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6d	Is the feature still in its original orientaton?	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
8.	If an objective, did the feature create the targeted instream habitat type?	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	NO	YES	YES	YES
9.	Were there any unintended effects by the feature on the habitat type? If Y, comment.	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	NO	NO	NO	NO
17a	If an objective, did the feature increase instream shelter rating?	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	NO	YES	YES
19a	If an objective, did the feature increase LWD count in the habitat unit?	NA	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO
21a	If an objective, did the feature lead to the targeted channel conditions?	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
25.	Did the feature achieve the targeted velocity?	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
PROJECT FEATURE NUMBER	NA	S2-01	S2-02	S2-03	S2-04	S2-05	S2-06	S2-07	S2-08	S2-09	S2-10	S2-11	S2-12	S2-13	S2-14	S2-15	S2-16	S2-17	S2-17	
4.	Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	0	4	4	4	4	4	4	4	4	4	4	4	4	4	3	4	4	4	4
5a	Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1
6a	Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	0	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1
6b	Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6d	Is the feature still in its original orientaton? (YES = 1 pt, NO = 0 pt)	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8.	If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	0	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	1	1
9.	Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1
17a	If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1
19a	If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
21a	If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
25.	Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
PROJECT FEATURE NUMBER	NA	S2-01	S2-02	S2-03	S2-04	S2-05	S2-06	S2-07	S2-08	S2-09	S2-10	S2-11	S2-12	S2-13	S2-14	S2-15	S2-16	S2-17	S2-17	
FEATURE RATING	Feature quantitative rating out of 15	0	14	13	13	13	12	13	13	13	13	13	13	13	12	9	12	13	13	
	Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)	Not rated	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Good	Excellent	Excellent	Excellent	Excellent

Table 23. Post-effective flow feature ratings for the Truett Hurst enhancement reach August 2020.

Project Reach		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Enhancement Reach		4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Colloquial Name		TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH
nmddy		81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820
Survey Type		PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
PROJECT SITE NUMBER		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
PROJECT FEATURE NUMBER		SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
Feature Type Code		S2-18	S2-19	S2-20	S2-21	S2-22	S2-23	S2-24	S2-25	S2-26	S2-27	S2-28	S2-29	S2-30	S2-31	S2-32	S2-33	S2-34	S2-35	
Habitat Unit		HW	R	HW	HW	FW	SCW	SCW	HW	R	HW	HW	HW	HW	FW	HW	FW	SCW	SCW	
Habitat Type		HU26	HU26	HU27	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU30	HU02 D	HU02 D	HU30	HU02 D	HU31
Habitat Type		Flatwater	Flatwater	Riffle	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Pool	Dry	Dry	Pool	Dry	Pool	Pool
4.	Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	GOOD	GOOD	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	GOOD	GOOD	UNKN	GOOD	GOOD	GOOD	GOOD	GOOD
5a	Are problems with the feature visible?	NO	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	UNKN	GOOD	GOOD	GOOD	GOOD	GOOD
6a	Is the feature still in its original location?	YES	NO	YES	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	YES	YES	UNK	YES	YES	YES	YES	YES
6b	Is the feature still in its original position?	YES	YES	YES	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	NO	YES	UNK	YES	YES	NO	YES	YES
6d	Is the feature still in its original orientaton?	YES	YES	YES	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	YES	YES	UNK	YES	YES	YES	YES	YES
8.	If an objective, did the feature create the targeted instream habitat type?	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	YES	YES	NO	YES	YES
9.	Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	NO	NO	YES	NO	NO
17a	If an objective, did the feature increase instream shelter rating?	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	YES	YES	NO	YES	YES
19a	If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO
21a	If an objective, did the feature lead to the targeted channel conditions?	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	YES	YES	YES	YES	YES
25.	Did the feature achieve the targeted velocity?	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	YES	YES	NO	YES	YES
PROJECT FEATURE NUMBER		S2-18	S2-19	S2-20	S2-21	S2-22	S2-23	S2-24	S2-25	S2-26	S2-27	S2-28	S2-29	S2-30	S2-31	S2-32	S2-33	S2-34	S2-35	
4.	Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	4	4	4	0	0	0	0	0	0	0	0	4	4	0	4	4	4	4	4
5a	Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	1	1	1	0	0	0	0	0	0	0	0	0	1	0	1	1	0	1	1
6a	Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	1	0	1	0	0	0	0	0	0	0	0	1	1	0	1	1	1	1	1
6b	Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	1	1	1	0	0	0	0	0	0	0	0	1	1	0	1	1	0	1	1
6d	Is the feature still in its original orientaton? (YES = 1 pt, NO = 0 pt)	1	1	1	0	0	0	0	0	0	0	0	1	1	0	1	1	1	1	1
8.	If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	1	1	1	0	0	0	0	0	0	0	0	0	1	0	1	1	0	1	1
9.	Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	1	1	1	0	0	0	0	0	0	0	0	0	1	0	1	1	0	1	1
17a	If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	1	1	0	0	0	0	0	0	0	0	0	1	0	1	1	0	1	1
19a	If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
21a	If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	1	1	1	0	0	0	0	0	0	0	0	0	1	0	1	1	1	1	1
25.	Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	1	1	0	0	0	0	0	0	0	0	0	1	0	1	1	0	1	1
PROJECT FEATURE NUMBER		S2-18	S2-19	S2-20	S2-21	S2-22	S2-23	S2-24	S2-25	S2-26	S2-27	S2-28	S2-29	S2-30	S2-31	S2-32	S2-33	S2-34	S2-35	
FEATURE RATING	Feature quantitative rating out of 15	13	12	13	0	0	0	0	0	0	0	6	13	0	13	13	8	13	13	
	Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)	Excellent	Excellent	Excellent	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Fair	Excellent	Not rated	Excellent	Excellent	Fair	Excellent	Excellent

Table 23. Post-effective flow feature ratings for the Truett Hurst enhancement reach August 2020.

Project Reach	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Enhancement Reach	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Colloquial Name	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH
nmddy	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820
Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
PROJECT SITE NUMBER	2	2	2	2	2	2	3	3	3	3	3	3	3	4	4	4	4	4	4	4
PROJECT FEATURE NUMBER	SideChan	SideChan	SideChan	SideChan	SideChan	SC Alcove	SC Alcove	SC Alcove	SC Alcove	SC Alcove	SC Alcove	SC Alcove	SC Alcove	SC Alcove	SC Alcove	SC Alcove	SC Alcove	SC Alcove	SC Alcove	SC Alcove
Feature Type Code	SCW	ISW	ISW	ISW	R	BCW	HW	BCW	HW	BCW	HW	BCW	HW	BCW	HW	BCW	HW	HW	HW	HW
Habitat Unit	HU31	HU02 D	HU32	HU32	HU32	HU16 2	HU19	HU19	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU28 2	HU28 2	HU04 D	HU28 2	HU04 D	HU04 D	HU28 2
Habitat Type	Pool	Dry	Flatwater	Flatwater	Flatwater	Pool	Alcove	Alcove	Dry	Dry	Dry	Dry	Dry	Pool	Pool	Dry	Pool	Dry	Pool	Pool
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	GOOD	GOOD	GOOD	FAIL	GOOD	GOOD	UNKN	FAIR	UNKN	UNKN	UNKN	UNKN	GOOD	UNKN	UNKN	GOOD	UNKN	GOOD	GOOD
5a. Are problems with the feature visible?	NO	NO	NO	NO	YES	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6a. Is the feature still in its original location?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	UNK	UNK	YES	UNK	UNK	YES
6b. Is the feature still in its original position?	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO	NO	UNK	UNK	NO	UNK	UNK	YES
6d. Is the feature still in its original orientaton?	YES	YES	YES	YES	YES	YES	YES	UNK	UNK	UNK	UNK	UNK	UNK	YES	UNK	UNK	YES	UNK	UNK	YES
8. If an objective, did the feature create the targeted instream habitat type?	YES	YES	YES	YES	NO	YES	YES	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	YES
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	NO	NO	NO	YES	NO	NO	YES	YES	YES	YES	YES	YES	NO	YES	YES	NO	YES	NO	NO
17a. If an objective, did the feature increase instream shelter rating?	YES	YES	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	YES	NO	YES
19a. If an objective, did the feature increase LWD count in the habitat unit?	NO	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
21a. If an objective, did the feature lead to the targeted channel conditions?	YES	YES	YES	YES	NO	YES	YES	NO	NO	NO	NO	NO	NO	YES	NO	NO	YES	NO	NO	YES
25. Did the feature achieve the targeted velocity?	YES	YES	YES	YES	NO	YES	YES	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	YES
PROJECT FEATURE NUMBER	S2-36	S2-37A	S2-37B	S2-37C	S2-38	S3-01	S3-02	S3-03	S3-04	S3-05	S3-06	S3-07	S4-01	S4-02	S4-03	S4-04	S4-05	S4-06	S4-06	
4. Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	4	4	4	4	1	4	4	0	3	0	0	0	4	0	0	4	0	4	0	4
5a. Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	1	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
6a. Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0	1	0	1	0	1
6b. Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	1	0	1	0	1
6d. Is the feature still in its original orientaton? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	0	0	0	0	0	1	0	0	1	0	1	0	1
8. If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	1	1	1	1	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	1
9. Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	1	1	1	1	0	1	1	0	0	0	0	0	1	0	0	1	0	1	0	1
17a. If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	0	0	0	0	0	1	0	0	1	0	1	0	1
19a. If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21a. If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	1	1	1	1	0	1	1	0	0	0	0	0	1	0	0	1	0	1	0	1
25. Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	1	1	1	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	1
PROJECT FEATURE NUMBER	S2-36	S2-37A	S2-37B	S2-37C	S2-38	S3-01	S3-02	S3-03	S3-04	S3-05	S3-06	S3-07	S4-01	S4-02	S4-03	S4-04	S4-05	S4-06	S4-06	
FEATURE RATING	Feature quantitative rating out of 15																			
	13	14	14	14	5	13	13	1	4	1	0	0	11	0	0	10	0	13		
	Feature qualitative rating																			
	Excellent	Excellent	Excellent	Excellent	Poor	Excellent	Excellent	Fail	Poor	Fail	Not rated	Not rated	Good	Not rated	Not rated	Good	Not rated	Excellent		
	Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)																			

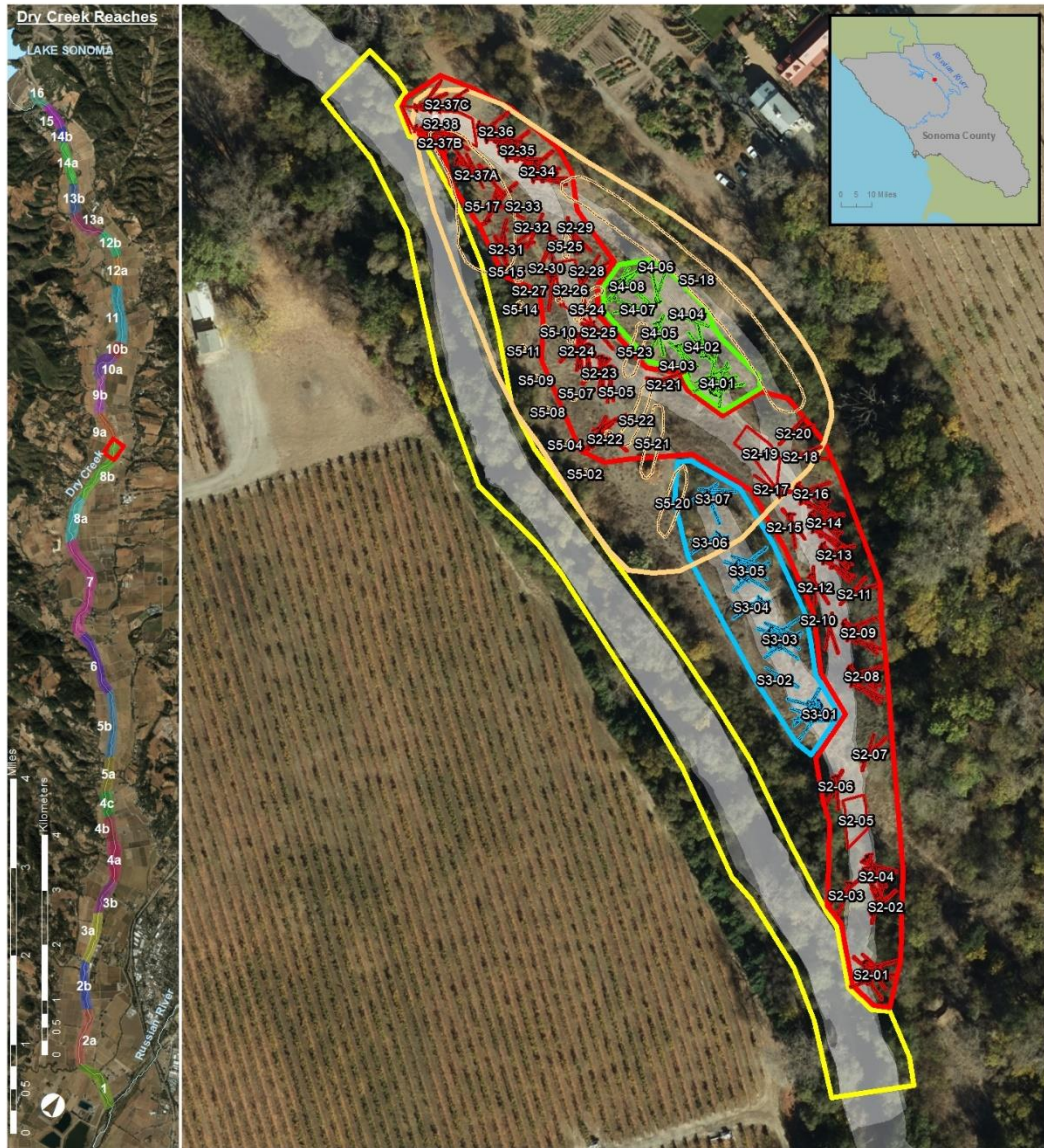
Table 23. Post-effective flow feature ratings for the Truett Hurst enhancement reach August 2020.

Project Reach		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Enhancement Reach		4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Colloquial Name		TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH
nmddy		81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820
Survey Type		PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
PROJECT SITE NUMBER		4	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Project Site Type		SC Alcove	SC Alcove	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP
PROJECT FEATURE NUMBER		S4-07	S4-08	S5-01	S5-02	S5-03	S5-04	S5-05	S5-06	S5-07	S5-08	S5-09	S5-10	S5-11	S5-12	S5-13	S5-14	S5-15	S5-16
Feature Type Code		HW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW
Habitat Unit		HU04 D	HU04 D	HU05 D	HU05 D	HU05 D	HU05 D	HU05 D	HU05 D	HU05 D	HU05 D	HU05 D	HU05 D	HU05 D	HU05 D	HU05 D	HU05 D	HU05 D	HU05 D
Habitat Type		Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
4.	Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	UNKN	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD
5a	Are problems with the feature visible?	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
6a	Is the feature still in its original location?	UNK	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6b	Is the feature still in its original position?	UNK	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6d	Is the feature still in its original orientaton?	UNK	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
8.	If an objective, did the feature create the targeted instream habitat type?	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
9.	Were there any unintended effects by the feature on the habitat type? If Y, comment.	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
17a	If an objective, did the feature increase instream shelter rating?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
19a	If an objective, did the feature increase LWD count in the habitat unit?	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO
21a	If an objective, did the feature lead to the targeted channel conditions?	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
25.	Did the feature achieve the targeted velocity?	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
PROJECT FEATURE NUMBER		S4-07	S4-08	S5-01	S5-02	S5-03	S5-04	S5-05	S5-06	S5-07	S5-08	S5-09	S5-10	S5-11	S5-12	S5-13	S5-14	S5-15	S5-16
4.	Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	0	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
5a	Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6a	Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6b	Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6d	Is the feature still in its original orientaton? (YES = 1 pt, NO = 0 pt)	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8.	If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
9.	Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
17a	If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19a	If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
21a	If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
25.	Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
PROJECT FEATURE NUMBER		S4-07	S4-08	S5-01	S5-02	S5-03	S5-04	S5-05	S5-06	S5-07	S5-08	S5-09	S5-10	S5-11	S5-12	S5-13	S5-14	S5-15	S5-16
FEATURE RATING	Feature quantitative rating out of 15	0	10	12	12	12	12	12	12	12	12	12	12	12	12	12	12	13	12
	Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)	Not rated	Good	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent

Table 23. Post-effective flow feature ratings for the Truett Hurst enhancement reach August 2020.

		2	2	2	2	2	2	2	2
Project Reach		2	2	2	2	2	2	2	2
Enhancement Reach		4	4	4	4	4	4	4	4
Colloquial Name		TH	TH	TH	TH	TH	TH	TH	TH
mmddyy		81820	81820	81820	81820	81820	81820	81820	81820
Survey Type		PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
PROJECT SITE NUMBER		5	5	5	5	5	5	5	5
Project Site Type		SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP
PROJECT FEATURE NUMBER		S5-17	S5-18	S5-20	S5-21	S5-22	S5-23	S5-24	S5-25
Feature Type Code		mental Large	bank Treatme	Willow Baffle	Willow Baffle	Willow Baffle	Willow Baffle	Willow Baffle	Willow Baffle
Habitat Unit		HU09 2	HU28	HU05 D	HU05 D	HU05 D	HU05 D	HU05 D	HU05 D
Habitat Type		Pool	Pool	Dry	Dry	Dry	Dry	Dry	Dry
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL		GOOD	GOOD	FAIR	FAIR	GOOD	GOOD	GOOD	GOOD
5a. Are problems with the feature visible?		NO	NO	NO	NO	NO	NO	NO	NO
6a. Is the feature still in its original location?		YES	YES	YES	YES	YES	YES	YES	YES
6b. Is the feature still in its original position?		YES	YES	YES	YES	YES	YES	YES	YES
6d. Is the feature still in its original orientaton?		YES	YES	YES	YES	YES	YES	YES	YES
8. If an objective, did the feature create the targeted instream habitat type?		YES	YES	YES	YES	YES	YES	YES	YES
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.		NO	NO	NO	NO	NO	NO	NO	NO
17a. If an objective, did the feature increase instream shelter rating?		YES	YES	NO	NO	NO	NO	NO	NO
19a. If an objective, did the feature increase LWD count in the habitat unit?		YES	NO	NO	NO	NO	NO	NO	NO
21a. If an objective, did the feature lead to the targeted channel conditions?		YES	YES	YES	YES	YES	YES	YES	YES
25. Did the feature achieve the targeted velocity?		YES	YES	YES	YES	YES	YES	YES	YES
PROJECT FEATURE NUMBER		S5-17	S5-18	S5-20	S5-21	S5-22	S5-23	S5-24	S5-25
4. Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)		4	4	3	3	4	4	4	4
5a. Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)		1	1	1	1	1	1	1	1
6a. Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)		1	1	1	1	1	1	1	1
6b. Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)		1	1	1	1	1	1	1	1
6d. Is the feature still in its original orientaton? (YES = 1 pt, NO = 0 pt)		1	1	1	1	1	1	1	1
8. If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)		1	1	1	1	1	1	1	1
9. Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)		1	1	1	1	1	1	1	1
17a. If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)		1	1	0	0	0	0	0	0
19a. If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)		1	0	0	0	0	0	0	0
21a. If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)		1	1	1	1	1	1	1	1
25. Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)		1	1	1	1	1	1	1	1
PROJECT FEATURE NUMBER		S5-17	S5-18	S5-20	S5-21	S5-22	S5-23	S5-24	S5-25
FEATURE RATING	Feature quantitative rating out of 15	14	13	11	11	12	12	12	12
	Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)	Excellent	Excellent	Good	Good	Excellent	Excellent	Excellent	Excellent

Truett Hurst Enhancement Reach

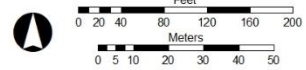


Sonoma Water

Map Date: 1/25/2022

Feature, Site ID
Features, Site 1
Features, Site 2
Features, Site 3
Features, Site 4
Features, Site 5

Post-Effective Flow, August 2020



Reach Name: Truett Hurst
Project Reach: 02
Enhancement Reach: 04
Inter-Fluve Reach: 8b
River Mile: 8.71 (River Kilometer 14.01)
Reach Length: 950 ft (290 m)

DISCLAIMER: This map document and associated data are distributed for informational purposes only "AS-IS" at the published scale and provided without warranty of any kind, expressed or implied. The positional accuracy of the data is approximate and not intended to represent survey map accuracy. The Sonoma County Water Agency assumes no responsibility arising from the use of this information.

Figure 41. Enhancement sites and features within the Truett Hurst enhancement reach, August 2020.

Truett Hurst Enhancement Reach

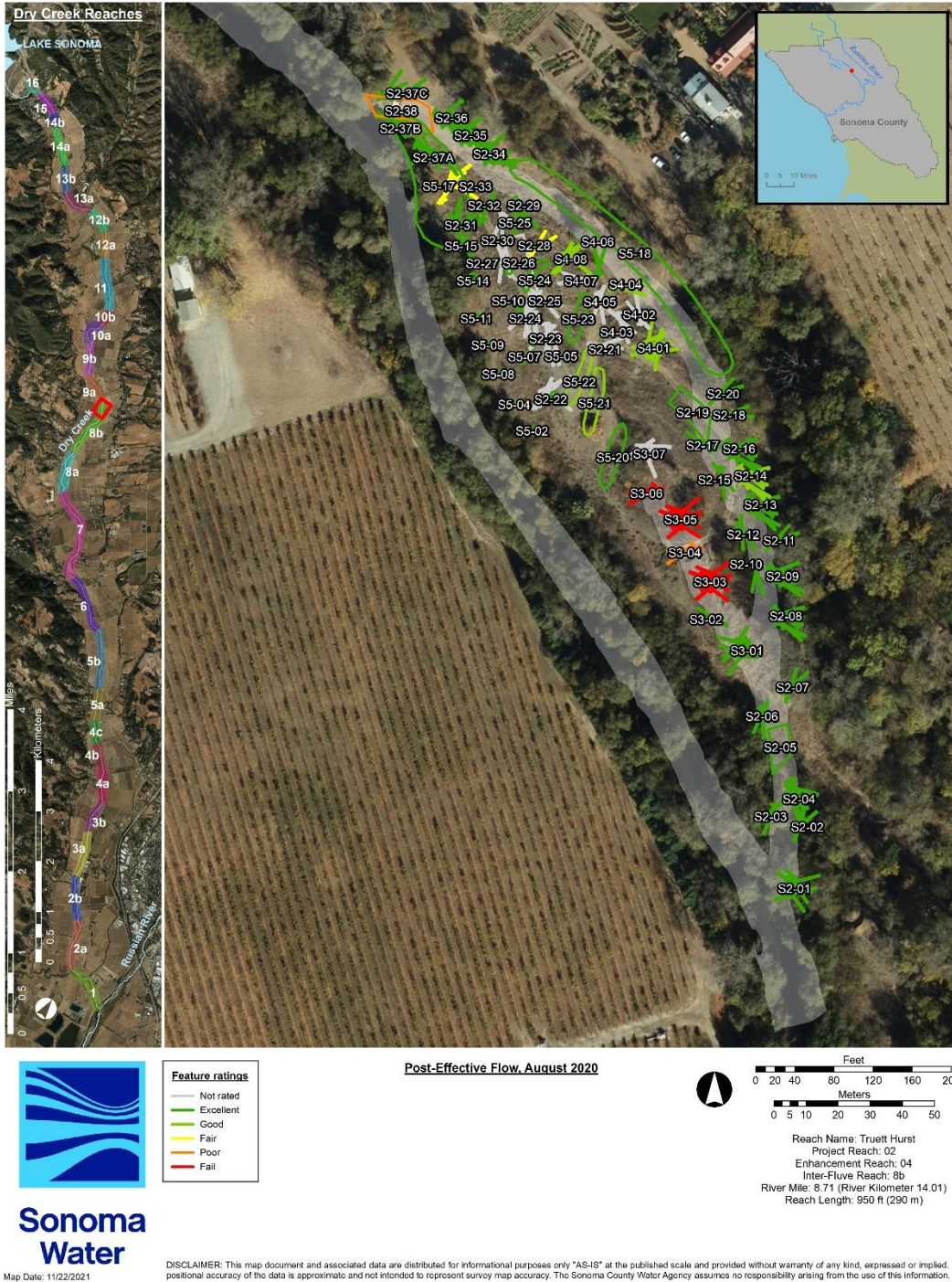


Figure 42. Feature ratings for the Truett Hurst enhancement reach, August 2020.

Table 24. Post-effective flow habitat unit ratings for the Truett Hurst enhancement reach August 2020.

Project Reach	2		2		2		2		2		2		2		2		2		2		2		2	
Enhancement Reach	4		4		4		4		4		4		4		4		4		4		4		4	
Colloquial Name	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH
mmddyy	81820		81820		81820		81820		81820		81820		81820		81820		81820		81820		81820		81820	
Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
HABITAT UNIT NUMBER	HU01	HU02	HU03	HU04	HU05	HU06	HU07	HU08	HU09	HU10	HU11	HU12	HU13	HU14	HU02 D	HU03 D	HU04 D	HU15	HU16	HU17	HU18			
Habitat Type	Flatwater	Riffle	Pool	Riffle	Flatwater	Pool	Riffle	Pool	Pool	Riffle	Flatwater	Pool	Riffle	Pool	Dry	Dry	Dry	Riffle	Pool	Pool	Pool	Riffle		
PROJECT SITE NUMBER	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	3	4	2	2	2	2
Project Site Type	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	SideChan	SideChan	SideChan	SideChan	SC Alcove	SC Alcove	SideChan	SideChan	SideChan	SideChan		
11e	% Area of habitat unit within 0.5 -2.0 ft depth	67%	79%	41%	79%	74%	25%	82%	60%	36%	72%	61%	43%	41%	71%	0%	0%	0%	0%	37%	56%	71%	22%	
11f	% Area of habitat unit within 2.0 -4.0 ft depth	24%	13%	50%	0%	12%	38%	7%	27%	30%	0%	28%	42%	0%	0%	0%	0%	0%	0%	0%	6%	5%	0%	
14.	Instream shelter value in the habitat unit : 0, 1, 2, 3	1	2	2	1	1	3	2	1	3	2	1	3	1	3	0	0	0	0	1	3	3	3	
15.	Percent of habitat unit covered by shelter: %	10	20	25	5	10	60	20	10	15	20	25	70	25	45	0	0	0	0	20	30	40	45	
17b	a. Calculate the shelter rating for the habitat unit : 0-300	10	40	50	5	10	180	40	10	45	40	35	210	25	135	0	0	0	0	20	90	120	135	
28.	Percent of habitat unit within targeted velocity (see above): (%)	24%	14%	35%	13%	13%	49%	19%	19%	42%	18%	21%	94%	26%	48%	0%	0%	0%	0%	29%	76%	75%	99%	
36e	% habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	16%	8%	17%	0%	2%	18%	9%	9%	18%	2%	12%	39%	8%	25%	0%	0%	0%	3%	46%	52%	22%		
36f	% habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	1%	0%	9%	0%	0%	16%	1%	0%	10%	0%	0%	41%	0%	0%	0%	0%	0%	0%	6%	3%	0%		
HABITAT UNIT NUMBER	HU01	HU02	HU03	HU04	HU05	HU06	HU07	HU08	HU09	HU10	HU11	HU12	HU13	HU14	HU02 D	HU03 D	HU04 D	HU15	HU16	HU17	HU18			
11e	% area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	4	4	4	4	2	4	4	3	4	4	4	4	4	0	0	0	0	3	4	4	2	
11f	% area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	2	1	4	0	1	3	0	2	3	0	2	4	0	0	0	0	0	0	0	0	0	0	
14.	Instream shelter value in the habitat unit : 0, 1, 2, 3 (3 = 5 pts; 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	3	4	4	3	3	5	4	3	5	4	3	5	3	5	0	0	0	0	3	5	5	5	
15.	% hab unit covered by shelter (≥80 = 5pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)	1	2	2	0	1	4	2	1	1	2	2	4	2	3	0	0	0	0	2	2	3	3	
17b	a. Calculate the shelter rating for the habitat unit : 0-300	0	1	1	0	0	5	1	0	1	1	0	5	0	4	0	0	0	0	3	4	4		
28.	% area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	2	1	3	1	1	4	1	1	4	1	2	4	2	4	0	0	0	0	2	4	4	4	
36e	% area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	1	0	1	0	0	1	0	0	1	0	1	3	0	2	0	0	0	0	0	4	4	2	
36f	% area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	1	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	
HABITAT UNIT NUMBER	HU01	HU02	HU03	HU04	HU05	HU06	HU07	HU08	HU09	HU10	HU11	HU12	HU13	HU14	HU02 D	HU03 D	HU04 D	HU15	HU16	HU17	HU18			
HABITAT UNIT RATING	Habitat unit quantitative rating (out of 35)		13	13	19	8	10	25	12	11	18	12	14	33	11	22	0	0	0	10	22	24	20	
HABITAT UNIT RATING	Habitat unit qualitative rating: Excellent (>=28), Good (>=21), Fair(>=14), Poor (>=7), Fail (<7)		Poor	Poor	Fair	Poor	Poor	Good	Poor	Poor	Fair	Poor	Fair	Excellent	Poor	Good	Not rated	Not rated	Not rated	Poor	Good	Good	Fair	

Table 24. Post-effective flow habitat unit ratings for the Truett Hurst enhancement reach August 2020.

Project Reach	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Enhancement Reach	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Colloquial Name	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH
mmddyy	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820
Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
HABITAT UNIT NUMBER	HU19	HU20	HU21	HU22	HU23	HU24	HU25	HU26	HU27	HU28	HU29	HU30	HU30 2	HU31	HU32	HU05 D	HU09 2	HU10 2	HU11 2	HU16 2	
Habitat Type	Alcove	Riffle	Pool	Alcove	Riffle	Pool	Riffle	Flatwater	Riffle	Pool	Riffle	Pool	Pool	Pool	Flatwater	Dry	Pool	Riffle	Flatwater	Pool	
PROJECT SITE NUMBER	3	2	2	2	2	2	2	2	2	2	2	2	5	2	2	5	5	5	5	3	
Project Site Type	SC Alcove	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SC Bank FP	SideChan	SideChan	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Alcove	
11e	% Area of habitat unit within 0.5 -2.0 ft depth	56%	23%	58%	47%	23%	73%	12%	39%	6%	61%	26%	63%	63%	46%	74%	0%	36%	72%	61%	56%
11f	% Area of habitat unit within 2.0 -4.0 ft depth	3%	0%	1%	0%	0%	5%	0%	0%	0%	1%	0%	20%	20%	32%	10%	0%	30%	0%	28%	6%
14.	Instream shelter value in the habitat unit : 0, 1, 2, 3	3	1	3	3	2	3	1	3	3	3	3	3	3	3	0	3	2	1	3	
15.	Percent of habitat unit covered by shelter: %	50	30	20	90	15	25	10	50	15	30	35	30	30	35	35	0	15	20	25	30
17b	a. Calculate the shelter rating for the habitat unit : 0-300	150	30	60	270	30	75	10	150	45	90	105	90	90	105	105	0	45	40	35	90
28.	Percent of habitat unit within targeted velocity (see above): (%)	100%	44%	75%	100%	28%	77%	29%	71%	41%	71%	48%	86%	86%	99%	83%	0%	42%	18%	21%	76%
36e	% habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	56%	3%	36%	47%	5%	53%	0%	24%	0%	37%	12%	51%	51%	46%	61%	0%	18%	2%	12%	46%
36f	% habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	3%	0%	1%	0%	0%	3%	0%	0%	0%	1%	0%	19%	19%	32%	8%	0%	10%	0%	0%	6%
HABITAT UNIT NUMBER	HU19	HU20	HU21	HU22	HU23	HU24	HU25	HU26	HU27	HU28	HU29	HU30	HU30 2	HU31	HU32	HU05 D	HU09 2	HU10 2	HU11 2	HU16 2	
11e	% area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	2	4	4	2	4	1	3	0	4	2	4	4	4	0	3	4	4	4	
11f	% area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	0	0	0	0	0	2	2	3	1	0	3	0	2	0	
14.	Instream shelter value in the habitat unit : 0, 1, 2, 3 (3 = 5 pts; 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	5	3	5	5	4	5	3	5	5	5	5	5	5	5	0	5	4	3	5	
15.	% hab unit covered by shelter (≥80 = 5pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)	3	2	2	5	1	2	1	3	1	2	2	2	2	2	0	1	2	2	2	
17b	a. Calculate the shelter rating for the habitat unit : 0-300	5	0	2	5	0	2	0	5	1	3	4	3	3	4	0	1	1	0	3	
28.	% area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	4	4	4	2	4	2	4	4	4	4	4	4	4	0	4	4	1	2	4
36e	% area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	0	3	4	0	4	0	2	0	3	1	4	4	4	0	1	0	1	4	
36f	% area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	0	0	0	0	0	1	1	3	0	0	0	0	0	0	
HABITAT UNIT RATING	HU19	HU20	HU21	HU22	HU23	HU24	HU25	HU26	HU27	HU28	HU29	HU30	HU30 2	HU31	HU32	HU05 D	HU09 2	HU10 2	HU11 2	HU16 2	
Habitat unit quantitative rating (out of 35)	25	11	20	27	9	21	7	22	11	21	18	25	25	29	24	0	18	12	14	22	
Habitat unit qualitative rating: Excellent (≥28), Good (≥21), Fair(≥14), Poor (≥7), Fail (<7)	Good	Poor	Fair	Good	Poor	Good	Poor	Good	Poor	Good	Fair	Good	Good	Excellent	Good	Not rated	Fair	Poor	Fair	Good	

Table 24. Post-effective flow habitat unit ratings for the Truett Hurst enhancement reach August 2020.

Project Reach	2	2	2	2	2	
Enhancement Reach	4	4	4	4	4	
Colloquial Name	TH	TH	TH	TH	TH	
mmddyy	81820	81820	81820	81820	81820	
Survey Type	PEF	PEF	PEF	PEF	PEF	
Habitat Type	HABITAT UNIT NUMBER					
	HU27 2	HU28 2	HU31 2	HU32 2	HU28 3	
Project Site Type	PROJECT SITE NUMBER					
	5	4	5	6	6	
	SC Bank FP	SC Alcove	SC Bank FP	SC Bank FP	SC Bank FP	
11e	% Area of habitat unit within 0.5 -2.0 ft depth	6%	61%	46%	74%	61%
11f	% Area of habitat unit within 2.0 -4.0 ft depth	0%	1%	32%	10%	1%
14.	Instream shelter value in the habitat unit : 0, 1, 2, 3	3	3	3	3	3
15.	Percent of habitat unit covered by shelter: %	15	30	35	35	30
17b	a. Calculate the shelter rating for the habitat unit : 0-300	45	90	105	105	90
28.	Percent of habitat unit within targeted velocity (see above): (%)	41%	71%	99%	83%	71%
36e	% habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	0%	37%	46%	61%	37%
36f	% habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	1%	32%	8%	1%
	HABITAT UNIT NUMBER					
	HU27 2	HU28 2	HU31 2	HU32 2	HU28 3	
11e	% area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	4	4	4	4
11f	% area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	3	1	0
14.	Instream shelter value in the habitat unit : 0, 1, 2, 3 (3 = 5 pts; 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	5	5	5	5	5
15.	% hab unit covered by shelter (≥80 = 5pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)	1	2	2	2	2
17b	a. Calculate the shelter rating for the habitat unit : 0-300	1	3	4	4	3
28.	% area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	4	4	4	4
36e	% area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	3	4	4	3
36f	% area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	3	0	0
	HABITAT UNIT NUMBER					
	HU27 2	HU28 2	HU31 2	HU32 2	HU28 3	
HABITAT UNIT RATING	Habitat unit quantitative rating (out of 35)					
	11	21	29	24	21	
	Habitat unit qualitative rating: Excellent (>=28), Good (>=21), Fair(>=14), Poor (>=7), Fail (<7)					
	Poor	Good	Excellent	Good	Good	

Truett Hurst Enhancement Reach

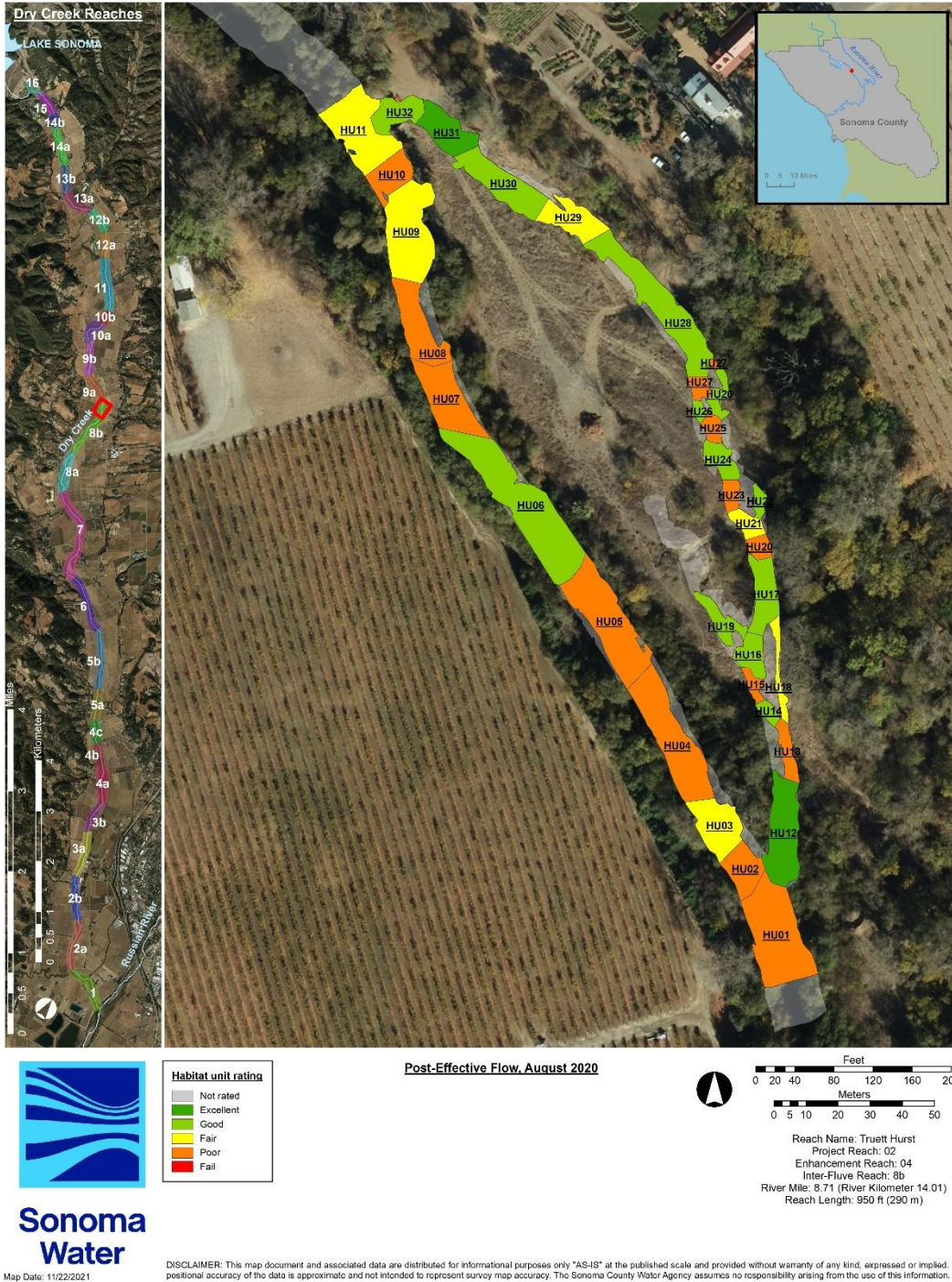


Figure 43. Habitat unit ratings for the Truett Hurst enhancement reach, August 2020.

Table 25. Post-effective flow average feature, average habitat unit, site, and reach ratings for the Truett Hurst enhancement reach, August 2020.

	Project Reach	2	2	2	2	2
	Enhancement Reach	4	4	4	4	4
	ENHANCEMENT REACH NAME	TH	TH	TH	TH	TH
	mmddyy	81820	81820	81820	81820	81820
	Survey Type	PEF	PEF	PEF	PEF	PEF
	PROJECT SITE NUMBER	1	2	3	4	5
	Project Site Type	MainChan	SideChan	SC Alcove	SC Alcove	SC Bank FP
	PROJECT SITE NUMBER	1	2	3	4	5
SITE AVERAGE FEATURE RATING	Site average feature quantitative rating (out of 15; bold indicates excluded from site rating)	0	12	6	11	12
	Site average feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3), Not rated (not used to rate site)	Not rated	Excellent	Fair	Good	Excellent
SITE AVERAGE HABITAT UNIT RATING	Site average habitat unit quantitative rating (out of 35; bold indicates excluded from site rating)	14	19	24	21	19
	Site average qualitative rating Excellent (>=28), Good (>=21), Fair(>=14), Poor (>=7), Fail (<7), Not rated (not used to rate site)	Fair	Fair	Good	Good	Fair
SITE RATING	Site quantitative rating (sum of site average feature and habitat unit ratings) (out of 50; bold indicates rating excludes feature or habitat unit rating and scoring out of 15 or 35)	14	32	30	32	31
	Site qualitative rating: Excellent (>=40, 28), Good (>=30, 21), Fair(>=20, 14), Poor (>=10, 7), Fail (<10, 7)	Fair	Good	Good	Good	Good
ENHANCEMENT REACH RATING	ENHANCEMENT REACH NAME	TH				
	Enhancement reach quantitative rating (average of site ratings) (out of 47)	28				
	Enhancement reach qualitative rating: Excellent (>=38), Good (>=28), Fair(>=19), Poor (>=9), Fail (<9)	Good				

Truett Hurst Enhancement Reach

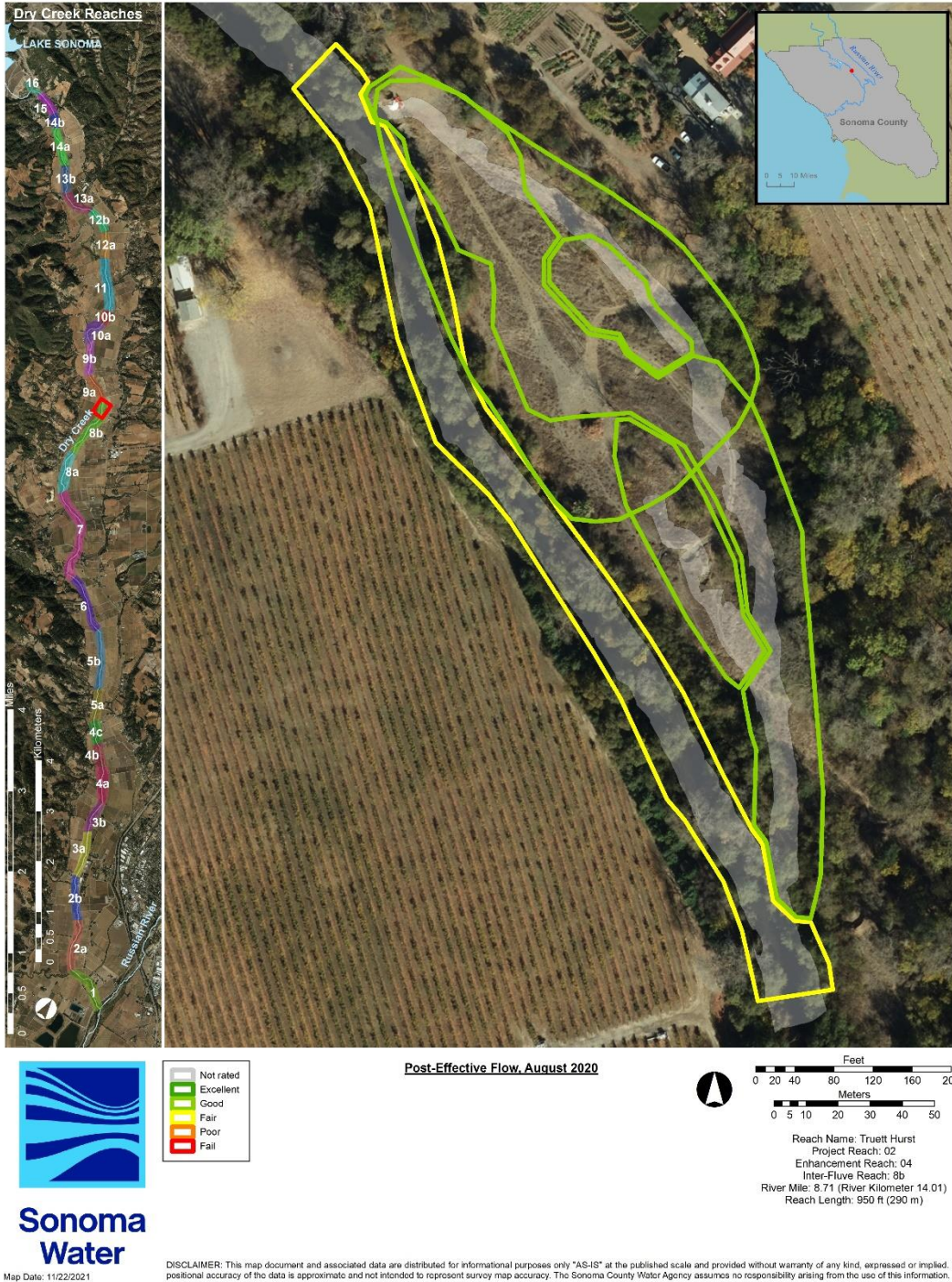


Figure 44. Post-effective flow site ratings for the Truett Hurst enhancement reach, August 2020.

Truett Hurst Enhancement Reach



Figure 45. Post-effective flow reach rating for the Truett Hurst enhancement reach, August 2020.

Feature and Habitat Unit Checklists

Table 26. Adaptive Management Plan targeted checklist for the Truett Hurst enhancement reach, August 2020.

Project Reach	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Enhancement Reach	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
Colloquial Name	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	
mmdyyy	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	
Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	
Project Site Number	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Project Site Type	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	
Project Feature Number	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	S2-01	S2-02	S2-03
Feature Type Code	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	BCW	HW	HW
Habitat Unit	HU01	HU02	HU03	HU04	HU05	HU06	HU07	HU08	HU09	HU10	HU11	HU15	HU23	HU16	HU25	HU12	HU12	HU12	HU12	
Habitat Type	Flatwater	Riffle	Pool	Riffle	Flatwater	Pool	Riffle	Pool	Pool	Riffle	Flatwater	Riffle	Riffle	Pool	Riffle	Pool	Riffle	Pool	Pool	
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	GOOD	GOOD	GOOD
5a. Are problems with the feature visible?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NO	NO	NO
6a. Is the feature still in its original location?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	YES	YES	YES
6b. Is the feature still in its original position?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	YES	YES	YES
6d. Is the feature still in its original orientation?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	YES	YES	YES
8. If an objective, did the feature create the targeted instream habitat type?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	YES	YES	YES
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NO	NO	NO
11e. % Area of habitat unit within 0.5 -2.0 ft depth	67%	79%	41%	79%	74%	25%	82%	60%	36%	72%	61%	37%	23%	56%	12%	43%	43%	43%	43%	43%
11f. % Area of habitat unit within 2.0 -4.0 ft depth	24%	13%	50%	0%	12%	38%	7%	27%	30%	0%	28%	0%	0%	6%	0%	42%	42%	42%	42%	42%
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	1	2	2	1	1	3	2	1	3	2	1	1	2	3	1	3	1	3	3	3
15. Percent of habitat unit covered by shelter: %	10	20	25	5	10	60	20	10	15	20	25	20	15	30	10	70	70	70	70	70
17a. If an objective, did the feature increase instream shelter rating?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	YES	YES	YES
17b. a. Calculate the shelter rating for the habitat unit: 0-300	10	40	50	5	10	180	40	10	45	40	35	20	30	90	10	210	210	210	210	210
19a. If an objective, did the feature increase LWD count in the habitat unit?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	YES	NO	NO
21a. If an objective, did the feature lead to the targeted channel conditions?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	YES	YES	YES
25. Did the feature achieve the targeted velocity?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	YES	YES	YES
28. Percent of habitat unit within targeted velocity (see above): (%)	24%	14%	35%	13%	13%	49%	19%	19%	42%	18%	21%	29%	28%	76%	29%	94%	94%	94%	94%	94%
36e. % habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	16%	8%	17%	0%	2%	18%	9%	17%	18%	2%	12%	3%	5%	46%	0%	39%	39%	39%	39%	39%
36f. % habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	1%	0%	9%	0%	0%	16%	1%	0%	10%	0%	0%	0%	0%	6%	0%	41%	41%	41%	41%	41%
FEATURE NUMBER																				
HABITAT UNIT NUMBER																				
	HU01	HU02	HU03	HU04	HU05	HU06	HU07	HU08	HU09	HU10	HU11	HU15	HU23	HU16	HU25	HU12	HU12	HU12	HU12	
SITE NUMBER																				
	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	
ENHANCEMENT REACH NAME																				
	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	
4. Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	4
5a. Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
6a. Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
6b. Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
6d. Is the feature still in its original orientation? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
8. If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
9. Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
11e. % area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	4	4	4	4	2	4	4	3	4	4	3	2	4	1	4	4	4	4	
11f. % area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	2	1	4	0	1	3	0	2	3	0	2	0	0	0	0	4	4	4	4	
14. Instream shelter value in the habitat unit: 0, 1, 2, 3 (3 = 5 pts, 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	3	4	4	3	3	5	4	3	5	4	3	3	4	5	3	5	5	5	5	
15. % hab unit covered by shelter (≥80 = 5pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)	1	2	2	0	1	4	2	1	2	2	2	2	1	2	1	4	4	4	4	
17a. If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
17b. a. Calculate the shelter rating for the habitat unit: 0-300	0	1	1	0	0	5	1	0	1	1	0	0	0	3	0	5	5	5	5	
19a. If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
21a. If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
25. Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
28. % area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	2	1	3	1	1	4	1	1	4	1	2	2	2	4	2	4	4	4	4	
36e. % area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	1	0	1	0	0	1	0	0	1	0	0	0	0	4	0	3	3	3	3	
36f. % area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	4	4	4	4	

Table 26. Adaptive Management Plan targeted checklist for the Truett Hurst enhancement reach, August 2020.

Project Reach	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Enhancement Reach	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Colloquial Name	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH
mmdyyy	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820
Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
Project Site Number	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Project Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
Project Feature Number	S2-04	S2-05	S2-06	S2-07	S2-08	S2-09	S2-10	S2-11	S2-12	S2-13	S2-14	S2-15	S2-16	S2-17	S2-18	S2-19	S2-20	S2-21	S2-21	S2-21
Feature Type Code	SCW	R	HW	HW	SCW	SCW	HW	HW	SCW	SCW	SCW	SCW	HW	HW	SCW	SCW	HW	R	HW	HW
Habitat Unit	HU12	HU13	HU14	HU18	HU17	HU17	HU17	HU20	HU21	HU22	HU22	HU24	HU24	HU24	HU24	HU26	HU26	HU27	HU27	HU02 D
Habitat Type	Pool	Riffle	Pool	Riffle	Pool	Pool	Pool	Riffle	Pool	Alcove	Alcove	Pool	Pool	Flatwater	Flatwater	Flatwater	Flatwater	Riffle	Pool	Dry
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	UNKN
5a. Are problems with the feature visible?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES
6a. Is the feature still in its original location?	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	UNKN
6b. Is the feature still in its original position?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	UNKN
6d. Is the feature still in its original orientation?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	UNKN
8. If an objective, did the feature create the targeted instream habitat type?	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	NO	YES	YES	YES	YES	YES	YES	YES	NO
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	NO	NO	NO	NO	NO	NO	NO	YES
11e. % Area of habitat unit within 0.5 -2.0 ft depth	43%	41%	71%	22%	71%	71%	71%	23%	58%	47%	47%	73%	73%	73%	39%	39%	39%	6%	0%	0%
11f. % Area of habitat unit within 2.0 -4.0 ft depth	42%	0%	0%	0%	5%	5%	5%	0%	1%	0%	0%	5%	5%	5%	0%	0%	0%	0%	0%	0%
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	3	1	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	0
15. Percent of habitat unit covered by shelter: %	70	25	45	45	40	40	40	30	20	90	90	25	25	25	50	50	15	0	0	0
17a. If an objective, did the feature increase instream shelter rating?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	NO
17b. a. Calculate the shelter rating for the habitat unit: 0-300	210	25	135	135	120	120	120	30	60	270	270	75	75	75	150	150	45	0	0	0
19a. If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
21a. If an objective, did the feature lead to the targeted channel conditions?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO
25. Did the feature achieve the targeted velocity?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO
28. Percent of habitat unit within targeted velocity (see above): (%)	94%	26%	48%	99%	75%	75%	75%	44%	75%	100%	100%	77%	77%	77%	71%	71%	41%	0%	0%	0%
36e. % habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	39%	8%	25%	22%	52%	52%	3%	36%	47%	53%	53%	53%	53%	24%	24%	24%	0%	0%	0%	0%
36f. % habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	41%	0%	0%	0%	3%	3%	3%	0%	1%	0%	0%	3%	3%	3%	0%	0%	0%	0%	0%	0%
FEATURE NUMBER	S2-04	S2-05	S2-06	S2-07	S2-08	S2-09	S2-10	S2-11	S2-12	S2-13	S2-14	S2-15	S2-16	S2-17	S2-18	S2-19	S2-20	S2-21	S2-21	S2-21
HABITAT UNIT NUMBER	HU12	HU13	HU14	HU18	HU17	HU17	HU17	HU20	HU21	HU22	HU22	HU24	HU24	HU24	HU24	HU26	HU26	HU27	HU27	HU02 D
SITE NUMBER	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
ENHANCEMENT REACH NAME	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH
4. Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	4	4	4	4	4	4	4	4	4	4	3	4	4	4	4	4	4	4	4	0
5a. Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	0
6a. Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0
6b. Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
6d. Is the feature still in its original orientation? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
8. If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	0	1	0	1	1	1	1	1	1	1	0
9. Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	0
11e. % area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	4	4	2	4	4	4	2	4	4	4	4	4	4	3	3	0	0	0	0
11f. % area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14. Instream shelter value in the habitat unit: 0, 1, 2, 3 (3 = 5 pts; 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	5	3	5	5	5	5	5	3	5	5	5	5	5	5	5	5	5	5	5	0
15. % hab unit covered by shelter (≥80 = 5pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)	4	2	3	3	3	3	3	2	5	5	2	2	2	2	3	3	1	0	0	0
17a. If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0
17b. a. Calculate the shelter rating for the habitat unit: 0-300	5	0	4	4	4	4	4	0	2	5	5	2	2	2	5	5	1	0	0	0
19a. If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
21a. If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
25. Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
28. % area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	0
36e. % area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	3	0	2	2	4	4	4	0	3	4	4	4	4	4	2	2	0	0	0	0
36f. % area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 26. Adaptive Management Plan targeted checklist for the Truett Hurst enhancement reach, August 2020.

Project Reach	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Enhancement Reach	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Colloquial Name	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH
mmdyyy	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820
Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
Project Site Number	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Project Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
Project Feature Number	S2-22	S2-23	S2-24	S2-25	S2-26	S2-27	S2-28	S2-29	S2-30	S2-31	S2-32	S2-33	S2-34	S2-35	S2-36	S2-37A	S2-37B	S2-37C	S2-37C	S2-37C
Feature Type Code	FW	SCW	SCW	HW	R	HW	HW	HW	HW	FW	HW	FW	SCW	SCW	SCW	ISW	ISW	ISW	ISW	ISW
Habitat Unit	HU02_D	HU02_D	HU02_D	HU02_D	HU02_D	HU02_D	HU02_D	HU30	HU02_D	HU02_D	HU30	HU02_D	HU30	HU31	HU31	HU31	HU02_D	HU32	HU32	HU32
Habitat Type	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Pool	Dry	Dry	Pool	Dry	Pool	Pool	Pool	Pool	Dry	Flatwater	Flatwater	Flatwater
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	GOOD	GOOD	UNKN	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD
5a. Are problems with the feature visible?	YES	YES	YES	YES	YES	YES	YES	NO	YES	NO	YES	NO	YES	NO	NO	NO	NO	NO	NO	NO
6a. Is the feature still in its original location?	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	YES	UNKN	YES	UNKN	YES	YES	YES	YES	YES	YES	YES	YES	YES
6b. Is the feature still in its original position?	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	NO	YES	UNKN	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES
6d. Is the feature still in its original orientation?	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	YES	YES	UNKN	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES
8. If an objective, did the feature create the targeted instream habitat type?	NO	NO	NO	NO	NO	NO	NO	YES	NO	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	YES	YES	YES	YES	YES	YES	YES	NO	YES	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO
11e. % Area of habitat unit within 0.5 -2.0 ft depth	0%	0%	0%	0%	0%	0%	0%	63%	0%	0%	63%	0%	63%	0%	63%	46%	46%	0%	74%	74%
11f. % Area of habitat unit within 2.0 -4.0 ft depth	0%	0%	0%	0%	0%	0%	0%	20%	0%	0%	20%	0%	20%	0%	20%	32%	32%	0%	10%	10%
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	0	0	0	0	0	0	0	3	0	0	3	0	3	0	3	3	3	0	3	3
15. Percent of habitat unit covered by shelter: %	0	0	0	0	0	0	0	30	0	0	30	0	30	0	30	35	35	0	35	35
17a. If an objective, did the feature increase instream shelter rating?	NO	NO	NO	NO	NO	NO	NO	YES	NO	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES
17b. a. Calculate the shelter rating for the habitat unit: 0-300	0	0	0	0	0	0	0	90	0	0	90	0	90	0	90	105	105	0	105	105
19a. If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	YES	YES	YES
21a. If an objective, did the feature lead to the targeted channel conditions?	NO	NO	NO	NO	NO	NO	NO	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
25. Did the feature achieve the targeted velocity?	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES
28. Percent of habitat unit within targeted velocity (see above): (%)	0%	0%	0%	0%	0%	0%	0%	86%	0%	0%	86%	0%	86%	0%	86%	99%	99%	0%	83%	83%
36e. % habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	0%	0%	0%	0%	0%	0%	0%	51%	0%	0%	51%	0%	51%	0%	51%	46%	46%	0%	61%	61%
36f. % habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	0%	0%	0%	0%	0%	0%	19%	0%	0%	19%	0%	19%	0%	19%	32%	32%	0%	8%	8%
FEATURE NUMBER	S2-22	S2-23	S2-24	S2-25	S2-26	S2-27	S2-28	S2-29	S2-30	S2-31	S2-32	S2-33	S2-34	S2-35	S2-36	S2-37A	S2-37B	S2-37C	S2-37C	S2-37C
HABITAT UNIT NUMBER	HU02_D	HU02_D	HU02_D	HU02_D	HU02_D	HU02_D	HU02_D	HU30	HU02_D	HU02_D	HU30	HU02_D	HU30	HU31	HU31	HU02_D	HU32	HU32	HU32	HU32
SITE NUMBER	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
ENHANCEMENT REACH NAME	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH
4. Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	0	0	0	0	0	0	4	4	0	4	4	4	4	4	4	4	4	4	4	4
5a. Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	0	0	0	0	0	0	0	1	0	1	0	1	1	0	1	1	1	1	1	1
6a. Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1
6b. Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	1	0	1	0	1	1	0	1	1	1	1	1	1
6d. Is the feature still in its original orientation? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1
8. If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	1	0	1	1	0	1	1	1	1	1	1	1	1
9. Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	0	0	0	0	0	0	0	1	0	1	1	0	1	1	1	1	1	1	1	1
11e. % area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	0	0	4	0	0	4	0	4	0	4	4	4	0	4	4
11f. % area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	0	0	2	0	0	2	0	2	0	2	3	3	0	1	1
14. Instream shelter value in the habitat unit: 0, 1, 2, 3 (3 = 5 pts, 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	0	0	0	0	0	0	0	5	0	0	5	0	5	0	5	5	5	0	5	5
15. % hab unit covered by shelter (≥80 = 5pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)	0	0	0	0	0	0	0	2	0	0	2	0	2	0	2	2	2	0	2	2
17a. If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	1	0	1	1	0	1	1	1	1	1	1	1	1
17b. a. Calculate the shelter rating for the habitat unit: 0-300	0	0	0	0	0	0	0	3	0	0	3	0	3	0	3	4	4	0	4	4
19a. If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	1
21a. If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1
25. Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	1	0	1	1	0	1	1	1	1	1	1	1	1
28. % area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	0	0	4	0	0	4	0	4	0	4	4	4	0	4	4
36e. % area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	0	0	4	0	0	4	0	4	0	4	4	4	0	4	4
36f. % area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	0	0	1	0	0	1	0	1	0	1	3	3	0	0	0

Table 26. Adaptive Management Plan targeted checklist for the Truett Hurst enhancement reach, August 2020.

Project Reach	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Enhancement Reach	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Colloquial Name	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH
mmdyyy	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820
Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
Project Site Number	2	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	5	5
Project Site Type	SideChan	SC Alcove	SC Alcove	SC Alcove	SC Alcove	SC Alcove	SC Alcove	SC Alcove	SC Alcove	SC Alcove	SC Alcove	SC Alcove	SC Alcove	SC Alcove	SC Alcove	SC Alcove	SC Alcove	SC Bank FP	SC Bank FP
Project Feature Number	S2-38	S3-01	S3-02	S3-03	S3-04	S3-05	S3-06	S3-07	S4-01	S4-02	S4-03	S4-04	S4-05	S4-06	S4-07	S4-08	NA	NA	NA
Feature Type Code	R	BCW	HW	BCW	HW	BCW	HW	FW	BCW	HW	BCW	HW	HW	HW	HW	HW	FW	NA	NA
Habitat Unit	HU32	HU16 2	HU19	HU19	HU03 D	HU03 D	HU03 D	HU03 D	HU28 2	HU28 2	HU04 D	HU28 2	HU04 D	HU28 2	HU04 D	HU04 D	HU29	HU30 2	HU30 2
Habitat Type	Flatwater	Pool	Alcove	Alcove	Dry	Dry	Dry	Dry	Pool	Pool	Dry	Pool	Dry	Pool	Dry	Dry	Riffle	Pool	Pool
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	FAIL	GOOD	GOOD	UNKN	FAIR	UNKN	UNKN	UNKN	GOOD	UNKN	UNKN	GOOD	UNKN	GOOD	UNKN	GOOD	NA	NA	NA
5a. Are problems with the feature visible?	YES	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	NA	NA
6a. Is the feature still in its original location?	YES	YES	YES	YES	YES	YES	UNK	UNK	YES	UNK	UNK	YES	UNK	YES	UNK	YES	UNK	YES	NA
6b. Is the feature still in its original position?	YES	YES	YES	NO	NO	NO	UNK	UNK	NO	UNK	UNK	YES	UNK	YES	UNK	YES	UNK	YES	NA
6d. Is the feature still in its original orientaton?	YES	YES	YES	UNK	UNK	UNK	UNK	UNK	YES	UNK	UNK	YES	UNK	YES	UNK	YES	UNK	YES	NA
8. If an objective, did the feature create the targeted instream habitat type?	NO	YES	YES	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	YES	NO	YES	NO	YES	NA
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	YES	NO	NO	YES	YES	YES	YES	YES	NO	YES	YES	NO	YES	NO	YES	NO	YES	NO	NA
11e. % Area of habitat unit within 0.5 -2.0 ft depth	74%	56%	56%	56%	0%	0%	0%	0%	61%	61%	0%	61%	0%	61%	0%	0%	0%	26%	63%
11f. % Area of habitat unit within 2.0 -4.0 ft depth	10%	6%	3%	3%	0%	0%	0%	0%	1%	1%	0%	1%	0%	1%	0%	0%	0%	0%	20%
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	3	3	3	3	0	0	0	0	3	3	0	3	0	3	0	0	0	3	3
15. Percent of habitat unit covered by shelter: %	35	30	50	50	0	0	0	0	30	30	0	30	0	30	0	0	0	35	30
17a. If an objective, did the feature increase instream shelter rating?	YES	YES	YES	NO	NO	NO	NO	NO	YES	NO	NO	YES	NO	YES	NO	NO	NO	NA	NA
17b. a. Calculate the shelter rating for the habitat unit: 0-300	105	90	150	150	0	0	0	0	90	90	0	90	0	90	0	0	105	90	90
19a. If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NA	NA
21a. If an objective, did the feature lead to the targeted channel conditions?	NO	YES	YES	NO	NO	NO	NO	NO	YES	NO	NO	YES	NO	YES	NO	YES	NO	NO	NA
25. Did the feature achieve the targeted velocity?	NO	YES	YES	NO	NO	NO	NO	NO	YES	NO	NO	YES	NO	NO	YES	NO	NO	NO	NA
28. Percent of habitat unit within targeted velocity (see above): (%)	83%	76%	100%	100%	0%	0%	0%	0%	71%	71%	0%	71%	0%	71%	0%	0%	48%	86%	86%
36e. % habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	61%	46%	56%	56%	0%	0%	0%	0%	37%	37%	0%	37%	0%	37%	0%	0%	12%	51%	51%
36f. % habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	8%	6%	3%	3%	0%	0%	0%	0%	1%	1%	0%	1%	0%	1%	0%	0%	0%	0%	19%
FEATURE NUMBER																			
HABITAT UNIT NUMBER																			
	S2-38	S3-01	S3-02	S3-03	S3-04	S3-05	S3-06	S3-07	S4-01	S4-02	S4-03	S4-04	S4-05	S4-06	S4-07	S4-08	NA	NA	NA
	HU32	HU16 2	HU19	HU19	HU03 D	HU03 D	HU03 D	HU03 D	HU28 2	HU28 2	HU04 D	HU28 2	HU04 D	HU28 2	HU04 D	HU04 D	HU29	HU30 2	HU30 2
SITE NUMBER																			
	2	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	5	5	5
ENHANCEMENT REACH NAME																			
	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH
4. Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	1	4	4	0	3	0	0	0	4	0	0	4	0	4	0	4	0	4	0
5a. Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
6a. Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	0	0	1	0	0	1	0	1	0	1	0	1	0
6b. Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	1	1	1	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	0
6d. Is the feature still in its original orientaton? (YES = 1 pt, NO = 0 pt)	1	1	1	0	0	0	0	0	1	0	0	1	0	1	0	1	0	1	0
8. If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	0	1	1	0	0	0	0	0	1	0	0	0	0	1	0	1	0	1	0
9. Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	0	1	1	0	0	0	0	0	1	0	0	1	0	1	0	1	0	1	0
11e. % area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	4	4	4	0	0	0	0	4	4	0	4	0	4	0	0	0	2	4
11f. % area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
14. Instream shelter value in the habitat unit: 0, 1, 2, 3 (3 = 5 pts; 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	5	5	5	5	0	0	0	0	5	5	0	5	0	5	0	0	0	5	5
15. % hab unit covered by shelter (≥80 = 5pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)	2	2	3	3	0	0	0	0	2	2	0	2	0	2	0	0	0	2	2
17a. If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	1	1	0	0	0	0	0	1	0	0	1	0	1	0	0	0	0	0
17b. a. Calculate the shelter rating for the habitat unit: 0-300	4	3	5	5	0	0	0	0	3	3	0	3	0	3	0	0	4	3	3
19a. If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
21a. If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	0	1	1	0	0	0	0	0	1	0	0	1	0	1	0	0	0	0	0
25. Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	0	1	1	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
28. % area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	4	4	4	0	0	0	0	4	4	0	4	0	4	0	0	4	4	4
36e. % area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	4	4	4	0	0	0	0	3	3	0	3	0	3	0	0	1	4	4
36f. % area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1

Table 26. Adaptive Management Plan targeted checklist for the Truett Hurst enhancement reach, August 2020.

Project Reach	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Enhancement Reach	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Colloquial Name	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH
mmdyyy	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820
Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
Project Site Number	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Project Site Type	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP
Project Feature Number	NA	NA	NA	NA	NA	S5-01	S5-02	S5-03	S5-04	S5-05	S5-06	S5-07	S5-08	S5-09	S5-10	S5-11	S5-12	S5-13	S5-13	S5-13
Feature Type Code	NA	NA	NA	NA	NA	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW
Habitat Unit	HU10 2	HU11 2	HU27 2	HU31 2	HU32 2	HU05 D	HU05 D	HU05 D	HU05 D	HU05 D	HU05 D	HU05 D	HU05 D	HU05 D	HU05 D	HU05 D	HU05 D	HU05 D	HU05 D	HU05 D
Habitat Type	Rifle	Flatwater	Rifle	Pool	Flatwater	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	NA	NA	NA	NA	NA	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD
5a. Are problems with the feature visible?	NA	NA	NA	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
6a. Is the feature still in its original location?	NA	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6b. Is the feature still in its original position?	NA	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6d. Is the feature still in its original orientation?	NA	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
8. If an objective, did the feature create the targeted instream habitat type?	NA	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	NA	NA	NA	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
11e. % Area of habitat unit within 0.5 -2.0 ft depth	72%	61%	6%	46%	74%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
11f. % Area of habitat unit within 2.0 -4.0 ft depth	0%	28%	0%	32%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	2	1	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15. Percent of habitat unit covered by shelter: %	20	25	15	35	35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17a. If an objective, did the feature increase instream shelter rating?	NA	NA	NA	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
17b. a. Calculate the shelter rating for the habitat unit: 0-300	40	35	45	105	105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19a. If an objective, did the feature increase LWD count in the habitat unit?	NA	NA	NA	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
21a. If an objective, did the feature lead to the targeted channel conditions?	NA	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
25. Did the feature achieve the targeted velocity?	NA	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
28. Percent of habitat unit within targeted velocity (see above): (%)	18%	21%	41%	99%	83%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
36e. % habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	2%	12%	0%	46%	61%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
36f. % habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	0%	0%	32%	8%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
FEATURE NUMBER	NA	NA	NA	NA	NA	S5-01	S5-02	S5-03	S5-04	S5-05	S5-06	S5-07	S5-08	S5-09	S5-10	S5-11	S5-12	S5-13	S5-13	S5-13
HABITAT UNIT NUMBER	HU10 2	HU11 2	HU27 2	HU31 2	HU32 2	HU05 D	HU05 D	HU05 D	HU05 D	HU05 D	HU05 D	HU05 D	HU05 D	HU05 D	HU05 D	HU05 D	HU05 D	HU05 D	HU05 D	HU05 D
SITE NUMBER	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
ENHANCEMENT REACH NAME	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH
4. Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	0	0	0	0	0	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
5a. Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6a. Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6b. Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6d. Is the feature still in its original orientation? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8. If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
9. Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
11e. % area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	4	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11f. % area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	2	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14. Instream shelter value in the habitat unit: 0, 1, 2, 3 (3 = 5 pts; 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	4	3	5	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15. % hab unit covered by shelter (≥80 = 5pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)	2	2	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17a. If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17b. a. Calculate the shelter rating for the habitat unit: 0-300	1	0	1	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19a. If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21a. If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
25. Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
28. % area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	1	2	4	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36e. % area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	1	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36f. % area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 26. Adaptive Management Plan targeted checklist for the Truett Hurst enhancement reach, August 2020.

Project Reach	2	2	2	2	2	2	2	2	2	2	2	2
Enhancement Reach	4	4	4	4	4	4	4	4	4	4	4	4
Colloquial Name	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH
mmddyy	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820
Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
Project Site Number	5	5	5	5	5	5	5	5	5	5	5	5
Project Site Type	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP
Project Feature Number	S5-14	S5-15	S5-16	S5-17	S5-18	S5-20	S5-21	S5-22	S5-23	S5-24	S5-25	
Feature Type Code	FW	FW	FW	mental Large	bank Treatme	Willow Baffle	Willow Baffle	Willow Baffle	Willow Baffle	Willow Baffle	Willow Baffle	Willow Baffle
Habitat Unit	HU05 D	HU05 D	HU05 D	HU09 2	HU28	HU05 D	HU05 D	HU05 D	HU05 D	HU05 D	HU05 D	HU05 D
Habitat Type	Dry	Dry	Dry	Pool	Pool	Dry	Dry	Dry	Dry	Dry	Dry	Dry
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	GOOD	GOOD	GOOD	GOOD	FAIR	FAIR	GOOD	GOOD	GOOD	GOOD	GOOD
5a. Are problems with the feature visible?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
6a. Is the feature still in its original location?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6b. Is the feature still in its original position?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6d. Is the feature still in its original orientaton?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
8. If an objective, did the feature create the targeted instream habitat type?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
11e. % Area of habitat unit within 0.5 -2.0 ft depth	0%	0%	0%	36%	61%	0%	0%	0%	0%	0%	0%	0%
11f. % Area of habitat unit within 2.0 -4.0 ft depth	0%	0%	0%	30%	1%	0%	0%	0%	0%	0%	0%	0%
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	0	0	0	3	3	0	0	0	0	0	0	0
15. Percent of habitat unit covered by shelter: %	0	0	0	15	30	0	0	0	0	0	0	0
17a. If an objective, did the feature increase instream shelter rating?	NO	NO	NO	YES	YES	NO	NO	NO	NO	NO	NO	NO
17b. a. Calculate the shelter rating for the habitat unit: 0-300	0	0	0	45	90	0	0	0	0	0	0	0
19a. If an objective, did the feature increase LWD count in the habitat unit?	NO	YES	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO
21a. If an objective, did the feature lead to the targeted channel conditions?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
25. Did the feature achieve the targeted velocity?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
28. Percent of habitat unit within targeted velocity (see above): (%)	0%	0%	0%	42%	71%	0%	0%	0%	0%	0%	0%	0%
36e. % habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	0%	0%	0%	18%	37%	0%	0%	0%	0%	0%	0%	0%
36f. % habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	0%	0%	10%	1%	0%	0%	0%	0%	0%	0%	0%
	FEATURE NUMBER	S5-14	S5-15	S5-16	S5-17	S5-18	S5-20	S5-21	S5-22	S5-23	S5-24	S5-25
	HABITAT UNIT NUMBER	HU05 D	HU05 D	HU05 D	HU09 2	HU28	HU05 D	HU05 D	HU05 D	HU05 D	HU05 D	HU05 D
	SITE NUMBER	5	5	5	5	5	5	5	5	5	5	5
	ENHANCEMENT REACH NAME	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH
4. Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	4	4	4	4	4	3	3	4	4	4	4	4
5a. Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1
6a. Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1
6b. Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1
6d. Is the feature still in its original orientaton? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1
8. If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1
9. Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1
11e. % area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	3	4	0	0	0	0	0	0	0
11f. % area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	3	0	0	0	0	0	0	0	0
14. Instream shelter value in the habitat unit: 0, 1, 2, 3 (3 = 5 pts; 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	0	0	0	5	5	0	0	0	0	0	0	0
15. % hab unit covered by shelter (≥80 = 5pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)	0	0	0	1	2	0	0	0	0	0	0	0
17a. If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	0	0	0	1	1	0	0	0	0	0	0	0
17b. a. Calculate the shelter rating for the habitat unit: 0-300	0	0	0	1	3	0	0	0	0	0	0	0
19a. If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	1	0	1	0	0	0	0	0	0	0	0
21a. If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1
25. Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1
28. % area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	4	4	0	0	0	0	0	0	0
36e. % area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	1	3	0	0	0	0	0	0	0
36f. % area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0

Table 27. Adaptive Management Plan full checklist for the Truett Hurst enhancement reach, August 2020.

	2	2	2	2	2	2	2	2	2	2	2	2
Project Reach	2	2	2	2	2	2	2	2	2	2	2	2
Enhancement Reach	4	4	4	4	4	4	4	4	4	4	4	4
Colloquial Name	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH
mmddyy	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820	81820
Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
Project Site Number	5	5	5	5	5	5	5	5	5	5	5	5
Project Site Type	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP
Project Feature Number	S5-14	S5-15	S5-16	S5-17	S5-18	S5-20	S5-21	S5-22	S5-23	S5-24	S5-25	S5-25
Feature Type Code	FW	FW	FW	mental Large	bank Treatme	Willow Baffle	Willow Baffle	Willow Baffle	Willow Baffle	Willow Baffle	Willow Baffle	Willow Baffle
Habitat Unit	HU05 D	HU05 D	HU05 D	HU09 2	HU28	HU05 D	HU05 D	HU05 D	HU05 D	HU05 D	HU05 D	HU05 D
Habitat Type	Dry	Dry	Dry	Pool	Pool	Dry	Dry	Dry	Dry	Dry	Dry	Dry
1. Length of targeted treatment (ft)	40	40	40	130	290	50	50	50	50	50	50	50
2. Width of targeted treatment: (ft)	30	30	30	50	15	5	5	5	5	5	5	5
3. Estimate area of the targeted feature: (ft ²)	1200	1200	1200	6500	4350	250	250	250	250	250	250	250
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	GOOD	GOOD	GOOD	GOOD	FAIR	FAIR	GOOD	GOOD	GOOD	GOOD	GOOD
5a. Are problems with the feature visible?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
5b. Types: ANC, BBB, CRF, MAT, SHF, STR, SWA, UND, UNS, WSH, OTH, NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
6a. Is the feature still in its original location?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6b. Is the feature still in its original position?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6c. If yes: LBK, MDC, RBK, SPN, OTH	OTH	OTH	OTH	RBK	LBK	OTH	OTH	OTH	OTH	OTH	OTH	OTH
6d. Is the feature still in its original orientation?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6e. If yes: DNS, MUL, PRL, PRP, UPS, OTH	OTH	OTH	OTH	MUL	PRL	PRP	PRP	PRP	PRP	PRP	PRP	PRP
7. Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	DRY	DRY	DRY	POO	POO	DRY	DRY	DRY	DRY	DRY	DRY	DRY
8. If an objective, did the feature create the targeted instream habitat type?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
10. Mean water depth in habitat unit: ft	0.0	0.0	0.0	2.3	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11a. Maximum water depth in habitat unit: ft	0.0	0.0	0.0	5.2	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11b. Area of habitat unit within 0.5 -2.0 ft depth: (ft ²)	0.0	0.0	0.0	1502.0	2725.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11c. Area of habitat unit within 2.0 -4.0 ft depth: (ft ²)	0.0	0.0	0.0	1282.0	52.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11d. Area of habitat unit within 0.5-4.0 ft depth: (ft ²)	0.0	0.0	0.0	2784.0	2778.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11e. % Area of habitat unit within 0.5 -2.0 ft depth	0%	0%	0%	36%	61%	0%	0%	0%	0%	0%	0%	0%
11f. % Area of habitat unit within 2.0 -4.0 ft depth	0%	0%	0%	30%	1%	0%	0%	0%	0%	0%	0%	0%
11g. % Area of habitat unit within 0.5-4.0 ft depth	0%	0%	0%	66%	62%	0%	0%	0%	0%	0%	0%	0%
11h. If an objective, did the feature increase/decrease water depth in the treatment area?	NO	NO	NO	YES	YES	NO	NO	NO	NO	NO	NO	NO
12a. Targeted depth or range (ft) in habitat unit	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0
12b. Estimate area of feature within targeted depth or range ft ² :												
13. Were there any unintended effects of the feature on the water depth? If Y, comment.	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	0	0	0	3	3	0	0	0	0	0	0	0
15. Percent of habitat unit covered by shelter: %	0	0	0	15	30	0	0	0	0	0	0	0
16a. 1st dominant cover in habitat unit: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	NON	NON	NON	TVG	LWD	NON	NON	NON	NON	NON	NON	NON
16b. 2nd dominant in habitat unit: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	NON	NON	NON	SWD	TVG	NON	NON	NON	NON	NON	NON	NON
17a. If an objective, did the feature increase instream shelter rating?	NO	NO	NO	YES	YES	NO	NO	NO	NO	NO	NO	NO
17b. a. Calculate the shelter rating for the habitat unit: 0-300	0	0	0	45	90	0	0	0	0	0	0	0
18a. Large woody debris count in habitat unit: D >1', L 6-20'	0	0	0	4	0	0	0	0	0	0	0	0
18b. Large woody debris count in habitat unit: D >1', L >20'	0	0	0	0	0	0	0	0	0	0	0	0
19a. If an objective, did the feature increase LWD count in the habitat unit?	NO	YES	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO
19b. LWD recruitment mechanisms in habitat unit: ANC, EXC, EXH, INT, RPR, UNA, OTH	NR	NR	NR	NR	NON	NR	NR	NR	NR	NR	NR	NR
20. Current stream channel problems in the habitat unit: AGG, BRD, FLO, GRC, HDC, INC, NAR, SCU, STT, WID, NON, OTH	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
21a. If an objective, did the feature lead to the targeted channel conditions?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
21b. Overall Offchannel Condition (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB
21c. Outlet Conditions (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB
21d. Inlet Conditions (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB
22. Were there any unintended effects on the stream channel at the feature? If Y, comment.	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
23. If an objective, did the feature decrease/increase velocity in the treatment area?	NA	NA	NA	NA	DEC	NA	NA	NA	NA	NA	NA	NA
24. Targeted velocity/range in the habitat unit: (ft/sec)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
25. Did the feature achieve the targeted velocity?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
26a. Measured minimum velocity (ft/sec) in habitat unit	0	0	0	0	0	0	0	0	0	0	0	0
26b. Measured max velocity (ft/sec) in habitat unit	0.0	0.0	0.0	4.5	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26c. Measured mean velocity (ft/sec) in habitat unit	0.0	0.0	0.0	1.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27. Area of habitat unit within targeted velocity: (ft ²)	0.0	0.0	0.0	1756.8	3179.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28. Percent of habitat unit within targeted velocity (see above): (%)	0%	0%	0%	42%	71%	0%	0%	0%	0%	0%	0%	0%
29. Were there any unintended effects of feature on velocity? If Y, comment.	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
30a. 1st/2nd dominant substrate in habitat unit: BED, BOL, COB, GRV, SND, SLC, OTH	GRV	GRV	GRV	GRV	COB	GRV	GRV	GRV	GRV	GRV	GRV	GRV
30b. 2nd dominant substrate in habitat unit: BED, BOL, COB, GRV, SND, SLC, OTH	SND	SND	SND	SND	SND	SND	SND	SND	SND	SND	SND	SND
31. If an objective, did the feature achieve the targeted substrate composition?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
32. % Canopy Measurement:	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
33. Photopoint data collected: YES /NO	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
34. Temperature Profile: YES /NO	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
35. Dissolved Oxygen Profile: YES/NO	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
36a. Total habitat unit area where targeted depth, velocity and shelter criteria overlap	0.0	0.0	0.0	1162.4	1716.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36b. Total habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	0.0	0.0	0.0	752.4	1664.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36c. Total habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0.0	0.0	0.0	409.9	51.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36d. % habitat unit area where targeted depth, velocity and shelter criteria overlap	0%	0%	0%	27%	39%	0%	0%	0%	0%	0%	0%	0%
36e. % habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	0%	0%	0%	18%	37%	0%	0%	0%	0%	0%	0%	0%
36f. % habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	0%	0%	10%	1%	0%	0%	0%	0%	0%	0%	0%
37. Does this feature need: DEC, ENH, MNT, REP, NON, OTH	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
38. Are additional restoration treatments recommended at this site?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO

Van Alyea, June 2020

Depth and Velocity

Table 28. Areas and percentages of: wetted area, optimal depth and velocity, and optimal hydraulic habitat within the Van Alyea enhancement reach, June 2020.

