APPENDIX 5.1: Dry Creek Habitat Enhancement Project

Effectiveness Monitoring Data

Collected 2019

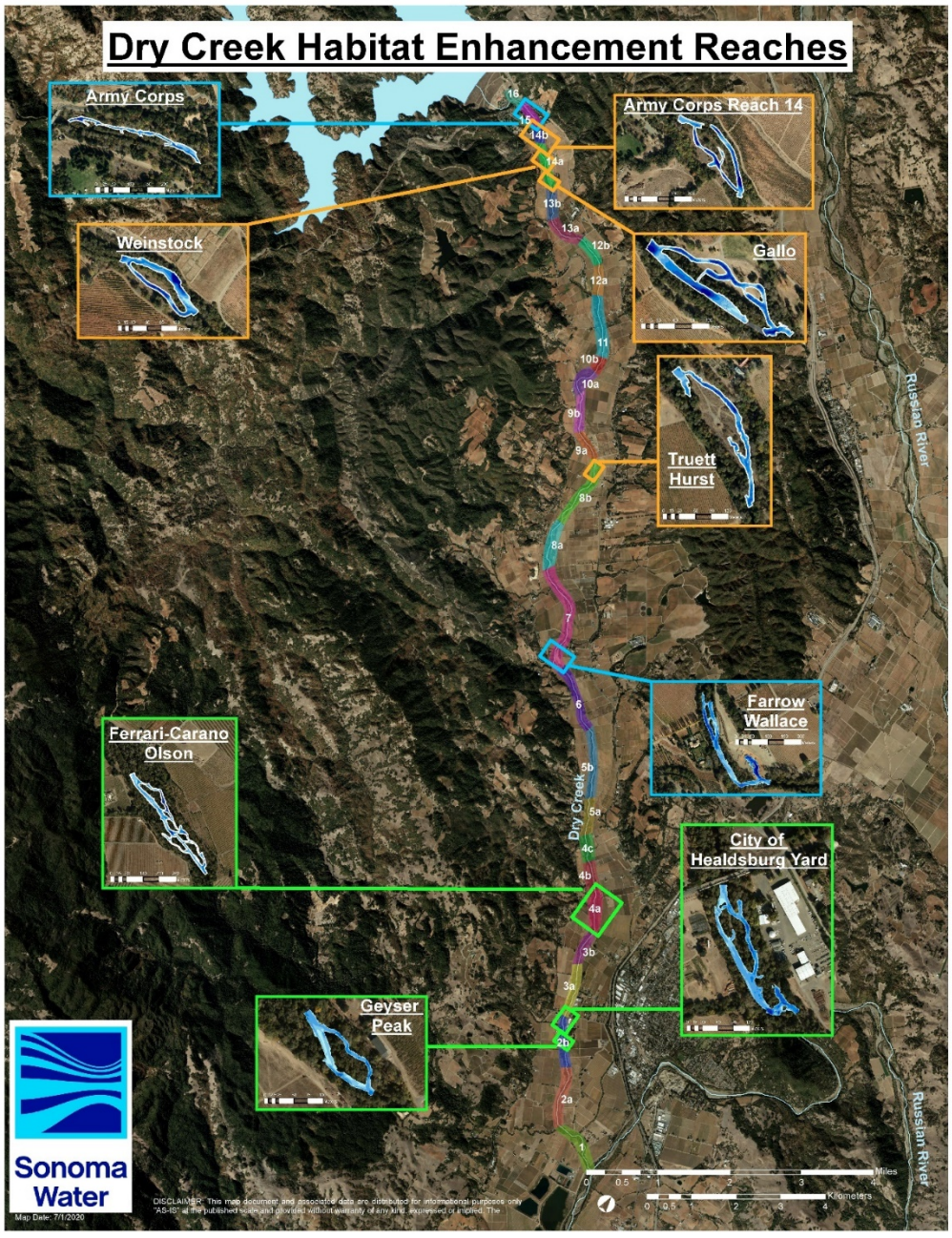

Table of Contents

TABLE OF CONTENTS **2**

LIST OF TABLES **4**

LIST OF FIGURES **7**

POST-ENHANCEMENT 2019 ..... **12**

GALLO, POST-ENHANCEMENT, SEPTEMBER 2019 13
Depth and Velocity *14*
Habitat Types and Shelter Values *20*
Feature, Habitat Unit, Site, and Reach Ratings *23*
Feature and Habitat Unit Checklists *36*

POST-EFFECTIVE FLOW 2019 ..... **46**

ARMY CORPS, POST-EFFECTIVE FLOW, SEPTEMBER 2019 47
Depth and Velocity *48*
Habitat Types and Shelter Values *54*
Feature, Habitat Unit, Site, and Reach Ratings *57*
Feature and Habitat Unit Checklists *67*
ARMY CORPS REACH 14, SEPTEMBER 2019 72
Depth and Velocity *73*
Habitat Types and Shelter Values *79*
Feature, Habitat Unit, Site, and Reach Ratings *82*
Feature and Habitat Unit Checklists *94*
WEINSTOCK, SEPTEMBER 2019 103
Depth and Velocity *104*
Habitat Types and Shelter Values *110*
Feature, Habitat Unit, Site, and Reach Ratings *113*
Feature and Habitat Unit Checklists *123*
TRUETT HURST, AUGUST 2019 128
Depth and Velocity *129*
Habitat Types and Shelter Values *135*
Feature, Habitat Unit, Site, and Reach Ratings *138*
Feature and Habitat Unit Checklists *153*
FARROW WALLACE, NOVEMBER 2019 166
Depth and Velocity *167*
Habitat Types and Shelter Values *173*
Feature, Habitat Unit, Site, and Reach Ratings *176*
Feature and Habitat Unit Checklists *189*
FERRARI-CARANO, OLSON, JUNE 2019 197
Depth and Velocity *198*
Habitat Types and Shelter Values *204*
Feature, Habitat Unit, Site, and Reach Ratings *208*
Feature and Habitat Unit Checklists *225*
CITY OF HEALDSBURG YARD, JULY 2019 242

Depth and Velocity *243*
Habitat Types and Shelter Values *249*
Feature, Habitat Unit, Site, and Reach Ratings *252*
Feature and Habitat Unit Checklists *266*
GEYSER PEAK, JULY 2019 275
Depth and Velocity *276*
Habitat Types and Shelter Values *282*
Feature, Habitat Unit, Site, and Reach Ratings *285*
Feature and Habitat Unit Checklists *296*

List of Tables

TABLE 1. AREAS AND PERCENTAGES OF: WETTED AREA, OPTIMAL DEPTH AND VELOCITY, AND OPTIMAL HYDRAULIC HABITAT WITHIN THE GALLO ENHANCEMENT REACH, SEPTEMBER 2019. 14
TABLE 2. HABITAT, TYPES, SHELTER VALUE, PERCENT COVER, AND SHELTER SCORE FOR HABITAT UNITS WITHIN THE GALLO ENHANCEMENT REACH, SEPTEMBER 2019. 20
TABLE 3. POST-ENHANCEMENT FEATURE RATINGS FOR THE GALLO ENHANCEMENT REACH SEPTEMBER 2019. 24
TABLE 4. POST-ENHANCEMENT HABITAT UNIT RATINGS FOR THE GALLO ENHANCEMENT REACH SEPTEMBER 2019. 30
TABLE 5. POST-ENHANCEMENT AVERAGE FEATURE, AVERAGE HABITAT UNIT, SITE, AND REACH RATINGS (ROUNDED TO THE NEAREST WHOLE NUMBER) FOR THE GALLO ENHANCEMENT REACH, SEPTEMBER 2019. 33
TABLE 6. ADAPTIVE MANAGEMENT PLAN TARGETED CHECKLIST FOR THE GALLO ENHANCEMENT REACH, SEPTEMBER 2019. 37
TABLE 7. ADAPTIVE MANAGEMENT PLAN FULL CHECKLIST FOR THE GALLO ENHANCEMENT REACH, SEPTEMBER 2019. 41
TABLE 8. AREAS AND PERCENTAGES OF: WETTED AREA, OPTIMAL DEPTH AND VELOCITY, AND OPTIMAL HYDRAULIC HABITAT WITHIN THE ARMY CORPS ENHANCEMENT REACH, OCTOBER 2019. 48
TABLE 9. HABITAT, TYPES, SHELTER VALUE, PERCENT COVER, AND SHELTER SCORE FOR HABITAT UNITS WITHIN THE ARMY CORPS ENHANCEMENT REACH, OCTOBER 2019. 54
TABLE 10. POST-EFFECTIVE FLOW FEATURE RATINGS FOR THE ARMY CORPS ENHANCEMENT REACH OCTOBER 2019. 58
TABLE 11. POST-EFFECTIVE FLOW HABITAT UNIT RATINGS FOR THE ARMY CORPS ENHANCEMENT REACH OCTOBER 2019. 61
TABLE 12. POST-ENHANCEMENT AVERAGE HABITAT UNIT, SITE, AND REACH RATINGS (ROUNDED TO THE NEAREST WHOLE NUMBER) FOR THE ARMY CORPS ENHANCEMENT REACH, OCTOBER 2019. 64
TABLE 13. ADAPTIVE MANAGEMENT PLAN TARGETED CHECKLIST FOR THE ARMY CORPS ENHANCEMENT REACH, OCTOBER 2019. 68
TABLE 14. ADAPTIVE MANAGEMENT PLAN FULL CHECKLIST FOR THE ARMY CORPS ENHANCEMENT REACH, OCTOBER 2019. 70
TABLE 15. AREAS AND PERCENTAGES OF: WETTED AREA, OPTIMAL DEPTH AND VELOCITY, AND OPTIMAL HYDRAULIC HABITAT WITHIN THE ARMY CORPS REACH 14 ENHANCEMENT REACH, SEPTEMBER 2019. 73
TABLE 16. HABITAT, TYPES, SHELTER VALUE, PERCENT COVER, AND SHELTER SCORE FOR HABITAT UNITS WITHIN THE ARMY CORPS REACH 14 ENHANCEMENT REACH, SEPTEMBER 2019. 79
TABLE 17. POST-EFFECTIVE FLOW FEATURE RATINGS FOR THE ARMY CORPS REACH 14 ENHANCEMENT REACH SEPTEMBER 2019. 83
TABLE 18. POST-EFFECTIVE FLOW HABITAT UNIT RATINGS FOR THE ARMY CORPS REACH 14 ENHANCEMENT REACH SEPTEMBER 2019. 88
TABLE 19. POST-EFFECTIVE FLOW AVERAGE FEATURE, AVERAGE HABITAT UNIT, SITE, AND REACH RATINGS (ROUNDED TO THE NEAREST WHOLE NUMBER) FOR THE ARMY CORPS REACH 14 ENHANCEMENT REACH, SEPTEMBER 2019. 91
TABLE 20. ADAPTIVE MANAGEMENT PLAN TARGETED CHECKLIST (SITES 1, 2) FOR THE ARMY CORPS REACH 14 ENHANCEMENT REACH, SEPTEMBER 2019. 95
TABLE 21. ADAPTIVE MANAGEMENT PLAN FULL CHECKLIST (SITES 1, 2) FOR THE ARMY CORPS REACH 14 ENHANCEMENT REACH, SEPTEMBER 2019. 99
TABLE 22. AREAS AND PERCENTAGES OF: WETTED AREA, OPTIMAL DEPTH AND VELOCITY, AND OPTIMAL HYDRAULIC HABITAT WITHIN THE WEINSTOCK ENHANCEMENT REACH, SEPTEMBER 2019. 104

TABLE 23. HABITAT, TYPES, SHELTER VALUE, PERCENT COVER, AND SHELTER SCORE FOR HABITAT UNITS WITHIN THE WEINSTOCK ENHANCEMENT REACH, SEPTEMBER 2019. 110
TABLE 24. POST-EFFECTIVE FLOW FEATURE RATINGS FOR THE WEINSTOCK ENHANCEMENT REACH SEPTEMBER 2019. 114
TABLE 25. POST-EFFECTIVE FLOW HABITAT UNIT RATINGS FOR THE WEINSTOCK ENHANCEMENT REACH SEPTEMBER 2019. 118
TABLE 26. POST-EFFECTIVE FLOW AVERAGE FEATURE, AVERAGE HABITAT UNIT, SITE, AND REACH RATINGS (ROUNDED TO THE NEAREST WHOLE NUMBER) FOR THE WEINSTOCK ENHANCEMENT REACH, SEPTEMBER 2019. 120
TABLE 27. ADAPTIVE MANAGEMENT PLAN TARGETED CHECKLIST FOR THE WEINSTOCK ENHANCEMENT REACH, SEPTEMBER 2019. 124
TABLE 28. ADAPTIVE MANAGEMENT PLAN FULL CHECKLIST FOR THE WEINSTOCK ENHANCEMENT REACH, SEPTEMBER 2019. 126
TABLE 29. AREAS AND PERCENTAGES OF: WETTED AREA, OPTIMAL DEPTH AND VELOCITY, AND OPTIMAL HYDRAULIC HABITAT WITHIN THE THE TRUETT HURST ENHANCEMENT REACH, AUGUST 2019. 129
TABLE 30. HABITAT, TYPES, SHELTER VALUE, PERCENT COVER, AND SHELTER SCORE FOR HABITAT UNITS WITHIN THE TRUETT HURST ENHANCEMENT REACH, AUGUST 2019. 135
TABLE 31. POST-EFFECTIVE FLOW FEATURE RATINGS FOR THE TRUETT HURST ENHANCEMENT REACH AUGUST 2019. 139
TABLE 32. POST-EFFECTIVE FLOW HABITAT UNIT RATINGS FOR THE TRUETT HURST ENHANCEMENT REACH AUGUST 2019. 146
TABLE 33. POST-EFFECTIVE FLOW AVERAGE FEATURE, AVERAGE HABITAT UNIT, SITE, AND REACH RATINGS (ROUNDED TO THE NEAREST WHOLE NUMBER) FOR THE TRUETT HURST ENHANCEMENT REACH, AUGUST 2019. 150
TABLE 34. ADAPTIVE MANAGEMENT PLAN TARGETED CHECKLIST FOR THE TRUETT HURST ENHANCEMENT REACH, AUGUST 2019. 154
TABLE 35. ADAPTIVE MANAGEMENT PLAN FULL CHECKLIST FOR THE TRUETT HURST ENHANCEMENT REACH, AUGUST 2019. 160
TABLE 36. AREAS AND PERCENTAGES OF: WETTED AREA, OPTIMAL DEPTH AND VELOCITY, AND OPTIMAL HYDRAULIC HABITAT WITHIN THE FARROW, WALLACE ENHANCEMENT REACH, NOVEMBER 2019. 167
TABLE 37. HABITAT, TYPES, SHELTER VALUE, PERCENT COVER, AND SHELTER SCORE FOR HABITAT UNITS WITHIN THE FARROW, WALLACE ENHANCEMENT REACH, NOVEMBER 2019. 173
TABLE 38. POST-EFFECTIVE FLOW FEATURE RATINGS FOR THE FARROW, WALLACE ENHANCEMENT REACH, NOVEMBER 2019. 177
TABLE 39. POST-EFFECTIVE FLOW HABITAT UNIT RATINGS FOR THE FARROW, WALLACE ENHANCEMENT REACH, NOVEMBER 2019. 183
TABLE 40. POST-EFFECTIVE FLOW AVERAGE FEATURE, AVERAGE HABITAT UNIT, SITE, AND REACH RATINGS (ROUNDED TO THE NEAREST WHOLE NUMBER) FOR THE FARROW, WALLACE ENHANCEMENT REACH, NOVEMBER 2019. 186
TABLE 41. ADAPTIVE MANAGEMENT PLAN TARGETED CHECKLIST FOR THE FARROW, WALLACE ENHANCEMENT REACH, NOVEMBER 2019. 190
TABLE 42. ADAPTIVE MANAGEMENT PLAN FULL CHECKLIST FOR THE FARROW, WALLACE ENHANCEMENT REACH, NOVEMBER 2019. 193
TABLE 43. AREAS AND PERCENTAGES OF: WETTED AREA, OPTIMAL DEPTH AND VELOCITY, AND OPTIMAL HYDRAULIC HABITAT WITHIN THE FERRARI-CARANO, OLSON ENHANCEMENT REACH, JUNE 2019. 198

TABLE 44. HABITAT, TYPES, SHELTER VALUE, PERCENT COVER, AND SHELTER SCORE FOR HABITAT UNITS WITHIN THE FERRARI-CARANO, OLSON ENHANCEMENT REACH, JUNE 2019. 204
TABLE 45. ADAPTIVE MANAGEMENT PLAN CHECKLIST FEATURE RATINGS FOR THE FERRARI-CARANO, OLSON ENHANCEMENT REACH, JUNE 2019....209
TABLE 46. ADAPTIVE MANAGEMENT PLAN CHECKLIST HABITAT UNIT RATINGS FOR THE FERRARI-CARANO, OLSON ENHANCEMENT REACH, JUNE 2019....218
TABLE 47. POST-EFFECTIVE FLOW AVERAGE FEATURE, AVERAGE HABITAT UNIT, SITE, AND REACH RATINGS (ROUNDED TO THE NEAREST WHOLE NUMBER) FOR THE FERRARI-CARANO, OLSON ENHANCEMENT REACH, JUNE 2019. 222
TABLE 48. ADAPTIVE MANAGEMENT PLAN TARGETED CHECKLIST FOR THE FERRARI-CARANO, OLSON ENHANCEMENT REACH, JUNE 2019....226
TABLE 49. ADAPTIVE MANAGEMENT PLAN FULL CHECKLIST FOR THE FERRARI-CARANO, OLSON ENHANCEMENT REACH, JUNE 2019. 234
TABLE 50. AREAS AND PERCENTAGES OF: WETTED AREA, OPTIMAL DEPTH AND VELOCITY, AND OPTIMAL HYDRAULIC HABITAT WITHIN THE CITY OF HEALDSBURG YARD ENHANCEMENT REACH, JULY 2019. 243
TABLE 51. HABITAT, TYPES, SHELTER VALUE, PERCENT COVER, AND SHELTER SCORE FOR HABITAT UNITS WITHIN THE CITY OF HEALDSBURG YARD ENHANCEMENT REACH, JULY 2019. 249
TABLE 52. POST-ENHANCEMENT FEATURE RATINGS FOR THE CITY OF HEALDSBURG YARD ENHANCEMENT REACH, JULY 2019. 253
TABLE 53. POST-ENHANCEMENT HABITAT UNIT RATINGS FOR THE CITY OF HEALDSBURG YARD ENHANCEMENT REACH, JULY 2019. 260
TABLE 54. POST-ENHANCEMENT AVERAGE FEATURE, AVERAGE HABITAT UNIT, SITE, AND REACH RATINGS (ROUNDED TO THE NEAREST WHOLE NUMBER) FOR THE CITY OF HEALDSBURG YARD ENHANCEMENT REACH, JULY 2019. 263
TABLE 55. ADAPTIVE MANAGEMENT PLAN TARGETED CHECKLIST (SITE 1) FOR THE CITY OF HEALDSBURG YARD ENHANCEMENT REACH, JULY 2019. 267
TABLE 56. ADAPTIVE MANAGEMENT PLAN FULL CHECKLIST FOR THE CITY OF HEALDSBURG YARD ENHANCEMENT REACH, JULY 2019. 271
TABLE 57. AREAS AND PERCENTAGES OF: WETTED AREA, OPTIMAL DEPTH AND VELOCITY, AND OPTIMAL HYDRAULIC HABITAT WITHIN THE GEYSER PEAK ENHANCEMENT REACH, JULY 2019. 276
TABLE 58. HABITAT, TYPES, SHELTER VALUE, PERCENT COVER, AND SHELTER SCORE FOR HABITAT UNITS WITHIN THE GEYSER PEAK ENHANCEMENT REACH, JULY 2019. 282
TABLE 59. POST-EFFECTIVE FLOW FEATURE RATINGS FOR THE GEYSER PEAK ENHANCEMENT REACH, JULY 2019.286
TABLE 60. POST-EFFECTIVE FLOW HABITAT UNIT RATINGS FOR THE GEYSER PEAK ENHANCEMENT REACH, JULY 2019. 291
TABLE 61. POST-EFFECTIVE FLOW AVERAGE FEATURE, HABITAT UNIT, SITE, AND REACH RATINGS (ROUNDED TO THE NEAREST WHOLE NUMBER) FOR THE GEYSER PEAK ENHANCEMENT REACH, JULY 2019. 293
TABLE 62. ADAPTIVE MANAGEMENT PLAN TARGETED CHECKLIST FOR THE GEYSER PEAK ENHANCEMENT REACH, JULY 2019. 297
TABLE 63. ADAPTIVE MANAGEMENT PLAN FULL CHECKLIST FOR THE GEYSER PEAK ENHANCEMENT REACH, JULY 2019. 300

List of Figures

FIGURE 1. MEASURED WATER DEPTH WITHIN THE GALLO ENHANCEMENT REACH, SEPTEMBER 2019. 15
FIGURE 2. OPTIMAL WATER DEPTH FOR FRY (0.5-2.0 FT) AND PARR (2.0-4.0 FT) WITHIN THE GALLO ENHANCEMENT REACH, SEPTEMBER 2019. 16
FIGURE 3. MEASURED WATER VELOCITY WITHIN THE GALLO ENHANCEMENT REACH, SEPTEMBER 2019. 17
FIGURE 4. OPTIMAL WATER VELOCITY FOR FRY AND PARR (< 0.5 FT/S) WITHIN THE GALLO ENHANCEMENT REACH, SEPTEMBER 2019. 18
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 GALLO ENHANCEMENT REACH, SEPTEMBER 2019. 19
FIGURE 6. HABITAT UNIT NUMBER AND TYPE WITHIN THE GALLO ENHANCEMENT REACH, SEPTEMBER 2019. 21
FIGURE 7. HABITAT UNIT SHELTER SCORES WITHIN THE GALLO ENHANCEMENT REACH, SEPTEMBER 2019. 22
FIGURE 8. ENHANCEMENT SITES AND FEATURES WITHIN THE GALLO ENHANCEMENT REACH, SEPTEMBER 2019...28
FIGURE 9. FEATURE RATINGS FOR THE GALLO ENHANCEMENT REACH, SEPTEMBER 2019. 29
FIGURE 10. HABITAT UNIT RATINGS FOR THE GALLO ENHANCEMENT REACH, SEPTEMBER 2019. 32
FIGURE 11. POST ENHANCEMENT SITE RATINGS FOR THE GALLO ENHANCEMENT REACH, SEPTEMBER 2019. 34
FIGURE 12. POST-ENHANCEMENT REACH RATING FOR THE GALLO ENHANCEMENT REACH, SEPTEMBER 2019. 35
FIGURE 13. MEASURED WATER DEPTH WITHIN THE ARMY CORPS ENHANCEMENT REACH, OCTOBER 2019. 49
FIGURE 14. OPTIMAL WATER DEPTH FOR FRY (0.5-2.0 FT) AND PARR (2.0-4.0 FT) WITHIN THE ARMY CORPS ENHANCEMENT REACH, OCTOBER 2019. 50
FIGURE 15. MEASURED WATER VELOCITY WITHIN THE ARMY CORPS ENHANCEMENT REACH, OCTOBER 2019. 51
FIGURE 16. OPTIMAL WATER VELOCITY FOR FRY AND PARR (< 0.5 FT/S) WITHIN THE ARMY CORPS ENHANCEMENT REACH, OCTOBER 2019. 52
FIGURE 17. 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 ARMY CORPS ENHANCEMENT REACH, OCTOBER 2019. 53
FIGURE 18. HABITAT UNIT NUMBER AND TYPE WITHIN THE ARMY CORPS ENHANCEMENT REACH, OCTOBER 2019. 55
FIGURE 19. HABITAT UNIT SHELTER SCORES WITHIN THE ARMY CORPS ENHANCEMENT REACH, OCTOBER 2019. ..56
FIGURE 20. ENHANCEMENT SITES AND FEATURES WITHIN THE ARMY CORPS ENHANCEMENT REACH, OCTOBER 2019. 59
FIGURE 21. POST-EFFECTIVE FLOW FEATURE RATINGS WITHIN THE ARMY CORPS ENHANCEMENT REACH, OCTOBER 2019. 60
FIGURE 22. HABITAT UNIT RATINGS WITHIN THE ARMY CORPS ENHANCEMENT REACH, OCTOBER 2019. 63
FIGURE 23. POST-EFFECTIVE FLOW SITE RATINGS FOR THE ARMY CORPS ENHANCEMENT REACH, OCTOBER 2019.65
FIGURE 24. POST-EFFECTIVE FLOW REACH RATING FOR THE ARMY CORPS ENHANCEMENT REACH, OCTOBER 2019. 66
FIGURE 25. MEASURED WATER DEPTH WITHIN THE ARMY CORPS REACH 14 ENHANCEMENT REACH, SEPTEMBER 2019. 74
FIGURE 26. OPTIMAL WATER DEPTH FOR FRY (0.5-2.0 FT) AND PARR (2.0-4.0 FT) WITHIN THE ARMY CORPS REACH 14 ENHANCEMENT REACH, SEPTEMBER 2019. 75
FIGURE 27. MEASURED WATER VELOCITY WITHIN THE ARMY CORPS REACH 14 ENHANCEMENT REACH, SEPTEMBER 2019. 76
FIGURE 28. OPTIMAL WATER VELOCITY FOR FRY AND PARR (< 0.5 FT/S) WITHIN THE ARMY CORPS REACH 14 ENHANCEMENT REACH, SEPTEMBER 2019. 77
FIGURE 29. 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 ARMY CORPS REACH 14 ENHANCEMENT REACH, SEPTEMBER 2019. 78

FIGURE 30. HABITAT UNIT NUMBER AND TYPE WITHIN THE ARMY CORPS REACH 14 ENHANCEMENT REACH, SEPTEMBER 2019. 80
FIGURE 31. HABITAT UNIT SHELTER SCORES WITHIN THE ARMY CORPS REACH 14 ENHANCEMENT REACH, SEPTEMBER 2019. 81
FIGURE 32. ENHANCEMENT SITES AND FEATURES WITHIN THE ARMY CORPS REACH 14 ENHANCEMENT REACH, SEPTEMBER 2019. 86
FIGURE 33. FEATURE RATINGS FOR THE ARMY CORPS REACH 14 ENHANCEMENT REACH, SEPTEMBER 2019. 87
FIGURE 34. HABITAT UNIT RATINGS FOR THE ARMY CORPS REACH 14 ENHANCEMENT REACH, SEPTEMBER 2019. 90
FIGURE 35. POST ENHANCEMENT SITE RATINGS FOR THE ARMY CORPS REACH 14 ENHANCEMENT REACH, SEPTEMBER 2019. 92
FIGURE 36. POST-EFFECTIVE FLOW REACH RATING FOR THE ARMY CORPS REACH 14 ENHANCEMENT REACH, SEPTEMBER 2019. 93
FIGURE 37. MEASURED WATER DEPTH WITHIN THE WEINSTOCK ENHANCEMENT REACH, SEPTEMBER 2019. 105
FIGURE 38. OPTIMAL WATER DEPTH FOR FRY (0.5-2.0 FT) AND PARR (2.0-4.0 FT) WITHIN THE WEINSTOCK ENHANCEMENT REACH, SEPTEMBER 2019. 106
FIGURE 39. MEASURED WATER VELOCITY WITHIN THE WEINSTOCK ENHANCEMENT REACH, SEPTEMBER 2019...107
FIGURE 40. OPTIMAL WATER VELOCITY FOR FRY AND PARR (< 0.5 FT/S) WITHIN THE WEINSTOCK ENHANCEMENT REACH, SEPTEMBER 2019. 108
FIGURE 41. 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, SEPTEMBER 2019. 109
FIGURE 42. HABITAT UNIT NUMBER AND TYPE WITHIN THE WEINSTOCK ENHANCEMENT REACH, SEPTEMBER 2019. 111
FIGURE 43. HABITAT UNIT SHELTER SCORES WITHIN THE WEINSTOCK ENHANCEMENT REACH, SEPTEMBER 2019. 112
FIGURE 44. ENHANCEMENT SITES AND FEATURES WITHIN THE WEINSTOCK ENHANCEMENT REACH, SEPTEMBER 2019. 116
FIGURE 45. FEATURE RATINGS FOR THE WEINSTOCK ENHANCEMENT REACH, SEPTEMBER 2019....117
FIGURE 46. HABITAT UNIT RATINGS FOR THE WEINSTOCK ENHANCEMENT REACH, SEPTEMBER 2019. 119
FIGURE 47. POST EFFECTIVE FLOW SITE RATINGS FOR THE WEINSTOCK ENHANCEMENT REACH, SEPTEMBER 2019. 121
FIGURE 48. POST-EFFECTIVE FLOW REACH RATING FOR THE WEINSTOCK ENHANCEMENT REACH, SEPTEMBER 2019. 122
FIGURE 49. MEASURED WATER DEPTH WITHIN THE TRUETT HURST ENHANCEMENT REACH, AUGUST 2019. 130
FIGURE 50. OPTIMAL WATER DEPTH FOR FRY (0.5-2.0 FT) AND PARR (2.0-4.0 FT) WITHIN THE TRUETT HURST ENHANCEMENT REACH, AUGUST 2019. 131
FIGURE 51. MEASURED WATER VELOCITY WITHIN THE TRUETT HURST ENHANCEMENT REACH, AUGUST 2019....132
FIGURE 52. OPTIMAL WATER VELOCITY FOR FRY AND PARR (< 0.5 FT/S) WITHIN THE TRUETT HURST ENHANCEMENT REACH, AUGUST 2019. 133
FIGURE 53. 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 2019. 134
FIGURE 54. HABITAT UNIT NUMBER AND TYPE WITHIN THE TRUETT HURST ENHANCEMENT REACH, AUGUST 2019. 136
FIGURE 55. HABITAT UNIT SHELTER SCORES WITHIN THE TRUETT HURST ENHANCEMENT REACH, AUGUST 2019. 137
FIGURE 56. ENHANCEMENT SITES AND FEATURES WITHIN THE TRUETT HURST ENHANCEMENT REACH, AUGUST 2019. 144

FIGURE 57. FEATURE RATINGS FOR THE THE TRUETT HURST ENHANCEMENT REACH, AUGUST 2019. 145
FIGURE 58. HABITAT UNIT RATINGS FOR THE TRUETT HURST ENHANCEMENT REACH, AUGUST 2019. 149
FIGURE 59. POST EFFECTIVE FLOW SITE RATINGS FOR THE TRUETT HURST ENHANCEMENT REACH, AUGUST 2019. 151
FIGURE 60. POST-EFFECTIVE FLOW REACH RATING FOR THE TRUETT HURST ENHANCEMENT REACH, AUGUST 2019. 152
FIGURE 61. MEASURED WATER DEPTH WITHIN THE FARROW, WALLACE ENHANCEMENT REACH, NOVEMBER 2019. 168
FIGURE 62. OPTIMAL WATER DEPTH FOR FRY (0.5-2.0 FT) AND PARR (2.0-4.0 FT) WITHIN THE FARROW, WALLACE ENHANCEMENT REACH, NOVEMBER 2019. 169
FIGURE 63. MEASURED WATER VELOCITY WITHIN THE FARROW, WALLACE ENHANCEMENT REACH, NOVEMBER 2019. 170
FIGURE 64. OPTIMAL WATER VELOCITY FOR FRY AND PARR (< 0.5 FT/S) WITHIN THE FARROW, WALLACE ENHANCEMENT REACH, NOVEMBER 2019. 171
FIGURE 65. 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, NOVEMBER 2019. 172
FIGURE 66. HABITAT UNIT NUMBER AND TYPE WITHIN THE FARROW, WALLACE ENHANCEMENT REACH, NOVEMBER 2019. 174
FIGURE 67. HABITAT UNIT SHELTER SCORES WITHIN THE FARROW, WALLACE ENHANCEMENT REACH, NOVEMBER 2019. 175
FIGURE 68. ENHANCEMENT SITES AND FEATURES WITHIN THE FARROW, WALLACE ENHANCEMENT REACH, NOVEMBER 2019. 181
FIGURE 69. FEATURE RATINGS FOR THE FARROW, WALLACE ENHANCEMENT REACH, NOVEMBER 2019. 182
FIGURE 70. HABITAT UNIT RATINGS FOR THE FARROW, WALLACE ENHANCEMENT REACH, NOVEMBER 2019. 185
FIGURE 71. POST-EFFECTIVE FLOW SITE RATINGS FOR THE FARROW, WALLACE ENHANCEMENT REACH, NOVEMBER 2019. 187
FIGURE 72. POST-EFFECTIVE FLOW REACH RATING FOR THE FARROW, WALLACE ENHANCEMENT REACH, NOVEMBER 2019. 188
FIGURE 73. WATER DEPTH WITHIN THE FERRARI-CARANO, OLSON ENHANCEMENT REACH, JUNE 2019. 199
FIGURE 74. OPTIMAL WATER DEPTH FOR FRY (0.5-2.0 FT) AND PARR (2.0-4.0 FT) WITHIN THE FERRARI-CARANO, OLSON ENHANCEMENT REACH, JUNE 2019. 200
FIGURE 75. OPTIMAL WATER VELOCITY FOR FRY AND PARR (< 0.5 FT/S) WITHIN THE FERRARI-CARANO, OLSON ENHANCEMENT REACH, JUNE 2019. 202
FIGURE 76. 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, JUNE 2019. 203
FIGURE 77. HABITAT UNIT NUMBER AND TYPE WITHIN THE FERRARI-CARANO, OLSON ENHANCEMENT REACH, JUNE 2019. 206
FIGURE 78. HABITAT UNIT SHELTER SCORES WITHIN THE FERRARI-CARANO, OLSON ENHANCEMENT REACH, JUNE 2019. 207
FIGURE FO 79. ENHANCEMENT SITES AND FEATURES WITHIN THE FERRARI-CARANO, OLSON ENHANCEMENT REACH. 216
FIGURE 80. FEATURE RATINGS FOR THE FERRARI-CARANO, OLSON ENHANCEMENT REACH, JUNE 2019. 217
FIGURE 81. HABITAT UNIT RATINGS FOR THE FERRARI-CARANO, OLSON ENHANCEMENT REACH JUNE 2019. 221
FIGURE 82. ENHANCEMENT SITE RATINGS FOR THE FERRARI-CARANO, OLSON ENHANCEMENT REACH, JUNE 2019. 223

FIGURE 83. ENHANCEMENT REACH RATING FOR THE FERRARI-CARANO, OLSON ENHANCEMENT REACH, JUNE 2019. 224
FIGURE 84. MEASURED WATER DEPTH WITHIN THE CITY OF HEALDSBURG YARD ENHANCEMENT REACH, JULY 2019. 244
FIGURE 85. OPTIMAL WATER DEPTH FOR FRY (0.5-2.0 FT) AND PARR (2.0-4.0 FT) WITHIN THE CITY OF HEALDSBURG YARD ENHANCEMENT REACH, JULY 2019. 245
FIGURE 86. MEASURED WATER VELOCITY WITHIN THE CITY OF HEALDSBURG YARD ENHANCEMENT REACH, JULY 2019. 246
FIGURE 87. OPTIMAL WATER VELOCITY FOR FRY AND PARR (< 0.5 FT/S) WITHIN THE CITY OF HEALDSBURG YARD ENHANCEMENT REACH, JULY 2019. 247
FIGURE 88. 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 CITY OF HEALDSBURG YARD ENHANCEMENT REACH, JULY 2019. 248
FIGURE 89. HABITAT UNIT NUMBER AND TYPE WITHIN THE CITY OF HEALDSBURG YARD ENHANCEMENT REACH, JULY 2019. 250
FIGURE 90. HABITAT UNIT SHELTER SCORES WITHIN THE CITY OF HEALDSBURG YARD ENHANCEMENT REACH, JULY 2019. 251
FIGURE 91. ENHANCEMENT SITES AND FEATURES WITHIN THE CITY OF HEALDSBURG YARD ENHANCEMENT REACH, JULY 2019. 258
FIGURE 92. FEATURE RATINGS FOR THE CITY OF HEALDSBURG YARD ENHANCEMENT REACH, JULY 2019. 259
FIGURE 93. HABITAT UNIT RATINGS FOR THE CITY OF HEALDSBURG YARD ENHANCEMENT REACH, JULY 2019. 262
FIGURE 94. POST ENHANCEMENT SITE RATINGS FOR THE CITY OF HEALDSBURG YARD ENHANCEMENT REACH, JULY 2019. 264
FIGURE 95. POST-ENHANCEMENT REACH RATING FOR THE CITY OF HEALDSBURG YARD ENHANCEMENT REACH, JULY 2019. 265
FIGURE 96. MEASURED WATER DEPTH WITHIN THE GEYSER PEAK ENHANCEMENT REACH, JULY 2019. 277
FIGURE 97. OPTIMAL WATER DEPTH FOR FRY (0.5-2.0 FT) AND PARR (2.0-4.0 FT) WITHIN THE GEYSER PEAK ENHANCEMENT REACH, JULY 2019. 278
FIGURE 98. MEASURED WATER VELOCITY WITHIN THE GEYSER PEAK ENHANCEMENT REACH, JULY 2019. 279
FIGURE 99. OPTIMAL WATER VELOCITY FOR FRY AND PARR (< 0.5 FT/S) WITHIN THE GEYSER PEAK ENHANCEMENT REACH, JULY 2019. 280
FIGURE 100. 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, JULY 2019. 281
FIGURE 101. HABITAT UNIT NUMBER AND TYPE WITHIN THE GEYSER PEAK ENHANCEMENT REACH, JULY 2019. 283
FIGURE 102. HABITAT UNIT SHELTER SCORES WITHIN THE GEYSER PEAK ENHANCEMENT REACH, JULY 2019. 284
FIGURE 103. ENHANCEMENT SITES AND FEATURES WITHIN THE GEYSER PEAK ENHANCEMENT REACH, JULY 2019. 289
FIGURE 104. FEATURE RATINGS FOR THE GEYSER PEAK ENHANCEMENT REACH, JULY 2019. 290
FIGURE 105. POST-EFFECTIVE FLOW HABITAT UNIT RATING FOR THE GEYSER PEAK ENHANCEMENT REACH, JULY 2019. 292
FIGURE 106. POST-EFFECTIVE FLOW SITE RATINGS FOR THE GEYSER PEAK ENHANCEMENT REACH, JULY 2019. 294
FIGURE 107. POST-EFFECTIVE FLOW REACH RATING FOR THE GEYSER PEAK ENHANCEMENT REACH, JULY 2019. 295

Post-enhancement 2019

Gallo, Post-enhancement, September 2019

Depth and Velocity

Table 1. Areas and percentages of: wetted area, optimal depth and velocity, and optimal hydraulic habitat within the Gallo enhancement reach, September 2019.

Gallo Post-enhancement September 2019	Wetted area (ft^2)	Optimal depth (ft^2)			Optimal velocity (ft^2)	Optimal habitat (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	44,560	17,445	14,701	32,146	19,052	5,542	5,679	11,221
Side channel area	34,281	12,531	11,961	24,492	22,276	6,857	8,160	15,017
Total area	**78,841**	**29,976**	**26,662**	**56,637**	**41,328**	**12,399**	**13,839**	**26,238**
Main channel % of wetted area	57%	39%	33%	72%	43%	12%	13%	25%
Side channel % of wetted area	43%	37%	35%	71%	65%	20%	24%	44%
Total % of wetted area	**100%**	**38%**	**34%**	**72%**	**52%**	**16%**	**18%**	**33%**

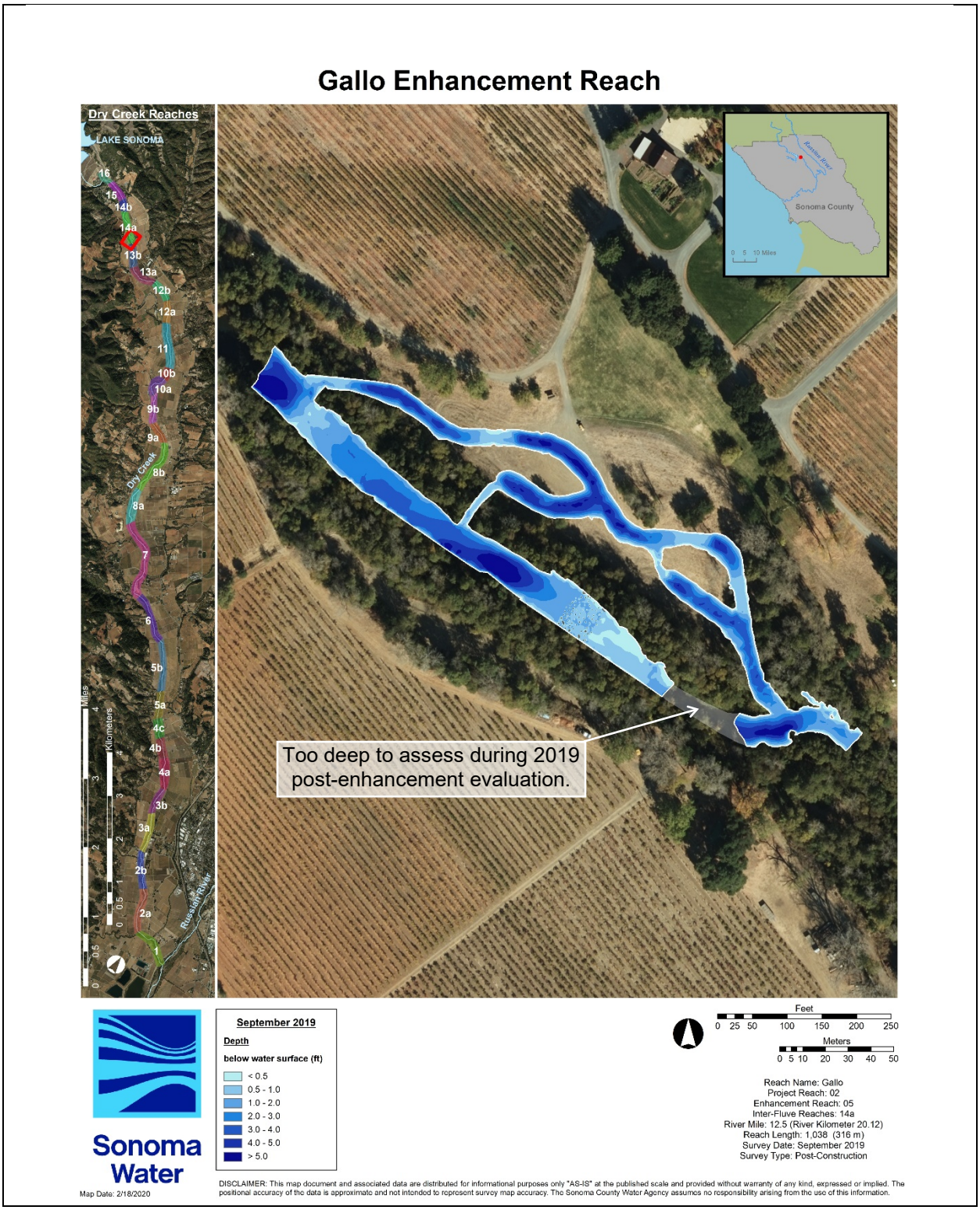

Figure 1. Measured water depth within the Gallo enhancement reach, September 2019.

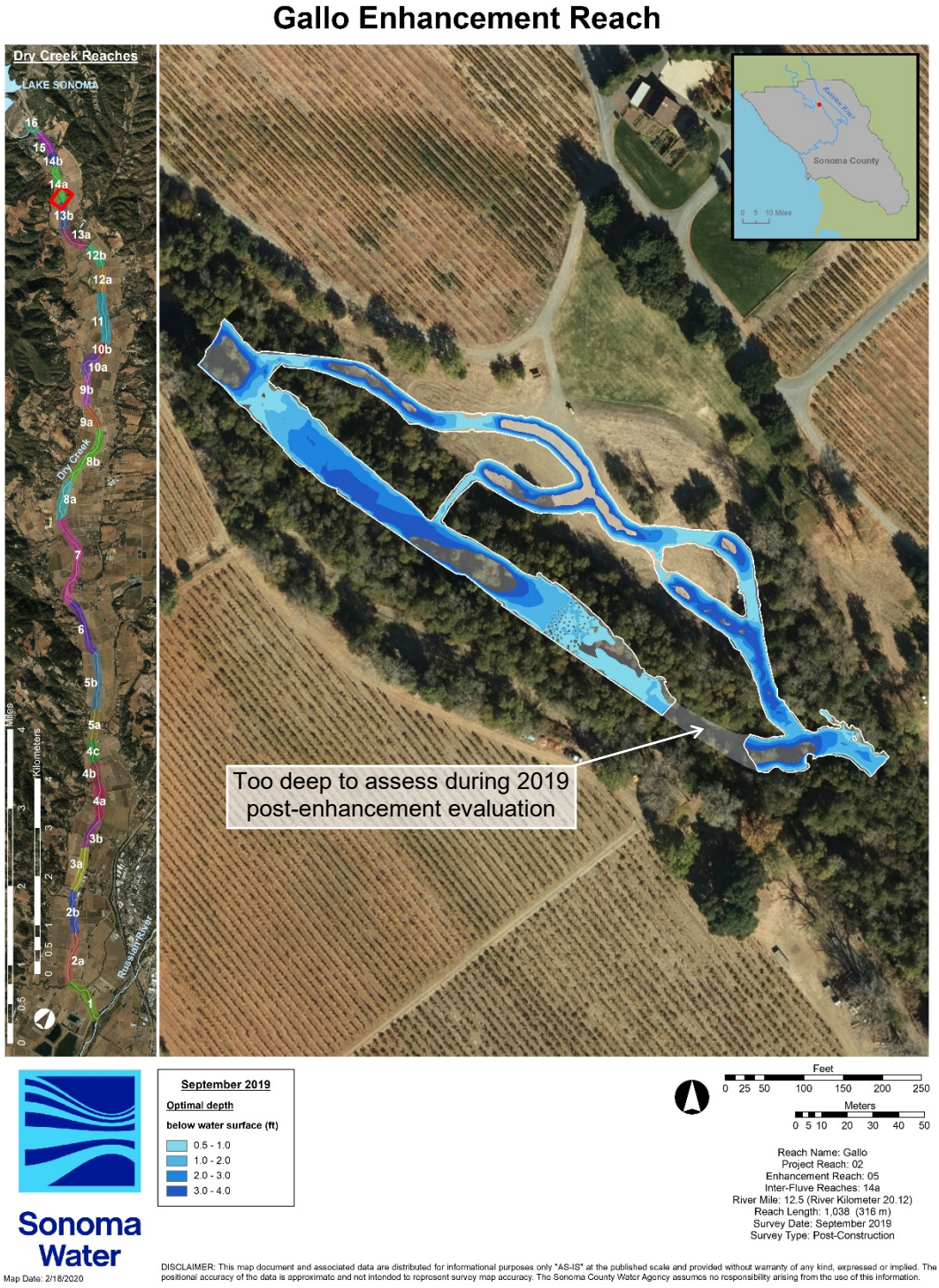

Figure 2. Optimal water depth for fry (0.5-2.0 ft) and parr (2.0-4.0 ft) within the Gallo enhancement reach, September 2019.

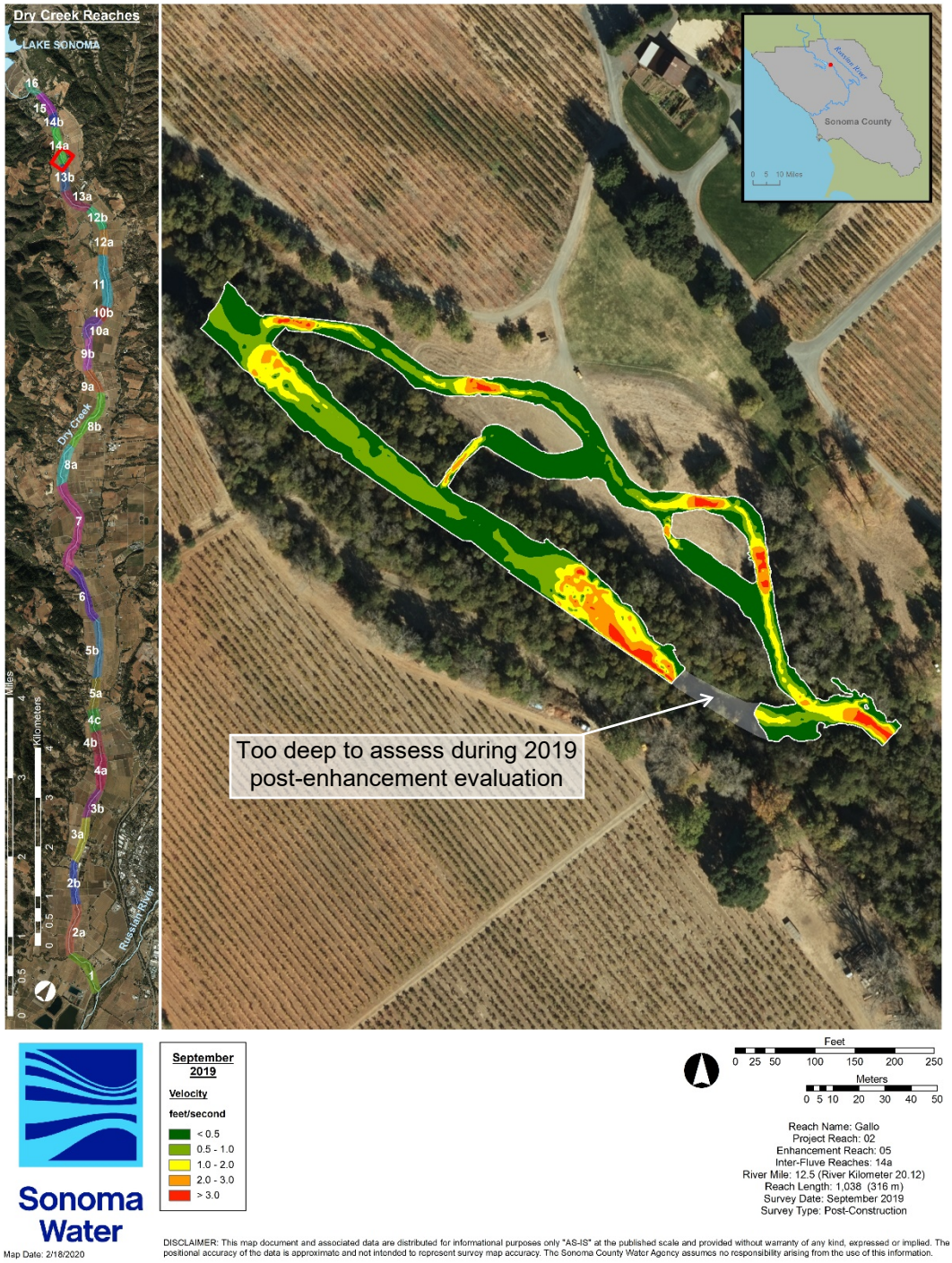

Figure 3. Measured water velocity within the Gallo enhancement reach, September 2019.

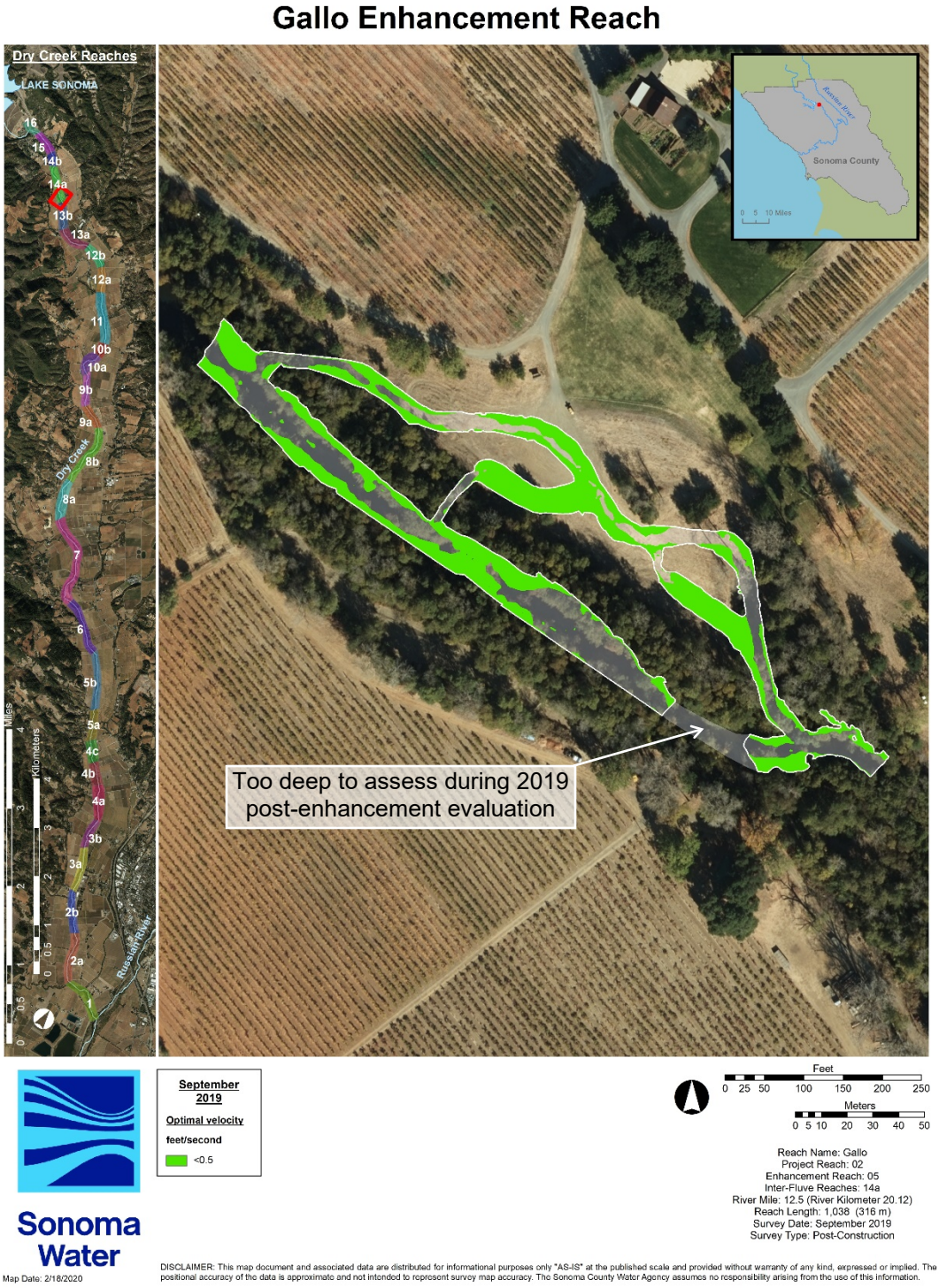

Figure 4. Optimal water velocity for fry and parr (< 0.5 ft/s) within the Gallo enhancement reach, September 2019.

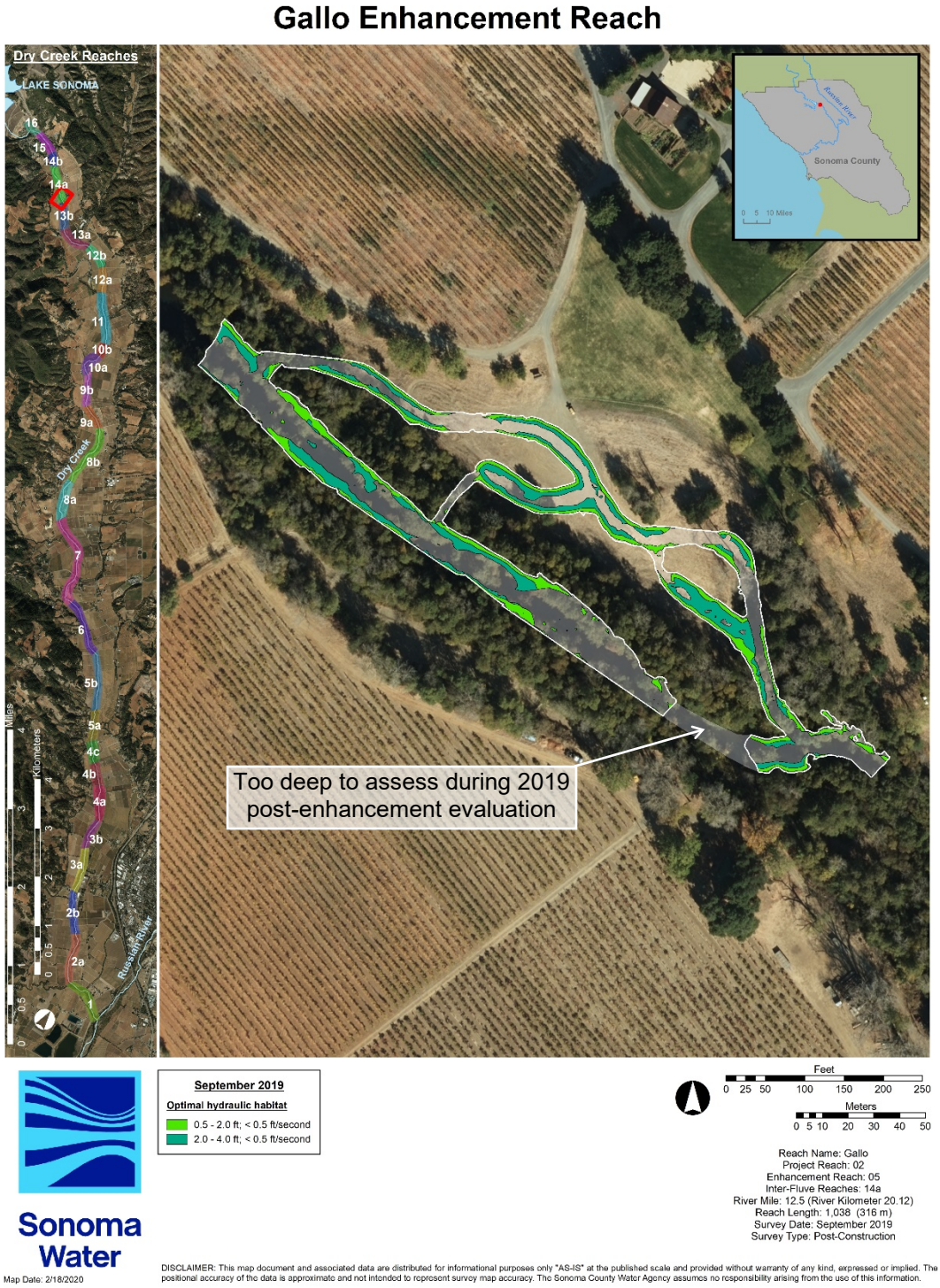

Figure 5. Optimal hydraulic habitat for fry (<0.5 ft/s, 0.5-2.0 ft) and parr (<0.5 ft/s, 2.0-4.0 ft) within the Gallo enhancement reach, September 2019.

Habitat Types and Shelter Values

Table 2. Habitat, types, shelter value, percent cover, and shelter score for habitat units within the Gallo enhancement reach, September 2019.

Post-enhancement (September 2019)				
Habitat Unit #	**Habitat Type**	**Shelter Value**	**Percent Cover**	**Shelter Score**
HU01	Riffle	2	20	40
HU02	Pool	3	50	150
HU03	Alcove	1	25	25
HU04	Riffle	3	50	150
HU05	Pool	3	25	75
HU06	Riffle	2	20	40
HU07	Pool	2	15	30
HU08	Pool	3	30	90
HU09	Riffle	3	30	90
HU10	Pool	3	30	90
HU11	Riffle	1	5	5
HU12	Pool	3	30	90
HU13	Riffle	3	60	180
HU14	Riffle	3	30	90
HU15	Riffle	1	10	10
HU16	Pool	3	20	60
HU17	Riffle	3	20	60
Pool: riffle	**9:7 (1.29)**			**Avg = 75**

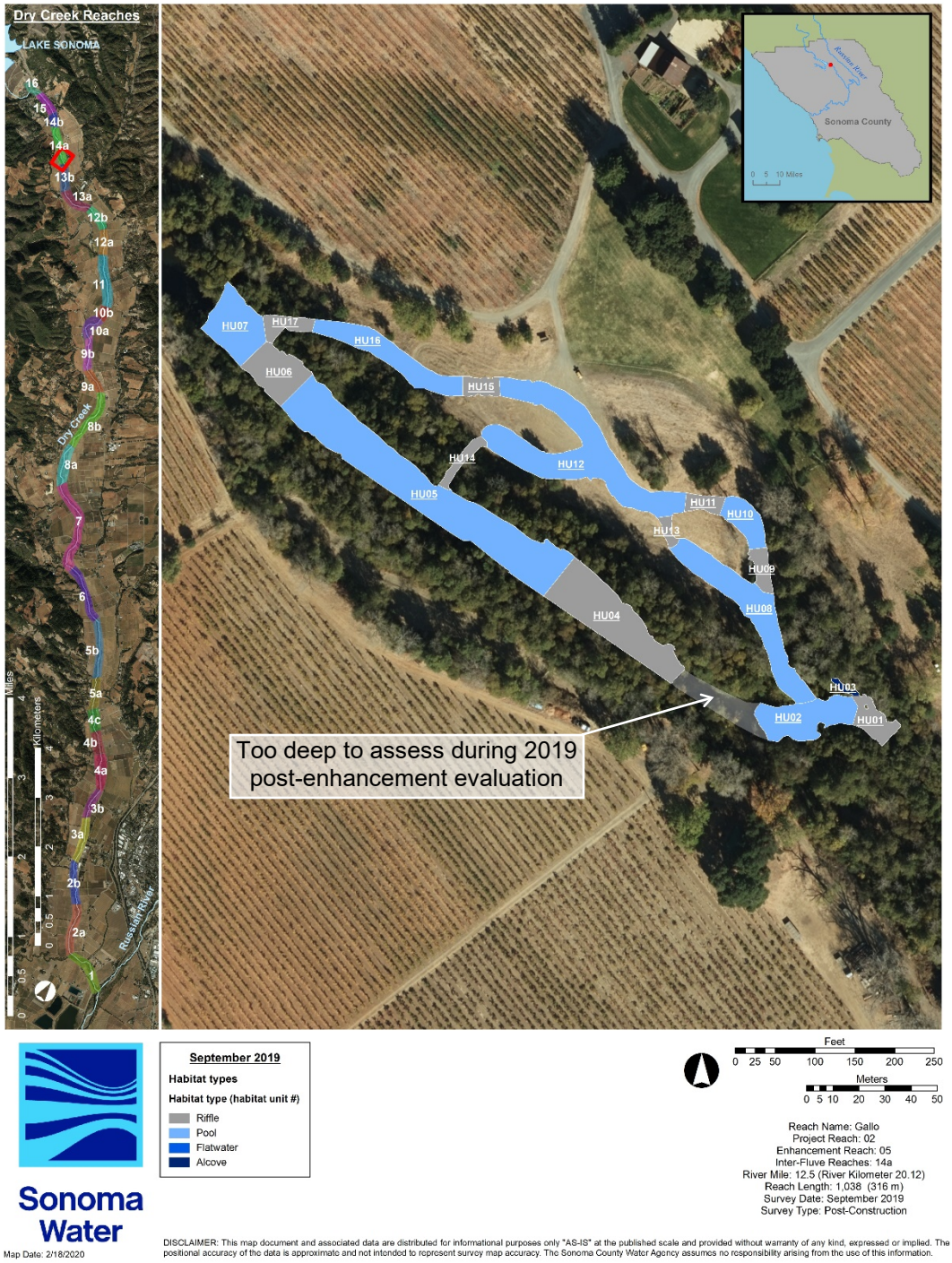

Figure 6. Habitat unit number and type within the Gallo enhancement reach, September 2019.

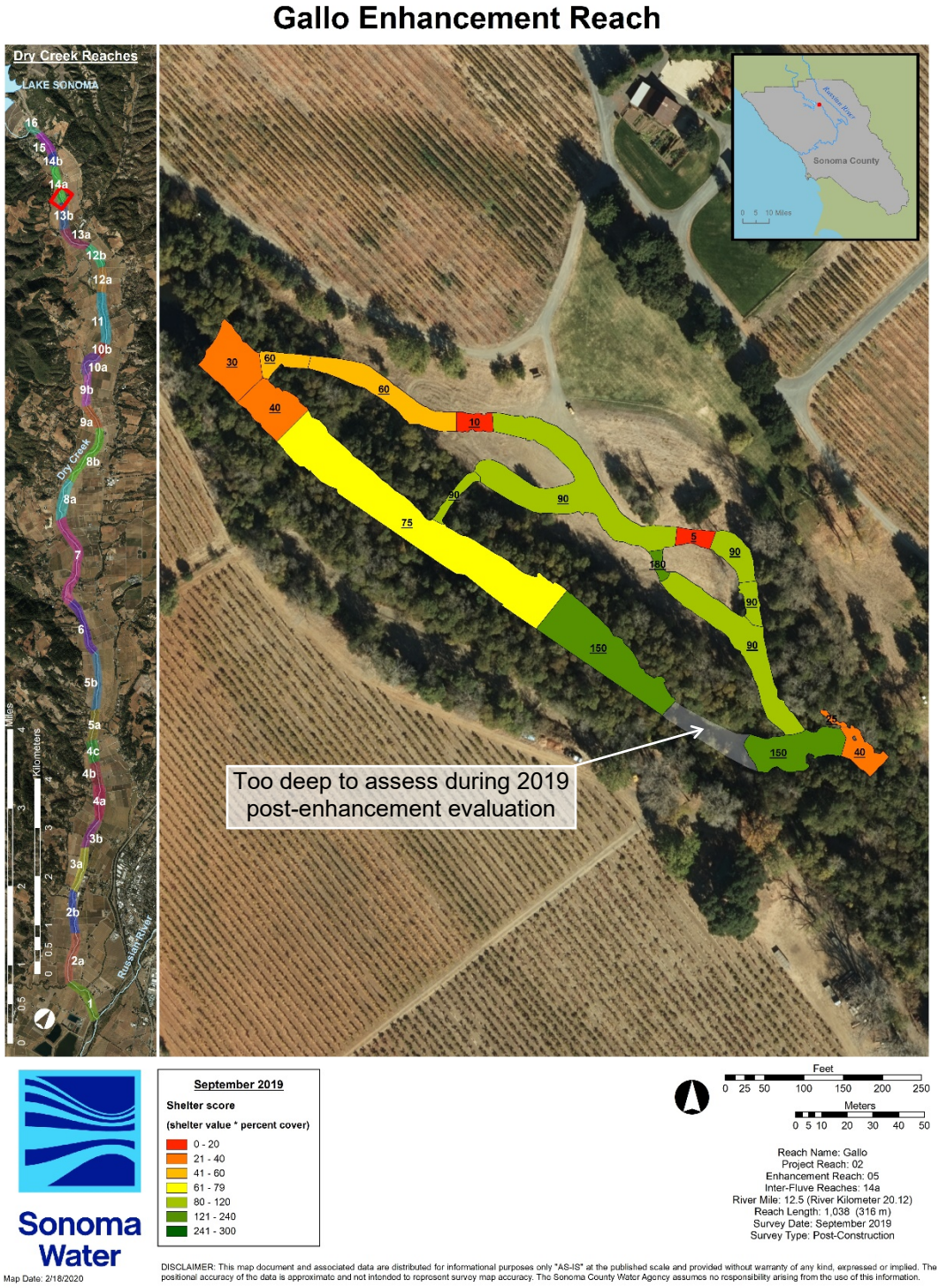

Figure 7. Habitat unit shelter scores within the Gallo enhancement reach, September 2019.

Feature, Habitat Unit, Site, and Reach Ratings

Table 3. Post-enhancement feature ratings for the Gallo enhancement reach September 2019.

	Project Reach	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
	Colloquial Name	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA
	mmddyy	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
	PROJECT SITE NUMBER	1	1	1	1	1	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
	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	HU04	HU05	HU05	HU06	HU01_D	HU08	HU08	HU08	HU08	HU09	HU08	HU09	HU08	HU08	HU02_D	HU10	HU10	HU10
	Habitat Type	Riffle	Pool	Pool	Riffle	Dry	Pool	Pool	Pool	Pool	Riffle	Pool	Riffle	Pool	Pool	Dry	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	YES	YES	YES	NO	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
17a	If an objective, did the **feature** increase instream shelter rating?	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**?	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	**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
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	1	1	1	0	1	1	1	1	1	1	1	1	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	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	0	1	1	1	1	1	1	1	1	1	0	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	**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	12	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

Table 3. Post-enhancement feature ratings for the Gallo enhancement reach September 2019.

	Project Reach	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
	Colloquial Name	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA
	mmddyy	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
	PROJECT SITE NUMBER	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
	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	HW	BWW	SCW	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	Riffle	Riffle	Pool	Pool	Pool	Riffle	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 3. Post-enhancement feature ratings for the Gallo enhancement reach September 2019.

	Project Reach	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
	Colloquial Name	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA
	mmddyy	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
	PROJECT SITE NUMBER	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
	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	HW	SCW	SCW	HW	HW	AW
	Habitat Unit	HU14	HU14	HU14	HU14	HU14	HU03_D	HU12	HU12	HU15	HU16	HU16	HU16	HU16	HU16	HU16	HU17	HU17	HU17
	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
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	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	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	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	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?	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
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	1	1	1	1	0	1	1	1	1	1	1	1	1	1	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	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	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	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	**S2-32**	**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	12	12	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 3. Post-enhancement feature ratings for the Gallo enhancement reach September 2019.

	Project Reach	2	2	2	2
	Enhancement Reach	5	5	5	5
	Colloquial Name	GA	GA	GA	GA
	mmddyy	93019	93019	93019	93019
	Survey Type	POS	POS	POS	POS
	PROJECT SITE NUMBER	2	2	2	2
	Project Site Type	SideChan	SideChan	SideChan	SideChan
	PROJECT FEATURE NUMBER	S2-50	S2-51	S2-52	S2-53
	Feature Type Code	R	HW	HW	R
	Habitat Unit	HU17	HU17	HU17	HU13
	Habitat Type	Riffle	Riffle	Riffle	Riffle
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	NO	NO	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	NO	NO	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	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
17a	If an objective, did the **feature** increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	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
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	12	12	14
	Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)	Excellent	Excellent	Excellent	Excellent

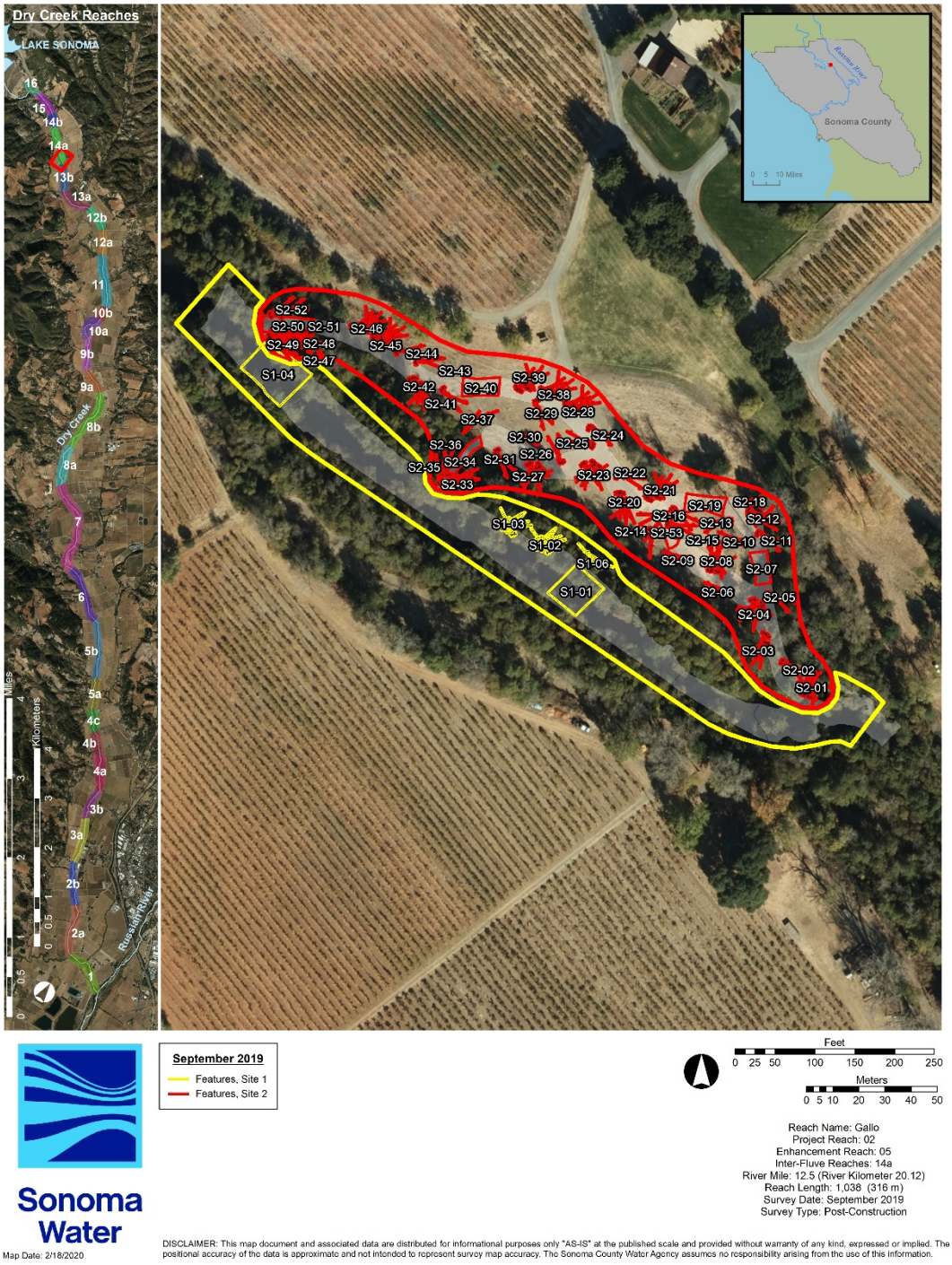

Figure 8. Enhancement sites and features within the Gallo enhancement reach, September 2019.

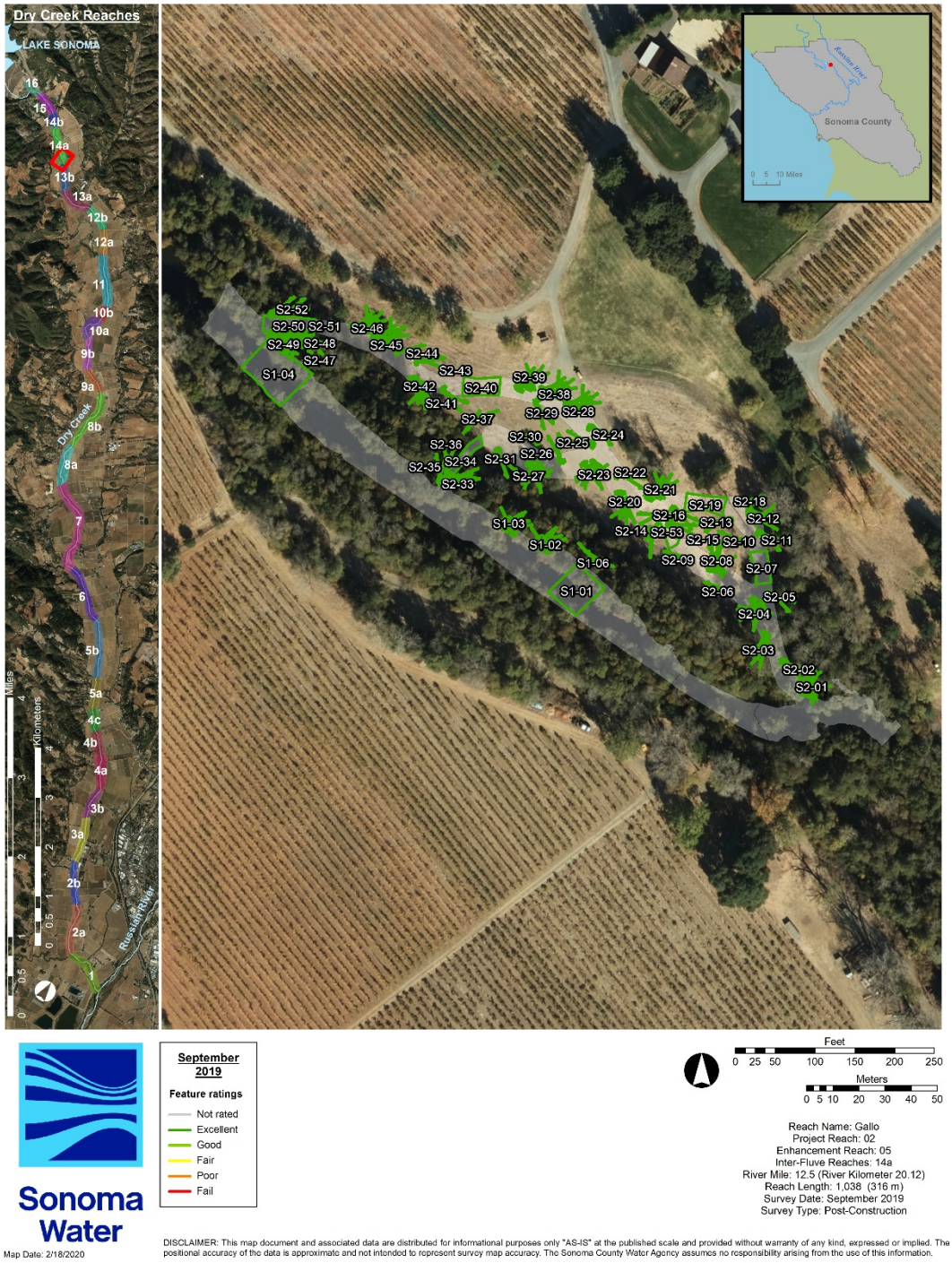

Figure 9. Feature ratings for the Gallo enhancement reach, September 2019.

Table 4. Post-enhancement habitat unit ratings for the Gallo enhancement reach September 2019.

	Project Reach	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
	Colloquial Name	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA
	mmddyy	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
	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	Pool	Alcove	Riffle	Pool	Riffle	Pool	Pool	Riffle	Pool	Riffle	Pool	Riffle	Riffle	Dry	Dry	Dry	Riffle
	PROJECT SITE NUMBER	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**1**	**2**	**2**	**2**
	Project Site Type	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	MainChan	SideChan	SideChan	SideChan
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	23%	6%	68%	28%	5%	10%	3%	8%	0%	0%	0%	0%	49%	34%	0%	0%	0%	32%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	69%	25%	32%	69%	23%	90%	13%	32%	0%	0%	0%	0%	51%	66%	0%	0%	0%	68%
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	2	3	1	3	3	2	2	3	3	3	1	3	3	3	0	0	0	1
15.	Percent of **habitat unit** covered by shelter: %	20	50	25	50	25	20	15	30	30	30	5	30	60	30	0	0	0	10
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	40	150	25	150	75	40	30	90	90	90	5	90	180	90	0	0	0	10
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	32%	43%	100%	12%	56%	22%	64%	73%	9%	53%	14%	84%	34%	25%	0%	0%	0%	17%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	13%	14%	32%	4%	16%	15%	9%	26%	0%	0%	0%	0%	0%	6%	0%	0%	0%	3%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	13%	0%	0%	21%	0%	19%	36%	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**	**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)	2	0	4	2	0	1	0	0	0	0	0	0	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)	4	2	3	4	2	4	1	3	0	0	0	0	4	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)	4	5	3	5	5	4	4	5	5	5	3	5	5	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)	2	3	2	3	2	2	1	2	2	2	0	2	4	2	0	0	0	1
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	1	5	0	5	2	1	0	3	3	3	0	3	5	3	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)	3	4	4	1	4	2	4	4	0	4	1	4	3	2	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)	1	1	3	0	1	1	0	2	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	1	0	0	2	0	1	3	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**	**HU01_D**	**HU02_D**	**HU03_D**	**HU15**
HABITAT UNIT RATING	Habitat unit quantitative rating (out of 35)	17	21	19	20	18	15	11	22	10	14	4	14	25	19	0	0	0	12
	Habitat unit qualitative rating: Excellent (>=28), Good (>=21), Fair(>=14), Poor (>=7), Fail (<7)	Fair	Good	Fair	Fair	Fair	Fair	Poor	Good	Poor	Fair	Fail	Fair	Good	Fair	Not rated	Not rated	Not rated	Poor

Table 4. Post-enhancement habitat unit ratings for the Gallo enhancement reach September 2019.

	Project Reach	2	2
	Enhancement Reach	5	5
	Colloquial Name	GA	GA
	mmddyy	93019	93019
	Survey Type	POS	POS
	HABITAT UNIT NUMBER	**HU16**	**HU17**
	Habitat Type	Pool	Riffle
	PROJECT SITE NUMBER	**2**	**2**
	Project Site Type	SideChan	SideChan
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	9%	19%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	30%	72%
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	3	3
15.	Percent of **habitat unit** covered by shelter: %	20	20
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	60	60
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	60%	27%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	22%	10%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	21%	5%
	HABITAT UNIT NUMBER	**HU16**	**HU17**
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	1
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	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
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
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	2	2
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
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
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
	HABITAT UNIT NUMBER	**HU16**	**HU17**
HABITAT UNIT RATING	Habitat unit quantitative rating (out of 35)	20	16
	Habitat unit qualitative rating: Excellent (>=28), Good (>=21), Fair(>=14), Poor (>=7), Fail (<7)	Fair	Fair

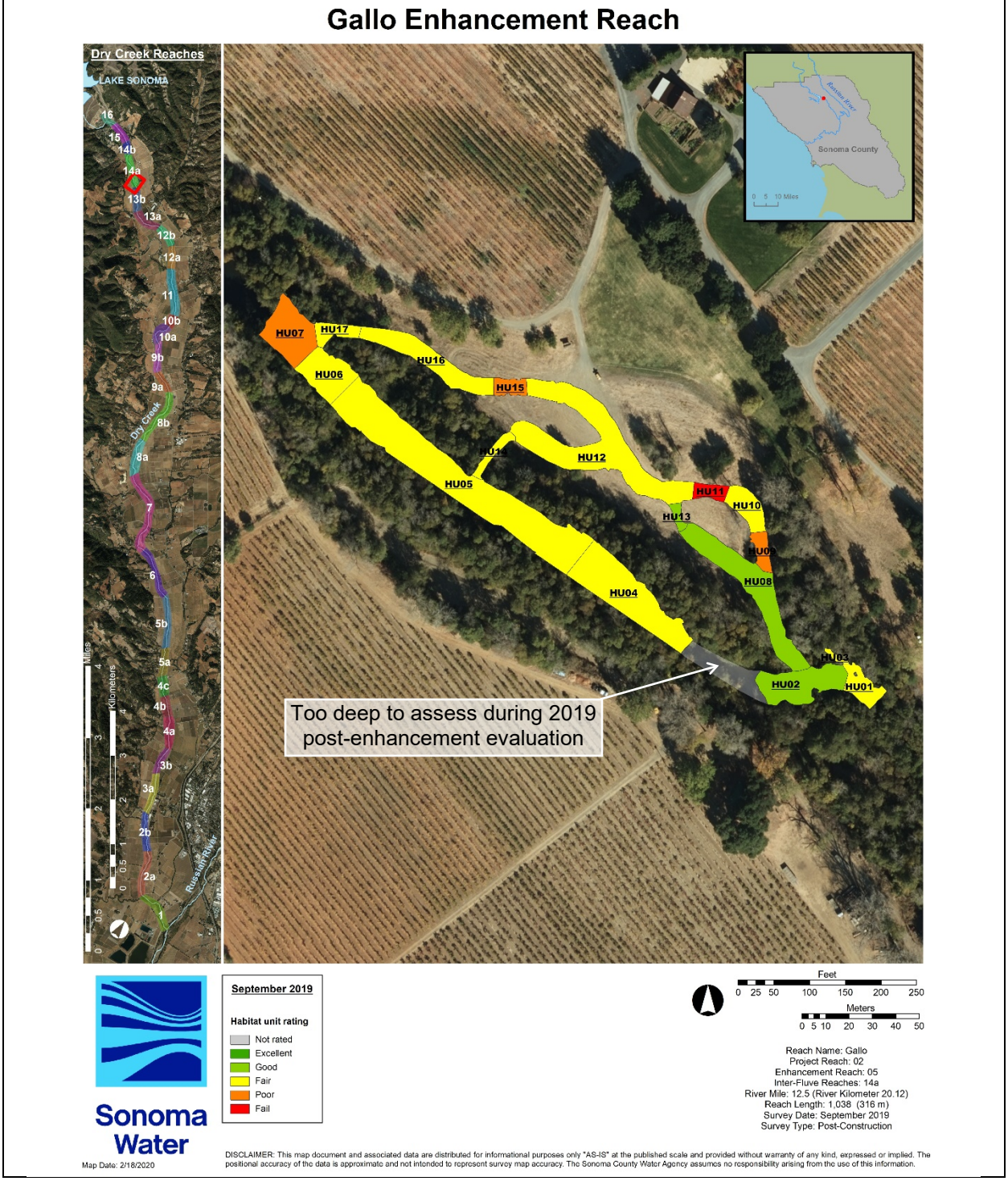

Figure 10. Habitat unit ratings for the Gallo enhancement reach, September 2019.

Table 5. Post-enhancement average feature, average habitat unit, site, and reach ratings (rounded to the nearest whole number) for the Gallo enhancement reach, September 2019.

	Project Reach	2	2
	Enhancement Reach	5	5
	ENHANCEMENT REACH NAME	**GA**	**GA**
	mmddyy	93019	93019
	Survey Type	POS	POS
	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	1
SITE AVERAGE HABITAT UNIT RATING	Site average habitat unit quantitative rating (out of 35; bold indicates excluded from site rating)	17	16
	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)	31	29
	Site qualitative rating: Excellent (>=40), Good (>=30), Fair(>=20), Poor (>=10), Fail (<10)	Good	Fair
	ENHANCEMENT REACH NAME	**GA**	
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	

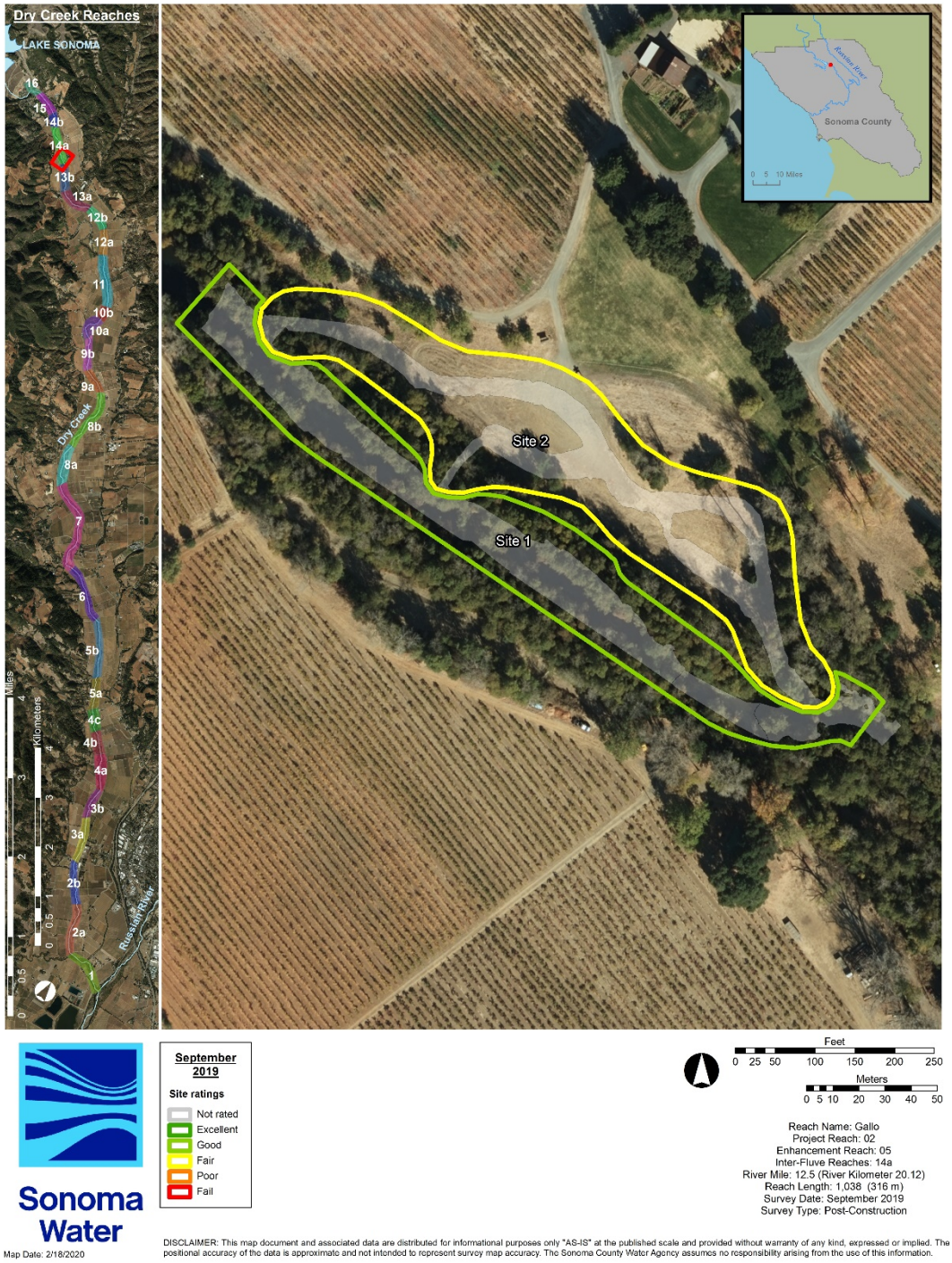

Figure 11. Post enhancement site ratings for the Gallo enhancement reach, September 2019.

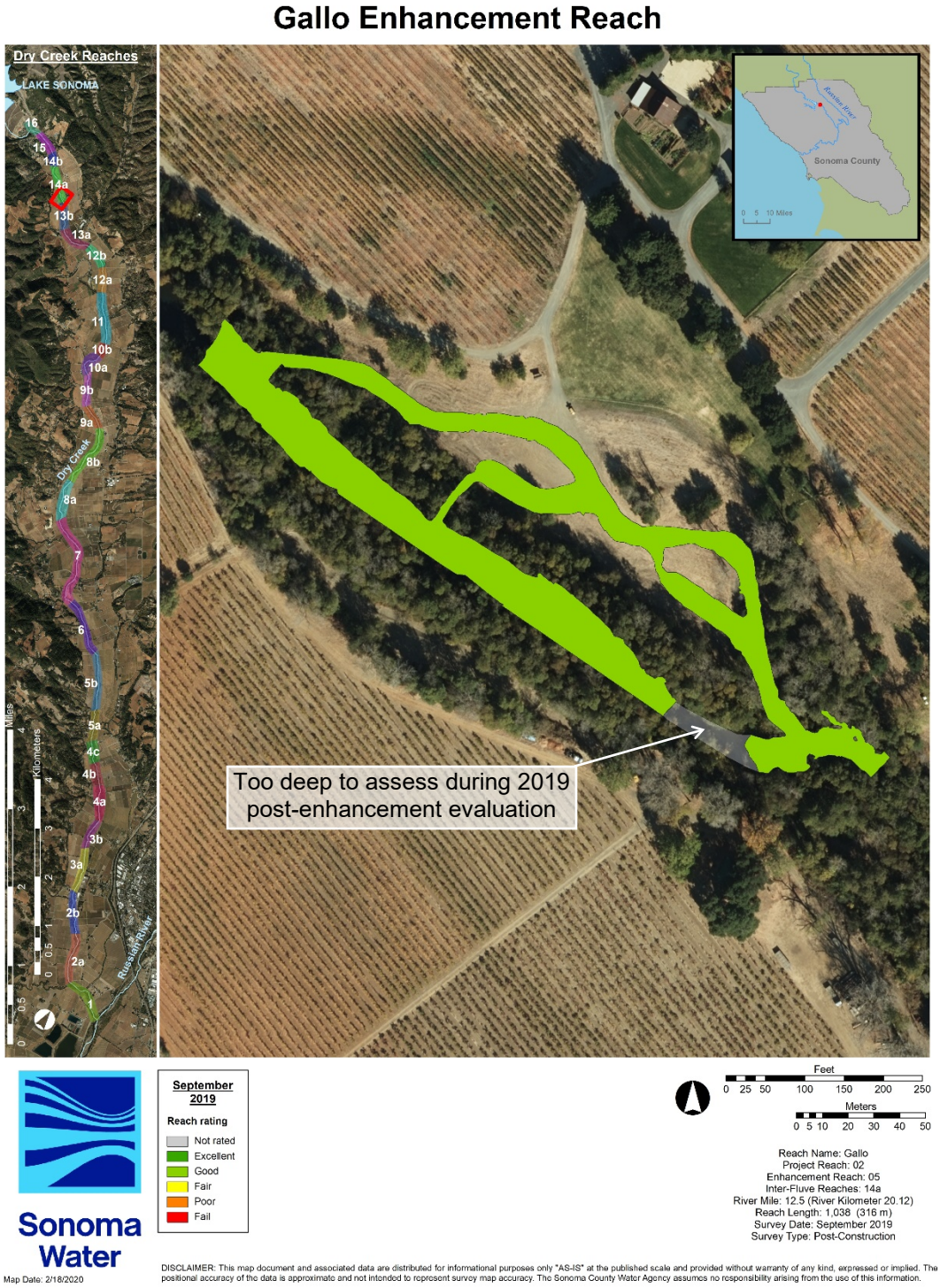

Figure 12. Post-enhancement reach rating for the Gallo enhancement reach, September 2019.

Feature and Habitat Unit Checklists

Table 6. Adaptive Management Plan targeted checklist for the Gallo enhancement reach, September 2019.

	Project Reach	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
	Colloquial Name	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA
	mmddyy	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
	Project Site Number	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	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
	Project Feature Number	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	S2-09
	Feature Type Code	NA	NA	NA	NA	BF	PWL	PWL	R	NA	BWW	HW	SCW	BWW	HW	HW	R	BWW	HW
	Habitat Unit	HU01	HU02	HU03	HU07	HU04	HU05	HU05	HU06	HU01_D	HU08	HU08	HU08	HU08	HU09	HU08	HU09	HU08	HU08
	Habitat Type	Riffle	Pool	Alcove	Pool	Riffle	Pool	Pool	Riffle	Dry	Pool	Pool	Pool	Pool	Riffle	Pool	Riffle	Pool	Pool
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	NA	NA	NA	NA	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL
5a	Are problems with the **feature** visible?	NA	NA	NA	NA	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	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	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6d	Is the **feature** still in its original orientaton?	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	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.	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	23%	6%	68%	3%	28%	5%	5%	10%	0%	8%	8%	8%	8%	0%	8%	0%	8%	8%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	69%	25%	32%	13%	69%	23%	23%	90%	0%	32%	32%	32%	32%	0%	32%	0%	32%	32%
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	2	3	1	2	3	3	3	2	0	3	3	3	3	3	3	3	3	3
15.	Percent of **habitat unit** covered by shelter: %	20	50	25	15	50	25	25	20	0	30	30	30	30	30	30	30	30	30
17a	If an objective, did the **feature** increase instream shelter rating?	NA	NA	NA	NA	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	40	150	25	30	150	75	75	40	0	90	90	90	90	90	90	90	90	90
19a	If an objective, did the **feature** increase LWD count in the **habitat unit**?	NA	NA	NA	NA	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	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	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	32%	43%	100%	64%	12%	56%	56%	22%	0%	73%	73%	73%	73%	9%	73%	9%	73%	73%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	13%	14%	32%	9%	4%	16%	16%	15%	0%	26%	26%	26%	26%	0%	26%	0%	26%	26%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	13%	0%	19%	0%	21%	21%	0%	0%	36%	36%	36%	36%	0%	36%	0%	36%	36%
	FEATURE NUMBER	**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**	**S2-09**
	HABITAT UNIT NUMBER	**HU01**	**HU02**	**HU03**	**HU07**	**HU04**	**HU05**	**HU05**	**HU06**	**HU01_D**	**HU08**	**HU08**	**HU08**	**HU08**	**HU09**	**HU08**	**HU09**	**HU08**	**HU08**
	SITE NUMBER	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**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**
4.	Structural condition of **feature**: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	0	0	0	0	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)	0	0	0	0	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	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	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	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	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)	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)	2	0	4	0	2	0	0	1	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)	4	2	3	1	4	2	2	4	0	3	3	3	3	0	3	0	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)	4	5	3	4	5	5	5	4	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	3	2	1	3	2	2	2	0	2	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)	0	0	0	0	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	1	5	0	0	5	2	2	1	0	3	3	3	3	3	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
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	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	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)	3	4	4	4	1	4	4	2	0	4	4	4	4	0	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)	1	1	3	0	0	1	1	1	0	2	2	2	2	0	2	0	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	1	0	1	0	2	2	0	0	3	3	3	3	0	3	0	3	3

Table 6. Adaptive Management Plan targeted checklist for the Gallo enhancement reach, September 2019.

	Project Reach	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
	Colloquial Name	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA
	mmddyy	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
	Project Site Number	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
	Project Feature Number	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	S2-27
	Feature Type Code	HW	HW	SCW	HW	FW	HW	HW	HW	HW	R	SCW	SCW	HW	BWW	HW	HW	HW	BWW
	Habitat Unit	HU02_D	HU10	HU10	HU10	HU13	HU13	HU12	HU12	HU10	HU11	HU12	HU12	HU12	HU12	HU12	HU12	HU12	HU12
	Habitat Type	Dry	Pool	Pool	Pool	Riffle	Riffle	Pool	Pool	Pool	Riffle	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?	NO	YES	YES	YES	YES	NO	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
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	0%	0%	0%	0%	49%	49%	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%	51%	51%	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	3	3	3	3	3	3	3	3	1	3	3	3	3	3	3	3	3
15.	Percent of **habitat unit** covered by shelter: %	0	30	30	30	60	60	30	30	30	5	30	30	30	30	30	30	30	30
17a	If an objective, did the **feature** increase instream shelter rating?	NO	YES	YES	YES	YES	NO	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	90	90	90	180	180	90	90	90	5	90	90	90	90	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	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
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	0%	53%	53%	53%	34%	34%	84%	84%	53%	14%	84%	84%	84%	84%	84%	84%	84%	84%
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%
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	**S2-10**	**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**	**S2-27**
	HABITAT UNIT NUMBER	**HU02_D**	**HU10**	**HU10**	**HU10**	**HU13**	**HU13**	**HU12**	**HU12**	**HU10**	**HU11**	**HU12**	**HU12**	**HU12**	**HU12**	**HU12**	**HU12**	**HU12**	**HU12**
	SITE NUMBER	**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**
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)	0	1	1	1	1	0	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
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	4	4	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	4	4	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	5	5	5	5	5	5	5	5	3	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	2	2	2	4	4	2	2	2	0	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)	0	1	1	1	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	0	3	3	3	5	5	3	3	3	0	3	3	3	3	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
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
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	4	3	3	4	4	4	1	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)	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 6. Adaptive Management Plan targeted checklist for the Gallo enhancement reach, September 2019.

	Project Reach	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
	Colloquial Name	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA
	mmddyy	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
	Project Site Number	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
	Project Feature Number	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	S2-45
	Feature Type Code	SCW	HW	HW	HW	HW	HW	R	HW	HW	FW	SCW	SCW	R	HW	SCW	HW	HW	SCW
	Habitat Unit	HU12	HU12	HU12	HU12	HU14	HU14	HU14	HU14	HU14	HU03_D	HU12	HU12	HU15	HU16	HU16	HU16	HU16	HU16
	Habitat Type	Pool	Pool	Pool	Pool	Riffle	Riffle	Riffle	Riffle	Riffle	Dry	Pool	Pool	Riffle	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	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
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	0%	0%	0%	0%	34%	34%	34%	34%	34%	0%	0%	0%	32%	9%	9%	9%	9%	9%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	0%	0%	0%	0%	66%	66%	66%	66%	66%	0%	0%	0%	68%	30%	30%	30%	30%	30%
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	3	3	3	3	3	3	3	3	3	0	3	3	1	3	3	3	3	3
15.	Percent of **habitat unit** covered by shelter: %	30	30	30	30	30	30	30	30	30	0	30	30	10	20	20	20	20	20
17a	If an objective, did the **feature** increase instream shelter rating?	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	90	90	90	90	90	90	90	90	90	0	90	90	10	60	60	60	60	60
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
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	84%	84%	84%	84%	25%	25%	25%	25%	25%	0%	84%	84%	17%	60%	60%	60%	60%	60%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	0%	0%	0%	0%	6%	6%	6%	6%	6%	0%	0%	0%	3%	22%	22%	22%	22%	22%
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%	21%	21%	21%	21%	21%
	FEATURE NUMBER	**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**	**S2-45**
	HABITAT UNIT NUMBER	**HU12**	**HU12**	**HU12**	**HU12**	**HU14**	**HU14**	**HU14**	**HU14**	**HU14**	**HU03_D**	**HU12**	**HU12**	**HU15**	**HU16**	**HU16**	**HU16**	**HU16**	**HU16**
	SITE NUMBER	**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**
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	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	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	0	3	3	3	3	3	0	0	0	3	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	4	4	4	4	4	0	0	0	4	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	5	5	5	5	5	5	5	5	0	5	5	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	2	2	2	2	2	2	2	2	0	2	2	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	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	3	3	3	3	3	3	3	3	3	0	3	3	0	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	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
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	2	2	2	2	0	4	4	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	0	0	0	0	0	0	0	0	0	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)	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2	2

Table 6. Adaptive Management Plan targeted checklist for the Gallo enhancement reach, September 2019.

	Project Reach	2	2	2	2	2	2	2	2
	Enhancement Reach	5	5	5	5	5	5	5	5
	Colloquial Name	GA	GA	GA	GA	GA	GA	GA	GA
	mmddyy	93019	93019	93019	93019	93019	93019	93019	93019
	Survey Type	POS	POS	POS	POS	POS	POS	POS	POS
	Project Site Number	2	2	2	2	2	2	2	2
	Project Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
	Project Feature Number	S2-46	S2-47	S2-48	S2-49	S2-50	S2-51	S2-52	S2-53
	Feature Type Code	SCW	HW	HW	AW	R	HW	HW	R
	Habitat Unit	HU16	HU17	HU17	HU17	HU17	HU17	HU17	HU13
	Habitat Type	Pool	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
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	NO	NO	YES	YES	NO	NO	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
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	9%	19%	19%	19%	19%	19%	19%	49%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	30%	72%	72%	72%	72%	72%	72%	51%
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	3	3	3	3	3	3	3	3
15.	Percent of **habitat unit** covered by shelter: %	20	20	20	20	20	20	20	60
17a	If an objective, did the **feature** increase instream shelter rating?	YES	NO	NO	YES	YES	NO	NO	YES
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	60	60	60	60	60	60	60	180
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
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	60%	27%	27%	27%	27%	27%	27%	34%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	22%	10%	10%	10%	10%	10%	10%	0%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	21%	5%	5%	5%	5%	5%	5%	0%
	FEATURE NUMBER	**S2-46**	**S2-47**	**S2-48**	**S2-49**	**S2-50**	**S2-51**	**S2-52**	**S2-53**
	HABITAT UNIT NUMBER	**HU16**	**HU17**	**HU17**	**HU17**	**HU17**	**HU17**	**HU17**	**HU13**
	SITE NUMBER	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**
	ENHANCEMENT REACH NAME	**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
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	0	0	1	1	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	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	1	1	1	1	1	1	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)	3	4	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
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	2	2	2	2	4
17a	If an objective, did the **feature** increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	0	0	1	1	0	0	1
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	2	2	2	2	2	2	2	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
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
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	2	2	2	2	2	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)	2	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)	2	0	0	0	0	0	0	0

Table 7. Adaptive Management Plan full checklist for the Gallo enhancement reach, September 2019.

	Project Reach	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
	Colloquial Name	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA
	mmddyy	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
	Project Site Number	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	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
	Project Feature Number	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	S2-09
	Feature Type Code	NA	NA	NA	NA	BF	PWL	PWL	R	NA	BWW	HW	SCW	BWW	HW	HW	R	BWW	HW
	Habitat Unit	HU01	HU02	HU03	HU07	HU04	HU05	HU05	HU06	HU01_D	HU08	HU08	HU08	HU08	HU09	HU08	HU09	HU08	HU08
	Habitat Type	Riffle	Pool	Alcove	Pool	Riffle	Pool	Pool	Riffle	Dry	Pool	Pool	Pool	Pool	Riffle	Pool	Riffle	Pool	Pool
1.	Length of targeted treatment (ft)				NA	50	35	35	35	40	26	31	25	37	21	38	50	26	30
2.	Width of targeted treatment: (ft)				NA	60	25	25	40	15	24	18	21	32	28	23	18	23	26
3.	Estimate area of the targeted **feature**: (ft^2)				#VALUE!	3000	875	875	1400	600	624	558	525	1184	588	874	900	598	780
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	NA	NA	NA	NA	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL
5a	Are problems with the **feature** visible?	NA	NA	NA	NA	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	NA	NA	NA	NA	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
6a	Is the **feature** still in its original location?	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	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6c	If yes: LBK, MDC, RBK, SPN, OTH	NA	NA	NA	NA	SPN	LBK	LBK	SPN	LBK	LBK	LBK	RBK	RBK	LBK	RBK	SPN	LBK	RBK
6d	Is the **feature** still in its original orientaton?	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6e	If yes: DNS, MUL, PRL, PRP, UPS, OTH	NA	NA	NA	NA	DNS	MUL	MUL	DNS	PRL	PRP	UPS	UPS	PRP	UPS	DNS	DNS	UPS	DNS
7.	Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	RIF	POO	ALC	POO	RIF	POO	POO	RIF	DRY	POO	POO	POO	POO	RIF	POO	RIF	POO	POO
8.	If an objective, did the **feature** create the targeted instream habitat type?	NA	NA	NA	NA	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.	NA	NA	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
10.	Mean water depth in **habitat unit**: ft	1.1	2.9	0.4	3.8	0.7	2.8	2.8	1.0	0.0	2.3	2.3	2.3	2.3	0.7	2.3	0.7	2.3	2.3
11a	Maximum water depth in **habitat unit**: ft	2.5	5.9	1.2	6.5	2.2	6.9	6.9	2.4	0.0	5.2	5.2	5.2	5.2	1.7	5.2	1.7	5.2	5.2
11b	Area of **habitat unit** within 0.5 -2.0 ft depth: (ft2)	1311.9	1200.5	75.2	615.4	6356.3	4544.7	4544.7	3340.9	0.0	2475.0	2475.0	2475.0	2475.0	864.6	2475.0	864.6	2475.0	2475.0
11c	Area of **habitat unit** within 2.0 -4.0 ft depth: (ft2)	161.1	1956.1	0.0	1407.6	15.5	11157.2	11157.2	2.9	0.0	4293.8	4293.8	4293.8	4293.8	0.0	4293.8	0.0	4293.8	4293.8
11d	Area of **habitat unit** within 0.5-4.0 ft depth: (ft2)	1740.1	1512.7	235.5	741.1	8946.4	5507.9	5507.9	3720.2	0.0	3125.8	3125.8	3125.8	3125.8	1107.3	3125.8	1107.3	3125.8	3125.8
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	23%	6%	68%	3%	28%	5%	5%	10%	0%	8%	8%	8%	8%	0%	8%	0%	8%	8%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	69%	25%	32%	13%	69%	23%	23%	90%	0%	32%	32%	32%	32%	0%	32%	0%	32%	32%
11g	% Area of **habitat** unit within 0.5-4.0 ft depth	92%	31%	100%	16%	98%	27%	27%	100%	0%	41%	41%	41%	41%	0%	41%	0%	41%	41%
11h	If an objective, did the **feature** increase/decrease water depth in the treatment area?	NA	NA	NA	NA	YES	YES	YES	YES	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:				NA	3208	210	210	1412		331	177	185	521	77	282	890	390	227
13.	Were there any unintended effects of the **feature** on the water depth? If Y, comment.	NA	NA	NA	NA	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	2	3	1	2	3	3	3	2	0	3	3	3	3	3	3	3	3	3
15.	Percent of **habitat unit** covered by shelter: %	20	50	25	15	50	25	25	20	0	30	30	30	30	30	30	30	30	30
16a	1st dominant cover in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	TVG	TVG	TVG	TVG	BOL	TVG	TVG	BOL	NON	RTW	RTW	RTW	RTW	BUB	RTW	BUB	RTW	RTW
16b	2nd dominant in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	RTW	SWD	NON	SWD	TVG	SWD	SWD	BUB	NON	LWD	LWD	LWD	LWD	NON	LWD	NON	LWD	LWD
17a	If an objective, did the **feature** increase instream shelter rating?	NA	NA	NA	NA	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	40	150	25	30	150	75	75	40	0	90	90	90	90	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
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**?	NA	NA	NA	NA	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	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
21a	If an objective, did the **feature** lead to the targeted channel conditions?	NA	NA	NA	NA	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	NA	NA	NA	NA	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	NA	NA	NA	NA	NA	NA	NA	NA	NA	STB	STB	STB	STB	STB	STB	STB	STB	STB
21d	Inlet Conditions (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	NA	NA	NA	NA	NA	NA	NA	NA	NA	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.	NA	NA	NA	NA	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?	NA	NA	NA	NA	YES	YES	YES	YES	NA	YES	YES	YES	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	0.6	0.5	0.6	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	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**	0.0	0.0	0.0	0.0	0.0	0.0	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)	600.0	2118.0	235.5	2937.9	1143.3	11207.9	11207.9	809.4	0.0	5653.2	5653.2	5653.2	5653.2	97.2	5653.2	97.2	5653.2	5653.2
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	32%	43%	100%	64%	12%	56%	56%	22%	0%	73%	73%	73%	73%	9%	73%	9%	73%	73%
29.	Were there any unintended effects of **feature** on velocity If Y, comment.	NA	NA	NA	NA	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	COB	GRV	SND	UNK	GRV	GRV	GRV	COB	NR	SND	SND	SND	SND	GRV	SND	GRV	SND	SND
30b	2nd dominant substrate in **habitat unit**: BED, BOL, COB, GRV, SND, SLC, OTH	GRV	SND	GRV	UNK	COB	SND	SND	GRV	NR	GRV	GRV	GRV	GRV	COB	GRV	COB	GRV	GRV
31.	If an objective, did the **feature** achieve the targeted substrate composition?	NA	NA	NA	NA	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	244.2	1312.2	75.2	1294.5	324.6	7411.7	7411.7	558.4	0.0	4753.6	4753.6	4753.6	4753.6	13.0	4753.6	13.0	4753.6	4753.6
36b	Total **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	244.2	697.9	75.2	397.7	324.6	3244.1	3244.1	558.4	0.0	1974.8	1974.8	1974.8	1974.8	13.0	1974.8	13.0	1974.8	1974.8
36c	Total **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0.0	614.3	0.0	896.8	0.0	4167.6	4167.6	0.0	0.0	2778.8	2778.8	2778.8	2778.8	0.0	2778.8	0.0	2778.8	2778.8
36d	% **habitat unit** area where targeted depth, velocity and shelter criteria overlap	13%	27%	32%	28%	4%	37%	37%	15%	0%	62%	62%	62%	62%	0%	62%	0%	62%	62%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	13%	14%	32%	9%	4%	16%	16%	15%	0%	26%	26%	26%	26%	0%	26%	0%	26%	26%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	13%	0%	19%	0%	21%	21%	0%	0%	36%	36%	36%	36%	0%	36%	0%	36%	36%
37.	Does this **feature** need: DEC, ENH, MNT, REP, NON, OTH	NA	NA	NA	NA	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
38.	Are additional restoration treatments recommended at this **site**?	NA	NA	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO

Table 7. Adaptive Management Plan full checklist for the Gallo enhancement reach, September 2019.

	Project Reach	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
	Colloquial Name	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA
	mmddyy	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
	Project Site Number	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
	Project Feature Number	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	S2-27
	Feature Type Code	HW	HW	SCW	HW	FW	HW	HW	HW	HW	R	SCW	SCW	HW	BWW	HW	HW	HW	BWW
	Habitat Unit	HU02_D	HU10	HU10	HU10	HU13	HU13	HU12	HU12	HU10	HU11	HU12	HU12	HU12	HU12	HU12	HU12	HU12	HU12
	Habitat Type	Dry	Pool	Pool	Pool	Riffle	Riffle	Pool	Pool	Pool	Riffle	Pool	Pool	Pool	Pool	Pool	Pool	Pool	Pool
1.	Length of targeted treatment (ft)	33	32	22	29	27	31	34	35	32	50	27	25	32	31	36	33	39	33
2.	Width of targeted treatment: (ft)	20	25	24	28	25	14	17	22	18	16	22	21	17	33	19	19	18	36
3.	Estimate area of the targeted **feature**: (ft^2)	660	800	528	812	675	434	578	770	576	800	594	525	544	1023	684	627	702	1188
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
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	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	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
6c	If yes: LBK, MDC, RBK, SPN, OTH	RBK	LBK	LBK	RBK	RBK	RBK	RBK	RBK	LBK	SPN	RBK	LBK	LBK	RBK	LBK	RBK	LBK	RBK
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
6e	If yes: DNS, MUL, PRL, PRP, UPS, OTH	DNS	UPS	UPS	DNS	OTH	DNS	UPS	DNS	UPS	DNS	UPS	UPS	UPS	MUL	UPS	DNS	DNS	MUL
7.	Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	DRY	POO	POO	POO	RIF	RIF	POO	POO	POO	RIF	POO	POO	POO	POO	POO	POO	POO	POO
8.	If an objective, did the **feature** create the targeted instream habitat type?	NO	YES	YES	YES	YES	NO	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
10.	Mean water depth in **habitat unit**: ft	0.0	2.1	2.1	2.1	0.5	0.5	2.9	2.9	2.1	0.7	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
11a	Maximum water depth in **habitat unit**: ft	0.0	5.1	5.1	5.1	1.4	1.4	5.8	5.8	5.1	1.2	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
11b	Area of **habitat unit** within 0.5 -2.0 ft depth: (ft2)	0.0	854.9	854.9	854.9	249.6	249.6	3437.4	3437.4	854.9	788.9	3437.4	3437.4	3437.4	3437.4	3437.4	3437.4	3437.4	3437.4
11c	Area of **habitat unit** within 2.0 -4.0 ft depth: (ft2)	0.0	831.2	831.2	831.2	0.0	0.0	4638.8	4638.8	831.2	0.0	4638.8	4638.8	4638.8	4638.8	4638.8	4638.8	4638.8	4638.8
11d	Area of **habitat unit** within 0.5-4.0 ft depth: (ft2)	0.0	1094.0	1094.0	1094.0	487.7	487.7	4465.5	4465.5	1094.0	973.3	4465.5	4465.5	4465.5	4465.5	4465.5	4465.5	4465.5	4465.5
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	0%	0%	0%	0%	49%	49%	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%	51%	51%	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%	100%	100%	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	YES	YES	YES	YES	NO	YES	YES	YES	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:	26	79	170	43	29	26	48	188	114	825	187	182	91	417	92	140	103	482
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	0	3	3	3	3	3	3	3	3	1	3	3	3	3	3	3	3	3
15.	Percent of **habitat unit** covered by shelter: %	0	30	30	30	60	60	30	30	30	5	30	30	30	30	30	30	30	30
16a	1st dominant cover in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	NON	RTW	RTW	RTW	BOL	BOL	RTW	RTW	RTW	AVG	RTW	RTW	RTW	RTW	RTW	RTW	RTW	RTW
16b	2nd dominant in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	NON	LWD	LWD	LWD	BUB	BUB	LWD	LWD	LWD	NON	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD
17a	If an objective, did the **feature** increase instream shelter rating?	NO	YES	YES	YES	YES	NO	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	90	90	90	180	180	90	90	90	5	90	90	90	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
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	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	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
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?	NA	YES	YES	YES	YES	NA	YES	YES	YES	YES	YES	YES	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
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
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	1127.3	1127.3	1127.3	165.2	165.2	11254.7	11254.7	1127.3	134.6	11254.7	11254.7	11254.7	11254.7	11254.7	11254.7	11254.7	11254.7
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	0%	53%	53%	53%	34%	34%	84%	84%	53%	14%	84%	84%	84%	84%	84%	84%	84%	84%
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	NO	NO	NO	NO	NO	NO
30a	1st/2nd dominant substrate in **habitat unit**: BED, BOL, COB, GRV, SND, SLC, OTH	NR	GRV	GRV	GRV	BOL	BOL	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	NR	SND	SND	SND	COB	COB	SND	SND	SND	COB	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	856.6	856.6	856.6	45.8	45.8	6842.8	6842.8	856.6	41.5	6842.8	6842.8	6842.8	6842.8	6842.8	6842.8	6842.8	6842.8
36b	Total **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	0.0	504.9	504.9	504.9	45.8	45.8	2929.2	2929.2	504.9	41.5	2929.2	2929.2	2929.2	2929.2	2929.2	2929.2	2929.2	2929.2
36c	Total **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0.0	351.8	351.8	351.8	0.0	0.0	3913.7	3913.7	351.8	0.0	3913.7	3913.7	3913.7	3913.7	3913.7	3913.7	3913.7	3913.7
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%	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%
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%
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 7. Adaptive Management Plan full checklist for the Gallo enhancement reach, September 2019.