Van Alyea Post-effective flow June 2020	Wetted area (ft ²)	0.5 – 2.0 ft	2.0 – 4.0 ft	Total	< 0.5 ft/s	0.5 – 2.0 ft < 0.5 ft/s	2.0 – 4.0 ft < 0.5 ft/s	Total
Main channel area	52,405	16,860	25,704	42,564	27,657	8,202	12,677	20,878
Main channel alcove area	20,733	4,870	7,664	12,534	20,733	4,870	7,664	12,534
Total area	73,138	21,730	33,368	55,098	48,390	13,071	20,341	33,413
Main channel % of wetted area	72%	32%	49%	81%	53%	16%	24%	40%
Main channel alcove % of wetted area	28%	23%	37%	60%	100%	23%	37%	60%
Total % of wetted area	100%	30%	46%	75%	66%	18%	28%	46%

Van Alyea Enhancement Reach

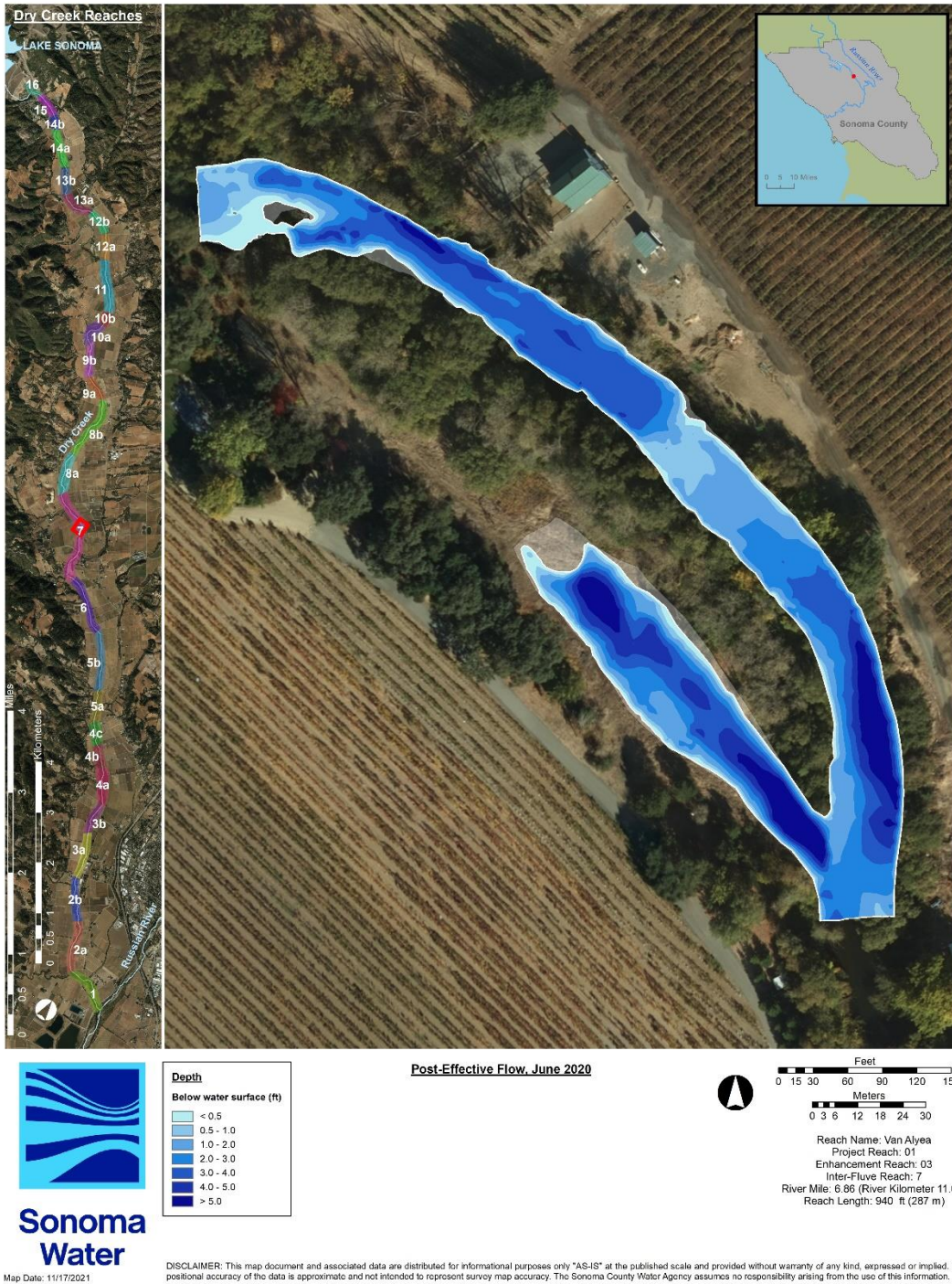


Figure 46. Measured water depth within the Van Alyea enhancement reach, June 2020.

Van Alyea Enhancement Reach

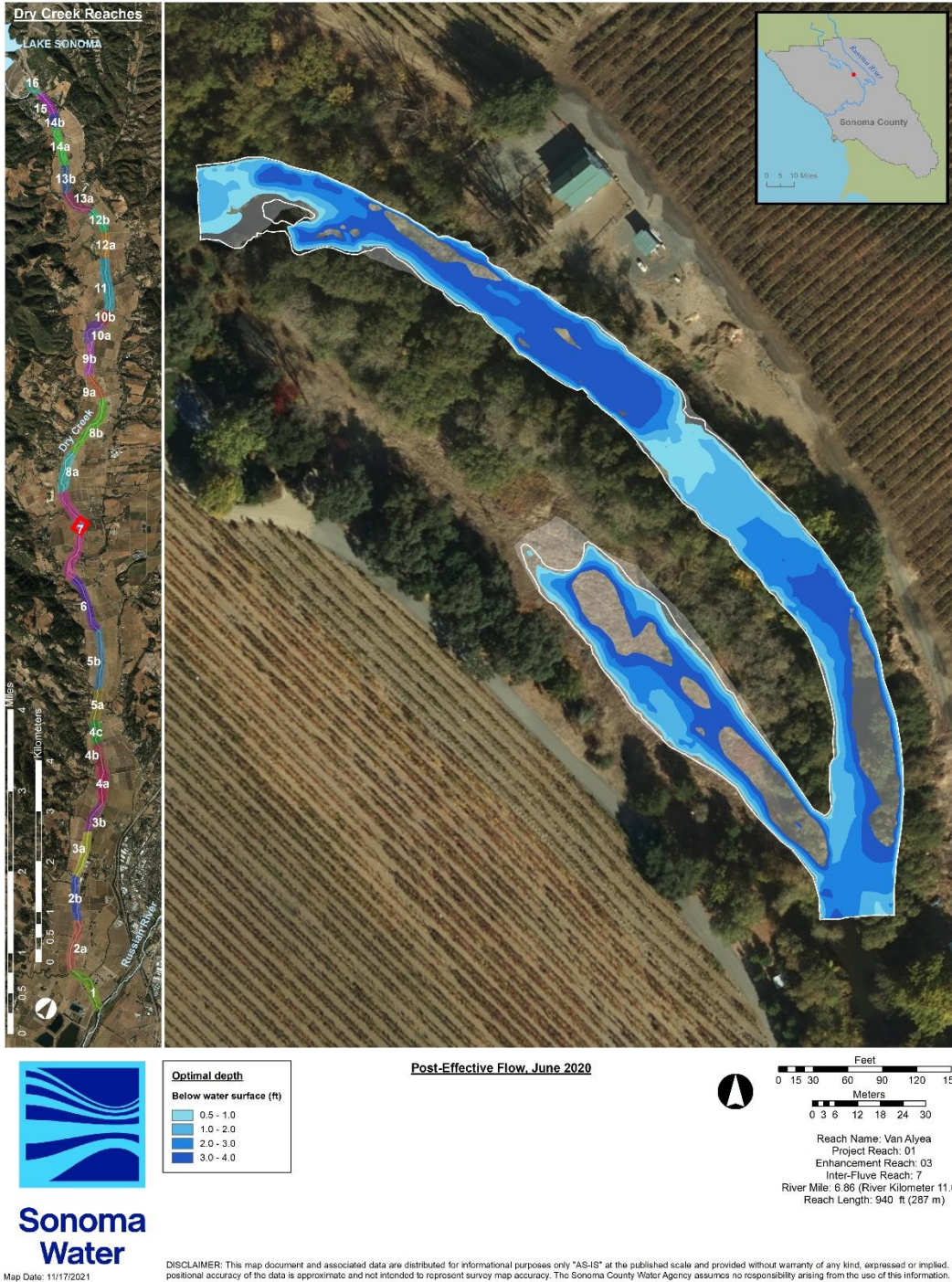


Figure 47. Optimal water depth for fry (0.5-2.0 ft) and parr (2.0-4.0 ft) within the Van Alyea enhancement reach, June 2020.

Van Alyea Enhancement Reach

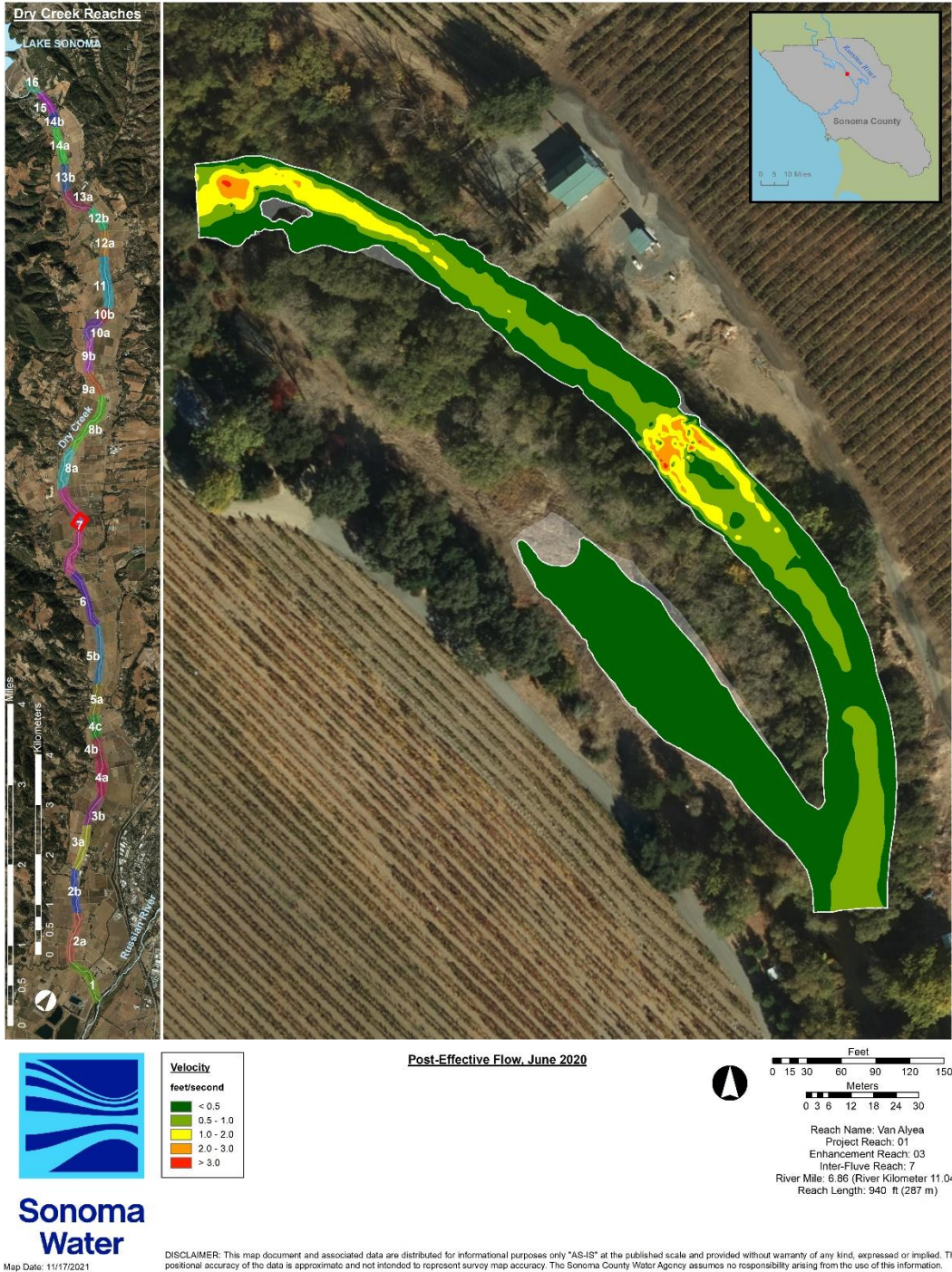


Figure 48. Measured water velocity within the Van Alyea enhancement reach, June 2020.

Van Alyea Enhancement Reach



Figure 49. Optimal water velocity for fry and parr (< 0.5 ft/s) within the Van Alyea enhancement reach, June 2020.

Van Alyea Enhancement Reach

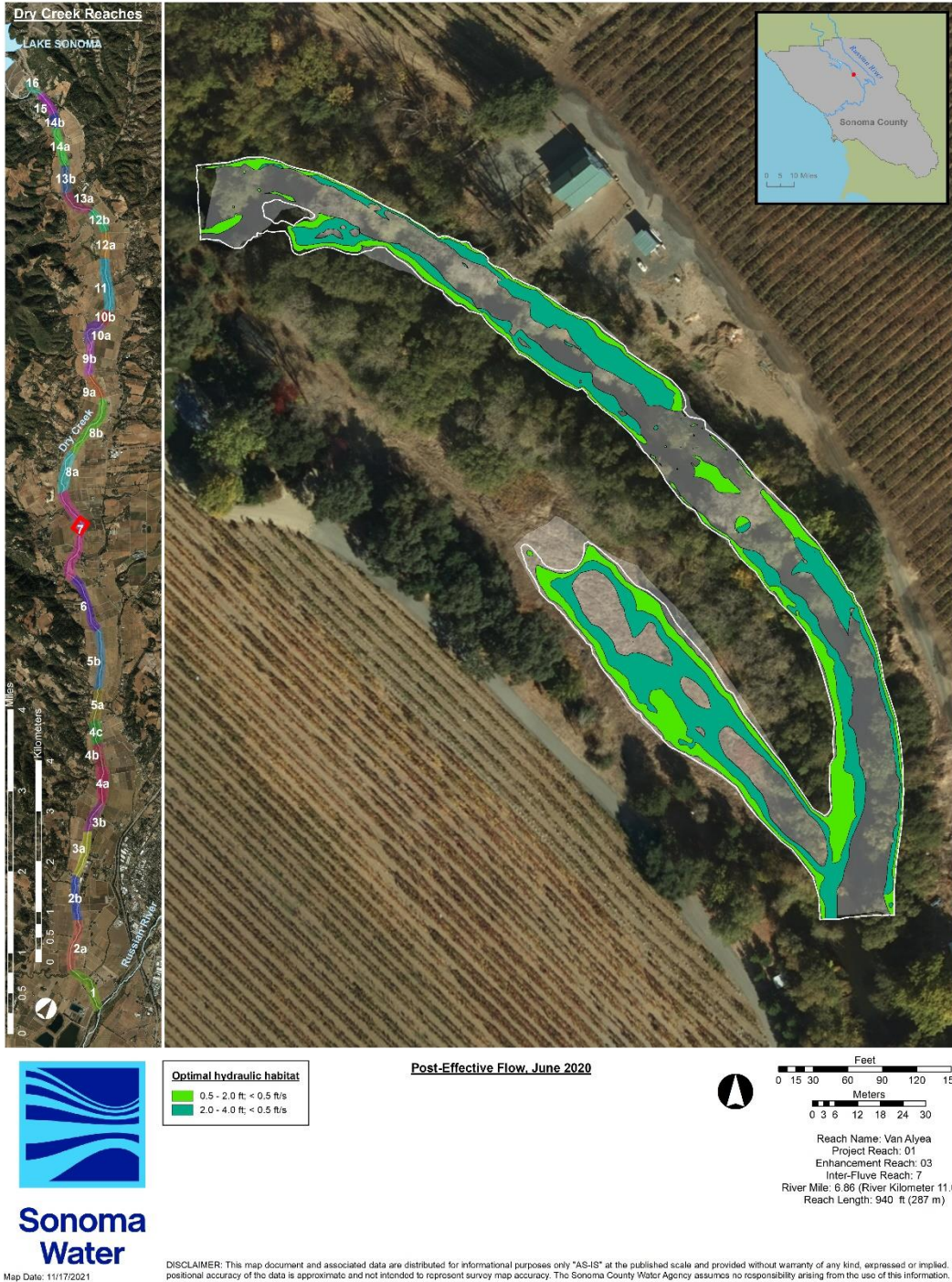


Figure 50. Optimal hydraulic habitat for fry (<0.5 ft/s, 0.5-2.0 ft) and parr (<0.5 ft/s, 2.0-4.0 ft) within the Van Alyea enhancement reach, June 2020.

Habitat Types and Shelter Values

Table 29. Habitat, types, shelter value, percent cover, and shelter score for habitat units within the Van Alyea enhancement reach, June 2020.

Habitat Unit #	Habitat Type	Shelter Value	Percent Cover	Shelter Score
HU01	Pool	3	30	90
HU02	Flatwater	3	15	45
HU03	Riffle	2	40	80
HU04	Pool	3	20	60
HU05	Flatwater	3	25	75
HU06	Pool	3	80	240
HU07	Riffle	2	35	70
HU08	Alcove	3	95	285
HU09	Flatwater	2	20	40
Pool: riffle	3:2 (1.50)			Avg = 109

Van Alyea Enhancement Reach

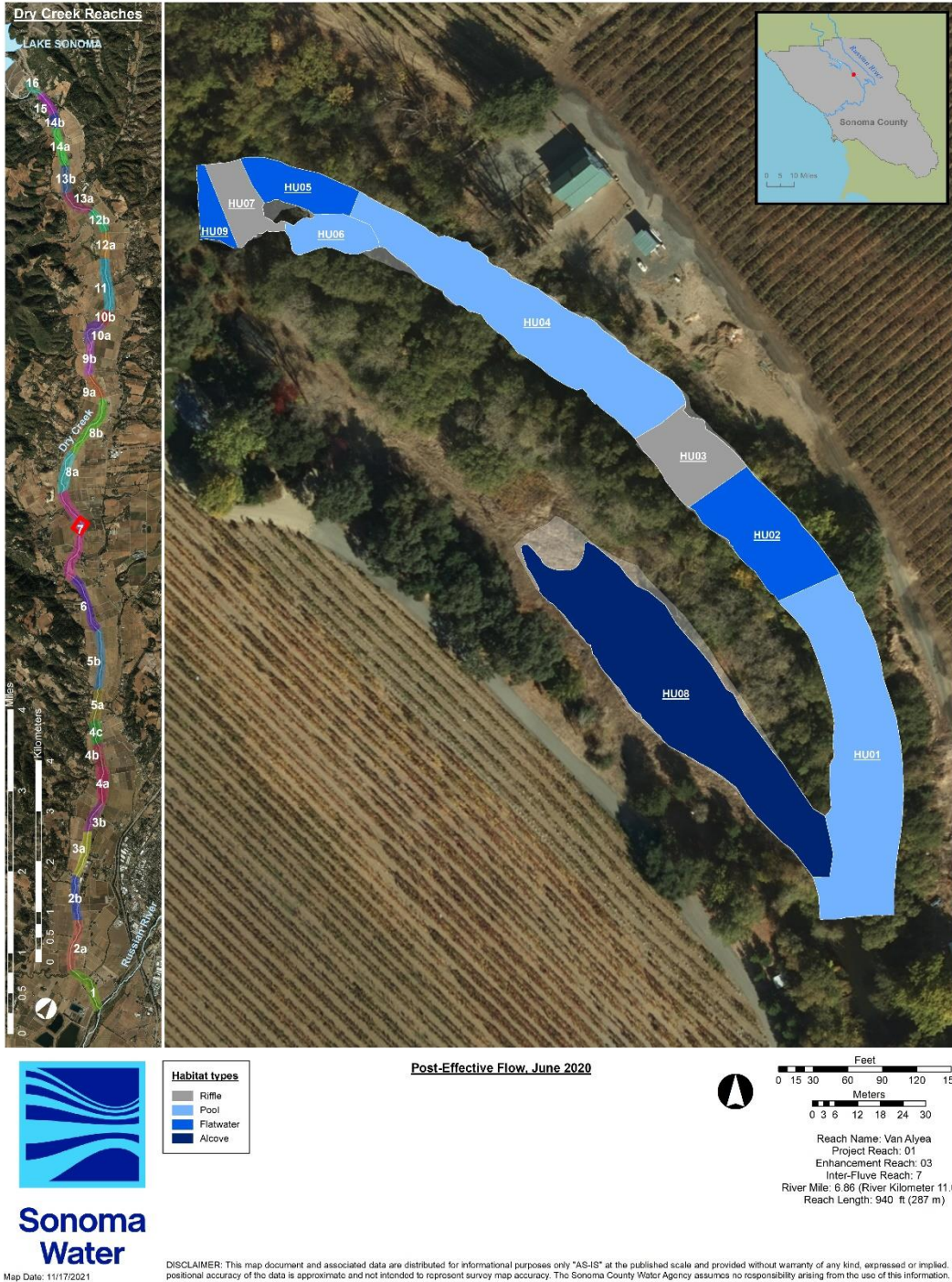


Figure 51. Habitat unit number and type within the Van Alyea enhancement reach, June 2020.

Van Alyea Enhancement Reach

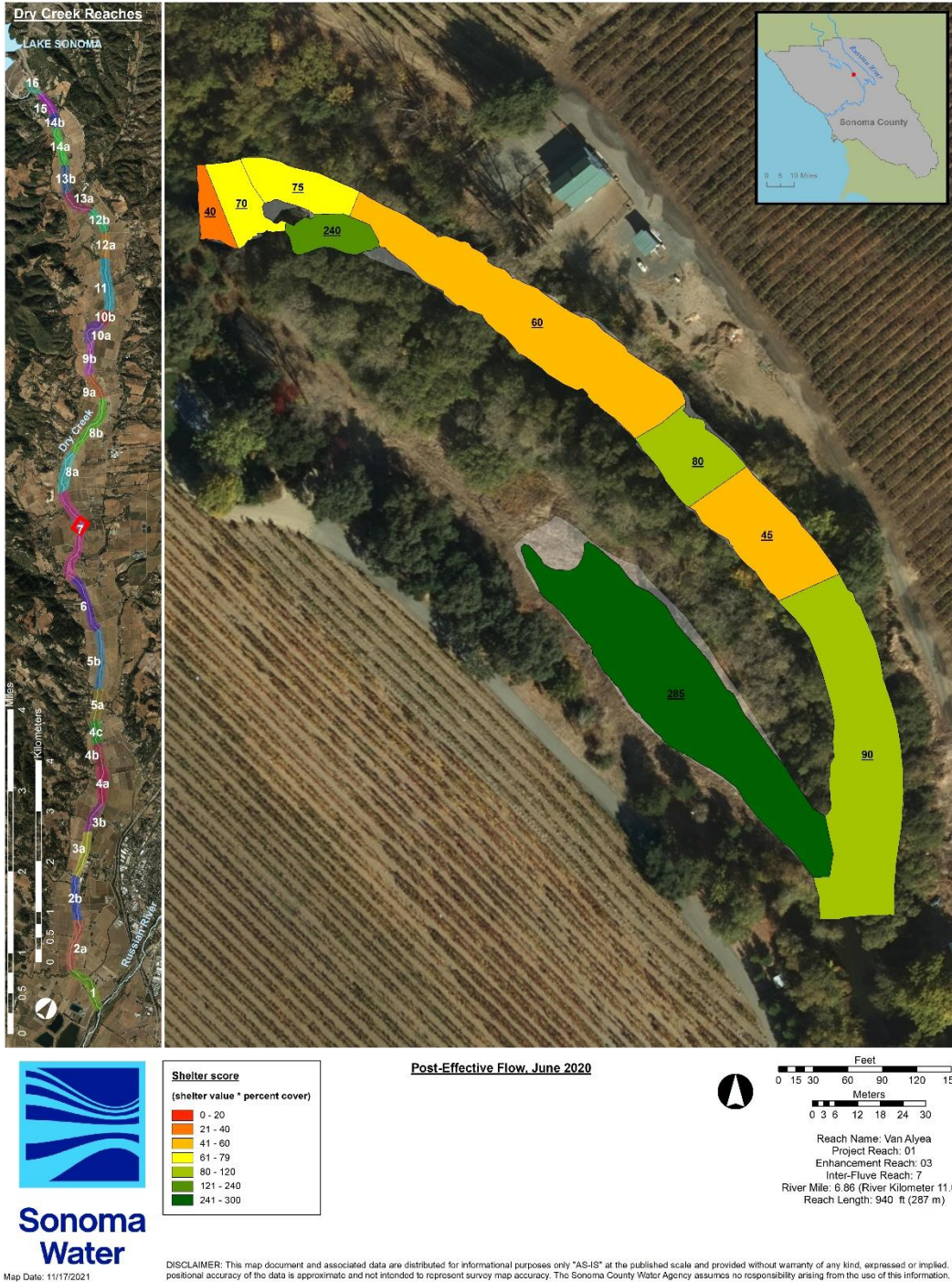


Figure 52. Habitat unit shelter scores within the Van Alyea enhancement reach, June 2020.

Feature, Habitat Unit, Site, and Reach Ratings

Table 30. Post-effective flow feature ratings for the Van Alyea enhancement reach June 2020.

Project Reach	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Enhancement Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Colloquial Name	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA
mmddy	60820	60820	60820	60820	60820	60820	60820	60820	60820	60820	60820	60820	60820	60820	60820	60820	60820	60820	60820	60820
Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
PROJECT SITE NUMBER	1	1	1	1	1	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3
Project Site Type	MainChan	MainChan	MainChan	MainChan	MainChan	MC Bank FP	MC Bank FP	MC Bank FP	MC Bank FP	MC Bank FP	MC Bank FP	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove
PROJECT FEATURE NUMBER	S1-01	S1-02	S1-03	S1-04	S1-05	S2-01	S2-02	S2-03	S2-04	S2-05	S2-06	S3-01	S3-02	S3-03	S3-04	S3-05	S3-06	S3-07	S3-07	
Feature Type Code	LWD	LWD	LWD	TER/FLP	RIF	Logjam	FPW	FPW	FPW	FPW	FPW	FPW	FPW	FPW	FPW	LWD	LWD	LWD	LWD	LWD
Habitat Unit	HU04	HU04	HU04	HU01	HU03	HU06 2	HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D
Habitat Type	Pool	Pool	Pool	Pool	Riffle	Pool	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	GOOD	GOOD	GOOD	GOOD	FAIR	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	FAIR	UNKN	FAIR	FAIR	FAIR
5a. Are problems with the feature visible?	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	YES	YES	YES
6a. Is the feature still in its original location?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6b. Is the feature still in its original position?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES
6d. Is the feature still in its original orientaton?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
8. If an objective, did the feature create the targeted instream habitat type?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	NO
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	YES
17a. If an objective, did the feature increase instream sheller rating?	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES
19a. If an objective, did the feature increase LWD count in the habitat unit?	YES	YES	NO	NO	NO	YES	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
21a. If an objective, did the feature lead to the targeted channel conditions?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	NO
25. Did the feature achieve the targeted velocity?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES
PROJECT FEATURE NUMBER	S1-01	S1-02	S1-03	S1-04	S1-05	S2-01	S2-02	S2-03	S2-04	S2-05	S2-06	S3-01	S3-02	S3-03	S3-04	S3-05	S3-06	S3-07	S3-07	
4. Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	4	4	4	4	4	3	4	4	4	4	4	4	4	4	3	0	3	3	3	3
5a. Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0
6a. Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6b. Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1
6d. Is the feature still in its original orientaton? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8. If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0
9. Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0
17a. If an objective, did the feature increase instream sheller rating? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0	1	1	1	1
19a. If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	1	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
21a. If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0
25. Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1
PROJECT FEATURE NUMBER	S1-01	S1-02	S1-03	S1-04	S1-05	S2-01	S2-02	S2-03	S2-04	S2-05	S2-06	S3-01	S3-02	S3-03	S3-04	S3-05	S3-06	S3-07	S3-07	
FEATURE RATING	Feature quantitative rating out of 15																			
	14	14	13	13	13	12	12	13	14	13	13	13	13	11	2	11	11	8		
	Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)																			
	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Good	Fail	Good	Good	Fair	

Table 30. Post-effective flow feature ratings for the Van Alyea enhancement reach June 2020.

Project Reach	1	1	1	1	1	1	1	1	1
Enhancement Reach	3	3	3	3	3	3	3	3	3
Colloquial Name	VA	VA	VA	VA	VA	VA	VA	VA	VA
mmddyy	60820	60820	60820	60820	60820	60820	60820	60820	60820
Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
PROJECT SITE NUMBER									
Project Site Type	3	3	3	3	3	3	3	3	3
PROJECT FEATURE NUMBER									
Feature Type Code	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove
Habitat Unit	S3-08	S3-09	S3-10	S3-11	S3-12	S3-13	S3-14	S3-15	S3-16
Habitat Type	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	Logjam
	HU08	HU08	HU08	HU08	HU08	HU08	HU08	HU08	HU08
	Alcove	Alcove	Alcove	Alcove	Alcove	Alcove	Alcove	Alcove	Alcove
4.	Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD
5a	Are problems with the feature visible?	NO	NO	NO	NO	NO	NO	NO	NO
6a	Is the feature still in its original location?	YES	YES	YES	YES	YES	YES	YES	YES
6b	Is the feature still in its original position?	YES	YES	YES	YES	YES	YES	YES	YES
6d	Is the feature still in its original orientation?	YES	YES	YES	YES	YES	YES	YES	YES
8.	If an objective, did the feature create the targeted instream habitat type?	YES	YES	YES	YES	YES	YES	YES	YES
9.	Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	NO	NO	NO	NO	NO	NO	NO
17a	If an objective, did the feature increase instream shelter rating?	YES	YES	YES	YES	YES	YES	YES	YES
19a	If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	NO	NO	NO	NO
21a	If an objective, did the feature lead to the targeted channel conditions?	YES	YES	YES	YES	YES	YES	YES	YES
25.	Did the feature achieve the targeted velocity?	YES	YES	YES	YES	YES	YES	YES	YES
PROJECT FEATURE NUMBER									
		S3-08	S3-09	S3-10	S3-11	S3-12	S3-13	S3-14	S3-15
4.	Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	4	4	4	4	4	4	4	4
5a	Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	1	1	1	1	1	1	1	1
6a	Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1
6b	Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1
6d	Is the feature still in its original orientation? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1
8.	If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1
9.	Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	1	1	1	1	1	1	1	1
17a	If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1
19a	If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0
21a	If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1
25.	Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1
PROJECT FEATURE NUMBER									
		S3-08	S3-09	S3-10	S3-11	S3-12	S3-13	S3-14	S3-15
FEATURE RATING	Feature quantitative rating out of 15	13	13	13	13	13	13	13	13
	Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent

Van Alyea Enhancement Reach

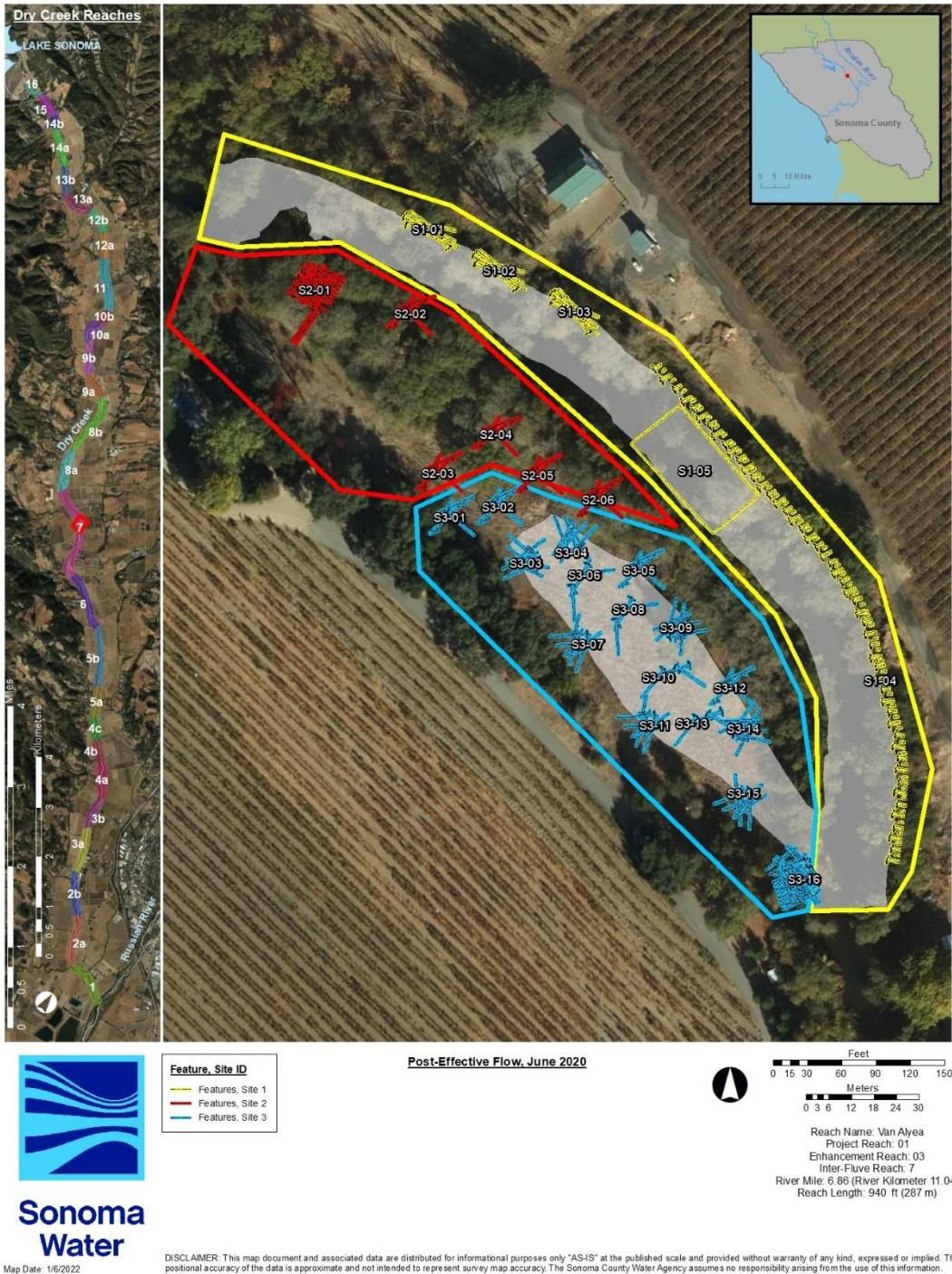


Figure 53. Enhancement sites and features within the Van Alyea enhancement reach, June 2020.

Van Alyea Enhancement Reach

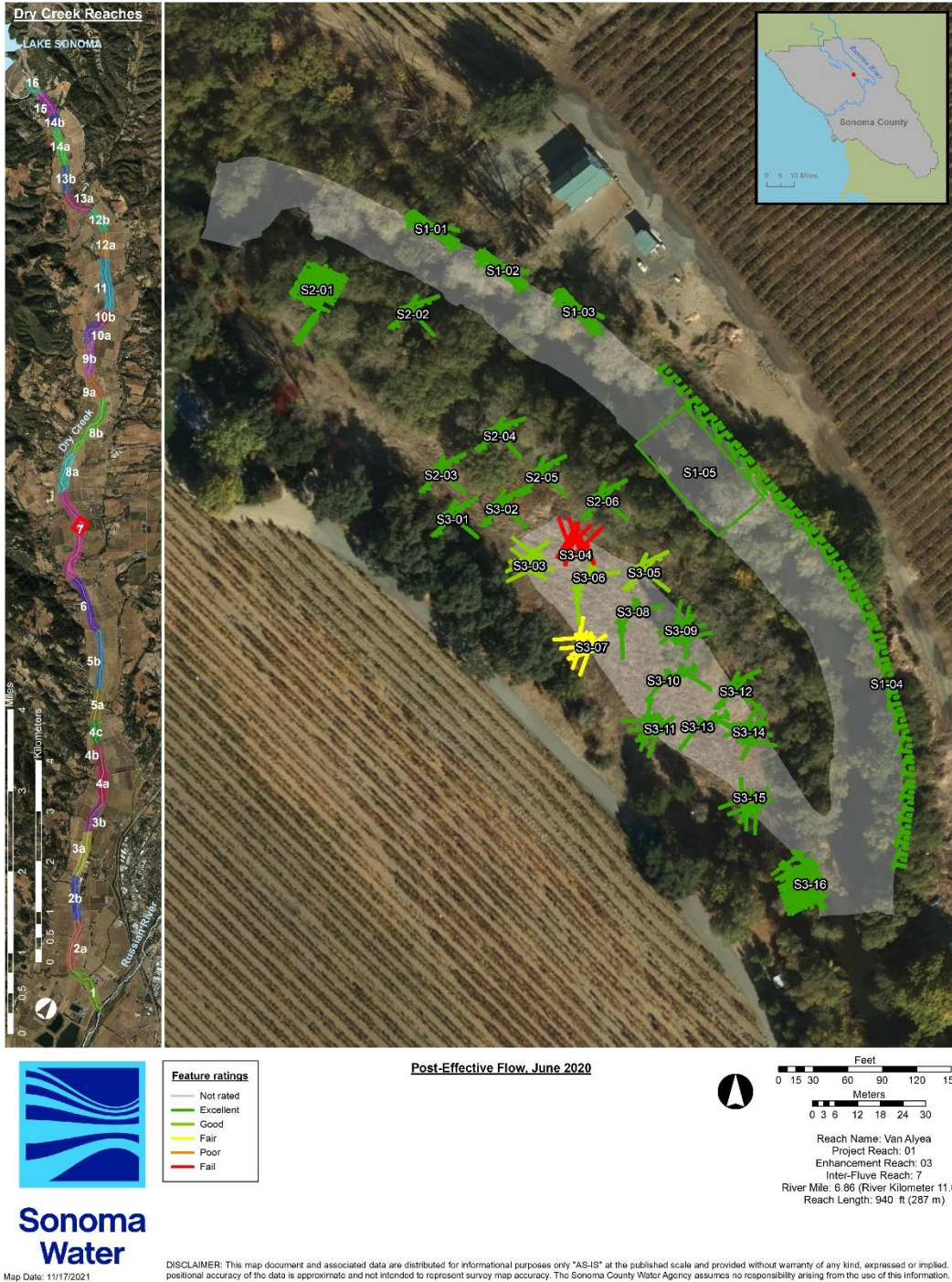


Figure 54. Feature ratings for the Van Alyea enhancement reach, June 2020.

Table 31. Post-effective flow habitat unit ratings for the Van Alyea enhancement reach June 2020.

Project Reach	1	1	1	1	1	1	1	1	1	1	1	1	1
Enhancement Reach	3	3	3	3	3	3	3	3	3	3	3	3	3
Colloquial Name	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA
nmddyy	60820	60820	60820	60820	60820	60820	60820	60820	60820	60820	60820	60820	60820
Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
HABITAT UNIT NUMBER	HU01	HU02	HU03	HU04	HU05	HU06	HU06 2	HU07	HU08	HU09	HU01 D	HU02 D	
Habitat Type	Pool	Flatwater	Riffle	Pool	Flatwater	Pool	Pool	Riffle	Alcove	Flatwater	Dry	Dry	
PROJECT SITE NUMBER	1	1	1	1	1	1	2	1	3	1	2	3	
Project Site Type	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MC Bank FP	MainChan	MC Alcove	MainChan	MC Bank FP	MC Alcove	
11e	% Area of habitat unit within 0.5 -2.0 ft depth	22%	51%	87%	12%	35%	28%	28%	56%	23%	79%	0%	0%
11f	% Area of habitat unit within 2.0 -4.0 ft depth	49%	44%	2%	75%	53%	53%	53%	0%	37%	0%	0%	0%
14.	Instream shelter value in the habitat unit : 0, 1, 2, 3	3	3	2	3	3	3	2	3	2	0	0	0
15.	Percent of habitat unit covered by shelter: %	30	15	40	20	25	80	35	95	20	0	0	0
17b	a. Calculate the shelter rating for the habitat unit : 0-300	90	45	80	60	75	240	240	70	285	40	0	0
28.	Percent of habitat unit within targeted velocity (see above): (%)	62%	41%	21%	59%	30%	88%	88%	43%	100%	34%	0%	0%
36e	% habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	19%	18%	12%	12%	13%	27%	27%	7%	23%	13%	0%	0%
36f	% habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	26%	18%	0%	38%	8%	41%	41%	0%	37%	0%	0%	0%
HABITAT UNIT NUMBER	HU01	HU02	HU03	HU04	HU05	HU06	HU06 2	HU07	HU08	HU09	HU01 D	HU02 D	
11e	% area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	2	4	4	1	3	2	2	4	2	4	0	0
11f	% area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	4	0	4	4	4	0	3	0	0	0	
14.	Instream shelter value in the habitat unit : 0, 1, 2, 3 (3 = 5 pts; 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	5	5	4	5	5	5	4	5	4	0	0	
15.	% hab unit covered by shelter (≥80 = 5pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)	2	1	3	2	2	5	5	2	5	2	0	0
17b	a. Calculate the shelter rating for the habitat unit : 0-300	3	1	3	2	2	5	5	2	5	1	0	0
28.	% area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	4	2	4	3	4	4	4	4	3	0	0
36e	% area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	1	1	1	1	1	2	2	0	2	1	0	0
36f	% area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	2	1	0	3	0	4	4	0	3	0	0	0
HABITAT UNIT NUMBER	HU01	HU02	HU03	HU04	HU05	HU06	HU06 2	HU07	HU08	HU09	HU01 D	HU02 D	
HABITAT UNIT RATING	Habitat unit quantitative rating (out of 35)												
	23	21	17	22	20	31	31	16	29	15	0	0	
	Habitat unit qualitative rating: Excellent (≥28), Good (≥21), Fair(≥14), Poor (≥7), Fail (<7)												
	Good	Good	Fair	Good	Fair	Excellent	Excellent	Fair	Excellent	Not rated	Not rated	Not rated	

Van Alyea Enhancement Reach

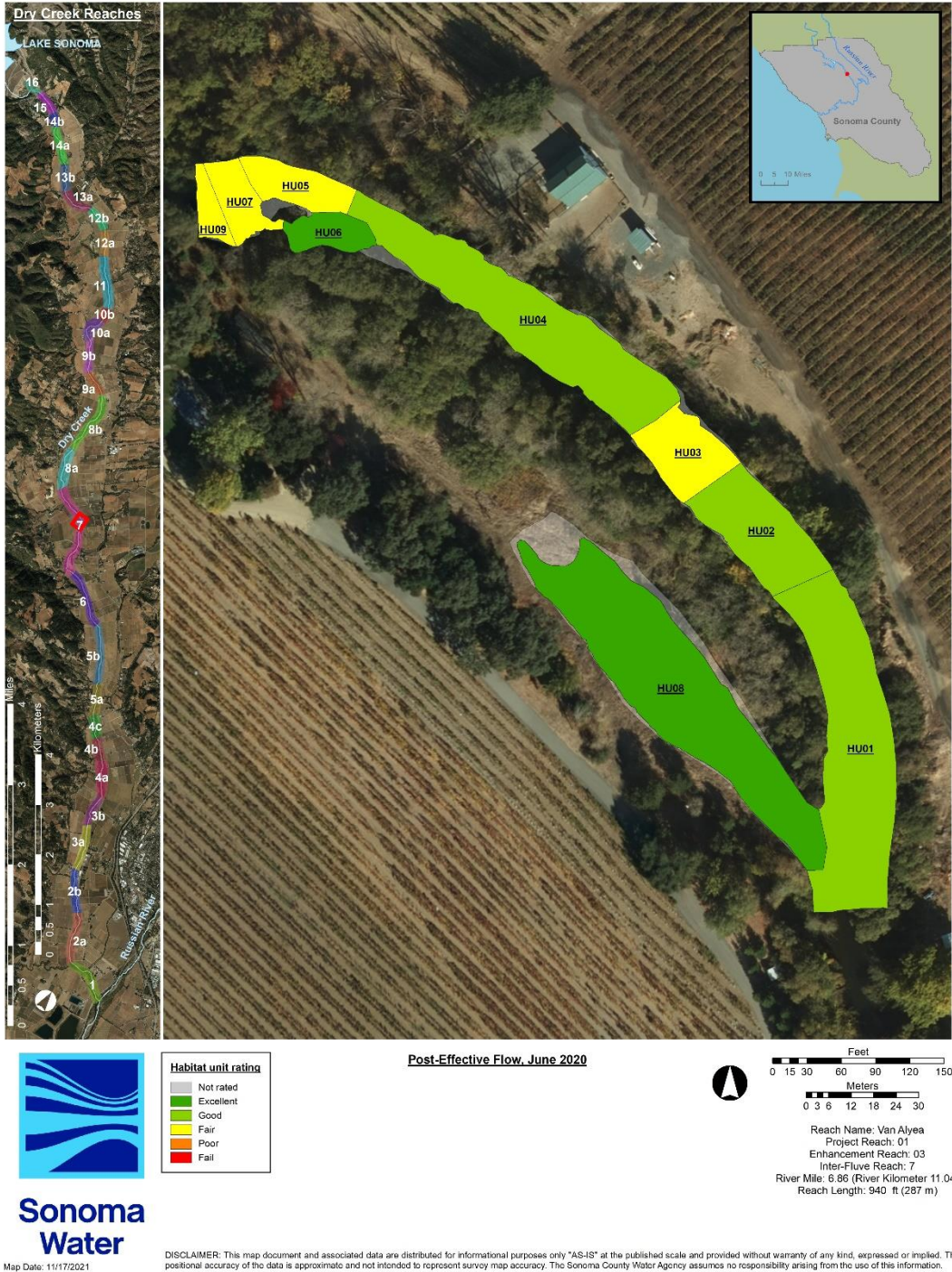


Figure 55. Habitat unit ratings for the Van Alyea enhancement reach, June 2020.

Table 32. Post-effective flow average feature, average habitat unit, site, and reach ratings for the Van Alyea enhancement reach, June 2020.

	Project Reach	1	1	1
	Enhancement Reach	3	3	3
	ENHANCEMENT REACH NAME	VA	VA	VA
	mmdyy	60820	60820	60820
	Survey Type	PEF	PEF	PEF
	PROJECT SITE NUMBER	1	2	3
	Project Site Type	MainChan	MC Bank FP	MC Alcove
	PROJECT SITE NUMBER	1	2	3
SITE AVERAGE FEATURE RATING	Site average feature quantitative rating (out of 15; bold indicates excluded from site rating)	13	13	12
	Site average feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3), Not rated (not used to rate site)	Excellent	Excellent	Good
	PROJECT SITE NUMBER	1	2	3
SITE AVERAGE HABITAT UNIT RATING	Site average habitat unit quantitative rating (out of 35; bold indicates excluded from site rating)	22	31	29
	Site average qualitative rating Excellent (>=28), Good (>=21), Fair(>=14), Poor (>=7), Fail (<7), Not rated (not used to rate site)	Good	Excellent	Excellent
	PROJECT SITE NUMBER	1	2	3
SITE RATING	Site quantitative rating (sum of site average feature and habitat unit ratings) (out of 50; bold indicates rating excludes feature or habitat unit rating and scoring out of 15 or 35)	36	44	41
	Site qualitative rating: Excellent (>=40), Good (>=30), Fair(>=20), Poor (>=10), Fail (<10)	Good	Excellent	Excellent
	ENHANCEMENT REACH NAME	VA		
ENHANCEMENT REACH RATING	Enhancement reach quantitative rating (average of site ratings) (out of 50)	40		
	Enhancement reach qualitative rating: Excellent (>=40), Good (>=30), Fair(>=20), Poor (>=10), Fail (<10)	Excellent		

Van Alyea Enhancement Reach

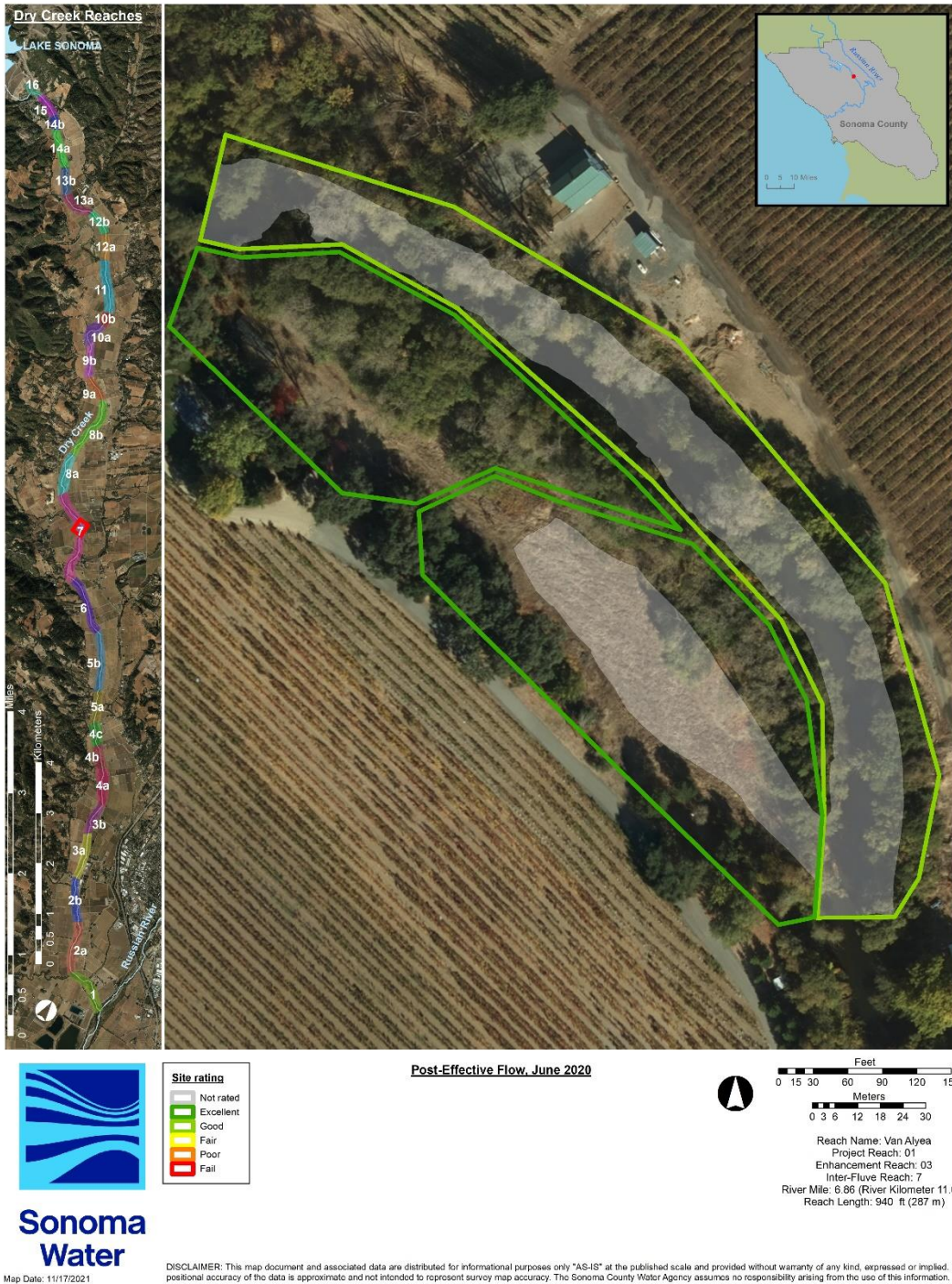


Figure 56. Post-effective flow site ratings for the Van Alyea enhancement reach, June 2020.

Van Alyea Enhancement Reach



Figure 57. Post-effective flow reach rating for the Van Alyea enhancement reach, June 2020.

Feature and Habitat Unit Checklists

Table 33. Adaptive Management Plan targeted checklist for the Van Alyea enhancement reach, June 2020.

Project Reach	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Enhancement Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Colloquial Name	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA
mmdyyy	60820	60820	60820	60820	60820	60820	60820	60820	60820	60820	60820	60820	60820	60820	60820	60820	60820	60820	60820
Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
Project Site Number	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	3	3
Project Site Type	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MC Bank FP	MC Bank FP	MC Bank FP	MC Bank FP	MC Bank FP	MC Bank FP	MC Bank FP	MC Alcove	MC Alcove
Project Feature Number	NA	NA	NA	NA	NA	S1-01	S1-02	S1-03	S1-04	S1-05	S2-01	S2-02	S2-03	S2-04	S2-05	S2-06	S3-01	S3-02	
Feature Type Code	NA	NA	NA	NA	NA	LWD	LWD	LWD	TER/FLP	RIF	Logjam	FPW	FPW	FPW	FPW	FPW	FPW	FPW	FPW
Habitat Unit	HU02	HU05	HU06	HU07	HU09	HU04	HU04	HU04	HU01	HU03	HU06 2	HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU02 D	HU02 D
Habitat Type	Flatwater	Flatwater	Pool	Riffle	Flatwater	Pool	Pool	Pool	Pool	Riffle	Pool	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	NA	NA	NA	NA	NA	GOOD	GOOD	GOOD	GOOD	GOOD	FAIR	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD
5a. Are problems with the feature visible?	NA	NA	NA	NA	NA	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO
6a. Is the feature still in its original location?	NA	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6b. Is the feature still in its original position?	NA	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6d. Is the feature still in its original orientation?	NA	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
8. If an objective, did the feature create the targeted instream habitat type?	NA	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	NA	NA	NA	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
11e. % Area of habitat unit within 0.5 -2.0 ft depth	51%	35%	28%	56%	79%	12%	12%	12%	22%	87%	28%	0%	0%	0%	0%	0%	0%	0%	0%
11f. % Area of habitat unit within 2.0 -4.0 ft depth	44%	53%	53%	0%	0%	75%	75%	75%	49%	2%	53%	0%	0%	0%	0%	0%	0%	0%	0%
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	3	3	3	2	2	3	3	3	3	2	3	0	0	0	0	0	0	0	0
15. Percent of habitat unit covered by shelter: %	15	25	80	35	20	20	20	20	30	40	80	0	0	0	0	0	0	0	0
17a. If an objective, did the feature increase instream shelter rating?	NA	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES
17b. a. Calculate the shelter rating for the habitat unit: 0-300	45	75	240	70	40	60	60	60	90	80	240	0	0	0	0	0	0	0	0
19a. If an objective, did the feature increase LWD count in the habitat unit?	NA	NA	NA	NA	NA	YES	YES	NO	NO	NO	YES	NO	NO	YES	NO	NO	NO	NO	NO
21a. If an objective, did the feature lead to the targeted channel conditions?	NA	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
25. Did the feature achieve the targeted velocity?	NA	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
28. Percent of habitat unit within targeted velocity (see above): (%)	41%	30%	88%	43%	34%	59%	59%	59%	62%	21%	88%	0%	0%	0%	0%	0%	0%	0%	0%
36e. % habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	18%	13%	27%	7%	13%	12%	12%	12%	19%	12%	27%	0%	0%	0%	0%	0%	0%	0%	0%
36f. % habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	18%	8%	41%	0%	0%	38%	38%	38%	26%	0%	41%	0%	0%	0%	0%	0%	0%	0%	0%
FEATURE NUMBER	NA	NA	NA	NA	NA	S1-01	S1-02	S1-03	S1-04	S1-05	S2-01	S2-02	S2-03	S2-04	S2-05	S2-06	S3-01	S3-02	
HABITAT UNIT NUMBER	HU02	HU05	HU06	HU07	HU09	HU04	HU04	HU04	HU01	HU03	HU06 2	HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU02 D	HU02 D
SITE NUMBER	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	3	3	
ENHANCEMENT REACH NAME	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA
4. Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	0	0	0	0	0	4	4	4	4	4	3	4	4	4	4	4	4	4	4
5a. Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	0	0	0	0	0	1	1	1	1	1	0	1	1	1	1	1	1	1	1
6a. Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6b. Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6d. Is the feature still in its original orientation? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8. If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
9. Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
11e. % area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	3	2	4	4	1	1	1	2	4	2	0	0	0	0	0	0	0	0
11f. % area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	4	4	0	0	4	4	4	4	0	4	0	0	0	0	0	0	0	0
14. Instream shelter value in the habitat unit: 0, 1, 2, 3 (3 = 5 pts; 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	5	5	5	4	4	5	5	5	5	4	5	0	0	0	0	0	0	0	0
15. % hab unit covered by shelter (≥80 = 5pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)	1	2	5	2	2	2	2	2	3	5	0	0	0	0	0	0	0	0	0
17a. If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	1	1	1	1	1	1	0	1	1	1	1	1	1	1
17b. a. Calculate the shelter rating for the habitat unit: 0-300	1	2	5	2	1	2	2	2	3	5	0	0	0	0	0	0	0	0	0
19a. If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	1	1	0	0	0	1	0	0	1	0	0	0	0	0
21a. If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
25. Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
28. % area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	3	4	4	3	4	4	4	4	2	4	0	0	0	0	0	0	0	0
36e. % area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	1	1	2	0	1	1	1	1	1	1	2	0	0	0	0	0	0	0	0
36f. % area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	1	0	4	0	0	3	3	3	2	0	4	0	0	0	0	0	0	0	0

Table 33. Adaptive Management Plan targeted checklist for the Van Alyea enhancement reach, June 2020.

1	1	1	1	1	1	1	1	1	1	1	1	1	1
3	3	3	3	3	3	3	3	3	3	3	3	3	3
VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA
60820	60820	60820	60820	60820	60820	60820	60820	60820	60820	60820	60820	60820	60820
PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
3	3	3	3	3	3	3	3	3	3	3	3	3	3
MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove
S3-03	S3-04	S3-05	S3-06	S3-07	S3-08	S3-09	S3-10	S3-11	S3-12	S3-13	S3-14	S3-15	S3-16
LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	Logjam
HU02 D	HU02 D	HU02 D	HU08	HU08	HU08	HU08	HU08	HU08	HU08	HU08	HU08	HU08	HU08
Dry	Dry	Dry	Alcove	Alcove	Alcove	Alcove	Alcove	Alcove	Alcove	Alcove	Alcove	Alcove	Alcove
FAIR	UNKN	FAIR	FAIR	FAIR	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD
YES	YES	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO
YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
YES	NO	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES
NO	YES	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO
0%	0%	0%	23%	23%	23%	23%	23%	23%	23%	23%	23%	23%	23%
0%	0%	0%	37%	37%	37%	37%	37%	37%	37%	37%	37%	37%	37%
0	0	0	3	3	3	3	3	3	3	3	3	3	3
0	0	0	95	95	95	95	95	95	95	95	95	95	95
YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
0	0	0	285	285	285	285	285	285	285	285	285	285	285
NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
YES	NO	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES
YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
0%	0%	0%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
0%	0%	0%	23%	23%	23%	23%	23%	23%	23%	23%	23%	23%	23%
0%	0%	0%	37%	37%	37%	37%	37%	37%	37%	37%	37%	37%	37%
S3-03	S3-04	S3-05	S3-06	S3-07	S3-08	S3-09	S3-10	S3-11	S3-12	S3-13	S3-14	S3-15	S3-16
HU02 D	HU02 D	HU02 D	HU08	HU08	HU08	HU08	HU08	HU08	HU08	HU08	HU08	HU08	HU08
3	3	3	3	3	3	3	3	3	3	3	3	3	3
VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA
3	0	3	3	3	4	4	4	4	4	4	4	4	4
0	0	0	0	0	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	0	1	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	0	1	1	0	1	1	1	1	1	1	1	1	1
1	0	1	1	1	1	1	1	1	1	1	1	1	1
0	0	0	2	2	2	2	2	2	2	2	2	2	2
0	0	0	3	3	3	3	3	3	3	3	3	3	3
0	0	0	5	5	5	5	5	5	5	5	5	5	5
0	0	0	5	5	5	5	5	5	5	5	5	5	5
1	0	1	1	1	1	1	1	1	1	1	1	1	1
0	0	0	5	5	5	5	5	5	5	5	5	5	5
0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	1	1	0	1	1	1	1	1	1	1	1	1
1	0	1	1	1	1	1	1	1	1	1	1	1	1
0	0	0	4	4	4	4	4	4	4	4	4	4	4
0	0	0	2	2	2	2	2	2	2	2	2	2	2
0	0	0	3	3	3	3	3	3	3	3	3	3	3

Farrow Wallace, July 2020

Depth and Velocity

Table 35. Areas and percentages of: wetted area, optimal depth and velocity, and optimal hydraulic habitat within the Farrow, Wallace enhancement reach, July 2020.

Farrow, Wallace Post-effective flow July 2020	Wetted area (ft²)	0.5 – 2.0 ft	2.0 – 4.0 ft	Total	< 0.5 ft/s	0.5 – 2.0 ft < 0.5 ft/s	2.0 – 4.0 ft < 0.5 ft/s	Total
Main channel area	45,745	22,075	16,245	38,320	10,193	3,823	3,379	7,203
Main channel alcove area	15,817	5,773	6,296	12,069	10,853	4,245	3,949	8,195
Side channel area	19,351	9,835	5,748	15,583	13,824	6,140	4,133	10,273
Total area	80,913	37,683	28,289	65,971	34,871	14,209	11,461	25,670
Main channel % of wetted area	57%	48%	36%	84%	22%	8%	7%	16%
Main channel alcove % of wetted area	20%	36%	40%	76%	69%	27%	25%	52%
Side channel % of wetted area	24%	51%	30%	81%	71%	32%	21%	53%
Total % of wetted area	100%	47%	35%	82%	43%	18%	14%	32%

Farrow Wallace Enhancement Reach

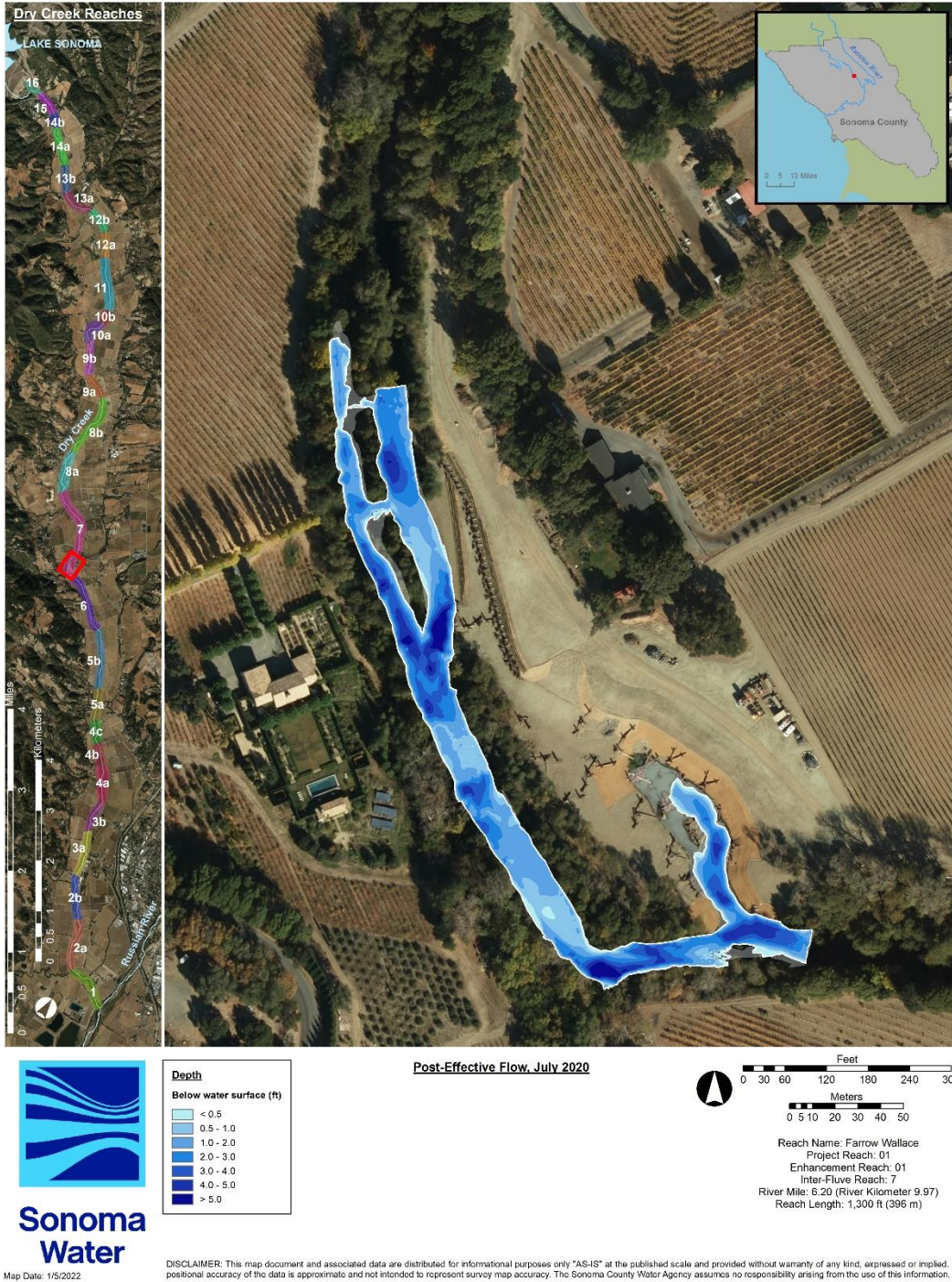


Figure 58. Measured water depth within the Farrow, Wallace enhancement reach, July 2020.

Farrow Wallace Enhancement Reach

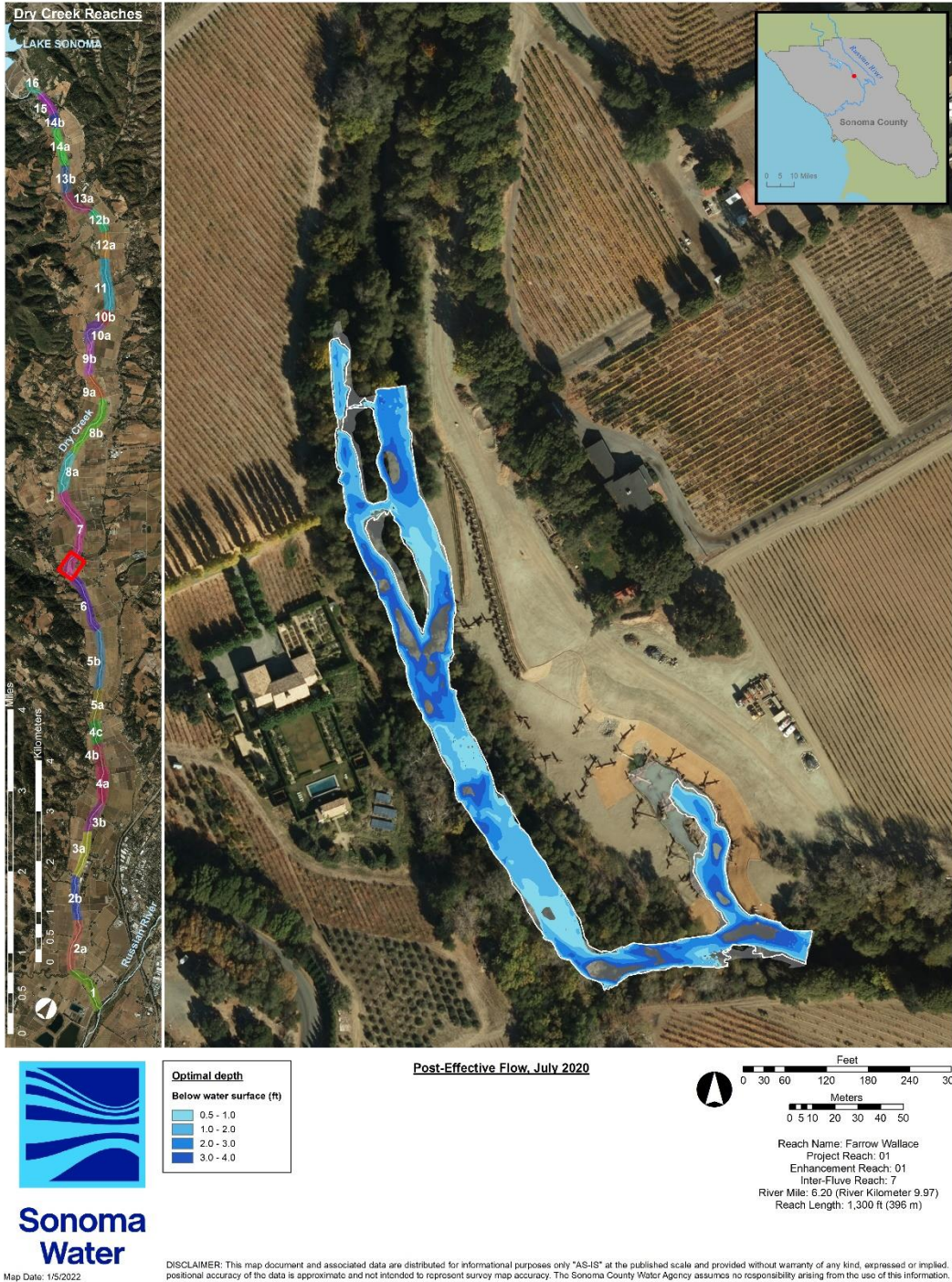


Figure 59. Optimal water depth for fry (0.5-2.0 ft) and parr (2.0-4.0 ft) within the Farrow, Wallace enhancement reach, July 2020.

Farrow Wallace Enhancement Reach

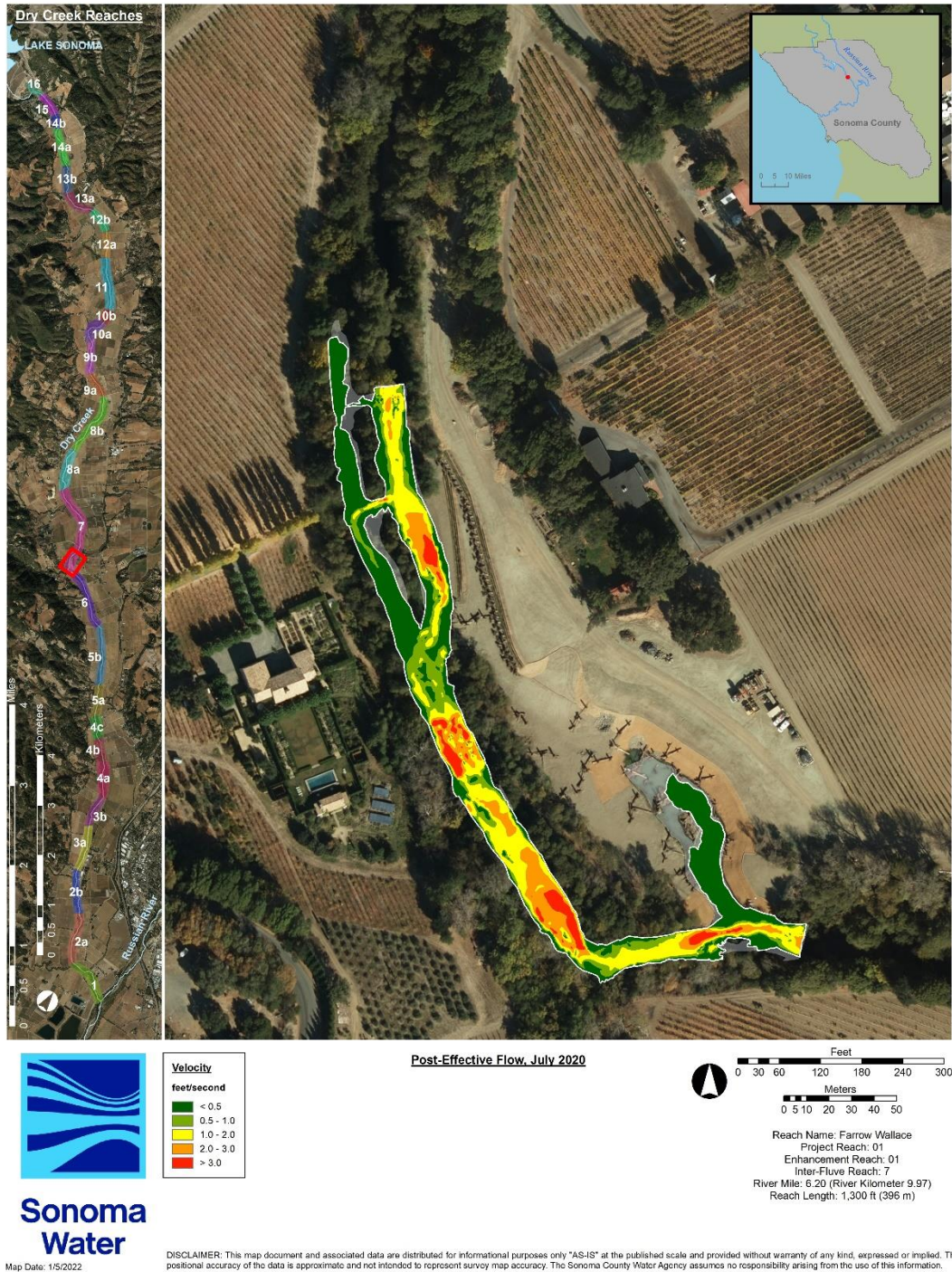


Figure 60. Measured water velocity within the Farrow, Wallace enhancement reach, July 2020.

Farrow Wallace Enhancement Reach

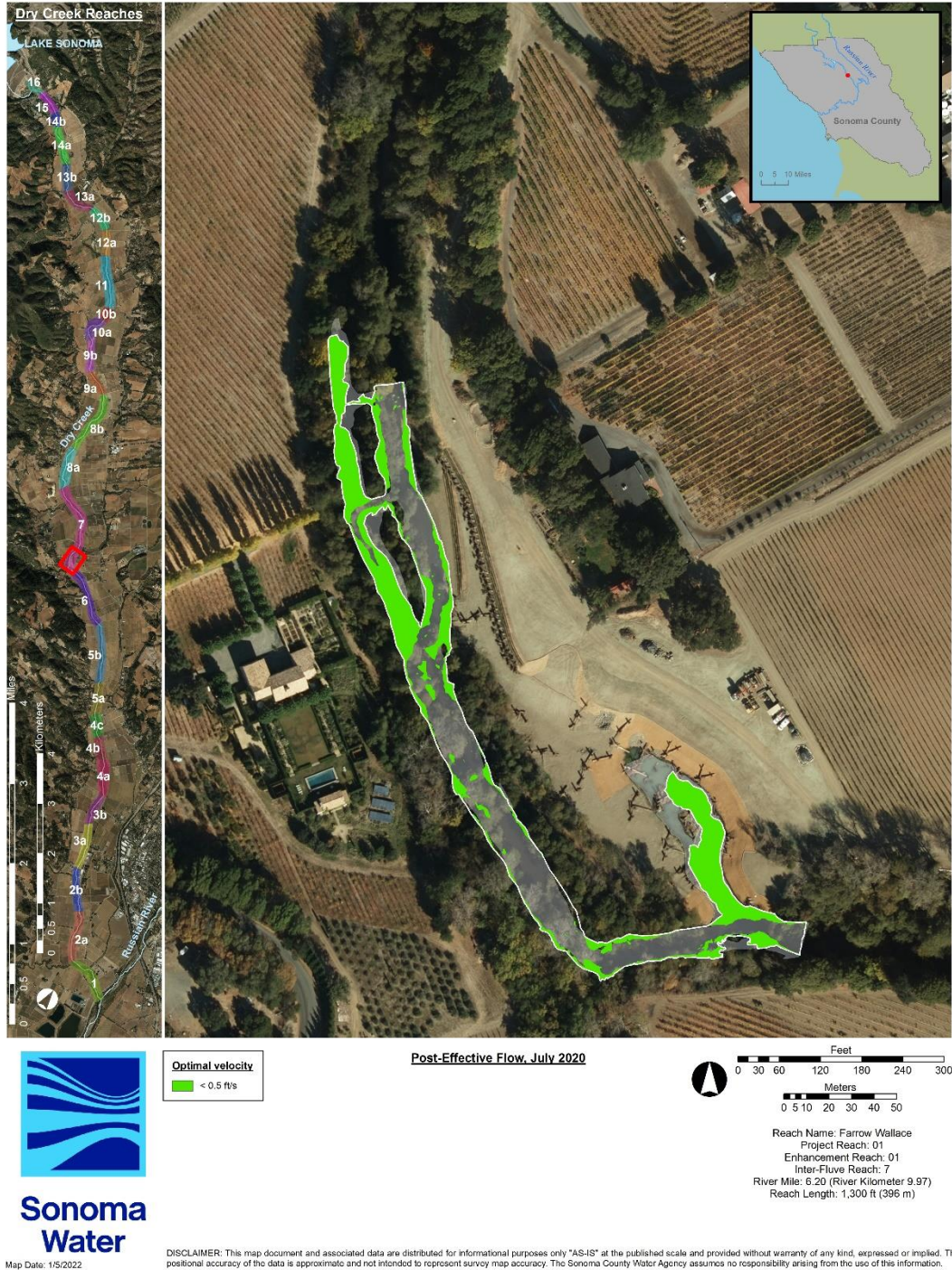


Figure 61. Optimal water velocity for fry and parr (< 0.5 ft/s) within the Farrow, Wallace enhancement reach, July 2020.

Farrow Wallace Enhancement Reach

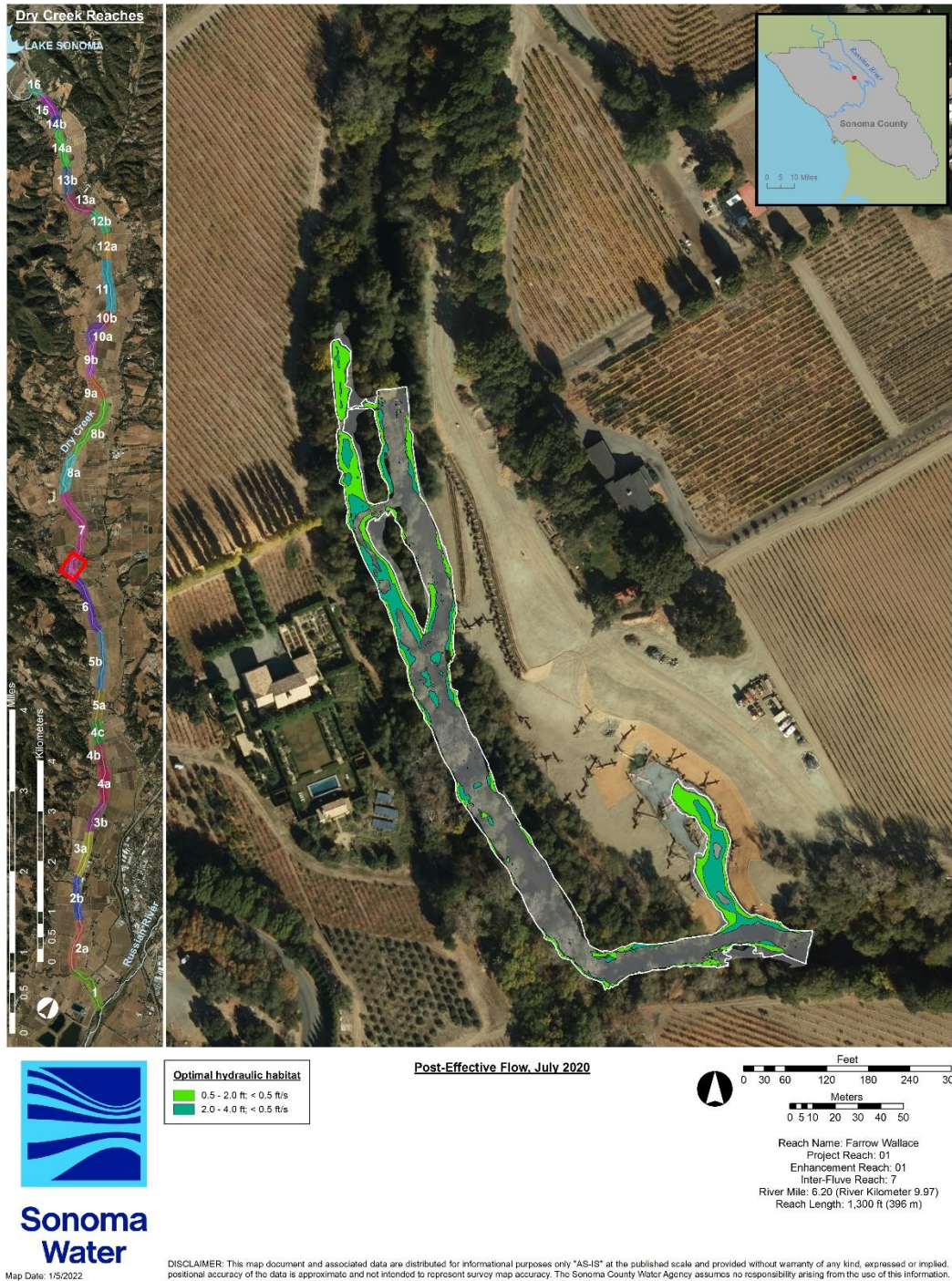


Figure 62. Optimal hydraulic habitat for fry (<0.5 ft/s, 0.5-2.0 ft) and parr (<0.5 ft/s, 2.0-4.0 ft) within the Farrow, Wallace enhancement reach, July 2020.

Habitat Types and Shelter Values

Table 36. Habitat, types, shelter value, percent cover, and shelter score for habitat units within the Farrow, Wallace enhancement reach, July 2020.

Habitat Unit #	Habitat Type	Shelter Value	Percent Cover	Shelter Score
HU01	Flatwater	3	35	105
HU02	Alcove	3	80	240
HU03	Riffle	3	35	105
HU04	Pool	3	45	135
HU05	Riffle	2	15	30
HU06	Flatwater	1	10	10
HU07	Pool	3	40	120
HU08	Riffle	2	20	40
HU09	Flatwater	3	35	105
HU10	Pool	3	50	150
HU11	Pool	3	40	120
HU12	Flatwater	3	60	180
HU13	Alcove	3	80	240
HU14	Riffle	3	55	165
HU15	Riffle	2	15	30
HU16	Pool	1	15	15
Pool: riffle	5:5 (1.00)			Avg = 112

Farrow Wallace Enhancement Reach



Figure 63. Habitat unit number and type within the Farrow, Wallace enhancement reach, July 2020.

Farrow Wallace Enhancement Reach



Sonoma Water

Map Date: 1/5/2022

DISCLAIMER: This map document and associated data are distributed for informational purposes only "AS-IS" at the published scale and provided without warranty of any kind, expressed or implied. The positional accuracy of the data is approximate and not intended to represent survey map accuracy. The Sonoma County Water Agency assumes no responsibility arising from the use of this information.

Figure 64. Habitat unit shelter scores within the Farrow, Wallace enhancement reach, July 2020.

Feature, Habitat Unit, Site, and Reach Ratings

Table 37. Post-effective flow feature ratings for the Farrow, Wallace enhancement reach, July 2020.

Project Reach		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Enhancement Reach		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Colloquial Name		FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW
nmddy		72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720
Survey Type		PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
PROJECT SITE NUMBER		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
PROJECT FEATURE NUMBER		MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove
Feature Type Code		LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD
Habitat Unit		HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU02	HU02	HU02	HU02	HU02	HU02
Habitat Type		Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Alcove	Alcove	Alcove	Alcove	Alcove	Alcove
4.	Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD
5a	Are problems with the feature visible?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
6a	Is the feature still in its original location?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6b	Is the feature still in its original position?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6d	Is the feature still in its original orientation?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
8.	If an objective, did the feature create the targeted instream habitat type?	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO	YES	YES	YES	YES	YES
9.	Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	NO	YES	NO	NO	NO
17a	If an objective, did the feature increase instream shelter rating?	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO	YES	YES	YES	YES	YES
19a	If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
21a	If an objective, did the feature lead to the targeted channel conditions?	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO	YES	YES	YES	YES	YES
25.	Did the feature achieve the targeted velocity?	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO	YES	YES	YES	YES	YES
PROJECT FEATURE NUMBER		S1-01	S1-02	S1-03	S1-04	S1-05	S1-06	S1-07	S1-08	S1-09	S1-10	S1-11	S1-12	S1-13	S1-14	S1-15	S1-16	S1-17	S1-18
4.	Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
5a	Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	1	1	1	1	1	1	1	1	1	0	0	1	0	1	1	1	1	1
6a	Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6b	Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6d	Is the feature still in its original orientation? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8.	If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	0	0	1	0	1	1	1	1	1
9.	Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	1	1	1	1	1	1	1	1	1	0	0	1	0	1	1	1	1	1
17a	If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	0	0	1	0	1	1	1	1	1	1
19a	If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21a	If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	0	0	1	0	1	1	1	1	1	1
25.	Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	0	0	1	0	1	1	1	1	1	1
PROJECT FEATURE NUMBER		S1-01	S1-02	S1-03	S1-04	S1-05	S1-06	S1-07	S1-08	S1-09	S1-10	S1-11	S1-12	S1-13	S1-14	S1-15	S1-16	S1-17	S1-18
FEATURE RATING	Feature quantitative rating out of 15	13	13	13	13	13	13	13	13	7	7	13	7	13	13	13	13	13	13
	Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Fair	Fair	Excellent	Fair	Excellent	Excellent	Excellent	Excellent	Excellent

Table 37. Post-effective flow feature ratings for the Farrow, Wallace enhancement reach, July 2020.

Project Reach	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Enhancement Reach	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Colloquial Name	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW
nmddy	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720
Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
PROJECT SITE NUMBER	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
PROJECT FEATURE NUMBER	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MC Bank FP	MC Bank FP	MC Bank FP
Feature Type Code	LWD	LWD	Boulder field	LWD	LWD	LWD	LWD	LWD	LWD	LWD	NA	BC	BC	BC	BC	BC	LWD	LWD	LWD
Habitat Unit	HU02	HU01	HU01	HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU04	HU01 W	HU01 W	HU01 W	HU01 W	HU16	HU16	HU02 D	HU02 D
Habitat Type	Alcove	Flatwater	Flatwater	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Pool	Flatwater	Flatwater	Flatwater	Flatwater	Pool	Pool	Dry	Dry
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	FAIR	GOOD	GOOD	GOOD	NR	UNKN	UNKN	UNKN	NA	NR	NR	NR	NR	GOOD	GOOD	GOOD	GOOD	GOOD
5a. Are problems with the feature visible?	NO	YES	YES	NO	NO	NR	NR	NR	NR	NA	NR	NR	NR	NR	NO	NO	NO	NO	NO
6a. Is the feature still in its original location?	YES	YES	YES	YES	YES	NR	NR	NR	NR	NA	NR	NR	NR	NR	YES	YES	YES	YES	YES
6b. Is the feature still in its original position?	YES	YES	YES	YES	YES	NR	NR	NR	NR	NA	NR	NR	NR	NR	YES	YES	YES	YES	YES
6d. Is the feature still in its original orientation?	YES	YES	YES	YES	YES	NR	NR	NR	NR	NA	NR	NR	NR	NR	YES	YES	YES	YES	YES
8. If an objective, did the feature create the targeted instream habitat type?	YES	YES	YES	YES	YES	NR	NR	NR	NR	NA	NR	NR	NR	NR	YES	YES	YES	YES	YES
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	NO	YES	NO	NO	NR	NR	NR	NR	NA	NR	NR	NR	NR	NO	NO	NO	NO	NO
17a. If an objective, did the feature increase instream shelter rating?	YES	YES	YES	YES	YES	NR	NR	NR	NR	NA	NR	NR	NR	NR	YES	YES	YES	YES	YES
19a. If an objective, did the feature increase LWD count in the habitat unit?	NO	YES	NO	NO	NO	NR	NR	NR	NR	NA	NR	NR	NR	NR	NO	NO	NO	NO	NO
21a. If an objective, did the feature lead to the targeted channel conditions?	YES	YES	NO	YES	YES	NR	NR	NR	NR	NA	NR	NR	NR	NR	YES	YES	YES	YES	YES
25. Did the feature achieve the targeted velocity?	YES	YES	YES	YES	YES	NR	NR	NR	NR	NA	NR	NR	NR	NR	YES	YES	YES	YES	YES
PROJECT FEATURE NUMBER	S1-19	S1-20	S1-21	S1-22	S1-23	S1-24	S1-25	S1-26	S1-27	NA	S3-01	S3-02	S3-03	S3-04	S3-05	S4-01	S4-02	S4-03	
4. Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	4	3	4	4	4	0	0	0	0	0	0	0	0	0	4	4	4	4	4
5a. Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	1	0	0	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1
6a. Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1
6b. Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1
6d. Is the feature still in its original orientation? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1
8. If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1
9. Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	1	1	0	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1
17a. If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1
19a. If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21a. If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	1	1	0	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1
25. Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1
PROJECT FEATURE NUMBER	S1-19	S1-20	S1-21	S1-22	S1-23	S1-24	S1-25	S1-26	S1-27	NA	S3-01	S3-02	S3-03	S3-04	S3-05	S4-01	S4-02	S4-03	
FEATURE RATING	Feature quantitative rating out of 15																		
	13	12	10	13	13	0	0	0	0	0	0	0	0	0	13	13	13	13	13
	Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)																		
	Excellent	Excellent	Good	Excellent	Excellent	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Excellent	Excellent	Excellent	Excellent	Excellent

Table 37. Post-effective flow feature ratings for the Farrow, Wallace enhancement reach, July 2020.

Project Reach	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Enhancement Reach	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Colloquial Name	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW
nmddy	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720
Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
PROJECT SITE NUMBER	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Project Site Type	MainChan	MainChan	MainChan	MainChan	MainChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
PROJECT FEATURE NUMBER	S5-01	S5-02	S5-03	S5-04	S5-05	S6-01	S6-02	S6-03	S6-04	S6-05	S6-06	S6-07	S6-08	S6-09	S6-10	S6-11	S6-12	S6-13	
Feature Type Code	TER	FLP	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD
Habitat Unit	HU03 D	HU03 D	HU10	HU03 D	HU03 D	HU04 D	HU04 D	HU13	HU12	HU12	HU14	HU11	HU11	HU11	HU11	HU11	HU12	HU12	HU12
Habitat Type	Dry	Dry	Pool	Dry	Dry	Dry	Dry	Alcove	Flatwater	Flatwater	Riffle	Pool	Pool	Pool	Pool	Pool	Flatwater	Flatwater	Flatwater
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD
5a. Are problems with the feature visible?	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
6a. Is the feature still in its original location?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6b. Is the feature still in its original position?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6d. Is the feature still in its original orientation?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
8. If an objective, did the feature create the targeted instream habitat type?	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	NO	NO	NO	NO	NO	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES
17a. If an objective, did the feature increase instream shelter rating?	YES	YES	YES	NO	YES	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO
19a. If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	YES	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
21a. If an objective, did the feature lead to the targeted channel conditions?	YES	YES	YES	YES	YES	YES	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO
25. Did the feature achieve the targeted velocity?	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO
PROJECT FEATURE NUMBER	S5-01	S5-02	S5-03	S5-04	S5-05	S6-01	S6-02	S6-03	S6-04	S6-05	S6-06	S6-07	S6-08	S6-09	S6-10	S6-11	S6-12	S6-13	
4. Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
5a. Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1
6a. Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6b. Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6d. Is the feature still in its original orientation? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8. If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0
9. Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	0
17a. If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	1	1	0	1	0	0	1	1	1	1	1	1	1	1	1	1	1	0
19a. If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
21a. If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	0
25. Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0
PROJECT FEATURE NUMBER	S5-01	S5-02	S5-03	S5-04	S5-05	S6-01	S6-02	S6-03	S6-04	S6-05	S6-06	S6-07	S6-08	S6-09	S6-10	S6-11	S6-12	S6-13	
FEATURE RATING	Feature quantitative rating out of 15																		
	13	13	14	12	13	13	7	11	13	13	13	13	13	13	13	13	13	13	8
	Feature qualitative rating																		
	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Fair	Good	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Fair
	Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)																		

Table 37. Post-effective flow feature ratings for the Farrow, Wallace enhancement reach, July 2020.

Project Reach		1	1
Enhancement Reach		1	1
Colloquial Name		FW	FW
mmddyy		72720	72720
Survey Type		PEF	PEF
	PROJECT SITE NUMBER	6	7
Project Site Type		SideChan	MainChan
	PROJECT FEATURE NUMBER	S6-14	S7-01
Feature Type Code		LWD	Constructed Rip
Habitat Unit		HU04 D	HU08
Habitat Type		Dry	Riffle
4.	Structural condition of feature : EXCL, GOOD, FAIR, POOR, FAIL	NR	GOOD
5a	Are problems with the feature visible?	NR	NO
6a	Is the feature still in its original location?	NR	YES
6b	Is the feature still in its original position?	NR	YES
6d	Is the feature still in its original orientaton?	NR	YES
8.	If an objective, did the feature create the targeted instream habitat type?	NR	YES
9.	Were there any unintended effects by the feature on the habitat type? If Y, comment.	NR	NO
17a	If an objective, did the feature increase instream shelter rating?	NR	YES
19a	If an objective, did the feature increase LWD count in the habitat unit ?	NR	NO
21a	If an objective, did the feature lead to the targeted channel conditions?	NR	YES
25.	Did the feature achieve the targeted velocity?	NR	YES
	PROJECT FEATURE NUMBER	S6-14	S7-01
4.	Structural condition of feature : EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	0	4
5a	Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	0	1
6a	Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	0	1
6b	Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	0	1
6d	Is the feature still in its original orientaton? (YES = 1 pt, NO = 0 pt)	0	1
8.	If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	0	1
9.	Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	0	1
17a	If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	0	1
19a	If an objective, did the feature increase LWD count in the habitat unit ? (YES = 1 pt, NO = 0 pt)	0	0
21a	If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	0	1
25.	Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	0	1
	PROJECT FEATURE NUMBER	S6-14	S7-01
FEATURE RATING	Feature quantitative rating out of 15	0	13
	Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)	Not rated	Excellent

Farrow Wallace Enhancement Reach

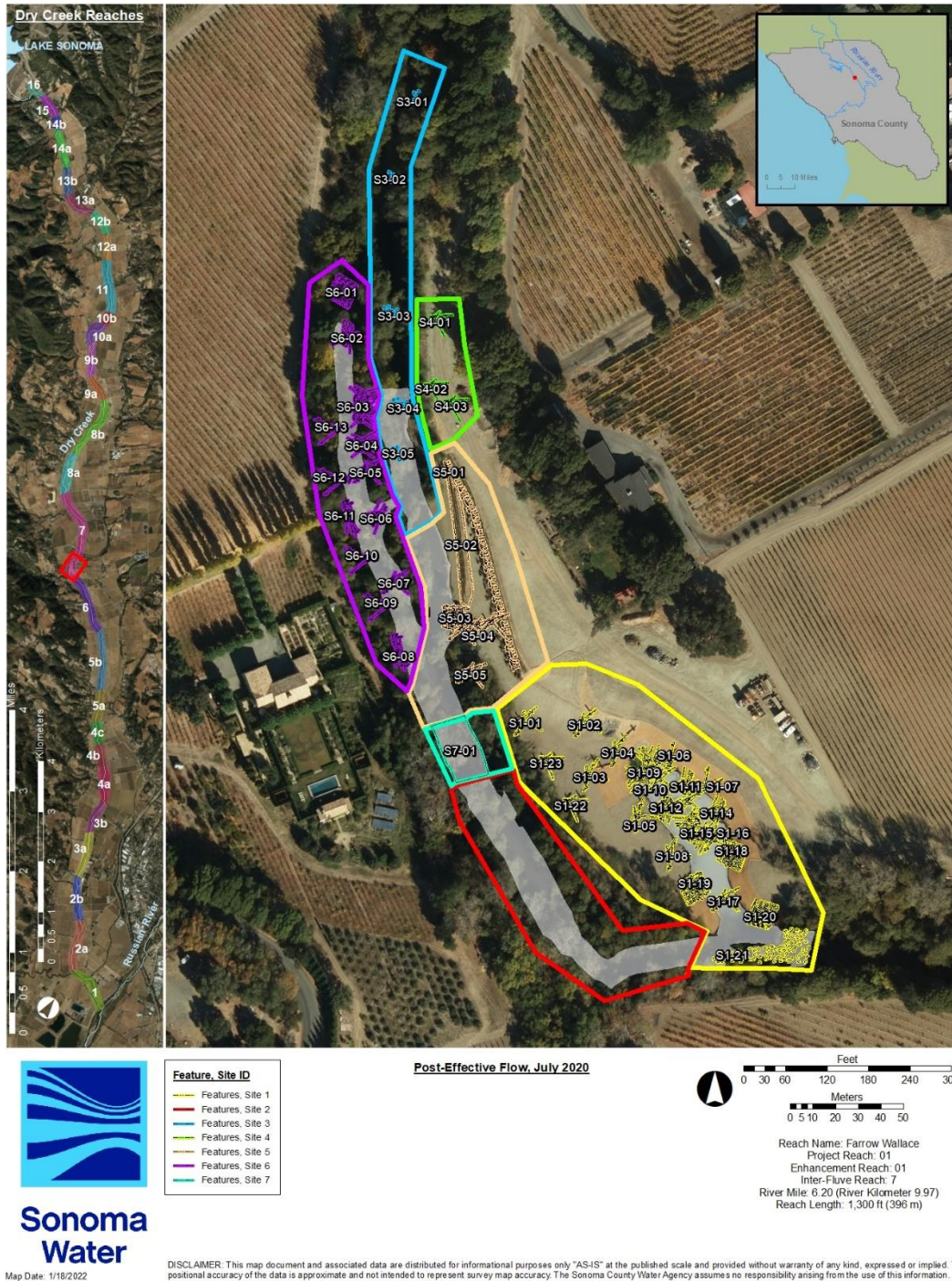


Figure 65. Enhancement sites and features within the Farrow, Wallace enhancement reach, July 2020.

Farrow Wallace Enhancement Reach

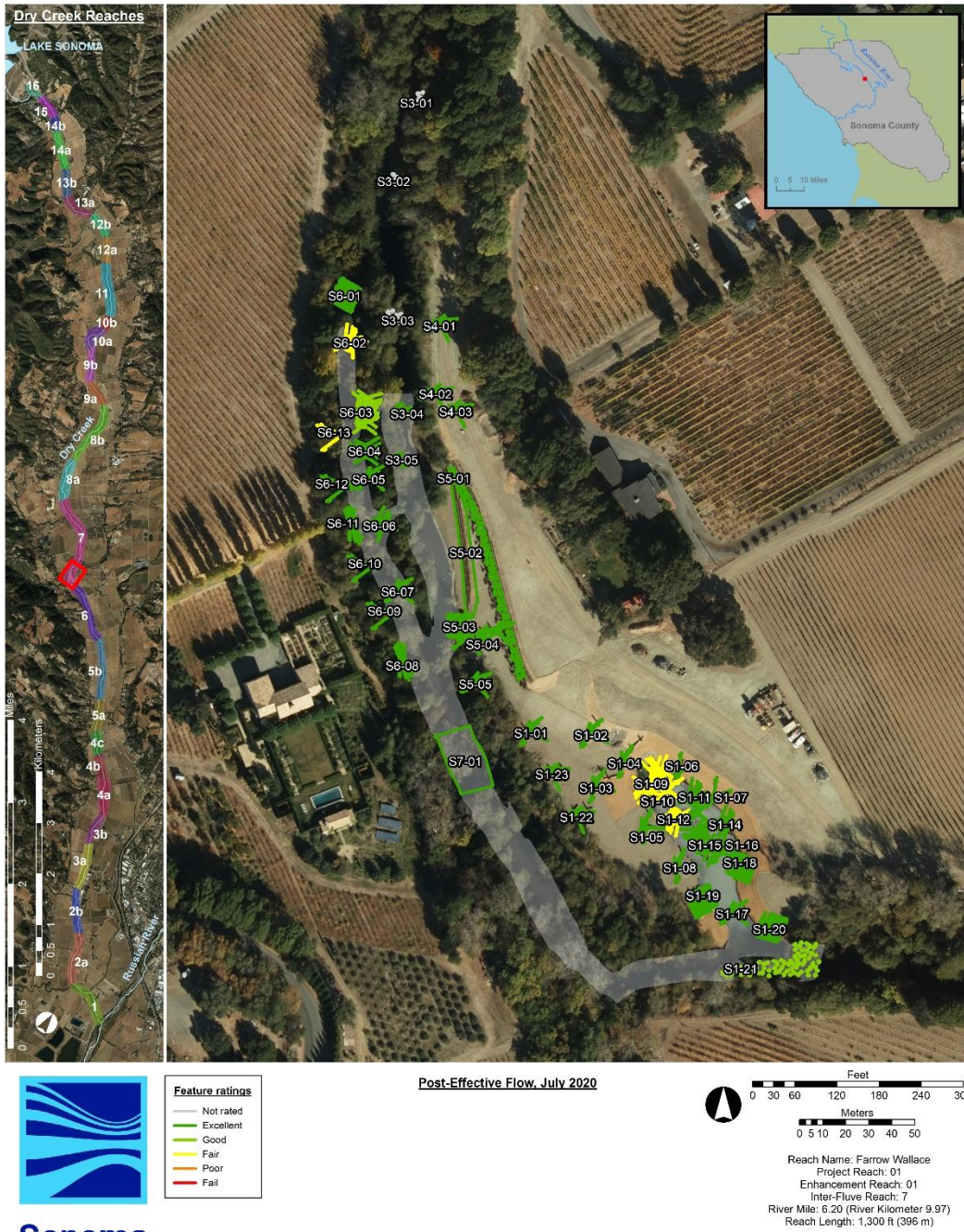


Figure 66. Feature ratings for the Farrow, Wallace enhancement reach, July 2020. Gray = not rated, dark green = Excellent, light green = Good, yellow = Fair, orange = Poor, red = Fail.

Table 38. Post-effective flow habitat unit ratings for the Farrow, Wallace enhancement reach, July 2020.

Project Reach	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Enhancement Reach	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Colloquial Name	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW
mmdyy	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720
Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
HABITAT UNIT NUMBER	HU01	HU02	HU03	HU04	HU05	HU06	HU07	HU08	HU09	HU10	HU11	HU12	HU13	HU14	HU02_D	HU15	HU16	
Habitat Type	Flatwater	Alcove	Riffle	Pool	Riffle	Flatwater	Pool	Riffle	Flatwater	Pool	Pool	Flatwater	Alcove	Riffle	Dry	Riffle	Pool	
PROJECT SITE NUMBER	1	1	1	2	2	2	2	7	5	5	6	6	6	6	6	4	6	3
Project Site Type	MC Alcove	MC Alcove	MC Alcove	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	SideChan	SideChan	SideChan	SideChan	SideChan	MC Bank Fl	SideChan	MainChan
11e	% Area of habitat unit within 0.5 -2.0 ft depth	22%	42%	55%	18%	75%	82%	34%	90%	11%	21%	20%	54%	71%	66%	0%	76%	36%
11f	% Area of habitat unit within 2.0 -4.0 ft depth	46%	39%	27%	50%	9%	14%	56%	2%	72%	33%	53%	33%	5%	1%	0%	13%	52%
14.	Instream shelter value in the habitat unit: 0, 1, 2, 3	3	3	3	3	2	1	3	2	3	3	3	3	3	3	0	2	1
15.	Percent of habitat unit covered by shelter: %	35	80	35	45	15	10	40	20	35	50	40	60	80	55	0	15	15
17b	a. Calculate the shelter rating for the habitat unit: 0-300	105	240	105	135	30	10	120	40	105	150	120	180	240	165	0	30	15
28.	Percent of habitat unit within targeted velocity (see above): (%)	42%	100%	28%	26%	10%	11%	28%	6%	30%	53%	85%	89%	100%	48%	0%	23%	28%
36e	% habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	12%	42%	15%	11%	4%	6%	11%	1%	8%	17%	19%	48%	71%	17%	0%	12%	12%
36f	% habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	16%	39%	0%	7%	1%	2%	12%	0%	18%	16%	40%	28%	5%	0%	0%	1%	10%
HABITAT UNIT NUMBER	HU01	HU02	HU03	HU04	HU05	HU06	HU07	HU08	HU09	HU10	HU11	HU12	HU13	HU14	HU02_D	HU15	HU16	
11e	% area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	2	4	4	1	4	4	4	3	4	2	2	4	4	4	0	4	3
11f	% area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	3	2	4	0	1	4	0	4	3	4	3	0	0	0	1	4
14.	Instream shelter value in the habitat unit: 0, 1, 2, 3 (3 = 5 pts; 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	5	5	5	5	4	3	5	4	5	5	5	5	5	0	4	3	
15.	% hab unit covered by shelter (≥80 = 5pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)	2	5	2	3	1	1	3	2	2	3	3	4	5	3	0	1	1
17b	a. Calculate the shelter rating for the habitat unit: 0-300	4	5	4	4	0	0	4	1	4	5	4	5	5	0	0	0	
28.	% area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	4	2	2	1	1	2	0	3	4	4	4	4	4	0	2	2
36e	% area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	1	4	1	1	0	0	1	0	0	1	1	4	4	1	0	1	1
36f	% area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	1	3	0	0	0	0	1	0	1	1	4	2	0	0	0	0	0
HABITAT UNIT NUMBER	HU01	HU02	HU03	HU04	HU05	HU06	HU07	HU08	HU09	HU10	HU11	HU12	HU13	HU14	HU02_D	HU15	HU16	
HABITAT UNIT RATING	Habitat unit quantitative rating (out of 35)	23	33	20	20	10	10	23	11	20	24	27	31	27	22	0	13	14
	Habitat unit qualitative rating: Excellent (≥28), Good (≥21), Fair(≥14), Poor (≥7), Fail (<7)	Good	Excellent	Fair	Fair	Poor	Poor	Good	Poor	Fair	Good	Good	Excellent	Good	Good	Not rated	Poor	Fair

Farrow Wallace Enhancement Reach

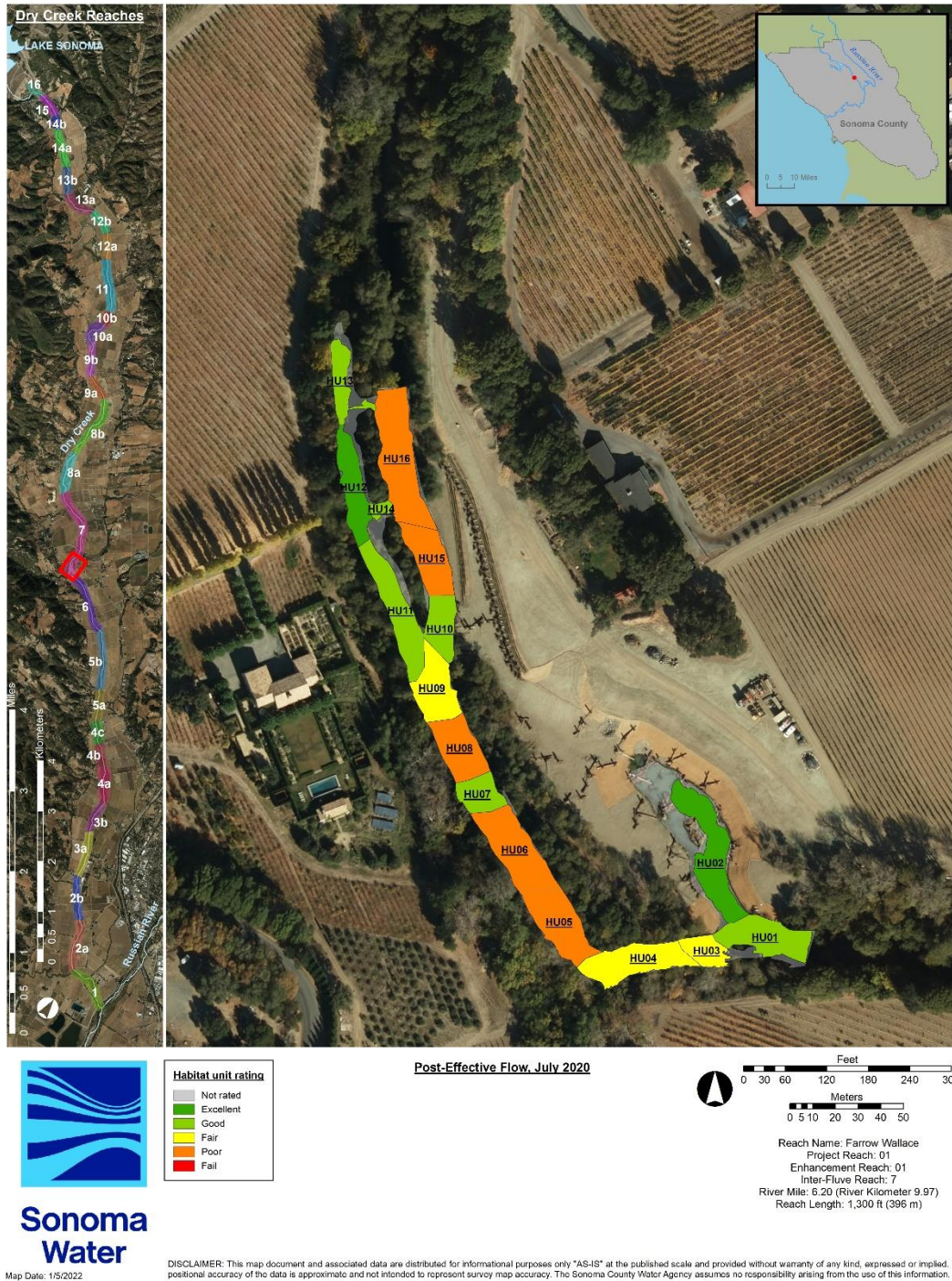


Figure 67. Habitat unit ratings for the Farrow, Wallace enhancement reach, July 2020.

Table 39. Post-effective flow average feature, average habitat unit, site, and reach ratings for the Farrow, Wallace enhancement reach, July 2020.

	Project Reach	1	1	1	1	1	1	1
	Enhancement Reach	1	1	1	1	1	1	1
	ENHANCEMENT REACH NAME	FW	FW	FW	FW	FW	FW	FW
	mmddy	72720	72720	72720	72720	72720	72720	72720
	Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF
	PROJECT SITE NUMBER	1	2	3	4	5	6	7
	Project Site Type	MC Alcove	MainChan	MainChan	MC Bank FP	MainChan	SideChan	MainChan
	PROJECT SITE NUMBER	1	2	3	4	5	6	7
SITE AVERAGE FEATURE RATING	Site average feature quantitative rating (out of 15; bold indicates excluded from site rating)	12	0	13	13	13	12	13
	Site average feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3), Not rated (not used to rate site)	Excellent	Not rated	Excellent	Excellent	Excellent	Excellent	Excellent
	PROJECT SITE NUMBER	1	2	3	4	5	6	7
SITE AVERAGE HABITAT UNIT RATING	Site average habitat unit quantitative rating (out of 35; bold indicates excluded from site rating)	25	16	14	0	22	21	11
	Site average qualitative rating Excellent (>=28), Good (>=21), Fair(>=14), Poor (>=7), Fail (<7), Not rated (not used to rate site)	Good	Fair	Fair	Not rated	Good	Good	Poor
	PROJECT SITE NUMBER	1	2	3	4	5	6	7
SITE RATING	Site quantitative rating (sum of site average feature and habitat unit ratings) (out of 50; bold indicates rating excludes feature or habitat unit rating and scoring out of 15 or 35)	37	16	27	13	35	33	24
	Site qualitative rating: Excellent (>=40), Good (>=30), Fair(>=20), Poor (>=10), Fail (<10)	Good	Fair	Fair	Excellent	Good	Good	Fair
	ENHANCEMENT REACH NAME	FW						
ENHANCEMENT REACH RATING	Enhancement reach quantitative rating (average of site ratings) (out of 43)	27						
	Enhancement reach qualitative rating: Excellent (>=34), Good (>=26), Fair(>=17), Poor (>=9), Fail (<9)	Good						

Farrow Wallace Enhancement Reach

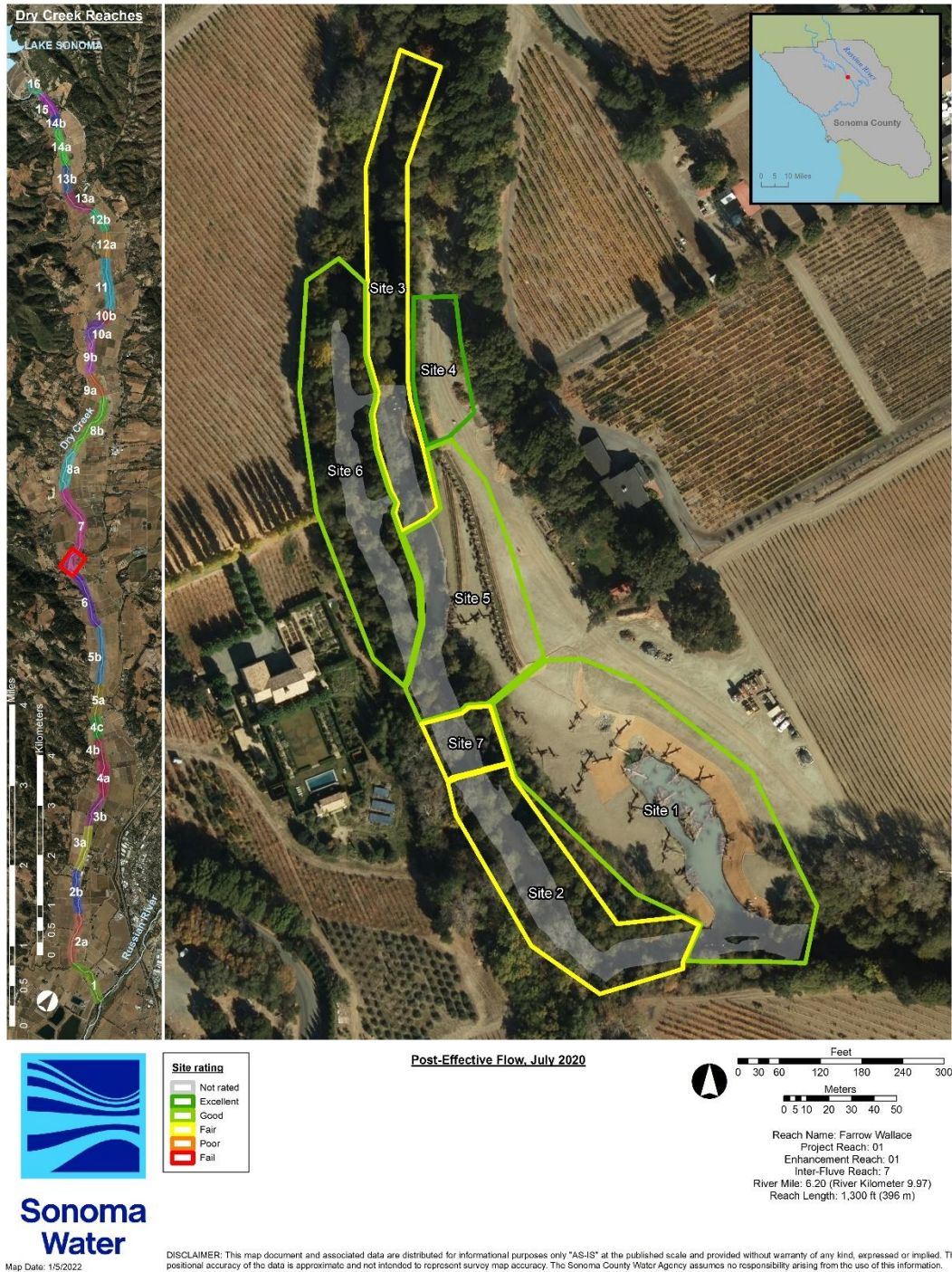


Figure 68. Post-effective flow site ratings for the Farrow, Wallace enhancement reach, July 2020.

Farrow Wallace Enhancement Reach



Figure 69. Post-effective flow reach rating for the Farrow, Wallace enhancement reach, July 2020.

Feature and Habitat Unit Checklists

Table 40. Adaptive Management Plan targeted checklist for the Farrow, Wallace enhancement reach, July 2020.

Project Reach	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Enhancement Reach	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Colloquial Name	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW
mmdyyy	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720
Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
Project Site Number	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Project Site Type	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove
Project Feature Number	NA	S1-01	S1-02	S1-03	S1-04	S1-05	S1-06	S1-07	S1-08	S1-09	S1-10	S1-11	S1-12	S1-13	S1-14	S1-15	S1-16	S1-17	
Feature Type Code	NA	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD
Habitat Unit	HU03	HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU02	HU02	HU02	HU02	HU02	HU02	HU02
Habitat Type	Rifle	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Alcove	Alcove	Alcove	Alcove	Alcove	Alcove	Alcove
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	NA	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD
5a. Are problems with the feature visible?	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
6a. Is the feature still in its original location?	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6b. Is the feature still in its original position?	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6d. Is the feature still in its original orientation?	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
8. If an objective, did the feature create the targeted instream habitat type?	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO	YES	YES	YES	YES
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	NO	YES	NO	NO	NO	NO
11e. % Area of habitat unit within 0.5 -2.0 ft depth	55%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	42%	42%	42%	42%	42%	42%
11f. % Area of habitat unit within 2.0 -4.0 ft depth	27%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	39%	39%	39%	39%	39%	39%
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	3	0	0	0	0	0	0	0	0	0	0	0	3	3	3	3	3	3	3
15. Percent of habitat unit covered by shelter: %	35	0	0	0	0	0	0	0	0	0	0	0	80	80	80	80	80	80	80
17a. If an objective, did the feature increase instream shelter rating?	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO	YES	YES	YES	YES	YES
17b. a. Calculate the shelter rating for the habitat unit: 0-300	105	0	0	0	0	0	0	0	0	0	0	0	240	240	240	240	240	240	240
19a. If an objective, did the feature increase LWD count in the habitat unit?	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
21a. If an objective, did the feature lead to the targeted channel conditions?	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO	YES	YES	YES	YES	YES
25. Did the feature achieve the targeted velocity?	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO	YES	YES	YES	YES	YES
28. Percent of habitat unit within targeted velocity (see above): (%)	28%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	100%	100%	100%	100%	100%
36e. % habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	15%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	42%	42%	42%	42%	42%	42%	42%
36f. % habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	39%	39%	39%	39%	39%	39%	39%
FEATURE NUMBER	NA	S1-01	S1-02	S1-03	S1-04	S1-05	S1-06	S1-07	S1-08	S1-09	S1-10	S1-11	S1-12	S1-13	S1-14	S1-15	S1-16	S1-17	
HABITAT UNIT NUMBER	HU03	HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU02	HU02	HU02	HU02	HU02	HU02	HU02
SITE NUMBER	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ENHANCEMENT REACH NAME	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW
4. Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	0	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
5a. Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	0	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1
6a. Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6b. Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6d. Is the feature still in its original orientation? (YES = 1 pt, NO = 0 pt)	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8. If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	0	1	1	1	1	1	1	1	1	1	0	0	1	0	1	1	1	1	1
9. Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	0	1	1	1	1	1	1	1	1	1	0	0	1	0	1	1	1	1	1
11e. % area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	0	0	0	0	0	0	0	0	0	0	0	4	4	4	4	4	4	4
11f. % area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	2	0	0	0	0	0	0	0	0	0	0	0	3	3	3	3	3	3	3
14. Instream shelter value in the habitat unit: 0, 1, 2, 3 (3 = 5 pts, 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	5	0	0	0	0	0	0	0	0	0	0	0	5	5	5	5	5	5	5
15. % hab unit covered by shelter (≥80 = 5pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)	2	0	0	0	0	0	0	0	0	0	0	0	5	5	5	5	5	5	5
17a. If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	0	1	1	1	1	1	1	1	1	1	0	0	1	0	1	1	1	1	1
17b. a. Calculate the shelter rating for the habitat unit: 0-300	4	0	0	0	0	0	0	0	0	0	0	0	5	5	5	5	5	5	5
19a. If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21a. If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	0	1	1	1	1	1	1	1	1	1	0	0	1	0	1	1	1	1	1
25. Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	0	1	1	1	1	1	1	1	1	1	0	0	1	0	1	1	1	1	1
28. % area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	2	0	0	0	0	0	0	0	0	0	0	0	4	4	4	4	4	4	4
36e. % area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	1	0	0	0	0	0	0	0	0	0	0	0	4	4	4	4	4	4	4
36f. % area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3	3	3	3	3

Table 40. Adaptive Management Plan targeted checklist for the Farrow, Wallace enhancement reach, July 2020.

Project Reach	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Enhancement Reach	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Colloquial Name	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW
mmdyyy	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720
Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
Project Site Number	1	1	1	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3	3
Project Site Type	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan
Project Feature Number	S1-18	S1-19	S1-20	S1-21	S1-22	S1-23	S1-24	S1-25	S1-26	S1-27	NA	NA	NA	NA	S3-01	S3-02	S3-03	S3-04	
Feature Type Code	LWD	LWD	LWD	Boulder field	LWD	LWD	LWD	LWD	LWD	LWD	NA	NA	NA	NA	NA	BC	BC	BC	BC
Habitat Unit	HU02	HU02	HU01	HU01	HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU04	HU05	HU06	HU07	HU01 W	HU01 W	HU01 W	HU16	
Habitat Type	Alcove	Alcove	Flatwater	Flatwater	Dry	Dry	Dry	Dry	Dry	Dry	Pool	Riffle	Flatwater	Pool	Flatwater	Flatwater	Flatwater	Pool	
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	GOOD	FAIR	GOOD	GOOD	GOOD	NR	UNKN	UNKN	UNKN	NA	NA	NA	NA	NR	NR	NR	GOOD	
5a. Are problems with the feature visible?	NO	NO	YES	YES	NO	NO	NR	NR	NR	NR	NA	NA	NA	NA	NR	NR	NR	NO	
6a. Is the feature still in its original location?	YES	YES	YES	YES	YES	YES	NR	NR	NR	NR	NA	NA	NA	NA	NR	NR	NR	YES	
6b. Is the feature still in its original position?	YES	YES	YES	YES	YES	YES	NR	NR	NR	NR	NA	NA	NA	NA	NR	NR	NR	YES	
6d. Is the feature still in its original orientation?	YES	YES	YES	YES	YES	YES	NR	NR	NR	NR	NA	NA	NA	NA	NR	NR	NR	YES	
8. If an objective, did the feature create the targeted instream habitat type?	YES	YES	YES	YES	YES	YES	NR	NR	NR	NR	NA	NA	NA	NA	NR	NR	NR	YES	
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	NO	NO	YES	NO	NO	NR	NR	NR	NR	NA	NA	NA	NA	NR	NR	NR	NO	
11e. % Area of habitat unit within 0.5 -2.0 ft depth	42%	42%	22%	22%	0%	0%	0%	0%	0%	0%	18%	75%	82%	34%	0%	0%	0%	36%	
11f. % Area of habitat unit within 2.0 -4.0 ft depth	39%	39%	46%	46%	0%	0%	0%	0%	0%	0%	50%	9%	14%	56%	0%	0%	0%	52%	
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	3	3	3	3	0	0	0	0	0	0	3	2	1	3	0	0	0	1	
15. Percent of habitat unit covered by shelter: %	80	80	35	35	0	0	0	0	0	0	45	15	10	40	0	0	0	15	
17a. If an objective, did the feature increase instream shelter rating?	YES	YES	YES	YES	YES	YES	NR	NR	NR	NR	NA	NA	NA	NA	NR	NR	NR	YES	
17b. a. Calculate the shelter rating for the habitat unit: 0-300	240	240	105	105	0	0	0	0	0	0	135	30	10	120	0	0	0	15	
19a. If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	YES	NO	NO	NO	NR	NR	NR	NR	NA	NA	NA	NA	NR	NR	NR	NO	
21a. If an objective, did the feature lead to the targeted channel conditions?	YES	YES	YES	NO	YES	YES	NR	NR	NR	NR	NA	NA	NA	NA	NR	NR	NR	YES	
25. Did the feature achieve the targeted velocity?	YES	YES	YES	YES	YES	YES	NR	NR	NR	NR	NA	NA	NA	NA	NR	NR	NR	YES	
28. Percent of habitat unit within targeted velocity (see above): (%)	100%	100%	42%	42%	0%	0%	0%	0%	0%	0%	26%	10%	11%	28%	0%	0%	0%	28%	
36e. % habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	42%	42%	12%	12%	0%	0%	0%	0%	0%	0%	11%	4%	6%	11%	0%	0%	0%	12%	
36f. % habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	39%	39%	16%	16%	0%	0%	0%	0%	0%	0%	7%	1%	2%	12%	0%	0%	0%	10%	
FEATURE NUMBER	S1-18	S1-19	S1-20	S1-21	S1-22	S1-23	S1-24	S1-25	S1-26	S1-27	NA	NA	NA	NA	S3-01	S3-02	S3-03	S3-04	
HABITAT UNIT NUMBER	HU02	HU02	HU01	HU01	HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU04	HU05	HU06	HU07	HU01 W	HU01 W	HU01 W	HU16	
SITE NUMBER	1	1	1	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3	
ENHANCEMENT REACH NAME	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	
4. Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	4	4	3	4	4	4	0	0	0	0	0	0	0	0	0	0	0	4	
5a. Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	
6a. Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	
6b. Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	
6d. Is the feature still in its original orientation? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	
8. If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	
9. Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	
11e. % area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	4	2	2	0	0	0	0	0	0	1	4	4	3	0	0	0	3	
11f. % area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	3	3	4	4	0	0	0	0	0	0	4	0	1	4	0	0	0	4	
14. Instream shelter value in the habitat unit: 0, 1, 2, 3 (3 = 5 pts, 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	5	5	5	5	0	0	0	0	0	0	5	4	3	5	0	0	0	3	
15. % hab unit covered by shelter (≥80 = 5pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)	5	5	2	2	0	0	0	0	0	0	3	1	1	3	0	0	0	1	
17a. If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	
17b. a. Calculate the shelter rating for the habitat unit: 0-300	5	5	4	4	0	0	0	0	0	0	4	0	0	4	0	0	0	0	
19a. If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
21a. If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	
25. Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	
28. % area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	4	4	4	0	0	0	0	0	0	2	1	1	2	0	0	0	2	
36e. % area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	4	1	1	0	0	0	0	0	0	1	0	0	1	0	0	0	1	
36f. % area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	3	3	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	

Table 40. Adaptive Management Plan targeted checklist for the Farrow, Wallace enhancement reach, July 2020.

Project Reach	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Enhancement Reach	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Colloquial Name	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW
mmdyyy	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720
Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
Project Site Number	3	4	4	4	7	5	5	5	5	5	5	5	6	6	6	6	6	6	6
Project Site Type	MainChan	MC Bank FP	MC Bank FP	MC Bank FP	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
Project Feature Number	S3-05	S4-01	S4-02	S4-03	S7-01	NA	S5-01	S5-02	S5-03	S5-04	S5-05	NA	S6-01	S6-02	S6-03	S6-04	S6-05	S6-06	
Feature Type Code	BC	LWD	LWD	LWD	Constructed Rif	NA	TER	FLP	LWD	LWD	LWD	NA	LWD	LWD	LWD	LWD	LWD	LWD	LWD
Habitat Unit	HU16	HU02 D	HU02 D	HU02 D	HU08	HU09	HU03 D	HU03 D	HU10	HU03 D	HU03 D	HU15	HU04 D	HU04 D	HU13	HU12	HU12	HU14	
Habitat Type	Pool	Dry	Dry	Dry	Riffle	Flatwater	Dry	Dry	Pool	Dry	Dry	Riffle	Dry	Dry	Alcove	Flatwater	Flatwater	Riffle	
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	GOOD	GOOD	GOOD	GOOD	NA	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	NA	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD
5a. Are problems with the feature visible?	NO	NO	NO	NO	NO	NA	NO	NO	NO	NO	NO	NO	NA	NO	YES	NO	NO	NO	NO
6a. Is the feature still in its original location?	YES	YES	YES	YES	YES	NA	YES	YES	YES	YES	YES	YES	NA	YES	YES	YES	YES	YES	YES
6b. Is the feature still in its original position?	YES	YES	YES	YES	YES	NA	YES	YES	YES	YES	YES	YES	NA	YES	YES	YES	YES	YES	YES
6d. Is the feature still in its original orientation?	YES	YES	YES	YES	YES	NA	YES	YES	YES	YES	YES	YES	NA	YES	YES	YES	YES	YES	YES
8. If an objective, did the feature create the targeted instream habitat type?	YES	YES	YES	YES	YES	NA	YES	YES	YES	YES	YES	YES	NA	YES	NO	YES	YES	YES	YES
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	NO	NO	NO	NO	NA	NO	NO	NO	NO	NO	NA	NO	YES	YES	NO	NO	NO	NO
11e. % Area of habitat unit within 0.5 -2.0 ft depth	36%	0%	0%	0%	90%	11%	0%	0%	21%	0%	0%	76%	0%	0%	71%	54%	54%	66%	
11f. % Area of habitat unit within 2.0 -4.0 ft depth	52%	0%	0%	0%	2%	72%	0%	0%	33%	0%	0%	13%	0%	0%	5%	33%	33%	1%	
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	1	0	0	0	2	3	0	0	3	0	0	2	0	0	3	3	3	3	
15. Percent of habitat unit covered by shelter: %	15	0	0	0	20	35	0	0	50	0	0	15	0	0	80	60	60	55	
17a. If an objective, did the feature increase instream shelter rating?	YES	YES	YES	YES	YES	NA	YES	YES	YES	NO	YES	NA	NO	NO	YES	YES	YES	YES	
17b. a. Calculate the shelter rating for the habitat unit: 0-300	15	0	0	0	40	105	0	0	150	0	0	30	0	0	240	180	180	165	
19a. If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	NO	NA	NO	NO	YES	NO	NO	NA	YES	NO	NO	NO	NO	NO	
21a. If an objective, did the feature lead to the targeted channel conditions?	YES	YES	YES	YES	YES	NA	YES	YES	YES	YES	YES	NA	YES	NO	NO	YES	YES	YES	
25. Did the feature achieve the targeted velocity?	YES	YES	YES	YES	YES	NA	YES	YES	YES	YES	YES	NA	YES	NO	YES	YES	YES	YES	
28. Percent of habitat unit within targeted velocity (see above): (%)	28%	0%	0%	0%	6%	30%	0%	0%	53%	0%	0%	23%	0%	0%	100%	89%	89%	48%	
36e. % habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	12%	0%	0%	0%	1%	8%	0%	0%	17%	0%	0%	12%	0%	0%	71%	48%	48%	17%	
36f. % habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	10%	0%	0%	0%	0%	18%	0%	0%	16%	0%	0%	1%	0%	0%	5%	28%	28%	0%	
FEATURE NUMBER	S3-05	S4-01	S4-02	S4-03	S7-01	NA	S5-01	S5-02	S5-03	S5-04	S5-05	NA	S6-01	S6-02	S6-03	S6-04	S6-05	S6-06	
HABITAT UNIT NUMBER	HU16	HU02 D	HU02 D	HU02 D	HU08	HU09	HU03 D	HU03 D	HU10	HU03 D	HU03 D	HU15	HU04 D	HU04 D	HU13	HU12	HU12	HU14	
SITE NUMBER	3	4	4	4	7	5	5	5	5	5	5	6	6	6	6	6	6	6	
ENHANCEMENT REACH NAME	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	
4. Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	4	4	4	4	4	0	4	4	4	4	4	0	4	4	4	4	4	4	
5a. Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	1	1	1	1	1	0	1	1	1	1	1	0	1	0	1	1	1	1	
6a. Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	0	1	1	1	1	1	0	1	1	1	1	1	1	
6b. Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	0	1	1	1	1	1	0	1	1	1	1	1	1	
6d. Is the feature still in its original orientation? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	0	1	1	1	1	1	0	1	1	1	1	1	1	
8. If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	0	1	1	1	1	1	0	1	0	1	1	1	1	
9. Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	1	1	1	1	1	0	1	1	1	1	1	0	1	0	0	1	1	1	
11e. % area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	3	0	0	0	4	1	0	0	2	0	0	4	0	0	4	4	4	4	
11f. % area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	0	0	0	0	4	0	0	3	0	0	1	0	0	0	3	3	0	
14. Instream shelter value in the habitat unit: 0, 1, 2, 3 (3 = 5 pts, 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	3	0	0	0	4	5	0	0	5	0	0	4	0	0	5	5	5	5	
15. % hab unit covered by shelter (≥80 = 5pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)	1	0	0	0	2	2	0	0	3	0	0	1	0	0	5	4	4	3	
17a. If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	0	1	1	1	0	1	0	0	0	1	1	1	1	
17b. a. Calculate the shelter rating for the habitat unit: 0-300	0	0	0	0	1	4	0	0	5	0	0	0	0	0	5	5	5	5	
19a. If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	
21a. If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	0	1	1	1	1	1	0	1	0	0	1	1	1	
25. Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	0	1	1	1	1	1	0	1	0	1	1	1	1	
28. % area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	2	0	0	0	0	3	0	0	4	0	0	2	0	0	4	4	4	4	
36e. % area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	1	0	0	0	0	0	0	0	1	0	0	1	0	0	4	4	4	1	
36f. % area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	2	0	

Table 40. Adaptive Management Plan targeted checklist for the Farrow, Wallace enhancement reach, July 2020.

Project Reach	1	1	1	1	1	1	1	1	1
Enhancement Reach	1	1	1	1	1	1	1	1	1
Colloquial Name	FW	FW	FW	FW	FW	FW	FW	FW	FW
mmddyy	72720	72720	72720	72720	72720	72720	72720	72720	72720
Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
Project Site Number	6	6	6	6	6	6	6	6	6
Project Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
Project Feature Number	S6-07	S6-08	S6-09	S6-10	S6-11	S6-12	S6-13	S6-14	
Feature Type Code	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD
Habitat Unit	HU11	HU11	HU11	HU11	HU12	HU12	HU12	HU04 D	
Habitat Type	Pool	Pool	Pool	Pool	Flatwater	Flatwater	Flatwater	Dry	
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	NR
5a. Are problems with the feature visible?	NO	NO	NO	NO	NO	NO	NO	NO	NR
6a. Is the feature still in its original location?	YES	YES	YES	YES	YES	YES	YES	YES	NR
6b. Is the feature still in its original position?	YES	YES	YES	YES	YES	YES	YES	YES	NR
6d. Is the feature still in its original orientation?	YES	YES	YES	YES	YES	YES	YES	YES	NR
8. If an objective, did the feature create the targeted instream habitat type?	YES	YES	YES	YES	YES	YES	YES	NO	NR
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	NO	NO	NO	NO	NO	YES	NR	
11e. % Area of habitat unit within 0.5 -2.0 ft depth	20%	20%	20%	20%	54%	54%	54%	0%	
11f. % Area of habitat unit within 2.0 -4.0 ft depth	53%	53%	53%	53%	33%	33%	33%	0%	
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	3	3	3	3	3	3	3	0	
15. Percent of habitat unit covered by shelter: %	40	40	40	40	60	60	60	0	
17a. If an objective, did the feature increase instream shelter rating?	YES	YES	YES	YES	YES	YES	NO	NR	
17b. a. Calculate the shelter rating for the habitat unit: 0-300	120	120	120	120	180	180	180	0	
19a. If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	NO	NO	NO	NR	
21a. If an objective, did the feature lead to the targeted channel conditions?	YES	YES	YES	YES	YES	YES	NO	NR	
25. Did the feature achieve the targeted velocity?	YES	YES	YES	YES	YES	YES	NO	NR	
28. Percent of habitat unit within targeted velocity (see above): (%)	85%	85%	85%	85%	89%	89%	89%	0%	
36e. % habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	19%	19%	19%	19%	48%	48%	48%	0%	
36f. % habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	40%	40%	40%	40%	28%	28%	28%	0%	
FEATURE NUMBER	S6-07	S6-08	S6-09	S6-10	S6-11	S6-12	S6-13	S6-14	
HABITAT UNIT NUMBER	HU11	HU11	HU11	HU11	HU12	HU12	HU12	HU04 D	
SITE NUMBER	6	6	6	6	6	6	6	6	
ENHANCEMENT REACH NAME	FW	FW	FW	FW	FW	FW	FW	FW	
4. Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	4	4	4	4	4	4	4	0	
5a. Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	1	1	1	1	1	1	1	0	
6a. Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	0	
6b. Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	0	
6d. Is the feature still in its original orientation? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	0	
8. If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	0	0	
9. Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	1	1	1	1	1	1	0	0	
11e. % area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	2	2	2	2	4	4	4	0	
11f. % area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	4	4	4	3	3	3	0	
14. Instream shelter value in the habitat unit: 0, 1, 2, 3 (3 = 5 pts; 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	5	5	5	5	5	5	5	0	
15. % hab unit covered by shelter (≥80 = 5pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)	3	3	3	3	4	4	4	0	
17a. If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	0	0	
17b. a. Calculate the shelter rating for the habitat unit: 0-300	4	4	4	4	5	5	5	0	
19a. If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	
21a. If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	0	0	
25. Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	0	0	
28. % area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	4	4	4	4	4	4	0	
36e. % area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	1	1	1	1	4	4	4	0	
36f. % area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	4	4	4	2	2	2	0	

Table 41. Adaptive Management Plan full checklist for the Farrow, Wallace enhancement reach, July 2020.

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Project Reach	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Enhancement Reach	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Colloquial Name	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW
mmddyy	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720
Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
Project Site Number	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Project Site Type	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove
Project Feature Number	NA	S1-01	S1-02	S1-03	S1-04	S1-05	S1-06	S1-07	S1-08	S1-09	S1-10	S1-11	S1-12	S1-13	S1-14	S1-15	S1-16	S1-17	S1-17	S1-17	S1-17
Feature Type Code	NA	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD
Habitat Unit	HU03	HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU02	HU02	HU02	HU02	HU02	HU02	HU02	HU02	HU02
Habitat Type	Riffle	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Alcove	Alcove	Alcove	Alcove	Alcove	Alcove	Alcove	Alcove	Alcove
1. Length of targeted treatment (ft)		35	35	35	35	35	35	25	25	40	35	25	25	35	25	35	35	35	35	35	35
2. Width of targeted treatment: (ft)		45	45	60	60	45	25	40	45	70	45	45	45	45	45	45	45	45	45	45	45
3. Estimate area of the targeted feature: (ft ²)		1575	1575	2100	2100	1575	875	1000	1125	2800	1575	1125	1125	1575	1125	1575	1575	1575	1575	1575	1575
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	NA	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD
5a. Are problems with the feature visible?	NA	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO
5b. Types: ANC, BBB, CRF, MAT, SHF, STR, SWA, UND, UNS, WSH, OTH, NON	NA	NON	NON	NON	NON	NON	NON	NON	NON	STR	STR	NON	STR	NON	NON	NON	NON	NON	NON	NON	NON
6a. Is the feature still in its original location?	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6b. Is the feature still in its original position?	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6c. If yes: LBK, MDC, RBK, SPN, OTH	NA	LBK	LBK	LBK	LBK	LBK	LBK	LBK	LBK	LBK	LBK	LBK	LBK	LBK	LBK	LBK	LBK	LBK	LBK	LBK	LBK
6d. Is the feature still in its original orientation?	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6e. If yes: DNS, MUL, PRL, PRP, UPS, OTH	NA	PRP	UPS	UPS	UPS	UPS	PRP	PRP	PRP	UPS	MUL	UPS	MUL	UPS	MUL	UPS	MUL	MUL	MUL	MUL	UPS
7. Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	RIF	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	ALC	ALC	ALC	ALC	ALC	ALC	ALC	ALC	ALC
8. If an objective, did the feature create the targeted instream habitat type?	NA	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO	YES	NO	NO	NO	NO	NO	NO	NO
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	NA	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO
10. Mean water depth in habitat unit: ft	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
11a. Maximum water depth in habitat unit: ft	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
11b. Area of habitat unit within 0.5 -2.0 ft depth: (ft ²)	1259.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3231.0	3231.0	3231.0	3231.0	3231.0	3231.0	3231.0	3231.0	3231.0	3231.0
11c. Area of habitat unit within 2.0 -4.0 ft depth: (ft ²)	621.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3047.3	3047.3	3047.3	3047.3	3047.3	3047.3	3047.3	3047.3	3047.3	3047.3
11d. Area of habitat unit within 0.5-4.0 ft depth: (ft ²)	1881.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6278.3	6278.3	6278.3	6278.3	6278.3	6278.3	6278.3	6278.3	6278.3	6278.3
11e. % Area of habitat unit within 0.5 -2.0 ft depth	55%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	42%	42%	42%	42%	42%	42%	42%	42%	42%	42%
11f. % Area of habitat unit within 2.0 -4.0 ft depth	27%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	39%	39%	39%	39%	39%	39%	39%	39%	39%	39%
11g. % Area of habitat unit within 0.5-4.0 ft depth	81%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	81%	81%	81%	81%	81%	81%	81%	81%	81%	81%
11h. If an objective, did the feature increase/decrease water depth in the treatment area?	NA	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO	YES	NO	YES	YES	YES	YES	YES	YES
12a. Targeted depth or range (ft) in habitat unit	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0
12b. Estimate area of feature within targeted depth or range ft ² :	1575	1575	2100	2100	1575	1000	1125	2800	1125	2800	1125	1125	1125	1575	1125	1575	1575	1575	1575	1575	1575
13. Were there any unintended effects of the feature on the water depth? If Y, comment.	NA	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	3	0	0	0	0	0	0	0	0	0	0	3	3	3	3	3	3	3	3	3	3
15. Percent of habitat unit covered by shelter: %	35	0	0	0	0	0	0	0	0	0	0	80	80	80	80	80	80	80	80	80	80
16a. 1st dominant cover in habitat unit: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	TVG	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	AVG	AVG	AVG	AVG	AVG	AVG	AVG	AVG	AVG	AVG
16b. 2nd dominant in habitat unit: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	BOL	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD
17a. If an objective, did the feature increase instream shelter rating?	NA	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES
17b. a. Calculate the shelter rating for the habitat unit: 0-300	105	0	0	0	0	0	0	0	0	0	0	240	240	240	240	240	240	240	240	240	240
18a. Large woody debris count in habitat unit: D >1', L 6-20'	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18b. Large woody debris count in habitat unit: D >1', L >20'	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19a. If an objective, did the feature increase LWD count in the habitat unit?	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
19b. LWD recruitment mechanisms in habitat unit: ANC, EXC, EXH, INT, RPR, UNA, OTH	UNK	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
20. Current stream channel problems in the habitat unit: AGG, BRD, FLO, GRC, HDC, INC, NAR, SCU, STT, VID, NON, OTH	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
21a. If an objective, did the feature lead to the targeted channel conditions?	NA	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO	YES	NO	YES	YES	YES	YES	YES	YES
21b. Overall Offchannel Condition (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, VID, OTH	NA	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	AGG	AGG	AGG	AGG	AGG	STB	STB	STB	STB	STB
21c. Outlet Conditions (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, VID, OTH	NA																				
21d. Inlet Conditions (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, VID, OTH	NA																				
22. Were there any unintended effects on the stream channel at the feature? If Y, comment.	NA	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO
23. If an objective, did the feature decrease/increase velocity in the treatment area?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	YES	NA	YES	NA	YES	YES	YES	YES	YES	YES
24. Targeted velocity/range in the habitat unit: (ft/sec)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
25. Did the feature achieve the targeted velocity?	NA	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO	YES	NO	YES	YES	YES	YES	YES	YES
26a. Measured minimum velocity (ft/sec) in habitat unit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26b. Measured max velocity (ft/sec) in habitat unit	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
26c. Measured mean velocity (ft/sec) in habitat unit	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27. Area of habitat unit within targeted velocity: (ft ²)	646.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7785.9	7785.9	7785.9	7785.9	7785.9	7785.9	7785.9	7785.9	7785.9	7785.9
28. Percent of habitat unit within targeted velocity (see above): (%)	28%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
29. Were there any unintended effects of feature on velocity? If Y, comment.	NA	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	NO	YES	NO	NO	NO	NO	NO			

Table 41. Adaptive Management Plan full checklist for the Farrow, Wallace enhancement reach, July 2020.

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Project Reach	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Enhancement Reach	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Colloquial Name	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW
mmddyy	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720
Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
Project Site Number	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3	3	3
Project Site Type	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MC Alcove	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	
Project Feature Number	S1-18	S1-19	S1-20	S1-21	S1-22	S1-23	S1-24	S1-25	S1-26	S1-27	NA	NA	NA	NA	NA	S3-01	S3-02	S3-03	S3-04	S3-05	S3-06	
Feature Type Code	LWD	LWD	LWD	Boulder field	LWD	LWD	LWD	LWD	LWD	LWD	NA	NA	NA	NA	NA	BC	BC	BC	BC	BC	BC	
Habitat Unit	HU02	HU02	HU01	HU01	HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU04	HU05	HU06	HU07	HU01 W	HU01 W	HU01 W	HU01 W	HU16	HU16	
Habitat Type	Alcove	Alcove	Flatwater	Flatwater	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Pool	Riffle	Flatwater	Pool	Flatwater	Flatwater	Flatwater	Flatwater	Pool	Pool	
1. Length of targeted treatment (ft)	35	35	35	195	35	35	35	20	20	20	20					21	24	19	30			
2. Width of targeted treatment (ft)	30	30	60	54	45	45	45	20	40	40						31	24	21	24			
3. Estimate area of the targeted feature: (ft ²)	1050	1050	2100	10530	1575	1575	1575	400	800	800						651	576	399	720			
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	GOOD	FAIR	GOOD	GOOD	GOOD	GOOD	NR	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	NA	NA	NA	NA	NA	NA	
5a. Are problems with the feature visible?	NO	NO	YES	YES	NO	NO	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
5b. Types: ANC, BBB, CRF, MAT, SHF, STR, SWA, UND, UNS, WSH, OTH, NON	NON	NON	UND	BBB	NON	NON	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
6a. Is the feature still in its original location?	YES	YES	YES	YES	YES	YES	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
6b. Is the feature still in its original orientation?	YES	YES	YES	YES	YES	YES	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
6c. If yes: LBK, MDC, RBK, SPN, OTH	LBK	LBK	LBK	MDC	LBK	LBK	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
6d. If yes: DNS, MUL, PRL, PRP, UPS, OTH	MUL	MUL	MUL	UPS	MUL	MUL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
7. Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	ALC	ALC	FLT	FLT	DRY	DRY	DRY	DRY	DRY	DRY	DRY	POO	RIF	FLT	POO	FLT	FLT	FLT	FLT	POO	POO	
8. If an objective, did the feature create the targeted instream habitat type?	YES	YES	YES	YES	YES	YES	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	NO	NO	YES	NO	NO	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
10. Mean water depth in habitat unit: ft	1.9	1.9	2.7	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.9	1.4	2.3	0.0	0.0	0.0	0.0	2.3	2.3	
11a. Maximum water depth in habitat unit: ft	4.9	4.9	5.1	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.8	3.6	4.2	4.9	0.0	0.0	0.0	0.0	5.1	5.1	
11b. Area of habitat unit within 0.5 -2.0 ft depth: (ft ²)	3231.0	3231.0	1282.2	1282.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1158.9	4652.8	6030.9	993.3	0.0	0.0	0.0	0.0	3476.6	3476.6	
11c. Area of habitat unit within 2.0 -4.0 ft depth: (ft ²)	3047.3	3047.3	2627.1	2627.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3144.0	586.6	1027.9	1632.8	0.0	0.0	0.0	0.0	5002.3	5002.3	
11d. Area of habitat unit within 0.5-4.0 ft depth: (ft ²)	6278.3	6278.3	3909.3	3909.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4302.9	5239.3	7058.8	2626.1	0.0	0.0	0.0	0.0	8478.9	8478.9	
11e. % Area of habitat unit within 0.5 -2.0 ft depth	42%	42%	22%	22%	0%	0%	0%	0%	0%	0%	0%	18%	75%	82%	34%	0%	0%	0%	0%	36%	36%	
11f. % Area of habitat unit within 2.0 -4.0 ft depth	39%	39%	46%	46%	0%	0%	0%	0%	0%	0%	0%	50%	9%	14%	56%	0%	0%	0%	0%	52%	52%	
11g. % Area of habitat unit within 0.5-4.0 ft depth	81%	81%	68%	68%	0%	0%	0%	0%	0%	0%	0%	69%	84%	97%	90%	0%	0%	0%	0%	88%	88%	
11h. If an objective, did the feature increase/decrease water depth in the treatment area?	YES	YES	YES	DEC	YES	YES	NR	NR	NR	NR	NR	NA	NA	NA	NA	NR	NR	NR	NR	YES	YES	
12a. Targeted depth or range (ft) in habitat unit	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	
12b. Estimate area of feature within targeted depth or range ft ² :	1050	1050	2100	10530	1575	1575	1575	400	800	800	400	3144.0	586.6	1027.9	1632.8	0.0	0.0	0.0	0.0	5002.3	5002.3	
13. Were there any unintended effects of the feature on the water depth? If Y, comment.	NO	NO	NO	YES	NO	NO	NR	NR	NR	NR	NR	NA	NA	NA	NA	NR	NR	NR	NR	NO	NO	
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	3	3	3	3	0	0	0	0	0	0	0	3	2	1	3	0	0	0	0	1	1	
15. Percent of habitat unit covered by shelter: %	80	80	35	35	0	0	0	0	0	0	0	45	15	10	40	0	0	0	0	15	15	
16a. 1st dominant cover in habitat unit: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	AVG	AVG	LWD	LWD	NON	NON	NON	NON	NON	NON	NON	TVG	SWD	SWD	RTW	NR	NR	NR	NR	TVG	TVG	
16b. 2nd dominant in habitat unit: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	LWD	LWD	RTW	RTW	NON	NON	NON	NON	NON	NON	NON	SWD	TVG	TVG	LWD	NR	NR	NR	NR	SWD	SWD	
17a. If an objective, did the feature increase instream shelter rating?	YES	YES	YES	YES	YES	YES	NR	NR	NR	NR	NR	NA	NA	NA	NR	NR	NR	NR	NR	YES	YES	
17b. a. Calculate the shelter rating for the habitat unit: 0-300	240	240	105	105	0	0	0	0	0	0	0	135	30	10	120	0	0	0	0	15	15	
18a. Large woody debris count in habitat unit: D >1', L 6-20'	0	0	3	3	0	0	0	0	0	0	0	1	1	2	1	0	0	0	0	0	0	
18b. Large woody debris count in habitat unit: D >1', L >20'	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	
19a. If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	YES	NO	NO	NO	NR	NR	NR	NR	NR	NA	NA	NA	NR	NR	NR	NR	NR	NO	NO	
19b. LWD recruitment mechanisms in habitat unit: ANC, EXC, EXH, INT, RPR, UNA, OTH	NON	NON	UNK	UNK	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	
20. Current stream channel problems in the habitat unit: AGG, BRD, FLO, GRC, HDC, INC, NAR, SCU, STT, WID, NON, OTH	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	
21a. If an objective, did the feature lead to the targeted channel conditions?	YES	YES	YES	NO	YES	YES	NR	NR	NR	NR	NR	NA	NA	NA	NA	NR	NR	NR	NR	YES	YES	
21b. Overall Offchannel Condition (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	STB	STB	STB	AGG	STB	STB	STB	STB	STB	STB	STB	NA	NA	NA	NA	NR	NR	NR	NR	STB	STB	
21c. Outlet Conditions (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH							STB	STB	STB	STB	STB	NA	NA	NA	NA	NR	NR	NR	NR			
21d. Inlet Conditions (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH							AGG	AGG	AGG	AGG	AGG	NA	NA	NA	NA	NR	NR	NR	NR			
22. Were there any unintended effects on the stream channel at the feature? If Y, comment.	NO	NO	NO	YES	NO	NO	NR	NR	NR	NR	NR	NA	NA	NA	NA	NR	NR	NR	NR	NO	NO	
23. If an objective, did the feature decrease/increase velocity in the treatment area?	YES	YES	DEC	DEC	NA	NA	NR	NR	NR	NR	NR	NA	NA	NA	NA	NR	NR	NR	NR	DEC	DEC	
24. Targeted velocity/range in the habitat unit: (ft/sec)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
25. Did the feature achieve the targeted velocity?	YES	YES	YES	YES	YES	YES	NR	NR	NR	NR	NR	NA	NA	NA	NA	NR	NR	NR	NR	YES	YES	
26a. Measured minimum velocity (ft/sec) in habitat unit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
26b. Measured max velocity (ft/sec) in habitat unit	0.1	0.1	4.3	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	5.2	3.0	3.2	0.0	0.0	0.0	0.0	2.6	2.6	
26c. Measured mean velocity (ft/sec) in habitat unit	0.0	0.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	2.3	1.6	1.0	0.0	0.0	0.0	0.0	1.0	1.0	
27. Area of habitat unit within targeted velocity: (ft ²)	7785.9	7785.9	2421.0	2421.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1659.6	646.1	769.5	831.7	0.0	0.0	0.0	0.0	2677.3	2677.3	
28. Percent of habitat unit within targeted velocity (see above): (%)	100%	100%	42%	42%	0%	0%	0%	0%	0%	0%	0%	26%	10%	11%	28%	0%	0%	0%	0%	28%	28%	
29. Were there any unintended effects of feature on velocity? If Y, comment.	NO	NO	NO	NO	NO	NO	NR	NR	NR	NR	NR	NA	NA	NA	NA	NR	NR	NR	NR	NO	NO	
30a. 1st/2nd dominant substrate in habitat unit: BED, BOL, COB, GRV, SND, SLC, OTH	SND	SND	GRV	GRV	NON	NON	NR	NR	NR	NR	NR	NA	NA	NA	NA	NR	NR	NR	NR			

Table 41. Adaptive Management Plan full checklist for the Farrow, Wallace enhancement reach, July 2020.

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Project Reach																						
Enhancement Reach																						
Colloquial Name	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW
nmddyy	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720	72720
Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
Project Site Number	3	4	4	4	4	7	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6
Project Site Type	MainChan	MC Bank FP	MC Bank FP	MC Bank FP	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
Project Feature Number	S3-05	S4-01	S4-02	S4-03	S7-01	NA	S5-01	S5-02	S5-03	S5-04	S5-05	NA	S6-01	S6-02	S6-03	S6-04	S6-05	S6-06				
Feature Type Code	BC	LWD	LWD	LWD	Constructed Rif	NA	TER	FLP	LWD	LWD	LWD	NA	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD
Habitat Unit	HU16	HU02 D	HU02 D	HU02 D	HU08	HU09	HU03 D	HU03 D	HU03 D	HU10	HU03 D	HU03 D	HU15	HU04 D	HU04 D	HU13	HU12	HU12	HU12	HU14	HU14	
Habitat Type	Pool	Dry	Dry	Dry	Riffle	Flatwater	Dry	Dry	Pool	Dry	Dry	Riffle	Dry	Dry	Alcove	Flatwater	Flatwater	Flatwater	Riffle			
1.	Length of targeted treatment (ft)	20	30	30	30	100	350	180	87	37	36	35	35	20	20	20	20	20	20	20	20	20
2.	Width of targeted treatment: (ft)	8	60	60	60	55			62	25	24	40	25	25	25	25	25	25	25	25	25	25
3.	Estimate area of the targeted feature: (ft ²)	160	1800	1800	1800				5394	925	864	1400	875	500	500	500	500	500	500	500	500	500
4.	Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	GOOD	GOOD	GOOD	GOOD	NA	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD
5a.	Are problems with the feature visible?	NO	NO	NO	NO	NO	NA	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO
5b.	Types: ANC, BBB, CRF, MAT, SHF, STR, SWA, UND, UNS, WSH, OTH, NON	NON	NON	NON	NON	NON	NA	NON	NON	NON	NON	NON	NON	NON	STR	NON	NON	NON	NON	NON	NON	NON
6a.	Is the feature still in its original location?	YES	YES	YES	YES	YES	NA	YES	YES	YES	YES	YES	YES	NA	YES	YES	YES	YES	YES	YES	YES	YES
6b.	Is the feature still in its original orientation?	YES	YES	YES	YES	YES	NA	YES	YES	YES	YES	YES	YES	NA	YES	YES	YES	YES	YES	YES	YES	YES
6c.	If yes: LBK, MDC, RBK, SPN, OTH	MCD	LBK	LBK	LBK	SPN	NA	LBK	LBK	LBK	LBK	LBK	LBK	NA	RBK	RBK	RBK	RBK	RBK	RBK	RBK	RBK
6d.	Is the feature still in its original orientation?	YES	YES	YES	YES	YES	NA	YES	YES	YES	YES	YES	YES	NA	YES	YES	YES	YES	YES	YES	YES	YES
6e.	If yes: DNS, MUL, PRL, PRP, UPS, OTH	MUL	PRP	PRP	PRP	OTH	NA	PRP	PRP	MUL	PRP	PRP	PRP	NA	OTH	OTH	PRL	PRL	PRL	PRL	UPS	UPS
7.	Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	POO	DRY	DRY	DRY	RIF	FLT	DRY	POO	DRY	DRY	RIF	DRY	DRY	ALC	FLT	FLT	FLT	RIF			
8.	If an objective, did the feature create the targeted instream habitat type?	YES	YES	YES	YES	YES	NA	YES	YES	YES	YES	YES	YES	NA	YES	YES	YES	YES	YES	YES	YES	YES
9.	Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	NO	NO	NO	NO	NA	NO	NO	NO	NO	NO	NO	NO	YES	YES	YES	NO	NO	NO	NO	NO
10.	Mean water depth in habitat unit: ft	2.3	0.0	0.0	0.0	1.0	3.0	0.0	0.0	3.4	0.0	0.0	1.2	0.0	0.0	1.1	1.6	1.6	1.6	0.9	0.9	
11a.	Maximum water depth in habitat unit: ft	5.1	0.0	0.0	0.0	2.8	5.4	0.0	0.0	7.6	0.0	0.0	4.3	0.0	0.0	2.2	4.2	4.2	4.2	2.1	2.1	
11b.	Area of habitat unit within 0.5-2.0 ft depth: (ft ²)	3476.6	0.0	0.0	0.0	4495.1	5433.3	0.0	0.0	723.9	0.0	0.0	3654.2	0.0	0.0	1973.8	2499.3	2499.3	2499.3	402.3	402.3	
11c.	Area of habitat unit within 2.0-4.0 ft depth: (ft ²)	5002.3	0.0	0.0	0.0	112.4	3612.7	0.0	0.0	1126.6	0.0	0.0	640.6	0.0	0.0	145.7	1536.6	1536.6	1536.6	3.6	3.6	
11d.	Area of habitat unit within 0.5-4.0 ft depth: (ft ²)	8478.9	0.0	0.0	0.0	4607.5	4155.9	0.0	0.0	1850.5	0.0	0.0	4294.8	0.0	0.0	2119.4	4035.9	4035.9	4035.9	405.9	405.9	
11e.	% Area of habitat unit within 0.5-2.0 ft depth	36%	0%	0%	0%	90%	11%	0%	0%	21%	0%	0%	76%	0%	0%	71%	54%	54%	54%	66%	66%	
11f.	% Area of habitat unit within 2.0-4.0 ft depth	52%	0%	0%	0%	2%	72%	0%	0%	33%	0%	0%	13%	0%	0%	5%	33%	33%	33%	1%	1%	
11g.	% Area of habitat unit within 0.5-4.0 ft depth	88%	0%	0%	0%	92%	83%	0%	0%	55%	0%	0%	89%	0%	0%	76%	87%	87%	87%	67%	67%	
11h.	If an objective, did the feature increase/decrease water depth in the treatment area?	YES	YES	YES	YES	YES	NA	YES	YES	YES	YES	YES	YES	NA	YES	NO	YES	YES	YES	YES	YES	
12a.	Targeted depth or range (ft) in habitat unit	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0
12b.	Estimate area of feature within targeted depth or range ft ² :	160	1800	1800	1800	5500			5394	925	864	1400	875	500	500	500	500	500	500	500	500	500
13.	Were there any unintended effects of the feature on the water depth? If Y, comment.	NO	NO	NO	NO	NO	NA	NO	NO	NO	NO	NO	NO	NA	NO	YES	YES	NO	NO	NO	NO	NO
14.	Instream shelter value in the habitat unit: 0, 1, 2, 3	1	0	0	0	2	3	0	0	3	0	0	2	0	0	3	0	0	0	3	3	3
15.	Percent of habitat unit covered by shelter: %	15	0	0	0	20	35	0	0	50	0	0	15	0	0	80	60	60	60	55	55	
16a.	1st dominant cover in habitat unit: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	TVG	NON	NON	NON	BOL	TVG	NON	NON	RTW	NON	NON	TVG	NON	NON	AVG	AVG	AVG	AVG	LWD	LWD	LWD
16b.	2nd dominant in habitat unit: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	SWD	NON	NON	NON	BUB	SWD	NON	NON	LWD	NON	NON	AVG	NON	NON	LWD	LWD	LWD	LWD	TVG	TVG	TVG
17a.	If an objective, did the feature increase instream shelter rating?	YES	YES	YES	YES	YES	NA	YES	YES	YES	NO	YES	NA	NO	NO	YES	YES	YES	YES	YES	YES	YES
17b.	a. Calculate the shelter rating for the habitat unit: 0-300	15	0	0	0	40	105	0	0	150	0	0	30	0	0	240	180	180	180	165	165	165
18a.	Large woody debris count in habitat unit: D >1', L 6-20'	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18b.	Large woody debris count in habitat unit: D >1', L >20'	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19a.	If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	NO	NA	NO	NO	YES	NO	NO	NA	YES	NO	NO	NO	NO	NO	NO	NO	NO
19b.	LWD recruitment mechanisms in habitat unit: ANC, EXC, EXH, INT, RPR, UNA, OTH	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
20.	Current stream channel problems in the habitat unit: AGG, BRD, FLO, GRC, HDC, INC, NAR, SCU, STT, WID, NON, OTH	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
21a.	If an objective, did the feature lead to the targeted channel conditions?	YES	YES	YES	YES	YES	NA	YES	YES	YES	YES	YES	YES	NA	YES	NO	NO	YES	YES	YES	YES	YES
21b.	Overall Offchannel Condition (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	STB	STB	STB	STB	STB	NA	STB	STB	STB	STB	STB	STB	NA	STB	AGG	STB	STB	STB	STB	STB	STB
21c.	Outlet Conditions (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH						NA						NA									
21d.	Inlet Conditions (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH						NA						NA									
22.	Were there any unintended effects on the stream channel at the feature? If Y, comment.	NO	NO	NO	NO	NO	NA	NO	NO	NO	NO	NO	NO	NO	YES	YES	NO	NO	NO	NO	NO	NO
23.	If an objective, did the feature decrease/increase velocity in the treatment area?	DEC	NA	NA	NA	INC	NA	NA	NA	DEC	NA	NA	NA	NA	NA	DEC	DEC	DEC	DEC	DEC	DEC	DEC
24.	Targeted velocity/range in the habitat unit: (ft/sec)	0.5	1.5	1.5	1.5	0.5	0.5	2.5	2.5	0.5	2.5	2.5	0.5	3.5	3.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
25.	Did the feature achieve the targeted velocity?	YES	YES	YES	YES	YES	NA	YES	YES	YES	YES	YES	YES	NA	YES	NO	YES	YES	YES	YES	YES	YES
26a.	Measured minimum velocity (ft/sec) in habitat unit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26b.	Measured max velocity (ft/sec) in habitat unit	2.6	0.0	0.0	0.0	6.5	1.9	0.0	0.0	3.1	0.0	0.0	4.4	0.0	0.0	0.5	1.7	1.7	1.7	4.3	4.3	
26c.	Measured mean velocity (ft/sec) in habitat unit	1.0	0.0	0.0	0.0	2.3	0.7	0.0	0.0	0.6	0.0	0.0	1.7	0.0	0.0	0.0	0.1	0.1	0.1	0.8	0.8	
27.	Area of habitat unit within targeted velocity: (ft ²)	2677.3	0.0	0.0	0.0	304.5	1511.6	0.0	0.0	1793.2	0.0	0.0	1102.2	0.0	0.0	2793.4	4147.8	4147.8	4147.8	291.5	291.5	
28.	Percent of habitat unit within targeted velocity (see above): (%)	28%	0%	0%	0%	6%	30%	0%	0%	53%	0%	0%	23%	0%	0%	100%	89%	89%	89%	48%	48%	
29.	Were there any unintended effects of feature on velocity If Y, comment.	NO	NO	NO	NO	NO	NA	NO	NO	NO	NO	NO	NA	NO	YES	NO	NO	NO	NO	NO	NO	NO
30a.	1st/2nd dominant substrate in habitat unit: BED, BOL, COB, GRV, SND, SLC, OTH	GRV	GRV	GRV	GRV	COB	GRV	GRV	GRV	SND	GRV	GRV	GRV	GRV	GRV	SLC	SND	SND	SND	GRV	GRV	GRV
30b.	2nd dominant substrate in habitat unit: BED, BOL, COB, GRV, SND, SLC, OTH	SND	SND	SND	SND	GRV	SND	SND	SND	GRV	SND	SND	COB	SND	SND	SND	SND	SND	SND	SND	SND	SND
31.	If an objective, did the feature achieve the targeted substrate composition?	YES	YES	YES	YES	YES	NA	YES	YES	YES	YES	YES	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES
32.	% Canopy Measurement:	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
33.	Photopoint data collected: YES/NO	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
34.	Temperature Profile: YES/NO	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
35.	Dissolved Oxygen Profile: YES/NO	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
36a.	Total habitat unit area where targeted depth, velocity and shelter criteria overlap	2125.2	0.0	0.0	0.0	72.1	1298.6	0.0	0.0	1114.7	0.0	0.0	647.3	0.0	0.0	2119.4	3533.7	3533.7	3533.7	106.7	106.7	
36b.	Total habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	1177.2	0.0	0.0	0.0	71.2	379.3	0.0	0.0	560.6	0.0	0										

Table 41. Adaptive Management Plan full checklist for the Farrow, Wallace enhancement reach, July 2020.

Project Reach	1	1
Enhancement Reach	1	1
Colloquial Name	FW	FW
mmddyy	72720	72720
Survey Type	PEF	PEF
Project Site Number	6	6
Project Site Type	SideChan	SideChan
Project Feature Number	S6-07	S6-08
Feature Type Code	LWD	LWD
Habitat Unit	HU11	HU11
Habitat Type	Pool	Pool
1. Length of targeted treatment (ft)	35	50
2. Width of targeted treatment (ft)	45	15
3. Estimate area of the targeted feature: (ft ²)	1575	750
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	GOOD
5a. Are problems with the feature visible?	NO	NO
5b. Types: ANC, BBB, CRF, MAT, SHF, STR, SWA, UND, UNS, WSH, OTH, NON	NON	NON
6a. Is the feature still in its original location?	YES	YES
6b. Is the feature still in its original position?	YES	YES
6c. If yes: LBK, MDC, RBK, SPN, OTH	RBK	RBK
6d. Is the feature still in its original orientation?	YES	YES
6e. If yes: DNS, MUL, PRL, PRP, UPS, OTH	PRL	PRL
7. Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	POO	POO
8. If an objective, did the feature create the targeted instream habitat type?	YES	YES
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	NO
10. Mean water depth in habitat unit: ft	2.9	2.9
11a. Maximum water depth in habitat unit: ft	5.8	5.8
11b. Area of habitat unit within 0.5 -2.0 ft depth: (ft ²)	1305.9	1305.9
11c. Area of habitat unit within 2.0 -4.0 ft depth: (ft ²)	3421.2	3421.2
11d. Area of habitat unit within 0.5-4.0 ft depth: (ft ²)	4727.1	4727.1
11e. % Area of habitat unit within 0.5 -2.0 ft depth	20%	20%
11f. % Area of habitat unit within 2.0 -4.0 ft depth	53%	53%
11g. % Area of habitat unit within 0.5-4.0 ft depth	73%	73%
11h. If an objective, did the feature increase/decrease water depth in the treatment area?	YES	YES
12a. Targeted depth or range (ft) in habitat unit	0.5-4.0	0.5-4.0
12b. Estimate area of feature within targeted depth or range ft ² :	1575	750
13. Were there any unintended effects of the feature on the water depth? If Y, comment.	NO	NO
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	3	3
15. Percent of habitat unit covered by shelter: %	40	40
16a. 1st dominant cover in habitat unit: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	TVG	TVG
16b. 2nd dominant in habitat unit: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	LWD	LWD
17a. If an objective, did the feature increase instream shelter rating?	YES	YES
17b. a. Calculate the shelter rating for the habitat unit: 0-300	120	120
18a. Large woody debris count in habitat unit: D >1', L 6-20'	0	0
18b. Large woody debris count in habitat unit: D >1', L >20'	0	0
19a. If an objective, did the feature increase LWD count in the habitat unit?	NO	NO
19b. LWD recruitment mechanisms in habitat unit: ANC, EXC, EXH, INT, RPR, UNA, OTH	NON	NON
20. Current stream channel problems in the habitat unit: AGG, BRD, FLO, GRC, HDC, INC, NAR, SCU, STT, WID, NON, OTH	NON	NON
21a. If an objective, did the feature lead to the targeted channel conditions?	YES	YES
21b. Overall Offchannel Condition (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	STB	STB
21c. Outlet Conditions (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH		
21d. Inlet Conditions (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH		
22. Were there any unintended effects on the stream channel at the feature? If Y, comment.	NO	NO
23. If an objective, did the feature decrease/increase velocity in the treatment area?	DEC	DEC
24. Targeted velocity/range in the habitat unit: (ft/sec)	0.5	0.5
25. Did the feature achieve the targeted velocity?	YES	YES
26a. Measured minimum velocity (ft/sec) in habitat unit	0	0
26b. Measured max velocity (ft/sec) in habitat unit	1.2	1.2
26c. Measured mean velocity (ft/sec) in habitat unit	0.2	0.2
27. Area of habitat unit within targeted velocity: (ft ²)	5489.3	5489.3
28. Percent of habitat unit within targeted velocity (see above): (%)	85%	85%
29. Were there any unintended effects of feature on velocity? If Y, comment.	NO	NO
30a. 1st/2nd dominant substrate in habitat unit: BED, BOL, COB, GRV, SND, SLC, OTH	SND	SND
30b. 2nd dominant substrate in habitat unit: BED, BOL, COB, GRV, SND, SLC, OTH	GRV	GRV
31. If an objective, did the feature achieve the targeted substrate composition?	YES	YES
32. % Canopy Measurement:	NR	NR
33. Photopoint data collected: YES /NO	NR	NR
34. Temperature Profile: YES /NO	NR	NR
35. Dissolved Oxygen Profile: YES/NO	NR	NR
36a. Total habitat unit area where targeted depth, velocity and shelter criteria overlap	3866.0	3866.0
36b. Total habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	1254.4	1254.4
36c. Total habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	2611.6	2611.6
36d. % habitat unit area where targeted depth, velocity and shelter criteria overlap	60%	60%
36e. % habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	19%	19%
36f. % habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	40%	40%
37. Does this feature need: DEC, ENH, MNT, REP, NON, OTH	NO	NO
38. Are additional restoration treatments recommended at this site?	NO	NO

Ferrari-Carano, Olson, October 2020

Depth and Velocity

Table 42. Areas and percentages of: wetted area, optimal depth and velocity, and optimal hydraulic habitat within the Ferrari-Carano, Olson enhancement reach, October 2020.