	Project Reach	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
	Colloquial Name	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA	GA
	mmddyy	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
	Project Site Number	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
	Project Feature Number	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	S2-45
	Feature Type Code	SCW	HW	HW	HW	HW	HW	R	HW	HW	FW	SCW	SCW	R	HW	SCW	HW	HW	SCW
	Habitat Unit	HU12	HU12	HU12	HU12	HU14	HU14	HU14	HU14	HU14	HU03_D	HU12	HU12	HU15	HU16	HU16	HU16	HU16	HU16
	Habitat Type	Pool	Pool	Pool	Pool	Riffle	Riffle	Riffle	Riffle	Riffle	Dry	Pool	Pool	Riffle	Pool	Pool	Pool	Pool	Pool
1.	Length of targeted treatment (ft)	24	31	38	38	39	38	70	40	37	36	27	24	50	36	33	35	32	22
2.	Width of targeted treatment: (ft)	26	18	21	18	12	12	12	16	14	16	20	20	20	14	22	23	26	22
3.	Estimate area of the targeted **feature**: (ft^2)	624	558	798	684	468	456	840	640	518	576	540	480	1000	504	726	805	832	484
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
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	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	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
6c	If yes: LBK, MDC, RBK, SPN, OTH	LBK	RBK	LBK	RBK	RBK	RBK	SPN	LBK	LBK	RBK	LBK	LBK	SPN	RBK	RBK	LBK	LBK	LBK
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
6e	If yes: DNS, MUL, PRL, PRP, UPS, OTH	UPS	UPS	UPS	UPS	UPS	UPS	DNS	UPS	UPS	DNS	UPS	UPS	DNS	UPS	UPS	UPS	UPS	UPS
7.	Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	POO	POO	POO	POO	RIF	RIF	RIF	RIF	RIF	DRY	POO	POO	RIF	POO	POO	POO	POO	POO
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
10.	Mean water depth in **habitat unit**: ft	2.9	2.9	2.9	2.9	0.6	0.6	0.6	0.6	0.6	0.0	2.9	2.9	0.6	2.5	2.5	2.5	2.5	2.5
11a	Maximum water depth in **habitat unit**: ft	5.8	5.8	5.8	5.8	1.5	1.5	1.5	1.5	1.5	0.0	5.8	5.8	1.4	5.1	5.1	5.1	5.1	5.1
11b	Area of **habitat unit** within 0.5 -2.0 ft depth: (ft2)	3437.4	3437.4	3437.4	3437.4	610.6	610.6	610.6	610.6	610.6	0.0	3437.4	3437.4	730.1	1550.6	1550.6	1550.6	1550.6	1550.6
11c	Area of **habitat unit** within 2.0 -4.0 ft depth: (ft2)	4638.8	4638.8	4638.8	4638.8	0.0	0.0	0.0	0.0	0.0	0.0	4638.8	4638.8	0.0	2074.7	2074.7	2074.7	2074.7	2074.7
11d	Area of **habitat unit** within 0.5-4.0 ft depth: (ft2)	4465.5	4465.5	4465.5	4465.5	925.5	925.5	925.5	925.5	925.5	0.0	4465.5	4465.5	1069.7	1999.7	1999.7	1999.7	1999.7	1999.7
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	0%	0%	0%	0%	34%	34%	34%	34%	34%	0%	0%	0%	32%	9%	9%	9%	9%	9%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	0%	0%	0%	0%	66%	66%	66%	66%	66%	0%	0%	0%	68%	30%	30%	30%	30%	30%
11g	% Area of **habitat** unit within 0.5-4.0 ft depth	0%	0%	0%	0%	100%	100%	100%	100%	100%	0%	0%	0%	100%	39%	39%	39%	39%	39%
11h	If an objective, did the **feature** increase/decrease water depth in the treatment area?	YES	YES	YES	YES	YES	YES	YES	YES	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:	187	10	119	208	45	45	663	48	22		191	187	917	26	180	52	81	141
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	3	3	3	3	3	3	3	3	0	3	3	1	3	3	3	3	3
15.	Percent of **habitat unit** covered by shelter: %	30	30	30	30	30	30	30	30	30	0	30	30	10	20	20	20	20	20
16a	1st dominant cover in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	RTW	RTW	RTW	RTW	RTW	RTW	RTW	RTW	RTW	NON	RTW	RTW	BUB	RTW	RTW	RTW	RTW	RTW
16b	2nd dominant in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	LWD	LWD	LWD	LWD	SWD	SWD	SWD	SWD	SWD	NON	LWD	LWD	NON	SWD	SWD	SWD	SWD	SWD
17a	If an objective, did the **feature** increase instream shelter rating?	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	90	90	90	90	90	90	90	90	90	0	90	90	10	60	60	60	60	60
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	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	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
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?	YES	YES	YES	YES	YES	YES	YES	YES	YES	NA	YES	YES	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
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
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)	11254.7	11254.7	11254.7	11254.7	232.6	232.6	232.6	232.6	232.6	0.0	11254.7	11254.7	176.7	3068.4	3068.4	3068.4	3068.4	3068.4
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	84%	84%	84%	84%	25%	25%	25%	25%	25%	0%	84%	84%	17%	60%	60%	60%	60%	60%
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	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	NR	GRV	GRV	COB	GRV	GRV	GRV	GRV	GRV
30b	2nd dominant substrate in **habitat unit**: BED, BOL, COB, GRV, SND, SLC, OTH	SND	SND	SND	SND	COB	COB	COB	COB	COB	NR	SND	SND	GRV	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	6842.8	6842.8	6842.8	6842.8	53.5	53.5	53.5	53.5	53.5	0.0	6842.8	6842.8	32.5	2172.9	2172.9	2172.9	2172.9	2172.9
36b	Total **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	2929.2	2929.2	2929.2	2929.2	53.5	53.5	53.5	53.5	53.5	0.0	2929.2	2929.2	32.5	1130.3	1130.3	1130.3	1130.3	1130.3
36c	Total **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	3913.7	3913.7	3913.7	3913.7	0.0	0.0	0.0	0.0	0.0	0.0	3913.7	3913.7	0.0	1042.6	1042.6	1042.6	1042.6	1042.6
36d	% **habitat unit** area where targeted depth, velocity and shelter criteria overlap	0%	0%	0%	0%	6%	6%	6%	6%	6%	0%	0%	0%	3%	43%	43%	43%	43%	43%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	0%	0%	0%	0%	6%	6%	6%	6%	6%	0%	0%	0%	3%	22%	22%	22%	22%	22%
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%	21%	21%	21%	21%	21%
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 7. Adaptive Management Plan full checklist for the Gallo enhancement reach, September 2019.

	Project Reach	2	2	2	2	2	2	2	2
	Enhancement Reach	5	5	5	5	5	5	5	5
	Colloquial Name	GA	GA	GA	GA	GA	GA	GA	GA
	mmddyy	93019	93019	93019	93019	93019	93019	93019	93019
	Survey Type	POS	POS	POS	POS	POS	POS	POS	POS
	Project Site Number	2	2	2	2	2	2	2	2
	Project Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
	Project Feature Number	S2-46	S2-47	S2-48	S2-49	S2-50	S2-51	S2-52	S2-53
	Feature Type Code	SCW	HW	HW	AW	R	HW	HW	R
	Habitat Unit	HU16	HU17	HU17	HU17	HU17	HU17	HU17	HU13
	Habitat Type	Pool	Riffle	Riffle	Riffle	Riffle	Riffle	Riffle	Riffle
1.	Length of targeted treatment (ft)	22	37	33	36	54	30	35	40
2.	Width of targeted treatment: (ft)	20	12	17	30	15	21	22	10
3.	Estimate area of the targeted **feature**: (ft^2)	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
5a	Are problems with the **feature** visible?	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
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
6c	If yes: LBK, MDC, RBK, SPN, OTH	LBK	RBK	RBK	RBK	SPN	RBK	RBK	SPN
6d	Is the **feature** still in its original orientaton?	YES	YES	YES	YES	YES	YES	YES	YES
6e	If yes: DNS, MUL, PRL, PRP, UPS, OTH	UPS	DNS	DNS	UPS	DNS	DNS	DNS	DNS
7.	Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	POO	RIF	RIF	RIF	RIF	RIF	RIF	RIF
8.	If an objective, did the **feature** create the targeted instream habitat type?	YES	NO	NO	YES	YES	NO	NO	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
10.	Mean water depth in **habitat unit**: ft	2.5	1.0	1.0	1.0	1.0	1.0	1.0	0.5
11a	Maximum water depth in **habitat unit**: ft	5.1	3.5	3.5	3.5	3.5	3.5	3.5	1.4
11b	Area of **habitat unit** within 0.5 -2.0 ft depth: (ft2)	1550.6	968.9	968.9	968.9	968.9	968.9	968.9	249.6
11c	Area of **habitat unit** within 2.0 -4.0 ft depth: (ft2)	2074.7	122.6	122.6	122.6	122.6	122.6	122.6	0.0
11d	Area of **habitat unit** within 0.5-4.0 ft depth: (ft2)	1999.7	1218.9	1218.9	1218.9	1218.9	1218.9	1218.9	487.7
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	9%	19%	19%	19%	19%	19%	19%	49%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	30%	72%	72%	72%	72%	72%	72%	51%
11g	% Area of **habitat** unit within 0.5-4.0 ft depth	39%	91%	91%	91%	91%	91%	91%	100%
11h	If an objective, did the **feature** increase/decrease water depth in the treatment area?	YES	NO	NO	YES	YES	NO	NO	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
12b	Estimate area of **feature** within targeted depth or range ft^2:	103	25	35	123	772	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
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	3	3	3	3	3	3	3	3
15.	Percent of **habitat unit** covered by shelter: %	20	20	20	20	20	20	20	60
16a	1st dominant cover in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	RTW	BUB	BUB	BUB	BUB	BUB	BUB	BOL
16b	2nd dominant in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	SWD	SWD	SWD	SWD	SWD	SWD	SWD	BUB
17a	If an objective, did the **feature** increase instream shelter rating?	YES	NO	NO	YES	YES	NO	NO	YES
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	60	60	60	60	60	60	60	180
18a	Large woody debris count in **habitat unit**: D >1', L 6-20'	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
19a	If an objective, did the **feature** increase LWD count in the **habitat unit**?	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
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
21a	If an objective, did the **feature** lead to the targeted channel conditions?	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
21c	Outlet Conditions (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	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
22.	Were there any unintended effects on the stream channel at the **feature**? If Y, comment.	NO	NO	NO	NO	NO	NO	NO	NO
23.	If an objective, did the **feature** decrease/increase velocity in the treatment area?	YES	NA	NA	YES	YES	NA	NA	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
25.	Did the **feature** achieve the targeted velocity?	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
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
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
27.	Area of **habitat unit** within targeted velocity: (ft^2)	3068.4	366.5	366.5	366.5	366.5	366.5	366.5	165.2
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	60%	27%	27%	27%	27%	27%	27%	34%
29.	Were there any unintended effects of **feature** on velocity If Y, comment.	NO	NO	NO	NO	NO	NO	NO	NO
30a	1st/2nd dominant substrate in **habitat unit**: BED, BOL, COB, GRV, SND, SLC, OTH	GRV	COB	COB	COB	COB	COB	COB	BOL
30b	2nd dominant substrate in **habitat unit**: BED, BOL, COB, GRV, SND, SLC, OTH	SND	GRV	GRV	GRV	GRV	GRV	GRV	COB
31.	If an objective, did the **feature** achieve the targeted substrate composition?	YES	YES	YES	YES	YES	YES	YES	YES
32.	% Canopy Measurement:	NR	NR	NR	NR	NR	NR	NR	NR
33.	Photopoint data collected: YES /NO	NR	NR	NR	NR	NR	NR	NR	NR
34.	Temperature Profile: YES /NO	NR	NR	NR	NR	NR	NR	NR	NR
35.	Dissolved Oxygen Profile: YES/NO	NR	NR	NR	NR	NR	NR	NR	NR
36a	Total **habitat unit** area where targeted depth, velocity and shelter criteria overlap	2172.9	204.8	204.8	204.8	204.8	204.8	204.8	45.8
36b	Total **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	1130.3	131.3	131.3	131.3	131.3	131.3	131.3	45.8
36c	Total **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	1042.6	73.6	73.6	73.6	73.6	73.6	73.6	0.0
36d	% **habitat unit** area where targeted depth, velocity and shelter criteria overlap	43%	15%	15%	15%	15%	15%	15%	0%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	22%	10%	10%	10%	10%	10%	10%	0%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	21%	5%	5%	5%	5%	5%	5%	0%
37.	Does this **feature** need: DEC, ENH, MNT, REP, NON, OTH	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

Post-effective Flow 2019

Army Corps, Post-effective Flow, September 2019

Depth and Velocity

Table 8. Areas and percentages of: wetted area, optimal depth and velocity, and optimal hydraulic habitat within the Army Corps enhancement reach, October 2019.

USACE reach 15 Post-effective flow October 2019	Wetted area (ft^2)	Optimal depth (ft^2)			Optimal velocity (ft^2)	Optimal habitat (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
Side channel area	28,207	17,137	4,107	21,244	26,976	16,019	4,105	20,125
Side channel % of area	100%	61%	15%	75%	96%	57%	15%	71%

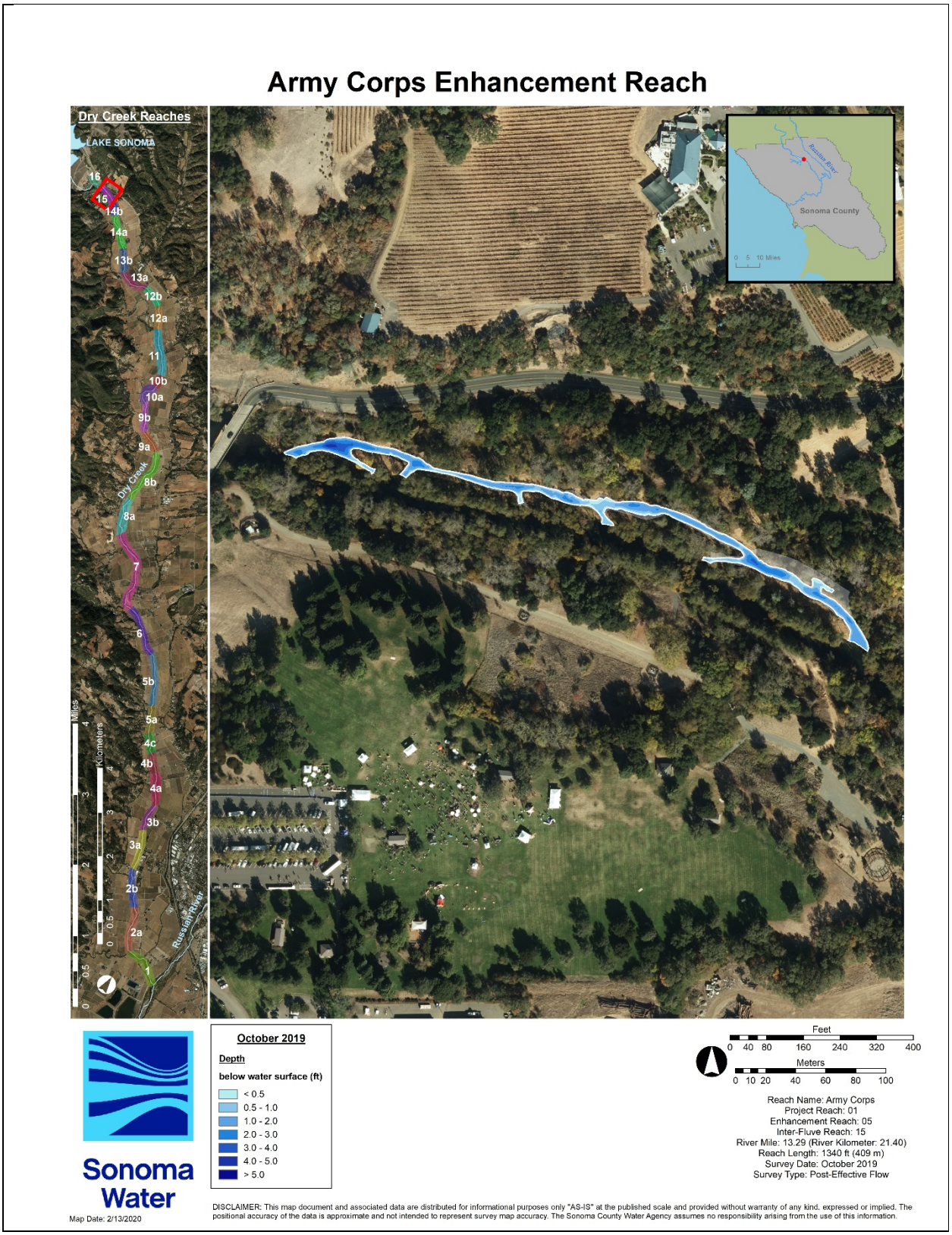

Figure 13. Measured water depth within the Army Corps enhancement reach, October 2019.

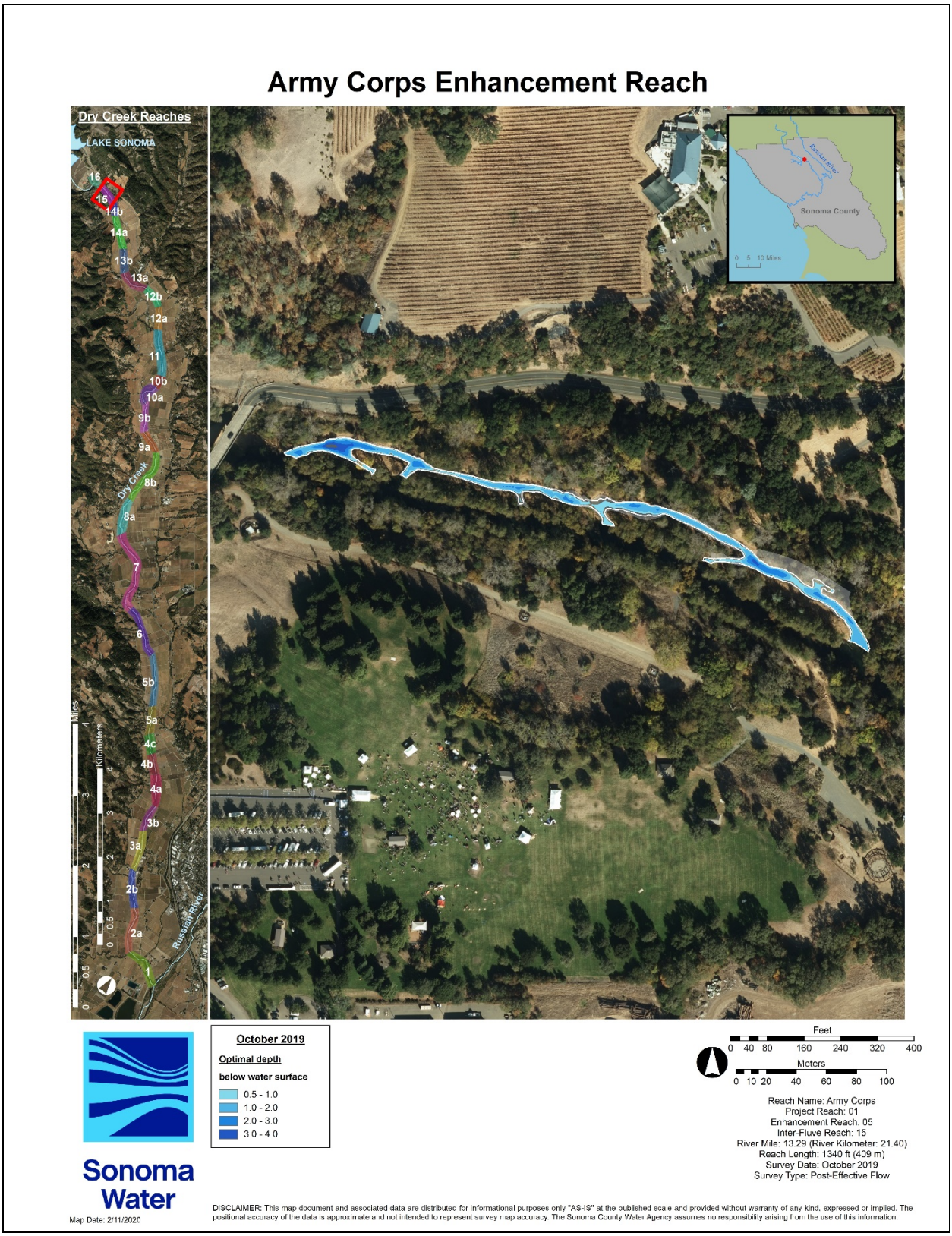

Figure 14. Optimal water depth for fry (0.5-2.0 ft) and parr (2.0-4.0 ft) within the Army Corps enhancement reach, October 2019.

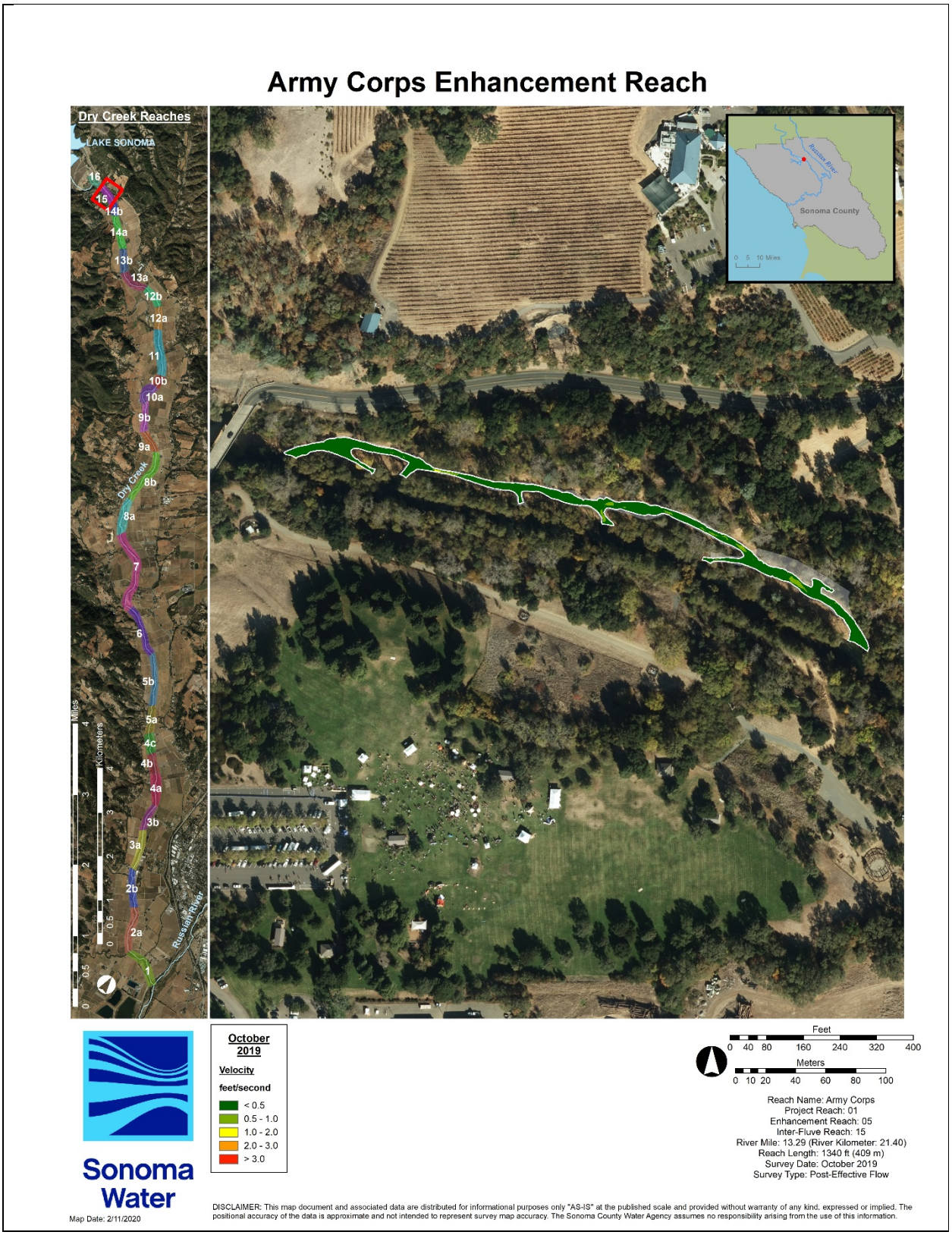

Figure 15. Measured water velocity within the Army Corps enhancement reach, October 2019.

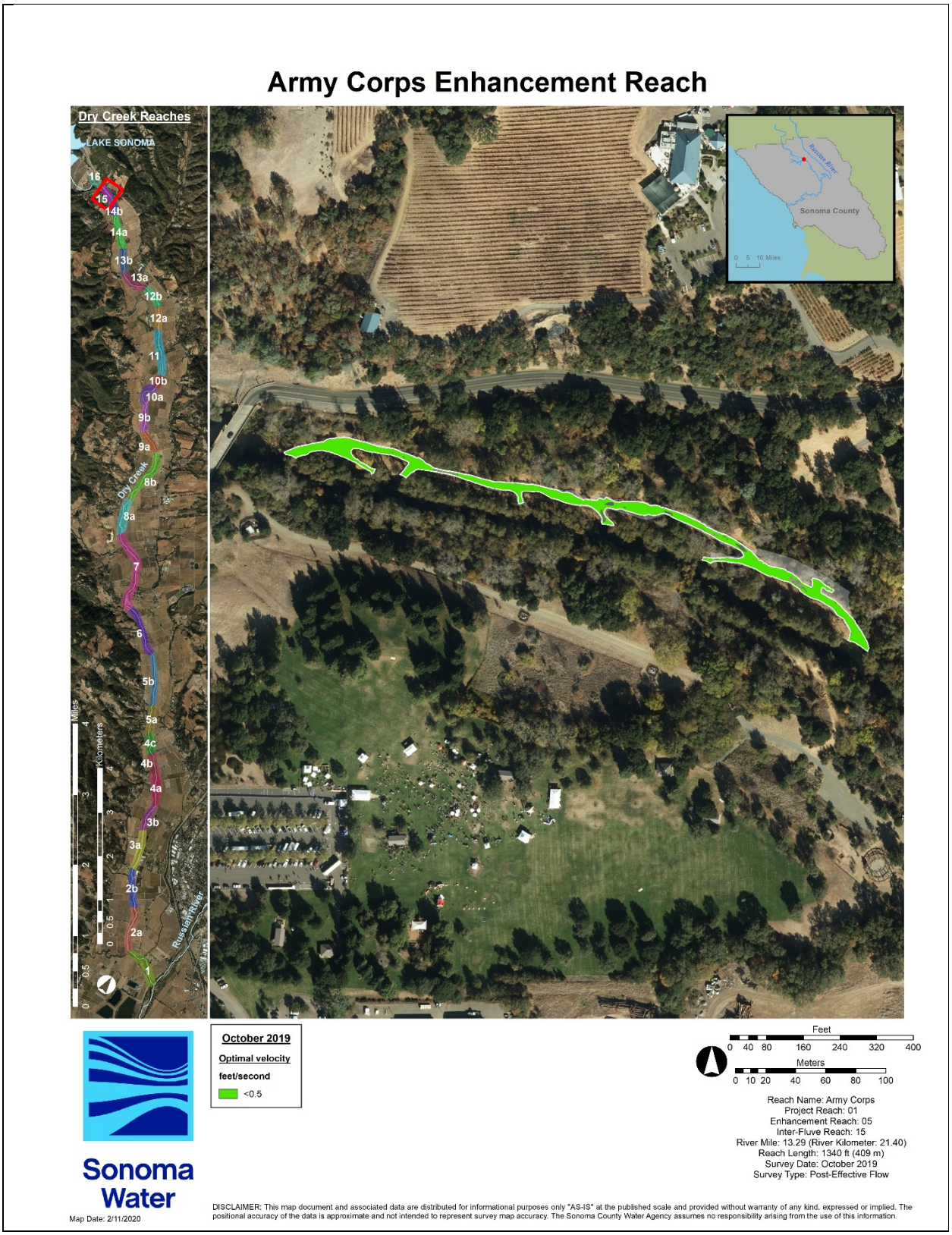

Figure 16. Optimal water velocity for fry and parr (< 0.5 ft/s) within the Army Corps enhancement reach, October 2019.

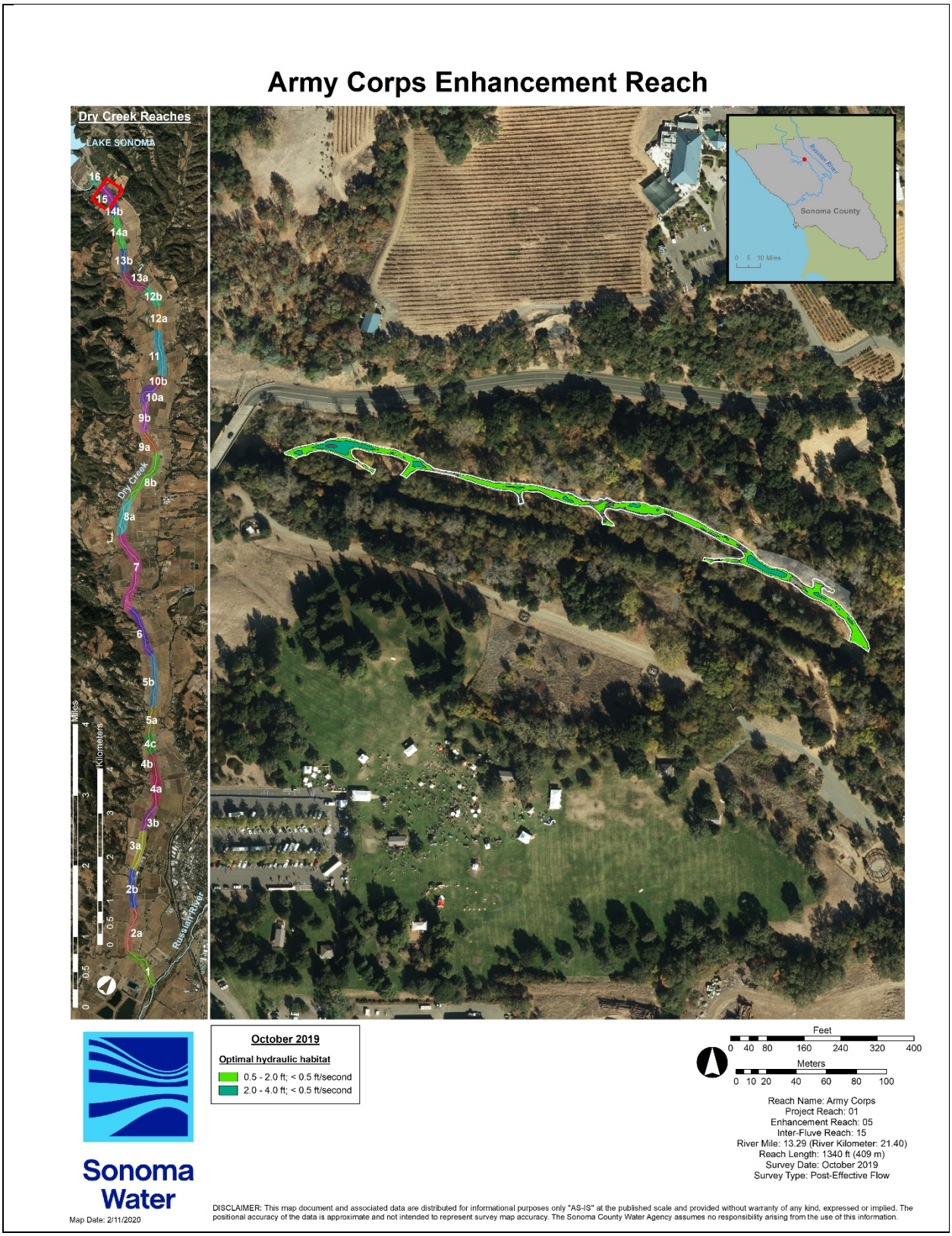

Figure 17. Optimal hydraulic habitat for fry (<0.5 ft/s, 0.5-2.0 ft) and parr (<0.5 ft/s, 2.0-4.0 ft) within the Army Corps enhancement reach, October 2019.

Habitat Types and Shelter Values

Table 9. Habitat, types, shelter value, percent cover, and shelter score for habitat units within the Army Corps enhancement reach, October 2019.

Post-effective flow (September 2016)				
Habitat Unit #	**Habitat Type**	**Shelter Value**	**Percent Cover**	**Shelter Score**
HU01	Flatwater	3	50	150
HU02	Pool	2	30	60
HU03	Alcove	3	60	180
HU04	Riffle	1	5	5
HU05	Pool	3	65	195
HU06	Flatwater	2	15	30
HU07	Flatwater	3	35	105
HU08	Pool	3	65	195
HU09	Flatwater	1	15	15
HU10	Pool	3	45	135
HU11	Flatwater	1	25	25
HU12	Riffle	2	30	60
HU13	Pool	3	60	180
HU14	Flatwater	2	35	70
HU15	Flatwater	1	30	30
HU16	Flatwater	1	25	25
HU17	Pool	3	45	135
HU18	Pool	3	80	240
Pool: riffle	**7: 2 (3.50)**			**Avg = 102**

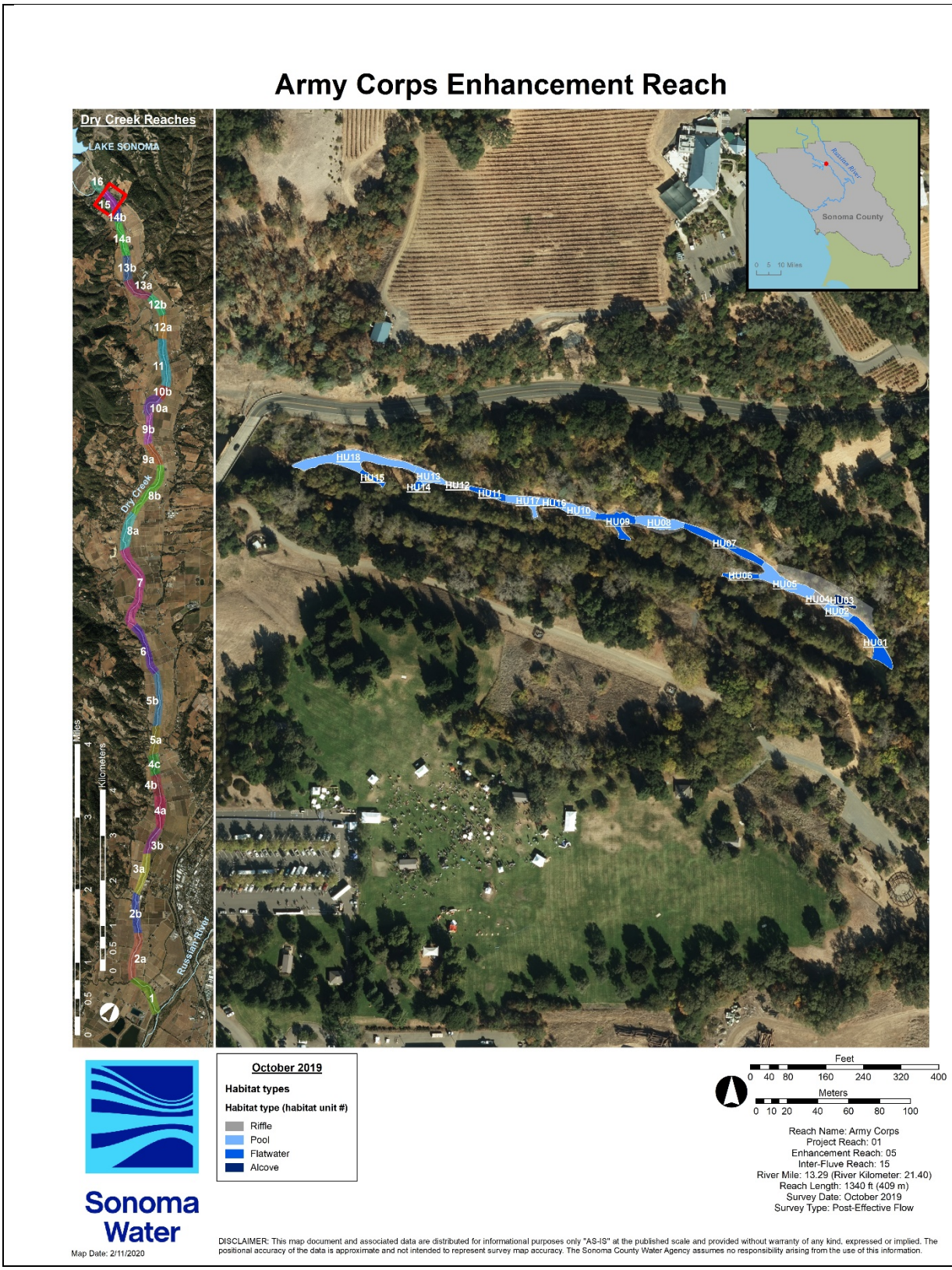

Figure 18. Habitat unit number and type within the Army Corps enhancement reach, October 2019.

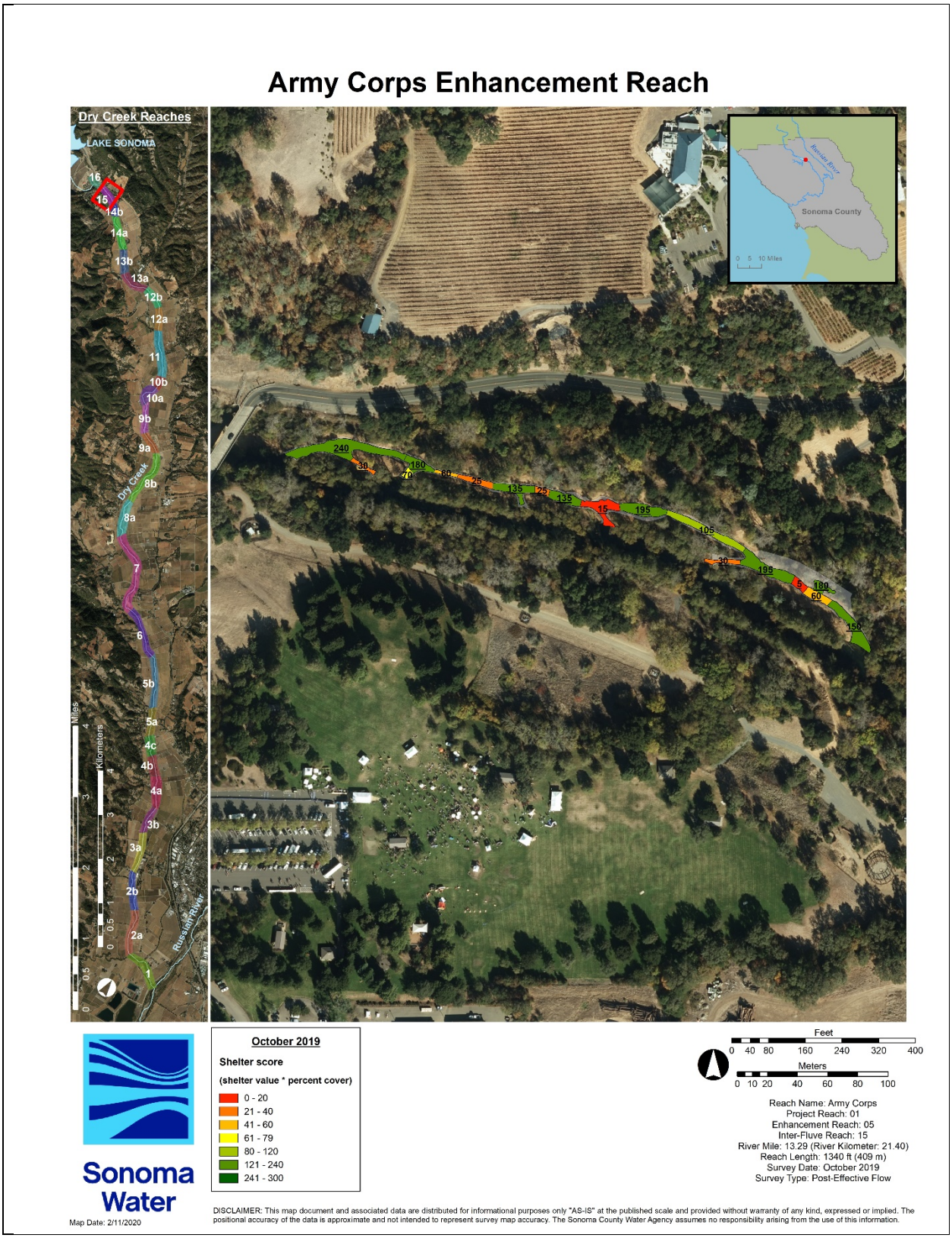

Figure 19. Habitat unit shelter scores within the Army Corps enhancement reach, October 2019.

Feature, Habitat Unit, Site, and Reach Ratings

Table 10. Post-effective flow feature ratings for the Army Corps enhancement reach October 2019.

	Project Reach	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Enhancement Reach	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	Colloquial Name	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC
	mmddyy	101619	101619	101619	101619	101619	101619	101619	101619	101619	101619	101619	101619	101619	101619	101619
	Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
	PROJECT SITE NUMBER	1	1	1	1	2	2	3	4	6	6	6	6	5	5	5
	Project Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
	PROJECT FEATURE NUMBER	S1-01	S1-05	S1-06	S1-07	S2-04	S2-05	S3-04	S4-05	S6-06	S6-07	S6-08	S6-09	S5-05	S5-06	S5-07
	Feature Type Code	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD
	Habitat Unit	HU01_D	HU18	HU18	HU18	HU13	HU13	HU17	HU10	HU01	HU02	HU05	HU05	HU07	HU08	HU07
	Habitat Type	NA	Pool	Pool	Pool	Pool	Pool	Pool	Pool	Flatwater	Pool	Pool	Pool	Flatwater	Pool	Flatwater
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	GOOD	GOOD	GOOD	EXCL	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
6a	Is the **feature** still in its original location?	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
6d	Is the **feature** still in its original orientaton?	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
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
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
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?	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
	PROJECT FEATURE NUMBER	**S1-01**	**S1-05**	**S1-06**	**S1-07**	**S2-04**	**S2-05**	**S3-04**	**S4-05**	**S6-06**	**S6-07**	**S6-08**	**S6-09**	**S5-05**	**S5-06**	**S5-07**
4.	Structural condition of **feature**: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	4	4	4	4	5	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	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
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
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
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
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
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
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)	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
	PROJECT FEATURE NUMBER	**S1-01**	**S1-05**	**S1-06**	**S1-07**	**S2-04**	**S2-05**	**S3-04**	**S4-05**	**S6-06**	**S6-07**	**S6-08**	**S6-09**	**S5-05**	**S5-06**	**S5-07**
FEATURE RATING	Feature quantitative rating out of 15	13	13	13	13	14	13	13	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	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent

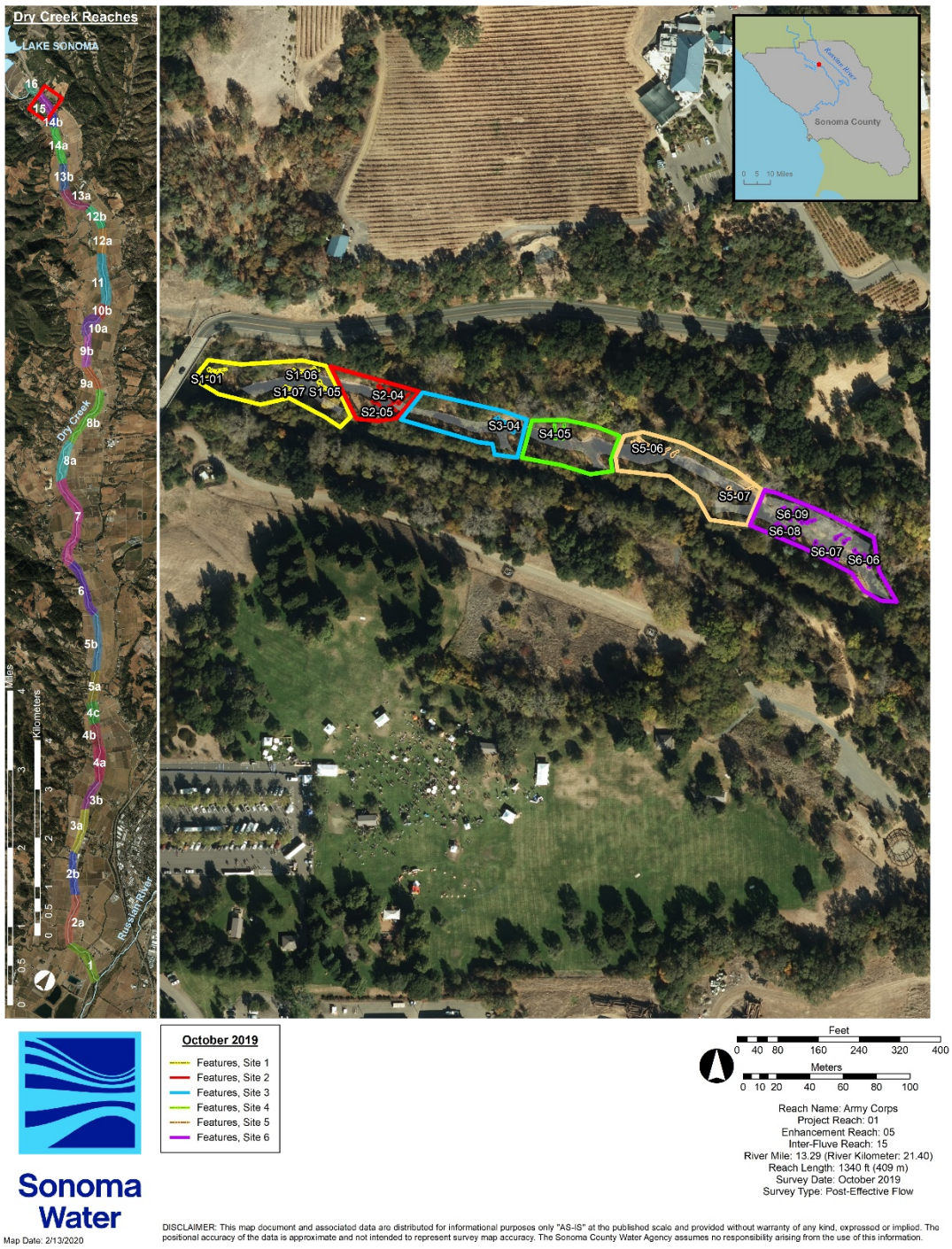

Figure 20. Enhancement sites and features within the Army Corps enhancement reach, October 2019.

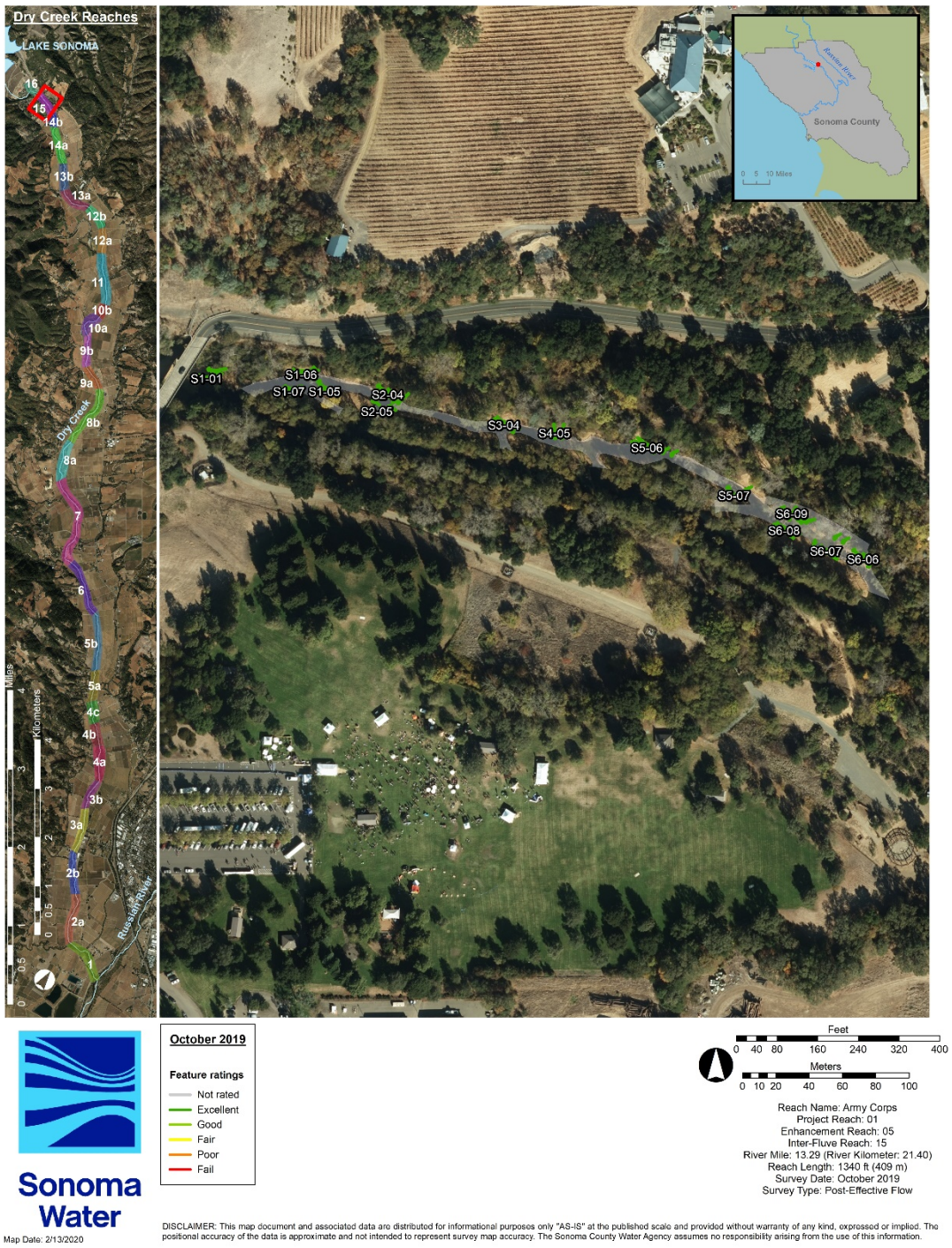

Figure 21. Post-effective flow feature ratings within the Army Corps enhancement reach, October 2019.

Table 11. Post-effective flow habitat unit ratings for the Army Corps enhancement reach October 2019.

	Project Reach	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Enhancement Reach	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	Colloquial Name	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC
	mmddyy	101619	101619	101619	101619	101619	101619	101619	101619	101619	101619	101619	101619	101619	101619	101619
	Survey Type	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**
	Habitat Type	Flatwater	Pool	Alcove	Riffle	Pool	Flatwater	Flatwater	Pool	Flatwater	Pool	Flatwater	Riffle	Pool	Flatwater	NA
	PROJECT SITE NUMBER	**6**	**6**	**6**	**6**	**6**	**5**	**5**	**5**	**4**	**4**	**3**	**3**	**2**	**2**	**1**
	Project Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	79%	69%	40%	64%	47%	52%	76%	71%	0%	0%	0%	0%	61%	72%	0%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	4%	14%	0%	0%	37%	0%	0%	8%	0%	0%	0%	0%	21%	0%	0%
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	3	2	3	1	3	2	3	3	1	3	1	2	3	2	0
15.	Percent of **habitat unit** covered by shelter: %	50	30	60	5	65	15	35	65	15	45	25	30	60	35	0
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	150	60	180	5	195	30	105	195	15	135	25	60	180	70	0
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	100%	98%	100%	51%	97%	97%	89%	99%	88%	100%	99%	47%	99%	100%	0%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	78%	67%	40%	17%	44%	49%	65%	70%	0%	0%	0%	0%	0%	72%	0%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	4%	14%	0%	0%	37%	0%	0%	8%	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**
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	4	4	4	0	0	0	0	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)	0	1	0	0	3	0	0	0	0	0	0	0	2	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	5	3	5	4	5	5	3	5	3	4	5	4	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	2	4	0	4	1	2	4	1	3	2	2	4	2	0
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	5	2	5	0	5	0	4	5	0	4	0	2	5	2	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	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)	4	4	4	1	4	4	4	4	0	0	0	0	0	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)	0	1	0	0	3	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**	**HU01_D**
HABITAT UNIT RATING	Habitat unit quantitative rating (out of 35)	25	22	26	12	32	17	23	26	8	16	9	12	24	20	0
	Habitat unit qualitative rating: Excellent (>=28), Good (>=21), Fair(>=14), Poor (>=7), Fail (<7)	Good	Good	Good	Poor	Excellent	Fair	Good	Good	Poor	Fair	Poor	Poor	Good	Fair	Fail

Table 11. Post-effective flow habitat unit ratings for the Army Corps enhancement reach October 2019.

	Project Reach	1	1	1	1	1	1
	Enhancement Reach	5	5	5	5	5	5
	Colloquial Name	AC	AC	AC	AC	AC	AC
	mmddyy	101619	101619	101619	101619	101619	101619
	Survey Type	PEF	PEF	PEF	PEF	PEF	PEF
	HABITAT UNIT NUMBER	**HU15**	**HU16**	**HU17**	**HU18**	**HU16_2**	**HU18_2**
	Habitat Type	Flatwater	Flatwater	Pool	Pool	Flatwater	Pool
	PROJECT SITE NUMBER	**1**	**3**	**3**	**1**	**4**	**2**
	Project Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	43%	70%	66%	48%	70%	48%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	0%	0%	7%	37%	0%	37%
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	1	1	3	3	1	3
15.	Percent of **habitat unit** covered by shelter: %	30	25	45	80	25	80
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	30	25	135	240	25	240
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	100%	100%	100%	100%	100%	100%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	43%	70%	66%	47%	70%	47%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	0%	7%	37%	0%	37%
	HABITAT UNIT NUMBER	**HU15**	**HU16**	**HU17**	**HU18**	**HU16_2**	**HU18_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	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	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)	3	3	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)	2	2	3	5	2	5
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	0	0	4	5	0	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	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)	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	3	0	3
	HABITAT UNIT NUMBER	**HU15**	**HU16**	**HU17**	**HU18**	**HU16_2**	**HU18_2**
HABITAT UNIT RATING	Habitat unit quantitative rating (out of 35)	17	17	24	33	17	33
	Habitat unit qualitative rating: Excellent (>=28), Good (>=21), Fair(>=14), Poor (>=7), Fail (<7)	Fair	Fair	Good	Excellent	Fair	Excellent

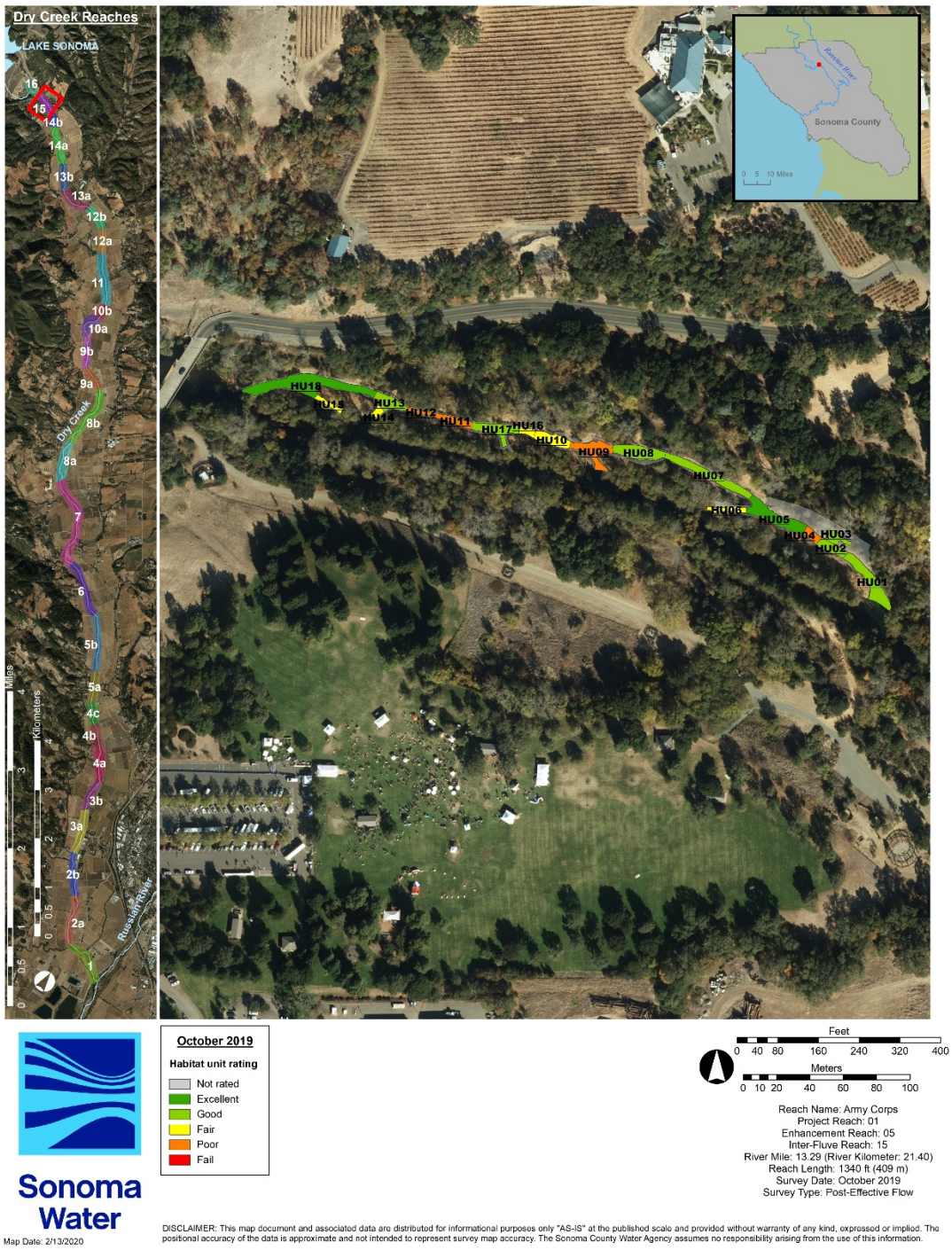

Figure 22. Habitat unit ratings within the Army Corps enhancement reach, October 2019.

Table 12. Post-enhancement average habitat unit, site, and reach ratings (rounded to the nearest whole number) for the Army Corps enhancement reach, October 2019.

	Project Reach	1	1	1	1	1	1
	Enhancement Reach	5	5	5	5	5	5
	ENHANCEMENT REACH NAME	**AC**	**AC**	**AC**	**AC**	**AC**	**AC**
	mmddyy	101619	101619	101619	101619	101619	101619
	Survey Type	PEF	PEF	PEF	PEF	PEF	PEF
	PROJECT SITE NUMBER	**1**	**2**	**3**	**4**	**5**	**6**
	Project Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
	PROJECT SITE NUMBER	**1**	**2**	**3**	**4**	**5**	**6**
SITE AVERAGE FEATURE RATING	Site average feature quantitative rating (out of 15; bold indicates excluded from site rating)	13	14	13	13	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	Excellent	Excellent	Excellent	Excellent
	PROJECT SITE NUMBER	1	2	3	4	5	6
SITE AVERAGE HABITAT UNIT RATING	Site average habitat unit quantitative rating (out of 35; bold indicates excluded from site rating)	25	26	16	19	22	23
	Site average qualitative rating Excellent (>=28), Good (>=21), Fair(>=14), Poor (>=7), Fail (<7), Not rated (not used to rate site)	Good	Good	Fair	Fair	Good	Good
	PROJECT SITE NUMBER	**1**	**2**	**3**	**4**	**5**	**6**
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)	38	39	29	32	35	36
	Site qualitative rating: Excellent (>=40), Good (>=30), Fair(>=20), Poor (>=10), Fail (<10)	Good	Good	Fair	Good	Good	Good
	ENHANCEMENT REACH NAME	**AC**					
ENHANCEMENT REACH RATING	Enhancement reach quantitative rating (average of site ratings) (out of 50)	35					
	Enhancement reach qualitative rating: Excellent (>=40), Good (>=30), Fair(>=20), Poor (>=10), Fail (<10)	Good					

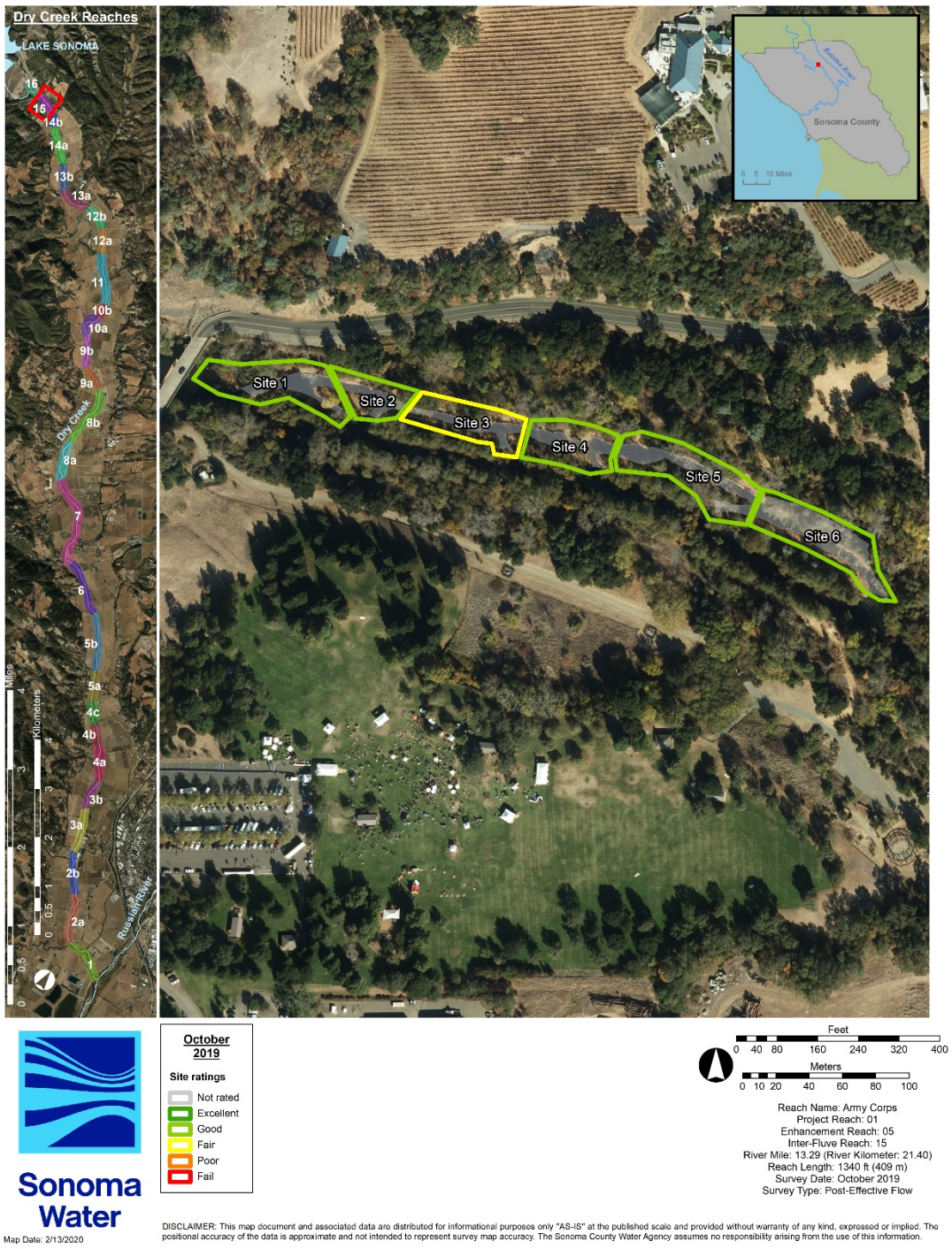

Figure 23. Post-effective flow site ratings for the Army Corps enhancement reach, October 2019.

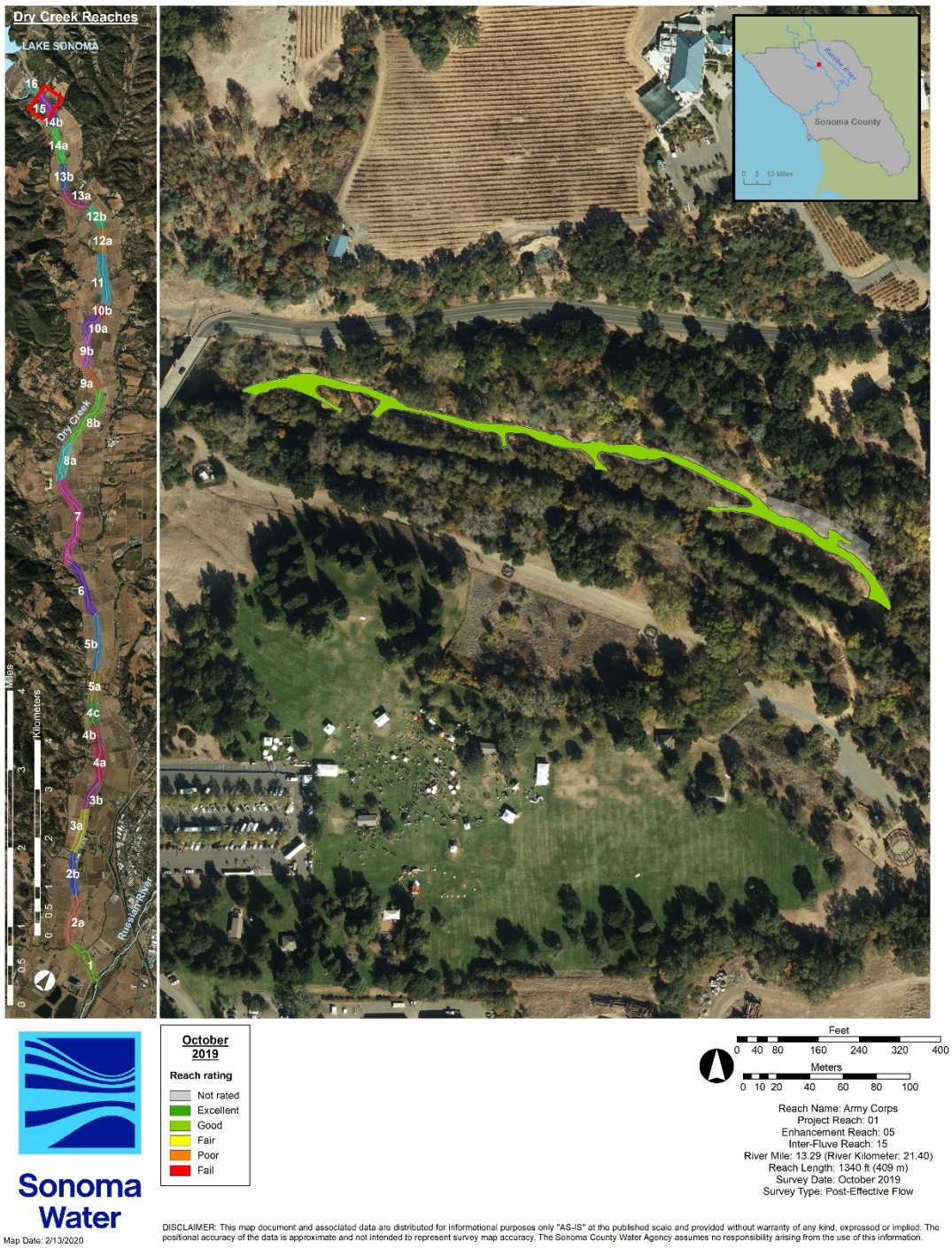

Figure 24. Post-effective flow reach rating for the Army Corps enhancement reach, October 2019.

Feature and Habitat Unit Checklists

Table 13. Adaptive Management Plan targeted checklist for the Army Corps enhancement reach, October 2019.

	Project Reach	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Enhancement Reach	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	Colloquial Name	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC
	mmddyy	101619	101619	101619	101619	101619	101619	101619	101619	101619	101619	101619	101619	101619	101619	101619	101619	101619	101619	101619
	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	3	3	3	3	4	4	4	5	5	5
	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	NA	S1-01	S1-05	S1-06	S1-07	NA	NA	S2-04	S2-05	NA	NA	NA	S3-04	NA	NA	S4-05	NA	S5-05	S5-06
	Feature Type Code	NA	LWD	LWD	LWD	LWD	NA	NA	LWD	LWD	NA	NA	NA	LWD	NA	NA	LWD	NA	LWD	LWD
	Habitat Unit	HU15	HU01_D	HU18	HU18	HU18	HU14	HU18_2	HU13	HU13	HU12	HU11	HU16	HU17	HU09	HU16_2	HU10	HU06	HU07	HU08
	Habitat Type	Flatwater	NA	Pool	Pool	Pool	Flatwater	Pool	Pool	Pool	Riffle	Flatwater	Flatwater	Pool	Flatwater	Flatwater	Pool	Flatwater	Flatwater	Pool
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	NA	GOOD	GOOD	GOOD	GOOD	NA	NA	EXCL	GOOD	NA	NA	NA	GOOD	NA	NA	GOOD	NA	GOOD	GOOD
5a	Are problems with the **feature** visible?	NA	NO	NO	NO	NO	NA	NA	NO	NO	NA	NA	NA	NO	NA	NA	NO	NA	NO	NO
6a	Is the **feature** still in its original location?	NA	YES	YES	YES	YES	NA	NA	YES	YES	NA	NA	NA	YES	NA	NA	YES	NA	YES	YES
6b	Is the **feature** still in its original position?	NA	YES	YES	YES	YES	NA	NA	YES	YES	NA	NA	NA	YES	NA	NA	YES	NA	YES	YES
6d	Is the **feature** still in its original orientaton?	NA	YES	YES	YES	YES	NA	NA	YES	YES	NA	NA	NA	YES	NA	NA	YES	NA	YES	YES
8.	If an objective, did the **feature** create the targeted instream habitat type?	NA	YES	YES	YES	YES	NA	NA	YES	YES	NA	NA	NA	YES	NA	NA	YES	NA	YES	YES
9.	Were there any unintended effects by the **feature** on the habitat type? If Y, comment.	NA	NO	NO	NO	NO	NA	NA	NO	NO	NA	NA	NA	NO	NA	NA	NO	NA	NO	NO
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	43%	0%	48%	48%	48%	72%	48%	61%	61%	0%	0%	70%	66%	0%	70%	0%	52%	76%	71%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	0%	0%	37%	37%	37%	0%	37%	21%	21%	0%	0%	0%	7%	0%	0%	0%	0%	0%	8%
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	1	0	3	3	3	2	3	3	3	2	1	1	3	1	1	3	2	3	3
15.	Percent of **habitat unit** covered by shelter: %	30	0	80	80	80	35	80	60	60	30	25	25	45	15	25	45	15	35	65
17a	If an objective, did the **feature** increase instream shelter rating?	NA	YES	YES	YES	YES	NA	NA	YES	YES	NA	NA	NA	YES	NA	NA	YES	NA	YES	YES
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	30	0	240	240	240	70	240	180	180	60	25	25	135	15	25	135	30	105	195
19a	If an objective, did the **feature** increase LWD count in the **habitat unit**?	NA	NO	NO	NO	NO	NA	NA	NO	NO	NA	NA	NA	NO	NA	NA	NO	NA	NO	NO
21a	If an objective, did the **feature** lead to the targeted channel conditions?	NA	YES	YES	YES	YES	NA	NA	YES	YES	NA	NA	NA	YES	NA	NA	YES	NA	YES	YES
25.	Did the **feature** achieve the targeted velocity?	NA	YES	YES	YES	YES	NA	NA	YES	YES	NA	NA	NA	YES	NA	NA	YES	NA	YES	YES
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	100%	0%	100%	100%	100%	100%	100%	99%	99%	47%	99%	100%	100%	88%	100%	100%	97%	89%	99%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	43%	0%	47%	47%	47%	72%	47%	0%	0%	0%	0%	70%	66%	0%	70%	0%	49%	65%	70%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	0%	37%	37%	37%	0%	37%	0%	0%	0%	0%	0%	7%	0%	0%	0%	0%	0%	8%
	FEATURE NUMBER	**NA**	**S1-01**	**S1-05**	**S1-06**	**S1-07**	**NA**	**NA**	**S2-04**	**S2-05**	**NA**	**NA**	**NA**	**S3-04**	**NA**	**NA**	**S4-05**	**NA**	**S5-05**	**S5-06**
	HABITAT UNIT NUMBER	**HU15**	**HU01_D**	**HU18**	**HU18**	**HU18**	**HU14**	**HU18_2**	**HU13**	**HU13**	**HU12**	**HU11**	**HU16**	**HU17**	**HU09**	**HU16_2**	**HU10**	**HU06**	**HU07**	**HU08**
	SITE NUMBER	**1**	**1**	**1**	**1**	**1**	**2**	**2**	**2**	**2**	**3**	**3**	**3**	**3**	**4**	**4**	**4**	**5**	**5**	**5**
	ENHANCEMENT REACH NAME	**AC**	**AC**	**AC**	**AC**	**AC**	**AC**	**AC**	**AC**	**AC**	**AC**	**AC**	**AC**	**AC**	**AC**	**AC**	**AC**	**AC**	**AC**	**AC**
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	0	0	5	4	0	0	0	4	0	0	4	0	4	4
5a	Are problems with the **feature** visible? (NO = 1 pt, YES = 0 pt)	0	1	1	1	1	0	0	1	1	0	0	0	1	0	0	1	0	1	1
6a	Is the **feature** still in its original location? (YES = 1 pt, NO = 0 pt)	0	1	1	1	1	0	0	1	1	0	0	0	1	0	0	1	0	1	1
6b	Is the **feature** still in its original position? (YES = 1 pt, NO = 0 pt)	0	1	1	1	1	0	0	1	1	0	0	0	1	0	0	1	0	1	1
6d	Is the **feature** still in its original orientaton? (YES = 1 pt, NO = 0 pt)	0	1	1	1	1	0	0	1	1	0	0	0	1	0	0	1	0	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	0	0	1	1	0	0	0	1	0	0	1	0	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	0	0	1	1	0	0	0	1	0	0	1	0	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	0	0	4	4	0	4	0	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	3	3	0	3	2	2	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	0	5	5	5	4	5	5	5	4	3	3	5	3	3	5	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)	2	0	5	5	5	2	5	4	4	2	2	2	3	1	2	3	1	2	4
17a	If an objective, did the **feature** increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	0	1	1	1	1	0	0	1	1	0	0	0	1	0	0	1	0	1	1
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	0	0	5	5	5	2	5	5	5	2	0	0	4	0	0	4	0	4	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	0	0	1	1	0	0	0	1	0	0	1	0	1	1
25.	Did the **feature** achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	0	1	1	1	1	0	0	1	1	0	0	0	1	0	0	1	0	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	4	4	4	4	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)	4	0	4	4	4	4	4	0	0	0	0	4	4	0	4	0	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	3	3	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0

Table 13. Adaptive Management Plan targeted checklist for the Army Corps enhancement reach, October 2019.

	Project Reach	1	1	1	1	1	1	1
	Enhancement Reach	5	5	5	5	5	5	5
	Colloquial Name	AC	AC	AC	AC	AC	AC	AC
	mmddyy	101619	101619	101619	101619	101619	101619	101619
	Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF
	Project Site Number	5	6	6	6	6	6	6
	Project Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
	Project Feature Number	S5-07	NA	NA	S6-06	S6-07	S6-08	S6-09
	Feature Type Code	LWD	NA	NA	LWD	LWD	LWD	LWD
	Habitat Unit	HU07	HU03	HU04	HU01	HU02	HU05	HU05
	Habitat Type	Flatwater	Alcove	Riffle	Flatwater	Pool	Pool	Pool
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	NA	NA	GOOD	GOOD	GOOD	GOOD
5a	Are problems with the **feature** visible?	NO	NA	NA	NO	NO	NO	NO
6a	Is the **feature** still in its original location?	YES	NA	NA	YES	YES	YES	YES
6b	Is the **feature** still in its original position?	YES	NA	NA	YES	YES	YES	YES
6d	Is the **feature** still in its original orientaton?	YES	NA	NA	YES	YES	YES	YES
8.	If an objective, did the **feature** create the targeted instream habitat type?	YES	NA	NA	YES	YES	YES	YES
9.	Were there any unintended effects by the **feature** on the habitat type? If Y, comment.	NO	NA	NA	NO	NO	NO	NO
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	76%	40%	64%	79%	69%	47%	47%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	0%	0%	0%	4%	14%	37%	37%
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	3	3	1	3	2	3	3
15.	Percent of **habitat unit** covered by shelter: %	35	60	5	50	30	65	65
17a	If an objective, did the **feature** increase instream shelter rating?	YES	NA	NA	YES	YES	YES	YES
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	105	180	5	150	60	195	195
19a	If an objective, did the **feature** increase LWD count in the **habitat unit**?	NO	NA	NA	NO	NO	NO	NO
21a	If an objective, did the **feature** lead to the targeted channel conditions?	YES	NA	NA	YES	YES	YES	YES
25.	Did the **feature** achieve the targeted velocity?	YES	NA	NA	YES	YES	YES	YES
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	89%	100%	51%	100%	98%	97%	97%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	65%	40%	17%	78%	67%	44%	44%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	0%	0%	4%	14%	37%	37%
	FEATURE NUMBER	**S5-07**	**NA**	**NA**	**S6-06**	**S6-07**	**S6-08**	**S6-09**
	HABITAT UNIT NUMBER	**HU07**	**HU03**	**HU04**	**HU01**	**HU02**	**HU05**	**HU05**
	SITE NUMBER	**5**	**6**	**6**	**6**	**6**	**6**	**6**
	ENHANCEMENT REACH NAME	**AC**	**AC**	**AC**	**AC**	**AC**	**AC**	**AC**
4.	Structural condition of **feature**: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	4	0	0	4	4	4	4
5a	Are problems with the **feature** visible? (NO = 1 pt, YES = 0 pt)	1	0	0	1	1	1	1
6a	Is the **feature** still in its original location? (YES = 1 pt, NO = 0 pt)	1	0	0	1	1	1	1
6b	Is the **feature** still in its original position? (YES = 1 pt, NO = 0 pt)	1	0	0	1	1	1	1
6d	Is the **feature** still in its original orientaton? (YES = 1 pt, NO = 0 pt)	1	0	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	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	0	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	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	1	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	5	3	5	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)	2	4	0	3	2	4	4
17a	If an objective, did the **feature** increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	0	0	1	1	1	1
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	4	5	0	5	2	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
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
25.	Did the **feature** achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	0	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)	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)	4	4	1	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	1	3	3

Table 14. Adaptive Management Plan full checklist for the Army Corps enhancement reach, October 2019.

	Project Reach	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Enhancement Reach	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	Colloquial Name	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC
	mmddyy	101619	101619	101619	101619	101619	101619	101619	101619	101619	101619	101619	101619	101619	101619	101619	101619	101619	101619	101619
	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	3	3	3	3	4	4	4	5	5	5
	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	NA	S1-01	S1-05	S1-06	S1-07	NA	NA	S2-04	S2-05	NA	NA	NA	S3-04	NA	NA	S4-05	NA	S5-05	S5-06
	Feature Type Code	NA	LWD	LWD	LWD	LWD	NA	NA	LWD	LWD	NA	NA	NA	LWD	NA	NA	LWD	NA	LWD	LWD
	Habitat Unit	HU15	HU01_D	HU18	HU18	HU18	HU14	HU18_2	HU13	HU13	HU12	HU11	HU16	HU17	HU09	HU16_2	HU10	HU06	HU07	HU08
	Habitat Type	Flatwater	NA	Pool	Pool	Pool	Flatwater	Pool	Pool	Pool	Riffle	Flatwater	Flatwater	Pool	Flatwater	Flatwater	Pool	Flatwater	Flatwater	Pool
1.	Length of targeted treatment (ft)	NA	NR	NR	NR	NR	NA	NA	NR	NR	NA	NA	NA	NR	NA	NA	NR	NA	NR	NR
2.	Width of targeted treatment: (ft)	NA	NR	NR	NR	NR	NA	NA	NR	NR	NA	NA	NA	NR	NA	NA	NR	NA	NR	NR
3.	Estimate area of the targeted **feature**: (ft^2)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	NA	GOOD	GOOD	GOOD	GOOD	NA	NA	EXCL	GOOD	NA	NA	NA	GOOD	NA	NA	GOOD	NA	GOOD	GOOD
5a	Are problems with the **feature** visible?	NA	NO	NO	NO	NO	NA	NA	NO	NO	NA	NA	NA	NO	NA	NA	NO	NA	NO	NO
5b	Types: ANC, BBB, CRF, MAT, SHF, STR, SWA, UND, UNS, WSH, OTH, NON	NA	NON	NON	NON	NON	NA	NA	NON	NON	NA	NA	NA	NON	NA	NA	NON	NA	NON	NON
6a	Is the **feature** still in its original location?	NA	YES	YES	YES	YES	NA	NA	YES	YES	NA	NA	NA	YES	NA	NA	YES	NA	YES	YES
6b	Is the **feature** still in its original position?	NA	YES	YES	YES	YES	NA	NA	YES	YES	NA	NA	NA	YES	NA	NA	YES	NA	YES	YES
6c	If yes: LBK, MDC, RBK, SPN, OTH	NA	LBK	RBK	LBK	MDC	NA	NA	LBK	RBK	NA	NA	NA	LBK	NA	NA	LBK	NA	LBK	LBK
6d	Is the **feature** still in its original orientaton?	NA	YES	YES	YES	YES	NA	NA	YES	YES	NA	NA	NA	YES	NA	NA	YES	NA	YES	YES
6e	If yes: DNS, MUL, PRL, PRP, UPS, OTH	NA	UPS	MUL	PRL	MUL	NA	NA	MUL	PRL	NA	NA	NA	PRL	NA	NA	MUL	NA	MUL	MUL
7.	Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	FLT	0	POO	POO	POO	FLT	POO	POO	POO	RIF	FLT	FLT	POO	FLT	FLT	POO	FLT	FLT	POO
8.	If an objective, did the **feature** create the targeted instream habitat type?	NA	YES	YES	YES	YES	NA	NA	YES	YES	NA	NA	NA	YES	NA	NA	YES	NA	YES	YES
9.	Were there any unintended effects by the **feature** on the habitat type? If Y, comment.	NA	NO	NO	NO	NO	NA	NA	NO	NO	NA	NA	NA	NO	NA	NA	NO	NA	NO	NO
10.	Mean water depth in **habitat unit**: ft	0.4	0.0	1.8	1.8	1.8	0.8	1.8	1.3	1.3	0.4	0.7	0.7	1.1	0.5	0.7	1.1	0.5	0.9	1.1
11a	Maximum water depth in **habitat unit**: ft	1.2	0.0	4.7	4.7	4.7	1.5	4.7	2.8	2.8	0.9	1.3	1.2	2.5	1.3	1.2	2.6	1.6	1.9	2.7
11b	Area of **habitat unit** within 0.5 -2.0 ft depth: (ft2)	197.1	0.0	2638.5	2638.5	2638.5	236.8	2638.5	813.7	813.7	135.4	693.7	306.5	1177.7	1166.9	306.5	996.9	334.3	1986.7	1556.3
11c	Area of **habitat unit** within 2.0 -4.0 ft depth: (ft2)	0.0	0.0	2038.0	2038.0	2038.0	0.0	2038.0	276.4	276.4	0.0	0.0	0.0	123.1	0.0	0.0	134.7	0.0	0.0	184.5
11d	Area of **habitat unit** within 0.5-4.0 ft depth: (ft2)	197.1	0.0	4676.5	4676.5	4676.5	236.8	4676.5	1090.0	1090.0	135.4	693.7	306.5	1300.8	1166.9	306.5	1131.5	334.3	1986.7	1740.8
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	43%	0%	48%	48%	48%	72%	48%	61%	61%	0%	0%	70%	66%	0%	70%	0%	52%	76%	71%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	0%	0%	37%	37%	37%	0%	37%	21%	21%	0%	0%	0%	7%	0%	0%	0%	0%	0%	8%
11g	% Area of **habitat** unit within 0.5-4.0 ft depth	43%	0%	84%	84%	84%	72%	84%	82%	82%	0%	0%	70%	73%	0%	70%	0%	52%	76%	79%
11h	If an objective, did the **feature** increase/decrease water depth in the treatment area?	NA	YES	YES	YES	YES	NA	NA	YES	YES	NA	NA	NA	YES	NA	NA	YES	NA	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
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.	NA	NO	NO	NO	NO	NA	NA	NO	NO	NA	NA	NA	NO	NA	NA	NO	NA	NO	NO
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	1	0	3	3	3	2	3	3	3	2	1	1	3	1	1	3	2	3	3
15.	Percent of **habitat unit** covered by shelter: %	30	0	80	80	80	35	80	60	60	30	25	25	45	15	25	45	15	35	65
16a	1st dominant cover in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	AVG	NA	AVG	AVG	AVG	AVG	AVG	AVG	AVG	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	TVG	NA	RTW	RTW	RTW	RTW	RTW	RTW	RTW	AVG	TVG	TVG	SWD	TVG	TVG	RTW	SWD	SWD	LWD
17a	If an objective, did the **feature** increase instream shelter rating?	NA	YES	YES	YES	YES	NA	NA	YES	YES	NA	NA	NA	YES	NA	NA	YES	NA	YES	YES
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	30	0	240	240	240	70	240	180	180	60	25	25	135	15	25	135	30	105	195
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	NO	NO	NO	NO	NA	NA	NO	NO	NA	NA	NA	NO	NA	NA	NO	NA	NO	NO
19b	LWD recruitment mechanisms in **habitat unit**: ANC, EXC, EXH, INT, RPR, UNA, OTH	NON	NA	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	NA	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	NA	NA	YES	YES	NA	NA	NA	YES	NA	NA	YES	NA	YES	YES
21b	Overall Offchannel Condition (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	NA	STB	STB	STB	STB	NA	NA	STB	STB	NA	NA	NA	STB	NA	NA	STB	NA	STB	STB
21c	Outlet Conditions (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	NA	STB	STB	STB	STB	NA	NA	STB	STB	NA	NA	NA	STB	NA	NA	STB	NA	STB	STB
21d	Inlet Conditions (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	NA	STB	STB	STB	STB	NA	NA	STB	STB	NA	NA	NA	STB	NA	NA	STB	NA	STB	STB
22.	Were there any unintended effects on the stream channel at the **feature**? If Y, comment.	NA	NO	NO	NO	NO	NA	NA	NO	NO	NA	NA	NA	NO	NA	NA	NO	NA	NO	NO
23.	If an objective, did the **feature** decrease/increase velocity in the treatment area?	NA	YES	YES	YES	YES	NA	NA	YES	YES	NA	NA	NA	YES	NA	NA	YES	NA	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
25.	Did the **feature** achieve the targeted velocity?	NA	YES	YES	YES	YES	NA	NA	YES	YES	NA	NA	NA	YES	NA	NA	YES	NA	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
26b	Measured max velocity (ft/sec) in **habitat unit**	0.1	0.0	0.6	0.6	0.6	0.2	0.6	0.8	0.8	1.6	0.8	0.3	0.3	0.9	0.3	0.3	0.6	1.0	0.6
26c	Measured mean velocity (ft/sec) in **habitat unit**	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.1	0.1	0.0	0.3	0.1	0.1	0.2	0.3	0.1
27.	Area of **habitat unit** within targeted velocity: (ft^2)	461.5	0.0	5527.3	5527.3	5527.3	329.9	5527.3	1325.3	1325.3	167.1	950.1	439.6	1779.5	1834.0	439.6	1427.9	627.6	2342.7	2174.1
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	100%	0%	100%	100%	100%	100%	100%	99%	99%	47%	99%	100%	100%	88%	100%	100%	97%	89%	99%
29.	Were there any unintended effects of **feature** on velocity If Y, comment.	NA	NO	NO	NO	NO	NA	NA	NO	NO	NA	NA	NA	NO	NA	NA	NO	NA	NO	NO
30a	1st/2nd dominant substrate in **habitat unit**: BED, BOL, COB, GRV, SND, SLC, OTH	GRV	NA	GRV	GRV	GRV	GRV	GRV	GRV	GRV	COB	GRV	GRV	GRV	COB	GRV	GRV	GRV	GRV	GRV
30b	2nd dominant substrate in **habitat unit**: BED, BOL, COB, GRV, SND, SLC, OTH	COB	NA	SND	SND	SND	SND	SND	SND	SND	GRV	COB	COB	SND	GRV	COB	COB	COB	SND	COB
31.	If an objective, did the **feature** achieve the targeted substrate composition?	NA	YES	YES	YES	YES	NA	NA	YES	YES	NA	NA	NA	YES	NA	NA	YES	NA	YES	YES
32.	% Canopy Measurement:	NR	NA	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
33.	Photopoint data collected: YES /NO	NR	NA	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
34.	Temperature Profile: YES /NO	NR	NA	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
35.	Dissolved Oxygen Profile: YES/NO	NR	NA	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	197.1	0.0	4659.6	4659.6	4659.6	236.8	4659.6	1084.1	1084.1	12.3	681.0	306.5	1300.8	929.7	306.5	1131.5	316.9	1710.8	1718.5
36b	Total **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	197.1	0.0	2621.6	2621.6	2621.6	236.8	2621.6	807.8	807.8	12.3	681.0	306.5	1177.7	929.7	306.5	996.8	316.9	1710.8	1534.1
36c	Total **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0.0	0.0	2038.0	2038.0	2038.0	0.0	2038.0	276.4	276.4	0.0	0.0	0.0	123.1	0.0	0.0	134.7	0.0	0.0	184.5
36d	% **habitat unit** area where targeted depth, velocity and shelter criteria overlap	43%	0%	84%	84%	84%	72%	84%	0%	0%	0%	0%	70%	73%	0%	70%	0%	49%	65%	78%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	43%	0%	47%	47%	47%	72%	47%	0%	0%	0%	0%	70%	66%	0%	70%	0%	49%	65%	70%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	0%	37%	37%	37%	0%	37%	0%	0%	0%	0%	0%	7%	0%	0%	0%	0%	0%	8%
37.	Does this **feature** need: DEC, ENH, MNT, REP, NON, OTH	NA	NON	NON	NON	NON	NA	NA	NON	NON	NA	NA	NA	NON	NA	NA	NON	NA	NON	NON
38.	Are additional restoration treatments recommended at this **site**?	NA	NO	NO	NO	NO	NA	NA	NO	NO	NA	NA	NA	NO	NA	NA	NO	NA	NO	NO

Table 14. Adaptive Management Plan full checklist for the Army Corps enhancement reach, October 2019.

	Project Reach	1	1	1	1	1	1	1
	Enhancement Reach	5	5	5	5	5	5	5
	Colloquial Name	AC	AC	AC	AC	AC	AC	AC
	mmddyy	101619	101619	101619	101619	101619	101619	101619
	Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF
	Project Site Number	5	6	6	6	6	6	6
	Project Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
	Project Feature Number	S5-07	NA	NA	S6-06	S6-07	S6-08	S6-09
	Feature Type Code	LWD	NA	NA	LWD	LWD	LWD	LWD
	Habitat Unit	HU07	HU03	HU04	HU01	HU02	HU05	HU05
	Habitat Type	Flatwater	Alcove	Riffle	Flatwater	Pool	Pool	Pool
1.	Length of targeted treatment (ft)	NR	NA	NA	NR	NR	NR	NR
2.	Width of targeted treatment: (ft)	NR	NA	NA	NR	NR	NR	NR
3.	Estimate area of the targeted **feature**: (ft^2)	0	0	0	0	0	0	0
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	NA	NA	GOOD	GOOD	GOOD	GOOD
5a	Are problems with the **feature** visible?	NO	NA	NA	NO	NO	NO	NO
5b	Types: ANC, BBB, CRF, MAT, SHF, STR, SWA, UND, UNS, WSH, OTH, NON	NON	NA	NA	NON	NON	NON	NON
6a	Is the **feature** still in its original location?	YES	NA	NA	YES	YES	YES	YES
6b	Is the **feature** still in its original position?	YES	NA	NA	YES	YES	YES	YES
6c	If yes: LBK, MDC, RBK, SPN, OTH	SPN	NA	NA	LBK	RBK	RBK	LBK
6d	Is the **feature** still in its original orientaton?	YES	NA	NA	YES	YES	YES	YES
6e	If yes: DNS, MUL, PRL, PRP, UPS, OTH	PRP	NA	NA	MUL	PRP	PRL	MUL
7.	Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	FLT	ALC	RIF	FLT	POO	POO	POO
8.	If an objective, did the **feature** create the targeted instream habitat type?	YES	NA	NA	YES	YES	YES	YES
9.	Were there any unintended effects by the **feature** on the habitat type? If Y, comment.	NO	NA	NA	NO	NO	NO	NO
10.	Mean water depth in **habitat unit**: ft	0.9	0.5	0.5	1.2	1.2	1.6	1.6
11a	Maximum water depth in **habitat unit**: ft	1.9	1.6	1.0	2.3	2.6	3.4	3.4
11b	Area of **habitat unit** within 0.5 -2.0 ft depth: (ft2)	1986.7	286.5	388.3	2084.5	745.1	1392.0	1392.0
11c	Area of **habitat unit** within 2.0 -4.0 ft depth: (ft2)	0.0	0.0	0.0	92.9	151.4	1106.4	1106.4
11d	Area of **habitat unit** within 0.5-4.0 ft depth: (ft2)	1986.7	286.5	388.3	2177.4	896.5	2498.3	2498.3
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	76%	40%	64%	79%	69%	47%	47%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	0%	0%	0%	4%	14%	37%	37%
11g	% Area of **habitat** unit within 0.5-4.0 ft depth	76%	40%	64%	82%	83%	84%	84%
11h	If an objective, did the **feature** increase/decrease water depth in the treatment area?	YES	NA	NA	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
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	NA	NA	NO	NO	NO	NO
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	3	3	1	3	2	3	3
15.	Percent of **habitat unit** covered by shelter: %	35	60	5	50	30	65	65
16a	1st dominant cover in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	AVG	AVG	AVG	AVG	AVG	AVG	AVG
16b	2nd dominant in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	SWD	TVG	SWD	SWD	SWD	SWD	SWD
17a	If an objective, did the **feature** increase instream shelter rating?	YES	NA	NA	YES	YES	YES	YES
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	105	180	5	150	60	195	195
18a	Large woody debris count in **habitat unit**: D >1', L 6-20'	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
19a	If an objective, did the **feature** increase LWD count in the **habitat unit**?	NO	NA	NA	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
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?	YES	NA	NA	YES	YES	YES	YES
21b	Overall Offchannel Condition (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	STB	NA	NA	STB	STB	STB	STB
21c	Outlet Conditions (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	STB	NA	NA	STB	STB	STB	STB
21d	Inlet Conditions (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	STB	NA	NA	STB	STB	STB	STB
22.	Were there any unintended effects on the stream channel at the **feature**? If Y, comment.	NO	NA	NA	NO	NO	NO	NO
23.	If an objective, did the **feature** decrease/increase velocity in the treatment area?	YES	NA	NA	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
25.	Did the **feature** achieve the targeted velocity?	YES	NA	NA	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**	1.0	0.1	1.0	0.8	0.7	0.9	0.9
26c	Measured mean velocity (ft/sec) in **habitat unit**	0.3	0.0	0.5	0.1	0.2	0.1	0.1
27.	Area of **habitat unit** within targeted velocity: (ft^2)	2342.7	715.3	308.1	2633.3	1055.0	2877.2	2877.2
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	89%	100%	51%	100%	98%	97%	97%
29.	Were there any unintended effects of **feature** on velocity If Y, comment.	NO	NA	NA	NO	NO	NO	NO
30a	1st/2nd dominant substrate in **habitat unit**: BED, BOL, COB, GRV, SND, SLC, OTH	GRV	SLC	GRV	GRV	GRV	SLC	SLC
30b	2nd dominant substrate in **habitat unit**: BED, BOL, COB, GRV, SND, SLC, OTH	SND	SND	COB	SND	SND	GRV	GRV
31.	If an objective, did the **feature** achieve the targeted substrate composition?	YES	NA	NA	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:	1710.8	286.5	105.8	2166.6	870.5	2409.8	2409.8
36b	Total **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap:	1710.8	286.5	105.8	2073.7	719.1	1305.4	1305.4
36c	Total **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap:	0.0	0.0	0.0	92.9	151.4	1104.4	1104.4
36d	% **habitat unit** area where targeted depth, velocity and shelter criteria overlap:	65%	40%	17%	82%	81%	81%	81%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap:	65%	40%	17%	78%	67%	44%	44%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap:	0%	0%	0%	4%	14%	37%	37%
37.	Does this **feature** need: DEC, ENH, MNT, REP, NON, OTH	NON	NA	NA	NON	NON	NON	NON
38.	Are additional restoration treatments recommended at this **site**?	NO	NA	NA	NO	NO	NO	NO

Army Corps Reach 14, September 2019

Depth and Velocity

Table 15. Areas and percentages of: wetted area, optimal depth and velocity, and optimal hydraulic habitat within the Army Corps Reach 14 enhancement reach, September 2019.

Army Corps Reach 14 Post-effective flow September 2019	Wetted area (ft^2)	Optimal depth (ft^2)			Optimal velocity (ft^2)	Optimal habitat (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	46,201	22,142	12,171	34,313	16,975	5,444	3,330	8,774
Side channel alcove area	3,121	1,807	725	2,532	3,121	1,807	725	2,532
Side channel area	25,220	8,396	10,330	18,725	15,182	4,910	5,116	10,026
Total area	**74,541**	**32,345**	**23,225**	**55,570**	**35,278**	**12,161**	**9,170**	**21,332**
Main channel % of wetted area	62%	48%	26%	74%	37%	12%	7%	19%
Side channel alcove % of wetted area	4%	58%	23%	81%	100%	58%	23%	81%
Side channel % of wetted area	34%	33%	41%	74%	60%	19%	20%	40%
Total % of wetted area	**100%**	**43%**	**31%**	**75%**	**47%**	**16%**	**12%**	**29%**

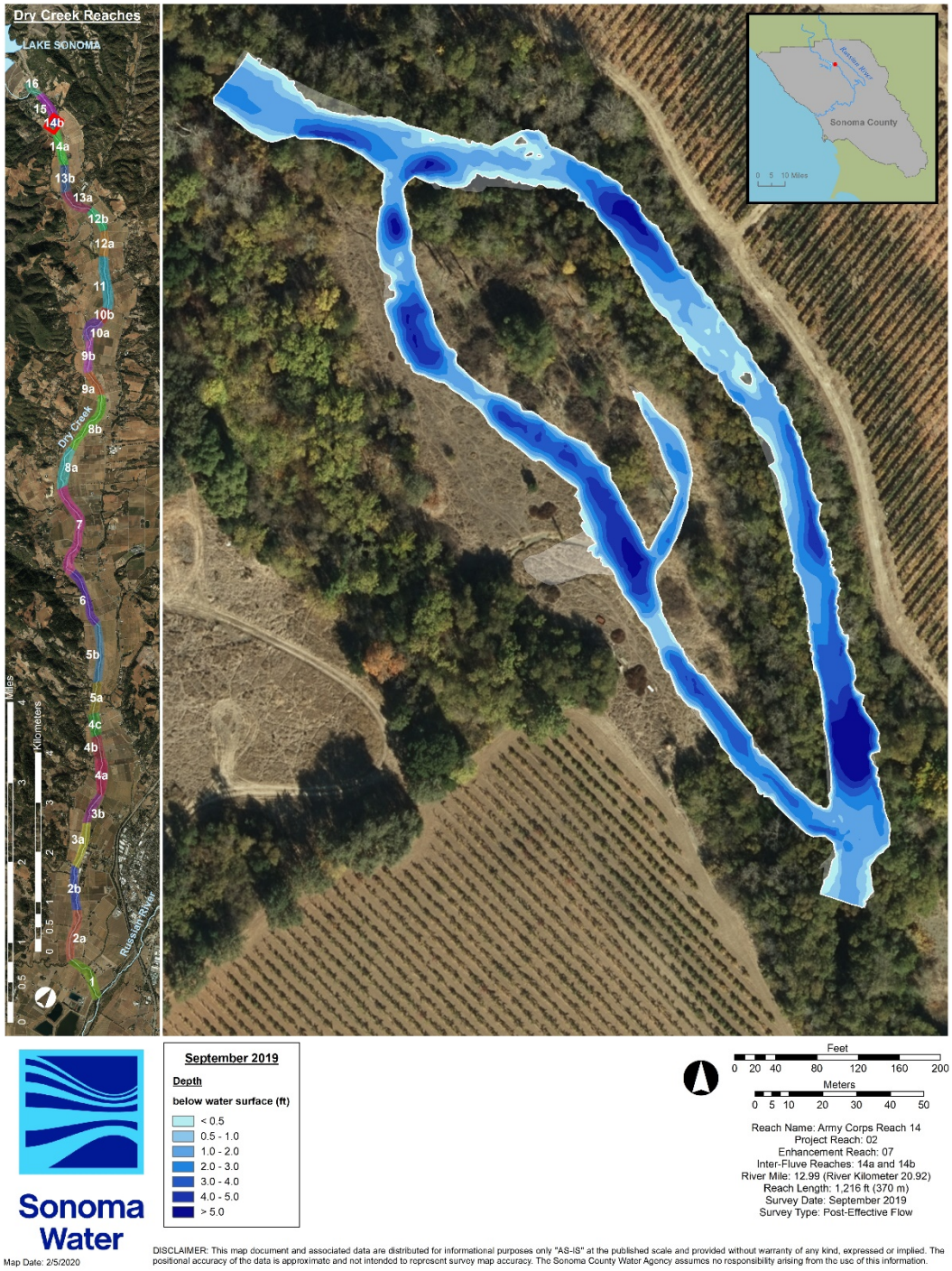

Figure 25. Measured water depth within the Army Corps Reach 14 enhancement reach, September 2019.

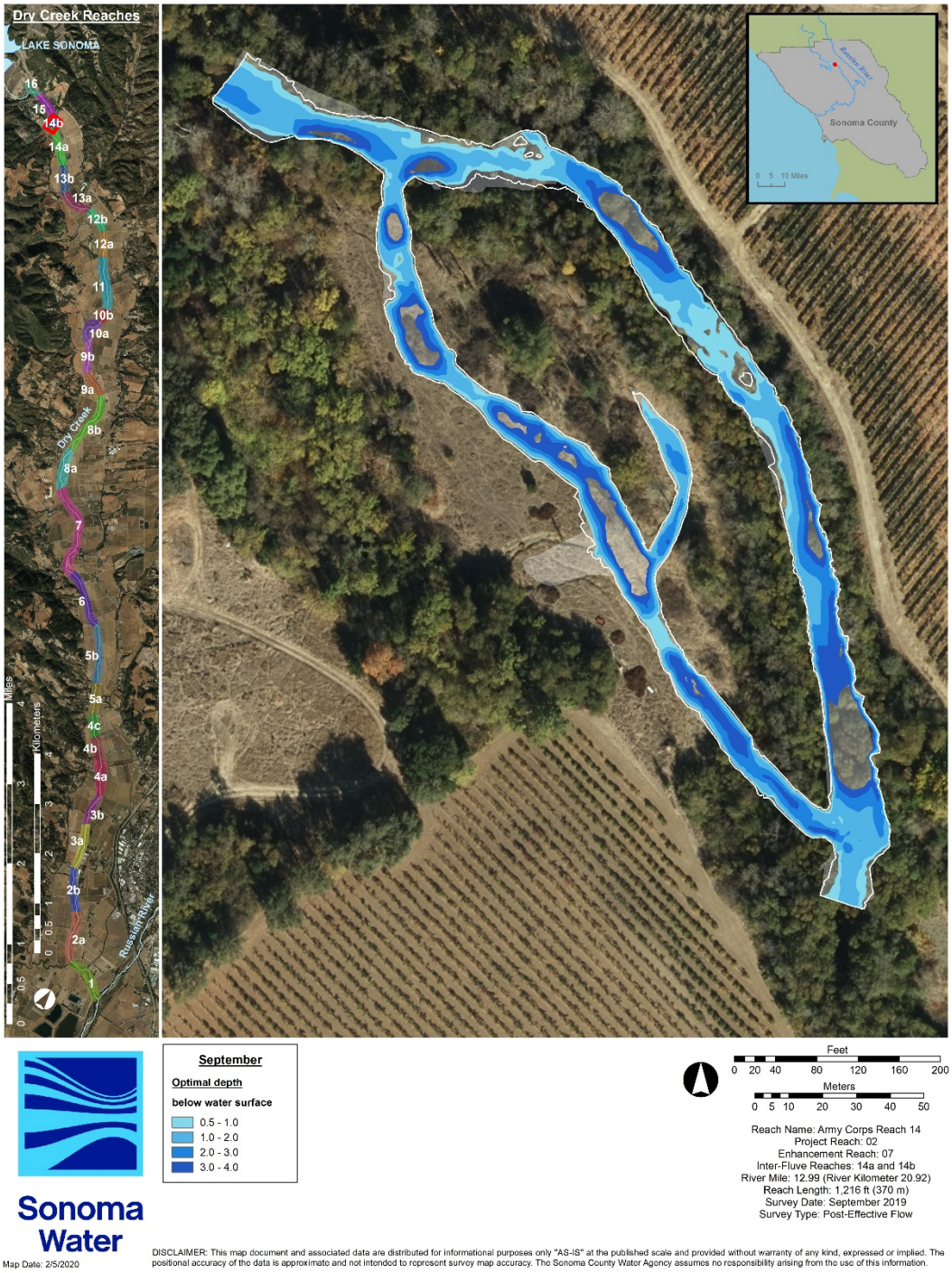

Figure 26. Optimal water depth for fry (0.5-2.0 ft) and parr (2.0-4.0 ft) within the Army Corps Reach 14 enhancement reach, September 2019.

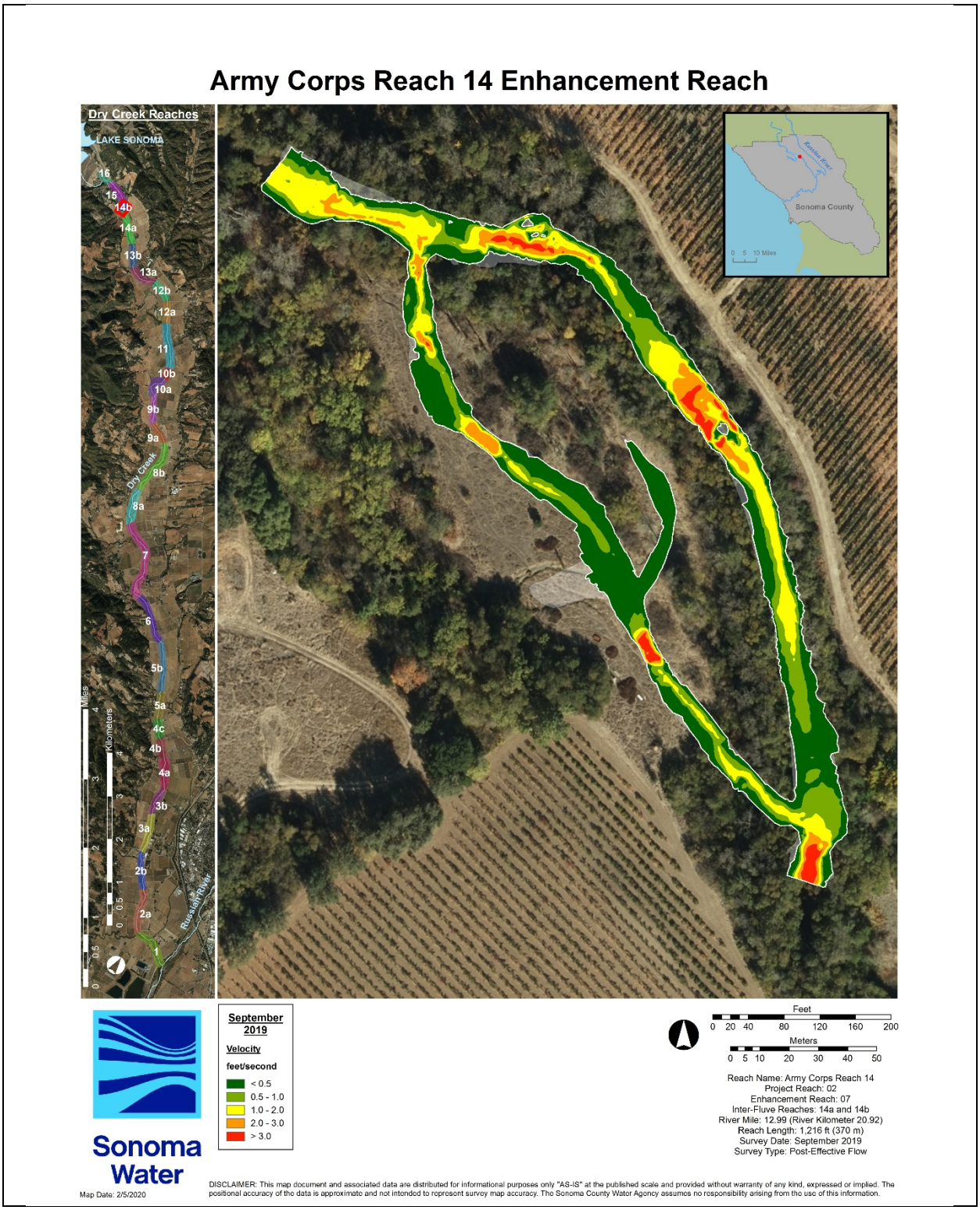

Figure 27. Measured water velocity within the Army Corps Reach 14 enhancement reach, September 2019.

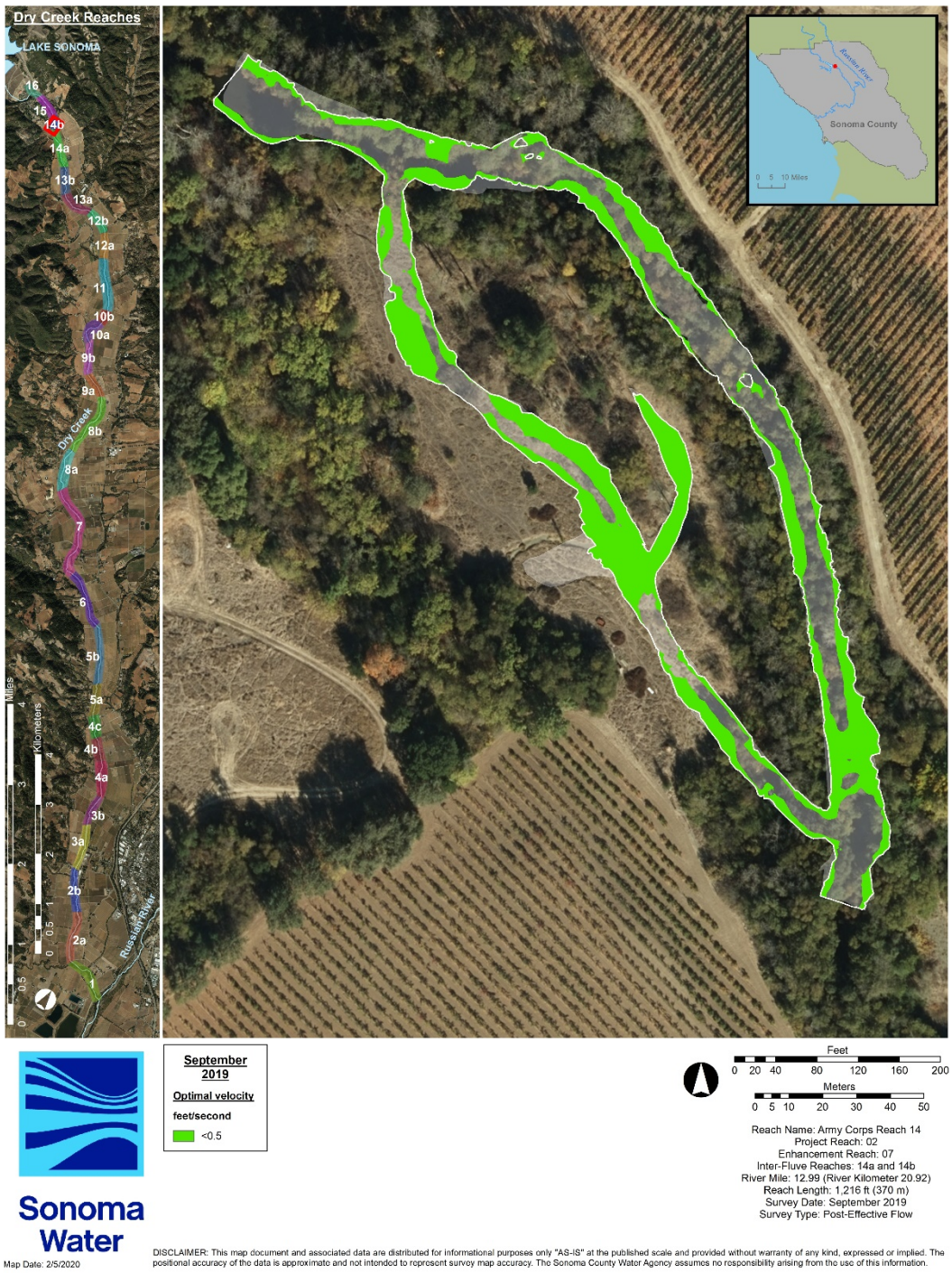

Figure 28. Optimal water velocity for fry and parr (< 0.5 ft/s) within the Army Corps Reach 14 enhancement reach, September 2019.