Ferrari-Carano, Olson Post-effective flow June 2020	Wetted area (ft ²)	0.5 – 2.0 ft	2.0 – 4.0 ft	Total	< 0.5 ft/s	0.5 – 2.0 ft < 0.5 ft/s	2.0 – 4.0 ft < 0.5 ft/s	Total
Main channel area	50,923	26,565	13,648	40,212	20,316	9,166	2,662	11,828
Side channel area	60,314	30,090	15,973	46,063	27,042	9,954	5,573	15,526
Total area	111,237	56,655	29,621	86,276	47,358	19,119	8,235	27,354
Main channel % of wetted area	46%	52%	27%	79%	40%	18%	5%	23%
Side channel % of wetted area	54%	50%	26%	76%	45%	17%	9%	26%
Total % of wetted area	100%	51%	27%	78%	43%	17%	7%	25%

Ferrari-Carano, Olson Enhancement Reach

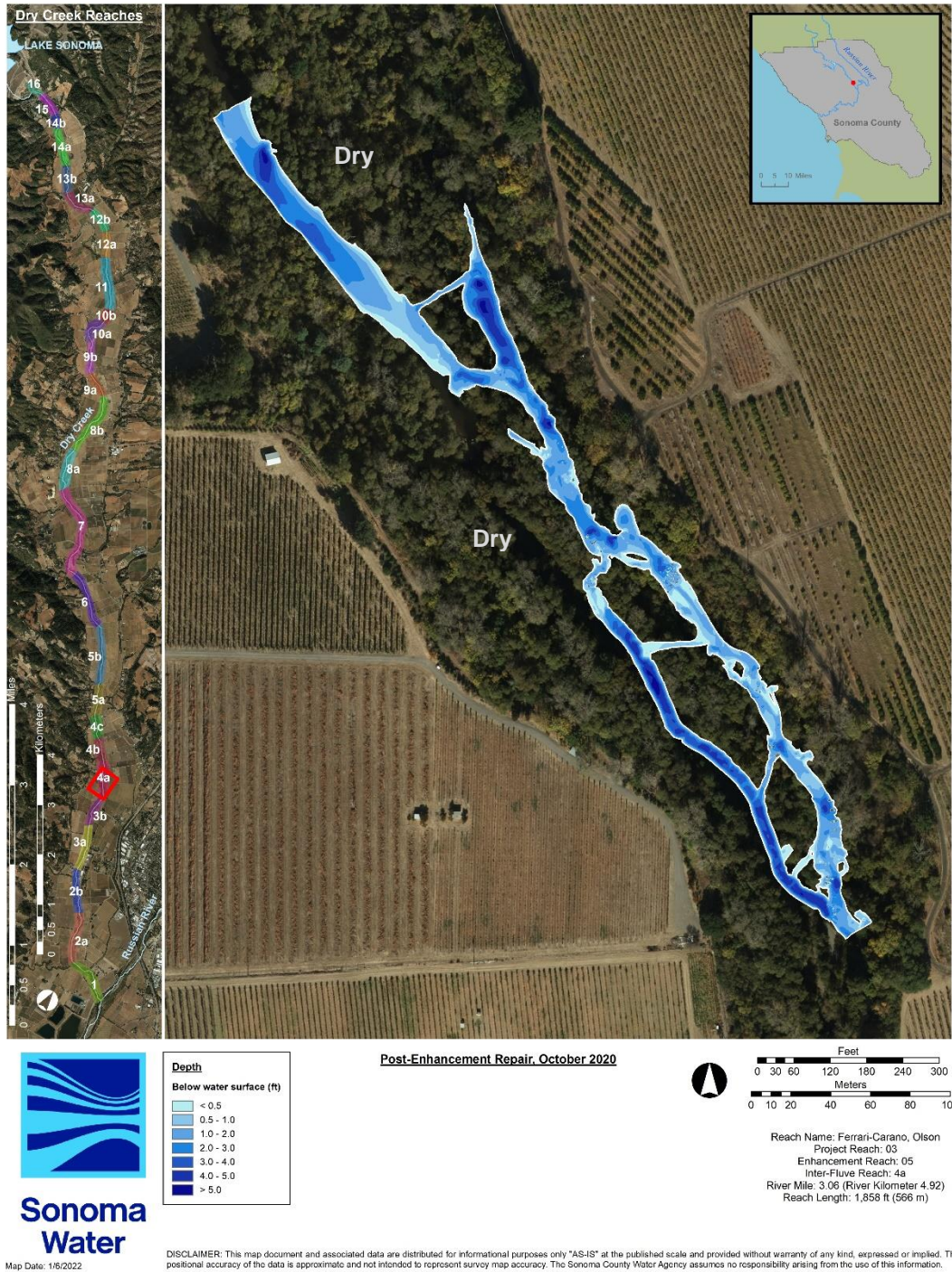


Figure 70. Water depth within the Ferrari-Carano, Olson enhancement reach, June 2020.

Ferrari-Carano, Olson Enhancement Reach

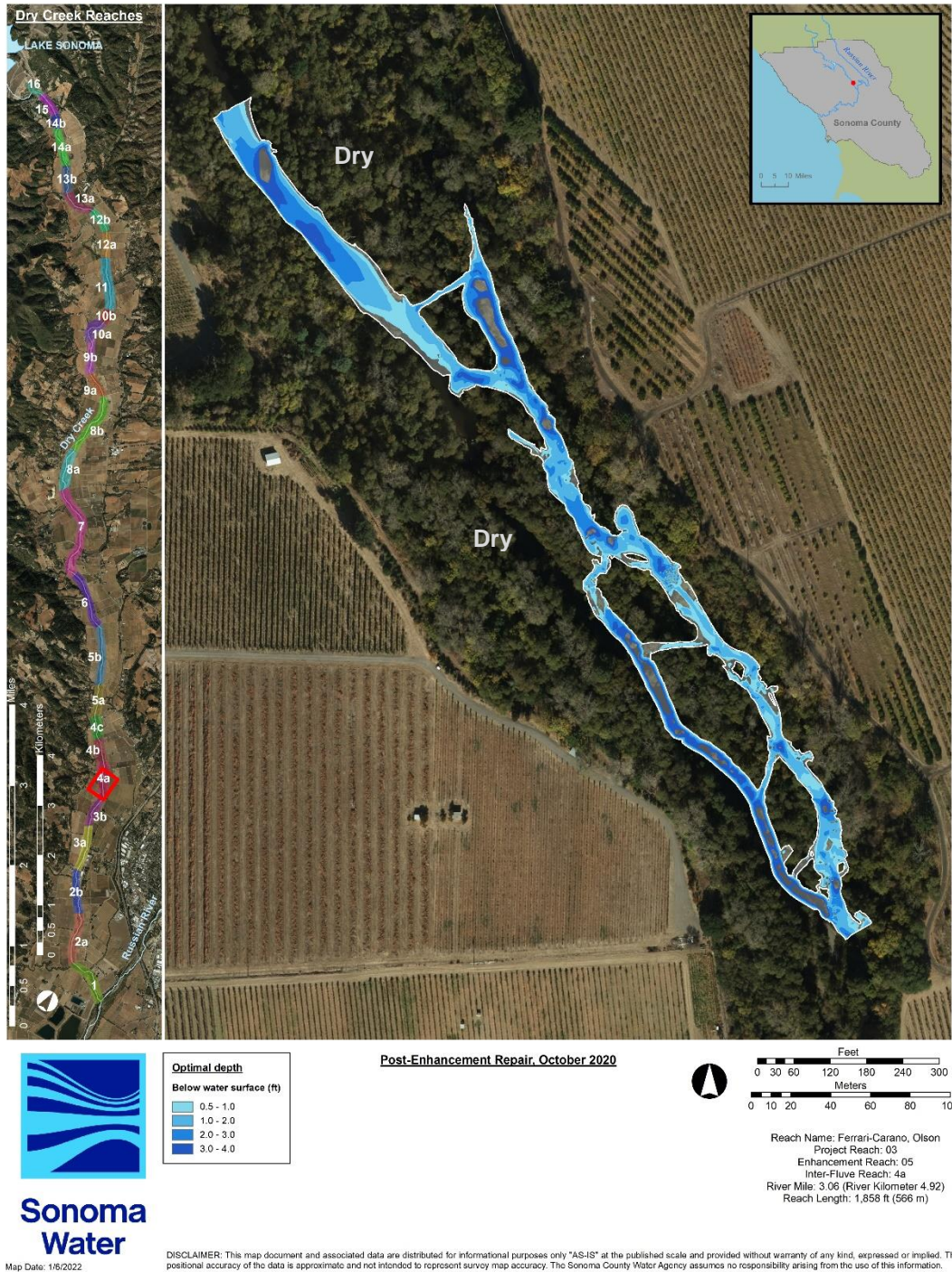


Figure 71. Optimal water depth for fry (0.5-2.0 ft) and parr (2.0-4.0 ft) within the Ferrari-Carano, Olson enhancement reach, October 2020.

Ferrari-Carano, Olson Enhancement Reach

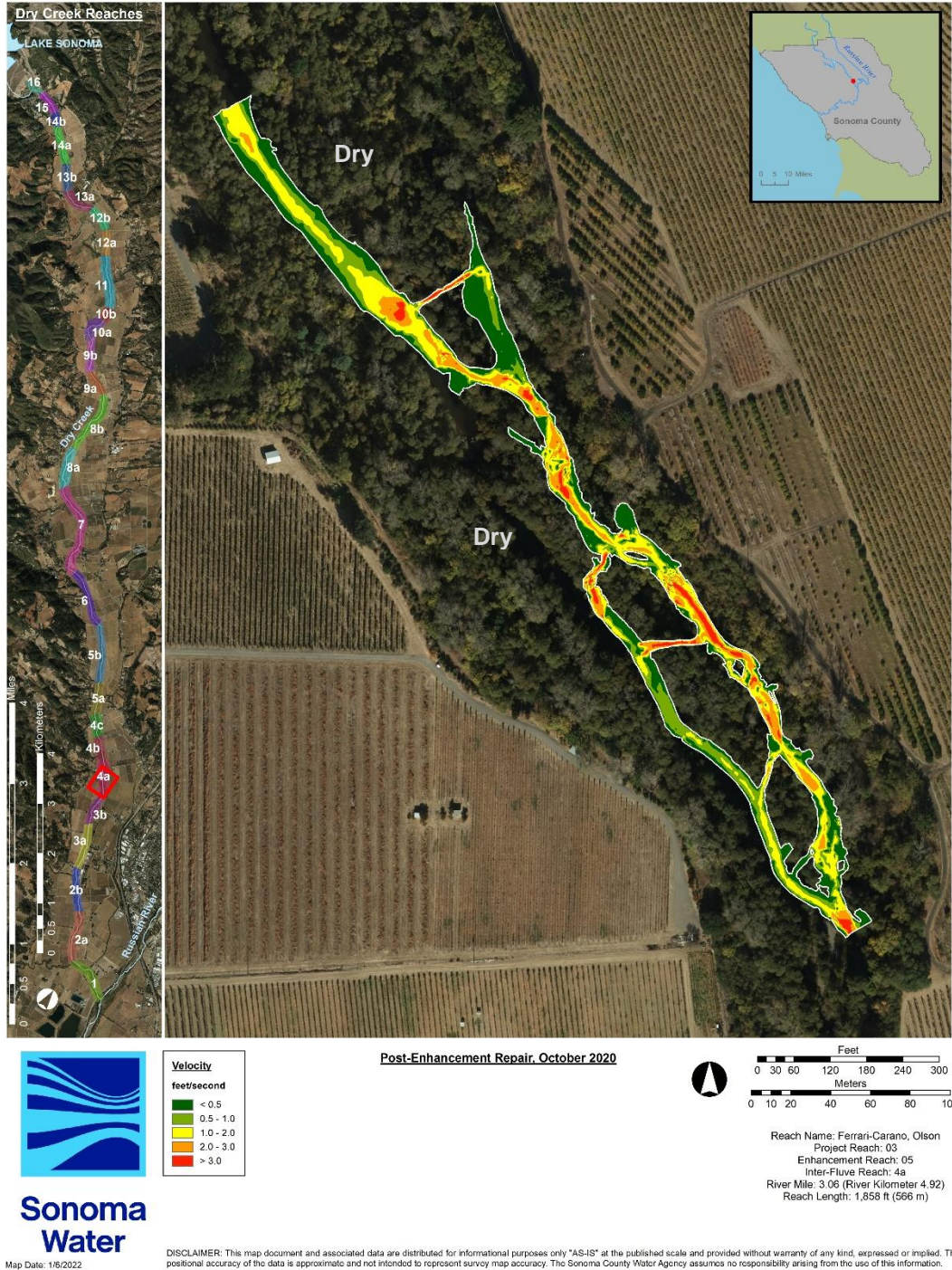


Figure 72. Measured water velocity within the Ferrari-Carano, Olson enhancement reach, October 2020.

Ferrari-Carano, Olson Enhancement Reach

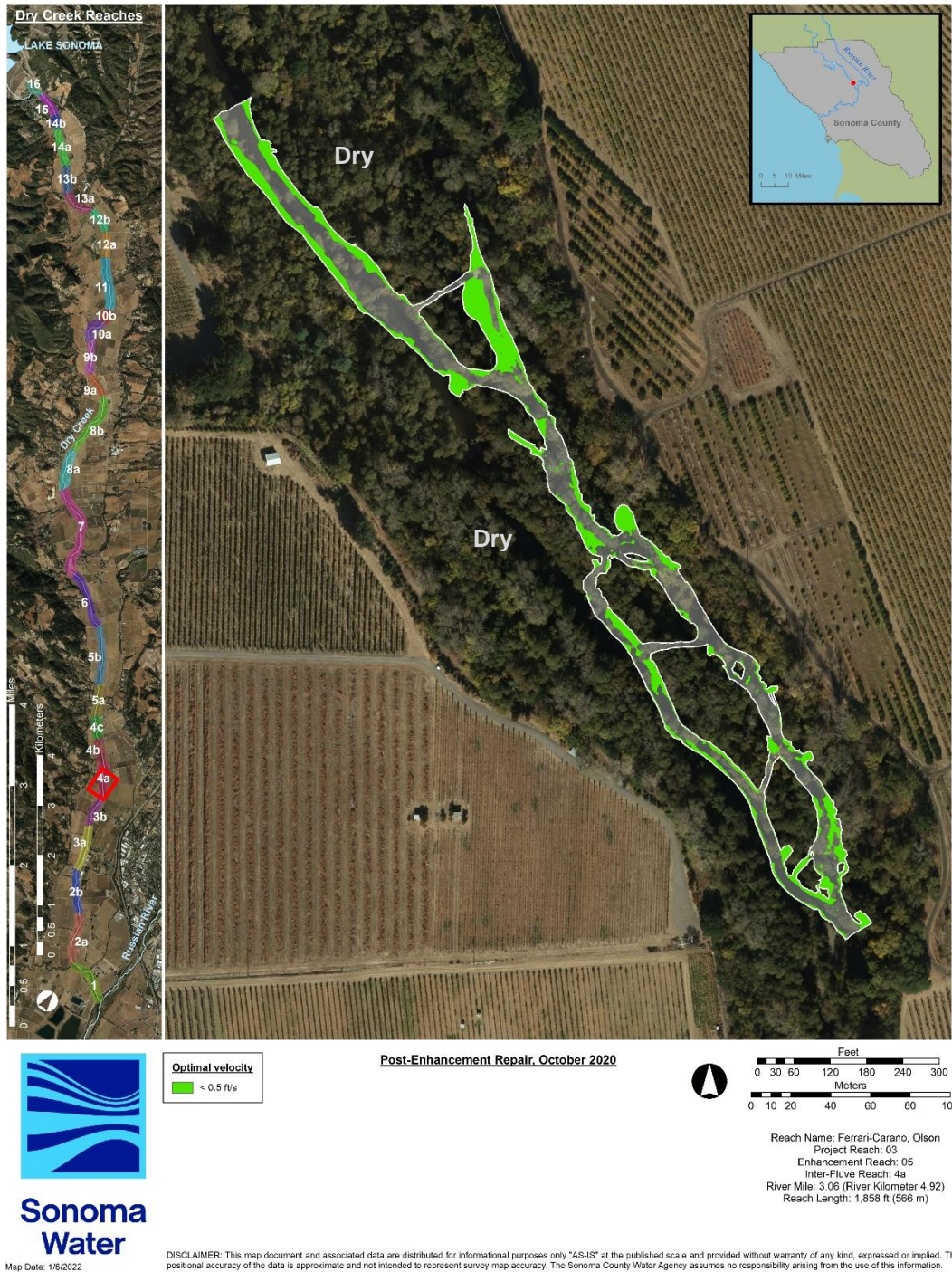


Figure 73. Optimal water velocity for fry and parr (< 0.5 ft/s) within the Ferrari-Carano, Olson enhancement reach, October 2020.

Ferrari-Carano, Olson Enhancement Reach

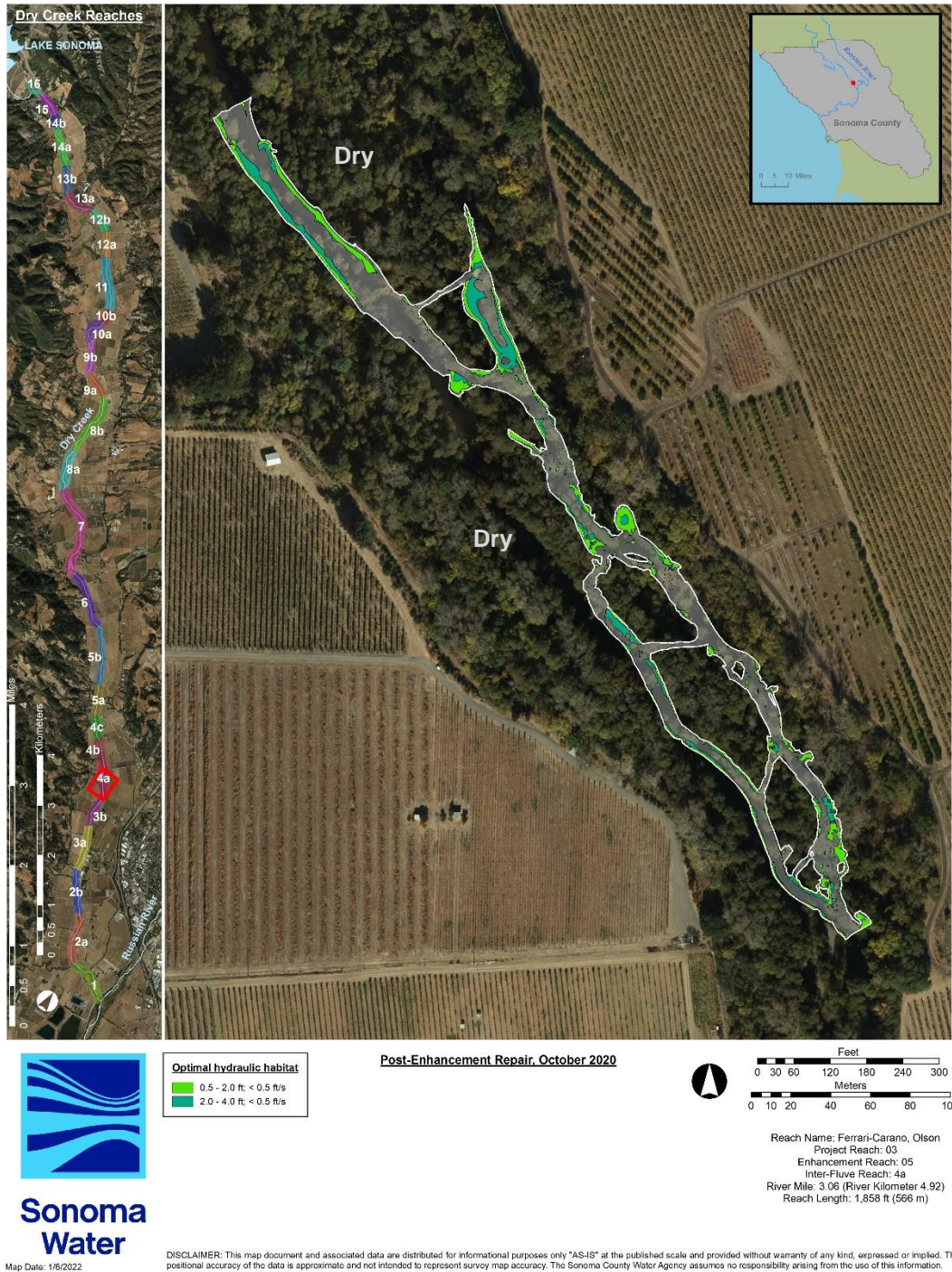


Figure 74. Optimal hydraulic habitat for fry (<0.5 ft/s, 0.5-2.0 ft) and parr (<0.5 ft/s, 2.0-4.0 ft) within the Ferrari-Carano, Olson enhancement reach, October 2020.

Habitat Types and Shelter Values

Table 43. Habitat, types, shelter value, percent cover, and shelter score for habitat units within the Ferrari-Carano, Olson enhancement reach, October 2020.

Habitat Unit #	Habitat Type	Shelter Value	Percent Cover	Shelter Score
HU01	Riffle	2	30	60
HU02	Pool	3	25	75
HU03	Flatwater	3	30	90
HU04	Pool	3	45	135
HU05	Riffle	1	5	5
HU06	Pool	3	40	120
HU07	Riffle	3	30	90
HU08	Riffle	3	25	75
HU09	Pool	3	45	135
HU10	Riffle	3	30	90
HU11	Alcove	3	90	270
HU12	Pool	3	35	105
HU13	Flatwater	2	15	30
HU14	Pool	3	15	45
HU15	Riffle	2	10	20
HU16	Riffle	3	75	225
HU17	Riffle	3	15	45
HU18	Flatwater	2	10	20
HU19	Riffle	1	5	5
HU20	Riffle	3	25	75
HU21	Pool	2	25	50
HU22	Flatwater	2	15	30
HU23	Pool	3	40	120
HU24	Riffle	2	20	40
HU25	Flatwater	2	30	60
HU26	Alcove	2	75	150
HU27	Alcove	3	65	195
HU28	Flatwater	1	10	10
HU29	Pool	3	25	75
HU30	Flatwater	2	10	20
HU31	Alcove	2	90	180
Pool: riffle	17:15 (1.13)			Avg = 85

Ferrari-Carano, Olson Enhancement Reach

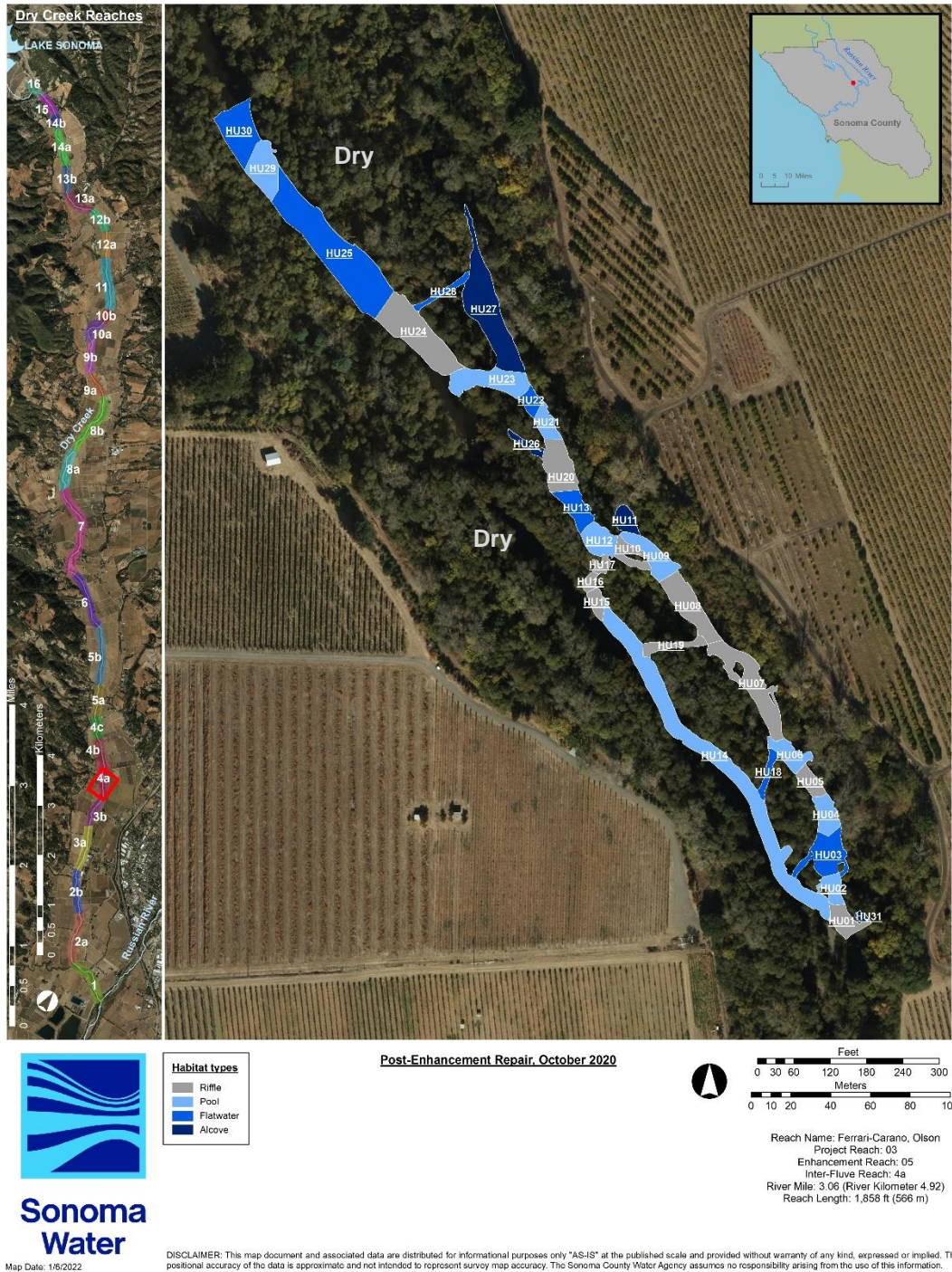


Figure 75. Habitat unit number and type within the Ferrari-Carano, Olson enhancement reach, October 2020.

Ferrari-Carano, Olson Enhancement Reach

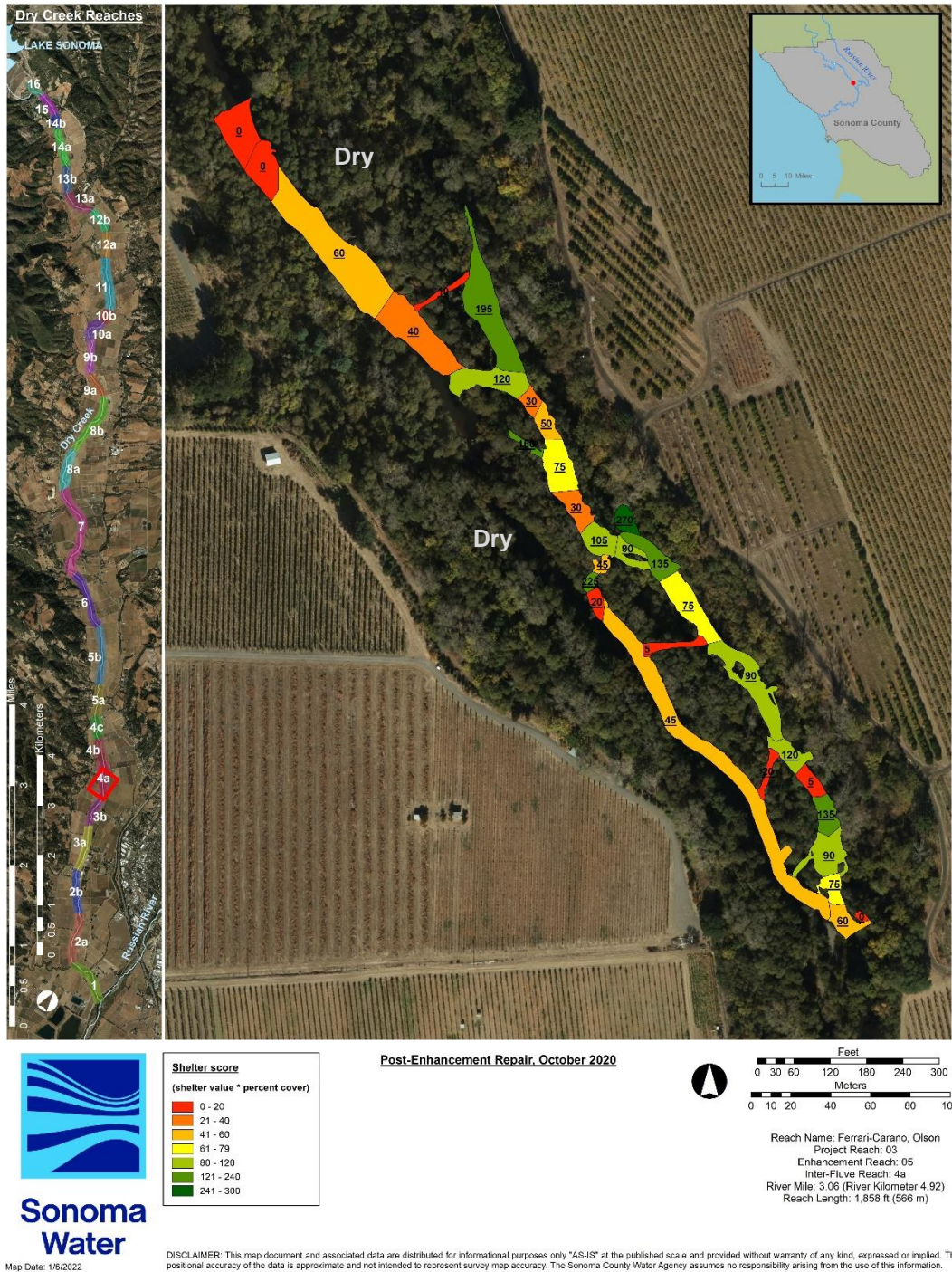


Figure 76. Habitat unit shelter scores within the Ferrari-Carano, Olson enhancement reach, October 2020.

Feature, Habitat Unit, Site, and Reach Ratings

Table 44. Adaptive Management Plan checklist feature ratings for the Ferrari-Carano, Olson enhancement reach, October 2020.

		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Project Reach		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach		5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name		FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
mmddyy		100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720
Survey Type		POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS
PROJECT SITE NUMBER		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Project Site Type		MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan
PROJECT FEATURE NUMBER		S1-01	S1-02	S1-03	S1-04	S1-05	S1-06	S1-07	S1-08	S1-09	S1-10	S1-11	S1-12	S1-13	S1-14	S1-15	S1-16	S1-17	S1-18
Feature Type Code		BF	TT	TT	TT	BF	TT	BF	TT	TT	TT	TT	TT	LW	TT	TT	TT	TT	TT
Habitat Unit		HU01	HU01 U	HU14	HU01 U	HU01 U	HU01 U	HU01 U	HU01 U	HU01 U	HU01 U	HU01 D	HU24	HU01 D	HU01 D	HU01 U	HU14	HU14	HU14
Habitat Type		Riffle	Dry	Pool	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Riffle	Dry	Dry	Dry	Pool	Pool	Pool
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL		GOOD	FAIL	GOOD	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	GOOD	GOOD	UNKN	POOR	FAIL	GOOD	GOOD	GOOD	GOOD
5a. Are problems with the feature visible?		YES	YES	NO	YES	NA	YES	NA	YES	NA	YES	YES	NO	YES	YES	NO	NO	NO	NO
6a. Is the feature still in its original location?		YES	NO	YES	NO	NA	NO	NA	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES
6b. Is the feature still in its original position?		YES	NO	YES	NO	NA	NO	NA	NO	NO	NO	NO	NO	NO	NO	YES	YES	YES	YES
6d. Is the feature still in its original orientaton?		YES	NO	YES	NO	NA	NO	NA	NO	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES
8. If an objective, did the feature create the targeted instream habitat type?		YES	NO	YES	NO	NA	NO	NA	NO	NO	NO	NO	YES	NO	NO	NO	YES	YES	YES
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.		NO	NO	NO	NO	NA	NO	NA	NO	NO	NO	NO	YES	NO	YES	YES	NO	NO	NO
17a. If an objective, did the feature increase instream shelter rating?		YES	NO	YES	NO	NA	NO	NA	NO	NO	NO	YES	YES	NO	NO	YES	YES	YES	YES
19a. If an objective, did the feature increase LWD count in the habitat unit?		NO	NO	NO	NO	NA	NO	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
21a. If an objective, did the feature lead to the targeted channel conditions?		YES	NO	NO	NO	NA	NO	NA	NO	NO	NO	NO	YES	NO	NO	NO	YES	YES	YES
25. Did the feature achieve the targeted velocity?		YES	NO	YES	NO	NA	NO	NA	NO	NO	NO	NO	YES	YES	NO	NO	YES	YES	YES
PROJECT FEATURE NUMBER		S1-01	S1-02	S1-03	S1-04	S1-05	S1-06	S1-07	S1-08	S1-09	S1-10	S1-11	S1-12	S1-13	S1-14	S1-15	S1-16	S1-17	S1-18
4. Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)		4	1	4	1	1	1	1	1	1	4	4	0	2	1	4	4	4	4
5a. Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)		0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1
6a. Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)		1	0	1	0	0	0	0	0	0	1	1	1	1	0	1	1	1	1
6b. Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)		1	0	1	0	0	0	0	0	0	0	0	1	0	0	1	1	1	1
6d. Is the feature still in its original orientaton? (YES = 1 pt, NO = 0 pt)		1	0	1	0	0	0	0	0	0	1	1	1	1	0	1	1	1	1
8. If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)		1	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1
9. Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)		1	1	1	1	0	1	0	1	1	1	0	1	0	0	1	1	1	1
17a. If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)		1	0	1	0	0	0	0	0	0	0	1	1	0	0	1	1	1	1
19a. If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21a. If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)		1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1
25. Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)		1	0	1	0	0	0	0	0	0	0	0	1	1	0	0	1	1	1
PROJECT FEATURE NUMBER		S1-01	S1-02	S1-03	S1-04	S1-05	S1-06	S1-07	S1-08	S1-09	S1-10	S1-11	S1-12	S1-13	S1-14	S1-15	S1-16	S1-17	S1-18
FEATURE RATING																			
Feature quantitative rating out of 15		12	2	12	2	1	2	1	2	2	2	6	13	4	4	2	13	13	13
Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)		Excellent	Not rated	Excellent	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Excellent	Not rated	Not rated	Not rated	Excellent	Excellent	Excellent

Table 44. Adaptive Management Plan checklist feature ratings for the Ferrari-Carano, Olson enhancement reach, October 2020.

		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Project Reach		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach		5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name		FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
mmddyy		100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720
Survey Type		POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS
PROJECT SITE NUMBER		1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Project Site Type		MainChan	MainChan	MainChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
PROJECT FEATURE NUMBER		S1-19	S1-20	S1-21	S2-01	S2-02	S2-03	S2-04	S2-05	S2-06	S2-07	S2-08	S2-09	S2-10	S2-11	S2-12	S2-13	S2-14	S2-15
Feature Type Code		FB	FB	FB	LW	HW2	HW1	HW2	HW1	LVW	HW1	LVW	HW1	PW	HW1	R	HW1	PW	PW
Habitat Unit		HU01 D	HU01 D	HU01 D	HU02	HU03	HU03	HU03	HU03	HU02 U	HU02 D	HU04	HU04	HU04	HU04	HU02 D	HU05	HU02 D	HU06
Habitat Type		Dry	Dry	Dry	Pool	Flatwater	Flatwater	Flatwater	Flatwater	Dry	Dry	Pool	Pool	Pool	Pool	Dry	Riffle	Dry	Pool
4.	Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	GOOD	GOOD	FAIR	FAIR	EXCL	GOOD	EXCL	FAIL	EXCL	GOOD	GOOD	EXCL	EXCL	EXCL	GOOD	EXCL	EXCL
5a	Are problems with the feature visible?	NO	NO	NO	YES	YES	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO
6a	Is the feature still in its original location?	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES
6b	Is the feature still in its original position?	YES	YES	YES	NO	NO	NO	NO	NO	YES	NO	YES	NO	YES	YES	NO	YES	YES	YES
6d	Is the feature still in its original orientaton?	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES
8.	If an objective, did the feature create the targeted instream habitat type?	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES
9.	Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO
17a	If an objective, did the feature increase instream shelter rating?	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	YES	YES	YES	NO	NO	NO	YES
19a	If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
21a	If an objective, did the feature lead to the targeted channel conditions?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
25.	Did the feature achieve the targeted velocity?	NA	NA	NA	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES
PROJECT FEATURE NUMBER		S1-19	S1-20	S1-21	S2-01	S2-02	S2-03	S2-04	S2-05	S2-06	S2-07	S2-08	S2-09	S2-10	S2-11	S2-12	S2-13	S2-14	S2-15
4.	Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	4	4	4	3	3	5	4	5	1	5	4	4	5	5	5	4	5	5
5a	Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	1	1	1	0	0	1	1	1	0	1	1	1	1	1	1	1	1	1
6a	Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1
6b	Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	1	1	1	0	0	0	0	0	1	0	1	0	1	1	0	1	1	1
6d	Is the feature still in its original orientaton? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1
8.	If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1
9.	Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1
17a	If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	0	0	1	1	1	1	0	0	0	1
19a	If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21a	If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1
25.	Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	0	0	0	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1
PROJECT FEATURE NUMBER		S1-19	S1-20	S1-21	S2-01	S2-02	S2-03	S2-04	S2-05	S2-06	S2-07	S2-08	S2-09	S2-10	S2-11	S2-12	S2-13	S2-14	S2-15
FEATURE RATING	Feature quantitative rating out of 15	12	12	12	10	10	13	12	14	2	13	12	13	14	13	13	12	12	14
	Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)	Excellent	Excellent	Excellent	Good	Good	Excellent	Excellent	Excellent	Not rated	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent

Table 44. Adaptive Management Plan checklist feature ratings for the Ferrari-Carano, Olson enhancement reach, October 2020.

		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Project Reach		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach		5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name		FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
mmddyy		100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720
Survey Type		POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS
PROJECT SITE NUMBER		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
PROJECT FEATURE NUMBER		SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
Feature Type Code		HW2	HW1	HW1	HW1	HW1	LWV	R	HW1	HW1	PW	TT	R	HW1	HW2	HW1	LW	ALS	PW
Habitat Unit		HU06	HU06	HU06	HU06	HU06	HU06	HU07	HU07	HU07	HU07	HU02 U	HU07	HU02 D	HU02 D	HU02 D	HU02 D	HU14 2	HU08
Habitat Type		Pool	Pool	Pool	Pool	Pool	Pool	Riffle	Riffle	Riffle	Riffle	Dry	Riffle	Dry	Dry	Dry	Dry	Pool	Riffle
4.	Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD
5a	Are problems with the feature visible?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
6a	Is the feature still in its original location?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6b	Is the feature still in its original position?	YES	NO	YES	NO	NO	YES	YES	NO	NO	YES	NO	YES	NO	NO	NO	NO	NO	NO
6d	Is the feature still in its original orientation?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
8.	If an objective, did the feature create the targeted instream habitat type?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
9.	Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
17a	If an objective, did the feature increase instream shelter rating?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
19a	If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
21a	If an objective, did the feature lead to the targeted channel conditions?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
25.	Did the feature achieve the targeted velocity?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
PROJECT FEATURE NUMBER		S2-16	S2-17	S2-18	S2-19	S2-20	S2-21	S2-22	S2-23	S2-24	S2-25	S2-26	S2-27	S2-28	S2-29	S2-30	S2-31	S2-32	S2-35
4.	Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	4	4	4	4	4	4	4	4	4	4	4	4	3	2	2	3	3	3
5a	Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
6a	Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6b	Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	1	0	1	0	0	1	1	0	0	1	0	1	0	0	0	0	0	1
6d	Is the feature still in its original orientation? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1
8.	If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0	1	1
9.	Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1
17a	If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0	1	1
19a	If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
21a	If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
25.	Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1
PROJECT FEATURE NUMBER		S2-16	S2-17	S2-18	S2-19	S2-20	S2-21	S2-22	S2-23	S2-24	S2-25	S2-26	S2-27	S2-28	S2-29	S2-30	S2-31	S2-32	S2-35
FEATURE RATING	Feature quantitative rating out of 15	13	12	13	12	12	13	14	12	12	12	4	14	6	5	5	6	10	11
	Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Not rated	Excellent	Not rated	Not rated	Not rated	Not rated	Good	Good

Table 44. Adaptive Management Plan checklist feature ratings for the Ferrari-Carano, Olson enhancement reach, October 2020.

		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Project Reach		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach		5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name		FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
mmddyy		100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720
Survey Type		POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS
PROJECT SITE NUMBER		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
PROJECT FEATURE NUMBER		SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
Feature Type Code		R	PW	HW2	LW	LW	HW2	HW1	ALS	TT	R	PW	HW1	HW1	HW1	HW1	R	PW	HW1
Habitat Unit		HU08	HU09	HU09	HU09	HU10	HU17	HU17	HU16	HU02 U	HU10	HU12	HU11	HU11	HU11	HU11	HU13	HU20	HU20
Habitat Type		Riffle	Pool	Pool	Pool	Riffle	Riffle	Riffle	Riffle	Dry	Riffle	Pool	Alcove	Alcove	Alcove	Alcove	Flatwater	Riffle	Riffle
4.	Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	EXCL	EXCL	FAIR	GOOD	GOOD	GOOD	FAIR	FAIL	GOOD	EXCL	EXCL	EXCL	EXCL	EXCL	GOOD	GOOD	FAIR
5a	Are problems with the feature visible?	NO	NO	NO	YES	NO	YES	YES	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	YES
6a	Is the feature still in its original location?	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	NO	YES	YES
6b	Is the feature still in its original position?	YES	YES	NO	YES	NO	NO	NO	YES	NO	YES	NO	YES	YES	YES	YES	YES	YES	NO
6d	Is the feature still in its original orientaton?	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES
8.	If an objective, did the feature create the targeted instream habitat type?	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES
9.	Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
17a	If an objective, did the feature increase instream shelter rating?	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES
19a	If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	YES	YES	YES
21a	If an objective, did the feature lead to the targeted channel conditions?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO
25.	Did the feature achieve the targeted velocity?	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES
PROJECT FEATURE NUMBER		S2-36	S2-37	S2-38	S2-39	S2-40	S2-41	S2-42	S2-43	S2-44	S2-45	S2-46	S2-47	S2-48	S2-49	S2-50	S2-51	S2-52	S2-53
4.	Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	4	5	5	3	4	4	4	3	1	4	5	5	5	5	5	4	4	3
5a	Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	1	1	1	0	1	0	0	1	0	1	1	1	1	1	1	1	1	0
6a	Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0	1	1
6b	Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	1	1	0	1	0	0	0	1	0	1	0	1	1	1	1	1	1	0
6d	Is the feature still in its original orientaton? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1
8.	If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1
9.	Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
17a	If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1
19a	If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	1
21a	If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0
25.	Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1
PROJECT FEATURE NUMBER		S2-36	S2-37	S2-38	S2-39	S2-40	S2-41	S2-42	S2-43	S2-44	S2-45	S2-46	S2-47	S2-48	S2-49	S2-50	S2-51	S2-52	S2-53
FEATURE RATING	Feature quantitative rating out of 15	13	14	13	10	12	11	11	12	3	14	13	14	14	14	14	13	13	10
	Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)	Excellent	Excellent	Excellent	Good	Excellent	Good	Good	Excellent	Not rated	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Good

Table 44. Adaptive Management Plan checklist feature ratings for the Ferrari-Carano, Olson enhancement reach, October 2020.

		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Project Reach		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach		5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name		FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
mmddyy		100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720
Survey Type		POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS
PROJECT SITE NUMBER		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Project Site Type		SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
PROJECT FEATURE NUMBER		S2-54	S2-55	S2-56	S2-57	S2-58	S2-59	S2-60	S2-61	S2-62	S2-63	S2-64	S2-65	S2-66	S2-67	S2-68	S2-69	S2-70	S2-71	S2-72	S2-73	
Feature Type Code		R	LW	HW1	TT	HW1	LW	LWV	HW1	TT	TT	HW1	HW1	HW1	HW1	TT	HW1	HW1	HW1	HW1	HW1	HW1
Habitat Unit		HU26	HU02 D	HU20	HU02 U	HU21	HU23	HU23	HU23	HU02 U	HU02 U	HU27	HU27	HU27	HU27	HU02 U	HU27	HU27	HU27	HU27	HU27	HU27
Habitat Type		Alcove	Dry	Riffle	Dry	Pool	Pool	Pool	Pool	Dry	Dry	Alcove	Alcove	Alcove	Alcove	Dry	Alcove	Alcove	Alcove	Alcove	Alcove	Alcove
4.	Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	FAIL	FAIL	FAIR	FAIL	FAIR	GOOD	EXCL	FAIR	FAIL	FAIL	GOOD	GOOD	GOOD	GOOD	FAIL	GOOD	GOOD	GOOD	GOOD	GOOD	
5a	Are problems with the feature visible?	YES	YES	YES	YES	YES	NO	NO	YES	YES	YES	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	
6a	Is the feature still in its original location?	YES	YES	YES	NO	YES	YES	YES	YES	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	
6b	Is the feature still in its original position?	NO	NO	NO	NO	YES	NO	YES	YES	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	
6d	Is the feature still in its original orientaton?	NO	UNK	YES	NO	YES	YES	YES	YES	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	
8.	If an objective, did the feature create the targeted instream habitat type?	NO	NO	YES	NO	YES	YES	YES	YES	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	
9.	Were there any unintended effects by the feature on the habitat type? If Y, comment.	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
17a	If an objective, did the feature increase instream shelter rating?	NO	NO	YES	NO	YES	YES	YES	YES	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	
19a	If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
21a	If an objective, did the feature lead to the targeted channel conditions?	NO	NO	NO	NO	NO	NO	YES	YES	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	
25.	Did the feature achieve the targeted velocity?	NO	NO	YES	NO	YES	YES	YES	NO	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	
PROJECT FEATURE NUMBER		S2-54	S2-55	S2-56	S2-57	S2-58	S2-59	S2-60	S2-61	S2-62	S2-63	S2-64	S2-65	S2-66	S2-67	S2-68	S2-69	S2-70	S2-71	S2-72	S2-73	
4.	Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	1	1	3	1	3	4	5	3	1	1	4	4	4	4	1	4	4	4	4	4	
5a	Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	0	0	0	0	0	1	1	0	0	0	1	1	1	1	0	1	1	1	1	1	
6a	Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	1	1	1	0	1	1	1	1	0	0	1	1	1	1	0	1	1	1	1	1	
6b	Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	0	0	0	0	1	0	1	1	0	0	1	1	1	1	0	1	1	1	1	1	
6d	Is the feature still in its original orientaton? (YES = 1 pt, NO = 0 pt)	0	0	1	0	1	1	1	1	0	0	1	1	1	1	0	1	1	1	1	1	
8.	If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	0	0	1	0	1	1	1	1	0	0	1	1	1	1	0	1	1	1	1	1	
9.	Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
17a	If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	0	0	1	0	1	1	1	1	0	0	1	1	1	1	0	1	1	1	1	1	
19a	If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
21a	If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	1	1	0	0	1	1	1	1	0	1	1	1	1	1	
25.	Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	0	0	1	0	1	1	1	0	0	0	1	1	1	1	0	1	1	1	1	1	
PROJECT FEATURE NUMBER		S2-54	S2-55	S2-56	S2-57	S2-58	S2-59	S2-60	S2-61	S2-62	S2-63	S2-64	S2-65	S2-66	S2-67	S2-68	S2-69	S2-70	S2-71	S2-72	S2-73	
FEATURE RATING	Feature quantitative rating out of 15	2	2	9	2	10	12	14	10	2	2	13	13	13	13	2	13	13	13	13	13	
	Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)	Not rated	Not rated	Good	Not rated	Good	Excellent	Excellent	Good	Not rated	Not rated	Excellent	Excellent	Excellent	Excellent	Not rated	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent

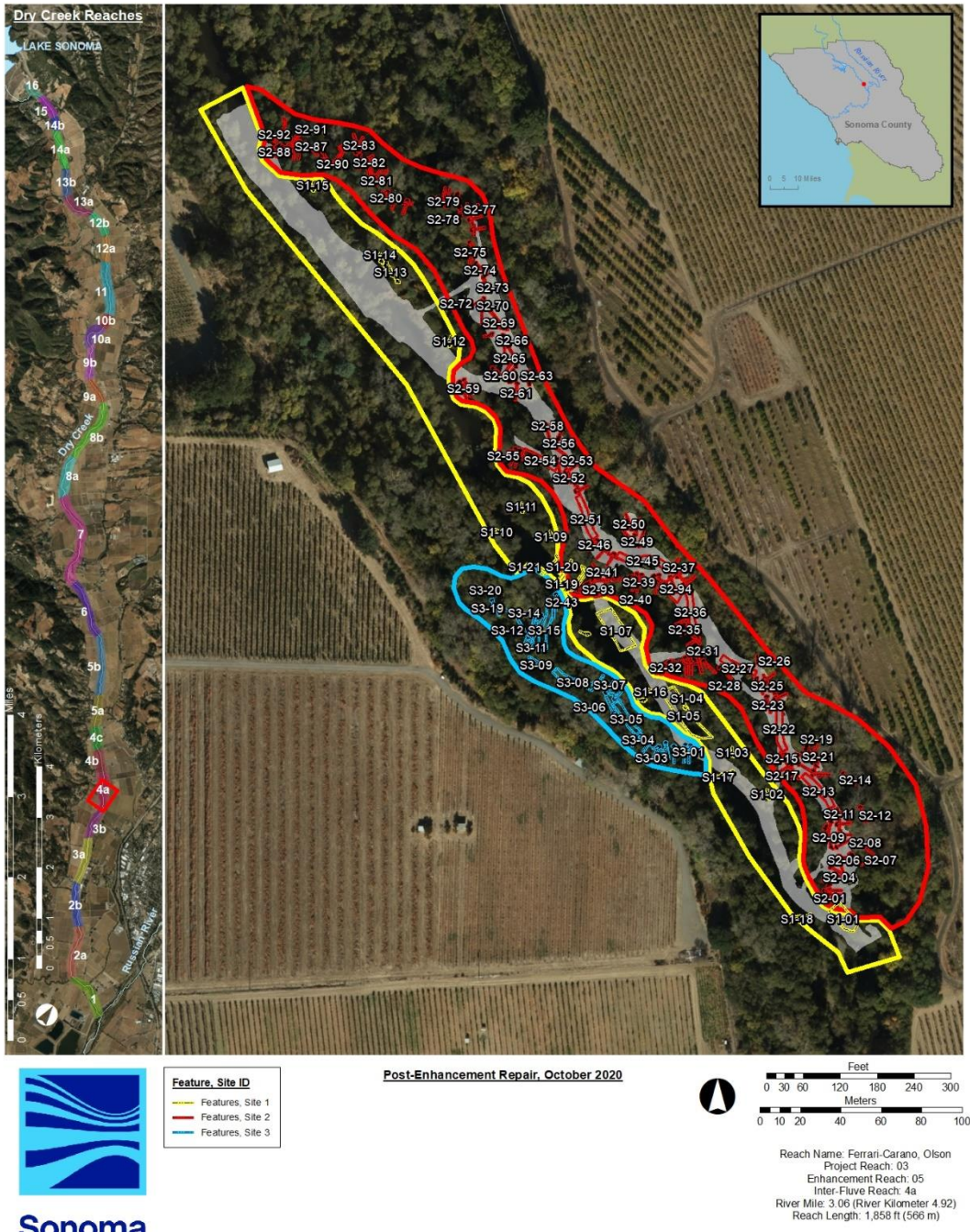
Table 44. Adaptive Management Plan checklist feature ratings for the Ferrari-Carano, Olson enhancement reach, October 2020.

		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Project Reach		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach		5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name		FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
mmddyy		100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720
Survey Type		POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS
PROJECT SITE NUMBER		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
PROJECT SITE TYPE		SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
PROJECT FEATURE NUMBER		S2-74	S2-75	S2-76	S2-77	S2-78	S2-79	S2-80	S2-81	S2-82	S2-83	S2-84	S2-85	S2-86	S2-87	S2-88	S2-89	S2-90	S2-91	S2-92	S2-93	S2-94	
Feature Type Code		HW2	HW1	HW1	PW	LVW	LW	PW	LW	LW	HW2	HW1	HW1	HW2	LW	ALS	FB	FB	FB	FB	FB	BF	BF
Habitat Unit		HU27	HU02 D	HU02 D	HU27	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU29	HU02 D	HU02 D	HU02 D	HU02 D	HU16	HU08	
Habitat Type		Alcove	Dry	Dry	Alcove	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Pool	Dry	Dry	Dry	Dry	Dry	Riffle	Riffle
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL		GOOD	FAIL	FAIL	POOR	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	EXCL	EXCL	
5a. Are problems with the feature visible?		NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	
6a. Is the feature still in its original location?		YES	UNK	UNK	YES	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	YES	YES	YES	YES	YES	YES	YES	
6b. Is the feature still in its original position?		YES	UNK	UNK	NO	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	YES	YES	YES	YES	YES	YES	YES	
6d. Is the feature still in its original orientation?		YES	UNK	UNK	YES	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	YES	YES	YES	YES	YES	YES	YES	
8. If an objective, did the feature create the targeted instream habitat type?		YES	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES	YES	
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.		NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	
17a. If an objective, did the feature increase instream shelter rating?		YES	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES	YES	
19a. If an objective, did the feature increase LWD count in the habitat unit?		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	
21a. If an objective, did the feature lead to the targeted channel conditions?		YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES	YES	
25. Did the feature achieve the targeted velocity?		YES	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NA	NA	NA	NA	NA	YES	
PROJECT FEATURE NUMBER		S2-74	S2-75	S2-76	S2-77	S2-78	S2-79	S2-80	S2-81	S2-82	S2-83	S2-84	S2-85	S2-86	S2-87	S2-88	S2-89	S2-90	S2-91	S2-92	S2-93	S2-94	
4. Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)		4	1	1	2	1	1	1	1	1	1	1	1	1	1	4	4	4	4	4	4	5	
5a. Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)		1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	
6a. Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)		1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	
6b. Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)		1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	
6d. Is the feature still in its original orientation? (YES = 1 pt, NO = 0 pt)		1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	
8. If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)		1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	
9. Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)		1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	
17a. If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)		1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	
19a. If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	
21a. If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)		1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	
25. Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)		1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	
PROJECT FEATURE NUMBER		S2-74	S2-75	S2-76	S2-77	S2-78	S2-79	S2-80	S2-81	S2-82	S2-83	S2-84	S2-85	S2-86	S2-87	S2-88	S2-89	S2-90	S2-91	S2-92	S2-93	S2-94	
FEATURE RATING		Feature quantitative rating out of 15																					
		13	1	1	7	1	1	1	1	1	1	1	1	1	1	14	12	12	12	12	14	14	
		Feature qualitative rating																					
		Excellent	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	
		Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)																					

Table 44. Adaptive Management Plan checklist feature ratings for the Ferrari-Carano, Olson enhancement reach, October 2020.

		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Project Reach		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach		5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name		FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
mmddyy		100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720
Survey Type		POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS
PROJECT SITE NUMBER		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Project Site Type		SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
PROJECT FEATURE NUMBER		S3-01	S3-02	S3-03	S3-04	S3-05	S3-06	S3-07	S3-08	S3-09	S3-10	S3-11	S3-12	S3-13	S3-14	S3-15	S3-16	S3-17	S3-18	S3-19	S3-20
Feature Type Code		LW	HW1	HW2	PW	R	HW1	PW	R	HW1	HW1	HW2	HW1	HW1	LWW	R	HW2	HW2	HW1	HW1	HW1
Habitat Unit		HU14 3	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D
Habitat Type		Pool	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
4.	Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	FAIR	FAIR	UNKN	FAIL	POOR	UNKN	FAIL	FAIR	FAIR	FAIR	FAIR	UNKN	FAIL	UNKN	UNKN	GOOD	GOOD	GOOD	
5a	Are problems with the feature visible?	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6a	Is the feature still in its original location?	YES	YES	YES	YES	NO	YES	YES	NO	YES	YES	YES	YES	UNK	NO	NO	YES	UNK	YES	YES	YES
6b	Is the feature still in its original position?	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	UNK	NO	NO	NO	NO	NO	NO	NO
6d	Is the feature still in its original orientaton?	YES	YES	YES	YES	NO	YES	YES	NO	YES	YES	YES	YES	UNK	NO	NO	UNK	UNK	YES	YES	YES
8.	If an objective, did the feature create the targeted instream habitat type?	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
9.	Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
17a	If an objective, did the feature increase instream shelter rating?	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
19a	If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
21a	If an objective, did the feature lead to the targeted channel conditions?	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
25.	Did the feature achieve the targeted velocity?	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
PROJECT FEATURE NUMBER		S3-01	S3-02	S3-03	S3-04	S3-05	S3-06	S3-07	S3-08	S3-09	S3-10	S3-11	S3-12	S3-13	S3-14	S3-15	S3-16	S3-17	S3-18	S3-19	S3-20
4.	Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	4	3	3	0	1	2	0	1	3	3	3	3	0	1	1	0	0	4	4	4
5a	Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6a	Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	1	1	1	1	0	1	1	0	1	1	1	1	0	0	0	1	0	1	1	1
6b	Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6d	Is the feature still in its original orientaton? (YES = 1 pt, NO = 0 pt)	1	1	1	1	0	1	1	0	1	1	1	1	0	0	0	0	0	1	1	1
8.	If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9.	Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17a	If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19a	If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21a	If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25.	Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PROJECT FEATURE NUMBER		S3-01	S3-02	S3-03	S3-04	S3-05	S3-06	S3-07	S3-08	S3-09	S3-10	S3-11	S3-12	S3-13	S3-14	S3-15	S3-16	S3-17	S3-18	S3-19	S3-20
FEATURE RATING	Feature quantitative rating out of 15	13	5	5	2	1	4	2	1	5	5	5	5	0	1	1	1	0	6	6	6
	Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)	Excellent	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated

Ferrari-Carano, Olson Enhancement Reach



Sonoma Water

Map Date: 1/6/2022

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Figure 77. Enhancement sites and features within the Ferrari-Carano, Olson enhancement reach, October 2020.

Ferrari-Carano, Olson Enhancement Reach

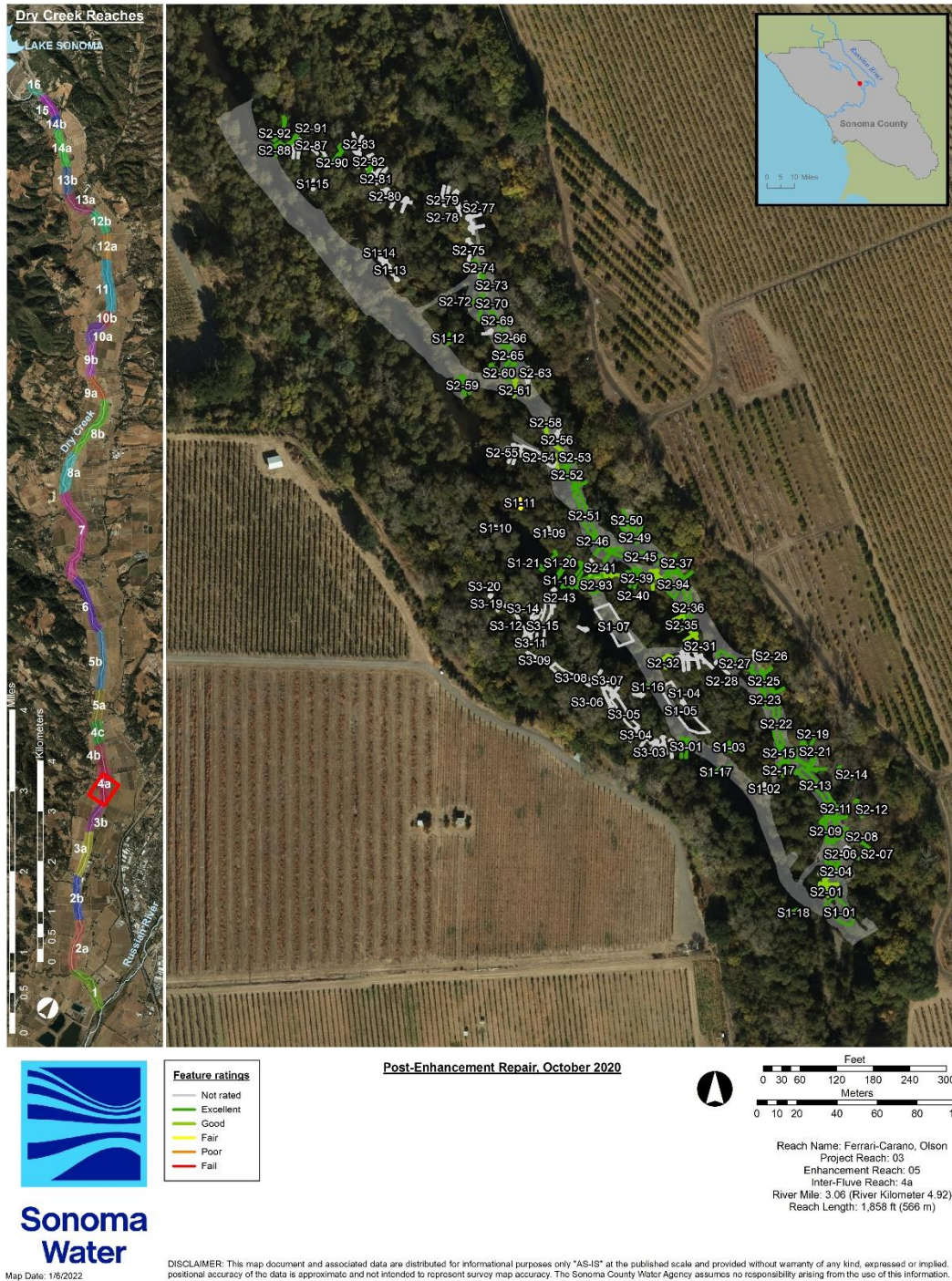


Figure 78. Feature ratings for the Ferrari-Carano, Olson enhancement reach, October 2020.

Table 45. Adaptive Management Plan checklist habitat unit ratings for the Ferrari-Carano, Olson enhancement reach, October 2020.

Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
mmddyy	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720
Survey Type	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS
HABITAT UNIT NUMBER	HU01	HU02	HU03	HU04	HU05	HU06	HU07	HU08	HU09	HU10	HU11	HU12	HU13	HU14	HU15	HU16	HU17	HU18	HU19	
Habitat Type	Riffle	Pool	Flatwater	Pool	Riffle	Pool	Riffle	Riffle	Pool	Riffle	Alcove	Pool	Flatwater	Pool	Riffle	Riffle	Riffle	Flatwater	Riffle	
PROJECT SITE NUMBER	1	2	2	2	2	2	2	2	2	2	2	2	2	1	1	2	2	2	2	
Project Site Type	MainChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	MainChan	MainChan	SideChan	SideChan	SideChan	SideChan	
11e	% Area of habitat unit within 0.5 -2.0 ft depth	71%	32%	67%	49%	85%	59%	69%	65%	56%	65%	67%	42%	41%	22%	35%	73%	65%	72%	31%
11f	% Area of habitat unit within 2.0 -4.0 ft depth	22%	41%	4%	37%	0%	21%	4%	1%	34%	2%	13%	39%	51%	45%	0%	2%	2%	10%	0%
14.	Instream shelter value in the habitat unit : 0, 1, 2, 3	2	3	3	3	1	3	3	3	3	3	3	2	3	2	3	3	2	1	1
15.	Percent of habitat unit covered by shelter: %	30	25	30	45	5	40	30	25	45	30	90	35	15	15	10	75	15	10	5
17b	a. Calculate the shelter rating for the habitat unit : 0-300	60	75	90	135	5	120	90	75	135	90	270	105	30	45	20	225	45	20	5
28.	Percent of habitat unit within targeted velocity (see above): (%)	19%	54%	42%	58%	13%	47%	20%	9%	31%	20%	94%	42%	37%	39%	9%	9%	42%	28%	6%
36e	% habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	12%	25%	19%	25%	3%	21%	7%	2%	17%	5%	61%	24%	19%	14%	0%	2%	13%	16%	0%
36f	% habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	1%	11%	0%	21%	0%	6%	0%	0%	5%	0%	13%	8%	10%	13%	0%	0%	0%	1%	0%
HABITAT UNIT NUMBER	HU01	HU02	HU03	HU04	HU05	HU06	HU07	HU08	HU09	HU10	HU11	HU12	HU13	HU14	HU15	HU16	HU17	HU18	HU19	
11e	% area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	3	4	4	4	4	4	4	4	4	4	4	4	2	3	4	4	4	3
11f	% area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	2	4	0	3	0	2	0	0	3	0	1	3	4	4	0	0	0	0	0
14.	Instream shelter value in the habitat unit : 0, 1, 2, 3 (3 = 5 pts, 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	4	5	5	5	3	5	5	5	5	5	5	5	4	5	4	5	5	4	3
15.	% hab unit covered by shelter (≥80 = 5pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)	2	2	2	3	0	3	2	2	3	2	5	2	1	1	1	4	1	1	0
17b	a. Calculate the shelter rating for the habitat unit : 0-300	2	2	3	4	0	4	3	2	4	3	5	4	0	1	0	5	1	0	0
28.	% area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	1	4	4	4	1	4	2	0	3	2	4	4	3	3	0	0	4	2	0
36e	% area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	1	2	1	2	0	2	0	0	1	0	4	2	1	1	0	0	1	1	0
36f	% area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	1	0	2	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
HABITAT UNIT QUANTITATIVE RATING	HU01	HU02	HU03	HU04	HU05	HU06	HU07	HU08	HU09	HU10	HU11	HU12	HU13	HU14	HU15	HU16	HU17	HU18	HU19	
Habitat unit quantitative rating (out of 35)	16	23	19	27	8	24	16	13	23	16	29	24	17	18	8	18	16	12	6	
HABITAT UNIT QUALITATIVE RATING	Fair	Good	Fair	Good	Poor	Good	Fair	Poor	Good	Fair	Excellent	Good	Fair	Fair	Poor	Fair	Fair	Poor	Fail	
Habitat unit qualitative rating: Excellent (≥28), Good (≥21), Fair(≥14), Poor (≥7), Fail (<7)																				

Table 45. Adaptive Management Plan checklist habitat unit ratings for the Ferrari-Carano, Olson enhancement reach, October 2020.

	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
mmddy	62220	62220	62220	62220	62220	62220	62220	62220	62220	62220	62220	62220	62220	62220	62220	62220	62220	62220	62220	62220
Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
	HABITAT UNIT NUMBER																			
Habitat Type	Alcove	Pool	Flatwater	Riffle	Alcove	Pool	Riffle	Alcove	Pool	Riffle	Pool	Flatwater	Riffle	Flatwater	Riffle	Pool	Riffle	Pool	Riffle	Pool
	PROJECT SITE NUMBER																			
Project Site Type	2	2	2	2	2	2	2	2	2	1	1	1	1	2	2	2	2	2	2	1
	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	MainChan	MainChan	MainChan	MainChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	MainChan
11e	% Area of habitat unit within 0.5 -2.0 ft depth																			
11f	% Area of habitat unit within 2.0 -4.0 ft depth																			
14	Instream shelter value in the habitat unit . 0, 1, 2, 3																			
15	Percent of habitat unit covered by shelter: %																			
17b	a. Calculate the shelter rating for the habitat unit . 0-300																			
28	Percent of habitat unit within targeted velocity (see above): (%)																			
36e	% habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap																			
36f	% habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap																			
	HABITAT UNIT NUMBER																			
11e	% area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)																			
11f	% area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)																			
14	Instream shelter value in the habitat unit . 0, 1, 2, 3 (3 = 5 pts; 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)																			
15	% hab unit covered by shelter (≥80 = 5pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)																			
17b	a. Calculate the shelter rating for the habitat unit . 0-300																			
28	% area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)																			
36e	% area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)																			
36f	% area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)																			
	HABITAT UNIT NUMBER																			
	Habitat unit quantitative rating (out of 35)																			
	Habitat unit qualitative rating: Excellent (≥28), Good (≥21), Fair(≥14), Poor (≥7), Fail (<7)																			
HABITAT UNIT RATING	30	24	17	17	27	15	12	29	22	10	15	21	16	17	11	11	25	13	25	
	Excellent	Good	Fair	Fair	Good	Fair	Poor	Excellent	Good	Poor	Fair	Good	Fair	Fair	Poor	Poor	Good	Poor	Good	

Table 45. Adaptive Management Plan checklist habitat unit ratings for the Ferrari-Carano, Olson enhancement reach, October 2020.

Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
mmddyy	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720
Survey Type	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS
HABITAT UNIT NUMBER	HU20	HU21	HU22	HU23	HU24	HU25	HU26	HU27	HU28	HU29	HU30	HU31	HU14 2	HU14 3	HU18 2	HU28 2	
Habitat Type	Riffle	Pool	Flatwater	Pool	Riffle	Flatwater	Alcove	Alcove	Flatwater	Pool	Flatwater	Alcove	Pool	Pool	Flatwater	Flatwater	
PROJECT SITE NUMBER	2	2	2	2	1	1	2	2	1	2	1	1	2	3	1	2	
Project Site Type	SideChan	SideChan	SideChan	SideChan	MainChan	MainChan	SideChan	SideChan	MainChan	SideChan	MainChan	MainChan	SideChan	SideChan	MainChan	SideChan	
11e	% Area of habitat unit within 0.5 -2.0 ft depth	74%	25%	46%	52%	72%	42%	46%	23%	79%	13%	66%	54%	22%	22%	72%	79%
11f	% Area of habitat unit within 2.0 -4.0 ft depth	13%	53%	37%	38%	0%	47%	0%	46%	7%	57%	20%	0%	45%	45%	10%	7%
14.	Instream shelter value in the habitat unit : 0, 1, 2, 3	3	2	2	3	2	2	2	3	1	3	2	2	3	3	2	1
15.	Percent of habitat unit covered by shelter: %	25	25	15	40	20	30	75	65	10	25	10	90	15	15	10	10
17b	a. Calculate the shelter rating for the habitat unit : 0-300	75	50	30	120	40	60	150	195	10	75	20	180	45	45	20	10
28.	Percent of habitat unit within targeted velocity (see above): (%)	15%	37%	24%	36%	18%	36%	97%	81%	13%	59%	31%	100%	39%	39%	28%	13%
36e	% habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	5%	14%	8%	20%	3%	17%	44%	22%	3%	12%	12%	54%	14%	14%	16%	3%
36f	% habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	9%	2%	7%	0%	9%	0%	33%	0%	34%	7%	0%	13%	13%	1%	0%
HABITAT UNIT NUMBER	HU20	HU21	HU22	HU23	HU24	HU25	HU26	HU27	HU28	HU29	HU30	HU31	HU14 2	HU14 3	HU18 2	HU28 2	
11e	% area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	2	4	4	4	4	4	2	4	1	4	4	2	2	4	4
11f	% area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	1	4	3	3	0	4	0	4	0	4	2	0	4	4	0	0
14.	Instream shelter value in the habitat unit : 0, 1, 2, 3 (3 = 5 pts; 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	5	4	4	5	4	4	4	5	3	5	4	4	5	5	4	3
15.	% hab unit covered by shelter (≥80 = 5pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)	2	2	1	3	2	2	4	4	1	2	1	5	1	1	1	1
17b	a. Calculate the shelter rating for the habitat unit : 0-300	2	1	0	4	1	2	5	5	0	2	0	5	1	1	0	0
28.	% area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	1	3	2	3	1	3	4	4	1	4	3	4	3	3	2	1
36e	% area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	1	0	2	0	1	4	2	0	1	1	4	1	1	1	0
36f	% area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	0	3	0	3	0	0	1	1	0	0	0
HABITAT UNIT NUMBER	HU20	HU21	HU22	HU23	HU24	HU25	HU26	HU27	HU28	HU29	HU30	HU31	HU14 2	HU14 3	HU18 2	HU28 2	
HABITAT UNIT RATING	Habitat unit quantitative rating (out of 35)																
	15	17	14	24	12	20	25	29	9	22	15	26	18	18	12	9	
	Habitat unit qualitative rating: Excellent (≥28), Good (≥21), Fair(≥14), Poor (≥7), Fail (<7)																
	Fair	Fair	Fair	Good	Poor	Fair	Good	Excellent	Poor	Good	Fair	Good	Fair	Fair	Poor	Poor	

Ferrari-Carano, Olson Enhancement Reach

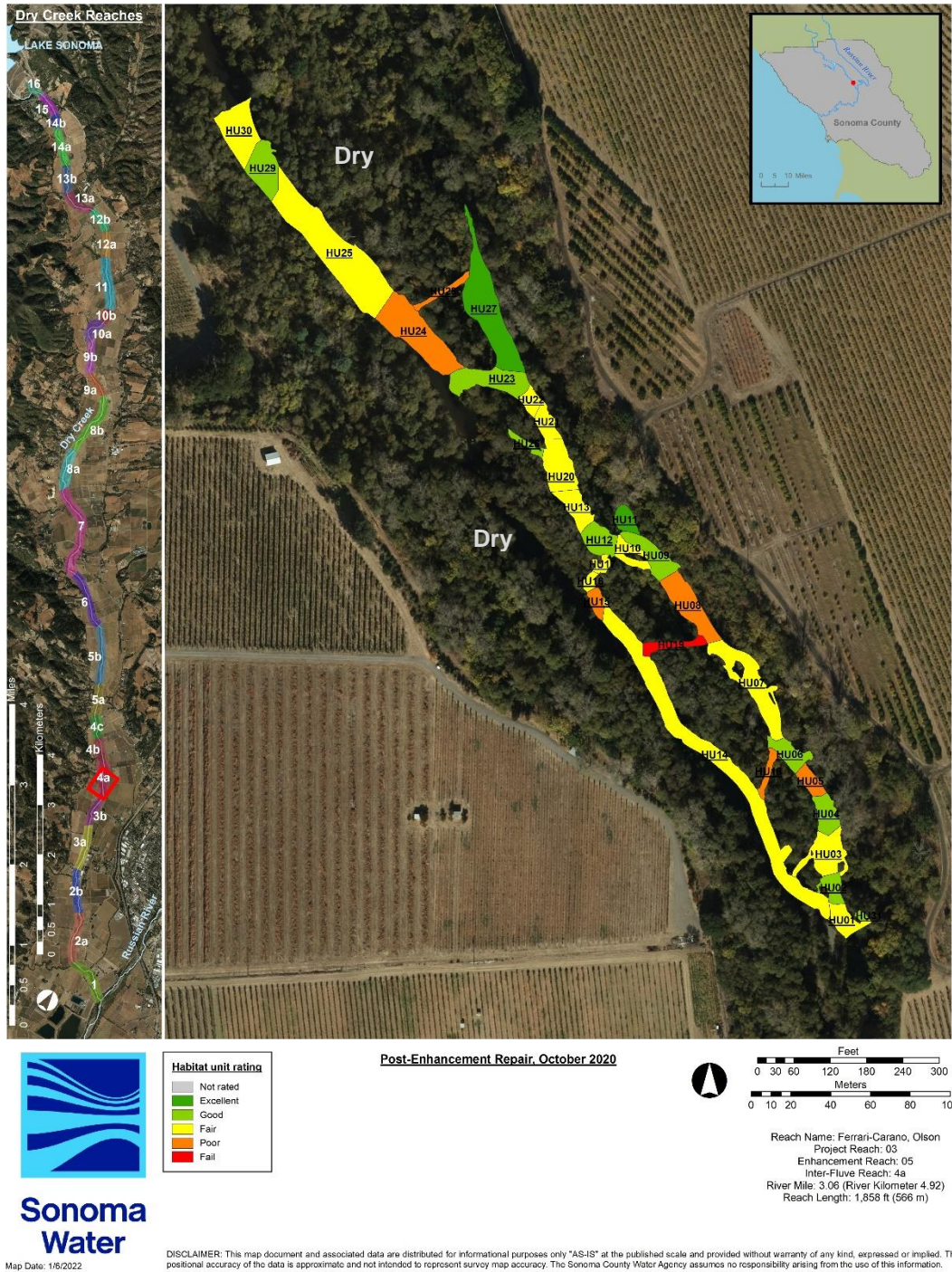


Figure 79. Habitat unit ratings for the Ferrari-Carano, Olson enhancement reach October 2020.

Table 46. Post-effective flow average feature, average habitat unit, site, and reach ratings for the Ferrari-Carano, Olson enhancement reach, October 2020.

	Project Reach	3	3	3
	Enhancement Reach	5	5	5
	ENHANCEMENT REACH NAME	FO	FO	FO
	mmddy	100720	100720	100720
	Survey Type	POS	POS	POS
	PROJECT SITE NUMBER	1	2	3
	Project Site Type	MainChan	SideChan	SideChan
	PROJECT SITE NUMBER	1	2	3
SITE AVERAGE FEATURE RATING	Site average feature quantitative rating (out of 15; bold indicates excluded from site rating)	12	12	13
	Site average feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3), Not rated (not used to rate site)	Excellent	Excellent	Excellent
	PROJECT SITE NUMBER	1	2	3
SITE AVERAGE HABITAT UNIT RATING	Site average habitat unit quantitative rating (out of 35; bold indicates excluded from site rating)	15	19	18
	Site average qualitative rating Excellent (>=28), Good (>=21), Fair(>=14), Poor (>=7), Fail (<7), Not rated (not used to rate site)	Fair	Fair	Fair
	PROJECT SITE NUMBER	1	2	3
SITE RATING	Site quantitative rating (sum of site average feature and habitat unit ratings) (out of 50; bold indicates rating excludes feature or habitat unit rating and scoring out of 15 or 35)	28	31	31
	Site qualitative rating: Excellent (>=40), Good (>=30), Fair(>=20), Poor (>=10), Fail (<10)	Fair	Good	Good
	ENHANCEMENT REACH NAME	FO		
ENHANCEMENT REACH RATING	Enhancement reach quantitative rating (average of site ratings) (out of 50)	30		
	Enhancement reach qualitative rating: Excellent (>=40), Good (>=30), Fair(>=20), Poor (>=10), Fail (<10)	Good		

Ferrari-Carano, Olson Enhancement Reach

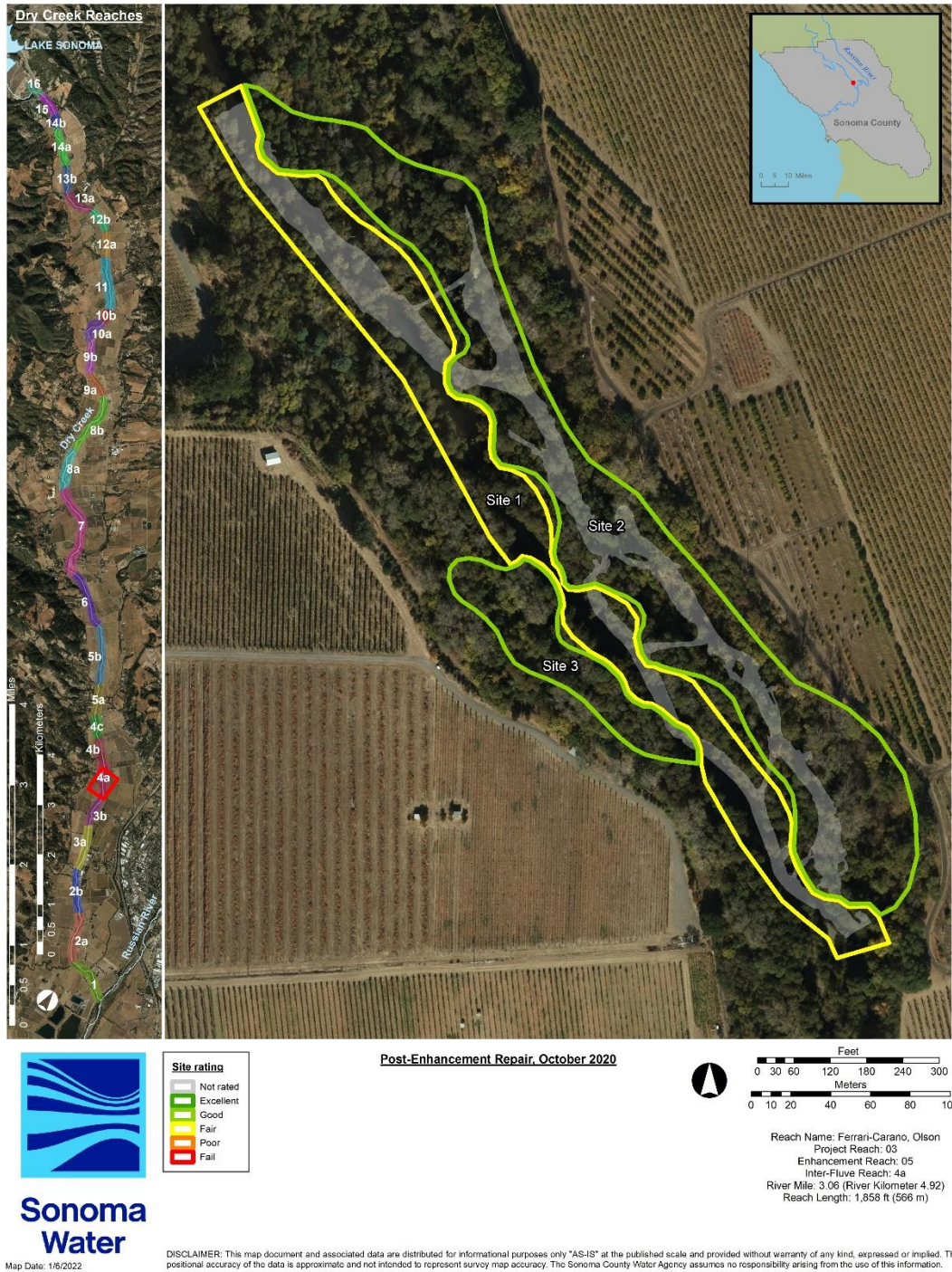


Figure 80. Enhancement site ratings for the Ferrari-Carano, Olson enhancement reach, October 2020.

Ferrari-Carano, Olson Enhancement Reach



Figure 81. Enhancement reach rating for the Ferrari-Carano, Olson enhancement reach, October 2020.

Feature and Habitat Unit Checklists

Table 47. Adaptive Management Plan targeted checklist for the Ferrari-Carano, Olson enhancement reach, October 2020.

Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
mmddyy	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720
Survey Type	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS
Project Site Number	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Project Site Type	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan
Project Feature Number	NA	NA	NA	NA	NA	NA	NA	NA	S1-01	S1-02	S1-03	S1-04	S1-05	S1-06	S1-07	S1-08	S1-09	S1-10	S1-11	
Feature Type Code	NA	NA	NA	NA	NA	NA	NA	NA	BF	TT	TT	TT	BF	TT	BF	TT	TT	TT	TT	TT
Habitat Unit	HU28	HU15	HU25	HU30	HU31	HU18_2	HU29_2	HU01	HU01_U	HU14	HU01_U	HU01_U	HU01_U	HU01_U	HU01_U	HU01_U	HU01_U	HU01_U	HU01_U	HU01_D
Habitat Type	Flatwater	Riffle	Flatwater	Flatwater	Alcove	Flatwater	Pool	Riffle	Dry	Pool	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	NA	NA	NA	NA	NA	NA	NA	GOOD	FAIL	GOOD	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	GOOD
5a. Are problems with the feature visible?	NA	NA	NA	NA	NA	NA	NA	YES	YES	NO	YES	NA	YES	NA	YES	NA	YES	YES	YES	YES
6a. Is the feature still in its original location?	NA	NA	NA	NA	NA	NA	NA	YES	NO	YES	NO	NA	NO	NA	NO	NA	NO	NO	NO	YES
6b. Is the feature still in its original position?	NA	NA	NA	NA	NA	NA	NA	YES	NO	YES	NO	NA	NO	NA	NO	NA	NO	NO	NO	NO
6d. Is the feature still in its original orientaton?	NA	NA	NA	NA	NA	NA	NA	YES	NO	YES	NO	NA	NO	NA	NO	NA	NO	NO	NO	YES
8. If an objective, did the feature create the targeted instream habitat type?	NA	NA	NA	NA	NA	NA	NA	YES	NO	YES	NO	NA	NO	NA	NO	NA	NO	NO	NO	NO
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	NA	NA	NA	NA	NA	NA	NA	NO	NO	NO	NO	NA	NO	NA	NO	NA	NO	NO	NO	YES
11e. % Area of habitat unit within 0.5 -2.0 ft depth	79%	35%	42%	66%	54%	72%	0%	71%	0%	22%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
11f. % Area of habitat unit within 2.0 -4.0 ft depth	7%	0%	47%	20%	0%	10%	0%	22%	0%	45%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	1	2	2	2	2	2	3	2	0	3	0	0	0	0	0	0	0	0	0	0
15. Percent of habitat unit covered by shelter: %	10	10	30	10	90	10	25	30	0	15	0	0	0	0	0	0	0	0	0	0
17a. If an objective, did the feature increase instream shelter rating?	NA	NA	NA	NA	NA	NA	NA	YES	NO	YES	NO	NA	NO	NA	NO	NO	NO	NO	NO	NO
17b. a. Calculate the shelter rating for the habitat unit: 0-300	10	20	60	20	180	20	75	60	0	45	0	0	0	0	0	0	0	0	0	0
19a. If an objective, did the feature increase LWD count in the habitat unit?	NA	NA	NA	NA	NA	NA	NA	NO	NO	NO	NO	NA	NO	NA	NO	NA	NO	NO	NO	NO
21a. If an objective, did the feature lead to the targeted channel conditions?	NA	NA	NA	NA	NA	NA	NA	YES	NO	NO	NO	NA	NO	NA	NO	NA	NO	NO	NO	NO
25. Did the feature achieve the targeted velocity?	NA	NA	NA	NA	NA	NA	NA	YES	NO	YES	NO	NA	NO	NA	NO	NA	NO	NO	NO	NO
28. Percent of habitat unit within targeted velocity (see above): (%)	13%	9%	36%	31%	100%	28%	0%	19%	0%	39%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
36e. % habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	3%	0%	17%	12%	54%	16%	0%	12%	0%	14%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
36f. % habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	0%	9%	7%	0%	1%	0%	1%	0%	13%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
FEATURE NUMBER																				
HABITAT UNIT NUMBER																				
SITE NUMBER																				
ENHANCEMENT REACH NAME																				
4. Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	0	0	0	0	0	0	0	4	1	4	1	1	1	1	1	1	1	1	1	4
5a. Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
6a. Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1
6b. Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
6d. Is the feature still in its original orientaton? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1
8. If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
9. Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	0	0	0	0	0	0	0	1	1	1	1	0	1	0	1	0	1	1	1	0
11e. % area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	3	4	4	4	4	0	4	0	2	0	0	0	0	0	0	0	0	0	0
11f. % area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	4	2	0	0	0	2	0	4	0	0	0	0	0	0	0	0	0	0
14. Instream shelter value in the habitat unit: 0, 1, 2, 3 (3 = 5 pts, 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	3	4	4	4	4	4	5	4	0	5	0	0	0	0	0	0	0	0	0	0
15. % hab unit covered by shelter (≥80 = 5pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)	1	1	2	1	5	1	2	2	0	1	0	0	0	0	0	0	0	0	0	0
17a. If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
17b. a. Calculate the shelter rating for the habitat unit: 0-300	0	0	2	0	5	0	2	2	0	1	0	0	0	0	0	0	0	0	0	0
19a. If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21a. If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
25. Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
28. % area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	1	0	3	3	4	2	0	1	0	3	0	0	0	0	0	0	0	0	0	0
36e. % area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	1	1	4	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0
36f. % area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0

Table 47. Adaptive Management Plan targeted checklist for the Ferrari-Carano, Olson enhancement reach, October 2020.

Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
mmddyy	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720
Survey Type	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS
Project Site Number	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2
Project Site Type	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
Project Feature Number	S1-12	S1-13	S1-14	S1-15	S1-16	S1-17	S1-18	S1-19	S1-20	S1-21	NA	NA	NA	NA	NA	S2-01	S2-02	S2-03	S2-04
Feature Type Code	TT	LW	TT	TT	TT	LVW	LVW	FB	FB	FB	NA	NA	NA	NA	NA	LW	HW2	HW1	HW2
Habitat Unit	HU24	HU01 D	HU01 D	HU01 U	HU14	HU14	HU14	HU01 D	HU01 D	HU01 D	HU22	HU19	HU18	HU28 2	HU02	HU03	HU03	HU03	HU03
Habitat Type	Rifle	Dry	Dry	Dry	Pool	Pool	Pool	Dry	Dry	Dry	Flatwater	Rifle	Flatwater	Flatwater	Flatwater	Pool	Flatwater	Flatwater	Flatwater
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	UNKN	POOR	FAIL	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	NA	NA	NA	NA	FAIR	FAIR	EXCL	GOOD	GOOD
5a. Are problems with the feature visible?	NO	YES	YES	YES	NO	NO	NO	NO	NO	NO	NA	NA	NA	NA	YES	YES	NO	NO	NO
6a. Is the feature still in its original location?	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	NA	NA	NA	NA	YES	YES	YES	YES	YES
6b. Is the feature still in its original position?	YES	NO	NO	NO	YES	YES	YES	YES	YES	YES	NA	NA	NA	NA	NO	NO	NO	NO	NO
6d. Is the feature still in its original orientaton?	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	NA	NA	NA	NA	YES	YES	YES	YES	YES
8. If an objective, did the feature create the targeted instream habitat type?	YES	NO	NO	NO	YES	YES	YES	YES	YES	YES	NA	NA	NA	NA	YES	YES	YES	YES	YES
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	YES	YES	NO	NO	NO	NO	NO	NO	NO	NA	NA	NA	NA	NO	NO	NO	NO	NO
11e. % Area of habitat unit within 0.5 -2.0 ft depth	72%	0%	0%	0%	22%	22%	22%	0%	0%	0%	46%	31%	72%	79%	32%	67%	67%	67%	67%
11f. % Area of habitat unit within 2.0 -4.0 ft depth	0%	0%	0%	0%	45%	45%	45%	0%	0%	0%	37%	0%	10%	7%	41%	4%	4%	4%	4%
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	2	0	0	0	3	3	3	0	0	0	2	1	2	1	3	3	3	3	3
15. Percent of habitat unit covered by shelter: %	20	0	0	0	15	15	15	0	0	0	15	5	10	10	25	30	30	30	30
17a. If an objective, did the feature increase instream shelter rating?	YES	YES	NO	NO	YES	YES	YES	YES	YES	YES	NA	NA	NA	NA	YES	YES	YES	YES	YES
17b. a. Calculate the shelter rating for the habitat unit: 0-300	40	0	0	0	45	45	45	0	0	0	30	5	20	10	75	90	90	90	90
19a. If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NA	NA	NA	NA	NO	NO	NO	NO	NO
21a. If an objective, did the feature lead to the targeted channel conditions?	YES	NO	NO	NO	YES	YES	YES	YES	YES	YES	NA	NA	NA	NA	YES	YES	YES	YES	YES
25. Did the feature achieve the targeted velocity?	YES	YES	NO	NO	YES	YES	YES	NA	NA	NA	NA	NA	NA	NA	YES	YES	YES	YES	YES
28. Percent of habitat unit within targeted velocity (see above): (%)	18%	0%	0%	0%	39%	39%	39%	0%	0%	0%	24%	6%	28%	13%	54%	42%	42%	42%	42%
36e. % habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	3%	0%	0%	0%	14%	14%	14%	0%	0%	0%	8%	0%	16%	3%	25%	19%	19%	19%	19%
36f. % habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	0%	0%	0%	13%	13%	13%	0%	0%	0%	2%	0%	1%	0%	11%	0%	0%	0%	0%
FEATURE NUMBER	S1-12	S1-13	S1-14	S1-15	S1-16	S1-17	S1-18	S1-19	S1-20	S1-21	NA	NA	NA	NA	S2-01	S2-02	S2-03	S2-04	S2-04
HABITAT UNIT NUMBER	HU24	HU01 D	HU01 D	HU01 U	HU14	HU14	HU14	HU01 D	HU01 D	HU01 D	HU22	HU19	HU18	HU28 2	HU02	HU03	HU03	HU03	HU03
SITE NUMBER	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2
ENHANCEMENT REACH NAME	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
4. Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	4	0	2	1	4	4	4	4	4	4	0	0	0	0	3	3	5	4	4
5a. Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	1	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	1	1	1
6a. Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	1	1	1	0	1	1	1	1	1	1	0	0	0	0	1	1	1	1	1
6b. Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	1	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0
6d. Is the feature still in its original orientaton? (YES = 1 pt, NO = 0 pt)	1	1	1	0	1	1	1	1	1	1	0	0	0	0	1	1	1	1	1
8. If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	1	0	0	0	1	1	1	1	1	1	0	0	0	0	1	1	1	1	1
9. Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	1	0	0	1	1	1	1	1	1	1	0	0	0	0	1	1	1	1	1
11e. % area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	0	0	0	2	2	2	0	0	0	4	3	4	4	3	4	4	4	4
11f. % area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	4	4	4	0	0	0	3	0	0	0	4	0	0	0	0
14. Instream shelter value in the habitat unit: 0, 1, 2, 3 (3 = 5 pts, 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	4	0	0	0	5	5	5	0	0	0	4	3	4	3	5	5	5	5	5
15. % hab unit covered by shelter (≥80 = 5pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)	2	0	0	0	1	1	1	0	0	0	1	0	1	1	2	2	2	2	2
17a. If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	1	0	0	1	1	1	1	1	1	0	0	0	0	1	1	1	1	1
17b. a. Calculate the shelter rating for the habitat unit: 0-300	1	0	0	0	1	1	1	0	0	0	0	0	0	0	2	3	3	3	3
19a. If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21a. If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	1	0	0	0	1	1	1	1	1	1	0	0	0	0	1	1	1	1	1
25. Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	1	0	0	1	1	1	0	0	0	0	0	0	0	1	1	1	1	1
28. % area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	1	0	0	0	3	3	3	0	0	0	2	0	2	1	4	4	4	4	4
36e. % area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	1	1	1	0	0	0	0	0	1	0	2	1	1	1	1
36f. % area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	1	1	1	0	0	0	0	0	0	0	1	0	0	0	0

Table 47. Adaptive Management Plan targeted checklist for the Ferrari-Carano, Olson enhancement reach, October 2020.

Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
mmddyy	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720
Survey Type	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS
Project Site Number	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Project Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
Project Feature Number	S2-05	S2-06	S2-07	S2-08	S2-09	S2-10	S2-11	S2-12	S2-13	S2-14	S2-15	S2-16	S2-17	S2-18	S2-19	S2-20	S2-21	S2-22	S2-22	
Feature Type Code	HW1	LWW	HW1	HW1	LWW	HW1	PW	HW1	R	HW1	PW	HW2	HW1	HW1	HW1	HW1	HW1	LWW	LWW	R
Habitat Unit	HU03	HU02 U	HU02 D	HU04	HU04	HU04	HU04	HU04	HU02 D	HU05	HU02 D	HU06	HU06	HU06	HU06	HU06	HU06	HU06	HU07	HU07
Habitat Type	Flatwater	Dry	Dry	Pool	Pool	Pool	Pool	Pool	Dry	Riffle	Dry	Pool	Pool	Pool	Pool	Pool	Pool	Pool	Pool	Riffle
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	EXCL	FAIL	EXCL	GOOD	GOOD	EXCL	EXCL	EXCL	GOOD	EXCL	EXCL	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD
5a. Are problems with the feature visible?	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
6a. Is the feature still in its original location?	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6b. Is the feature still in its original position?	YES	NO	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	NO	NO	YES	YES
6d. Is the feature still in its original orientation?	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
8. If an objective, did the feature create the targeted instream habitat type?	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
11e. % Area of habitat unit within 0.5 -2.0 ft depth	67%	0%	0%	49%	49%	49%	49%	49%	0%	85%	0%	59%	59%	59%	59%	59%	59%	59%	59%	69%
11f. % Area of habitat unit within 2.0 -4.0 ft depth	4%	0%	0%	37%	37%	37%	37%	37%	0%	0%	0%	21%	21%	21%	21%	21%	21%	21%	21%	4%
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	3	0	0	3	3	3	3	3	0	1	0	3	3	3	3	3	3	3	3	3
15. Percent of habitat unit covered by shelter: %	30	0	0	45	45	45	45	45	0	5	0	40	40	40	40	40	40	40	40	30
17a. If an objective, did the feature increase instream shelter rating?	YES	NO	NO	YES	YES	YES	YES	YES	NO	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES
17b. a. Calculate the shelter rating for the habitat unit: 0-300	90	0	0	135	135	135	135	135	0	5	0	120	120	120	120	120	120	120	120	90
19a. If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES
21a. If an objective, did the feature lead to the targeted channel conditions?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES
25. Did the feature achieve the targeted velocity?	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
28. Percent of habitat unit within targeted velocity (see above): (%)	42%	0%	0%	58%	58%	58%	58%	58%	0%	13%	0%	47%	47%	47%	47%	47%	47%	47%	47%	20%
36e. % habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	19%	0%	0%	25%	25%	25%	25%	25%	0%	3%	0%	21%	21%	21%	21%	21%	21%	21%	21%	7%
36f. % habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	0%	0%	21%	21%	21%	21%	21%	0%	0%	0%	6%	6%	6%	6%	6%	6%	6%	6%	0%
	FEATURE NUMBER	S2-05	S2-06	S2-07	S2-08	S2-09	S2-10	S2-11	S2-12	S2-13	S2-14	S2-15	S2-16	S2-17	S2-18	S2-19	S2-20	S2-21	S2-22	S2-22
	HABITAT UNIT NUMBER	HU03	HU02 U	HU02 D	HU04	HU04	HU04	HU04	HU02 D	HU05	HU02 D	HU06	HU06	HU06	HU06	HU06	HU06	HU06	HU06	HU07
	SITE NUMBER	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	ENHANCEMENT REACH NAME	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
4. Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	5	1	5	4	4	5	5	5	4	5	5	4	4	4	4	4	4	4	4	4
5a. Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6a. Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6b. Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	1	0	1	0	1	1	1	0	1	1	1	1	1	0	1	0	1	1	1	1
6d. Is the feature still in its original orientation? (YES = 1 pt, NO = 0 pt)	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8. If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
9. Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
11e. % area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	0	0	4	4	4	4	4	0	4	0	4	4	4	4	4	4	4	4	4
11f. % area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	3	3	3	3	3	0	0	0	2	2	2	2	2	2	2	2	0
14. Instream shelter value in the habitat unit: 0, 1, 2, 3 (3 = 5 pts; 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	5	0	0	5	5	5	5	5	0	3	0	5	5	5	5	5	5	5	5	5
15. % hab unit covered by shelter (≥80 = 5pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)	2	0	0	3	3	3	3	3	0	0	0	3	3	3	3	3	3	3	3	2
17a. If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	0	0	1	1	1	1	1	0	0	0	1	1	1	1	1	1	1	1	1
17b. a. Calculate the shelter rating for the habitat unit: 0-300	3	0	0	4	4	4	4	4	0	0	0	4	4	4	4	4	4	4	4	3
19a. If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
21a. If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1
25. Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
28. % area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	0	0	4	4	4	4	4	0	1	0	4	4	4	4	4	4	4	4	2
36e. % area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	1	0	0	2	2	2	2	2	0	0	0	2	2	2	2	2	2	2	2	0
36f. % area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	2	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0

Table 47. Adaptive Management Plan targeted checklist for the Ferrari-Carano, Olson enhancement reach, October 2020.

Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
mmdyyy	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720
Survey Type	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS
Project Site Number	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Project Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
Project Feature Number	S2-23	S2-24	S2-25	S2-26	S2-27	S2-28	S2-29	S2-30	S2-31	S2-32	S2-35	S2-36	S2-37	S2-38	S2-39	S2-40	S2-41	S2-42	S2-42
Feature Type Code	HW1	HW1	PW	TT	R	HW1	HW2	HW1	LW	ALS	PW	R	PW	HW2	LW	LW	HW2	HW1	HW1
Habitat Unit	HU07	HU07	HU07	HU02 U	HU07	HU02 D	HU02 D	HU02 D	HU02 D	HU14 2	HU08	HU08	HU09	HU09	HU09	HU10	HU17	HU17	HU17
Habitat Type	Rifle	Rifle	Rifle	Dry	Rifle	Dry	Dry	Dry	Dry	Pool	Rifle	Rifle	Pool	Pool	Pool	Pool	Rifle	Rifle	Rifle
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	GOOD	GOOD	FAIL	GOOD	FAIR	POOR	POOR	FAIR	FAIR	FAIR	GOOD	EXCL	EXCL	FAIR	GOOD	GOOD	GOOD	GOOD
5a. Are problems with the feature visible?	NO	NO	YES	YES	NO	YES	YES	YES	YES	YES	YES	NO	NO	NO	YES	NO	YES	YES	YES
6a. Is the feature still in its original location?	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6b. Is the feature still in its original position?	NO	NO	YES	NO	YES	NO	NO	NO	NO	NO	YES	YES	YES	NO	YES	NO	NO	NO	NO
6d. Is the feature still in its original orientation?	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
8. If an objective, did the feature create the targeted instream habitat type?	YES	YES	YES	NO	YES	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	NO	NO	NO	NO	YES	YES	YES	YES	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO
11e. % Area of habitat unit within 0.5 -2.0 ft depth	69%	69%	69%	0%	69%	0%	0%	0%	0%	22%	65%	65%	56%	56%	56%	65%	65%	65%	65%
11f. % Area of habitat unit within 2.0 -4.0 ft depth	4%	4%	4%	0%	4%	0%	0%	0%	0%	45%	1%	1%	34%	34%	34%	2%	2%	2%	2%
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	3	3	3	0	3	0	0	0	0	3	3	3	3	3	3	3	3	3	3
15. Percent of habitat unit covered by shelter: %	30	30	30	0	30	0	0	0	0	15	25	25	45	45	45	30	15	15	15
17a. If an objective, did the feature increase instream shelter rating?	YES	YES	YES	NO	YES	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
17b. a. Calculate the shelter rating for the habitat unit: 0-300	90	90	90	0	90	0	0	0	0	45	75	75	135	135	135	90	45	45	45
19a. If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
21a. If an objective, did the feature lead to the targeted channel conditions?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
25. Did the feature achieve the targeted velocity?	YES	YES	YES	YES	YES	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
28. Percent of habitat unit within targeted velocity (see above): (%)	20%	20%	20%	0%	20%	0%	0%	0%	0%	39%	9%	9%	31%	31%	31%	20%	42%	42%	42%
36e. % habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	7%	7%	7%	0%	7%	0%	0%	0%	0%	14%	2%	2%	17%	17%	17%	5%	13%	13%	13%
36f. % habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	0%	0%	0%	0%	0%	0%	0%	0%	13%	0%	0%	5%	5%	5%	0%	0%	0%	0%
FEATURE NUMBER	S2-23	S2-24	S2-25	S2-26	S2-27	S2-28	S2-29	S2-30	S2-31	S2-32	S2-35	S2-36	S2-37	S2-38	S2-39	S2-40	S2-41	S2-42	S2-42
HABITAT UNIT NUMBER	HU07	HU07	HU07	HU02 U	HU07	HU02 D	HU02 D	HU02 D	HU02 D	HU14 2	HU08	HU08	HU09	HU09	HU09	HU10	HU17	HU17	HU17
SITE NUMBER	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
ENHANCEMENT REACH NAME	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
4. Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	4	4	4	1	4	3	2	2	3	3	3	4	5	5	3	4	4	4	4
5a. Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	1	1	0	0	1	0	0	0	0	0	0	1	1	1	0	1	0	0	0
6a. Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6b. Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	0	0	1	0	1	0	0	0	0	0	1	1	1	0	1	0	0	0	0
6d. Is the feature still in its original orientation? (YES = 1 pt, NO = 0 pt)	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8. If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	1	1	1	0	1	0	0	0	0	1	1	1	1	1	1	1	1	1	1
9. Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	1	1	1	1	1	0	0	0	0	1	1	1	1	1	0	1	1	1	1
11e. % area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	4	4	0	4	0	0	0	0	2	4	4	4	4	4	4	4	4	4
11f. % area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	0	0	0	0	4	0	0	3	3	3	0	0	0	0
14. Instream shelter value in the habitat unit: 0, 1, 2, 3 (3 = 5 pts; 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	5	5	5	0	5	0	0	0	0	5	5	5	5	5	5	5	5	5	5
15. % hab unit covered by shelter (≥80 = 5pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)	2	2	2	0	2	0	0	0	0	1	2	2	3	3	3	2	1	1	1
17a. If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	1	1	0	1	0	0	0	0	1	1	1	1	1	1	1	1	1	1
17b. a. Calculate the shelter rating for the habitat unit: 0-300	3	3	3	0	3	0	0	0	0	1	2	2	4	4	4	3	1	1	1
19a. If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21a. If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
25. Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	0	0	0	0	1	1	1	1	1	1	1	1	1	1
28. % area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	2	2	2	0	2	0	0	0	0	3	0	0	3	3	3	2	4	4	4
36e. % area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	0	1	1	1
36f. % area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0

Table 47. Adaptive Management Plan targeted checklist for the Ferrari-Carano, Olson enhancement reach, October 2020.

Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
mmdyyy	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720
Survey Type	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS
Project Site Number	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Project Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
Project Feature Number	S2-43	S2-44	S2-45	S2-46	S2-47	S2-48	S2-49	S2-50	S2-51	S2-52	S2-53	S2-54	S2-55	S2-56	S2-57	S2-58	S2-59	S2-60	
Feature Type Code	ALS	TT	R	PW	HW1	HW1	HW1	HW1	R	PW	HW1	R	LW	HW1	TT	HW1	LW	LVW	
Habitat Unit	HU16	HU02 U	HU10	HU12	HU11	HU11	HU11	HU11	HU13	HU20	HU20	HU26	HU02 D	HU20	HU02 U	HU21	HU23	HU23	
Habitat Type	Riffle	Dry	Riffle	Pool	Alcove	Alcove	Alcove	Alcove	Flatwater	Riffle	Riffle	Alcove	Dry	Riffle	Dry	Pool	Pool	Pool	
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	FAIR	FAIL	GOOD	EXCL	EXCL	EXCL	EXCL	EXCL	GOOD	GOOD	FAIR	FAIL	FAIL	FAIR	FAIL	FAIR	GOOD	EXCL	
5a. Are problems with the feature visible?	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES	NO	NO	
6a. Is the feature still in its original location?	YES	NO	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	NO	YES	YES	
6b. Is the feature still in its original position?	YES	NO	YES	NO	YES	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO	YES	NO	YES	
6d. Is the feature still in its original orientation?	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	UNK	YES	NO	YES	YES	YES	
8. If an objective, did the feature create the targeted instream habitat type?	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO	YES	YES	
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	NO	NO	NO	NO	NO	
11e. % Area of habitat unit within 0.5 -2.0 ft depth	73%	0%	65%	42%	67%	67%	67%	67%	41%	74%	74%	46%	0%	74%	0%	25%	52%	52%	
11f. % Area of habitat unit within 2.0 -4.0 ft depth	2%	0%	2%	39%	13%	13%	13%	13%	51%	13%	13%	0%	0%	13%	0%	53%	38%	38%	
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	3	0	3	3	3	3	3	3	2	3	3	2	0	3	0	2	3	3	
15. Percent of habitat unit covered by shelter: %	75	0	30	35	90	90	90	90	15	25	25	75	0	25	0	25	40	40	
17a. If an objective, did the feature increase instream shelter rating?	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO	YES	NO	YES	YES	
17b. a. Calculate the shelter rating for the habitat unit: 0-300	225	0	90	105	270	270	270	270	30	75	75	150	0	75	0	50	120	120	
19a. If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	YES	NO	NO	NO	NO	NO	YES	YES	YES	NO	NO	NO	NO	NO	YES	NO	
21a. If an objective, did the feature lead to the targeted channel conditions?	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	YES	YES	
25. Did the feature achieve the targeted velocity?	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO	YES	YES	YES	
28. Percent of habitat unit within targeted velocity (see above): (%)	9%	0%	20%	42%	94%	94%	94%	94%	37%	15%	15%	97%	0%	15%	0%	37%	36%	36%	
36e. % habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	2%	0%	5%	24%	61%	61%	61%	61%	19%	5%	5%	44%	0%	5%	0%	14%	20%	20%	
36f. % habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	0%	0%	8%	13%	13%	13%	13%	10%	0%	0%	0%	0%	0%	0%	9%	7%	7%	
FEATURE NUMBER	S2-43	S2-44	S2-45	S2-46	S2-47	S2-48	S2-49	S2-50	S2-51	S2-52	S2-53	S2-54	S2-55	S2-56	S2-57	S2-58	S2-59	S2-60	
HABITAT UNIT NUMBER	HU16	HU02 U	HU10	HU12	HU11	HU11	HU11	HU11	HU13	HU20	HU20	HU26	HU02 D	HU20	HU02 U	HU21	HU23	HU23	
SITE NUMBER	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
ENHANCEMENT REACH NAME	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	
4. Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	3	1	4	5	5	5	5	5	4	4	3	1	1	3	1	3	4	5	
5a. Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	1	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	1	1	
6a. Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	
6b. Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	1	0	1	0	1	1	1	1	1	1	0	0	0	0	0	1	0	1	
6d. Is the feature still in its original orientation? (YES = 1 pt, NO = 0 pt)	1	0	1	1	1	1	1	1	1	1	1	0	0	1	0	1	1	1	
8. If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	1	0	1	1	1	1	1	1	1	1	1	0	0	1	0	1	1	1	
9. Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	
11e. % area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	0	4	4	4	4	4	4	4	4	4	4	0	4	0	2	4	4	
11f. % area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	3	1	1	1	1	4	1	1	0	0	1	0	4	3	3	
14. Instream shelter value in the habitat unit: 0, 1, 2, 3 (3 = 5 pts, 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	5	0	5	5	5	5	5	5	4	5	5	4	0	5	0	4	5	5	
15. % hab unit covered by shelter (≥80 = 5pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)	4	0	2	2	5	5	5	5	1	2	2	4	0	2	0	2	3	3	
17a. If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	0	1	1	1	1	1	1	1	1	1	0	0	1	0	1	1	1	
17b. a. Calculate the shelter rating for the habitat unit: 0-300	5	0	3	4	5	5	5	5	0	2	2	5	0	2	0	1	4	4	
19a. If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	1	0	0	0	0	0	1	1	1	0	0	0	0	0	1	0	
21a. If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	1	
25. Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	0	1	1	1	1	1	1	1	1	1	0	0	1	0	1	1	1	
28. % area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	2	4	4	4	4	4	3	1	1	4	0	1	0	3	3	3	
36e. % area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	2	4	4	4	4	1	0	0	4	0	0	0	1	2	2	
36f. % area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	

Table 47. Adaptive Management Plan targeted checklist for the Ferrari-Carano, Olson enhancement reach, October 2020.

	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
mmddyy	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720
Survey Type	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS
Project Site Number	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Project Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
Project Feature Number	S2-61	S2-62	S2-63	S2-64	S2-65	S2-66	S2-67	S2-68	S2-69	S2-70	S2-71	S2-72	S2-73	S2-74	S2-75	S2-76	S2-77	S2-78	
Feature Type Code	HW1	TT	TT	HW1	HW1	HW1	HW1	TT	HW1	HW1	HW1	HW1	HW1	HW1	HW1	HW2	HW1	HW1	LVW
Habitat Unit	HU23	HU02_U	HU02_U	HU27	HU27	HU27	HU27	HU02_U	HU27	HU27	HU27	HU27	HU27	HU27	HU27	HU02_D	HU02_D	HU27	HU02_D
Habitat Type	Pool	Dry	Dry	Alcove	Alcove	Alcove	Alcove	Dry	Alcove	Alcove	Alcove	Alcove	Alcove	Alcove	Alcove	Dry	Dry	Alcove	Dry
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	FAIR	FAIL	FAIL	GOOD	GOOD	GOOD	GOOD	FAIL	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	FAIL	FAIL	POOR	FAIL
5a. Are problems with the feature visible?	YES	YES	YES	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	YES	YES	YES	YES
6a. Is the feature still in its original location?	YES	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	UNK	UNK	YES	UNK
6b. Is the feature still in its original position?	YES	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	UNK	UNK	NO	UNK
6d. Is the feature still in its original orientation?	YES	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	UNK	UNK	YES	UNK
8. If an objective, did the feature create the targeted instream habitat type?	YES	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	YES	YES
11e. % Area of habitat unit within 0.5 -2.0 ft depth	52%	0%	0%	23%	23%	23%	23%	0%	23%	23%	23%	23%	23%	23%	23%	0%	0%	23%	0%
11f. % Area of habitat unit within 2.0 -4.0 ft depth	38%	0%	0%	46%	46%	46%	46%	0%	46%	46%	46%	46%	46%	46%	46%	0%	0%	46%	0%
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	3	0	0	3	3	3	3	0	3	3	3	3	3	3	3	0	0	3	0
15. Percent of habitat unit covered by shelter: %	40	0	0	65	65	65	65	0	65	65	65	65	65	65	65	0	0	65	0
17a. If an objective, did the feature increase instream shelter rating?	YES	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO
17b. a. Calculate the shelter rating for the habitat unit: 0-300	120	0	0	195	195	195	195	0	195	195	195	195	195	195	195	0	0	195	0
19a. If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
21a. If an objective, did the feature lead to the targeted channel conditions?	YES	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	NO	NO	NO	NO
25. Did the feature achieve the targeted velocity?	NO	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO
28. Percent of habitat unit within targeted velocity (see above): (%)	36%	0%	0%	81%	81%	81%	81%	0%	81%	81%	81%	81%	81%	81%	81%	0%	0%	81%	0%
36e. % habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	20%	0%	0%	22%	22%	22%	22%	0%	22%	22%	22%	22%	22%	22%	22%	0%	0%	22%	0%
36f. % habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	7%	0%	0%	33%	33%	33%	33%	0%	33%	33%	33%	33%	33%	33%	33%	0%	0%	33%	0%
	FEATURE NUMBER	S2-61	S2-62	S2-63	S2-64	S2-65	S2-66	S2-67	S2-68	S2-69	S2-70	S2-71	S2-72	S2-73	S2-74	S2-75	S2-76	S2-77	S2-78
	HABITAT UNIT NUMBER	HU23	HU02_U	HU02_U	HU27	HU27	HU27	HU27	HU02_U	HU27	HU27	HU27	HU27	HU27	HU27	HU02_D	HU02_D	HU27	HU02_D
	SITE NUMBER	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	ENHANCEMENT REACH NAME	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
4. Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	3	1	1	4	4	4	4	1	4	4	4	4	4	4	4	1	1	2	1
5a. Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	0	0	0	1	1	1	1	0	1	1	1	1	1	1	1	0	0	0	0
6a. Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	1	0	0	1	1	1	1	0	1	1	1	1	1	1	1	0	0	1	0
6b. Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	1	0	0	1	1	1	1	0	1	1	1	1	1	1	1	0	0	0	0
6d. Is the feature still in its original orientation? (YES = 1 pt, NO = 0 pt)	1	0	0	1	1	1	1	0	1	1	1	1	1	1	1	0	0	1	0
8. If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	1	0	0	1	1	1	1	0	1	1	1	1	1	1	1	0	0	1	0
9. Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0
11e. % area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	0	0	2	2	2	2	0	2	2	2	2	2	2	2	0	0	2	0
11f. % area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	3	0	0	4	4	4	4	0	4	4	4	4	4	4	4	0	0	4	0
14. Instream shelter value in the habitat unit: 0, 1, 2, 3 (3 = 5 pts, 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	5	0	0	5	5	5	5	0	5	5	5	5	5	5	5	0	0	5	0
15. % hab unit covered by shelter (≥80 = 5 pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)	3	0	0	4	4	4	4	0	4	4	4	4	4	4	4	0	0	4	0
17a. If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	0	0	1	1	1	1	0	1	1	1	1	1	1	1	0	0	1	0
17b. a. Calculate the shelter rating for the habitat unit: 0-300	4	0	0	5	5	5	5	0	5	5	5	5	5	5	5	0	0	5	0
19a. If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21a. If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	1	0	0	1	1	1	1	0	1	1	1	1	1	1	1	0	0	0	0
25. Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	0	0	0	1	1	1	1	0	1	1	1	1	1	1	1	0	0	1	0
28. % area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	3	0	0	4	4	4	4	0	4	4	4	4	4	4	4	0	0	4	0
36e. % area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	2	0	0	2	2	2	2	0	2	2	2	2	2	2	2	0	0	2	0
36f. % area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	3	3	3	3	0	3	3	3	3	3	3	3	0	0	3	0

Table 47. Adaptive Management Plan targeted checklist for the Ferrari-Carano, Olson enhancement reach, October 2020.

	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
mmdyyy	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720
Survey Type	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS
Project Site Number	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Project Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
Project Feature Number	S2-79	S2-80	S2-81	S2-82	S2-83	S2-84	S2-85	S2-86	S2-87	S2-88	S2-89	S2-90	S2-91	S2-92	S2-93	S2-94	S3-01	S3-02	S3-03	S3-04	S3-05	
Feature Type Code	LW	PW	LW	LW	HW2	HW1	HW1	HW1	HW1	LW	ALS	FB	FB	FB	FB	BF	BF	LW	HW1	HW2	PW	R
Habitat Unit	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU16	HU08	HU14 3	HU03 D	HU03 D	HU03 D	HU03 D	
Habitat Type	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Pool	Dry	Dry	Dry	Riffle	Pool	Dry	Dry	Dry	Dry	Dry	
4.	Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	GOOD	GOOD	GOOD	GOOD	GOOD	EXCL	EXCL	GOOD	FAIR	FAIR	UNKN	FAIL	
5a	Are problems with the feature visible?	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	YES	YES	
6a	Is the feature still in its original location?	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	YES	YES	YES	YES	YES	YES	NO	
6b	Is the feature still in its original position?	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	YES	YES	YES	YES	YES	NO	NO	
6d	Is the feature still in its original orientaton?	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	YES	YES	YES	YES	YES	YES	NO	
8.	If an objective, did the feature create the targeted instream habitat type?	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	NO	
9.	Were there any unintended effects by the feature on the habitat type? If Y, comment.	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	YES	YES	
11e	% Area of habitat unit within 0.5 -2.0 ft depth	0%	0%	0%	0%	0%	0%	0%	0%	13%	0%	0%	0%	0%	73%	65%	22%	0%	0%	0%	0%	
11f	% Area of habitat unit within 2.0 -4.0 ft depth	0%	0%	0%	0%	0%	0%	0%	0%	57%	0%	0%	0%	0%	2%	1%	45%	0%	0%	0%	0%	
14.	Instream shelter value in the habitat unit: 0, 1, 2, 3	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3	3	0	0	0	0	
15.	Percent of habitat unit covered by shelter: %	0	0	0	0	0	0	0	0	25	0	0	0	0	75	25	15	0	0	0	0	
17a	If an objective, did the feature increase instream shelter rating?	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	NO	NO	
17b	a. Calculate the shelter rating for the habitat unit: 0-300	0	0	0	0	0	0	0	0	75	0	0	0	0	225	75	45	0	0	0	0	
19a	If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
21a	If an objective, did the feature lead to the targeted channel conditions?	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	NO	NO	
25.	Did the feature achieve the targeted velocity?	NO	NO	NO	NO	NO	NO	NO	NO	YES	NA	NA	NA	NA	YES	YES	YES	NO	NO	NO	NO	
28.	Percent of habitat unit within targeted velocity (see above): (%)	0%	0%	0%	0%	0%	0%	0%	0%	59%	0%	0%	0%	0%	9%	9%	39%	0%	0%	0%	0%	
36e	% habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	0%	0%	0%	0%	0%	0%	0%	0%	12%	0%	0%	0%	0%	2%	2%	14%	0%	0%	0%	0%	
36f	% habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	0%	0%	0%	0%	0%	0%	0%	34%	0%	0%	0%	0%	0%	0%	13%	0%	0%	0%	0%	
	FEATURE NUMBER	S2-79	S2-80	S2-81	S2-82	S2-83	S2-84	S2-85	S2-86	S2-87	S2-88	S2-89	S2-90	S2-91	S2-92	S2-93	S2-94	S3-01	S3-02	S3-03	S3-04	S3-05
	HABITAT UNIT NUMBER	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU29	HU02 D	HU02 D	HU02 D	HU02 D	HU16	HU08	HU14 3	HU03 D	HU03 D	HU03 D	HU03 D
	SITE NUMBER	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3
	ENHANCEMENT REACH NAME	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
4.	Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	1	1	1	1	1	1	1	1	1	4	4	4	4	4	5	5	4	3	3	0	1
5a	Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0
6a	Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0
6b	Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0
6d	Is the feature still in its original orientaton? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0
8.	If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0
9.	Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0
11e	% area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	0	0	0	1	0	0	0	0	4	4	2	0	0	0	0	
11f	% area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	4	0	0	0	0	
14.	Instream shelter value in the habitat unit: 0, 1, 2, 3 (3 = 5 pts; 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	0	0	0	0	0	0	0	0	5	0	0	0	0	5	5	5	0	0	0	0	
15.	% hab unit covered by shelter (≥80 = 5pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)	0	0	0	0	0	0	0	0	2	0	0	0	0	4	2	1	0	0	0	0	
17a	If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	
17b	a. Calculate the shelter rating for the habitat unit: 0-300	0	0	0	0	0	0	0	0	2	0	0	0	0	5	2	1	0	0	0	0	
19a	If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	
21a	If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	
25.	Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	1	0	0	0	0	
28.	% area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	3	0	0	0	0	
36e	% area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	
36f	% area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	1	0	0	0	0	

Table 47. Adaptive Management Plan targeted checklist for the Ferrari-Carano, Olson enhancement reach, October 2020.

Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
mmdyyy	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720
Survey Type	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS
Project Site Number	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Project Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
Project Feature Number	S3-06	S3-07	S3-08	S3-09	S3-10	S3-11	S3-12	S3-13	S3-14	S3-15	S3-16	S3-17	S3-18	S3-19	S3-20	
Feature Type Code	HW1	PW	R	HW1	HW1	HW2	HW1	HW1	LVW	R	HW2	HW2	HW1	HW1	HW1	
Habitat Unit	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	
Habitat Type	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	POOR	UNKN	FAIL	FAIR	FAIR	FAIR	FAIR	UNKN	FAIL	FAIL	UNKN	UNKN	GOOD	GOOD	GOOD	
5a. Are problems with the feature visible?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
6a. Is the feature still in its original location?	YES	YES	NO	YES	YES	YES	YES	UNKN	NO	NO	YES	UNKN	YES	YES	YES	
6b. Is the feature still in its original position?	NO	NO	NO	NO	NO	NO	NO	UNKN	NO	NO	NO	NO	NO	NO	NO	
6d. Is the feature still in its original orientation?	YES	YES	NO	YES	YES	YES	YES	UNKN	NO	NO	UNKN	UNKN	YES	YES	YES	
8. If an objective, did the feature create the targeted instream habitat type?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
11e. % Area of habitat unit within 0.5 -2.0 ft depth	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
11f. % Area of habitat unit within 2.0 -4.0 ft depth	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
15. Percent of habitat unit covered by shelter: %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
17a. If an objective, did the feature increase instream shelter rating?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
17b. a. Calculate the shelter rating for the habitat unit: 0-300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
19a. If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
21a. If an objective, did the feature lead to the targeted channel conditions?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
25. Did the feature achieve the targeted velocity?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
28. Percent of habitat unit within targeted velocity (see above): (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
36e. % habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
36f. % habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	FEATURE NUMBER	S3-06	S3-07	S3-08	S3-09	S3-10	S3-11	S3-12	S3-13	S3-14	S3-15	S3-16	S3-17	S3-18	S3-19	S3-20
	HABITAT UNIT NUMBER	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D
	SITE NUMBER	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
	ENHANCEMENT REACH NAME	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
4. Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	2	0	1	3	3	3	3	0	1	1	0	0	4	4	4	
5a. Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6a. Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	1	1	0	1	1	1	1	0	0	0	1	0	1	1	1	
6b. Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6d. Is the feature still in its original orientation? (YES = 1 pt, NO = 0 pt)	1	1	0	1	1	1	1	0	0	0	0	0	1	1	1	
8. If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
9. Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11e. % area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11f. % area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
14. Instream shelter value in the habitat unit: 0, 1, 2, 3 (3 = 5 pts; 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
15. % hab unit covered by shelter (≥80 = 5pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
17a. If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
17b. a. Calculate the shelter rating for the habitat unit: 0-300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
19a. If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
21a. If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
25. Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
28. % area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
36e. % area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
36f. % area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Table 48. Adaptive Management Plan full checklist for the Ferrari-Carano, Olson enhancement reach, October 2020.

	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
nmddyy	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720
Survey Type	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS
Project Site Number	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2
Project Site Type	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
Project Feature Number	S1-12	S1-13	S1-14	S1-15	S1-16	S1-17	S1-18	S1-19	S1-20	S1-21	S1-21	NA	NA	NA	NA	NA	S2-01	S2-02	S2-03	S2-04
Feature Type Code	TT	LW	TT	TT	TT	LWV	LWV	FB	FB	FB	FB	NA	NA	NA	NA	NA	LW	HW2	HW1	HW2
Habitat Unit	HU24	HU01 D	HU01 D	HU01 U	HU14	HU14	HU14	HU01 D	HU01 D	HU01 D	HU18	HU19	HU22	HU28 2	HU02	HU03	HU03	HU03	HU03	HU03
Habitat Type	Riffle	Dry	Dry	Dry	Pool	Pool	Pool	Dry	Dry	Dry	Flatwater	Riffle	Flatwater	Flatwater	Flatwater	Pool	Flatwater	Flatwater	Flatwater	Flatwater
1. Length of targeted treatment (ft)	NR	NR	NR	NR	20	20	20	60	56	49	0	0	0	0	23	7	7	17	17	17
2. Width of targeted treatment: (ft)	NR	NR	NR	NR	18	26	17	5	4	4	0	0	0	0	27	17	18	10	10	10
3. Estimate area of the targeted feature: (ft ²)					360	520	340	300	224	196	0	0	0	0	621	119	126	170	170	170
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	UNKN	POOR	FAIL	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	NA	NA	NA	NA	FAIR	FAIR	EXCL	GOOD	GOOD	GOOD
5a. Are problems with the feature visible?	NO	YES	YES	YES	NO	NO	NO	NO	NO	NO	NA	NA	NA	NA	YES	YES	NO	NO	NO	NO
5b. Types: ANC, BBB, CRF, MAT, SHF, STR, SWA, UND, UNS, WSH, OTH, NON	NON	BBB	BBB	WSH	NON	NON	NON	NON	NON	NON	NA	NA	NA	NA	NA	AGG	AGG	NON	NON	NON
6a. Is the feature still in its original location?	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES
6b. Is the feature still in its original orientation?	YES	NO	NO	NO	YES	YES	YES	YES	YES	YES	NA	NA	NA	NA	NO	NO	NO	NO	NO	NO
6c. If yes: LBK, MDC, RBK, SPN, OTH	LBK	LBK	LBK	UNK	RBK	RBK	RBK	OTH	OTH	OTH	NA	NA	NA	NA	MDC	MDC	MDC	MDC	MDC	MDC
6d. Is the feature still in its original orientation?	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES
6e. If yes: DNS, MUL, PRL, PRP, UPS, OTH	DNS	DNS	DNS	UNK	DNS	DNS	DNS	PRP	PRP	PRP	NA	NA	NA	NA	PRP	PRP	PRP	PRP	PRP	UPS
7. Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	RIF	DRY	DRY	DRY	POO	POO	POO	DRY	DRY	DRY	FLT	RIF	FLT	FLT	POO	FLT	FLT	FLT	FLT	FLT
8. If an objective, did the feature create the targeted instream habitat type?	YES	NO	NO	NO	YES	YES	YES	YES	YES	YES	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	YES	YES	NO	NO	NO	NO	NO	NO	NO	NA	NA	NA	NA	NO	NO	NO	NO	NO	NO
10. Mean water depth in habitat unit: ft	0.8	0.0	0.0	0.0	2.8	2.8	2.8	0.0	0.0	0.0	1.2	0.4	1.6	1.2	2.0	0.9	0.9	0.9	0.9	0.9
11a. Maximum water depth in habitat unit: ft	2.6	0.0	0.0	0.0	5.5	5.5	5.5	0.0	0.0	0.0	2.5	1.1	3.5	3.4	4.8	3.1	3.1	3.1	3.1	3.1
11b. Area of habitat unit within 0.5 -2.0 ft depth: (ft ²)	5406.4	0.0	0.0	0.0	3403.4	3403.4	3403.4	0.0	0.0	0.0	649.1	420.8	499.1	728.9	454.8	2572.3	2572.3	2572.3	2572.3	2572.3
11c. Area of habitat unit within 2.0 -4.0 ft depth: (ft ²)	23.1	0.0	0.0	0.0	7049.3	7049.3	7049.3	0.0	0.0	0.0	88.5	0.0	400.8	64.7	580.4	152.5	152.5	152.5	152.5	152.5
11d. Area of habitat unit within 0.5-4.0 ft depth: (ft ²)	5429.5	0.0	0.0	0.0	10452.6	10452.6	10452.6	0.0	0.0	0.0	737.5	420.8	899.9	793.7	1035.2	2724.8	2724.8	2724.8	2724.8	2724.8
11e. % Area of habitat unit within 0.5 -2.0 ft depth	72%	0%	0%	0%	22%	22%	22%	0%	0%	0%	72%	31%	46%	79%	32%	67%	67%	67%	67%	67%
11f. % Area of habitat unit within 2.0 -4.0 ft depth	0%	0%	0%	0%	45%	45%	45%	0%	0%	0%	10%	0%	37%	7%	41%	4%	4%	4%	4%	4%
11g. % Area of habitat unit within 0.5-4.0 ft depth	72%	0%	0%	0%	66%	66%	66%	0%	0%	0%	82%	31%	83%	86%	73%	71%	71%	71%	71%	71%
11h. If an objective, did the feature increase/decrease water depth in the treatment area?	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES
12a. Targeted depth or range (ft) in habitat unit	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0
12b. Estimate area of feature within targeted depth or range ft ² :					370	340	100	196	224	300	0	0	0	0	252	56	43	60	60	60
13. Were there any unintended effects of the feature on the water depth? If Y, comment.	NO	YES	YES	NO	NO	NO	NO	NO	NO	NO	NA	NA	NA	NA	NO	NO	NO	NO	NO	NO
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	2	0	0	0	3	3	3	0	0	0	2	1	2	1	3	3	3	3	3	3
15. Percent of habitat unit covered by shelter: %	20	0	0	0	15	15	15	0	0	0	10	5	15	10	25	30	30	30	30	30
16a. 1st dominant cover in habitat unit: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	TVG	NA	NA	NA	TVG	TVG	TVG	NA	NA	NA	BOL	UCB	AVG	UCB	BOL	LWD	LWD	LWD	LWD	LWD
16b. 2nd dominant cover in habitat unit: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	SWD	NA	NA	NA	RTW	RTW	RTW	NA	NA	NA	LWD	TVG	TVG	SWD	UCB	AVG	AVG	AVG	AVG	AVG
17a. If an objective, did the feature increase instream shelter rating?	YES	YES	NO	NO	YES	YES	YES	YES	YES	YES	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES
17b. a. Calculate the shelter rating for the habitat unit: 0-300	40	0	0	0	45	45	45	0	0	0	20	5	30	10	75	90	90	90	90	90
18a. Large woody debris count in habitat unit: D >1', L 6-20'	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18b. Large woody debris count in habitat unit: D >1', L >20'	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19a. If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NA	NA	NA	NA	NO	NO	NO	NO	NO	NO
19b. LWD recruitment mechanisms in habitat unit: ANC, EXC, EXH, INT, RPR, UNA, OTH	NON	NA	NA	NA	NON	NON	NON	NA	NA	NA	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
20. Current stream channel problems in the habitat unit: AGG, BRD, FLO, GRC, HDC, INC, NAR, SCU, STT, WID, NON, OTH	NON	NA	NA	NA	NON	NON	NON	NA	NA	NA	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
21a. If an objective, did the feature lead to the targeted channel conditions?	YES	NO	NO	NO	YES	YES	YES	YES	YES	YES	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES
21b. Overall Offchannel Condition (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	STB	AGG	AGG	AGG	STB	NO	NO	STB	STB	STB	NA	NA	NA	NA	STB	STB	STB	STB	STB	STB
21c. Outlet Conditions (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH								STB	STB	STB	NA	NA	NA	NA	STB	STB	STB	STB	STB	STB
21d. Inlet Conditions (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH								STB	STB	STB	NA	NA	NA	NA	STB	STB	STB	STB	STB	STB
22. Were there any unintended effects on the stream channel at the feature? If Y, comment.	NO	YES	YES	YES	NO	NO	NO	NO	NO	NO	NA	NA	NA	NA	NO	NO	NO	NO	NO	NO
23. If an objective, did the feature decrease/increase velocity in the treatment area?	DEC	DEC	NA	NA	YES	YES	YES	YES	YES	YES	NA	NA	NA	NA	DEC	DEC	DEC	DEC	DEC	DEC
24. Targeted velocity/range in the habitat unit: (ft/sec)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
25. Did the feature achieve the targeted velocity?	YES	YES	NO	NO	YES	YES	YES	NA	NA	NA	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES
26a. Measured minimum velocity (ft/sec) in habitat unit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26b. Measured max velocity (ft/sec) in habitat unit	4.4	0.0	0.0	0.0	3.6	3.6	3.6	0.0	0.0	0.0	2.3	4.3	3.6	4.7	2.0	2.8	2.8	2.8	2.8	2.8
26c. Measured mean velocity (ft/sec) in habitat unit	1.6	0.0	0.0	0.0	0.6	0.6	0.6	0.0	0.0	0.0	0.9	2.2	1.8	2.0	0.6	0.8	0.8	0.8	0.8	0.8
27. Area of habitat unit within targeted velocity: (ft ²)	1331.3	0.0	0.0	0.0	6200.2	6200.2	6200.2	0.0	0.0	0.0	252.1	86.1	255.1	122.3	772.8	1604.4	1604.4	1604.4	1604.4	1604.4
28. Percent of habitat unit within targeted velocity (see above): (%)	18%	0%	0%	0%	39%	39%	39%	0%	0%	0%	28%	6%	24%	13%	54%	42%	42%	42%	42%	42%
29. Were there any unintended effects of feature on velocity? If Y, comment.	NO	NO	YES	YES	NO	NO	NO	NO	NO	NO	NA	NA	NA	NA	NO	NO	NO	NO	NO	NO
30a. 1st/2nd dominant substrate in habitat unit: BED, BOL, COB, GRV, SND, SLC, OTH	GRV	GRV	GRV	GRV	SND	SND	SND	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV
30b. 2nd dominant substrate in habitat unit: BED, BOL, COB, GRV, SND, SLC, OTH	COB	SND	SND	SND	GRV	GRV	GRV	SND	SND	SND	SND	SND	COB	COB	BOL	BOL	BOL	BOL	BOL	BOL
31. If an objective, did the feature achieve the targeted substrate composition?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES
32. % Canopy Measurement:	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
33. Photopoint data collected: YES /NO	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
34. Temperature Profile: YES /NO	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
35. Dissolved Oxygen Profile: YES/NO	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
36a. Total habitat unit area where targeted depth, velocity and shelter criteria overlap	210.8	0.0	0.0	0.0	4178.9	4178.9	4178.9	0.0	0.0	0.0	147.0	2.0	105.6	30.0	516.5	729.7	729.7	729.7	729.7	729.7
36b. Total habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	210.8	0.0	0.0	0.0	2208.3	2208.3	2208.3	0.0	0.0	0.0	140.9	2.0	85.0	29.1	358.8	722.9	722.9	722.9	722.9	722.9
36c. Total habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0.0	0.0	0.0	0.0	1970.6	1970.6	1970.6	0.0	0.0	0.0	6.1	0.0	20.6	0.9	157.7	6.8	6.8	6.8		

Table 48. Adaptive Management Plan full checklist for the Ferrari-Carano, Olson enhancement reach, October 2020.

	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
mmddyy	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720
Survey Type	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS
Project Site Number	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Project Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
Project Feature Number	S2-05	S2-06	S2-07	S2-08	S2-09	S2-10	S2-11	S2-12	S2-13	S2-14	S2-15	S2-16	S2-17	S2-18	S2-19	S2-20	S2-21	S2-22	
Feature Type Code	HW1	LVW	HW1	HW1	LVW	HW1	PW	HW1	R	HW1	PW	HW2	HW1	HW1	HW1	HW1	LVW	R	
Habitat Unit	HU03	HU02 U	HU02 D	HU04	HU04	HU04	HU04	HU02 D	HU05	HU02 D	HU06	HU06	HU06	HU06	HU06	HU06	HU06	HU07	
Habitat Type	Flatwater	Dry	Dry	Pool	Pool	Pool	Pool	Dry	Riffle	Dry	Pool	Pool	Pool	Pool	Pool	Pool	Pool	Riffle	
1. Length of targeted treatment (ft)	7	NR	12	10	NR	9	48	12	NR	12	52	10	16	16	14	10	37	NR	
2. Width of targeted treatment: (ft)	11	NR	12	13	NR	7	13	8	NR	9	10	16	10	15	10	15	22	NR	
3. Estimate area of the targeted feature: (ft ²)	77	NR	144	130	NR	63	624	96	NR	108	520	160	160	240	140	150	814	NR	
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	EXCL	FAIL	EXCL	GOOD	GOOD	EXCL	EXCL	EXCL	GOOD	EXCL	EXCL	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	
5a. Are problems with the feature visible?	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
5b. Types: ANC, BBB, CRF, MAT, SHF, STR, SWA, UND, UNS, WSH, OTH, NON	NON	WSH	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	
6a. Is the feature still in its original location?	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
6b. Is the feature still in its original orientation?	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
6c. If yes: LBK, MDC, RBK, SPN, OTH	LBK	UNK	OTH	MDC	RBK	RBK	MDC	OTH	SPN	OTH	RBK	MDC	MDC	MDC	LBK	LBK	LBK	SPN	
6d. Is the feature still in its original orientation?	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
6e. If yes: DNS, MUL, PRL, PRP, UPS, OTH	PRP	UNK	UPS	PRP	DNS	UPS	MUL	UPS	OTH	UPS	PRL	UPS	UPS	PRP	DNS	UPS	UPS	OTH	
7. Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	FLT	DRY	DRY	POO	POO	POO	POO	DRY	RIF	DRY	POO	POO	POO	POO	POO	POO	POO	RIF	
8. If an objective, did the feature create the targeted instream habitat type?	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
10. Mean water depth in habitat unit: ft	0.9	0.0	0.0	2.0	2.0	2.0	2.0	0.0	0.9	0.0	1.4	1.4	1.4	1.4	1.4	1.4	1.4	0.9	
11a. Maximum water depth in habitat unit: ft	3.1	0.0	0.0	4.5	4.5	4.5	4.5	0.0	2.2	0.0	4.2	4.2	4.2	4.2	4.2	4.2	4.2	2.7	
11b. Area of habitat unit within 0.5 -2.0 ft depth: (ft ²)	2572.3	0.0	0.0	980.7	980.7	980.7	980.7	0.0	1148.1	0.0	1186.8	1186.8	1186.8	1186.8	1186.8	1186.8	1186.8	4162.1	
11c. Area of habitat unit within 2.0 -4.0 ft depth: (ft ²)	152.5	0.0	0.0	733.7	733.7	733.7	733.7	0.0	5.9	0.0	416.7	416.7	416.7	416.7	416.7	416.7	416.7	219.4	
11d. Area of habitat unit within 0.5-4.0 ft depth: (ft ²)	2724.8	0.0	0.0	1714.4	1714.4	1714.4	1714.4	0.0	1154.0	0.0	1603.4	1603.4	1603.4	1603.4	1603.4	1603.4	1603.4	4381.5	
11e. % Area of habitat unit within 0.5 -2.0 ft depth	67%	0%	0%	49%	49%	49%	49%	0%	85%	0%	59%	59%	59%	59%	59%	59%	59%	69%	
11f. % Area of habitat unit within 2.0 -4.0 ft depth	4%	0%	0%	37%	37%	37%	37%	0%	0%	0%	21%	21%	21%	21%	21%	21%	21%	4%	
11g. % Area of habitat unit within 0.5-4.0 ft depth	71%	0%	0%	85%	85%	85%	85%	0%	86%	0%	80%	80%	80%	80%	80%	80%	80%	73%	
11h. If an objective, did the feature increase/decrease water depth in the treatment area?	YES	NO	NO	YES	YES	YES	YES	NO	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	
12a. Targeted depth or range (ft) in habitat unit	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	
12b. Estimate area of feature within targeted depth or range ft ² :	40	NR	NA	50	NR	25	205	NA	NA	NA	232	43	31	42	48	NA	507	NR	
13. Were there any unintended effects of the feature on the water depth? If Y, comment.	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	YES	YES	NO	NO	
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	3	0	0	3	3	3	3	0	1	0	3	3	3	3	3	3	3	3	
15. Percent of habitat unit covered by shelter: %	30	0	0	45	45	45	45	0	5	0	40	40	40	40	40	40	40	30	
16a. 1st dominant cover in habitat unit: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	LWD	NA	NA	LWD	LWD	LWD	LWD	NA	AVG	NA	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	
16b. 2nd dominant in habitat unit: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	AVG	NA	NA	BOL	BOL	BOL	BOL	NA	TVG	NA	BOL	BOL	BOL	BOL	BOL	BOL	BOL	UCB	
17a. If an objective, did the feature increase instream shelter rating?	YES	NO	NO	YES	YES	YES	YES	NO	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES	
17b. a. Calculate the shelter rating for the habitat unit: 0-300	90	0	0	135	135	135	135	0	5	0	120	120	120	120	120	120	120	90	
18a. Large woody debris count in habitat unit: D >1', L 6-20'	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	
18b. Large woody debris count in habitat unit: D >1', L >20'	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	2	
19a. If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	
19b. LWD recruitment mechanisms in habitat unit: ANC, EXC, EXH, INT, RPR, UNA, OTH	NON	NA	NA	RPR	RPR	RPR	RPR	NA	NON	NA	RPR	RPR	RPR	RPR	RPR	RPR	RPR	RPR	
20. Current stream channel problems in the habitat unit: AGG, BRD, FLO, GRC, HDC, INC, NAR, SCU, STT, WID, NON, OTH	NON	NA	NA	NON	NON	NON	NON	NA	NON	NA	NON	NON	NON	NON	NON	NON	NON	NON	
21a. If an objective, did the feature lead to the targeted channel conditions?	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	
21b. Overall Offchannel Condition (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	
21c. Outlet Conditions (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	
21d. Inlet Conditions (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	
22. Were there any unintended effects on the stream channel at the feature? If Y, comment.	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
23. If an objective, did the feature decrease/increase velocity in the treatment area?	DEC	NA	NA	DEC	DEC	DEC	DEC	NA	INC	NA	DEC	DEC	DEC	DEC	DEC	DEC	DEC	INC	
24. Targeted velocity/range in the habitat unit: (ft/sec)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
25. Did the feature achieve the targeted velocity?	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
26a. Measured minimum velocity (ft/sec) in habitat unit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
26b. Measured max velocity (ft/sec) in habitat unit	2.8	0.0	0.0	2.3	2.3	2.3	2.3	0.0	2.7	0.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4.3	
26c. Measured mean velocity (ft/sec) in habitat unit	0.8	0.0	0.0	0.6	0.6	0.6	0.6	0.0	1.6	0.0	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.6	
27. Area of habitat unit within targeted velocity: (ft ²)	1604.4	0.0	0.0	1159.2	1159.2	1159.2	1159.2	0.0	174.6	0.0	934.7	934.7	934.7	934.7	934.7	934.7	934.7	1202.9	
28. Percent of habitat unit within targeted velocity (see above): (%)	42%	0%	0%	58%	58%	58%	58%	0%	13%	0%	47%	47%	47%	47%	47%	47%	47%	20%	
29. Were there any unintended effects of feature on velocity? If Y, comment.	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
30a. 1st/2nd dominant substrate in habitat unit: BED, BOL, COB, GRV, SND, SLC, OTH	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	
30b. 2nd dominant substrate in habitat unit: BED, BOL, COB, GRV, SND, SLC, OTH	BOL	SND	SND	BOL	BOL	BOL	BOL	SND	COB	SND	SND	SND	SND	SND	SND	SND	SND	COB	
31. If an objective, did the feature achieve the targeted substrate composition?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
32. % Canopy Measurement:	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
33. Photopoint data collected: YES /NO	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
34. Temperature Profile: YES /NO	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
35. Dissolved Oxygen Profile: YES/NO	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
36a. Total habitat unit area where targeted depth, velocity and shelter criteria overlap	729.7	0.0	0.0	924.5	924.5	924.5	924.5	0.0	43.0	0.0	558.6	558.6	558.6	558.6	558.6	558.6	558.6	424.0	
36b. Total habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	722.9	0.0	0.0	510.0	510.0	510.0	510.0	0.0	42.8	0.0	430.9	430.9	430.9	430.9	430.9	430.9	430.9	409.5	
36c. Total habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	6.8	0.0	0.0	414.5	414.5	414.5	414.5	0.0	0.3	0.0	127.7	127.7	127.7	127.7	127.7	127.7	127.7	14.5	
36d. % habitat unit area where targeted depth, velocity and shelter criteria overlap	19%	0%	0%	46%	46%	46%	46%	0%	3%	0%	28%	28%	28%	28%	28%	28%	28%	7%	
36e. % habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	19%	0%	0%	25%	25%	25%	25%	0%	3%	0%	21%	21%	21%	21%	21%	21%	21%	7%	
36f. % habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	0%	0%	21%	21%	21%	21%	0%	0%	0%	6%	6%	6%	6%	6%	6%	6%	0%	
37. Does this feature need: DEC, ENH, MNT, REP, NON, OTH	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	
38. Are additional restoration treatments recommended at this site?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	

Table 48. Adaptive Management Plan full checklist for the Ferrari-Carano, Olson enhancement reach, October 2020.

Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
mmddyy	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720
Survey Type	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS
Project Site Number	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Project Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
Project Feature Number	S2-43	S2-44	S2-45	S2-46	S2-47	S2-48	S2-49	S2-50	S2-51	S2-52	S2-53	S2-54	S2-55	S2-56	S2-57	S2-58	S2-59	S2-60	
Feature Type Code	ALS	TT	R	PW	HW1	HW1	HW1	HW1	HW1	R	PW	HW1	R	LW	HW1	TT	HW1	LW	LVW
Habitat Unit	HU16	HU02 U	HU10	HU12	HU11	HU11	HU11	HU11	HU11	HU13	HU20	HU20	HU26	HU02 D	HU20	HU02 U	HU21	HU23	HU23
Habitat Type	Rifle	Dry	Rifle	Pool	Alcove	Alcove	Alcove	Alcove	Alcove	Flatwater	Rifle	Rifle	Alcove	Dry	Rifle	Dry	Pool	Pool	Pool
1. Length of targeted treatment (ft)	34	NR	NR	50	15	16	17	18	85	50	11	NR	26	8	NR	7	23	78	
2. Width of targeted treatment: (ft)	34	NR	NR	11	6	8	8	9	20	13	18	NR	24	18	NR	16	33	19	
3. Estimate area of the targeted feature: (ft ²)	1156			550	90	128	136	162	1700	650	198		624	144		112	759	1482	
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	FAIR	FAIL	GOOD	EXCL	EXCL	EXCL	EXCL	EXCL	GOOD	GOOD	FAIR	FAIL	FAIL	FAIR	FAIL	FAIR	GOOD	EXCL	
5a. Are problems with the feature visible?	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES	NO	NO	
5b. Types: ANC, BBB, CRF, MAT, SHF, STR, SWA, UND, UNS, WSH, OTH, NON	NON	WSH	NON	NON	NON	NON	NON	NON	NON	NON	AGG	AGG	BBB	AGG	WSH	AGG	NON	NON	
6a. Is the feature still in its original location?	YES	NO	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	NO	YES	YES	
6b. Is the feature still in its original position?	YES	NO	YES	NO	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO	NO	YES	NO	YES	
6c. If yes: LBK, MDC, RBK, SPN, OTH	RBK	UNK	SPN	MDC	MDC	LBK	MDC	SPN	SPN	LBK	RBK	RBK	DRY	OTH	RBK	UNK	RBK	MDC	
6d. Is the feature still in its original orientation?	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	UNK	YES	NO	YES	YES	YES	
6e. If yes: DNS, MUL, PRL, PRP, UPS, OTH	MUL	UNK	OTH	PRL	PRP	DNS	UPS	DNS	OTH	PRL	UPS	OTH	UNK	UNK	UPS	UNK	UPS	PRP	
7. Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	RIF	DRY	RIF	POO	ALC	ALC	ALC	ALC	FLT	RIF	RIF	ALC	DRY	RIF	DRY	POO	POO	POO	
8. If an objective, did the feature create the targeted instream habitat type?	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	YES	NO	YES	YES	
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	NO	NO	NO	NO	NO	
10. Mean water depth in habitat unit: ft	0.9	0.0	0.8	2.1	1.2	1.2	1.2	1.2	1.8	1.3	1.3	0.5	0.0	1.3	0.0	2.5	1.7	1.7	
11a. Maximum water depth in habitat unit: ft	2.3	0.0	2.4	5.6	2.4	2.4	2.4	2.4	3.2	3.1	3.1	1.8	0.0	3.1	0.0	5.6	4.2	4.2	
11b. Area of habitat unit within 0.5-2.0 ft depth: (ft ²)	411.9	0.0	995.7	1005.9	872.9	872.9	872.9	872.9	916.6	2762.3	2762.3	313.0	0.0	2762.3	0.0	386.2	2296.3	2296.3	
11c. Area of habitat unit within 2.0-4.0 ft depth: (ft ²)	10.1	0.0	32.8	934.8	173.7	173.7	173.7	173.7	1136.7	479.7	479.7	0.0	0.0	479.7	0.0	812.7	1692.9	1692.9	
11d. Area of habitat unit within 0.5-4.0 ft depth: (ft ²)	422.0	0.0	1028.5	1940.7	1046.6	1046.6	1046.6	1046.6	2053.3	3242.0	3242.0	313.0	0.0	3242.0	0.0	1198.9	3989.1	3989.1	
11e. % Area of habitat unit within 0.5-2.0 ft depth	73%	0%	65%	42%	67%	67%	67%	67%	41%	74%	74%	46%	0%	74%	0%	25%	52%	52%	
11f. % Area of habitat unit within 2.0-4.0 ft depth	2%	0%	2%	39%	13%	13%	13%	13%	51%	13%	13%	0%	0%	13%	0%	53%	38%	38%	
11g. % Area of habitat unit within 0.5-4.0 ft depth	75%	0%	67%	81%	80%	80%	80%	80%	92%	86%	86%	46%	0%	86%	0%	78%	90%	90%	
11h. If an objective, did the feature increase/decrease water depth in the treatment area?	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO	YES	YES	YES	
12a. Targeted depth or range (ft) in habitat unit	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	
12b. Estimate area of feature within targeted depth or range ft ² :	424	NR	223	60	47	56	61	296	31	240	32	NR	NR	39	327	445			
13. Were there any unintended effects of the feature on the water depth? If Y, comment.	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES	NO	NO	
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	3	0	3	3	3	3	3	3	2	3	2	0	0	3	0	2	3	3	
15. Percent of habitat unit covered by shelter: %	75	0	30	35	90	90	90	90	15	25	25	75	0	25	0	25	40	40	
16a. 1st dominant cover in habitat unit: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	BOL	NA	SWD	LWD	AVG	AVG	AVG	AVG	UCB	LWD	LWD	AVG	NA	LWD	NA	BOL	LWD	LWD	
16b. 2nd dominant in habitat unit: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	BUB	NA	LWD	BOL	SWD	SWD	SWD	SWD	SWD	AVG	SWD	TVG	NA	SWD	NA	UCB	SWD	SWD	
17a. If an objective, did the feature increase instream shelter rating?	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO	YES	YES	YES	
17b. a. Calculate the shelter rating for the habitat unit: 0-300	225	0	90	105	270	270	270	270	30	75	75	150	0	75	0	50	120	120	
18a. Large woody debris count in habitat unit: D >1', L 6-20'	0	0	0	0	1	1	1	1	0	1	1	0	0	1	0	0	0	0	
18b. Large woody debris count in habitat unit: D >1', L >20'	0	0	1	1	1	1	1	1	2	2	2	0	0	2	0	0	0	0	
19a. If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	YES	NO	NO	NO	NO	NO	YES	YES	YES	NO	NO	NO	NO	NO	NO	YES	
19b. LWD recruitment mechanisms in habitat unit: ANC, EXC, EXH, INT, RPR, UNA, OTH	NON	NA	RPR	RPR	RPR	RPR	RPR	RPR	RPR	RPR	RPR	NON	NA	RPR	NA	NON	NON	NON	
20. Current stream channel problems in the habitat unit: AGG, BRD, FLO, GRC, HDC, INC, NAR, SCU, STT, WID, NON, OTH	NON	NA	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NA	NON	NA	NON	NON	NON	
21a. If an objective, did the feature lead to the targeted channel conditions?	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
21b. Overall Offchannel Condition (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	
21c. Outlet Conditions (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	
21d. Inlet Conditions (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	
22. Were there any unintended effects on the stream channel at the feature? If Y, comment.	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	YES	NO	NO	NO	NO	NO	YES	
23. If an objective, did the feature decrease/increase velocity in the treatment area?	DEC	NO	INC	DEC	DEC	DEC	DEC	DEC	INC	DEC	DEC	NA	NA	DEC	NO	DEC	NO	DEC	
24. Targeted velocity/range in the habitat unit: (ft/sec)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
25. Did the feature achieve the targeted velocity?	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO	YES	YES	YES	
26a. Measured minimum velocity (ft/sec) in habitat unit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
26b. Measured max velocity (ft/sec) in habitat unit	4.6	0.0	3.4	3.3	1.5	1.5	1.5	1.5	3.6	3.8	3.8	1.7	0.0	3.8	0.0	3.4	3.3	3.3	
26c. Measured mean velocity (ft/sec) in habitat unit	1.9	0.0	1.2	0.9	0.1	0.1	0.1	0.1	1.3	1.6	1.6	0.0	0.0	1.6	0.0	1.2	1.1	1.1	
27. Area of habitat unit within targeted velocity: (ft ²)	51.7	0.0	311.4	993.7	1227.3	1227.3	1227.3	1227.3	835.2	546.4	546.4	657.1	0.0	546.4	0.0	570.1	1585.3	1585.3	
28. Percent of habitat unit within targeted velocity (see above): (%)	9%	0%	20%	42%	15%	15%	15%	15%	37%	15%	15%	97%	0%	15%	0%	37%	36%	36%	
29. Were there any unintended effects of feature on velocity? If Y, comment.	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	NO	YES	NO	NO	NO	
30a. 1st/2nd dominant substrate in habitat unit: BED, BOL, COB, GRV, SND, SLC, OTH	BOL	GRV	GRV	SND	SND	SND	SND	SND	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	
30b. 2nd dominant substrate in habitat unit: BED, BOL, COB, GRV, SND, SLC, OTH	COB	SND	COB	GRV	SLC	SLC	SLC	SLC	SND	COB	COB	COB	SND	COB	SND	BOL	SND	SND	
31. If an objective, did the feature achieve the targeted substrate composition?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
32. % Canopy Measurement:	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
33. Photopoint data collected: YES/NO	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
34. Temperature Profile: YES/NO	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
35. Dissolved Oxygen Profile: YES/NO	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
36a. Total habitat unit area where targeted depth, velocity and shelter criteria overlap																			

Table 48. Adaptive Management Plan full checklist for the Ferrari-Carano, Olson enhancement reach, October 2020.

Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
mmddyy	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720
Survey Type	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS
Project Site Number	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Project Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
Project Feature Number	S2-61	S2-62	S2-63	S2-64	S2-65	S2-66	S2-67	S2-68	S2-69	S2-70	S2-71	S2-72	S2-73	S2-74	S2-75	S2-76	S2-77	S2-78	S2-79	
Feature Type Code	HW1	TT	TT	HW1	HW1	HW1	HW1	TT	HW1	HW1	HW1	HW1	HW1	HW2	HW1	HW1	PW	LWV		
Habitat Unit	HU23	HU02 U	HU02 U	HU27	HU27	HU27	HU27	HU02 U	HU27	HU27	HU27	HU27	HU27	HU02 D	HU02 D	HU02 D	HU27	HU02 D	HU27	HU02 D
Habitat Type	Pool	Dry	Dry	Alcove	Alcove	Alcove	Alcove	Dry	Alcove	Alcove	Alcove	Alcove	Alcove	Alcove	Alcove	Dry	Dry	Alcove	Dry	
1. Length of targeted treatment (ft)	20	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	55	74
2. Width of targeted treatment: (ft)	6	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	12	18
3. Estimate area of the targeted feature: (ft ²)	120																		660	1332
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	FAIR	FAIL	FAIL	GOOD	GOOD	GOOD	GOOD	FAIL	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	FAIL	FAIL	POOR	FAIL
5a. Are problems with the feature visible?	YES	YES	YES	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	YES	YES
5b. Types: ANC, BBB, CRF, MAT, SHF, STR, SWA, UND, UNS, WSH, OTH, NON	BBB	WSH	WSH	NON	NON	NON	NON	WSH	NON	NON	NON	NON	NON	NON	NON	NON	BBB	BBB	BBB	BBB
6a. Is the feature still in its original location?	YES	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	UNK	UNK	YES	UNK	
6b. Is the feature still in its original position?	YES	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	UNK	UNK	NO	UNK	
6c. If yes: LBK, MDC, RBK, SPN, OTH	RBK	UNK	UNK	MDC	MDC	MDC	MDC	UNK	LBK	MDC	RBK	RBK	MDC	MDC	DRY	DRY	LBK	DRY		
6d. Is the feature still in its original orientation?	YES	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	UNK	UNK	YES	UNK		
6e. If yes: DNS, MUL, PRL, PRP, UPS, OTH	PRP	UNK	UNK	UPS	UPS	UPS	UPS	UNK	UPS	UPS	UPS	UPS	UPS	UPS	UNK	UNK	PRP	UNK		
7. Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	POO	DRY	DRY	ALC	ALC	ALC	ALC	DRY	ALC	ALC	ALC	ALC	ALC	ALC	ALC	DRY	DRY	ALC	DRY	
8. If an objective, did the feature create the targeted instream habitat type?	YES	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO	
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	YES	YES	
10. Mean water depth in habitat unit: ft	1.7	0.0	0.0	2.7	2.7	2.7	2.7	0.0	2.7	2.7	2.7	2.7	2.7	2.7	2.7	0.0	0.0	2.7	0.0	
11a. Maximum water depth in habitat unit: ft	4.2	0.0	0.0	5.7	5.7	5.7	5.7	0.0	5.7	5.7	5.7	5.7	5.7	5.7	5.7	0.0	0.0	5.7	0.0	
11b. Area of habitat unit within 0.5-2.0 ft depth: (ft ²)	2296.3	0.0	0.0	2067.3	2067.3	2067.3	2067.3	0.0	2067.3	2067.3	2067.3	2067.3	2067.3	2067.3	2067.3	0.0	0.0	2067.3	0.0	
11c. Area of habitat unit within 2.0-4.0 ft depth: (ft ²)	1692.9	0.0	0.0	4100.0	4100.0	4100.0	4100.0	0.0	4100.0	4100.0	4100.0	4100.0	4100.0	4100.0	4100.0	0.0	0.0	4100.0	0.0	
11d. Area of habitat unit within 0.5-4.0 ft depth: (ft ²)	3989.1	0.0	0.0	6167.3	6167.3	6167.3	6167.3	0.0	6167.3	6167.3	6167.3	6167.3	6167.3	6167.3	6167.3	0.0	0.0	6167.3	0.0	
11e. % Area of habitat unit within 0.5-2.0 ft depth	52%	0%	0%	23%	23%	23%	23%	0%	23%	23%	23%	23%	23%	23%	23%	0%	0%	23%	0%	
11f. % Area of habitat unit within 2.0-4.0 ft depth	38%	0%	0%	46%	46%	46%	46%	0%	46%	46%	46%	46%	46%	46%	46%	0%	0%	46%	0%	
11g. % Area of habitat unit within 0.5-4.0 ft depth	90%	0%	0%	70%	70%	70%	70%	0%	70%	70%	70%	70%	70%	70%	70%	0%	0%	70%	0%	
11h. If an objective, did the feature increase/decrease water depth in the treatment area?	NO	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO	
12a. Targeted depth or range (ft) in habitat unit	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	
12b. Estimate area of feature within targeted depth or range ft ² :	48	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	362	427
13. Were there any unintended effects of the feature on the water depth? If Y, comment.	YES	YES	YES	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	YES	YES	YES	YES	
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	3	0	0	3	3	3	3	0	3	3	3	3	3	3	3	0	0	3	0	
15. Percent of habitat unit covered by shelter: %	40	0	0	65	65	65	65	0	65	65	65	65	65	65	65	0	0	65	0	
16a. 1st dominant cover in habitat unit: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	LWD	NA	NA	AVG	AVG	AVG	AVG	NA	AVG	AVG	AVG	AVG	AVG	AVG	AVG	NA	NA	AVG	NA	
16b. 2nd dominant in habitat unit: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	SWD	NA	NA	SWD	SWD	SWD	SWD	NA	SWD	SWD	SWD	SWD	SWD	SWD	SWD	NA	NA	SWD	NA	
17a. If an objective, did the feature increase instream shelter rating?	YES	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO	
17b. a. Calculate the shelter rating for the habitat unit: 0-300	120	0	0	195	195	195	195	0	195	195	195	195	195	195	195	0	0	195	0	
18a. Large woody debris count in habitat unit: D >1', L 6-20'	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
18b. Large woody debris count in habitat unit: D >1', L >20'	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
19a. If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
19b. LWD recruitment mechanisms in habitat unit: ANC, EXC, EXH, INT, RPR, UNA, OTH	NON	NA	NA	NON	NON	NON	NON	NA	NON	NON	NON	NON	NON	NON	NON	NA	NA	NON	NA	
20. Current stream channel problems in the habitat unit: AGG, BRD, FLO, GRC, HDC, INC, NAR, SCU, STT, WID, NON, OTH	NON	NA	NA	NON	NON	NON	NON	NA	NON	NON	NON	NON	NON	NON	NON	NA	NA	NON	NA	
21a. If an objective, did the feature lead to the targeted channel conditions?	YES	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	NO	NO	NO	NO	
21b. Overall Offchannel Condition (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	
21c. Outlet Conditions (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	
21d. Inlet Conditions (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	
22. Were there any unintended effects on the stream channel at the feature? If Y, comment.	NO	YES	YES	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	YES	YES	YES	YES	
23. If an objective, did the feature decrease/increase velocity in the treatment area?	INC	NO	NO	DEC	DEC	DEC	DEC	NO	DEC	DEC	DEC	DEC	DEC	DEC	DEC	NA	NA	DEC	NA	
24. Targeted velocity/range in the habitat unit: (ft/sec)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
25. Did the feature achieve the targeted velocity?	NO	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO	
26a. Measured minimum velocity (ft/sec) in habitat unit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
26b. Measured max velocity (ft/sec) in habitat unit	3.3	0.0	0.0	3.8	3.8	3.8	3.8	0.0	3.8	3.8	3.8	3.8	3.8	3.8	3.8	0.0	0.0	3.8	0.0	
26c. Measured mean velocity (ft/sec) in habitat unit	1.1	0.0	0.0	0.3	0.3	0.3	0.3	0.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.0	0.0	0.3	0.0	
27. Area of habitat unit within targeted velocity: (ft ²)	1585.3	0.0	0.0	7169.2	7169.2	7169.2	7169.2	0.0	7169.2	7169.2	7169.2	7169.2	7169.2	7169.2	7169.2	0.0	0.0	7169.2	0.0	
28. Percent of habitat unit within targeted velocity (see above): (%)	36%	0%	0%	81%	81%	81%	81%	0%	81%	81%	81%	81%	81%	81%	81%	0%	0%	81%	0%	
29. Were there any unintended effects of feature on velocity? If Y, comment.	YES	YES	YES	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	YES	YES	NO	YES	
30a. 1st/2nd dominant substrate in habitat unit: BED, BOL, COB, GRV, SND, SLC, OTH	GRV	GRV	GRV	SND	SND	SND	SND	GRV	SND	SND	SND	SND	SND	SND	SND	GRV	GRV	SND	GRV	
30b. 2nd dominant substrate in habitat unit: BED, BOL, COB, GRV, SND, SLC, OTH	SND	SND	SND	UNK	UNK	UNK	UNK	SND	UNK	UNK	UNK	UNK	UNK	UNK	UNK	SND	SND	UNK	SND	
31. If an objective, did the feature achieve the targeted substrate composition?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
32. % Canopy Measurement:	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
33. Photopoint data collected: YES /NO	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
34. Temperature Profile: YES /NO	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
35. Dissolved Oxygen Profile: YES/NO	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
36a. Total habitat unit area where targeted depth, velocity and shelter criteria overlap	1212.8	0.0	0.0	4820.8	4820.8	4820.8	4820.8	0.0	4820.8	4820.8	4820.8	4820.8	4820.8	4820.8	4820.8	0.0	0.0	4820.8	0.0	
36b. Total habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	897.9	0.0	0.0	1918.2	1918.2	1918.2	1918.2	0.0	1918.2	1918.2	1918.2	1918.2	1918.2	1918.2	1918.2	0.0	0.0	1918.2	0.0	
36c. Total habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	314.9	0.0	0.0	2902.5	2902.5	2902.5	2902.5	0.0	2902.5	2902.5	2902.5	2902.5	2902.5	2902.5	2902.5	0.0	0.0	2902.5	0.0	
36d. % habitat unit area where targeted depth, velocity and shelter criteria overlap	27%	0%	0%	55%	55%	55%	55%	0%	55%	55%	55%	55%	55%	55%	55%	0%	0%	55%	0%	
36e. % habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	20%	0%	0%	22%	22%	22%	22%	0%	22%	22%	22%	22%	22%	22%	22%	0%	0%	22%	0%	
36f. % habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	7%	0%	0%</																	

Table 48. Adaptive Management Plan full checklist for the Ferrari-Carano, Olson enhancement reach, October 2020.

	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
mmddyy	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720
Survey Type	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS
Project Site Number	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3
Project Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
Project Feature Number	S2-79	S2-80	S2-81	S2-82	S2-83	S2-84	S2-85	S2-86	S2-87	S2-88	S2-89	S2-90	S2-91	S2-92	S2-93	S2-94	S3-01	S3-02	
Feature Type Code	LW	PW	LW	LW	HW2	HW1	HW1	HW2	LW	ALS	FB	FB	FB	FB	BF	BF	LW	HW1	
Habitat Unit	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU29	HU02 D	HU02 D	HU02 D	HU02 D	HU16	HU08	HU14 3	HU03 D	
Habitat Type	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Pool	Dry	Dry	Dry	Dry	Riffle	Riffle	Pool	Dry	
1. Length of targeted treatment (ft)	30	56	30	25	17	12	12	19	17	26	43	40	44	35	43	40	26	16	
2. Width of targeted treatment: (ft)	20	16	18	20	8	6	9	7	22	35	3	4	3	3	3	4	32	9	
3. Estimate area of the targeted feature: (ft ²)	600	896	540	500	136	72	108	133	374	910	129	160	132	105	129	160	832	144	
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	EXCL	EXCL	GOOD	FAIR	
5a. Are problems with the feature visible?	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	YES	
5b. Types: ANC, BBB, CRF, MAT, SHF, STR, SWA, UND, UNS, WSH, OTH, NON	BBB	BBB	BBB	BBB	BBB	BBB	BBB	BBB	BBB	NON	NON	NON	NON	NON	NON	NON	NON	NON	AGG
6a. Is the feature still in its original location?	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	YES	YES	YES	YES	YES	YES	YES	YES	YES	
6b. Is the feature still in its original orientation?	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	YES	YES	YES	YES	YES	YES	YES	YES	YES	
6c. If yes: LBK, MDC, RBK, SPN, OTH	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	LBK	OTH	OTH	OTH	OTH	SPN	SPN	RBK	OTH	
6d. Is the feature still in its original orientation?	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	YES	YES	YES	YES	YES	YES	YES	YES	YES	
6e. If yes: DNS, MUL, PRL, PRP, UPS, OTH	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	PRP	PRP	PRP	PRP	PRP	MUL	MUL	MUL	OTH	
7. Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	POO	DRY	DRY	DRY	DRY	RIF	RIF	POO	DRY	
8. If an objective, did the feature create the targeted instream habitat type?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES	
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	
10. Mean water depth in habitat unit: ft	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.9	0.8	2.8	0.0	
11a. Maximum water depth in habitat unit: ft	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.8	0.0	0.0	0.0	0.0	2.3	2.4	5.5	0.0	
11b. Area of habitat unit within 0.5 -2.0 ft depth: (ft ²)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	445.8	0.0	0.0	0.0	0.0	411.9	2747.8	3403.4	0.0	
11c. Area of habitat unit within 2.0 -4.0 ft depth: (ft ²)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2016.3	0.0	0.0	0.0	0.0	10.1	33.6	7049.3	0.0	
11d. Area of habitat unit within 0.5-4.0 ft depth: (ft ²)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2462.1	0.0	0.0	0.0	0.0	422.0	2781.5	10452.6	0.0	
11e. % Area of habitat unit within 0.5 -2.0 ft depth	0%	0%	0%	0%	0%	0%	0%	0%	0%	13%	0%	0%	0%	0%	73%	65%	22%	0%	
11f. % Area of habitat unit within 2.0 -4.0 ft depth	0%	0%	0%	0%	0%	0%	0%	0%	0%	57%	0%	0%	0%	0%	2%	1%	45%	0%	
11g. % Area of habitat unit within 0.5-4.0 ft depth	0%	0%	0%	0%	0%	0%	0%	0%	0%	70%	0%	0%	0%	0%	75%	66%	66%	0%	
11h. If an objective, did the feature increase/decrease water depth in the treatment area?	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	
12a. Targeted depth or range (ft) in habitat unit	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	
12b. Estimate area of feature within targeted depth or range ft ² :	218	364	250	216	50	45	61	75	203	318	129	160	132	105	129	160	299	69	
13. Were there any unintended effects of the feature on the water depth? If Y, comment.	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3	3	0	
15. Percent of habitat unit covered by shelter: %	0	0	0	0	0	0	0	0	0	25	0	0	0	0	75	25	15	0	
16a. 1st dominant cover in habitat unit: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	NA	NA	NA	NA	NA	NA	NA	NA	NA	RTW	NA	NA	NA	NA	BOL	LWD	TVG	NA	
16b. 2nd dominant in habitat unit: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	NA	NA	NA	NA	NA	NA	NA	NA	NA	AVG	NA	NA	NA	NA	BUB	BOL	RTW	NA	
17a. If an objective, did the feature increase instream shelter rating?	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES	NO	
17b. a. Calculate the shelter rating for the habitat unit: 0-300	0	0	0	0	0	0	0	0	0	75	0	0	0	0	225	75	45	0	
18a. Large woody debris count in habitat unit: D >1', L 6-20'	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
18b. Large woody debris count in habitat unit: D >1', L >20'	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	
19a. If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	
19b. LWD recruitment mechanisms in habitat unit: ANC, EXC, EXH, INT, RPR, UNA, OTH	NA	NA	NA	NA	NA	NA	NA	NA	NA	NON	NA	NA	NA	NA	NON	RPR	NON	NA	
20. Current stream channel problems in the habitat unit: AGG, BRD, FLO, GRC, HDC, INC, NAR, SCU, STT, WID, NON, OTH	NA	NA	NA	NA	NA	NA	NA	NA	NA	NON	NA	NA	NA	NA	NON	NON	NON	NA	
21a. If an objective, did the feature lead to the targeted channel conditions?	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES	NO	
21b. Overall Offchannel Condition (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	
21c. Outlet Conditions (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	
21d. Inlet Conditions (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	
22. Were there any unintended effects on the stream channel at the feature? If Y, comment.	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	YES	
23. If an objective, did the feature decrease/increase velocity in the treatment area?	NA	NA	NA	NA	NA	NA	NA	NA	NA	DEC	YES	YES	YES	YES	INC	DEC	DEC	NA	
24. Targeted velocity/range in the habitat unit: (ft/sec)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
25. Did the feature achieve the targeted velocity?	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NA	NA	NA	NA	YES	YES	YES	NO	
26a. Measured minimum velocity (ft/sec) in habitat unit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
26b. Measured max velocity (ft/sec) in habitat unit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.0	0.0	4.6	4.4	3.6	0.0	
26c. Measured mean velocity (ft/sec) in habitat unit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	1.9	2.1	0.6	0.0	
27. Area of habitat unit within targeted velocity: (ft ²)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2086.0	0.0	0.0	0.0	0.0	51.7	369.1	6200.2	0.0	
28. Percent of habitat unit within targeted velocity (see above): (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	59%	0%	0%	0%	0%	9%	9%	39%	0%	
29. Were there any unintended effects of feature on velocity If Y, comment.	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	YES	
30a. 1st/2nd dominant substrate in habitat unit: BED, BOL, COB, GRV, SND, SLC, OTH	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	BOL	GRV	SND	GRV
30b. 2nd dominant substrate in habitat unit: BED, BOL, COB, GRV, SND, SLC, OTH	SND	SND	SND	SND	SND	SND	SND	SND	SND	SND	SND	SND	SND	SND	SND	COB	BOL	GRV	SND
31. If an objective, did the feature achieve the targeted substrate composition?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
32. % Canopy Measurement:	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
33. Photopoint data collected: YES /NO	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
34. Temperature Profile: YES /NO	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
35. Dissolved Oxygen Profile: YES/NO	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
36a. Total habitat unit area where targeted depth, velocity and shelter criteria overlap	0.0																		

Table 48. Adaptive Management Plan full checklist for the Ferrari-Carano, Olson enhancement reach, October 2020.

	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
mmddyy	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720
Survey Type	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS
Project Site Number	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Project Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
Project Feature Number	S3-03	S3-04	S3-05	S3-06	S3-07	S3-08	S3-09	S3-10	S3-11	S3-12	S3-13	S3-14	S3-15	S3-16	S3-17	
Feature Type Code	HW2	PW	R	HW1	PW	R	HW1	HW1	HW2	HW1	HW1	LWV	R	HW2	HW2	
Habitat Unit	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	
Habitat Type	Drv	Drv	Drv	Drv	Drv	Drv	Drv	Drv	Drv	Drv	Drv	Drv	Drv	Drv	Drv	Drv
1. Length of targeted treatment (ft)	15	50	25	13	54	NR	20	20	18	15	12	47	NR	18	18	
2. Width of targeted treatment: (ft)	7	10	11	6	10	NR	8	9	7	7	7	11	NR	7	7	
3. Estimate area of the targeted feature: (ft ²)	105	500	275	78	540		160	180	126	105	84	517		126	126	
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	FAIR	UNKN	FAIL	POOR	UNKN	FAIL	FAIR	FAIR	FAIR	FAIR	UNKN	FAIL	UNKN	UNKN	UNKN	
5a. Are problems with the feature visible?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
5b. Types: ANC, BBB, CRF, MAT, SHF, STR, SWA, UND, UNS, WSH, OTH, NON	BBB	BBB	AGG	BBB	BBB	AGG	AGG	STR	STR	STR	BBB	BBB	AGG	BBB	BBB	
6a. Is the feature still in its original location?	YES	YES	NO	YES	YES	NO	YES	YES	YES	YES	UNKN	NO	NO	YES	UNKN	
6b. Is the feature still in its original position?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	UNKN	NO	NO	NO	NO	
6c. If yes: LBK, MDC, RBK, SPN, OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH	UNKN	OTH	OTH	OTH	UNKN	
6d. Is the feature still in its original orientation?	YES	YES	NO	YES	YES	NO	YES	YES	YES	YES	UNKN	NO	NO	UNKN	UNKN	
6e. If yes: DNS, MUL, PRL, PRP, UPS, OTH	OTH	PRL	OTH	OTH	OTH	OTH	DNS	MUL	MUL	MUL	UNKN	OTH	OTH	OTH	UNKN	
7. Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	
8. If an objective, did the feature create the targeted instream habitat type?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
10. Mean water depth in habitat unit: ft	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
11a. Maximum water depth in habitat unit: ft	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
11b. Area of habitat unit within 0.5 -2.0 ft depth: (ft ²)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
11c. Area of habitat unit within 2.0 -4.0 ft depth: (ft ²)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
11d. Area of habitat unit within 0.5-4.0 ft depth: (ft ²)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
11e. % Area of habitat unit within 0.5 -2.0 ft depth	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
11f. % Area of habitat unit within 2.0 -4.0 ft depth	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
11g. % Area of habitat unit within 0.5-4.0 ft depth	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
11h. If an objective, did the feature increase/decrease water depth in the treatment area?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
12a. Targeted depth or range (ft) in habitat unit	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	
12b. Estimate area of feature within targeted depth or range ft ² :	47	210		50	230		107	58	46	42	46	150		55	53	
13. Were there any unintended effects of the feature on the water depth? If Y, comment.	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
15. Percent of habitat unit covered by shelter: %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
16a. 1st dominant cover in habitat unit: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
16b. 2nd dominant in habitat unit: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
17a. If an objective, did the feature increase instream shelter rating?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
17b. a. Calculate the shelter rating for the habitat unit: 0-300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
18a. Large woody debris count in habitat unit: D >1', L 6-20'	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
18b. Large woody debris count in habitat unit: D >1', L >20'	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
19a. If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
19b. LWD recruitment mechanisms in habitat unit: ANC, EXC, EXH, INT, RPR, UNA, OTH	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
20. Current stream channel problems in the habitat unit: AGG, BRD, FLO, GRC, HDC, INC, NAR, SCU, STT, WID, NON, OTH	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
21a. If an objective, did the feature lead to the targeted channel conditions?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
21b. Overall Offchannel Condition (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	
21c. Outlet Conditions (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	
21d. Inlet Conditions (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	
22. Were there any unintended effects on the stream channel at the feature? If Y, comment.	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
23. If an objective, did the feature decrease/increase velocity in the treatment area?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
24. Targeted velocity/range in the habitat unit: (ft/sec)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
25. Did the feature achieve the targeted velocity?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
26a. Measured minimum velocity (ft/sec) in habitat unit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
26b. Measured max velocity (ft/sec) in habitat unit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
26c. Measured mean velocity (ft/sec) in habitat unit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
27. Area of habitat unit within targeted velocity: (ft ²)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
28. Percent of habitat unit within targeted velocity (see above): (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
29. Were there any unintended effects of feature on velocity? If Y, comment.	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
30a. 1st/2nd dominant substrate in habitat unit: BED, BOL, COB, GRV, SND, SLC, OTH	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	
30b. 2nd dominant substrate in habitat unit: BED, BOL, COB, GRV, SND, SLC, OTH	SND	SND	SND	SND	SND	SND	SND	SND	SND	SND	SND	SND	SND	SND	SND	
31. If an objective, did the feature achieve the targeted substrate composition?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
32. % Canopy Measurement:	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
33. Photopoint data collected: YES /NO	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
34. Temperature Profile: YES /NO	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
35. Dissolved Oxygen Profile: YES/NO	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
36a. Total habitat unit area where targeted depth, velocity and shelter criteria overlap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
36b. Total habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
36c. Total habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
36d. % habitat unit area where targeted depth, velocity and shelter criteria overlap	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
36e. % habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
36f. % habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
37. Does this feature need: DEC, ENH, MNT, REP, NON, OTH	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	
38. Are additional restoration treatments recommended at this site?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	

Geyser Peak, April 2020

Depth and Velocity

Table 49. Areas and percentages of: wetted area, optimal depth and velocity, and optimal hydraulic habitat within the Geyser Peak enhancement reach, April 2020.

Geyser Peak Post-effective flow April 2020	Wetted area (ft²)	0.5 – 2.0 ft	2.0 – 4.0 ft	Total	< 0.5 ft/s	0.5 – 2.0 ft < 0.5 ft/s	2.0 – 4.0 ft < 0.5 ft/s	Total
Main channel area	37,851	22,949	5,120	28,069	11,015	4,410	859	5,270
Side channel area	1,602	931	267	1,198	1,602	931	267	1,198
Total area	39,452	23,880	5,386	29,266	12,617	5,341	1,126	6,468
Main channel % of wetted area	96%	61%	14%	74%	29%	12%	2%	14%
Side channel % of wetted area	4%	58%	17%	75%	100%	58%	17%	75%
Total % of wetted area	100%	61%	14%	74%	32%	14%	3%	16%

Geyser Peak Enhancement Reach

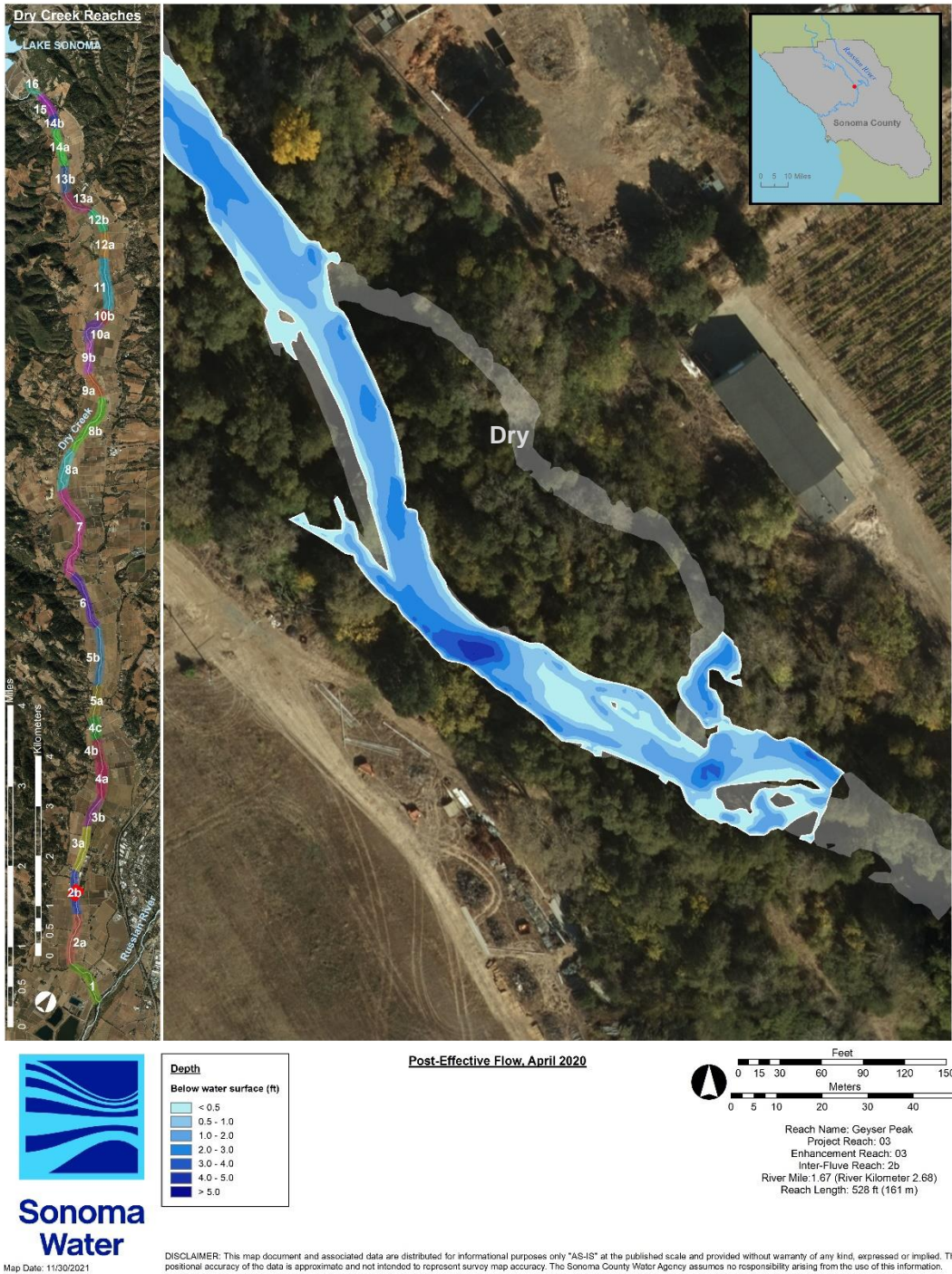


Figure 82. Measured water depth within the Geyser Peak enhancement reach, April 2020.

Geyser Peak Enhancement Reach



Figure 83. Optimal water depth for fry (0.5-2.0 ft) and parr (2.0-4.0 ft) within the Geyser Peak enhancement reach, April 2020.

Geyser Peak Enhancement Reach

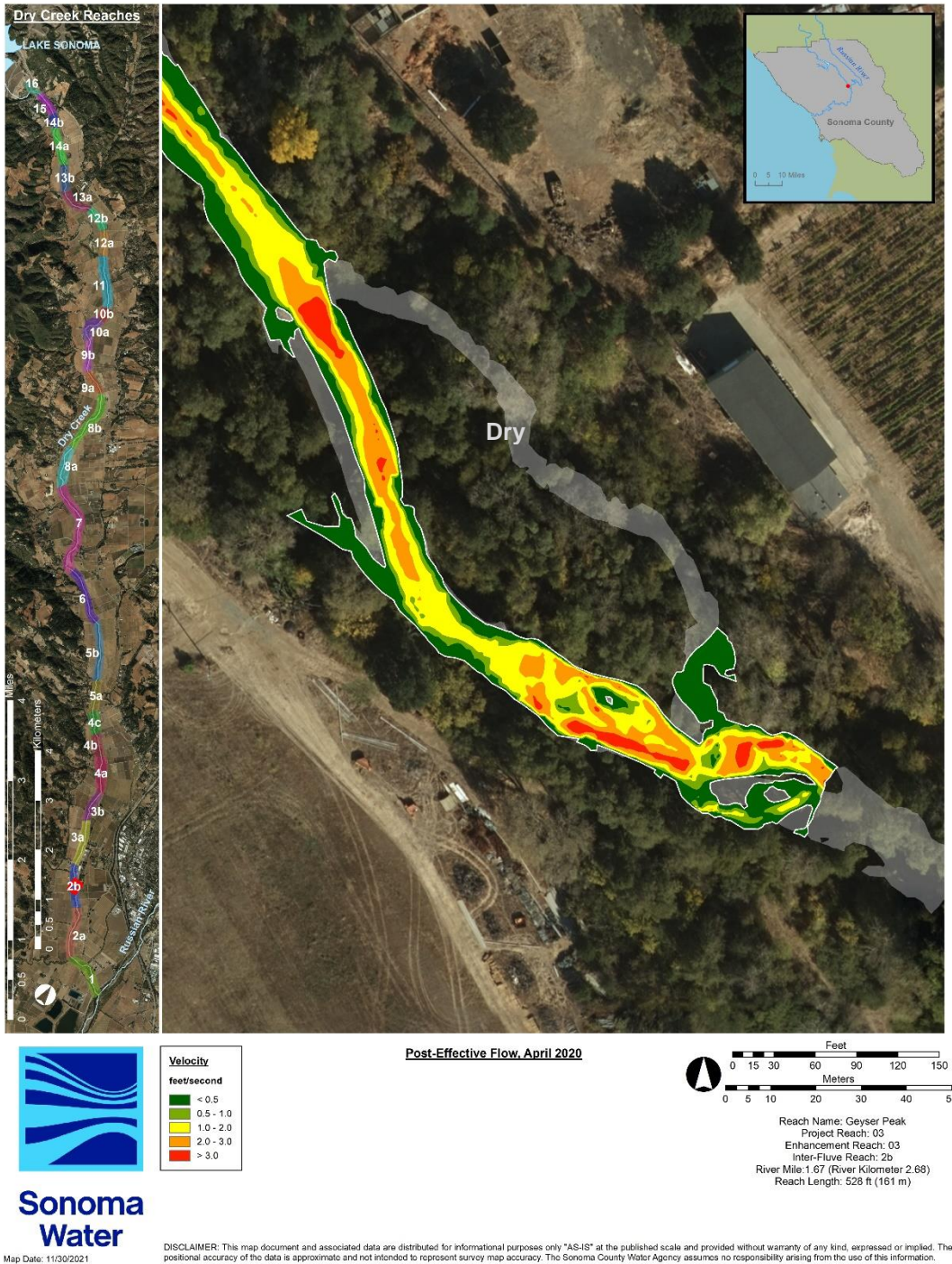


Figure 84. Measured water velocity within the Geyser Peak enhancement reach, April 2020.

Geyser Peak Enhancement Reach



Figure 85. Optimal water velocity for fry and parr (< 0.5 ft/s) within the Geyser Peak enhancement reach, April 2020.

Geyser Peak Enhancement Reach

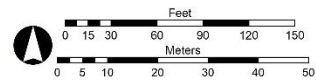


Sonoma Water

Map Date: 11/30/2021

Optimal hydraulic habitat
 0.5 - 2.0 ft < 0.5 ft/s
 2.0 - 4.0 ft < 0.5 ft/s

Post-Effective Flow, April 2020



Reach Name: Geyser Peak
 Project Reach: 03
 Enhancement Reach: 03
 Inter-Fluve Reach: 2b
 River Mile: 1.67 (River Kilometer 2.68)
 Reach Length: 526 ft (161 m)

DISCLAIMER: This map document and associated data are distributed for informational purposes only "AS-IS" at the published scale and provided without warranty of any kind, expressed or implied. The positional accuracy of the data is approximate and not intended to represent survey map accuracy. The Sonoma County Water Agency assumes no responsibility arising from the use of this information.

Figure 86. Optimal hydraulic habitat for fry (<0.5 ft/s, 0.5-2.0 ft) and parr (<0.5 ft/s, 2.0-4.0 ft) within the Geyser Peak enhancement reach, April 2020.

Habitat Types and Shelter Values

Table 50. Habitat, types, shelter value, percent cover, and shelter score for habitat units within the Geysir Peak enhancement reach, April 2020.

Habitat Unit #	Habitat Type	Shelter Value	Percent Cover	Shelter Score
HU01	Riffle	3	30	90
HU02	Riffle	1	5	5
HU03	Pool	3	30	90
HU04	Pool	3	40	120
HU05	Riffle	2	10	20
HU06	Riffle	3	15	45
HU07	Alcove	3	50	150
HU08	Riffle	2	10	20
HU09	Pool	3	25	75
HU10	Flatwater	2	20	40
HU11	Alcove	3	60	180
HU12	Riffle	2	5	10
HU13	Alcove	3	90	270
HU14	Flatwater	2	15	30
HU15	Riffle	2	20	40
Pool: riffle	3:7 (0.43)			Avg = 79

Geyser Peak Enhancement Reach



Figure 87. Habitat unit number and type within the Geyser Peak enhancement reach, April 2020.

Geyser Peak Enhancement Reach

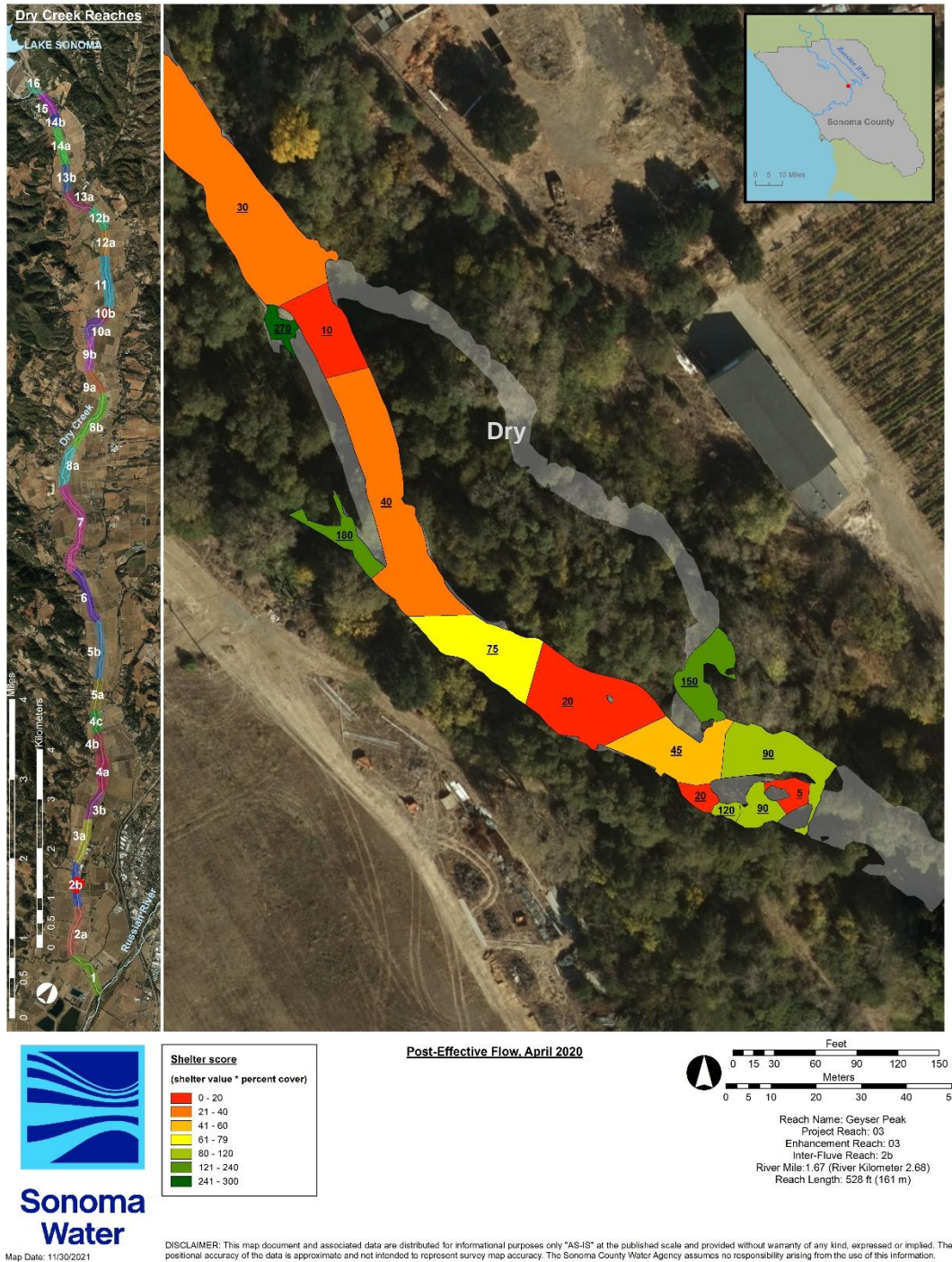


Figure 88. Habitat unit shelter scores within the Geyser Peak enhancement reach, April 2020.

Feature, Habitat Unit, Site, and Reach Ratings

Table 51. Post-effective flow feature ratings for the Geysers Peak enhancement reach, April 2020.

		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Project Reach		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Colloquial Name		GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP
mmddyy		42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920
Survey Type		PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
PROJECT SITE NUMBER		1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2
PROJECT FEATURE NUMBER		MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
Feature Type Code		LWS□	LW	HW2	HW2	LW	LW	R	HW2	HW1	PW	PW	PW	HW1	R	HW2	HW1	HW2	HW2
Habitat Unit		HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D
Habitat Type		Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
4.	Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	UNKN	UNKN	UNKN	UNKN	UNKN	POOR	FAIL	UNKN	UNKN	GOOD	GOOD	GOOD	UNKN	FAIL	UNKN	UNKN	UNKN	UNKN
5a	Are problems with the feature visible?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6a	Is the feature still in its original location?	YES	NO	NO	NO	NO	YES	NO	YES	YES	YES	YES	YES	UNK	NO	UNK	UNK	UNK	UNK
6b	Is the feature still in its original position?	NO	NO	NO	NO	NO	NO	NO	UNK	UNK	NO	NO	NO	NO	NO	NO	NO	NO	NO
6d	Is the feature still in its original orientaton?	YES	NO	NO	NO	NO	UNK	NO	UNK	UNK	YES	YES	YES	UNK	NO	UNK	UNK	UNK	UNK
8.	If an objective, did the feature create the targeted instream habitat type?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
9.	Were there any unintended effects by the feature on the habitat type? If Y, comment.	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
17a	If an objective, did the feature increase instream sheller rating?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
19a	If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
21a	If an objective, did the feature lead to the targeted channel conditions?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
25.	Did the feature achieve the targeted velocity?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
PROJECT FEATURE NUMBER		S1-05	S1-07	S1-08	S1-10	S1-11	S1-12	S2-01	S2-02	S2-03	S2-04.1	S2-04.2	S2-04.3	S2-05	S2-06	S2-07.1	S2-07.2	S2-08	S2-09.1
4.	Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	0	0	0	0	0	2	1	0	0	4	4	4	0	1	0	0	0	0
5a	Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6a	Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	1	0	0	0	0	1	0	1	1	1	1	1	0	0	0	0	0	0
6b	Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6d	Is the feature still in its original orientaton? (YES = 1 pt, NO = 0 pt)	1	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0
8.	If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9.	Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17a	If an objective, did the feature increase instream sheller rating? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19a	If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
21a	If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25.	Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PROJECT FEATURE NUMBER		S1-05	S1-07	S1-08	S1-10	S1-11	S1-12	S2-01	S2-02	S2-03	S2-04.1	S2-04.2	S2-04.3	S2-05	S2-06	S2-07.1	S2-07.2	S2-08	S2-09.1
FEATURE RATING	Feature quantitative rating out of 15	2	0	0	0	0	4	1	1	1	6	6	6	0	1	0	0	0	0
	Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)	Fail	Not rated	Not rated	Not rated	Not rated	Poor	Fail	Fail	Fail	Fair	Fair	Fair	Not rated	Fail	Fail	Fail	Fail	Fail

Table 51. Post-effective flow feature ratings for the Geysers Peak enhancement reach, April 2020.

		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Project Reach		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Colloquial Name		GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP
mmddyy		42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920
Survey Type		PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
PROJECT SITE NUMBER		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
PROJECT FEATURE NUMBER		SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
Feature Type Code		HW1	HW1	HW1	PW	PW	PW	HW1	HW1	R	HW2	HW2	HW1	LW	PW	PW	PW	HW1	ALJ
Habitat Unit		HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU12 2
Habitat Type		Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Rifle
4.	Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	FAIR	FAIR	FAIL	UNKN	UNKN	UNKN	UNKN	GOOD	GOOD	GOOD	UNKN	GOOD
5a	Are problems with the feature visible?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6a	Is the feature still in its original location?	UNK	UNK	UNK	UNK	UNK	UNK	YES	YES	NO	UNK	UNK	UNK	UNK	YES	YES	YES	UNK	YES
6b	Is the feature still in its original position?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	YES	NO	NO
6d	Is the feature still in its original orientaton?	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	NO	UNK	UNK	UNK	UNK	YES	YES	YES	UNK	YES
8.	If an objective, did the feature create the targeted instream habitat type?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES
9.	Were there any unintended effects by the feature on the habitat type? If Y, comment.	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO
17a	If an objective, did the feature increase instream sheller rating?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	YES	NO	YES
19a	If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES
21a	If an objective, did the feature lead to the targeted channel conditions?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
25.	Did the feature achieve the targeted velocity?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	YES	NO	YES
PROJECT FEATURE NUMBER		S2-09.2	S2-10	S2-11	S2-12.1	S2-12.2	S2-12.3	S2-13.1	S2-13.2	S2-14	S2-15	S2-16.1	S2-16.2	S2-17	S2-18.1	S2-18.2	S2-18.3	S2-19	S2-20
4.	Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	0	0	0	0	0	0	3	3	1	0	0	0	0	4	4	4	0	4
5a	Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6a	Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	1	1	0	0	0	0	0	1	1	1	0	1
6b	Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
6d	Is the feature still in its original orientaton? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1
8.	If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
9.	Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
17a	If an objective, did the feature increase instream sheller rating? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1
19a	If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
21a	If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25.	Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1
PROJECT FEATURE NUMBER		S2-09.2	S2-10	S2-11	S2-12.1	S2-12.2	S2-12.3	S2-13.1	S2-13.2	S2-14	S2-15	S2-16.1	S2-16.2	S2-17	S2-18.1	S2-18.2	S2-18.3	S2-19	S2-20
FEATURE RATING	Feature quantitative rating out of 15	0	0	0	0	0	0	4	4	1	0	0	0	0	9	9	9	0	11
	Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)	Fail	Not rated	Fail	Fail	Fail	Fail	Poor	Poor	Fail	Fail	Fail	Fail	Not rated	Good	Good	Good	Fail	Good

Table 51. Post-effective flow feature ratings for the Geyser Peak enhancement reach, April 2020.

Project Reach		3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach		3	3	3	3	3	3	3	3	3	3	3
Colloquial Name		GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP
mmddyy		42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920
Survey Type		PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
PROJECT SITE NUMBER		2	2	2	2	2	2	2	3	4	4	4
Project Site Type		SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SC Bank FP	SC Bank FP	SC Bank FP
PROJECT FEATURE NUMBER		S2-21.1	S2-21.2	S2-21.3	S2-21.4	S2-22.1	S2-22.2	S2-23	S3-01	S4-01	S4-02	S4-03
Feature Type Code		HW1	HW2	HW1	HW1	HW1	HW1	TT	LW	FB	FB	FB
Habitat Unit		HU02 D	HU02 D	HU02 D	HU02 D	HU14 2	HU14 2	HU14 2	HU07	HU03 D	HU03 D	HU03 D
Habitat Type		Dry	Dry	Dry	Dry	Flatwater	Flatwater	Flatwater	Alcove	Dry	Dry	Dry
4.	Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	FAIR	FAIR	FAIR	FAIR	GOOD	GOOD	UNKN	GOOD	GOOD	FAIR	GOOD
5a	Are problems with the feature visible?	YES	YES	YES	YES	NO	NO	YES	NO	NO	YES	NO
6a	Is the feature still in its original location?	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES
6b	Is the feature still in its original position?	YES	YES	YES	YES	YES	YES	NO	NO	YES	YES	YES
6d	Is the feature still in its original orientaton?	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES
8.	If an objective, did the feature create the targeted instream habitat type?	NO	NO	NO	NO	YES	YES	NO	YES	YES	YES	YES
9.	Were there any unintended effects by the feature on the habitat type? If Y, comment.	YES	YES	YES	YES	NO	NO	YES	NO	NO	NO	NO
17a	If an objective, did the feature increase instream shelter rating?	YES	YES	YES	YES	YES	YES	NO	YES	NO	NO	NO
19a	If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO
21a	If an objective, did the feature lead to the targeted channel conditions?	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	YES
25.	Did the feature achieve the targeted velocity?	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES
PROJECT FEATURE NUMBER		S2-21.1	S2-21.2	S2-21.3	S2-21.4	S2-22.1	S2-22.2	S2-23	S3-01	S4-01	S4-02	S4-03
4.	Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	3	3	3	3	4	4	0	4	4	3	4
5a	Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	0	0	0	0	1	1	0	1	1	0	1
6a	Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	0	1	1	1	1
6b	Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	0	0	1	1	1
6d	Is the feature still in its original orientaton? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	0	1	1	1	1
8.	If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	0	0	0	0	1	1	0	1	1	1	1
9.	Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	0	0	0	0	1	1	0	1	1	1	1
17a	If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	0	1	0	0	0
19a	If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	1	0	0	0
21a	If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	1	1	1
25.	Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	0	1	1	1	1
PROJECT FEATURE NUMBER		S2-21.1	S2-21.2	S2-21.3	S2-21.4	S2-22.1	S2-22.2	S2-23	S3-01	S4-01	S4-02	S4-03
FEATURE RATING	Feature quantitative rating out of 15	8	8	8	8	12	12	0	12	12	10	12
	Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)	Fair	Fair	Fair	Fair	Excellent	Excellent	Not rated	Excellent	Excellent	Good	Excellent

Geyser Peak Enhancement Reach

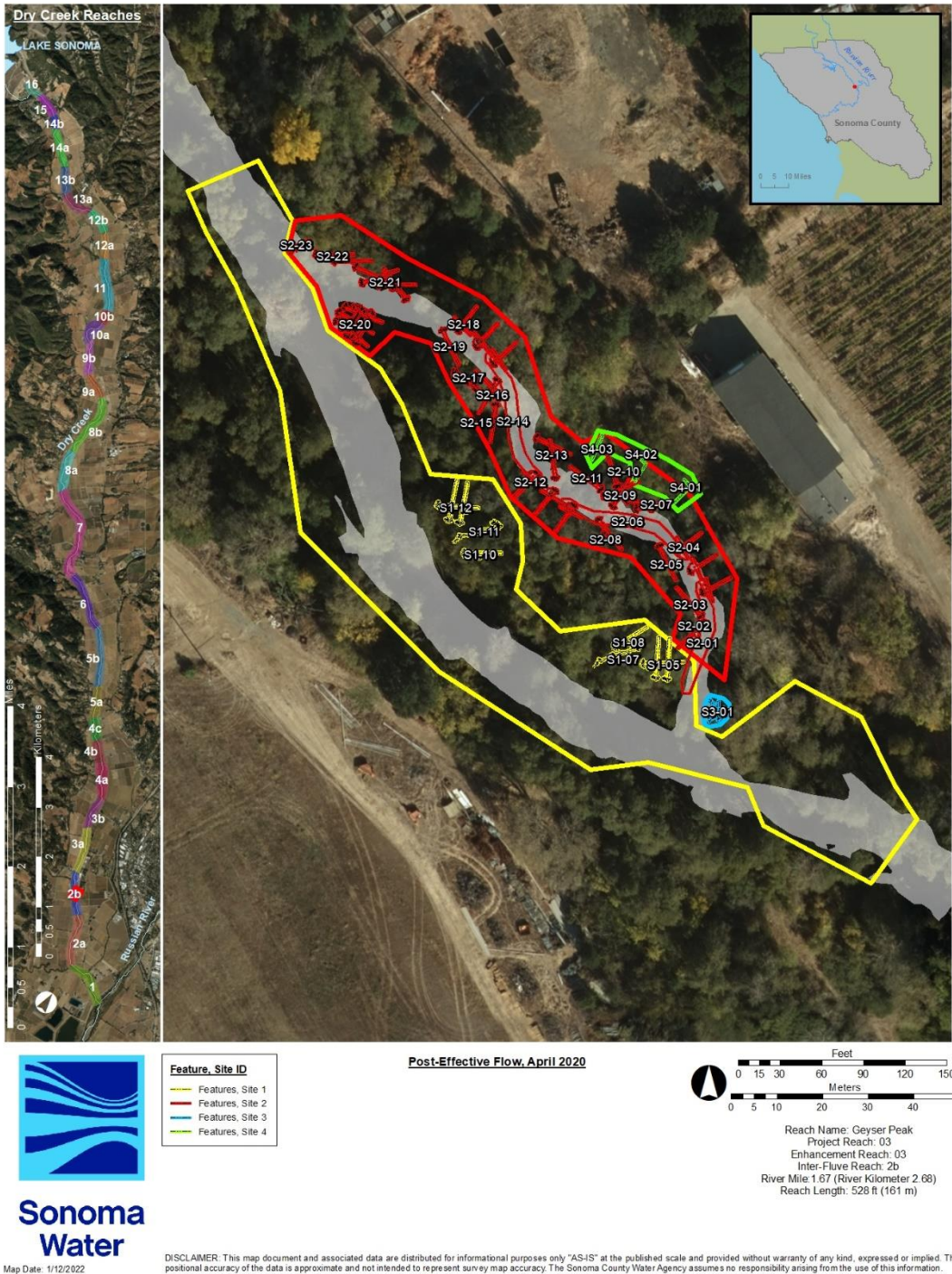


Figure 89. Enhancement sites and features within the Geyser Peak enhancement reach, April 2020.

Geyser Peak Enhancement Reach

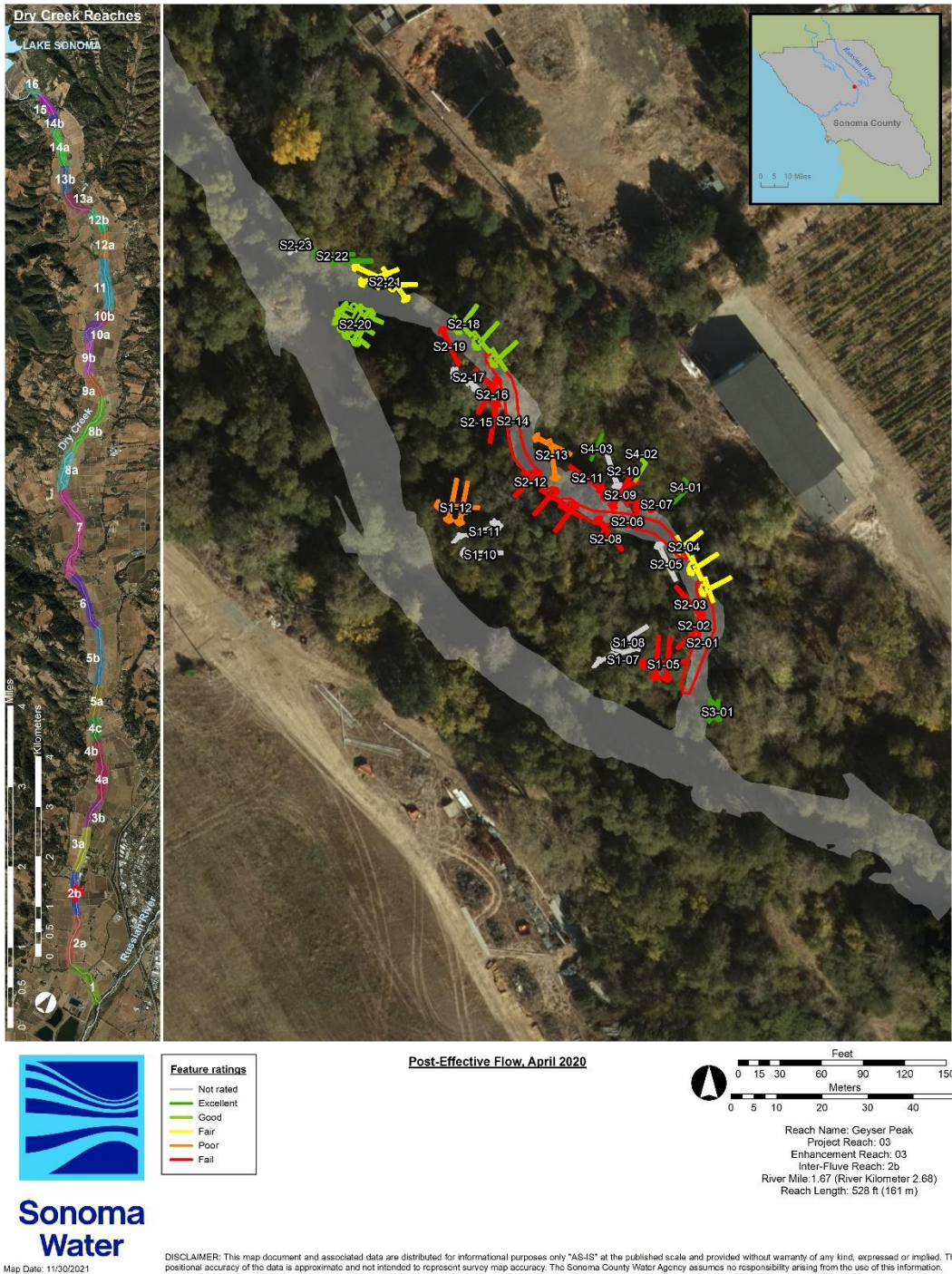


Figure 90. Feature ratings for the Geyser Peak enhancement reach, April 2020.

Table 52. Post-effective flow habitat unit ratings for the Geysers Peak enhancement reach, April 2020.

Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Colloquial Name	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP
nmddyy	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920
Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
HABITAT UNIT NUMBER	HU01	HU02	HU03	HU04	HU05	HU06	HU07	HU08	HU09	HU10	HU11	HU12	HU13	HU14	HU01 D	HU02 D	HU03 D	HU15	
Habitat Type	Riffle	Riffle	Pool	Pool	Riffle	Riffle	Alcove	Riffle	Pool	Flatwater	Alcove	Riffle	Alcove	Flatwater	Dry	Dry	Dry	Riffle	
PROJECT SITE NUMBER	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	2	4	1	
Project Site Type	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	SideChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	SideChan	SC Bank FP	MainChan	
11e	% Area of habitat unit within 0.5 -2.0 ft depth	66%	21%	65%	47%	29%	68%	58%	57%	42%	68%	49%	77%	0%	64%	0%	0%	0%	60%
11f	% Area of habitat unit within 2.0 -4.0 ft depth	12%	0%	0%	0%	0%	13%	17%	2%	42%	19%	1%	2%	0%	18%	0%	0%	0%	3%
14.	Instream shelter value in the habitat unit : 0, 1, 2, 3	3	1	3	3	2	3	3	2	3	2	3	2	3	2	0	0	0	2
15.	Percent of habitat unit covered by shelter: %	30	5	30	40	10	15	50	10	25	20	60	5	90	15	0	0	0	20
17b	a. Calculate the shelter rating for the habitat unit : 0-300	90	5	90	120	20	45	150	20	75	40	180	10	270	30	0	0	0	40
28.	Percent of habitat unit within targeted velocity (see above): (%)	18%	64%	77%	48%	73%	13%	100%	12%	29%	26%	100%	20%	100%	38%	0%	0%	0%	12%
36e	% habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	6%	13%	50%	14%	25%	4%	58%	3%	11%	12%	49%	8%	0%	18%	0%	0%	0%	2%
36f	% habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	0%	0%	0%	0%	1%	66%	0%	14%	3%	2%	0%	0%	4%	0%	0%	0%	0%
HABITAT UNIT NUMBER	HU01	HU02	HU03	HU04	HU05	HU06	HU07	HU08	HU09	HU10	HU11	HU12	HU13	HU14	HU01 D	HU02 D	HU03 D	HU15	
11e	% area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	2	4	4	2	4	4	4	4	4	4	0	4	0	0	0	4	
11f	% area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	1	0	0	0	0	1	1	0	4	1	0	0	1	0	0	0	0	
14.	Instream shelter value in the habitat unit : 0, 1, 2, 3 (3 = 5 pts; 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	5	3	5	5	4	5	5	4	5	4	5	4	5	4	0	0	0	4
15.	% hab unit covered by shelter (≥80 = 5pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)	2	0	2	3	1	1	3	1	2	2	4	0	5	1	0	0	0	2
17b	a. Calculate the shelter rating for the habitat unit : 0-300	3	0	3	4	0	1	5	0	2	1	5	0	5	0	0	0	1	
28.	% area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	1	4	4	4	4	1	4	1	2	2	4	1	4	3	0	0	0	1
36e	% area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	1	4	1	2	0	4	0	1	1	4	0	0	1	0	0	0	0
36f	% area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	0	4	0	1	0	0	0	0	0	0	0	0	0
HABITAT UNIT NUMBER	HU01	HU02	HU03	HU04	HU05	HU06	HU07	HU08	HU09	HU10	HU11	HU12	HU13	HU14	HU01 D	HU02 D	HU03 D	HU15	
HABITAT UNIT RATING	Habitat unit quantitative rating (out of 35)																		
	16	10	22	21	13	13	30	10	21	15	26	9	19	14	0	0	0	12	
	Habitat unit qualitative rating: Excellent (≥28), Good (≥21), Fair(≥14), Poor (≥7), Fail (<7)																		
	Fair	Poor	Good	Good	Poor	Poor	Excellent	Poor	Good	Fair	Good	Poor	Fair	Fair	Not rated	Fail	Not rated	Poor	

Table 52. Post-effective flow habitat unit ratings for the Geyser Peak enhancement reach, April 2020.

	Project Reach	3	3
	Enhancement Reach	3	3
	Colloquial Name	GP	GP
	mmddyy	42920	42920
	Survey Type	PEF	PEF
	HABITAT UNIT NUMBER	HU12 2	HU14 2
	Habitat Type	Riffle	Flatwater
	PROJECT SITE NUMBER	2	2
	Project Site Type	SideChan	SideChan
11e	% Area of habitat unit within 0.5 -2.0 ft depth	77%	64%
11f	% Area of habitat unit within 2.0 -4.0 ft depth	2%	18%
14.	Instream shelter value in the habitat unit : 0, 1, 2, 3	2	2
15.	Percent of habitat unit covered by shelter: %	5	15
17b	a. Calculate the shelter rating for the habitat unit : 0-300	10	30
28.	Percent of habitat unit within targeted velocity (see above): (%)	20%	38%
36e	% habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	8%	18%
36f	% habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	4%
	HABITAT UNIT NUMBER	HU12 2	HU14 2
11e	% area of hab unit within 0.5 -2.0 ft depth ($\geq 40 = 4$ pts, $\geq 30 = 3$ pts, $\geq 20 = 2$ pts, $\geq 10 = 1$ pt, $< 10 = 0$ pt)	4	4
11f	% area of hab unit within 2.0 -4.0 ft depth ($\geq 40 = 4$ pts, $\geq 30 = 3$ pts, $\geq 20 = 2$ pts, $\geq 10 = 1$ pt, $< 10 = 0$ pt)	0	1
14.	Instream shelter value in the habitat unit : 0, 1, 2, 3 (3 = 5 pts; 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	4	4
15.	% hab unit covered by shelter ($\geq 80 = 5$ pts; $\geq 60 = 4$ pts; $\geq 40 = 3$ pts; $\geq 20 = 2$ pts; $\geq 10 = 1$ pt; $< 10 = 0$ pt)	0	1
17b	a. Calculate the shelter rating for the habitat unit : 0-300	0	0
28.	% area of hab unit within targeted velocity ($\geq 40 = 4$ pts, $\geq 30 = 3$ pts, $\geq 20 = 2$ pts, $\geq 10 = 1$ pt, $< 10 = 0$ pt)	1	3
36e	% area hab unit with < 0.5 f/s; 0.5 to 2 ft ($\geq 40 = 4$ pts, $\geq 30 = 3$ pts, $\geq 20 = 2$ pts, $\geq 10 = 1$ pt, $< 10 = 0$ pt)	0	1
36f	% area hab unit with < 0.5 f/s; 2 to 4 ft ($\geq 40 = 4$ pts, $\geq 30 = 3$ pts, $\geq 20 = 2$ pts, $\geq 10 = 1$ pt, $< 10 = 0$ pt)	0	0
	HABITAT UNIT NUMBER	HU12 2	HU14 2
HABITAT UNIT RATING	Habitat unit quantitative rating (out of 35)	9	14
	Habitat unit qualitative rating: Excellent (≥ 28), Good (≥ 21), Fair (≥ 14), Poor (≥ 7), Fail (< 7)	Poor	Fair

Geyser Peak Enhancement Reach

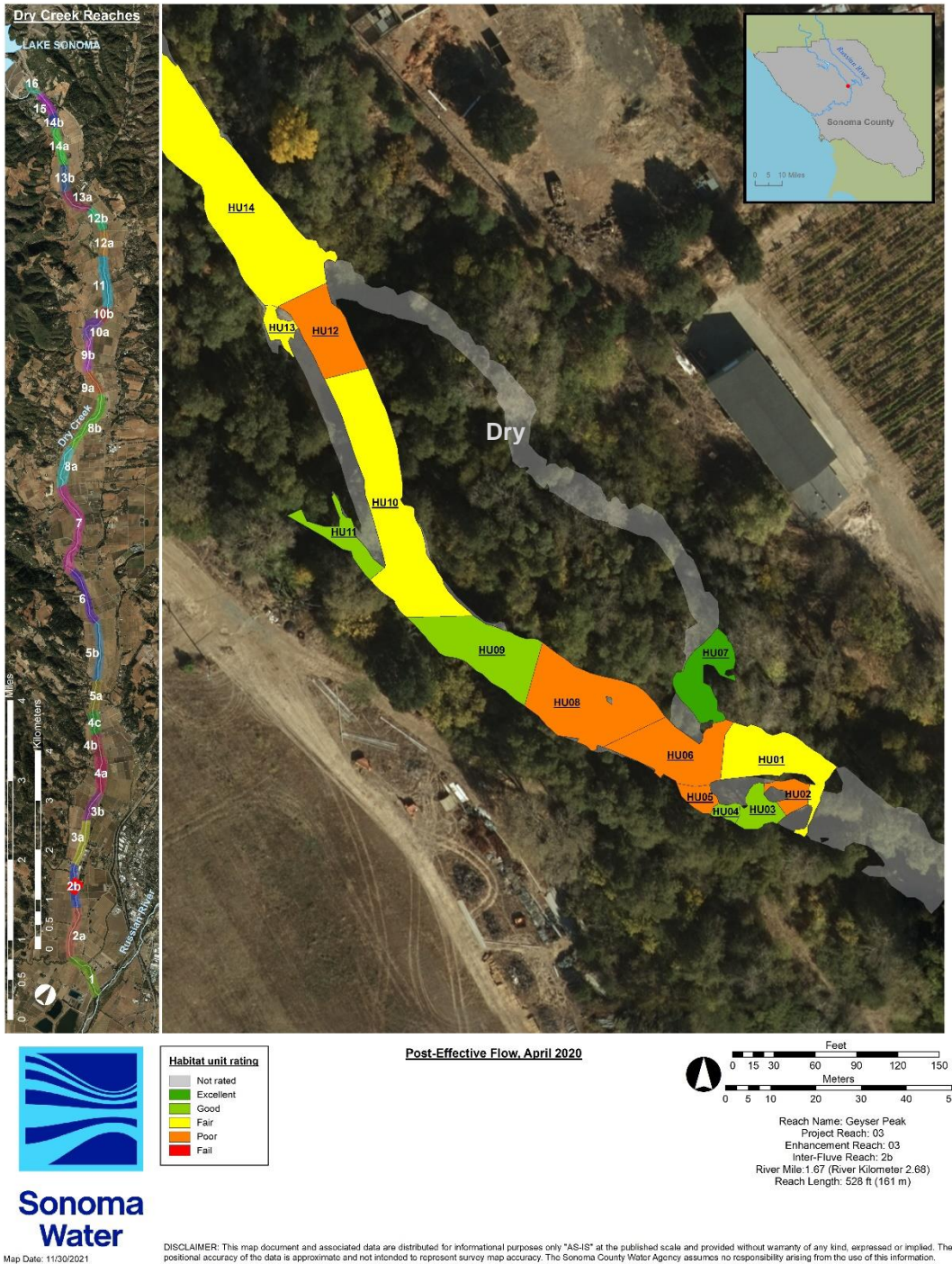


Figure 91. Post-effective flow habitat unit rating for the Geyser Peak enhancement reach, April 2020.

Table 53. Post-effective flow average feature, habitat unit, site, and reach ratings for the Geyser Peak enhancement reach, April 2020.

	Project Reach	3	3	3	3
	Enhancement Reach	3	3	3	3
	ENHANCEMENT REACH NAME	GP	GP	GP	GP
	mmdyy	42920	42920	42920	42920
	Survey Type	PEF	PEF	PEF	PEF
	PROJECT SITE NUMBER	1	2	3	4
	Project Site Type	MainChan	SideChan	SideChan	SC Bank FP
	PROJECT SITE NUMBER	1	2	3	4
SITE AVERAGE FEATURE RATING	Site average feature quantitative rating (out of 15; bold indicates excluded from site rating)	3	3	12	11
	Site average feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3), Not rated (not used to rate site)	Poor	Fail	Excellent	Good
	PROJECT SITE NUMBER	1	2	3	4
SITE AVERAGE HABITAT UNIT RATING	Site average habitat unit quantitative rating (out of 35; bold indicates excluded from site rating)	16	0	30	0
	Site average qualitative rating Excellent (>=28), Good (>=21), Fair(>=14), Poor (>=7), Fail (<7), Not rated (not used to rate site)	Fair	Fail	Excellent	Not rated
	PROJECT SITE NUMBER	1	2	3	4
SITE RATING	Site quantitative rating (sum of site average feature and habitat unit ratings) (out of 50; bold indicates rating excludes feature or habitat unit rating and scoring out of 15 or 35)	19	3	42	11
	Site qualitative rating: Excellent (>=40), Good (>=30), Fair(>=20), Poor (>=10), Fail (<10)	Poor	Fail	Excellent	Good
	ENHANCEMENT REACH NAME	GP			
ENHANCEMENT REACH RATING	Enhancement reach quantitative rating (average of site ratings) (out of 42)	19			
	Enhancement reach qualitative rating: Excellent (>=33), Good (>=25), Fair(>=17), Poor (>=8), Fail (<8)	Fair			

Geyser Peak Enhancement Reach



Figure 92. Post-effective flow site ratings for the Geyser Peak enhancement reach, April 2020.

Geyser Peak Enhancement Reach



Figure 93. Post-effective flow reach rating for the Geyser Peak enhancement reach, April 2020.

Feature and Habitat Unit Checklists

Table 54. Adaptive Management Plan targeted checklist for the Geysir Peak enhancement reach, April 2020.

	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Colloquial Name	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP
mmdyyy	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920
Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
Project Site Number	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Project Site Type	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan
Project Feature Number	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	S1-05	S1-07	S1-08	S1-10
Feature Type Code	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	LWS	LW	HW2	HW2
Habitat Unit	HU01	HU02	HU03	HU04	HU05	HU06	HU08	HU09	HU10	HU12	HU13	HU11	HU14	HU15	HU01 D	HU01 D	HU01 D	HU01 D	
Habitat Type	Riffle	Riffle	Pool	Pool	Riffle	Riffle	Riffle	Pool	Flatwater	Riffle	Alcove	Alcove	Flatwater	Riffle	Dry	Dry	Dry	Dry	
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	UNKN	UNKN	UNKN	UNKN	
5a. Are problems with the feature visible?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	YES	YES	YES	YES	
6a. Is the feature still in its original location?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	YES	NO	NO	NO	
6b. Is the feature still in its original position?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NO	NO	NO	NO	
6d. Is the feature still in its original orientation?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	YES	NO	NO	NO	
8. If an objective, did the feature create the targeted instream habitat type?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NO	NO	NO	NO	
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	YES	YES	YES	YES	
11e. % Area of habitat unit within 0.5 -2.0 ft depth	66%	21%	65%	47%	29%	68%	57%	42%	68%	77%	0%	49%	64%	60%	0%	0%	0%	0%	
11f. % Area of habitat unit within 2.0 -4.0 ft depth	12%	0%	0%	0%	0%	13%	2%	42%	19%	2%	0%	1%	18%	3%	0%	0%	0%	0%	
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	3	1	3	3	2	3	2	3	2	2	3	3	2	2	0	0	0	0	
15. Percent of habitat unit covered by shelter: %	30	5	30	40	10	15	10	25	20	5	90	60	15	20	0	0	0	0	
17a. If an objective, did the feature increase instream shelter rating?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NO	NO	NO	NO	
17b. a. Calculate the shelter rating for the habitat unit: 0-300	90	5	90	120	20	45	20	75	40	10	270	180	30	40	0	0	0	0	
19a. If an objective, did the feature increase LWD count in the habitat unit?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NO	NO	NO	NO	
21a. If an objective, did the feature lead to the targeted channel conditions?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NO	NO	NO	NO	
25. Did the feature achieve the targeted velocity?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NO	NO	NO	NO	
28. Percent of habitat unit within targeted velocity (see above): (%)	18%	64%	77%	48%	73%	13%	12%	29%	26%	20%	100%	100%	38%	12%	0%	0%	0%	0%	
36e. % habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	6%	13%	50%	14%	25%	4%	3%	11%	12%	8%	0%	49%	18%	2%	0%	0%	0%	0%	
36f. % habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	0%	0%	0%	0%	1%	0%	14%	3%	0%	0%	2%	4%	0%	0%	0%	0%	0%	
FEATURE NUMBER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	S1-05	S1-07	S1-08	S1-10	
HABITAT UNIT NUMBER	HU01	HU02	HU03	HU04	HU05	HU06	HU08	HU09	HU10	HU12	HU13	HU11	HU14	HU15	HU01 D	HU01 D	HU01 D	HU01 D	
SITE NUMBER	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
ENHANCEMENT REACH NAME	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	
4. Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5a. Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6a. Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	
6b. Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6d. Is the feature still in its original orientation? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	
8. If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
9. Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11e. % area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	2	4	4	2	4	4	4	4	4	0	4	4	4	0	0	0	0	
11f. % area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	1	0	0	0	0	1	0	4	1	0	0	1	0	0	0	0	0	0	
14. Instream shelter value in the habitat unit: 0, 1, 2, 3 (3 = 5 pts; 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	5	3	5	5	4	5	4	5	4	4	5	5	4	4	0	0	0	0	
15. % hab unit covered by shelter (≥80 = 5pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)	2	0	2	3	1	1	1	2	2	0	5	4	1	2	0	0	0	0	
17a. If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
17b. a. Calculate the shelter rating for the habitat unit: 0-300	3	0	3	4	0	1	0	2	1	0	5	5	0	1	0	0	0	0	
19a. If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
21a. If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
25. Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
28. % area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	1	4	4	4	4	1	1	2	2	1	4	4	3	1	0	0	0	0	
36e. % area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	1	4	1	2	0	0	1	1	0	0	4	1	0	0	0	0	0	
36f. % area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	

Table 54. Adaptive Management Plan targeted checklist for the Geysers Peak enhancement reach, April 2020.

Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Colloquial Name	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP
mmdyyy	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920
Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
Project Site Number	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Project Site Type	MainChan	MainChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
Project Feature Number	S1-11	S1-12	S2-01	S2-02	S2-03	S2-04.1	S2-04.2	S2-04.3	S2-05	S2-06	S2-07.1	S2-07.2	S2-08	S2-09.1	S2-09.2	S2-10	S2-11	S2-12.1	S2-12.1
Feature Type Code	LW	LW	R	HW2	HW1	PW	PW	PW	HW1	R	HW2	HW1	HW2	HW1	HW1	HW1	HW1	PW	PW
Habitat Unit	HU01 D	HU01 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D
Habitat Type	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	UNKN	POOR	FAIL	UNKN	UNKN	GOOD	GOOD	GOOD	UNKN	FAIL	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN
5a. Are problems with the feature visible?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6a. Is the feature still in its original location?	NO	YES	NO	YES	YES	YES	YES	YES	UNKN	NO	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN
6b. Is the feature still in its original position?	NO	NO	NO	UNKN	UNKN	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
6d. Is the feature still in its original orientation?	NO	UNKN	NO	UNKN	UNKN	YES	YES	YES	UNKN	NO	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN
8. If an objective, did the feature create the targeted instream habitat type?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
11e. % Area of habitat unit within 0.5 -2.0 ft depth	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
11f. % Area of habitat unit within 2.0 -4.0 ft depth	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15. Percent of habitat unit covered by shelter: %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17a. If an objective, did the feature increase instream shelter rating?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
17b. a. Calculate the shelter rating for the habitat unit: 0-300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19a. If an objective, did the feature increase LWD count in the habitat unit?	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
21a. If an objective, did the feature lead to the targeted channel conditions?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
25. Did the feature achieve the targeted velocity?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
28. Percent of habitat unit within targeted velocity (see above): (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
36e. % habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
36f. % habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
FEATURE NUMBER	S1-11	S1-12	S2-01	S2-02	S2-03	S2-04.1	S2-04.2	S2-04.3	S2-05	S2-06	S2-07.1	S2-07.2	S2-08	S2-09.1	S2-09.2	S2-10	S2-11	S2-12.1	S2-12.1
HABITAT UNIT NUMBER	HU01 D	HU01 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D
SITE NUMBER	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
ENHANCEMENT REACH NAME	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP
4. Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	0	2	1	0	0	4	4	4	0	1	0	0	0	0	0	0	0	0	0
5a. Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6a. Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	0	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0
6b. Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6d. Is the feature still in its original orientation? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0
8. If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9. Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11e. % area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11f. % area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14. Instream shelter value in the habitat unit: 0, 1, 2, 3 (3 = 5 pts; 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15. % hab unit covered by shelter (≥80 = 5pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17a. If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17b. a. Calculate the shelter rating for the habitat unit: 0-300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19a. If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21a. If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25. Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28. % area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36e. % area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36f. % area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 54. Adaptive Management Plan targeted checklist for the Geysers Peak enhancement reach, April 2020.

Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Colloquial Name	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP
mmdyyy	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920
Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
Project Site Number	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Project Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
Project Feature Number	S2-12.2	S2-12.3	S2-13.1	S2-13.2	S2-14	S2-15	S2-16.1	S2-16.2	S2-17	S2-18.1	S2-18.2	S2-18.3	S2-19	S2-20	S2-21.1	S2-21.2	S2-21.3	S2-21.4	
Feature Type Code	PW	PW	HW1	HW1	R	HW2	HW2	HW1	LW	PW	PW	PW	HW1	ALJ	HW1	HW2	HW1	HW1	
Habitat Unit	HU02_D	HU02_D	HU02_D	HU02_D	HU02_D	HU02_D	HU02_D	HU02_D	HU02_D	HU02_D	HU02_D	HU02_D	HU02_D	HU12_2	HU02_D	HU02_D	HU02_D	HU02_D	
Habitat Type	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Riffle	Dry	Dry	Dry	Dry	
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	UNKN	UNKN	FAIR	FAIR	FAIL	UNKN	UNKN	UNKN	UNKN	GOOD	GOOD	GOOD	UNKN	GOOD	FAIR	FAIR	FAIR	FAIR	
5a. Are problems with the feature visible?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
6a. Is the feature still in its original location?	UNKN	UNKN	YES	YES	NO	UNKN	UNKN	UNKN	UNKN	YES	YES	YES	UNKN	YES	YES	YES	YES	YES	
6b. Is the feature still in its original position?	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	YES	NO	NO	YES	YES	YES	YES	
6d. Is the feature still in its original orientation?	UNKN	UNKN	UNKN	UNKN	NO	UNKN	UNKN	UNKN	UNKN	YES	YES	YES	UNKN	YES	YES	YES	YES	YES	
8. If an objective, did the feature create the targeted instream habitat type?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	
11e. % Area of habitat unit within 0.5 -2.0 ft depth	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	77%	0%	0%	0%	
11f. % Area of habitat unit within 2.0 -4.0 ft depth	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	
15. Percent of habitat unit covered by shelter: %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	
17a. If an objective, did the feature increase instream shelter rating?	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	YES	NO	YES	YES	YES	YES	YES	
17b. a. Calculate the shelter rating for the habitat unit: 0-300	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	
19a. If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	
21a. If an objective, did the feature lead to the targeted channel conditions?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
25. Did the feature achieve the targeted velocity?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	YES	NO	YES	YES	YES	YES	
28. Percent of habitat unit within targeted velocity (see above): (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	20%	0%	0%	0%	
36e. % habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	8%	0%	0%	0%	
36f. % habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
FEATURE NUMBER	S2-12.2	S2-12.3	S2-13.1	S2-13.2	S2-14	S2-15	S2-16.1	S2-16.2	S2-17	S2-18.1	S2-18.2	S2-18.3	S2-19	S2-20	S2-21.1	S2-21.2	S2-21.3	S2-21.4	
HABITAT UNIT NUMBER	HU02_D	HU02_D	HU02_D	HU02_D	HU02_D	HU02_D	HU02_D	HU02_D	HU02_D	HU02_D	HU02_D	HU02_D	HU02_D	HU12_2	HU02_D	HU02_D	HU02_D	HU02_D	
SITE NUMBER	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
ENHANCEMENT REACH NAME	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	
4. Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	0	0	3	3	1	0	0	0	0	4	4	4	0	4	3	3	3	3	
5a. Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6a. Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	0	0	1	1	0	0	0	0	0	1	1	1	0	1	1	1	1	1	
6b. Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	1	1	1	0	0	1	1	1	1	
6d. Is the feature still in its original orientation? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	1	1	1	0	1	1	1	1	1	
8. If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	
9. Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	
11e. % area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	
11f. % area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
14. Instream shelter value in the habitat unit: 0, 1, 2, 3 (3 = 5 pts; 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	
15. % hab unit covered by shelter (≥80 = 5pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
17a. If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	1	1	1	0	1	1	1	1	1	
17b. a. Calculate the shelter rating for the habitat unit: 0-300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
19a. If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	
21a. If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
25. Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	1	1	1	0	1	1	1	1	1	
28. % area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	
36e. % area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
36f. % area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Table 54. Adaptive Management Plan targeted checklist for the Geysers Peak enhancement reach, April 2020.

Project Reach	3	3	3	3	3	3	3
Enhancement Reach	3	3	3	3	3	3	3
Colloquial Name	GP	GP	GP	GP	GP	GP	GP
mmddyy	42920	42920	42920	42920	42920	42920	42920
Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF
Project Site Number	2	2	2	3	4	4	4
Project Site Type	SideChan	SideChan	SideChan	SideChan	SC Bank FP	SC Bank FP	SC Bank FP
Project Feature Number	S2-22.1	S2-22.2	S2-23	S3-01	S4-01	S4-02	S4-03
Feature Type Code	HW1	HW1	TT	LW	FB	FB	FB
Habitat Unit	HU14 2	HU14 2	HU14 2	HU07	HU03 D	HU03 D	HU03 D
Habitat Type	Flatwater	Flatwater	Flatwater	Alcove	Dry	Dry	Dry
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	GOOD	UNKN	GOOD	GOOD	FAIR	GOOD
5a. Are problems with the feature visible?	NO	NO	YES	NO	NO	YES	NO
6a. Is the feature still in its original location?	YES	YES	NO	YES	YES	YES	YES
6b. Is the feature still in its original position?	YES	YES	NO	NO	YES	YES	YES
6d. Is the feature still in its original orientation?	YES	YES	NO	YES	YES	YES	YES
8. If an objective, did the feature create the targeted instream habitat type?	YES	YES	NO	YES	YES	YES	YES
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	NO	YES	NO	NO	NO	NO
11e. % Area of habitat unit within 0.5 -2.0 ft depth	64%	64%	64%	58%	0%	0%	0%
11f. % Area of habitat unit within 2.0 -4.0 ft depth	18%	18%	18%	17%	0%	0%	0%
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	2	2	2	3	0	0	0
15. Percent of habitat unit covered by shelter: %	15	15	15	50	0	0	0
17a. If an objective, did the feature increase instream shelter rating?	YES	YES	NO	YES	NO	NO	NO
17b. a. Calculate the shelter rating for the habitat unit: 0-300	30	30	30	150	0	0	0
19a. If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	YES	NO	NO	NO
21a. If an objective, did the feature lead to the targeted channel conditions?	NO	NO	NO	NO	YES	YES	YES
25. Did the feature achieve the targeted velocity?	YES	YES	NO	YES	YES	YES	YES
28. Percent of habitat unit within targeted velocity (see above): (%)	38%	38%	38%	100%	0%	0%	0%
36e. % habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	18%	18%	18%	58%	0%	0%	0%
36f. % habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	4%	4%	4%	66%	0%	0%	0%
FEATURE NUMBER	S2-22.1	S2-22.2	S2-23	S3-01	S4-01	S4-02	S4-03
HABITAT UNIT NUMBER	HU14 2	HU14 2	HU14 2	HU07	HU03 D	HU03 D	HU03 D
SITE NUMBER	2	2	2	3	4	4	4
ENHANCEMENT REACH NAME	GP	GP	GP	GP	GP	GP	GP
4. Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	4	4	0	4	4	3	4
5a. Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	1	1	0	1	1	0	1
6a. Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	1	1	0	1	1	1	1
6b. Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	1	1	0	0	1	1	1
6d. Is the feature still in its original orientation? (YES = 1 pt, NO = 0 pt)	1	1	0	1	1	1	1
8. If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	1	1	0	1	1	1	1
9. Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	1	1	0	1	1	1	1
11e. % area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	4	4	4	0	0	0
11f. % area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	1	1	1	1	0	0	0
14. Instream shelter value in the habitat unit: 0, 1, 2, 3 (3 = 5 pts; 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	4	4	4	5	0	0	0
15. % hab unit covered by shelter (≥80 = 5pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)	1	1	1	3	0	0	0
17a. If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	1	0	1	0	0	0
17b. a. Calculate the shelter rating for the habitat unit: 0-300	0	0	0	5	0	0	0
19a. If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	1	0	0	0
21a. If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	0	0	0	0	1	1	1
25. Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	1	0	1	1	1	1
28. % area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	3	3	3	4	0	0	0
36e. % area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	1	1	1	4	0	0	0
36f. % area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	4	0	0	0

Table 55. Adaptive Management Plan full checklist for the Geyser Peak enhancement reach, April 2020.

	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Colloquial Name	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP
nmddy	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920
Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
Project Site Number	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Project Site Type	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan
Project Feature Number	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Feature Type Code	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Habitat Unit	HU01	HU02	HU03	HU04	HU05	HU06	HU08	HU09	HU10	HU12	HU13	HU11	HU14	HU15	HU01 D	HU01 D	HU01 D	HU01 D	HU01 D
Habitat Type	Riffle	Riffle	Pool	Pool	Riffle	Riffle	Riffle	Pool	Flatwater	Riffle	Alcove	Alcove	Flatwater	Riffle	Dry	Dry	Dry	Dry	Dry
1.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
5a	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
5b	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
6a	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
6b	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
6c	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
6d	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
6e	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
7.	RIF	RIF	POO	POO	RIF	RIF	RIF	POO	FLT	RIF	ALC	ALC	FLT	RIF	DRY	DRY	DRY	DRY	DRY
8.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
9.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10.	1.0	0.3	0.8	0.6	0.4	1.2	0.7	2.2	1.4	0.9	0.2	0.6	1.3	0.8	0.0	0.0	0.0	0.0	0.0
11a	3.4	1.3	2.0	1.8	1.0	3.4	2.6	5.0	3.1	2.3	0.5	2.5	2.9	3.2	0.0	0.0	0.0	0.0	0.0
11b	1689.8	96.4	451.5	99.9	118.6	1750.6	2408.8	1269.6	4180.7	1636.8	0.3	453.1	6274.9	2517.8	0.0	0.0	0.0	0.0	0.0
11c	296.6	0.0	0.0	0.0	0.0	349.2	68.7	1261.3	1201.8	38.7	0.0	7.6	1775.3	120.5	0.0	0.0	0.0	0.0	0.0
11d	1986.4	96.4	451.5	99.9	118.6	2099.7	2477.5	2530.9	5382.6	1675.5	0.3	460.8	8050.2	2638.3	0.0	0.0	0.0	0.0	0.0
11e	66%	21%	65%	47%	29%	68%	57%	42%	68%	77%	0%	49%	64%	60%	0%	0%	0%	0%	0%
11f	12%	0%	0%	0%	0%	13%	2%	42%	19%	2%	0%	1%	18%	3%	0%	0%	0%	0%	0%
11g	77%	21%	65%	47%	29%	81%	59%	85%	87%	78%	0%	50%	82%	63%	0%	0%	0%	0%	0%
11h	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NO	NO	NO	NO	NO
12a	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0
12b	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
13.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
14.	3	1	3	3	2	3	2	3	2	3	2	3	2	2	0	0	0	0	0
15.	30	5	30	40	10	15	10	25	20	5	90	60	15	20	0	0	0	0	0
16a	SWD	TVG	LWD	RTW	RTW	LWD	TVG	TVG	SWD	TVG	TVG	TVG	TVG	TVG	NON	NON	NON	NON	NON
16b	RTW	NA	RTW	SWD	TVG	SWD	RTW	LWD	TVG	AVG	SWD	AVG	SWD	LWD	NON	NON	NON	NON	NON
17a	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NO	NO	NO	NO	NO
17b	90	5	90	120	20	45	20	75	40	10	270	180	30	40	0	0	0	0	0
18a	0	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
18b	0	0	0	0	0	2	0	2	0	0	0	0	0	3	0	0	0	0	0
19a	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NO	NO	NO	NO	NO
19b	NON	NON	NR	NON	NON	NR	NON	NR	NON	NON	NON	NON	NON	NR	NR	NR	NR	NR	NR
20.	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
21a	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NO	NO	NO	NO	NO
21b	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	AGG	AGG	AGG	AGG	AGG
21c	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
21d	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
22.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	YES	YES	YES	YES	YES
23.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
24.	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
25.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NO	NO	NO	NO	NO
26a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26b	4.0	1.9	1.4	2.4	2.3	4.5	4.5	2.6	3.2	4.1	0.5	0.1	4.0	3.9	0.0	0.0	0.0	0.0	0.0
26c	1.8	0.4	0.3	0.6	0.4	1.8	1.7	1.0	1.3	2.1	0.0	0.0	1.1	1.5	0.0	0.0	0.0	0.0	0.0
27.	472.7	294.6	535.3	101.0	296.2	330.7	495.8	863.9	1581.7	423.5	442.4	917.8	3741.3	518.7	0.0	0.0	0.0	0.0	0.0
28.	18%	64%	77%	48%	73%	13%	29%	12%	26%	100%	100%	38%	12%	0%	0%	0%	0%	0%	0%
29.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	YES	YES	YES	YES	YES
30a	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	SLC	SND	GRV	GRV	GRV	GRV	GRV	GRV	GRV
30b	NON	NON	SND	SND	NON	SND	COB	SND	SND	COB	SND	SND	COB	SND	SND	SND	SND	SND	SND
31.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	YES	YES	YES	YES	YES
32.	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
33.	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
34.	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
35.	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
36a	156.4	60.0	347.7	28.8	103.7	124.4	136.1	659.1	890.0	184.5	0.3	460.8	2047.8	70.0	0.0	0.0	0.0	0.0	0.0
36b	153.7	60.0	347.7	28.8	103.7	99.8	127.6	340.0	712.2	176.8	0.3	453.1	1736.6	70.0	0.0	0.0	0.0	0.0	0.0
36c	2.7	0.0	0.0	0.0	0.0	24.7	8.5	319.1	177.9	7.7	0.0	7.6	311.3	0.0	0.0	0.0	0.0	0.0	0.0
36d	6%	13%	50%	14%	25%	5%	3%	22%	14%	9%	0%	50%	21%	2%	0%	0%	0%	0%	0%
36e	6%	13%	50%	14%	25%	4%	3%	11%	12%	8%	0%	49%	18%	2%	0%	0%	0%	0%	0%
36f	0%	0%	0%	0%	0%	0%	1%	0%	3%	0%	0%	2%	4%	0%					

Table 55. Adaptive Management Plan full checklist for the Geyser Peak enhancement reach, April 2020.

	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Colloquial Name	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP
nmddyy	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920	42920
Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
Project Site Number	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Project Site Type	MainChan	MainChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
Project Feature Number	S1-11	S1-12	S2-01	S2-02	S2-03	S2-04.1	S2-04.2	S2-04.3	S2-05	S2-06	S2-07.1	S2-07.2	S2-08	S2-09.1	S2-09.2	S2-10	S2-11	S2-12.1	S2-12.1
Feature Type Code	LW	LW	R	HW2	HW1	PW	PW	PW	HW1	R	HW2	HW1	HW2	HW2	HW1	HW1	HW1	HW1	PW
Habitat Unit	HU01 D	HU01 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D
Habitat Type	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
1. Length of targeted treatment (ft)	NA	NA	NR	8	10	20	20	20	NA	NR	8	7	10	6	6	10	7	8	
2. Width of targeted treatment: (ft)	NA	NA	NR	10	5	5	5	5	NA	NR	15	10	8	11	10	10	9	9	
3. Estimate area of the targeted feature: (ft ²)				80	50	100	100	100			120	70	80	66	60	100	63	72	
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	UNKN	POOR	FAIL	UNKN	UNKN	GOOD	GOOD	GOOD	UNKN	FAIL	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	
5a. Are problems with the feature visible?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
5b. Types: ANC, BBB, CRF, MAT, SHF, STR, SWA, UND, UNS, WSH, OTH, NON	BBB	BBB	BBB	BBB	BBB	AGG	AGG	AGG	BBB	BBB	BBB	BBB	BBB	BBB	BBB	BBB	BBB	BBB	
6a. Is the feature still in its original location?	NO	YES	NO	YES	YES	YES	YES	YES	UNK	NO	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	
6b. Is the feature still in its original orientation?	NO	NO	NO	UNK	UNK	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
6c. If yes: LBK, MDC, RBK, SPN, OTH	UNK	LBK	OTH	OTH	OTH	OTH	OTH	OTH	UNK	OTH	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	
6d. Is the feature still in its original orientation?	NO	UNK	NO	UNK	UNK	YES	YES	YES	UNK	NO	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	
6e. If yes: DNS, MUL, PRL, PRP, UPS, OTH	UNK	UNK	OTH	UNK	UNK	PRL	PRL	PRL	UNK	OTH	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	
7. Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	
8. If an objective, did the feature create the targeted instream habitat type?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
10. Mean water depth in habitat unit: ft	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
11a. Maximum water depth in habitat unit: ft	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
11b. Area of habitat unit within 0.5 -2.0 ft depth: (ft ²)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
11c. Area of habitat unit within 2.0 -4.0 ft depth: (ft ²)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
11d. Area of habitat unit within 0.5-4.0 ft depth: (ft ²)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
11e. % Area of habitat unit within 0.5 -2.0 ft depth	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
11f. % Area of habitat unit within 2.0 -4.0 ft depth	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
11g. % Area of habitat unit within 0.5-4.0 ft depth	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
11h. If an objective, did the feature increase/decrease water depth in the treatment area?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
12a. Targeted depth or range (ft) in habitat unit	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	
12b. Estimate area of feature within targeted depth or range ft ² :	0	0	50	40	40	30	40	40	40	40	55	55	25	35	30	30	0	40	
13. Were there any unintended effects of the feature on the water depth? If Y, comment.	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
15. Percent of habitat unit covered by shelter: %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
16a. 1st dominant cover in habitat unit: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	
16b. 2nd dominant in habitat unit: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	
17a. If an objective, did the feature increase instream shelter rating?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
17b. a. Calculate the shelter rating for the habitat unit: 0-300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
18a. Large woody debris count in habitat unit: D >1', L 6-20'	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
18b. Large woody debris count in habitat unit: D >1', L >20'	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
19a. If an objective, did the feature increase LWD count in the habitat unit?	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
19b. LWD recruitment mechanisms in habitat unit: ANC, EXC, EXH, INT, RPR, UNA, OTH	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
20. Current stream channel problems in the habitat unit: AGG, BRD, FLO, GRC, HDC, INC, NAR, SCU, STT, WID, NON, OTH	NON	NON	AGG	AGG	AGG	AGG	AGG	AGG	AGG	AGG	AGG	AGG	AGG	AGG	AGG	AGG	AGG	AGG	
21a. If an objective, did the feature lead to the targeted channel conditions?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
21b. Overall Offchannel Condition (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	AGG	AGG	AGG	AGG	AGG	AGG	AGG	AGG	AGG	AGG	AGG	AGG	AGG	AGG	AGG	AGG	AGG	AGG	
21c. Outlet Conditions (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	NA	NA	AGG	AGG	AGG	AGG	AGG	AGG	AGG	AGG	AGG	AGG	AGG	AGG	AGG	AGG	AGG	AGG	
21d. Inlet Conditions (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	NA	NA	AGG	AGG	AGG	AGG	AGG	AGG	AGG	AGG	AGG	AGG	AGG	AGG	AGG	AGG	AGG	AGG	
22. Were there any unintended effects on the stream channel at the feature? If Y, comment.	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
23. If an objective, did the feature decrease/increase velocity in the treatment area?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
24. Targeted velocity/range in the habitat unit: (ft/sec)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
25. Did the feature achieve the targeted velocity?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
26a. Measured minimum velocity (ft/sec) in habitat unit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
26b. Measured max velocity (ft/sec) in habitat unit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
26c. Measured mean velocity (ft/sec) in habitat unit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
27. Area of habitat unit within targeted velocity: (ft ²)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
28. Percent of habitat unit within targeted velocity (see above): (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
29. Were there any unintended effects of feature on velocity? If Y, comment.	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
30a. 1st/2nd dominant substrate in habitat unit: BED, BOL, COB, GRV, SND, SLC, OTH	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	
30b. 2nd dominant substrate in habitat unit: BED, BOL, COB, GRV, SND, SLC, OTH	SND	SND	SND	SND	SND	SND	SND	SND	SND	SND	SND	SND	SND	SND	SND	SND	SND	SND	
31. If an objective, did the feature achieve the targeted substrate composition?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
32. % Canopy Measurement:	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
33. Photopoint data collected: YES /NO	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
34. Temperature Profile: YES /NO	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
35. Dissolved Oxygen Profile: YES/NO	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
36a. Total habitat unit area where targeted depth, velocity and shelter criteria overlap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
36b. Total habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
36c. Total habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter																			

Table 55. Adaptive Management Plan full checklist for the Geyser Peak enhancement reach, April 2020.

	3	3	3	3	3	3	3
Project Reach	3	3	3	3	3	3	3
Enhancement Reach	3	3	3	3	3	3	3
Colloquial Name	GP	GP	GP	GP	GP	GP	GP
mmddyy	42920	42920	42920	42920	42920	42920	42920
Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF
Project Site Number	2	2	2	3	4	4	4
Project Site Type	SideChan	SideChan	SideChan	SideChan	SC Bank FP	SC Bank FP	SC Bank FP
Project Feature Number	S2-22.1	S2-22.2	S2-23	S3-01	S4-01	S4-02	S4-03
Feature Type Code	HW1	HW1	TT	LW	FB	FB	FB
Habitat Unit	HU14 2	HU14 2	HU14 2	HU07	HU03 D	HU03 D	HU03 D
Habitat Type	Flatwater	Flatwater	Flatwater	Alcove	Dry	Dry	Dry
1. Length of targeted treatment (ft)	6	12	NA	12	13	13	13
2. Width of targeted treatment: (ft)	7	10	NA	10	20	20	20
3. Estimate area of the targeted feature: (ft ²)	42	120		120	260	260	260
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	GOOD	UNKN	GOOD	GOOD	FAIR	GOOD
5a. Are problems with the feature visible?	NO	NO	YES	NO	NO	YES	NO
5b. Types: ANC, BBB, CRF, MAT, SHF, STR, SWA, UND, UNS, WSH, OTH, NON	NON	NON	WSH	NON	NON	OTH	NON
6a. Is the feature still in its original location?	YES	YES	NO	YES	YES	YES	YES
6b. Is the feature still in its original position?	YES	YES	NO	NO	YES	YES	YES
6c. If yes: LBK, MDC, RBK, SPN, OTH	LBK	LBK	UNKN	LBK	OTH	OTH	OTH
6d. Is the feature still in its original orientation?	YES	YES	NO	YES	YES	YES	YES
6e. If yes: DNS, MUL, PRL, PRP, UPS, OTH	UPS	UPS	UNKN	PRP	PRP	PRP	PRP
7. Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	FLT	FLT	FLT	ALC	DRY	DRY	DRY
8. If an objective, did the feature create the targeted instream habitat type?	YES	YES	NO	YES	YES	YES	YES
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	NO	YES	NO	NO	NO	NO
10. Mean water depth in habitat unit: ft	1.3	1.3	1.3	1.2	0.0	0.0	0.0
11a. Maximum water depth in habitat unit: ft	2.9	2.9	2.9	2.9	0.0	0.0	0.0
11b. Area of habitat unit within 0.5 -2.0 ft depth: (ft ²)	6274.9	6274.9	6274.9	931.1	0.0	0.0	0.0
11c. Area of habitat unit within 2.0 -4.0 ft depth: (ft ²)	1775.3	1775.3	1775.3	266.8	0.0	0.0	0.0
11d. Area of habitat unit within 0.5-4.0 ft depth: (ft ²)	8050.2	8050.2	8050.2	1198.0	0.0	0.0	0.0
11e. % Area of habitat unit within 0.5 -2.0 ft depth	64%	64%	64%	58%	0%	0%	0%
11f. % Area of habitat unit within 2.0 -4.0 ft depth	18%	18%	18%	17%	0%	0%	0%
11g. % Area of habitat unit within 0.5-4.0 ft depth	82%	82%	82%	75%	0%	0%	0%
11h. If an objective, did the feature increase/decrease water depth in the treatment area?	YES	YES	NO	YES	NO	NO	NO
12a. Targeted depth or range (ft) in habitat unit	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0
12b. Estimate area of feature within targeted depth or range ft ² :	25	100		0	0	0	0
13. Were there any unintended effects of the feature on the water depth? If Y, comment.	NO	NO	YES	NO	NO	NO	NO
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	2	2	2	3	0	0	0
15. Percent of habitat unit covered by shelter: %	15	15	15	50	0	0	0
16a. 1st dominant cover in habitat unit: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	TVG	TVG	TVG	AVG	NON	NON	NON
16b. 2nd dominant in habitat unit: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	SWD	SWD	SWD	RTW	NON	NON	NON
17a. If an objective, did the feature increase instream shelter rating?	YES	YES	NO	YES	NO	NO	NO
17b. a. Calculate the shelter rating for the habitat unit: 0-300	30	30	30	150	0	0	0
18a. Large woody debris count in habitat unit: D >1', L 6-20'	0	0	0	2	0	0	0
18b. Large woody debris count in habitat unit: D >1', L >20'	0	0	0	0	0	0	0
19a. If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	YES	NO	NO	NO
19b. LWD recruitment mechanisms in habitat unit: ANC, EXC, EXH, INT, RPR, UNA, OTH	NON	NON	NON	NR	NR	NR	NR
20. Current stream channel problems in the habitat unit: AGG, BRD, FLO, GRC, HDC, INC, NAR, SCU, STT, WID, NON, OTH	NON	NON	NON	NON	NON	NON	NON
21a. If an objective, did the feature lead to the targeted channel conditions?	NO	NO	NO	NO	YES	YES	YES
21b. Overall Offchannel Condition (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	AGG	AGG	AGG	AGG	AGG	AGG	AGG
21c. Outlet Conditions (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	AGG	AGG	AGG	AGG	AGG	AGG	AGG
21d. Inlet Conditions (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	AGG	AGG	AGG	AGG	AGG	AGG	AGG
22. Were there any unintended effects on the stream channel at the feature? If Y, comment.	YES	YES	YES	YES	NO	NO	NO
23. If an objective, did the feature decrease/increase velocity in the treatment area?	DEC	DEC	NA	DEC	NA	NA	NA
24. Targeted velocity/range in the habitat unit: (ft/sec)	0.5	0.5	0.5	0.5	0.5	0.5	0.5
25. Did the feature achieve the targeted velocity?	YES	YES	NO	YES	YES	YES	YES
26a. Measured minimum velocity (ft/sec) in habitat unit	0	0	0	0	0	0	0
26b. Measured max velocity (ft/sec) in habitat unit	4.0	4.0	4.0	0.5	0.0	0.0	0.0
26c. Measured mean velocity (ft/sec) in habitat unit	1.1	1.1	1.1	0.0	0.0	0.0	0.0
27. Area of habitat unit within targeted velocity: (ft ²)	3741.3	3741.3	3741.3	1601.9	0.0	0.0	0.0
28. Percent of habitat unit within targeted velocity (see above): (%)	38%	38%	38%	100%	0%	0%	0%
29. Were there any unintended effects of feature on velocity? If Y, comment.	NO	NO	YES	NO	NO	NO	NO
30a. 1st/2nd dominant substrate in habitat unit: BED, BOL, COB, GRV, SND, SLC, OTH	GRV	GRV	GRV	SND	GRV	GRV	GRV
30b. 2nd dominant substrate in habitat unit: BED, BOL, COB, GRV, SND, SLC, OTH	SND	SND	SND	GRV	SND	SND	SND
31. If an objective, did the feature achieve the targeted substrate composition?	YES	YES	YES	YES	YES	YES	YES
32. % Canopy Measurement:	NR	NR	NR	NR	NR	NR	NR
33. Photopoint data collected: YES /NO	NR	NR	NR	NR	NR	NR	NR
34. Temperature Profile: YES /NO	NR	NR	NR	NR	NR	NR	NR
35. Dissolved Oxygen Profile: YES/NO	NR	NR	NR	NR	NR	NR	NR
36a. Total habitat unit area where targeted depth, velocity and shelter criteria overlap	2047.8	2047.8	2047.8	1198.0	0.0	0.0	0.0
36b. Total habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	1736.6	1736.6	1736.6	931.1	0.0	0.0	0.0
36c. Total habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	311.3	311.3	311.3	266.8	0.0	0.0	0.0
36d. % habitat unit area where targeted depth, velocity and shelter criteria overlap	21%	21%	21%	75%	0%	0%	0%
36e. % habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	18%	18%	18%	58%	0%	0%	0%
36f. % habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	4%	4%	4%	66%	0%	0%	0%
37. Does this feature need: DEC, ENH, MNT, REP, NON, OTH	NON	NON	NON	NON	NON	NON	NON
38. Are additional restoration treatments recommended at this site?	NO	NO	NO	NO	NO	NO	NO

Post-construction, October 2020

Ferrari-Carano, Olson, October 2020

Depth and Velocity

Table 56. Areas and percentages of: wetted area, optimal depth and velocity, and optimal hydraulic habitat within the Ferrari-Carano, Olson enhancement reach, October 2020.