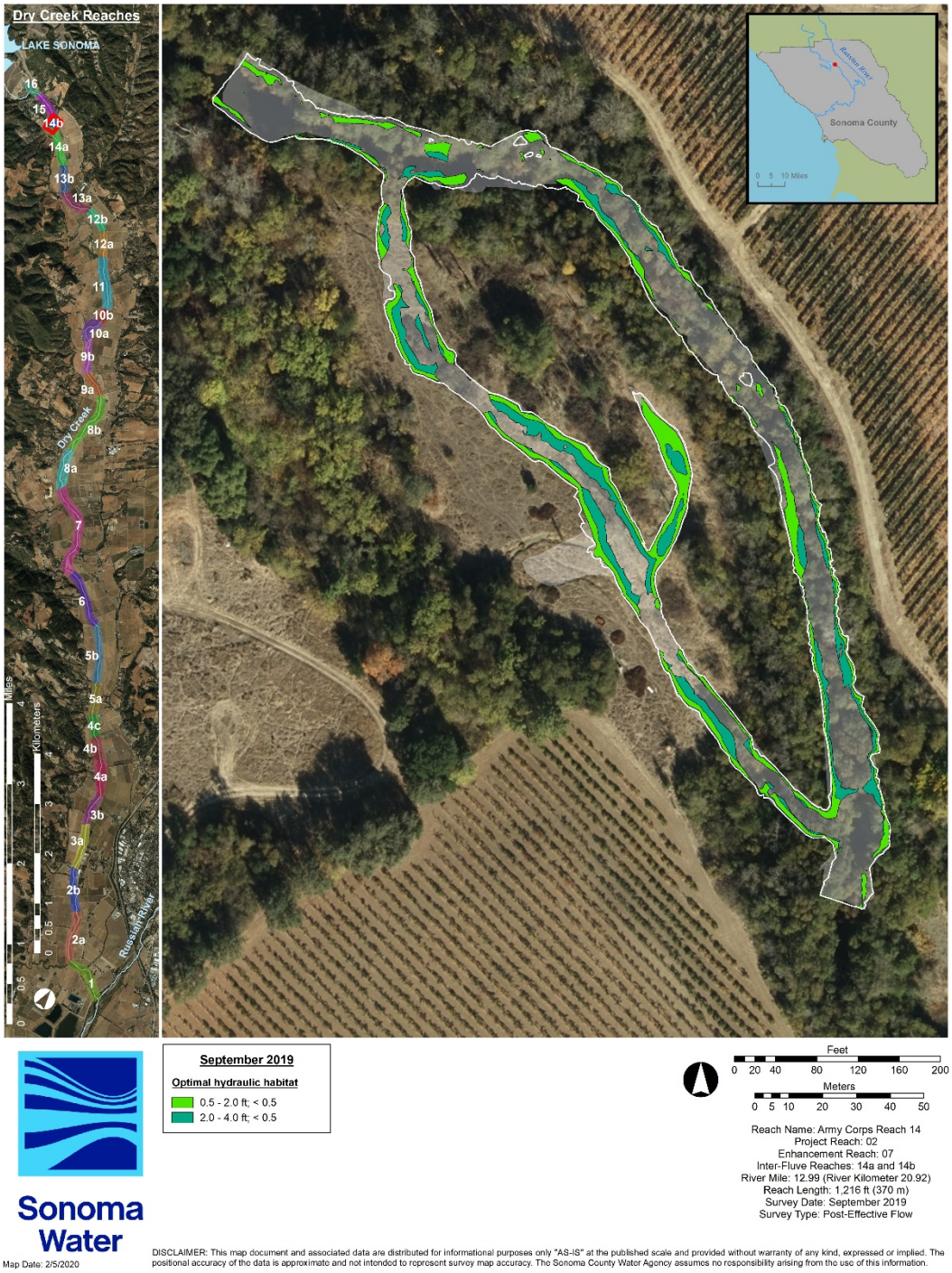

Figure 29. Optimal hydraulic habitat for fry (<0.5 ft/s, 0.5-2.0 ft) and parr (<0.5 ft/s, 2.0-4.0 ft) within the Army Corps Reach 14 enhancement reach, September 2019.

Habitat Types and Shelter Values

Table 16. Habitat, types, shelter value, percent cover, and shelter score for habitat units within the Army Corps Reach 14 enhancement reach, September 2019.

Post-effective flow (September 2019)				
Habitat Unit #	**Habitat Type**	**Shelter Value**	**Percent Cover**	**Shelter Score**
HU01	Riffle	2	10	20
HU02	Pool	3	20	60
HU03	Pool	3	10	30
HU04	Riffle	3	15	45
HU05	Pool	3	30	90
HU06	Riffle	3	45	135
HU07	Pool	3	15	45
HU08	Pool	2	25	50
HU09	Riffle	2	15	30
HU10	Pool	3	40	120
HU11	Pool	3	50	150
HU12	Riffle	3	10	30
HU13	Pool	3	40	120
HU15	Riffle	0	0	0
HU16	Pool	3	40	120
HU17	Pool	3	30	90
HU18	Riffle	3	50	150
HU10	Pool	3	40	120
Pool: riffle	**10:7 (1.43)**			**Avg = 78**

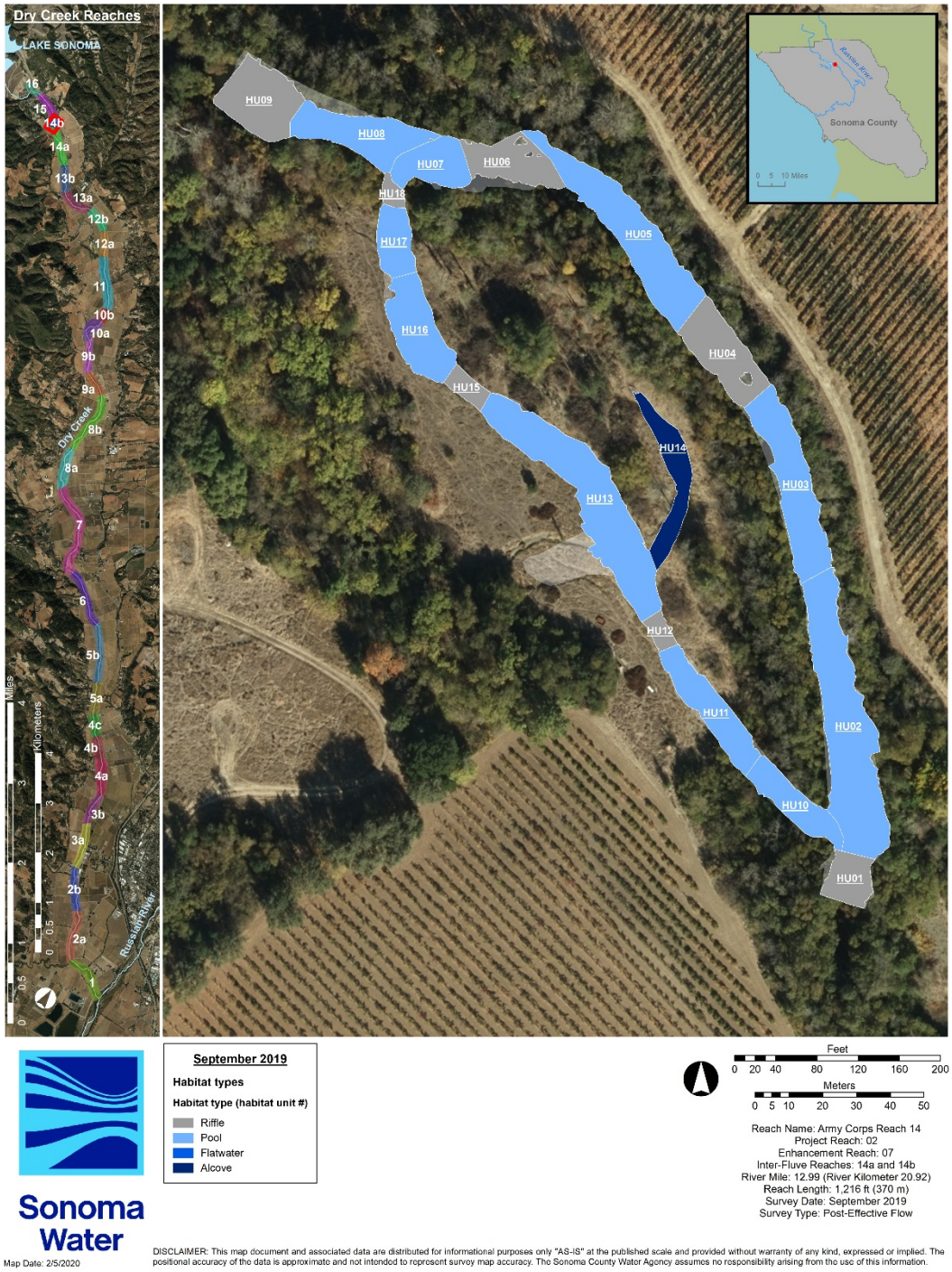

Figure 30. Habitat unit number and type within the Army Corps Reach 14 enhancement reach, September 2019.

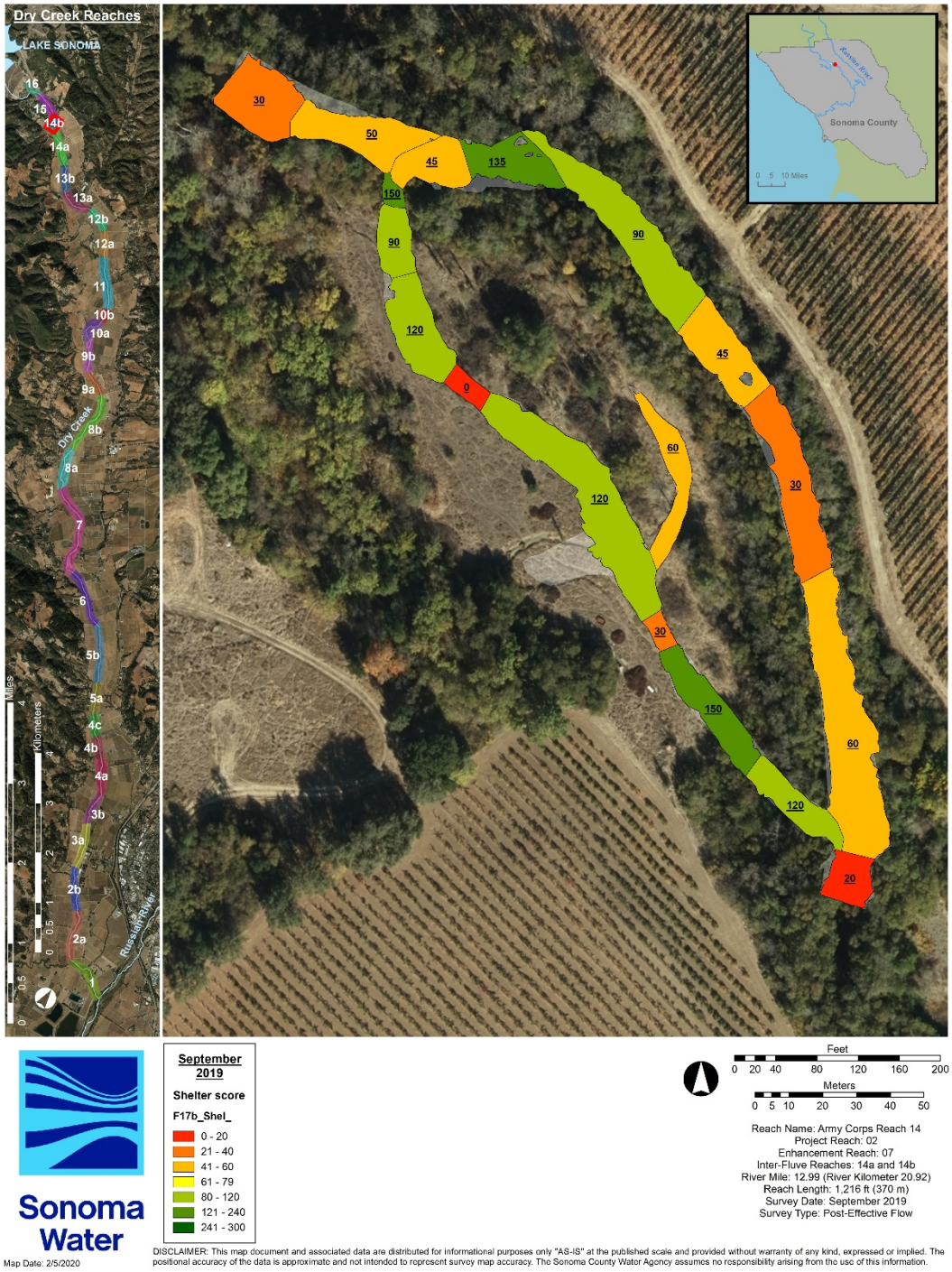

Figure 31. Habitat unit shelter scores within the Army Corps Reach 14 enhancement reach, September 2019.

Feature, Habitat Unit, Site, and Reach Ratings

Table 17. Post-effective flow feature ratings for the Army Corps Reach 14 enhancement reach September 2019.

	Project Reach	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Enhancement Reach	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	Colloquial Name	US	US	US	US	US	US	US	US	US	US	US	US	US	US	US	US	US	US
	mmddyy	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319
	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 Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
	PROJECT FEATURE NUMBER	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	S2-18
	Feature Type Code	BKW	HW	HW	HW	SCW	SCW	SCW	HW	FW	R	HW	HW	HW	HW	HW	SCW	HW	SCW
	Habitat Unit	HU10	HU10	HU10	HU11	HU11	HU11	HU11	HU11	HU02_D	HU12	HU13	HU13	HU13	HU13	HU13	HU13	HU13	HU13
	Habitat Type	Pool	Pool	Pool	Pool	Pool	Pool	Pool	Pool	Dry	Riffle	Pool	Pool	Pool	Pool	Pool	Pool	Pool	Pool
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	GOOD	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	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	**S2-01**	**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**	**S2-18**
4.	Structural condition of **feature**: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	4	5	5	5	5	5	5	5	5	4	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	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	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	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	**S2-01**	**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**	**S2-18**
FEATURE RATING	Feature quantitative rating out of 15	13	14	14	14	14	14	14	14	14	13	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 17. Post-effective flow feature ratings for the Army Corps Reach 14 enhancement reach September 2019.

	Project Reach	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Enhancement Reach	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	Colloquial Name	US	US	US	US	US	US	US	US	US	US	US	US	US	US	US	US	US	US
	mmddyy	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319
	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 Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
	PROJECT FEATURE NUMBER	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	S2-36
	Feature Type Code	HW	SCW	FW	SCW	R	HW	HW	SCW	SCW	HW	SCW	HW	FW	HW	HW	HW	HW	HW
	Habitat Unit	HU13	HU13	HU02_D	HU13	HU15	HU16	HU16	HU16	HU16	HU16	HU16	HU17	HU02_D	HU17	HU17	HU18	HU18	HU08_2
	Habitat Type	Pool	Pool	Dry	Pool	Riffle	Pool	Pool	Pool	Pool	Pool	Pool	Pool	Dry	Pool	Pool	Riffle	Riffle	Riffle
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	EXCL	EXCL	EXCL	GOOD	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL
5a	Are problems with the **feature** visible?	YES	NO	NO	NO	NO	NO	NO	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	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	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?	NO	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	**S2-19**	**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**	**S2-36**
4.	Structural condition of **feature**: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	4	5	5	5	4	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	1	1	1	1	1	1	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	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	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	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	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	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	**S2-19**	**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**	**S2-36**
FEATURE RATING	Feature quantitative rating out of 15	11	14	14	14	13	14	14	14	14	14	13	14	14	14	14	14	14	14
	Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)	Good	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent

Table 17. Post-effective flow feature ratings for the Army Corps Reach 14 enhancement reach September 2019.
***+**

	Project Reach	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Enhancement Reach	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	Colloquial Name	US	US	US	US	US	US	US	US	US	US	US	US	US	US	US	US
	mmddyy	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319
	Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
	PROJECT SITE NUMBER	2	2	2	2	2	3	3	3	3	3	4	4	4	4	4	4
	Project Site Type	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
	PROJECT FEATURE NUMBER	S2-37	S2-38	S2-39	S2-40	S2-41	S3-01	S3-02	S3-03	S3-04	S3-05	S4-01	S4-02	S4-03	S4-04	S4-05	S4-06
	Feature Type Code	HW	HW	AW	R	FW	BWW	FW	BWW	HW	FW	BWW	HW	HW	TTI	HW	HW
	Habitat Unit	HU18	HU18	HU07_2	HU18	HU02_D	HU14	HU03_D	HU14	HU14	HU03_D	HU13_2	HU01_D	HU01_D	HU01_D	HU01_D	HU01_D
	Habitat Type	Riffle	Riffle	Pool	Riffle	Dry	Alcove	Dry	Alcove	Alcove	Dry	Pool	Dry	Dry	Dry	Dry	Dry
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	EXCL	EXCL	EXCL	GOOD	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	GOOD	GOOD	GOOD	GOOD	GOOD
5a	Are problems with the **feature** visible?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	NO	YES	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
6b	Is the **feature** still in its original position?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	NO	NO
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
8.	If an objective, did the **feature** create the targeted instream habitat type?	YES	YES	YES	YES	YES	YES	YES	YES	YES	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	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	YES	YES
17a	If an objective, did the **feature** increase instream shelter rating?	YES	YES	YES	YES	YES	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	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	NO	NO	NO	NO	NO	NO
25.	Did the **feature** achieve the targeted velocity?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	NO	NO	NO
	PROJECT FEATURE NUMBER	**S2-37**	**S2-38**	**S2-39**	**S2-40**	**S2-41**	**S3-01**	**S3-02**	**S3-03**	**S3-04**	**S3-05**	**S4-01**	**S4-02**	**S4-03**	**S4-04**	**S4-05**	**S4-06**
4.	Structural condition of **feature**: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	5	5	5	4	5	5	5	5	5	5	5	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	0	0	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
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	0	1	1	0	0
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
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	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	1	1	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	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	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	0	0	0	0	0	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	0	1	0	0	0
	PROJECT FEATURE NUMBER	**S2-37**	**S2-38**	**S2-39**	**S2-40**	**S2-41**	**S3-01**	**S3-02**	**S3-03**	**S3-04**	**S3-05**	**S4-01**	**S4-02**	**S4-03**	**S4-04**	**S4-05**	**S4-06**
FEATURE RATING	Feature quantitative rating out of 15	14	14	14	13	14	14	14	14	14	14	13	6	11	10	7	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	Fair	Good	Good	Fair	Fair

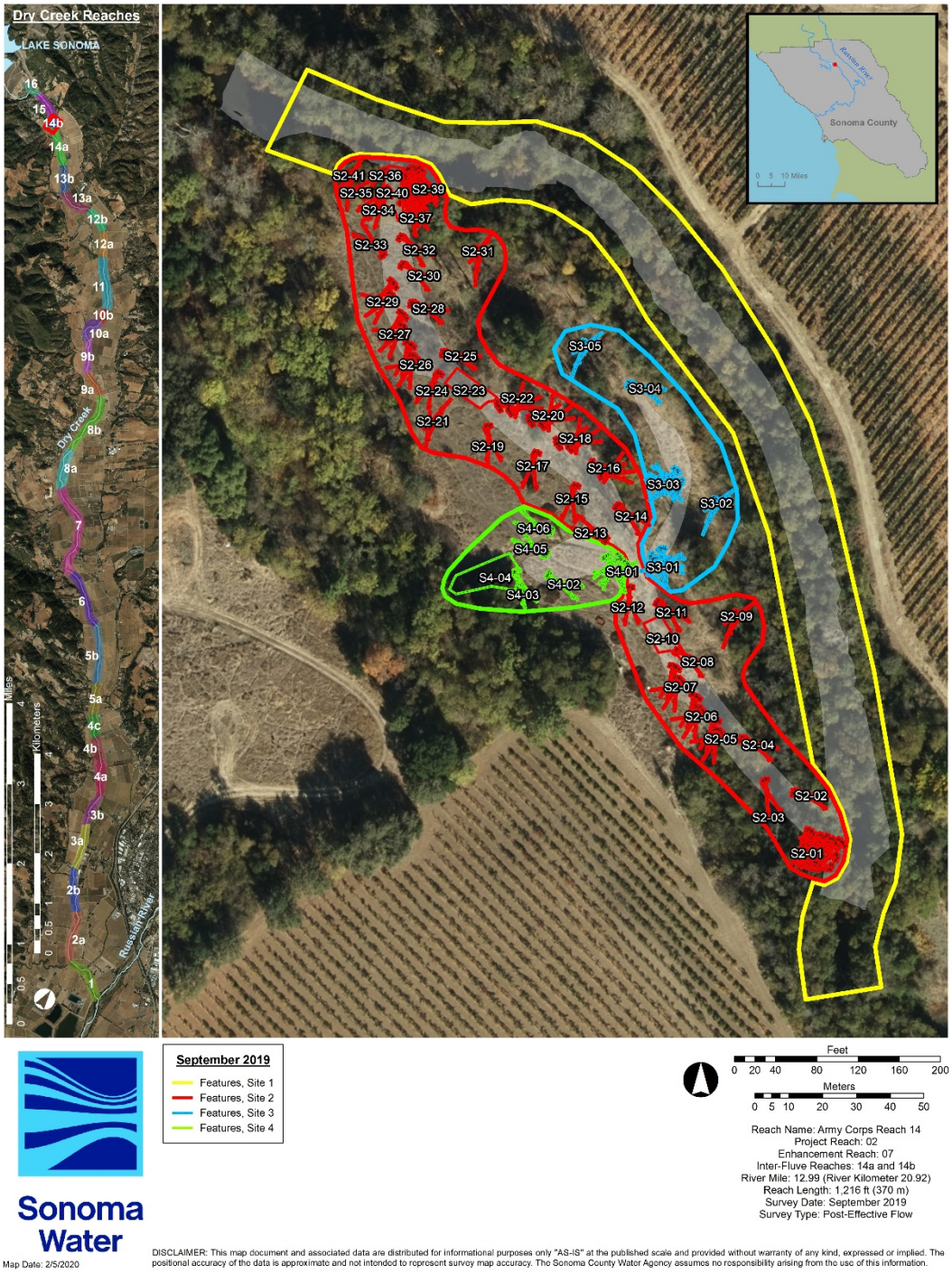

Figure 32. Enhancement sites and features within the Army Corps Reach 14 enhancement reach, September 2019.

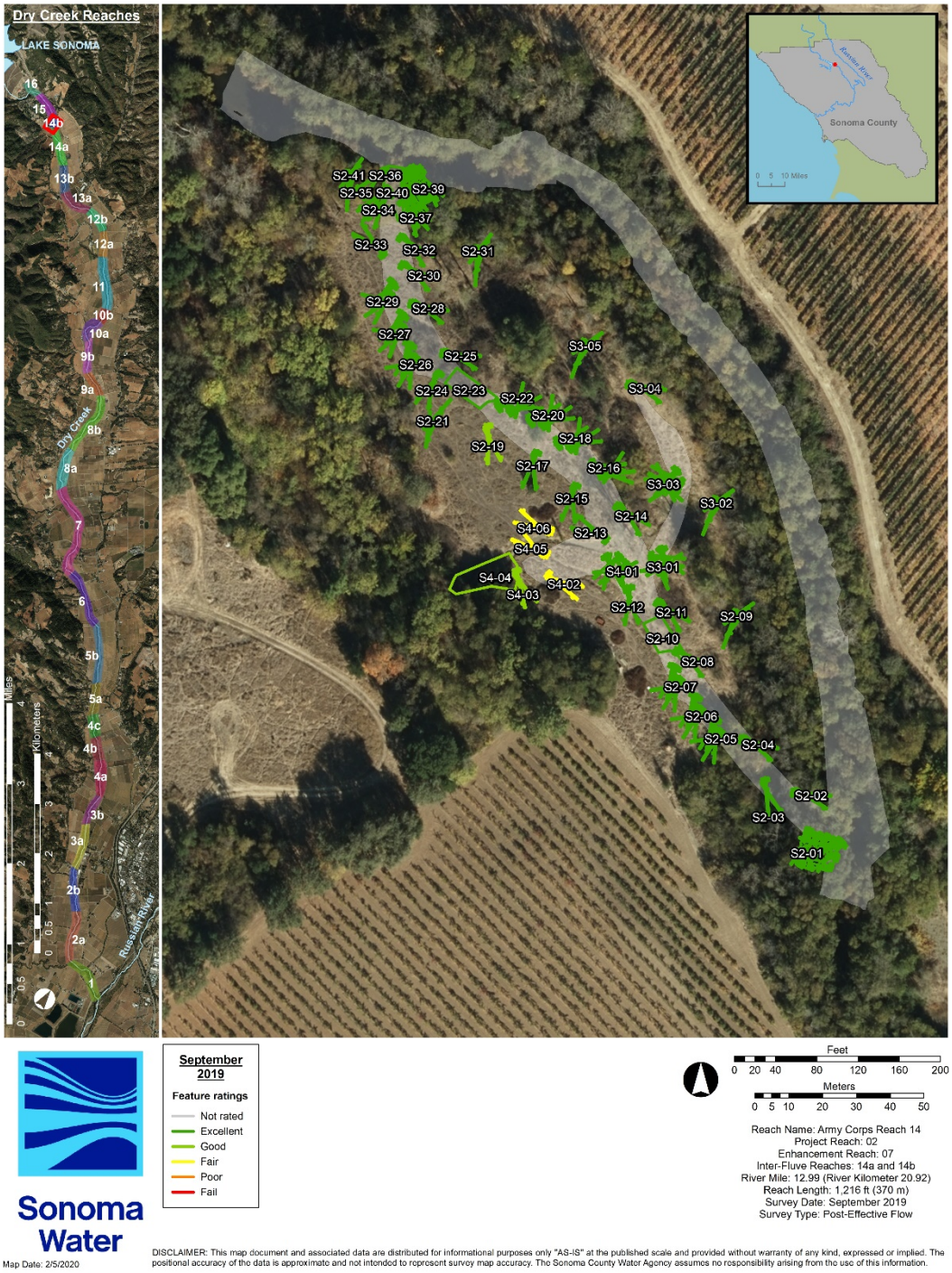

Figure 33. Feature ratings for the Army Corps Reach 14 enhancement reach, September 2019.

Table 18. Post-effective flow habitat unit ratings for the Army Corps Reach 14 enhancement reach September 2019.

	Project Reach	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Enhancement Reach	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	Colloquial Name	US	US	US	US	US	US	US	US	US	US	US	US	US	US	US	US	US	US	US
	mmddyy	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319
	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**	**HU08_2**	**HU09**	**HU10**	**HU11**	**HU12**	**HU13**	**HU14**	**HU01_D**	**HU02_D**	**HU03_D**	**HU15**
	Habitat Type	Riffle	Pool	Pool	Riffle	Pool	Riffle	Pool	Pool	Riffle	Riffle	Pool	Pool	Riffle	Pool	Alcove	Dry	Dry	Dry	Riffle
	PROJECT SITE NUMBER	1	1	1	1	1	1	1	1	2	1	2	2	2	2	3	4	2	3	2
	Project Site Type	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	SideChan	MainChan	SideChan	SideChan	SideChan	SideChan	SC Alcove	SC Alcove	SideChan	SC Alcove	SideChan
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	75%	30%	45%	70%	42%	64%	47%	45%	45%	0%	0%	0%	0%	23%	58%	0%	0%	0%	83%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	0%	38%	37%	2%	32%	0%	30%	35%	35%	0%	0%	0%	0%	42%	23%	0%	0%	0%	0%
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	2	3	3	3	3	3	3	2	2	2	3	3	3	3	3	0	0	0	0
15.	Percent of **habitat unit** covered by shelter: %	10	20	10	15	30	45	15	25	25	15	40	50	10	40	20	0	0	0	0
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	20	60	30	45	90	135	45	50	50	30	120	150	30	120	60	0	0	0	0
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	26%	51%	41%	12%	43%	19%	47%	28%	28%	25%	39%	54%	9%	77%	100%	0%	0%	0%	9%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	6%	11%	20%	3%	15%	3%	19%	12%	12%	0%	0%	0%	0%	0%	58%	0%	0%	0%	0%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	14%	8%	0%	10%	0%	12%	2%	2%	0%	0%	0%	0%	0%	23%	0%	0%	0%	0%
	HABITAT UNIT NUMBER	**HU01**	**HU02**	**HU03**	**HU04**	**HU05**	**HU06**	**HU07**	**HU08**	**HU08_2**	**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	4	4	4	4	4	0	0	0	0	2	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)	0	3	3	0	3	0	3	3	3	0	0	0	0	4	2	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	5	5	5	4	4	4	5	5	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)	1	2	1	1	2	3	1	2	2	1	3	3	1	3	2	0	0	0	0
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	0	2	0	1	3	4	1	1	1	0	4	5	0	4	2	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	4	1	4	1	4	2	2	2	3	4	0	4	4	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	2	0	1	0	1	1	1	0	0	0	0	0	4	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	1	0	0	1	0	1	0	0	0	0	0	0	0	2	0	0	0	0
	HABITAT UNIT NUMBER	**HU01**	**HU02**	**HU03**	**HU04**	**HU05**	**HU06**	**HU07**	**HU08**	**HU08_2**	**HU09**	**HU10**	**HU11**	**HU12**	**HU13**	**HU14**	**HU01_D**	**HU02_D**	**HU03_D**	**HU15**
HABITAT UNIT RATING	Habitat unit quantitative rating (out of 35)	11	20	19	12	23	17	20	17	17	7	15	17	6	22	25	0	0	0	4
	Habitat unit qualitative rating: Excellent (>=28), Good (>=21), Fair(>=14), Poor (>=7), Fail (<7)	Poor	Fair	Fair	Poor	Good	Fair	Fair	Fair	Fair	Poor	Fair	Fair	Fail	Good	Good	Not rated	Not rated	Not rated	Fail

Table 18. Post-effective flow habitat unit ratings for the Army Corps Reach 14 enhancement reach September 2019.

	Project Reach	2	2	2	2	2
	Enhancement Reach	7	7	7	7	7
	Colloquial Name	US	US	US	US	US
	mmddyy	90319	90319	90319	90319	90319
	Survey Type	PEF	PEF	PEF	PEF	PEF
	HABITAT UNIT NUMBER	**HU16**	**HU17**	**HU18**	**HU07_2**	**HU13_2**
	Habitat Type	Pool	Pool	Riffle	Pool	Pool
	PROJECT SITE NUMBER	**2**	**2**	**2**	**2**	**4**
	Project Site Type	SideChan	SideChan	SideChan	SideChan	SC Alcove
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	27%	47%	81%	47%	23%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	41%	27%	5%	30%	42%
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: %	40	30	50	15	40
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	120	90	150	45	120
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	71%	46%	20%	47%	77%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	20%	18%	9%	19%	0%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	22%	15%	0%	12%	0%
	HABITAT UNIT NUMBER	**HU16**	**HU17**	**HU18**	**HU07_2**	**HU13_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	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)	4	2	0	3	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
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	3	1	3
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	4	3	5	1	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	4	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	0	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	1	0	1	0
	HABITAT UNIT NUMBER	**HU16**	**HU17**	**HU18**	**HU07_2**	**HU13_2**
HABITAT UNIT RATING	Habitat unit quantitative rating (out of 35)	25	22	19	20	22
	Habitat unit qualitative rating: Excellent (>=28), Good (>=21), Fair(>=14), Poor (>=7), Fail (<7)	Good	Good	Fair	Fair	Good

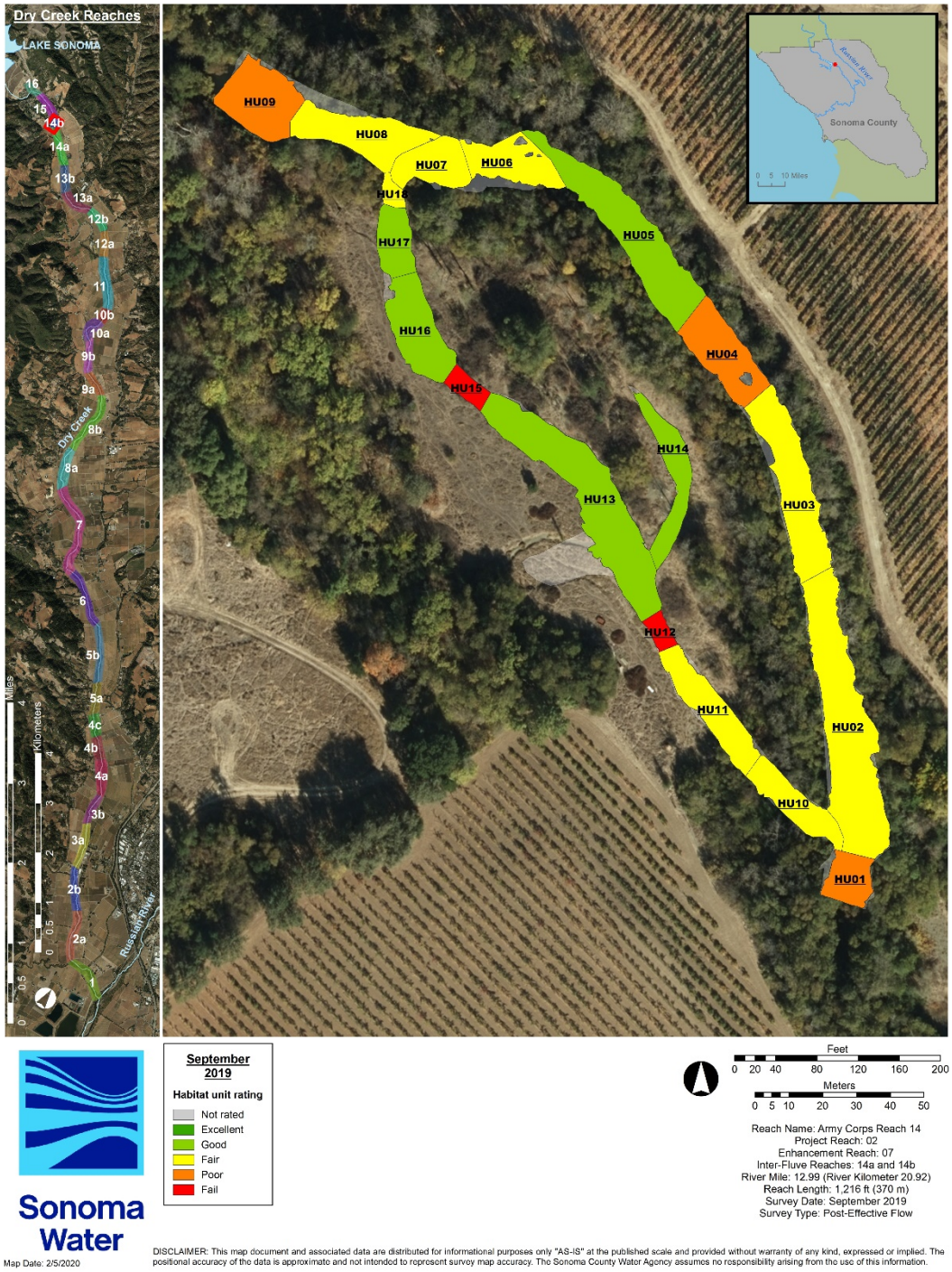

Figure 34. Habitat unit ratings for the Army Corps Reach 14 enhancement reach, September 2019.

Table 19. Post-effective flow average feature, average habitat unit, site, and reach ratings (rounded to the nearest whole number) for the Army Corps Reach 14 enhancement reach, September 2019.

	Project Reach	2	2	2	2
	Enhancement Reach	7	7	7	7
	ENHANCEMENT REACH NAME	**US**	**US**	**US**	**US**
	mmddyy	90319	90319	90319	90319
	Survey Type	PEF	PEF	PEF	PEF
	PROJECT SITE NUMBER	**1**	**2**	**3**	**4**
	Project Site Type	MainChan	SideChan	SC Alcove	SC Alcove
	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)	0	14	14	9
	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	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	17	25	22
	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
	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)	**16**	31	39	31
	Site qualitative rating: Excellent (>=40, 28), Good (>=30, 21), Fair(>=20, 14), Poor (>=10, 7), Fail (<10, 7)	Fair	Good	Good	Good
	ENHANCEMENT REACH NAME	**US**			
ENHANCEMENT REACH RATING	Enhancement reach quantitative rating (average of site ratings) (out of 46)	29			
	Enhancement reach qualitative rating: Excellent (>=37), Good (>=28), Fair(>=19), Poor (>=9), Fail (<9)	Good			

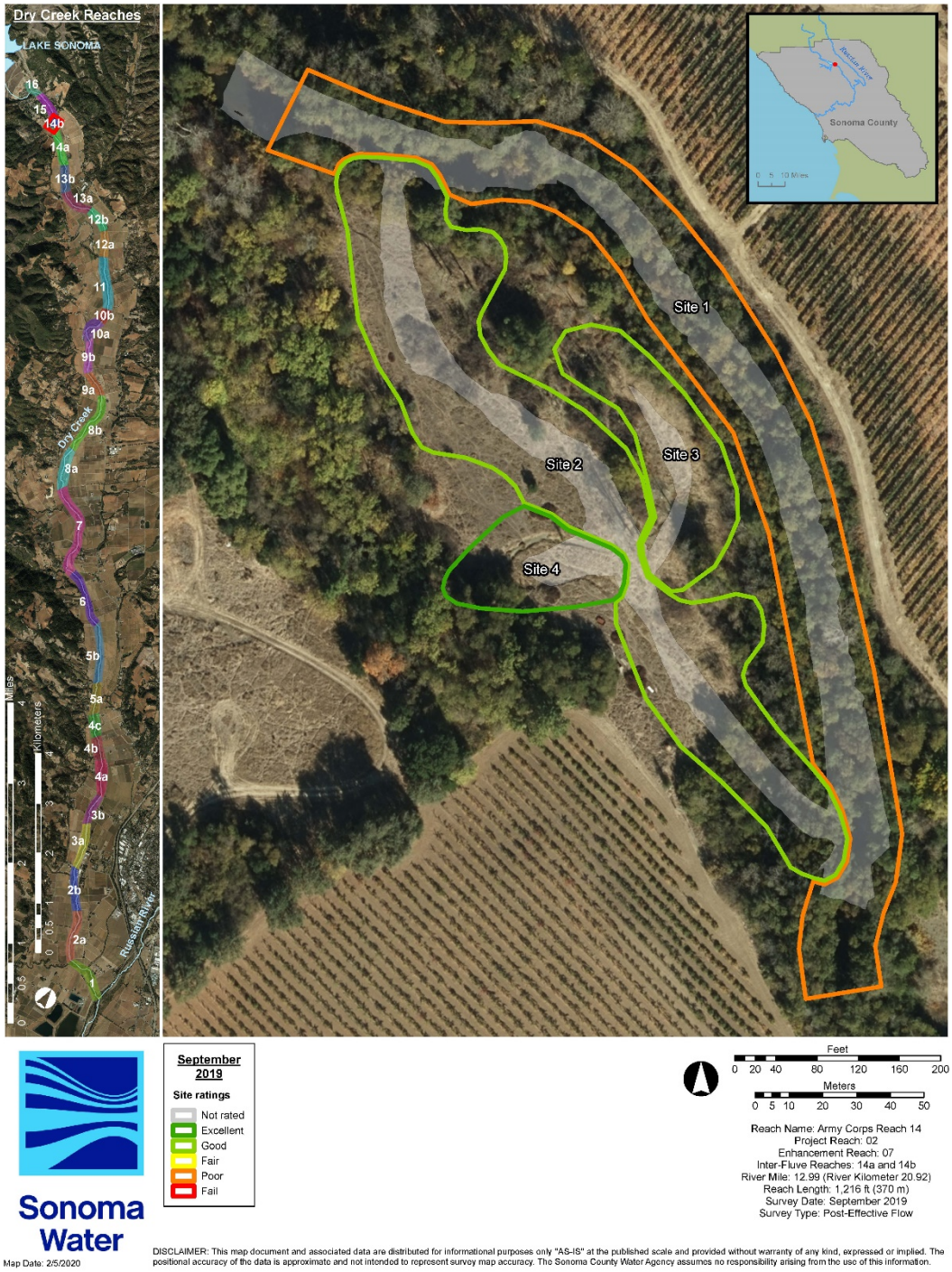

Figure 35. Post enhancement site ratings for the Army Corps Reach 14 enhancement reach, September 2019.

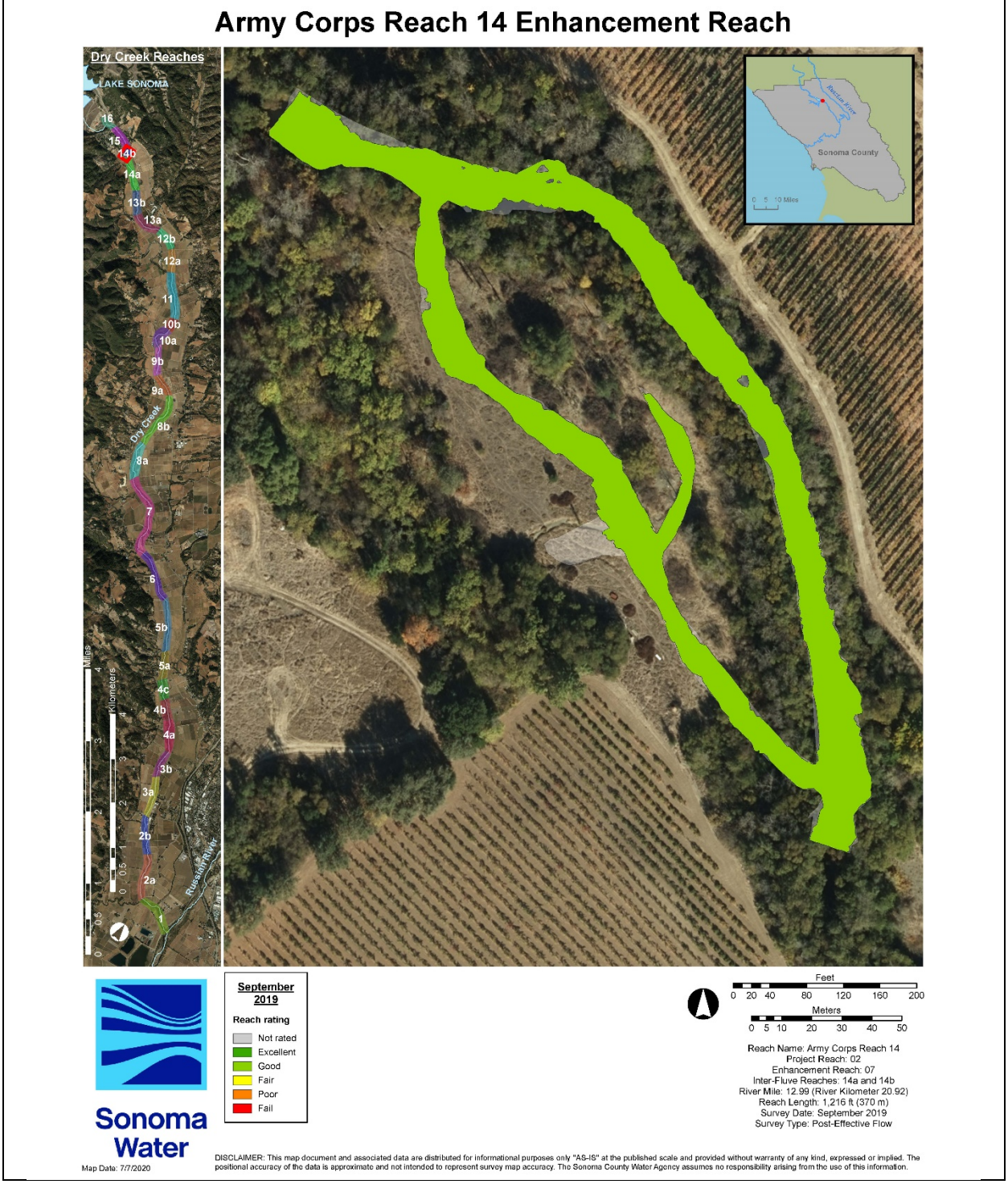

Figure 36. Post-effective flow reach rating for the Army Corps Reach 14 enhancement reach, September 2019.

Feature and Habitat Unit Checklists

Table 20. Adaptive Management Plan targeted checklist (Sites 1, 2) for the Army Corps Reach 14 enhancement reach, September 2019.

	Project Reach	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Enhancement Reach	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	Colloquial Name	US	US	US	US	US	US	US	US	US	US	US	US	US	US	US	US	US	US
	mmddyy	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319
	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	2	2	2	2	2	2	2	2	2
	Project Site Type	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
	Project Feature Number	NA	NA	NA	NA	NA	NA	NA	NA	NA	S2-01	S2-02	S2-03	S2-04	S2-05	S2-06	S2-07	S2-08	S2-09
	Feature Type Code	NA	NA	NA	NA	NA	NA	NA	NA	NA	BKW	HW	HW	HW	SCW	SCW	SCW	HW	FW
	Habitat Unit	HU01	HU02	HU03	HU04	HU05	HU06	HU07	HU08	HU09	HU10	HU10	HU10	HU11	HU11	HU11	HU11	HU11	HU02_D
	Habitat Type	Riffle	Pool	Pool	Riffle	Pool	Riffle	Pool	Pool	Riffle	Pool	Pool	Pool	Pool	Pool	Pool	Pool	Pool	Dry
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	NA	NA	NA	NA	NA	NA	NA	NA	NA	GOOD	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL
5a	Are problems with the **feature** visible?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO
6a	Is the **feature** still in its original location?	NA	NA	NA	NA	NA	NA	NA	NA	NA	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	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES
6d	Is the **feature** still in its original orientaton?	NA	NA	NA	NA	NA	NA	NA	NA	NA	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	NA	NA	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	NA	NA	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	75%	30%	45%	70%	42%	64%	47%	45%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	0%	38%	37%	2%	32%	0%	30%	35%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	2	3	3	3	3	3	3	2	2	3	3	3	3	3	3	3	3	0
15.	Percent of **habitat unit** covered by shelter: %	10	20	10	15	30	45	15	25	15	40	40	40	50	50	50	50	50	0
17a	If an objective, did the **feature** increase instream shelter rating?	NA	NA	NA	NA	NA	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	20	60	30	45	90	135	45	50	30	120	120	120	150	150	150	150	150	0
19a	If an objective, did the **feature** increase LWD count in the **habitat unit**?	NA	NA	NA	NA	NA	NA	NA	NA	NA	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	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES
25.	Did the **feature** achieve the targeted velocity?	NA	NA	NA	NA	NA	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	26%	51%	41%	12%	43%	19%	47%	28%	25%	39%	39%	39%	54%	54%	54%	54%	54%	0%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	6%	11%	20%	3%	15%	3%	19%	12%	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%	14%	8%	0%	10%	0%	12%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	FEATURE NUMBER	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**S2-01**	**S2-02**	**S2-03**	**S2-04**	**S2-05**	**S2-06**	**S2-07**	**S2-08**	**S2-09**
	HABITAT UNIT NUMBER	**HU01**	**HU02**	**HU03**	**HU04**	**HU05**	**HU06**	**HU07**	**HU08**	**HU09**	**HU10**	**HU10**	**HU10**	**HU11**	**HU11**	**HU11**	**HU11**	**HU11**	**HU02_D**
	SITE NUMBER	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**
	ENHANCEMENT REACH NAME	**US**	**US**	**US**	**US**	**US**	**US**	**US**	**US**	**US**	**US**	**US**	**US**	**US**	**US**	**US**	**US**	**US**	**US**
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	4	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	0	0	0	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)	0	0	0	0	0	0	0	0	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)	0	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	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)	0	0	0	0	0	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)	0	0	0	0	0	0	0	0	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)	4	2	4	4	4	4	4	4	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	3	3	0	3	0	3	3	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	5	5	5	5	5	5	4	4	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)	1	2	1	1	2	3	1	2	1	3	3	3	3	3	3	3	3	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	1	1	1	1	1	1
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	0	2	0	1	3	4	1	1	0	4	4	4	5	5	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	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	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	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	4	4	1	4	1	4	2	2	3	3	3	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)	0	1	2	0	1	0	1	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	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0

Table 20. Adaptive Management Plan targeted checklist (Sites 1, 2) for the Army Corps Reach 14 enhancement reach, September 2019.

	Project Reach	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Enhancement Reach	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	Colloquial Name	US	US	US	US	US	US	US	US	US	US	US	US	US	US	US	US	US	US
	mmddyy	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319
	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 Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
	Project Feature Number	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	S2-27
	Feature Type Code	R	HW	HW	HW	HW	HW	SCW	HW	SCW	HW	SCW	FW	SCW	R	HW	HW	SCW	SCW
	Habitat Unit	HU12	HU13	HU13	HU13	HU13	HU13	HU13	HU13	HU13	HU13	HU13	HU02_D	HU13	HU15	HU16	HU16	HU16	HU16
	Habitat Type	Riffle	Pool	Pool	Pool	Pool	Pool	Pool	Pool	Pool	Pool	Pool	Dry	Pool	Riffle	Pool	Pool	Pool	Pool
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	GOOD	EXCL	EXCL	EXCL	GOOD	EXCL	EXCL	EXCL	EXCL
5a	Are problems with the **feature** visible?	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	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	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
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	0%	23%	23%	23%	23%	23%	23%	23%	23%	23%	23%	0%	23%	83%	27%	27%	27%	27%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	0%	42%	42%	42%	42%	42%	42%	42%	42%	42%	42%	0%	42%	0%	41%	41%	41%	41%
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	3	3	3	3	3	3	3	3	3	3	3	0	3	0	3	3	3	3
15.	Percent of **habitat unit** covered by shelter: %	10	40	40	40	40	40	40	40	40	40	40	0	40	0	40	40	40	40
17a	If an objective, did the **feature** increase instream shelter rating?	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	30	120	120	120	120	120	120	120	120	120	120	0	120	0	120	120	120	120
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
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	9%	77%	77%	77%	77%	77%	77%	77%	77%	77%	77%	0%	77%	9%	71%	71%	71%	71%
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%	20%	20%	20%	20%
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%	22%	22%	22%	22%
	FEATURE NUMBER	**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**	**S2-27**
	HABITAT UNIT NUMBER	**HU12**	**HU13**	**HU13**	**HU13**	**HU13**	**HU13**	**HU13**	**HU13**	**HU13**	**HU13**	**HU13**	**HU02_D**	**HU13**	**HU15**	**HU16**	**HU16**	**HU16**	**HU16**
	SITE NUMBER	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**
	ENHANCEMENT REACH NAME	**US**	**US**	**US**	**US**	**US**	**US**	**US**	**US**	**US**	**US**	**US**	**US**	**US**	**US**	**US**	**US**	**US**	**US**
4.	Structural condition of **feature**: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	4	5	5	5	5	5	5	5	5	4	5	5	5	4	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	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	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	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)	0	2	2	2	2	2	2	2	2	2	2	0	2	4	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)	0	4	4	4	4	4	4	4	4	4	4	0	4	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)	5	5	5	5	5	5	5	5	5	5	5	0	5	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	3	3	3	3	3	3	3	3	3	3	0	3	0	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	0	1	1	1	1	1	1	1	1
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	0	4	4	4	4	4	4	4	4	4	4	0	4	0	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
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
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	4	4	4	4	4	4	4	4	0	4	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)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0	0	0	2	2	2	2

Table 20. Adaptive Management Plan targeted checklist (Sites 1, 2) for the Army Corps Reach 14 enhancement reach, September 2019.

	Project Reach	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Enhancement Reach	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	Colloquial Name	US	US	US	US	US	US	US	US	US	US	US	US	US	US	US	US	US	US
	mmddyy	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319
	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	3	3	3	3
	Project Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SC Alcove	SC Alcove	SC Alcove	SC Alcove
	Project Feature Number	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	S3-01	S3-02	S3-03	S3-04
	Feature Type Code	HW	SCW	HW	FW	HW	HW	HW	HW	HW	HW	HW	AW	R	FW	BWW	FW	BWW	HW
	Habitat Unit	HU16	HU16	HU17	HU02_D	HU17	HU17	HU18	HU18	HU08_2	HU18	HU18	HU07_2	HU18	HU02_D	HU14	HU03_D	HU14	HU14
	Habitat Type	Pool	Pool	Pool	Dry	Pool	Pool	Riffle	Riffle	Riffle	Riffle	Riffle	Pool	Riffle	Dry	Alcove	Dry	Alcove	Alcove
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	GOOD	EXCL	EXCL	EXCL	EXCL	EXCL
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
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	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
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	27%	27%	47%	0%	47%	47%	81%	81%	45%	81%	81%	47%	81%	0%	58%	0%	58%	58%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	41%	41%	27%	0%	27%	27%	5%	5%	35%	5%	5%	30%	5%	0%	23%	0%	23%	23%
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	3	3	3	0	3	3	3	3	2	3	3	3	3	0	3	0	3	3
15.	Percent of **habitat unit** covered by shelter: %	40	40	30	0	30	30	50	50	25	50	50	15	50	0	20	0	20	20
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
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	120	120	90	0	90	90	150	150	50	150	150	45	150	0	60	0	60	60
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
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	71%	71%	46%	0%	46%	46%	20%	20%	28%	20%	20%	47%	20%	0%	100%	0%	100%	100%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	20%	20%	18%	0%	18%	18%	9%	9%	12%	9%	9%	19%	9%	0%	58%	0%	58%	58%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	22%	22%	15%	0%	15%	15%	0%	0%	2%	0%	0%	12%	0%	0%	23%	0%	23%	23%
	FEATURE NUMBER	**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**	**S3-01**	**S3-02**	**S3-03**	**S3-04**
	HABITAT UNIT NUMBER	**HU16**	**HU16**	**HU17**	**HU02_D**	**HU17**	**HU17**	**HU18**	**HU18**	**HU08_2**	**HU18**	**HU18**	**HU07_2**	**HU18**	**HU02_D**	**HU14**	**HU03_D**	**HU14**	**HU14**
	SITE NUMBER	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**3**	**3**	**3**	**3**
	ENHANCEMENT REACH NAME	**US**	**US**	**US**	**US**	**US**	**US**	**US**	**US**	**US**	**US**	**US**	**US**	**US**	**US**	**US**	**US**	**US**	**US**
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	4	5	5	5	5	5
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
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	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	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	4	0	4	4	4	4	4	4	4	4	4	0	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)	4	4	2	0	2	2	0	0	3	0	0	3	0	0	2	0	2	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	0	5	5	5	5	4	5	5	5	5	0	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)	3	3	2	0	2	2	3	3	2	3	3	1	3	0	2	0	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	1	1	1	1	1	1	1	1
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	4	4	3	0	3	3	5	5	1	5	5	1	5	0	2	0	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	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
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	0	4	4	2	2	2	2	2	4	2	0	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)	1	1	1	0	1	1	0	0	1	0	0	1	0	0	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)	2	2	1	0	1	1	0	0	0	0	0	1	0	0	2	0	2	2

Table 20. Adaptive Management Plan targeted checklist (Sites 1, 2) for the Army Corps Reach 14 enhancement reach, September 2019.

	Project Reach	2	2	2	2	2	2	2
	Enhancement Reach	7	7	7	7	7	7	7
	Colloquial Name	US	US	US	US	US	US	US
	mmddyy	90319	90319	90319	90319	90319	90319	90319
	Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF
	Project Site Number	3	4	4	4	4	4	4
	Project Site Type	SC Alcove	SC Alcove	SC Alcove	SC Alcove	SC Alcove	SC Alcove	SC Alcove
	Project Feature Number	S3-05	S4-01	S4-02	S4-03	S4-04	S4-05	S4-06
	Feature Type Code	FW	BWW	HW	HW	TTI	HW	HW
	Habitat Unit	HU03_D	HU13_2	HU01_D	HU01_D	HU01_D	HU01_D	HU01_D
	Habitat Type	Dry	Pool	Dry	Dry	Dry	Dry	Dry
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	EXCL	EXCL	GOOD	GOOD	GOOD	GOOD	GOOD
5a	Are problems with the **feature** visible?	NO	NO	YES	YES	NO	YES	NO
6a	Is the **feature** still in its original location?	YES	YES	YES	YES	YES	YES	YES
6b	Is the **feature** still in its original position?	YES	YES	NO	YES	YES	NO	NO
6d	Is the **feature** still in its original orientaton?	YES	YES	YES	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	YES	YES
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	0%	23%	0%	0%	0%	0%	0%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	0%	42%	0%	0%	0%	0%	0%
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	0	3	0	0	0	0	0
15.	Percent of **habitat unit** covered by shelter: %	0	40	0	0	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	0	120	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
21a	If an objective, did the **feature** lead to the targeted channel conditions?	YES	NO	NO	NO	NO	NO	NO
25.	Did the **feature** achieve the targeted velocity?	YES	YES	NO	YES	NO	NO	NO
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	0%	77%	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%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	0%	0%	0%	0%	0%	0%
	FEATURE NUMBER	**S3-05**	**S4-01**	**S4-02**	**S4-03**	**S4-04**	**S4-05**	**S4-06**
	HABITAT UNIT NUMBER	**HU03_D**	**HU13_2**	**HU01_D**	**HU01_D**	**HU01_D**	**HU01_D**	**HU01_D**
	SITE NUMBER	**3**	**4**	**4**	**4**	**4**	**4**	**4**
	ENHANCEMENT REACH NAME	**US**	**US**	**US**	**US**	**US**	**US**	**US**
4.	Structural condition of **feature**: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	5	5	4	4	4	4	4
5a	Are problems with the **feature** visible? (NO = 1 pt, YES = 0 pt)	1	1	0	0	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
6b	Is the **feature** still in its original position? (YES = 1 pt, NO = 0 pt)	1	1	0	1	1	0	0
6d	Is the **feature** still in its original orientaton? (YES = 1 pt, NO = 0 pt)	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	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	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	2	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	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)	0	5	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	3	0	0	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	4	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
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
25.	Did the **feature** achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	1	0	1	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	4	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
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

Table 21. Adaptive Management Plan full checklist (Sites 1, 2) for the Army Corps Reach 14 enhancement reach, September 2019.

	Project Reach	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Enhancement Reach	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	Colloquial Name	US	US	US	US	US	US	US	US	US	US	US	US	US	US	US	US	US	US
	mmddyy	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319
	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	2	2	2	2	2	2	2	2	2
	Project Site Type	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
	Project Feature Number	NA	NA	NA	NA	NA	NA	NA	NA	NA	S2-01	S2-02	S2-03	S2-04	S2-05	S2-06	S2-07	S2-08	S2-09
	Feature Type Code	NA	NA	NA	NA	NA	NA	NA	NA	NA	BKW	HW	HW	HW	SCW	SCW	SCW	HW	FW
	Habitat Unit	HU01	HU02	HU03	HU04	HU05	HU06	HU07	HU08	HU09	HU10	HU10	HU10	HU11	HU11	HU11	HU11	HU11	HU02_D
	Habitat Type	Riffle	Pool	Pool	Riffle	Pool	Riffle	Pool	Pool	Riffle	Pool	Pool	Pool	Pool	Pool	Pool	Pool	Pool	Dry
1.	Length of targeted treatment (ft)	0	0	0	0	0	0	0	0	0	43	43	32	36	27	25	30	39	30
2.	Width of targeted treatment: (ft)	0	0	0	0	0	0	0	0	0	40	19	15	23	25	25	24	22	40
3.	Estimate area of the targeted **feature**: (ft^2)	0	0	0	0	0	0	0	0	0	1720	817	480	828	675	625	720	858	1200
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	NA	NA	NA	NA	NA	NA	NA	NA	NA	GOOD	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL
5a	Are problems with the **feature** visible?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO
5b	Types: ANC, BBB, CRF, MAT, SHF, STR, SWA, UND, UNS, WSH, OTH, NON	NA	NA	NA	NA	NA	NA	NA	NA	NA	NON	NON	NON	NON	NON	NON	NON	NON	NON
6a	Is the **feature** still in its original location?	NA	NA	NA	NA	NA	NA	NA	NA	NA	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	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES
6c	If yes: LBK, MDC, RBK, SPN, OTH	NA	NA	NA	NA	NA	NA	NA	NA	NA	RBK	LBK	RBK	LBK	RBK	RBK	RBK	LBK	OTH
6d	Is the **feature** still in its original orientaton?	NA	NA	NA	NA	NA	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES
6e	If yes: DNS, MUL, PRL, PRP, UPS, OTH	NA	NA	NA	NA	NA	NA	NA	NA	NA	MUL	UPS	UPS	UPS	UPS	UPS	UPS	UPS	OTH
7.	Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	RIF	POO	POO	RIF	POO	RIF	POO	POO	RIF	POO	POO	POO	POO	POO	POO	POO	POO	DRY
8.	If an objective, did the **feature** create the targeted instream habitat type?	NA	NA	NA	NA	NA	NA	NA	NA	NA	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	NA	NA	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO
10.	Mean water depth in **habitat unit**: ft	0.9	3.1	1.9	0.7	2.3	0.7	2.0	1.8	1.2	1.9	1.9	1.9	2.3	2.3	2.3	2.3	2.3	0.0
11a	Maximum water depth in **habitat unit**: ft	2.0	7.4	5.0	2.8	5.7	1.7	5.2	4.6	2.5	3.9	3.9	3.9	4.2	4.2	4.2	4.2	4.2	0.0
11b	Area of **habitat unit** within 0.5 -2.0 ft depth: (ft2)	1494.4	3366.5	2763.0	2889.8	3263.6	2030.3	1313.4	2022.5	2998.7	1216.4	1216.4	1216.4	1049.5	1049.5	1049.5	1049.5	1049.5	0.0
11c	Area of **habitat unit** within 2.0 -4.0 ft depth: (ft2)	0.6	4309.0	2269.6	94.3	2482.3	0.0	850.4	1547.9	616.6	1390.3	1390.3	1390.3	2344.8	2344.8	2344.8	2344.8	2344.8	0.0
11d	Area of **habitat unit** within 0.5-4.0 ft depth: (ft2)	1495.0	7675.5	5032.6	2984.1	5745.9	2030.3	2163.8	3570.5	3615.3	2606.7	2606.7	2606.7	3394.3	3394.3	3394.3	3394.3	3394.3	0.0
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	75%	30%	45%	70%	42%	64%	47%	45%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	0%	38%	37%	2%	32%	0%	30%	35%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
11g	% Area of **habitat** unit within 0.5-4.0 ft depth	75%	68%	82%	72%	74%	64%	78%	80%	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?	NA	NA	NA	NA	NA	NA	NA	NA	NA	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:	NA	NA	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	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	2	3	3	3	3	3	3	2	2	3	3	3	3	3	3	3	3	0
15.	Percent of **habitat unit** covered by shelter: %	10	20	10	15	30	45	15	25	15	40	40	40	50	50	50	50	50	0
16a	1st dominant cover in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	SWD	LWD	SWD	SWD	SWD	SWD	RTW	TVG	TVG	RTW	RTW	RTW	RTW	RTW	RTW	RTW	RTW	NON
16b	2nd dominant in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	AVG	TVG	LWD	AVG	RTW	TVG	SWD	SWD	SWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	NON
17a	If an objective, did the **feature** increase instream shelter rating?	NA	NA	NA	NA	NA	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	20	60	30	45	90	135	45	50	30	120	120	120	150	150	150	150	150	0
18a	Large woody debris count in **habitat unit**: D >1', L 6-20'	0	2	2	0	1	0	0	0	0	1	1	1	0	0	0	0	0	0
18b	Large woody debris count in **habitat unit**: D >1', L >20'	0	1	0	0	0	1	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	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO
19b	LWD recruitment mechanisms in **habitat unit**: ANC, EXC, EXH, INT, RPR, UNA, OTH	NON	RPR	INT	NON	RPR	INT	NON	NON	NON	INT	INT	INT	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
21a	If an objective, did the **feature** lead to the targeted channel conditions?	NA	NA	NA	NA	NA	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES
21b	Overall Offchannel Condition (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	NA	NA	NA	NA	NA	NA	NA	NA	NA	STB	STB	STB	STB	STB	STB	STB	STB	STB
21c	Outlet Conditions (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	NA	NA	NA	NA	NA	NA	NA	NA	NA	STB	STB	STB	STB	STB	STB	STB	STB	STB
21d	Inlet Conditions (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	NA	NA	NA	NA	NA	NA	NA	NA	NA	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.	NA	NA	NA	NA	NA	NA	NA	NA	NA	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	NA	NA	NA	NA	NA	DEC	DEC	DEC	DEC	DEC	DEC	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?	NA	NA	NA	NA	NA	NA	NA	NA	NA	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	2.4	3.0	5.3	3.7	3.8	3.2	2.6	2.5	1.7	1.7	1.7	3.1	3.1	3.1	3.1	3.1	0.0
26c	Measured mean velocity (ft/sec) in **habitat unit**	1.9	0.5	0.8	2.0	0.7	1.7	0.7	1.1	1.0	0.7	0.7	0.7	0.5	0.5	0.5	0.5	0.5	0.0
27.	Area of **habitat unit** within targeted velocity: (ft^2)	516.5	5764.8	2528.7	518.5	3357.9	602.2	1313.2	1263.9	1109.6	1114.4	1114.4	1114.4	2054.1	2054.1	2054.1	2054.1	2054.1	0.0
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	26%	51%	41%	12%	43%	19%	47%	28%	25%	39%	39%	39%	54%	54%	54%	54%	54%	0%
29.	Were there any unintended effects of **feature** on velocity If Y, comment.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO
30a	1st/2nd dominant substrate in **habitat unit**: BED, BOL, COB, GRV, SND, SLC, OTH	COB	GRV	GRV	GRV	GRV	GRV	COB	GRV	COB	SND	SND	SND	GRV	GRV	GRV	GRV	GRV	NR
30b	2nd dominant substrate in **habitat unit**: BED, BOL, COB, GRV, SND, SLC, OTH	GRV	SND	COB	COB	UNK	COB	GRV	COB	GRV	GRV	GRV	GRV	UNK	UNK	UNK	UNK	UNK	NR
31.	If an objective, did the **feature** achieve the targeted substrate composition?	NA	NA	NA	NA	NA	NA	NA	NA	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
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	128.7	2811.8	1755.3	129.2	1978.2	81.4	871.0	618.2	400.0	840.1	840.1	840.1	1711.5	1711.5	1711.5	1711.5	1711.5	0.0
36b	Total **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	128.7	1210.4	1241.0	127.3	1186.4	81.4	527.1	543.0	399.0	698.2	698.2	698.2	865.8	865.8	865.8	865.8	865.8	0.0
36c	Total **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0.0	1601.4	514.3	1.9	791.7	0.0	343.9	75.2	1.1	141.8	141.8	141.8	845.7	845.7	845.7	845.7	845.7	0.0
36d	% **habitat unit** area where targeted depth, velocity and shelter criteria overlap	6%	25%	28%	3%	25%	3%	31%	14%	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	6%	11%	20%	3%	15%	3%	19%	12%	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%	14%	8%	0%	10%	0%	12%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
37.	Does this **feature** need: DEC, ENH, MNT, REP, NON, OTH	NA	NA	NA	NA	NA	NA	NA	NA	NA	NON	NON	NON	NON	NON	NON	NON	NON	NON
38.	Are additional restoration treatments recommended at this **site**?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO

Table 21. Adaptive Management Plan full checklist (Sites 1, 2) for the Army Corps Reach 14 enhancement reach, September 2019.

	Project Reach	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Enhancement Reach	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	Colloquial Name	US	US	US	US	US	US	US	US	US	US	US	US	US	US	US	US	US	US
	mmddyy	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319
	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 Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
	Project Feature Number	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	S2-27
	Feature Type Code	R	HW	HW	HW	HW	HW	SCW	HW	SCW	HW	SCW	FW	SCW	R	HW	HW	SCW	SCW
	Habitat Unit	HU12	HU13	HU13	HU13	HU13	HU13	HU13	HU13	HU13	HU13	HU13	HU02_D	HU13	HU15	HU16	HU16	HU16	HU16
	Habitat Type	Riffle	Pool	Pool	Pool	Pool	Pool	Pool	Pool	Pool	Pool	Pool	Dry	Pool	Riffle	Pool	Pool	Pool	Pool
1.	Length of targeted treatment (ft)	36	32	39	39	37	39	29	27	28	38	25	21	27	50	22	40	27	31
2.	Width of targeted treatment: (ft)	18	19	19	21	16	24	23	37	26	28	19	35	27	18	36	16	24	26
3.	Estimate area of the targeted **feature**: (ft^2)	648	608	741	819	592	936	667	999	728	1064	475	735	729	900	792	640	648	806
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	GOOD	EXCL	EXCL	EXCL	GOOD	EXCL	EXCL	EXCL	EXCL
5a	Are problems with the **feature** visible?	NO	NO	NO	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	NON	NON	NON	NON	STR	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	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
6c	If yes: LBK, MDC, RBK, SPN, OTH	SPN	LBK	RBK	RBK	LBK	RBK	LBK	RBK	LBK	RBK	LBK	RBK	LBK	SPN	RBK	LBK	RBK	RBK
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
6e	If yes: DNS, MUL, PRL, PRP, UPS, OTH	OTH	UPS	UPS	DNS	UPS	UPS	UPS	UPS	UPS	UPS	UPS	OTH	UPS	OTH	PRP	UPS	UPS	UPS
7.	Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	RIF	POO	POO	POO	POO	POO	POO	POO	POO	POO	POO	DRY	POO	RIF	POO	POO	POO	POO
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
10.	Mean water depth in **habitat unit**: ft	0.7	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	0.0	2.8	0.9	2.7	2.7	2.7	2.7
11a	Maximum water depth in **habitat unit**: ft	1.5	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	0.0	5.8	1.8	5.2	5.2	5.2	5.2
11b	Area of **habitat unit** within 0.5 -2.0 ft depth: (ft2)	503.7	2331.4	2331.4	2331.4	2331.4	2331.4	2331.4	2331.4	2331.4	2331.4	2331.4	0.0	2331.4	757.5	1113.8	1113.8	1113.8	1113.8
11c	Area of **habitat unit** within 2.0 -4.0 ft depth: (ft2)	0.0	4306.0	4306.0	4306.0	4306.0	4306.0	4306.0	4306.0	4306.0	4306.0	4306.0	0.0	4306.0	0.0	1697.1	1697.1	1697.1	1697.1
11d	Area of **habitat unit** within 0.5-4.0 ft depth: (ft2)	503.7	6637.5	6637.5	6637.5	6637.5	6637.5	6637.5	6637.5	6637.5	6637.5	6637.5	0.0	6637.5	757.5	2811.0	2811.0	2811.0	2811.0
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	0%	23%	23%	23%	23%	23%	23%	23%	23%	23%	23%	0%	23%	83%	27%	27%	27%	27%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	0%	42%	42%	42%	42%	42%	42%	42%	42%	42%	42%	0%	42%	0%	41%	41%	41%	41%
11g	% Area of **habitat** unit within 0.5-4.0 ft depth	0%	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%	0%	65%	83%	68%	68%	68%	68%
11h	If an objective, did the **feature** increase/decrease water depth in the treatment area?	YES	YES	YES	YES	YES	YES	YES	YES	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:																		
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	YES	NO	NO	NO	NO	NO	NO	NO	NO
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	3	3	3	3	3	3	3	3	3	3	3	0	3	0	3	3	3	3
15.	Percent of **habitat unit** covered by shelter: %	10	40	40	40	40	40	40	40	40	40	40	0	40	0	40	40	40	40
16a	1st dominant cover in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	RTW	RTW	RTW	RTW	RTW	RTW	RTW	RTW	RTW	RTW	RTW	NON	RTW	NON	RTW	RTW	RTW	RTW
16b	2nd dominant in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	NON	AVG	AVG	AVG	AVG	AVG	AVG	AVG	AVG	AVG	AVG	NON	AVG	NON	TVG	TVG	TVG	TVG
17a	If an objective, did the **feature** increase instream shelter rating?	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	30	120	120	120	120	120	120	120	120	120	120	0	120	0	120	120	120	120
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	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	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
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?	INC	DEC	DEC	DEC	DEC	DEC	DEC	DEC	DEC	NA	DEC	NA	DEC	INC	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	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**	4.4	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	0.0	2.8	3.0	3.6	3.6	3.6	3.6
26c	Measured mean velocity (ft/sec) in **habitat unit**	2.6	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.0	0.3	1.9	0.4	0.4	0.4	0.4
27.	Area of **habitat unit** within targeted velocity: (ft^2)	59.5	7888.7	7888.7	7888.7	7888.7	7888.7	7888.7	7888.7	7888.7	7888.7	7888.7	0.0	7888.7	78.1	2905.9	2905.9	2905.9	2905.9
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	9%	77%	77%	77%	77%	77%	77%	77%	77%	77%	77%	0%	77%	9%	71%	71%	71%	71%
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	NO	NO	NO	NO	NO	NO
30a	1st/2nd dominant substrate in **habitat unit**: BED, BOL, COB, GRV, SND, SLC, OTH	COB	SND	SND	SND	SND	SND	SND	SND	SND	SND	SND	NR	SND	GRV	GRV	GRV	GRV	GRV
30b	2nd dominant substrate in **habitat unit**: BED, BOL, COB, GRV, SND, SLC, OTH	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	NR	GRV	COB	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	1.0	5005.4	5005.4	5005.4	5005.4	5005.4	5005.4	5005.4	5005.4	5005.4	5005.4	0.0	5005.4	3.4	1716.6	1716.6	1716.6	1716.6
36b	Total **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	1.0	2103.6	2103.6	2103.6	2103.6	2103.6	2103.6	2103.6	2103.6	2103.6	2103.6	0.0	2103.6	3.4	815.8	815.8	815.8	815.8
36c	Total **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0.0	2901.9	2901.9	2901.9	2901.9	2901.9	2901.9	2901.9	2901.9	2901.9	2901.9	0.0	2901.9	0.0	900.8	900.8	900.8	900.8
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%	42%	42%	42%	42%
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%	20%	20%	20%	20%
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%	22%	22%	22%	22%
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 21. Adaptive Management Plan full checklist (Sites 1, 2) for the Army Corps Reach 14 enhancement reach, September 2019.

	Project Reach	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Enhancement Reach	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	Colloquial Name	US	US	US	US	US	US	US	US	US	US	US	US	US	US	US	US	US	US
	mmddyy	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319
	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	3	3	3	3
	Project Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SC Alcove	SC Alcove	SC Alcove	SC Alcove
	Project Feature Number	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	S3-01	S3-02	S3-03	S3-04
	Feature Type Code	HW	SCW	HW	FW	HW	HW	HW	HW	HW	HW	HW	AW	R	FW	BWW	FW	BWW	HW
	Habitat Unit	HU16	HU16	HU17	HU02_D	HU17	HU17	HU18	HU18	HU08_2	HU18	HU18	HU07_2	HU18	HU02_D	HU14	HU03_D	HU14	HU14
	Habitat Type	Pool	Pool	Pool	Dry	Pool	Pool	Riffle	Riffle	Riffle	Riffle	Riffle	Pool	Riffle	Dry	Alcove	Dry	Alcove	Alcove
1.	Length of targeted treatment (ft)	28	29	29	30	34	33	33	31	32	35	38	34	42	34	37	35	25	35
2.	Width of targeted treatment: (ft)	34	29	34	34	30	30	30	31	30	23	27	34	18	20	24	29	35	16
3.	Estimate area of the targeted **feature**: (ft^2)	952	841	986	1020	1020	990	990	961	960	805	1026	1156	756	680	888	1015	875	560
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	GOOD	EXCL	EXCL	EXCL	EXCL	EXCL
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	AGG	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	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
6c	If yes: LBK, MDC, RBK, SPN, OTH	LBK	RBK	LBK	OTH	LBK	RBK	RBK	RBK	RBK	LBK	LBK	LBK	SPN	OTH	LBK	OTH	RBK	LBK
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
6e	If yes: DNS, MUL, PRL, PRP, UPS, OTH	UPS	UPS	UPS	OTH	UPS	DNS	UPS	UPS	UPS	UPS	UPS	UPS	OTH	OTH	MUL	OTH	MUL	UPS
7.	Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	POO	POO	POO	DRY	POO	POO	RIF	RIF	RIF	RIF	RIF	POO	RIF	DRY	ALC	DRY	ALC	ALC
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
10.	Mean water depth in **habitat unit**: ft	2.7	2.7	2.1	0.0	2.1	2.1	1.1	1.1	1.8	1.1	1.1	2.0	1.1	0.0	1.3	0.0	1.3	1.3
11a	Maximum water depth in **habitat unit**: ft	5.2	5.2	5.9	0.0	5.9	5.9	2.8	2.8	4.6	2.8	2.8	5.2	2.8	0.0	3.4	0.0	3.4	3.4
11b	Area of **habitat unit** within 0.5 -2.0 ft depth: (ft2)	1113.8	1113.8	996.0	0.0	996.0	996.0	427.2	427.2	2022.5	427.2	427.2	1313.4	427.2	0.0	1807.2	0.0	1807.2	1807.2
11c	Area of **habitat unit** within 2.0 -4.0 ft depth: (ft2)	1697.1	1697.1	566.7	0.0	566.7	566.7	24.6	24.6	1547.9	24.6	24.6	850.4	24.6	0.0	724.6	0.0	724.6	724.6
11d	Area of **habitat unit** within 0.5-4.0 ft depth: (ft2)	2811.0	2811.0	1562.8	0.0	1562.8	1562.8	451.8	451.8	3570.5	451.8	451.8	2163.8	451.8	0.0	2531.8	0.0	2531.8	2531.8
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	27%	27%	47%	0%	47%	47%	81%	81%	45%	81%	81%	47%	81%	0%	58%	0%	58%	58%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	41%	41%	27%	0%	27%	27%	5%	5%	35%	5%	5%	30%	5%	0%	23%	0%	23%	23%
11g	% Area of **habitat** unit within 0.5-4.0 ft depth	68%	68%	74%	0%	74%	74%	86%	86%	80%	86%	86%	78%	86%	0%	81%	0%	81%	81%
11h	If an objective, did the **feature** increase/decrease water depth in the treatment area?	YES	YES	YES	YES	YES	YES	YES	YES	YES	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:																		
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	NO	NO	NO	NO	NO	NO	NO	NO
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	3	3	3	0	3	3	3	3	2	3	3	3	3	0	3	0	3	3
15.	Percent of **habitat unit** covered by shelter: %	40	40	30	0	30	30	50	50	25	50	50	15	50	0	20	0	20	20
16a	1st dominant cover in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	RTW	RTW	RTW	NON	RTW	RTW	RTW	RTW	TVG	RTW	RTW	RTW	RTW	NON	RTW	NON	RTW	RTW
16b	2nd dominant in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	TVG	TVG	LWD	NON	LWD	LWD	SWD	SWD	SWD	SWD	SWD	SWD	SWD	NON	AVG	NON	AVG	AVG
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
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	120	120	90	0	90	90	150	150	50	150	150	45	150	0	60	0	60	60
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	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	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	AGG	NON	AGG	AGG
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	DEC	DEC	DEC	DEC	DEC	DEC	DEC	DEC	INC	NA	DEC	NA	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	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**	3.6	3.6	3.1	0.0	3.1	3.1	3.2	3.2	2.6	3.2	3.2	3.2	3.2	0.0	0.1	0.0	0.1	0.1
26c	Measured mean velocity (ft/sec) in **habitat unit**	0.4	0.4	0.7	0.0	0.7	0.7	1.4	1.4	1.1	1.4	1.4	0.7	1.4	0.0	0.0	0.0	0.0	0.0
27.	Area of **habitat unit** within targeted velocity: (ft^2)	2905.9	2905.9	974.5	0.0	974.5	974.5	107.0	107.0	1263.9	107.0	107.0	1313.2	107.0	0.0	3120.8	0.0	3120.8	3120.8
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	71%	71%	46%	0%	46%	46%	20%	20%	28%	20%	20%	47%	20%	0%	100%	0%	100%	100%
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	NO	NO	NO	NO	NO	NO
30a	1st/2nd dominant substrate in **habitat unit**: BED, BOL, COB, GRV, SND, SLC, OTH	GRV	GRV	SND	NR	SND	SND	COB	COB	GRV	COB	COB	COB	COB	NR	GRV	NR	GRV	GRV
30b	2nd dominant substrate in **habitat unit**: BED, BOL, COB, GRV, SND, SLC, OTH	SND	SND	GRV	NR	GRV	GRV	GRV	GRV	COB	GRV	GRV	GRV	GRV	NR	SND	NR	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	1716.6	1716.6	702.6	0.0	702.6	702.6	45.3	45.3	618.2	45.3	45.3	871.0	45.3	0.0	2531.8	0.0	2531.8	2531.8
36b	Total **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	815.8	815.8	376.6	0.0	376.6	376.6	45.2	45.2	543.0	45.2	45.2	527.1	45.2	0.0	1807.2	0.0	1807.2	1807.2
36c	Total **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	900.8	900.8	326.0	0.0	326.0	326.0	0.0	0.0	75.2	0.0	0.0	343.9	0.0	0.0	724.6	0.0	724.6	724.6
36d	% **habitat unit** area where targeted depth, velocity and shelter criteria overlap	42%	42%	33%	0%	33%	33%	9%	9%	14%	9%	9%	31%	9%	0%	81%	0%	81%	81%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	20%	20%	18%	0%	18%	18%	9%	9%	12%	9%	9%	19%	9%	0%	58%	0%	58%	58%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	22%	22%	15%	0%	15%	15%	0%	0%	2%	0%	0%	12%	0%	0%	23%	0%	23%	23%
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 21. Adaptive Management Plan full checklist (Sites 1, 2) for the Army Corps Reach 14 enhancement reach, September 2019.

	Project Reach	2	2	2	2	2	2	2
	Enhancement Reach	7	7	7	7	7	7	7
	Colloquial Name	US	US	US	US	US	US	US
	mmddyy	90319	90319	90319	90319	90319	90319	90319
	Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF
	Project Site Number	3	4	4	4	4	4	4
	Project Site Type	SC Alcove	SC Alcove	SC Alcove	SC Alcove	SC Alcove	SC Alcove	SC Alcove
	Project Feature Number	S3-05	S4-01	S4-02	S4-03	S4-04	S4-05	S4-06
	Feature Type Code	FW	BWW	HW	HW	TTI	HW	HW
	Habitat Unit	HU03_D	HU13_2	HU01_D	HU01_D	HU01_D	HU01_D	HU01_D
	Habitat Type	Dry	Pool	Dry	Dry	Dry	Dry	Dry
1.	Length of targeted treatment (ft)	14	40	31	18	63	32	35
2.	Width of targeted treatment: (ft)	38	33	31	41	30	34	27
3.	Estimate area of the targeted **feature**: (ft^2)	532	1320	961	738	1890	1088	945
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	EXCL	EXCL	GOOD	GOOD	GOOD	GOOD	GOOD
5a	Are problems with the **feature** visible?	NO	NO	YES	YES	NO	YES	NO
5b	Types: ANC, BBB, CRF, MAT, SHF, STR, SWA, UND, UNS, WSH, OTH, NON	NON	NON	STR	STR	NON	STR	NON
6a	Is the **feature** still in its original location?	YES	YES	YES	YES	YES	YES	YES
6b	Is the **feature** still in its original position?	YES	YES	NO	YES	YES	NO	NO
6c	If yes: LBK, MDC, RBK, SPN, OTH	OTH	RBK	OTH	RBK	OTH	OTH	RBK
6d	Is the **feature** still in its original orientaton?	YES	YES	YES	YES	YES	YES	YES
6e	If yes: DNS, MUL, PRL, PRP, UPS, OTH	OTH	MUL	UPS	UPS	OTH	DNS	DNS
7.	Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	DRY	POO	DRY	DRY	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	YES	YES
10.	Mean water depth in **habitat unit**: ft	0.0	2.8	0.0	0.0	0.0	0.0	0.0
11a	Maximum water depth in **habitat unit**: ft	0.0	5.8	0.0	0.0	0.0	0.0	0.0
11b	Area of **habitat unit** within 0.5 -2.0 ft depth: (ft2)	0.0	2331.4	0.0	0.0	0.0	0.0	0.0
11c	Area of **habitat unit** within 2.0 -4.0 ft depth: (ft2)	0.0	4306.0	0.0	0.0	0.0	0.0	0.0
11d	Area of **habitat unit** within 0.5-4.0 ft depth: (ft2)	0.0	6637.5	0.0	0.0	0.0	0.0	0.0
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	0%	23%	0%	0%	0%	0%	0%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	0%	42%	0%	0%	0%	0%	0%
11g	% Area of **habitat** unit within 0.5-4.0 ft depth	0%	65%	0%	0%	0%	0%	0%
11h	If an objective, did the **feature** increase/decrease water depth in the treatment area?	YES	YES	NO	YES	YES	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:							
13.	Were there any unintended effects of the **feature** on the water depth? If Y, comment.	NO	NO	YES	NO	YES	YES	YES
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	0	3	0	0	0	0	0
15.	Percent of **habitat unit** covered by shelter: %	0	40	0	0	0	0	0
16a	1st dominant cover in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	NON	RTW	NON	NON	NON	NON	NON
16b	2nd dominant in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	NON	AVG	NON	NON	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	0	120	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
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	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
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?	YES	NO	NO	NO	NO	NO	NO
21b	Overall Offchannel Condition (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	STB	AGG	AGG	AGG	AGG	AGG	AGG
21c	Outlet Conditions (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	STB	AGG	AGG	AGG	AGG	AGG	AGG
21d	Inlet Conditions (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	STB	AGG	AGG	AGG	AGG	AGG	AGG
22.	Were there any unintended effects on the stream channel at the **feature**? If Y, comment.	NO	NO	YES	YES	NO	YES	NO
23.	If an objective, did the **feature** decrease/increase velocity in the treatment area?	NA	DEC	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?	YES	YES	NO	YES	NO	NO	NO
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**	0.0	2.8	0.0	0.0	0.0	0.0	0.0
26c	Measured mean velocity (ft/sec) in **habitat unit**	0.0	0.3	0.0	0.0	0.0	0.0	0.0
27.	Area of **habitat unit** within targeted velocity: (ft^2)	0.0	7888.7	0.0	0.0	0.0	0.0	0.0
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	0%	77%	0%	0%	0%	0%	0%
29.	Were there any unintended effects of **feature** on velocity If Y, comment.	NO	NO	YES	NO	NO	YES	NO
30a	1st/2nd dominant substrate in **habitat unit**: BED, BOL, COB, GRV, SND, SLC, OTH	NR	SND	NR	NR	NR	NR	NR
30b	2nd dominant substrate in **habitat unit**: BED, BOL, COB, GRV, SND, SLC, OTH	NR	GRV	NR	NR	NR	NR	NR
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	0.0	5005.4	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	2103.6	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	2901.9	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%
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%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	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
38.	Are additional restoration treatments recommended at this **site**?	NO	NO	NO	NO	NO	NO	NO

Weinstock, September 2019

Depth and Velocity

Table 22. Areas and percentages of: wetted area, optimal depth and velocity, and optimal hydraulic habitat within the Weinstock enhancement reach, September 2019.

Weinstock Post-effective flow September 2019	Wetted area (ft^2)	Optimal depth (ft^2)			Optimal velocity (ft^2)	Optimal habitat (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	34,734	14,437	11,841	26,278	15,474	5,102	4,504	9,605
Side channel area	11,406	6,711	3,132	9,843	3,924	1,823	1,039	2,862
Total area	**46,140**	**21,148**	**14,973**	**36,121**	**19,398**	**6,924**	**5,543**	**12,467**
Main channel % of wetted area	75%	42%	34%	76%	45%	15%	13%	28%
Side channel % of wetted area	25%	59%	27%	86%	34%	16%	9%	25%
Total % of wetted area	**100%**	**46%**	**32%**	**78%**	**42%**	**15%**	**12%**	**27%**

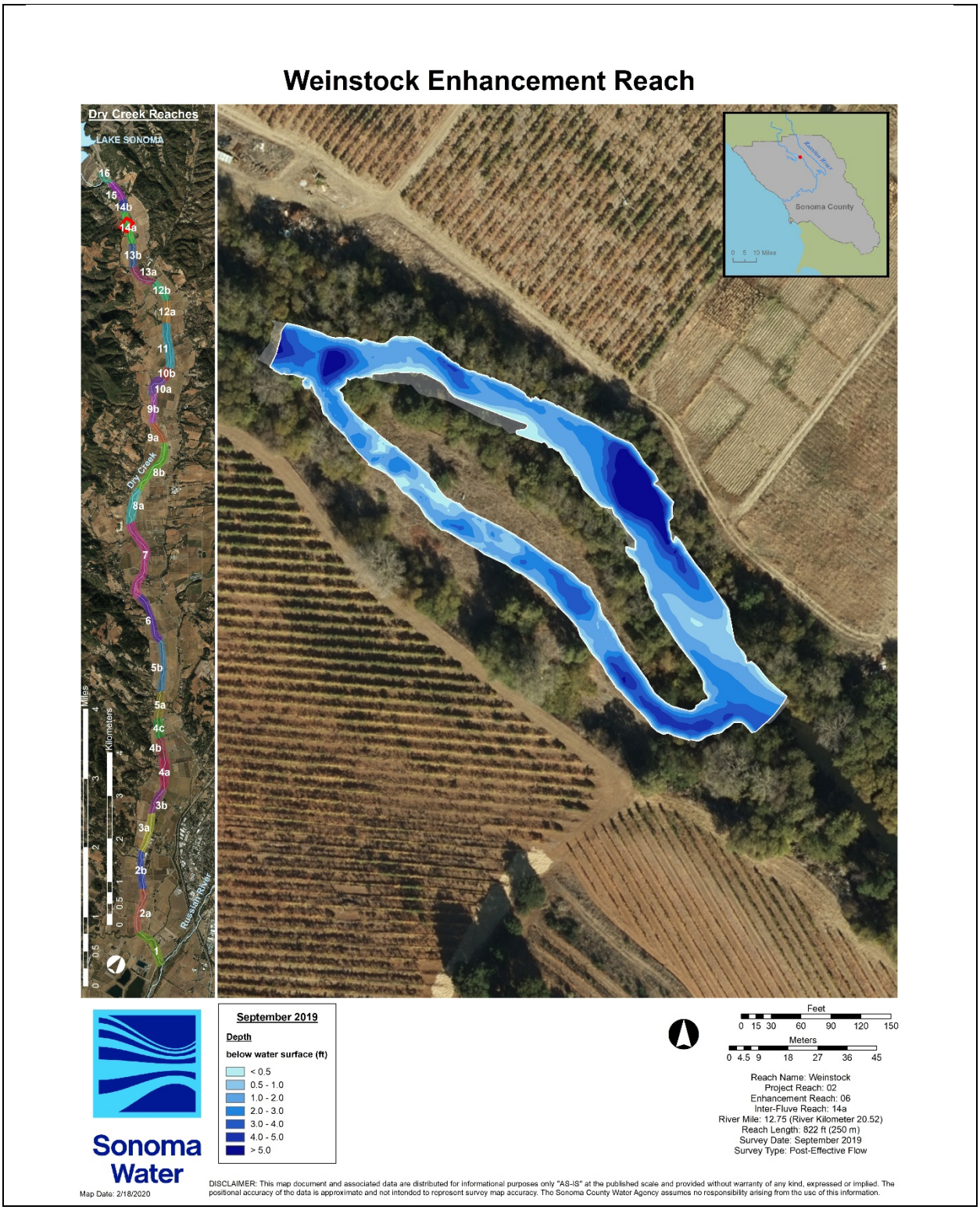

Figure 37. Measured water depth within the Weinstock enhancement reach, September 2019.

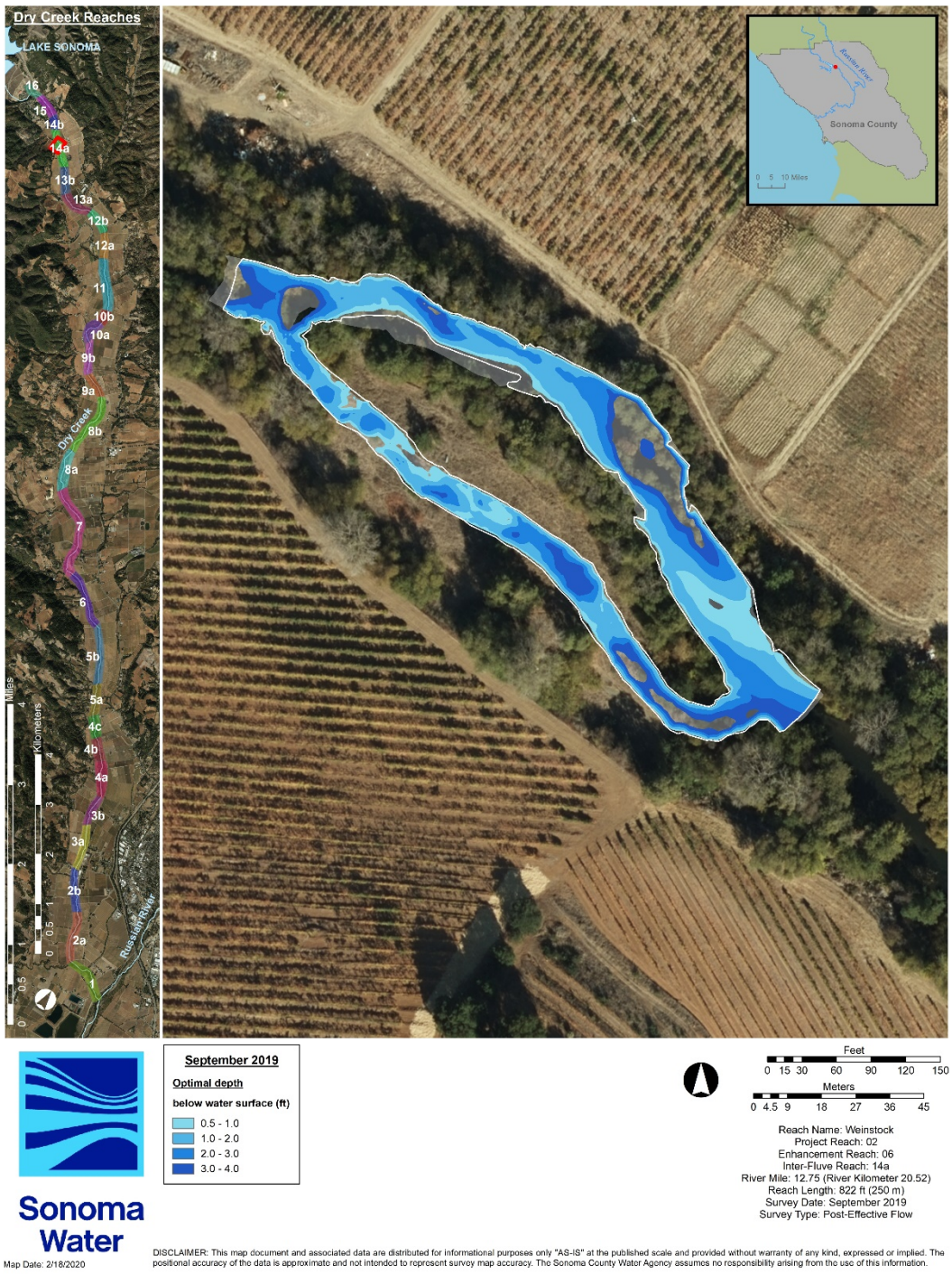

Figure 38. Optimal water depth for fry (0.5-2.0 ft) and parr (2.0-4.0 ft) within the Weinstock enhancement reach, September 2019.

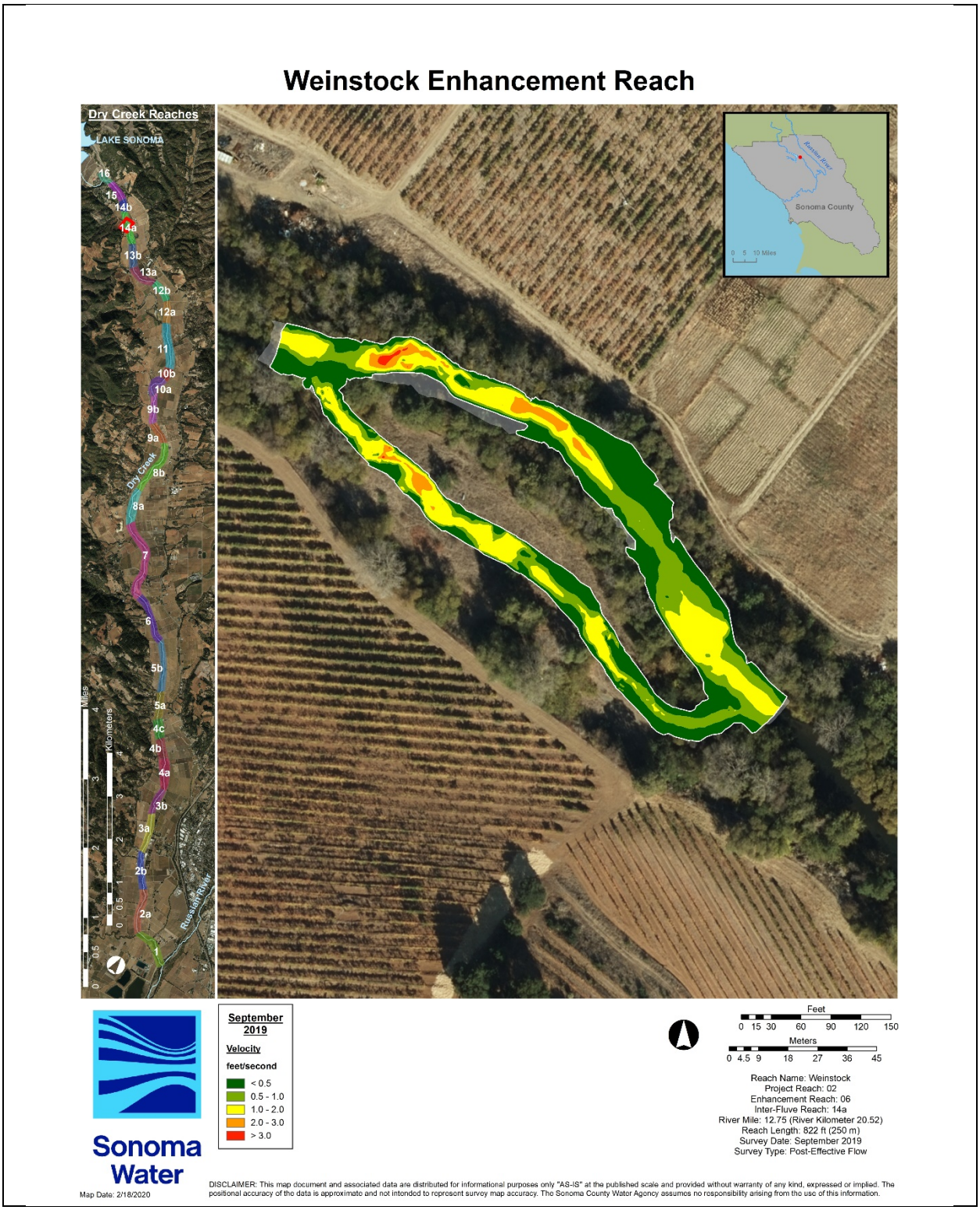

Figure 39. Measured water velocity within the Weinstock enhancement reach, September 2019.

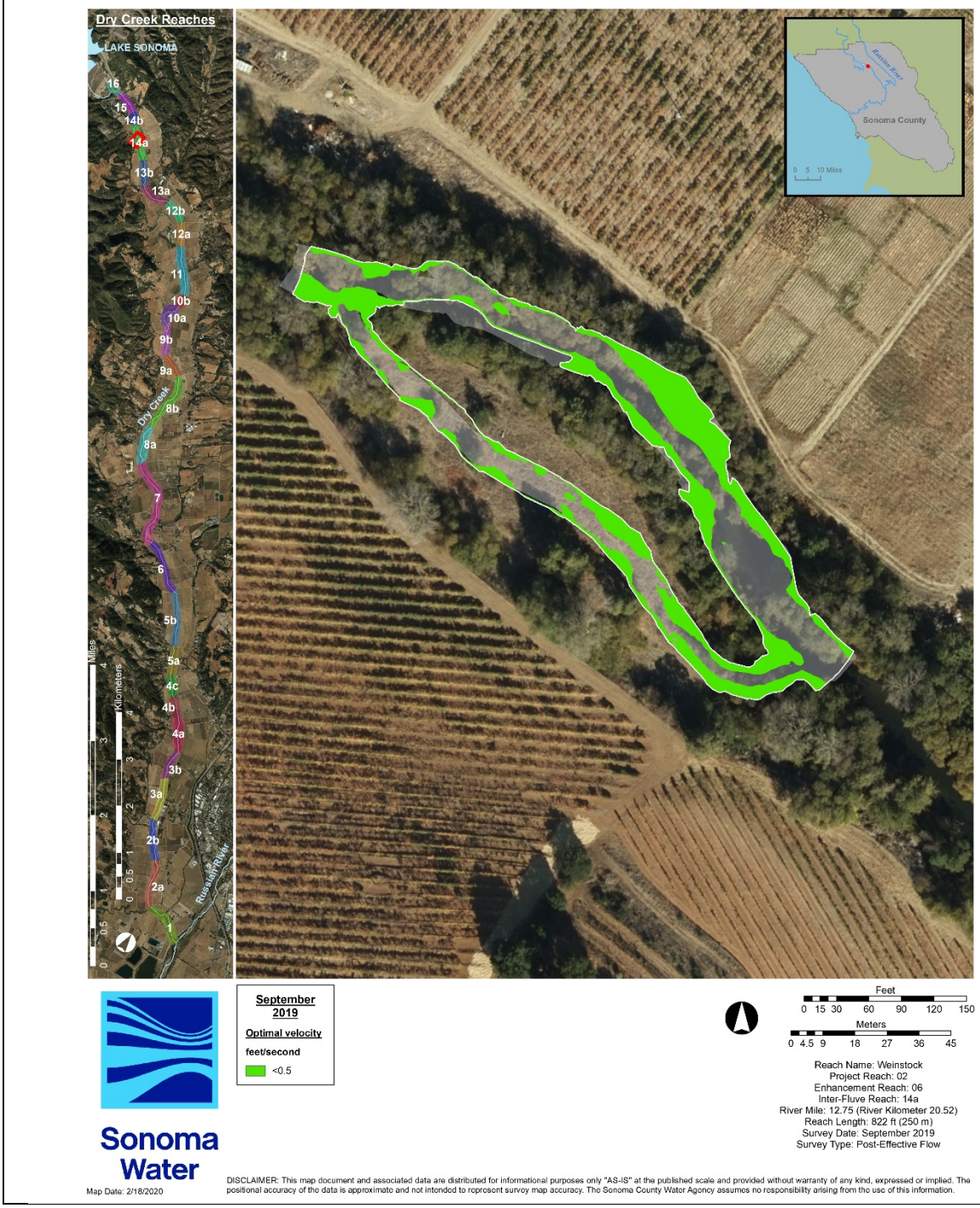

Figure 40. Optimal water velocity for fry and parr (< 0.5 ft/s) within the Weinstock enhancement reach, September 2019.

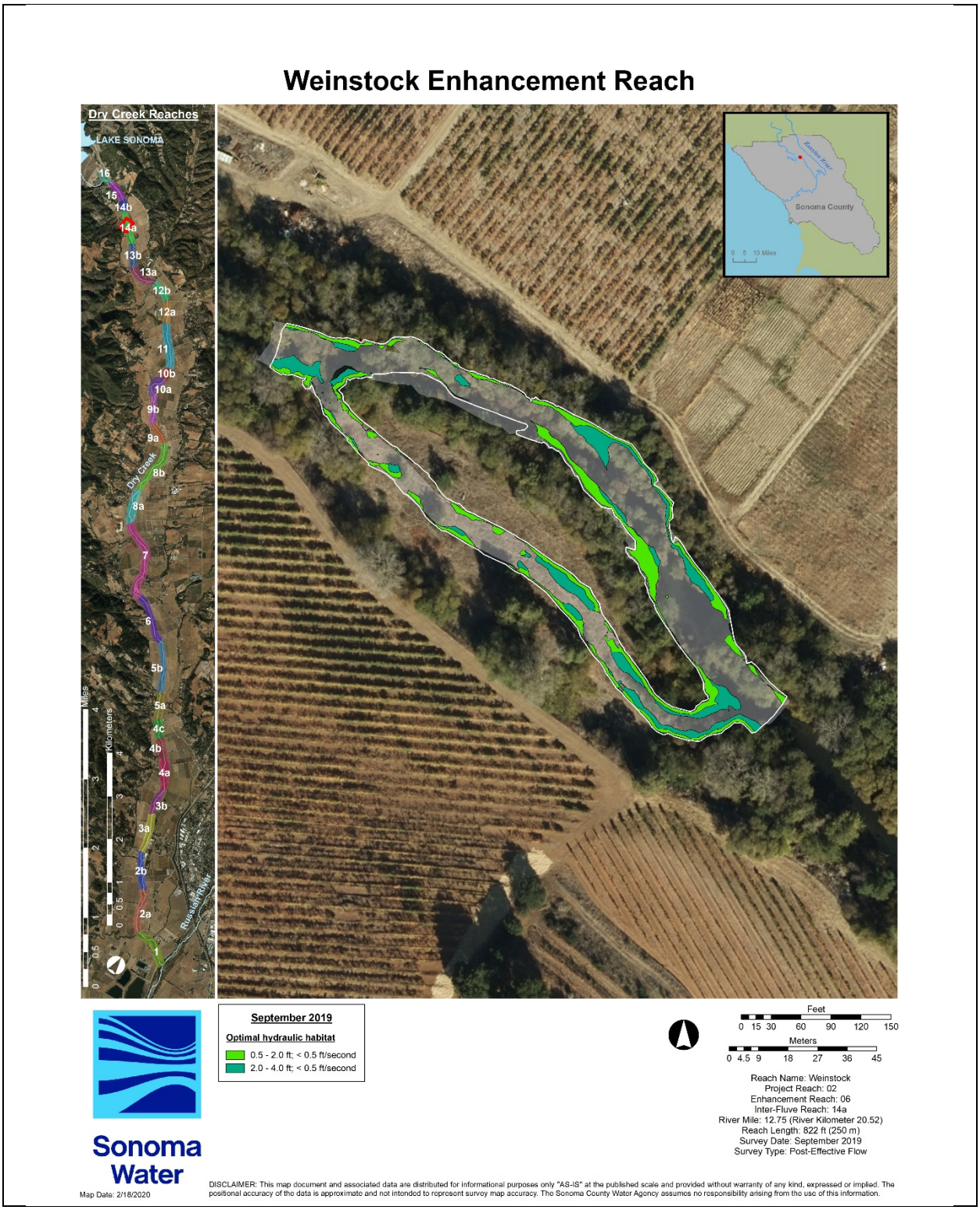

Figure 41. Optimal hydraulic habitat for fry (<0.5 ft/s, 0.5-2.0 ft) and parr (<0.5 ft/s, 2.0-4.0 ft) within the Weinstock enhancement reach, September 2019.

Habitat Types and Shelter Values

Table 23. Habitat, types, shelter value, percent cover, and shelter score for habitat units within the Weinstock enhancement reach, September 2019.

Post-effective flow (September 2019)				
Habitat Unit #	**Habitat Type**	**Shelter Value**	**Percent Cover**	**Shelter Score**
HU01	Pool	3	35	105
HU02	Flatwater	2	25	50
HU03	Pool	3	20	60
HU04	Riffle	2	15	30
HU05	Pool	3	20	60
HU06	Riffle	2	20	40
HU07	Pool	3	40	120
HU08	Flatwater	3	25	75
HU09	Pool	3	30	90
HU10	Pool	3	30	90
HU11	Pool	3	30	90
HU12	Riffle	3	15	45
HU13	Pool	3	40	120
Pool: riffle	**8:3 (2.67)**			**Avg = 75**

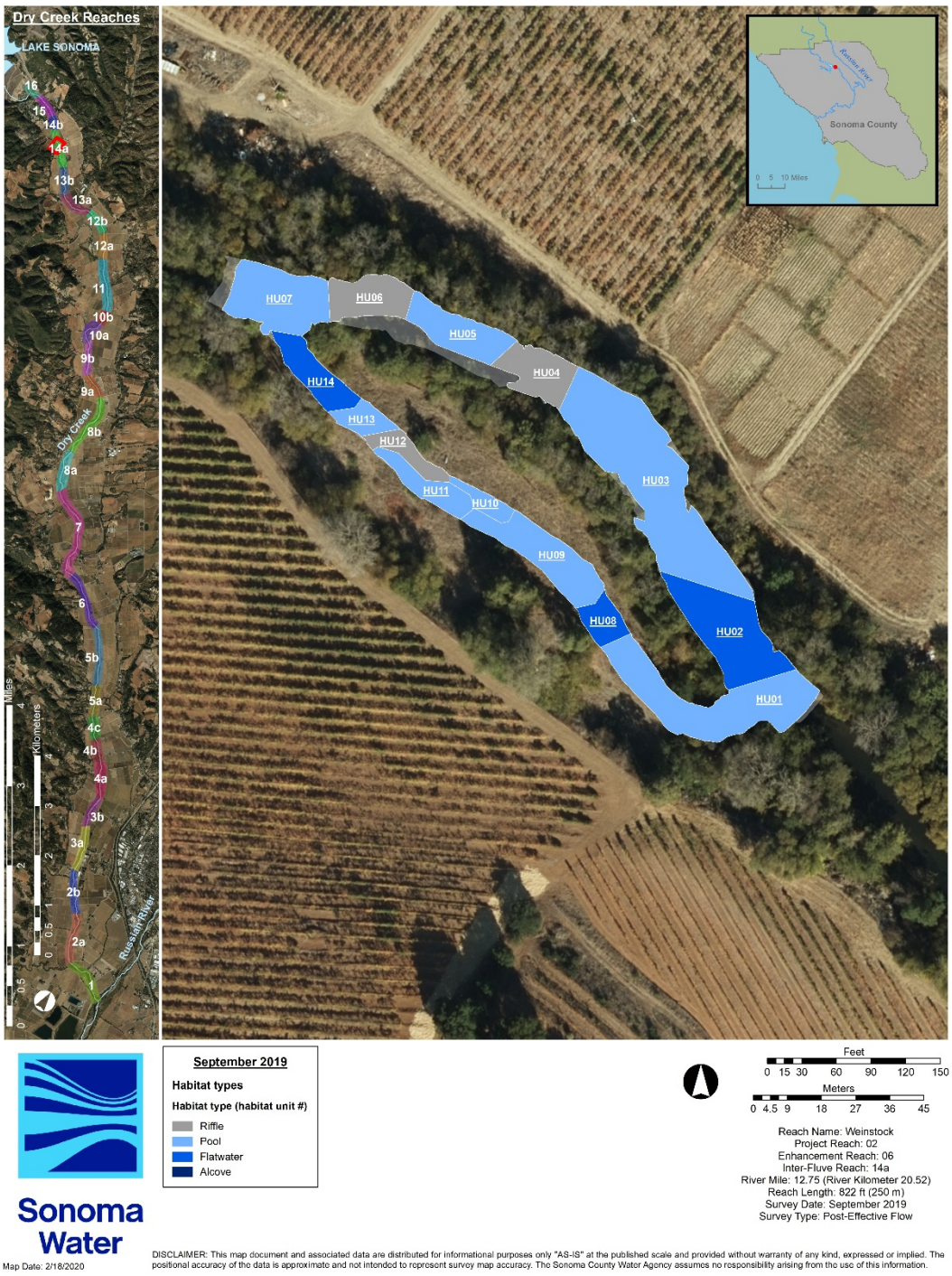

Figure 42. Habitat unit number and type within the Weinstock enhancement reach, September 2019.

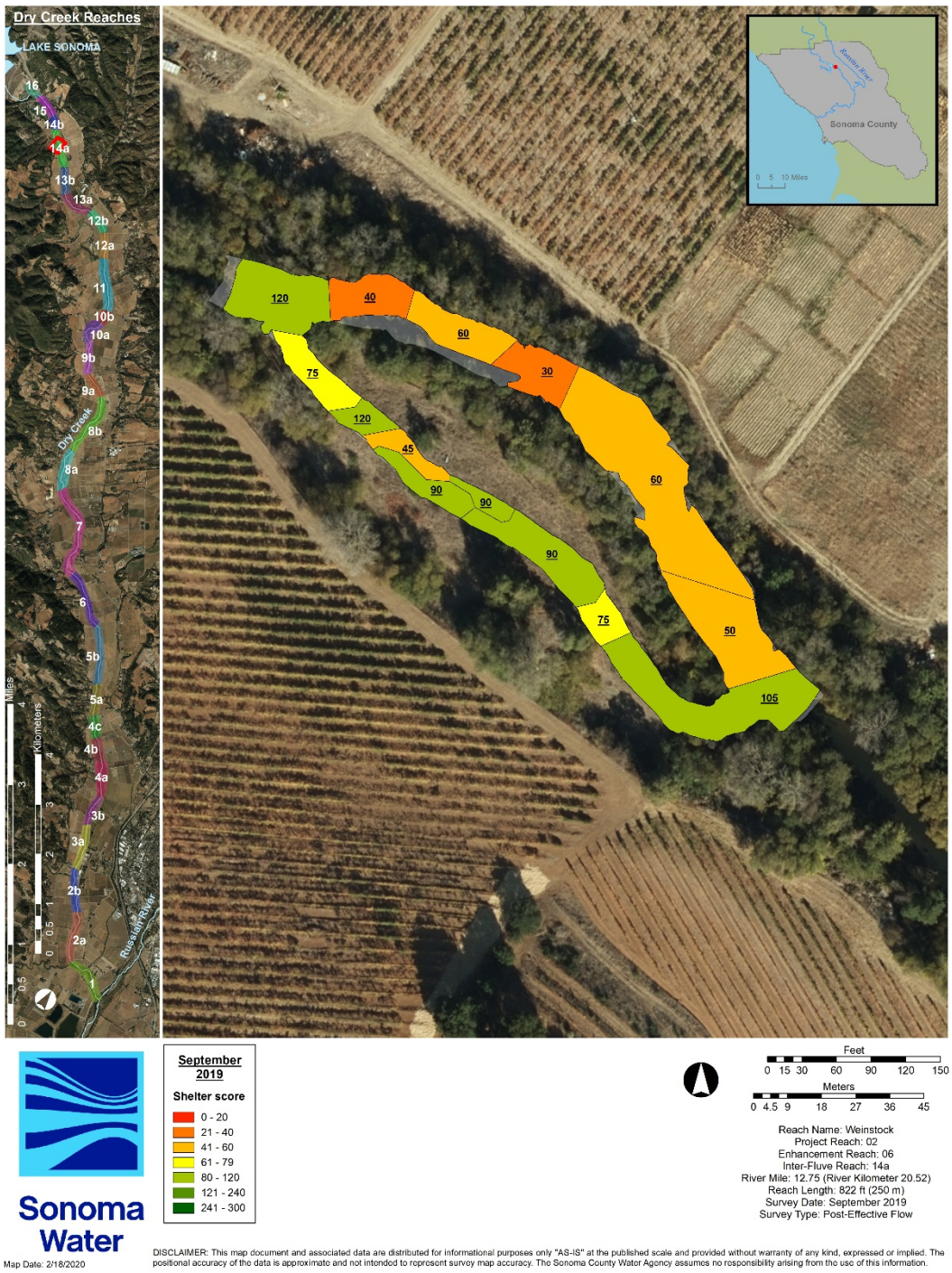

Figure 43. Habitat unit shelter scores within the Weinstock enhancement reach, September 2019.

Feature, Habitat Unit, Site, and Reach Ratings

Table 24. Post-effective flow feature ratings for the Weinstock enhancement reach September 2019.

	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
	mmddyy	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319
	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 Site Type	MainChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
	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	HU07	HU01_2	HU01_2	HU01_2	HU01_2	HU01_2	HU01_2	HU01_2	HU01_2	HU08	HU08	HU09	HU01_D	HU09	HU09	HU10	HU11	HU12
	Habitat Type	Pool	Pool	Pool	Pool	Pool	Pool	Pool	Pool	Pool	Flatwater	Flatwater	Pool	Dry	Pool	Pool	Pool	Pool	Riffle
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	GOOD	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	FAIL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL
5a	Are problems with the **feature** visible?	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	YES	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	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
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	0	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	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 24. Post-effective flow feature ratings for the Weinstock enhancement reach September 2019.

	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
	mmddyy	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319
	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 Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
	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 Type Code	SCW	SCW	HW	R	HW	HW	HW	HW	HW	HW	AW
	Habitat Unit	HU11	HU13	HU14	HU14	HU14	HU14	HU14	HU14	HU14	HU14	HU07_2
	Habitat Type	Pool	Pool	Flatwater	Flatwater	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

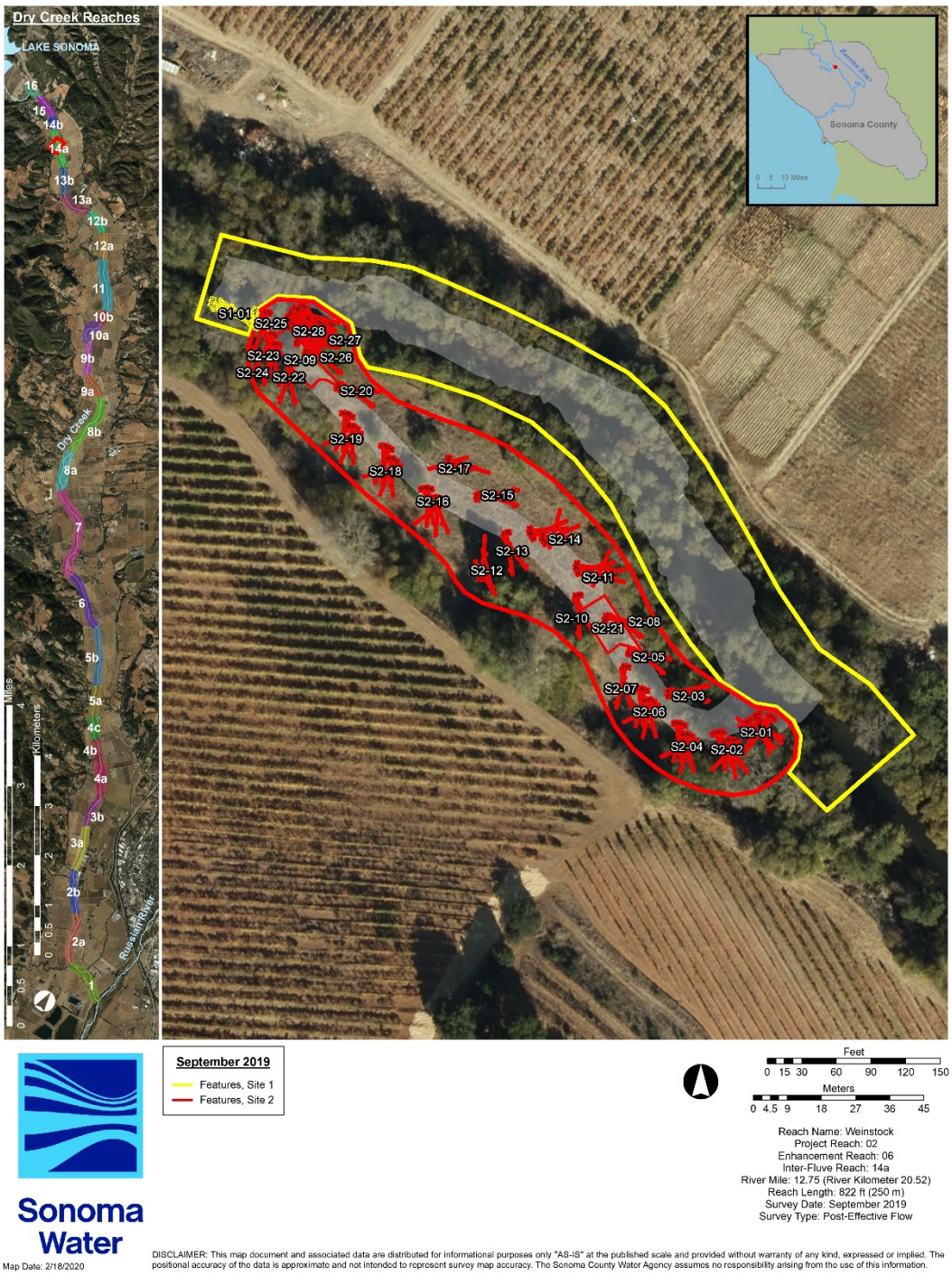

Figure 44. Enhancement sites and features within the Weinstock enhancement reach, September 2019.

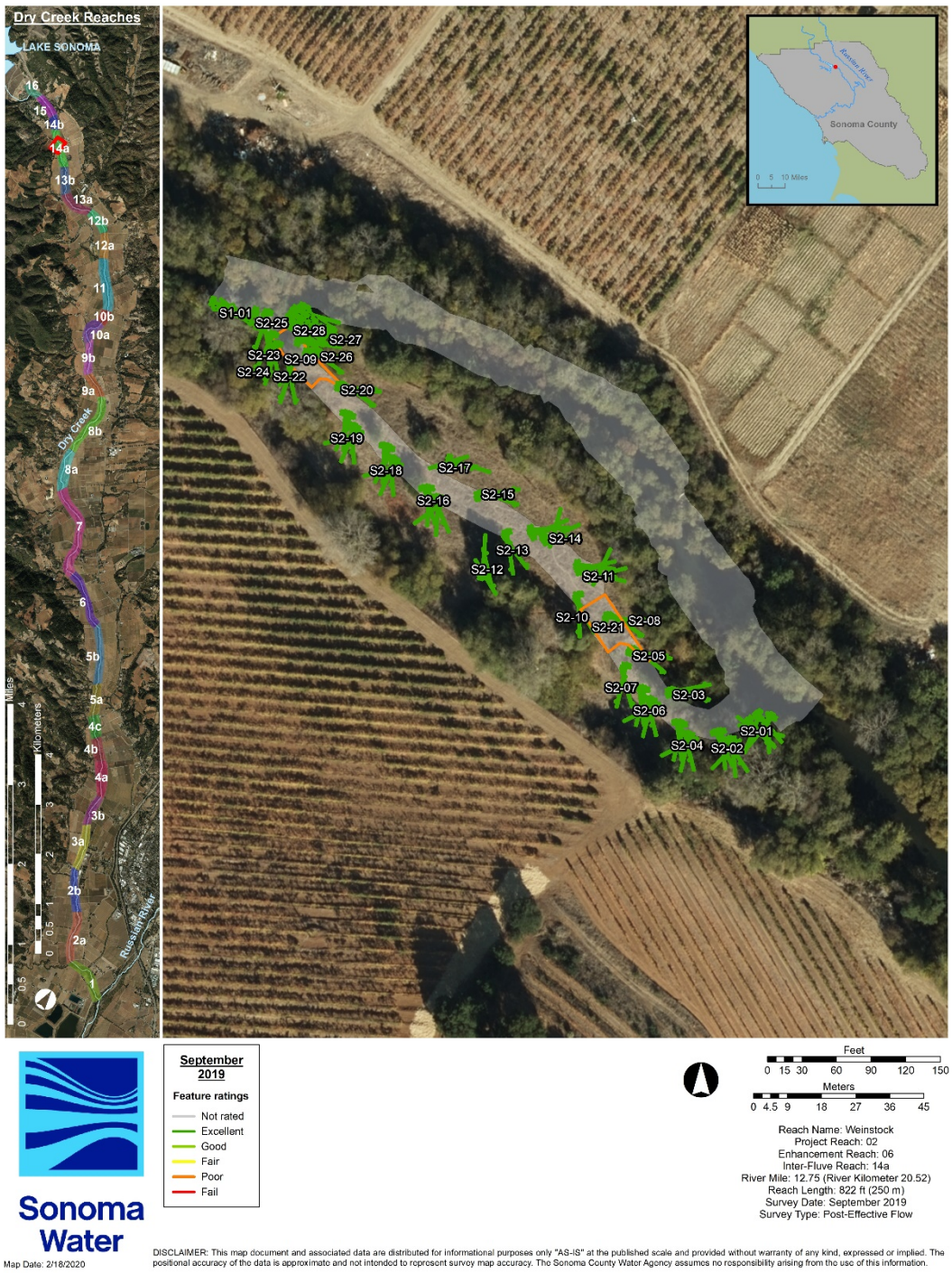

Figure 45. Feature ratings for the Weinstock enhancement reach, September 2019.

Table 25. Post-effective flow habitat unit ratings for the Weinstock enhancement reach September 2019.

	Project Reach	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
	Colloquial Name	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS
	mmddyy	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319
	Survey Type	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**	**HU07_2**
	Habitat Type	Pool	Flatwater	Pool	Riffle	Pool	Riffle	Pool	Flatwater	Pool	Pool	Pool	Riffle	Pool	Flatwater	Dry	Pool	Pool
	PROJECT SITE NUMBER	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**
	Project Site Type	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	24%	77%	32%	64%	49%	75%	16%	86%	0%	0%	0%	0%	60%	56%	0%	24%	16%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	56%	14%	32%	12%	38%	8%	53%	1%	0%	0%	0%	0%	28%	28%	0%	56%	53%
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	3	2	3	2	3	2	3	3	3	3	3	3	3	3	0	3	3
15.	Percent of **habitat unit** covered by shelter: %	35	25	20	15	20	20	40	25	30	30	30	15	40	25	0	35	40
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	105	50	60	30	60	40	120	75	90	90	90	45	120	75	0	105	120
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	54%	17%	59%	41%	22%	18%	53%	31%	48%	29%	26%	20%	34%	29%	0%	54%	53%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	16%	9%	19%	20%	8%	7%	13%	18%	0%	0%	0%	0%	0%	17%	0%	16%	13%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	27%	1%	14%	0%	4%	0%	21%	0%	0%	0%	0%	0%	0%	2%	0%	27%	21%
	HABITAT UNIT NUMBER	**HU01**	**HU02**	**HU03**	**HU04**	**HU05**	**HU06**	**HU07**	**HU08**	**HU09**	**HU10**	**HU11**	**HU12**	**HU13**	**HU14**	**HU01_D**	**HU01_2**	**HU07_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	4	3	4	4	4	1	4	0	0	0	0	4	4	0	2	1
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	1	3	0	4	0	0	0	0	0	2	2	0	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	4	5	4	5	5	5	5	5	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)	2	2	2	1	2	2	3	2	2	2	2	1	3	2	0	2	3
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	4	1	2	0	2	1	4	2	3	3	3	1	4	2	0	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)	4	1	4	4	2	1	4	3	4	2	2	1	3	2	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)	1	0	1	2	0	0	1	1	0	0	0	0	0	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)	2	0	1	0	0	0	2	0	0	0	0	0	0	0	0	2	2
	HABITAT UNIT NUMBER	**HU01**	**HU02**	**HU03**	**HU04**	**HU05**	**HU06**	**HU07**	**HU08**	**HU09**	**HU10**	**HU11**	**HU12**	**HU13**	**HU14**	**HU01_D**	**HU01_2**	**HU07_2**
HABITAT UNIT RATING	Habitat unit quantitative rating (out of 35)	24	13	21	16	18	12	24	17	14	12	12	8	21	18	0	24	24
	Habitat unit qualitative rating: Excellent (>=28), Good (>=21), Fair(>=14), Poor (>=7), Fail (<7)	Good	Poor	Good	Fair	Fair	Poor	Good	Fair	Fair	Poor	Poor	Poor	Good	Fair	Not rated	Good	Good

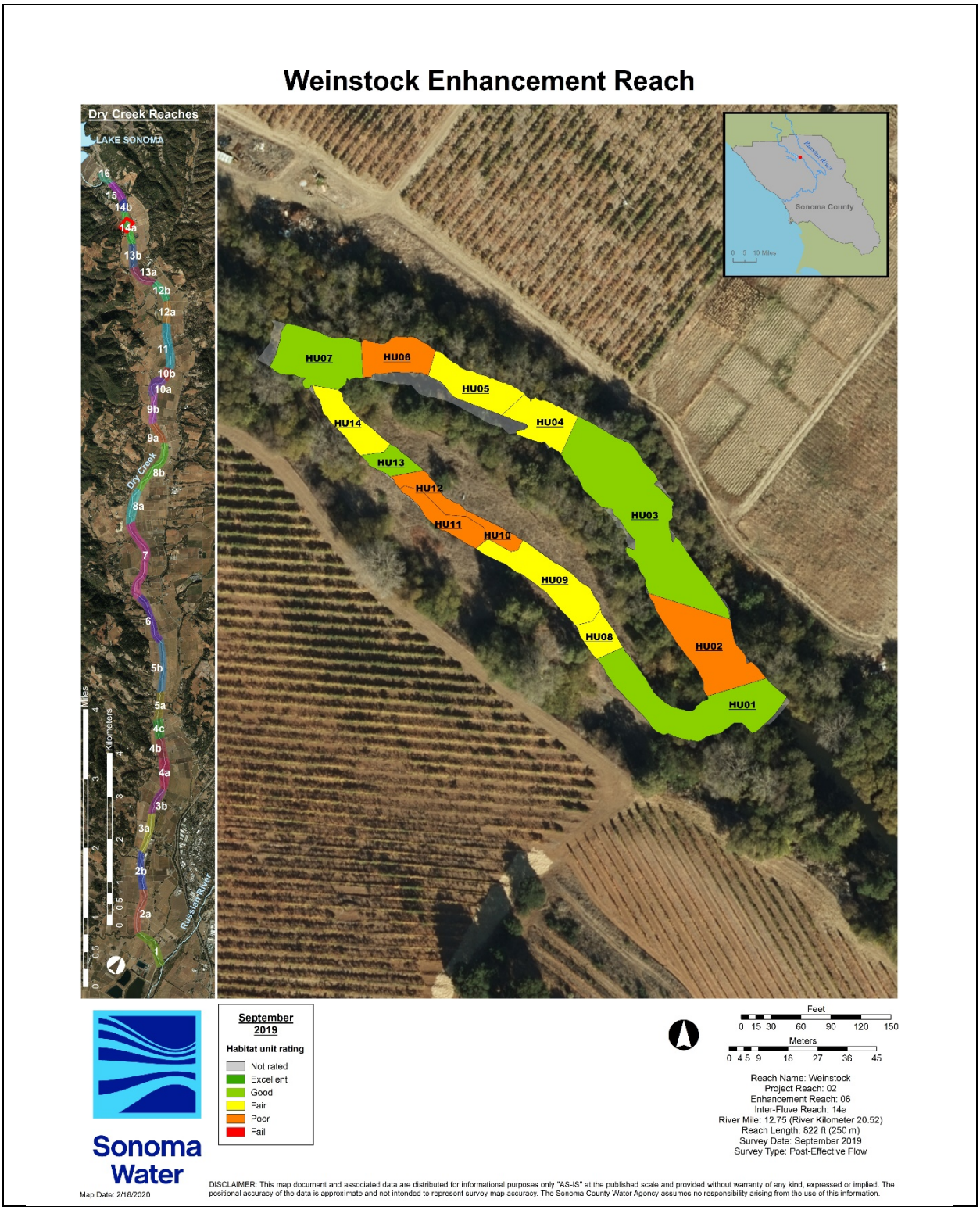

Figure 46. Habitat unit ratings for the Weinstock enhancement reach, September 2019.

Table 26. Post-effective flow average feature, average habitat unit, site, and reach ratings (rounded to the nearest whole number) for the Weinstock enhancement reach, September 2019.

	Project Reach	2	2
	Enhancement Reach	6	6
	ENHANCEMENT REACH NAME	**WS**	**WS**
	mmddyy	90319	90319
	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)	18	17
	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)	31	30
	Site qualitative rating: Excellent (>=40), Good (>=30), Fair(>=20), Poor (>=10), Fail (<10)	Good	Fair
	ENHANCEMENT REACH NAME	**WS**	
ENHANCEMENT REACH RATING	Enhancement reach quantitative rating (average of site ratings) (out of 50)	31	
	Enhancement reach qualitative rating: Excellent (>=40), Good (>=30), Fair(>=20), Poor (>=10), Fail (<10)	Good	

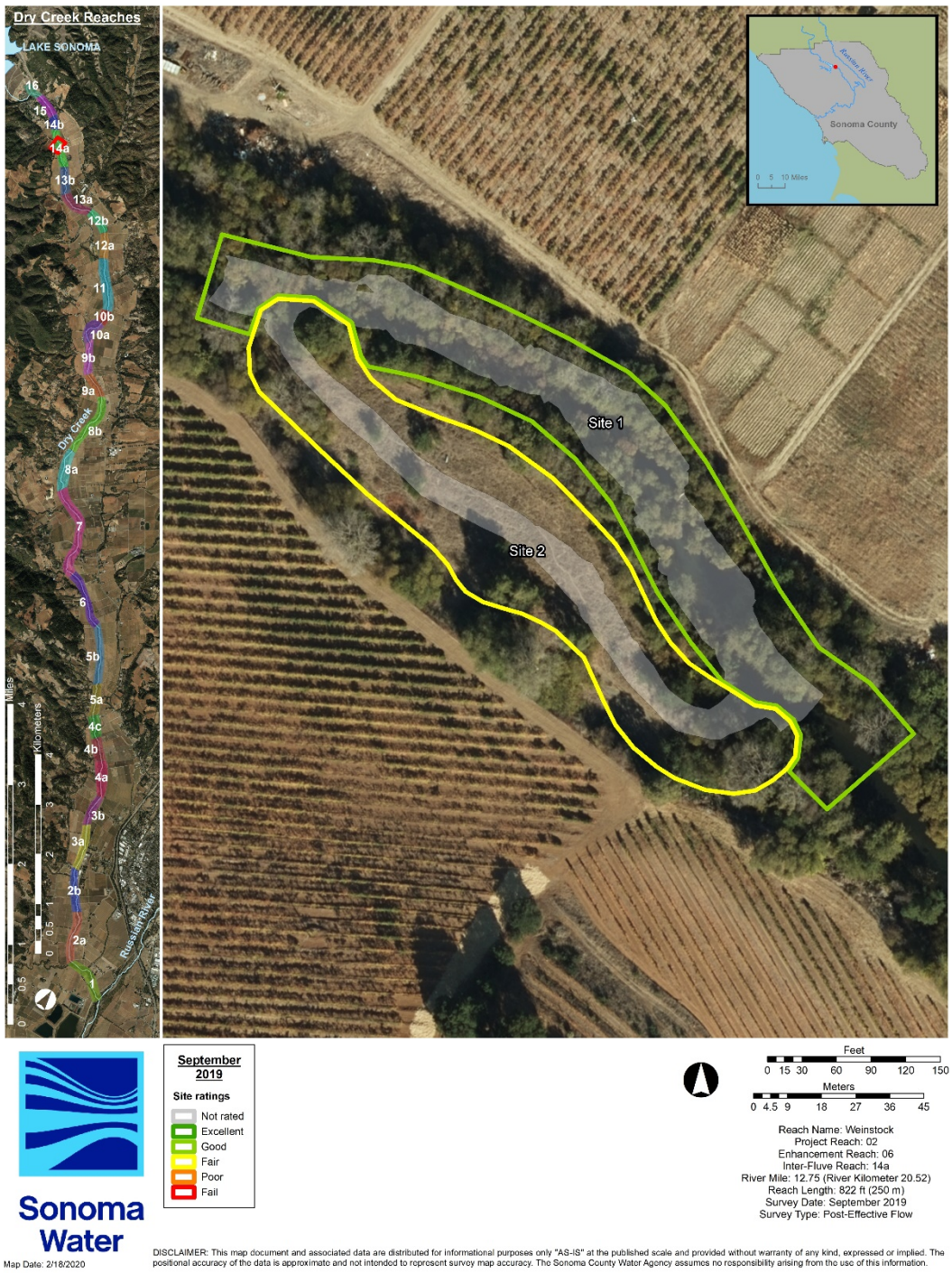

Figure 47. Post effective flow site ratings for the Weinstock enhancement reach, September 2019.

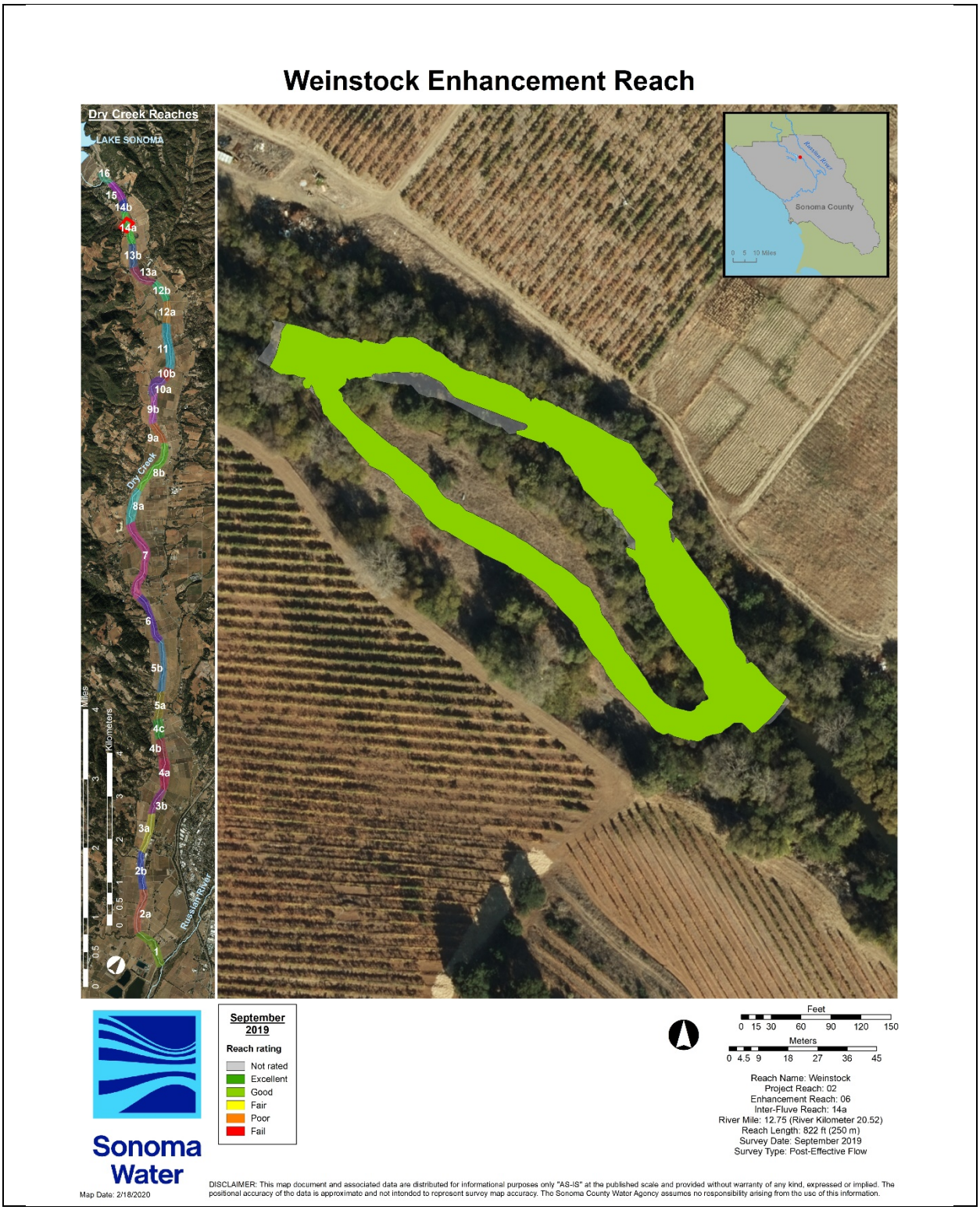

Figure 48. Post-effective flow reach rating for the Weinstock enhancement reach, September 2019.

Feature and Habitat Unit Checklists

Table 27. Adaptive Management Plan targeted checklist for the Weinstock enhancement reach, September 2019.

	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
	mmddyy	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319
	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	2	2	2	2	2	2	2	2	2	2	2
	Project Site Type	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
	Project Feature Number	NA	NA	NA	NA	NA	NA	S1-01	S2-01	S2-02	S2-03	S2-04	S2-05	S2-06	S2-07	S2-08	S2-09	S2-10	S2-11
	Feature Type Code	NA	NA	NA	NA	NA	NA	PWH	BWW	SCW	HW	SCW	HW	SCW	HW	HW	R	HW	SCW
	Habitat Unit	HU01	HU02	HU03	HU04	HU05	HU06	HU07	HU01_2	HU01_2	HU01_2	HU01_2	HU01_2	HU01_2	HU01_2	HU01_2	HU08	HU08	HU09
	Habitat Type	Pool	Flatwater	Pool	Riffle	Pool	Riffle	Pool	Pool	Pool	Pool	Pool	Pool	Pool	Pool	Pool	Flatwater	Flatwater	Pool
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	NA	NA	NA	NA	NA	NA	GOOD	GOOD	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	FAIL	EXCL	EXCL
5a	Are problems with the **feature** visible?	NA	NA	NA	NA	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO
6a	Is the **feature** still in its original location?	NA	NA	NA	NA	NA	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	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6d	Is the **feature** still in its original orientaton?	NA	NA	NA	NA	NA	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	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES
9.	Were there any unintended effects by the **feature** on the habitat type? If Y, comment.	NA	NA	NA	NA	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	24%	77%	32%	64%	49%	75%	16%	24%	24%	24%	24%	24%	24%	24%	24%	86%	86%	0%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	56%	14%	32%	12%	38%	8%	53%	56%	56%	56%	56%	56%	56%	56%	56%	1%	1%	0%
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	3	2	3	2	3	2	3	3	3	3	3	3	3	3	3	3	3	3
15.	Percent of **habitat unit** covered by shelter: %	35	25	20	15	20	20	40	35	35	35	35	35	35	35	35	25	25	30
17a	If an objective, did the **feature** increase instream shelter rating?	NA	NA	NA	NA	NA	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	105	50	60	30	60	40	120	105	105	105	105	105	105	105	105	75	75	90
19a	If an objective, did the **feature** increase LWD count in the **habitat unit**?	NA	NA	NA	NA	NA	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	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES
25.	Did the **feature** achieve the targeted velocity?	NA	NA	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	54%	17%	59%	41%	22%	18%	53%	54%	54%	54%	54%	54%	54%	54%	54%	31%	31%	48%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	16%	9%	19%	20%	8%	7%	13%	16%	16%	16%	16%	16%	16%	16%	16%	18%	18%	0%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	27%	1%	14%	0%	4%	0%	21%	27%	27%	27%	27%	27%	27%	27%	27%	0%	0%	0%
	FEATURE NUMBER	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**S1-01**	**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**	**HU02**	**HU03**	**HU04**	**HU05**	**HU06**	**HU07**	**HU01_2**	**HU01_2**	**HU01_2**	**HU01_2**	**HU01_2**	**HU01_2**	**HU01_2**	**HU01_2**	**HU08**	**HU08**	**HU09**
	SITE NUMBER	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**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**
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	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	1	1	1	1	1	1	1	1	1	0	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	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	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	0	0	0	0	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	1	1	1	1	1	1	1	1	1	0	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	1	1	1	1	1	1	1	1	1	0	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	4	3	4	4	4	1	2	2	2	2	2	2	2	2	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	1	3	1	3	0	4	4	4	4	4	4	4	4	4	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	4	5	4	5	4	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)	2	2	2	1	2	2	3	2	2	2	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)	0	0	0	0	0	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	4	1	2	0	2	1	4	4	4	4	4	4	4	4	4	2	2	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
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	1	1	1	1	1	1	1	0	1	1
25.	Did the **feature** achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	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	1	4	4	2	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	0	1	2	0	0	1	1	1	1	1	1	1	1	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)	2	0	1	0	0	0	2	2	2	2	2	2	2	2	2	0	0	0

Table 27. Adaptive Management Plan targeted checklist for the Weinstock enhancement reach, September 2019.

	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
	mmddyy	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319
	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 Site Type	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	
	Feature Type Code	FW	HW	SCW	HW	SCW	FW	SCW	SCW	HW	R	HW	HW	HW	HW	HW	HW	AW	
	Habitat Unit	HU01_D	HU09	HU09	HU10	HU11	HU12	HU11	HU13	HU14	HU14	HU14	HU14	HU14	HU14	HU14	HU14	HU07_2	
	Habitat Type	Dry	Pool	Pool	Pool	Pool	Riffle	Pool	Pool	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	FAIL	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	
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	
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	
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	
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	
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	
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	0%	0%	0%	0%	0%	0%	0%	60%	56%	56%	56%	56%	56%	56%	56%	56%	16%	
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	0%	0%	0%	0%	0%	0%	0%	28%	28%	28%	28%	28%	28%	28%	28%	28%	53%	
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	0	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
15.	Percent of **habitat unit** covered by shelter: %	0	30	30	30	30	15	30	40	25	25	25	25	25	25	25	25	40	
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	
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	0	90	90	90	90	45	90	120	75	75	75	75	75	75	75	75	120	
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	
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	
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	
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	0%	48%	48%	29%	26%	20%	26%	34%	29%	29%	29%	29%	29%	29%	29%	29%	53%	
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%	17%	17%	17%	17%	17%	17%	17%	17%	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%	2%	2%	2%	2%	2%	2%	2%	2%	21%	
	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**	
	HABITAT UNIT NUMBER	**HU01_D**	**HU09**	**HU09**	**HU10**	**HU11**	**HU12**	**HU11**	**HU13**	**HU14**	**HU14**	**HU14**	**HU14**	**HU14**	**HU14**	**HU14**	**HU14**	**HU07_2**	
	SITE NUMBER	**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**	
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	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	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	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	
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	
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	
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	
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	4	4	4	4	4	4	4	4	1	
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	2	2	2	2	2	2	2	2	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)	0	5	5	5	5	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)	0	2	2	2	2	1	2	3	2	2	2	2	2	2	2	2	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	
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	0	3	3	3	3	1	3	4	2	2	2	2	2	2	2	2	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	
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	
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	
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	1	2	3	2	2	2	2	2	2	2	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)	0	0	0	0	0	0	0	0	1	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)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	

Table 28. Adaptive Management Plan full checklist for the Weinstock enhancement reach, September 2019.

	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
	mmddyy	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319
	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	2	2	2	2	2	2	2	2	2	2	2
	Project Site Type	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
	Project Feature Number	NA	NA	NA	NA	NA	NA	S1-01	S2-01	S2-02	S2-03	S2-04	S2-05	S2-06	S2-07	S2-08	S2-09	S2-10	S2-11
	Feature Type Code	NA	NA	NA	NA	NA	NA	PWH	BWW	SCW	HW	SCW	HW	SCW	HW	HW	R	HW	SCW
	Habitat Unit	HU01	HU02	HU03	HU04	HU05	HU06	HU07	HU01_2	HU01_2	HU01_2	HU01_2	HU01_2	HU01_2	HU01_2	HU01_2	HU08	HU08	HU09
	Habitat Type	Pool	Flatwater	Pool	Riffle	Pool	Riffle	Pool	Pool	Pool	Pool	Pool	Pool	Pool	Pool	Pool	Flatwater	Flatwater	Pool
1.	Length of targeted treatment (ft)	0	0	0	0	0	0	30	27	23	15	26	31	30	36	29	40	39	25
2.	Width of targeted treatment: (ft)	0	0	0	0	0	0	25	27	16	34	17	16	26	20	20	28	19	25
3.	Estimate area of the targeted **feature**: (ft^2)	0	0	0	0	0	0	750	729	368	510	442	496	780	720	580	1120	741	625
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	NA	NA	NA	NA	NA	NA	GOOD	GOOD	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	FAIL	EXCL	EXCL
5a	Are problems with the **feature** visible?	NA	NA	NA	NA	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO
5b	Types: ANC, BBB, CRF, MAT, SHF, STR, SWA, UND, UNS, WSH, OTH, NON	NA	NA	NA	NA	NA	NA	NON	NON	NON	NON	NON	NON	NON	NON	NON	WSH	NON	NON
6a	Is the **feature** still in its original location?	NA	NA	NA	NA	NA	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	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6c	If yes: LBK, MDC, RBK, SPN, OTH	NA	NA	NA	NA	NA	NA	RBK	RBK	RBK	RBK	LBK	RBK	LBK	RBK	RBK	SPN	SPN	RBK
6d	Is the **feature** still in its original orientaton?	NA	NA	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6e	If yes: DNS, MUL, PRL, PRP, UPS, OTH	NA	NA	NA	NA	NA	NA	MUL	MUL	MUL	UPS	UPS	UPS	UPS	UPS	UPS	OTH	DNS	UPS
7.	Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	POO	FLT	POO	RIF	POO	RIF	POO	POO	POO	POO	POO	POO	POO	POO	POO	FLT	FLT	POO
8.	If an objective, did the **feature** create the targeted instream habitat type?	NA	NA	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES
9.	Were there any unintended effects by the **feature** on the habitat type? If Y, comment.	NA	NA	NA	NA	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO
10.	Mean water depth in **habitat unit**: ft	2.7	1.2	3.2	1.2	1.8	1.2	3.1	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	1.1	1.1	2.0
11a	Maximum water depth in **habitat unit**: ft	5.2	2.8	8.5	2.5	4.4	2.7	5.9	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	2.3	2.3	3.8
11b	Area of **habitat unit** within 0.5 -2.0 ft depth: (ft2)	1564.4	3950.7	3708.8	1487.8	1300.9	1767.9	656.0	1564.4	1564.4	1564.4	1564.4	1564.4	1564.4	1564.4	1564.4	1015.9	1015.9	1475.6
11c	Area of **habitat unit** within 2.0 -4.0 ft depth: (ft2)	3694.4	739.7	3695.7	281.8	1018.0	191.6	2220.1	3694.4	3694.4	3694.4	3694.4	3694.4	3694.4	3694.4	3694.4	16.7	16.7	1880.0
11d	Area of **habitat unit** within 0.5-4.0 ft depth: (ft2)	5258.8	4690.4	7404.5	1769.6	2318.9	1959.5	2876.2	5258.8	5258.8	5258.8	5258.8	5258.8	5258.8	5258.8	5258.8	1032.6	1032.6	3355.6
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	24%	77%	32%	64%	49%	75%	16%	24%	24%	24%	24%	24%	24%	24%	24%	86%	86%	0%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	56%	14%	32%	12%	38%	8%	53%	56%	56%	56%	56%	56%	56%	56%	56%	1%	1%	0%
11g	% Area of **habitat** unit within 0.5-4.0 ft depth	79%	92%	65%	76%	87%	83%	68%	79%	79%	79%	79%	79%	79%	79%	79%	87%	87%	0%
11h	If an objective, did the **feature** increase/decrease water depth in the treatment area?	NA	NA	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	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:																		
13.	Were there any unintended effects of the **feature** on the water depth? If Y, comment.	NA	NA	NA	NA	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	3	2	3	2	3	2	3	3	3	3	3	3	3	3	3	3	3	3
15.	Percent of **habitat unit** covered by shelter: %	35	25	20	15	20	20	40	35	35	35	35	35	35	35	35	25	25	30
16a	1st dominant cover in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	RTW	TVG	SWD	SWD	SWD	TVG	RTW	RTW	RTW	RTW	RTW	RTW	RTW	RTW	RTW	RTW	RTW	RTW
16b	2nd dominant in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	TVG	SWD	TVG	TVG	TVG	SWD	SWD	TVG	TVG	TVG	TVG	TVG	TVG	TVG	TVG	TVG	LWD	SWD
17a	If an objective, did the **feature** increase instream shelter rating?	NA	NA	NA	NA	NA	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	105	50	60	30	60	40	120	105	105	105	105	105	105	105	105	75	75	90
18a	Large woody debris count in **habitat unit**: D >1', L 6-20'	0	0	2	0	0	1	1	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	1	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	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	NON	RPR	NON	NON	UNK	RPR	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
21a	If an objective, did the **feature** lead to the targeted channel conditions?	NA	NA	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES
21b	Overall Offchannel Condition (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	NA	NA	NA	NA	NA	NA	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	NA	NA	NA	NA	NA	NA		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	NA	NA	NA	NA	NA	NA		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.	NA	NA	NA	NA	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO
23.	If an objective, did the **feature** decrease/increase velocity in the treatment area?	NA	NA	NA	NA	NA	NA	DEC	DEC	DEC	DEC	DEC	DEC	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?	NA	NA	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	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**	1.9	2.0	2.3	2.9	2.6	3.6	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.8
26c	Measured mean velocity (ft/sec) in **habitat unit**	0.5	1.0	0.5	1.1	1.0	1.5	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.9	0.9	0.6
27.	Area of **habitat unit** within targeted velocity: (ft^2)	3599.2	873.6	6800.3	947.1	586.6	425.0	2242.5	3599.2	3599.2	3599.2	3599.2	3599.2	3599.2	3599.2	3599.2	366.7	366.7	1763.0
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	54%	17%	59%	41%	22%	18%	53%	54%	54%	54%	54%	54%	54%	54%	54%	31%	31%	48%
29.	Were there any unintended effects of **feature** on velocity If Y, comment.	NA	NA	NA	NA	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO
30a	1st/2nd dominant substrate in **habitat unit**: BED, BOL, COB, GRV, SND, SLC, OTH	GRV	COB	SND	COB	GRV	COB	SND	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	SND
30b	2nd dominant substrate in **habitat unit**: BED, BOL, COB, GRV, SND, SLC, OTH	SND	GRV	GRV	GRV	SND	GRV	GRV	SND	SND	SND	SND	SND	SND	SND	SND	COB	COB	GRV
31.	If an objective, did the **feature** achieve the targeted substrate composition?	NA	NA	NA	NA	NA	NA	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	2903.6	547.6	3763.3	474.9	315.1	157.3	1443.3	2903.6	2903.6	2903.6	2903.6	2903.6	2903.6	2903.6	2903.6	219.0	219.0	1484.4
36b	Total **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	1088.8	478.8	2134.5	468.0	207.3	157.3	566.8	1088.8	1088.8	1088.8	1088.8	1088.8	1088.8	1088.8	1088.8	218.4	218.4	638.7
36c	Total **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	1814.8	68.7	1628.8	7.0	107.8	0.0	876.5	1814.8	1814.8	1814.8	1814.8	1814.8	1814.8	1814.8	1814.8	0.6	0.6	845.7
36d	% **habitat unit** area where targeted depth, velocity and shelter criteria overlap	44%	11%	33%	20%	12%	7%	34%	44%	44%	44%	44%	44%	44%	44%	44%	18%	18%	0%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	16%	9%	19%	20%	8%	7%	13%	16%	16%	16%	16%	16%	16%	16%	16%	18%	18%	0%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	27%	1%	14%	0%	4%	0%	21%	27%	27%	27%	27%	27%	27%	27%	27%	0%	0%	0%
37.	Does this **feature** need: DEC, ENH, MNT, REP, NON, OTH	NA	NA	NA	NA	NA	NA	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
38.	Are additional restoration treatments recommended at this **site**?	NA	NA	NA	NA	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO

Table 28. Adaptive Management Plan full checklist for the Weinstock enhancement reach, September 2019.

	Project Reach	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
	Colloquial Name	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS
	mmddyy	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319	90319
	Survey Type	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
	Project Site Type	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
	Feature Type Code	FW	HW	SCW	HW	SCW	FW	SCW	SCW	HW	R	HW	HW	HW	HW	HW	HW	AW
	Habitat Unit	HU01_D	HU09	HU09	HU10	HU11	HU12	HU11	HU13	HU14	HU14	HU14	HU14	HU14	HU14	HU14	HU14	HU07_2
	Habitat Type	Dry	Pool	Pool	Pool	Pool	Riffle	Pool	Pool	Flatwater	Flatwater	Flatwater	Flatwater	Flatwater	Flatwater	Flatwater	Flatwater	Pool
1.	Length of targeted treatment (ft)	35	38	33	38	25	34	32	26	36	58	33	36	35	28	34	38	40
2.	Width of targeted treatment: (ft)	20	16	26	18	25	20	28	24	19	21	23	25	30	16	22	22	32
3.	Estimate area of the targeted **feature**: (ft^2)	700	608	858	684	625	680	896	624	684	1218	759	900	1050	448	748	836	1280
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	EXCL	EXCL	EXCL	EXCL	EXCL	EXCL	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	YES	NO	NO	NO	NO	NO	NO	NO
5b	Types: ANC, BBB, CRF, MAT, SHF, STR, SWA, UND, UNS, WSH, OTH, NON	NON	NON	NON	STR	NON	NON	NON	NON	NON	WSH	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	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
6c	If yes: LBK, MDC, RBK, SPN, OTH	LBK	OTH	RBK	LBK	LBK	RBK	LBK	RBK	RBK	SPN	SPN	RBK	RBK	RBK	RBK	LBK	LBK
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
6e	If yes: DNS, MUL, PRL, PRP, UPS, OTH	UPS	OTH	UPS	UPS	UPS	UPS	OTH	UPS	UPS	OTH	DNS	UPS	UPS	UPS	UPS	UPS	UPS
7.	Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	DRY	POO	POO	POO	POO	RIF	POO	POO	FLT	FLT	FLT	FLT	FLT	FLT	FLT	FLT	POO
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
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
10.	Mean water depth in **habitat unit**: ft	0.0	2.0	2.0	1.0	1.5	0.6	1.5	1.5	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	3.1
11a	Maximum water depth in **habitat unit**: ft	0.0	3.8	3.8	2.4	3.3	1.9	3.3	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	5.9
11b	Area of **habitat unit** within 0.5 -2.0 ft depth: (ft2)	0.0	1475.6	1475.6	654.9	1131.5	677.7	1131.5	607.1	1148.7	1148.7	1148.7	1148.7	1148.7	1148.7	1148.7	1148.7	656.0
11c	Area of **habitat unit** within 2.0 -4.0 ft depth: (ft2)	0.0	1880.0	1880.0	16.6	360.6	0.0	360.6	279.8	577.8	577.8	577.8	577.8	577.8	577.8	577.8	577.8	2220.1
11d	Area of **habitat unit** within 0.5-4.0 ft depth: (ft2)	0.0	3355.6	3355.6	671.5	1492.1	677.7	1492.1	886.9	1726.5	1726.5	1726.5	1726.5	1726.5	1726.5	1726.5	1726.5	2876.2
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	0%	0%	0%	0%	0%	0%	0%	60%	56%	56%	56%	56%	56%	56%	56%	56%	16%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	0%	0%	0%	0%	0%	0%	0%	28%	28%	28%	28%	28%	28%	28%	28%	28%	53%
11g	% Area of **habitat** unit within 0.5-4.0 ft depth	0%	0%	0%	0%	0%	0%	0%	87%	84%	84%	84%	84%	84%	84%	84%	84%	68%
11h	If an objective, did the **feature** increase/decrease water depth in the treatment area?	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	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
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	YES	NO	NO	NO	NO	NO	NO	NO
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	0	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
15.	Percent of **habitat unit** covered by shelter: %	0	30	30	30	30	15	30	40	25	25	25	25	25	25	25	25	40
16a	1st dominant cover in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	NON	RTW	RTW	RTW	LWD	RTW	LWD	RTW	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	RTW
16b	2nd dominant in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	NON	SWD	SWD	LWD	RTW	TVG	RTW	AVG	TVG	TVG	TVG	TVG	TVG	TVG	TVG	TVG	SWD
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
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	0	90	90	90	90	45	90	120	75	75	75	75	75	75	75	75	120
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	1
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	1
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	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	RPR
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
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
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.	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO
23.	If an objective, did the **feature** decrease/increase velocity in the treatment area?	NA	DEC	DEC	DEC	DEC	DEC	DEC	DEC	DEC	DEC	DEC	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
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
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	1.8	1.8	1.8	2.5	3.0	2.5	3.5	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	1.8
26c	Measured mean velocity (ft/sec) in **habitat unit**	0.0	0.6	0.6	0.9	1.0	1.3	1.0	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.6
27.	Area of **habitat unit** within targeted velocity: (ft^2)	0.0	1763.0	1763.0	215.2	415.5	225.5	415.5	346.4	591.6	591.6	591.6	591.6	591.6	591.6	591.6	591.6	2242.5
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	0%	48%	48%	29%	26%	20%	26%	34%	29%	29%	29%	29%	29%	29%	29%	29%	53%
29.	Were there any unintended effects of **feature** on velocity If Y, comment.	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO
30a	1st/2nd dominant substrate in **habitat unit**: BED, BOL, COB, GRV, SND, SLC, OTH	NR	SND	SND	SND	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	SND
30b	2nd dominant substrate in **habitat unit**: BED, BOL, COB, GRV, SND, SLC, OTH	NR	GRV	GRV	GRV	COB	COB	COB	SND	BOL	BOL	BOL	BOL	BOL	BOL	BOL	BOL	GRV
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	1484.4	1484.4	143.6	300.4	103.9	300.4	233.3	377.0	377.0	377.0	377.0	377.0	377.0	377.0	377.0	1443.3
36b	Total **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	0.0	638.7	638.7	143.6	227.0	103.9	227.0	148.9	342.2	342.2	342.2	342.2	342.2	342.2	342.2	342.2	566.8
36c	Total **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0.0	845.7	845.7	0.0	73.4	0.0	73.4	84.4	34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9	876.5
36d	% **habitat unit** area where targeted depth, velocity and shelter criteria overlap	0%	0%	0%	0%	0%	0%	0%	0%	18%	18%	18%	18%	18%	18%	18%	18%	34%
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%	17%	17%	17%	17%	17%	17%	17%	17%	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%	2%	2%	2%	2%	2%	2%	2%	2%	21%
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

Truett Hurst, August 2019

Depth and Velocity

Table 29. Areas and percentages of: wetted area, optimal depth and velocity, and optimal hydraulic habitat within the the Truett Hurst enhancement reach, August 2019.

Truett Hurst Post-effective flow August 2019	Wetted area (ft^2)	Optimal depth (ft^2)			Optimal velocity (ft^2)	Optimal habitat (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	58,331	33,091	17,611	50,702	20,262	8,993	6,281	15,274
Side channel area	16,572	9,039	1,784	10,823	10,928	5,849	1,488	7,337
Side channel alcove area	6,234	**3**,321	39	3,360	4,159	2,199	33	2,233
Total area	**81,137**	**45,451**	**19,435**	**64,885**	**35,348**	**17,041**	**7,802**	**24,844**
Main channel % of wetted area	72%	57%	30%	87%	35%	15%	11%	26%
Side channel % of wetted area	20%	55%	11%	65%	66%	35%	9%	44%
Side channel alcove area % of wetted area	8%	53%	1%	54%	67%	35%	1%	36%
Total % of wetted area	**100%**	**56%**	**24%**	**80%**	**44%**	**21%**	**10%**	**31%**

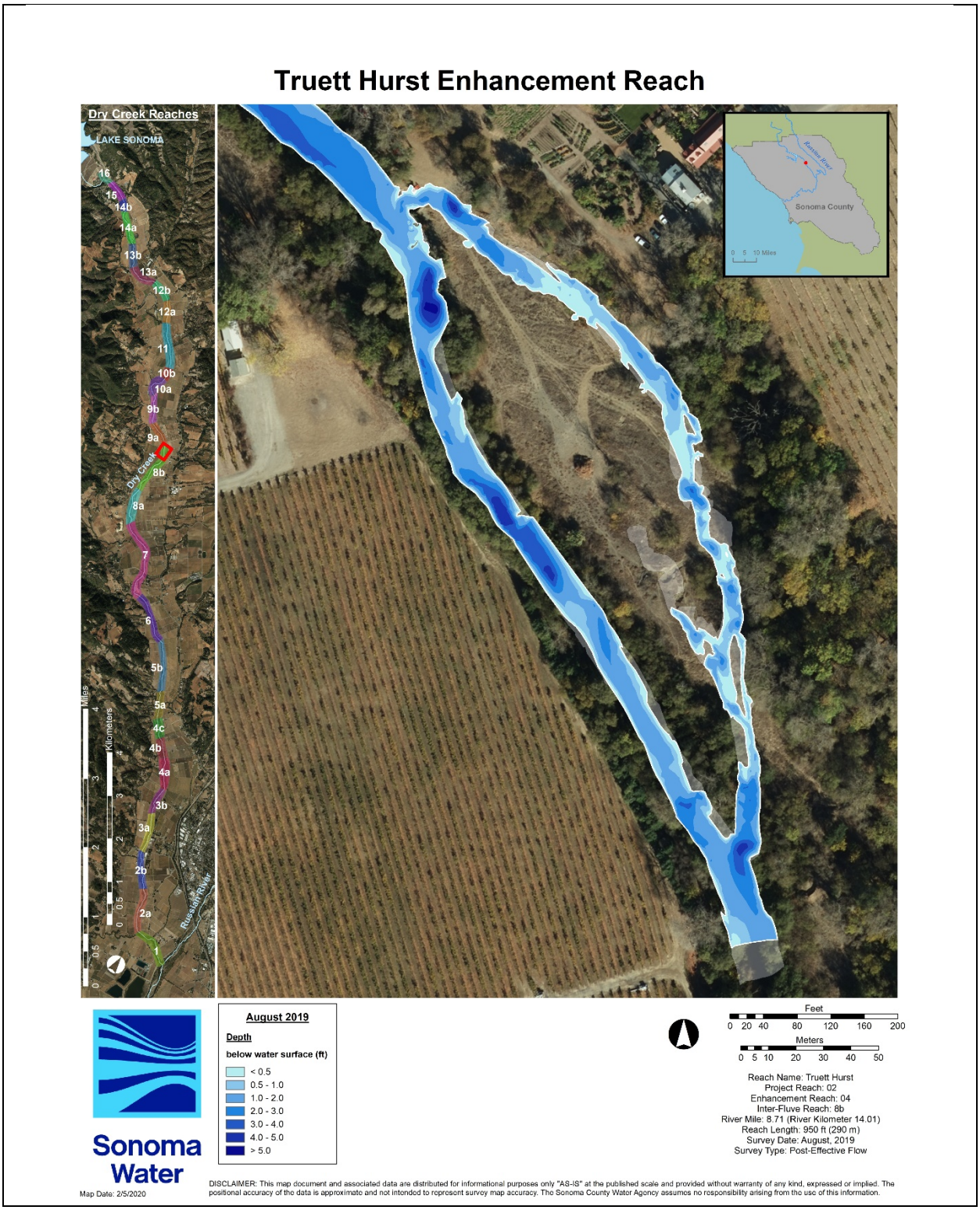

Figure 49. Measured water depth within the Truett Hurst enhancement reach, August 2019.

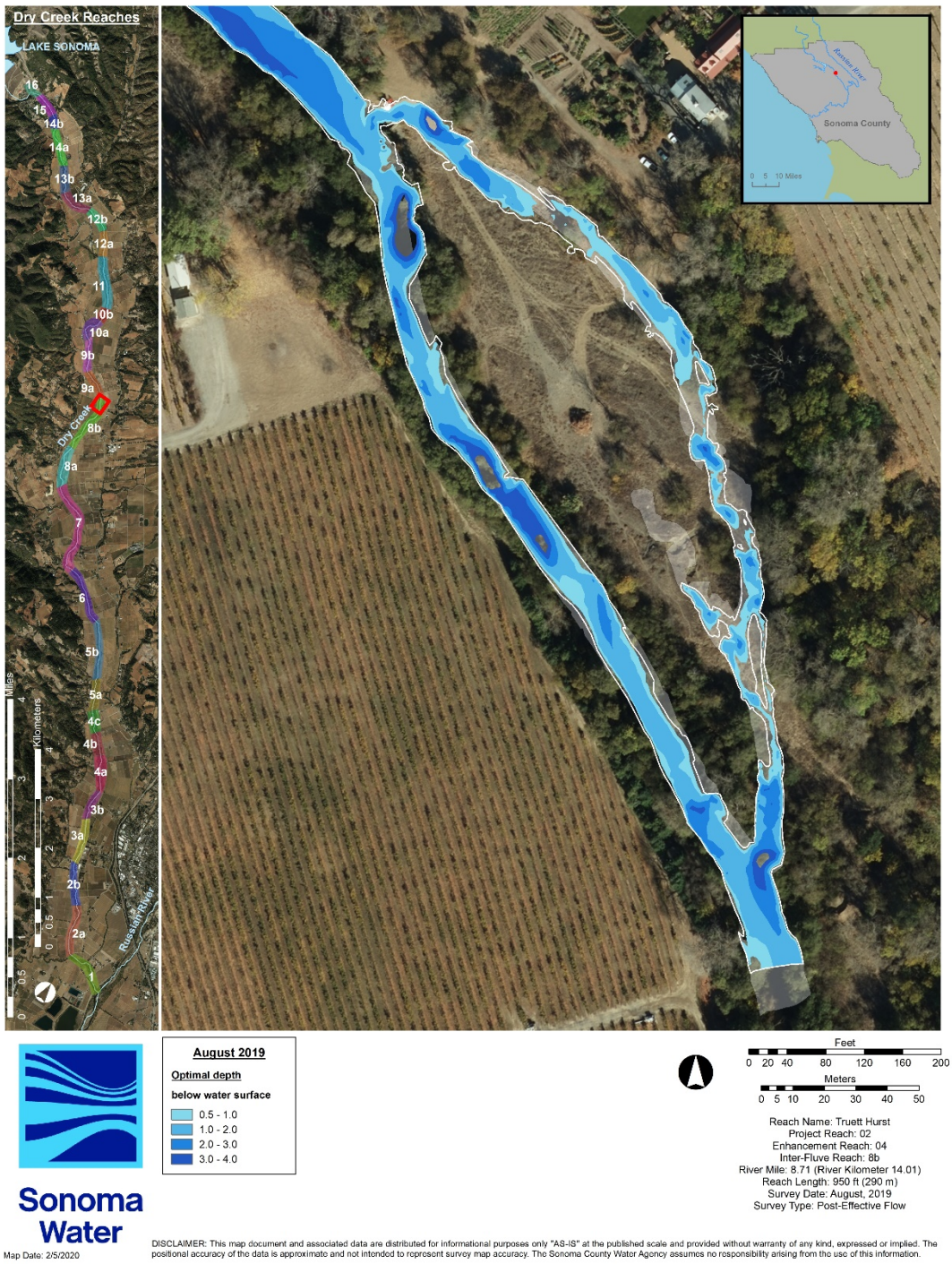

Figure 50. Optimal water depth for fry (0.5-2.0 ft) and parr (2.0-4.0 ft) within the Truett Hurst enhancement reach, August 2019.

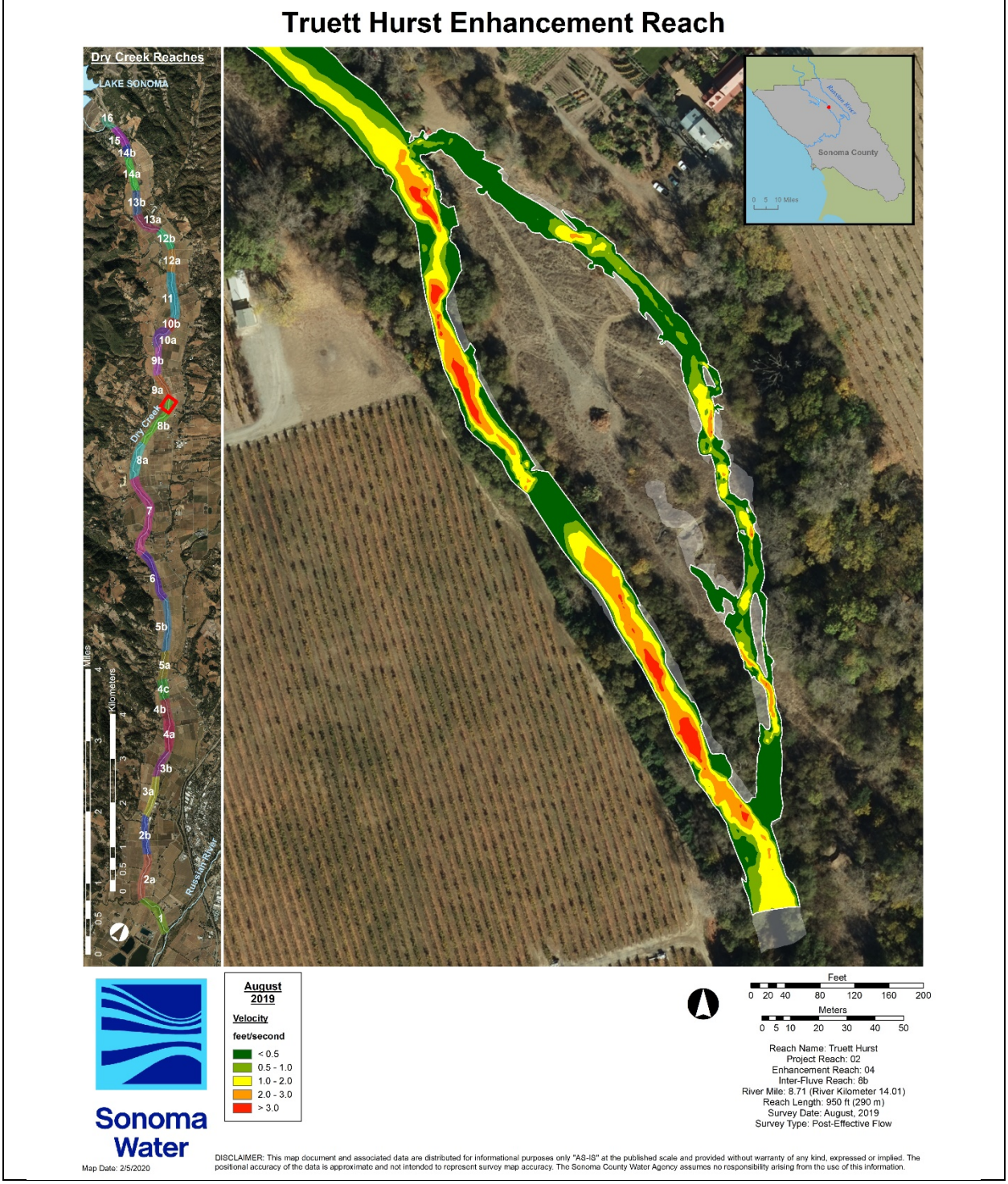

Figure 51. Measured water velocity within the Truett Hurst enhancement reach, August 2019.

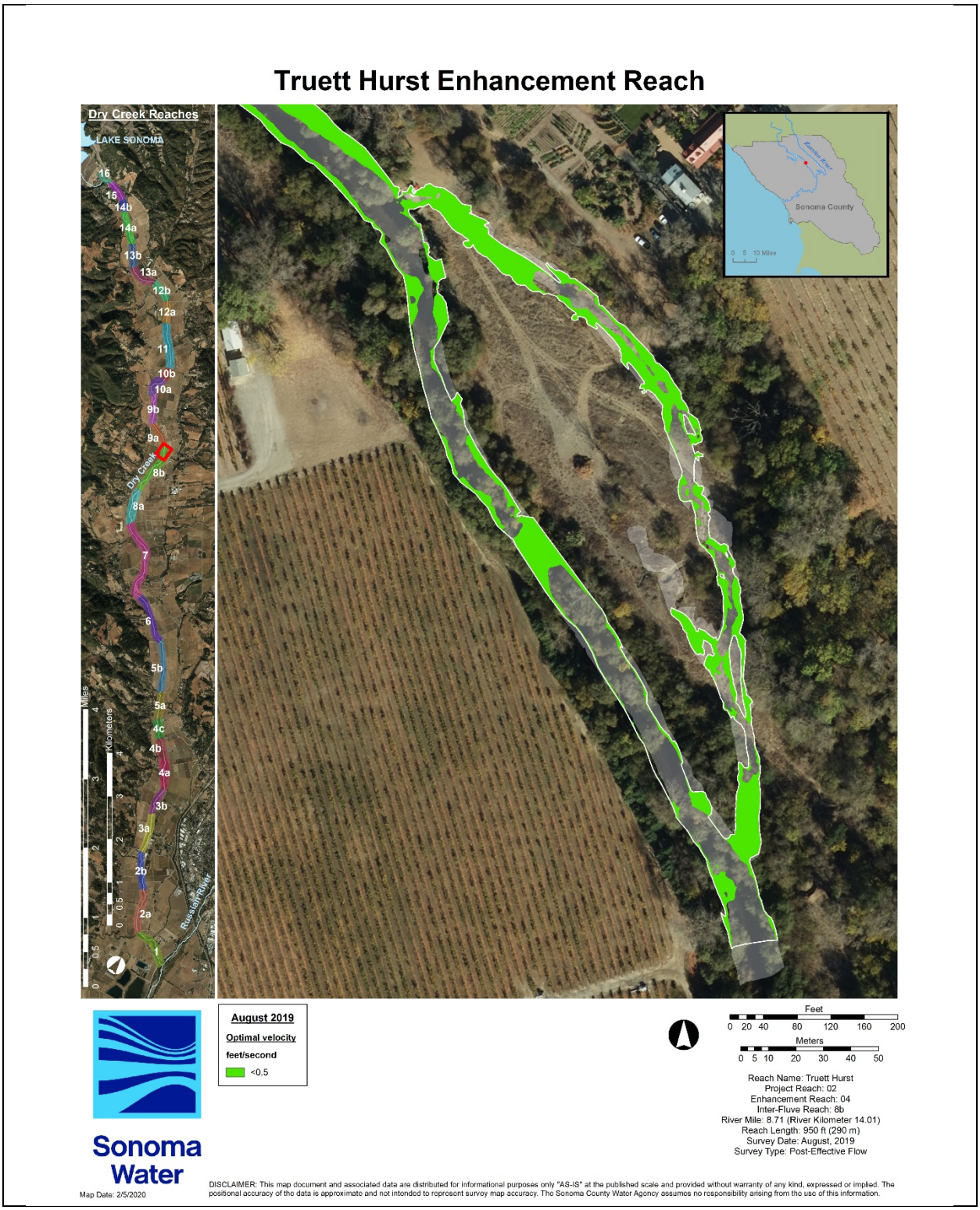

Figure 52. Optimal water velocity for fry and parr (< 0.5 ft/s) within the Truett Hurst enhancement reach, August 2019.

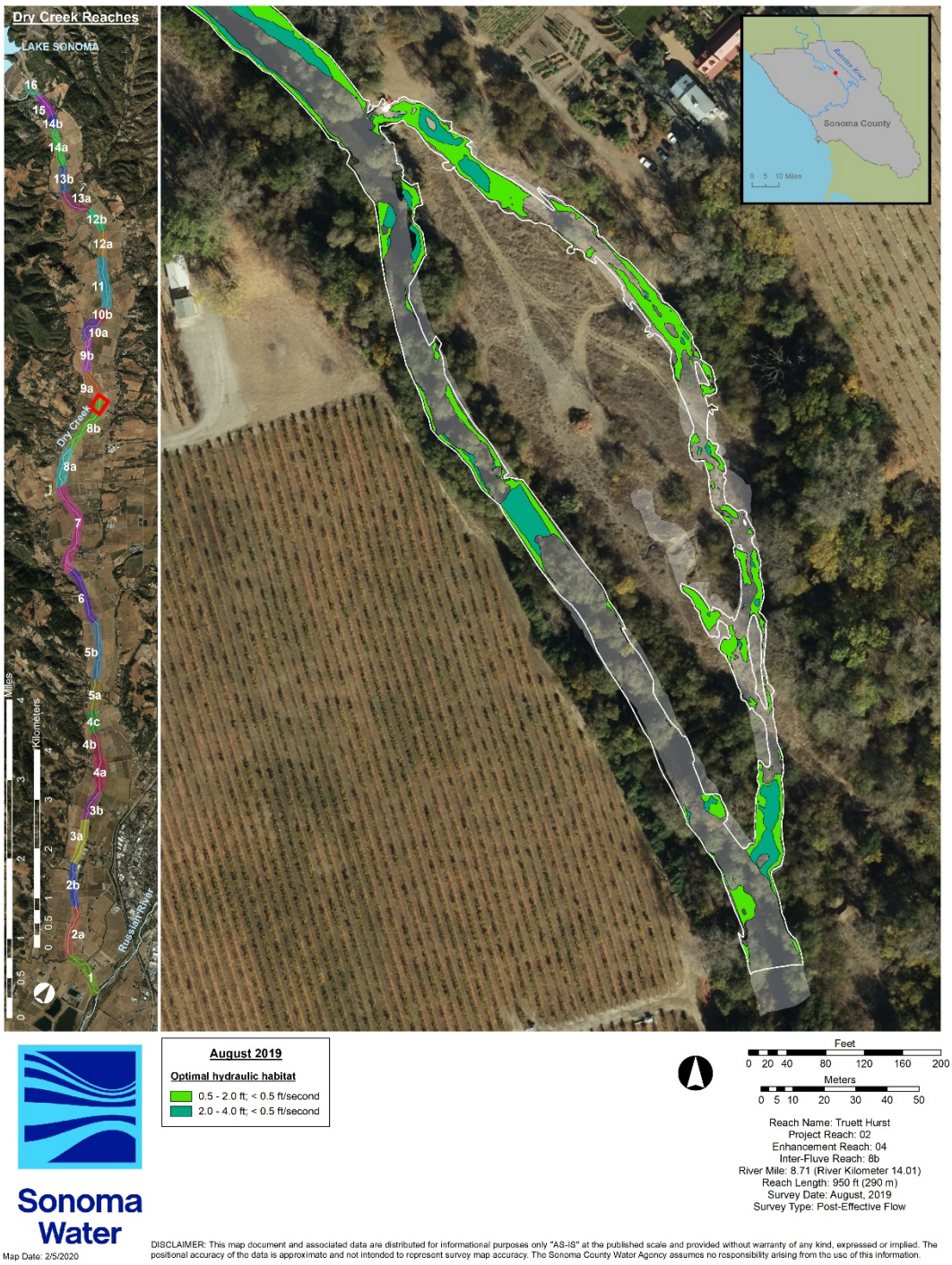

Figure 53. Optimal hydraulic habitat for fry (<0.5 f/s, 0.5-2.0 ft) and parr (<0.5 f/s, 2.0-4.0 ft) within the Truett Hurst enhancement reach, August 2019.

Habitat Types and Shelter Values

Table 30. Habitat, types, shelter value, percent cover, and shelter score for habitat units within the Truett Hurst enhancement reach, August 2019.

Post-effective flow (August 2019)				
Habitat Unit #	**Habitat Type**	**Shelter Value**	**Percent Cover**	**Shelter Score**
HU01	Flatwater	3	10	30
HU02	Pool	3	25	75
HU03	Riffle	1	5	5
HU04	Flatwater	2	15	30
HU05	Riffle	2	20	40
HU06	Pool	3	45	135
HU07	Flatwater	3	20	60
HU08	Riffle	3	25	75
HU09	Flatwater	2	30	60
HU10	Pool	3	30	90
HU11	Riffle	3	40	120
HU12	Pool	2	15	30
HU13	Flatwater	2	15	30
HU14	Pool	3	25	75
HU15	Riffle	1	10	10
HU16	Pool	3	35	105
HU17	Flatwater	3	30	90
HU18	Riffle	1	15	15
HU19	Pool	3	40	120
HU20	Flatwater	1	5	5
HU21	Alcove	3	40	120
HU22	Pool	3	45	135
HU23	Riffle	2	40	80
HU24	Flatwater	3	70	210
HU25	Pool	3	30	90
HU26	Riffle	2	20	40
HU27	Pool	3	20	60
HU28	Pool	3	10	30
HU29	Pool	3	20	60
HU30	Riffle	3	10	30
HU31	Pool	3	10	30
HU32	Flatwater	3	35	105
HU33	Flatwater	3	35	105
HU34	Riffle	3	10	30
HU35	Pool	3	20	60
HU36	Pool	3	30	90
Pool: riffle	**15:10 (1.50)**			**Avg = 69**

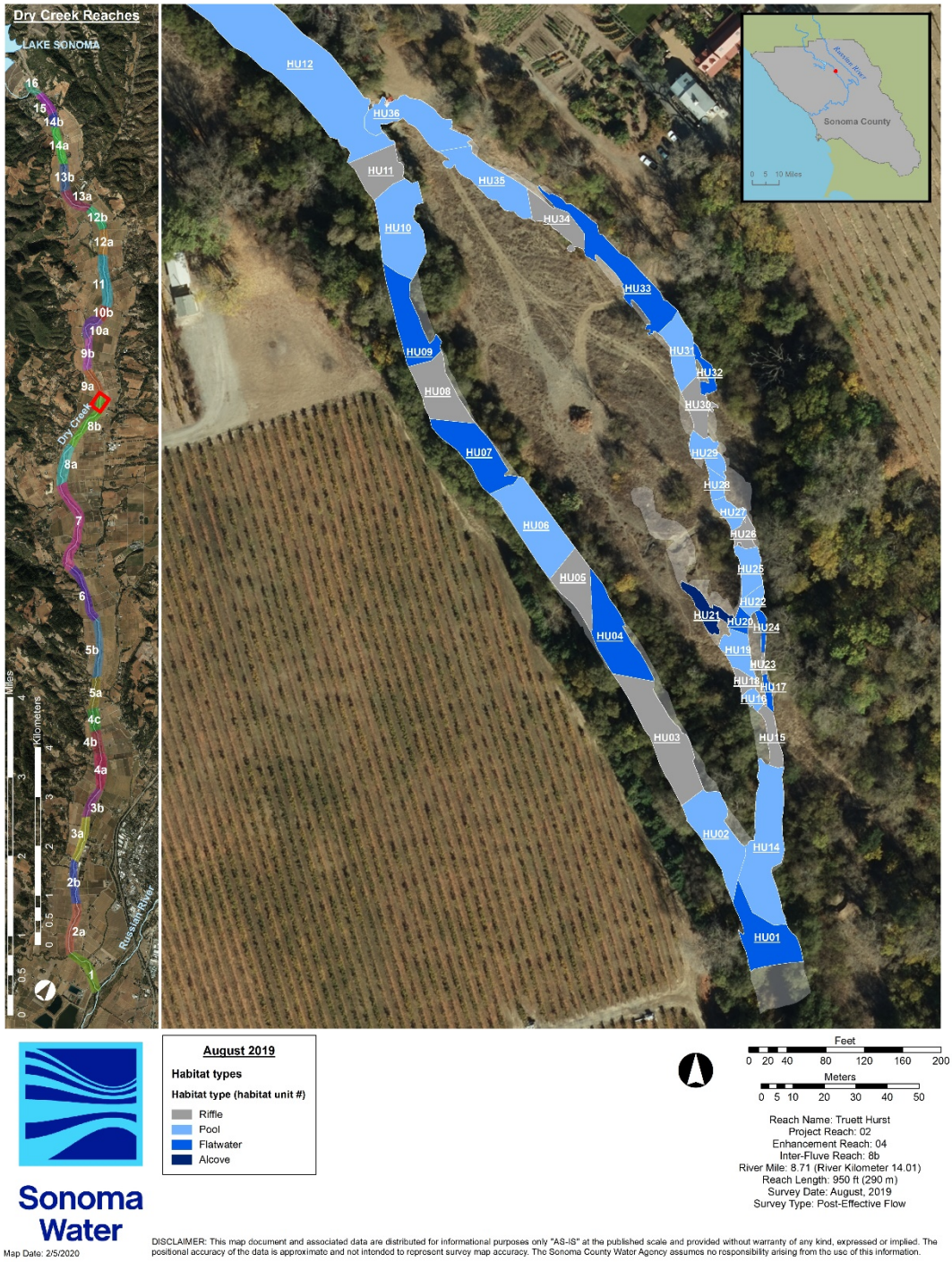

Figure 54. Habitat unit number and type within the Truett Hurst enhancement reach, August 2019.

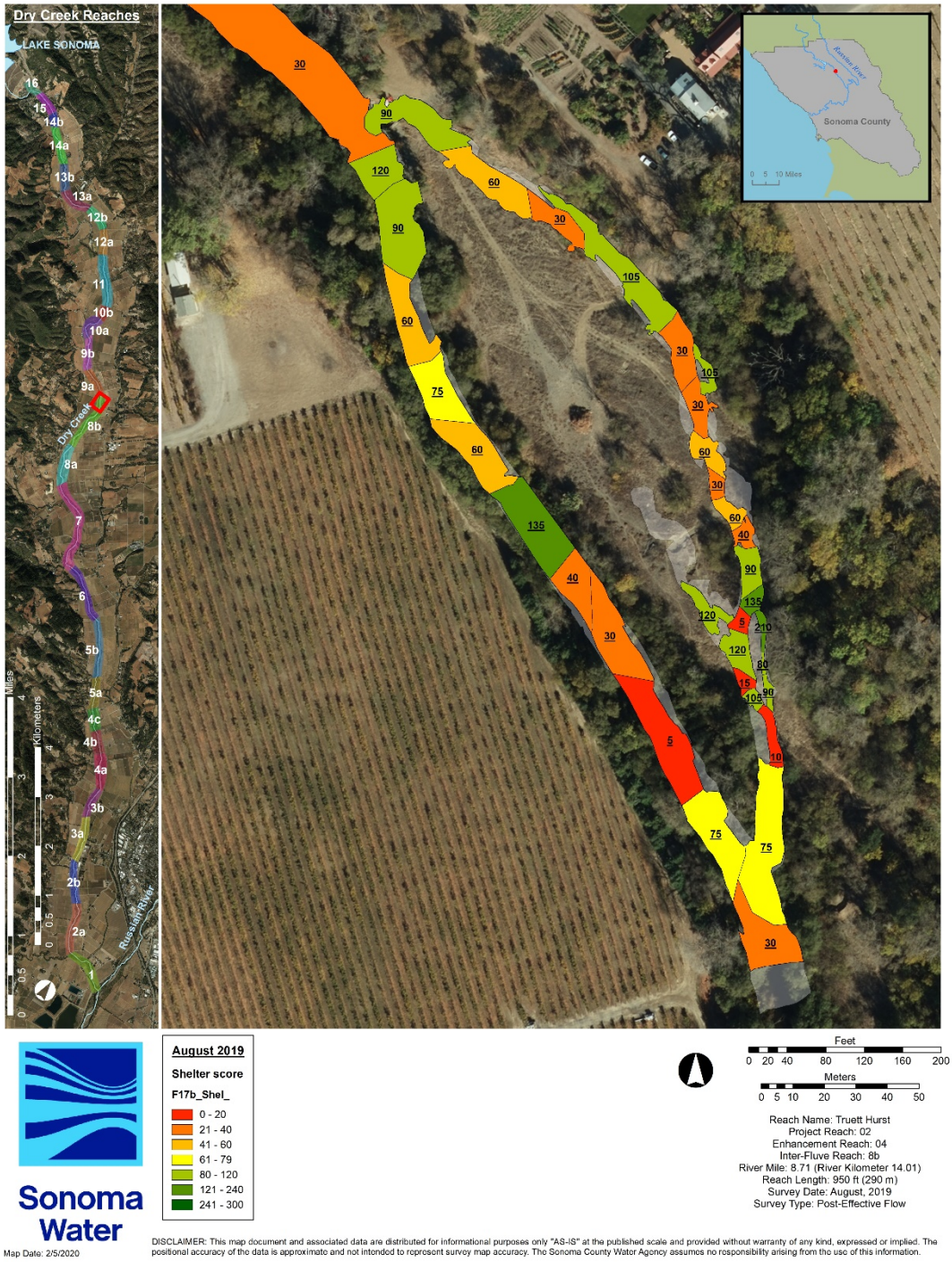

Figure 55. Habitat unit shelter scores within the Truett Hurst enhancement reach, August 2019.

Feature, Habitat Unit, Site, and Reach Ratings

Table 31. Post-effective flow feature ratings for the Truett Hurst enhancement reach August 2019.

	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
	mmddyy	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019
	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 Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
	PROJECT FEATURE NUMBER	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	S2-18
	Feature Type Code	BCW	HW	HW	SCW	R	HW	HW	SCW	SCW	HW	HW	HW	SCW	SCW	SCW	HW	HW	HW
	Habitat Unit	HU14_2	HU14_2	HU14_2	HU14_2	HU15	HU16	HU17	HU22	HU25	HU25	HU26	HU27	HU27	HU29	HU29	HU29	HU29	HU30
	Habitat Type	Pool	Pool	Pool	Pool	Riffle	Pool	Flatwater	Pool	Pool	Pool	Riffle	Pool	Pool	Pool	Pool	Pool	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	YES	NO	NO	NO
6a	Is the **feature** still in its original location?	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?	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	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	YES	YES	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**?	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?	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	**S2-01**	**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**	**S2-18**
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	1	1	1	1	1	0	1	1	1
6a	Is the **feature** still in its original location? (YES = 1 pt, NO = 0 pt)	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)	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	1	1	1	1	1	1	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)	1	1	1	1	1	1	1	1	1	1	1	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	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)	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)	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	**S2-01**	**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**	**S2-18**
FEATURE RATING	Feature quantitative rating out of 15	14	13	13	13	12	13	13	13	13	13	13	13	12	12	12	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	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent

Table 31. Post-effective flow feature ratings for the Truett Hurst enhancement reach August 2019.

	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
	mmddyy	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019
	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 Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
	PROJECT FEATURE NUMBER	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	S2-36
	Feature Type Code	R	HW	HW	FW	SCW	SCW	HW	R	HW	HW	HW	HW	FW	HW	FW	SCW	SCW	SCW
	Habitat Unit	HU30	HU31	HU02_D	HU02_D	HU02_D	HU02_D	HU02_D	HU02_D	HU02_D	HU02_D	HU35	HU02_D	HU02_D	HU35	HU35	HU35	HU36	HU36
	Habitat Type	Riffle	Pool	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Pool	Dry	Dry	Pool	Pool	Pool	Pool	Pool
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	GOOD	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	GOOD	GOOD	UNKN	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD
5a	Are problems with the **feature** visible?	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	NO	NO	YES	NO	NO	NO
6a	Is the **feature** still in its original location?	NO	YES	UNK	UNK	UNK	UNK	UNK	UNK	UNK	YES	YES	UNK	YES	YES	YES	YES	YES	YES
6b	Is the **feature** still in its original position?	YES	YES	UNK	UNK	UNK	UNK	UNK	UNK	UNK	NO	YES	UNK	YES	YES	NO	YES	YES	YES
6d	Is the **feature** still in its original orientaton?	YES	YES	UNK	UNK	UNK	UNK	UNK	UNK	UNK	YES	YES	UNK	YES	YES	YES	YES	YES	YES
8.	If an objective, did the **feature** create the targeted instream habitat type?	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	YES	YES	NO	YES	YES	YES
9.	Were there any unintended effects by the **feature** on the habitat type? If Y, comment.	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	NO	NO	YES	NO	NO	NO
17a	If an objective, did the **feature** increase instream shelter rating?	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	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	YES	NO	NO	NO
21a	If an objective, did the **feature** lead to the targeted channel conditions?	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	YES	YES	YES	YES	YES	YES
25.	Did the **feature** achieve the targeted velocity?	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	YES	YES	NO	YES	YES	YES
	PROJECT FEATURE NUMBER	**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**	**S2-36**
4.	Structural condition of **feature**: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	4	4	0	0	0	0	0	0	0	4	4	0	4	4	4	4	4	4
5a	Are problems with the **feature** visible? (NO = 1 pt, YES = 0 pt)	1	1	0	0	0	0	0	0	0	0	1	0	1	1	0	1	1	1
6a	Is the **feature** still in its original location? (YES = 1 pt, NO = 0 pt)	0	1	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0	1	0	1	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	0	0	0	0	0	0	0	0	1	0	1	1	0	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	0	0	1	0	1	1	0	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
21a	If an objective, did the **feature** lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	1	1	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0	1	0	1	1	0	1	1	1
	PROJECT FEATURE NUMBER	**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**	**S2-36**
FEATURE RATING	Feature quantitative rating out of 15	12	13	0	0	0	0	0	0	0	6	13	0	13	13	8	13	13	13
	Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)	Excellent	Excellent	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Fair	Excellent	Not rated	Excellent	Excellent	Fair	Excellent	Excellent	Excellent

Table 31. Post-effective flow feature ratings for the Truett Hurst enhancement reach August 2019.

	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
	mmddyy	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019
	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	3	3	3	3	3	3	3	3	3	4	4	4	4	4
	Project Site Type	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
	PROJECT FEATURE NUMBER	S2-37A	S2-37B	S2-37C	S2-38	NA	S3-01	S3-02	S3-03	S3-04	S3-05	S3-06	S3-07	S3-08	S4-01	S4-02	S4-03	S4-04	S4-05
	Feature Type Code	ISW	ISW	ISW	R	NA	BCW	HW	BCW	HW	BCW	HW	FW	P	BCW	HW	HW	HW	HW
	Habitat Unit	HU02_D	HU36	HU36	HU36	HU20_2	HU19_2	HU21	HU03_D	HU03_D	HU03_D	HU03_D	HU03_D	HU03_D	HU33	HU04_D	HU04_D	HU33	HU04_D
	Habitat Type	Dry	Pool	Pool	Pool	Flatwater	Pool	Alcove	Dry	Dry	Dry	Dry	Dry	Dry	Flatwater	Dry	Dry	Flatwater	Dry
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	GOOD	GOOD	FAIL	NA	GOOD	GOOD	UNKN	FAIR	UNKN	UNKN	UNKN	UNKN	GOOD	UNKN	UNKN	GOOD	UNKN
5a	Are problems with the **feature** visible?	NO	NO	NO	YES	NA	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6a	Is the **feature** still in its original location?	YES	YES	YES	YES	NA	YES	YES	YES	YES	YES	UNK	UNK	UNK	YES	UNK	UNK	YES	UNK
6b	Is the **feature** still in its original position?	YES	YES	YES	YES	NA	YES	YES	NO	NO	NO	UNK	UNK	UNK	NO	UNK	UNK	YES	UNK
6d	Is the **feature** still in its original orientaton?	YES	YES	YES	YES	NA	YES	YES	UNK	UNK	UNK	UNK	UNK	UNK	YES	UNK	UNK	YES	UNK
8.	If an objective, did the **feature** create the targeted instream habitat type?	YES	YES	YES	NO	NA	YES	YES	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.	NO	NO	NO	YES	NA	NO	NO	YES	YES	YES	YES	YES	YES	NO	YES	YES	NO	YES
17a	If an objective, did the **feature** increase instream shelter rating?	YES	YES	YES	YES	NA	YES	YES	NO	NO	NO	NO	NO	NO	YES	NO	NO	YES	NO
19a	If an objective, did the **feature** increase LWD count in the **habitat unit**?	YES	YES	YES	NO	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?	YES	YES	YES	NO	NA	YES	YES	NO	NO	NO	NO	NO	NO	YES	NO	NO	YES	NO
25.	Did the **feature** achieve the targeted velocity?	YES	YES	YES	NO	NA	YES	YES	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO
	PROJECT FEATURE NUMBER	**S2-37A**	**S2-37B**	**S2-37C**	**S2-38**	**NA**	**S3-01**	**S3-02**	**S3-03**	**S3-04**	**S3-05**	**S3-06**	**S3-07**	**S3-08**	**S4-01**	**S4-02**	**S4-03**	**S4-04**	**S4-05**
4.	Structural condition of **feature**: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	4	4	4	1	0	4	4	0	3	0	0	0	0	4	0	0	4	0
5a	Are problems with the **feature** visible? (NO = 1 pt, YES = 0 pt)	1	1	1	0	0	1	1	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	1	1	1	0	0	0	1	0	0	1	0
6b	Is the **feature** still in its original position? (YES = 1 pt, NO = 0 pt)	1	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	1	0
6d	Is the **feature** still in its original orientaton? (YES = 1 pt, NO = 0 pt)	1	1	1	1	0	1	1	0	0	0	0	0	0	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	1	1	0	0	1	1	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)	1	1	1	0	0	1	1	0	0	0	0	0	0	1	0	0	1	0
17a	If an objective, did the **feature** increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	1	1	1	0	1	1	0	0	0	0	0	0	1	0	0	1	0
19a	If an objective, did the **feature** increase LWD count in the **habitat unit**? (YES = 1 pt, NO = 0 pt)	1	1	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	0	1	1	0	0	0	0	0	0	1	0	0	1	0
25.	Did the **feature** achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	1	1	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0
	PROJECT FEATURE NUMBER	**S2-37A**	**S2-37B**	**S2-37C**	**S2-38**	**NA**	**S3-01**	**S3-02**	**S3-03**	**S3-04**	**S3-05**	**S3-06**	**S3-07**	**S3-08**	**S4-01**	**S4-02**	**S4-03**	**S4-04**	**S4-05**
FEATURE RATING	Feature quantitative rating out of 15	14	14	14	5	0	13	13	1	4	1	0	0	0	11	0	0	10	0
	Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)	Excellent	Excellent	Excellent	Poor	Not rated	Excellent	Excellent	Fail	Poor	Fail	Not rated	Not rated	Not rated	Good	Not rated	Not rated	Good	Not rated

Table 31. Post-effective flow feature ratings for the Truett Hurst enhancement reach August 2019.

	Project Reach	2	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	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
	mmddyy	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019
	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	4	4	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	Project Site Type	SC Alcove	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	SC Bank FP	SC Bank FP	SC Bank FP
	PROJECT FEATURE NUMBER	S4-06	S4-07	S4-08	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	S5-14	
	Feature Type Code	HW	HW	FW	NA	NA	NA	NA	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	
	Habitat Unit	HU33	HU04_D	HU34	HU35_2	HU34_2	HU32_2	HU31_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	
	Habitat Type	Flatwater	Dry	Riffle	Pool	Riffle	Flatwater	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	UNKN	GOOD	NA	NA	NA	NA	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	
5a	Are problems with the **feature** visible?	NO	YES	YES	NA	NA	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
6a	Is the **feature** still in its original location?	YES	UNK	YES	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?	YES	UNK	YES	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 orientaton?	YES	UNK	YES	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?	YES	NO	YES	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.	NO	YES	NO	NA	NA	NA	NA	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	NO	NA	NA	NA	NA	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	YES	NA	NA	NA	NA	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	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?	YES	NO	NO	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
	PROJECT FEATURE NUMBER	**S4-06**	**S4-07**	**S4-08**	**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**	**S5-14**	
4.	Structural condition of **feature**: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	4	0	4	0	0	0	0	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	0	0	0	0	0	0	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	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)	1	0	1	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 orientaton? (YES = 1 pt, NO = 0 pt)	1	0	1	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)	1	0	1	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)	1	0	1	0	0	0	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	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**? (YES = 1 pt, NO = 0 pt)	0	0	1	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	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	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	PROJECT FEATURE NUMBER	**S4-06**	**S4-07**	**S4-08**	**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**	**S5-14**	
FEATURE RATING	Feature quantitative rating out of 15	13	0	10	0	0	0	0	12	12	12	12	12	12	12	12	12	12	12	12	12	12	
	Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)	Excellent	Not rated	Good	Not rated	Not rated	Not rated	Not rated	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	

Table 31. Post-effective flow feature ratings for the Truett Hurst enhancement reach August 2019.

	Project Reach	2	2	2	2	2	2	2	2	2	2	2
	Enhancement Reach	4	4	4	4	4	4	4	4	4	4	4
	Colloquial Name	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH
	mmddyy	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019
	Survey Type	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
	Project Site Type	SC Bank FF	SC Bank FF	SC Bank FF	SC Bank FF	SC Bank FF	SC Bank FF	SC Bank FF	SC Bank FF	SC Bank FF	SC Bank FF	SC Bank FF
	PROJECT FEATURE NUMBER	S5-15	S5-16	S5-17	S5-18	S5-19	S5-20	S5-21	S5-22	S5-23	S5-24	S5-25
	Feature Type Code	FW	FW	nental Larg	ank Treatme	Willow Baffl	Willow Baffl	Willow Baffl	Willow Baffl	Willow Baffl	Willow Baffl	Willow Baffl
	Habitat Unit	HU05_D	HU05_D	HU36_2	HU33_2	HU05_D	HU05_D	HU05_D	HU05_D	HU05_D	HU05_D	HU05_D
	Habitat Type	Dry	Dry	Pool	Flatwater	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
5a	Are problems with the **feature** visible?	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
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	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
17a	If an objective, did the **feature** increase instream shelter rating?	NO	NO	YES	YES	NO	NO	NO	NO	NO	NO	NO
19a	If an objective, did the **feature** increase LWD count in the **habitat unit**?	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
25.	Did the **feature** achieve the targeted velocity?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
	PROJECT FEATURE NUMBER	**S5-15**	**S5-16**	**S5-17**	**S5-18**	**S5-19**	**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	4	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	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	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
17a	If an objective, did the **feature** increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	0	0	1	1	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)	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
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
	PROJECT FEATURE NUMBER	**S5-15**	**S5-16**	**S5-17**	**S5-18**	**S5-19**	**S5-20**	**S5-21**	**S5-22**	**S5-23**	**S5-24**	**S5-25**
FEATURE RATING	Feature quantitative rating out of 15	13	12	14	13	12	11	11	12	12	12	12
	Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)	Excellent	Excellent	Excellent	Excellent	Excellent	Good	Good	Excellent	Excellent	Excellent	Excellent

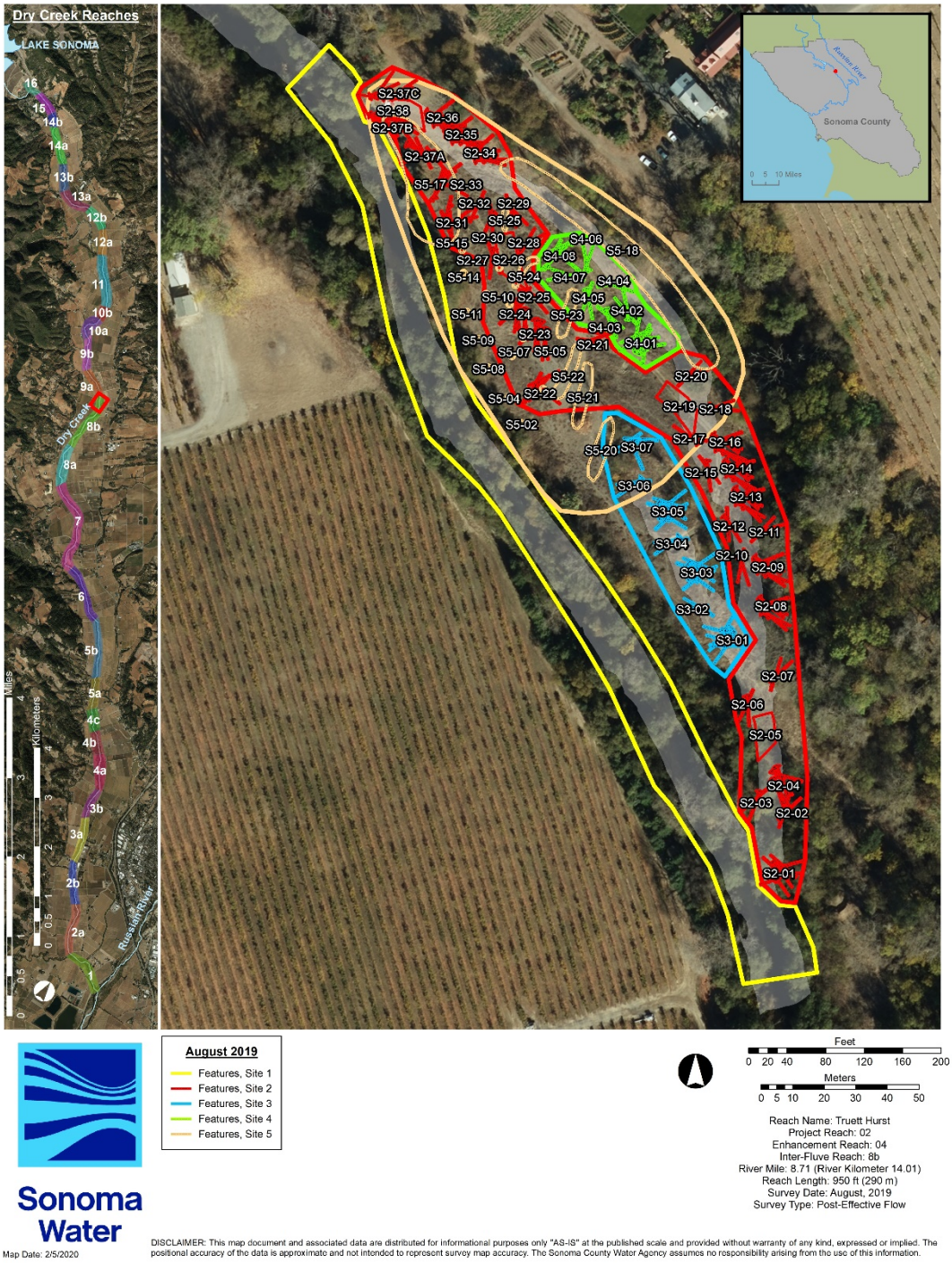

Figure 56. Enhancement sites and features within the Truett Hurst enhancement reach, August 2019.

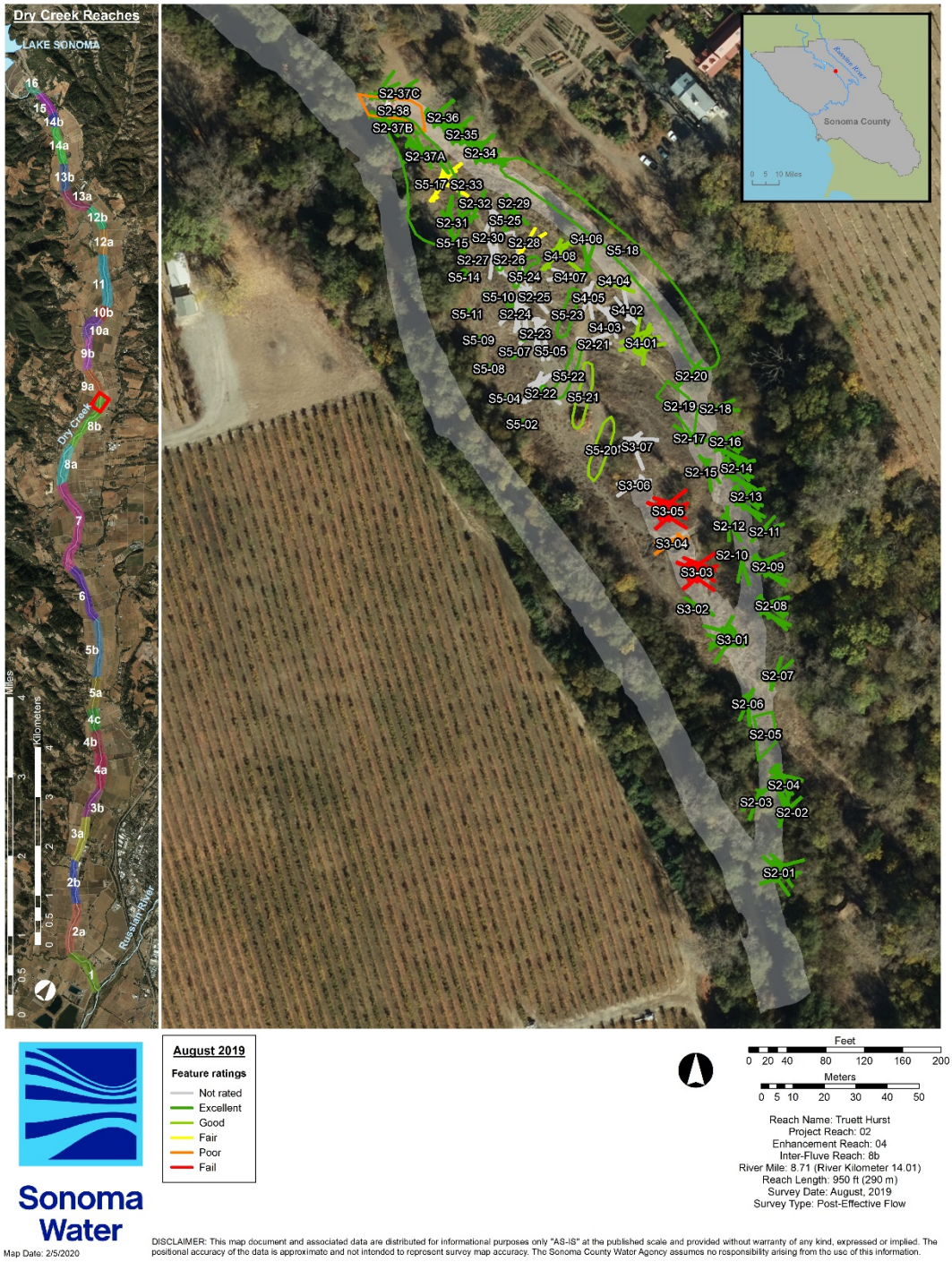

Figure 57. Feature ratings for the the Truett Hurst enhancement reach, August 2019.

Table 32. Post-effective flow habitat unit ratings for the Truett Hurst enhancement reach August 2019.

	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
	mmddyy	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019
	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**	**HU03_D**	**HU04_D**	**HU15**
	Habitat Type	Flatwater	Pool	Riffle	Flatwater	Riffle	Pool	Flatwater	Riffle	Flatwater	Pool	Riffle	Pool	Flatwater	Pool	Dry	Dry	Dry	Riffle
	PROJECT SITE NUMBER	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**2**	**3**	**4**	**2**
	Project Site Type	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	SideChan	SC Alcove	SC Alcove	SideChan
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	86%	62%	81%	73%	82%	33%	33%	82%	0%	0%	0%	0%	89%	39%	0%	0%	0%	51%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	2%	30%	0%	13%	0%	55%	42%	4%	0%	0%	0%	0%	3%	51%	0%	0%	0%	0%
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	3	3	1	2	2	3	3	3	2	3	3	2	2	3	0	0	0	1
15.	Percent of **habitat unit** covered by shelter: %	10	25	5	15	20	45	20	25	30	30	40	15	15	25	0	0	0	10
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	30	75	5	30	40	135	60	75	60	90	120	30	30	75	0	0	0	10
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	25%	26%	11%	12%	12%	71%	37%	29%	17%	48%	14%	42%	27%	63%	0%	0%	0%	23%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	17%	15%	0%	2%	0%	20%	20%	18%	0%	0%	0%	0%	0%	26%	0%	0%	0%	4%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	4%	0%	0%	0%	40%	7%	1%	0%	0%	0%	0%	0%	29%	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**
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	3	3	4	0	0	0	0	4	3	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)	0	2	0	1	0	4	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)	5	5	3	4	4	5	5	5	4	5	5	4	4	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)	1	2	0	1	2	3	2	2	2	2	3	1	1	2	0	0	0	1
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	0	2	0	0	1	4	2	2	2	3	4	0	0	2	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	2	1	1	1	4	3	2	1	4	1	4	2	4	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)	1	1	0	0	0	1	2	1	0	0	0	0	0	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)	0	0	0	0	0	4	0	0	0	0	0	0	0	2	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**
HABITAT UNIT RATING	Habitat unit quantitative rating (out of 35)	13	18	8	11	12	28	21	16	9	14	13	9	11	24	0	0	0	10
	Habitat unit qualitative rating: Excellent (>=28), Good (>=21), Fair(>=14), Poor (>=7), Fail (<7)	Poor	Fair	Poor	Poor	Poor	Excellent	Good	Fair	Poor	Fair	Poor	Poor	Poor	Good	Not rated	Not rated	Not rated	Poor

Table 32. Post-effective flow habitat unit ratings for the Truett Hurst enhancement reach August 2019.

	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
	mmddyy	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019
	Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
	HABITAT UNIT NUMBER	**HU16**	**HU17**	**HU18**	**HU19**	**HU20**	**HU21**	**HU22**	**HU23**	**HU24**	**HU25**	**HU26**	**HU27**	**HU28**	**HU29**	**HU30**	**HU31**	**HU32**	**HU33**
	Habitat Type	Pool	Flatwater	Riffle	Pool	Flatwater	Alcove	Pool	Riffle	Flatwater	Pool	Riffle	Pool	Pool	Pool	Riffle	Pool	Flatwater	Flatwater
	PROJECT SITE NUMBER	**2**	**2**	**2**	**2**	**2**	**3**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**4**
	Project Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SC Alcove	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SC Alcove
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	68%	25%	35%	62%	64%	53%	76%	0%	26%	69%	19%	57%	53%	56%	14%	69%	58%	70%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	0%	0%	0%	4%	0%	1%	8%	0%	0%	6%	0%	4%	0%	24%	0%	3%	0%	1%
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	3	3	1	3	1	3	3	2	3	3	2	3	3	3	3	3	3	3
15.	Percent of **habitat unit** covered by shelter: %	35	30	15	40	5	40	45	40	70	30	20	20	10	20	10	10	35	35
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	105	90	15	120	5	120	135	80	210	90	40	60	30	60	30	30	105	105
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	40%	100%	21%	68%	26%	100%	63%	85%	100%	72%	34%	56%	20%	54%	14%	68%	83%	72%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	19%	25%	1%	43%	8%	53%	41%	0%	26%	48%	5%	28%	5%	31%	0%	46%	45%	44%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	0%	0%	2%	0%	1%	8%	0%	0%	2%	0%	1%	0%	7%	0%	3%	0%	1%
	HABITAT UNIT NUMBER	**HU16**	**HU17**	**HU18**	**HU19**	**HU20**	**HU21**	**HU22**	**HU23**	**HU24**	**HU25**	**HU26**	**HU27**	**HU28**	**HU29**	**HU30**	**HU31**	**HU32**	**HU33**
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	3	4	4	4	4	0	2	4	1	4	4	4	1	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	0	0	0	2	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	3	5	3	5	5	4	5	5	4	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	1	3	0	3	3	3	4	2	2	2	1	2	1	1	2	2
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	4	3	0	4	0	4	4	3	5	3	1	2	0	2	0	0	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)	3	4	2	4	2	4	4	4	4	4	3	4	2	4	1	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	2	0	4	0	4	4	0	2	4	0	2	0	3	0	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	0	0	0	0	0	0
	HABITAT UNIT NUMBER	**HU16**	**HU17**	**HU18**	**HU19**	**HU20**	**HU21**	**HU22**	**HU23**	**HU24**	**HU25**	**HU26**	**HU27**	**HU28**	**HU29**	**HU30**	**HU31**	**HU32**	**HU33**
HABITAT UNIT RATING	Habitat unit quantitative rating (out of 35)	19	18	9	24	9	24	24	14	22	22	11	19	12	22	8	18	23	23
	Habitat unit qualitative rating: Excellent (>=28), Good (>=21), Fair(>=14), Poor (>=7), Fail (<7)	Fair	Fair	Poor	Good	Poor	Good	Good	Fair	Good	Good	Poor	Fair	Poor	Good	Poor	Fair	Good	Good

Table 32. Post-effective flow habitat unit ratings for the Truett Hurst enhancement reach August 2019.

	Project Reach	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
	Colloquial Name	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH
	mmddyy	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019
	Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
	HABITAT UNIT NUMBER	**HU33_2**	**HU34**	**HU35**	**HU36**	**HU20_2**	**HU31_2**	**HU32_2**	**HU34_2**	**HU36_2**	**HU05_D**	**HU14_2**	**HU19_2**	**HU35_2**
	Habitat Type	Flatwater	Riffle	Pool	Pool	Flatwater	Pool	Flatwater	Riffle	Pool	Dry	Pool	Pool	Pool
	PROJECT SITE NUMBER	**5**	**4**	**2**	**2**	**3**	**5**	**5**	**5**	**5**	**5**	**2**	**3**	**5**
	Project Site Type	SC Bank FP	SC Alcove	SideChan	SideChan	SC Alcove	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SC Bank FP	SideChan	SC Alcove	SC Bank FP
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	70%	9%	63%	54%	64%	69%	58%	9%	54%	0%	39%	62%	63%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	1%	0%	20%	26%	0%	3%	0%	0%	26%	0%	51%	4%	20%
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	3	3	3	3	1	3	3	3	3	0	3	3	3
15.	Percent of **habitat unit** covered by shelter: %	35	10	20	30	5	10	35	10	30	0	25	40	20
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	105	30	60	90	5	30	105	30	90	0	75	120	60
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	72%	31%	96%	86%	26%	68%	83%	31%	86%	0%	63%	68%	96%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	44%	1%	60%	42%	8%	46%	45%	1%	42%	0%	26%	43%	60%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	1%	0%	20%	24%	0%	3%	0%	0%	24%	0%	29%	2%	20%
	HABITAT UNIT NUMBER	**HU33_2**	**HU34**	**HU35**	**HU36**	**HU20_2**	**HU31_2**	**HU32_2**	**HU34_2**	**HU36_2**	**HU05_D**	**HU14_2**	**HU19_2**	**HU35_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	0	4	4	4	4	4	0	4	0	3	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	2	2	0	0	0	0	2	0	4	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	3	5	5	5	5	0	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	1	2	2	0	1	2	1	2	0	2	3	2
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	4	0	2	3	0	0	4	0	3	0	2	4	2
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	4	4	3	4	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	0	4	4	0	4	4	0	4	0	2	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	2	2	0	0	0	0	2	0	2	0	2
	HABITAT UNIT NUMBER	**HU33_2**	**HU34**	**HU35**	**HU36**	**HU20_2**	**HU31_2**	**HU32_2**	**HU34_2**	**HU36_2**	**HU05_D**	**HU14_2**	**HU19_2**	**HU35_2**
HABITAT UNIT RATING	Habitat unit quantitative rating (out of 35)	23	9	25	26	9	18	23	9	26	0	24	24	25
	Habitat unit qualitative rating: Excellent (>=28), Good (>=21), Fair(>=14), Poor (>=7), Fail (<7)	Good	Poor	Good	Good	Poor	Fair	Good	Poor	Good	Not rated	Good	Good	Good

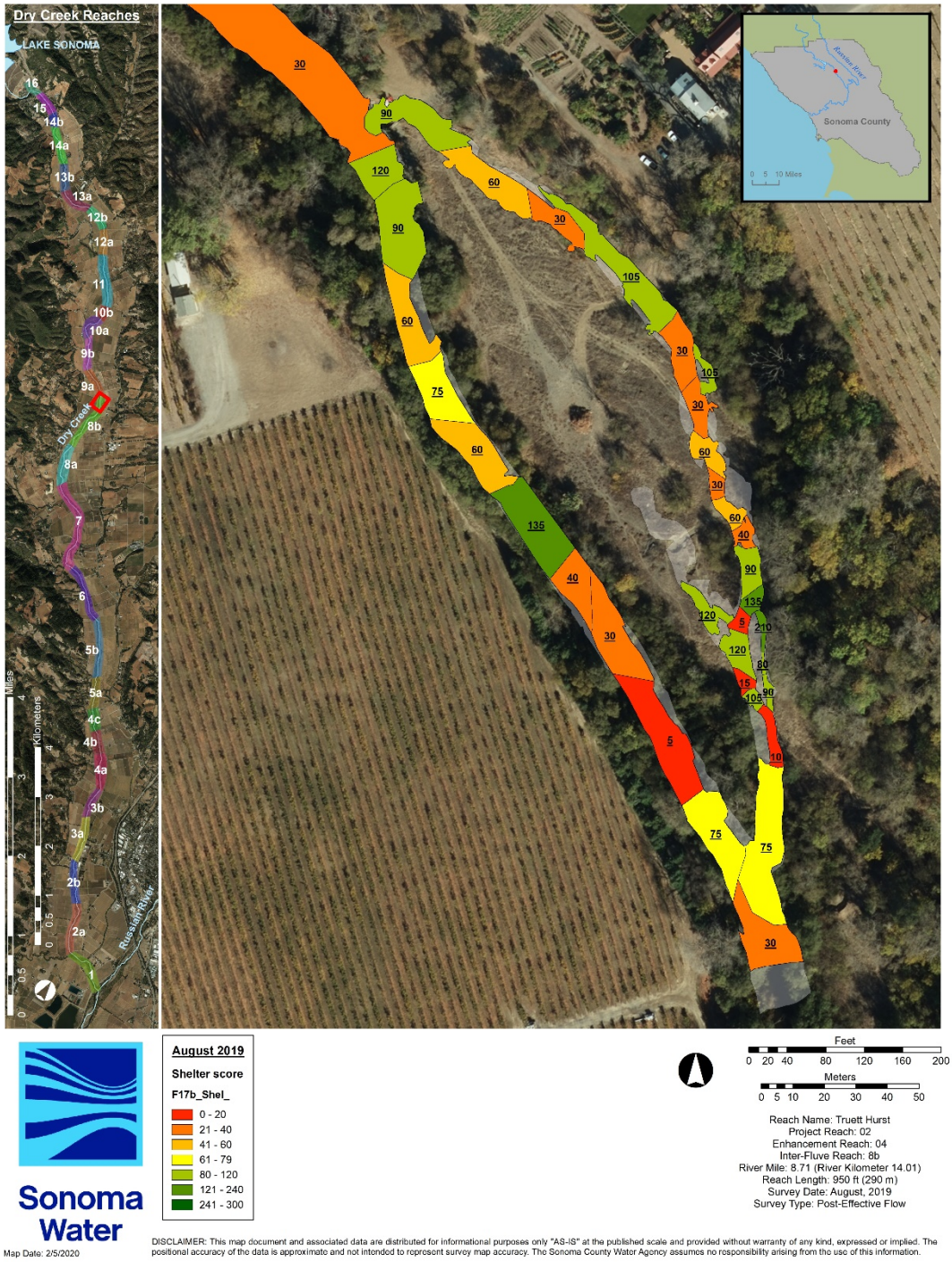

Figure 58. Habitat unit ratings for the Truett Hurst enhancement reach, August 2019.

Table 33. Post-effective flow average feature, average habitat unit, site, and reach ratings (rounded to the nearest whole number) for the Truett Hurst enhancement reach, August 2019.

	Project Reach	2	2	2	2	2
	Enhancement Reach	4	4	4	4	4
	ENHANCEMENT REACH NAME	**TH**	**TH**	**TH**	**TH**	**TH**
	mmddyy	82019	82019	82019	82019	82019
	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
	PROJECT SITE NUMBER	1	2	3	4	5
SITE AVERAGE HABITAT UNIT RATING	Site average habitat unit quantitative rating (out of 35; bold indicates excluded from site rating)	15	18	19	16	21
	Site average qualitative rating Excellent (>=28), Good (>=21), Fair(>=14), Poor (>=7), Fail (<7), Not rated (not used to rate site)	Fair	Fair	Fair	Fair	Fair
	PROJECT SITE NUMBER	**1**	**2**	**3**	**4**	**5**
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)	**15**	30	25	27	33
	Site qualitative rating: Excellent (>=40, 12), Good (>=30, 9), Fair(>=20, 6), Poor (>=10, 3), Fail (<10, 3)	Fair	Good	Fair	Fair	Good
	ENHANCEMENT REACH NAME	**TH**				
ENHANCEMENT REACH RATING	Enhancement reach quantitative rating (average of site ratings) (out of 47)	26				
	Enhancement reach qualitative rating: Excellent (>=38), Good (>=28), Fair(>=19), Poor (>=9), Fail (<9)	Fair				

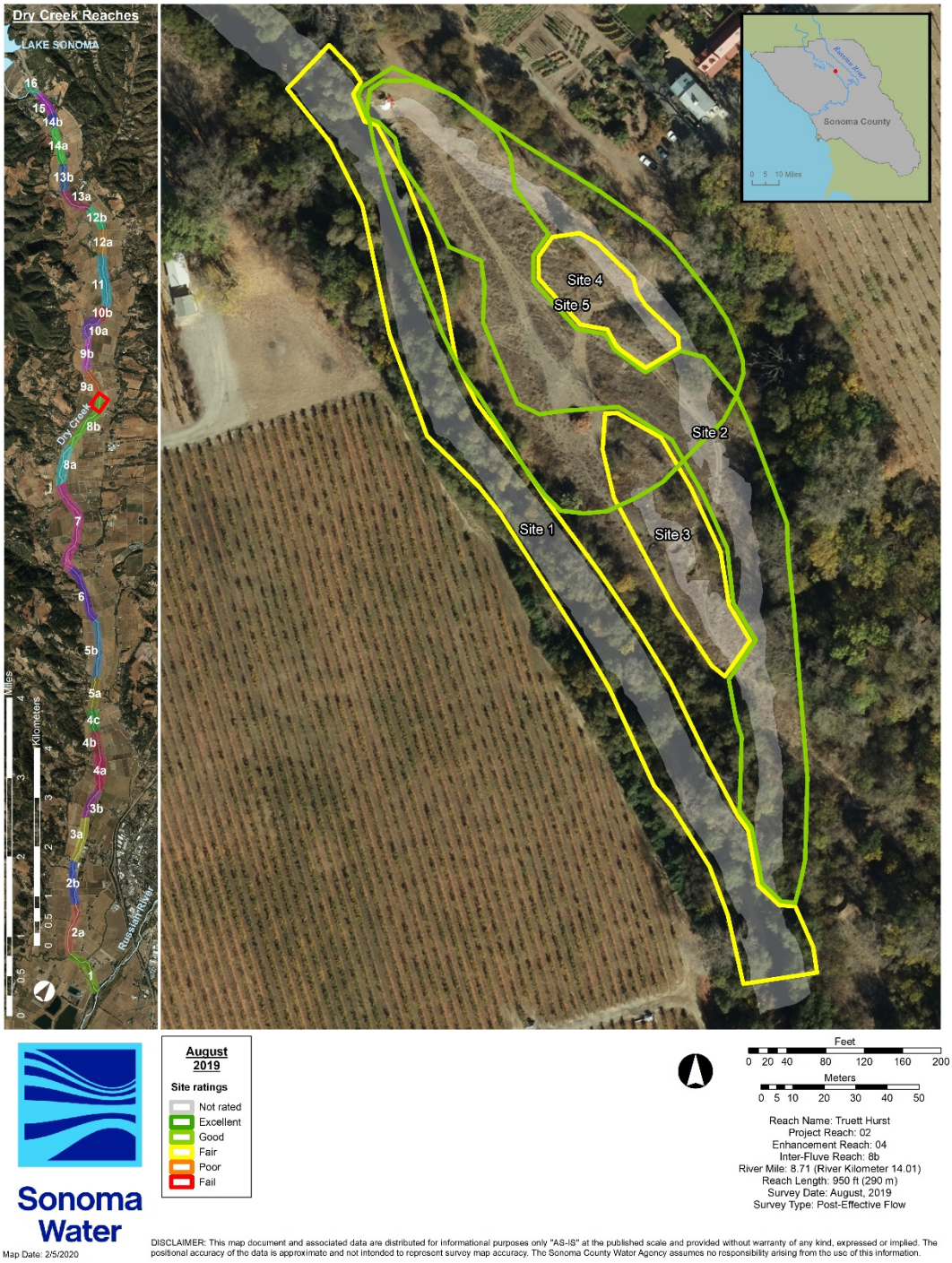

Figure 59. Post effective flow site ratings for the Truett Hurst enhancement reach, August 2019.