Ferrari-Carano, Olson Post-repair October 2020	Wetted area (ft²)	0.5 – 2.0 ft	2.0 – 4.0 ft	Total	< 0.5 ft/s	0.5 – 2.0 ft < 0.5 ft/s	2.0 – 4.0 ft < 0.5 ft/s	Total
Main channel area	46,355	20,527	15,194	35,722	15,020	5,828	3,651	9,479
Side channel area	58,413	29,260	14,972	44,232	23,984	9,207	6,024	15,231
Total area	104,768	49,787	30,166	79,954	39,004	15,036	9,674	24,710
Main channel % of wetted area	44%	44%	33%	77%	32%	13%	8%	20%
Side channel % of wetted area	56%	50%	26%	76%	41%	16%	10%	26%
Total % of wetted area	100%	48%	29%	76%	37%	14%	9%	24%

Ferrari-Carano, Olson Enhancement Reach

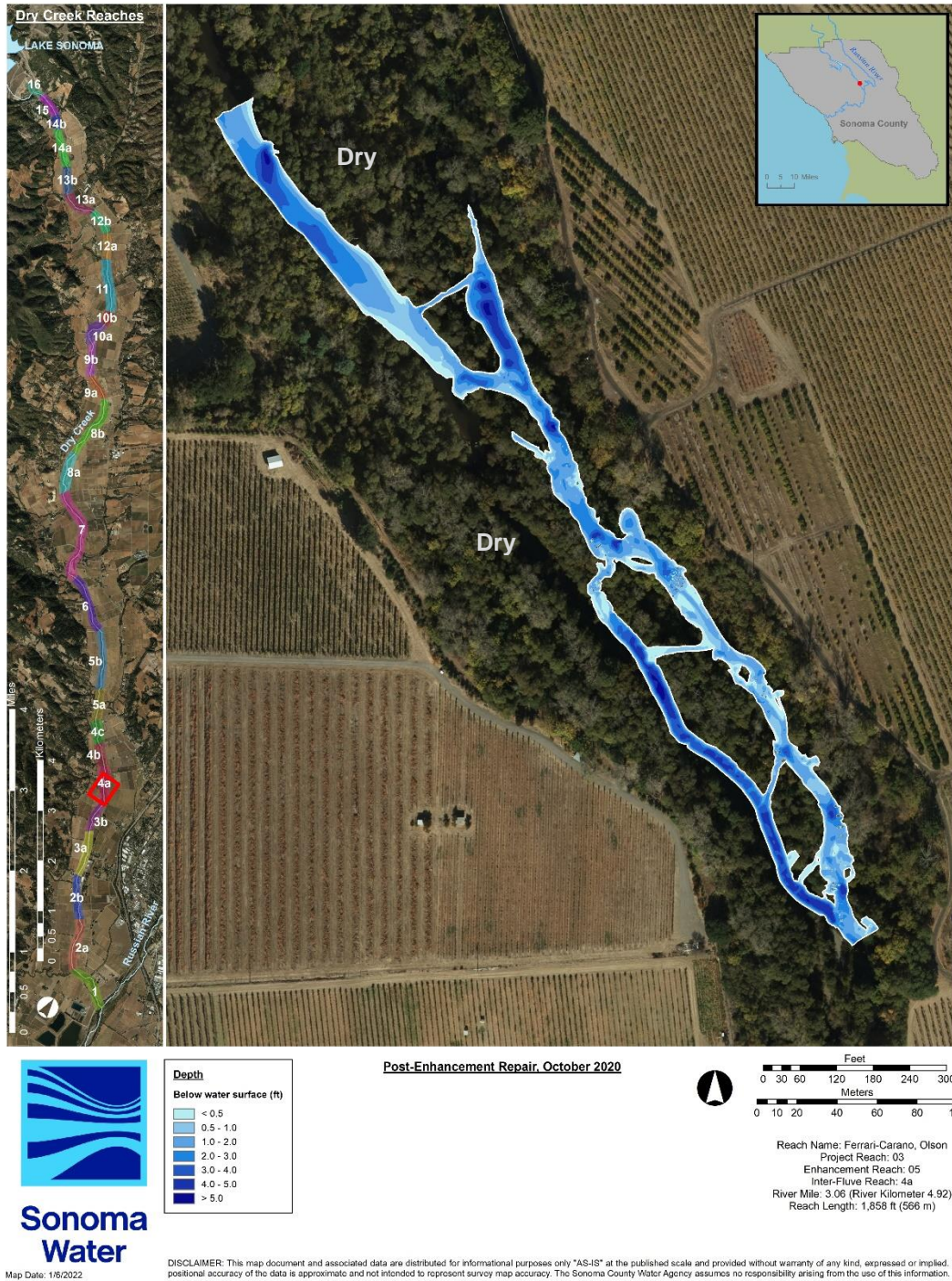


Figure 94. Water depth within the Ferrari-Carano, Olson enhancement reach, June 2020.

Ferrari-Carano, Olson Enhancement Reach

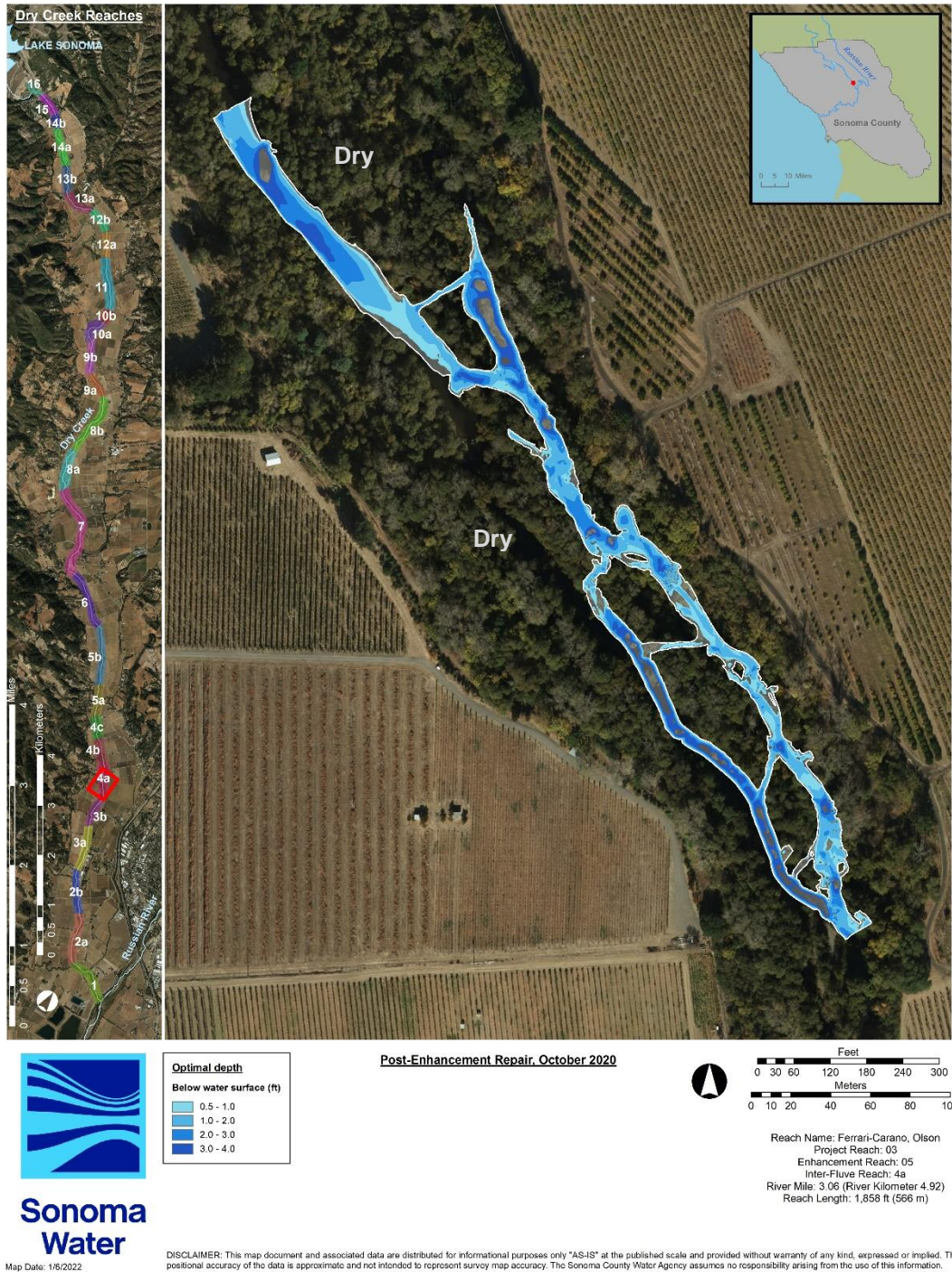


Figure 95. Optimal water depth for fry (0.5-2.0 ft) and parr (2.0-4.0 ft) within the Ferrari-Carano, Olson enhancement reach, October 2020.

Ferrari-Carano, Olson Enhancement Reach

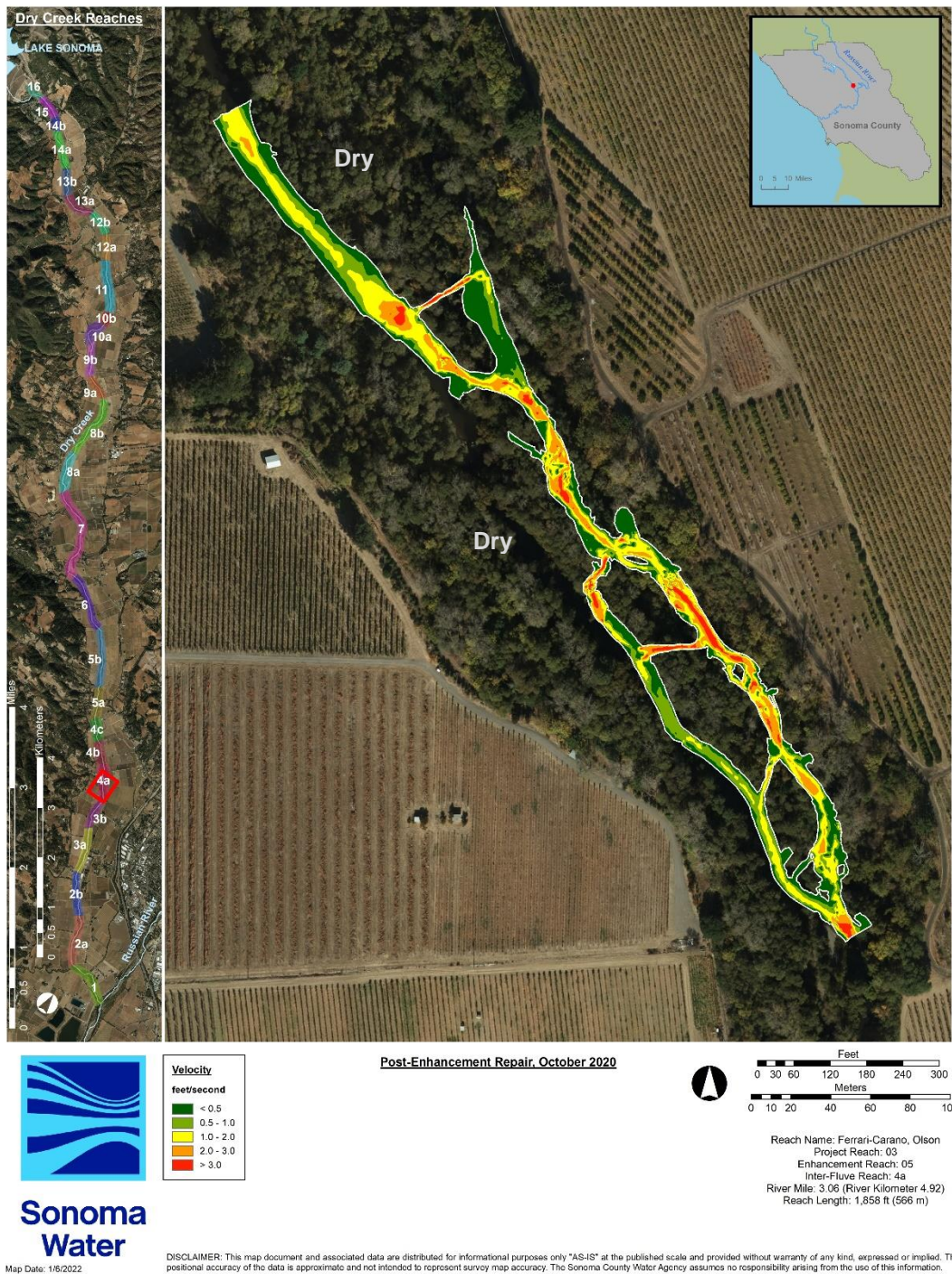


Figure 96-. Measured water velocity within the Ferrari-Carano, Olson enhancement reach, October 2020.

Ferrari-Carano, Olson Enhancement Reach

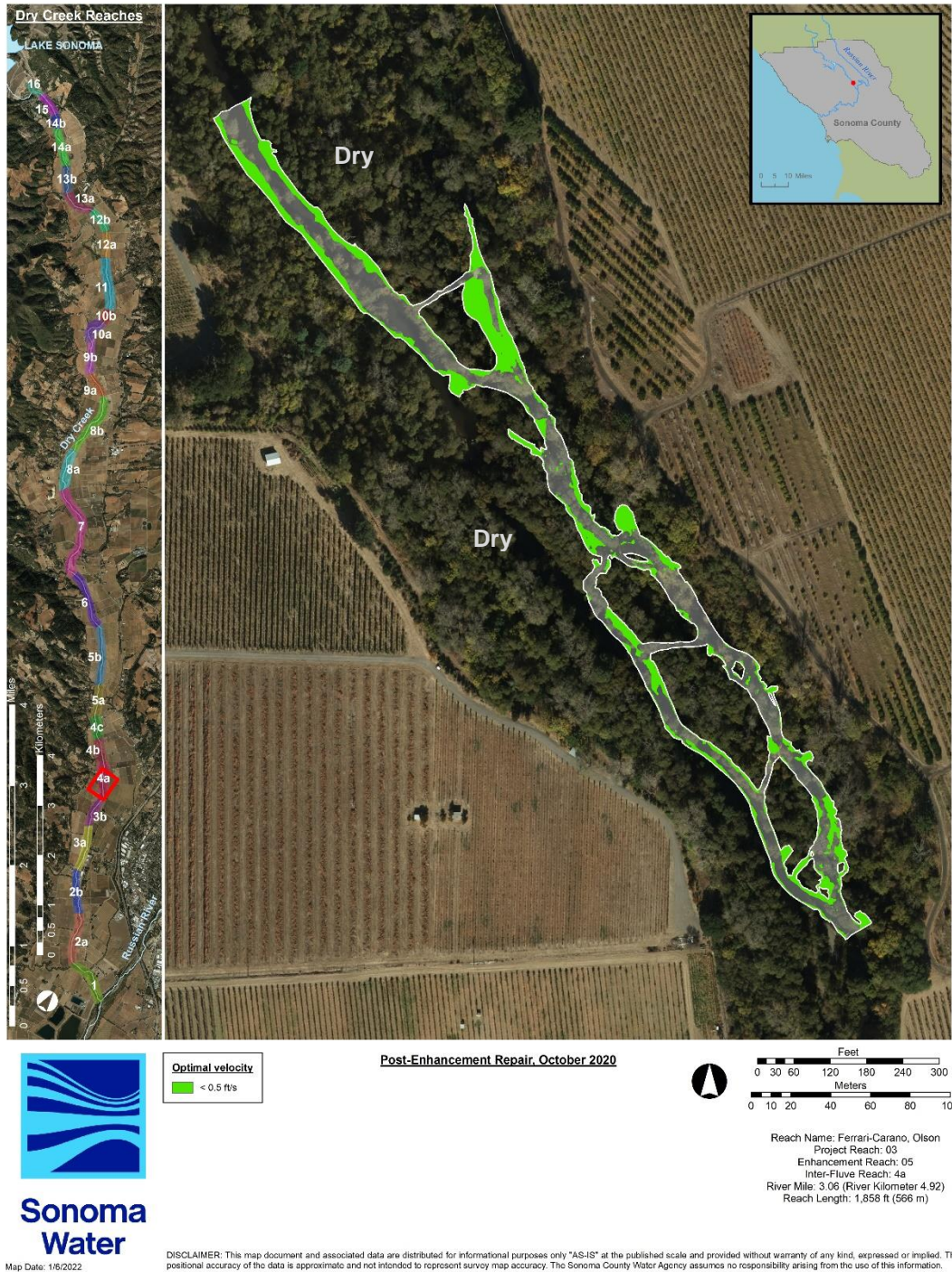


Figure 97. Optimal water velocity for fry and parr (< 0.5 ft/s) within the Ferrari-Carano, Olson enhancement reach, October 2020.

Ferrari-Carano, Olson Enhancement Reach

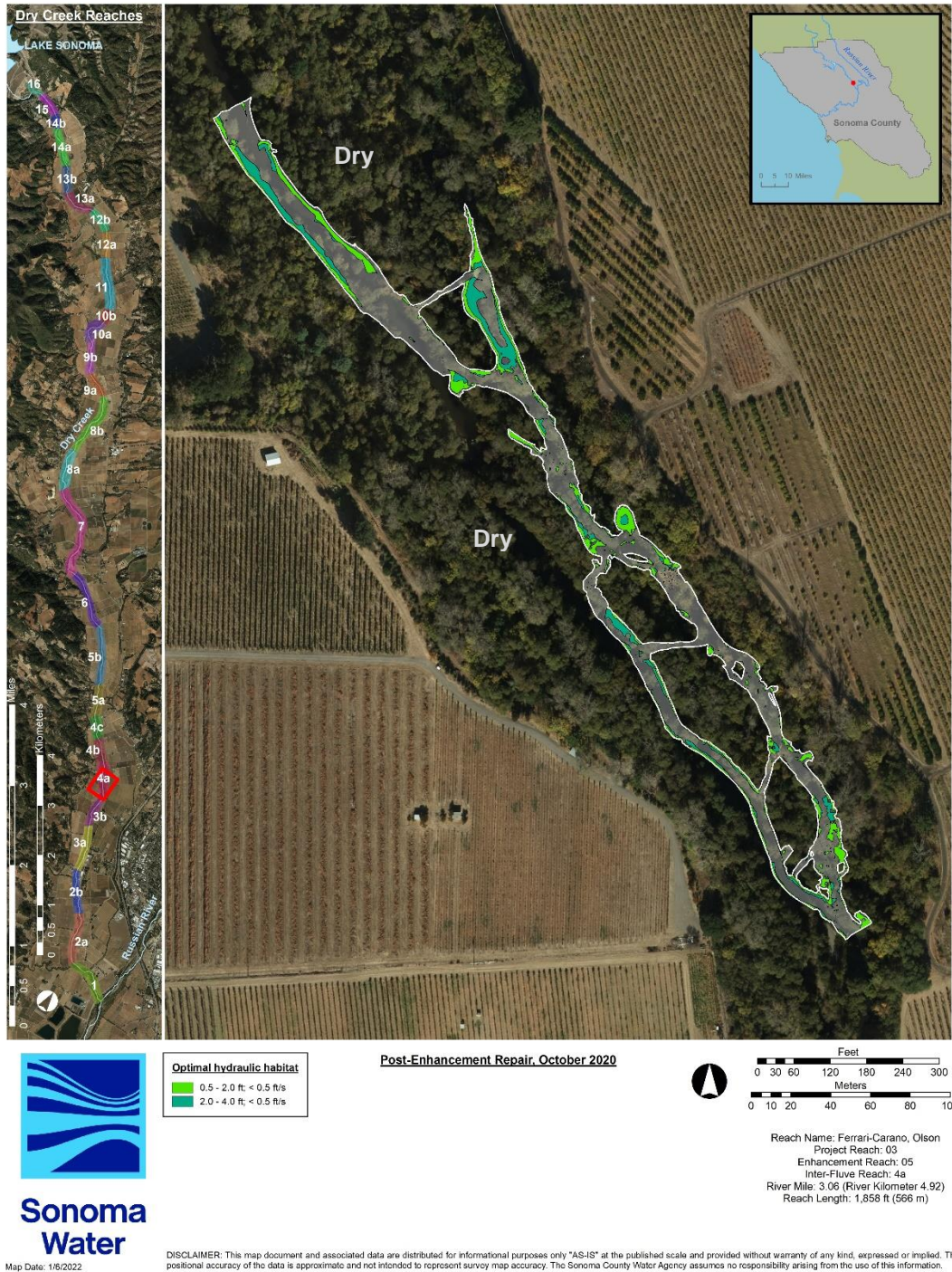


Figure 98. Optimal hydraulic habitat for fry (<0.5 ft/s, 0.5-2.0 ft) and parr (<0.5 ft/s, 2.0-4.0 ft) within the Ferrari-Carano, Olson enhancement reach, October 2020.

Habitat Types and Shelter Values

Table 57. Habitat, types, shelter value, percent cover, and shelter score for habitat units within the Ferrari-Carano, Olson enhancement reach, October 2020.

Habitat Unit #	Habitat Type	Shelter Value	Percent Cover	Shelter Score
HU01	Riffle	2	30	60
HU02	Pool	3	25	75
HU03	Flatwater	3	30	90
HU04	Pool	3	45	135
HU05	Riffle	1	5	5
HU06	Pool	3	40	120
HU07	Riffle	3	30	90
HU08	Riffle	3	25	75
HU09	Pool	3	45	135
HU10	Riffle	3	30	90
HU11	Alcove	3	90	270
HU12	Pool	3	35	105
HU13	Flatwater	2	15	30
HU14	Pool	3	15	45
HU15	Riffle	2	10	20
HU16	Riffle	3	75	225
HU17	Riffle	3	15	45
HU18	Flatwater	2	10	20
HU19	Riffle	1	5	5
HU20	Riffle	3	25	75
HU21	Pool	2	25	50
HU22	Flatwater	2	15	30
HU23	Pool	3	40	120
HU24	Riffle	2	20	40
HU25	Flatwater	2	30	60
HU26	Alcove	2	75	150
HU27	Alcove	3	65	195
HU28	Flatwater	1	10	10
HU29	Pool	3	25	75
HU30	Flatwater	2	10	20
HU31	Alcove	2	90	180
Pool: riffle	9:11 (0.82)			Avg = 85

Ferrari-Carano, Olson Enhancement Reach

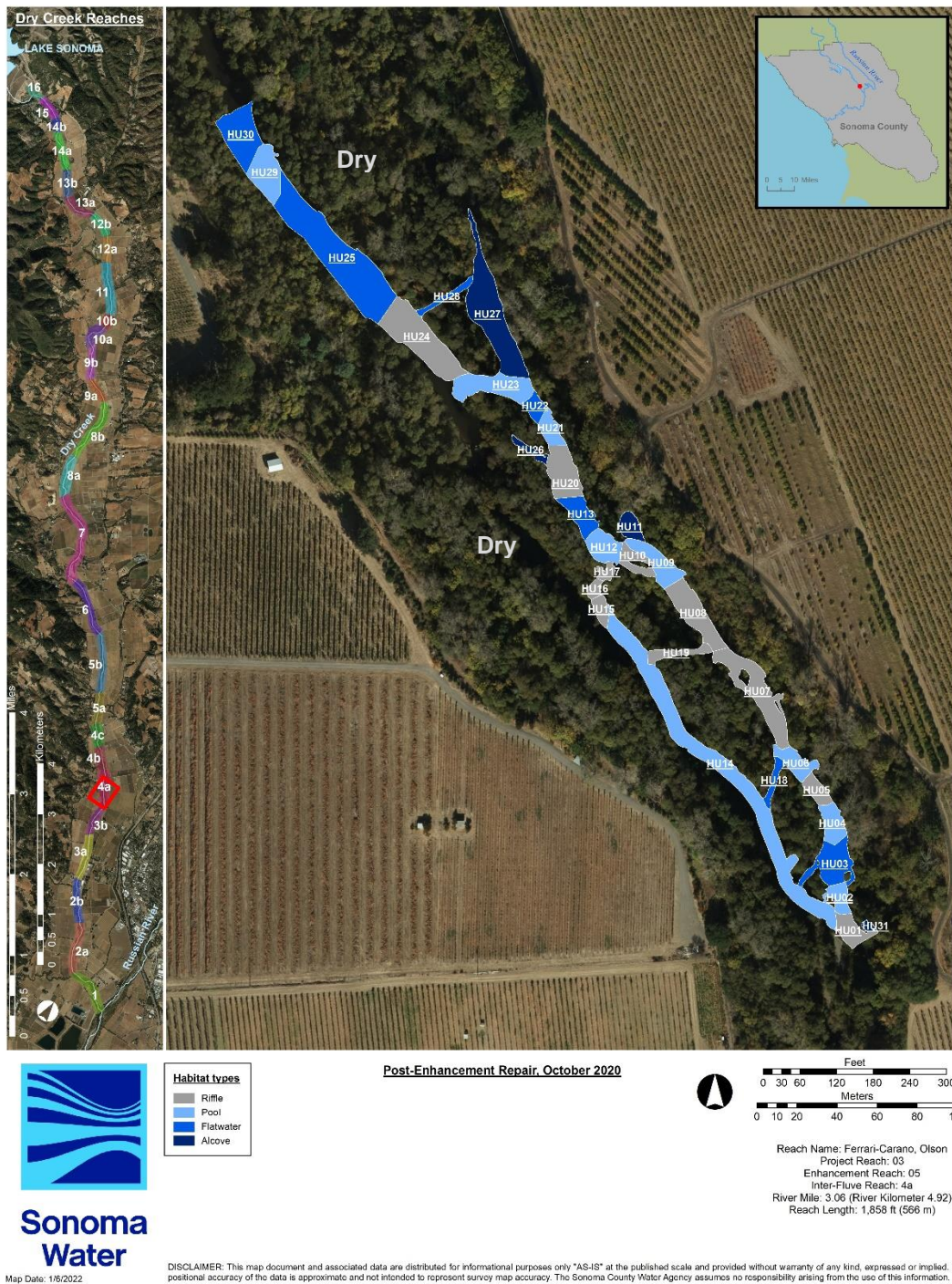


Figure 99. Habitat unit number and type within the Ferrari-Carano, Olson enhancement reach, October 2020.

Ferrari-Carano, Olson Enhancement Reach

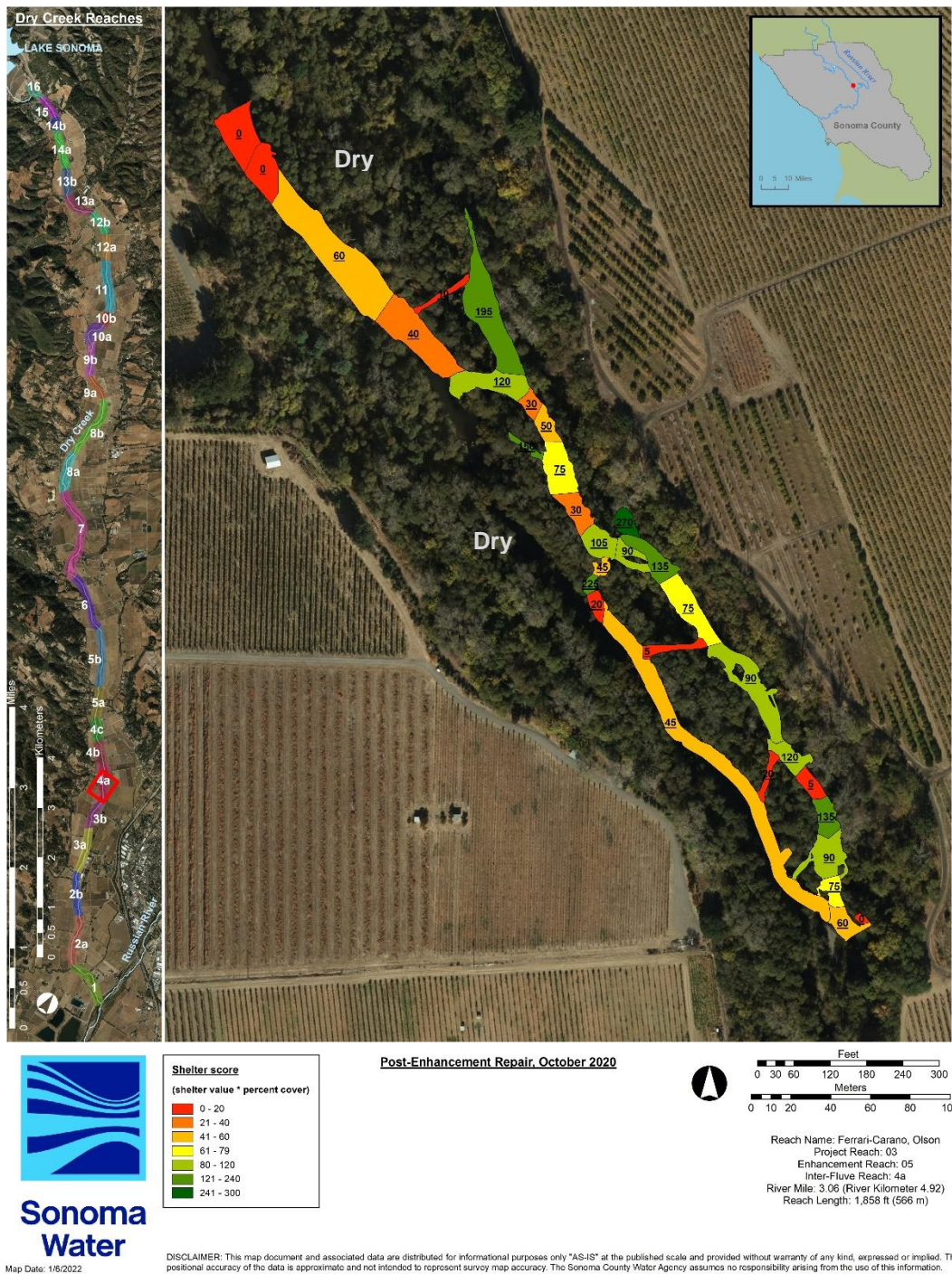


Figure 100. Habitat unit shelter scores within the Ferrari-Carano, Olson enhancement reach, October 2020.

Feature, Habitat Unit, Site, and Reach Ratings

Table 58. Adaptive Management Plan checklist feature ratings for the Ferrari-Carano, Olson enhancement reach, October 2020.

		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Project Reach		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach		5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name		FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
mmddyy		100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720
Survey Type		POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS
PROJECT SITE NUMBER		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Project Site Type		MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan
PROJECT FEATURE NUMBER		S1-01	S1-02	S1-03	S1-04	S1-05	S1-06	S1-07	S1-08	S1-09	S1-10	S1-11	S1-12	S1-13	S1-14	S1-15	S1-16	S1-17	S1-18
Feature Type Code		BF	TT	TT	TT	BF	TT	BF	TT	TT	TT	TT	TT	LW	TT	TT	TT	TT	LW
Habitat Unit		HU01	HU01 U	HU14	HU01 U	HU01 U	HU01 U	HU01 U	HU01 U	HU01 U	HU01 U	HU01 D	HU24	HU01 D	HU01 D	HU01 U	HU14	HU14	HU14
Habitat Type		Rifle	Dry	Pool	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Rifle	Dry	Dry	Dry	Pool	Pool	Pool
4.	Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	FAIL	GOOD	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	GOOD	GOOD	UNKN	POOR	FAIL	GOOD	GOOD	GOOD	GOOD
5a	Are problems with the feature visible?	YES	YES	NO	YES	NA	YES	NA	YES	YES	YES	NO	YES	YES	YES	NO	NO	NO	NO
6a	Is the feature still in its original location?	YES	NO	YES	NO	NA	NO	NA	NO	NO	NO	YES	YES	YES	NO	YES	YES	YES	YES
6b	Is the feature still in its original position?	YES	NO	YES	NO	NA	NO	NA	NO	NO	NO	NO	YES	NO	NO	YES	YES	YES	YES
6d	Is the feature still in its original orientaton?	YES	NO	YES	NO	NA	NO	NA	NO	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES
8.	If an objective, did the feature create the targeted instream habitat type?	YES	NO	YES	NO	NA	NO	NA	NO	NO	NO	NO	YES	NO	NO	NO	YES	YES	YES
9.	Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	NO	NO	NO	NA	NO	NA	NO	NO	NO	NO	YES	NO	YES	YES	NO	NO	NO
17a	If an objective, did the feature increase instream shelter rating?	YES	NO	YES	NO	NA	NO	NA	NO	NO	NO	NO	YES	YES	NO	NO	YES	YES	YES
19a	If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	NA	NO	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
21a	If an objective, did the feature lead to the targeted channel conditions?	YES	NO	NO	NO	NA	NO	NA	NO	NO	NO	NO	YES	NO	NO	NO	YES	YES	YES
25.	Did the feature achieve the targeted velocity?	YES	NO	YES	NO	NA	NO	NA	NO	NO	NO	NO	YES	YES	NO	NO	YES	YES	YES
PROJECT FEATURE NUMBER		S1-01	S1-02	S1-03	S1-04	S1-05	S1-06	S1-07	S1-08	S1-09	S1-10	S1-11	S1-12	S1-13	S1-14	S1-15	S1-16	S1-17	S1-18
4.	Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	4	1	4	1	1	1	1	1	1	4	4	0	2	1	4	4	4	4
5a	Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1
6a	Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	1	0	1	0	0	0	0	0	0	0	1	1	1	1	0	1	1	1
6b	Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	1	0	1	0	0	0	0	0	0	0	0	1	0	0	1	1	1	1
6d	Is the feature still in its original orientaton? (YES = 1 pt, NO = 0 pt)	1	0	1	0	0	0	0	0	0	0	1	1	1	1	0	1	1	1
8.	If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	1	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1
9.	Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	1	1	1	1	0	1	0	1	1	1	0	1	0	0	1	1	1	1
17a	If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	0	1	0	0	0	0	0	0	0	1	1	0	0	1	1	1	1
19a	If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21a	If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1
25.	Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	0	1	0	0	0	0	0	0	0	0	1	1	0	0	1	1	1
PROJECT FEATURE NUMBER		S1-01	S1-02	S1-03	S1-04	S1-05	S1-06	S1-07	S1-08	S1-09	S1-10	S1-11	S1-12	S1-13	S1-14	S1-15	S1-16	S1-17	S1-18
FEATURE RATING	Feature quantitative rating out of 15	12	2	12	2	1	2	1	2	2	2	6	13	4	4	2	13	13	13
	Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)	Excellent	Not rated	Excellent	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Excellent	Not rated	Not rated	Not rated	Excellent	Excellent	Excellent

Table 58. Adaptive Management Plan checklist feature ratings for the Ferrari-Carano, Olson enhancement reach, October 2020.

		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Project Reach		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach		5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name		FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
mmddyy		100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720
Survey Type		POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS
PROJECT SITE NUMBER		1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
PROJECT FEATURE NUMBER		MainChan	MainChan	MainChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
Feature Type Code		FB	FB	FB	LW	HW2	HW1	HW2	HW1	LVW	HW1	LVW	HW1	LVW	HW1	PW	HW1	R	HW1
Habitat Unit		HU01 D	HU01 D	HU01 D	HU02	HU03	HU03	HU03	HU03	HU02 U	HU02 D	HU04	HU04	HU04	HU04	HU04	HU02 D	HU05	HU02 D
Habitat Type		Dry	Dry	Dry	Pool	Flatwater	Flatwater	Flatwater	Flatwater	Dry	Dry	Pool	Pool	Pool	Pool	Pool	Dry	Riffle	Dry
4.	Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	GOOD	GOOD	FAIR	FAIR	EXCL	GOOD	EXCL	FAIL	EXCL	GOOD	GOOD	EXCL	EXCL	EXCL	GOOD	EXCL	EXCL
5a	Are problems with the feature visible?	NO	NO	NO	YES	YES	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO
6a	Is the feature still in its original location?	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES
6b	Is the feature still in its original position?	YES	YES	YES	NO	NO	NO	NO	NO	YES	NO	YES	NO	YES	YES	NO	YES	YES	YES
6d	Is the feature still in its original orientaton?	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES
8.	If an objective, did the feature create the targeted instream habitat type?	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES
9.	Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO
17a	If an objective, did the feature increase instream shelter rating?	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	YES	YES	YES	NO	NO	NO	YES
19a	If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
21a	If an objective, did the feature lead to the targeted channel conditions?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO
25.	Did the feature achieve the targeted velocity?	NA	NA	NA	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES
PROJECT FEATURE NUMBER		S1-19	S1-20	S1-21	S2-01	S2-02	S2-03	S2-04	S2-05	S2-06	S2-07	S2-08	S2-09	S2-10	S2-11	S2-12	S2-13	S2-14	S2-15
4.	Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	4	4	4	3	3	5	4	5	1	5	4	4	5	5	5	4	5	5
5a	Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	1	1	1	0	0	1	1	1	0	1	1	1	1	1	1	1	1	1
6a	Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1
6b	Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	1	1	1	0	0	0	0	1	0	1	0	1	1	0	1	1	1	1
6d	Is the feature still in its original orientaton? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1
8.	If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1
9.	Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1
17a	If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	0	0	1	1	1	1	0	0	0	1
19a	If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21a	If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
25.	Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	0	0	0	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1
PROJECT FEATURE NUMBER		S1-19	S1-20	S1-21	S2-01	S2-02	S2-03	S2-04	S2-05	S2-06	S2-07	S2-08	S2-09	S2-10	S2-11	S2-12	S2-13	S2-14	S2-15
FEATURE RATING	Feature quantitative rating out of 15	12	12	12	10	10	13	12	14	2	13	12	13	14	13	13	12	12	14
	Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)	Excellent	Excellent	Excellent	Good	Good	Excellent	Excellent	Excellent	Not rated	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent

Table 58. Adaptive Management Plan checklist feature ratings for the Ferrari-Carano, Olson enhancement reach, October 2020.

		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Project Reach		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach		5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name		FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
mmddyy		100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720
Survey Type		POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS
PROJECT SITE NUMBER		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
PROJECT FEATURE NUMBER		SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
Feature Type Code		HW2	HW1	HW1	HW1	HW1	LWV	R	HW1	HW1	PW	TT	R	HW1	HW2	HW1	LW	ALS	PW
Habitat Unit		HU06	HU06	HU06	HU06	HU06	HU06	HU07	HU07	HU07	HU07	HU02 U	HU07	HU02 D	HU02 D	HU02 D	HU02 D	HU14 2	HU08
Habitat Type		Pool	Pool	Pool	Pool	Pool	Pool	Riffle	Riffle	Riffle	Riffle	Dry	Riffle	Dry	Dry	Dry	Dry	Pool	Riffle
4.	Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD
5a	Are problems with the feature visible?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
6a	Is the feature still in its original location?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6b	Is the feature still in its original position?	YES	NO	YES	NO	NO	YES	YES	NO	NO	YES	NO	YES	NO	NO	NO	NO	NO	YES
6d	Is the feature still in its original orientaton?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
8.	If an objective, did the feature create the targeted instream habitat type?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
9.	Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
17a	If an objective, did the feature increase instream shelter rating?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
19a	If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
21a	If an objective, did the feature lead to the targeted channel conditions?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
25.	Did the feature achieve the targeted velocity?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
PROJECT FEATURE NUMBER		S2-16	S2-17	S2-18	S2-19	S2-20	S2-21	S2-22	S2-23	S2-24	S2-25	S2-26	S2-27	S2-28	S2-29	S2-30	S2-31	S2-32	S2-35
4.	Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	4	4	4	4	4	4	4	4	4	4	4	4	3	2	2	3	3	3
5a	Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
6a	Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6b	Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	1	0	1	0	0	1	1	0	0	1	0	1	0	0	0	0	0	1
6d	Is the feature still in its original orientaton? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1
8.	If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1
9.	Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1
17a	If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1
19a	If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21a	If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
25.	Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1
PROJECT FEATURE NUMBER		S2-16	S2-17	S2-18	S2-19	S2-20	S2-21	S2-22	S2-23	S2-24	S2-25	S2-26	S2-27	S2-28	S2-29	S2-30	S2-31	S2-32	S2-35
FEATURE RATING	Feature quantitative rating out of 15	13	12	13	12	12	13	14	12	12	12	4	14	6	5	5	6	10	11
	Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Not rated	Excellent	Not rated	Not rated	Not rated	Not rated	Good

Table 58. Adaptive Management Plan checklist feature ratings for the Ferrari-Carano, Olson enhancement reach, October 2020.

		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Project Reach		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach		5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name		FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
mmddyy		100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720
Survey Type		POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS
PROJECT SITE NUMBER		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
PROJECT FEATURE NUMBER		SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
Feature Type Code		R	PW	HW2	LW	LW	HW2	HW1	ALS	TT	R	PW	HW1	HW1	HW1	HW1	R	PW	HW1
Habitat Unit		HU08	HU09	HU09	HU09	HU10	HU10	HU17	HU16	HU02 U	HU10	HU12	HU11	HU11	HU11	HU11	HU13	HU20	HU20
Habitat Type		Riffle	Pool	Pool	Pool	Riffle	Riffle	Riffle	Riffle	Dry	Riffle	Pool	Alcove	Alcove	Alcove	Alcove	Flatwater	Riffle	Riffle
4.	Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	EXCL	EXCL	FAIR	GOOD	GOOD	GOOD	FAIR	FAIL	GOOD	EXCL	EXCL	EXCL	EXCL	EXCL	GOOD	GOOD	FAIR
5a	Are problems with the feature visible?	NO	NO	NO	YES	NO	YES	YES	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	YES
6a	Is the feature still in its original location?	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	NO	YES	YES
6b	Is the feature still in its original position?	YES	YES	NO	YES	NO	NO	NO	YES	NO	YES	NO	YES	YES	YES	YES	YES	YES	NO
6d	Is the feature still in its original orientaton?	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES
8.	If an objective, did the feature create the targeted instream habitat type?	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES
9.	Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
17a	If an objective, did the feature increase instream shelter rating?	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES
19a	If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	YES	YES	YES
21a	If an objective, did the feature lead to the targeted channel conditions?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO
25.	Did the feature achieve the targeted velocity?	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES
PROJECT FEATURE NUMBER		S2-36	S2-37	S2-38	S2-39	S2-40	S2-41	S2-42	S2-43	S2-44	S2-45	S2-46	S2-47	S2-48	S2-49	S2-50	S2-51	S2-52	S2-53
4.	Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	4	5	5	3	4	4	4	3	1	4	5	5	5	5	5	4	4	3
5a	Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	1	1	1	0	1	0	0	1	0	1	1	1	1	1	1	1	1	0
6a	Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0	1	1
6b	Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	1	1	0	1	0	0	0	1	0	1	0	1	1	1	1	1	1	0
6d	Is the feature still in its original orientaton? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1
8.	If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1
9.	Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
17a	If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1
19a	If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	1
21a	If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0
25.	Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1
PROJECT FEATURE NUMBER		S2-36	S2-37	S2-38	S2-39	S2-40	S2-41	S2-42	S2-43	S2-44	S2-45	S2-46	S2-47	S2-48	S2-49	S2-50	S2-51	S2-52	S2-53
FEATURE RATING	Feature quantitative rating out of 15	13	14	13	10	12	11	11	12	3	14	13	14	14	14	14	13	13	10
	Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)	Excellent	Excellent	Excellent	Good	Excellent	Good	Good	Excellent	Not rated	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Good

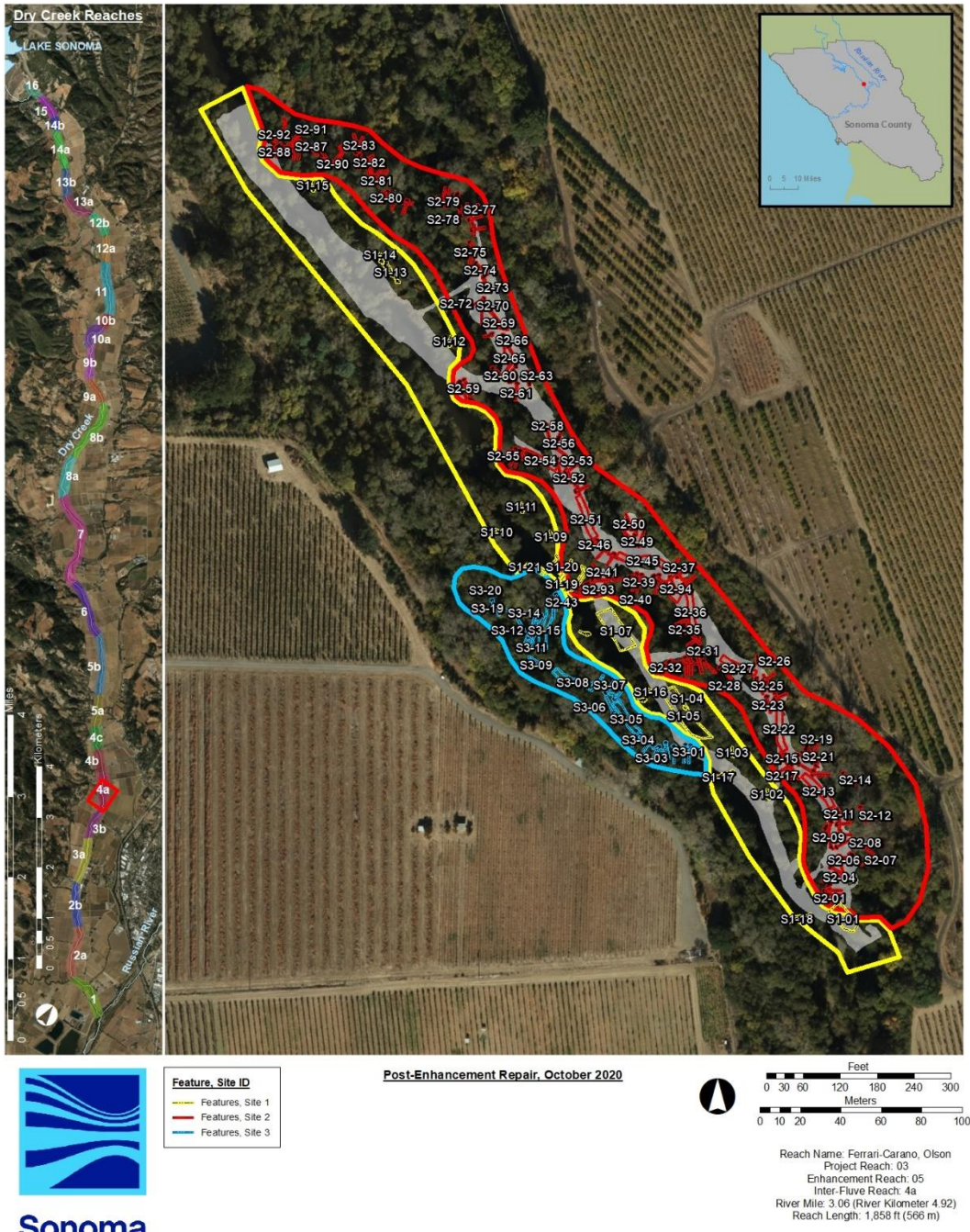
Table 58. Adaptive Management Plan checklist feature ratings for the Ferrari-Carano, Olson enhancement reach, October 2020.

		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Project Reach		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach		5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name		FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
mmddyy		100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720
Survey Type		POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS
PROJECT SITE NUMBER		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
PROJECT FEATURE NUMBER		SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
Feature Type Code		R	LW	HW1	TT	HW1	LW	LWV	HW1	TT	TT	HW1	HW1	HW1	HW1	TT	HW1	HW1	HW1	HW1	HW1	HW1
Habitat Unit		HU26	HU02 D	HU20	HU02 U	HU21	HU23	HU23	HU23	HU02 U	HU02 U	HU27	HU27	HU27	HU27	HU02 U	HU27	HU27	HU27	HU27	HU27	HU27
Habitat Type		Alcove	Dry	Riffle	Dry	Pool	Pool	Pool	Pool	Dry	Dry	Alcove	Alcove	Alcove	Alcove	Dry	Alcove	Alcove	Alcove	Alcove	Alcove	Alcove
4.	Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	FAIL	FAIL	FAIR	FAIL	FAIR	GOOD	EXCL	FAIR	FAIL	FAIL	GOOD	GOOD	GOOD	GOOD	FAIL	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD
5a	Are problems with the feature visible?	YES	YES	YES	YES	YES	NO	NO	YES	YES	YES	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO
6a	Is the feature still in its original location?	YES	YES	YES	NO	YES	YES	YES	YES	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES
6b	Is the feature still in its original position?	NO	NO	NO	NO	YES	NO	YES	YES	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES
6d	Is the feature still in its original orientaton?	NO	UNK	YES	NO	YES	YES	YES	YES	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES
8.	If an objective, did the feature create the targeted instream habitat type?	NO	NO	YES	NO	YES	YES	YES	YES	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES
9.	Were there any unintended effects by the feature on the habitat type? If Y, comment.	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
17a	If an objective, did the feature increase instream shelter rating?	NO	NO	YES	NO	YES	YES	YES	YES	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES
19a	If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
21a	If an objective, did the feature lead to the targeted channel conditions?	NO	NO	NO	NO	NO	NO	YES	YES	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES
25.	Did the feature achieve the targeted velocity?	NO	NO	YES	NO	YES	YES	YES	NO	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES
PROJECT FEATURE NUMBER		S2-54	S2-55	S2-56	S2-57	S2-58	S2-59	S2-60	S2-61	S2-62	S2-63	S2-64	S2-65	S2-66	S2-67	S2-68	S2-69	S2-70	S2-71	S2-72	S2-73	
4.	Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	1	1	3	1	3	4	5	3	1	1	4	4	4	4	1	4	4	4	4	4	4
5a	Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	0	0	0	0	0	1	1	0	0	0	1	1	1	1	0	1	1	1	1	1	1
6a	Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	1	1	1	0	1	1	1	1	0	0	1	1	1	1	0	1	1	1	1	1	1
6b	Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	0	0	0	0	1	0	1	1	0	0	1	1	1	1	0	1	1	1	1	1	1
6d	Is the feature still in its original orientaton? (YES = 1 pt, NO = 0 pt)	0	0	1	0	1	1	1	1	0	0	1	1	1	1	0	1	1	1	1	1	1
8.	If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	0	0	1	0	1	1	1	1	0	0	1	1	1	1	0	1	1	1	1	1	1
9.	Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
17a	If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	0	0	1	0	1	1	1	1	0	0	1	1	1	1	0	1	1	1	1	1	1
19a	If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21a	If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	1	1	0	0	1	1	1	1	0	1	1	1	1	1	1
25.	Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	0	0	1	0	1	1	1	0	0	0	1	1	1	1	0	1	1	1	1	1	1
PROJECT FEATURE NUMBER		S2-54	S2-55	S2-56	S2-57	S2-58	S2-59	S2-60	S2-61	S2-62	S2-63	S2-64	S2-65	S2-66	S2-67	S2-68	S2-69	S2-70	S2-71	S2-72	S2-73	
FEATURE RATING	Feature quantitative rating out of 15	2	2	9	2	10	12	14	10	2	2	13	13	13	13	2	13	13	13	13	13	
	Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)	Not rated	Not rated	Good	Not rated	Good	Excellent	Excellent	Good	Not rated	Not rated	Excellent	Excellent	Excellent	Excellent	Not rated	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent

Table 58. Adaptive Management Plan checklist feature ratings for the Ferrari-Carano, Olson enhancement reach, October 2020.

		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Project Reach		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach		5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name		FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
mmddyy		100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720
Survey Type		POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS
PROJECT SITE NUMBER		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
PROJECT SITE TYPE		SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
PROJECT FEATURE NUMBER		S3-01	S3-02	S3-03	S3-04	S3-05	S3-06	S3-07	S3-08	S3-09	S3-10	S3-11	S3-12	S3-13	S3-14	S3-15	S3-16	S3-17	S3-18	S3-19	S3-20
Feature Type Code		LW	HW1	HW2	PW	R	HW1	PW	R	HW1	HW1	HW2	HW1	HW1	LWW	R	HW2	HW2	HW1	HW1	HW1
Habitat Unit		HU14 3	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D
Habitat Type		Pool	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
4.	Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	FAIR	FAIR	UNKN	FAIL	POOR	UNKN	FAIL	FAIR	FAIR	FAIR	FAIR	UNKN	FAIL	UNKN	UNKN	GOOD	GOOD	GOOD	
5a	Are problems with the feature visible?	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6a	Is the feature still in its original location?	YES	YES	YES	YES	NO	YES	YES	NO	YES	YES	YES	YES	UNK	NO	NO	YES	UNK	YES	YES	YES
6b	Is the feature still in its original position?	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	UNK	NO	NO	NO	NO	NO	NO	NO
6d	Is the feature still in its original orientaton?	YES	YES	YES	YES	NO	YES	YES	NO	YES	YES	YES	YES	UNK	NO	NO	UNK	UNK	YES	YES	YES
8.	If an objective, did the feature create the targeted instream habitat type?	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
9.	Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
17a	If an objective, did the feature increase instream shelter rating?	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
19a	If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
21a	If an objective, did the feature lead to the targeted channel conditions?	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
25.	Did the feature achieve the targeted velocity?	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
PROJECT FEATURE NUMBER		S3-01	S3-02	S3-03	S3-04	S3-05	S3-06	S3-07	S3-08	S3-09	S3-10	S3-11	S3-12	S3-13	S3-14	S3-15	S3-16	S3-17	S3-18	S3-19	S3-20
4.	Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	4	3	3	0	1	2	0	1	3	3	3	3	0	1	1	0	0	4	4	4
5a	Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6a	Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	1	1	1	1	0	1	1	0	1	1	1	1	0	0	0	1	0	1	1	1
6b	Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6d	Is the feature still in its original orientaton? (YES = 1 pt, NO = 0 pt)	1	1	1	1	0	1	1	0	1	1	1	1	0	0	0	0	0	1	1	1
8.	If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9.	Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17a	If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19a	If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21a	If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25.	Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PROJECT FEATURE NUMBER		S3-01	S3-02	S3-03	S3-04	S3-05	S3-06	S3-07	S3-08	S3-09	S3-10	S3-11	S3-12	S3-13	S3-14	S3-15	S3-16	S3-17	S3-18	S3-19	S3-20
FEATURE RATING	Feature quantitative rating out of 15	13	5	5	2	1	4	2	1	5	5	5	5	0	1	1	1	0	6	6	6
	Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)	Excellent	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated

Ferrari-Carano, Olson Enhancement Reach



Sonoma Water

Map Date: 1/6/2022

DISCLAIMER: This map document and associated data are distributed for informational purposes only "AS-IS" at the published scale and provided without warranty of any kind, expressed or implied. The positional accuracy of the data is approximate and not intended to represent survey map accuracy. The Sonoma County Water Agency assumes no responsibility arising from the use of this information.

Figure FO 101. Enhancement sites and features survey map within the Ferrari-Carano, Olson enhancement reach, October 2020.

Ferrari-Carano, Olson Enhancement Reach

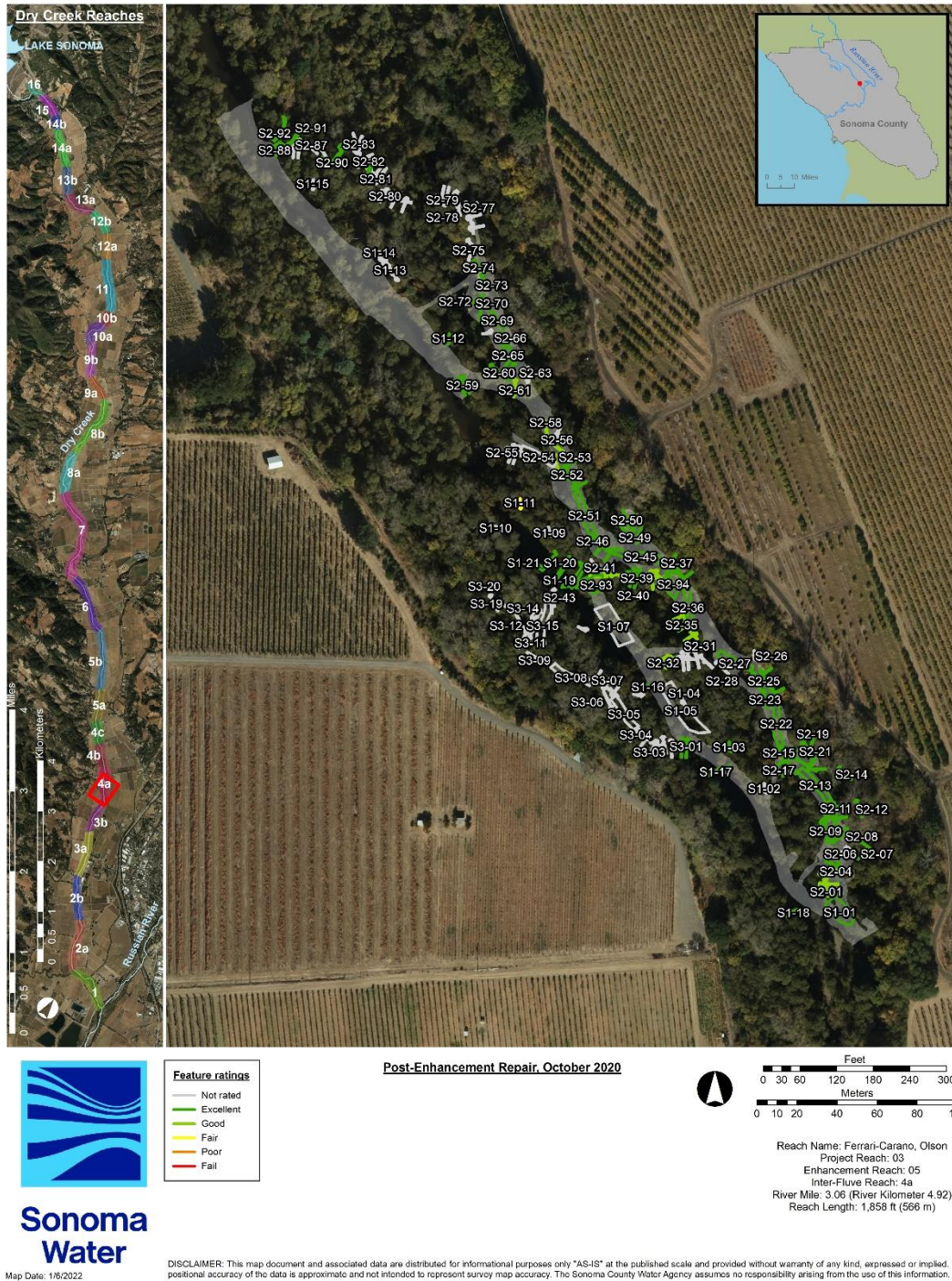


Figure 102. Feature ratings for the Ferrari-Carano, Olson enhancement reach, October 2020.

Table 59. Adaptive Management Plan checklist habitat unit ratings for the Ferrari-Carano, Olson enhancement reach, October 2020.

Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
mmddyy	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720
Survey Type	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS
HABITAT UNIT NUMBER	HU01	HU02	HU03	HU04	HU05	HU06	HU07	HU08	HU09	HU10	HU11	HU12	HU13	HU14	HU15	HU16	HU17	HU18	HU19	
Habitat Type	Riffle	Pool	Flatwater	Pool	Riffle	Pool	Riffle	Riffle	Pool	Riffle	Alcove	Pool	Flatwater	Pool	Riffle	Riffle	Riffle	Flatwater	Riffle	
PROJECT SITE NUMBER	1	2	2	2	2	2	2	2	2	2	2	2	2	1	1	2	2	2	2	
Project Site Type	MainChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	MainChan	MainChan	SideChan	SideChan	SideChan	SideChan	
11e	% Area of habitat unit within 0.5 -2.0 ft depth	71%	32%	67%	49%	85%	59%	69%	65%	56%	65%	67%	42%	41%	22%	35%	73%	65%	72%	31%
11f	% Area of habitat unit within 2.0 -4.0 ft depth	22%	41%	4%	37%	0%	21%	4%	1%	34%	2%	13%	39%	51%	45%	0%	2%	2%	10%	0%
14.	Instream shelter value in the habitat unit : 0, 1, 2, 3	2	3	3	3	1	3	3	3	3	3	3	2	3	2	3	3	2	1	1
15.	Percent of habitat unit covered by shelter: %	30	25	30	45	5	40	30	25	45	30	90	35	15	15	10	75	15	10	5
17b	a. Calculate the shelter rating for the habitat unit : 0-300	60	75	90	135	5	120	90	75	135	90	270	105	30	45	20	225	45	20	5
28.	Percent of habitat unit within targeted velocity (see above): (%)	19%	54%	42%	58%	13%	47%	20%	9%	31%	20%	94%	42%	37%	39%	9%	9%	42%	28%	6%
36e	% habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	12%	25%	19%	25%	3%	21%	7%	2%	17%	5%	61%	24%	19%	14%	0%	2%	13%	16%	0%
36f	% habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	1%	11%	0%	21%	0%	6%	0%	0%	5%	0%	13%	8%	10%	13%	0%	0%	0%	1%	0%
HABITAT UNIT NUMBER	HU01	HU02	HU03	HU04	HU05	HU06	HU07	HU08	HU09	HU10	HU11	HU12	HU13	HU14	HU15	HU16	HU17	HU18	HU19	
11e	% area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	3	4	4	4	4	4	4	4	4	4	4	4	2	3	4	4	4	3
11f	% area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	2	4	0	3	0	2	0	0	3	0	1	3	4	4	0	0	0	0	0
14.	Instream shelter value in the habitat unit : 0, 1, 2, 3 (3 = 5 pts; 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	4	5	5	5	3	5	5	5	5	5	5	5	4	5	4	5	5	4	3
15.	% hab unit covered by shelter (≥80 = 5pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)	2	2	2	3	0	3	2	2	3	2	5	2	1	1	1	4	1	1	0
17b	a. Calculate the shelter rating for the habitat unit : 0-300	2	2	3	4	0	4	3	2	4	3	5	4	0	1	0	5	1	0	0
28.	% area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	1	4	4	4	1	4	2	0	3	2	4	4	3	3	0	0	4	2	0
36e	% area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	1	2	1	2	0	2	0	0	1	0	4	2	1	1	0	0	1	1	0
36f	% area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	1	0	2	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
HABITAT UNIT QUANTITATIVE RATING	HU01	HU02	HU03	HU04	HU05	HU06	HU07	HU08	HU09	HU10	HU11	HU12	HU13	HU14	HU15	HU16	HU17	HU18	HU19	
Habitat unit quantitative rating (out of 35)	16	23	19	27	8	24	16	13	23	16	29	24	17	18	8	18	16	12	6	
HABITAT UNIT QUALITATIVE RATING	HU01	HU02	HU03	HU04	HU05	HU06	HU07	HU08	HU09	HU10	HU11	HU12	HU13	HU14	HU15	HU16	HU17	HU18	HU19	
Habitat unit qualitative rating: Excellent (≥28), Good (≥21), Fair(≥14), Poor (≥7), Fail (<7)	Fair	Good	Fair	Good	Poor	Good	Fair	Poor	Good	Fair	Excellent	Good	Fair	Fair	Poor	Fair	Fair	Poor	Fail	

Table 59. Adaptive Management Plan checklist habitat unit ratings for the Ferrari-Carano, Olson enhancement reach, October 2020.

	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
mmddy	62220	62220	62220	62220	62220	62220	62220	62220	62220	62220	62220	62220	62220	62220	62220	62220	62220	62220	62220	62220	62220
Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
HABITAT UNIT NUMBER	HU17	HU18	HU19	HU20	HU21	HU22	HU23	HU24	HU25	HU26	HU27	HU28	HU29	HU30	HU31	HU32	HU33	HU34	HU35	HU35	
Habitat Type	Alcove	Pool	Flatwater	Riffle	Alcove	Pool	Riffle	Alcove	Pool	Riffle	Pool	Flatwater	Riffle	Flatwater	Riffle	Pool	Pool	Riffle	Pool	Riffle	Pool
PROJECT SITE NUMBER	2	2	2	2	2	2	2	2	2	1	1	1	1	2	2	2	2	2	2	1	
Project Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	MainChan	MainChan	MainChan	MainChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	MainChan	
11e	% Area of habitat unit within 0.5 -2.0 ft depth	61%	41%	24%	70%	58%	30%	58%	22%	40%	77%	38%	14%	64%	74%	79%	0%	62%	1%	37%	
11f	% Area of habitat unit within 2.0 -4.0 ft depth	20%	43%	69%	20%	0%	50%	34%	39%	49%	3%	50%	57%	26%	10%	9%	0%	0%	0%	0%	
14	Instream shelter value in the habitat unit . 0, 1, 2, 3	3	3	3	3	3	2	1	3	3	2	2	3	3	3	1	3	1	3	3	
15	Percent of habitat unit covered by shelter: %	95	35	10	35	85	15	10	95	20	10	15	20	15	30	10	50	50	65	90	
17b	a. Calculate the shelter rating for the habitat unit . 0-300	285	105	30	105	255	30	10	285	60	20	30	60	45	90	30	50	150	65	270	
28	Percent of habitat unit within targeted velocity (see above): (%)	92%	39%	39%	14%	99%	30%	14%	99%	41%	16%	28%	52%	23%	23%	11%	88%	100%	100%	100%	
36e	% habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	54%	24%	19%	8%	57%	12%	4%	22%	22%	4%	13%	12%	12%	14%	3%	0%	62%	1%	37%	
36f	% habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	20%	9%	13%	1%	0%	7%	4%	38%	9%	0%	6%	27%	3%	0%	0%	0%	0%	0%	0%	
HABITAT UNIT NUMBER	HU17	HU18	HU19	HU20	HU21	HU22	HU23	HU24	HU25	HU26	HU27	HU28	HU29	HU30	HU31	HU32	HU33	HU34	HU35	HU35	
11e	% area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	4	2	4	4	3	4	2	3	4	1	4	4	4	0	4	0	4	0	
11f	% area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	2	4	4	1	0	4	3	3	4	0	4	4	2	0	0	0	0	0	0	
14	Instream shelter value in the habitat unit . 0, 1, 2, 3 (3 = 5 pts; 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	5	5	5	5	5	4	3	5	5	4	4	5	5	5	3	5	3	5	5	
15	% hab unit covered by shelter (≥80 = 5pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)	5	2	1	2	5	1	1	5	2	1	1	2	1	2	1	3	3	4	5	
17b	a. Calculate the shelter rating for the habitat unit . 0-300	5	4	0	4	5	0	0	5	2	0	0	2	1	3	0	1	5	2	5	
28	% area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	3	3	1	4	2	1	4	4	1	2	4	2	2	1	4	4	4	4	
36e	% area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	2	1	0	4	1	0	2	2	0	1	1	1	0	0	4	0	0	3	
36f	% area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	1	0	1	0	0	0	0	3	0	0	0	2	0	0	0	0	0	0	0	
HABITAT UNIT NUMBER	HU17	HU18	HU19	HU20	HU21	HU22	HU23	HU24	HU25	HU26	HU27	HU28	HU29	HU30	HU31	HU32	HU33	HU34	HU35	HU35	
Habitat unit quantitative rating (out of 35)	30	24	17	17	27	15	12	29	22	10	15	21	16	17	11	11	25	13	25	25	
Habitat unit qualitative rating: Excellent (≥28), Good (≥21), Fair(≥14), Poor (≥7), Fail (<7)	Excellent	Good	Fair	Fair	Good	Fair	Poor	Excellent	Good	Poor	Fair	Good	Fair	Fair	Poor	Poor	Good	Poor	Good	Good	

Table 59. Adaptive Management Plan checklist habitat unit ratings for the Ferrari-Carano, Olson enhancement reach, October 2020.

	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
mmddyy	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720
Survey Type	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS
	HABITAT UNIT NUMBER																
	HU20	HU21	HU22	HU23	HU24	HU25	HU26	HU27	HU28	HU29	HU30	HU31	HU14 2	HU14 3	HU18 2	HU28 2	
Habitat Type	Riffle	Pool	Flatwater	Pool	Riffle	Flatwater	Alcove	Alcove	Flatwater	Pool	Flatwater	Alcove	Pool	Pool	Flatwater	Flatwater	
	PROJECT SITE NUMBER																
	2	2	2	2	1	1	2	2	1	2	1	1	2	3	1	2	
Project Site Type	SideChan	SideChan	SideChan	SideChan	MainChan	MainChan	SideChan	SideChan	MainChan	SideChan	MainChan	MainChan	SideChan	SideChan	MainChan	SideChan	
11e	% Area of habitat unit within 0.5 -2.0 ft depth	74%	25%	46%	52%	72%	42%	46%	23%	79%	13%	66%	54%	22%	22%	72%	79%
11f	% Area of habitat unit within 2.0 -4.0 ft depth	13%	53%	37%	38%	0%	47%	0%	46%	7%	57%	20%	0%	45%	45%	10%	7%
14.	Instream shelter value in the habitat unit: 0, 1, 2, 3	3	2	2	3	2	2	2	3	1	3	2	2	3	3	2	1
15.	Percent of habitat unit covered by shelter: %	25	25	15	40	20	30	75	65	10	25	10	90	15	15	10	10
17b	a. Calculate the shelter rating for the habitat unit: 0-300	75	50	30	120	40	60	150	195	10	75	20	180	45	45	20	10
28.	Percent of habitat unit within targeted velocity (see above): (%)	15%	37%	24%	36%	18%	36%	97%	81%	13%	59%	31%	100%	39%	39%	28%	13%
36e	% habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	5%	14%	8%	20%	3%	17%	44%	22%	3%	12%	12%	54%	14%	14%	16%	3%
36f	% habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	9%	2%	7%	0%	9%	0%	33%	0%	34%	7%	0%	13%	13%	1%	0%
	HABITAT UNIT NUMBER																
	HU20	HU21	HU22	HU23	HU24	HU25	HU26	HU27	HU28	HU29	HU30	HU31	HU14 2	HU14 3	HU18 2	HU28 2	
11e	% area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	2	4	4	4	4	4	2	4	1	4	4	2	2	4	4
11f	% area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	1	4	3	3	0	4	0	4	0	4	2	0	4	4	0	0
14.	Instream shelter value in the habitat unit: 0, 1, 2, 3 (3 = 5 pts; 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	5	4	4	5	4	4	4	5	3	5	4	4	5	5	4	3
15.	% hab unit covered by shelter (≥80 = 5pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)	2	2	1	3	2	2	4	4	1	2	1	5	1	1	1	1
17b	a. Calculate the shelter rating for the habitat unit: 0-300	2	1	0	4	1	2	5	5	0	2	0	5	1	1	0	0
28.	% area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	1	3	2	3	1	3	4	4	1	4	3	4	3	3	2	1
36e	% area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	1	0	2	0	1	4	2	0	1	1	4	1	1	1	0
36f	% area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	0	3	0	3	0	0	1	1	0	0	0
	HABITAT UNIT NUMBER																
	HU20	HU21	HU22	HU23	HU24	HU25	HU26	HU27	HU28	HU29	HU30	HU31	HU14 2	HU14 3	HU18 2	HU28 2	
HABITAT UNIT RATING	Habitat unit quantitative rating (out of 35)																
	15	17	14	24	12	20	25	29	9	22	15	26	18	18	12	9	
	Habitat unit qualitative rating: Excellent (≥28), Good (≥21), Fair(≥14), Poor (≥7), Fail (<7)																
	Fair	Fair	Fair	Good	Poor	Fair	Good	Excellent	Poor	Good	Fair	Good	Fair	Fair	Poor	Poor	

Ferrari-Carano, Olson Enhancement Reach

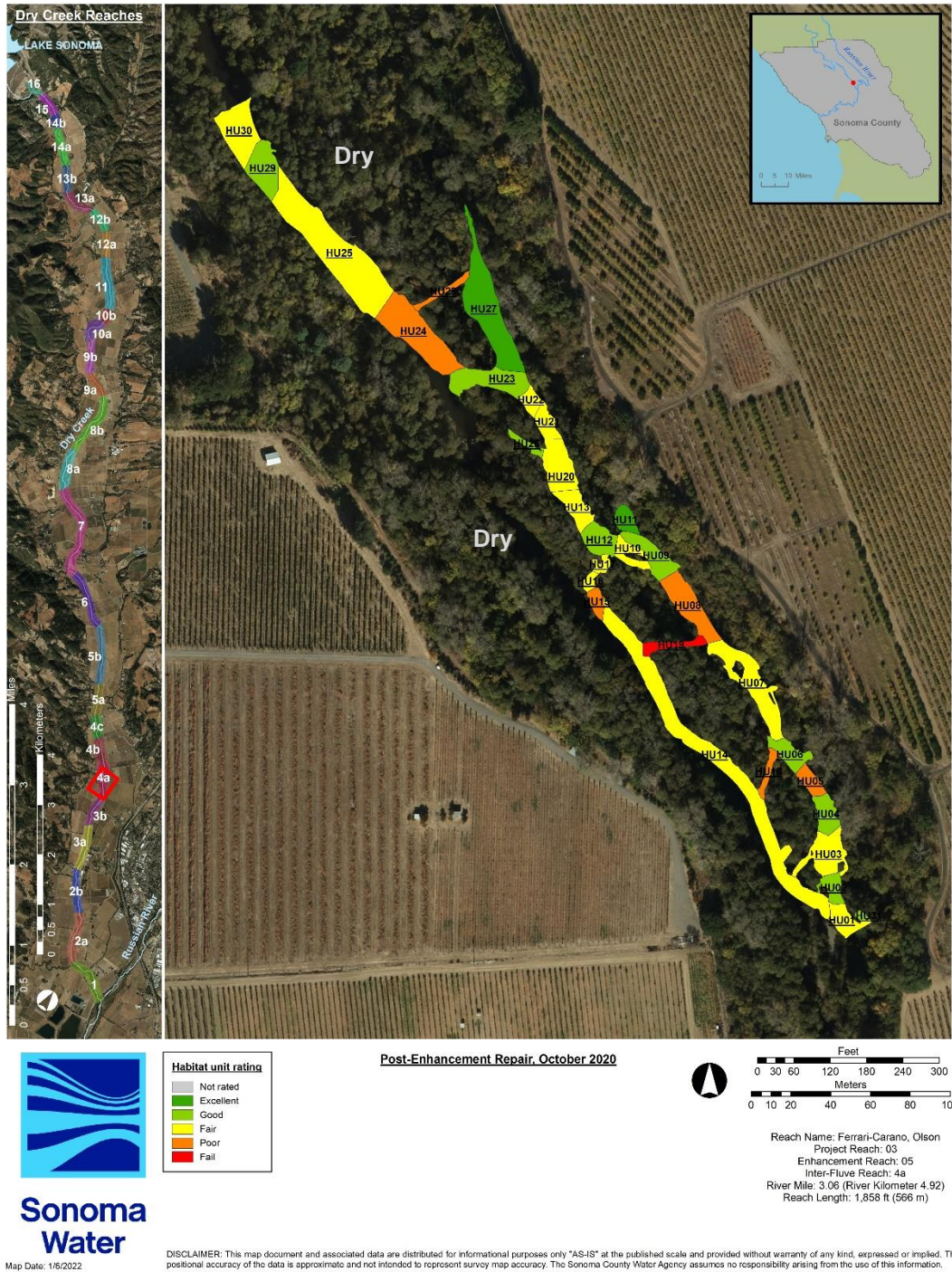


Figure 103. Habitat unit ratings for the Ferrari-Carano, Olson enhancement reach October 2020.

Table 60. Post-effective flow average feature, average habitat unit, site, and reach ratings for the Ferrari-Carano, Olson enhancement reach, October 2020.

	Project Reach	3	3	3
	Enhancement Reach	5	5	5
	ENHANCEMENT REACH NAME	FO	FO	FO
	mmdyy	100720	100720	100720
	Survey Type	POS	POS	POS
	PROJECT SITE NUMBER	1	2	3
	Project Site Type	MainChan	SideChan	SideChan
	PROJECT SITE NUMBER	1	2	3
SITE AVERAGE FEATURE RATING	Site average feature quantitative rating (out of 15; bold indicates excluded from site rating)	12	12	13
	Site average feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3), Not rated (not used to rate site)	Excellent	Excellent	Excellent
	PROJECT SITE NUMBER	1	2	3
SITE AVERAGE HABITAT UNIT RATING	Site average habitat unit quantitative rating (out of 35; bold indicates excluded from site rating)	15	19	18
	Site average qualitative rating Excellent (>=28), Good (>=21), Fair(>=14), Poor (>=7), Fail (<7), Not rated (not used to rate site)	Fair	Fair	Fair
	PROJECT SITE NUMBER	1	2	3
SITE RATING	Site quantitative rating (sum of site average feature and habitat unit ratings) (out of 50; bold indicates rating excludes feature or habitat unit rating and scoring out of 15 or 35)	28	31	31
	Site qualitative rating: Excellent (>=40), Good (>=30), Fair(>=20), Poor (>=10), Fail (<10)	Fair	Good	Good
	ENHANCEMENT REACH NAME	FO		
ENHANCEMENT REACH RATING	Enhancement reach quantitative rating (average of site ratings) (out of 50)	30		
	Enhancement reach qualitative rating: Excellent (>=40), Good (>=30), Fair(>=20), Poor (>=10), Fail (<10)	Good		

Ferrari-Carano, Olson Enhancement Reach

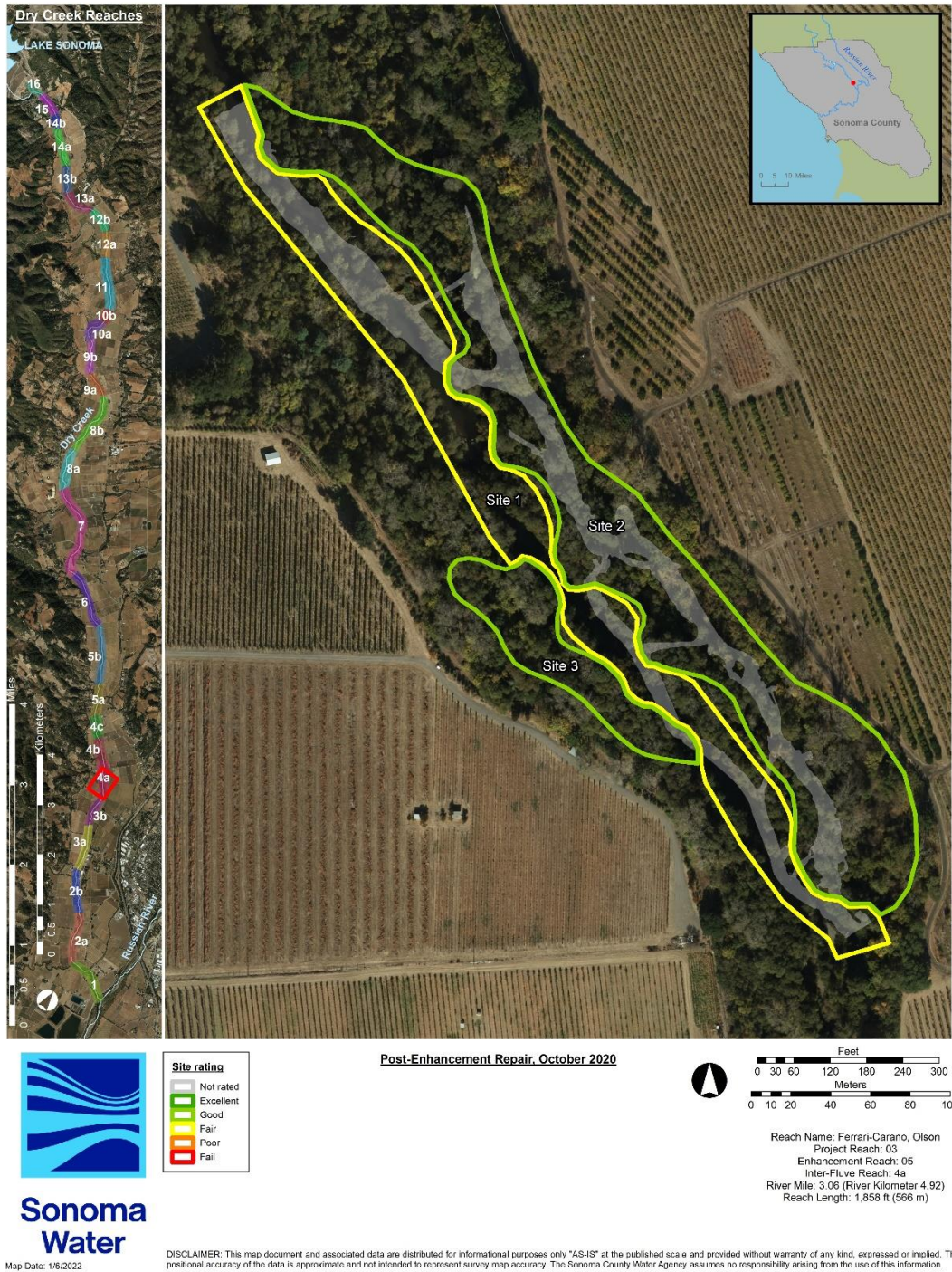


Figure 104. Enhancement site ratings for the Ferrari-Carano, Olson enhancement reach, October 2020.