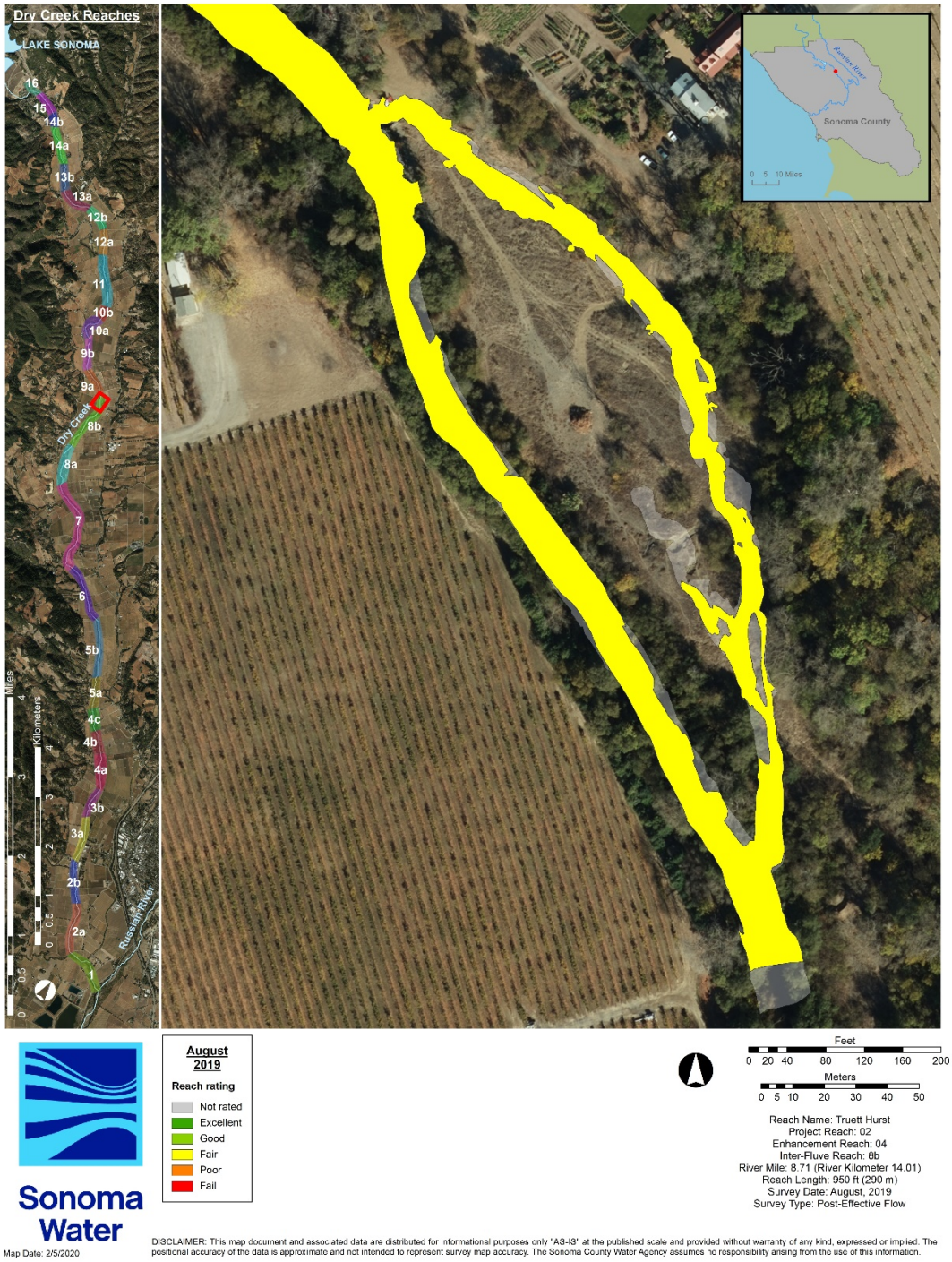

Figure 60. Post-effective flow reach rating for the Truett Hurst enhancement reach, August 2019.

Feature and Habitat Unit Checklists

Table 34. Adaptive Management Plan targeted checklist for the Truett Hurst enhancement reach, August 2019.

	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
	mmddyy	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019
	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	2	2	2	2
	Project Site Type	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	SideChan	SideChan	SideChan	SideChan
	Project Feature Number	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
	Habitat Unit	HU01	HU02	HU03	HU04	HU05	HU06	HU07	HU08	HU09	HU10	HU12	HU13	HU11	HU14	HU28	HU19	HU23	HU24
	Habitat Type	Flatwater	Pool	Riffle	Flatwater	Riffle	Pool	Flatwater	Riffle	Flatwater	Pool	Pool	Flatwater	Riffle	Pool	Pool	Pool	Riffle	Flatwater
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	NA
5a	Are problems with the **feature** visible?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
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	NA
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	NA
6d	Is the **feature** still in its original orientaton?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	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	NA	NA	NA	NA	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	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	86%	62%	81%	73%	82%	33%	33%	82%	0%	0%	0%	89%	0%	39%	53%	62%	0%	26%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	2%	30%	0%	13%	0%	55%	42%	4%	0%	0%	0%	3%	0%	51%	0%	4%	0%	0%
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	3	3	1	2	2	3	3	3	2	3	2	2	3	3	3	3	2	3
15.	Percent of **habitat unit** covered by shelter: %	10	25	5	15	20	45	20	25	30	30	15	15	40	25	10	40	40	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	NA
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	30	75	5	30	40	135	60	75	60	90	30	30	120	75	30	120	80	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	NA
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	NA
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	NA
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	25%	26%	11%	12%	12%	71%	37%	29%	17%	48%	42%	27%	14%	63%	20%	68%	85%	100%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	17%	15%	0%	2%	0%	20%	20%	18%	0%	0%	0%	0%	0%	26%	5%	43%	0%	26%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	4%	0%	0%	0%	40%	7%	1%	0%	0%	0%	0%	0%	29%	0%	2%	0%	0%
	FEATURE NUMBER	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
	HABITAT UNIT NUMBER	**HU01**	**HU02**	**HU03**	**HU04**	**HU05**	**HU06**	**HU07**	**HU08**	**HU09**	**HU10**	**HU12**	**HU13**	**HU11**	**HU14**	**HU28**	**HU19**	**HU23**	**HU24**
	SITE NUMBER	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**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**
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	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)	0	0	0	0	0	0	0	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
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	4	4	4	4	3	3	4	0	0	0	4	0	3	4	4	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)	0	2	0	1	0	4	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)	5	5	3	4	4	5	5	5	4	5	4	4	5	5	5	5	4	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	0	1	2	3	2	2	2	2	1	1	3	2	1	3	3	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	0
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	0	2	0	0	1	4	2	2	2	3	0	0	4	2	0	4	3	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	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)	2	2	1	1	1	4	3	2	1	4	4	2	1	4	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	1	0	0	0	1	2	1	0	0	0	0	0	2	0	4	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	0	0	0	0	4	0	0	0	0	0	0	0	2	0	0	0	0

Table 34. Adaptive Management Plan targeted checklist for the Truett Hurst enhancement reach, August 2019.

	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
	mmddyy	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019
	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 Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
	Project Feature Number	NA	NA	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
	Feature Type Code	NA	NA	NA	BCW	HW	HW	SCW	R	HW	HW	SCW	SCW	HW	HW	HW	SCW	SCW	SCW
	Habitat Unit	HU20	HU18	HU32	HU14_2	HU14_2	HU14_2	HU14_2	HU15	HU16	HU17	HU22	HU25	HU25	HU26	HU27	HU27	HU29	HU29
	Habitat Type	Flatwater	Riffle	Flatwater	Pool	Pool	Pool	Pool	Riffle	Pool	Flatwater	Pool	Pool	Pool	Riffle	Pool	Pool	Pool	Pool
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	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	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES
6a	Is the **feature** still in its original location?	NA	NA	NA	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6b	Is the **feature** still in its original position?	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 orientaton?	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	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.	NA	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	NO
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	64%	35%	58%	39%	39%	39%	39%	51%	68%	25%	76%	69%	69%	19%	57%	57%	56%	56%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	0%	0%	0%	51%	51%	51%	51%	0%	0%	0%	8%	6%	6%	0%	4%	4%	24%	24%
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	1	1	3	3	3	3	3	1	3	3	3	3	3	2	3	3	3	3
15.	Percent of **habitat unit** covered by shelter: %	5	15	35	25	25	25	25	10	35	30	45	30	30	20	20	20	20	20
17a	If an objective, did the **feature** increase instream shelter rating?	NA	NA	NA	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	5	15	105	75	75	75	75	10	105	90	135	90	90	40	60	60	60	60
19a	If an objective, did the **feature** increase LWD count in the **habitat unit**?	NA	NA	NA	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO
21a	If an objective, did the **feature** lead to the targeted channel conditions?	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	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): (%)	26%	21%	83%	63%	63%	63%	63%	23%	40%	100%	63%	72%	72%	34%	56%	56%	54%	54%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	8%	1%	45%	26%	26%	26%	26%	4%	19%	25%	41%	48%	48%	5%	28%	28%	31%	31%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	0%	0%	29%	29%	29%	29%	0%	0%	0%	8%	2%	2%	0%	1%	1%	7%	7%
	FEATURE NUMBER	**NA**	**NA**	**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**
	HABITAT UNIT NUMBER	**HU20**	**HU18**	**HU32**	**HU14_2**	**HU14_2**	**HU14_2**	**HU14_2**	**HU15**	**HU16**	**HU17**	**HU22**	**HU25**	**HU25**	**HU26**	**HU27**	**HU27**	**HU29**	**HU29**
	SITE NUMBER	**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**
4.	Structural condition of **feature**: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	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	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
6a	Is the **feature** still in its original location? (YES = 1 pt, NO = 0 pt)	0	0	0	1	1	1	1	0	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	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	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	1	1	1	1	1	1	1	1	1	1	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	0	0	1	1	1	1	1	1	1	1	1	1	1	1	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	3	4	3	3	3	3	4	4	2	4	4	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)	0	0	0	4	4	4	4	0	0	0	0	0	0	0	0	0	2	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)	3	3	5	5	5	5	5	3	5	5	5	5	5	4	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	2	2	2	2	2	1	2	2	3	2	2	2	2	2	2	2
17a	If an objective, did the **feature** increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	0	0	0	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	0	4	2	2	2	2	0	4	3	4	3	3	1	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	1	0	0	0	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	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	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)	2	2	4	4	4	4	4	2	3	4	4	4	4	3	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	4	2	2	2	2	0	1	2	4	4	4	0	2	2	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	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0

Table 34. Adaptive Management Plan targeted checklist for the Truett Hurst enhancement reach, August 2019.

	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
	mmddyy	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019
	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	S2-16	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	S2-33	
	Feature Type Code	HW	HW	HW	R	HW	HW	FW	SCW	SCW	HW	R	HW	HW	HW	HW	FW	HW	FW	
	Habitat Unit	HU29	HU29	HU30	HU30	HU31	HU02_D	HU02_D	HU02_D	HU02_D	HU02_D	HU02_D	HU02_D	HU02_D	HU35	HU02_D	HU02_D	HU35	HU35	
	Habitat Type	Pool	Pool	Riffle	Riffle	Pool	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Pool	Dry	Dry	Pool	Pool	
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	GOOD	GOOD	GOOD	GOOD	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	GOOD	GOOD	UNKN	GOOD	GOOD	GOOD	
5a	Are problems with the **feature** visible?	NO	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	NO	NO	YES	
6a	Is the **feature** still in its original location?	YES	YES	YES	NO	YES	UNK	UNK	UNK	UNK	UNK	UNK	UNK	YES	YES	UNK	YES	YES	YES	
6b	Is the **feature** still in its original position?	YES	YES	YES	YES	YES	UNK	UNK	UNK	UNK	UNK	UNK	UNK	NO	YES	UNK	YES	YES	NO	
6d	Is the **feature** still in its original orientaton?	YES	YES	YES	YES	YES	UNK	UNK	UNK	UNK	UNK	UNK	UNK	YES	YES	UNK	YES	YES	YES	
8.	If an objective, did the **feature** create the targeted instream habitat type?	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	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	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	NO	NO	YES	
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	56%	56%	14%	14%	69%	0%	0%	0%	0%	0%	0%	0%	0%	63%	0%	0%	63%	63%	
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	24%	24%	0%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	20%	0%	0%	20%	20%	
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	3	3	3	3	3	0	0	0	0	0	0	0	0	3	0	0	3	3	
15.	Percent of **habitat unit** covered by shelter: %	20	20	10	10	10	0	0	0	0	0	0	0	0	20	0	0	20	20	
17a	If an objective, did the **feature** increase instream shelter rating?	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	YES	YES	NO	
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	60	60	30	30	30	0	0	0	0	0	0	0	0	60	0	0	60	60	
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?	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	YES	YES	YES	
25.	Did the **feature** achieve the targeted velocity?	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	YES	YES	NO	
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	54%	54%	14%	14%	68%	0%	0%	0%	0%	0%	0%	0%	0%	96%	0%	0%	96%	96%	
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	31%	31%	0%	0%	46%	0%	0%	0%	0%	0%	0%	0%	0%	60%	0%	0%	60%	60%	
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	7%	7%	0%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	20%	0%	0%	20%	20%	
	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**	**S2-33**	
	HABITAT UNIT NUMBER	**HU29**	**HU29**	**HU30**	**HU30**	**HU31**	**HU02_D**	**HU02_D**	**HU02_D**	**HU02_D**	**HU02_D**	**HU02_D**	**HU02_D**	**HU02_D**	**HU35**	**HU02_D**	**HU02_D**	**HU35**	**HU35**	
	SITE NUMBER	**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**	
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	0	0	0	0	0	0	4	4	0	4	4	4	
5a	Are problems with the **feature** visible? (NO = 1 pt, YES = 0 pt)	1	1	1	1	1	0	0	0	0	0	0	0	0	1	0	1	1	0	
6a	Is the **feature** still in its original location? (YES = 1 pt, NO = 0 pt)	1	1	1	0	1	0	0	0	0	0	0	0	1	1	0	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	1	0	1	1	0	
6d	Is the **feature** still in its original orientaton? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	0	0	0	0	0	0	0	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	1	1	1	1	0	0	0	0	0	0	0	0	1	0	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	0	0	0	0	0	0	0	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	4	1	1	4	0	0	0	0	0	0	0	0	4	0	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)	2	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	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	5	0	0	0	0	0	0	0	0	5	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	1	1	1	0	0	0	0	0	0	0	0	2	0	0	2	2	
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	1	0	1	1	0	
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	2	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0	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	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	0	0	0	0	0	0	0	0	1	0	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	1	0	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	4	1	1	4	0	0	0	0	0	0	0	0	4	0	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)	3	3	0	0	4	0	0	0	0	0	0	0	0	4	0	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	0	0	0	0	0	0	2	0	0	2	2	

Table 34. Adaptive Management Plan targeted checklist for the Truett Hurst enhancement reach, August 2019.

	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
	mmddyy	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019
	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	3	3	3	3	3	3	3	3	3	4	4
	Project Site Type	SideChan	SideChan	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
	Project Feature Number	S2-34	S2-35	S2-36	S2-37A	S2-37B	S2-37C	S2-38	NA	S3-01	S3-02	S3-03	S3-04	S3-05	S3-06	S3-07	S3-08	S4-01	S4-02
	Feature Type Code	SCW	SCW	SCW	ISW	ISW	ISW	R	NA	BCW	HW	BCW	HW	BCW	HW	FW	P	BCW	HW
	Habitat Unit	HU35	HU36	HU36	HU02_D	HU36	HU36	HU36	HU20_2	HU19_2	HU21	HU03_D	HU03_D	HU03_D	HU03_D	HU03_D	HU03_D	HU33	HU04_D
	Habitat Type	Pool	Pool	Pool	Dry	Pool	Pool	Pool	Flatwater	Pool	Alcove	Dry	Dry	Dry	Dry	Dry	Dry	Flatwater	Dry
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	FAIL	NA	GOOD	GOOD	UNKN	FAIR	UNKN	UNKN	UNKN	UNKN	GOOD	UNKN
5a	Are problems with the **feature** visible?	NO	NO	NO	NO	NO	NO	YES	NA	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES
6a	Is the **feature** still in its original location?	YES	YES	YES	YES	YES	YES	YES	NA	YES	YES	YES	YES	YES	UNK	UNK	UNK	YES	UNK
6b	Is the **feature** still in its original position?	YES	YES	YES	YES	YES	YES	YES	NA	YES	YES	NO	NO	NO	UNK	UNK	UNK	NO	UNK
6d	Is the **feature** still in its original orientaton?	YES	YES	YES	YES	YES	YES	YES	NA	YES	YES	UNK	UNK	UNK	UNK	UNK	UNK	YES	UNK
8.	If an objective, did the **feature** create the targeted instream habitat type?	YES	YES	YES	YES	YES	YES	NO	NA	YES	YES	NO	NO	NO	NO	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	YES	NA	NO	NO	YES	YES	YES	YES	YES	YES	NO	YES
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	63%	54%	54%	0%	54%	54%	54%	64%	62%	53%	0%	0%	0%	0%	0%	0%	70%	0%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	20%	26%	26%	0%	26%	26%	26%	0%	4%	1%	0%	0%	0%	0%	0%	0%	1%	0%
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	3	3	3	0	3	3	3	1	3	3	0	0	0	0	0	0	3	0
15.	Percent of **habitat unit** covered by shelter: %	20	30	30	0	30	30	30	5	40	40	0	0	0	0	0	0	35	0
17a	If an objective, did the **feature** increase instream shelter rating?	YES	YES	YES	YES	YES	YES	YES	NA	YES	YES	NO	NO	NO	NO	NO	NO	YES	NO
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	60	90	90	0	90	90	90	5	120	120	0	0	0	0	0	0	105	0
19a	If an objective, did the **feature** increase LWD count in the **habitat unit**?	NO	NO	NO	YES	YES	YES	NO	NA	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	NA	YES	YES	NO	NO	NO	NO	NO	NO	YES	NO
25.	Did the **feature** achieve the targeted velocity?	YES	YES	YES	YES	YES	YES	NO	NA	YES	YES	NO	NO	NO	NO	NO	NO	YES	NO
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	96%	86%	86%	0%	86%	86%	86%	26%	68%	100%	0%	0%	0%	0%	0%	0%	72%	0%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	60%	42%	42%	0%	42%	42%	42%	8%	43%	53%	0%	0%	0%	0%	0%	0%	44%	0%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	20%	24%	24%	0%	24%	24%	24%	0%	2%	1%	0%	0%	0%	0%	0%	0%	1%	0%
	FEATURE NUMBER	**S2-34**	**S2-35**	**S2-36**	**S2-37A**	**S2-37B**	**S2-37C**	**S2-38**	**NA**	**S3-01**	**S3-02**	**S3-03**	**S3-04**	**S3-05**	**S3-06**	**S3-07**	**S3-08**	**S4-01**	**S4-02**
	HABITAT UNIT NUMBER	**HU35**	**HU36**	**HU36**	**HU02_D**	**HU36**	**HU36**	**HU36**	**HU20_2**	**HU19_2**	**HU21**	**HU03_D**	**HU03_D**	**HU03_D**	**HU03_D**	**HU03_D**	**HU03_D**	**HU33**	**HU04_D**
	SITE NUMBER	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**4**	**4**
	ENHANCEMENT REACH NAME	**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	1	0	4	4	0	3	0	0	0	0	4	0
5a	Are problems with the **feature** visible? (NO = 1 pt, YES = 0 pt)	1	1	1	1	1	1	0	0	1	1	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	1	1	1	0	1	1	1	1	1	0	0	0	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	1	1	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	1	1	1	0	1	1	0	0	0	0	0	0	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	1	1	0	0	0	0	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	0	0	1	1	0	0	0	0	0	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	0	4	4	4	4	4	4	0	0	0	0	0	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	2	2	0	2	2	2	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	5	5	0	5	5	5	3	5	5	0	0	0	0	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)	2	2	2	0	2	2	2	0	3	3	0	0	0	0	0	0	2	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	0	1	1	0	0	0	0	0	0	1	0
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	2	3	3	0	3	3	3	0	4	4	0	0	0	0	0	0	4	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	1	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)	1	1	1	1	1	1	0	0	1	1	0	0	0	0	0	0	1	0
25.	Did the **feature** achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	0	0	1	1	0	0	0	0	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)	4	4	4	0	4	4	4	2	4	4	0	0	0	0	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)	4	4	4	0	4	4	4	0	4	4	0	0	0	0	0	0	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)	2	2	2	0	2	2	2	0	0	0	0	0	0	0	0	0	0	0

Table 34. Adaptive Management Plan targeted checklist for the Truett Hurst enhancement reach, August 2019.

	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
	mmddyy	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019
	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	4	4	4	4	5	5	5	5	5	5	5	5	5	5	5	5
	Project Site Type	SC Alcove	SC Alcove	SC Alcove	SC Alcove	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
	Project Feature Number	S4-03	S4-04	S4-05	S4-06	S4-07	S4-08	NA	NA	NA	NA	S5-01	S5-02	S5-03	S5-04	S5-05	S5-06	S5-07	S5-08
	Feature Type Code	HW	HW	HW	HW	HW	FW	NA	NA	NA	NA	FW	FW	FW	FW	FW	FW	FW	FW
	Habitat Unit	HU04_D	HU33	HU04_D	HU33	HU04_D	HU34	HU31_2	HU32_2	HU34_2	HU35_2	HU05_D	HU05_D	HU05_D	HU05_D	HU05_D	HU05_D	HU05_D	HU05_D
	Habitat Type	Dry	Flatwater	Dry	Flatwater	Dry	Riffle	Pool	Flatwater	Riffle	Pool	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	UNKN	GOOD	UNKN	GOOD	UNKN	GOOD	NA	NA	NA	NA	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD
5a	Are problems with the **feature** visible?	YES	YES	YES	NO	YES	YES	NA	NA	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO
6a	Is the **feature** still in its original location?	UNK	YES	UNK	YES	UNK	YES	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES
6b	Is the **feature** still in its original position?	UNK	YES	UNK	YES	UNK	YES	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES
6d	Is the **feature** still in its original orientaton?	UNK	YES	UNK	YES	UNK	YES	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES
8.	If an objective, did the **feature** create the targeted instream habitat type?	NO	NO	NO	YES	NO	YES	NA	NA	NA	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.	YES	NO	YES	NO	YES	NO	NA	NA	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	0%	70%	0%	70%	0%	9%	69%	58%	9%	63%	0%	0%	0%	0%	0%	0%	0%	0%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	0%	1%	0%	1%	0%	0%	3%	0%	0%	20%	0%	0%	0%	0%	0%	0%	0%	0%
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	0	3	0	3	0	3	3	3	3	3	0	0	0	0	0	0	0	0
15.	Percent of **habitat unit** covered by shelter: %	0	35	0	35	0	10	10	35	10	20	0	0	0	0	0	0	0	0
17a	If an objective, did the **feature** increase instream shelter rating?	NO	YES	NO	YES	NO	NO	NA	NA	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	0	105	0	105	0	30	30	105	30	60	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	YES	NA	NA	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO
21a	If an objective, did the **feature** lead to the targeted channel conditions?	NO	YES	NO	YES	NO	NO	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES
25.	Did the **feature** achieve the targeted velocity?	NO	NO	NO	YES	NO	NO	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	0%	72%	0%	72%	0%	31%	68%	83%	31%	96%	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%	44%	0%	44%	0%	1%	46%	45%	1%	60%	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%	1%	0%	1%	0%	0%	3%	0%	0%	20%	0%	0%	0%	0%	0%	0%	0%	0%
	FEATURE NUMBER	**S4-03**	**S4-04**	**S4-05**	**S4-06**	**S4-07**	**S4-08**	**NA**	**NA**	**NA**	**NA**	**S5-01**	**S5-02**	**S5-03**	**S5-04**	**S5-05**	**S5-06**	**S5-07**	**S5-08**
	HABITAT UNIT NUMBER	**HU04_D**	**HU33**	**HU04_D**	**HU33**	**HU04_D**	**HU34**	**HU31_2**	**HU32_2**	**HU34_2**	**HU35_2**	**HU05_D**	**HU05_D**	**HU05_D**	**HU05_D**	**HU05_D**	**HU05_D**	**HU05_D**	**HU05_D**
	SITE NUMBER	**4**	**4**	**4**	**4**	**4**	**4**	**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**
4.	Structural condition of **feature**: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	0	4	0	4	0	4	0	0	0	0	4	4	4	4	4	4	4	4
5a	Are problems with the **feature** visible? (NO = 1 pt, YES = 0 pt)	0	0	0	1	0	0	0	0	0	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	1	0	1	0	1	0	0	0	0	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	0	1	0	1	0	0	0	0	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	0	1	0	1	0	0	0	0	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	1	0	1	0	0	0	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	1	0	1	0	1	0	0	0	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	4	0	4	0	0	4	4	0	4	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	2	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	5	0	5	0	5	5	5	5	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)	0	2	0	2	0	1	1	2	1	2	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	1	0	1	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	4	0	4	0	0	0	4	0	2	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	1	0	1	0	0	0	0	0	0	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	1	0	0	0	0	0	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	4	0	4	0	3	4	4	3	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)	0	4	0	4	0	0	4	4	0	4	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	2	0	0	0	0	0	0	0	0

Table 34. Adaptive Management Plan targeted checklist for the Truett Hurst enhancement reach, August 2019.

	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
	mmddyy	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019
	Survey Type	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
	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
	Project Feature Number	S5-09	S5-10	S5-11	S5-12	S5-13	S5-14	S5-15	S5-16	S5-17	S5-18	S5-19	S5-20	S5-21	S5-22	S5-23	S5-24	S5-25	
	Feature Type Code	FW	FW	FW	FW	FW	FW	FW	FW	mental Large	ank Treatme	Willow Baffle	Willow Baffle	Willow Baffle	Willow Baffle	Willow Baffle	Willow Baffle	Willow Baffle	
	Habitat Unit	HU05_D	HU05_D	HU05_D	HU05_D	HU05_D	HU05_D	HU05_D	HU05_D	HU36_2	HU33_2	HU05_D	HU05_D	HU05_D	HU05_D	HU05_D	HU05_D	HU05_D	
	Habitat Type	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Pool	Flatwater	Dry	Dry	Dry	Dry	Dry	Dry	Dry	
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	FAIR	FAIR	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	
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	
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	
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	
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	
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	
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	0%	0%	0%	0%	0%	0%	0%	0%	54%	70%	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%	26%	1%	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	3	3	0	0	0	0	0	0	0	
15.	Percent of **habitat unit** covered by shelter: %	0	0	0	0	0	0	0	0	30	35	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	YES	YES	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	90	105	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	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	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	
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	0%	0%	0%	0%	0%	0%	0%	0%	86%	72%	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%	42%	44%	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%	24%	1%	0%	0%	0%	0%	0%	0%	0%	
	FEATURE NUMBER	**S5-09**	**S5-10**	**S5-11**	**S5-12**	**S5-13**	**S5-14**	**S5-15**	**S5-16**	**S5-17**	**S5-18**	**S5-19**	**S5-20**	**S5-21**	**S5-22**	**S5-23**	**S5-24**	**S5-25**	
	HABITAT UNIT NUMBER	**HU05_D**	**HU05_D**	**HU05_D**	**HU05_D**	**HU05_D**	**HU05_D**	**HU05_D**	**HU05_D**	**HU36_2**	**HU33_2**	**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**	
	ENHANCEMENT REACH NAME	**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	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	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	
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	
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	
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	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	
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	4	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	0	0	0	0	0	2	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	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	0	0	0	0	0	2	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	0	0	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	0	0	0	0	0	3	4	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	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	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	
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	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	0	0	0	0	0	4	4	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	2	0	0	0	0	0	0	0	0	

Table 35. Adaptive Management Plan full checklist for the Truett Hurst enhancement reach, August 2019.

	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
	mmddyy	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019
	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	2	2	2	2
	Project Site Type	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	SideChan	SideChan	SideChan	SideChan
	Project Feature Number	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
	Habitat Unit	HU01	HU02	HU03	HU04	HU05	HU06	HU07	HU08	HU09	HU10	HU12	HU13	HU11	HU14	HU20	HU18	HU19	HU23
	Habitat Type	Flatwater	Pool	Riffle	Flatwater	Riffle	Pool	Flatwater	Riffle	Flatwater	Pool	Pool	Flatwater	Riffle	Pool	Flatwater	Riffle	Pool	Riffle
1.	Length of targeted treatment (ft)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2.	Width of targeted treatment: (ft)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3.	Estimate area of the targeted **feature**: (ft^2)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
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	NA
5a	Are problems with the **feature** visible?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	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	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
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	NA
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	NA
6c	If yes: LBK, MDC, RBK, SPN, OTH	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
6d	Is the **feature** still in its original orientaton?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
6e	If yes: DNS, MUL, PRL, PRP, UPS, OTH	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
7.	Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	FLT	POO	RIF	FLT	RIF	POO	FLT	RIF	FLT	POO	POO	FLT	RIF	POO	FLT	RIF	POO	RIF
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	NA
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	NA
10.	Mean water depth in **habitat unit**: ft	1.1	1.7	1.0	1.3	0.9	2.3	2.3	1.2	1.3	2.5	2.1	1.3	0.8	2.0	0.5	0.4	0.8	0.1
11a	Maximum water depth in **habitat unit**: ft	2.2	3.4	2.1	2.7	1.9	4.3	5.0	2.4	3.2	5.5	3.8	2.3	2.0	4.9	1.3	1.3	2.6	0.5
11b	Area of **habitat unit** within 0.5 -2.0 ft depth: (ft2)	2598.2	2048.9	3532.1	2378.2	1549.6	1245.0	971.0	1982.5	1763.4	1447.3	4270.0	6086.7	1187.3	2030.9	244.3	122.2	676.0	0.1
11c	Area of **habitat unit** within 2.0 -4.0 ft depth: (ft2)	59.7	974.2	4.6	435.1	0.0	2088.4	1237.5	89.0	473.5	1296.1	8046.2	230.7	0.0	2675.9	0.0	0.0	38.6	0.0
11d	Area of **habitat unit** within 0.5-4.0 ft depth: (ft2)	2658.0	3023.1	3536.6	2813.3	1549.6	3333.4	2208.5	2071.5	2236.9	2743.5	12316.3	6317.4	1187.3	4706.8	244.3	122.2	714.6	0.1
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	86%	62%	81%	73%	82%	33%	33%	82%	0%	0%	0%	89%	0%	39%	64%	35%	62%	0%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	2%	30%	0%	13%	0%	55%	42%	4%	0%	0%	0%	3%	0%	51%	0%	0%	4%	0%
11g	% Area of **habitat** unit within 0.5-4.0 ft depth	88%	92%	82%	86%	82%	87%	76%	85%	0%	0%	0%	92%	0%	90%	64%	35%	65%	0%
11h	If an objective, did the **feature** increase/decrease water depth in the treatment area?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	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	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.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	3	3	1	2	2	3	3	3	2	3	2	2	3	3	1	1	3	2
15.	Percent of **habitat unit** covered by shelter: %	10	25	5	15	20	45	20	25	30	30	15	15	40	25	5	15	40	40
16a	1st dominant cover in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	SWD	SWD	TVG	TVG	TVG	TVG	BOL	TVG	TVG	TVG	TVG	TVG	TVG	LWD	TVG	TVG	LWD	LWD
16b	2nd dominant in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	LWD	TVG	NON	SWD	SWD	SWD	SWD	BOL	SWD	RTW	SWD	SWD	BOL	RTW	NON	AVG	TVG	TVG
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	NA
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	30	75	5	30	40	135	60	75	60	90	30	30	120	75	5	15	120	80
18a	Large woody debris count in **habitat unit**: D >1', L 6-20'	0	0	0	0	0	1	1	0	0	4	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	1	0	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**?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
19b	LWD recruitment mechanisms in **habitat unit**: ANC, EXC, EXH, INT, RPR, UNA, OTH	INT	NON	NON	NON	NON	INT	INT	NON	INT	INT	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	AGG	NON	NON	NON	NON
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	NA
21b	Overall Offchannel Condition (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	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	NA	NA	NA	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	NA	NA	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	NA	NA	NA	NA	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	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?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
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**	2.1	3.4	4.2	3.4	2.9	2.5	3.3	4.3	3.9	4.8	2.9	4.5	4.9	3.3	1.2	3.1	1.2	1.0
26c	Measured mean velocity (ft/sec) in **habitat unit**	1.0	1.4	2.1	1.7	1.7	0.4	1.0	1.7	1.8	0.8	0.7	1.1	1.9	0.6	0.8	1.1	0.3	0.3
27.	Area of **habitat unit** within targeted velocity: (ft^2)	749.6	847.2	469.5	387.0	225.5	2702.1	1071.0	702.5	438.3	1889.8	5395.5	1831.4	257.9	3294.6	101.3	74.0	742.2	68.1
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	25%	26%	11%	12%	12%	71%	37%	29%	17%	48%	42%	27%	14%	63%	26%	21%	68%	85%
29.	Were there any unintended effects of **feature** on velocity If Y, comment.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
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	COB	SND	GRV	GRV	GRV	GRV
30b	2nd dominant substrate in **habitat unit**: BED, BOL, COB, GRV, SND, SLC, OTH	SND	SND	COB	COB	COB	SND	BOL	COB	COB	SND	SND	COB	GRV	GRV	NON	NON	SND	SND
31.	If an objective, did the **feature** achieve the targeted substrate composition?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
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	524.6	616.7	8.3	68.7	1.9	2293.1	793.5	447.5	139.7	1394.7	4775.9	1345.5	6.8	2857.2	29.6	5.2	497.7	0.0
36b	Total **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	524.6	477.0	8.3	68.7	1.9	750.7	597.5	434.8	139.7	811.0	2491.8	1325.5	6.8	1354.4	29.6	5.2	472.7	0.0
36c	Total **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0.0	139.7	0.0	0.0	0.0	1542.4	196.1	12.8	0.0	583.7	2284.1	19.9	0.0	1502.8	0.0	0.0	25.0	0.0
36d	% **habitat unit** area where targeted depth, velocity and shelter criteria overlap	17%	19%	0%	2%	0%	60%	27%	18%	0%	0%	0%	0%	0%	55%	8%	1%	45%	0%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	17%	15%	0%	2%	0%	20%	20%	18%	0%	0%	0%	0%	0%	26%	8%	1%	43%	0%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	4%	0%	0%	0%	40%	7%	1%	0%	0%	0%	0%	0%	29%	0%	0%	2%	0%
37.	Does this **feature** need: DEC, ENH, MNT, REP, NON, OTH	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
38.	Are additional restoration treatments recommended at this **site**?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 35. Adaptive Management Plan full checklist for the Truett Hurst enhancement reach, August 2019.

	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
	mmddyy	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019
	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 Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
	Project Feature Number	NA	NA	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
	Feature Type Code	NA	NA	NA	BCW	HW	HW	SCW	R	HW	HW	SCW	SCW	HW	HW	HW	SCW	SCW	SCW
	Habitat Unit	HU24	HU28	HU32	HU14_2	HU14_2	HU14_2	HU14_2	HU15	HU16	HU17	HU22	HU25	HU25	HU26	HU27	HU27	HU29	HU29
	Habitat Type	Flatwater	Pool	Flatwater	Pool	Pool	Pool	Pool	Riffle	Pool	Flatwater	Pool	Pool	Pool	Riffle	Pool	Pool	Pool	Pool
1.	Length of targeted treatment (ft)	NA	NA	NA	35	30	32	40	40	36	35	45	46	37	20	40	35	31	26
2.	Width of targeted treatment: (ft)	NA	NA	NA	31	29	29	30	31	18	18	31	27	15	23	18	32	31	35
3.	Estimate area of the targeted **feature**: (ft^2)	NA	NA	NA	1085	870	928	1200	1240	648	630	1395	1242	555	460	720	1120	961	910
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	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	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES
5b	Types: ANC, BBB, CRF, MAT, SHF, STR, SWA, UND, UNS, WSH, OTH, NON	NA	NA	NA	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	STR
6a	Is the **feature** still in its original location?	NA	NA	NA	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6b	Is the **feature** still in its original position?	NA	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6c	If yes: LBK, MDC, RBK, SPN, OTH	NA	NA	NA	LBK	LBK	RBK	LBK	MDC	RBK	LBK	LBK	LBK	RBK	LBK	RBK	LBK	LBK	LBK
6d	Is the **feature** still in its original orientaton?	NA	NA	NA	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	NA	NA	MUL	PRP	UPS	UPS	PRL	UPS	DNS	MUL	MUL	UPS	PRP	UPS	MUL	PRP	PRP
7.	Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	FLT	POO	FLT	POO	POO	POO	POO	RIF	POO	FLT	POO	POO	POO	RIF	POO	POO	POO	POO
8.	If an objective, did the **feature** create the targeted instream habitat type?	NA	NA	NA	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.	NA	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	NO
10.	Mean water depth in **habitat unit**: ft	0.3	0.6	0.6	2.0	2.0	2.0	2.0	0.5	0.8	0.3	1.0	1.0	1.0	0.3	0.8	0.8	1.3	1.3
11a	Maximum water depth in **habitat unit**: ft	1.0	1.6	1.4	4.9	4.9	4.9	4.9	1.3	2.0	0.8	2.7	2.8	2.8	1.6	2.4	2.4	3.3	3.3
11b	Area of **habitat unit** within 0.5 -2.0 ft depth: (ft2)	69.1	219.7	303.6	2030.9	2030.9	2030.9	2030.9	382.0	204.1	65.1	357.0	716.1	716.1	97.6	351.0	351.0	539.0	539.0
11c	Area of **habitat unit** within 2.0 -4.0 ft depth: (ft2)	0.0	0.0	0.0	2675.9	2675.9	2675.9	2675.9	0.0	0.6	0.0	36.2	65.6	65.6	0.0	24.6	24.6	232.4	232.4
11d	Area of **habitat unit** within 0.5-4.0 ft depth: (ft2)	69.1	219.7	303.6	4706.8	4706.8	4706.8	4706.8	382.0	204.6	65.1	393.2	781.7	781.7	97.6	375.5	375.5	771.4	771.4
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	26%	53%	58%	39%	39%	39%	39%	51%	68%	25%	76%	69%	69%	19%	57%	57%	56%	56%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	0%	0%	0%	51%	51%	51%	51%	0%	0%	0%	8%	6%	6%	0%	4%	4%	24%	24%
11g	% Area of **habitat** unit within 0.5-4.0 ft depth	26%	53%	58%	90%	90%	90%	90%	51%	69%	25%	83%	75%	75%	19%	61%	61%	79%	79%
11h	If an objective, did the **feature** increase/decrease water depth in the treatment area?	NA	NA	NA	YES	YES	YES	YES	YES	YES	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:		NA		500	240	140	590	1180	170	140	420	350	125	145	300	370	350	400
13.	Were there any unintended effects of the **feature** on the water depth? If Y, comment.	NA	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	YES	YES
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	3	3	3	3	3	3	3	1	3	3	3	3	3	2	3	3	3	3
15.	Percent of **habitat unit** covered by shelter: %	70	10	35	25	25	25	25	10	35	30	45	30	30	20	20	20	20	20
16a	1st dominant cover in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	AVG	LWD	LWD	LWD	LWD	LWD	LWD	TVG	LWD	RTW	TVG	LWD	LWD	LWD	LWD	LWD	LWD	LWD
16b	2nd dominant in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	TVG	TVG	RTW	RTW	RTW	RTW	RTW	BOL	TVG	TVG	AVG	RTW	RTW	TVG	SWD	SWD	RTW	RTW
17a	If an objective, did the **feature** increase instream shelter rating?	NA	NA	NA	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	210	30	105	75	75	75	75	10	105	90	135	90	90	40	60	60	60	60
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	1	1	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**?	NA	NA	NA	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	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	INT	INT	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	AGG	AGG	AGG	AGG	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	NA	NA	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	NA	NA	NA	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	NA	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	NA	NA	NA	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.	NA	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO
23.	If an objective, did the **feature** decrease/increase velocity in the treatment area?	NA	NA	NA	DEC	DEC	DEC	DEC	INC	DEC	DEC	DEC	DEC	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?	NA	NA	NA	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**	0.3	2.8	1.9	3.3	3.3	3.3	3.3	3.2	3.4	0.6	1.2	3.3	3.3	3.6	2.0	2.0	2.3	2.3
26c	Measured mean velocity (ft/sec) in **habitat unit**	0.0	1.0	0.3	0.6	0.6	0.6	0.6	1.3	0.9	0.1	0.4	0.3	0.3	0.9	0.5	0.5	0.5	0.5
27.	Area of **habitat unit** within targeted velocity: (ft^2)	264.8	84.1	430.5	3294.6	3294.6	3294.6	3294.6	171.0	118.1	258.7	296.2	746.8	746.8	178.3	344.6	344.6	528.7	528.7
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	100%	20%	83%	63%	63%	63%	63%	23%	40%	100%	63%	72%	72%	34%	56%	56%	54%	54%
29.	Were there any unintended effects of **feature** on velocity If Y, comment.	NA	NA	NA	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	SND	SND	SND	SND	SND	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	GRV	GRV	GRV	GRV	GRV	COB	SND	SND	SND	SND	SND	SND	SND	SND	SND	SND
31.	If an objective, did the **feature** achieve the targeted substrate composition?	NA	NA	NA	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	69.1	22.2	236.6	2857.2	2857.2	2857.2	2857.2	30.2	57.2	64.9	227.5	527.1	527.1	23.8	176.2	176.2	370.5	370.5
36b	Total **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	69.1	22.2	236.6	1354.4	1354.4	1354.4	1354.4	30.2	57.0	64.9	191.3	502.5	502.5	23.8	172.3	172.3	298.4	298.4
36c	Total **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0.0	0.0	0.0	1502.8	1502.8	1502.8	1502.8	0.0	0.2	0.0	36.2	24.6	24.6	0.0	3.9	3.9	72.1	72.1
36d	% **habitat unit** area where targeted depth, velocity and shelter criteria overlap	26%	5%	45%	55%	55%	55%	55%	4%	19%	25%	48%	51%	51%	5%	28%	28%	38%	38%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	26%	5%	45%	26%	26%	26%	26%	4%	19%	25%	41%	48%	48%	5%	28%	28%	31%	31%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	0%	0%	29%	29%	29%	29%	0%	0%	0%	8%	2%	2%	0%	1%	1%	7%	7%
37.	Does this **feature** need: DEC, ENH, MNT, REP, NON, OTH	NA	NA	NA	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
38.	Are additional restoration treatments recommended at this **site**?	NA	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO

Table 35. Adaptive Management Plan full checklist for the Truett Hurst enhancement reach, August 2019.

	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
	mmddyy	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019
	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 Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
	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	S2-33
	Feature Type Code	HW	HW	HW	R	HW	HW	FW	SCW	SCW	HW	R	HW	HW	HW	HW	FW	HW	FW
	Habitat Unit	HU29	HU29	HU30	HU30	HU31	HU02_D	HU02_D	HU02_D	HU02_D	HU02_D	HU02_D	HU02_D	HU02_D	HU35	HU02_D	HU02_D	HU35	HU35
	Habitat Type	Pool	Pool	Riffle	Riffle	Pool	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Pool	Dry	Dry	Pool	Pool
1.	Length of targeted treatment (ft)	36	20	18	40	22		31						31	33		50	31	40
2.	Width of targeted treatment: (ft)	21	36	37	30	38		37						32	20		15	30	38
3.	Estimate area of the targeted **feature**: (ft^2)	756	720	666	1200	836		1147						992	660		750	930	1520
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	GOOD	GOOD	GOOD	GOOD	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	GOOD	GOOD	UNKN	GOOD	GOOD	GOOD
5a	Are problems with the **feature** visible?	NO	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	NO	NO	YES
5b	Types: ANC, BBB, CRF, MAT, SHF, STR, SWA, UND, UNS, WSH, OTH, NON	NON	NON	NON	NON	NON	BBB	BBB	BBB	BBB	BBB	BBB	BBB	STR	NON	BBB	NON	NON	STR
6a	Is the **feature** still in its original location?	YES	YES	YES	NO	YES	UNK	UNK	UNK	UNK	UNK	UNK	UNK	YES	YES	UNK	YES	YES	YES
6b	Is the **feature** still in its original position?	YES	YES	YES	YES	YES	UNK	UNK	UNK	UNK	UNK	UNK	UNK	NO	YES	UNK	YES	YES	NO
6c	If yes: LBK, MDC, RBK, SPN, OTH	RBK	RBK	LBK	MDC	LBK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	OTH	RBK	UNK	OTH	RBK	OTH
6d	Is the **feature** still in its original orientaton?	YES	YES	YES	YES	YES	UNK	UNK	UNK	UNK	UNK	UNK	UNK	YES	YES	UNK	YES	YES	YES
6e	If yes: DNS, MUL, PRL, PRP, UPS, OTH	UPS	PRP	PRP	PRL	PRP	UNK	UNK	UNK	UNK	UNK	UNK	UNK	PRP	UPS	UNK	PRP	PRP	MUL
7.	Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	POO	POO	RIF	RIF	POO	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	POO	DRY	DRY	POO	POO
8.	If an objective, did the **feature** create the targeted instream habitat type?	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	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	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	NO	NO	YES
10.	Mean water depth in **habitat unit**: ft	1.3	1.3	0.3	0.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	1.3	1.3
11a	Maximum water depth in **habitat unit**: ft	3.3	3.3	1.1	1.1	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.0	2.8	2.8
11b	Area of **habitat unit** within 0.5 -2.0 ft depth: (ft2)	539.0	539.0	155.8	155.8	1193.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1737.6	0.0	0.0	1737.6	1737.6
11c	Area of **habitat unit** within 2.0 -4.0 ft depth: (ft2)	232.4	232.4	0.0	0.0	45.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	556.3	0.0	0.0	556.3	556.3
11d	Area of **habitat unit** within 0.5-4.0 ft depth: (ft2)	771.4	771.4	155.8	155.8	1239.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2293.9	0.0	0.0	2293.9	2293.9
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	56%	56%	14%	14%	69%	0%	0%	0%	0%	0%	0%	0%	0%	63%	0%	0%	63%	63%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	24%	24%	0%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	20%	0%	0%	20%	20%
11g	% Area of **habitat** unit within 0.5-4.0 ft depth	79%	79%	14%	14%	72%	0%	0%	0%	0%	0%	0%	0%	0%	84%	0%	0%	84%	84%
11h	If an objective, did the **feature** increase/decrease water depth in the treatment area?	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	YES	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
12b	Estimate area of **feature** within targeted depth or range ft^2:	365	200	155	1040	130								0	50			30	
13.	Were there any unintended effects of the **feature** on the water depth? If Y, comment.	NO	NO	NO	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES	NO	YES	NO	NO	YES
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	3	3	3	3	3	0	0	0	0	0	0	0	0	3	0	0	3	3
15.	Percent of **habitat unit** covered by shelter: %	20	20	10	10	10	0	0	0	0	0	0	0	0	20	0	0	20	20
16a	1st dominant cover in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	LWD	LWD	RTW	RTW	RTW	NON	NON	NON	NON	NON	NON	NON	NON	RTW	NON	NON	RTW	RTW
16b	2nd dominant in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	RTW	RTW	LWD	LWD	TVG	NON	NON	NON	NON	NON	NON	NON	NON	TVG	NON	NON	TVG	TVG
17a	If an objective, did the **feature** increase instream shelter rating?	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	YES	YES	NO
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	60	60	30	30	30	0	0	0	0	0	0	0	0	60	0	0	60	60
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	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	NON	NON	NON	NON	NR	NR	NR	NR	NR	NR	NR	NR	NON	NR	NR	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
21a	If an objective, did the **feature** lead to the targeted channel conditions?	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	YES	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	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	STB	STB	STB	STB	STB	AGG	AGG	AGG	AGG	AGG	AGG	AGG	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	AGG	AGG	AGG	AGG	AGG	AGG	AGG	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	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	NO	NO	NO
23.	If an objective, did the **feature** decrease/increase velocity in the treatment area?	DEC	DEC	DEC	INC	DEC	NA	NA	NA	NA	NA	NA	NA	NA	DEC	DEC	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
25.	Did the **feature** achieve the targeted velocity?	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	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**	2.3	2.3	3.4	3.4	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	1.0
26c	Measured mean velocity (ft/sec) in **habitat unit**	0.5	0.5	1.2	1.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.2	0.2
27.	Area of **habitat unit** within targeted velocity: (ft^2)	528.7	528.7	149.3	149.3	1177.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2636.0	0.0	0.0	2636.0	2636.0
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	54%	54%	14%	14%	68%	0%	0%	0%	0%	0%	0%	0%	0%	96%	0%	0%	96%	96%
29.	Were there any unintended effects of **feature** on velocity If Y, comment.	NO	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	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	GRV	GRV	GRV
30b	2nd dominant substrate in **habitat unit**: BED, BOL, COB, GRV, SND, SLC, OTH	SND	SND	COB	COB	COB	SND	SND	SND	SND	SND	SND	SND	SND	UNK	SND	SND	UNK	UNK
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	370.5	370.5	3.8	3.8	830.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2190.4	0.0	0.0	2190.4	2190.4
36b	Total **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	298.4	298.4	3.8	3.8	784.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1634.1	0.0	0.0	1634.1	1634.1
36c	Total **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	72.1	72.1	0.0	0.0	45.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	556.3	0.0	0.0	556.3	556.3
36d	% **habitat unit** area where targeted depth, velocity and shelter criteria overlap	38%	38%	0%	0%	48%	0%	0%	0%	0%	0%	0%	0%	0%	80%	0%	0%	80%	80%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	31%	31%	0%	0%	46%	0%	0%	0%	0%	0%	0%	0%	0%	60%	0%	0%	60%	60%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	7%	7%	0%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	20%	0%	0%	20%	20%
37.	Does this **feature** need: DEC, ENH, MNT, REP, NON, OTH	NON	NON	NON	NON	NON	MNT	MNT	MNT	MNT	MNT	MNT	MNT	NON	NON	MNT	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 35. Adaptive Management Plan full checklist for the Truett Hurst enhancement reach, August 2019.

	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
	mmddyy	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019
	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	3	3	3	3	3	3	3	3	3	4	4
	Project Site Type	SideChan	SideChan	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
	Project Feature Number	S2-34	S2-35	S2-36	S2-37A	S2-37B	S2-37C	S2-38	NA	S3-01	S3-02	S3-03	S3-04	S3-05	S3-06	S3-07	S3-08	S4-01	S4-02
	Feature Type Code	SCW	SCW	SCW	ISW	ISW	ISW	R	NA	BCW	HW	BCW	HW	BCW	HW	FW	P	BCW	HW
	Habitat Unit	HU35	HU36	HU36	HU02_D	HU36	HU36	HU36	HU20_2	HU19_2	HU21	HU03_D	HU03_D	HU03_D	HU03_D	HU03_D	HU03_D	HU33	HU04_D
	Habitat Type	Pool	Pool	Pool	Dry	Pool	Pool	Pool	Flatwater	Pool	Alcove	Dry	Dry	Dry	Dry	Dry	Dry	Flatwater	Dry
1.	Length of targeted treatment (ft)	27	28	27	26	22	25	40	NA	30	18	27	20	33				38	
2.	Width of targeted treatment: (ft)	40	40	40	39	45	45	20	NA	28	33	31	32	30				38	
3.	Estimate area of the targeted **feature**: (ft^2)	1080	1120	1080	1014	990	1125	800	NA	840	594	837	640	990				1444	
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	FAIL	NA	GOOD	GOOD	UNKN	FAIR	UNKN	UNKN	UNKN	UNKN	GOOD	UNKN
5a	Are problems with the **feature** visible?	NO	NO	NO	NO	NO	NO	YES	NA	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES
5b	Types: ANC, BBB, CRF, MAT, SHF, STR, SWA, UND, UNS, WSH, OTH, NON	NON	NON	NON	NON	NON	NON	OTH	NA	NON	NON	BBB	STR	BBB	NON	NON	NON	STR	NON
6a	Is the **feature** still in its original location?	YES	YES	YES	YES	YES	YES	YES	NA	YES	YES	YES	YES	YES	UNK	UNK	UNK	YES	UNK
6b	Is the **feature** still in its original position?	YES	YES	YES	YES	YES	YES	YES	NA	YES	YES	NO	NO	NO	UNK	UNK	UNK	NO	UNK
6c	If yes: LBK, MDC, RBK, SPN, OTH	LBK	LBK	LBK	RBK	RBK	LBK	SPN	NA	RBK	RBK	OTH	OTH	OTH	UNK	UNK	UNK	RBK	UNK
6d	Is the **feature** still in its original orientaton?	YES	YES	YES	YES	YES	YES	YES	NA	YES	YES	UNK	UNK	UNK	UNK	UNK	UNK	YES	UNK
6e	If yes: DNS, MUL, PRL, PRP, UPS, OTH	UPS	UPS	PRP	MUL	MUL	MUL	OTH	NA	MUL	DNS	UNK	UNK	UNK	UNK	UNK	UNK	UPS	UNK
7.	Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	POO	POO	POO	DRY	POO	POO	POO	FLT	POO	ALC	DRY	DRY	DRY	DRY	DRY	DRY	FLT	DRY
8.	If an objective, did the **feature** create the targeted instream habitat type?	YES	YES	YES	YES	YES	YES	NO	NA	YES	YES	NO	NO	NO	NO	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	YES	NA	NO	NO	YES	YES	YES	YES	YES	YES	NO	YES
10.	Mean water depth in **habitat unit**: ft	1.3	1.6	1.6	0.0	1.6	1.6	1.6	0.5	0.8	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0
11a	Maximum water depth in **habitat unit**: ft	2.8	5.2	5.2	0.0	5.2	5.2	5.2	1.3	2.6	2.5	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0
11b	Area of **habitat unit** within 0.5 -2.0 ft depth: (ft2)	1737.6	1605.1	1605.1	0.0	1605.1	1605.1	1605.1	244.3	676.0	514.9	0.0	0.0	0.0	0.0	0.0	0.0	2681.4	0.0
11c	Area of **habitat unit** within 2.0 -4.0 ft depth: (ft2)	556.3	784.6	784.6	0.0	784.6	784.6	784.6	0.0	38.6	10.7	0.0	0.0	0.0	0.0	0.0	0.0	28.6	0.0
11d	Area of **habitat unit** within 0.5-4.0 ft depth: (ft2)	2293.9	2389.7	2389.7	0.0	2389.7	2389.7	2389.7	244.3	714.6	525.5	0.0	0.0	0.0	0.0	0.0	0.0	2710.0	0.0
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	63%	54%	54%	0%	54%	54%	54%	64%	62%	53%	0%	0%	0%	0%	0%	0%	70%	0%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	20%	26%	26%	0%	26%	26%	26%	0%	4%	1%	0%	0%	0%	0%	0%	0%	1%	0%
11g	% Area of **habitat** unit within 0.5-4.0 ft depth	84%	80%	80%	0%	80%	80%	80%	64%	65%	54%	0%	0%	0%	0%	0%	0%	71%	0%
11h	If an objective, did the **feature** increase/decrease water depth in the treatment area?	YES	YES	YES	YES	YES	YES	NO	NA	YES	YES	NO	NO	NO	NO	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
12b	Estimate area of **feature** within targeted depth or range ft^2:	330	330	330		200	250	800		575	180	400	195	330				200	
13.	Were there any unintended effects of the **feature** on the water depth? If Y, comment.	NO	NO	NO	NO	NO	NO	YES	NA	NO	NO	YES	YES	YES	YES	YES	YES	NO	YES
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	3	3	3	0	3	3	3	1	3	3	0	0	0	0	0	0	3	0
15.	Percent of **habitat unit** covered by shelter: %	20	30	30	0	30	30	30	5	40	40	0	0	0	0	0	0	35	0
16a	1st dominant cover in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	RTW	RTW	RTW	NON	RTW	RTW	RTW	TVG	LWD	AVG	NON	NON	NON	NON	NON	NON	LWD	NON
16b	2nd dominant in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	TVG	LWD	LWD	NON	LWD	LWD	LWD	NON	TVG	TVG	NON	NON	NON	NON	NON	NON	BOL	NON
17a	If an objective, did the **feature** increase instream shelter rating?	YES	YES	YES	YES	YES	YES	YES	NA	YES	YES	NO	NO	NO	NO	NO	NO	YES	NO
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	60	90	90	0	90	90	90	5	120	120	0	0	0	0	0	0	105	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	NO	NO	YES	YES	YES	NO	NA	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	NON	NON	NR	NON	NON	NON	NON	NON	NON	NR	NR	NR	NR	NR	NR	NON	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	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	NO	NA	YES	YES	NO	NO	NO	NO	NO	NO	YES	NO
21b	Overall Offchannel Condition (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	AGG	AGG	AGG	AGG	AGG	AGG	AGG	NA	STB	STB	AGG	AGG	AGG	AGG	AGG	AGG	AGG	AGG
21c	Outlet Conditions (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	STB	STB	STB	STB	STB	STB	STB	NA	STB	STB	STB	STB	STB	AGG	AGG	AGG	STB	AGG
21d	Inlet Conditions (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	STB	STB	STB	STB	STB	STB	STB	NA	STB	STB	STB	STB	STB	AGG	AGG	AGG	STB	AGG
22.	Were there any unintended effects on the stream channel at the **feature**? If Y, comment.	NO	NO	NO	NO	NO	NO	YES	NA	NO	NO	YES	YES	YES	YES	YES	YES	NO	YES
23.	If an objective, did the **feature** decrease/increase velocity in the treatment area?	DEC	DEC	DEC	DEC	DEC	DEC	DEC	NA	DEC	DEC	NA	NA	NA	NA	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
25.	Did the **feature** achieve the targeted velocity?	YES	YES	YES	YES	YES	YES	NO	NA	YES	YES	NO	NO	NO	NO	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
26b	Measured max velocity (ft/sec) in **habitat unit**	1.0	2.2	2.2	0.0	2.2	2.2	2.2	1.2	1.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0
26c	Measured mean velocity (ft/sec) in **habitat unit**	0.2	0.2	0.2	0.0	0.2	0.2	0.2	0.8	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0
27.	Area of **habitat unit** within targeted velocity: (ft^2)	2636.0	2557.7	2557.7	0.0	2557.7	2557.7	2557.7	101.3	742.2	966.7	0.0	0.0	0.0	0.0	0.0	0.0	2752.8	0.0
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	96%	86%	86%	0%	86%	86%	86%	26%	68%	100%	0%	0%	0%	0%	0%	0%	72%	0%
29.	Were there any unintended effects of **feature** on velocity If Y, comment.	NO	NO	NO	NO	NO	NO	YES	NA	NO	NO	YES	YES	YES	YES	YES	YES	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	SND	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV
30b	2nd dominant substrate in **habitat unit**: BED, BOL, COB, GRV, SND, SLC, OTH	UNK	UNK	UNK	SND	UNK	UNK	UNK	NON	SND	GRV	SND	SND	SND	SND	SND	SND	COB	SND
31.	If an objective, did the **feature** achieve the targeted substrate composition?	YES	YES	YES	YES	YES	YES	YES	NA	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	2190.4	1974.2	1974.2	0.0	1974.2	1974.2	1974.2	29.6	497.7	525.5	0.0	0.0	0.0	0.0	0.0	0.0	1698.3	0.0
36b	Total **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	1634.1	1250.4	1250.4	0.0	1250.4	1250.4	1250.4	29.6	472.7	514.9	0.0	0.0	0.0	0.0	0.0	0.0	1675.7	0.0
36c	Total **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	556.3	723.9	723.9	0.0	723.9	723.9	723.9	0.0	25.0	10.7	0.0	0.0	0.0	0.0	0.0	0.0	22.6	0.0
36d	% **habitat unit** area where targeted depth, velocity and shelter criteria overlap	80%	66%	66%	0%	66%	66%	66%	8%	45%	54%	0%	0%	0%	0%	0%	0%	44%	0%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	60%	42%	42%	0%	42%	42%	42%	8%	43%	53%	0%	0%	0%	0%	0%	0%	44%	0%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	20%	24%	24%	0%	24%	24%	24%	0%	2%	1%	0%	0%	0%	0%	0%	0%	1%	0%
37.	Does this **feature** need: DEC, ENH, MNT, REP, NON, OTH	NON	NON	NON	NON	NON	NON	NON	NA	NON	NON	NON	NON	NON	MNT	MNT	MNT	NON	MNT
38.	Are additional restoration treatments recommended at this **site**?	NO	NO	NO	NO	NO	NO	NO	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO

Table 35. Adaptive Management Plan full checklist for the Truett Hurst enhancement reach, August 2019.

	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
	mmddyy	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019
	Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
	Project Site Number	4	4	4	4	4	4	5	5	5	5	5	5	5	5	5	5	5	5	5
	Project Site Type	SC Alcove	SC Alcove	SC Alcove	SC Alcove	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
	Project Feature Number	S4-03	S4-04	S4-05	S4-06	S4-07	S4-08	NA	NA	NA	NA	S5-01	S5-02	S5-03	S5-04	S5-05	S5-06	S5-07	S5-08	
	Feature Type Code	HW	HW	HW	HW	HW	FW	NA	NA	NA	NA	FW	FW	FW	FW	FW	FW	FW	FW	
	Habitat Unit	HU04_D	HU33	HU04_D	HU33	HU04_D	HU34	HU31_2	HU32_2	HU34_2	HU35_2	HU05_D	HU05_D	HU05_D	HU05_D	HU05_D	HU05_D	HU05_D	HU05_D	
	Habitat Type	Dry	Flatwater	Dry	Flatwater	Dry	Riffle	Pool	Flatwater	Riffle	Pool	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	
1.	Length of targeted treatment (ft)		15		30		35	NA	NA	NA	NA	40	40	40	40	40	40	40	40	
2.	Width of targeted treatment: (ft)		35		16		40	NA	NA	NA	NA	30	30	30	30	30	30	30	30	
3.	Estimate area of the targeted **feature**: (ft^2)		525		480		1400	NA	NA	NA	NA	1200	1200	1200	1200	1200	1200	1200	1200	
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	UNKN	GOOD	UNKN	GOOD	UNKN	GOOD	NA	NA	NA	NA	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	
5a	Are problems with the **feature** visible?	YES	YES	YES	NO	YES	YES	NA	NA	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	
5b	Types: ANC, BBB, CRF, MAT, SHF, STR, SWA, UND, UNS, WSH, OTH, NON	NON	STR	NON	NON	NON	STR	NA	NA	NA	NA	NON	NON	NON	NON	NON	NON	NON	NON	
6a	Is the **feature** still in its original location?	UNK	YES	UNK	YES	UNK	YES	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	
6b	Is the **feature** still in its original position?	UNK	YES	UNK	YES	UNK	YES	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	
6c	If yes: LBK, MDC, RBK, SPN, OTH	UNK	RBK	UNK	RBK	UNK	OTH	NA	NA	NA	NA	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH	
6d	Is the **feature** still in its original orientaton?	UNK	YES	UNK	YES	UNK	YES	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	
6e	If yes: DNS, MUL, PRL, PRP, UPS, OTH	UNK	PRP	UNK	UPS	UNK	DNS	NA	NA	NA	NA	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH	
7.	Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	DRY	FLT	DRY	FLT	DRY	RIF	POO	FLT	RIF	POO	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	
8.	If an objective, did the **feature** create the targeted instream habitat type?	NO	NO	NO	YES	NO	YES	NA	NA	NA	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.	YES	NO	YES	NO	YES	NO	NA	NA	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	
10.	Mean water depth in **habitat unit**: ft	0.0	0.8	0.0	0.8	0.0	0.3	0.8	0.6	0.3	1.3	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	2.2	0.0	2.2	0.0	1.0	2.6	1.4	1.0	2.8	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: (ft2)	0.0	2681.4	0.0	2681.4	0.0	124.5	1193.6	303.6	124.5	1737.6	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: (ft2)	0.0	28.6	0.0	28.6	0.0	0.0	45.5	0.0	0.0	556.3	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: (ft2)	0.0	2710.0	0.0	2710.0	0.0	124.5	1239.1	303.6	124.5	2293.9	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%	70%	0%	70%	0%	9%	69%	58%	9%	63%	0%	0%	0%	0%	0%	0%	0%	0%	
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	0%	1%	0%	1%	0%	0%	3%	0%	0%	20%	0%	0%	0%	0%	0%	0%	0%	0%	
11g	% Area of **habitat** unit within 0.5-4.0 ft depth	0%	71%	0%	71%	0%	9%	72%	58%	9%	84%	0%	0%	0%	0%	0%	0%	0%	0%	
11h	If an objective, did the **feature** increase/decrease water depth in the treatment area?	NO	YES	NO	YES	NO	NO	NA	NA	NA	NA	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:		175		110						NA									
13.	Were there any unintended effects of the **feature** on the water depth? If Y, comment.	YES	NO	YES	NO	YES	YES	NA	NA	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	0	3	0	3	0	3	3	3	3	3	0	0	0	0	0	0	0	0	
15.	Percent of **habitat unit** covered by shelter: %	0	35	0	35	0	10	10	35	10	20	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	LWD	NON	LWD	NON	RTW	RTW	LWD	RTW	RTW	NON	NON	NON	NON	NON	NON	NON	NON	
16b	2nd dominant in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	NON	BOL	NON	BOL	NON	LWD	TVG	RTW	LWD	TVG	NON	NON	NON	NON	NON	NON	NON	NON	
17a	If an objective, did the **feature** increase instream shelter rating?	NO	YES	NO	YES	NO	NO	NA	NA	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	0	105	0	105	0	30	30	105	30	60	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	NO	NO	NO	NO	YES	NA	NA	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	
19b	LWD recruitment mechanisms in **habitat unit**: ANC, EXC, EXH, INT, RPR, UNA, OTH	NR	NON	NR	NON	NR	NON	NON	NON	NON	NON	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	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?	NO	YES	NO	YES	NO	NO	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	
21b	Overall Offchannel Condition (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	AGG	STB	AGG	STB	AGG	AGG	NA	NA	NA	NA	STB	STB	STB	STB	STB	STB	STB	STB	
21c	Outlet Conditions (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	AGG	STB	AGG	STB	AGG	STB	NA	NA	NA	NA	STB	STB	STB	STB	STB	STB	STB	STB	
21d	Inlet Conditions (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	AGG	STB	AGG	STB	AGG	STB	NA	NA	NA	NA	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	NO	YES	NO	YES	NO	NA	NA	NA	NA	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	DEC	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	YES	NO	NO	NA	NA	NA	NA	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**	0.0	1.6	0.0	1.6	0.0	3.0	1.1	1.9	3.0	1.0	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	0.3	0.0	0.3	0.0	0.9	0.4	0.3	0.9	0.2	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	2752.8	0.0	2752.8	0.0	439.3	1177.3	430.5	439.3	2636.0	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%	72%	0%	72%	0%	31%	68%	83%	31%	96%	0%	0%	0%	0%	0%	0%	0%	0%	
29.	Were there any unintended effects of **feature** on velocity If Y, comment.	YES	NO	YES	NO	YES	NO	NA	NA	NA	NA	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	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	SND	COB	SND	COB	SND	COB	COB	GRV	COB	UNK	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	NA	NA	NA	NA	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	1698.3	0.0	1698.3	0.0	8.9	830.3	236.6	8.9	2190.4	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	1675.7	0.0	1675.7	0.0	8.9	784.8	236.6	8.9	1634.1	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	22.6	0.0	22.6	0.0	0.0	45.5	0.0	0.0	556.3	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%	44%	0%	44%	0%	1%	48%	45%	1%	80%	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%	44%	0%	44%	0%	1%	46%	45%	1%	60%	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%	1%	0%	1%	0%	0%	3%	0%	0%	20%	0%	0%	0%	0%	0%	0%	0%	0%	
37.	Does this **feature** need: DEC, ENH, MNT, REP, NON, OTH	MNT	NON	MNT	NON	MNT	NON	NA	NA	NA	NA	NON	NON	NON	NON	NON	NON	NON	NON	
38.	Are additional restoration treatments recommended at this **site**?	NO	NO	NO	NO	NO	NO	NA	NA	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	

Table 35. Adaptive Management Plan full checklist for the Truett Hurst enhancement reach, August 2019.

	Project Reach	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
	Colloquial Name	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH	TH
	mmddyy	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019	82019
	Survey Type	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
	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
	Project Feature Number	S5-09	S5-10	S5-11	S5-12	S5-13	S5-14	S5-15	S5-16	S5-17	S5-18	S5-19	S5-20	S5-21	S5-22	S5-23	S5-24	S5-25
	Feature Type Code	FW	FW	FW	FW	FW	FW	FW	FW	mental Large	ank Treatme	Willow Baffle	Willow Baffle	Willow Baffle	Willow Baffle	Willow Baffle	Willow Baffle	Willow Baffle
	Habitat Unit	HU05_D	HU05_D	HU05_D	HU05_D	HU05_D	HU05_D	HU05_D	HU05_D	HU36_2	HU33_2	HU05_D	HU05_D	HU05_D	HU05_D	HU05_D	HU05_D	HU05_D
	Habitat Type	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Pool	Flatwater	Dry	Dry	Dry	Dry	Dry	Dry	Dry
1.	Length of targeted treatment (ft)	40	40	40	40	40	40	40	40	130	290		50	50	50	50	50	50
2.	Width of targeted treatment: (ft)	30	30	30	30	30	30	30	30	50	15		5	5	5	5	5	5
3.	Estimate area of the targeted **feature**: (ft^2)	1200	1200	1200	1200	1200	1200	1200	1200	6500	4350		250	250	250	250	250	250
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	FAIR	FAIR	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
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	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	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
6c	If yes: LBK, MDC, RBK, SPN, OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH	RBK	LBK	OTH	OTH	OTH	OTH	OTH	OTH	OTH
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
6e	If yes: DNS, MUL, PRL, PRP, UPS, OTH	OTH	OTH	OTH	OTH	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	DRY	DRY	DRY	DRY	DRY	POO	FLT	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	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
10.	Mean water depth in **habitat unit**: ft	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.8	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	5.2	2.2	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: (ft2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1605.1	2681.4	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: (ft2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	784.6	28.6	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: (ft2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2389.7	2710.0	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%	54%	70%	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%	26%	1%	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%	80%	71%	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	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	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:									230	2500							
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
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0
15.	Percent of **habitat unit** covered by shelter: %	0	0	0	0	0	0	0	0	30	35	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	RTW	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	NON	NON	NON	NON	NON	LWD	BOL	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	YES	YES	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	90	105	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	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	NR	NR	NR	NR	NON	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	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
21b	Overall Offchannel Condition (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	STB	STB	STB	STB	STB	STB	STB	STB	STB	AGG	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.	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?	NA	NA	NA	NA	NA	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	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	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
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	2.2	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	0.0	0.0	0.0	0.0	0.0	0.2	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	0.0	0.0	0.0	0.0	0.0	2557.7	2752.8	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%	86%	72%	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	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
30b	2nd dominant substrate in **habitat unit**: BED, BOL, COB, GRV, SND, SLC, OTH	SND	SND	SND	SND	SND	SND	SND	SND	UNK	COB	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	1974.2	1698.3	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	1250.4	1675.7	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	723.9	22.6	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%	66%	44%	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%	42%	44%	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%	24%	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	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

Farrow Wallace, November 2019

Depth and Velocity

Table 36. Areas and percentages of: wetted area, optimal depth and velocity, and optimal hydraulic habitat within the Farrow, Wallace enhancement reach, November 2019.

Farrow, Wallace Post-effective flow November 2019	Wetted area (ft^2)	Optimal depth (ft^2)			Optimal velocity (ft^2)	Optimal habitat (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	47,292	25,257	13,813	39,070	12,252	4,267	3,667	7,934
Main channel alcove area	15,821	5,517	6,531	12,048	11,521	4,296	4,297	8,593
Side channel area	10,711	5,142	3,485	8,628	9,697	4,575	3,061	7,636
Total area	73,824	35,917	23,829	59,746	33,470	13,138	11,025	24,163
Main channel % of wetted area	64%	53%	29%	83%	26%	9%	8%	17%
Main channel alcove % of wetted area	21%	35%	41%	76%	73%	27%	27%	54%
Side channel % of wetted area	15%	48%	33%	81%	91%	43%	29%	71%
Total % of wetted area	**100%**	49%	32%	81%	45%	18%	15%	33%

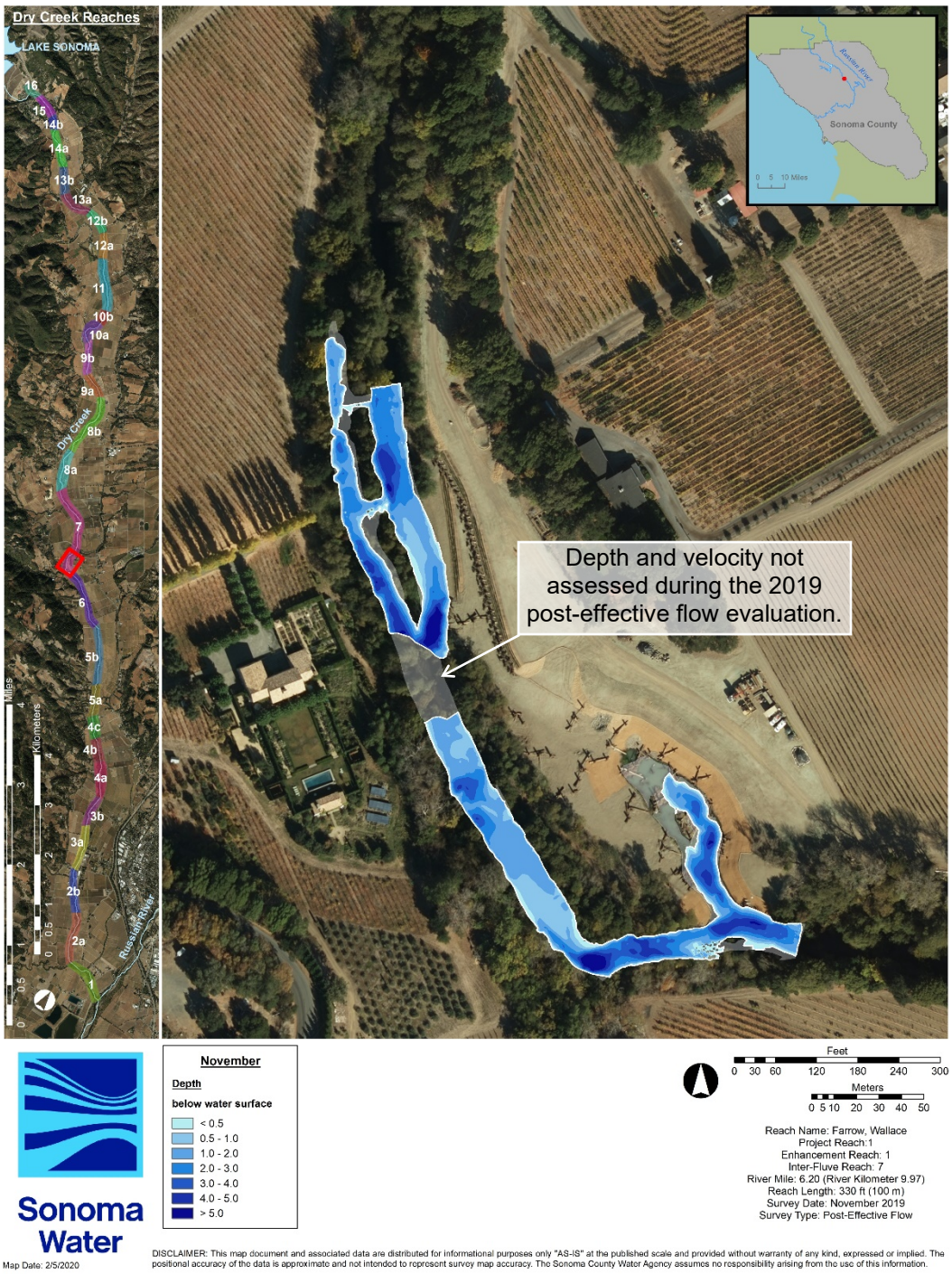

Figure 61. Measured water depth within the Farrow, Wallace enhancement reach, November 2019.

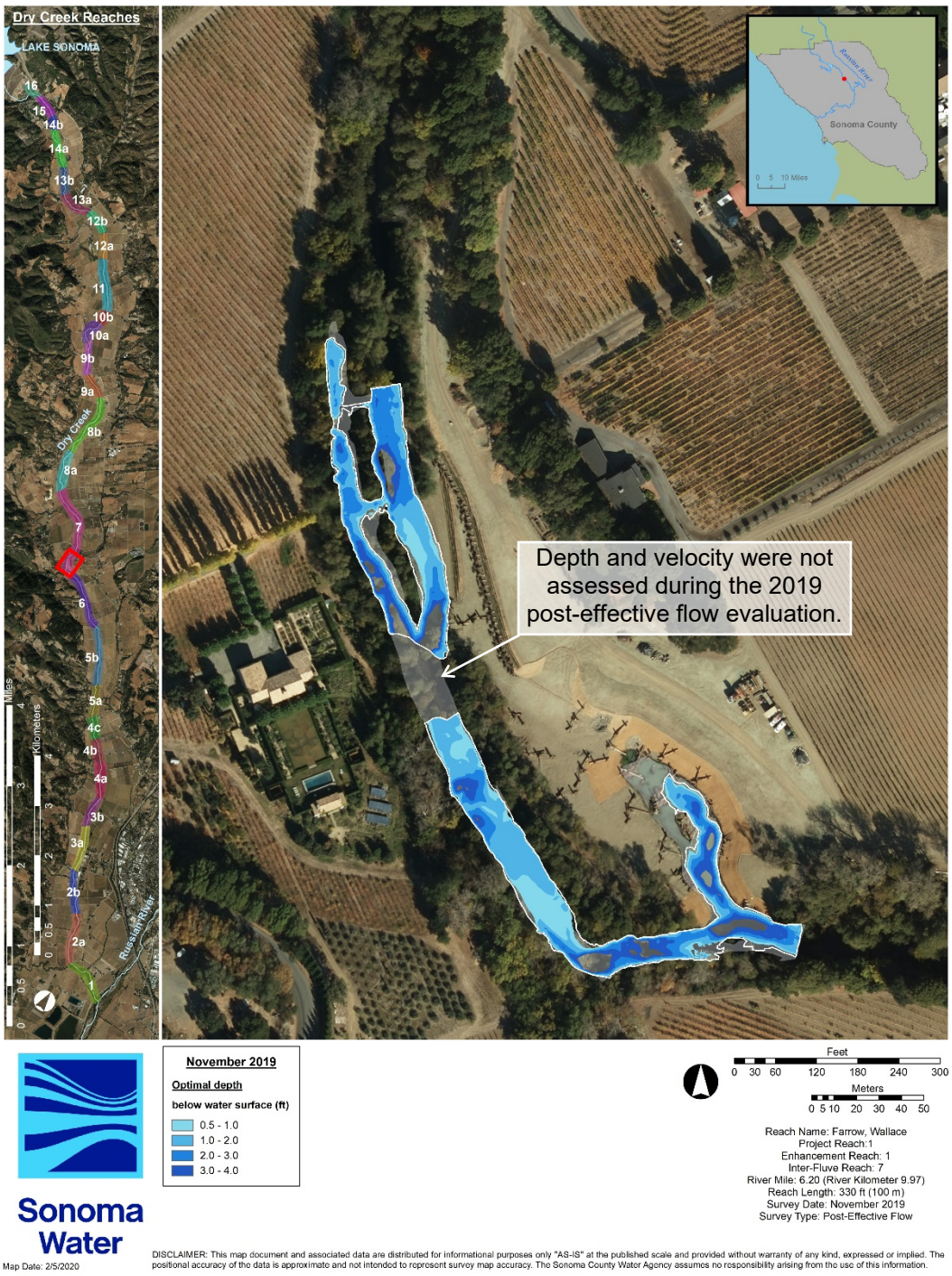

Figure 62. Optimal water depth for fry (0.5-2.0 ft) and parr (2.0-4.0 ft) within the Farrow, Wallace enhancement reach, November 2019.

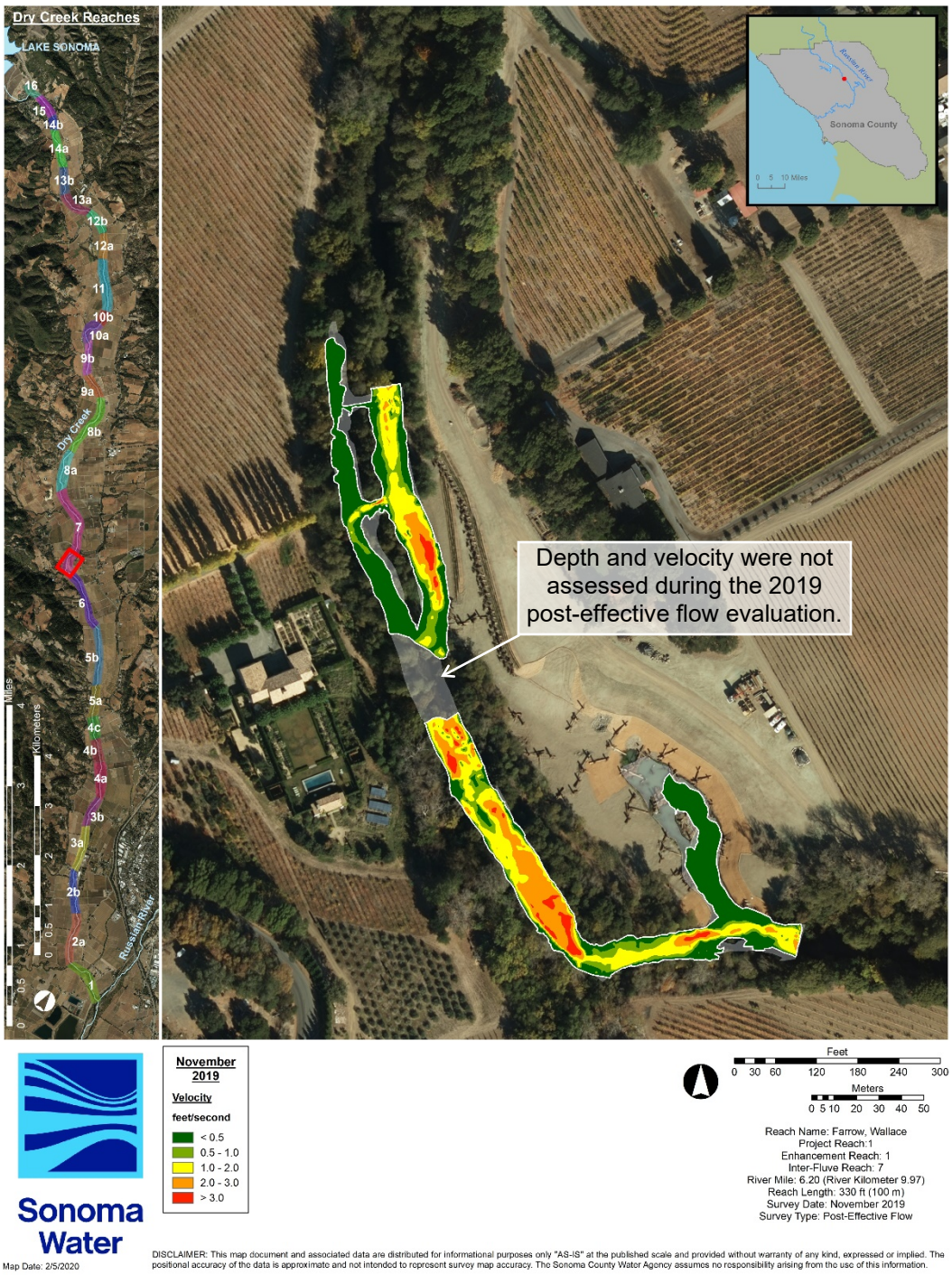

Figure 63. Measured water velocity within the Farrow, Wallace enhancement reach, November 2019.

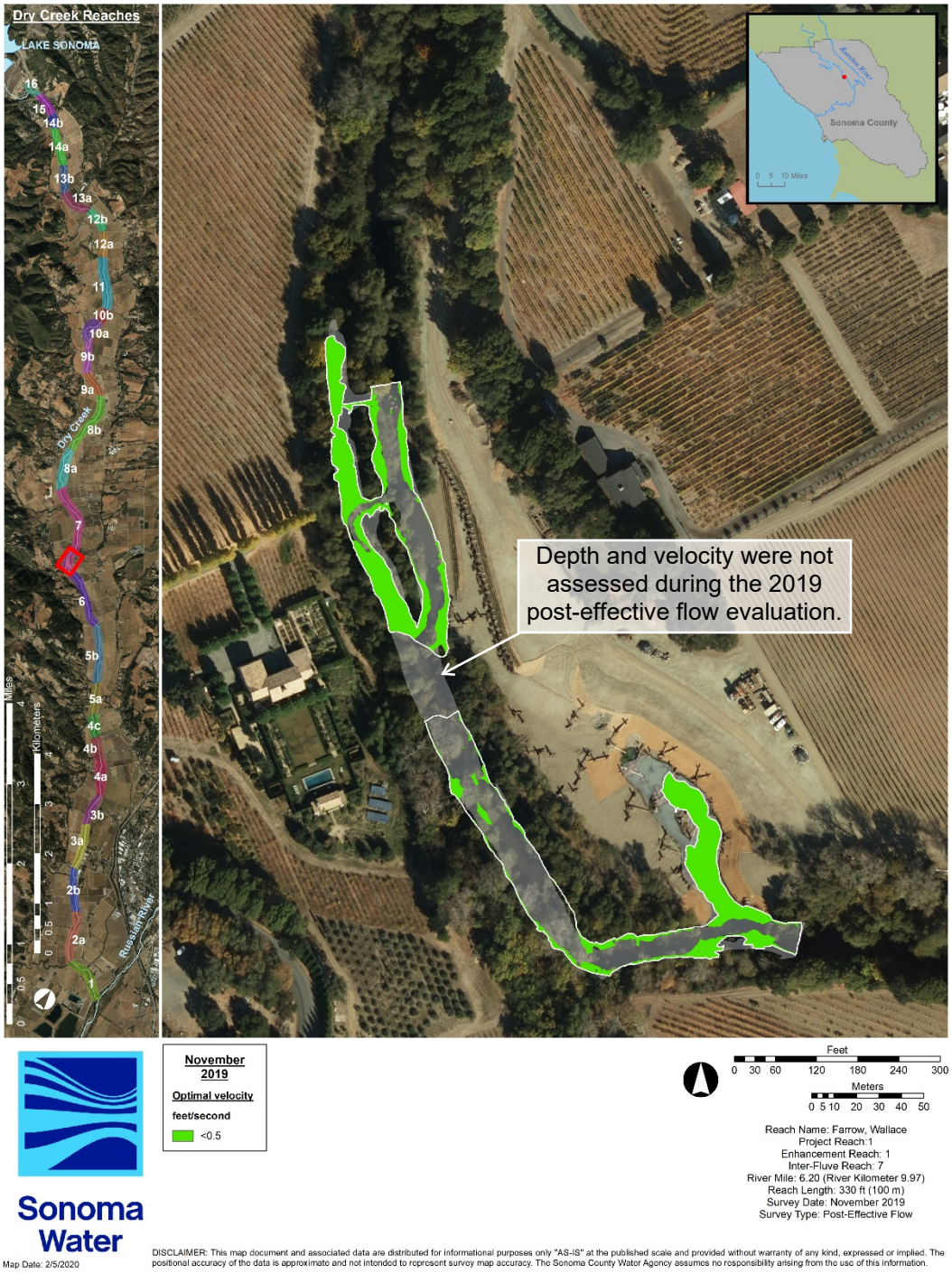

Figure 64. Optimal water velocity for fry and parr (< 0.5 ft/s) within the Farrow, Wallace enhancement reach, November 2019.

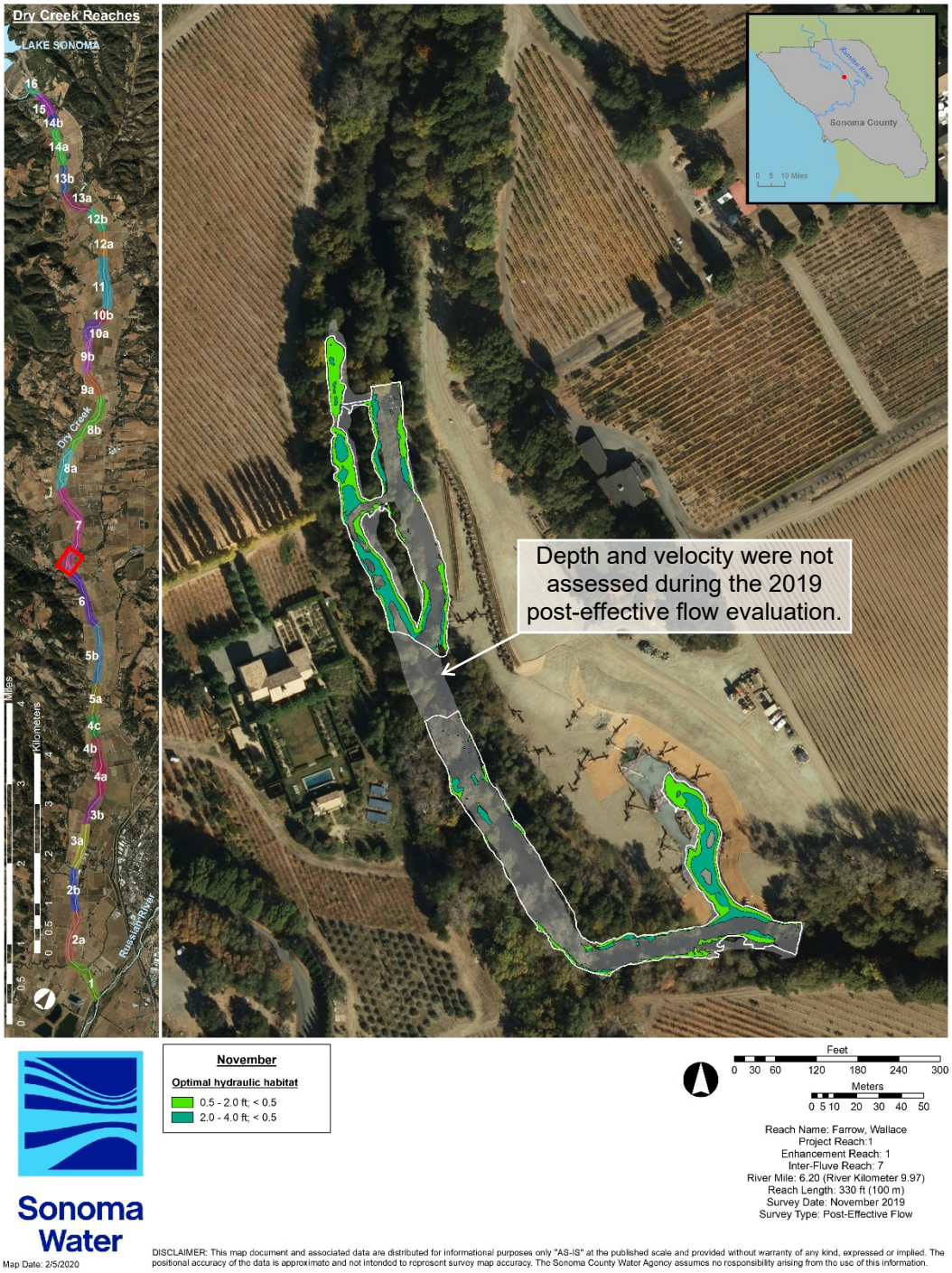

Figure 65. Optimal hydraulic habitat for fry (<0.5 ft/s, 0.5-2.0 ft) and parr (<0.5 ft/s, 2.0-4.0 ft) within the Farrow, Wallace enhancement reach, November 2019.

Habitat Types and Shelter Values

Table 37. Habitat, types, shelter value, percent cover, and shelter score for habitat units within the Farrow, Wallace enhancement reach, November 2019.

Post-effective flow (November 2019)				
Habitat Unit #	**Habitat Type**	**Shelter Value**	**Percent Cover**	**Shelter Score**
HU01	Pool	3	35	105
HU02	Alcove	3	65	195
HU03	Flatwater	2	30	60
HU04	Pool	2	20	40
HU05	Riffle	1	10	10
HU06	Flatwater	1	10	10
HU07	Pool	3	40	120
HU08	Riffle	0	50	0
HU09	Pool	3	50	150
HU10	Riffle	2	20	40
HU11	Pool	3	30	90
HU12	Flatwater	2	20	40
HU13	Riffle	3	75	225
HU14	Alcove	2	45	90
HU15	Flatwater	2	15	30
HU16	Flatwater	2	40	80
HU17	Pool	3	50	150
Pool: riffle	**6:4 (1.50)**			**Avg = 84**

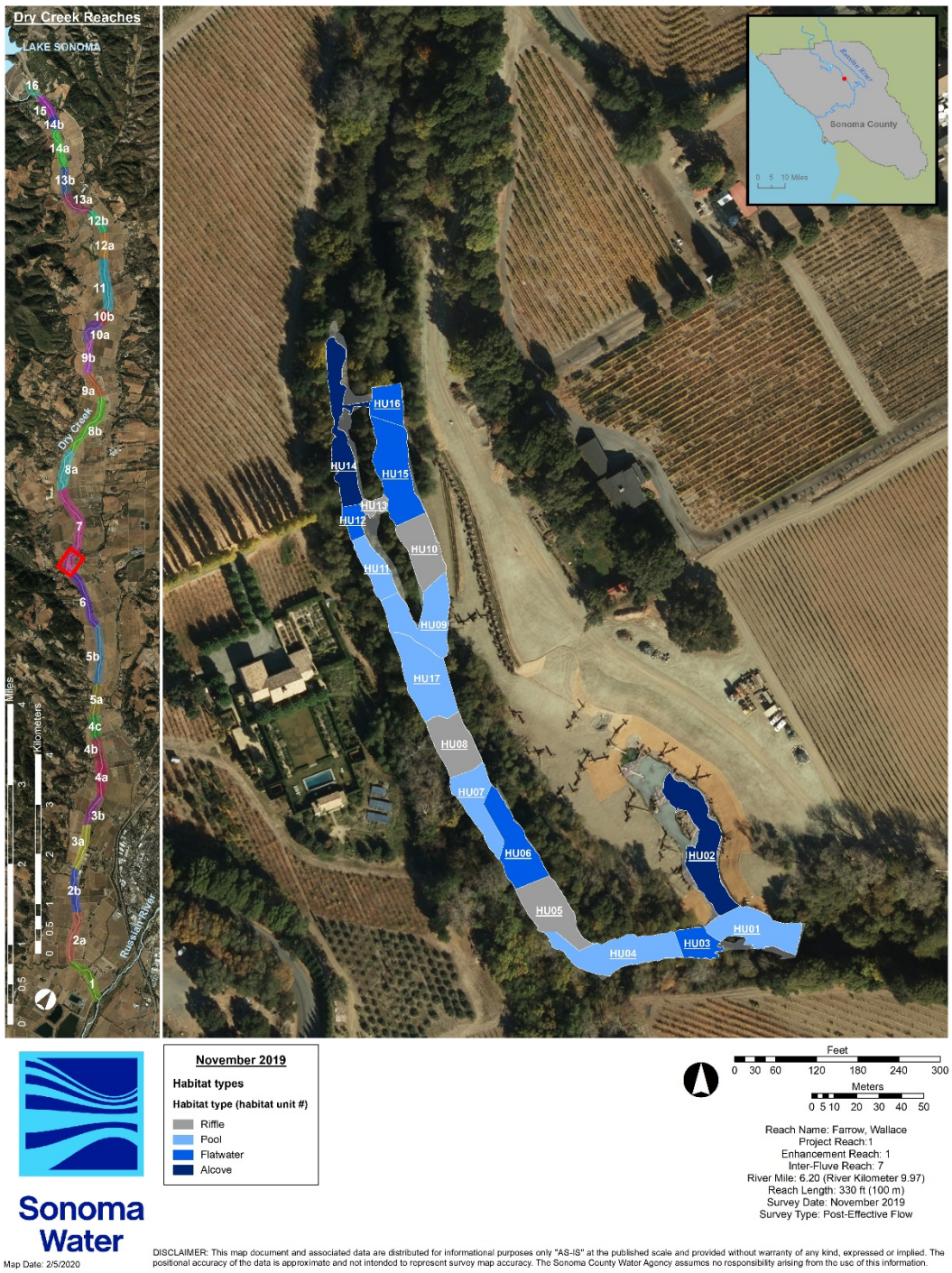

Figure 66. Habitat unit number and type within the Farrow, Wallace enhancement reach, November 2019.

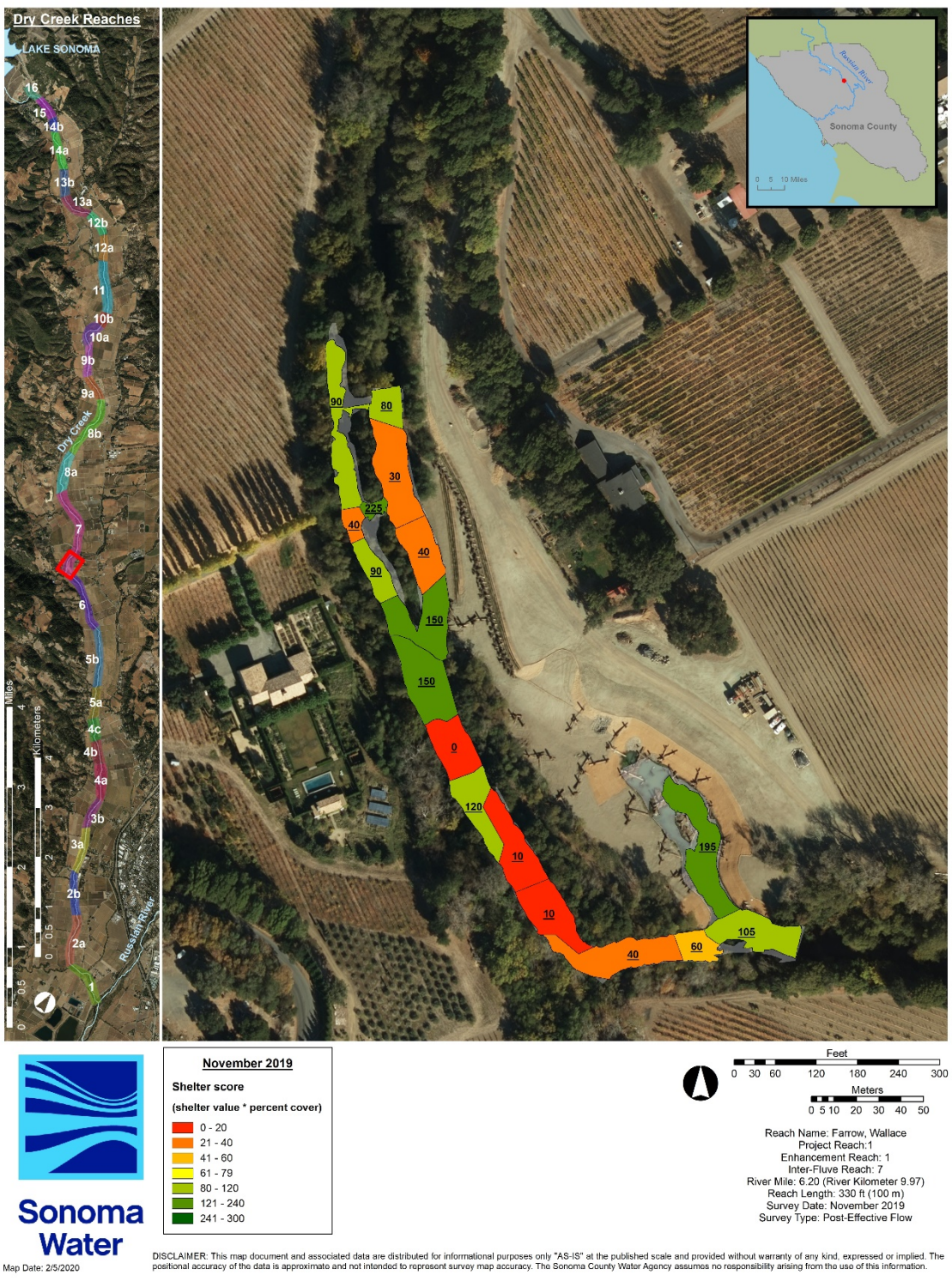

Figure 67. Habitat unit shelter scores within the Farrow, Wallace enhancement reach, November 2019.

Feature, Habitat Unit, Site, and Reach Ratings

Table 38. Post-effective flow feature ratings for the Farrow, Wallace enhancement reach, November 2019.

	Project Reach	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	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
	mmddyy	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519
	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 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
	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
	Habitat Unit	HU02	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	Alcove	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
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
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
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
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
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	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	YES	YES	NO	YES	NO	NO	NO	NO	NO
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
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
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	YES	YES	YES	YES
25.	Did the **feature** achieve the targeted velocity?	NA	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO	YES	YES	YES	YES	YES
	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**
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	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)	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	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	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)	0	1	1	1	1	1	1	1	1	0	0	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	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	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	0	0	1	0	1	1	1	1	1
	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 RATING	Feature quantitative rating out of 15	0	13	13	13	13	13	13	13	13	7	7	13	7	13	13	13	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	Fair	Fair	Excellent	Fair	Excellent	Excellent	Excellent	Excellent	Excellent

Table 38. Post-effective flow feature ratings for the Farrow, Wallace enhancement reach, November 2019.

	Project Reach	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	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
	mmddyy	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519
	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	2	3	3	3	3	3	4	4
	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	MC Bank FP	MC Bank FP
	PROJECT FEATURE NUMBER	S1-18	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
	Feature Type Code	LWD	LWD	LWD	Boulder field	LWD	LWD	LWD	LWD	LWD	LWD	NA	BC	BC	BC	BC	BC	LWD	LWD
	Habitat Unit	HU02	HU02	HU01	HU01	HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU04	HU01 W	HU01 W	HU01 W	HU01 W	HU16	HU02 D	HU02 D
	Habitat Type	Alcove	Alcove	Pool	Pool	Dry	Dry	Dry	Dry	Dry	Dry	Pool	Flatwater	Flatwater	Flatwater	Flatwater	Flatwater	Dry	Dry
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	GOOD	FAIR	GOOD	GOOD	GOOD	NR	UNKN	UNKN	UNKN	NA	NR	NR	NR	GOOD	GOOD	GOOD	GOOD
5a	Are problems with the **feature** visible?	NO	NO	YES	YES	NO	NO	NR	NO	NO	NO	NA	NR	NR	NR	NO	NO	NO	NO
6a	Is the **feature** still in its original location?	YES	YES	YES	YES	YES	YES	NR	YES	YES	YES	NA	NR	NR	NR	YES	YES	YES	YES
6b	Is the **feature** still in its original position?	YES	YES	YES	YES	YES	YES	NR	YES	YES	YES	NA	NR	NR	NR	YES	YES	YES	YES
6d	Is the **feature** still in its original orientaton?	YES	YES	YES	YES	YES	YES	NR	YES	YES	YES	NA	NR	NR	NR	YES	YES	YES	YES
8.	If an objective, did the **feature** create the targeted instream habitat type?	YES	YES	YES	YES	YES	YES	NR	YES	YES	YES	NA	NR	NR	NR	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	NR	NO	NO	NO	NA	NR	NR	NR	NO	NO	NO	NO
17a	If an objective, did the **feature** increase instream shelter rating?	YES	YES	YES	YES	YES	YES	NR	YES	YES	YES	NA	NR	NR	NR	YES	YES	YES	YES
19a	If an objective, did the **feature** increase LWD count in the **habitat unit**?	NO	NO	NR	NO	NO	NO	NR	NO	NO	NO	NA	NR	NR	NR	NO	NO	NO	NO
21a	If an objective, did the **feature** lead to the targeted channel conditions?	YES	YES	YES	NO	YES	YES	NR	YES	YES	YES	NA	NR	NR	NR	YES	YES	YES	YES
25.	Did the **feature** achieve the targeted velocity?	YES	YES	YES	YES	YES	YES	NR	YES	YES	YES	NA	NR	NR	NR	YES	YES	YES	YES
	PROJECT FEATURE NUMBER	**S1-18**	**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**
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	4	4	4	4
5a	Are problems with the **feature** visible? (NO = 1 pt, YES = 0 pt)	1	1	0	0	1	1	0	1	1	1	0	0	0	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	1	0	1	1	1	0	0	0	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	1	1	1	0	0	0	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	0	1	1	1	0	0	0	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	1	1	1	1	0	1	1	1	0	0	0	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	0	1	1	0	1	1	1	0	0	0	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	1	1	0	0	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	1	1	0	1	1	0	1	1	1	0	0	0	0	1	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	0	0	0	0	1	1	1	1
	PROJECT FEATURE NUMBER	**S1-18**	**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**
FEATURE RATING	Feature quantitative rating out of 15	13	13	11	10	13	13	0	9	9	9	0	0	0	0	13	13	13	13
	Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)	Excellent	Excellent	Good	Good	Excellent	Excellent	Not rated	Good	Good	Good	Not rated	Not rated	Not rated	Not rated	Excellent	Excellent	Excellent	Excellent

Table 38. Post-effective flow feature ratings for the Farrow, Wallace enhancement reach, November 2019.

	Project Reach	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	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
	mmddyy	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519
	Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
	PROJECT SITE NUMBER	4	7	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	6
	Project Site Type	MC Bank FP	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
	PROJECT FEATURE NUMBER	S4-03	S7-01	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
	Feature Type Code	LWD	onstructed Rif	TER	FLP	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD
	Habitat Unit	HU02_D	HU08	HU03_D	HU03_D	HU09	HU03_D	HU03_D	HU04_D	HU04_D	HU14	HU14	HU14	HU13	HU11	HU09_2	HU09_2	HU11	HU12
	Habitat Type	Dry	Riffle	Dry	Dry	Pool	Dry	Dry	Dry	Dry	Alcove	Alcove	Alcove	Riffle	Pool	Pool	Pool	Pool	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
5a	Are problems with the **feature** visible?	NO	NO	NO	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
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	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	NO	YES	NO	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	YES	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	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	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES
	PROJECT FEATURE NUMBER	**S4-03**	**S7-01**	**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**
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	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
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	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	0	1	0	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	1	0	0	1	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	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	0	1	1	1	1	1	1	1	1	1
	PROJECT FEATURE NUMBER	**S4-03**	**S7-01**	**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**
FEATURE RATING	Feature quantitative rating out of 15	13	13	13	13	14	12	13	13	7	13	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	Fair	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent

Table 38. Post-effective flow feature ratings for the Farrow, Wallace enhancement reach, November 2019.

	Project Reach	2	2	2
	Enhancement Reach	1	1	1
	Colloquial Name	FW	FW	FW
	mmddyy	110519	110519	110519
	Survey Type	PEF	PEF	PEF
	PROJECT SITE NUMBER	6	6	6
	Project Site Type	SideChan	SideChan	SideChan
	PROJECT FEATURE NUMBER	S6-12	S6-13	S6-14
	Feature Type Code	LWD	LWD	LWD
	Habitat Unit	HU14	HU14	HU04_D
	Habitat Type	Alcove	Alcove	Dry
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	GOOD	NR
5a	Are problems with the **feature** visible?	NO	NO	NR
6a	Is the **feature** still in its original location?	YES	YES	NR
6b	Is the **feature** still in its original position?	YES	YES	NR
6d	Is the **feature** still in its original orientaton?	YES	YES	NR
8.	If an objective, did the **feature** create the targeted instream habitat type?	YES	NO	NR
9.	Were there any unintended effects by the **feature** on the habitat type? If Y, comment.	NO	YES	NR
17a	If an objective, did the **feature** increase instream shelter rating?	YES	NO	NR
19a	If an objective, did the **feature** increase LWD count in the **habitat unit**?	NO	NO	NR
21a	If an objective, did the **feature** lead to the targeted channel conditions?	YES	NO	NR
25.	Did the **feature** achieve the targeted velocity?	YES	NO	NR
	PROJECT FEATURE NUMBER	**S6-12**	**S6-13**	**S6-14**
4.	Structural condition of **feature**: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	4	4	0
5a	Are problems with the **feature** visible? (NO = 1 pt, YES = 0 pt)	1	1	0
6a	Is the **feature** still in its original location? (YES = 1 pt, NO = 0 pt)	1	1	0
6b	Is the **feature** still in its original position? (YES = 1 pt, NO = 0 pt)	1	1	0
6d	Is the **feature** still in its original orientaton? (YES = 1 pt, NO = 0 pt)	1	1	0
8.	If an objective, did the **feature** create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	1	0	0
9.	Were there any unintended effects by the **feature** on the habitat type? (NO = 1 pt, YES = 0 pt)	1	0	0
17a	If an objective, did the **feature** increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	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
21a	If an objective, did the **feature** lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	1	0	0
25.	Did the **feature** achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	0	0
	PROJECT FEATURE NUMBER	**S6-12**	**S6-13**	**S6-14**
FEATURE RATING	Feature quantitative rating out of 15	13	8	0
	Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)	Excellent	Fair	Not rated

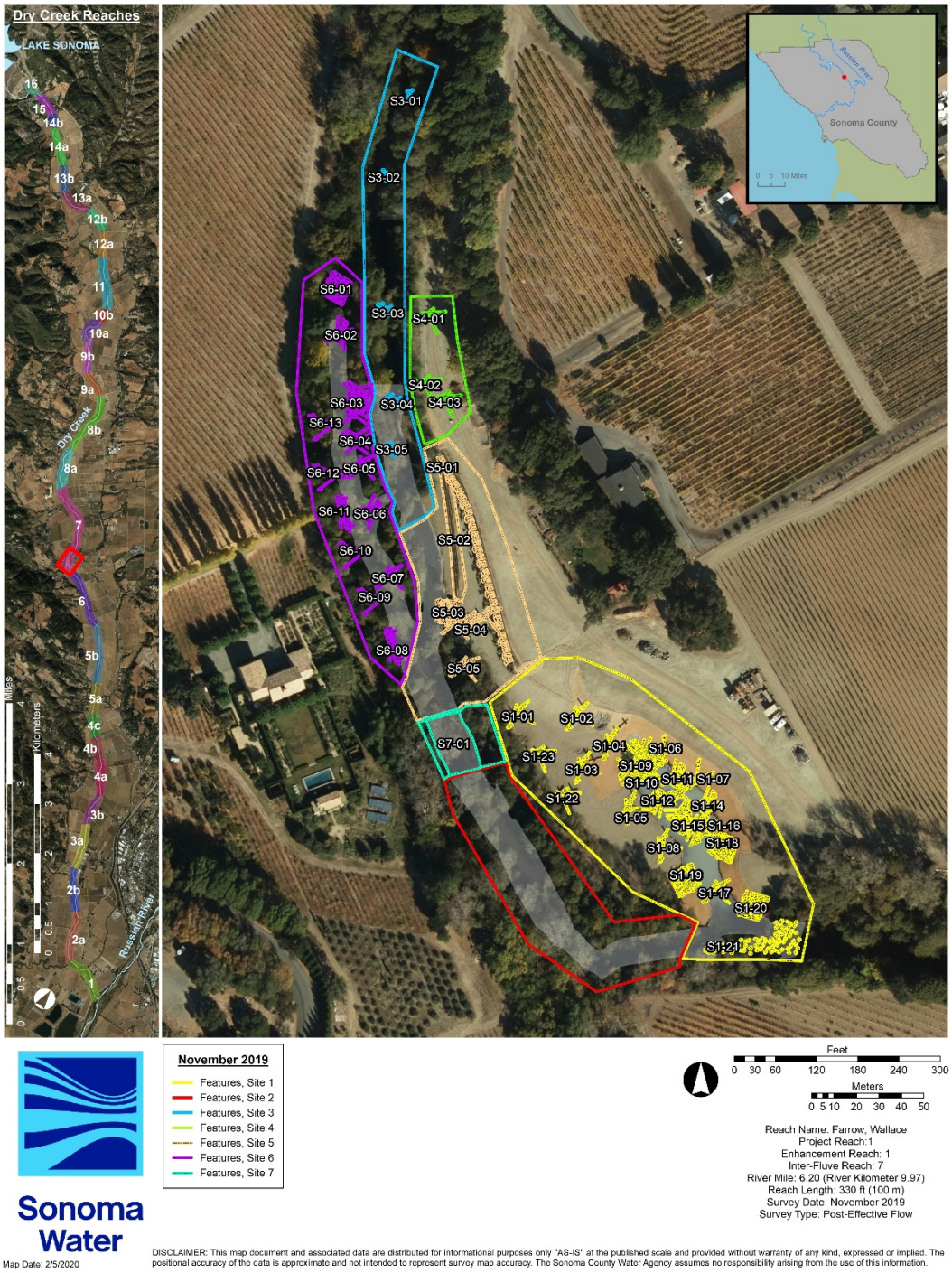

Figure 68. Enhancement sites and features within the Farrow, Wallace enhancement reach, November 2019.