Ferrari-Carano, Olson Enhancement Reach

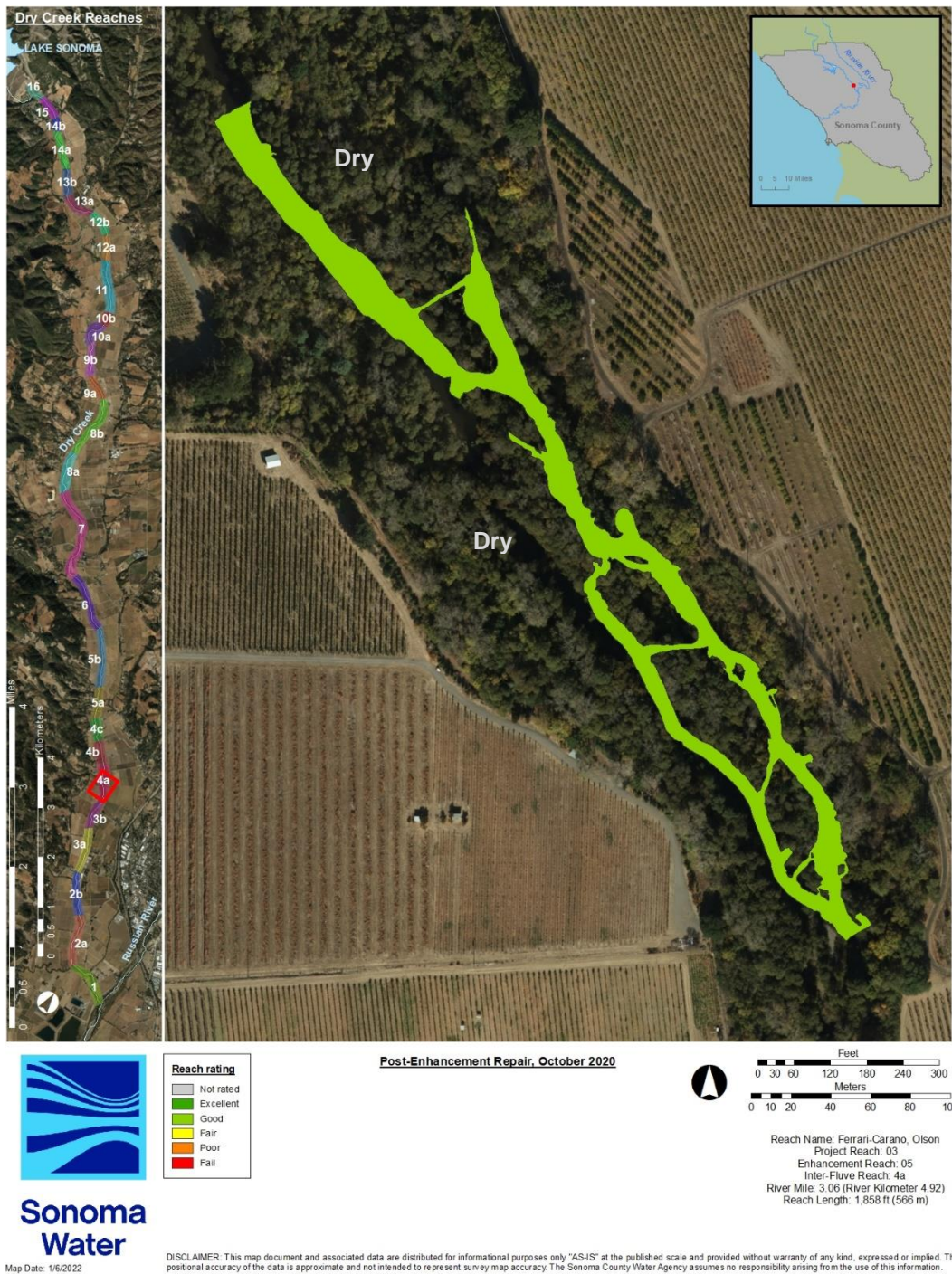


Figure 105. Enhancement reach rating for the Ferrari-Carano, Olson enhancement reach, October 2020.

Feature and Habitat Unit Checklists

Table 61. Adaptive Management Plan targeted checklist for the Ferrari-Carano, Olson enhancement reach, October 2020.

Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
mmddyy	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720
Survey Type	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS
Project Site Number	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Project Site Type	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan
Project Feature Number	NA	NA	NA	NA	NA	NA	NA	NA	S1-01	S1-02	S1-03	S1-04	S1-05	S1-06	S1-07	S1-08	S1-09	S1-10	S1-11
Feature Type Code	NA	NA	NA	NA	NA	NA	NA	NA	BF	TT	TT	TT	BF	TT	BF	TT	TT	TT	TT
Habitat Unit	HU28	HU15	HU25	HU30	HU31	HU18 2	HU29 2	HU01	HU01 U	HU14	HU01 U	HU01 U	HU01 U	HU01 U	HU01 U	HU01 U	HU01 U	HU01 U	HU01 D
Habitat Type	Flatwater	Riffle	Flatwater	Flatwater	Alcove	Flatwater	Pool	Riffle	Dry	Pool	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	NA	NA	NA	NA	NA	NA	NA	GOOD	FAIL	GOOD	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	GOOD
5a. Are problems with the feature visible?	NA	NA	NA	NA	NA	NA	NA	YES	YES	NO	YES	NA	YES	NA	YES	NA	YES	YES	YES
6a. Is the feature still in its original location?	NA	NA	NA	NA	NA	NA	NA	YES	NO	YES	NO	NA	NO	NA	NO	NA	NO	NO	YES
6b. Is the feature still in its original position?	NA	NA	NA	NA	NA	NA	NA	YES	NO	YES	NO	NA	NO	NA	NO	NA	NO	NO	NO
6d. Is the feature still in its original orientation?	NA	NA	NA	NA	NA	NA	NA	YES	NO	YES	NO	NA	NO	NA	NO	NA	NO	NO	YES
8. If an objective, did the feature create the targeted instream habitat type?	NA	NA	NA	NA	NA	NA	NA	YES	NO	YES	NO	NA	NO	NA	NO	NA	NO	NO	NO
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	NA	NA	NA	NA	NA	NA	NA	NO	NO	NO	NO	NA	NO	NA	NO	NA	NO	NO	YES
11e. % Area of habitat unit within 0.5 -2.0 ft depth	79%	35%	42%	66%	54%	72%	0%	71%	0%	22%	0%	0%	0%	0%	0%	0%	0%	0%	0%
11f. % Area of habitat unit within 2.0 -4.0 ft depth	7%	0%	47%	20%	0%	10%	0%	22%	0%	45%	0%	0%	0%	0%	0%	0%	0%	0%	0%
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	1	2	2	2	2	2	3	2	0	3	0	0	0	0	0	0	0	0	0
15. Percent of habitat unit covered by shelter: %	10	10	30	10	90	10	25	30	0	15	0	0	0	0	0	0	0	0	0
17a. If an objective, did the feature increase instream shelter rating?	NA	NA	NA	NA	NA	NA	NA	YES	NO	YES	NO	NA	NO	NA	NO	NO	NO	NO	NO
17b. a. Calculate the shelter rating for the habitat unit: 0-300	10	20	60	20	180	20	75	60	0	45	0	0	0	0	0	0	0	0	0
19a. If an objective, did the feature increase LWD count in the habitat unit?	NA	NA	NA	NA	NA	NA	NA	NO	NO	NO	NO	NA	NO	NA	NO	NO	NO	NO	NO
21a. If an objective, did the feature lead to the targeted channel conditions?	NA	NA	NA	NA	NA	NA	NA	YES	NO	NO	NO	NA	NO	NA	NO	NA	NO	NO	NO
25. Did the feature achieve the targeted velocity?	NA	NA	NA	NA	NA	NA	NA	YES	NO	YES	NO	NA	NO	NA	NO	NA	NO	NO	NO
28. Percent of habitat unit within targeted velocity (see above): (%)	13%	9%	36%	31%	100%	28%	0%	19%	0%	39%	0%	0%	0%	0%	0%	0%	0%	0%	0%
36e. % habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	3%	0%	17%	12%	54%	16%	0%	12%	0%	14%	0%	0%	0%	0%	0%	0%	0%	0%	0%
36f. % habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	0%	9%	7%	0%	1%	0%	1%	0%	13%	0%	0%	0%	0%	0%	0%	0%	0%	0%
FEATURE NUMBER	NA	NA	NA	NA	NA	NA	NA	S1-01	S1-02	S1-03	S1-04	S1-05	S1-06	S1-07	S1-08	S1-09	S1-10	S1-11	
HABITAT UNIT NUMBER	HU28	HU15	HU25	HU30	HU31	HU18 2	HU29 2	HU01	HU01 U	HU14	HU01 U	HU01 U	HU01 U	HU01 U	HU01 U	HU01 U	HU01 U	HU01 U	HU01 D
SITE NUMBER	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ENHANCEMENT REACH NAME	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
4. Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	0	0	0	0	0	0	0	4	1	4	1	1	1	1	1	1	1	1	4
5a. Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
6a. Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
6b. Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
6d. Is the feature still in its original orientation? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
8. If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
9. Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	0	0	0	0	0	0	0	1	1	1	1	0	1	0	1	0	1	1	0
11e. % area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	3	4	4	4	4	0	4	0	2	0	0	0	0	0	0	0	0	0
11f. % area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	4	2	0	0	0	2	0	4	0	0	0	0	0	0	0	0	0
14. Instream shelter value in the habitat unit: 0, 1, 2, 3 (3 = 5 pts; 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	3	4	4	4	4	4	5	4	0	5	0	0	0	0	0	0	0	0	0
15. % hab unit covered by shelter (≥80 = 5pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)	1	1	2	1	5	1	2	2	0	1	0	0	0	0	0	0	0	0	0
17a. If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
17b. a. Calculate the shelter rating for the habitat unit: 0-300	0	0	2	0	5	0	2	2	0	1	0	0	0	0	0	0	0	0	0
19a. If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21a. If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
25. Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
28. % area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	1	0	3	3	4	2	0	1	0	3	0	0	0	0	0	0	0	0	0
36e. % area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	1	1	4	1	0	1	0	1	0	0	0	0	0	0	0	0	0
36f. % area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0

Table 61. Adaptive Management Plan targeted checklist for the Ferrari-Carano, Olson enhancement reach, October 2020.

Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
mmddyy	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720
Survey Type	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS
Project Site Number	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Project Site Type	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan
Project Feature Number	S1-12	S1-13	S1-14	S1-15	S1-16	S1-17	S1-18	S1-19	S1-20	S1-21	NA	NA	NA	NA	NA	NA	NA	NA	NA
Feature Type Code	TT	LW	TT	TT	TT	LWW	LWW	FB	FB	FB	NA	NA	NA	NA	NA	NA	NA	NA	NA
Habitat Unit	HU24	HU01 D	HU01 D	HU01 U	HU14	HU14	HU14	HU01 D	HU01 D	HU01 D	HU22	HU19	HU18	HU28 2	HU02	HU03	HU03	HU03	HU03
Habitat Type	Rifle	Dry	Dry	Dry	Pool	Pool	Pool	Dry	Dry	Dry	Flatwater	Rifle	Flatwater	Flatwater	Pool	Flatwater	Flatwater	Flatwater	Flatwater
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	UNKN	POOR	FAIL	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD
5a. Are problems with the feature visible?	NO	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
6a. Is the feature still in its original location?	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6b. Is the feature still in its original position?	YES	NO	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6d. Is the feature still in its original orientaton?	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
8. If an objective, did the feature create the targeted instream habitat type?	YES	NO	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
11e. % Area of habitat unit within 0.5 -2.0 ft depth	72%	0%	0%	0%	22%	22%	22%	0%	0%	0%	46%	31%	72%	79%	32%	67%	67%	67%	67%
11f. % Area of habitat unit within 2.0 -4.0 ft depth	0%	0%	0%	0%	45%	45%	45%	0%	0%	0%	37%	0%	10%	7%	41%	4%	4%	4%	4%
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	2	0	0	0	3	3	3	0	0	0	2	1	2	1	3	3	3	3	3
15. Percent of habitat unit covered by shelter: %	20	0	0	0	15	15	15	0	0	0	15	5	10	10	25	30	30	30	30
17a. If an objective, did the feature increase instream shelter rating?	YES	YES	NO	NO	YES	YES	YES	YES	YES	YES	NA	NA	NA	NA	YES	YES	YES	YES	YES
17b. a. Calculate the shelter rating for the habitat unit: 0-300	40	0	0	0	45	45	45	0	0	0	30	5	20	10	75	90	90	90	90
19a. If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NA	NA	NA	NA	NO	NO	NO	NO	NO
21a. If an objective, did the feature lead to the targeted channel conditions?	YES	NO	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
25. Did the feature achieve the targeted velocity?	YES	YES	NO	NO	YES	YES	YES	NA	NA	NA	NA	NA	NA	NA	YES	YES	YES	YES	YES
28. Percent of habitat unit within targeted velocity (see above): (%)	18%	0%	0%	0%	39%	39%	39%	0%	0%	0%	24%	6%	28%	13%	54%	42%	42%	42%	42%
36e. % habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	3%	0%	0%	0%	14%	14%	14%	0%	0%	0%	8%	0%	16%	3%	25%	19%	19%	19%	19%
36f. % habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	0%	0%	0%	13%	13%	13%	0%	0%	0%	2%	0%	1%	0%	11%	0%	0%	0%	0%
FEATURE NUMBER	S1-12	S1-13	S1-14	S1-15	S1-16	S1-17	S1-18	S1-19	S1-20	S1-21	NA	NA	NA	NA	S2-01	S2-02	S2-03	S2-04	S2-04
HABITAT UNIT NUMBER	HU24	HU01 D	HU01 D	HU01 U	HU14	HU14	HU14	HU01 D	HU01 D	HU01 D	HU22	HU19	HU18	HU28 2	HU02	HU03	HU03	HU03	HU03
SITE NUMBER	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2
ENHANCEMENT REACH NAME	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
4. Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	4	0	2	1	4	4	4	4	4	4	0	0	0	0	3	3	5	4	4
5a. Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	1	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	1	1	1
6a. Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	1	1	1	0	1	1	1	1	1	1	0	0	0	0	1	1	1	1	1
6b. Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	1	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0
6d. Is the feature still in its original orientaton? (YES = 1 pt, NO = 0 pt)	1	1	1	0	1	1	1	1	1	1	0	0	0	0	1	1	1	1	1
8. If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	1	0	0	0	1	1	1	1	1	1	0	0	0	0	1	1	1	1	1
9. Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	1	0	0	1	1	1	1	1	1	1	0	0	0	0	1	1	1	1	1
11e. % area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	0	0	0	2	2	2	0	0	0	4	3	4	4	3	4	4	4	4
11f. % area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	4	4	4	0	0	0	3	0	0	0	4	0	0	0	0
14. Instream shelter value in the habitat unit: 0, 1, 2, 3 (3 = 5 pts; 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	4	0	0	0	5	5	5	0	0	0	4	3	4	3	5	5	5	5	5
15. % hab unit covered by shelter (≥80 = 5pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)	2	0	0	0	1	1	1	0	0	0	1	0	1	1	2	2	2	2	2
17a. If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	1	0	0	1	1	1	1	1	1	0	0	0	0	1	1	1	1	1
17b. a. Calculate the shelter rating for the habitat unit: 0-300	1	0	0	0	1	1	1	0	0	0	0	0	0	0	2	3	3	3	3
19a. If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21a. If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	1	0	0	0	1	1	1	1	1	1	0	0	0	0	1	1	1	1	1
25. Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	1	0	0	1	1	1	0	0	0	0	0	0	0	1	1	1	1	1
28. % area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	1	0	0	0	3	3	3	0	0	0	2	0	2	1	4	4	4	4	4
36e. % area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	1	1	1	0	0	0	0	0	1	0	2	1	1	1	1
36f. % area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	1	1	1	0	0	0	0	0	0	0	1	0	0	0	0

Table 61. Adaptive Management Plan targeted checklist for the Ferrari-Carano, Olson enhancement reach, October 2020.

Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
mmddyy	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720
Survey Type	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS
Project Site Number	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Project Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
Project Feature Number	S2-05	S2-06	S2-07	S2-08	S2-09	S2-10	S2-11	S2-12	S2-13	S2-14	S2-15	S2-16	S2-17	S2-18	S2-19	S2-20	S2-21	S2-22	S2-22	
Feature Type Code	HW1	LWW	HW1	HW1	LWW	HW1	PW	HW1	R	HW1	PW	HW2	HW1	HW1	HW1	HW1	HW1	LWW	R	R
Habitat Unit	HU03	HU02 U	HU02 D	HU04	HU04	HU04	HU04	HU04	HU02 D	HU05	HU02 D	HU06	HU06	HU06	HU06	HU06	HU06	HU06	HU07	HU07
Habitat Type	Flatwater	Dry	Dry	Pool	Pool	Pool	Pool	Pool	Dry	Riffle	Dry	Pool	Pool	Pool	Pool	Pool	Pool	Pool	Pool	Riffle
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	EXCL	FAIL	EXCL	GOOD	GOOD	EXCL	EXCL	EXCL	GOOD	EXCL	EXCL	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD
5a. Are problems with the feature visible?	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
6a. Is the feature still in its original location?	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6b. Is the feature still in its original position?	YES	NO	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	NO	NO	YES	YES
6d. Is the feature still in its original orientation?	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
8. If an objective, did the feature create the targeted instream habitat type?	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
11e. % Area of habitat unit within 0.5 -2.0 ft depth	67%	0%	0%	49%	49%	49%	49%	49%	0%	85%	0%	59%	59%	59%	59%	59%	59%	59%	59%	69%
11f. % Area of habitat unit within 2.0 -4.0 ft depth	4%	0%	0%	37%	37%	37%	37%	37%	0%	0%	0%	21%	21%	21%	21%	21%	21%	21%	21%	4%
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	3	0	0	3	3	3	3	3	0	1	0	40	40	40	40	40	40	40	40	30
15. Percent of habitat unit covered by shelter: %	30	0	0	45	45	45	45	45	0	5	0	40	40	40	40	40	40	40	40	30
17a. If an objective, did the feature increase instream shelter rating?	YES	NO	NO	YES	YES	YES	YES	YES	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
17b. a. Calculate the shelter rating for the habitat unit: 0-300	90	0	0	135	135	135	135	135	0	5	0	120	120	120	120	120	120	120	120	90
19a. If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES
21a. If an objective, did the feature lead to the targeted channel conditions?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
25. Did the feature achieve the targeted velocity?	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
28. Percent of habitat unit within targeted velocity (see above): (%)	42%	0%	0%	58%	58%	58%	58%	58%	0%	13%	0%	47%	47%	47%	47%	47%	47%	47%	47%	20%
36e. % habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	19%	0%	0%	25%	25%	25%	25%	25%	0%	3%	0%	21%	21%	21%	21%	21%	21%	21%	21%	7%
36f. % habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	0%	0%	21%	21%	21%	21%	21%	0%	0%	0%	6%	6%	6%	6%	6%	6%	6%	6%	0%
FEATURE NUMBER	S2-05	S2-06	S2-07	S2-08	S2-09	S2-10	S2-11	S2-12	S2-13	S2-14	S2-15	S2-16	S2-17	S2-18	S2-19	S2-20	S2-21	S2-22	S2-22	
HABITAT UNIT NUMBER	HU03	HU02 U	HU02 D	HU04	HU04	HU04	HU04	HU04	HU02 D	HU05	HU02 D	HU06	HU06	HU06	HU06	HU06	HU06	HU06	HU06	HU07
SITE NUMBER	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
ENHANCEMENT REACH NAME	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
4. Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	5	1	5	4	4	5	5	5	4	5	5	4	4	4	4	4	4	4	4	4
5a. Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6a. Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6b. Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	1	0	1	0	1	1	1	0	1	1	1	1	0	1	0	1	0	1	1	1
6d. Is the feature still in its original orientation? (YES = 1 pt, NO = 0 pt)	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8. If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
9. Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
11e. % area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	0	0	4	4	4	4	4	0	4	0	4	4	4	4	4	4	4	4	4
11f. % area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	3	3	3	3	3	0	0	0	2	2	2	2	2	2	2	2	0
14. Instream shelter value in the habitat unit: 0, 1, 2, 3 (3 = 5 pts; 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	5	0	0	5	5	5	5	5	0	3	0	5	5	5	5	5	5	5	5	5
15. % hab unit covered by shelter (≥80 = 5pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)	2	0	0	3	3	3	3	3	0	0	0	3	3	3	3	3	3	3	3	2
17a. If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	0	0	1	1	1	1	1	0	0	0	1	1	1	1	1	1	1	1	1
17b. a. Calculate the shelter rating for the habitat unit: 0-300	3	0	0	4	4	4	4	4	0	0	0	4	4	4	4	4	4	4	4	3
19a. If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
21a. If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
25. Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
28. % area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	0	0	4	4	4	4	4	0	1	0	4	4	4	4	4	4	4	4	2
36e. % area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	1	0	0	2	2	2	2	2	0	0	0	2	2	2	2	2	2	2	2	0
36f. % area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	2	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0

Table 61. Adaptive Management Plan targeted checklist for the Ferrari-Carano, Olson enhancement reach, October 2020.

Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
mmdyyy	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720
Survey Type	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS
Project Site Number	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Project Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
Project Feature Number	S2-23	S2-24	S2-25	S2-26	S2-27	S2-28	S2-29	S2-30	S2-31	S2-32	S2-35	S2-36	S2-37	S2-38	S2-39	S2-40	S2-41	S2-42	
Feature Type Code	HW1	HW1	PW	TT	R	HW1	HW2	HW1	LW	ALS	PW	R	PW	HW2	LW	LW	HW2	HW1	
Habitat Unit	HU07	HU07	HU07	HU02 U	HU07	HU02 D	HU02 D	HU02 D	HU02 D	HU14 2	HU08	HU08	HU09	HU09	HU09	HU10	HU17	HU17	
Habitat Type	Riffle	Riffle	Riffle	Dry	Riffle	Dry	Dry	Dry	Dry	Pool	Riffle	Riffle	Pool	Pool	Pool	Riffle	Riffle	Riffle	
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	GOOD	GOOD	FAIL	GOOD	FAIR	POOR	POOR	FAIR	FAIR	FAIR	GOOD	EXCL	EXCL	FAIR	GOOD	GOOD	GOOD	
5a. Are problems with the feature visible?	NO	NO	YES	YES	NO	YES	YES	YES	YES	YES	YES	NO	NO	NO	YES	NO	YES	YES	
6a. Is the feature still in its original location?	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
6b. Is the feature still in its original position?	NO	NO	YES	NO	YES	NO	NO	NO	NO	NO	YES	YES	YES	NO	YES	NO	NO	NO	
6d. Is the feature still in its original orientaton?	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
8. If an objective, did the feature create the targeted instream habitat type?	YES	YES	YES	NO	YES	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	NO	NO	NO	NO	YES	YES	YES	YES	NO	NO	NO	NO	NO	YES	NO	NO	NO	
11e. % Area of habitat unit within 0.5 -2.0 ft depth	69%	69%	69%	0%	69%	0%	0%	0%	0%	22%	65%	65%	56%	56%	56%	65%	65%	65%	
11f. % Area of habitat unit within 2.0 -4.0 ft depth	4%	4%	4%	0%	4%	0%	0%	0%	0%	45%	1%	1%	34%	34%	34%	2%	2%	2%	
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	3	3	3	0	3	0	0	0	0	3	3	3	3	3	3	3	3	3	
15. Percent of habitat unit covered by shelter: %	30	30	30	0	30	0	0	0	0	15	25	25	45	45	45	30	15	15	
17a. If an objective, did the feature increase instream shelter rating?	YES	YES	YES	NO	YES	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	
17b. a. Calculate the shelter rating for the habitat unit: 0-300	90	90	90	0	90	0	0	0	0	45	75	75	135	135	135	90	45	45	
19a. If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
21a. If an objective, did the feature lead to the targeted channel conditions?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
25. Did the feature achieve the targeted velocity?	YES	YES	YES	YES	YES	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	
28. Percent of habitat unit within targeted velocity (see above): (%)	20%	20%	20%	0%	20%	0%	0%	0%	0%	39%	9%	9%	31%	31%	31%	20%	42%	42%	
36e. % habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	7%	7%	7%	0%	7%	0%	0%	0%	0%	14%	2%	2%	17%	17%	17%	5%	13%	13%	
36f. % habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	0%	0%	0%	0%	0%	0%	0%	0%	13%	0%	0%	5%	5%	5%	0%	0%	0%	
FEATURE NUMBER	S2-23	S2-24	S2-25	S2-26	S2-27	S2-28	S2-29	S2-30	S2-31	S2-32	S2-35	S2-36	S2-37	S2-38	S2-39	S2-40	S2-41	S2-42	
HABITAT UNIT NUMBER	HU07	HU07	HU07	HU02 U	HU07	HU02 D	HU02 D	HU02 D	HU02 D	HU14 2	HU08	HU08	HU09	HU09	HU09	HU10	HU17	HU17	
SITE NUMBER	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
ENHANCEMENT REACH NAME	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	
4. Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	4	4	4	1	4	3	2	2	3	3	3	4	5	5	3	4	4	4	
5a. Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	1	1	0	0	1	0	0	0	0	0	0	1	1	1	0	1	0	0	
6a. Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
6b. Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	0	0	1	0	1	0	0	0	0	0	1	1	1	0	1	0	0	0	
6d. Is the feature still in its original orientaton? (YES = 1 pt, NO = 0 pt)	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
8. If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	1	1	1	0	1	0	0	0	0	1	1	1	1	1	1	1	1	1	
9. Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	1	1	1	1	1	0	0	0	0	1	1	1	1	1	0	1	1	1	
11e. % area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	4	4	0	4	0	0	0	0	2	4	4	4	4	4	4	4	4	
11f. % area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	0	0	0	0	4	0	0	3	3	3	0	0	0	
14. Instream shelter value in the habitat unit: 0, 1, 2, 3 (3 = 5 pts; 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	5	5	5	0	5	0	0	0	0	5	5	5	5	5	5	5	5	5	
15. % hab unit covered by shelter (≥80 = 5pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)	2	2	2	0	2	0	0	0	0	1	2	2	3	3	3	2	1	1	
17a. If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	1	1	0	1	0	0	0	0	1	1	1	1	1	1	1	1	1	
17b. a. Calculate the shelter rating for the habitat unit: 0-300	3	3	3	0	3	0	0	0	0	1	2	2	4	4	4	3	1	1	
19a. If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
21a. If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
25. Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	0	0	0	0	1	1	1	1	1	1	1	1	1	
28. % area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	2	2	2	0	2	0	0	0	0	3	0	0	3	3	3	2	4	4	
36e. % area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	0	1	1	
36f. % area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	

Table 61. Adaptive Management Plan targeted checklist for the Ferrari-Carano, Olson enhancement reach, October 2020.

Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
mmdyyy	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720
Survey Type	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS
Project Site Number	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Project Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
Project Feature Number	S2-43	S2-44	S2-45	S2-46	S2-47	S2-48	S2-49	S2-50	S2-51	S2-52	S2-53	S2-54	S2-55	S2-56	S2-57	S2-58	S2-59	S2-60	S2-60
Feature Type Code	ALS	TT	R	PW	HW1	HW1	HW1	HW1	R	PW	HW1	R	LW	HW1	TT	HW1	LW	LVW	LVW
Habitat Unit	HU16	HU02 U	HU10	HU12	HU11	HU11	HU11	HU11	HU13	HU20	HU20	HU26	HU02 D	HU20	HU02 U	HU21	HU23	HU23	HU23
Habitat Type	Riffle	Dry	Riffle	Pool	Alcove	Alcove	Alcove	Alcove	Flatwater	Riffle	Riffle	Alcove	Dry	Riffle	Dry	Pool	Pool	Pool	Pool
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	FAIR	FAIL	GOOD	EXCL	EXCL	EXCL	EXCL	EXCL	GOOD	GOOD	FAIR	FAIL	FAIL	FAIR	FAIL	FAIR	GOOD	EXCL	EXCL
5a. Are problems with the feature visible?	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES	NO	NO	NO
6a. Is the feature still in its original location?	YES	NO	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	NO	YES	YES	YES
6b. Is the feature still in its original position?	YES	NO	YES	NO	YES	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO	YES	NO	YES	YES
6d. Is the feature still in its original orientaton?	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	UNK	YES	NO	YES	YES	YES	YES
8. If an objective, did the feature create the targeted instream habitat type?	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO	YES	YES	YES
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	NO	NO	NO	NO	NO	NO
11e. % Area of habitat unit within 0.5 -2.0 ft depth	73%	0%	65%	42%	67%	67%	67%	67%	41%	74%	74%	46%	0%	74%	0%	25%	52%	52%	52%
11f. % Area of habitat unit within 2.0 -4.0 ft depth	2%	0%	2%	39%	13%	13%	13%	13%	51%	13%	13%	0%	0%	13%	0%	53%	38%	38%	38%
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	3	0	3	3	3	3	3	3	2	3	3	2	0	3	0	2	3	3	3
15. Percent of habitat unit covered by shelter: %	75	0	30	35	90	90	90	90	15	25	25	75	0	25	0	25	40	40	40
17a. If an objective, did the feature increase instream shelter rating?	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO	YES	NO	YES	YES	YES
17b. a. Calculate the shelter rating for the habitat unit: 0-300	225	0	90	105	270	270	270	270	30	75	75	150	0	75	0	50	120	120	120
19a. If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	YES	NO	NO	NO	NO	NO	YES	YES	YES	NO	NO	NO	NO	NO	YES	NO	NO
21a. If an objective, did the feature lead to the targeted channel conditions?	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES
25. Did the feature achieve the targeted velocity?	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	NO	NO	YES	NO	YES	YES	YES
28. Percent of habitat unit within targeted velocity (see above): (%)	9%	0%	20%	42%	94%	94%	94%	94%	37%	15%	15%	97%	0%	15%	0%	37%	36%	36%	36%
36e. % habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	2%	0%	5%	24%	61%	61%	61%	61%	19%	5%	5%	44%	0%	5%	0%	14%	20%	20%	20%
36f. % habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	0%	0%	8%	13%	13%	13%	13%	10%	0%	0%	0%	0%	0%	0%	9%	7%	7%	7%
FEATURE NUMBER	S2-43	S2-44	S2-45	S2-46	S2-47	S2-48	S2-49	S2-50	S2-51	S2-52	S2-53	S2-54	S2-55	S2-56	S2-57	S2-58	S2-59	S2-60	S2-60
HABITAT UNIT NUMBER	HU16	HU02 U	HU10	HU12	HU11	HU11	HU11	HU11	HU13	HU20	HU20	HU26	HU02 D	HU20	HU02 U	HU21	HU23	HU23	HU23
SITE NUMBER	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
ENHANCEMENT REACH NAME	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
4. Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	3	1	4	5	5	5	5	5	4	4	3	1	1	3	1	3	4	5	5
5a. Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	1	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	1	1	1
6a. Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6b. Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	1	0	1	0	1	1	1	1	1	1	0	0	0	0	0	1	0	1	1
6d. Is the feature still in its original orientaton? (YES = 1 pt, NO = 0 pt)	1	0	1	1	1	1	1	1	1	1	1	0	0	1	0	1	1	1	1
8. If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	1	0	1	1	1	1	1	1	1	1	1	0	0	1	0	1	1	1	1
9. Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1
11e. % area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	0	4	4	4	4	4	4	4	4	4	4	0	4	0	2	4	4	4
11f. % area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	3	1	1	1	1	4	1	1	0	0	1	0	4	3	3	3
14. Instream shelter value in the habitat unit: 0, 1, 2, 3 (3 = 5 pts; 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	5	0	5	5	5	5	5	5	4	5	5	4	0	5	0	4	5	5	5
15. % hab unit covered by shelter (≥80 = 5pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)	4	0	2	2	5	5	5	5	1	2	2	4	0	2	0	2	3	3	3
17a. If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	0	1	1	1	1	1	1	1	1	1	0	0	1	0	1	1	1	1
17b. a. Calculate the shelter rating for the habitat unit: 0-300	5	0	3	4	5	5	5	5	0	2	2	5	0	2	0	1	4	4	4
19a. If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	1	0	0	0	0	0	1	1	1	0	0	0	0	0	1	0	0
21a. If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	1	1
25. Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	0	1	1	1	1	1	1	1	1	1	0	0	1	0	1	1	1	1
28. % area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	2	4	4	4	4	4	3	1	1	4	0	1	0	3	3	3	3
36e. % area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	2	4	4	4	4	1	0	0	4	0	0	0	1	2	2	2
36f. % area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0

Table 61. Adaptive Management Plan targeted checklist for the Ferrari-Carano, Olson enhancement reach, October 2020.

Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
mmdyyy	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720
Survey Type	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS
Project Site Number	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Project Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
Project Feature Number	S2-61	S2-62	S2-63	S2-64	S2-65	S2-66	S2-67	S2-68	S2-69	S2-70	S2-71	S2-72	S2-73	S2-74	S2-75	S2-76	S2-77	S2-78	
Feature Type Code	HW1	TT	TT	HW1	HW1	HW1	HW1	TT	HW1	HW1	HW1	HW1	HW1	HW2	HW1	HW1	HW1	LVW	LVW
Habitat Unit	HU23	HU02 U	HU02 U	HU27	HU27	HU27	HU27	HU02 U	HU27	HU27	HU27	HU27	HU27	HU27	HU02 D	HU02 D	HU27	HU02 D	HU27
Habitat Type	Pool	Dry	Dry	Alcove	Alcove	Alcove	Alcove	Dry	Alcove	Alcove	Alcove	Alcove	Alcove	Alcove	Dry	Dry	Alcove	Dry	Dry
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	FAIR	FAIL	FAIL	GOOD	GOOD	GOOD	GOOD	FAIL	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	FAIL	FAIL	POOR	FAIL
5a. Are problems with the feature visible?	YES	YES	YES	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	YES	YES	YES	YES
6a. Is the feature still in its original location?	YES	NO	NO	YES	YES	YES	YES	NO	YES	NO	YES	YES	YES	YES	YES	UNK	UNK	YES	UNK
6b. Is the feature still in its original position?	YES	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	UNK	UNK	NO	UNK	UNK
6d. Is the feature still in its original orientaton?	YES	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	UNK	UNK	YES	UNK	UNK
8. If an objective, did the feature create the targeted instream habitat type?	YES	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	YES	YES
11e. % Area of habitat unit within 0.5 -2.0 ft depth	52%	0%	0%	23%	23%	23%	23%	0%	23%	23%	23%	23%	23%	23%	23%	0%	0%	23%	0%
11f. % Area of habitat unit within 2.0 -4.0 ft depth	38%	0%	0%	46%	46%	46%	46%	0%	46%	46%	46%	46%	46%	46%	46%	0%	0%	46%	0%
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	3	0	0	3	3	3	3	0	3	3	3	3	3	3	3	0	0	3	0
15. Percent of habitat unit covered by shelter: %	40	0	0	65	65	65	65	0	65	65	65	65	65	65	65	0	0	65	0
17a. If an objective, did the feature increase instream shelter rating?	YES	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO	NO
17b. a. Calculate the shelter rating for the habitat unit: 0-300	120	0	0	195	195	195	195	0	195	195	195	195	195	195	0	0	195	0	0
19a. If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
21a. If an objective, did the feature lead to the targeted channel conditions?	YES	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	NO	NO	NO	NO
25. Did the feature achieve the targeted velocity?	NO	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO
28. Percent of habitat unit within targeted velocity (see above): (%)	36%	0%	0%	81%	81%	81%	81%	0%	81%	81%	81%	81%	81%	81%	81%	0%	0%	81%	0%
36e. % habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	20%	0%	0%	22%	22%	22%	22%	0%	22%	22%	22%	22%	22%	22%	22%	0%	0%	22%	0%
36f. % habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	7%	0%	0%	33%	33%	33%	33%	0%	33%	33%	33%	33%	33%	33%	33%	0%	0%	33%	0%
FEATURE NUMBER																			
HABITAT UNIT NUMBER																			
SITE NUMBER																			
ENHANCEMENT REACH NAME																			
4. Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	3	1	1	4	4	4	4	1	4	4	4	4	4	4	1	1	1	2	1
5a. Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	0	0	0	1	1	1	1	0	1	1	1	1	1	1	1	0	0	0	0
6a. Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	1	0	0	1	1	1	1	0	1	1	1	1	1	1	1	0	0	1	0
6b. Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	1	0	0	1	1	1	1	0	1	1	1	1	1	1	1	0	0	0	0
6d. Is the feature still in its original orientaton? (YES = 1 pt, NO = 0 pt)	1	0	0	1	1	1	1	0	1	1	1	1	1	1	1	0	0	1	0
8. If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	1	0	0	1	1	1	1	0	1	1	1	1	1	1	1	0	0	1	0
9. Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0
11e. % area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	4	0	0	2	2	2	2	0	2	2	2	2	2	2	2	0	0	2	0
11f. % area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	3	0	0	4	4	4	4	0	4	4	4	4	4	4	4	0	0	4	0
14. Instream shelter value in the habitat unit: 0, 1, 2, 3 (3 = 5 pts, 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	5	0	0	5	5	5	5	0	5	5	5	5	5	5	5	0	0	5	0
15. % hab unit covered by shelter (≥80 = 5pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)	3	0	0	4	4	4	4	0	4	4	4	4	4	4	4	0	0	4	0
17a. If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	0	0	1	1	1	1	0	1	1	1	1	1	1	1	0	0	1	0
17b. a. Calculate the shelter rating for the habitat unit: 0-300	4	0	0	5	5	5	5	0	5	5	5	5	5	5	5	0	0	5	0
19a. If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21a. If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	1	0	0	1	1	1	1	0	1	1	1	1	1	1	1	0	0	0	0
25. Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	0	0	0	1	1	1	1	0	1	1	1	1	1	1	1	0	0	1	0
28. % area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	3	0	0	4	4	4	4	0	4	4	4	4	4	4	4	0	0	4	0
36e. % area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	2	0	0	2	2	2	2	0	2	2	2	2	2	2	2	0	0	2	0
36f. % area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	3	3	3	3	0	3	3	3	3	3	3	3	0	0	3	0

Table 61. Adaptive Management Plan targeted checklist for the Ferrari-Carano, Olson enhancement reach, October 2020.

Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
mmdyyy	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720
Survey Type	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS
Project Site Number	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Project Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
Project Feature Number	S3-06	S3-07	S3-08	S3-09	S3-10	S3-11	S3-12	S3-13	S3-14	S3-15	S3-16	S3-17	S3-18	S3-19	S3-20	
Feature Type Code	HW1	PW	R	HW1	HW1	HW2	HW1	HW1	LVW	R	HW2	HW2	HW1	HW1	HW1	
Habitat Unit	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	
Habitat Type	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	POOR	UNKN	FAIL	FAIR	FAIR	FAIR	FAIR	UNKN	FAIL	FAIL	UNKN	UNKN	GOOD	GOOD	GOOD	
5a. Are problems with the feature visible?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
6a. Is the feature still in its original location?	YES	YES	NO	YES	YES	YES	YES	UNKN	NO	NO	YES	UNKN	YES	YES	YES	
6b. Is the feature still in its original position?	NO	NO	NO	NO	NO	NO	NO	UNKN	NO	NO	NO	NO	NO	NO	NO	
6d. Is the feature still in its original orientation?	YES	YES	NO	YES	YES	YES	YES	UNKN	NO	NO	UNKN	UNKN	YES	YES	YES	
8. If an objective, did the feature create the targeted instream habitat type?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
11e. % Area of habitat unit within 0.5 -2.0 ft depth	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
11f. % Area of habitat unit within 2.0 -4.0 ft depth	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
15. Percent of habitat unit covered by shelter: %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
17a. If an objective, did the feature increase instream shelter rating?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
17b. a. Calculate the shelter rating for the habitat unit: 0-300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
19a. If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
21a. If an objective, did the feature lead to the targeted channel conditions?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
25. Did the feature achieve the targeted velocity?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
28. Percent of habitat unit within targeted velocity (see above): (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
36e. % habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
36f. % habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
FEATURE NUMBER	S3-06	S3-07	S3-08	S3-09	S3-10	S3-11	S3-12	S3-13	S3-14	S3-15	S3-16	S3-17	S3-18	S3-19	S3-20	
HABITAT UNIT NUMBER	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	
SITE NUMBER	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
ENHANCEMENT REACH NAME	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	
4. Structural condition of feature: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	2	0	1	3	3	3	3	0	1	1	0	0	4	4	4	
5a. Are problems with the feature visible? (NO = 1 pt, YES = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6a. Is the feature still in its original location? (YES = 1 pt, NO = 0 pt)	1	1	0	1	1	1	1	0	0	0	1	0	1	1	1	
6b. Is the feature still in its original position? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6d. Is the feature still in its original orientation? (YES = 1 pt, NO = 0 pt)	1	1	0	1	1	1	1	0	0	0	0	0	1	1	1	
8. If an objective, did the feature create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
9. Were there any unintended effects by the feature on the habitat type? (NO = 1 pt, YES = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11e. % area of hab unit within 0.5 -2.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11f. % area of hab unit within 2.0 -4.0 ft depth (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
14. Instream shelter value in the habitat unit: 0, 1, 2, 3 (3 = 5 pts; 2 = 4 pts, 1 = 3 pts, 0 = 0 pts)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
15. % hab unit covered by shelter (≥80 = 5pts; ≥60 = 4 pts; ≥40 = 3 pts; ≥20 = 2 pts; ≥10 = 1 pt; <10 = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
17a. If an objective, did the feature increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
17b. a. Calculate the shelter rating for the habitat unit: 0-300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
19a. If an objective, did the feature increase LWD count in the habitat unit? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
21a. If an objective, did the feature lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
25. Did the feature achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
28. % area of hab unit within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
36e. % area hab unit with < 0.5 f/s; 0.5 to 2 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
36f. % area hab unit with < 0.5 f/s; 2 to 4 ft (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Table 62. Adaptive Management Plan full checklist for the Ferrari-Carano, Olson enhancement reach, October 2020.

	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
mmddyy	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720
Survey Type	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS
Project Site Number	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Project Site Type	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan
Project Feature Number	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Feature Type Code	NA	NA	NA	NA	NA	NA	NA	BF	TT	TT	TT	BF	TT	BF	TT	TT	TT	TT	TT
Habitat Unit	HU15	HU25	HU28	HU31	HU30	HU18 2	HU29 2	HU01	HU01 U	HU14	HU01 U	HU01 U	HU01 U	HU01 U	HU01 U	HU01 U	HU01 U	HU01 U	HU01 D
Habitat Type	Riffle	Flatwater	Flatwater	Alcove	Flatwater	Flatwater	Pool	Riffle	Dry	Pool	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
1. Length of targeted treatment (ft)	0	0	0	0	0	0	0	60	NR	NR	NR	NR	75	NR	80	NR	NR	NR	NR
2. Width of targeted treatment: (ft)	0	0	0	0	0	0	0	40	NR	NR	NR	NR	25	NR	30	NR	NR	NR	NR
3. Estimate area of the targeted feature: (ft ²)	0	0	0	0	0	0	0	2400					1875		2400				
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	NA	NA	NA	NA	NA	NA	NA	GOOD	FAIL	GOOD	FAIL	GOOD	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	GOOD
5a. Are problems with the feature visible?	NA	NA	NA	NA	NA	NA	NA	YES	YES	NO	YES	NA	YES	NA	YES	YES	YES	YES	YES
5b. Types: ANC, BBB, CRF, MAT, SHF, STR, SWA, UND, UNS, WSH, OTH, NON	NA	NA	NA	NA	NA	NA	NA	NON	WSH	NON	WSH	NON	WSH	NA	WSH	NA	WSH	WSH	STR
6a. Is the feature still in its original location?	NA	NA	NA	NA	NA	NA	NA	YES	NO	YES	NO	NA	NO	NA	NO	NO	NO	NO	YES
6b. Is the feature still in its original position?	NA	NA	NA	NA	NA	NA	NA	YES	NO	YES	NO	NA	NO	NA	NO	NO	NO	NO	NO
6c. If yes: LBK, MDC, RBK, SPN, OTH	NA	NA	NA	NA	NA	NA	NA	SPN	UNK	LBK	UNK	NA	UNK	NA	UNK	UNK	UNK	UNK	UNK
6d. Is the feature still in its original orientation?	NA	NA	NA	NA	NA	NA	NA	YES	NO	YES	NO	NA	NO	NA	NO	NO	NO	NO	YES
6e. If yes: DNS, MUL, PRL, PRP, UPS, OTH	NA	NA	NA	NA	NA	NA	NA	MUL	UNK	DNS	UNK	NA	UNK	NA	UNK	UNK	UNK	UNK	DNS
7. Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	RIF	FLT	FLT	ALC	FLT	FLT	POO	RIF	DRY	POO	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
8. If an objective, did the feature create the targeted instream habitat type?	NA	NA	NA	NA	NA	NA	NA	YES	NO	YES	NO	NO	NO	NA	NO	NO	NO	NO	NO
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	NA	NA	NA	NA	NA	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES
10. Mean water depth in habitat unit: ft	0.5	1.9	1.2	0.5	1.4	1.2	0.0	1.5	0.0	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11a. Maximum water depth in habitat unit: ft	1.8	4.4	3.4	1.0	2.6	2.5	0.0	3.3	0.0	5.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11b. Area of habitat unit within 0.5 -2.0 ft depth: (ft ²)	342.5	6058.3	728.9	145.6	3072.3	649.1	0.0	1369.9	0.0	3403.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11c. Area of habitat unit within 2.0 -4.0 ft depth: (ft ²)	0.0	6699.1	64.7	0.0	935.4	88.5	0.0	422.8	0.0	7049.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11d. Area of habitat unit within 0.5-4.0 ft depth: (ft ²)	342.5	12757.4	793.7	145.6	4007.7	737.5	0.0	1792.7	0.0	10452.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11e. % Area of habitat unit within 0.5 -2.0 ft depth	35%	42%	79%	54%	66%	72%	0%	71%	0%	22%	0%	0%	0%	0%	0%	0%	0%	0%	0%
11f. % Area of habitat unit within 2.0 -4.0 ft depth	0%	47%	7%	0%	20%	10%	0%	22%	0%	45%	0%	0%	0%	0%	0%	0%	0%	0%	0%
11g. % Area of habitat unit within 0.5-4.0 ft depth	35%	89%	86%	54%	86%	82%	0%	92%	0%	66%	0%	0%	0%	0%	0%	0%	0%	0%	0%
11h. If an objective, did the feature increase/decrease water depth in the treatment area?	NA	NA	NA	NA	NA	NA	NA	YES	NO	YES	NO	NA	NO	NA	NO	NO	NO	NO	NO
12a. Targeted depth or range (ft) in habitat unit	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0
12b. Estimate area of feature within targeted depth or range ft ² :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13. Were there any unintended effects of the feature on the water depth? If Y, comment.	NA	NA	NA	NA	NA	NA	NA	NO	NO	NO	NO	NO	NA	NO	NA	NO	NO	NO	YES
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	2	2	1	2	2	2	3	2	0	3	0	0	0	0	0	0	0	0	0
15. Percent of habitat unit covered by shelter: %	10	30	10	90	10	10	25	30	0	15	0	0	0	0	0	0	0	0	0
16a. 1st dominant cover in habitat unit: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	BUB	TVG	UCB	AVG	SWD	BOL	RTW	TVG	NA	TVG	NA	NA	NA	NA	NA	NA	NA	NA	NA
16b. 2nd dominant in habitat unit: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	TVG	SWD	SWD	TVG	TVG	LWD	AVG	BOL	NA	RTW	NA	NA	NA	NA	NA	NA	NA	NA	NA
17a. If an objective, did the feature increase instream shelter rating?	NA	NA	NA	NA	NA	NA	NA	YES	NO	YES	NO	NA	NO	NA	NO	NO	NO	NO	NO
17b. a. Calculate the shelter rating for the habitat unit: 0-300	20	60	10	180	20	20	75	60	0	45	0	0	0	0	0	0	0	0	0
18a. Large woody debris count in habitat unit: D >1', L 6-20'	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18b. Large woody debris count in habitat unit: D >1', L >20'	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19a. If an objective, did the feature increase LWD count in the habitat unit?	NA	NA	NA	NA	NA	NA	NA	NO	NO	NO	NO	NA	NO	NA	NO	NO	NO	NO	NO
19b. LWD recruitment mechanisms in habitat unit: ANC, EXC, EXH, INT, RPR, UNA, OTH	NON	NON	NON	NON	NON	NON	NON	NON	NA	NON	NA	NA	NA	NA	NA	NA	NA	NA	NA
20. Current stream channel problems in the habitat unit: AGG, BRD, FLO, GRC, HDC, INC, NAR, SCU, STT, WID, NON, OTH	NON	NON	NON	NON	NON	NON	NON	NON	NA	NON	NA	NA	NA	NA	NA	NA	NA	NA	NA
21a. If an objective, did the feature lead to the targeted channel conditions?	NA	NA	NA	NA	NA	NA	NA	YES	NO	NO	NO	NA	NO	NA	NO	NO	NO	NO	NO
21b. Overall Offchannel Condition (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	NA	NA	NA	NA	NA	NA	NA	STB	AGG	AGG	AGG	STB	AGG	STB	AGG	STB	AGG	AGG	AGG
21c. Outlet Conditions (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	NA	NA	NA	NA	NA	NA	NA	NA											
21d. Inlet Conditions (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	NA	NA	NA	NA	NA	NA	NA	NA											
22. Were there any unintended effects on the stream channel at the feature? If Y, comment.	NA	NA	NA	NA	NA	NA	NA	NO	YES	YES	YES	NA	YES	NA	YES	NA	YES	YES	YES
23. If an objective, did the feature decrease/increase velocity in the treatment area?	NA	NA	NA	NA	NA	NA	NA	DEC	NA	DEC	NA	NA	NA	NA	NA	NA	NA	NA	NA
24. Targeted velocity/range in the habitat unit: (ft/sec)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
25. Did the feature achieve the targeted velocity?	NA	NA	NA	NA	NA	NA	NA	YES	NO	YES	NO	NA	NO	NA	NO	NO	NO	NO	NO
26a. Measured minimum velocity (ft/sec) in habitat unit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26b. Measured max velocity (ft/sec) in habitat unit	4.9	2.4	4.7	0.0	2.3	2.3	0.0	3.6	0.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26c. Measured mean velocity (ft/sec) in habitat unit	2.1	0.8	2.0	0.0	1.0	0.9	0.0	1.7	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27. Area of habitat unit within targeted velocity: (ft ²)	91.3	5168.8	122.3	267.6	1461.5	252.1	0.0	376.8	0.0	6200.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28. Percent of habitat unit within targeted velocity (see above): (%)	9%	36%	13%	100%	31%	28%	0%	19%	0%	39%	0%	0%	0%	0%	0%	0%	0%	0%	0%
29. Were there any unintended effects of feature on velocity? If Y, comment.	NA	NA	NA	NA	NA	NA	NA	NO	YES	NO	YES	NA	YES	NA	YES	NA	YES	YES	YES
30a. 1st/2nd dominant substrate in habitat unit: BED, BOL, COB, GRV, SND, SLC, OTH	GRV	GRV	GRV	SND	GRV	GRV	GRV	GRV	GRV	SND	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV
30b. 2nd dominant substrate in habitat unit: BED, BOL, COB, GRV, SND, SLC, OTH	SND	COB	COB	SLC	SND	SND	SND	BOL	SND	GRV	SND	SND	SND	SND	SND	SND	SND	SND	SND
31. If an objective, did the feature achieve the targeted substrate composition?	NA	NA	NA	NA	NA	NA	NA	YES	YES	YES	YES	NA	YES	NA	YES	NA	YES	YES	YES
32. % Canopy Measurement:	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
33. Photopoint data collected: YES /NO	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
34. Temperature Profile: YES /NO	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
35. Dissolved Oxygen Profile: YES/NO	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
36a. Total habitat unit area where targeted depth, velocity and shelter criteria overlap	4.3	3773.4	30.0	145.6	870.9	147.0	0.0	265.3</											

Table 62. Adaptive Management Plan full checklist for the Ferrari-Carano, Olson enhancement reach, October 2020.

	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
mmddyy	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720
Survey Type	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS
Project Site Number	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Project Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
Project Feature Number	S2-05	S2-06	S2-07	S2-08	S2-09	S2-10	S2-11	S2-12	S2-13	S2-14	S2-15	S2-16	S2-17	S2-18	S2-19	S2-20	S2-21	S2-22	
Feature Type Code	HW1	LVW	HW1	HW1	LVW	HW1	PW	HW1	R	HW1	PW	HW2	HW1	HW1	HW1	HW1	LVW	R	
Habitat Unit	HU03	HU02 U	HU02 D	HU04	HU04	HU04	HU04	HU02 D	HU05	HU02 D	HU06	HU06	HU06	HU06	HU06	HU06	HU06	HU07	
Habitat Type	Flatwater	Dry	Dry	Pool	Pool	Pool	Pool	Dry	Riffle	Dry	Pool	Pool	Pool	Pool	Pool	Pool	Pool	Riffle	
1. Length of targeted treatment (ft)	7	NR	12	10	NR	9	48	12	NR	12	52	10	16	16	14	10	37	NR	
2. Width of targeted treatment: (ft)	11	NR	12	13	NR	7	13	8	NR	9	10	16	10	15	10	15	22	NR	
3. Estimate area of the targeted feature: (ft ²)	77	NR	144	130	NR	63	624	96	NR	108	520	160	160	240	140	150	814	NR	
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	EXCL	FAIL	EXCL	GOOD	GOOD	EXCL	EXCL	EXCL	GOOD	EXCL	EXCL	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	
5a. Are problems with the feature visible?	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
5b. Types: ANC, BBB, CRF, MAT, SHF, STR, SWA, UND, UNS, WSH, OTH, NON	NON	WSH	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	
6a. Is the feature still in its original location?	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
6b. Is the feature still in its original orientation?	YES	NO	YES	NO	YES	YES	NO	YES	YES	YES	YES	YES	YES	NO	YES	NO	YES	YES	
6c. If yes: LBK, MDC, RBK, SPN, OTH	LBK	UNK	OTH	MDC	RBK	RBK	MDC	OTH	SPN	OTH	RBK	MDC	MDC	MDC	LBK	LBK	LBK	SPN	
6d. Is the feature still in its original orientation?	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
6e. If yes: DNS, MUL, PRL, PRP, UPS, OTH	PRP	UNK	UPS	PRP	DNS	UPS	MUL	UPS	OTH	UPS	PRL	UPS	UPS	PRP	DNS	UPS	UPS	OTH	
7. Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	FLT	DRY	DRY	POO	POO	POO	POO	DRY	RIF	DRY	POO	POO	POO	POO	POO	POO	POO	RIF	
8. If an objective, did the feature create the targeted instream habitat type?	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
10. Mean water depth in habitat unit: ft	0.9	0.0	0.0	2.0	2.0	2.0	2.0	0.0	0.9	0.0	1.4	1.4	1.4	1.4	1.4	1.4	1.4	0.9	
11a. Maximum water depth in habitat unit: ft	3.1	0.0	0.0	4.5	4.5	4.5	4.5	0.0	2.2	0.0	4.2	4.2	4.2	4.2	4.2	4.2	4.2	2.7	
11b. Area of habitat unit within 0.5 -2.0 ft depth: (ft ²)	2572.3	0.0	0.0	980.7	980.7	980.7	980.7	0.0	1148.1	0.0	1186.8	1186.8	1186.8	1186.8	1186.8	1186.8	1186.8	4162.1	
11c. Area of habitat unit within 2.0 -4.0 ft depth: (ft ²)	152.5	0.0	0.0	733.7	733.7	733.7	733.7	0.0	5.9	0.0	416.7	416.7	416.7	416.7	416.7	416.7	416.7	219.4	
11d. Area of habitat unit within 0.5-4.0 ft depth: (ft ²)	2724.8	0.0	0.0	1714.4	1714.4	1714.4	1714.4	0.0	1154.0	0.0	1603.4	1603.4	1603.4	1603.4	1603.4	1603.4	1603.4	4381.5	
11e. % Area of habitat unit within 0.5 -2.0 ft depth	67%	0%	0%	49%	49%	49%	49%	0%	85%	0%	59%	59%	59%	59%	59%	59%	59%	69%	
11f. % Area of habitat unit within 2.0 -4.0 ft depth	4%	0%	0%	37%	37%	37%	37%	0%	0%	0%	21%	21%	21%	21%	21%	21%	21%	4%	
11g. % Area of habitat unit within 0.5-4.0 ft depth	71%	0%	0%	85%	85%	85%	85%	0%	86%	0%	80%	80%	80%	80%	80%	80%	80%	73%	
11h. If an objective, did the feature increase/decrease water depth in the treatment area?	YES	NO	NO	YES	YES	YES	YES	NO	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	
12a. Targeted depth or range (ft) in habitat unit	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	
12b. Estimate area of feature within targeted depth or range ft ² :	40	NR	NA	50	NR	25	205	NA	NA	NA	232	43	31	42	48	NA	507	NR	
13. Were there any unintended effects of the feature on the water depth? If Y, comment.	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	3	0	0	3	3	3	3	0	1	0	3	3	3	3	3	3	3	3	
15. Percent of habitat unit covered by shelter: %	30	0	0	45	45	45	45	0	5	0	40	40	40	40	40	40	40	30	
16a. 1st dominant cover in habitat unit: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	LWD	NA	NA	LWD	LWD	LWD	LWD	NA	AVG	NA	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	
16b. 2nd dominant in habitat unit: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	AVG	NA	NA	BOL	BOL	BOL	BOL	NA	TVG	NA	BOL	BOL	BOL	BOL	BOL	BOL	BOL	UCB	
17a. If an objective, did the feature increase instream shelter rating?	YES	NO	NO	YES	YES	YES	YES	NO	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES	
17b. a. Calculate the shelter rating for the habitat unit: 0-300	90	0	0	135	135	135	135	0	5	0	120	120	120	120	120	120	120	90	
18a. Large woody debris count in habitat unit: D >1', L 6-20'	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	
18b. Large woody debris count in habitat unit: D >1', L >20'	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	2	
19a. If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	
19b. LWD recruitment mechanisms in habitat unit: ANC, EXC, EXH, INT, RPR, UNA, OTH	NON	NA	NA	RPR	RPR	RPR	RPR	NA	NON	NA	RPR	RPR	RPR	RPR	RPR	RPR	RPR	RPR	
20. Current stream channel problems in the habitat unit: AGG, BRD, FLO, GRC, HDC, INC, NAR, SCU, STT, WID, NON, OTH	NON	NA	NA	NON	NON	NON	NON	NA	NON	NA	NON	NON	NON	NON	NON	NON	NON	NON	
21a. If an objective, did the feature lead to the targeted channel conditions?	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	
21b. Overall Offchannel Condition (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	
21c. Outlet Conditions (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	
21d. Inlet Conditions (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	
22. Were there any unintended effects on the stream channel at the feature? If Y, comment.	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
23. If an objective, did the feature decrease/increase velocity in the treatment area?	DEC	NA	NA	DEC	DEC	DEC	DEC	NA	INC	NA	DEC	DEC	DEC	DEC	DEC	DEC	DEC	INC	
24. Targeted velocity/range in the habitat unit: (ft/sec)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
25. Did the feature achieve the targeted velocity?	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
26a. Measured minimum velocity (ft/sec) in habitat unit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
26b. Measured max velocity (ft/sec) in habitat unit	2.8	0.0	0.0	2.3	2.3	2.3	2.3	0.0	2.7	0.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4.3	
26c. Measured mean velocity (ft/sec) in habitat unit	0.8	0.0	0.0	0.6	0.6	0.6	0.6	0.0	1.6	0.0	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.6	
27. Area of habitat unit within targeted velocity: (ft ²)	1604.4	0.0	0.0	1159.2	1159.2	1159.2	1159.2	0.0	174.6	0.0	934.7	934.7	934.7	934.7	934.7	934.7	934.7	1202.9	
28. Percent of habitat unit within targeted velocity (see above): (%)	42%	0%	0%	58%	58%	58%	58%	0%	13%	0%	47%	47%	47%	47%	47%	47%	47%	20%	
29. Were there any unintended effects of feature on velocity? If Y, comment.	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
30a. 1st/2nd dominant substrate in habitat unit: BED, BOL, COB, GRV, SND, SLC, OTH	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	
30b. 2nd dominant substrate in habitat unit: BED, BOL, COB, GRV, SND, SLC, OTH	BOL	SND	SND	BOL	BOL	BOL	BOL	SND	COB	SND	SND	SND	SND	SND	SND	SND	SND	COB	
31. If an objective, did the feature achieve the targeted substrate composition?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
32. % Canopy Measurement:	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
33. Photopoint data collected: YES /NO	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
34. Temperature Profile: YES /NO	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
35. Dissolved Oxygen Profile: YES/NO	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
36a. Total habitat unit area where targeted depth, velocity and shelter criteria overlap	729.7	0.0	0.0	924.5	924.5	924.5	924.5	0.0	43.0	0.0	558.6	558.6	558.6	558.6	558.6	558.6	558.6	424.0	
36b. Total habitat unit area where &																			

Table 62. Adaptive Management Plan full checklist for the Ferrari-Carano, Olson enhancement reach, October 2020.

Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
mmddyy	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720
Survey Type	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS
Project Site Number	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Project Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
Project Feature Number	S2-23	S2-24	S2-25	S2-26	S2-27	S2-28	S2-29	S2-30	S2-31	S2-32	S2-35	S2-36	S2-37	S2-38	S2-39	S2-40	S2-41	S2-42	
Feature Type Code	HW1	HW1	PW	TT	R	HW1	HW2	HW1	LW	ALS	PW	R	PW	HW2	LW	LW	HW2	HW1	
Habitat Unit	HU07	HU07	HU07	HU02 U	HU07	HU02 D	HU02 D	HU02 D	HU02 D	HU14 2	HU08	HU08	HU09	HU09	HU09	HU10	HU17	HU17	
Habitat Type	Rifle	Rifle	Rifle	Dry	Rifle	Dry	Dry	Dry	Dry	Pool	Rifle	Rifle	Pool	Pool	Pool	Rifle	Rifle	Rifle	
1. Length of targeted treatment (ft)	14	17	51	NR	100	11	19	15	25	32	50	NR	50	24	23	28	26	26	
2. Width of targeted treatment: (ft)	8	7	12	NR	35	7	8	6	27	34	18	NR	15	10	24	24	10	9	
3. Estimate area of the targeted feature: (ft ²)	112	119	612		3500	77	152	90	675	1088	900		750	240			260	234	
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	GOOD	GOOD	FAIL	GOOD	FAIR	POOR	POOR	FAIR	FAIR	FAIR	GOOD	EXCL	EXCL	FAIR	GOOD	GOOD	GOOD	
5a. Are problems with the feature visible?	NO	NO	YES	YES	NO	YES	YES	YES	YES	YES	YES	NO	NO	NO	YES	NO	YES	YES	
5b. Types: ANC, BBB, CRF, MAT, SHF, STR, SWA, UND, UNS, WSH, OTH, NON	NON	NON	AGG	WSH	NON	STR	BBB	BBB	STR	AGG	AGG	NON	NON	NON	BBB	NON	AGG	AGG	
6a. Is the feature still in its original location?	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
6b. Is the feature still in its original orientation?	NO	NO	YES	NO	YES	NO	NO	NO	NO	NO	YES	YES	YES	YES	NO	NO	NO	NO	
6c. If yes: LBK, MDC, RBK, SPN, OTH	MDC	MDC	LBK	UNK	SPN	RBK	OTH	OTH	OTH	LBK	RBK	SPN	LBK	MDC	RBK	RBK	LBK	SPN	
6d. Is the feature still in its original orientation?	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
6e. If yes: DNS, MUL, PRL, PRP, UPS, OTH	UPS	UPS	PRL	UNK	OTH	DNS	UPS	UPS	UPS	MUL	PRL	OTH	PRL	UPS	MUL	MUL	PRP	PRP	
7. Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	RIF	RIF	RIF	DRY	RIF	DRY	DRY	DRY	DRY	POO	RIF	RIF	POO	POO	POO	RIF	RIF	RIF	
8. If an objective, did the feature create the targeted instream habitat type?	YES	YES	YES	NO	YES	NO	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES	
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	NO	NO	NO	NO	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO	YES	NO	NO	
10. Mean water depth in habitat unit: ft	0.9	0.9	0.9	0.0	0.9	0.0	0.0	0.0	0.0	2.8	0.8	0.8	1.7	1.7	1.7	0.8	0.8	0.8	
11a. Maximum water depth in habitat unit: ft	2.7	2.7	2.7	0.0	2.7	0.0	0.0	0.0	0.0	5.5	2.4	2.4	3.7	3.7	3.7	2.4	2.2	2.2	
11b. Area of habitat unit within 0.5 -2.0 ft depth: (ft ²)	4162.1	4162.1	4162.1	0.0	4162.1	0.0	0.0	0.0	0.0	3403.4	2747.8	2747.8	1553.4	1553.4	1553.4	995.7	411.3	411.3	
11c. Area of habitat unit within 2.0 -4.0 ft depth: (ft ²)	219.4	219.4	219.4	0.0	219.4	0.0	0.0	0.0	0.0	7049.3	33.6	33.6	935.6	935.6	935.6	32.8	15.1	15.1	
11d. Area of habitat unit within 0.5-4.0 ft depth: (ft ²)	4381.5	4381.5	4381.5	0.0	4381.5	0.0	0.0	0.0	0.0	10452.6	2781.5	2781.5	2489.1	2489.1	2489.1	1028.5	426.5	426.5	
11e. % Area of habitat unit within 0.5 -2.0 ft depth	69%	69%	69%	0%	69%	0%	0%	0%	0%	22%	65%	65%	56%	56%	56%	65%	65%	65%	
11f. % Area of habitat unit within 2.0 -4.0 ft depth	4%	4%	4%	0%	4%	0%	0%	0%	0%	45%	1%	1%	34%	34%	34%	2%	2%	2%	
11g. % Area of habitat unit within 0.5-4.0 ft depth	73%	73%	73%	0%	73%	0%	0%	0%	0%	66%	66%	66%	89%	89%	89%	67%	67%	67%	
11h. If an objective, did the feature increase/decrease water depth in the treatment area?	YES	YES	YES	NO	YES	YES	NO	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	
12a. Targeted depth or range (ft) in habitat unit	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	
12b. Estimate area of feature within targeted depth or range ft ² :	43	46	272	NR	37	58	37	265	370	320	278	74	285	309	86	89			
13. Were there any unintended effects of the feature on the water depth? If Y, comment.	NO	NO	YES	YES	NO	YES	YES	YES	YES	NO	NO	NO	NO	NO	YES	YES	YES	YES	
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	3	3	3	0	3	0	0	0	0	3	3	3	3	3	3	3	3	3	
15. Percent of habitat unit covered by shelter: %	30	30	30	0	30	0	0	0	0	15	25	25	45	45	45	30	15	15	
16a. 1st dominant cover in habitat unit: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	LWD	LWD	LWD	NA	LWD	NA	NA	NA	NA	TVG	LWD	LWD	LWD	LWD	LWD	LWD	RTW	RTW	
16b. 2nd dominant in habitat unit: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	UCB	UCB	UCB	NA	UCB	NA	NA	NA	NA	RTW	BOL	BOL	BOL	BOL	BOL	LWD	TVG	TVG	
17a. If an objective, did the feature increase instream shelter rating?	YES	YES	YES	NO	YES	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	
17b. a. Calculate the shelter rating for the habitat unit: 0-300	90	90	90	0	90	0	0	0	0	45	75	75	135	135	135	90	45	45	
18a. Large woody debris count in habitat unit: D >1', L 6-20'	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
18b. Large woody debris count in habitat unit: D >1', L >20'	2	2	2	0	2	0	0	0	0	3	3	1	1	1	1	1	0	0	
19a. If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
19b. LWD recruitment mechanisms in habitat unit: ANC, EXC, EXH, INT, RPR, UNA, OTH	RPR	RPR	RPR	NA	RPR	NA	NA	NA	NA	NON	RPR	RPR	RPR	RPR	RPR	RPR	RPR	NON	
20. Current stream channel problems in the habitat unit: AGG, BRD, FLO, GRC, HDC, INC, NAR, SCU, STT, WID, NON, OTH	NON	NON	NON	NA	NON	NA	NA	NA	NA	NON	NON	NON	NON	NON	NON	NON	NON	NON	
21a. If an objective, did the feature lead to the targeted channel conditions?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
21b. Overall Offchannel Condition (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	
21c. Outlet Conditions (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	
21d. Inlet Conditions (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	
22. Were there any unintended effects on the stream channel at the feature? If Y, comment.	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
23. If an objective, did the feature decrease/increase velocity in the treatment area?	DEC	DEC	DEC	NA	INC	NA	NA	NA	NA	DEC	DEC	INC	DEC	DEC	DEC	DEC	DEC	DEC	
24. Targeted velocity/range in the habitat unit: (ft/sec)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
25. Did the feature achieve the targeted velocity?	YES	YES	YES	YES	YES	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	
26a. Measured minimum velocity (ft/sec) in habitat unit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
26b. Measured max velocity (ft/sec) in habitat unit	4.3	4.3	4.3	0.0	4.3	0.0	0.0	0.0	0.0	3.6	4.4	4.4	3.3	3.3	3.3	3.4	4.6	4.6	
26c. Measured mean velocity (ft/sec) in habitat unit	1.6	1.6	1.6	0.0	1.6	0.0	0.0	0.0	0.0	0.6	2.1	2.1	0.9	0.9	0.9	1.2	1.3	1.3	
27. Area of habitat unit within targeted velocity: (ft ²)	1202.9	1202.9	1202.9	0.0	1202.9	0.0	0.0	0.0	0.0	6200.2	369.1	369.1	871.6	871.6	871.6	311.4	268.5	268.5	
28. Percent of habitat unit within targeted velocity (see above): (%)	20%	20%	20%	0%	20%	0%	0%	0%	0%	39%	9%	9%	31%	31%	31%	20%	42%	42%	
29. Were there any unintended effects of feature on velocity? If Y, comment.	NO	NO	NO	NO	NO	YES	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	
30a. 1st/2nd dominant substrate in habitat unit: BED, BOL, COB, GRV, SND, SLC, OTH	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	SND	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	
30b. 2nd dominant substrate in habitat unit: BED, BOL, COB, GRV, SND, SLC, OTH	COB	COB	COB	SND	COB	SND	SND	SND	SND	GRV	BOL	BOL	BOL	BOL	BOL	COB	COB	COB	
31. If an objective, did the feature achieve the targeted substrate composition?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
32. % Canopy Measurement:	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
33. Photopoint data collected: YES /NO	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
34. Temperature Profile: YES /NO	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
35. Dissolved Oxygen Profile: YES/NO	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
36a. Total habitat unit area where targeted depth, velocity and shelter criteria overlap	424.0	424.0	424.0	0.0	424.0	0.0													

Table 62. Adaptive Management Plan full checklist for the Ferrari-Carano, Olson enhancement reach, October 2020.

Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
mmddyy	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720
Survey Type	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS
Project Site Number	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Project Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
Project Feature Number	S2-43	S2-44	S2-45	S2-46	S2-47	S2-48	S2-49	S2-50	S2-51	S2-52	S2-53	S2-54	S2-55	S2-56	S2-57	S2-58	S2-59	S2-60	
Feature Type Code	ALS	TT	R	PW	HW1	HW1	HW1	HW1	R	PW	HW1	R	LW	HW1	TT	HW1	LW	LWV	
Habitat Unit	HU16	HU02 U	HU10	HU12	HU11	HU11	HU11	HU11	HU13	HU20	HU20	HU26	HU02 D	HU20	HU02 U	HU21	HU23	HU23	
Habitat Type	Rifle	Dry	Rifle	Pool	Alcove	Alcove	Alcove	Alcove	Flatwater	Rifle	Rifle	Alcove	Dry	Rifle	Dry	Pool	Pool	Pool	
1. Length of targeted treatment (ft)	34	NR	NR	50	15	16	17	18	85	50	11	NR	26	8	NR	7	23	78	
2. Width of targeted treatment: (ft)	34	NR	NR	11	6	8	8	9	20	13	18	NR	24	18	NR	16	33	19	
3. Estimate area of the targeted feature: (ft ²)	1156			550	90	128	136	162	1700	650	198		624	144		112	759	1482	
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	FAIR	FAIL	GOOD	EXCL	EXCL	EXCL	EXCL	EXCL	GOOD	GOOD	FAIR	FAIL	FAIL	FAIR	FAIL	FAIR	GOOD	EXCL	
5a. Are problems with the feature visible?	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES	YES	NO	
5b. Types: ANC, BBB, CRF, MAT, SHF, STR, SWA, UND, UNS, WSH, OTH, NON	NON	WSH	NON	NON	NON	NON	NON	NON	NON	NON	AGG	AGG	BBB	AGG	WSH	AGG	NON	NON	
6a. Is the feature still in its original location?	YES	NO	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	NO	YES	
6b. Is the feature still in its original orientation?	YES	NO	YES	NO	YES	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO	YES	NO	YES	
6c. If yes: LBK, MDC, RBK, SPN, OTH	RBK	UNK	SPN	MDC	MDC	LBK	MDC	SPN	SPN	LBK	RBK	UNK	DRY	OTH	RBK	UNK	RBK	MDC	
6d. Is the feature still in its original orientation?	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	NO	UNK	YES	NO	UNK	YES	NO	YES	
6e. If yes: DNS, MUL, PRL, PRP, UPS, OTH	MUL	UNK	OTH	PRL	PRP	DNS	UPS	DNS	OTH	PRL	UPS	OTH	UNK	UPS	UNK	UPS	UNK	PRP	
7. Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	RIF	DRY	RIF	POO	ALC	ALC	ALC	ALC	FLT	RIF	RIF	ALC	DRY	RIF	DRY	POO	POO	POO	
8. If an objective, did the feature create the targeted instream habitat type?	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	YES	NO	YES	YES	
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	NO	NO	NO	NO	NO	
10. Mean water depth in habitat unit: ft	0.9	0.0	0.8	2.1	1.2	1.2	1.2	1.2	1.8	1.3	1.3	0.5	0.0	1.3	0.0	2.5	1.7	1.7	
11a. Maximum water depth in habitat unit: ft	2.3	0.0	2.4	5.6	2.4	2.4	2.4	2.4	3.2	3.1	3.1	1.8	0.0	3.1	0.0	5.6	4.2	4.2	
11b. Area of habitat unit within 0.5 -2.0 ft depth: (ft ²)	411.9	0.0	995.7	1005.9	872.9	872.9	872.9	872.9	916.6	2762.3	2762.3	313.0	0.0	2762.3	0.0	386.2	2296.3	2296.3	
11c. Area of habitat unit within 2.0 -4.0 ft depth: (ft ²)	10.1	0.0	32.8	934.8	173.7	173.7	173.7	173.7	1136.7	479.7	479.7	0.0	0.0	479.7	0.0	812.7	1692.9	1692.9	
11d. Area of habitat unit within 0.5-4.0 ft depth: (ft ²)	422.0	0.0	1028.5	1940.7	1046.6	1046.6	1046.6	1046.6	2053.3	3242.0	3242.0	313.0	0.0	3242.0	0.0	1198.9	3989.1	3989.1	
11e. % Area of habitat unit within 0.5 -2.0 ft depth	73%	0%	65%	42%	67%	67%	67%	67%	41%	74%	74%	46%	0%	74%	0%	25%	52%	52%	
11f. % Area of habitat unit within 2.0 -4.0 ft depth	2%	0%	2%	39%	13%	13%	13%	13%	51%	13%	13%	0%	0%	13%	0%	53%	38%	38%	
11g. % Area of habitat unit within 0.5-4.0 ft depth	75%	0%	67%	81%	80%	80%	80%	80%	92%	86%	86%	46%	0%	86%	0%	78%	90%	90%	
11h. If an objective, did the feature increase/decrease water depth in the treatment area?	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO	YES	YES	YES	
12a. Targeted depth or range (ft) in habitat unit	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	
12b. Estimate area of feature within targeted depth or range ft ² :	424	NR	223	60	47	56	61	296	31	240	32	NR	39	327	445				
13. Were there any unintended effects of the feature on the water depth? If Y, comment.	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES	YES	NO	
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	3	0	3	3	3	3	3	3	2	3	2	0	3	0	3	0	3	3	
15. Percent of habitat unit covered by shelter: %	75	0	30	35	90	90	90	90	15	25	25	75	0	25	0	25	40	40	
16a. 1st dominant cover in habitat unit: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	BOL	NA	SWD	LWD	AVG	AVG	AVG	AVG	UCB	LWD	LWD	AVG	NA	LWD	NA	BOL	LWD	LWD	
16b. 2nd dominant in habitat unit: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	BUB	NA	LWD	BOL	SWD	SWD	SWD	SWD	SWD	AVG	SWD	TVG	NA	SWD	NA	UCB	SWD	SWD	
17a. If an objective, did the feature increase instream shelter rating?	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO	YES	YES	YES	
17b. a. Calculate the shelter rating for the habitat unit: 0-300	225	0	90	105	270	270	270	270	30	75	75	150	0	75	0	50	120	120	
18a. Large woody debris count in habitat unit: D >1', L 6-20'	0	0	0	0	1	1	1	1	0	1	1	0	0	1	0	0	0	0	
18b. Large woody debris count in habitat unit: D >1', L >20'	0	0	1	1	1	1	1	1	2	2	2	0	0	2	0	0	0	0	
19a. If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	YES	NO	NO	NO	NO	NO	YES	YES	YES	NO	NO	NO	NO	NO	NO	YES	
19b. LWD recruitment mechanisms in habitat unit: ANC, EXC, EXH, INT, RPR, UNA, OTH	NON	NA	RPR	RPR	RPR	RPR	RPR	RPR	RPR	RPR	RPR	NON	NA	RPR	NA	NON	NON	NON	
20. Current stream channel problems in the habitat unit: AGG, BRD, FLO, GRC, HDC, INC, NAR, SCU, STT, WID, NON, OTH	NON	NA	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NA	NON	NA	NON	NON	NON	
21a. If an objective, did the feature lead to the targeted channel conditions?	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	
21b. Overall Offchannel Condition (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	
21c. Outlet Conditions (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	
21d. Inlet Conditions (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	
22. Were there any unintended effects on the stream channel at the feature? If Y, comment.	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	YES	NO	NO	NO	NO	NO	YES	
23. If an objective, did the feature decrease/increase velocity in the treatment area?	DEC	NO	INC	DEC	DEC	DEC	DEC	DEC	INC	DEC	DEC	NA	NA	DEC	NO	DEC	NO	DEC	
24. Targeted velocity/range in the habitat unit: (ft/sec)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
25. Did the feature achieve the targeted velocity?	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO	YES	YES	YES	
26a. Measured minimum velocity (ft/sec) in habitat unit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
26b. Measured max velocity (ft/sec) in habitat unit	4.6	0.0	3.4	3.3	1.5	1.5	1.5	1.5	3.6	3.8	3.8	1.7	0.0	3.8	0.0	3.4	3.3	3.3	
26c. Measured mean velocity (ft/sec) in habitat unit	1.9	0.0	1.2	0.9	0.1	0.1	0.1	0.1	1.3	1.6	1.6	0.0	0.0	1.6	0.0	1.2	1.1	1.1	
27. Area of habitat unit within targeted velocity: (ft ²)	51.7	0.0	311.4	993.7	1227.3	1227.3	1227.3	1227.3	835.2	546.4	546.4	657.1	0.0	546.4	0.0	570.1	1585.3	1585.3	
28. Percent of habitat unit within targeted velocity (see above): (%)	9%	0%	20%	42%	15%	15%	15%	15%	37%	15%	15%	97%	0%	15%	0%	37%	36%	36%	
29. Were there any unintended effects of feature on velocity? If Y, comment.	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	NO	YES	NO	NO	NO	
30a. 1st/2nd dominant substrate in habitat unit: BED, BOL, COB, GRV, SND, SLC, OTH	BOL	GRV	GRV	SND	SND	SND	SND	SND	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	
30b. 2nd dominant substrate in habitat unit: BED, BOL, COB, GRV, SND, SLC, OTH	COB	SND	COB	GRV	SLC	SLC	SLC	SLC	SND	COB	COB	COB	SND	COB	SND	BOL	SND	SND	
31. If an objective, did the feature achieve the targeted substrate composition?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
32. % Canopy Measurement:	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
33. Photopoint data collected: YES /NO	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
34. Temperature Profile: YES /NO	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
35. Dissolved Oxygen Profile: YES/NO	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
36a. Total habitat unit area where targeted depth, velocity and shelter criteria overlap	10.5	0.0																	

Table 62. Adaptive Management Plan full checklist for the Ferrari-Carano, Olson enhancement reach, October 2020.

	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Enhancement Reach	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Colloquial Name	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
mmddyy	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720	100720
Survey Type	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS
Project Site Number	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Project Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
Project Feature Number	S3-03	S3-04	S3-05	S3-06	S3-07	S3-08	S3-09	S3-10	S3-11	S3-12	S3-13	S3-14	S3-15	S3-16	S3-17	S3-17	S3-17
Feature Type Code	HW2	PW	R	HW1	PW	R	HW1	HW1	HW2	HW1	HW1	LWV	R	HW2	HW2	HW2	HW2
Habitat Unit	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D
Habitat Type	Drv	Drv	Drv	Drv	Drv	Drv	Drv	Drv	Drv	Drv	Drv	Drv	Drv	Drv	Drv	Drv	Drv
1. Length of targeted treatment (ft)	15	50	25	13	54	NR	20	20	18	15	12	47	NR	18	18	18	18
2. Width of targeted treatment: (ft)	7	10	11	6	10	NR	8	9	7	7	7	11	NR	7	7	7	7
3. Estimate area of the targeted feature: (ft ²)	105	500	275	78	540		160	180	126	105	84	517		126	126	126	126
4. Structural condition of feature: EXCL, GOOD, FAIR, POOR, FAIL	FAIR	UNKN	FAIL	POOR	UNKN	FAIL	FAIR	FAIR	FAIR	FAIR	UNKN	FAIL	UNKN	UNKN	UNKN	UNKN	UNKN
5a. Are problems with the feature visible?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
5b. Types: ANC, BBB, CRF, MAT, SHF, STR, SWA, UND, UNS, WSH, OTH, NON	BBB	BBB	AGG	BBB	BBB	AGG	AGG	STR	STR	STR	STR	BBB	BBB	AGG	BBB	BBB	BBB
6a. Is the feature still in its original location?	YES	YES	NO	YES	YES	NO	YES	YES	YES	YES	UNKN	NO	NO	YES	UNKN	UNKN	UNKN
6b. Is the feature still in its original orientation?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	UNKN	NO	NO	NO	NO	NO	NO
6c. If yes: LBK, MDC, RBK, SPN, OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH
6d. Is the feature still in its original orientation?	YES	YES	NO	YES	YES	NO	YES	YES	YES	YES	UNKN	NO	NO	UNKN	UNKN	UNKN	UNKN
6e. If yes: DNS, MUL, PRL, PRP, UPS, OTH	OTH	PRL	OTH	OTH	OTH	OTH	DNS	MUL	MUL	MUL	MUL	UNKN	OTH	OTH	OTH	OTH	OTH
7. Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
8. If an objective, did the feature create the targeted instream habitat type?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
9. Were there any unintended effects by the feature on the habitat type? If Y, comment.	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
10. Mean water depth in habitat unit: ft	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11a. Maximum water depth in habitat unit: ft	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11b. Area of habitat unit within 0.5 -2.0 ft depth: (ft ²)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11c. Area of habitat unit within 2.0 -4.0 ft depth: (ft ²)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11d. Area of habitat unit within 0.5-4.0 ft depth: (ft ²)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11e. % Area of habitat unit within 0.5 -2.0 ft depth	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
11f. % Area of habitat unit within 2.0 -4.0 ft depth	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
11g. % Area of habitat unit within 0.5-4.0 ft depth	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
11h. If an objective, did the feature increase/decrease water depth in the treatment area?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
12a. Targeted depth or range (ft) in habitat unit	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0	0.5-4.0
12b. Estimate area of feature within targeted depth or range ft ² :	47	210		50	230		107	58	46	42	46	150		55	53	53	53
13. Were there any unintended effects of the feature on the water depth? If Y, comment.	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
14. Instream shelter value in the habitat unit: 0, 1, 2, 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15. Percent of habitat unit covered by shelter: %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16a. 1st dominant cover in habitat unit: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
16b. 2nd dominant in habitat unit: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
17a. If an objective, did the feature increase instream shelter rating?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
17b. a. Calculate the shelter rating for the habitat unit: 0-300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18a. Large woody debris count in habitat unit: D >1', L 6-20'	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18b. Large woody debris count in habitat unit: D >1', L >20'	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19a. If an objective, did the feature increase LWD count in the habitat unit?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
19b. LWD recruitment mechanisms in habitat unit: ANC, EXC, EXH, INT, RPR, UNA, OTH	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
20. Current stream channel problems in the habitat unit: AGG, BRD, FLO, GRC, HDC, INC, NAR, SCU, STT, WID, NON, OTH	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
21a. If an objective, did the feature lead to the targeted channel conditions?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
21b. Overall Offchannel Condition (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB
21c. Outlet Conditions (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB
21d. Inlet Conditions (site): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB	STB
22. Were there any unintended effects on the stream channel at the feature? If Y, comment.	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
23. If an objective, did the feature decrease/increase velocity in the treatment area?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
24. Targeted velocity/range in the habitat unit: (ft/sec)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
25. Did the feature achieve the targeted velocity?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
26a. Measured minimum velocity (ft/sec) in habitat unit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26b. Measured max velocity (ft/sec) in habitat unit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26c. Measured mean velocity (ft/sec) in habitat unit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27. Area of habitat unit within targeted velocity: (ft ²)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28. Percent of habitat unit within targeted velocity (see above): (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
29. Were there any unintended effects of feature on velocity? If Y, comment.	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
30a. 1st/2nd dominant substrate in habitat unit: BED, BOL, COB, GRV, SND, SLC, OTH	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV
30b. 2nd dominant substrate in habitat unit: BED, BOL, COB, GRV, SND, SLC, OTH	SND	SND	SND	SND	SND	SND	SND	SND	SND	SND	SND	SND	SND	SND	SND	SND	SND
31. If an objective, did the feature achieve the targeted substrate composition?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
32. % Canopy Measurement:	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
33. Photopoint data collected: YES /NO	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
34. Temperature Profile: YES /NO	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
35. Dissolved Oxygen Profile: YES/NO	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
36a. Total habitat unit area where targeted depth, velocity and shelter criteria overlap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36b. Total habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36c. Total habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36d. % habitat unit area where targeted depth, velocity and shelter criteria overlap	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
36e. % habitat unit area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
36f. % habitat unit area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
37. Does this feature need: DEC, ENH, MNT, REP, NON, OTH	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
38. Are additional restoration treatments recommended at this site?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO