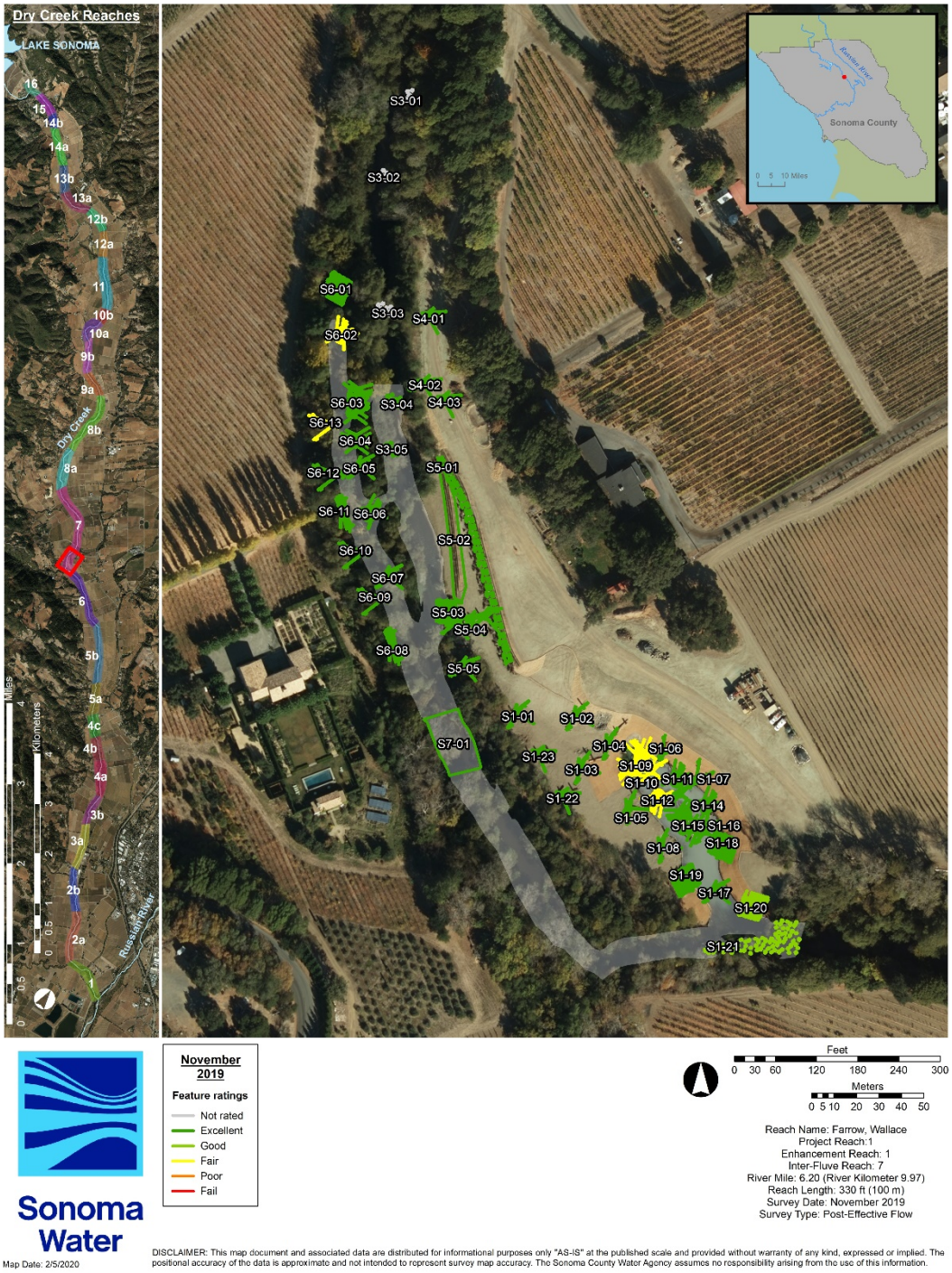

Figure 69. Feature ratings for the Farrow, Wallace enhancement reach, November 2019. Gray = not rated, dark green = Excellent, light green = Good, yellow = Fair, orange = Poor, red = Fail.

Table 39. Post-effective flow habitat unit ratings for the Farrow, Wallace enhancement reach, November 2019.

	Project Reach	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	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
	mmddyy	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519
	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**	**HU01_D**	**HU02_D**	**HU03_D**	**HU04_D**
	Habitat Type	Pool	Alcove	Flatwater	Pool	Riffle	Flatwater	Pool	Riffle	Pool	Riffle	Pool	Flatwater	Riffle	Alcove	Dry	Dry	Dry	Dry
	PROJECT SITE NUMBER	**1**	**1**	**1**	**2**	**2**	**2**	**2**	**7**	**5**	**5**	**6**	**6**	**6**	**6**	**1**	**4**	**5**	**6**
	Project Site Type	MC Alcove	MC Alcove	MC Alcove	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	SideChan	SideChan	SideChan	SideChan	MC Alcove	MC Bank FP	MainChan	SideChan
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	26%	38%	45%	17%	85%	95%	36%	93%	24%	80%	23%	50%	61%	57%	0%	0%	0%	0%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	46%	43%	24%	53%	1%	0%	59%	0%	37%	3%	54%	42%	6%	24%	0%	0%	0%	0%
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	3	3	2	2	1	1	3	0	3	2	3	2	3	2	0	0	0	0
15.	Percent of **habitat unit** covered by shelter: %	35	65	30	20	10	10	40	50	50	20	30	20	75	45	0	0	0	0
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	105	195	60	40	10	10	120	0	150	40	90	40	225	90	0	0	0	0
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	46%	100%	49%	29%	9%	7%	25%	7%	67%	16%	94%	61%	54%	100%	0%	0%	0%	0%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	15%	38%	20%	11%	2%	3%	8%	2%	20%	6%	22%	31%	22%	57%	0%	0%	0%	0%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	17%	43%	1%	8%	0%	0%	13%	0%	24%	0%	49%	22%	1%	24%	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**	**HU04_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	3	4	1	4	4	3	4	2	4	2	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)	4	4	2	4	0	0	4	0	3	0	4	4	0	2	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	4	4	3	3	5	0	5	4	5	4	5	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	4	2	2	1	1	3	3	3	2	2	2	4	3	0	0	0	0
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	4	5	2	1	0	0	4	0	5	1	3	1	5	3	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	2	0	0	2	0	4	1	4	4	4	4	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	3	1	1	0	0	0	0	2	0	2	3	2	4	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	4	0	0	0	0	1	0	2	0	4	2	0	2	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**	**HU04_D**
HABITAT UNIT RATING	Habitat unit quantitative rating (out of 35)	23	32	19	15	8	8	22	7	26	12	26	24	24	26	0	0	0	0
	Habitat unit qualitative rating: Excellent (>=28), Good (>=21), Fair(>=14), Poor (>=7), Fail (<7)	Good	Excellent	Fair	Fair	Poor	Poor	Good	Poor	Good	Poor	Good	Good	Good	Good	Not rated	Not rated	Not rated	Not rated

Table 39. Post-effective flow habitat unit ratings for the Farrow, Wallace enhancement reach, November 2019.

	Project Reach	2	2	2	2	2
	Enhancement Reach	1	1	1	1	1
	Colloquial Name	FW	FW	FW	FW	FW
	mmddyy	110519	110519	110519	110519	110519
	Survey Type	PEF	PEF	PEF	PEF	PEF
	HABITAT UNIT NUMBER	**HU15**	**HU16**	**HU17**	**HU01_W**	**HU09_2**
	Habitat Type	Flatwater	Flatwater	Pool	Flatwater	Pool
	PROJECT SITE NUMBER	**3**	**3**	**5**	**3**	**6**
	Project Site Type	MainChan	MainChan	MainChan	MainChan	SideChan
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	32%	36%	0%	0%	24%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	50%	59%	0%	0%	37%
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	2	2	3	0	3
15.	Percent of **habitat unit** covered by shelter: %	15	40	50	0	50
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	30	80	150	0	150
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	34%	27%	0%	0%	67%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	14%	12%	0%	0%	20%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	12%	10%	0%	0%	24%
	HABITAT UNIT NUMBER	**HU15**	**HU16**	**HU17**	**HU01_W**	**HU09_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)	3	3	0	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)	4	4	0	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)	4	4	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)	1	3	3	0	3
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	0	3	5	0	5
28.	% area of **hab unit** within targeted velocity (≥40 = 4 pts, ≥30 = 3 pts, ≥20 = 2 pts, ≥10 = 1 pt, <10 = 0 pt)	3	2	0	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	1	0	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)	1	1	0	0	2
	HABITAT UNIT NUMBER	**HU15**	**HU16**	**HU17**	**HU01_W**	**HU09_2**
HABITAT UNIT RATING	Habitat unit quantitative rating (out of 35)	17	21	13	0	26
	Habitat unit qualitative rating: Excellent (>=28), Good (>=21), Fair(>=14), Poor (>=7), Fail (<7)	Fair	Good	Not rated	Not rated	Good

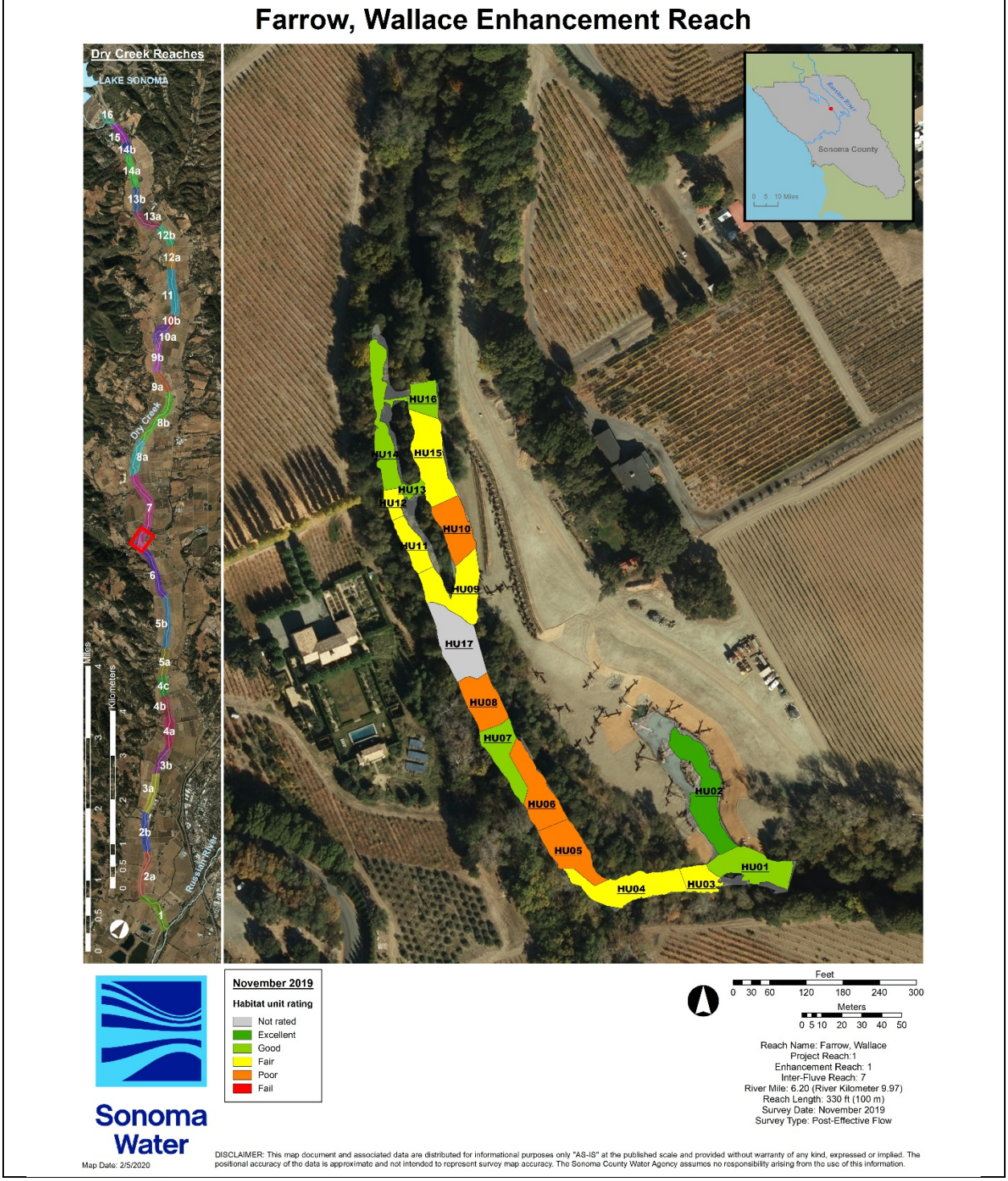

Figure 70. Habitat unit ratings for the Farrow, Wallace enhancement reach, November 2019.

Table 40. Post-effective flow average feature, average habitat unit, site, and reach ratings (rounded to the nearest whole number) for the Farrow, Wallace enhancement reach, November 2019.

	Project Reach	2	2	2	2	2	2	2
	Enhancement Reach	1	1	1	1	1	1	1
	ENHANCEMENT REACH NAME	**FW**	**FW**	**FW**	**FW**	**FW**	**FW**	**FW**
	mmddyy	110519	110519	110519	110519	110519	110519	110519
	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**	**3**	**3**	**4**	**5**	**6**	**5**
SITE AVERAGE FEATURE RATING	Site average feature quantitative rating (out of 15; bold indicates excluded from site rating)	11	0	13	13	13	11	13
	Site average feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3), Not rated (not used to rate site)	Good	Not rated	Excellent	Excellent	Excellent	Good	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	13	19	0	21	25	7
	Site average qualitative rating Excellent (>=28), Good (>=21), Fair(>=14), Poor (>=7), Fail (<7), Not rated (not used to rate site)	Good	Poor	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)	35	**13**	32	**13**	34	36	20
	Site qualitative rating: Excellent (>=40, 28, 12), Good (>=30, 21, 9), Fair(>=20, 14, 6), Poor (>=10, 7, 3), Fail (<10, 7, 3)	Good	Poor	Good	Excellent	Good	Good	Fair
	ENHANCEMENT REACH NAME	**FW**						
ENHANCEMENT REACH RATING	Enhancement reach quantitative rating (average of site ratings) (out of 43)	26						
	Enhancement reach qualitative rating: Excellent (>=34), Good (>=26), Fair(>=17), Poor (>=9), Fail (<9)	Good						

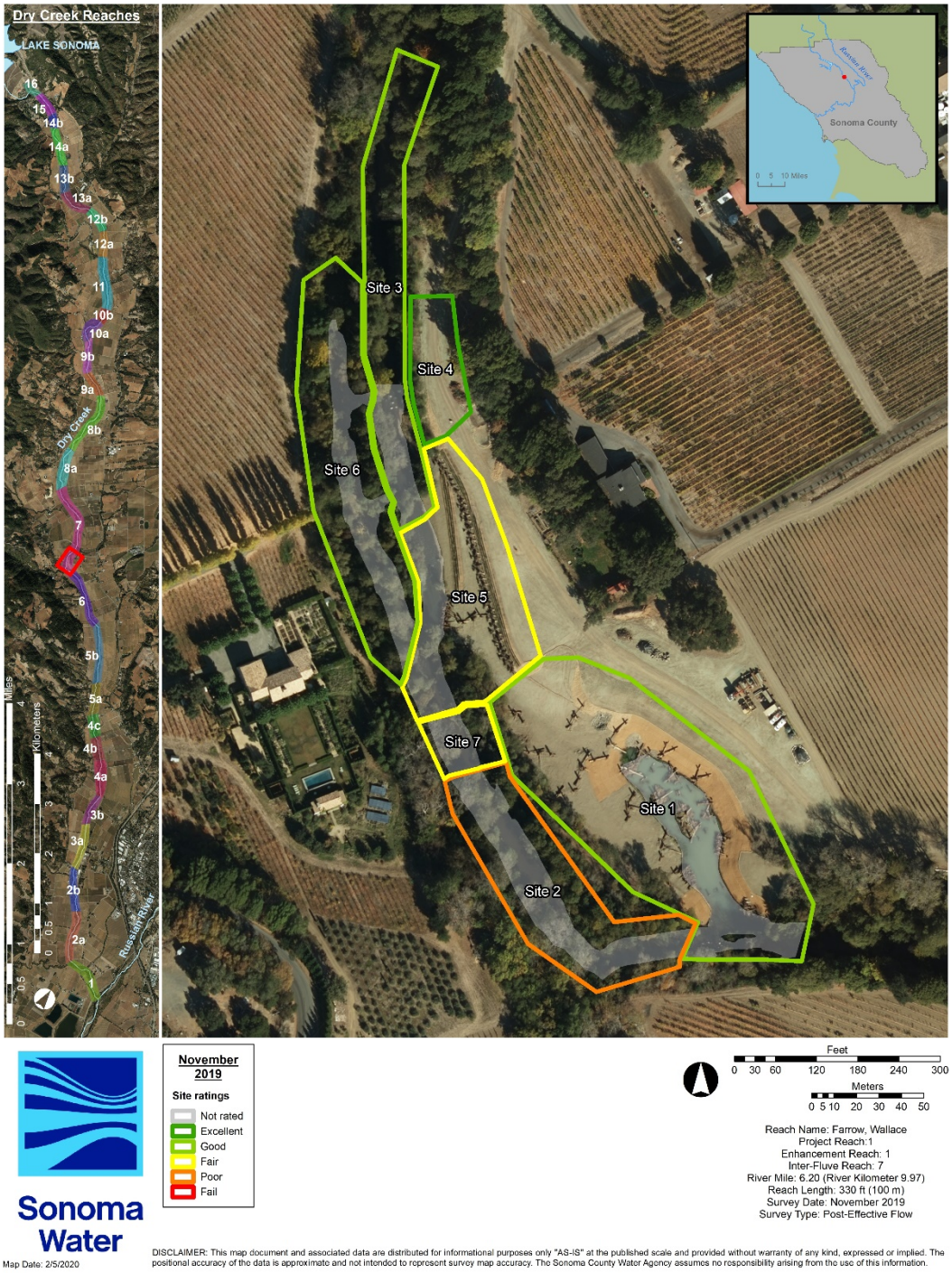

Figure 71. Post-effective flow site ratings for the Farrow, Wallace enhancement reach, November 2019.

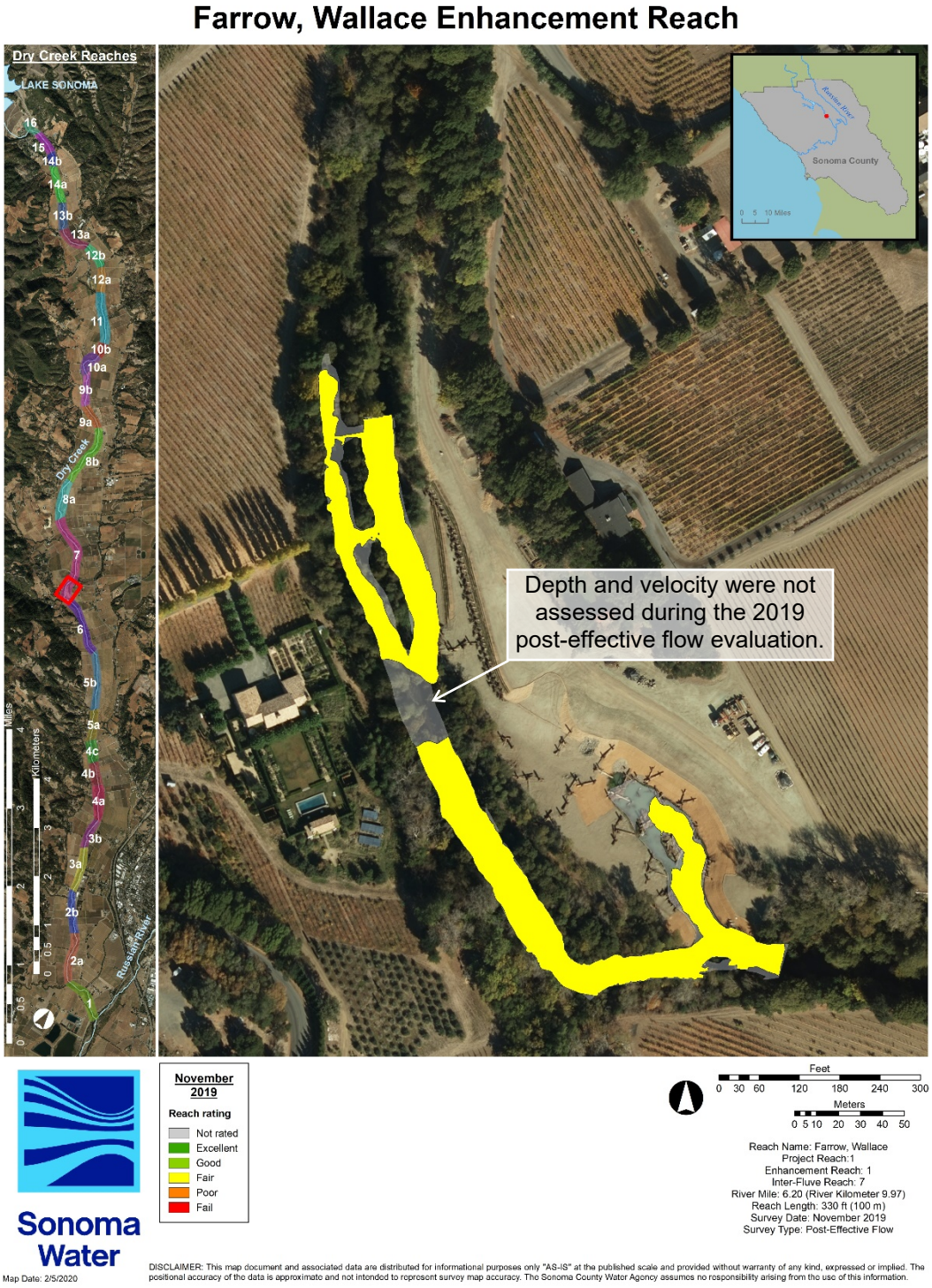

Figure 72. Post-effective flow reach rating for the Farrow, Wallace enhancement reach, November 2019.

Feature and Habitat Unit Checklists

Table 41. Adaptive Management Plan targeted checklist for the Farrow, Wallace enhancement reach, November 2019.

	Project Reach	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	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
	mmddyy	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519
	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 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
	Project Feature Number	NA	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
	Feature Type Code	NA	NA	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD
	Habitat Unit	HU02	HU03	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	Alcove	Flatwater	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	NA	NA	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD
5a	Are problems with the **feature** visible?	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	NO	YES	NO	NO	NO	NO
6a	Is the **feature** still in its original location?	NA	NA	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	NA	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	NA	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	NA	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	NA	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	38%	45%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	38%	38%	38%	38%	38%	38%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	43%	24%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	43%	43%	43%	43%	43%	43%
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	3	2	0	0	0	0	0	0	0	0	0	0	3	3	3	3	3	3
15.	Percent of **habitat unit** covered by shelter: %	65	30	0	0	0	0	0	0	0	0	0	0	65	65	65	65	65	65
17a	If an objective, did the **feature** increase instream shelter rating?	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO	YES	YES	YES	YES
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	195	60	0	0	0	0	0	0	0	0	0	0	195	195	195	195	195	195
19a	If an objective, did the **feature** increase LWD count in the **habitat unit**?	NA	NA	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	NA	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO	YES	YES	YES	YES
25.	Did the **feature** achieve the targeted velocity?	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO	YES	YES	YES	YES
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	100%	49%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	100%	100%	100%	100%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	38%	20%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	38%	38%	38%	38%	38%	38%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	43%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	43%	43%	43%	43%	43%	43%
	FEATURE NUMBER	**NA**	**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**
	HABITAT UNIT NUMBER	**HU02**	**HU03**	**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**
	SITE NUMBER	**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**
4.	Structural condition of **feature**: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	0	0	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	0	0	1	0	1	1	1	1
6a	Is the **feature** still in its original location? (YES = 1 pt, NO = 0 pt)	0	0	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	0	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	0	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	0	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)	0	0	1	1	1	1	1	1	1	1	0	0	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)	3	4	0	0	0	0	0	0	0	0	0	0	3	3	3	3	3	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	2	0	0	0	0	0	0	0	0	0	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	4	0	0	0	0	0	0	0	0	0	0	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)	4	2	0	0	0	0	0	0	0	0	0	0	4	4	4	4	4	4
17a	If an objective, did the **feature** increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	0	0	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	2	0	0	0	0	0	0	0	0	0	0	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
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	0	0	1	0	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	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)	4	4	0	0	0	0	0	0	0	0	0	0	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)	3	1	0	0	0	0	0	0	0	0	0	0	3	3	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)	4	0	0	0	0	0	0	0	0	0	0	0	4	4	4	4	4	4

Table 41. Adaptive Management Plan targeted checklist for the Farrow, Wallace enhancement reach, November 2019.

	Project Reach	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	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
	mmddyy	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519
	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	2	2	2	2	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
	Project Feature Number	S1-17	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
	Feature Type Code	LWD	LWD	LWD	LWD	Boulder field	LWD	LWD	LWD	LWD	LWD	LWD	NA	NA	NA	NA	NA	BC	BC
	Habitat Unit	HU02	HU02	HU02	HU01	HU01	HU01_D	HU01_D	HU01_D	HU01_D	HU01_D	HU01_D	HU04	HU05	HU06	HU07	HU15	HU01_W	HU01_W
	Habitat Type	Alcove	Alcove	Alcove	Pool	Pool	Dry	Dry	Dry	Dry	Dry	Dry	Pool	Riffle	Flatwater	Pool	Flatwater	Flatwater	Flatwater
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	GOOD	GOOD	FAIR	GOOD	GOOD	GOOD	NR	UNKN	UNKN	UNKN	NA	NA	NA	NA	NA	NR	NR
5a	Are problems with the **feature** visible?	NO	NO	NO	YES	YES	NO	NO	NR	NO	NO	NO	NA	NA	NA	NA	NA	NR	NR
6a	Is the **feature** still in its original location?	YES	YES	YES	YES	YES	YES	YES	NR	YES	YES	YES	NA	NA	NA	NA	NA	NR	NR
6b	Is the **feature** still in its original position?	YES	YES	YES	YES	YES	YES	YES	NR	YES	YES	YES	NA	NA	NA	NA	NA	NR	NR
6d	Is the **feature** still in its original orientaton?	YES	YES	YES	YES	YES	YES	YES	NR	YES	YES	YES	NA	NA	NA	NA	NA	NR	NR
8.	If an objective, did the **feature** create the targeted instream habitat type?	YES	YES	YES	YES	YES	YES	YES	NR	YES	YES	YES	NA	NA	NA	NA	NA	NR	NR
9.	Were there any unintended effects by the **feature** on the habitat type? If Y, comment.	NO	NO	NO	NO	YES	NO	NO	NR	NO	NO	NO	NA	NA	NA	NA	NA	NR	NR
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	38%	38%	38%	26%	26%	0%	0%	0%	0%	0%	0%	17%	85%	95%	36%	32%	0%	0%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	43%	43%	43%	46%	46%	0%	0%	0%	0%	0%	0%	53%	1%	0%	59%	50%	0%	0%
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	3	3	3	3	3	0	0	0	0	0	0	2	1	1	3	2	0	0
15.	Percent of **habitat unit** covered by shelter: %	65	65	65	35	35	0	0	0	0	0	0	20	10	10	40	15	0	0
17a	If an objective, did the **feature** increase instream shelter rating?	YES	YES	YES	YES	YES	YES	YES	NR	YES	YES	YES	NA	NA	NA	NA	NA	NR	NR
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	195	195	195	105	105	0	0	0	0	0	0	40	10	10	120	30	0	0
19a	If an objective, did the **feature** increase LWD count in the **habitat unit**?	NO	NO	NO	NR	NO	NO	NO	NR	NO	NO	NO	NA	NA	NA	NA	NA	NR	NR
21a	If an objective, did the **feature** lead to the targeted channel conditions?	YES	YES	YES	YES	NO	YES	YES	NR	YES	YES	YES	NA	NA	NA	NA	NA	NR	NR
25.	Did the **feature** achieve the targeted velocity?	YES	YES	YES	YES	YES	YES	YES	NR	YES	YES	YES	NA	NA	NA	NA	NA	NR	NR
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	100%	100%	100%	46%	46%	0%	0%	0%	0%	0%	0%	29%	9%	7%	25%	34%	0%	0%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	38%	38%	38%	15%	15%	0%	0%	0%	0%	0%	0%	11%	2%	3%	8%	14%	0%	0%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	43%	43%	43%	17%	17%	0%	0%	0%	0%	0%	0%	8%	0%	0%	13%	12%	0%	0%
	FEATURE NUMBER	**S1-17**	**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**
	HABITAT UNIT NUMBER	**HU02**	**HU02**	**HU02**	**HU01**	**HU01**	**HU01_D**	**HU01_D**	**HU01_D**	**HU01_D**	**HU01_D**	**HU01_D**	**HU04**	**HU05**	**HU06**	**HU07**	**HU15**	**HU01_W**	**HU01_W**
	SITE NUMBER	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**2**	**2**	**2**	**2**	**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	4	3	4	4	4	0	0	0	0	0	0	0	0	0	0	0
5a	Are problems with the **feature** visible? (NO = 1 pt, YES = 0 pt)	1	1	1	0	0	1	1	0	1	1	1	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	1	1	1	0	1	1	1	0	0	0	0	0	0	0
6b	Is the **feature** still in its original position? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	0	1	1	1	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	1	1	1	0	1	1	1	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)	1	1	1	1	1	1	1	0	1	1	1	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	1	1	1	0	1	1	0	1	1	1	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)	3	3	3	2	2	0	0	0	0	0	0	1	4	4	3	3	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	4	4	0	0	0	0	0	0	4	0	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	5	5	5	5	0	0	0	0	0	0	4	3	3	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)	4	4	4	2	2	0	0	0	0	0	0	2	1	1	3	1	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	0	1	1	1	0	0	0	0	0	0	0
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	5	5	5	4	4	0	0	0	0	0	0	1	0	0	4	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)	1	1	1	1	0	1	1	0	1	1	1	0	0	0	0	0	0	0
25.	Did the **feature** achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	1	1	1	1	1	1	0	1	1	1	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)	4	4	4	4	4	0	0	0	0	0	0	2	0	0	2	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)	3	3	3	1	1	0	0	0	0	0	0	1	0	0	0	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)	4	4	4	1	1	0	0	0	0	0	0	0	0	0	1	1	0	0

Table 41. Adaptive Management Plan targeted checklist for the Farrow, Wallace enhancement reach, November 2019.

	Project Reach	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	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
	mmddyy	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519
	Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
	Project Site Number	3	3	3	4	4	4	7	5	5	5	5	5	5	5	6	6	6	6
	Project Site Type	MainChan	MainChan	MainChan	MC Bank FP	MC Bank FP	MC Bank FP	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	SideChan	SideChan	SideChan	SideChan
	Project Feature Number	S3-03	S3-04	S3-05	S4-01	S4-02	S4-03	S7-01	NA	NA	S5-01	S5-02	S5-03	S5-04	S5-05	S6-01	S6-02	S6-03	S6-04
	Feature Type Code	BC	BC	BC	LWD	LWD	LWD	onstructed Rif	NA	NA	TER	FLP	LWD	LWD	LWD	LWD	LWD	LWD	LWD
	Habitat Unit	HU01_W	HU01_W	HU16	HU02_D	HU02_D	HU02_D	HU08	HU10	HU17	HU03_D	HU03_D	HU09	HU03_D	HU03_D	HU04_D	HU04_D	HU14	HU14
	Habitat Type	Flatwater	Flatwater	Flatwater	Dry	Dry	Dry	Riffle	Riffle	Pool	Dry	Dry	Pool	Dry	Dry	Dry	Dry	Alcove	Alcove
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	NR	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	NA	NA	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD
5a	Are problems with the **feature** visible?	NR	NO	NO	NO	NO	NO	NO	NA	NA	NO	NO	NO	NO	NO	NO	YES	NO	NO
6a	Is the **feature** still in its original location?	NR	YES	YES	YES	YES	YES	YES	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES
6b	Is the **feature** still in its original position?	NR	YES	YES	YES	YES	YES	YES	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES
6d	Is the **feature** still in its original orientaton?	NR	YES	YES	YES	YES	YES	YES	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES
8.	If an objective, did the **feature** create the targeted instream habitat type?	NR	YES	YES	YES	YES	YES	YES	NA	NA	YES	YES	YES	YES	YES	YES	NO	YES	YES
9.	Were there any unintended effects by the **feature** on the habitat type? If Y, comment.	NR	NO	NO	NO	NO	NO	NO	NA	NA	NO	NO	NO	NO	NO	NO	YES	NO	NO
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	0%	0%	36%	0%	0%	0%	93%	80%	0%	0%	0%	24%	0%	0%	0%	0%	57%	57%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	0%	0%	59%	0%	0%	0%	0%	3%	0%	0%	0%	37%	0%	0%	0%	0%	24%	24%
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	0	0	2	0	0	0	0	2	3	0	0	3	0	0	0	0	2	2
15.	Percent of **habitat unit** covered by shelter: %	0	0	40	0	0	0	50	20	50	0	0	50	0	0	0	0	45	45
17a	If an objective, did the **feature** increase instream shelter rating?	NR	YES	YES	YES	YES	YES	YES	NA	NA	YES	YES	YES	NO	YES	NO	NO	YES	YES
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	0	0	80	0	0	0	0	40	150	0	0	150	0	0	0	0	90	90
19a	If an objective, did the **feature** increase LWD count in the **habitat unit**?	NR	NO	NO	NO	NO	NO	NO	NA	NA	NO	NO	YES	NO	NO	YES	NO	NO	NO
21a	If an objective, did the **feature** lead to the targeted channel conditions?	NR	YES	YES	YES	YES	YES	YES	NA	NA	YES	YES	YES	YES	YES	YES	NO	YES	YES
25.	Did the **feature** achieve the targeted velocity?	NR	YES	YES	YES	YES	YES	YES	NA	NA	YES	YES	YES	YES	YES	YES	NO	YES	YES
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	0%	0%	27%	0%	0%	0%	7%	16%	0%	0%	0%	67%	0%	0%	0%	0%	100%	100%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	0%	0%	12%	0%	0%	0%	2%	6%	0%	0%	0%	20%	0%	0%	0%	0%	57%	57%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%	0%	24%	0%	0%	0%	0%	24%	24%
	FEATURE NUMBER	**S3-03**	**S3-04**	**S3-05**	**S4-01**	**S4-02**	**S4-03**	**S7-01**	**NA**	**NA**	**S5-01**	**S5-02**	**S5-03**	**S5-04**	**S5-05**	**S6-01**	**S6-02**	**S6-03**	**S6-04**
	HABITAT UNIT NUMBER	**HU01_W**	**HU01_W**	**HU16**	**HU02_D**	**HU02_D**	**HU02_D**	**HU08**	**HU10**	**HU17**	**HU03_D**	**HU03_D**	**HU09**	**HU03_D**	**HU03_D**	**HU04_D**	**HU04_D**	**HU14**	**HU14**
	SITE NUMBER	**3**	**3**	**3**	**4**	**4**	**4**	**7**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**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)	0	4	4	4	4	4	4	0	0	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	0	0	1	1	1	1	1	1	0	1	1
6a	Is the **feature** still in its original location? (YES = 1 pt, NO = 0 pt)	0	1	1	1	1	1	1	0	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)	0	1	1	1	1	1	1	0	0	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	0	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)	0	1	1	1	1	1	1	0	0	1	1	1	1	1	1	0	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	0	0	1	1	1	1	1	1	0	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	3	0	0	0	4	4	0	0	0	2	0	0	0	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	4	0	0	0	0	0	0	0	0	3	0	0	0	0	2	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)	0	0	4	0	0	0	0	4	5	0	0	5	0	0	0	0	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)	0	0	3	0	0	0	3	2	3	0	0	3	0	0	0	0	3	3
17a	If an objective, did the **feature** increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	0	1	1	1	1	1	1	0	0	1	1	1	0	1	0	0	1	1
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	0	0	3	0	0	0	0	1	5	0	0	5	0	0	0	0	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	1	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	1	1	1	1	1	1	0	0	1	1	1	1	1	1	0	1	1
25.	Did the **feature** achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	0	1	1	1	1	1	1	0	0	1	1	1	1	1	1	0	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	0	0	0	0	1	0	0	0	4	0	0	0	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	1	0	0	0	0	0	0	0	0	2	0	0	0	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	1	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2

Table 42. Adaptive Management Plan full checklist for the Farrow, Wallace enhancement reach, November 2019.

	Project Reach	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	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
	mmddyy	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519
	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 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
	Project Feature Number	NA	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
	Feature Type Code	NA	NA	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD	LWD
	Habitat Unit	HU02	HU03	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	Alcove	Flatwater	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	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
2.	Width of targeted treatment: (ft)			45	45	60	60	45	25	40	45	70	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
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	NA	NA	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD
5a	Are problems with the **feature** visible?	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	NO	YES	NO	NO	NO	NO
5b	Types: ANC, BBB, CRF, MAT, SHF, STR, SWA, UND, UNS, WSH, OTH, NON	NA	NA	NON	NON	NON	NON	NON	NON	NON	NON	STR	STR	NON	STR	NON	NON	NON	NON
6a	Is the **feature** still in its original location?	NA	NA	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	NA	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	NA	LBK	LBK	LBK	LBK	LBK	LBK	LBK	LBK	LBK	LBK	LBK	LBK	LBK	LBK	LBK	LBK
6d	Is the **feature** still in its original orientaton?	NA	NA	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	NA	PRL	UPS	UPS	UPS	UPS	PRL	PRL	UPS	MUL	PRP	MUL	MUL	PRP	MUL	MUL	MUL
7.	Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	ALC	FLT	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	ALC	ALC	ALC	ALC	ALC	ALC
8.	If an objective, did the **feature** create the targeted instream habitat type?	NA	NA	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	NA	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	NO	YES	NO	NO	NO	NO
10.	Mean water depth in **habitat unit**: ft	2.1	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	2.1	2.1	2.1	2.1	2.1
11a	Maximum water depth in **habitat unit**: ft	5.4	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4	5.4	5.4	5.4	5.4	5.4
11b	Area of **habitat unit** within 0.5 -2.0 ft depth: (ft2)	2991.9	1055.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2991.9	2991.9	2991.9	2991.9	2991.9	2991.9
11c	Area of **habitat unit** within 2.0 -4.0 ft depth: (ft2)	3321.7	559.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3321.7	3321.7	3321.7	3321.7	3321.7	3321.7
11d	Area of **habitat unit** within 0.5-4.0 ft depth: (ft2)	6313.6	1615.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6313.6	6313.6	6313.6	6313.6	6313.6	6313.6
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	38%	45%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	38%	38%	38%	38%	38%	38%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	43%	24%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	43%	43%	43%	43%	43%	43%
11g	% Area of **habitat** unit within 0.5-4.0 ft depth	81%	69%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	81%	81%	81%	81%	81%	81%
11h	If an objective, did the **feature** increase/decrease water depth in the treatment area?	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO	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:			1575	1575	2100	2100	1575	875	1000	1125	2800	1575	1125	1125	1575	1125	1575	1575
13.	Were there any unintended effects of the **feature** on the water depth? If Y, comment.	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	NO	YES	NO	NO	NO	NO
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	3	2	0	0	0	0	0	0	0	0	0	0	3	3	3	3	3	3
15.	Percent of **habitat unit** covered by shelter: %	65	30	0	0	0	0	0	0	0	0	0	0	65	65	65	65	65	65
16a	1st dominant cover in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	AVG	TVG	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	AVG	AVG	AVG	AVG	AVG	AVG
16b	2nd dominant in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	LWD	SWD	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	LWD	LWD	LWD	LWD	LWD	LWD
17a	If an objective, did the **feature** increase instream shelter rating?	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO	YES	YES	YES	YES
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	195	60	0	0	0	0	0	0	0	0	0	0	195	195	195	195	195	195
18a	Large woody debris count in **habitat unit**: D >1', L 6-20'	3	0	0	0	0	0	0	0	0	0	0	0	3	3	3	3	3	3
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**?	NA	NA	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	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	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	AGG	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	AGG	AGG	AGG	AGG	AGG	AGG
21a	If an objective, did the **feature** lead to the targeted channel conditions?	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO	YES	YES	YES	YES
21b	Overall Offchannel Condition (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	NA	NA	STB	STB	STB	STB	STB	STB	STB	STB	AGG	AGG	AGG	AGG	AGG	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.	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	NO	YES	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	NA	YES	NA	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
25.	Did the **feature** achieve the targeted velocity?	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO	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**	0.1	4.1	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
26c	Measured mean velocity (ft/sec) in **habitat unit**	0.0	1.1	0.0	0.0	0.0	0.0	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)	7773.7	1139.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7773.7	7773.7	7773.7	7773.7	7773.7	7773.7
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	100%	49%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	100%	100%	100%	100%
29.	Were there any unintended effects of **feature** on velocity If Y, comment.	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	NO	YES	NO	NO	NO	NO
30a	1st/2nd dominant substrate in **habitat unit**: BED, BOL, COB, GRV, SND, SLC, OTH	SLC	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	SLC	SLC	SLC	SLC	SLC	SLC
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?	NA	NA	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	6313.6	471.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6313.6	6313.6	6313.6	6313.6	6313.6	6313.6
36b	Total **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	2991.9	459.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2991.9	2991.9	2991.9	2991.9	2991.9	2991.9
36c	Total **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	3321.7	11.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3321.7	3321.7	3321.7	3321.7	3321.7	3321.7
36d	% **habitat unit** area where targeted depth, velocity and shelter criteria overlap	81%	20%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	81%	81%	81%	81%	81%	81%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	38%	20%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	38%	38%	38%	38%	38%	38%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	43%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	43%	43%	43%	43%	43%	43%
37.	Does this **feature** need: DEC, ENH, MNT, REP, NON, OTH	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
38.	Are additional restoration treatments recommended at this **site**?	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO

Table 42. Adaptive Management Plan full checklist for the Farrow, Wallace enhancement reach, November 2019.

	Project Reach	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	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
	mmddyy	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519
	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	2	2	2	2	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
	Project Feature Number	S1-17	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
	Feature Type Code	LWD	LWD	LWD	LWD	Boulder field	LWD	LWD	LWD	LWD	LWD	LWD	NA	NA	NA	NA	NA	BC	BC
	Habitat Unit	HU02	HU02	HU02	HU01	HU01	HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU01 D	HU04	HU05	HU06	HU07	HU15	HU01 W	HU01 W
	Habitat Type	Alcove	Alcove	Alcove	Pool	Pool	Dry	Dry	Dry	Dry	Dry	Dry	Pool	Riffle	Flatwater	Pool	Flatwater	Flatwater	Flatwater
1.	Length of targeted treatment (ft)	35	35	35	35	195	35	35	35	20	20	20						21	24
2.	Width of targeted treatment: (ft)	45	30	30	60	54	45	45	45	20	40	40						31	24
3.	Estimate area of the targeted **feature**: (ft^2)	1575	1050	1050	2100	10530	1575	1575	1575	400	800	800						651	576
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	GOOD	GOOD	FAIR	GOOD	GOOD	GOOD	NR	UNKN	UNKN	UNKN	NA	NA	NA	NA	NA	NR	NR
5a	Are problems with the **feature** visible?	NO	NO	NO	YES	YES	NO	NO	NR	NO	NO	NO	NA	NA	NA	NA	NA	NR	NR
5b	Types: ANC, BBB, CRF, MAT, SHF, STR, SWA, UND, UNS, WSH, OTH, NON	NON	NON	NON	UND	BBB	NON	NON	NR	NON	NON	NON	NA	NA	NA	NA	NA	NR	NR
6a	Is the **feature** still in its original location?	YES	YES	YES	YES	YES	YES	YES	NR	YES	YES	YES	NA	NA	NA	NA	NA	NR	NR
6b	Is the **feature** still in its original position?	YES	YES	YES	YES	YES	YES	YES	NR	YES	YES	YES	NA	NA	NA	NA	NA	NR	NR
6c	If yes: LBK, MDC, RBK, SPN, OTH	LBK	LBK	LBK	LBK	MDC	LBK	LBK	NR	OTH	OTH	OTH	NA	NA	NA	NA	NA	NR	NR
6d	Is the **feature** still in its original orientaton?	YES	YES	YES	YES	YES	YES	YES	NR	YES	YES	YES	NA	NA	NA	NA	NA	NR	NR
6e	If yes: DNS, MUL, PRL, PRP, UPS, OTH	PRP	MUL	MUL	MUL	MUL	UPS	UPS	NR	MUL	MUL	MUL	NA	NA	NA	NA	NA	NR	NR
7.	Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	ALC	ALC	ALC	POO	POO	DRY	DRY	DRY	DRY	DRY	DRY	POO	RIF	FLT	POO	FLT	FLT	FLT
8.	If an objective, did the **feature** create the targeted instream habitat type?	YES	YES	YES	YES	YES	YES	YES	NR	YES	YES	YES	NA	NA	NA	NA	NA	NR	NR
9.	Were there any unintended effects by the **feature** on the habitat type? If Y, comment.	NO	NO	NO	NO	YES	NO	NO	NR	NO	NO	NO	NA	NA	NA	NA	NA	NR	NR
10.	Mean water depth in **habitat unit**: ft	2.1	2.1	2.1	2.6	2.6	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.8	1.2	2.3	2.5	0.0	0.0
11a	Maximum water depth in **habitat unit**: ft	5.4	5.4	5.4	5.4	5.4	0.0	0.0	0.0	0.0	0.0	0.0	5.6	2.5	2.2	4.6	5.7	0.0	0.0
11b	Area of **habitat unit** within 0.5 -2.0 ft depth: (ft2)	2991.9	2991.9	2991.9	1469.5	1469.5	0.0	0.0	0.0	0.0	0.0	0.0	1208.0	4566.3	5393.5	1578.9	2230.8	0.0	0.0
11c	Area of **habitat unit** within 2.0 -4.0 ft depth: (ft2)	3321.7	3321.7	3321.7	2650.2	2650.2	0.0	0.0	0.0	0.0	0.0	0.0	3732.8	27.6	21.8	2637.8	3497.5	0.0	0.0
11d	Area of **habitat unit** within 0.5-4.0 ft depth: (ft2)	6313.6	6313.6	6313.6	4119.7	4119.7	0.0	0.0	0.0	0.0	0.0	0.0	4940.7	4594.0	5415.3	4216.7	5728.4	0.0	0.0
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	38%	38%	38%	26%	26%	0%	0%	0%	0%	0%	0%	17%	85%	95%	36%	32%	0%	0%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	43%	43%	43%	46%	46%	0%	0%	0%	0%	0%	0%	53%	1%	0%	59%	50%	0%	0%
11g	% Area of **habitat** unit within 0.5-4.0 ft depth	81%	81%	81%	72%	72%	0%	0%	0%	0%	0%	0%	71%	85%	95%	95%	82%	0%	0%
11h	If an objective, did the **feature** increase/decrease water depth in the treatment area?	YES	YES	YES	YES	DEC	YES	YES	NR	YES	YES	YES	NA	NA	NA	NA	NA	NR	NR
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:	1575	1050	1050	2100	10530	1575	1575	1575	400	800	800						651	576
13.	Were there any unintended effects of the **feature** on the water depth? If Y, comment.	NO	NO	NO	NO	YES	NO	NO	NR	NO	NO	NO	NA	NA	NA	NA	NA	NR	NR
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	3	3	3	3	3	0	0	0	0	0	0	2	1	1	3	2	0	0
15.	Percent of **habitat unit** covered by shelter: %	65	65	65	35	35	0	0	0	0	0	0	20	10	10	40	15	0	0
16a	1st dominant cover in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	AVG	AVG	AVG	LWD	LWD	NON	NON	NON	NON	NON	NON	TVG	BUB	UCB	LWD	SWD	NON	NON
16b	2nd dominant in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	LWD	LWD	LWD	BOL	BOL	NON	NON	NON	NON	NON	NON	SWD	TVG	TVG	BUB	TVG	NON	NON
17a	If an objective, did the **feature** increase instream shelter rating?	YES	YES	YES	YES	YES	YES	YES	NR	YES	YES	YES	NA	NA	NA	NA	NA	NR	NR
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	195	195	195	105	105	0	0	0	0	0	0	40	10	10	120	30	0	0
18a	Large woody debris count in **habitat unit**: D >1', L 6-20'	3	3	3	1	1	0	0	0	0	0	0	2	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	1	1	0	0
19a	If an objective, did the **feature** increase LWD count in the **habitat unit**?	NO	NO	NO	NR	NO	NO	NO	NR	NO	NO	NO	NA	NA	NA	NA	NA	NR	NR
19b	LWD recruitment mechanisms in **habitat unit**: ANC, EXC, EXH, INT, RPR, UNA, OTH	NR	NR	NR	RPR	RPR	NON	NON	NON	NON	NON	NON	RPR	NON	NON	EXC	EXC	NON	NON
20.	Current stream channel problems in the **habitat unit**: AGG, BRD, FLO, GRC, HDC, INC, NAR, SCU, STT, WID, NON, OTH	AGG	AGG	AGG	NON	NON	NON	NON	NON	NON	NON	NON	SCU	NON	NON	SCU	NON	NON	NON
21a	If an objective, did the **feature** lead to the targeted channel conditions?	YES	YES	YES	YES	NO	YES	YES	NR	YES	YES	YES	NA	NA	NA	NA	NA	NR	NR
21b	Overall Offchannel Condition (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	STB	STB	STB	STB	AGG	STB	STB	STB	STB	STB	STB	NA	NA	NA	NA	NA	NR	NR
21c	Outlet Conditions (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH								STB	STB	STB	STB	NA	NA	NA	NA	NA	NR	NR
21d	Inlet Conditions (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH								AGG	AGG	AGG	AGG	NA	NA	NA	NA	NA	NR	NR
22.	Were there any unintended effects on the stream channel at the **feature**? If Y, comment.	NO	NO	NO	NO	YES	NO	NO	NR	NO	NO	NO	NA	NA	NA	NA	NA	NR	NR
23.	If an objective, did the **feature** decrease/increase velocity in the treatment area?	YES	YES	YES	DEC	DEC	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	NA	NR	NR
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	YES	YES	NR	YES	YES	YES	NA	NA	NA	NA	NA	NR	NR
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**	0.1	0.1	0.1	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	4.6	4.4	3.4	3.3	2.5	0.0	0.0
26c	Measured mean velocity (ft/sec) in **habitat unit**	0.0	0.0	0.0	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.3	1.8	0.9	0.9	0.0	0.0
27.	Area of **habitat unit** within targeted velocity: (ft^2)	7773.7	7773.7	7773.7	2608.4	2608.4	0.0	0.0	0.0	0.0	0.0	0.0	2021.0	467.1	400.8	1096.0	2354.5	0.0	0.0
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	100%	100%	100%	46%	46%	0%	0%	0%	0%	0%	0%	29%	9%	7%	25%	34%	0%	0%
29.	Were there any unintended effects of **feature** on velocity If Y, comment.	NO	NO	NO	NO	NO	NO	NO	NR	NO	NO	NO	NA	NA	NA	NA	NA	NR	NR
30a	1st/2nd dominant substrate in **habitat unit**: BED, BOL, COB, GRV, SND, SLC, OTH	SLC	SLC	SLC	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	NR	YES	YES	YES	NA	NA	NA	NA	NA	NR	NR
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	6313.6	6313.6	6313.6	1808.2	1808.2	0.0	0.0	0.0	0.0	0.0	0.0	1320.2	90.4	160.8	921.1	1810.0	0.0	0.0
36b	Total **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	2991.9	2991.9	2991.9	844.1	844.1	0.0	0.0	0.0	0.0	0.0	0.0	775.5	90.4	160.8	341.9	996.6	0.0	0.0
36c	Total **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	3321.7	3321.7	3321.7	964.1	964.1	0.0	0.0	0.0	0.0	0.0	0.0	544.6	0.0	0.0	579.2	813.4	0.0	0.0
36d	% **habitat unit** area where targeted depth, velocity and shelter criteria overlap	81%	81%	81%	32%	32%	0%	0%	0%	0%	0%	0%	19%	2%	3%	21%	26%	0%	0%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	38%	38%	38%	15%	15%	0%	0%	0%	0%	0%	0%	11%	2%	3%	8%	14%	0%	0%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	43%	43%	43%	17%	17%	0%	0%	0%	0%	0%	0%	8%	0%	0%	13%	12%	0%	0%
37.	Does this **feature** need: DEC, ENH, MNT, REP, NON, OTH	NO	NO	NO	NON	NON	NO	NO	NON	NON	NON	NON	NA	NA	NA	NA	NA	NR	NR
38.	Are additional restoration treatments recommended at this **site**?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NA	NA	NA	NA	NA	NR	NR

Table 42. Adaptive Management Plan full checklist for the Farrow, Wallace enhancement reach, November 2019.

	Project Reach	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	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
	mmddyy	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519
	Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
	Project Site Number	3	3	3	4	4	4	7	5	5	5	5	5	5	5	6	6	6	6
	Project Site Type	MainChan	MainChan	MainChan	MC Bank FP	MC Bank FP	MC Bank FP	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	SideChan	SideChan	SideChan	SideChan
	Project Feature Number	S3-03	S3-04	S3-05	S4-01	S4-02	S4-03	S7-01	NA	NA	S5-01	S5-02	S5-03	S5-04	S5-05	S6-01	S6-02	S6-03	S6-04
	Feature Type Code	BC	BC	BC	LWD	LWD	LWD	onstructed Rif	NA	NA	TER	FLP	LWD	LWD	LWD	LWD	LWD	LWD	LWD
	Habitat Unit	HU01_W	HU01_W	HU16	HU02_D	HU02_D	HU02_D	HU08	HU10	HU17	HU03_D	HU03_D	HU09	HU03_D	HU03_D	HU04_D	HU04_D	HU14	HU14
	Habitat Type	Flatwater	Flatwater	Flatwater	Dry	Dry	Dry	Riffle	Riffle	Pool	Dry	Dry	Pool	Dry	Dry	Dry	Dry	Alcove	Alcove
1.	Length of targeted treatment (ft)	19	30	20	30	30	30	100		NA	350	180	87	37	36	35	35	20	20
2.	Width of targeted treatment: (ft)	21	24	8	60	60	60	55		NA			62	25	24	40	25	25	25
3.	Estimate area of the targeted **feature**: (ft^2)	399	720	160	1800	1800	1800	5500		#VALUE!			5394	925	864	1400	875	500	500
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	NR	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	NA	NA	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD
5a	Are problems with the **feature** visible?	NR	NO	NO	NO	NO	NO	NO	NA	NA	NO	NO	NO	NO	NO	NO	YES	NO	NO
5b	Types: ANC, BBB, CRF, MAT, SHF, STR, SWA, UND, UNS, WSH, OTH, NON	NR	NON	NON	NON	NON	NON	NON	NA	NA	NON	NON	NON	NON	NON	NON	STR	NON	NON
6a	Is the **feature** still in its original location?	NR	YES	YES	YES	YES	YES	YES	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES
6b	Is the **feature** still in its original position?	NR	YES	YES	YES	YES	YES	YES	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES
6c	If yes: LBK, MDC, RBK, SPN, OTH	NR	MCD	MCD	LBK	LBK	LBK	SPN	NA	NA	LBK	LBK	LBK	LBK	LBK	RBK	RBK	RBK	RBK
6d	Is the **feature** still in its original orientaton?	NR	YES	YES	YES	YES	YES	YES	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES
6e	If yes: DNS, MUL, PRL, PRP, UPS, OTH	NR	MUL	MUL	PRP	PRP	PRP	OTH	NA	NA	PRP	PRP	MUL	PRP	PRP	OTH	OTH	PRL	PRL
7.	Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	FLT	FLT	FLT	DRY	DRY	DRY	RIF	RIF	POO	DRY	DRY	POO	DRY	DRY	DRY	DRY	ALC	ALC
8.	If an objective, did the **feature** create the targeted instream habitat type?	NR	YES	YES	YES	YES	YES	YES	NA	NA	YES	YES	YES	YES	YES	YES	NO	YES	YES
9.	Were there any unintended effects by the **feature** on the habitat type? If Y, comment.	NR	NO	NO	NO	NO	NO	NO	NA	NA	NO	NO	NO	NO	NO	NO	YES	NO	NO
10.	Mean water depth in **habitat unit**: ft	0.0	0.0	2.0	0.0	0.0	0.0	1.0	0.9	0.0	0.0	0.0	3.1	0.0	0.0	0.0	0.0	1.4	1.4
11a	Maximum water depth in **habitat unit**: ft	0.0	0.0	3.6	0.0	0.0	0.0	1.8	2.4	0.0	0.0	0.0	7.7	0.0	0.0	0.0	0.0	3.7	3.7
11b	Area of **habitat unit** within 0.5 -2.0 ft depth: (ft2)	0.0	0.0	866.0	0.0	0.0	0.0	4252.7	3626.6	0.0	0.0	0.0	1534.6	0.0	0.0	0.0	0.0	3412.8	3412.8
11c	Area of **habitat unit** within 2.0 -4.0 ft depth: (ft2)	0.0	0.0	1424.6	0.0	0.0	0.0	0.0	147.1	0.0	0.0	0.0	2323.3	0.0	0.0	0.0	0.0	1431.4	1431.4
11d	Area of **habitat unit** within 0.5-4.0 ft depth: (ft2)	0.0	0.0	2290.6	0.0	0.0	0.0	4252.7	3773.7	0.0	0.0	0.0	3857.9	0.0	0.0	0.0	0.0	4844.2	4844.2
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	0%	0%	36%	0%	0%	0%	93%	80%	0%	0%	0%	24%	0%	0%	0%	0%	57%	57%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	0%	0%	59%	0%	0%	0%	0%	3%	0%	0%	0%	37%	0%	0%	0%	0%	24%	24%
11g	% Area of **habitat** unit within 0.5-4.0 ft depth	0%	0%	95%	0%	0%	0%	93%	83%	0%	0%	0%	61%	0%	0%	0%	0%	81%	81%
11h	If an objective, did the **feature** increase/decrease water depth in the treatment area?	NR	YES	YES	YES	YES	YES	YES	NA	NA	YES	YES	YES	YES	YES	YES	NO	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:	399	720	160	1800	1800	1800	5500		NA			5394	925	864	1400	875	500	500
13.	Were there any unintended effects of the **feature** on the water depth? If Y, comment.	NR	NO	NO	NO	NO	NO	NO	NA	NA	NO	NO	NO	NO	NO	NO	YES	NO	NO
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	0	0	2	0	0	0	0	2	3	0	0	3	0	0	0	0	2	2
15.	Percent of **habitat unit** covered by shelter: %	0	0	40	0	0	0	50	20	50	0	0	50	0	0	0	0	45	45
16a	1st dominant cover in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	NON	NON	BOL	NON	NON	NON	BUB	TVG	LWD	NON	NON	LWD	NON	NON	NON	NON	AVG	AVG
16b	2nd dominant in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	NON	NON	SWD	NON	NON	NON	BOL	SWD	TVG	NON	NON	TVG	NON	NON	NON	NON	LWD	LWD
17a	If an objective, did the **feature** increase instream shelter rating?	NR	YES	YES	YES	YES	YES	YES	NA	NA	YES	YES	YES	NO	YES	NO	NO	YES	YES
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	0	0	80	0	0	0	0	40	150	0	0	150	0	0	0	0	90	90
18a	Large woody debris count in **habitat unit**: D >1', L 6-20'	0	0	1	0	0	0	0	1	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**?	NR	NO	NO	NO	NO	NO	NO	NA	NA	NO	NO	YES	NO	NO	YES	NO	NO	NO
19b	LWD recruitment mechanisms in **habitat unit**: ANC, EXC, EXH, INT, RPR, UNA, OTH	NON	NON	NR	NON	NON	NON	NON	NR	NR	NON	NON	NR	NON	NON	NON	NON	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	AGG	AGG	NON	NON	AGG	NON	NON	NON	NON	AGG	AGG
21a	If an objective, did the **feature** lead to the targeted channel conditions?	NR	YES	YES	YES	YES	YES	YES	NA	NA	YES	YES	YES	YES	YES	YES	NO	YES	YES
21b	Overall Offchannel Condition (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	NR	STB	STB	STB	STB	STB	STB	NA	NA	STB	STB	STB	STB	STB	STB	AGG	STB	STB
21c	Outlet Conditions (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	NR							NA	NA									
21d	Inlet Conditions (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	NR							NA	NA									
22.	Were there any unintended effects on the stream channel at the **feature**? If Y, comment.	NR	NO	NO	NO	NO	NO	NO	NA	NA	NO	NO	NO	NO	NO	NO	YES	NO	NO
23.	If an objective, did the **feature** decrease/increase velocity in the treatment area?	NR	DEC	DEC	NA	NA	NA	INC	NA	NA	NA	NA	DEC	NA	NA	NA	NA	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?	NR	YES	YES	YES	YES	YES	YES	NA	NA	YES	YES	YES	YES	YES	YES	NO	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**	0.0	0.0	2.9	0.0	0.0	0.0	4.4	4.2	0.0	0.0	0.0	3.9	0.0	0.0	0.0	0.0	0.3	0.3
26c	Measured mean velocity (ft/sec) in **habitat unit**	0.0	0.0	1.0	0.0	0.0	0.0	1.9	1.8	0.0	0.0	0.0	0.5	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	646.4	0.0	0.0	0.0	299.0	750.0	0.0	0.0	0.0	4216.9	0.0	0.0	0.0	0.0	5945.1	5945.1
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	0%	0%	27%	0%	0%	0%	7%	16%	0%	0%	0%	67%	0%	0%	0%	0%	100%	100%
29.	Were there any unintended effects of **feature** on velocity If Y, comment.	NR	NO	NO	NO	NO	NO	NO	NA	NA	NO	NO	NO	NO	NO	NO	YES	NO	NO
30a	1st/2nd dominant substrate in **habitat unit**: BED, BOL, COB, GRV, SND, SLC, OTH	GRV	GRV	GRV	GRV	GRV	GRV	COB	GRV	SND	GRV	GRV	SND	GRV	GRV	GRV	GRV	SLC	SLC
30b	2nd dominant substrate in **habitat unit**: BED, BOL, COB, GRV, SND, SLC, OTH	SND	SND	SND	SND	SND	SND	GRV	COB	GRV	SND	SND	GRV	SND	SND	SND	SND	SND	SND
31.	If an objective, did the **feature** achieve the targeted substrate composition?	NR	YES	YES	YES	YES	YES	YES	NA	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
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	527.2	0.0	0.0	0.0	71.1	272.8	0.0	0.0	0.0	2760.3	0.0	0.0	0.0	0.0	4844.2	4844.2
36b	Total **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	0.0	0.0	279.4	0.0	0.0	0.0	71.1	272.1	0.0	0.0	0.0	1279.3	0.0	0.0	0.0	0.0	3412.8	3412.8
36c	Total **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0.0	0.0	247.9	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	1481.0	0.0	0.0	0.0	0.0	1431.4	1431.4
36d	% **habitat unit** area where targeted depth, velocity and shelter criteria overlap	0%	0%	22%	0%	0%	0%	2%	6%	0%	0%	0%	44%	0%	0%	0%	0%	81%	81%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	0%	0%	12%	0%	0%	0%	2%	6%	0%	0%	0%	20%	0%	0%	0%	0%	57%	57%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%	0%	24%	0%	0%	0%	0%	24%	24%
37.	Does this **feature** need: DEC, ENH, MNT, REP, NON, OTH	NR	NO	NO	NO	NO	NO	NO	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO
38.	Are additional restoration treatments recommended at this **site**?	NR	NO	NO	NO	NO	NO	NO	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO

Table 42. Adaptive Management Plan full checklist for the Farrow, Wallace enhancement reach, November 2019.

	Project Reach	2	2	2	2	2	2	2	2	2	2
	Enhancement Reach	1	1	1	1	1	1	1	1	1	1
	Colloquial Name	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW
	mmddyy	110519	110519	110519	110519	110519	110519	110519	110519	110519	110519
	Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
	Project Site Number	6	6	6	6	6	6	6	6	6	6
	Project Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
	Project Feature Number	S6-05	S6-06	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	LWD
	Habitat Unit	HU14	HU13	HU11	HU09_2	HU09_2	HU11	HU12	HU14	HU14	HU04_D
	Habitat Type	Alcove	Riffle	Pool	Pool	Pool	Pool	Flatwater	Alcove	Alcove	Dry
1.	Length of targeted treatment (ft)	20	20	35	50	25	25	50	25	25	35
2.	Width of targeted treatment: (ft)	25	25	45	15	40	40	15	40	40	45
3.	Estimate area of the targeted **feature**: (ft^2)	500	500	1575	750	1000	1000	750	1000	1000	1575
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	NR
5a	Are problems with the **feature** visible?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NR
5b	Types: ANC, BBB, CRF, MAT, SHF, STR, SWA, UND, UNS, WSH, OTH, NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NR
6a	Is the **feature** still in its original location?	YES	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	YES	NR
6c	If yes: LBK, MDC, RBK, SPN, OTH	RBK	RBK	RBK	RBK	RBK	RBK	RBK	RBK	RBK	NR
6d	Is the **feature** still in its original orientaton?	YES	YES	YES	YES	YES	YES	YES	YES	YES	NR
6e	If yes: DNS, MUL, PRL, PRP, UPS, OTH	PRL	UPS	PRL	PRL	PRL	PRL	PRL	PRL	UPS	NR
7.	Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	ALC	RIF	POO	POO	POO	POO	FLT	ALC	ALC	DRY
8.	If an objective, did the **feature** create the targeted instream habitat type?	YES	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	NO	NO	YES	NR
10.	Mean water depth in **habitat unit**: ft	1.4	1.0	2.7	3.1	3.1	2.7	1.7	1.4	1.4	0.0
11a	Maximum water depth in **habitat unit**: ft	3.7	2.5	5.4	7.7	7.7	5.4	3.0	3.7	3.7	0.0
11b	Area of **habitat unit** within 0.5 -2.0 ft depth: (ft2)	3412.8	472.2	621.3	1534.6	1534.6	621.3	636.2	3412.8	3412.8	0.0
11c	Area of **habitat unit** within 2.0 -4.0 ft depth: (ft2)	1431.4	43.7	1480.2	2323.3	2323.3	1480.2	529.8	1431.4	1431.4	0.0
11d	Area of **habitat unit** within 0.5-4.0 ft depth: (ft2)	4844.2	515.9	2101.5	3857.9	3857.9	2101.5	1166.1	4844.2	4844.2	0.0
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	57%	61%	23%	24%	24%	23%	50%	57%	57%	0%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	24%	6%	54%	37%	37%	54%	42%	24%	24%	0%
11g	% Area of **habitat** unit within 0.5-4.0 ft depth	81%	67%	77%	61%	61%	77%	92%	81%	81%	0%
11h	If an objective, did the **feature** increase/decrease water depth in the treatment area?	YES	YES	YES	YES	YES	YES	YES	YES	NO	NR
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
12b	Estimate area of **feature** within targeted depth or range ft^2:	500	500	1575	750	1000	1000	750	1000	1000	1575
13.	Were there any unintended effects of the **feature** on the water depth? If Y, comment.	NO	NO	NO	NO	NO	NO	NO	NO	YES	NR
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	2	3	3	3	3	3	2	2	2	0
15.	Percent of **habitat unit** covered by shelter: %	45	75	30	50	50	30	20	45	45	0
16a	1st dominant cover in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	AVG	LWD	TVG	LWD	LWD	TVG	LWD	AVG	AVG	NON
16b	2nd dominant in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	LWD	TVG	LWD	TVG	TVG	LWD	BOL	LWD	LWD	NON
17a	If an objective, did the **feature** increase instream shelter rating?	YES	YES	YES	YES	YES	YES	YES	YES	NO	NR
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	90	225	90	150	150	90	40	90	90	0
18a	Large woody debris count in **habitat unit**: D >1', L 6-20'	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
19a	If an objective, did the **feature** increase LWD count in the **habitat unit**?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NR
19b	LWD recruitment mechanisms in **habitat unit**: ANC, EXC, EXH, INT, RPR, UNA, OTH	NR	NR	NR	NR	NR	NR	NR	NR	NR	NON
20.	Current stream channel problems in the **habitat unit**: AGG, BRD, FLO, GRC, HDC, INC, NAR, SCU, STT, WID, NON, OTH	AGG	AGG	AGG	AGG	AGG	AGG	AGG	AGG	AGG	NON
21a	If an objective, did the **feature** lead to the targeted channel conditions?	YES	YES	YES	YES	YES	YES	YES	YES	NO	NR
21b	Overall Offchannel Condition (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	STB	STB	STB	STB	STB	STB	STB	STB	AGG	NR
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	NO	NO	NO	NO	NO	NO	YES	NR
23.	If an objective, did the **feature** decrease/increase velocity in the treatment area?	DEC	DEC	DEC	DEC	DEC	DEC	DEC	DEC	NA	NR
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
25.	Did the **feature** achieve the targeted velocity?	YES	YES	YES	YES	YES	YES	YES	YES	NO	NR
26a	Measured minimum velocity (ft/sec) in **habitat unit**	0	0	0	0	0	0	0	0	0	0
26b	Measured max velocity (ft/sec) in **habitat unit**	0.3	3.9	0.8	3.9	3.9	0.8	1.7	0.3	0.3	0.0
26c	Measured mean velocity (ft/sec) in **habitat unit**	0.0	0.7	0.2	0.5	0.5	0.2	0.5	0.0	0.0	0.0
27.	Area of **habitat unit** within targeted velocity: (ft^2)	5945.1	417.6	2556.0	4216.9	4216.9	2556.0	778.3	5945.1	5945.1	0.0
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	100%	54%	94%	67%	67%	94%	61%	100%	100%	0%
29.	Were there any unintended effects of **feature** on velocity If Y, comment.	NO	NO	NO	NO	NO	NO	NO	NO	YES	NR
30a	1st/2nd dominant substrate in **habitat unit**: BED, BOL, COB, GRV, SND, SLC, OTH	SLC	GRV	SND	SND	SND	SND	SND	SLC	SLC	GRV
30b	2nd dominant substrate in **habitat unit**: BED, BOL, COB, GRV, SND, SLC, OTH	SND	SND	GRV	GRV	GRV	GRV	GRV	SND	SND	SND
31.	If an objective, did the **feature** achieve the targeted substrate composition?	YES	YES	YES	YES	YES	YES	YES	YES	YES	NR
32.	% Canopy Measurement:	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
34.	Temperature Profile: YES /NO	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
36a	Total **habitat unit** area where targeted depth, velocity and shelter criteria overlap	4844.2	180.0	1942.1	2760.3	2760.3	1942.1	670.1	4844.2	4844.2	0.0
36b	Total **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	3412.8	170.8	601.4	1279.3	1279.3	601.4	390.4	3412.8	3412.8	0.0
36c	Total **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	1431.4	9.1	1340.7	1481.0	1481.0	1340.7	279.7	1431.4	1431.4	0.0
36d	% **habitat unit** area where targeted depth, velocity and shelter criteria overlap	81%	23%	71%	44%	44%	71%	53%	81%	81%	0%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	57%	22%	22%	20%	20%	22%	31%	57%	57%	0%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	24%	1%	49%	24%	24%	49%	22%	24%	24%	0%
37.	Does this **feature** need: DEC, ENH, MNT, REP, NON, OTH	NO	NO	NO	NO	NO	NO	NO	NO	NO	NR
38.	Are additional restoration treatments recommended at this **site**?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NR

Ferrari-Carano, Olson, June 2019

Depth and Velocity

Table 43. Areas and percentages of: wetted area, optimal depth and velocity, and optimal hydraulic habitat within the Ferrari-Carano, Olson enhancement reach, June 2019.

Ferrari-Carano, Olson Post-effective flow June 2019	Wetted area (ft^2)	Optimal depth (ft^2)			Optimal velocity (ft^2)	Optimal habitat (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	57,518	27,641	14,415	42,056	21,612	8,118	2,247	10,364
Side channel area	53,142	24,016	18,338	42,353	23,365	8,824	6,168	14,992
Total area	110,660	51,656	32,753	84,409	44,977	16,942	8,414	25,356
Main channel % of wetted area	52%	48%	25%	73%	38%	14%	4%	18%
Side channel % of wetted area	48%	45%	35%	80%	44%	17%	12%	28%
Total % of wetted area	**100%**	47%	30%	76%	41%	15%	8%	23%

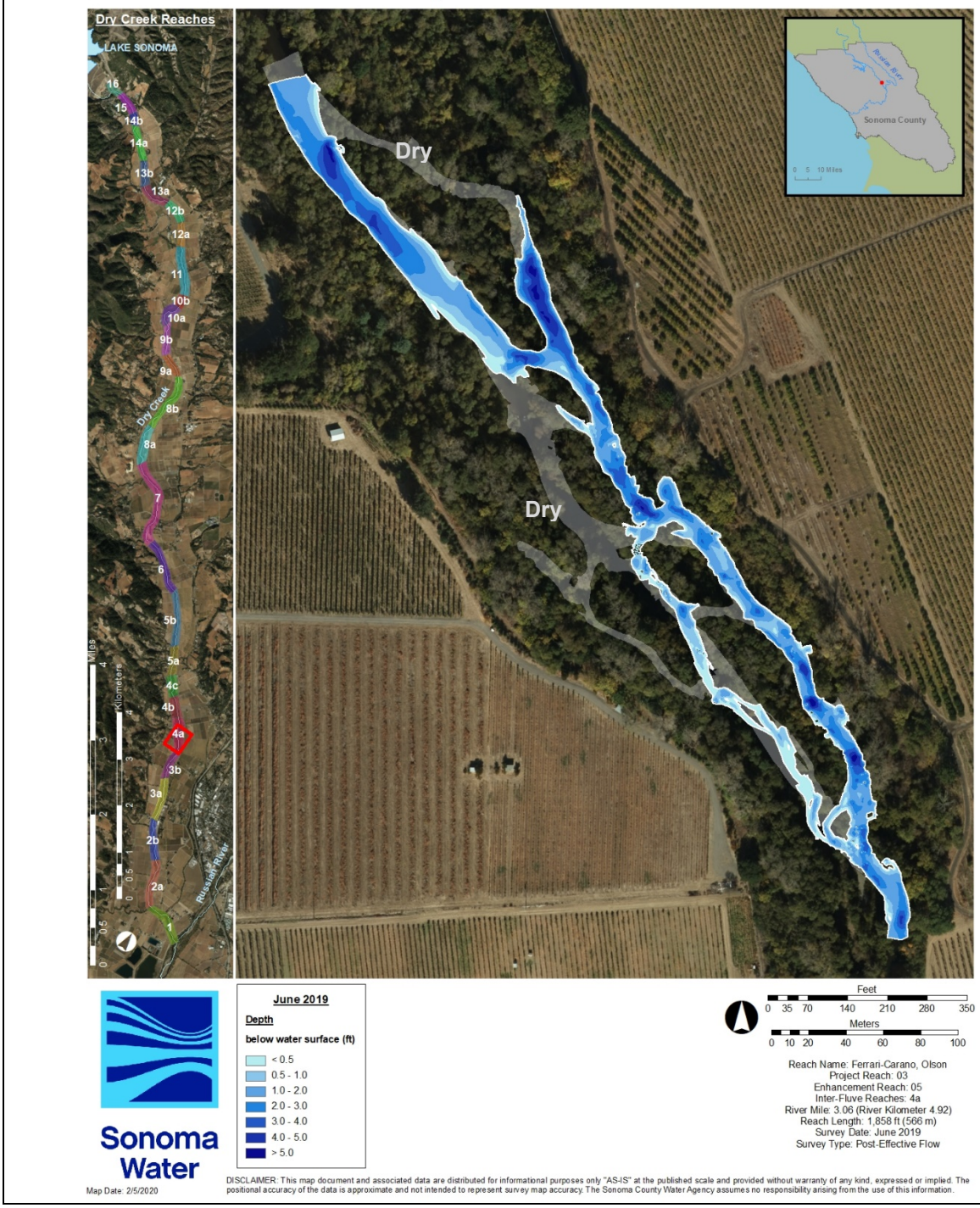

Figure 73. Water depth within the Ferrari-Carano, Olson enhancement reach, June 2019.

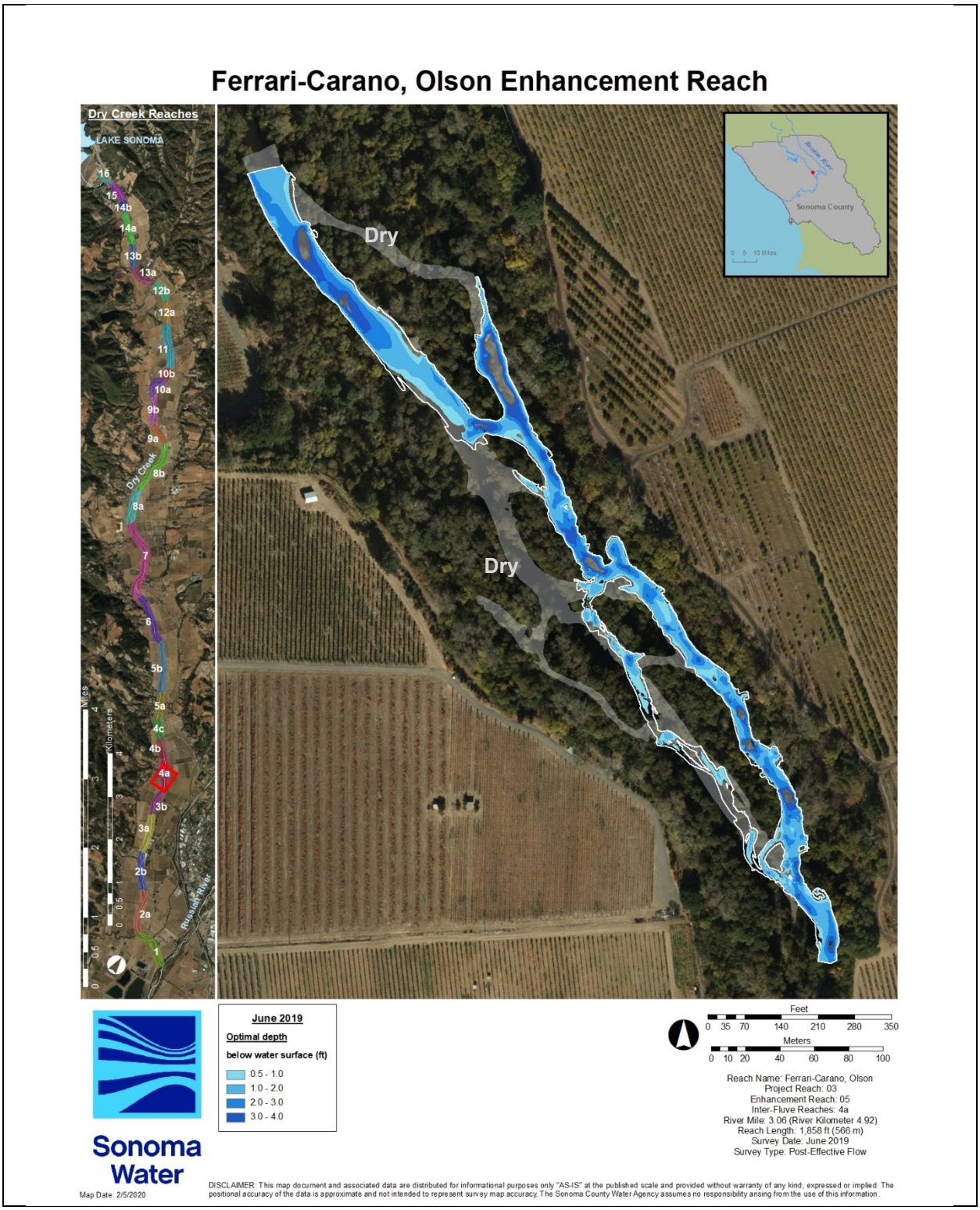

Figure 74. Optimal water depth for fry (0.5-2.0 ft) and parr (2.0-4.0 ft) within the Ferrari-Carano, Olson enhancement reach, June 2019.

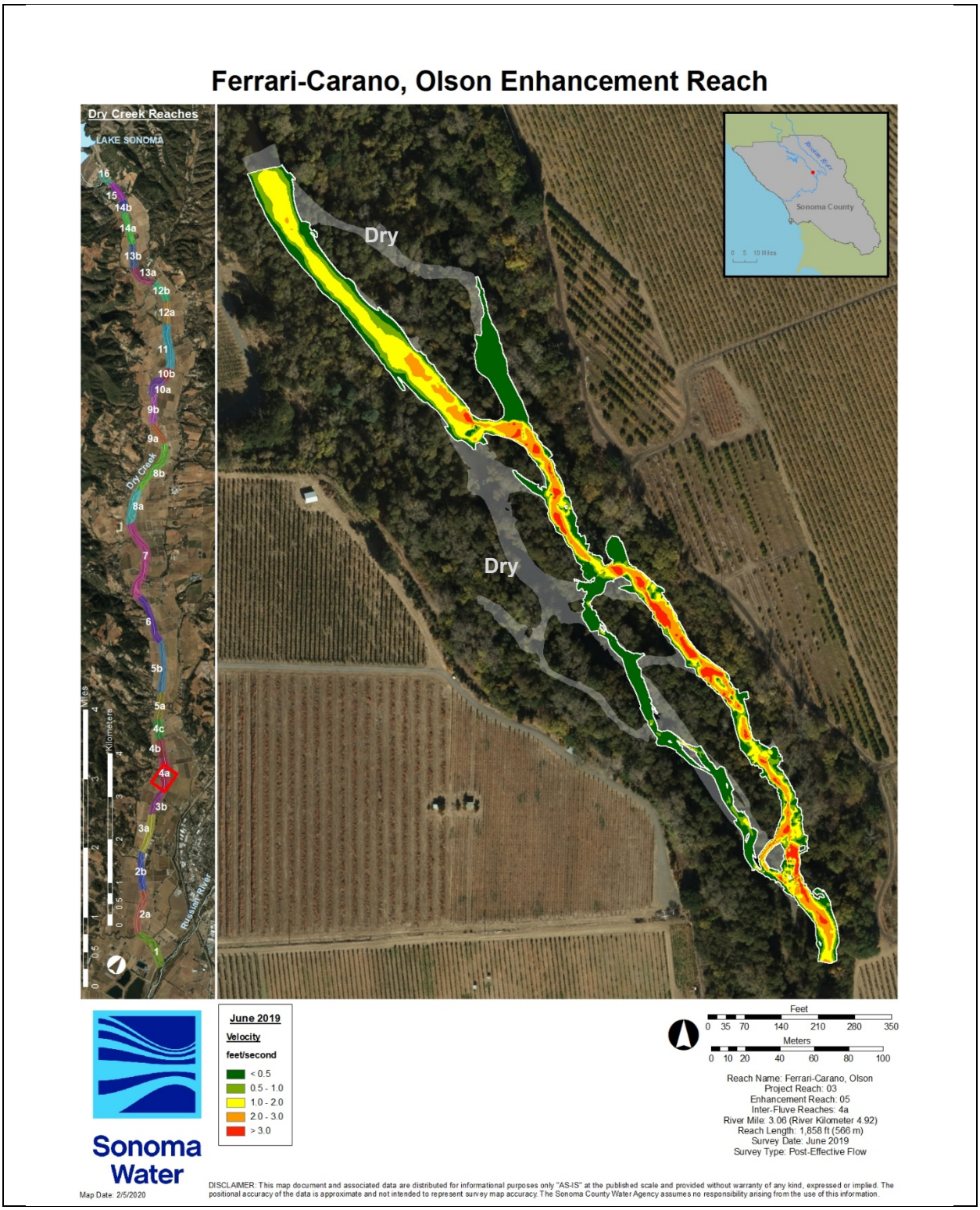

Figure . Measured water velocity within the Ferrari-Carano, Olson enhancement reach, June 2019.

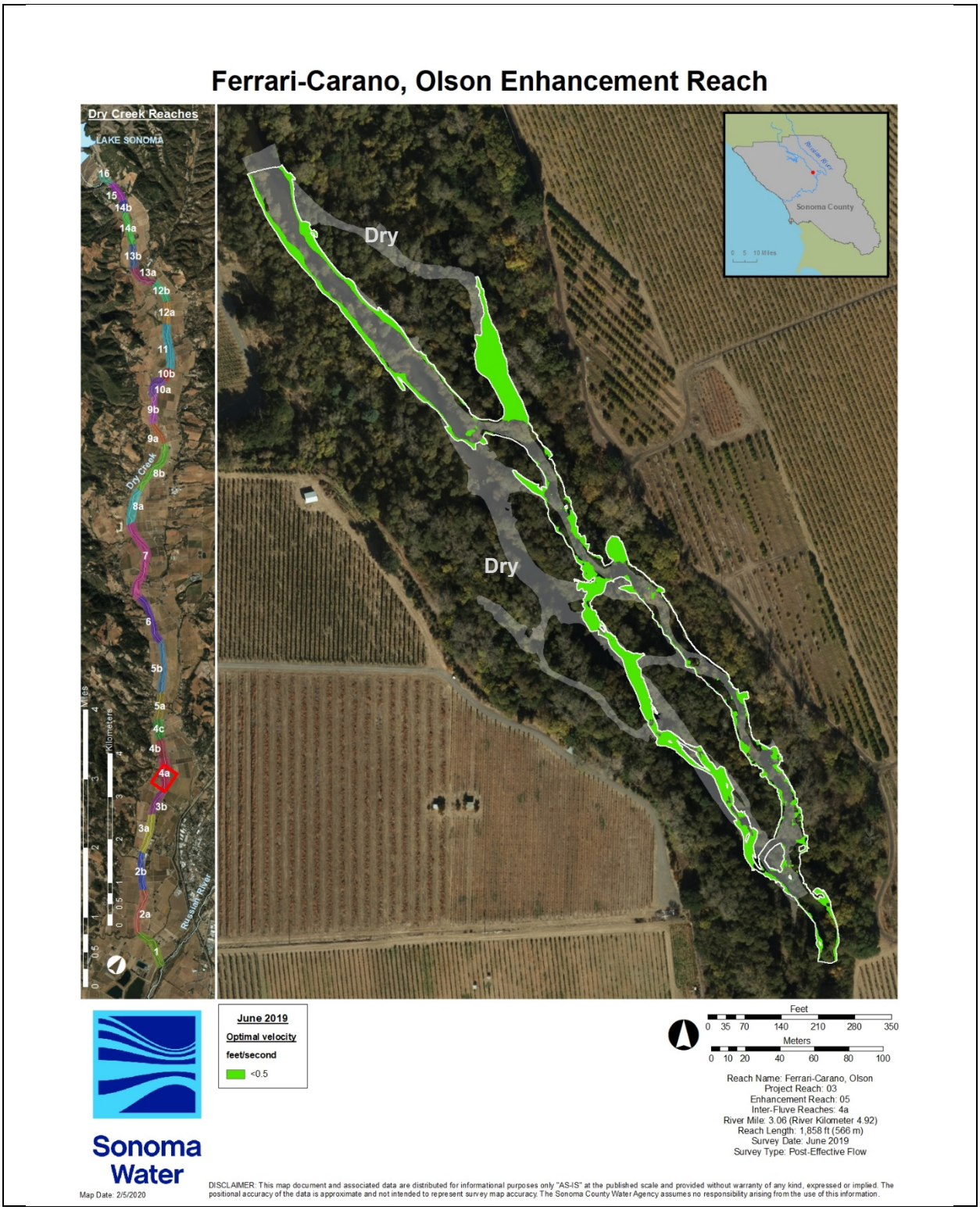

Figure 75. Optimal water velocity for fry and parr (< 0.5 ft/s) within the Ferrari-Carano, Olson enhancement reach, June 2019.

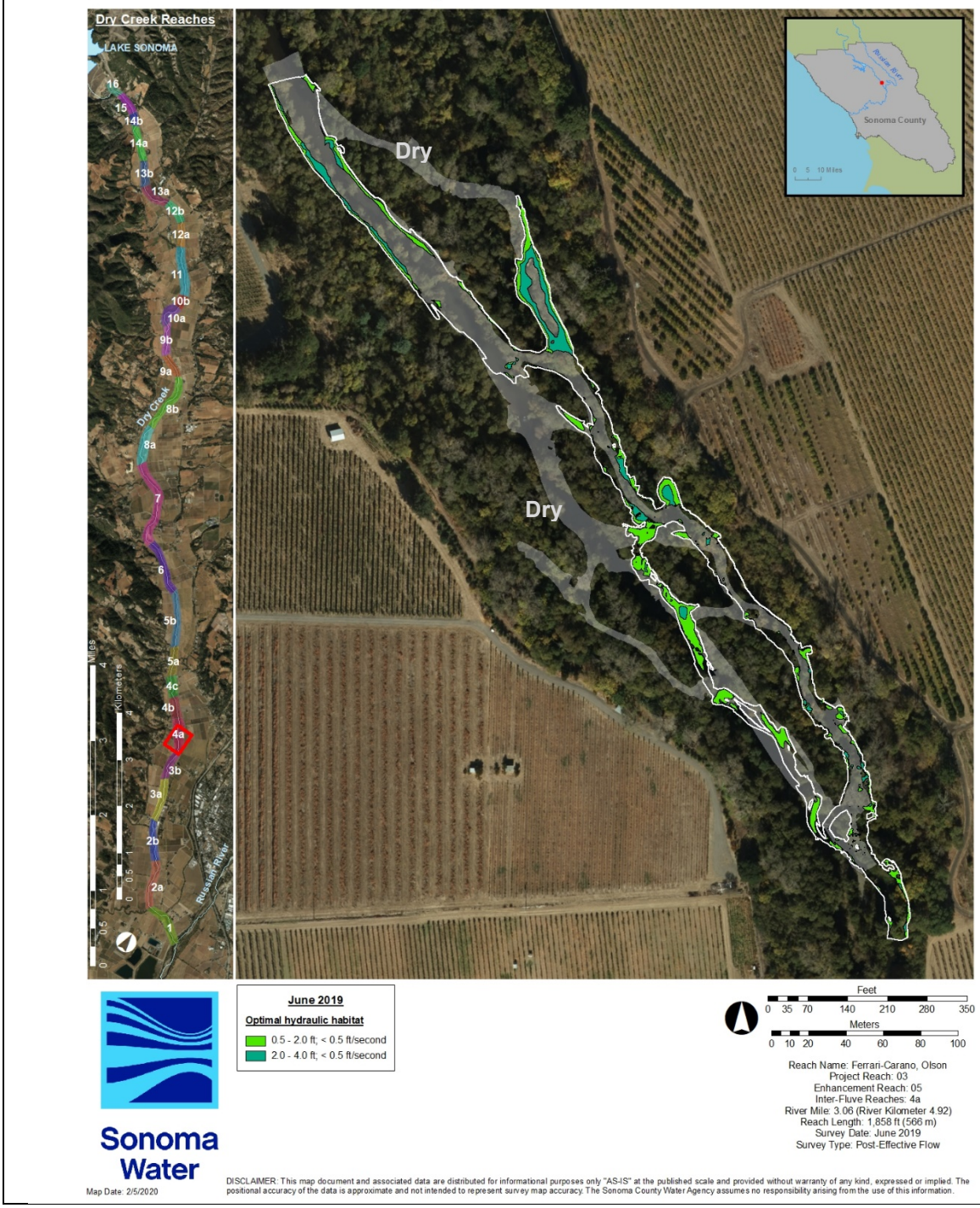

Figure 76. Optimal hydraulic habitat for fry (<0.5 ft/s, 0.5-2.0 ft) and parr (<0.5 ft/s, 2.0-4.0 ft) within the Ferrari-Carano, Olson enhancement reach, June 2019.

Habitat Types and Shelter Values

Table 44. Habitat, types, shelter value, percent cover, and shelter score for habitat units within the Ferrari-Carano, Olson enhancement reach, June 2019.

Post-effective flow (June 2019)				
Habitat Unit #	**Habitat Type**	**Shelter Value**	**Percent Cover**	**Shelter Score**
HU00	Pool	3	65	195
HU01	Flatwater	3	40	120
HU02	Alcove	1	15	15
HU03	Riffle	3	30	90
HU04	Pool	2	40	80
HU05	Pool	3	35	105
HU06	Flatwater	2	15	30
HU07	Pool	3	40	120
HU08	Pool	3	15	45
HU09	Riffle	3	20	60
HU10	Pool	3	30	90
HU11	Flatwater	1	10	10
HU12	Pool	3	30	90
HU13	Pool	3	15	45
HU14	Pool	3	30	90
HU15	Alcove	3	60	180
HU16	Flatwater	3	15	45
HU17	Alcove	0	0	0
HU18	Riffle	0	0	0
HU19	Pool	3	20	60
HU20	Alcove	3	25	75
HU21	Riffle	1	15	15
HU22	Pool	3	15	45
HU23	Flatwater	2	10	20
HU24	Riffle	0	0	0
HU25	Pool	3	40	120
HU26	Riffle	1	5	5
HU27	Pool	2	40	80
HU28	Riffle	1	10	10
HU29	Flatwater	1	5	5
HU30	Pool	3	35	105
HU31	Riffle	0	0	0
HU32	Flatwater	1	10	10
HU33	Pool	3	15	45
HU34	Pool	3	35	105
HU35	Riffle	2	40	80
HU36	Pool	2	15	30
HU37	Riffle	3	50	150

Table 44. Habitat, types, shelter value, percent cover, and shelter score for habitat units within the Ferrari-Carano, Olson enhancement reach, June 2019.

Post-effective flow (June 2019)				
Habitat Unit #	**Habitat Type**	**Shelter Value**	**Percent Cover**	**Shelter Score**
HU38	Flatwater	2	10	20
HU39	Alcove	1	5	5
Pool: riffle	**17:10 (1.70)**			**Avg = 60**

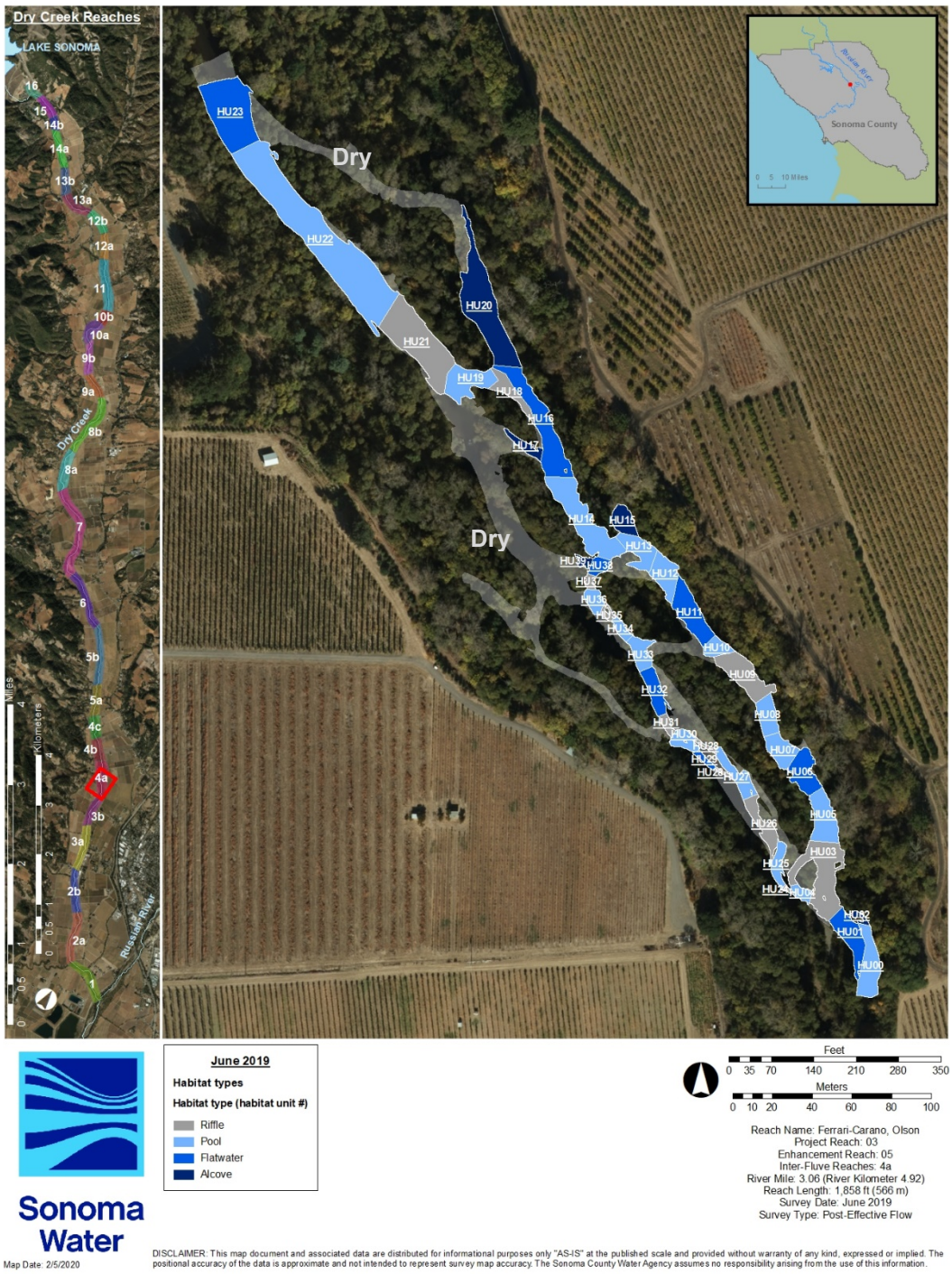

Figure 77. Habitat unit number and type within the Ferrari-Carano, Olson enhancement reach, June 2019.

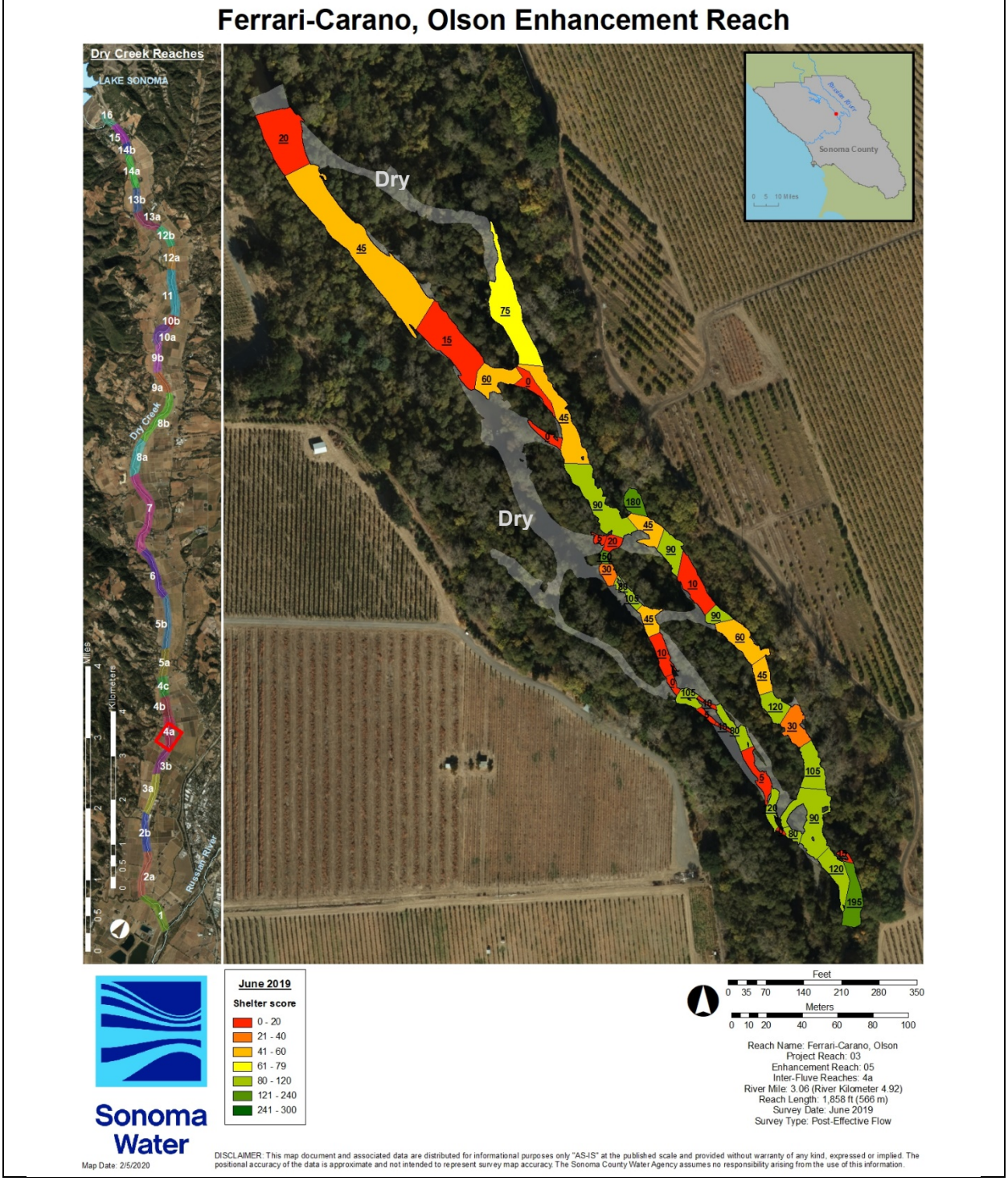

Figure 78. Habitat unit shelter scores within the Ferrari-Carano, Olson enhancement reach, June 2019.

Feature, Habitat Unit, Site, and Reach Ratings

Table 45. Adaptive Management Plan checklist feature ratings for the Ferrari-Carano, Olson enhancement reach, June 2019.

	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	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019
	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	2	2	2
	Project Site Type	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	SideChan	SideChan	SideChan
	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	S2-01	S2-02	S2-03
	Feature Type Code	BF	TT	TT	TT	BF	TT	BF	TT	TT	TT	TT	TT	LVW	TT	TT	LW	HW2	HW1
	Habitat Unit	HU03	HU01 D	HU27	HU01 D	HU32	HU01 D	HU36	HU01 D	HU01 D	HU01 D	HU01 D	HU21	HU01 D	HU01 D	HU01 D	HU03 2	HU03 2	HU03 2
	Habitat Type	Riffle	Dry	Pool	Dry	Flatwater	Dry	Pool	Dry	Dry	Dry	Dry	Riffle	Dry	Dry	Dry	Riffle	Riffle	Riffle
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	GOOD	GOOD	UNKN	FAIR	FAIL	FAIR	FAIL	FAIL	FAIL	GOOD	EXCL	UNKN	POOR	FAIL	GOOD	POOR	EXCL
5a	Are problems with the **feature** visible?	NO	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	NO	YES	NO
6a	Is the **feature** still in its original location?	YES	YES	YES	NO	YES	NO	YES	NO	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES
6b	Is the **feature** still in its original position?	YES	NO	YES	NO	YES	NO	YES	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO
6d	Is the **feature** still in its original orientaton?	YES	YES	YES	NO	YES	NO	YES	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	YES	NO	YES	NO	NO	NO	NO	YES	NO	NO	NO	YES	NO	YES
9.	Were there any unintended effects by the **feature** on the habitat type? If Y, comment.	NO	YES	NO	NO	NO	NO	YES	NO	NO	NO	YES	NO	YES	YES	NO	NO	YES	NO
17a	If an objective, did the **feature** increase instream shelter rating?	YES	NO	YES	NO	YES	NO	YES	NO	NO	NO	NO	YES	YES	NO	NO	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	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	YES	NO	NO	NO	NO	NO	NO
25.	Did the **feature** achieve the targeted velocity?	YES	NO	YES	NO	YES	NO	YES	NO	NO	NO	NO	YES	YES	NO	NO	YES	NO	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**	**S2-01**	**S2-02**	**S2-03**
4.	Structural condition of **feature**: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	4	4	4	0	3	1	3	1	1	1	4	5	0	2	1	4	2	5
5a	Are problems with the **feature** visible? (NO = 1 pt, YES = 0 pt)	1	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1
6a	Is the **feature** still in its original location? (YES = 1 pt, NO = 0 pt)	1	1	1	0	1	0	1	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	1	0	1	0	0	0	0	1	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	0	1	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	1	0	1	0	0	0	0	1	0	0	0	1	0	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	0	1	1	1	0	1	0	0	1	1	0	1
17a	If an objective, did the **feature** increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	0	1	0	1	0	1	0	0	0	0	1	1	0	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	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	0	0	0
25.	Did the **feature** achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	0	1	0	1	0	1	0	0	0	0	1	1	0	0	1	0	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**	**S2-01**	**S2-02**	**S2-03**
FEATURE RATING	Feature quantitative rating out of 15	13	6	12	1	10	2	9	2	2	2	6	14	4	4	2	11	4	12
	Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)	Excellent	Fair	Excellent	Not rated	Good	Fail	Good	Fail	Fail	Fail	Fair	Excellent	Poor	Poor	Fail	Good	Poor	Excellent

Table 45. Adaptive Management Plan checklist feature ratings for the Ferrari-Carano, Olson enhancement reach, June 2019.

	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	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019
	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 Site Type	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
	Feature Type Code	HW2	HW1	LVW	HW1	HW1	LVW	HW1	PW	HW1	R	HW1	PW	HW2	HW1	HW1	HW1	HW1	LVW
	Habitat Unit	HU03_2	HU03_2	HU03_2	HU02_D	HU05	HU05	HU05	HU05	HU02_D	HU06	HU02_D	HU07	HU06	HU07	HU06	HU07	HU07	HU06
	Habitat Type	Riffle	Riffle	Riffle	Dry	Pool	Pool	Pool	Pool	Dry	Flatwater	Dry	Pool	Flatwater	Pool	Flatwater	Pool	Pool	Flatwater
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	EXCL	FAIL	EXCL	GOOD	GOOD	EXCL	EXCL	EXCL	FAIR	EXCL	EXCL	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD
5a	Are problems with the **feature** visible?	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO
6a	Is the **feature** still in its original location?	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	YES	NO	YES	NO	YES	YES	NO	YES	YES	YES	YES	YES	NO	YES	NO	NO	YES
6d	Is the **feature** still in its original orientaton?	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	NO	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	NO	YES
9.	Were there any unintended effects by the **feature** on the habitat type? If Y, comment.	NO	NO	YES	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	YES	NO
17a	If an objective, did the **feature** increase instream shelter rating?	YES	YES	NO	NO	YES	YES	YES	YES	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	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	YES	NO	NO	NO	NO	NO	NO
25.	Did the **feature** achieve the targeted velocity?	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
	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**
4.	Structural condition of **feature**: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	4	5	1	5	4	4	5	5	5	3	5	5	4	4	4	4	4	4
5a	Are problems with the **feature** visible? (NO = 1 pt, YES = 0 pt)	1	1	0	1	1	1	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)	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	1	0	1	0	1	1	0	1	1	1	1	1	0	1	0	0	1
6d	Is the **feature** still in its original orientaton? (YES = 1 pt, NO = 0 pt)	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	0	1	1	1	1	1	1	0	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)	1	1	0	1	1	1	1	1	1	0	1	1	1	1	1	1	0	1
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	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	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	1	0	0	0	0	0	0
25.	Did the **feature** achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	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**
FEATURE RATING	Feature quantitative rating out of 15	11	13	1	12	11	12	13	12	12	8	12	14	12	11	12	11	8	12
	Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)	Good	Excellent	Fail	Excellent	Good	Excellent	Excellent	Excellent	Excellent	Fair	Excellent	Excellent	Excellent	Good	Excellent	Good	Fair	Excellent

Table 45. Adaptive Management Plan checklist feature ratings for the Ferrari-Carano, Olson enhancement reach, June 2019.

	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	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019
	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 Site Type	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	S2-35	S2-36	S2-37	S2-38	S2-39	S2-40	S2-41
	Feature Type Code	R	HW1	HW1	PW	TT	R	HW1	HW2	HW1	LW	ALS	PW	R	PW	HW2	LW	LW	HW2
	Habitat Unit	HU08	HU09	HU09	HU09	HU02_D	HU09	HU10	HU02_D	HU02_D	HU02_D	HU33	HU11	HU11	HU12	HU12	HU13	HU13	HU38
	Habitat Type	Pool	Riffle	Riffle	Riffle	Dry	Riffle	Pool	Dry	Dry	Dry	Pool	Flatwater	Flatwater	Pool	Pool	Pool	Pool	Flatwater
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	FAIR	GOOD	GOOD	GOOD	FAIL	GOOD	FAIR	POOR	POOR	FAIR	POOR	FAIR	FAIR	EXCL	EXCL	FAIR	GOOD	UNKN
5a	Are problems with the **feature** visible?	YES	NO	NO	YES	YES	NO	YES	YES	YES	YES	YES	YES	NO	NO	NO	YES	NO	YES
6a	Is the **feature** still in its original location?	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?	YES	NO	NO	YES	NO	YES	NO	NO	NO	NO	NO	YES	YES	YES	NO	NO	NO	NO
6d	Is the **feature** still in its original orientaton?	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	UNK
8.	If an objective, did the **feature** create the targeted instream habitat type?	NO	YES	YES	YES	NO	YES	NO	NO	NO	NO	YES	YES	NO	YES	YES	NO	YES	NO
9.	Were there any unintended effects by the **feature** on the habitat type? If Y, comment.	YES	NO	NO	NO	NO	NO	YES	YES	YES	YES	YES	NO	YES	NO	NO	YES	NO	YES
17a	If an objective, did the **feature** increase instream shelter rating?	YES	YES	YES	YES	NO	YES	YES	NO	NO	NO	YES	YES	NO	YES	YES	YES	YES	NO
19a	If an objective, did the **feature** increase LWD count in the **habitat unit**?	YES	NO	NO	NO	NO	YES	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	YES	NO	NO	NO	NO	NO	YES	YES	NO	NO	NO	NO	NO
25.	Did the **feature** achieve the targeted velocity?	NO	YES	YES	YES	YES	YES	YES	NO	NO	NO	YES	YES	YES	YES	YES	YES	YES	NO
	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**	**S2-35**	**S2-36**	**S2-37**	**S2-38**	**S2-39**	**S2-40**	**S2-41**
4.	Structural condition of **feature**: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	3	4	4	4	1	4	3	2	2	3	2	3	3	5	5	3	4	0
5a	Are problems with the **feature** visible? (NO = 1 pt, YES = 0 pt)	0	1	1	0	0	1	0	0	0	0	0	0	1	1	1	0	1	0
6a	Is the **feature** still in its original location? (YES = 1 pt, NO = 0 pt)	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)	1	0	0	1	0	1	0	0	0	0	0	1	1	1	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	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	1	1	1	0	1	0	0	0	0	1	1	0	1	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	1	1	1	0	0	0	0	0	1	0	1	1	0	1	0
17a	If an objective, did the **feature** increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	1	1	1	0	1	1	0	0	0	1	1	0	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)	1	0	0	0	0	1	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	1	0	0	0	0	0	1	1	0	0	0	0	0
25.	Did the **feature** achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	0	1	1	1	1	1	1	0	0	0	1	1	1	1	1	1	1	0
	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**	**S2-35**	**S2-36**	**S2-37**	**S2-38**	**S2-39**	**S2-40**	**S2-41**
FEATURE RATING	Feature quantitative rating out of 15	8	11	11	11	3	14	8	4	4	5	7	11	9	13	12	7	11	1
	Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)	Fair	Good	Good	Good	Not rated	Excellent	Fair	Poor	Poor	Poor	Fair	Good	Good	Excellent	Excellent	Fair	Good	Fail

Table 45. Adaptive Management Plan checklist feature ratings for the Ferrari-Carano, Olson enhancement reach, June 2019.

	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	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019
	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 Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
	PROJECT FEATURE NUMBER	S2-42	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
	Feature Type Code	HW1	ALS	TT	R	PW	HW1	HW1	HW1	HW1	R	PW	HW1	R	LW	HW1	TT	HW1	LW
	Habitat Unit	HU38	HU37	HU39	HU13	HU14	HU15	HU15	HU15	HU15	HU14	HU16	HU16	HU17	HU02_D	HU16	HU02_D	HU16	HU19
	Habitat Type	Flatwater	Riffle	Alcove	Pool	Pool	Alcove	Alcove	Alcove	Alcove	Pool	Flatwater	Flatwater	Alcove	Dry	Flatwater	Dry	Flatwater	Pool
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	FAIR	POOR	FAIL	GOOD	EXCL	EXCL	EXCL	EXCL	EXCL	POOR	GOOD	FAIR	FAIL	FAIL	FAIR	FAIL	FAIR	GOOD
5a	Are problems with the **feature** visible?	YES	YES	YES	NO	NO	NO	NO	NO	NO	YES	NO	YES	YES	YES	YES	YES	YES	NO
6a	Is the **feature** still in its original location?	YES	YES	NO	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	NO	YES	YES
6b	Is the **feature** still in its original position?	NO	NO	NO	YES	NO	YES	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO	YES	NO
6d	Is the **feature** still in its original orientaton?	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	UNK	YES	NO	YES	YES
8.	If an objective, did the **feature** create the targeted instream habitat type?	NO	NO	NO	YES	YES	YES	YES	YES	YES	NO	YES	YES	NO	NO	YES	NO	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	YES	NO	NO	YES	YES	NO	NO	NO	NO
17a	If an objective, did the **feature** increase instream shelter rating?	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO	YES	YES
19a	If an objective, did the **feature** increase LWD count in the **habitat unit**?	NO	NO	NO	YES	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	YES
21a	If an objective, did the **feature** lead to the targeted channel conditions?	NO	NO	NO	YES	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO
25.	Did the **feature** achieve the targeted velocity?	YES	YES	NO	YES	YES	YES	YES	YES	YES	NO	YES	YES	NO	NO	YES	NO	YES	YES
	PROJECT FEATURE NUMBER	**S2-42**	**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**
4.	Structural condition of **feature**: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	3	2	1	4	5	5	5	5	5	2	4	3	1	1	3	1	3	4
5a	Are problems with the **feature** visible? (NO = 1 pt, YES = 0 pt)	0	0	0	1	1	1	1	1	1	0	1	0	0	0	0	0	0	1
6a	Is the **feature** still in its original location? (YES = 1 pt, NO = 0 pt)	1	1	0	1	1	1	1	1	1	0	1	1	1	1	1	0	1	1
6b	Is the **feature** still in its original position? (YES = 1 pt, NO = 0 pt)	0	0	0	1	0	1	1	1	1	1	1	0	0	0	0	0	1	0
6d	Is the **feature** still in its original orientaton? (YES = 1 pt, NO = 0 pt)	1	1	0	1	1	1	1	1	1	1	1	1	0	0	1	0	1	1
8.	If an objective, did the **feature** create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	0	0	0	1	1	1	1	1	1	0	1	1	0	0	1	0	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	0	1	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	1	0	1	1	1	1	1	1	1	1	1	0	0	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	1	0	0	0	0	0	1	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	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0
25.	Did the **feature** achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	1	0	1	1	1	1	1	1	0	1	1	0	0	1	0	1	1
	PROJECT FEATURE NUMBER	**S2-42**	**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**
FEATURE RATING	Feature quantitative rating out of 15	7	6	2	14	13	14	14	14	14	6	12	9	2	2	9	2	10	12
	Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)	Fair	Fair	Fail	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Fair	Excellent	Good	Fail	Fail	Good	Fail	Good	Excellent

Table 45. Adaptive Management Plan checklist feature ratings for the Ferrari-Carano, Olson enhancement reach, June 2019.

	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	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019
	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	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	S2-60	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	S2-74	S2-75	S2-76	S2-77	S2-78	S2-79
	Feature Type Code	LVW	HW1	TT	TT	HW1	HW1	HW1	HW1	TT	HW1	HW1	HW1	HW1	HW1	HW2	HW1	HW1	PW	LVW	LW
	Habitat Unit	HU19	HU18	HU16	HU16	HU16	HU20	HU20	HU20	HU02 D	HU20	HU20	HU20	HU20	HU20	HU20	HU02 D	HU02 D	HU20	HU02 D	HU02 D
	Habitat Type	Pool	Riffle	Flatwater	Flatwater	Flatwater	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	EXCL	FAIR	FAIL	FAIL	GOOD	GOOD	GOOD	GOOD	FAIL	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	FAIL	FAIL	POOR	FAIL	FAIL
5a	Are problems with the **feature** visible?	NO	NO	YES	YES	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	YES	YES	YES	YES	YES
6a	Is the **feature** still in its original location?	YES	YES	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	UNK	UNK	YES	UNK	UNK
6b	Is the **feature** still in its original position?	YES	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	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	YES	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO	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	YES
17a	If an objective, did the **feature** increase instream shelter rating?	YES	YES	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	NO	NO	YES	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	YES	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO
25.	Did the **feature** achieve the targeted velocity?	YES	NO	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO	NO
	PROJECT FEATURE NUMBER	**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**	**S2-74**	**S2-75**	**S2-76**	**S2-77**	**S2-78**	**S2-79**
4.	Structural condition of **feature**: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	5	3	1	1	4	4	4	4	1	4	4	4	4	4	4	1	1	2	1	1
5a	Are problems with the **feature** visible? (NO = 1 pt, YES = 0 pt)	1	1	0	0	1	1	1	1	0	1	1	1	1	1	1	0	0	0	0	0
6a	Is the **feature** still in its original location? (YES = 1 pt, NO = 0 pt)	1	1	0	0	1	1	1	1	0	1	1	1	1	1	1	0	0	1	0	0
6b	Is the **feature** still in its original position? (YES = 1 pt, NO = 0 pt)	1	1	0	0	1	1	1	1	0	1	1	1	1	1	1	0	0	0	0	0
6d	Is the **feature** still in its original orientaton? (YES = 1 pt, NO = 0 pt)	1	1	0	0	1	1	1	1	0	1	1	1	1	1	1	0	0	1	0	0
8.	If an objective, did the **feature** create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	1	1	0	0	1	1	1	1	0	1	1	1	1	1	1	0	0	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	1	1	1	1	1	1	1	1	1	0	0	0	0	0
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	0	1	1	1	1	1	1	0	0	1	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	1	0	0	1	1	1	1	0	1	1	1	1	1	1	0	0	0	0	0
25.	Did the **feature** achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	0	0	0	1	1	1	1	0	1	1	1	1	1	1	0	0	1	0	0
	PROJECT FEATURE NUMBER	**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**	**S2-74**	**S2-75**	**S2-76**	**S2-77**	**S2-78**	**S2-79**
FEATURE RATING	Feature quantitative rating out of 15	14	11	2	2	13	13	13	13	2	13	13	13	13	13	13	1	1	7	1	1
	Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)	Excellent	Good	Fail	Fail	Excellent	Excellent	Excellent	Excellent	Not rated	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Fail	Fail	Fair	Fail	Fail

Table 45. Adaptive Management Plan checklist feature ratings for the Ferrari-Carano, Olson enhancement reach, June 2019.

	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	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019
	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	2	2	2	2	2	2	2	2	2	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	SideChan	SideChan
	PROJECT FEATURE NUMBER	S2-80	S2-81	S2-82	S2-83	S2-84	S2-85	S2-86	S2-87	S2-88	S3-01	S3-02	S3-03	S3-04	S3-05	S3-06	S3-07	S3-08	S3-09	S3-10	S3-11	S3-12
	Feature Type Code	PW	LW	LW	HW2	HW1	HW1	HW2	LW	ALS	LW	HW1	HW2	PW	R	HW1	PW	R	HW1	HW1	HW2	HW1
	Habitat Unit	HU02_D	HU02_D	HU02_D	HU02_D	HU02_D	HU02_D	HU02_D	HU02_D	HU22_2	HU30_2	HU03_D	HU03_D	HU03_D	HU03_D	HU03_D	HU03_D	HU03_D	HU03_D	HU40_W	HU03_D	HU40_W
	Habitat Type	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Pool	Pool	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Pond	Dry	Pond
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	GOOD	EXCL	FAIR	FAIR	UNKN	FAIL	POOR	UNKN	FAIL	FAIR	FAIR	FAIR	FAIR
5a	Are problems with the **feature** visible?	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	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	UNK	UNK	YES	YES	YES	YES	YES	NO	YES	YES	NO	YES	YES	YES	YES
6b	Is the **feature** still in its original position?	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
6d	Is the **feature** still in its original orientaton?	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	YES	YES	YES	YES	YES	NO	YES	YES	NO	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	YES	YES	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	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
17a	If an objective, did the **feature** increase instream shelter rating?	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	NO	NO	NO	NO	NO	NO	NO	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	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	YES	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	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	YES
	PROJECT FEATURE NUMBER	**S2-80**	**S2-81**	**S2-82**	**S2-83**	**S2-84**	**S2-85**	**S2-86**	**S2-87**	**S2-88**	**S3-01**	**S3-02**	**S3-03**	**S3-04**	**S3-05**	**S3-06**	**S3-07**	**S3-08**	**S3-09**	**S3-10**	**S3-11**	**S3-12**
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	4	5	3	3	0	1	2	0	1	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	1	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	1	1	1	1	1	0	1	1	0	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	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)	0	0	0	0	0	0	0	0	1	1	1	1	1	0	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	0	0	0	0	1	1	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	1	1	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	1	1	0	0	0	0	0	0	0	0	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	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	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	0	1	1	0	0	0	0	0	0	0	0	1	1	1
	PROJECT FEATURE NUMBER	**S2-80**	**S2-81**	**S2-82**	**S2-83**	**S2-84**	**S2-85**	**S2-86**	**S2-87**	**S2-88**	**S3-01**	**S3-02**	**S3-03**	**S3-04**	**S3-05**	**S3-06**	**S3-07**	**S3-08**	**S3-09**	**S3-10**	**S3-11**	**S3-12**
FEATURE RATING	Feature quantitative rating out of 15	1	1	1	1	1	1	1	1	11	14	5	5	2	1	4	2	1	5	7	7	7
	Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Good	Excellent	Poor	Poor	Fail	Fail	Poor	Fail	Fail	Poor	Fair	Fair	Fair

Table 45. Adaptive Management Plan checklist feature ratings for the Ferrari-Carano, Olson enhancement reach, June 2019.

	Project Reach	3	3	3	3	3	3	3	3
	Enhancement Reach	5	5	5	5	5	5	5	5
	Colloquial Name	FO	FO	FO	FO	FO	FO	FO	FO
	mmddyy	62019	62019	62019	62019	62019	62019	62019	62019
	Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
	PROJECT SITE NUMBER	3	3	3	3	3	3	3	3
	Project Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
	PROJECT FEATURE NUMBER	S3-13	S3-14	S3-15	S3-16	S3-17	S3-18	S3-19	S3-20
	Feature Type Code	HW1	LVW	R	HW2	HW2	HW1	HW1	HW1
	Habitat Unit	HU03_D	HU03_D	HU03_D	HU03_D	HU03_D	HU40_W	HU40_W	HU40_W
	Habitat Type	Dry	Dry	Dry	Dry	Dry	Pond	Pond	Pond
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	UNKN	FAIL	FAIL	UNKN	UNKN	GOOD	GOOD	GOOD
5a	Are problems with the **feature** visible?	YES	YES	YES	YES	YES	YES	YES	YES
6a	Is the **feature** still in its original location?	UNK	NO	NO	YES	UNK	YES	YES	YES
6b	Is the **feature** still in its original position?	UNK	NO	NO	NO	NO	YES	YES	YES
6d	Is the **feature** still in its original orientaton?	UNK	NO	NO	UNK	UNK	YES	YES	YES
8.	If an objective, did the **feature** create the targeted instream habitat type?	NO	NO	NO	NO	NO	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	NO	NO
17a	If an objective, did the **feature** increase instream shelter rating?	NO	NO	NO	NO	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
21a	If an objective, did the **feature** lead to the targeted channel conditions?	NO	NO	NO	NO	NO	NO	NO	NO
25.	Did the **feature** achieve the targeted velocity?	NO	NO	NO	NO	NO	YES	YES	YES
	PROJECT FEATURE NUMBER	**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)	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
6a	Is the **feature** still in its original location? (YES = 1 pt, NO = 0 pt)	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	1	1	1
6d	Is the **feature** still in its original orientaton? (YES = 1 pt, NO = 0 pt)	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	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	1	1
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
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)	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	1	1	1
	PROJECT FEATURE NUMBER	**S3-13**	**S3-14**	**S3-15**	**S3-16**	**S3-17**	**S3-18**	**S3-19**	**S3-20**
FEATURE RATING	Feature quantitative rating out of 15	0	1	1	1	0	10	11	11
	Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)	Fail	Fail	Fail	Fail	Fail	Good	Good	Good

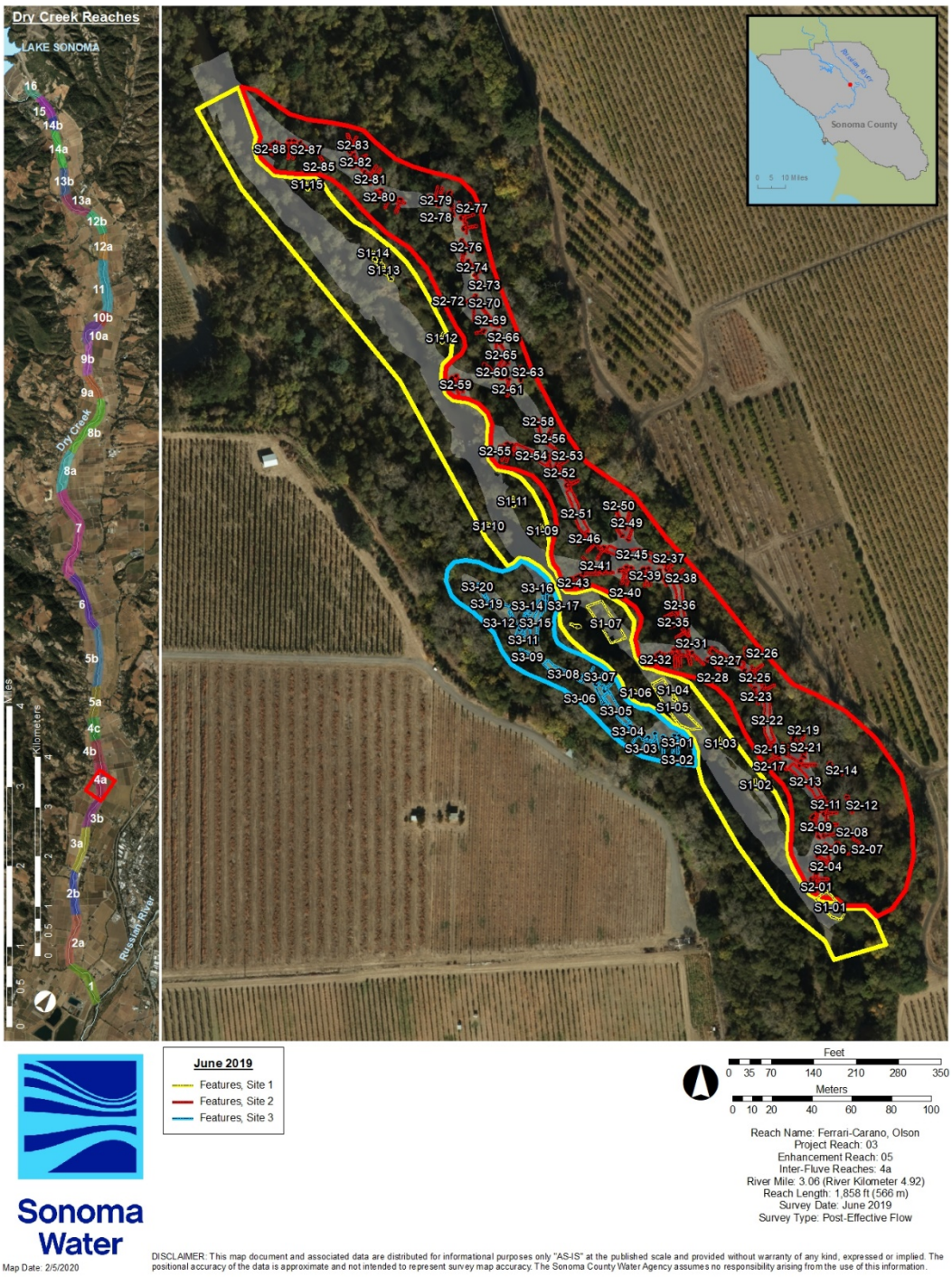

Figure FO 79. Enhancement sites and features within the Ferrari-Carano, Olson enhancement reach.

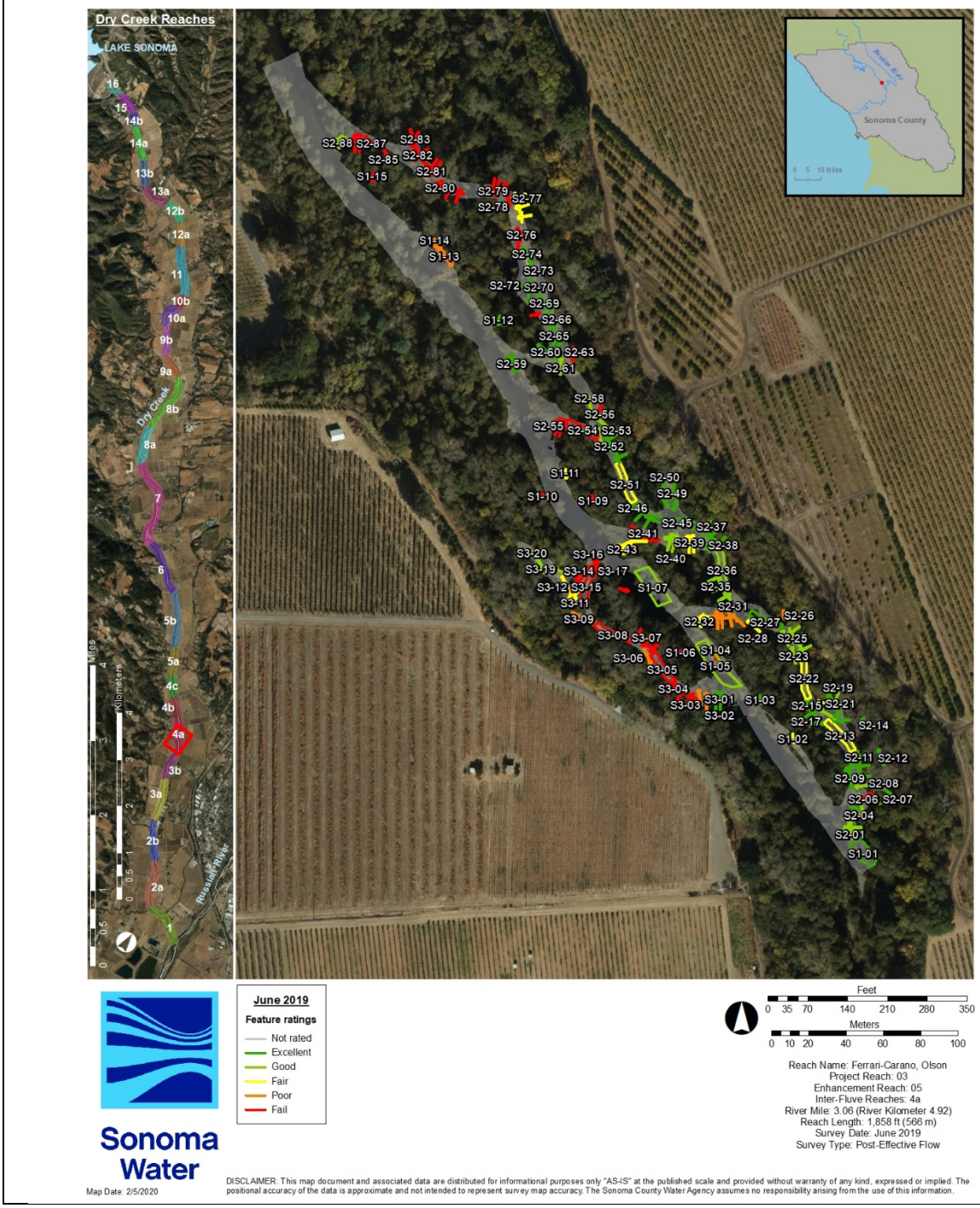

Figure 80. Feature ratings for the Ferrari-Carano, Olson enhancement reach, June 2019.

Table 46. Adaptive Management Plan checklist habitat unit ratings for the Ferrari-Carano, Olson enhancement reach, June 2019.

	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	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019
	Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
	HABITAT UNIT NUMBER	**HU00**	**HU01**	**HU02**	**HU03**	**HU03_2**	**HU04**	**HU05**	**HU06**	**HU07**	**HU08**	**HU09**	**HU10**	**HU11**	**HU12**	**HU13**	**HU14**	**HU01_D**	**HU02_D**
	Habitat Type	Pool	Flatwater	Alcove	Riffle	Riffle	Pool	Pool	Flatwater	Pool	Pool	Riffle	Pool	Flatwater	Pool	Pool	Pool	Dry	Dry
	PROJECT SITE NUMBER	**1**	**1**	**1**	**1**	**2**	**1**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**1**	**2**
	Project Site Type	MainChan	MainChan	MainChan	MainChan	SideChan	MainChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	MainChan	SideChan
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	49%	60%	33%	62%	62%	68%	34%	49%	35%	42%	68%	51%	39%	39%	58%	31%	0%	0%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	44%	27%	0%	20%	20%	4%	47%	35%	37%	38%	20%	40%	48%	48%	29%	53%	0%	0%
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	3	3	1	3	3	2	3	2	3	3	3	3	1	3	3	3	0	0
15.	Percent of **habitat unit** covered by shelter: %	65	40	15	30	30	40	35	15	40	15	20	30	10	30	15	30	0	0
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	195	120	15	90	90	80	105	30	120	45	60	90	10	90	45	90	0	0
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	27%	16%	100%	16%	16%	47%	28%	35%	30%	27%	18%	17%	34%	34%	22%	39%	0%	0%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	18%	5%	33%	7%	7%	25%	11%	19%	11%	16%	9%	8%	18%	18%	12%	16%	0%	0%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	4%	0%	0%	1%	1%	1%	11%	2%	7%	3%	1%	0%	2%	2%	0%	14%	0%	0%
	HABITAT UNIT NUMBER	**HU00**	**HU01**	**HU02**	**HU03**	**HU03_2**	**HU04**	**HU05**	**HU06**	**HU07**	**HU08**	**HU09**	**HU10**	**HU11**	**HU12**	**HU13**	**HU14**	**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)	4	4	3	4	4	4	3	4	3	4	4	4	3	3	4	3	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	2	0	2	2	0	4	3	3	3	1	3	4	4	2	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	5	3	5	5	4	5	4	5	5	5	5	3	5	5	5	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)	4	3	1	2	2	3	2	1	3	1	2	2	1	2	1	2	0	0
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	5	4	0	3	3	3	4	0	4	1	2	3	0	3	1	3	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	1	4	1	1	4	2	3	3	2	1	1	3	3	2	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	0	3	0	0	2	1	1	1	1	0	0	1	1	1	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)	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0
	HABITAT UNIT NUMBER	**HU00**	**HU01**	**HU02**	**HU03**	**HU03_2**	**HU04**	**HU05**	**HU06**	**HU07**	**HU08**	**HU09**	**HU10**	**HU11**	**HU12**	**HU13**	**HU14**	**HU01_D**	**HU02_D**
HABITAT UNIT RATING	Habitat unit quantitative rating (out of 35)	25	19	14	17	17	20	22	16	22	17	15	18	15	21	16	22	0	0
	Habitat unit qualitative rating: Excellent (>=28), Good (>=21), Fair(>=14), Poor (>=7), Fail (<7)	Good	Fair	Fair	Fair	Fair	Fair	Good	Fair	Good	Fair	Fair	Fair	Fair	Good	Fair	Good	Fail	Fail

Table 46. Adaptive Management Plan checklist habitat unit ratings for the Ferrari-Carano, Olson enhancement reach, June 2019.

	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	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019
	Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
	HABITAT UNIT NUMBER	**HU03_D**	**HU15**	**HU16**	**HU17**	**HU18**	**HU19**	**HU20**	**HU21**	**HU22**	**HU22_2**	**HU23**	**HU24**	**HU25**	**HU26**	**HU27**	**HU28**	**HU29**	**HU30**
	Habitat Type	Dry	Alcove	Flatwater	Alcove	Riffle	Pool	Alcove	Riffle	Pool	Pool	Flatwater	Riffle	Pool	Riffle	Pool	Riffle	Flatwater	Pool
	PROJECT SITE NUMBER	**3**	**2**	**2**	**2**	**2**	**2**	**2**	**1**	**1**	**2**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
	Project Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	MainChan	MainChan	SideChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	0%	53%	44%	46%	80%	36%	23%	70%	34%	34%	63%	4%	51%	0%	45%	0%	1%	55%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	0%	32%	48%	0%	0%	44%	39%	5%	48%	48%	27%	0%	0%	0%	0%	0%	0%	0%
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	0	3	3	0	0	3	3	1	3	3	2	0	3	1	2	1	1	3
15.	Percent of **habitat unit** covered by shelter: %	0	60	15	0	0	20	25	15	15	15	10	0	40	5	40	10	5	35
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	0	180	45	0	0	60	75	15	45	45	20	0	120	5	80	10	5	105
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	0%	98%	19%	96%	9%	22%	100%	15%	33%	33%	20%	34%	92%	71%	96%	58%	100%	99%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	0%	51%	7%	43%	3%	6%	23%	3%	12%	12%	9%	0%	47%	0%	44%	0%	1%	54%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	32%	5%	0%	0%	5%	39%	0%	9%	9%	2%	0%	0%	0%	0%	0%	0%	0%
	HABITAT UNIT NUMBER	**HU03_D**	**HU15**	**HU16**	**HU17**	**HU18**	**HU19**	**HU20**	**HU21**	**HU22**	**HU22_2**	**HU23**	**HU24**	**HU25**	**HU26**	**HU27**	**HU28**	**HU29**	**HU30**
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	3	2	4	3	3	4	0	4	0	4	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)	0	3	4	0	0	4	3	0	4	4	2	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	5	5	0	0	5	5	3	5	5	4	0	5	3	4	3	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)	0	4	1	0	0	2	2	1	1	1	1	0	3	0	3	1	0	2
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	0	5	1	0	0	2	2	0	1	1	0	0	4	0	3	0	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)	0	4	1	4	0	2	4	1	3	3	2	3	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)	0	4	0	4	0	0	2	0	1	1	0	0	4	0	4	0	0	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	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
	HABITAT UNIT NUMBER	**HU03_D**	**HU15**	**HU16**	**HU17**	**HU18**	**HU19**	**HU20**	**HU21**	**HU22**	**HU22_2**	**HU23**	**HU24**	**HU25**	**HU26**	**HU27**	**HU28**	**HU29**	**HU30**
HABITAT UNIT RATING	Habitat unit quantitative rating (out of 35)	0	32	16	12	4	18	23	9	18	18	13	3	24	7	22	8	7	23
	Habitat unit qualitative rating: Excellent (>=28), Good (>=21), Fair(>=14), Poor (>=7), Fail (<7)	Fail	Excellent	Fair	Poor	Fail	Fair	Good	Poor	Fair	Fair	Poor	Fail	Good	Poor	Good	Poor	Poor	Good

Table 46. Adaptive Management Plan checklist habitat unit ratings for the Ferrari-Carano, Olson enhancement reach, June 2019.

	Project Reach	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
	Colloquial Name	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
	mmddyy	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019
	Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
	HABITAT UNIT NUMBER	**HU30_2**	**HU31**	**HU32**	**HU33**	**HU33_2**	**HU34**	**HU35**	**HU36**	**HU37**	**HU38**	**HU39**	**HU40_W**
	Habitat Type	Pool	Riffle	Flatwater	Pool	Pool	Pool	Riffle	Pool	Riffle	Flatwater	Alcove	Pond
	PROJECT SITE NUMBER	**3**	**1**	**1**	**2**	**1**	**1**	**1**	**1**	**2**	**2**	**2**	**3**
	Project Site Type	SideChan	MainChan	MainChan	SideChan	MainChan	MainChan	MainChan	MainChan	SideChan	SideChan	SideChan	SideChan
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	55%	0%	47%	65%	65%	61%	11%	59%	18%	79%	53%	0%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	0%	0%	0%	17%	17%	0%	0%	5%	0%	0%	0%	0%
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	3	0	1	3	3	3	2	2	3	2	1	3
15.	Percent of **habitat unit** covered by shelter: %	35	0	10	15	15	35	40	15	50	10	5	15
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	105	0	10	45	45	105	80	30	150	20	5	45
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	99%	77%	100%	100%	100%	99%	78%	100%	79%	100%	100%	0%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	54%	0%	47%	65%	65%	61%	10%	59%	15%	78%	53%	0%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	0%	0%	17%	17%	0%	0%	5%	0%	0%	0%	0%
	HABITAT UNIT NUMBER	**HU30_2**	**HU31**	**HU32**	**HU33**	**HU33_2**	**HU34**	**HU35**	**HU36**	**HU37**	**HU38**	**HU39**	**HU40_W**
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	1	4	1	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)	0	0	0	1	1	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	0	3	5	5	5	4	4	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)	2	0	1	1	1	2	3	1	3	1	0	1
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	4	0	0	1	1	4	3	0	5	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	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)	4	0	4	4	4	4	1	4	1	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)	0	0	0	1	1	0	0	0	0	0	0	0
	HABITAT UNIT NUMBER	**HU30_2**	**HU31**	**HU32**	**HU33**	**HU33_2**	**HU34**	**HU35**	**HU36**	**HU37**	**HU38**	**HU39**	**HU40_W**
HABITAT UNIT RATING	Habitat unit quantitative rating (out of 35)	23	4	16	21	21	23	16	17	19	17	15	7
	Habitat unit qualitative rating: Excellent (>=28), Good (>=21), Fair(>=14), Poor (>=7), Fail (<7)	Good	Fail	Fair	Good	Good	Good	Fair	Fair	Fair	Fair	Fair	Poor

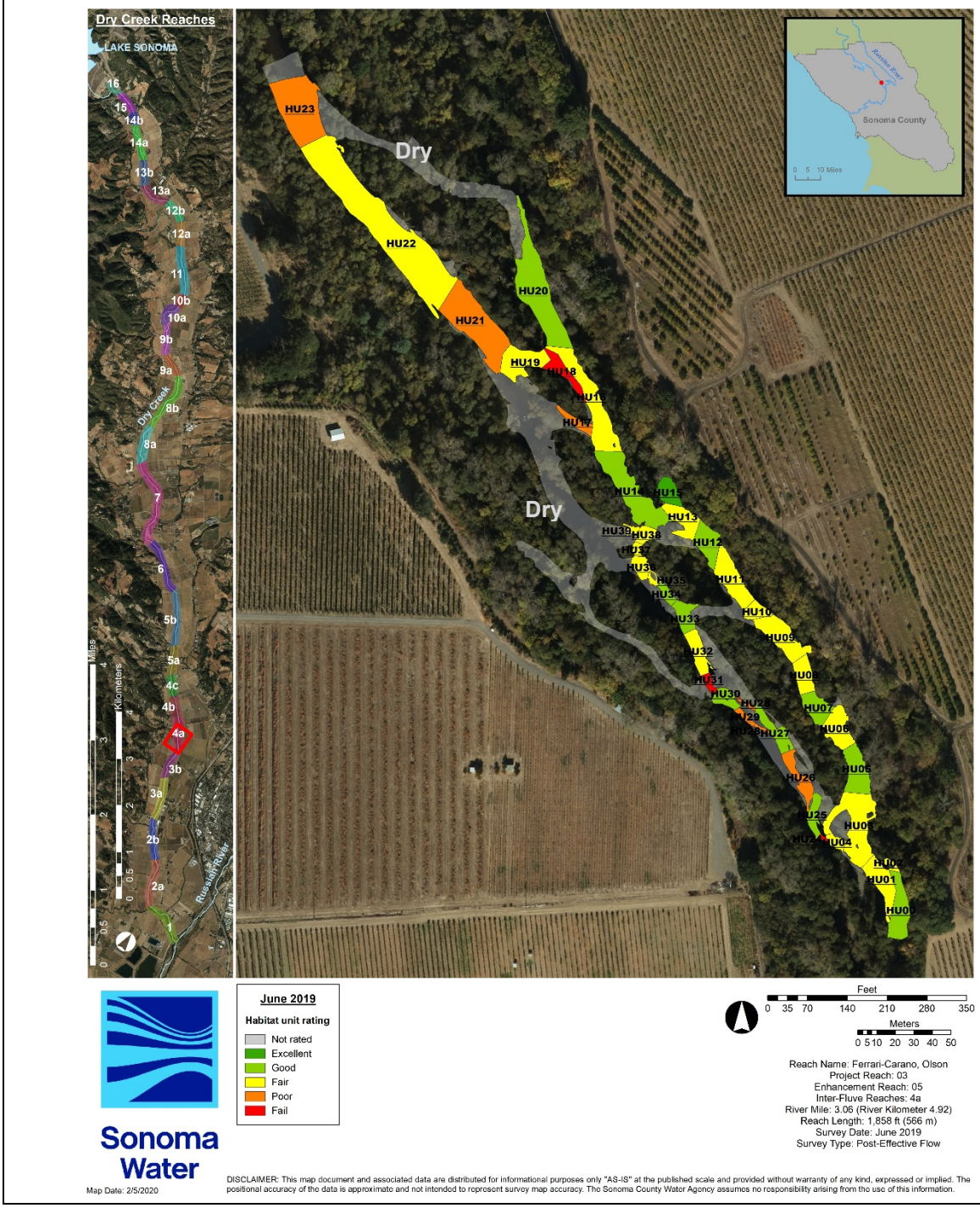

Figure 81. Habitat unit ratings for the Ferrari-Carano, Olson enhancement reach June 2019.

Table 47. Post-effective flow average feature, average habitat unit, site, and reach ratings (rounded to the nearest whole number) for the Ferrari-Carano, Olson enhancement reach, June 2019.

	Project Reach	3	3	3
	Enhancement Reach	5	5	5
	ENHANCEMENT REACH NAME	**FO**	**FO**	**FO**
	mmddyy	62019	62019	62019
	Survey Type	PEF	PEF	PEF
	PROJECT SITE NUMBER	**1**	**2**	**3**
	Project Site Type	MainChan	SideChan	3
	PROJECT SITE NUMBER	**1**	**2**	**3**
SITE AVERAGE FEATURE RATING	Site average feature quantitative rating out of 15	6	9	5
	Site average feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)	Fair	Fair	Poor
	PROJECT SITE NUMBER	1	2	3
SITE AVERAGE HABITAT UNIT RATING	Site average habitat unit quantitative rating (out of 35)	14	17	10
	Site average qualitative rating Excellent (>=28), Good (>=21), Fair(>=14), Poor (>=7), Fail (<7)	Fair	Fair	Poor
	PROJECT SITE NUMBER	**1**	**2**	**3**
SITE RATING	Site quantitative rating (sum of site average feature and habitat unit ratings) (out of 50)	21	26	15
	Site qualitative rating: Excellent (>=40), Good (>=30), Fair(>=20), Poor (>=10), Fail (<10)	Fair	Fair	Poor
	ENHANCEMENT REACH NAME	**FO**		
ENHANCEMENT REACH RATING	Enhancement reach quantitative rating (average of site ratings) (out of 50)	20		
	Enhancement reach qualitative rating: Excellent (>=40), Good (>=30), Fair(>=20), Poor (>=10), Fail (<10)	Fair		

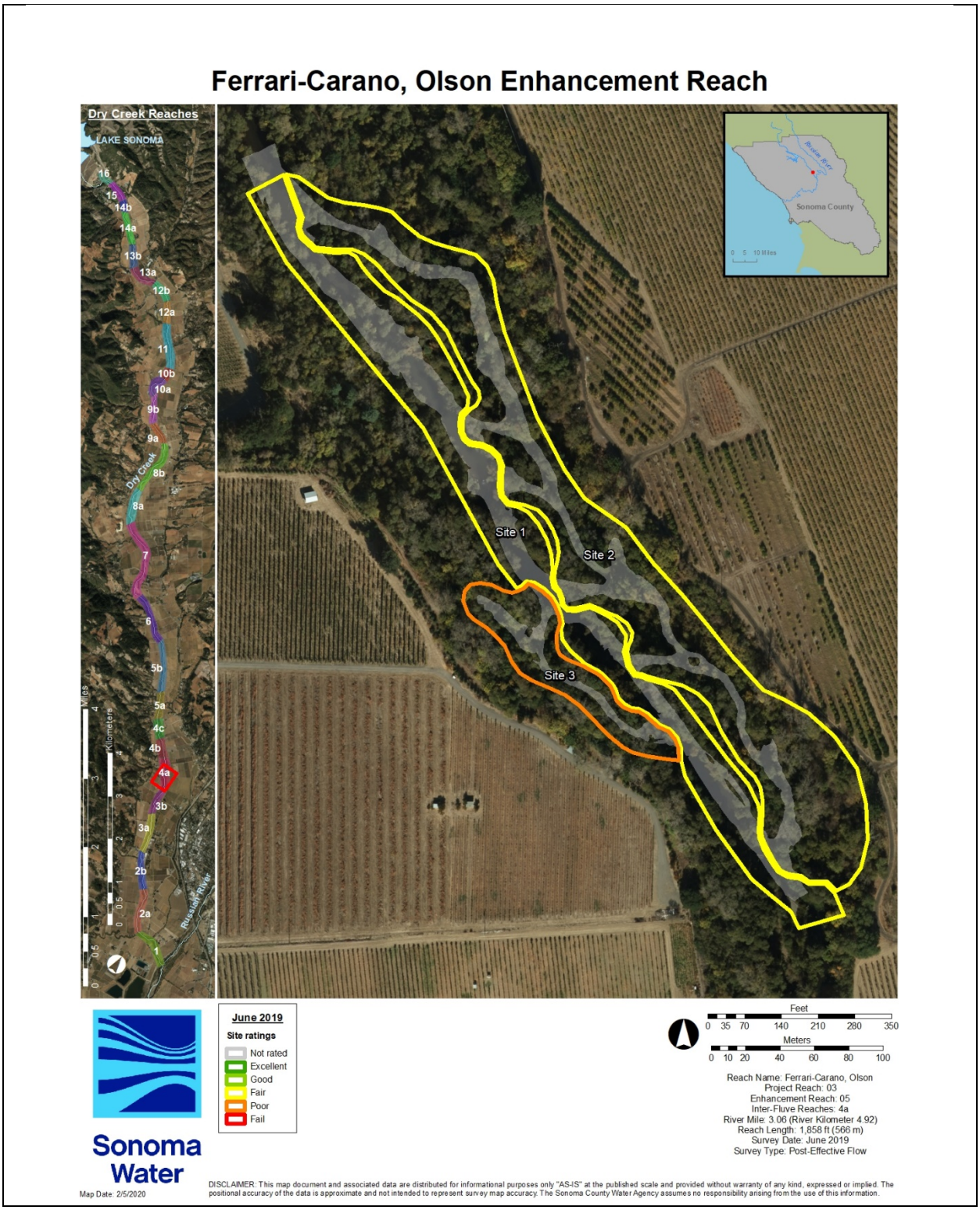

Figure 82. Enhancement site ratings for the Ferrari-Carano, Olson enhancement reach, June 2019.

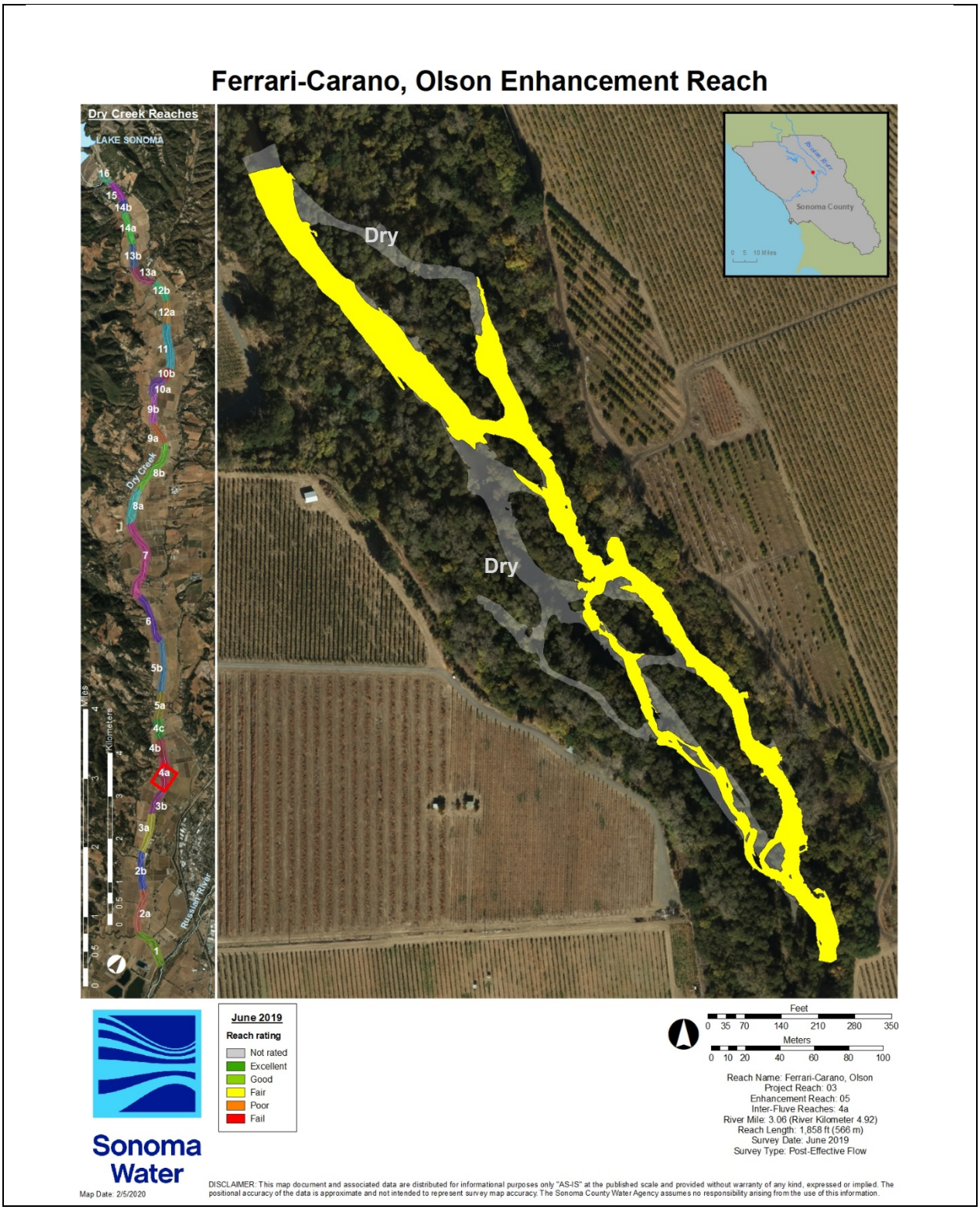

Figure 83. Enhancement reach rating for the Ferrari-Carano, Olson enhancement reach, June 2019.

Feature and Habitat Unit Checklists

Table 48. Adaptive Management Plan targeted checklist for the Ferrari-Carano, Olson enhancement reach, June 2019.

	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	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019
	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 Site Type	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	S1-01
	Feature Type Code	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	BF
	Habitat Unit	HU01	HU02	HU04	HU00	HU22	HU29	HU26	HU28	HU23	HU24	HU25	HU21	HU30	HU31	HU33_2	HU34	HU35	HU03
	Habitat Type	Flatwater	Alcove	Pool	Pool	Pool	Flatwater	Riffle	Riffle	Flatwater	Riffle	Pool	Riffle	Pool	Riffle	Pool	Pool	Riffle	Riffle
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
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
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
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
6d	Is the **feature** still in its original orientaton?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	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
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
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	60%	33%	68%	49%	34%	1%	0%	0%	63%	4%	51%	70%	55%	0%	65%	61%	11%	62%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	27%	0%	4%	44%	48%	0%	0%	0%	27%	0%	0%	5%	0%	0%	17%	0%	0%	20%
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	3	1	2	3	3	1	1	1	2	0	3	1	3	0	3	3	2	3
15.	Percent of **habitat unit** covered by shelter: %	40	15	40	65	15	5	5	10	10	0	40	15	35	0	15	35	40	30
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
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	120	15	80	195	45	5	5	10	20	0	120	15	105	0	45	105	80	90
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	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
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
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	16%	100%	47%	27%	33%	100%	71%	58%	20%	34%	92%	15%	99%	77%	100%	99%	78%	16%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	5%	33%	25%	18%	12%	1%	0%	0%	9%	0%	47%	3%	54%	0%	65%	61%	10%	7%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	0%	1%	4%	9%	0%	0%	0%	2%	0%	0%	0%	0%	0%	17%	0%	0%	1%
	FEATURE NUMBER	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**S1-01**
	HABITAT UNIT NUMBER	**HU01**	**HU02**	**HU04**	**HU00**	**HU22**	**HU29**	**HU26**	**HU28**	**HU23**	**HU24**	**HU25**	**HU21**	**HU30**	**HU31**	**HU33_2**	**HU34**	**HU35**	**HU03**
	SITE NUMBER	**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**
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
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
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
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
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	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	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
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	3	0	0	0	4	0	4	4	4	0	4	4	1	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	4	4	0	0	0	2	0	0	0	0	0	1	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	3	4	5	5	3	3	3	4	0	5	3	5	0	5	5	4	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	1	3	4	1	0	0	1	1	0	3	1	2	0	1	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	0	0	0	0	0	0	0	0	0	0	1
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	4	0	3	5	1	0	0	0	0	0	4	0	4	0	1	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	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
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
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	2	3	4	4	4	2	3	4	1	4	4	4	4	4	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	3	2	1	1	0	0	0	0	0	4	0	4	0	4	4	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	0	0	0	0	0	0	0	0	1	0	0	0

Table 48. Adaptive Management Plan targeted checklist for the Ferrari-Carano, Olson enhancement reach, June 2019.

	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	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019
	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	2	2	2	2
	Project Site Type	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	SideChan	SideChan	SideChan	SideChan
	Project Feature Number	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	NA	NA	S2-01	S2-02
	Feature Type Code	TT	TT	TT	BF	TT	BF	TT	TT	TT	TT	TT	LVW	TT	TT	NA	NA	LW	HW2
	Habitat Unit	HU01_D	HU27	HU01_D	HU32	HU01_D	HU36	HU01_D	HU01_D	HU01_D	HU01_D	HU21	HU01_D	HU01_D	HU01_D	HU18	HU39	HU03_2	HU03_2
	Habitat Type	Dry	Pool	Dry	Flatwater	Dry	Pool	Dry	Dry	Dry	Dry	Riffle	Dry	Dry	Dry	Riffle	Alcove	Riffle	Riffle
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	GOOD	UNKN	FAIR	FAIL	FAIR	FAIL	FAIL	FAIL	GOOD	EXCL	UNKN	POOR	FAIL	NA	NA	GOOD	POOR
5a	Are problems with the **feature** visible?	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	NA	NA	NO	YES
6a	Is the **feature** still in its original location?	YES	YES	NO	YES	NO	YES	NO	NO	NO	YES	YES	YES	YES	NO	NA	NA	YES	YES
6b	Is the **feature** still in its original position?	NO	YES	NO	YES	NO	YES	NO	NO	NO	NO	YES	NO	NO	NO	NA	NA	NO	NO
6d	Is the **feature** still in its original orientaton?	YES	YES	NO	YES	NO	YES	NO	NO	NO	YES	YES	YES	YES	NO	NA	NA	YES	YES
8.	If an objective, did the **feature** create the targeted instream habitat type?	NO	YES	NO	YES	NO	YES	NO	NO	NO	NO	YES	NO	NO	NO	NA	NA	YES	NO
9.	Were there any unintended effects by the **feature** on the habitat type? If Y, comment.	YES	NO	NO	NO	NO	YES	NO	NO	NO	YES	NO	YES	YES	NO	NA	NA	NO	YES
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	0%	45%	0%	47%	0%	59%	0%	0%	0%	0%	70%	0%	0%	0%	80%	53%	62%	62%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	0%	0%	0%	0%	0%	5%	0%	0%	0%	0%	5%	0%	0%	0%	0%	0%	20%	20%
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	0	2	0	1	0	2	0	0	0	0	1	0	0	0	0	1	3	3
15.	Percent of **habitat unit** covered by shelter: %	0	40	0	10	0	15	0	0	0	0	15	0	0	0	0	5	30	30
17a	If an objective, did the **feature** increase instream shelter rating?	NO	YES	NO	YES	NO	YES	NO	NO	NO	NO	YES	YES	NO	NO	NA	NA	YES	NO
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	0	80	0	10	0	30	0	0	0	0	15	0	0	0	0	5	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	NA	NA	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	YES	NO	NO	NO	NA	NA	NO	NO
25.	Did the **feature** achieve the targeted velocity?	NO	YES	NO	YES	NO	YES	NO	NO	NO	NO	YES	YES	NO	NO	NA	NA	YES	NO
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	0%	96%	0%	100%	0%	100%	0%	0%	0%	0%	15%	0%	0%	0%	9%	100%	16%	16%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	0%	44%	0%	47%	0%	59%	0%	0%	0%	0%	3%	0%	0%	0%	3%	53%	7%	7%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	0%	0%	0%	0%	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	1%
	FEATURE NUMBER	**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**	**NA**	**NA**	**S2-01**	**S2-02**
	HABITAT UNIT NUMBER	**HU01_D**	**HU27**	**HU01_D**	**HU32**	**HU01_D**	**HU36**	**HU01_D**	**HU01_D**	**HU01_D**	**HU01_D**	**HU21**	**HU01_D**	**HU01_D**	**HU01_D**	**HU18**	**HU39**	**HU03_2**	**HU03_2**
	SITE NUMBER	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**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	0	3	1	3	1	1	1	4	5	0	2	1	0	0	4	2
5a	Are problems with the **feature** visible? (NO = 1 pt, YES = 0 pt)	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0
6a	Is the **feature** still in its original location? (YES = 1 pt, NO = 0 pt)	1	1	0	1	0	1	0	0	0	1	1	1	1	0	0	0	1	1
6b	Is the **feature** still in its original position? (YES = 1 pt, NO = 0 pt)	0	1	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0
6d	Is the **feature** still in its original orientaton? (YES = 1 pt, NO = 0 pt)	1	1	0	1	0	1	0	0	0	1	1	1	1	0	0	0	1	1
8.	If an objective, did the **feature** create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	0	1	0	1	0	1	0	0	0	0	1	0	0	0	0	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	1	1	0	1	1	1	0	1	0	0	1	0	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)	0	4	0	4	0	4	0	0	0	0	4	0	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)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	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)	0	4	0	3	0	4	0	0	0	0	3	0	0	0	0	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)	0	3	0	1	0	1	0	0	0	0	1	0	0	0	0	0	2	2
17a	If an objective, did the **feature** increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	0	1	0	1	0	1	0	0	0	0	1	1	0	0	0	0	1	0
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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
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	1	0	0	0	0	0	0	0
25.	Did the **feature** achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	0	1	0	1	0	1	0	0	0	0	1	1	0	0	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)	0	4	0	4	0	4	0	0	0	0	1	0	0	0	0	4	1	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	4	0	4	0	4	0	0	0	0	0	0	0	0	0	4	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 48. Adaptive Management Plan targeted checklist for the Ferrari-Carano, Olson enhancement reach, June 2019.

	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	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019
	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 Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
	Project Feature Number	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	S2-18	S2-19	S2-20
	Feature Type Code	HW1	HW2	HW1	LVW	HW1	HW1	LVW	HW1	PW	HW1	R	HW1	PW	HW2	HW1	HW1	HW1	HW1
	Habitat Unit	HU03_2	HU03_2	HU03_2	HU03_2	HU02_D	HU05	HU05	HU05	HU05	HU02_D	HU06	HU02_D	HU07	HU06	HU07	HU06	HU07	HU07
	Habitat Type	Riffle	Riffle	Riffle	Riffle	Dry	Pool	Pool	Pool	Pool	Dry	Flatwater	Dry	Pool	Flatwater	Pool	Flatwater	Pool	Pool
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	EXCL	GOOD	EXCL	FAIL	EXCL	GOOD	GOOD	EXCL	EXCL	EXCL	FAIR	EXCL	EXCL	GOOD	GOOD	GOOD	GOOD	GOOD
5a	Are problems with the **feature** visible?	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	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	YES	YES	NO	YES	YES	YES	YES	YES	NO	YES	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	YES	YES	YES	YES	YES	NO	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	YES	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	YES
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	62%	62%	62%	62%	0%	34%	34%	34%	34%	0%	49%	0%	35%	49%	35%	49%	35%	35%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	20%	20%	20%	20%	0%	47%	47%	47%	47%	0%	35%	0%	37%	35%	37%	35%	37%	37%
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	3	3	3	3	0	3	3	3	3	0	2	0	3	2	3	2	3	3
15.	Percent of **habitat unit** covered by shelter: %	30	30	30	30	0	35	35	35	35	0	15	0	40	15	40	15	40	40
17a	If an objective, did the **feature** increase instream shelter rating?	YES	YES	YES	NO	NO	YES	YES	YES	YES	NO	NO	NO	YES	YES	YES	YES	YES	YES
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	90	90	90	90	0	105	105	105	105	0	30	0	120	30	120	30	120	120
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?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO
25.	Did the **feature** achieve the targeted velocity?	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	16%	16%	16%	16%	0%	28%	28%	28%	28%	0%	35%	0%	30%	35%	30%	35%	30%	30%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	7%	7%	7%	7%	0%	11%	11%	11%	11%	0%	19%	0%	11%	19%	11%	19%	11%	11%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	1%	1%	1%	1%	0%	11%	11%	11%	11%	0%	2%	0%	7%	2%	7%	2%	7%	7%
	FEATURE NUMBER	**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**	**S2-18**	**S2-19**	**S2-20**
	HABITAT UNIT NUMBER	**HU03_2**	**HU03_2**	**HU03_2**	**HU03_2**	**HU02_D**	**HU05**	**HU05**	**HU05**	**HU05**	**HU02_D**	**HU06**	**HU02_D**	**HU07**	**HU06**	**HU07**	**HU06**	**HU07**	**HU07**
	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)	5	4	5	1	5	4	4	5	5	5	3	5	5	4	4	4	4	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	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	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	1	1	0	1	1	1	1	1	0	1	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	1	1	1	1	1	0	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	0	1	1	1	1	1	1	0	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	4	0	3	3	3	3	0	4	0	3	4	3	4	3	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	2	2	2	0	4	4	4	4	0	3	0	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	5	5	5	0	5	5	5	5	0	4	0	5	4	5	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)	2	2	2	2	0	2	2	2	2	0	1	0	3	1	3	1	3	3
17a	If an objective, did the **feature** increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	1	1	0	0	1	1	1	1	0	0	0	1	1	1	1	1	1
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	3	3	3	3	0	4	4	4	4	0	0	0	4	0	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	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	1	0	0	0	0	0
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	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	1	1	1	0	2	2	2	2	0	3	0	3	3	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	0	0	1	1	1	1	0	1	0	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)	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0

Table 48. Adaptive Management Plan targeted checklist for the Ferrari-Carano, Olson enhancement reach, June 2019.

	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	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019
	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 Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
	Project Feature Number	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	S2-36	S2-37	S2-38	S2-39	S2-40
	Feature Type Code	LVW	R	HW1	HW1	PW	TT	R	HW1	HW2	HW1	LW	ALS	PW	R	PW	HW2	LW	LW
	Habitat Unit	HU06	HU08	HU09	HU09	HU09	HU02_D	HU09	HU10	HU02_D	HU02_D	HU02_D	HU33	HU11	HU11	HU12	HU12	HU13	HU13
	Habitat Type	Flatwater	Pool	Riffle	Riffle	Riffle	Dry	Riffle	Pool	Dry	Dry	Dry	Pool	Flatwater	Flatwater	Pool	Pool	Pool	Pool
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	FAIR	GOOD	GOOD	GOOD	FAIL	GOOD	FAIR	POOR	POOR	FAIR	POOR	FAIR	FAIR	EXCL	EXCL	FAIR	GOOD
5a	Are problems with the **feature** visible?	NO	YES	NO	NO	YES	YES	NO	YES	YES	YES	YES	YES	YES	NO	NO	NO	YES	NO
6a	Is the **feature** still in its original location?	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6b	Is the **feature** still in its original position?	YES	YES	NO	NO	YES	NO	YES	NO	NO	NO	NO	NO	YES	YES	YES	NO	NO	NO
6d	Is the **feature** still in its original orientaton?	YES	YES	YES	YES	YES	NO	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	NO	YES	NO	NO	NO	NO	YES	YES	NO	YES	YES	NO	YES
9.	Were there any unintended effects by the **feature** on the habitat type? If Y, comment.	NO	YES	NO	NO	NO	NO	NO	YES	YES	YES	YES	YES	NO	YES	NO	NO	YES	NO
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	49%	42%	68%	68%	68%	0%	68%	51%	0%	0%	0%	65%	39%	39%	39%	39%	58%	58%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	35%	38%	20%	20%	20%	0%	20%	40%	0%	0%	0%	17%	48%	48%	48%	48%	29%	29%
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	2	3	3	3	3	0	3	3	0	0	0	3	1	1	3	3	3	3
15.	Percent of **habitat unit** covered by shelter: %	15	15	20	20	20	0	20	30	0	0	0	15	10	10	30	30	15	15
17a	If an objective, did the **feature** increase instream shelter rating?	YES	YES	YES	YES	YES	NO	YES	YES	NO	NO	NO	YES	YES	NO	YES	YES	YES	YES
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	30	45	60	60	60	0	60	90	0	0	0	45	10	10	90	90	45	45
19a	If an objective, did the **feature** increase LWD count in the **habitat unit**?	NO	YES	NO	NO	NO	NO	YES	YES	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	NO	NO	NO	NO	NO	YES	YES	NO	NO	NO	NO
25.	Did the **feature** achieve the targeted velocity?	YES	NO	YES	YES	YES	YES	YES	YES	NO	NO	NO	YES	YES	YES	YES	YES	YES	YES
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	35%	27%	18%	18%	18%	0%	18%	17%	0%	0%	0%	100%	34%	34%	34%	34%	22%	22%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	19%	16%	9%	9%	9%	0%	9%	8%	0%	0%	0%	65%	18%	18%	18%	18%	12%	12%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	2%	3%	1%	1%	1%	0%	1%	0%	0%	0%	0%	17%	2%	2%	2%	2%	0%	0%
	FEATURE NUMBER	**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**	**S2-36**	**S2-37**	**S2-38**	**S2-39**	**S2-40**
	HABITAT UNIT NUMBER	**HU06**	**HU08**	**HU09**	**HU09**	**HU09**	**HU02_D**	**HU09**	**HU10**	**HU02_D**	**HU02_D**	**HU02_D**	**HU33**	**HU11**	**HU11**	**HU12**	**HU12**	**HU13**	**HU13**
	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	3	4	4	4	1	4	3	2	2	3	2	3	3	5	5	3	4
5a	Are problems with the **feature** visible? (NO = 1 pt, YES = 0 pt)	1	0	1	1	0	0	1	0	0	0	0	0	0	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	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)	1	1	0	0	1	0	1	0	0	0	0	0	1	1	1	0	0	0
6d	Is the **feature** still in its original orientaton? (YES = 1 pt, NO = 0 pt)	1	1	1	1	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)	1	0	1	1	1	0	1	0	0	0	0	1	1	0	1	1	0	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	0	0	0	0	0	1	0	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)	4	4	4	4	4	0	4	4	0	0	0	4	3	3	3	3	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)	3	3	1	1	1	0	1	3	0	0	0	1	4	4	4	4	2	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)	4	5	5	5	5	0	5	5	0	0	0	5	3	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	1	2	2	2	0	2	2	0	0	0	1	1	1	2	2	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	0	0	0	1	1	0	1	1	1	1
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	0	1	2	2	2	0	2	3	0	0	0	1	0	0	3	3	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	1	1	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	0	0	0	0	0	1	1	0	0	0	0
25.	Did the **feature** achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	0	1	1	1	1	1	1	0	0	0	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)	3	2	1	1	1	0	1	1	0	0	0	4	3	3	3	3	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	1	0	0	0	0	0	0	0	0	0	4	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)	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0

Table 48. Adaptive Management Plan targeted checklist for the Ferrari-Carano, Olson enhancement reach, June 2019.

	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	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019
	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 Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
	Project Feature Number	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	S2-54	S2-55	S2-56	S2-57	S2-58
	Feature Type Code	HW2	HW1	ALS	TT	R	PW	HW1	HW1	HW1	HW1	R	PW	HW1	R	LW	HW1	TT	HW1
	Habitat Unit	HU38	HU38	HU37	HU39	HU13	HU14	HU15	HU15	HU15	HU15	HU14	HU16	HU16	HU17	HU02_D	HU16	HU02_D	HU16
	Habitat Type	Flatwater	Flatwater	Riffle	Alcove	Pool	Pool	Alcove	Alcove	Alcove	Alcove	Pool	Flatwater	Flatwater	Alcove	Dry	Flatwater	Dry	Flatwater
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	UNKN	FAIR	POOR	FAIL	GOOD	EXCL	EXCL	EXCL	EXCL	EXCL	POOR	GOOD	FAIR	FAIL	FAIL	FAIR	FAIL	FAIR
5a	Are problems with the **feature** visible?	YES	YES	YES	YES	NO	NO	NO	NO	NO	NO	YES	NO	YES	YES	YES	YES	YES	YES
6a	Is the **feature** still in its original location?	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	NO	YES
6b	Is the **feature** still in its original position?	NO	NO	NO	NO	YES	NO	YES	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO	YES
6d	Is the **feature** still in its original orientaton?	UNK	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	UNK	YES	NO	YES
8.	If an objective, did the **feature** create the targeted instream habitat type?	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES	NO	YES	YES	NO	NO	YES	NO	YES
9.	Were there any unintended effects by the **feature** on the habitat type? If Y, comment.	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	YES	YES	NO	NO	NO
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	79%	79%	18%	53%	58%	31%	53%	53%	53%	53%	31%	44%	44%	46%	0%	44%	0%	44%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	0%	0%	0%	0%	29%	53%	32%	32%	32%	32%	53%	48%	48%	0%	0%	48%	0%	48%
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	2	2	3	1	3	3	3	3	3	3	3	3	3	0	0	3	0	3
15.	Percent of **habitat unit** covered by shelter: %	10	10	50	5	15	30	60	60	60	60	30	15	15	0	0	15	0	15
17a	If an objective, did the **feature** increase instream shelter rating?	NO	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO	YES
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	20	20	150	5	45	90	180	180	180	180	90	45	45	0	0	45	0	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	YES	NO	NO	NO	NO	NO	NO	NO
21a	If an objective, did the **feature** lead to the targeted channel conditions?	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO
25.	Did the **feature** achieve the targeted velocity?	NO	YES	YES	NO	YES	YES	YES	YES	YES	YES	NO	YES	YES	NO	NO	YES	NO	YES
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	100%	100%	79%	100%	22%	39%	98%	98%	98%	98%	39%	19%	19%	96%	0%	19%	0%	19%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	78%	78%	15%	53%	12%	16%	51%	51%	51%	51%	16%	7%	7%	43%	0%	7%	0%	7%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	0%	0%	0%	0%	14%	32%	32%	32%	32%	14%	5%	5%	0%	0%	5%	0%	5%
	FEATURE NUMBER	**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**	**S2-54**	**S2-55**	**S2-56**	**S2-57**	**S2-58**
	HABITAT UNIT NUMBER	**HU38**	**HU38**	**HU37**	**HU39**	**HU13**	**HU14**	**HU15**	**HU15**	**HU15**	**HU15**	**HU14**	**HU16**	**HU16**	**HU17**	**HU02_D**	**HU16**	**HU02_D**	**HU16**
	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)	0	3	2	1	4	5	5	5	5	5	2	4	3	1	1	3	1	3
5a	Are problems with the **feature** visible? (NO = 1 pt, YES = 0 pt)	0	0	0	0	1	1	1	1	1	1	0	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	0	1	1	1	1	1	1	0	1	1	1	1	1	0	1
6b	Is the **feature** still in its original position? (YES = 1 pt, NO = 0 pt)	0	0	0	0	1	0	1	1	1	1	1	1	0	0	0	0	0	1
6d	Is the **feature** still in its original orientaton? (YES = 1 pt, NO = 0 pt)	0	1	1	0	1	1	1	1	1	1	1	1	1	0	0	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	1	1	1	1	1	1	0	1	1	0	0	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	1	1	1	1	1	1	1	0	1	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)	4	4	1	4	4	3	4	4	4	4	3	4	4	4	0	4	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)	0	0	0	0	2	4	3	3	3	3	4	4	4	0	0	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	4	5	3	5	5	5	5	5	5	5	5	5	0	0	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)	1	1	3	0	1	2	4	4	4	4	2	1	1	0	0	1	0	1
17a	If an objective, did the **feature** increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	0	1	1	0	1	1	1	1	1	1	1	1	1	0	0	1	0	1
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	0	0	5	0	1	3	5	5	5	5	3	1	1	0	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	0	0	0	1	0	0	0	0	0	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)	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0
25.	Did the **feature** achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	0	1	1	0	1	1	1	1	1	1	0	1	1	0	0	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	4	4	4	2	3	4	4	4	4	3	1	1	4	0	1	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)	4	4	1	4	1	1	4	4	4	4	1	0	0	4	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	1	3	3	3	3	1	0	0	0	0	0	0	0

Table 48. Adaptive Management Plan targeted checklist for the Ferrari-Carano, Olson enhancement reach, June 2019.

	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	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019
	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	S2-59	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	S2-74	S2-75	S2-76	
	Feature Type Code	LW	LVW	HW1	TT	TT	HW1	HW1	HW1	HW1	TT	HW1	HW1	HW1	HW1	HW1	HW2	HW1	HW1	
	Habitat Unit	HU19	HU19	HU18	HU16	HU16	HU16	HU20	HU20	HU20	HU02_D	HU20	HU20	HU20	HU20	HU20	HU20	HU02_D	HU02_D	
	Habitat Type	Pool	Pool	Riffle	Flatwater	Flatwater	Flatwater	Alcove	Alcove	Alcove	Dry	Alcove	Alcove	Alcove	Alcove	Alcove	Alcove	Dry	Dry	
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	EXCL	FAIR	FAIL	FAIL	GOOD	GOOD	GOOD	GOOD	FAIL	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	FAIL	FAIL	
5a	Are problems with the **feature** visible?	NO	NO	NO	YES	YES	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	YES	YES	
6a	Is the **feature** still in its original location?	YES	YES	YES	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	UNK	UNK	
6b	Is the **feature** still in its original position?	NO	YES	YES	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	UNK	UNK	
6d	Is the **feature** still in its original orientaton?	YES	YES	YES	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	UNK	UNK	
8.	If an objective, did the **feature** create the targeted instream habitat type?	YES	YES	YES	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	NO	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	YES	
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	36%	36%	80%	44%	44%	44%	23%	23%	23%	0%	23%	23%	23%	23%	23%	23%	0%	0%	
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	44%	44%	0%	48%	48%	48%	39%	39%	39%	0%	39%	39%	39%	39%	39%	39%	0%	0%	
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	3	3	0	3	3	3	3	3	3	0	3	3	3	3	3	3	0	0	
15.	Percent of **habitat unit** covered by shelter: %	20	20	0	15	15	15	25	25	25	0	25	25	25	25	25	25	0	0	
17a	If an objective, did the **feature** increase instream shelter rating?	YES	YES	YES	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	NO	NO	
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	60	60	0	45	45	45	75	75	75	0	75	75	75	75	75	75	0	0	
19a	If an objective, did the **feature** increase LWD count in the **habitat unit**?	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	YES	YES	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	NO	NO	
25.	Did the **feature** achieve the targeted velocity?	YES	YES	NO	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	NO	NO	
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	22%	22%	9%	19%	19%	19%	100%	100%	100%	0%	100%	100%	100%	100%	100%	100%	0%	0%	
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	6%	6%	3%	7%	7%	7%	23%	23%	23%	0%	23%	23%	23%	23%	23%	23%	0%	0%	
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	5%	5%	0%	5%	5%	5%	39%	39%	39%	0%	39%	39%	39%	39%	39%	39%	0%	0%	
	FEATURE NUMBER	**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**	**S2-74**	**S2-75**	**S2-76**	
	HABITAT UNIT NUMBER	**HU19**	**HU19**	**HU18**	**HU16**	**HU16**	**HU16**	**HU20**	**HU20**	**HU20**	**HU02_D**	**HU20**	**HU20**	**HU20**	**HU20**	**HU20**	**HU20**	**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	**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	5	3	1	1	4	4	4	4	1	4	4	4	4	4	4	1	1	
5a	Are problems with the **feature** visible? (NO = 1 pt, YES = 0 pt)	1	1	1	0	0	1	1	1	1	0	1	1	1	1	1	1	0	0	
6a	Is the **feature** still in its original location? (YES = 1 pt, NO = 0 pt)	1	1	1	0	0	1	1	1	1	0	1	1	1	1	1	1	0	0	
6b	Is the **feature** still in its original position? (YES = 1 pt, NO = 0 pt)	0	1	1	0	0	1	1	1	1	0	1	1	1	1	1	1	0	0	
6d	Is the **feature** still in its original orientaton? (YES = 1 pt, NO = 0 pt)	1	1	1	0	0	1	1	1	1	0	1	1	1	1	1	1	0	0	
8.	If an objective, did the **feature** create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	1	1	1	0	0	1	1	1	1	0	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	1	1	1	1	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)	3	3	4	4	4	4	2	2	2	0	2	2	2	2	2	2	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	3	3	3	0	3	3	3	3	3	3	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	0	5	5	5	5	5	5	0	5	5	5	5	5	5	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	0	1	1	1	2	2	2	0	2	2	2	2	2	2	0	0	
17a	If an objective, did the **feature** increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	1	1	0	0	1	1	1	1	0	1	1	1	1	1	1	0	0	
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	2	2	0	1	1	1	2	2	2	0	2	2	2	2	2	2	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	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	0	0	1	1	1	1	0	1	1	1	1	1	1	0	0	
25.	Did the **feature** achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	1	0	0	0	1	1	1	1	0	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)	2	2	0	1	1	1	4	4	4	0	4	4	4	4	4	4	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	2	2	2	0	2	2	2	2	2	2	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	3	3	3	0	3	3	3	3	3	3	0	0	

Table 48. Adaptive Management Plan targeted checklist for the Ferrari-Carano, Olson enhancement reach, June 2019.

	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	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019
	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	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
	Project Feature Number	S2-77	S2-78	S2-79	S2-80	S2-81	S2-82	S2-83	S2-84	S2-85	S2-86	S2-87	S2-88	S3-01	S3-02	S3-03	S3-04	S3-05	S3-06
	Feature Type Code	PW	LVW	LW	PW	LW	LW	HW2	HW1	HW1	HW2	LW	ALS	LW	HW1	HW2	PW	R	HW1
	Habitat Unit	HU20	HU02_D	HU02_D	HU02_D	HU02_D	HU02_D	HU02_D	HU02_D	HU02_D	HU02_D	HU02_D	HU22_2	HU30_2	HU03_D	HU03_D	HU03_D	HU03_D	HU03_D
	Habitat Type	Alcove	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Pool	Pool	Dry	Dry	Dry	Dry	Dry
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	POOR	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	GOOD	EXCL	FAIR	FAIR	UNKN	FAIL	POOR
5a	Are problems with the **feature** visible?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES
6a	Is the **feature** still in its original location?	YES	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	YES	YES	YES	YES	YES	NO	YES
6b	Is the **feature** still in its original position?	NO	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	NO	YES	NO	NO	NO	NO	NO
6d	Is the **feature** still in its original orientaton?	YES	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	YES	YES	YES	YES	YES	NO	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	YES	YES	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	NO	NO	YES	YES	YES	YES	YES
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	23%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	34%	55%	0%	0%	0%	0%	0%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	39%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	48%	0%	0%	0%	0%	0%	0%
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	0	0	0	0	0
15.	Percent of **habitat unit** covered by shelter: %	25	0	0	0	0	0	0	0	0	0	0	15	35	0	0	0	0	0
17a	If an objective, did the **feature** increase instream shelter rating?	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	NO	NO	NO	NO	NO
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	75	0	0	0	0	0	0	0	0	0	0	45	105	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	YES	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	YES	NO	NO	NO	NO	NO
25.	Did the **feature** achieve the targeted velocity?	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	NO	NO	NO	NO	NO
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	33%	99%	0%	0%	0%	0%	0%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	23%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	12%	54%	0%	0%	0%	0%	0%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	39%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	9%	0%	0%	0%	0%	0%	0%
	FEATURE NUMBER	**S2-77**	**S2-78**	**S2-79**	**S2-80**	**S2-81**	**S2-82**	**S2-83**	**S2-84**	**S2-85**	**S2-86**	**S2-87**	**S2-88**	**S3-01**	**S3-02**	**S3-03**	**S3-04**	**S3-05**	**S3-06**
	HABITAT UNIT NUMBER	**HU20**	**HU02_D**	**HU02_D**	**HU02_D**	**HU02_D**	**HU02_D**	**HU02_D**	**HU02_D**	**HU02_D**	**HU02_D**	**HU02_D**	**HU22_2**	**HU30_2**	**HU03_D**	**HU03_D**	**HU03_D**	**HU03_D**	**HU03_D**
	SITE NUMBER	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**3**	**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**
4.	Structural condition of **feature**: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	2	1	1	1	1	1	1	1	1	1	1	4	5	3	3	0	1	2
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	1	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	0	0	0	0	0	0	1	1	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	1	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	0	0	1	1	1	1	1	0	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	1	1	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	1	1	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)	2	0	0	0	0	0	0	0	0	0	0	3	4	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)	3	0	0	0	0	0	0	0	0	0	0	4	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	0	0	0	0	0	0	0	0	0	0	5	5	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	0	0	0	0	0	0	0	0	0	0	1	2	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	1	1	0	0	0	0	0
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	2	0	0	0	0	0	0	0	0	0	0	1	4	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	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	0	0	0	0	0	0	0	0	0	0	0	1	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	1	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	0	0	0	0	0	0	0	0	0	0	3	4	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)	2	0	0	0	0	0	0	0	0	0	0	1	4	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)	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 48. Adaptive Management Plan targeted checklist for the Ferrari-Carano, Olson enhancement reach, June 2019.

	Project Reach	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
	Colloquial Name	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
	mmddyy	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019
	Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
	Project Site Number	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
	Project Feature Number	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	PW	R	HW1	HW1	HW2	HW1	HW1	LVW	R	HW2	HW2	HW1	HW1	HW1
	Habitat Unit	HU03_D	HU03_D	HU03_D	HU40_W	HU03_D	HU40_W	HU03_D	HU03_D	HU03_D	HU03_D	HU03_D	HU40_W	HU40_W	HU40_W
	Habitat Type	Dry	Dry	Dry	Pond	Dry	Pond	Dry	Dry	Dry	Dry	Dry	Pond	Pond	Pond
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	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
6a	Is the **feature** still in its original location?	YES	NO	YES	YES	YES	YES	UNK	NO	NO	YES	UNK	YES	YES	YES
6b	Is the **feature** still in its original position?	NO	NO	NO	NO	NO	NO	UNK	NO	NO	NO	NO	YES	YES	YES
6d	Is the **feature** still in its original orientaton?	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?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	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	YES	YES	YES	NO	NO
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%
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%
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	0	0	0	3	0	3	0	0	0	0	0	3	3	3
15.	Percent of **habitat unit** covered by shelter: %	0	0	0	15	0	15	0	0	0	0	0	15	15	15
17a	If an objective, did the **feature** increase instream shelter rating?	NO	NO	NO	YES	YES	YES	NO	NO	NO	NO	NO	YES	YES	YES
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	0	0	0	45	0	45	0	0	0	0	0	45	45	45
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
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
25.	Did the **feature** achieve the targeted velocity?	NO	NO	NO	YES	YES	YES	NO	NO	NO	NO	NO	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%
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%
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%
	FEATURE NUMBER	**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**	**HU40_W**	**HU03_D**	**HU40_W**	**HU03_D**	**HU03_D**	**HU03_D**	**HU03_D**	**HU03_D**	**HU40_W**	**HU40_W**	**HU40_W**
	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**
4.	Structural condition of **feature**: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	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
6a	Is the **feature** still in its original location? (YES = 1 pt, NO = 0 pt)	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	1	1	1
6d	Is the **feature** still in its original orientaton? (YES = 1 pt, NO = 0 pt)	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	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	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	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
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	0	5	0	0	0	0	0	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	0	0	1	0	1	0	0	0	0	0	1	1	1
17a	If an objective, did the **feature** increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	0	0	0	1	1	1	0	0	0	0	0	1	1	1
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	0	0	0	1	0	1	0	0	0	0	0	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
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
25.	Did the **feature** achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	0	0	0	1	1	1	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)	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
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

Table 49. Adaptive Management Plan full checklist for the Ferrari-Carano, Olson enhancement reach, June 2019.

	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	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019
	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 Site Type	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	S1-01
	Feature Type Code	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	BF
	Habitat Unit	HU01	HU02	HU04	HU00	HU21	HU23	HU24	HU25	HU26	HU28	HU29	HU31	HU34	HU35	HU22	HU30	HU33_2	HU03
	Habitat Type	Flatwater	Alcove	Pool	Pool	Riffle	Flatwater	Riffle	Pool	Riffle	Riffle	Flatwater	Riffle	Pool	Riffle	Pool	Pool	Pool	Riffle
1.	Length of targeted treatment (ft)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	60
2.	Width of targeted treatment: (ft)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	40
3.	Estimate area of the targeted **feature**: (ft^2)																		2400
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
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
5b	Types: ANC, BBB, CRF, MAT, SHF, STR, SWA, UND, UNS, WSH, OTH, NON	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NON
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
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
6c	If yes: LBK, MDC, RBK, SPN, OTH	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	SPN
6d	Is the **feature** still in its original orientaton?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	YES
6e	If yes: DNS, MUL, PRL, PRP, UPS, OTH	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	OTH
7.	Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	FLT	ALC	POO	POO	RIF	FLT	RIF	POO	RIF	RIF	FLT	RIF	POO	RIF	POO	POO	POO	RIF
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
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
10.	Mean water depth in **habitat unit**: ft	1.5	0.4	0.9	1.9	1.0	1.5	0.2	0.6	0.2	0.2	0.2	0.2	0.6	0.3	2.1	0.6	1.2	1.3
11a	Maximum water depth in **habitat unit**: ft	3.9	1.3	2.5	4.4	2.5	3.1	0.7	1.7	0.6	0.6	0.6	0.4	1.7	1.0	5.9	1.9	3.3	4.0
11b	Area of **habitat unit** within 0.5 -2.0 ft depth: (ft2)	1669.0	105.9	425.4	1513.0	5821.1	4909.6	4.3	605.8	3.1	2.0	4.8	0.0	390.5	35.7	7011.3	636.2	997.1	3764.7
11c	Area of **habitat unit** within 2.0 -4.0 ft depth: (ft2)	744.3	0.0	28.2	1354.5	385.0	2130.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9838.1	0.0	263.2	1236.9
11d	Area of **habitat unit** within 0.5-4.0 ft depth: (ft2)	2413.3	105.9	453.6	2867.5	6206.1	7040.4	4.3	605.8	3.1	2.0	4.8	0.0	390.5	35.7	16849.5	636.2	1260.3	5001.7
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	60%	33%	68%	49%	70%	63%	4%	51%	0%	0%	1%	0%	61%	11%	34%	55%	65%	62%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	27%	0%	4%	44%	5%	27%	0%	0%	0%	0%	0%	0%	0%	0%	48%	0%	17%	20%
11g	% Area of **habitat** unit within 0.5-4.0 ft depth	87%	33%	72%	92%	75%	90%	4%	51%	0%	0%	1%	0%	61%	11%	82%	55%	82%	83%
11h	If an objective, did the **feature** increase/decrease water depth in the treatment area?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	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:																		
13.	Were there any unintended effects of the **feature** on the water depth? If Y, comment.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NO
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	3	1	2	3	1	2	0	3	1	1	1	0	3	2	3	3	3	3
15.	Percent of **habitat unit** covered by shelter: %	40	15	40	65	15	10	0	40	5	10	5	0	35	40	15	35	15	30
16a	1st dominant cover in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	TVG	TVG	RTW	LWD	TVG	TVG	NON	LWD	TVG	TVG	TVG	NON	BOL	BOL	RTW	RTW	RTW	BOL
16b	2nd dominant in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	BOL	NON	TVG	TVG	NON	SWD	NON	SWD	NON	NON	NON	NON	SWD	TVG	TVG	LWD	UCB	UCB
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
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	120	15	80	195	15	20	0	120	5	10	5	0	105	80	45	105	45	90
18a	Large woody debris count in **habitat unit**: D >1', L 6-20'	0	0	0	2	0	0	0	0	0	0	0	0	1	1	0	0	0	0
18b	Large woody debris count in **habitat unit**: D >1', L >20'	0	0	0	2	0	0	0	3	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	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NO
19b	LWD recruitment mechanisms in **habitat unit**: ANC, EXC, EXH, INT, RPR, UNA, OTH	NON	NON	NON	RPR	NON	NON	NON	RPR	NON	NON	NON	NON	INT	RPR	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	RPR	NON	NON	NON	NON	INT	RPR	NON	NON	NON	NON
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
21b	Overall Offchannel Condition (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	STB
21c	Outlet Conditions (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	NA	NA	NA	NA	NA	NA	NA	NA	NA	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	NA	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	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	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	NA	NA	NA	NA	NA	NA	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?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	YES
26a	Measured minimum velocity (ft/sec) in **habitat unit**	0	0	0	0	0	0	0.0001793	0	0	0	0	0	0	0	0	0	0	0
26b	Measured max velocity (ft/sec) in **habitat unit**	4.3	0.2	3.1	3.5	4.1	2.2	2.4	1.5	2.0	1.9	0.3	1.8	0.6	1.6	2.4	0.7	0.4	5.3
26c	Measured mean velocity (ft/sec) in **habitat unit**	1.8	0.0	0.8	1.2	1.5	1.0	0.7	0.2	0.4	0.6	0.0	0.3	0.1	0.3	0.8	0.1	0.0	1.7
27.	Area of **habitat unit** within targeted velocity: (ft^2)	435.0	318.3	295.8	844.7	1269.4	1559.4	40.9	1095.0	1326.8	229.1	383.9	379.6	638.8	257.8	6702.9	1146.8	1544.5	998.7
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	16%	100%	47%	27%	15%	20%	34%	92%	71%	58%	100%	77%	99%	78%	33%	99%	100%	16%
29.	Were there any unintended effects of **feature** on velocity If Y, comment.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NO
30a	1st/2nd dominant substrate in **habitat unit**: BED, BOL, COB, GRV, SND, SLC, OTH	GRV	SND	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	GRV	SND	GRV
30b	2nd dominant substrate in **habitat unit**: BED, BOL, COB, GRV, SND, SLC, OTH	BOL	SLC	SND	SND	COB	SND	COB	SND	COB	NON	NON	COB	BOL	BOL	SND	SND	GRV	BOL
31.	If an objective, did the **feature** achieve the targeted substrate composition?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	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	142.1	105.9	167.0	675.9	248.9	906.7	0.1	555.8	0.0	0.8	4.8	0.0	390.1	34.2	4384.4	630.3	1260.3	504.2
36b	Total **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	129.1	105.9	159.4	551.8	248.9	717.2	0.1	555.8	0.0	0.8	4.8	0.0	390.1	34.2	2453.2	630.3	997.1	450.6
36c	Total **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	13.0	0.0	7.7	124.1	0.0	189.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1931.2	0.0	263.2	53.6
36d	% **habitat unit** area where targeted depth, velocity and shelter criteria overlap	5%	33%	27%	22%	3%	12%	0%	47%	0%	0%	1%	0%	61%	10%	21%	54%	82%	8%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	5%	33%	25%	18%	3%	9%	0%	47%	0%	0%	1%	0%	61%	10%	12%	54%	65%	7%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	0%	1%	4%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	9%	0%	17%	1%
37.	Does this **feature** need: DEC, ENH, MNT, REP, NON, OTH	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NON
38.	Are additional restoration treatments recommended at this **site**?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NO

Table 49. Adaptive Management Plan full checklist for the Ferrari-Carano, Olson enhancement reach, June 2019.

	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	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019
	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	2	2	2	2
	Project Site Type	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	SideChan	SideChan	SideChan	SideChan
	Project Feature Number	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	NA	NA	S2-01	S2-02
	Feature Type Code	TT	TT	TT	BF	TT	BF	TT	TT	TT	TT	TT	LVW	TT	TT	NA	NA	LW	HW2
	Habitat Unit	HU01 D	HU27	HU01 D	HU32	HU01 D	HU36	HU01 D	HU01 D	HU01 D	HU01 D	HU21	HU01 D	HU01 D	HU01 D	HU18	HU39	HU03 2	HU03 2
	Habitat Type	Dry	Pool	Dry	Flatwater	Dry	Pool	Dry	Dry	Dry	Dry	Riffle	Dry	Dry	Dry	Riffle	Alcove	Riffle	Riffle
1.	Length of targeted treatment (ft)	NR	NR	NR	75	NR	80	NR	NR	NR	NR	NR	NR	NR	NR	NA	NA	23	7
2.	Width of targeted treatment: (ft)	NR	NR	NR	25	NR	30	NR	NR	NR	NR	NR	NR	NR	NR	NA	NA	27	17
3.	Estimate area of the targeted **feature**: (ft^2)				1875		2400											621	119
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	GOOD	UNKN	FAIR	FAIL	FAIR	FAIL	FAIL	FAIL	GOOD	EXCL	UNKN	POOR	FAIL	NA	NA	GOOD	POOR
5a	Are problems with the **feature** visible?	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	NA	NA	NO	YES
5b	Types: ANC, BBB, CRF, MAT, SHF, STR, SWA, UND, UNS, WSH, OTH, NON	STR	NON	WSH	BBB	WSH	OTH	WSH	WSH	WSH	STR	NON	BBB	BBB	WSH	NA	NA	NON	BBB
6a	Is the **feature** still in its original location?	YES	YES	NO	YES	NO	YES	NO	NO	NO	YES	YES	YES	YES	NO	NA	NA	YES	YES
6b	Is the **feature** still in its original position?	NO	YES	NO	YES	NO	YES	NO	NO	NO	NO	YES	NO	NO	NO	NA	NA	NO	NO
6c	If yes: LBK, MDC, RBK, SPN, OTH	LBK	LBK	UNK	SPN	UNK	MDC	UNK	UNK	UNK	OTH	LBK	LBK	LBK	UNK	NA	NA	RBK	MDC
6d	Is the **feature** still in its original orientaton?	YES	YES	NO	YES	NO	YES	NO	NO	NO	YES	YES	YES	YES	NO	NA	NA	YES	YES
6e	If yes: DNS, MUL, PRL, PRP, UPS, OTH	DNS	DNS	UNK	OTH	UNK	MUL	UNK	UNK	UNK	DNS	DNS	DNS	DNS	UNK	NA	NA	PRP	PRP
7.	Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	DRY	POO	DRY	FLT	DRY	POO	DRY	DRY	DRY	DRY	RIF	DRY	DRY	DRY	RIF	ALC	RIF	RIF
8.	If an objective, did the **feature** create the targeted instream habitat type?	NO	YES	NO	YES	NO	YES	NO	NO	NO	NO	YES	NO	NO	NO	NA	NA	YES	NO
9.	Were there any unintended effects by the **feature** on the habitat type? If Y, comment.	YES	NO	NO	NO	NO	YES	NO	NO	NO	YES	NO	YES	YES	NO	NA	NA	NO	YES
10.	Mean water depth in **habitat unit**: ft	0.0	0.5	0.0	0.4	0.0	0.9	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.9	0.6	1.3	1.3
11a	Maximum water depth in **habitat unit**: ft	0.0	1.3	0.0	1.2	0.0	2.8	0.0	0.0	0.0	0.0	2.5	0.0	0.0	0.0	2.2	1.6	4.0	4.0
11b	Area of **habitat unit** within 0.5 -2.0 ft depth: (ft2)	0.0	823.0	0.0	845.9	0.0	582.6	0.0	0.0	0.0	0.0	5821.1	0.0	0.0	0.0	1315.4	197.8	3764.7	3764.7
11c	Area of **habitat unit** within 2.0 -4.0 ft depth: (ft2)	0.0	0.0	0.0	0.0	0.0	51.7	0.0	0.0	0.0	0.0	385.0	0.0	0.0	0.0	2.3	0.0	1236.9	1236.9
11d	Area of **habitat unit** within 0.5-4.0 ft depth: (ft2)	0.0	823.0	0.0	845.9	0.0	634.3	0.0	0.0	0.0	0.0	6206.1	0.0	0.0	0.0	1317.7	197.8	5001.7	5001.7
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	0%	45%	0%	47%	0%	59%	0%	0%	0%	0%	70%	0%	0%	0%	80%	53%	62%	62%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	0%	0%	0%	0%	0%	5%	0%	0%	0%	0%	5%	0%	0%	0%	0%	0%	20%	20%
11g	% Area of **habitat** unit within 0.5-4.0 ft depth	0%	45%	0%	47%	0%	64%	0%	0%	0%	0%	75%	0%	0%	0%	80%	53%	83%	83%
11h	If an objective, did the **feature** increase/decrease water depth in the treatment area?	NO	YES	NO	YES	NO	YES	NO	NO	NO	NO	YES	NO	NO	NO	NA	NA	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
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.	YES	NO	NO	YES	NO	YES	NO	NO	NO	YES	NO	YES	YES	NO	NA	NA	YES	YES
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	0	2	0	1	0	2	0	0	0	0	1	0	0	0	0	1	3	3
15.	Percent of **habitat unit** covered by shelter: %	0	40	0	10	0	15	0	0	0	0	15	0	0	0	0	5	30	30
16a	1st dominant cover in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	NON	SWD	NON	BOL	NON	TVG	NON	NON	NON	NON	TVG	NON	NON	NON	NON	BOL	BOL	BOL
16b	2nd dominant in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	NON	TVG	NON	NON	NON	BOL	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	UCB	UCB
17a	If an objective, did the **feature** increase instream shelter rating?	NO	YES	NO	YES	NO	YES	NO	NO	NO	NO	YES	YES	NO	NO	NA	NA	YES	NO
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	0	80	0	10	0	30	0	0	0	0	15	0	0	0	0	5	90	90
18a	Large woody debris count in **habitat unit**: D >1', L 6-20'	0	0	0	0	0	1	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	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NA	NA	NO	NO
19b	LWD recruitment mechanisms in **habitat unit**: ANC, EXC, EXH, INT, RPR, UNA, OTH	NON	NON	NON	NON	NON	RPR	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	RPR	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?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NA	NA	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	STB	AGG	AGG	AGG	NA	NA	MIG	MIG
21c	Outlet Conditions (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH															NA	NA	MIG	MIG
21d	Inlet Conditions (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH															NA	NA	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	NO	YES	YES	YES	NA	NA	YES	YES
23.	If an objective, did the **feature** decrease/increase velocity in the treatment area?	NA	DEC	NA	DEC	NA	DEC	NA	NA	NA	NA	DEC	DEC	NA	NA	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
25.	Did the **feature** achieve the targeted velocity?	NO	YES	NO	YES	NO	YES	NO	NO	NO	NO	YES	YES	NO	NO	NA	NA	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	0.9	0.0	0.5	0.0	0.4	0.0	0.0	0.0	0.0	4.1	0.0	0.0	0.0	3.9	0.1	5.3	5.3
26c	Measured mean velocity (ft/sec) in **habitat unit**	0.0	0.2	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	2.1	0.0	1.7	1.7
27.	Area of **habitat unit** within targeted velocity: (ft^2)	0.0	1749.9	0.0	1798.9	0.0	985.5	0.0	0.0	0.0	0.0	1269.4	0.0	0.0	0.0	147.6	376.0	998.7	998.7
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	0%	96%	0%	100%	0%	100%	0%	0%	0%	0%	15%	0%	0%	0%	9%	100%	16%	16%
29.	Were there any unintended effects of **feature** on velocity If Y, comment.	YES	NO	YES	NO	YES	YES	YES	YES	YES	YES	NO	NO	YES	YES	NA	NA	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	SND	GRV	GRV
30b	2nd dominant substrate in **habitat unit**: BED, BOL, COB, GRV, SND, SLC, OTH	SND	SND	SND	BOL	SND	SND	SND	SND	SND	SND	COB	SND	SND	SND	COB	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	YES	YES	YES	YES	NA	NA	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	808.9	0.0	845.9	0.0	634.3	0.0	0.0	0.0	0.0	248.9	0.0	0.0	0.0	42.7	197.8	504.2	504.2
36b	Total **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	0.0	808.9	0.0	845.9	0.0	582.6	0.0	0.0	0.0	0.0	248.9	0.0	0.0	0.0	42.7	197.8	450.6	450.6
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	51.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	53.6	53.6
36d	% **habitat unit** area where targeted depth, velocity and shelter criteria overlap	0%	44%	0%	47%	0%	64%	0%	0%	0%	0%	3%	0%	0%	0%	3%	53%	8%	8%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	0%	44%	0%	47%	0%	59%	0%	0%	0%	0%	3%	0%	0%	0%	3%	53%	7%	7%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	0%	0%	0%	0%	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	1%
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	NA	NA	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	NA	NA	NO	NO

Table 49. Adaptive Management Plan full checklist for the Ferrari-Carano, Olson enhancement reach, June 2019.

	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	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019
	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 Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
	Project Feature Number	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	S2-18	S2-19	S2-20
	Feature Type Code	HW1	HW2	HW1	LVW	HW1	HW1	LVW	HW1	PW	HW1	R	HW1	PW	HW2	HW1	HW1	HW1	HW1
	Habitat Unit	HU03_2	HU03_2	HU03_2	HU03_2	HU02_D	HU05	HU05	HU05	HU05	HU02_D	HU06	HU02_D	HU07	HU06	HU07	HU06	HU07	HU07
	Habitat Type	Riffle	Riffle	Riffle	Riffle	Dry	Pool	Pool	Pool	Pool	Dry	Flatwater	Dry	Pool	Flatwater	Pool	Flatwater	Pool	Pool
1.	Length of targeted treatment (ft)	7	17	7	NR	12	10	NR	9	48	12	NR	12	52	10	16	16	14	10
2.	Width of targeted treatment: (ft)	18	10	11	NR	12	13	NR	7	13	8	NR	9	10	16	10	15	10	15
3.	Estimate area of the targeted **feature**: (ft^2)	126	170	77		144	130		63	624	96		108	520	160	160	240	140	150
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	EXCL	GOOD	EXCL	FAIL	EXCL	GOOD	GOOD	EXCL	EXCL	EXCL	FAIR	EXCL	EXCL	GOOD	GOOD	GOOD	GOOD	GOOD
5a	Are problems with the **feature** visible?	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES
5b	Types: ANC, BBB, CRF, MAT, SHF, STR, SWA, UND, UNS, WSH, OTH, NON	NON	NON	NON	WSH	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	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 position?	NO	NO	YES	NO	YES	NO	YES	YES	NO	YES	YES	YES	YES	YES	NO	YES	NO	NO
6c	If yes: LBK, MDC, RBK, SPN, OTH	MDC	MDC	LBK	UNK	OTH	MDC	RBK	RBK	MDC	OTH	SPN	OTH	RBK	MDC	MDC	MDC	LBK	LBK
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
6e	If yes: DNS, MUL, PRL, PRP, UPS, OTH	PRP	UPS	PRP	UNK	UPS	PRP	DNS	UPS	MUL	UPS	OTH	UPS	PRL	UPS	UPS	PRP	DNS	DNS
7.	Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	RIF	RIF	RIF	RIF	DRY	POO	POO	POO	POO	DRY	FLT	DRY	POO	FLT	POO	FLT	POO	POO
8.	If an objective, did the **feature** create the targeted instream habitat type?	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	NO	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	YES	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	YES
10.	Mean water depth in **habitat unit**: ft	1.3	1.3	1.3	1.3	0.0	2.4	2.4	2.4	2.4	0.0	1.5	0.0	2.3	1.5	2.3	1.5	2.3	2.3
11a	Maximum water depth in **habitat unit**: ft	4.0	4.0	4.0	4.0	0.0	5.6	5.6	5.6	5.6	0.0	3.3	0.0	6.4	3.3	6.4	3.3	6.4	6.4
11b	Area of **habitat unit** within 0.5 -2.0 ft depth: (ft2)	3764.7	3764.7	3764.7	3764.7	0.0	1008.5	1008.5	1008.5	1008.5	0.0	1239.6	0.0	687.0	1239.6	687.0	1239.6	687.0	687.0
11c	Area of **habitat unit** within 2.0 -4.0 ft depth: (ft2)	1236.9	1236.9	1236.9	1236.9	0.0	1387.8	1387.8	1387.8	1387.8	0.0	879.9	0.0	727.1	879.9	727.1	879.9	727.1	727.1
11d	Area of **habitat unit** within 0.5-4.0 ft depth: (ft2)	5001.7	5001.7	5001.7	5001.7	0.0	2396.3	2396.3	2396.3	2396.3	0.0	2119.6	0.0	1414.1	2119.6	1414.1	2119.6	1414.1	1414.1
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	62%	62%	62%	62%	0%	34%	34%	34%	34%	0%	49%	0%	35%	49%	35%	49%	35%	35%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	20%	20%	20%	20%	0%	47%	47%	47%	47%	0%	35%	0%	37%	35%	37%	35%	37%	37%
11g	% Area of **habitat** unit within 0.5-4.0 ft depth	83%	83%	83%	83%	0%	81%	81%	81%	81%	0%	84%	0%	71%	84%	71%	84%	71%	71%
11h	If an objective, did the **feature** increase/decrease water depth in the treatment area?	YES	YES	YES	NO	NO	YES	YES	YES	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
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	YES	NO	NO	YES	YES	YES	YES	YES
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	3	3	3	3	0	3	3	3	3	0	2	0	3	2	3	2	3	3
15.	Percent of **habitat unit** covered by shelter: %	30	30	30	30	0	35	35	35	35	0	15	0	40	15	40	15	40	40
16a	1st dominant cover in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	BOL	BOL	BOL	BOL	NON	RTW	RTW	RTW	RTW	NON	RTW	NON	RTW	RTW	RTW	RTW	RTW	RTW
16b	2nd dominant in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	UCB	UCB	UCB	UCB	NON	LWD	LWD	LWD	LWD	NON	TVG	NON	LWD	TVG	LWD	TVG	LWD	LWD
17a	If an objective, did the **feature** increase instream shelter rating?	YES	YES	YES	NO	NO	YES	YES	YES	YES	NO	NO	NO	YES	YES	YES	YES	YES	YES
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	90	90	90	90	0	105	105	105	105	0	30	0	120	30	120	30	120	120
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	1	0	0	1	0	1	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
19b	LWD recruitment mechanisms in **habitat unit**: ANC, EXC, EXH, INT, RPR, UNA, OTH	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	RPR	NON	NON	RPR	NON	RPR	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	RPR	NON	NON	RPR	NON	RPR	NON	NON
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	YES	NO	NO	NO	NO	NO
21b	Overall Offchannel Condition (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	MIG	MIG	MIG	MIG	MIG	MIG	WID	WID	WID	WID	NAR	WID	STB	AGG	WID	AGG	AGG	AGG
21c	Outlet Conditions (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	MIG	MIG	MIG	MIG	MIG	MIG	WID	WID	WID	WID	NAR	WID	STB	WID	WID	WID	WID	WID
21d	Inlet Conditions (**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
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	NO	YES	YES	YES	YES	YES
23.	If an objective, did the **feature** decrease/increase velocity in the treatment area?	DEC	DEC	DEC	NA	NA	DEC	DEC	DEC	DEC	NA	INC	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
25.	Did the **feature** achieve the targeted velocity?	YES	YES	YES	NO	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 (fl/sec) in **habitat unit**	5.3	5.3	5.3	5.3	0.0	3.5	3.5	3.5	3.5	0.0	3.4	0.0	3.6	3.4	3.6	3.4	3.6	3.6
26c	Measured mean velocity (ft/sec) in **habitat unit**	1.7	1.7	1.7	1.7	0.0	1.2	1.2	1.2	1.2	0.0	1.1	0.0	1.0	1.1	1.0	1.1	1.0	1.0
27.	Area of **habitat unit** within targeted velocity: (ft^2)	998.7	998.7	998.7	998.7	0.0	842.7	842.7	842.7	842.7	0.0	876.3	0.0	597.7	876.3	597.7	876.3	597.7	597.7
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	16%	16%	16%	16%	0%	28%	28%	28%	28%	0%	35%	0%	30%	35%	30%	35%	30%	30%
29.	Were there any unintended effects of **feature** on velocity If Y, comment.	NO	NO	NO	YES	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	BOL	BOL	BOL	SND	COB	COB	COB	COB	SND	SND	SND	BOL	SND	BOL	SND	BOL	BOL
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	504.2	504.2	504.2	504.2	0.0	668.1	668.1	668.1	668.1	0.0	516.0	0.0	358.8	516.0	358.8	516.0	358.8	358.8
36b	Total **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	450.6	450.6	450.6	450.6	0.0	329.8	329.8	329.8	329.8	0.0	471.1	0.0	212.6	471.1	212.6	471.1	212.6	212.6
36c	Total **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	53.6	53.6	53.6	53.6	0.0	338.3	338.3	338.3	338.3	0.0	44.9	0.0	146.2	44.9	146.2	44.9	146.2	146.2
36d	% **habitat unit** area where targeted depth, velocity and shelter criteria overlap	8%	8%	8%	8%	0%	23%	23%	23%	23%	0%	20%	0%	18%	20%	18%	20%	18%	18%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	7%	7%	7%	7%	0%	11%	11%	11%	11%	0%	19%	0%	11%	19%	11%	19%	11%	11%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	1%	1%	1%	1%	0%	11%	11%	11%	11%	0%	2%	0%	7%	2%	7%	2%	7%	7%
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 49. Adaptive Management Plan full checklist for the Ferrari-Carano, Olson enhancement reach, June 2019.

	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	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019
	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 Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
	Project Feature Number	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	S2-36	S2-37	S2-38	S2-39	S2-40
	Feature Type Code	LVW	R	HW1	HW1	PW	TT	R	HW1	HW2	HW1	LW	ALS	PW	R	PW	HW2	LW	LW
	Habitat Unit	HU06	HU08	HU09	HU09	HU09	HU02_D	HU09	HU10	HU02_D	HU02_D	HU02_D	HU33	HU11	HU11	HU12	HU12	HU13	HU13
	Habitat Type	Flatwater	Pool	Riffle	Riffle	Riffle	Dry	Riffle	Pool	Dry	Dry	Dry	Pool	Flatwater	Flatwater	Pool	Pool	Pool	Pool
1.	Length of targeted treatment (ft)	37	NR	14	17	51	NR	100	11	19	15	25	32	50	NR	50	24	23	28
2.	Width of targeted treatment: (ft)	22	NR	8	7	12	NR	35	7	8	6	27	34	18	NR	15	10	24	24
3.	Estimate area of the targeted **feature**: (ft^2)	814		112	119	612		3500	77	152	90	675	1088	900		750	240	552	672
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	FAIR	GOOD	GOOD	GOOD	FAIL	GOOD	FAIR	POOR	POOR	FAIR	POOR	FAIR	FAIR	EXCL	EXCL	FAIR	GOOD
5a	Are problems with the **feature** visible?	NO	YES	NO	NO	YES	YES	NO	YES	YES	YES	YES	YES	YES	NO	NO	NO	YES	NO
5b	Types: ANC, BBB, CRF, MAT, SHF, STR, SWA, UND, UNS, WSH, OTH, NON	NON	OTH	NON	NON	AGG	WSH	NON	AGG	BBB	BBB	STR	STR	AGG	NON	NON	NON	BBB	NON
6a	Is the **feature** still in its original location?	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6b	Is the **feature** still in its original position?	YES	YES	NO	NO	YES	NO	YES	NO	NO	NO	NO	NO	YES	YES	YES	NO	NO	NO
6c	If yes: LBK, MDC, RBK, SPN, OTH	LBK	SPN	MDC	MDC	LBK	UNK	SPN	RBK	OTH	OTH	OTH	LBK	RBK	SPN	LBK	MDC	RBK	RBK
6d	Is the **feature** still in its original orientaton?	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
6e	If yes: DNS, MUL, PRL, PRP, UPS, OTH	UPS	OTH	UPS	UPS	PRL	UNK	OTH	DNS	UPS	UPS	UPS	MUL	PRL	OTH	PRL	UPS	MUL	MUL
7.	Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	FLT	POO	RIF	RIF	RIF	DRY	RIF	POO	DRY	DRY	DRY	POO	FLT	FLT	POO	POO	POO	POO
8.	If an objective, did the **feature** create the targeted instream habitat type?	YES	NO	YES	YES	YES	NO	YES	NO	NO	NO	NO	YES	YES	NO	YES	YES	NO	YES
9.	Were there any unintended effects by the **feature** on the habitat type? If Y, comment.	NO	YES	NO	NO	NO	NO	NO	YES	YES	YES	YES	YES	NO	YES	NO	NO	YES	NO
10.	Mean water depth in **habitat unit**: ft	1.5	2.2	1.3	1.3	1.3	0.0	1.3	1.8	0.0	0.0	0.0	1.2	1.8	1.8	1.8	1.8	1.5	1.5
11a	Maximum water depth in **habitat unit**: ft	3.3	4.8	3.3	3.3	3.3	0.0	3.3	3.6	0.0	0.0	0.0	3.3	3.7	3.7	3.7	3.7	3.7	3.7
11b	Area of **habitat unit** within 0.5 -2.0 ft depth: (ft2)	1239.6	761.8	2443.0	2443.0	2443.0	0.0	2443.0	546.4	0.0	0.0	0.0	997.1	559.1	559.1	559.1	559.1	1311.5	1311.5
11c	Area of **habitat unit** within 2.0 -4.0 ft depth: (ft2)	879.9	690.3	705.1	705.1	705.1	0.0	705.1	427.7	0.0	0.0	0.0	263.2	687.3	687.3	687.3	687.3	645.9	645.9
11d	Area of **habitat unit** within 0.5-4.0 ft depth: (ft2)	2119.6	1452.1	3148.2	3148.2	3148.2	0.0	3148.2	974.1	0.0	0.0	0.0	1260.3	1246.4	1246.4	1246.4	1246.4	1957.4	1957.4
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	49%	42%	68%	68%	68%	0%	68%	51%	0%	0%	0%	65%	39%	39%	39%	39%	58%	58%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	35%	38%	20%	20%	20%	0%	20%	40%	0%	0%	0%	17%	48%	48%	48%	48%	29%	29%
11g	% Area of **habitat** unit within 0.5-4.0 ft depth	84%	81%	88%	88%	88%	0%	88%	90%	0%	0%	0%	82%	86%	86%	86%	86%	87%	87%
11h	If an objective, did the **feature** increase/decrease water depth in the treatment area?	YES	YES	YES	YES	YES	NO	YES	YES	NO	NO	NO	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:																		
13.	Were there any unintended effects of the **feature** on the water depth? If Y, comment.	NO	YES	NO	NO	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	YES
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	2	3	3	3	3	0	3	3	0	0	0	3	1	1	3	3	3	3
15.	Percent of **habitat unit** covered by shelter: %	15	15	20	20	20	0	20	30	0	0	0	15	10	10	30	30	15	15
16a	1st dominant cover in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	RTW	LWD	RTW	RTW	RTW	NON	RTW	RTW	NON	NON	NON	RTW	RTW	RTW	RTW	RTW	RTW	RTW
16b	2nd dominant in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	TVG	UCB	LWD	LWD	LWD	NON	LWD	LWD	NON	NON	NON	UCB	UCB	UCB	LWD	LWD	UCB	UCB
17a	If an objective, did the **feature** increase instream shelter rating?	YES	YES	YES	YES	YES	NO	YES	YES	NO	NO	NO	YES	YES	NO	YES	YES	YES	YES
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	30	45	60	60	60	0	60	90	0	0	0	45	10	10	90	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'	1	1	0	0	0	0	0	3	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	YES	YES	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	NON	NON	NON	NON	NON	RPR	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	RPR	RPR	NON	NON	NON	NON	NON	RPR	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
21a	If an objective, did the **feature** lead to the targeted channel conditions?	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	YES	YES	NO	NO	NO	NO
21b	Overall Offchannel Condition (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	INC	INC	WID	WID	WID	WID	AGG	AGG	AGG	AGG	AGG	AGG	AGG	WID	AGG	WID	AGG	AGG
21c	Outlet Conditions (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	WID	WID	WID	WID	WID	WID	WID	WID	WID	WID	WID	WID	WID	WID	WID	WID	WID	WID
21d	Inlet Conditions (**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
22.	Were there any unintended effects on the stream channel at the **feature**? If Y, comment.	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	NO	NO	YES	YES	YES
23.	If an objective, did the **feature** decrease/increase velocity in the treatment area?	DEC	DEC	DEC	DEC	DEC	NA	INC	DEC	NA	NA	NA	DEC	DEC	INC	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	NO	YES	YES	YES	YES	YES	YES	NO	NO	NO	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**	3.4	3.5	4.1	4.1	4.1	0.0	4.1	4.0	0.0	0.0	0.0	0.4	2.6	2.6	2.6	2.6	4.6	4.6
26c	Measured mean velocity (ft/sec) in **habitat unit**	1.1	1.3	1.8	1.8	1.8	0.0	1.8	1.6	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.9	1.8	1.8
27.	Area of **habitat unit** within targeted velocity: (ft^2)	876.3	488.8	650.7	650.7	650.7	0.0	650.7	185.2	0.0	0.0	0.0	1544.5	483.3	483.3	483.3	483.3	493.8	493.8
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	35%	27%	18%	18%	18%	0%	18%	17%	0%	0%	0%	100%	34%	34%	34%	34%	22%	22%
29.	Were there any unintended effects of **feature** on velocity If Y, comment.	NO	YES	NO	NO	NO	NO	NO	NO	YES	YES	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	GRV	GRV	GRV	GRV	GRV	GRV	GRV	SND	GRV	GRV	GRV	GRV	GRV	GRV
30b	2nd dominant substrate in **habitat unit**: BED, BOL, COB, GRV, SND, SLC, OTH	SND	UNK	COB	COB	COB	SND	COB	BOL	SND	SND	SND	GRV	NON	NON	BOL	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	516.0	350.3	328.5	328.5	328.5	0.0	328.5	94.1	0.0	0.0	0.0	1260.3	293.4	293.4	293.4	293.4	270.1	270.1
36b	Total **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	471.1	289.8	309.7	309.7	309.7	0.0	309.7	89.9	0.0	0.0	0.0	997.1	264.6	264.6	264.6	264.6	262.6	262.6
36c	Total **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	44.9	60.5	18.8	18.8	18.8	0.0	18.8	4.2	0.0	0.0	0.0	263.2	28.8	28.8	28.8	28.8	7.6	7.6
36d	% **habitat unit** area where targeted depth, velocity and shelter criteria overlap	20%	19%	9%	9%	9%	0%	9%	9%	0%	0%	0%	82%	20%	20%	20%	20%	12%	12%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	19%	16%	9%	9%	9%	0%	9%	8%	0%	0%	0%	65%	18%	18%	18%	18%	12%	12%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	2%	3%	1%	1%	1%	0%	1%	0%	0%	0%	0%	17%	2%	2%	2%	2%	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	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 49. Adaptive Management Plan full checklist for the Ferrari-Carano, Olson enhancement reach, June 2019.

	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	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019
	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 Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
	Project Feature Number	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	S2-54	S2-55	S2-56	S2-57	S2-58
	Feature Type Code	HW2	HW1	ALS	TT	R	PW	HW1	HW1	HW1	HW1	R	PW	HW1	R	LW	HW1	TT	HW1
	Habitat Unit	HU38	HU38	HU37	HU39	HU13	HU14	HU15	HU15	HU15	HU15	HU14	HU16	HU16	HU17	HU02_D	HU16	HU02_D	HU16
	Habitat Type	Flatwater	Flatwater	Riffle	Alcove	Pool	Pool	Alcove	Alcove	Alcove	Alcove	Pool	Flatwater	Flatwater	Alcove	Dry	Flatwater	Dry	Flatwater
1.	Length of targeted treatment (ft)	26	26	34	NR	NR	50	15	16	17	18	85	50	11	NR	26	8	NR	7
2.	Width of targeted treatment: (ft)	10	9	34	NR	NR	11	6	8	8	9	20	13	18	NR	24	18	NR	16
3.	Estimate area of the targeted **feature**: (ft^2)	260	234	1156			550	90	128	136	162	1700	650	198		624	144		112
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	UNKN	FAIR	POOR	FAIL	GOOD	EXCL	EXCL	EXCL	EXCL	EXCL	POOR	GOOD	FAIR	FAIL	FAIL	FAIR	FAIL	FAIR
5a	Are problems with the **feature** visible?	YES	YES	YES	YES	NO	NO	NO	NO	NO	NO	YES	NO	YES	YES	YES	YES	YES	YES
5b	Types: ANC, BBB, CRF, MAT, SHF, STR, SWA, UND, UNS, WSH, OTH, NON	BBB	AGG	AGG	WSH	NON	NON	NON	NON	NON	NON	OTH	NON	AGG	AGG	BBB	AGG	WSH	AGG
6a	Is the **feature** still in its original location?	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	NO	YES
6b	Is the **feature** still in its original position?	NO	NO	NO	NO	YES	NO	YES	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO	YES
6c	If yes: LBK, MDC, RBK, SPN, OTH	UNK	MDC	RBK	UNK	SPN	MDC	MDC	LBK	MDC	MDC	SPN	LBK	RBK	DRY	OTH	RBK	UNK	RBK
6d	Is the **feature** still in its original orientaton?	UNK	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	UNK	YES	NO	YES
6e	If yes: DNS, MUL, PRL, PRP, UPS, OTH	UNK	PRP	MUL	UNK	OTH	PRL	PRP	DNS	UPS	DNS	OTH	PRL	UPS	OTH	UNK	UPS	UNK	UPS
7.	Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	FLT	FLT	RIF	ALC	POO	POO	ALC	ALC	ALC	ALC	POO	FLT	FLT	ALC	DRY	FLT	DRY	FLT
8.	If an objective, did the **feature** create the targeted instream habitat type?	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES	NO	YES	YES	NO	NO	YES	NO	YES
9.	Were there any unintended effects by the **feature** on the habitat type? If Y, comment.	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	YES	YES	NO	NO	NO
10.	Mean water depth in **habitat unit**: ft	0.9	0.9	0.3	0.6	1.5	2.3	1.5	1.5	1.5	1.5	2.3	1.9	1.9	0.5	0.0	1.9	0.0	1.9
11a	Maximum water depth in **habitat unit**: ft	2.1	2.1	1.1	1.6	3.7	5.3	3.6	3.6	3.6	3.6	5.3	3.9	3.9	1.5	0.0	3.9	0.0	3.9
11b	Area of **habitat unit** within 0.5 -2.0 ft depth: (ft2)	643.2	643.2	62.3	197.8	1311.5	1944.6	786.1	786.1	786.1	786.1	1944.6	2584.0	2584.0	425.9	0.0	2584.0	0.0	2584.0
11c	Area of **habitat unit** within 2.0 -4.0 ft depth: (ft2)	3.4	3.4	0.0	0.0	645.9	3255.8	478.5	478.5	478.5	478.5	3255.8	2835.3	2835.3	0.0	0.0	2835.3	0.0	2835.3
11d	Area of **habitat unit** within 0.5-4.0 ft depth: (ft2)	646.6	646.6	62.3	197.8	1957.4	5200.3	1264.5	1264.5	1264.5	1264.5	5200.3	5419.3	5419.3	425.9	0.0	5419.3	0.0	5419.3
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	79%	79%	18%	53%	58%	31%	53%	53%	53%	53%	31%	44%	44%	46%	0%	44%	0%	44%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	0%	0%	0%	0%	29%	53%	32%	32%	32%	32%	53%	48%	48%	0%	0%	48%	0%	48%
11g	% Area of **habitat** unit within 0.5-4.0 ft depth	79%	79%	18%	53%	87%	84%	85%	85%	85%	85%	84%	91%	91%	46%	0%	91%	0%	91%
11h	If an objective, did the **feature** increase/decrease water depth in the treatment area?	NO	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO	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:																		
13.	Were there any unintended effects of the **feature** on the water depth? If Y, comment.	YES	YES	YES	YES	NO	NO	NO	NO	NO	NO	YES	NO	YES	YES	YES	YES	YES	YES
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	2	2	3	1	3	3	3	3	3	3	3	3	3	0	0	3	0	3
15.	Percent of **habitat unit** covered by shelter: %	10	10	50	5	15	30	60	60	60	60	30	15	15	0	0	15	0	15
16a	1st dominant cover in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	RTW	RTW	BOL	BOL	RTW	LWD	RTW	RTW	RTW	RTW	LWD	SWD	SWD	NON	NON	SWD	NON	SWD
16b	2nd dominant in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	LWD	LWD	TVG	NON	UCB	RTW	LWD	LWD	LWD	LWD	RTW	BOL	BOL	NON	NON	BOL	NON	BOL
17a	If an objective, did the **feature** increase instream shelter rating?	NO	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO	YES
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	20	20	150	5	45	90	180	180	180	180	90	45	45	0	0	45	0	45
18a	Large woody debris count in **habitat unit**: D >1', L 6-20'	0	0	0	0	0	0	1	1	1	1	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	5	1	1	1	1	5	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	YES	NO	NO	NO	NO	NO	YES	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	RPR	UNK	UNK	UNK	UNK	RPR	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	RPR	UNK	UNK	UNK	UNK	RPR	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	YES	YES	YES	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	STB	STB	STB	STB	STB	STB	INC	AGG	AGG	AGG	BBB	AGG	AGG	AGG
21c	Outlet Conditions (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	WID	WID	WID	WID	WID	WID	WID	WID	WID	WID	WID	WID	WID	WID	WID	WID	WID	WID
21d	Inlet Conditions (**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
22.	Were there any unintended effects on the stream channel at the **feature**? If Y, comment.	YES	YES	YES	YES	NO	NO	NO	NO	NO	NO	YES	NO	YES	YES	YES	YES	YES	YES
23.	If an objective, did the **feature** decrease/increase velocity in the treatment area?	NA	DEC	DEC	NO	INC	DEC	DEC	DEC	DEC	DEC	DEC	DEC	DEC	NA	NA	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?	NO	YES	YES	NO	YES	YES	YES	YES	YES	YES	NO	YES	YES	NO	NO	YES	NO	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**	0.6	0.6	1.7	0.1	4.6	4.5	0.7	0.7	0.7	0.7	4.5	4.0	4.0	1.1	0.0	4.0	0.0	4.0
26c	Measured mean velocity (ft/sec) in **habitat unit**	0.1	0.1	0.3	0.0	1.8	1.2	0.1	0.1	0.1	0.1	1.2	1.6	1.6	0.0	0.0	1.6	0.0	1.6
27.	Area of **habitat unit** within targeted velocity: (ft^2)	813.6	813.6	275.2	376.0	493.8	2396.1	1463.2	1463.2	1463.2	1463.2	2396.1	1148.0	1148.0	884.3	0.0	1148.0	0.0	1148.0
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	100%	100%	79%	100%	22%	39%	98%	98%	98%	98%	39%	19%	19%	96%	0%	19%	0%	19%
29.	Were there any unintended effects of **feature** on velocity If Y, comment.	YES	NO	NO	YES	NO	NO	NO	NO	NO	NO	YES	NO	NO	YES	YES	NO	YES	NO
30a	1st/2nd dominant substrate in **habitat unit**: BED, BOL, COB, GRV, SND, SLC, OTH	GRV	GRV	GRV	SND	GRV	UNK	SND	SND	SND	SND	UNK	GRV	GRV	GRV	GRV	GRV	GRV	GRV
30b	2nd dominant substrate in **habitat unit**: BED, BOL, COB, GRV, SND, SLC, OTH	SND	SND	BOL	BOL	SND	NON	GRV	GRV	GRV	GRV	NON	COB	COB	SND	SND	COB	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	643.0	643.0	52.6	197.8	270.1	1833.9	1236.8	1236.8	1236.8	1236.8	1833.9	696.3	696.3	391.3	0.0	696.3	0.0	696.3
36b	Total **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	639.6	639.6	52.6	197.8	262.6	982.0	761.5	761.5	761.5	761.5	982.0	398.5	398.5	391.3	0.0	398.5	0.0	398.5
36c	Total **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	3.4	3.4	0.0	0.0	7.6	851.9	475.3	475.3	475.3	475.3	851.9	297.8	297.8	0.0	0.0	297.8	0.0	297.8
36d	% **habitat unit** area where targeted depth, velocity and shelter criteria overlap	79%	79%	15%	53%	12%	30%	83%	83%	83%	83%	30%	12%	12%	43%	0%	12%	0%	12%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	78%	78%	15%	53%	12%	16%	51%	51%	51%	51%	16%	7%	7%	43%	0%	7%	0%	7%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	0%	0%	0%	0%	14%	32%	32%	32%	32%	14%	5%	5%	0%	0%	5%	0%	5%
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 49. Adaptive Management Plan full checklist for the Ferrari-Carano, Olson enhancement reach, June 2019.

	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	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019
	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 Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
	Project Feature Number	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	S2-74	S2-75	S2-76
	Feature Type Code	LW	LVW	HW1	TT	TT	HW1	HW1	HW1	HW1	TT	HW1	HW1	HW1	HW1	HW1	HW2	HW1	HW1
	Habitat Unit	HU19	HU19	HU18	HU16	HU16	HU16	HU20	HU20	HU20	HU02_D	HU20	HU20	HU20	HU20	HU20	HU20	HU02_D	HU02_D
	Habitat Type	Pool	Pool	Riffle	Flatwater	Flatwater	Flatwater	Alcove	Alcove	Alcove	Dry	Alcove	Alcove	Alcove	Alcove	Alcove	Alcove	Dry	Dry
1.	Length of targeted treatment (ft)	23	78	20	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
2.	Width of targeted treatment: (ft)	33	19	6	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
3.	Estimate area of the targeted **feature**: (ft^2)	759	1482	120															
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	EXCL	FAIR	FAIL	FAIL	GOOD	GOOD	GOOD	GOOD	FAIL	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	FAIL	FAIL
5a	Are problems with the **feature** visible?	NO	NO	NO	YES	YES	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	YES	YES
5b	Types: ANC, BBB, CRF, MAT, SHF, STR, SWA, UND, UNS, WSH, OTH, NON	NON	NON	AGG	WSH	WSH	NON	NON	NON	NON	WSH	NON	NON	NON	NON	NON	NON	BBB	BBB
6a	Is the **feature** still in its original location?	YES	YES	YES	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	UNK	UNK
6b	Is the **feature** still in its original position?	NO	YES	YES	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	UNK	UNK
6c	If yes: LBK, MDC, RBK, SPN, OTH	MDC	LBK	RBK	UNK	UNK	MDC	MDC	MDC	MDC	UNK	LBK	MDC	RBK	RBK	MDC	MDC	DRY	DRY
6d	Is the **feature** still in its original orientaton?	YES	YES	YES	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	UNK	UNK
6e	If yes: DNS, MUL, PRL, PRP, UPS, OTH	PRP	DNS	PRP	UNK	UNK	UPS	UPS	UPS	UPS	UNK	UPS	UPS	UPS	UPS	UPS	UPS	UNK	UNK
7.	Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	POO	POO	RIF	FLT	FLT	FLT	ALC	ALC	ALC	DRY	ALC	ALC	ALC	ALC	ALC	ALC	DRY	DRY
8.	If an objective, did the **feature** create the targeted instream habitat type?	YES	YES	YES	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	NO	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	YES
10.	Mean water depth in **habitat unit**: ft	2.0	2.0	0.9	1.9	1.9	1.9	2.9	2.9	2.9	0.0	2.9	2.9	2.9	2.9	2.9	2.9	0.0	0.0
11a	Maximum water depth in **habitat unit**: ft	4.6	4.6	2.2	3.9	3.9	3.9	6.1	6.1	6.1	0.0	6.1	6.1	6.1	6.1	6.1	6.1	0.0	0.0
11b	Area of **habitat unit** within 0.5 -2.0 ft depth: (ft2)	1149.3	1149.3	1315.4	2584.0	2584.0	2584.0	2030.6	2030.6	2030.6	0.0	2030.6	2030.6	2030.6	2030.6	2030.6	2030.6	0.0	0.0
11c	Area of **habitat unit** within 2.0 -4.0 ft depth: (ft2)	1429.0	1429.0	2.3	2835.3	2835.3	2835.3	3406.6	3406.6	3406.6	0.0	3406.6	3406.6	3406.6	3406.6	3406.6	3406.6	0.0	0.0
11d	Area of **habitat unit** within 0.5-4.0 ft depth: (ft2)	2578.2	2578.2	1317.7	5419.3	5419.3	5419.3	5437.2	5437.2	5437.2	0.0	5437.2	5437.2	5437.2	5437.2	5437.2	5437.2	0.0	0.0
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	36%	36%	80%	44%	44%	44%	23%	23%	23%	0%	23%	23%	23%	23%	23%	23%	0%	0%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	44%	44%	0%	48%	48%	48%	39%	39%	39%	0%	39%	39%	39%	39%	39%	39%	0%	0%
11g	% Area of **habitat** unit within 0.5-4.0 ft depth	80%	80%	80%	91%	91%	91%	62%	62%	62%	0%	62%	62%	62%	62%	62%	62%	0%	0%
11h	If an objective, did the **feature** increase/decrease water depth in the treatment area?	YES	YES	NO	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	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:																		
13.	Were there any unintended effects of the **feature** on the water depth? If Y, comment.	NO	NO	YES	YES	YES	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	YES	YES
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	3	3	0	3	3	3	3	3	3	0	3	3	3	3	3	3	0	0
15.	Percent of **habitat unit** covered by shelter: %	20	20	0	15	15	15	25	25	25	0	25	25	25	25	25	25	0	0
16a	1st dominant cover in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	RTW	RTW	NON	SWD	SWD	SWD	LWD	LWD	LWD	NON	LWD	LWD	LWD	LWD	LWD	LWD	NON	NON
16b	2nd dominant in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	UCB	UCB	NON	BOL	BOL	BOL	AVG	AVG	AVG	NON	AVG	AVG	AVG	AVG	AVG	AVG	NON	NON
17a	If an objective, did the **feature** increase instream shelter rating?	YES	YES	YES	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	NO	NO
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	60	60	0	45	45	45	75	75	75	0	75	75	75	75	75	75	0	0
18a	Large woody debris count in **habitat unit**: D >1', L 6-20'	1	1	0	0	0	0	1	1	1	0	1	1	1	1	1	1	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**?	YES	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	INT	INT	NON	NON	NON	NON	RPR	RPR	RPR	NON	RPR	RPR	RPR	RPR	RPR	RPR	NON	NON
20.	Current stream channel problems in the **habitat unit**: AGG, BRD, FLO, GRC, HDC, INC, NAR, SCU, STT, WID, NON, OTH	INT	INT	NON	NON	NON	NON	RPR	RPR	RPR	NON	RPR	RPR	RPR	RPR	RPR	RPR	NON	NON
21a	If an objective, did the **feature** lead to the targeted channel conditions?	NO	YES	YES	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	NO	NO
21b	Overall Offchannel Condition (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	MIG	STB	STB	AGG	AGG	STB	STB	STB	STB	AGG	STB	STB	STB	STB	STB	STB	AGG	AGG
21c	Outlet Conditions (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	WID	WID	WID	WID	WID	WID	WID	WID	WID	WID	WID	WID	WID	WID	WID	WID	WID	WID
21d	Inlet Conditions (**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
22.	Were there any unintended effects on the stream channel at the **feature**? If Y, comment.	YES	NO	NO	YES	YES	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	YES	YES
23.	If an objective, did the **feature** decrease/increase velocity in the treatment area?	DEC	DEC	INC	NO	NO	DEC	DEC	DEC	DEC	NO	DEC	DEC	DEC	DEC	DEC	DEC	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?	YES	YES	NO	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	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**	3.9	3.9	3.9	4.0	4.0	4.0	0.2	0.2	0.2	0.0	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.0
26c	Measured mean velocity (ft/sec) in **habitat unit**	1.4	1.4	2.1	1.6	1.6	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
27.	Area of **habitat unit** within targeted velocity: (ft^2)	699.9	699.9	147.6	1148.0	1148.0	1148.0	8763.0	8763.0	8763.0	0.0	8763.0	8763.0	8763.0	8763.0	8763.0	8763.0	0.0	0.0
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	22%	22%	9%	19%	19%	19%	100%	100%	100%	0%	100%	100%	100%	100%	100%	100%	0%	0%
29.	Were there any unintended effects of **feature** on velocity If Y, comment.	NO	NO	YES	YES	YES	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	YES	YES
30a	1st/2nd dominant substrate in **habitat unit**: BED, BOL, COB, GRV, SND, SLC, OTH	GRV	GRV	GRV	GRV	GRV	GRV	SND	SND	SND	GRV	SND	SND	SND	SND	SND	SND	GRV	GRV
30b	2nd dominant substrate in **habitat unit**: BED, BOL, COB, GRV, SND, SLC, OTH	COB	COB	COB	COB	COB	COB	SLC	SLC	SLC	SND	SLC	SLC	SLC	SLC	SLC	SLC	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	335.0	335.0	42.7	696.3	696.3	696.3	5437.2	5437.2	5437.2	0.0	5437.2	5437.2	5437.2	5437.2	5437.2	5437.2	0.0	0.0
36b	Total **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	182.5	182.5	42.7	398.5	398.5	398.5	2030.6	2030.6	2030.6	0.0	2030.6	2030.6	2030.6	2030.6	2030.6	2030.6	0.0	0.0
36c	Total **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	152.5	152.5	0.0	297.8	297.8	297.8	3406.6	3406.6	3406.6	0.0	3406.6	3406.6	3406.6	3406.6	3406.6	3406.6	0.0	0.0
36d	% **habitat unit** area where targeted depth, velocity and shelter criteria overlap	10%	10%	3%	12%	12%	12%	62%	62%	62%	0%	62%	62%	62%	62%	62%	62%	0%	0%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	6%	6%	3%	7%	7%	7%	23%	23%	23%	0%	23%	23%	23%	23%	23%	23%	0%	0%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	5%	5%	0%	5%	5%	5%	39%	39%	39%	0%	39%	39%	39%	39%	39%	39%	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	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 49. Adaptive Management Plan full checklist for the Ferrari-Carano, Olson enhancement reach, June 2019.

	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	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019
	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	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
	Project Feature Number	S2-77	S2-78	S2-79	S2-80	S2-81	S2-82	S2-83	S2-84	S2-85	S2-86	S2-87	S2-88	S3-01	S3-02	S3-03	S3-04	S3-05	S3-06
	Feature Type Code	PW	LVW	LW	PW	LW	LW	HW2	HW1	HW1	HW2	LW	ALS	LW	HW1	HW2	PW	R	HW1
	Habitat Unit	HU20	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU02 D	HU22 2	HU30 2	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D
	Habitat Type	Alcove	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Pool	Pool	Dry	Dry	Dry	Dry	Dry
1.	Length of targeted treatment (ft)	55	74	30	56	30	25	17	12	12	19	17	26	26	16	15	50	25	13
2.	Width of targeted treatment: (ft)	12	18	20	16	18	20	8	6	9	7	22	35	32	9	7	10	11	6
3.	Estimate area of the targeted **feature**: (ft^2)	660	1332	600	896	540	500	136	72	108	133	374	910	832	144	105	500	275	78
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	POOR	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	GOOD	EXCL	FAIR	FAIR	UNKN	FAIL	POOR
5a	Are problems with the **feature** visible?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES
5b	Types: ANC, BBB, CRF, MAT, SHF, STR, SWA, UND, UNS, WSH, OTH, NON	BBB	BBB	BBB	BBB	BBB	BBB	BBB	BBB	BBB	BBB	BBB	AGG	NON	AGG	BBB	BBB	AGG	BBB
6a	Is the **feature** still in its original location?	YES	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	YES	YES	YES	YES	YES	NO	YES
6b	Is the **feature** still in its original position?	NO	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	NO	YES	NO	NO	NO	NO	NO
6c	If yes: LBK, MDC, RBK, SPN, OTH	LBK	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	LBK	RBK	OTH	OTH	OTH	OTH	OTH
6d	Is the **feature** still in its original orientaton?	YES	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	YES	YES	YES	YES	YES	NO	YES
6e	If yes: DNS, MUL, PRL, PRP, UPS, OTH	PRL	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	PRP	UPS	OTH	OTH	PRL	OTH	OTH
7.	Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	ALC	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	POO	POO	DRY	DRY	DRY	DRY	DRY
8.	If an objective, did the **feature** create the targeted instream habitat type?	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	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	NO	NO	YES	YES	YES	YES	YES
10.	Mean water depth in **habitat unit**: ft	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.6	0.0	0.0	0.0	0.0	0.0
11a	Maximum water depth in **habitat unit**: ft	6.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9	1.9	0.0	0.0	0.0	0.0	0.0
11b	Area of **habitat unit** within 0.5 -2.0 ft depth: (ft2)	2030.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7011.3	636.2	0.0	0.0	0.0	0.0	0.0
11c	Area of **habitat unit** within 2.0 -4.0 ft depth: (ft2)	3406.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9838.1	0.0	0.0	0.0	0.0	0.0	0.0
11d	Area of **habitat unit** within 0.5-4.0 ft depth: (ft2)	5437.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16849.5	636.2	0.0	0.0	0.0	0.0	0.0
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	23%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	34%	55%	0%	0%	0%	0%	0%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	39%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	48%	0%	0%	0%	0%	0%	0%
11g	% Area of **habitat** unit within 0.5-4.0 ft depth	62%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	82%	55%	0%	0%	0%	0%	0%
11h	If an objective, did the **feature** increase/decrease water depth in the treatment area?	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	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:																		
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	NO	YES	YES	YES	YES	YES
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	0	0	0	0	0
15.	Percent of **habitat unit** covered by shelter: %	25	0	0	0	0	0	0	0	0	0	0	15	35	0	0	0	0	0
16a	1st dominant cover in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	LWD	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	RTW	RTW	NON	NON	NON	NON	NON
16b	2nd dominant in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	AVG	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	TVG	LWD	NON	NON	NON	NON	NON
17a	If an objective, did the **feature** increase instream shelter rating?	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	NO	NO	NO	NO	NO
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	75	0	0	0	0	0	0	0	0	0	0	45	105	0	0	0	0	0
18a	Large woody debris count in **habitat unit**: D >1', L 6-20'	1	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	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO
19b	LWD recruitment mechanisms in **habitat unit**: ANC, EXC, EXH, INT, RPR, UNA, OTH	RPR	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	RPR	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?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	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	WID	WID	WID	WID	WID	WID	WID	WID	WID	WID	WID	WID	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	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?	DEC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	DEC	DEC	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?	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	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**	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.7	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	0.8	0.1	0.0	0.0	0.0	0.0	0.0
27.	Area of **habitat unit** within targeted velocity: (ft^2)	8763.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6702.9	1146.8	0.0	0.0	0.0	0.0	0.0
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	33%	99%	0%	0%	0%	0%	0%
29.	Were there any unintended effects of **feature** on velocity If Y, comment.	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	YES	YES	YES	YES
30a	1st/2nd dominant substrate in **habitat unit**: BED, BOL, COB, GRV, SND, SLC, OTH	SND	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	SLC	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	5437.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4384.4	630.3	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	2030.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2453.2	630.3	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	3406.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1931.2	0.0	0.0	0.0	0.0	0.0	0.0
36d	% **habitat unit** area where targeted depth, velocity and shelter criteria overlap	62%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	21%	54%	0%	0%	0%	0%	0%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	23%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	12%	54%	0%	0%	0%	0%	0%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	39%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	9%	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	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 49. Adaptive Management Plan full checklist for the Ferrari-Carano, Olson enhancement reach, June 2019.

	Project Reach	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
	Colloquial Name	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO	FO
	mmddyy	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019	62019
	Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
	Project Site Number	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
	Project Feature Number	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	PW	R	HW1	HW1	HW2	HW1	HW1	LVW	R	HW2	HW2	HW1	HW1	HW1	
	Habitat Unit	HU03 D	HU03 D	HU03 D	HU40 W	HU03 D	HU40 W	HU03 D	HU03 D	HU03 D	HU03 D	HU03 D	HU40 W	HU40 W	HU40 W	
	Habitat Type	Dry	Dry	Dry	Pond	Dry	Pond	Dry	Dry	Dry	Dry	Dry	Pond	Pond	Pond	
1.	Length of targeted treatment (ft)	54	NR	20	20	18	15	12	47	NR	18	18	13	18	18	
2.	Width of targeted treatment: (ft)	10	NR	8	9	7	7	7	11	NR	7	7	6	8	7	
3.	Estimate area of the targeted **feature**: (ft^2)	540		160	180	126	105	84	517		126	126	78	144	126	
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	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	
5b	Types: ANC, BBB, CRF, MAT, SHF, STR, SWA, UND, UNS, WSH, OTH, NON	BBB	AGG	AGG	STR	STR	STR	BBB	BBB	AGG	BBB	BBB	STR	STR	STR	
6a	Is the **feature** still in its original location?	YES	NO	YES	YES	YES	YES	UNK	NO	NO	YES	UNK	YES	YES	YES	
6b	Is the **feature** still in its original position?	NO	NO	NO	NO	NO	NO	UNK	NO	NO	NO	NO	YES	YES	YES	
6c	If yes: LBK, MDC, RBK, SPN, OTH	OTH	OTH	OTH	OTH	OTH	OTH	UNK	OTH	OTH	OTH	UNK	MDC	MDC	MDC	
6d	Is the **feature** still in its original orientaton?	YES	NO	YES	YES	YES	YES	UNK	NO	NO	UNK	UNK	YES	YES	YES	
6e	If yes: DNS, MUL, PRL, PRP, UPS, OTH	OTH	OTH	DNS	MUL	MUL	MUL	UNK	OTH	OTH	OTH	UNK	UPS	UPS	UPS	
7.	Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	DRY	DRY	DRY	PND	DRY	PND	DRY	DRY	DRY	DRY	DRY	PND	PND	PND	
8.	If an objective, did the **feature** create the targeted instream habitat type?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	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	YES	YES	YES	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	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	
11b	Area of **habitat unit** within 0.5 -2.0 ft depth: (ft2)	0.0	0.0	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: (ft2)	0.0	0.0	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: (ft2)	0.0	0.0	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%	
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%	
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%	
11h	If an objective, did the **feature** increase/decrease water depth in the treatment area?	NO	NO	NO	YES	YES	YES	NO	NO	NO	NO	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	
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.	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	NO	NO	NO	
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	0	0	0	3	0	3	0	0	0	0	0	3	3	3	
15.	Percent of **habitat unit** covered by shelter: %	0	0	0	15	0	15	0	0	0	0	0	15	15	15	
16a	1st dominant cover in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	NON	NON	NON	RTW	NON	RTW	NON	NON	NON	NON	NON	RTW	RTW	RTW	
16b	2nd dominant in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	NON	NON	NON	LWD	NON	LWD	NON	NON	NON	NON	NON	LWD	LWD	LWD	
17a	If an objective, did the **feature** increase instream shelter rating?	NO	NO	NO	YES	YES	YES	NO	NO	NO	NO	NO	YES	YES	YES	
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	0	0	0	45	0	45	0	0	0	0	0	45	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	
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	
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	
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	
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	
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	
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	
21c	Outlet Conditions (**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	
21d	Inlet Conditions (**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	
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	
23.	If an objective, did the **feature** decrease/increase velocity in the treatment area?	NA	NA	NA	DEC	DEC	DEC	NA	NA	NA	NA	NA	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	
25.	Did the **feature** achieve the targeted velocity?	NO	NO	NO	YES	YES	YES	NO	NO	NO	NO	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	
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	
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	
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	
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	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	NO	NO	NO	YES	YES	YES	YES	YES	NO	NO	NO	
30a	1st/2nd dominant substrate in **habitat unit**: BED, BOL, COB, GRV, SND, SLC, OTH	GRV	GRV	GRV	SND	GRV	SND	GRV	GRV	GRV	GRV	GRV	SND	SND	SND	
30b	2nd dominant substrate in **habitat unit**: BED, BOL, COB, GRV, SND, SLC, OTH	SND	SND	SND	GRV	SND	GRV	SND	SND	SND	SND	SND	GRV	GRV	GRV	
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	
32.	% Canopy Measurement:	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	
34.	Temperature Profile: YES /NO	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	
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	
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	
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	
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%	
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%	
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%	
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	
38.	Are additional restoration treatments recommended at this **site**?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	

City of Healdsburg Yard, July 2019

Depth and Velocity

Table 50. Areas and percentages of: wetted area, optimal depth and velocity, and optimal hydraulic habitat within the City of Healdsburg Yard enhancement reach, July 2019.

City of Healdsburg Yard Post-effective flow July 2019	Wetted area (ft^2)	Optimal depth (ft^2)			Optimal velocity (ft^2)	Optimal habitat (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	54,727	35,457	10,376	45,833	11,276	5,313	687	6,000
Main channel alcove area	3,186	1,513	981	2,494	3,028	1,417	936	2,352
Side channel area	1,513	952	109	1,061	1,513	952	109	1,061
Total area	**59,426**	**37,922**	**11,467**	**49,388**	**15,817**	**7,682**	**1,732**	**9,413**
Main channel % of wetted area	92%	65%	19%	84%	21%	10%	1%	11%
Main channel alcove % of wetted area	5%	47%	31%	78%	95%	44%	29%	74%
Side channel % of wetted area	3%	63%	7%	70%	100%	63%	7%	70%
Total % of wetted area	**100%**	**64%**	**19%**	**83%**	**27%**	**13%**	**3%**	**16%**

Figure 84. Measured water depth within the City of Healdsburg Yard enhancement reach, July 2019.

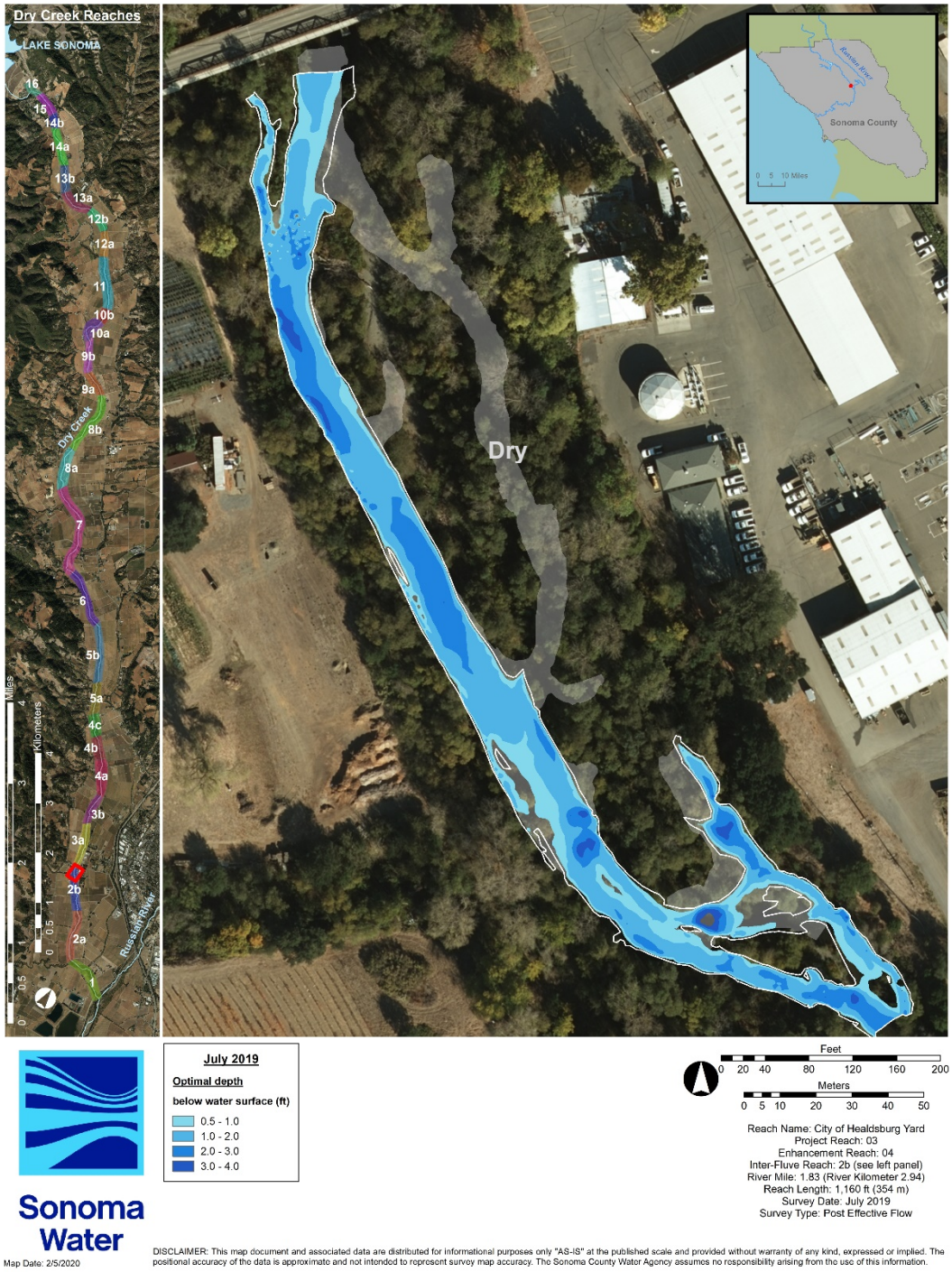

Figure 85. Optimal water depth for fry (0.5-2.0 ft) and parr (2.0-4.0 ft) within the City of Healdsburg Yard enhancement reach, July 2019.

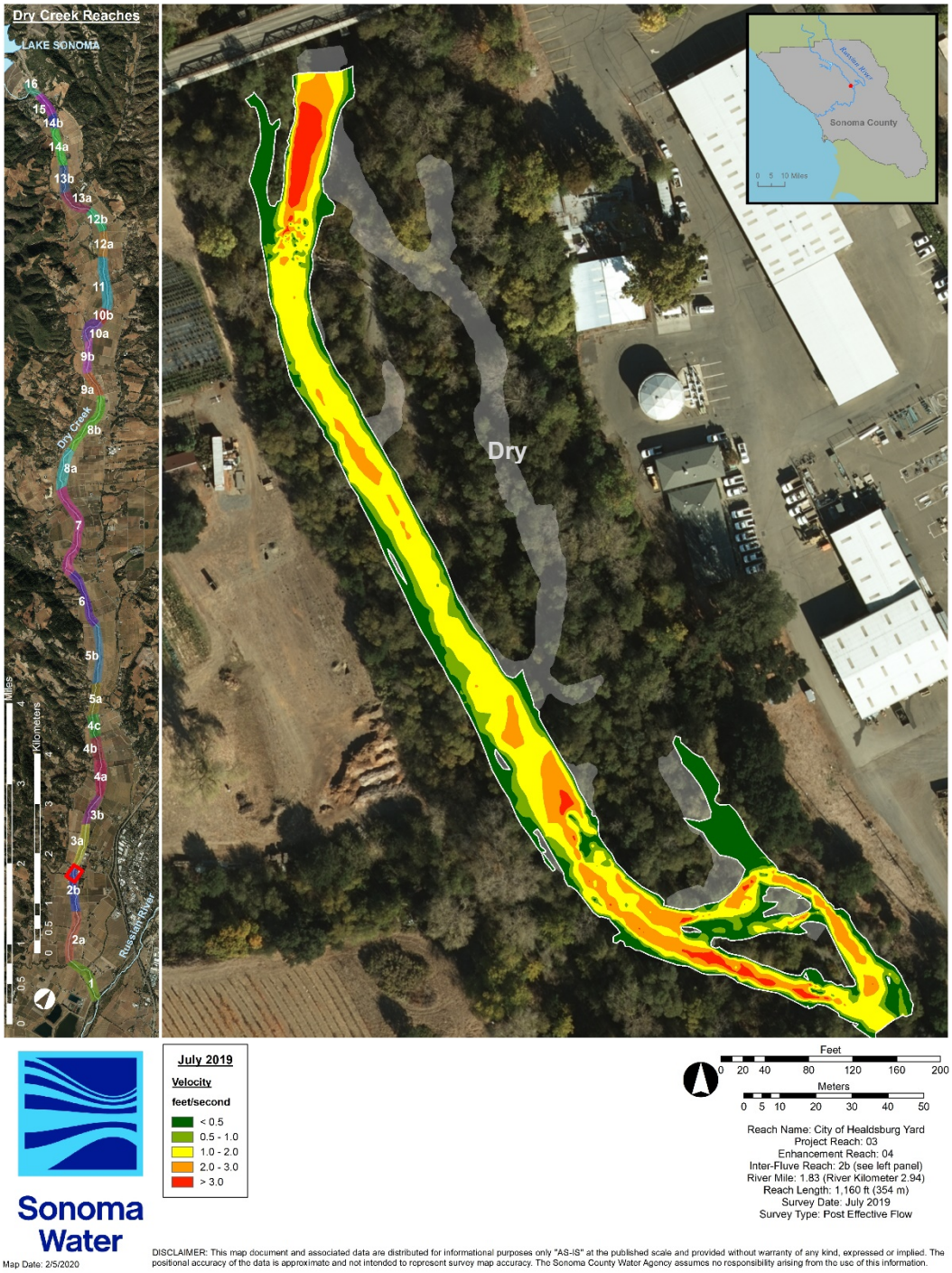

Figure 86. Measured water velocity within the City of Healdsburg Yard enhancement reach, July 2019.

Figure 87. Optimal water velocity for fry and parr (< 0.5 ft/s) within the City of Healdsburg Yard enhancement reach, July 2019.

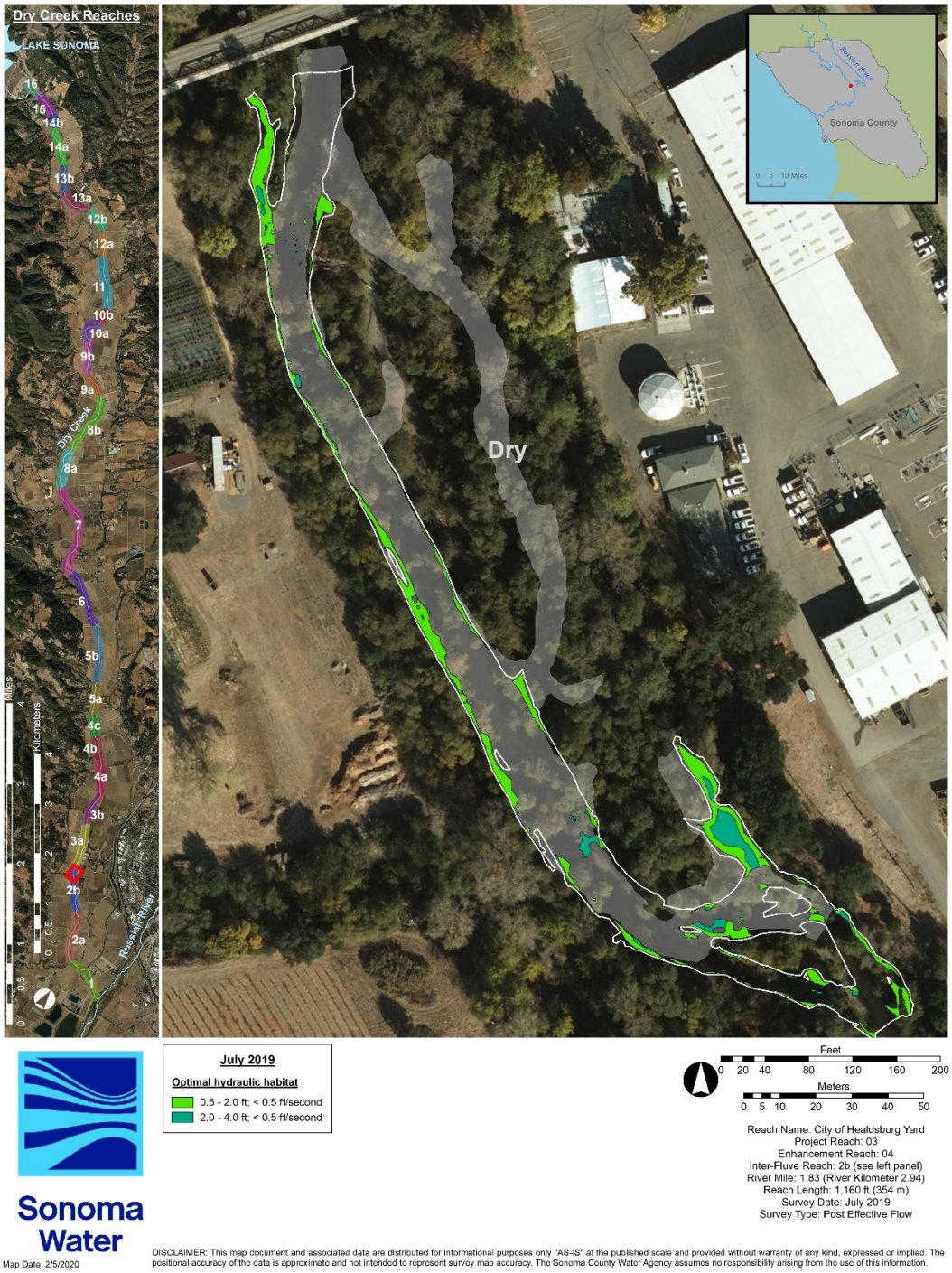

Figure 88. Optimal hydraulic habitat for fry (<0.5 ft/s, 0.5-2.0 ft) and parr (<0.5 ft/s, 2.0-4.0 ft) within the City of Healdsburg Yard enhancement reach, July 2019.

Habitat Types and Shelter Values

Table 51. Habitat, types, shelter value, percent cover, and shelter score for habitat units within the City of Healdsburg Yard enhancement reach, July 2019.

Post-effective flow (July 2019)				
Habitat Unit #	**Habitat Type**	**Shelter Value**	**Percent Cover**	**Shelter Score**
HU01	Pool	3	30	90
HU02	Riffle	1	20	20
HU03	Flatwater	3	20	60
HU04	Riffle	0	0	0
HU05	Flatwater	1	5	5
HU06	Pool	2	30	60
HU07	Flatwater	2	40	80
HU08	Riffle	3	30	90
HU09	Flatwater	2	25	50
HU10	Pool	3	35	105
HU11	Riffle	1	5	5
HU12	Alcove	3	40	120
HU13	Flatwater	1	15	15
HU14	Flatwater	3	15	45
HU15	Flatwater	3	10	30
HU16	Flatwater	3	35	105
HU17	Pool	3	60	180
HU18	Riffle	1	5	5
HU19	Pool	1	10	10
Pool: riffle	**5:5 (1.00)**			**Avg = 57**

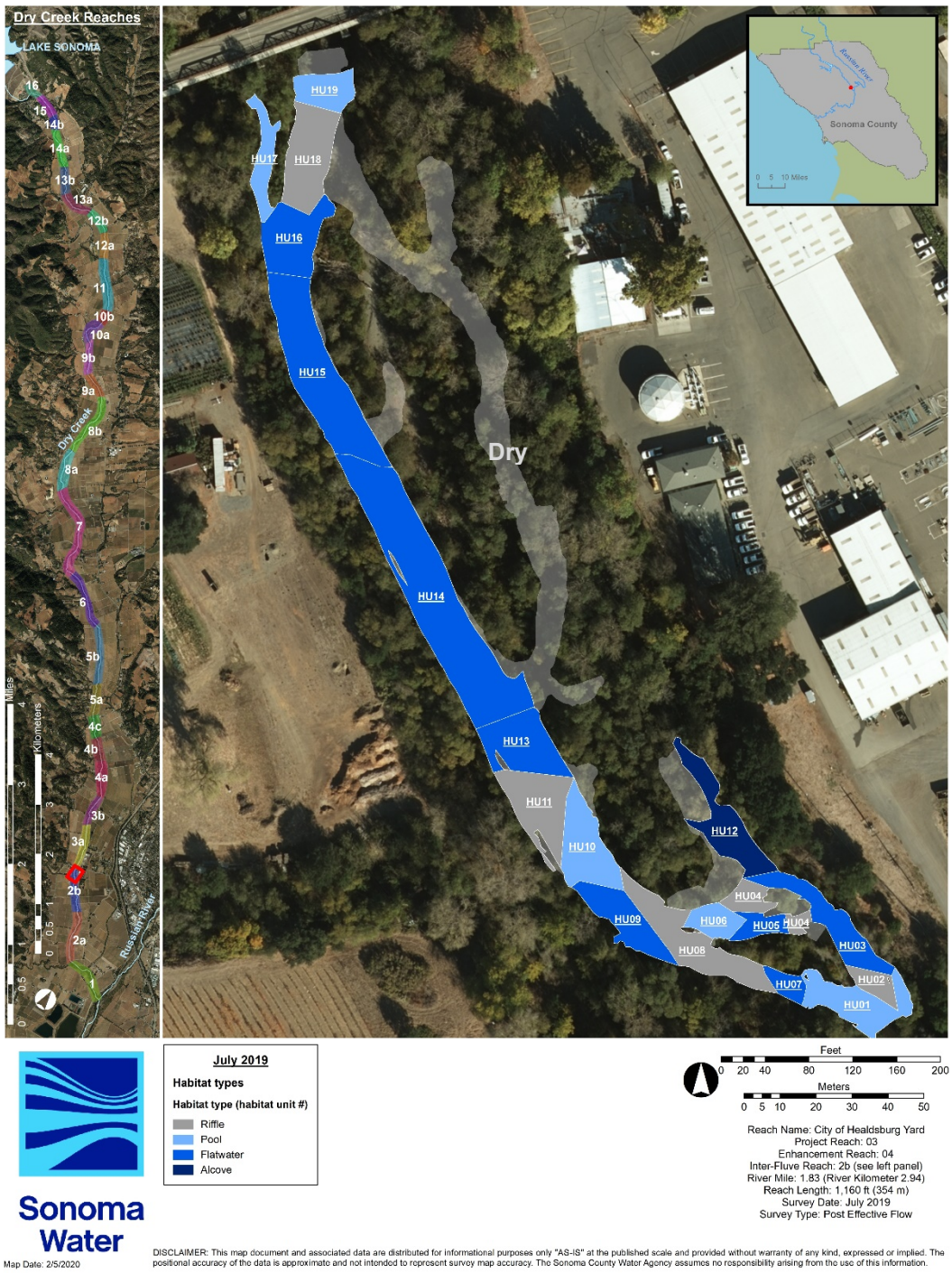

Figure 89. Habitat unit number and type within the City of Healdsburg Yard enhancement reach, July 2019.

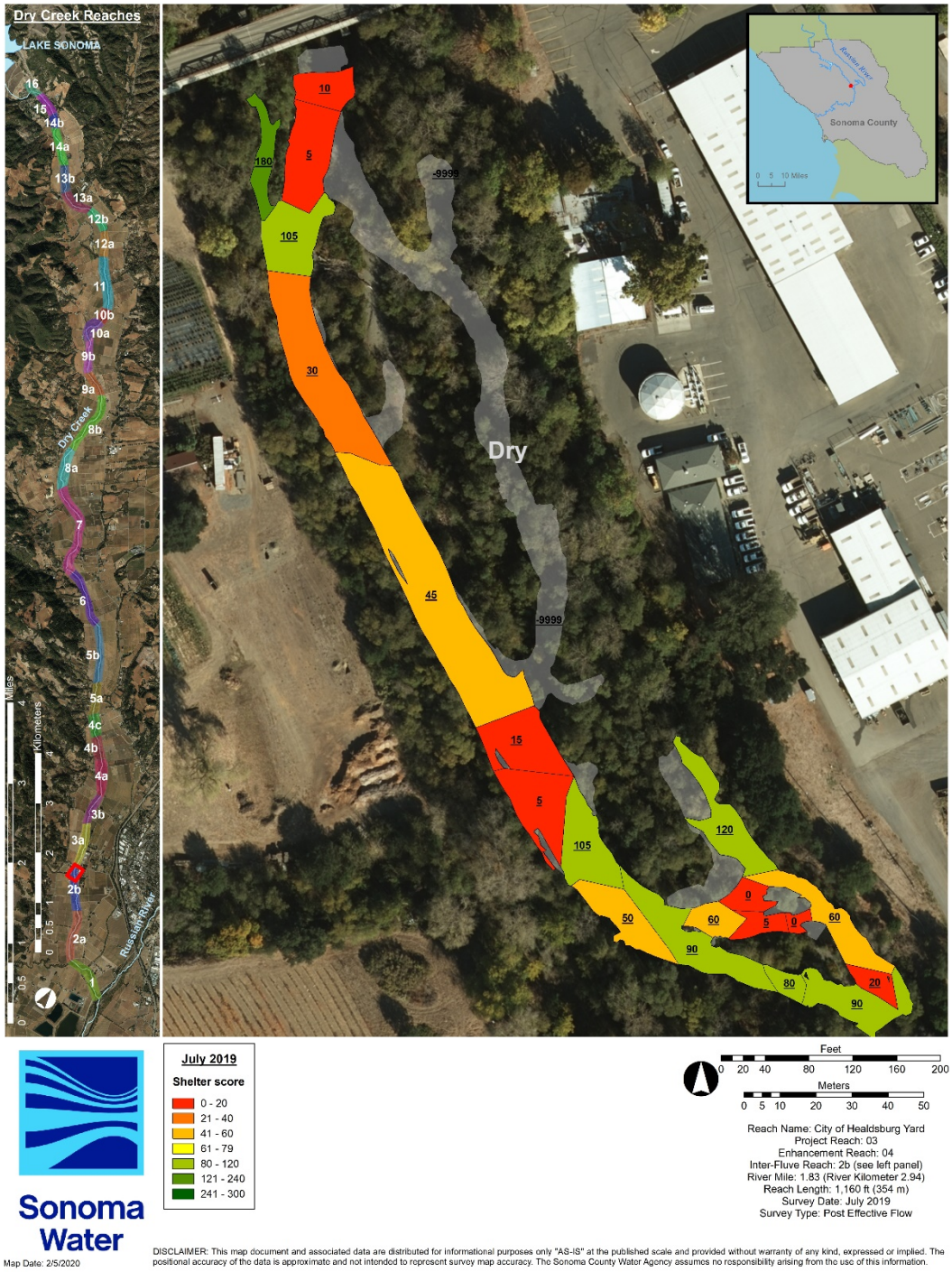

Figure 90. Habitat unit shelter scores within the City of Healdsburg Yard enhancement reach, July 2019.

Feature, Habitat Unit, Site, and Reach Ratings

Table 52. Post-enhancement feature ratings for the City of Healdsburg Yard enhancement reach, July 2019.

	Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	Enhancement Reach	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	Colloquial Name	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH
	mmddyy	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019
	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 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	S1-05.1	S1-05.2	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	LWS	LWS	HW2	HW1	LW	LW	HW1	TT	LWS	TT	HW1	TT	TT	TT	HW1	HW1	HW2	TT
	Habitat Unit	HU01_D	HU10	HU10	HU10	HU01_D	HU01_D	HU11	HU01_U	HU13	HU01_U	HU01_D	HU01_U	HU01_U	HU01_U	HU01_D	HU01_D	HU01_D	HU01_U
	Habitat Type	Dry	Pool	Pool	Pool	Dry	Dry	Riffle	Unknown	Flatwater	Unknown	Dry	Unknown	Unknown	Unknown	Dry	Dry	Dry	Unknown
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	UNKN	GOOD	GOOD	GOOD	UNKN	UNKN	UNKN	UNKN	GOOD	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN
5a	Are problems with the **feature** visible?	YES	NO	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES
6a	Is the **feature** still in its original location?	YES	YES	YES	YES	UNK	UNK	UNK	NO	YES	NO	UNK	NO	NO	NO	UNK	UNK	UNK	NO
6b	Is the **feature** still in its original position?	NO	YES	YES	YES	UNK	UNK	UNK	NO	YES	NO	UNK	NO	NO	NO	UNK	UNK	UNK	NO
6d	Is the **feature** still in its original orientaton?	YES	YES	YES	YES	UNK	UNK	UNK	NO	YES	NO	UNK	NO	NO	NO	UNK	UNK	UNK	NO
8.	If an objective, did the **feature** create the targeted instream habitat type?	NO	YES	YES	YES	NO	NO	NO	NO	YES	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	NO	NO	NO	YES	YES	YES	NO	NO	NO	YES	NO	NO	NO	YES	YES	YES	NO
17a	If an objective, did the **feature** increase instream shelter rating?	NO	YES	YES	YES	NO	NO	NO	NO	YES	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	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	YES	YES	YES	NO	NO	NO	YES	YES	YES	NO	YES	YES	YES	NO	NO	NO	YES
25.	Did the **feature** achieve the targeted velocity?	NO	YES	YES	YES	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO
	PROJECT FEATURE NUMBER	**S1-01**	**S1-02**	**S1-03**	**S1-04**	**S1-05.1**	**S1-05.2**	**S1-06**	**S1-07**	**S1-08**	**S1-09**	**S1-10**	**S1-11**	**S1-12**	**S1-13**	**S1-14**	**S1-15**	**S1-16**	**S1-17**
4.	Structural condition of **feature**: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	0	4	4	4	0	0	0	0	4	0	0	0	0	0	0	0	0	0
5a	Are problems with the **feature** visible? (NO = 1 pt, YES = 0 pt)	0	1	1	1	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)	1	1	1	1	0	0	0	0	1	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	1	1	1	0	0	0	0	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	1	0	0	0	0	1	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	1	1	1	0	0	0	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	1	1	1	0	0	0	1	1	1	0	1	1	1	0	0	0	1
17a	If an objective, did the **feature** increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	0	1	1	1	0	0	0	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	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	1	1	1	0	0	0	1	1	1	0	1	1	1	0	0	0	1
25.	Did the **feature** achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	0	1	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	PROJECT FEATURE NUMBER	**S1-01**	**S1-02**	**S1-03**	**S1-04**	**S1-05.1**	**S1-05.2**	**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 RATING	Feature quantitative rating out of 15	2	13	13	14	0	0	0	2	13	2	0	2	2	2	0	0	0	2
	Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)	Fail	Excellent	Excellent	Excellent	Fail	Fail	Fail	Not rated	Excellent	Not rated	Fail	Not rated	Not rated	Not rated	Fail	Fail	Fail	Not rated

Table 52. Post-enhancement feature ratings for the City of Healdsburg Yard enhancement reach, July 2019.

	Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	Enhancement Reach	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	Colloquial Name	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH
	mmddyy	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019
	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	3	3	3	3
	Project Site Type	MainChan	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	SideChan	SideChan	SideChan	SideChan
	PROJECT FEATURE NUMBER	S1-18	S2-01	S2-02	S2-03	S2-04.1	S2-04.2	S2-05	S2-06	S2-07	S2-08	S2-09	S2-10	S2-11	S2-12	S3-01	S3-02	S3-03.1	S3-03.2
	Feature Type Code	BF	HW2	HW1	HW2	HW1	HW1	HW1	HW1	HW2	HW1	HW1	HW1	HW2	LW	HW1	HW1	PW	PW
	Habitat Unit	HU16	HU03_2	HU02_D	HU02_D	HU12	HU12	HU02_D	HU12	HU12	HU02_D	HU12	HU02_D	HU12	HU12	HU03_D	HU03_D	HU21_W	HU21_W
	Habitat Type	Flatwater	Flatwater	Dry	Dry	Alcove	Alcove	Dry	Alcove	Alcove	Dry	Alcove	Dry	Alcove	Alcove	Dry	Dry	Pond	Pond
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	EXCL	GOOD	UNKN	UNKN	FAIR	FAIR	UNKN	GOOD	UNKN	UNKN	GOOD	UNKN	POOR	GOOD	UNKN	UNKN	POOR	POOR
5a	Are problems with the **feature** visible?	NO	NO	YES	YES	YES	YES	YES	NO	YES	YES	NO	YES	YES	NO	YES	YES	YES	YES
6a	Is the **feature** still in its original location?	YES	YES	UNK	YES	YES	YES	UNK	YES	YES	UNK	YES	UNK	YES	YES	YES	UNK	YES	YES
6b	Is the **feature** still in its original position?	YES	YES	NO	NO	NO	NO	NO	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO
6d	Is the **feature** still in its original orientaton?	YES	YES	UNK	UNK	YES	YES	UNK	YES	YES	UNK	YES	UNK	YES	YES	UNK	UNK	UNK	UNK
8.	If an objective, did the **feature** create the targeted instream habitat type?	YES	YES	NO	NO	YES	YES	NO	YES	NO	NO	YES	NO	NO	YES	NO	NO	NO	NO
9.	Were there any unintended effects by the **feature** on the habitat type? If Y, comment.	NO	NO	YES	YES	NO	NO	YES	NO	YES	YES	NO	YES	YES	NO	YES	YES	YES	YES
17a	If an objective, did the **feature** increase instream shelter rating?	YES	YES	NO	NO	YES	YES	NO	YES	YES	NO	YES	NO	YES	YES	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
21a	If an objective, did the **feature** lead to the targeted channel conditions?	YES	YES	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
25.	Did the **feature** achieve the targeted velocity?	YES	YES	NO	NO	YES	YES	NO	YES	YES	NO	YES	NO	YES	YES	NO	NO	NO	NO
	PROJECT FEATURE NUMBER	**S1-18**	**S2-01**	**S2-02**	**S2-03**	**S2-04.1**	**S2-04.2**	**S2-05**	**S2-06**	**S2-07**	**S2-08**	**S2-09**	**S2-10**	**S2-11**	**S2-12**	**S3-01**	**S3-02**	**S3-03.1**	**S3-03.2**
4.	Structural condition of **feature**: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	5	4	0	0	3	3	0	4	0	0	4	0	2	4	0	0	2	2
5a	Are problems with the **feature** visible? (NO = 1 pt, YES = 0 pt)	1	1	0	0	0	0	0	1	0	0	1	0	0	1	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	0	1	1	0	1	0	1	1	1	0	1	1
6b	Is the **feature** still in its original position? (YES = 1 pt, NO = 0 pt)	1	1	0	0	0	0	0	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	0	0	1	1	0	1	1	0	1	0	1	1	0	0	0	0
8.	If an objective, did the **feature** create the targeted instream habitat type? (YES = 1 pt, NO = 0 pt)	1	1	0	0	1	1	0	1	0	0	1	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)	1	1	0	0	1	1	0	1	0	0	1	0	0	1	0	0	0	0
17a	If an objective, did the **feature** increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	1	1	0	0	1	1	0	1	1	0	1	0	1	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)	1	1	0	0	0	0	0	1	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	1	0	0	1	1	0	1	1	0	1	0	1	1	0	0	0	0
	PROJECT FEATURE NUMBER	**S1-18**	**S2-01**	**S2-02**	**S2-03**	**S2-04.1**	**S2-04.2**	**S2-05**	**S2-06**	**S2-07**	**S2-08**	**S2-09**	**S2-10**	**S2-11**	**S2-12**	**S3-01**	**S3-02**	**S3-03.1**	**S3-03.2**
FEATURE RATING	Feature quantitative rating out of 15	14	13	0	1	9	9	0	13	5	0	11	0	6	11	1	0	3	3
	Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)	Excellent	Excellent	Fail	Fail	Good	Good	Fail	Excellent	Poor	Fail	Good	Fail	Fair	Good	Fail	Fail	Poor	Poor

Table 52. Post-enhancement feature ratings for the City of Healdsburg Yard enhancement reach, July 2019.

	Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	Enhancement Reach	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	Colloquial Name	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH
	mmddyy	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019
	Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
	PROJECT SITE NUMBER	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
	PROJECT FEATURE NUMBER	S3-03.3	S3-04	S3-05	S3-06	S3-07	S3-08.1	S3-08.2	S3-09	S3-10	S3-11	S3-12.1	S3-12.2	S3-12.3	S3-13	S3-14	S3-15	S3-16	S3-17
	Feature Type Code	PW	HW1	LWS	R	HW1	HW2	HW2	HW1	HW1	HW1	PW	PW	PW	R	HW2	TT	LW	HW1
	Habitat Unit	HU21_W	HU21_W	HU21_W	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	Pond	Pond	Pond	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	FAIR	FAIL	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	FAIL	POOR	FAIL	FAIL	POOR
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	UNK	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	UNK	UNK	YES
6b	Is the **feature** still in its original position?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
6d	Is the **feature** still in its original orientaton?	UNK	UNK	YES	NO	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	NO	NO	NO	NO	NO
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 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	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	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	**S3-03.3**	**S3-04**	**S3-05**	**S3-06**	**S3-07**	**S3-08.1**	**S3-08.2**	**S3-09**	**S3-10**	**S3-11**	**S3-12.1**	**S3-12.2**	**S3-12.3**	**S3-13**	**S3-14**	**S3-15**	**S3-16**	**S3-17**
4.	Structural condition of **feature**: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	2	0	3	1	0	0	0	0	0	0	0	0	0	1	2	1	1	2
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	1	0	1	1	1	1	1	1	1	1	1	0	1	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	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)	0	0	1	0	0	0	0	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
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 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	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	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	**S3-03.3**	**S3-04**	**S3-05**	**S3-06**	**S3-07**	**S3-08.1**	**S3-08.2**	**S3-09**	**S3-10**	**S3-11**	**S3-12.1**	**S3-12.2**	**S3-12.3**	**S3-13**	**S3-14**	**S3-15**	**S3-16**	**S3-17**
FEATURE RATING	Feature quantitative rating out of 15	3	0	6	1	1	1	1	1	1	1	1	1	1	1	3	1	1	3
	Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)	Poor	Fail	Fair	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Poor	Fail	Fail	Poor

Table 52. Post-enhancement feature ratings for the City of Healdsburg Yard enhancement reach, July 2019.

	Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	Enhancement Reach	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	Colloquial Name	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH
	mmddyy	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019
	Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
	PROJECT SITE NUMBER	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4
	Project Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SC Alcove	SC Alcove	SC Alcove	SC Alcove	SC Alcove	SC Alcove	SC Alcove
	PROJECT FEATURE NUMBER	S3-18.1	S3-18.2	S3-18.3	S3-19	S3-20	S3-21	S3-22	S3-23.1	S3-23.2	S3-23.3	S3-24	S4-01	S4-02	S4-03	S4-04	S4-05	S4-06	S4-07
	Feature Type Code	PW	PW	PW	R	HW1	HW2	LWS	PW	PW	PW	ALJ	HW1	HW2	LW	HW1	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	HU16_2	HU04_D	HU04_D	HU04_D	HU20_W	HU20_W	HU20_W	HU20_W
	Habitat Type	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Flatwater	Dry	Dry	Dry	Pond	Pond	Pond	Pond
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	POOR	POOR	POOR	FAIL	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	GOOD	UNKN	UNKN	UNKN	FAIR	FAIR	FAIR	FAIR
5a	Are problems with the **feature** visible?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES
6a	Is the **feature** still in its original location?	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	UNK	UNK	UNK	YES	YES	YES	YES
6b	Is the **feature** still in its original position?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	UNK	UNK	NO	NO	NO	NO	NO
6d	Is the **feature** still in its original orientaton?	NO	NO	NO	NO	UNK	UNK	UNK	UNK	UNK	UNK	YES	UNK	UNK	UNK	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	YES	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 shelter rating?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	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	YES	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	YES	NO	NO	NO	NO	NO	NO	NO
	PROJECT FEATURE NUMBER	**S3-18.1**	**S3-18.2**	**S3-18.3**	**S3-19**	**S3-20**	**S3-21**	**S3-22**	**S3-23.1**	**S3-23.2**	**S3-23.3**	**S3-24**	**S4-01**	**S4-02**	**S4-03**	**S4-04**	**S4-05**	**S4-06**	**S4-07**
4.	Structural condition of **feature**: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	2	2	2	1	0	0	0	0	0	0	4	0	0	0	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	1	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	0	1	1	1	1	1	1	1	0	0	0	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	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	0	0	0	1	0	0	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	0	0	0	0	0	0	1	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 shelter rating? (YES = 1 pt, NO = 0 pt)	0	0	0	0	0	0	0	0	0	0	1	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	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)	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	1	0	0	0	0	0	0	0
	PROJECT FEATURE NUMBER	**S3-18.1**	**S3-18.2**	**S3-18.3**	**S3-19**	**S3-20**	**S3-21**	**S3-22**	**S3-23.1**	**S3-23.2**	**S3-23.3**	**S3-24**	**S4-01**	**S4-02**	**S4-03**	**S4-04**	**S4-05**	**S4-06**	**S4-07**
FEATURE RATING	Feature quantitative rating out of 15	3	3	3	1	1	1	1	1	1	1	11	0	0	0	5	5	5	5
	Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)	Poor	Poor	Poor	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Good	Fail	Fail	Fail	Poor	Poor	Poor	Poor

Table 52. Post-enhancement feature ratings for the City of Healdsburg Yard enhancement reach, July 2019.

	Project Reach	3	3	3
	Enhancement Reach	4	4	4
	Colloquial Name	CH	CH	CH
	mmddyy	71019	71019	71019
	Survey Type	PEF	PEF	PEF
	PROJECT SITE NUMBER	5	5	5
	Project Site Type	BankStab	BankStab	BankStab
	PROJECT FEATURE NUMBER	S5-01	S5-02	S5-03
	Feature Type Code	HW1	HW1	HW1
	Habitat Unit	HU17	HU17	HU17
	Habitat Type	Pool	Pool	Pool
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	GOOD	GOOD
5a	Are problems with the **feature** visible?	NO	NO	NO
6a	Is the **feature** still in its original location?	YES	YES	YES
6b	Is the **feature** still in its original position?	YES	YES	YES
6d	Is the **feature** still in its original orientaton?	YES	YES	YES
8.	If an objective, did the **feature** create the targeted instream habitat type?	YES	YES	YES
9.	Were there any unintended effects by the **feature** on the habitat type? If Y, comment.	NO	NO	NO
17a	If an objective, did the **feature** increase instream shelter rating?	YES	YES	YES
19a	If an objective, did the **feature** increase LWD count in the **habitat unit**?	NO	NO	NO
21a	If an objective, did the **feature** lead to the targeted channel conditions?	YES	YES	YES
25.	Did the **feature** achieve the targeted velocity?	YES	YES	YES
	PROJECT FEATURE NUMBER	**S5-01**	**S5-02**	**S5-03**
4.	Structural condition of **feature**: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	4	4	4
5a	Are problems with the **feature** visible? (NO = 1 pt, YES = 0 pt)	1	1	1
6a	Is the **feature** still in its original location? (YES = 1 pt, NO = 0 pt)	1	1	1
6b	Is the **feature** still in its original position? (YES = 1 pt, NO = 0 pt)	1	1	1
6d	Is the **feature** still in its original orientaton? (YES = 1 pt, NO = 0 pt)	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
9.	Were there any unintended effects by the **feature** on the habitat type? (NO = 1 pt, YES = 0 pt)	1	1	1
17a	If an objective, did the **feature** increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	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
21a	If an objective, did the **feature** lead to the targeted channel conditions? (YES = 1 pt, NO = 0 pt)	1	1	1
25.	Did the **feature** achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	1	1	1
	PROJECT FEATURE NUMBER	**S5-01**	**S5-02**	**S5-03**
FEATURE RATING	Feature quantitative rating out of 15	13	13	13
	Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)	Excellent	Excellent	Excellent

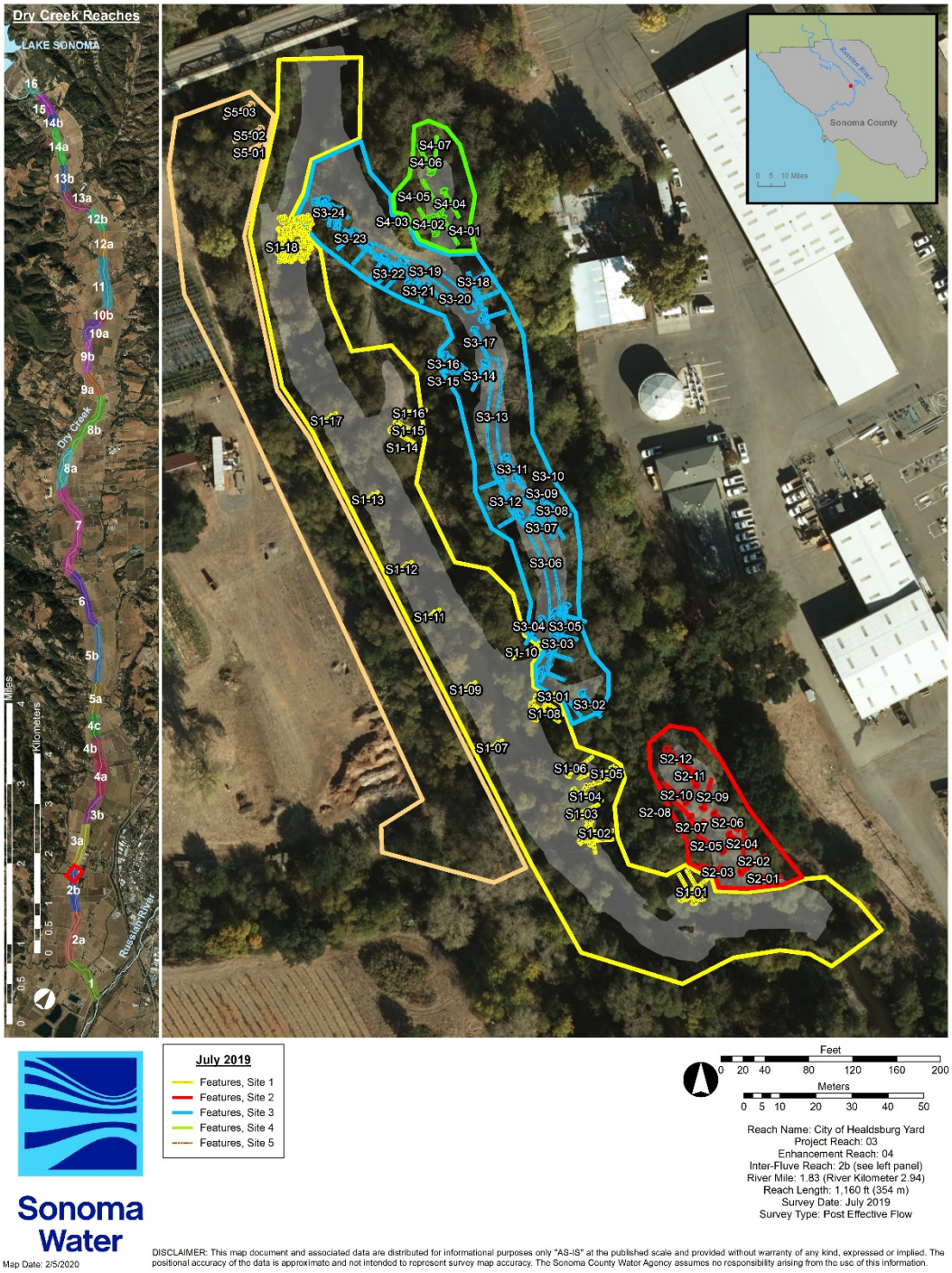

Figure 91. Enhancement sites and features within the City of Healdsburg Yard enhancement reach, July 2019.

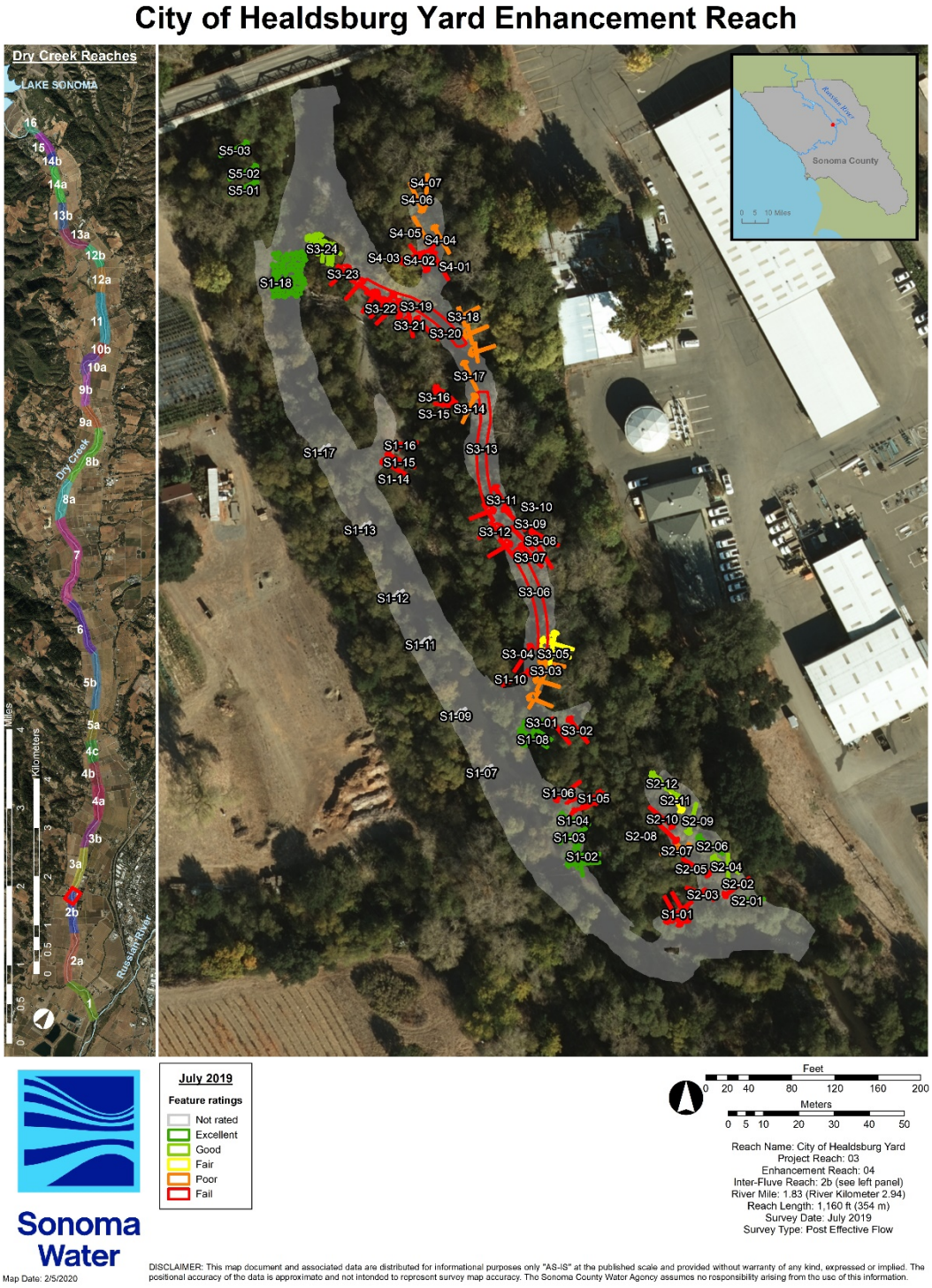

Figure 92. Feature ratings for the City of Healdsburg Yard enhancement reach, July 2019.

Table 53. Post-enhancement habitat unit ratings for the City of Healdsburg Yard enhancement reach, July 2019.

	Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	Enhancement Reach	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	Colloquial Name	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH
	mmddyy	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019
	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**	**HU03_2**	**HU04**	**HU05**	**HU06**	**HU07**	**HU08**	**HU09**	**HU10**	**HU11**	**HU12**	**HU13**	**HU14**	**HU01_D**	**HU02_D**	**HU03_D**
	Habitat Type	Pool	Riffle	Flatwater	Flatwater	Riffle	Flatwater	Pool	Flatwater	Riffle	Flatwater	Pool	Riffle	Alcove	Flatwater	Flatwater	Dry	Dry	Dry
	PROJECT SITE NUMBER	**1**	**1**	**1**	**2**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**2**	**1**	**1**	**1**	**2**	**3**
	Project Site Type	MainChan	MainChan	MainChan	MC Alcove	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MC Alcove	MainChan	MainChan	MainChan	MC Alcove	SideChan
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	49%	32%	80%	80%	33%	33%	45%	66%	80%	80%	61%	64%	47%	83%	64%	0%	0%	0%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	39%	0%	4%	4%	0%	0%	39%	23%	4%	8%	31%	0%	31%	7%	28%	0%	0%	0%
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	3	1	3	3	0	1	2	2	3	2	3	1	3	1	3	0	0	0
15.	Percent of **habitat unit** covered by shelter: %	30	20	20	20	0	5	30	40	30	25	35	5	40	15	15	0	0	0
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	90	20	60	60	0	5	60	80	90	50	105	5	120	15	45	0	0	0
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	31%	25%	23%	23%	27%	50%	45%	17%	12%	20%	19%	24%	95%	18%	22%	0%	0%	0%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	18%	2%	11%	11%	2%	14%	19%	6%	3%	9%	7%	9%	44%	9%	15%	0%	0%	0%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	1%	0%	2%	2%	0%	0%	15%	0%	0%	2%	7%	0%	29%	0%	0%	0%	0%	0%
	HABITAT UNIT NUMBER	**HU01**	**HU02**	**HU03**	**HU03_2**	**HU04**	**HU05**	**HU06**	**HU07**	**HU08**	**HU09**	**HU10**	**HU11**	**HU12**	**HU13**	**HU14**	**HU01_D**	**HU02_D**	**HU03_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)	4	3	4	4	3	3	4	4	4	4	4	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)	3	0	0	0	0	0	3	2	0	0	3	0	3	0	2	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	0	3	4	4	5	4	5	3	5	3	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)	2	2	2	2	0	0	2	3	2	2	2	0	3	1	1	0	0	0
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	3	0	2	2	0	0	2	3	3	1	4	0	4	0	1	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)	3	2	2	2	2	4	4	1	1	2	1	2	4	1	2	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	0	1	1	0	1	1	0	0	0	0	0	4	0	1	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	1	0	0	0	0	0	2	0	0	0	0	0
	HABITAT UNIT NUMBER	**HU01**	**HU02**	**HU03**	**HU03_2**	**HU04**	**HU05**	**HU06**	**HU07**	**HU08**	**HU09**	**HU10**	**HU11**	**HU12**	**HU13**	**HU14**	**HU01_D**	**HU02_D**	**HU03_D**
HABITAT UNIT RATING	Habitat unit quantitative rating (out of 35)	21	10	16	16	5	11	21	17	15	13	19	9	29	9	16	0	0	0
	Habitat unit qualitative rating: Excellent (>=28), Good (>=21), Fair(>=14), Poor (>=7), Fail (<7)	Good	Poor	Fair	Fair	Fail	Poor	Good	Fair	Fair	Poor	Fair	Poor	Excellent	Poor	Fair	Fail	Fail	Fail

Table 53. Post-enhancement habitat unit ratings for the City of Healdsburg Yard enhancement reach, July 2019.

	Project Reach	3	3	3	3	3	3	3	3	3	3
	Enhancement Reach	4	4	4	4	4	4	4	4	4	4
	Colloquial Name	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH
	mmddyy	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019
	Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
	HABITAT UNIT NUMBER	**HU04_D**	**HU15**	**HU16**	**HU17**	**HU18**	**HU19**	**HU20_W**	**HU21_W**	**HU16_2**	**HU01_U**
	Habitat Type	Dry	Flatwater	Flatwater	Pool	Riffle	Pool	Pond	Pond	Flatwater	Unknown
	PROJECT SITE NUMBER	**4**	**1**	**1**	**5**	**1**	**1**	**4**	**3**	**3**	**1**
	Project Site Type	SC Alcove	MainChan	MainChan	BankStab	MainChan	MainChan	SC Alcove	SideChan	SideChan	MainChan
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	0%	51%	74%	63%	78%	68%	0%	0%	74%	0%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	0%	42%	15%	7%	0%	0%	0%	0%	15%	0%
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	0	3	3	3	1	1	0	0	3	0
15.	Percent of **habitat unit** covered by shelter: %	0	10	35	60	5	10	0	0	35	0
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	0	30	105	180	5	10	0	0	105	0
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	0%	14%	27%	100%	7%	14%	0%	0%	27%	0%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	0%	7%	18%	63%	0%	0%	0%	0%	18%	0%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	1%	1%	7%	0%	0%	0%	0%	1%	0%
	HABITAT UNIT NUMBER	**HU04_D**	**HU15**	**HU16**	**HU17**	**HU18**	**HU19**	**HU20_W**	**HU21_W**	**HU16_2**	**HU01_U**
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	4	0	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)	0	4	1	0	0	0	0	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)	0	5	5	5	3	3	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)	0	1	2	4	0	1	0	0	2	0
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	0	0	4	5	0	0	0	0	4	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	1	2	4	0	1	0	0	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)	0	0	1	4	0	0	0	0	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	0	0	0	0
	HABITAT UNIT NUMBER	**HU04_D**	**HU15**	**HU16**	**HU17**	**HU18**	**HU19**	**HU20_W**	**HU21_W**	**HU16_2**	**HU01_U**
HABITAT UNIT RATING	Habitat unit quantitative rating (out of 35)	0	15	19	26	7	9	0	0	19	0
	Habitat unit qualitative rating: Excellent (>=28), Good (>=21), Fair(>=14), Poor (>=7), Fail (<7)	Fail	Fair	Fair	Good	Poor	Poor	Fail	Fail	Fair	Not rated

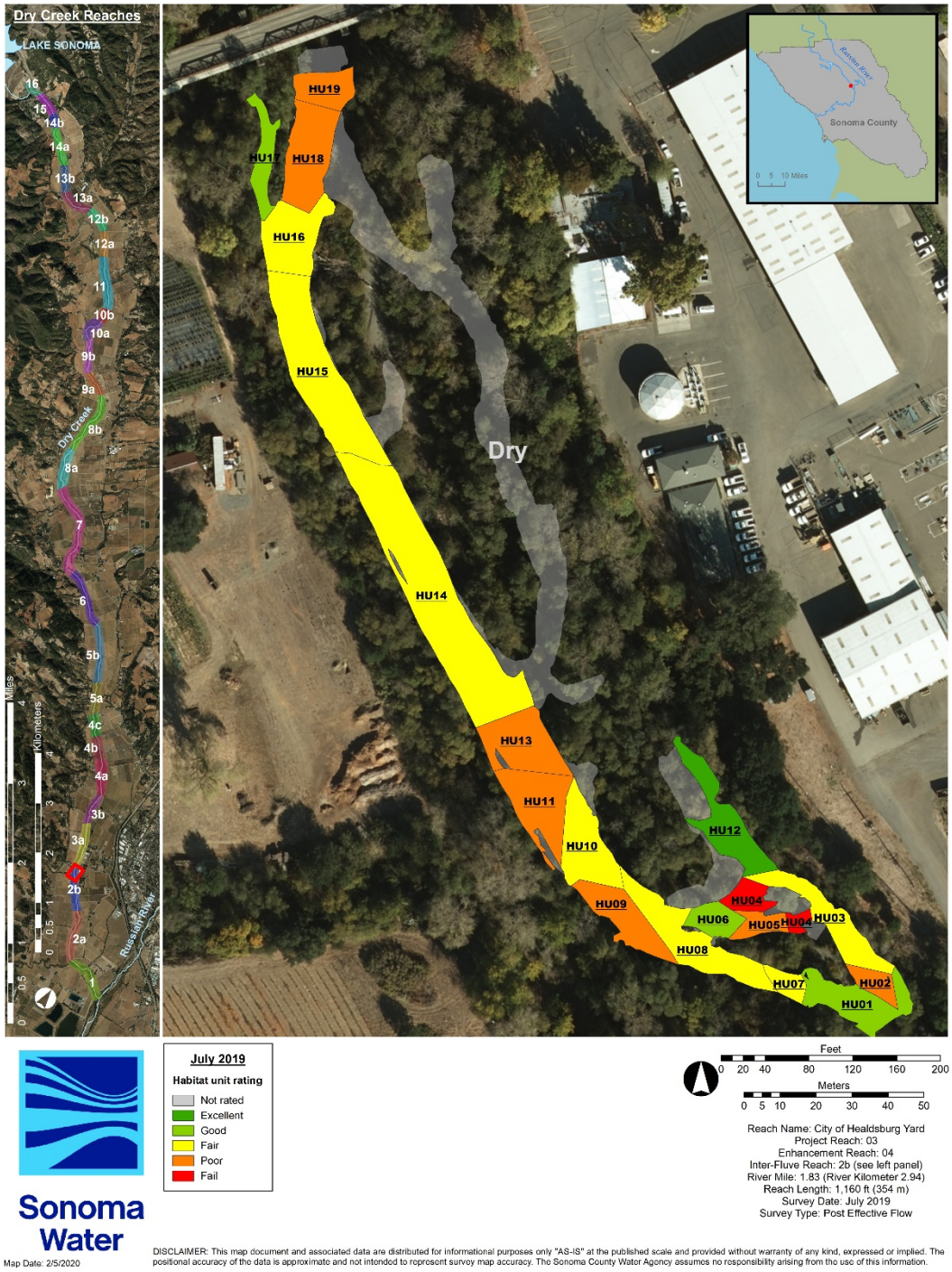

Figure 93. Habitat unit ratings for the City of Healdsburg Yard enhancement reach, July 2019.

Table 54. Post-enhancement average feature, average habitat unit, site, and reach ratings (rounded to the nearest whole number) for the City of Healdsburg Yard enhancement reach, July 2019.

	Project Reach	3	3	3	3	3
	Enhancement Reach	4	4	4	4	4
	ENHANCEMENT REACH NAME	**CH**	**CH**	**CH**	**CH**	**CH**
	mmddyy	71019	71019	71019	71019	71019
	Survey Type	PEF	PEF	PEF	PEF	PEF
	PROJECT SITE NUMBER	**1**	**2**	**3**	**4**	**5**
	Project Site Type	MainChan	MC Alcove	SideChan	SC Alcove	BankStab
	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)	6	6	2	3	13
	Site average feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3), Not rated (not used to rate site)	Poor	Poor	Fail	Fail	Excellent
	PROJECT SITE NUMBER	1	2	3	4	5
SITE AVERAGE HABITAT UNIT RATING	Site average habitat unit quantitative rating (out of 35; bold indicates excluded from site rating)	14	23	6	0	26
	Site average qualitative rating Excellent (>=28), Good (>=21), Fair(>=14), Poor (>=7), Fail (<7), Not rated (not used to rate site)	Poor	Good	Fail	Fail	Good
	PROJECT SITE NUMBER	**1**	**2**	**3**	**4**	**5**
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	28	8	3	39
	Site qualitative rating: Excellent (>=40), Good (>=30), Fair(>=20), Poor (>=10), Fail (<10)	Poor	Fair	Fail	Fail	Good
	ENHANCEMENT REACH NAME	**CH**				
ENHANCEMENT REACH RATING	Enhancement reach quantitative rating (average of site ratings) (out of 50)	20				
	Enhancement reach qualitative rating: Excellent (>=40), Good (>=30), Fair(>=20), Poor (>=10), Fail (<10)	Poor				

Figure 94. Post enhancement site ratings for the City of Healdsburg Yard enhancement reach, July 2019.

Figure 95. Post-enhancement reach rating for the City of Healdsburg Yard enhancement reach, July 2019.

Feature and Habitat Unit Checklists

Table 55. Adaptive Management Plan targeted checklist (Site 1) for the City of Healdsburg Yard enhancement reach, July 2019.

	Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	Enhancement Reach	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	Colloquial Name	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH
	mmddyy	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019
	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 Site Type	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	S1-01	S1-02	S1-03	S1-04	S1-05.1
	Feature Type Code	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	LWS	LWS	HW2	HW1	LW
	Habitat Unit	HU01	HU02	HU03	HU04	HU05	HU06	HU07	HU08	HU09	HU14	HU19	HU15	HU18	HU01_D	HU10	HU10	HU10	HU01_D
	Habitat Type	Pool	Riffle	Flatwater	Riffle	Flatwater	Pool	Flatwater	Riffle	Flatwater	Flatwater	Pool	Flatwater	Riffle	Dry	Pool	Pool	Pool	Dry
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	UNKN	GOOD	GOOD	GOOD	UNKN
5a	Are problems with the **feature** visible?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	YES	NO	NO	NO	YES
6a	Is the **feature** still in its original location?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	YES	YES	YES	YES	UNK
6b	Is the **feature** still in its original position?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NO	YES	YES	YES	UNK
6d	Is the **feature** still in its original orientaton?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	YES	YES	YES	YES	UNK
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	NO	YES	YES	YES	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	YES	NO	NO	NO	YES
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	49%	32%	80%	33%	33%	45%	66%	80%	80%	64%	68%	51%	78%	0%	61%	61%	61%	0%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	39%	0%	4%	0%	0%	39%	23%	4%	8%	28%	0%	42%	0%	0%	31%	31%	31%	0%
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	3	1	3	0	1	2	2	3	2	3	1	3	1	0	3	3	3	0
15.	Percent of **habitat unit** covered by shelter: %	30	20	20	0	5	30	40	30	25	15	10	10	5	0	35	35	35	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	NO	YES	YES	YES	NO
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	90	20	60	0	5	60	80	90	50	45	10	30	5	0	105	105	105	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	NO	NO	NO	YES	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	NO	YES	YES	YES	NO
25.	Did the **feature** achieve the targeted velocity?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NO	YES	YES	YES	NO
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	31%	25%	23%	27%	50%	45%	17%	12%	20%	22%	14%	14%	7%	0%	19%	19%	19%	0%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	18%	2%	11%	2%	14%	19%	6%	3%	9%	15%	0%	7%	0%	0%	7%	7%	7%	0%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	1%	0%	2%	0%	0%	15%	0%	0%	2%	0%	0%	1%	0%	0%	7%	7%	7%	0%
	FEATURE NUMBER	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**S1-01**	**S1-02**	**S1-03**	**S1-04**	**S1-05.1**
	HABITAT UNIT NUMBER	**HU01**	**HU02**	**HU03**	**HU04**	**HU05**	**HU06**	**HU07**	**HU08**	**HU09**	**HU14**	**HU19**	**HU15**	**HU18**	**HU01_D**	**HU10**	**HU10**	**HU10**	**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	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**
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	4	4	4	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	1	1	1	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	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	0	0	0	0	0	1	1	1	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	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	0	0	0	0	0	1	1	1	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	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	3	3	4	4	4	4	4	4	4	4	0	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)	3	0	0	0	0	3	2	0	0	2	0	4	0	0	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	3	5	0	3	4	4	5	4	5	3	5	3	0	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)	2	2	2	0	0	2	3	2	2	1	1	1	0	0	2	2	2	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	1	1	1	0
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	3	0	2	0	0	2	3	3	1	1	0	0	0	0	4	4	4	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	1	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	1	1	1	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	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)	3	2	2	2	4	4	1	1	2	2	1	1	0	0	1	1	1	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	0	1	0	1	1	0	0	0	1	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	1	0	0	0	0	0	0	0	0	0	0	0	0

Table 55. Adaptive Management Plan targeted checklist (Site 1) for the City of Healdsburg Yard enhancement reach, July 2019.

	Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	Enhancement Reach	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	Colloquial Name	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH
	mmddyy	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019
	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	3	3	3	3
	Project Site Type	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	SideChan	SideChan	SideChan	SideChan
	Project Feature Number	S1-05.2	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	S3-01	S3-02	S3-03.1	S3-03.2
	Feature Type Code	LW	HW1	TT	LWS	TT	HW1	TT	TT	TT	HW1	HW1	HW2	TT	BF	HW1	HW1	PW	PW
	Habitat Unit	HU01_D	HU11	HU01_U	HU13	HU01_U	HU01_D	HU01_U	HU01_U	HU01_U	HU01_D	HU01_D	HU01_D	HU01_U	HU16	HU03_D	HU03_D	HU21_W	HU21_W
	Habitat Type	Dry	Riffle	Unknown	Flatwater	Unknown	Dry	Unknown	Unknown	Unknown	Dry	Dry	Dry	Unknown	Flatwater	Dry	Dry	Pond	Pond
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	UNKN	UNKN	UNKN	GOOD	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	EXCL	UNKN	UNKN	POOR	POOR
5a	Are problems with the **feature** visible?	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES
6a	Is the **feature** still in its original location?	UNK	UNK	NO	YES	NO	UNK	NO	NO	NO	UNK	UNK	UNK	NO	YES	YES	UNK	YES	YES
6b	Is the **feature** still in its original position?	UNK	UNK	NO	YES	NO	UNK	NO	NO	NO	UNK	UNK	UNK	NO	YES	NO	NO	NO	NO
6d	Is the **feature** still in its original orientaton?	UNK	UNK	NO	YES	NO	UNK	NO	NO	NO	UNK	UNK	UNK	NO	YES	UNK	UNK	UNK	UNK
8.	If an objective, did the **feature** create the targeted instream habitat type?	NO	NO	NO	YES	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	NO	NO	NO	YES	NO	NO	NO	YES	YES	YES	NO	NO	YES	YES	YES	YES
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	0%	64%	0%	83%	0%	0%	0%	0%	0%	0%	0%	0%	0%	74%	0%	0%	0%	0%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	0%	0%	0%	7%	0%	0%	0%	0%	0%	0%	0%	0%	0%	15%	0%	0%	0%	0%
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	0	1	0	1	0	0	0	0	0	0	0	0	0	3	0	0	0	0
15.	Percent of **habitat unit** covered by shelter: %	0	5	0	15	0	0	0	0	0	0	0	0	0	35	0	0	0	0
17a	If an objective, did the **feature** increase instream shelter rating?	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	0	5	0	15	0	0	0	0	0	0	0	0	0	105	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
21a	If an objective, did the **feature** lead to the targeted channel conditions?	NO	NO	YES	YES	YES	NO	YES	YES	YES	NO	NO	NO	YES	YES	NO	NO	NO	NO
25.	Did the **feature** achieve the targeted velocity?	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	0%	24%	0%	18%	0%	0%	0%	0%	0%	0%	0%	0%	0%	27%	0%	0%	0%	0%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	0%	9%	0%	9%	0%	0%	0%	0%	0%	0%	0%	0%	0%	18%	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%	1%	0%	0%	0%	0%
	FEATURE NUMBER	**S1-05.2**	**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**	**S3-01**	**S3-02**	**S3-03.1**	**S3-03.2**
	HABITAT UNIT NUMBER	**HU01_D**	**HU11**	**HU01_U**	**HU13**	**HU01_U**	**HU01_D**	**HU01_U**	**HU01_U**	**HU01_U**	**HU01_D**	**HU01_D**	**HU01_D**	**HU01_U**	**HU16**	**HU03_D**	**HU03_D**	**HU21_W**	**HU21_W**
	SITE NUMBER	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**3**	**3**	**3**	**3**
	ENHANCEMENT REACH NAME	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**
4.	Structural condition of **feature**: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	0	0	0	4	0	0	0	0	0	0	0	0	0	5	0	0	2	2
5a	Are problems with the **feature** visible? (NO = 1 pt, YES = 0 pt)	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
6a	Is the **feature** still in its original location? (YES = 1 pt, NO = 0 pt)	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1	0	1	1
6b	Is the **feature** still in its original position? (YES = 1 pt, NO = 0 pt)	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
6d	Is the **feature** still in its original orientaton? (YES = 1 pt, NO = 0 pt)	0	0	0	1	0	0	0	0	0	0	0	0	0	1	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	1	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	1	1	1	0	1	1	1	0	0	0	1	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	4	0	4	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	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)	0	3	0	3	0	0	0	0	0	0	0	0	0	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	1	0	0	0	0	0	0	0	0	0	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	1	0	0	0	0	0	0	0	0	0	1	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	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	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	1	1	1	0	1	1	1	0	0	0	1	1	0	0	0	0
25.	Did the **feature** achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	0	0	0	1	0	0	0	0	0	0	0	0	0	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	2	0	1	0	0	0	0	0	0	0	0	0	2	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	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	0	0	0	0	0	0	0	0	0	0

Table 55. Adaptive Management Plan targeted checklist (Site 1) for the City of Healdsburg Yard enhancement reach, July 2019.

	Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	Enhancement Reach	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	Colloquial Name	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH
	mmddyy	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019
	Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
	Project Site Number	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
	Project Feature Number	S3-03.3	S3-04	S3-05	S3-06	S3-07	S3-08.1	S3-08.2	S3-09	S3-10	S3-11	S3-12.1	S3-12.2	S3-12.3	S3-13	S3-14	S3-15	S3-16	S3-17
	Feature Type Code	PW	HW1	LWS	R	HW1	HW2	HW2	HW1	HW1	HW1	PW	PW	PW	R	HW2	TT	LW	HW1
	Habitat Unit	HU21_W	HU21_W	HU21_W	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	Pond	Pond	Pond	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	FAIR	FAIL	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	FAIL	POOR	FAIL	FAIL	POOR
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	UNK	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	UNK	UNK	YES
6b	Is the **feature** still in its original position?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
6d	Is the **feature** still in its original orientaton?	UNK	UNK	YES	NO	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	NO	NO	NO	NO	NO
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
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%
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
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
19a	If an objective, did the **feature** increase LWD count in the **habitat unit**?	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	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
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%
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%
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	**S3-03.3**	**S3-04**	**S3-05**	**S3-06**	**S3-07**	**S3-08.1**	**S3-08.2**	**S3-09**	**S3-10**	**S3-11**	**S3-12.1**	**S3-12.2**	**S3-12.3**	**S3-13**	**S3-14**	**S3-15**	**S3-16**	**S3-17**
	HABITAT UNIT NUMBER	**HU21_W**	**HU21_W**	**HU21_W**	**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**	**3**	**3**	**3**
	ENHANCEMENT REACH NAME	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**
4.	Structural condition of **feature**: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	2	0	3	1	0	0	0	0	0	0	0	0	0	1	2	1	1	2
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	1	0	1	1	1	1	1	1	1	1	1	0	1	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	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)	0	0	1	0	0	0	0	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
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)	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
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
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	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
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)	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)	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
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 55. Adaptive Management Plan targeted checklist (Site 1) for the City of Healdsburg Yard enhancement reach, July 2019.

	Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	Enhancement Reach	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	Colloquial Name	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH
	mmddyy	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019
	Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
	Project Site Number	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4
	Project Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SC Alcove	SC Alcove	SC Alcove	SC Alcove	SC Alcove	SC Alcove	SC Alcove
	Project Feature Number	S3-18.1	S3-18.2	S3-18.3	S3-19	S3-20	S3-21	S3-22	S3-23.1	S3-23.2	S3-23.3	S3-24	S4-01	S4-02	S4-03	S4-04	S4-05	S4-06	S4-07
	Feature Type Code	PW	PW	PW	R	HW1	HW2	LWS	PW	PW	PW	ALJ	HW1	HW2	LW	HW1	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	HU16_2	HU04_D	HU04_D	HU04_D	HU20_W	HU20_W	HU20_W	HU20_W
	Habitat Type	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Flatwater	Dry	Dry	Dry	Pond	Pond	Pond	Pond
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	POOR	POOR	POOR	FAIL	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	GOOD	UNKN	UNKN	UNKN	FAIR	FAIR	FAIR	FAIR
5a	Are problems with the **feature** visible?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES
6a	Is the **feature** still in its original location?	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	UNK	UNK	UNK	YES	YES	YES	YES
6b	Is the **feature** still in its original position?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	UNK	UNK	NO	NO	NO	NO	NO
6d	Is the **feature** still in its original orientaton?	NO	NO	NO	NO	UNK	UNK	UNK	UNK	UNK	UNK	YES	UNK	UNK	UNK	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	YES	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
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	74%	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%	15%	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	3	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	35	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	YES	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	105	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	YES	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	YES	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%	27%	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%	18%	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%	1%	0%	0%	0%	0%	0%	0%	0%
	FEATURE NUMBER	**S3-18.1**	**S3-18.2**	**S3-18.3**	**S3-19**	**S3-20**	**S3-21**	**S3-22**	**S3-23.1**	**S3-23.2**	**S3-23.3**	**S3-24**	**S4-01**	**S4-02**	**S4-03**	**S4-04**	**S4-05**	**S4-06**	**S4-07**
	HABITAT UNIT NUMBER	**HU03_D**	**HU03_D**	**HU03_D**	**HU03_D**	**HU03_D**	**HU03_D**	**HU03_D**	**HU03_D**	**HU03_D**	**HU03_D**	**HU16_2**	**HU04_D**	**HU04_D**	**HU04_D**	**HU20_W**	**HU20_W**	**HU20_W**	**HU20_W**
	SITE NUMBER	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**4**	**4**	**4**	**4**	**4**	**4**	**4**
	ENHANCEMENT REACH NAME	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**	**CH**
4.	Structural condition of **feature**: EXCL (5 pts), GOOD (4 pts), FAIR (3 pts), POOR (2 pts), FAIL (1 pt)	2	2	2	1	0	0	0	0	0	0	4	0	0	0	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	1	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	0	1	1	1	1	1	1	1	0	0	0	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	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	0	0	0	1	0	0	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	0	0	0	0	0	0	1	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)	0	0	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	1	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	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	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	1	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	4	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	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)	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	1	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	2	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	1	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 56. Adaptive Management Plan full checklist for the City of Healdsburg Yard enhancement reach, July 2019.

	Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	Enhancement Reach	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	Colloquial Name	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH
	mmddyy	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019
	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 Site Type	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	S1-01	S1-02	S1-03	S1-04	S1-05.1
	Feature Type Code	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	LWS	LWS	HW2	HW1	LW
	Habitat Unit	HU01	HU02	HU03	HU04	HU05	HU06	HU07	HU08	HU09	HU14	HU15	HU18	HU19	HU01_D	HU10	HU10	HU10	HU01_D
	Habitat Type	Pool	Riffle	Flatwater	Riffle	Flatwater	Pool	Flatwater	Riffle	Flatwater	Flatwater	Flatwater	Riffle	Pool	Dry	Pool	Pool	Pool	Dry
1.	Length of targeted treatment (ft)														12	18	15	15	36
2.	Width of targeted treatment: (ft)														26	17	8	14	46
3.	Estimate area of the targeted **feature**: (ft^2)														312	306	120	210	1656
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	UNKN	GOOD	GOOD	GOOD	UNKN
5a	Are problems with the **feature** visible?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	YES	NO	NO	NO	YES
5b	Types: ANC, BBB, CRF, MAT, SHF, STR, SWA, UND, UNS, WSH, OTH, NON	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	BBB	NON	NON	NON	BBB
6a	Is the **feature** still in its original location?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	YES	YES	YES	YES	UNK
6b	Is the **feature** still in its original position?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NO	YES	YES	YES	UNK
6c	If yes: LBK, MDC, RBK, SPN, OTH	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	OTH	LBK	LBK	LBK	UNK
6d	Is the **feature** still in its original orientaton?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	YES	YES	YES	YES	UNK
6e	If yes: DNS, MUL, PRL, PRP, UPS, OTH	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	PRL	PRP	PRP	PRP	UNK
7.	Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	POO	RIF	FLT	RIF	FLT	POO	FLT	RIF	FLT	FLT	FLT	RIF	POO	DRY	POO	POO	POO	DRY
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	NO	YES	YES	YES	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	YES	NO	NO	NO	YES
10.	Mean water depth in **habitat unit**: ft	1.6	0.4	1.1	0.4	0.4	2.1	1.5	1.1	1.3	1.6	1.8	0.8	0.9	0.0	1.6	1.6	1.6	0.0
11a	Maximum water depth in **habitat unit**: ft	3.4	1.1	3.6	1.4	1.3	4.7	2.6	2.8	2.8	3.0	3.7	1.8	1.9	0.0	3.9	3.9	3.9	0.0
11b	Area of **habitat unit** within 0.5 -2.0 ft depth: (ft2)	1466.4	280.9	2302.9	431.8	294.3	543.1	481.0	3229.3	2035.5	7724.7	3668.3	2818.2	1113.4	0.0	1925.7	1925.7	1925.7	0.0
11c	Area of **habitat unit** within 2.0 -4.0 ft depth: (ft2)	1181.6	0.0	125.3	0.0	0.0	461.9	168.3	171.8	208.8	3436.6	2961.1	0.0	0.0	0.0	981.6	981.6	981.6	0.0
11d	Area of **habitat unit** within 0.5-4.0 ft depth: (ft2)	2648.0	280.9	2428.2	431.8	294.3	1005.0	649.4	3401.1	2244.3	11161.3	6629.4	2818.2	1113.4	0.0	2907.3	2907.3	2907.3	0.0
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	49%	32%	80%	33%	33%	45%	66%	80%	80%	64%	51%	78%	68%	0%	61%	61%	61%	0%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	39%	0%	4%	0%	0%	39%	23%	4%	8%	28%	42%	0%	0%	0%	31%	31%	31%	0%
11g	% Area of **habitat** unit within 0.5-4.0 ft depth	88%	32%	85%	33%	33%	84%	89%	85%	88%	92%	93%	78%	68%	0%	92%	92%	92%	0%
11h	If an objective, did the **feature** increase/decrease water depth in the treatment area?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NO	YES	YES	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
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.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	YES	NO	NO	NO	YES
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	3	1	3	0	1	2	2	3	2	3	3	1	1	0	3	3	3	0
15.	Percent of **habitat unit** covered by shelter: %	30	20	20	0	5	30	40	30	25	15	10	5	10	0	35	35	35	0
16a	1st dominant cover in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	TVG	TVG	TVG	NON	SWD	TVG	TVG	TVG	TVG	TVG	BOL	TVG	TVG	NON	RTW	RTW	RTW	NON
16b	2nd dominant in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	LWD	BOL	BOL	NON	TVG	SWD	NON	SWD	SWD	LWD	TVG	NON	NON	NON	LWD	LWD	LWD	NON
17a	If an objective, did the **feature** increase instream shelter rating?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NO	YES	YES	YES	NO
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	90	20	60	0	5	60	80	90	50	45	30	5	10	0	105	105	105	0
18a	Large woody debris count in **habitat unit**: D >1', L 6-20'	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0
18b	Large woody debris count in **habitat unit**: D >1', L >20'	2	0	0	0	0	0	0	0	0	1	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	NA	NA	NA	NA	NA	NA	NO	NO	NO	YES	NO
19b	LWD recruitment mechanisms in **habitat unit**: ANC, EXC, EXH, INT, RPR, UNA, OTH	RPR	NON	NON	NON	NON	NON	NON	NON	NON	INT	NON	NON	NON	NON	INT	INT	INT	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
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	NO	YES	YES	YES	NO
21b	Overall Offchannel Condition (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	AGG	STB	STB	STB	AGG
21c	Outlet Conditions (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	NA	NA	NA	NA	NA	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	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	NA	NA	NA	NA	NA	NA	YES	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	NA	NA	NA	NA	NA	DEC	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?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NO	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**	3.8	3.1	3.2	3.4	1.8	3.6	3.9	4.2	3.2	2.3	2.3	4.2	3.0	0.0	3.7	3.7	3.7	0.0
26c	Measured mean velocity (ft/sec) in **habitat unit**	1.0	1.3	1.4	1.3	0.6	0.8	1.6	1.9	1.5	1.1	1.3	2.5	1.7	0.0	1.3	1.3	1.3	0.0
27.	Area of **habitat unit** within targeted velocity: (ft^2)	921.3	222.5	652.0	356.1	447.7	543.3	122.0	475.8	518.3	2698.9	1023.7	258.3	222.1	0.0	591.9	591.9	591.9	0.0
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	31%	25%	23%	27%	50%	45%	17%	12%	20%	22%	14%	7%	14%	0%	19%	19%	19%	0%
29.	Were there any unintended effects of **feature** on velocity If Y, comment.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	YES	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	NR	SND	SND	SND	NR
30b	2nd dominant substrate in **habitat unit**: BED, BOL, COB, GRV, SND, SLC, OTH	SND	SND	SND	COB	COB	SND	COB	COB	COB	COB	SND	COB	SND	NR	GRV	GRV	GRV	NR
31.	If an objective, did the **feature** achieve the targeted substrate composition?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	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	590.5	17.3	373.5	31.1	122.7	408.3	43.5	135.1	270.5	1795.3	571.2	11.0	0.4	0.0	431.2	431.2	431.2	0.0
36b	Total **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	547.7	17.3	325.1	31.1	122.7	231.5	43.5	132.3	225.2	1777.0	468.0	11.0	0.4	0.0	208.2	208.2	208.2	0.0
36c	Total **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	42.8	0.0	48.4	0.0	0.0	176.8	0.0	2.8	45.4	18.3	103.1	0.0	0.0	0.0	222.9	222.9	222.9	0.0
36d	% **habitat unit** area where targeted depth, velocity and shelter criteria overlap	20%	2%	13%	2%	14%	34%	6%	3%	11%	15%	8%	0%	0%	0%	14%	14%	14%	0%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	18%	2%	11%	2%	14%	19%	6%	3%	9%	15%	7%	0%	0%	0%	7%	7%	7%	0%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	1%	0%	2%	0%	0%	15%	0%	0%	2%	0%	1%	0%	0%	0%	7%	7%	7%	0%
37.	Does this **feature** need: DEC, ENH, MNT, REP, NON, OTH	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NON	NON	NON	NON	NON
38.	Are additional restoration treatments recommended at this **site**?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NO	NO	NO	NO	NO

Table 56. Adaptive Management Plan full checklist for the City of Healdsburg Yard enhancement reach, July 2019.

	Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	Enhancement Reach	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	Colloquial Name	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH
	mmddyy	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019
	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	3	3	3	3
	Project Site Type	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	SideChan	SideChan	SideChan	SideChan
	Project Feature Number	S1-05.2	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	S3-01	S3-02	S3-03.1	S3-03.2
	Feature Type Code	LW	HW1	TT	LWS	TT	HW1	TT	TT	TT	HW1	HW1	HW2	TT	BF	HW1	HW1	PW	PW
	Habitat Unit	HU01_D	HU11	HU01_U	HU13	HU01_U	HU01_D	HU01_U	HU01_U	HU01_U	HU01_D	HU01_D	HU01_D	HU01_U	HU16	HU03_D	HU03_D	HU21_W	HU21_W
	Habitat Type	Dry	Riffle	Unknown	Flatwater	Unknown	Dry	Unknown	Unknown	Unknown	Dry	Dry	Dry	Unknown	Flatwater	Dry	Dry	Pond	Pond
1.	Length of targeted treatment (ft)	36	15	30	17	30	12	30	30	30	8	8	8	30	50	10	10	18	18
2.	Width of targeted treatment: (ft)	46	8	10	18	10	10	10	10	10	10	10	10	10	35	10	10	10	10
3.	Estimate area of the targeted **feature**: (ft^2)	1656	120	300	306	300	120	300	300	300	80	80	80	300	1750	100	100	180	180
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	UNKN	UNKN	UNKN	GOOD	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	EXCL	UNKN	UNKN	POOR	POOR
5a	Are problems with the **feature** visible?	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES
5b	Types: ANC, BBB, CRF, MAT, SHF, STR, SWA, UND, UNS, WSH, OTH, NON	BBB	BBB	WSH	NON	WSH	BBB	WSH	WSH	WSH	BBB	BBB	BBB	WSH	NON	BBB	BBB	BBB	BBB
6a	Is the **feature** still in its original location?	UNK	UNK	NO	YES	NO	UNK	NO	NO	NO	UNK	UNK	UNK	NO	YES	YES	UNK	YES	YES
6b	Is the **feature** still in its original position?	UNK	UNK	NO	YES	NO	UNK	NO	NO	NO	UNK	UNK	UNK	NO	YES	NO	NO	NO	NO
6c	If yes: LBK, MDC, RBK, SPN, OTH	UNK	UNK	UNK	LBK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	SPN	OTH	UNK	OTH	OTH
6d	Is the **feature** still in its original orientaton?	UNK	UNK	NO	YES	NO	UNK	NO	NO	NO	UNK	UNK	UNK	NO	YES	UNK	UNK	UNK	UNK
6e	If yes: DNS, MUL, PRL, PRP, UPS, OTH	UNK	UNK	UNK	UPS	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	MUL	UNK	UNK	UNK	UNK
7.	Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	DRY	RIF	UNK	FLT	UNK	DRY	UNK	UNK	UNK	DRY	DRY	DRY	UNK	FLT	DRY	DRY	PND	PND
8.	If an objective, did the **feature** create the targeted instream habitat type?	NO	NO	NO	YES	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	NO	NO	NO	YES	NO	NO	NO	YES	YES	YES	NO	NO	YES	YES	YES	YES
10.	Mean water depth in **habitat unit**: ft	0.0	0.7	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0
11a	Maximum water depth in **habitat unit**: ft	0.0	1.8	0.0	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	0.0	0.0	0.0	0.0
11b	Area of **habitat unit** within 0.5 -2.0 ft depth: (ft2)	0.0	2124.6	0.0	2691.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2324.9	0.0	0.0	0.0	0.0
11c	Area of **habitat unit** within 2.0 -4.0 ft depth: (ft2)	0.0	0.0	0.0	221.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	458.0	0.0	0.0	0.0	0.0
11d	Area of **habitat unit** within 0.5-4.0 ft depth: (ft2)	0.0	2124.6	0.0	2913.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2782.9	0.0	0.0	0.0	0.0
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	0%	64%	0%	83%	0%	0%	0%	0%	0%	0%	0%	0%	0%	74%	0%	0%	0%	0%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	0%	0%	0%	7%	0%	0%	0%	0%	0%	0%	0%	0%	0%	15%	0%	0%	0%	0%
11g	% Area of **habitat** unit within 0.5-4.0 ft depth	0%	64%	0%	90%	0%	0%	0%	0%	0%	0%	0%	0%	0%	88%	0%	0%	0%	0%
11h	If an objective, did the **feature** increase/decrease water depth in the treatment area?	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	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:																		
13.	Were there any unintended effects of the **feature** on the water depth? If Y, comment.	YES	YES	NO	NO	NO	YES	NO	NO	NO	YES	YES	YES	NO	NO	YES	YES	YES	YES
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	0	1	0	1	0	0	0	0	0	0	0	0	0	3	0	0	0	0
15.	Percent of **habitat unit** covered by shelter: %	0	5	0	15	0	0	0	0	0	0	0	0	0	35	0	0	0	0
16a	1st dominant cover in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	NON	TVG	NON	TVG	NON	NON	NON	NON	NON	NON	NON	NON	NON	BOL	NON	NON	NR	NR
16b	2nd dominant in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	NON	SWD	NON	SWD	NON	NON	NON	NON	NON	NON	NON	NON	NON	TVG	NON	NON	NR	NR
17a	If an objective, did the **feature** increase instream shelter rating?	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	0	5	0	15	0	0	0	0	0	0	0	0	0	105	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	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	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	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	NON	NON	NON	NON	NR	NR
21a	If an objective, did the **feature** lead to the targeted channel conditions?	NO	NO	YES	YES	YES	NO	YES	YES	YES	NO	NO	NO	YES	YES	NO	NO	NO	NO
21b	Overall Offchannel Condition (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	AGG	AGG	STB	STB	STB	AGG	STB	STB	STB	AGG	AGG	AGG	STB	STB	AGG	AGG	AGG	AGG
21c	Outlet Conditions (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH															AGG	AGG	AGG	AGG
21d	Inlet Conditions (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH															AGG	AGG	AGG	AGG
22.	Were there any unintended effects on the stream channel at the **feature**? If Y, comment.	YES	YES	NO	NO	NO	YES	NO	NO	NO	YES	YES	YES	NO	NO	YES	YES	YES	YES
23.	If an objective, did the **feature** decrease/increase velocity in the treatment area?	NA	NA	NA	DEC	NA	NA	NA	NA	NA	NA	NA	NA	NA	DEC	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	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	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	3.6	0.0	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	0.0	0.0	0.0	0.0
26c	Measured mean velocity (ft/sec) in **habitat unit**	0.0	1.3	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0
27.	Area of **habitat unit** within targeted velocity: (ft^2)	0.0	802.2	0.0	568.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	851.6	0.0	0.0	0.0	0.0
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	0%	24%	0%	18%	0%	0%	0%	0%	0%	0%	0%	0%	0%	27%	0%	0%	0%	0%
29.	Were there any unintended effects of **feature** on velocity If Y, comment.	YES	YES	NO	NO	NO	YES	NO	NO	NO	YES	YES	YES	NO	NO	YES	YES	YES	YES
30a	1st/2nd dominant substrate in **habitat unit**: BED, BOL, COB, GRV, SND, SLC, OTH	NR	GRV	NA	GRV	NA	NR	NA	NA	NA	NR	NR	NR	NA	GRV	NR	NR	NR	NR
30b	2nd dominant substrate in **habitat unit**: BED, BOL, COB, GRV, SND, SLC, OTH	NR	COB	NA	COB	NA	NR	NA	NA	NA	NR	NR	NR	NA	BOL	NR	NR	NR	NR
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	NA	NR	NA	NR	NA	NA	NA	NR	NR	NR	NA	NR	NR	NR	NR	NR
33.	Photopoint data collected: YES /NO	NR	NR	NA	NR	NA	NR	NA	NA	NA	NR	NR	NR	NA	NR	NR	NR	NR	NR
34.	Temperature Profile: YES /NO	NR	NR	NA	NR	NA	NR	NA	NA	NA	NR	NR	NR	NA	NR	NR	NR	NR	NR
35.	Dissolved Oxygen Profile: YES/NO	NR	NR	NA	NR	NA	NR	NA	NA	NA	NR	NR	NR	NA	NR	NR	NR	NR	NR
36a	Total **habitat unit** area where targeted depth, velocity and shelter criteria overlap	0.0	294.6	0.0	306.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	597.1	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	294.6	0.0	305.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	572.0	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	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0
36d	% **habitat unit** area where targeted depth, velocity and shelter criteria overlap	0%	9%	0%	9%	0%	0%	0%	0%	0%	0%	0%	0%	0%	19%	0%	0%	0%	0%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	0%	9%	0%	9%	0%	0%	0%	0%	0%	0%	0%	0%	0%	18%	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%	1%	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	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 56. Adaptive Management Plan full checklist for the City of Healdsburg Yard enhancement reach, July 2019.

	Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	Enhancement Reach	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	Colloquial Name	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH
	mmddyy	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019
	Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
	Project Site Number	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
	Project Feature Number	S3-03.3	S3-04	S3-05	S3-06	S3-07	S3-08.1	S3-08.2	S3-09	S3-10	S3-11	S3-12.1	S3-12.2	S3-12.3	S3-13	S3-14	S3-15	S3-16	S3-17
	Feature Type Code	PW	HW1	LWS	R	HW1	HW2	HW2	HW1	HW1	HW1	PW	PW	PW	R	HW2	TT	LW	HW1
	Habitat Unit	HU21_W	HU21_W	HU21_W	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	Pond	Pond	Pond	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
1.	Length of targeted treatment (ft)	18	7	15		13	12	12	13	13	18	15	15	15		13	18	17	12
2.	Width of targeted treatment: (ft)	10	10	13		12	18	18	12	12	11	12	12	12		12	17	32	9
3.	Estimate area of the targeted **feature**: (ft^2)	180	70	195		156	216	216	156	156	198	180	180	180		156	306	544	108
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	POOR	UNKN	FAIR	FAIL	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	FAIL	POOR	FAIL	FAIL	POOR
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	STR	BBB	BBB	BBB	BBB	BBB	BBB	BBB	BBB	BBB	BBB	BBB	BBB	WSH	WSH	BBB
6a	Is the **feature** still in its original location?	YES	UNK	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	UNK	UNK	YES
6b	Is the **feature** still in its original position?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	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	OTH
6d	Is the **feature** still in its original orientaton?	UNK	UNK	YES	NO	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	NO	NO	NO	NO	NO
6e	If yes: DNS, MUL, PRL, PRP, UPS, OTH	UNK	UNK	PRL	OTH	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	OTH	OTH	UNK	UNK	OTH
7.	Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	PND	PND	PND	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: (ft2)	0.0	0.0	0.0	0.0	0.0	0.0	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: (ft2)	0.0	0.0	0.0	0.0	0.0	0.0	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: (ft2)	0.0	0.0	0.0	0.0	0.0	0.0	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:																		
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	NR	NR	NR	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	NR	NR	NR	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	NO	YES	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	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	NR	NR	NR	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?	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	AGG	AGG	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	AGG	AGG	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	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
30b	2nd dominant substrate in **habitat unit**: BED, BOL, COB, GRV, SND, SLC, OTH	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
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	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	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	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%	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%
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%
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 56. Adaptive Management Plan full checklist for the City of Healdsburg Yard enhancement reach, July 2019.

	Project Reach	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	Enhancement Reach	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	Colloquial Name	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH
	mmddyy	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019	71019
	Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
	Project Site Number	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4
	Project Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SC Alcove	SC Alcove	SC Alcove	SC Alcove	SC Alcove	SC Alcove	SC Alcove
	Project Feature Number	S3-18.1	S3-18.2	S3-18.3	S3-19	S3-20	S3-21	S3-22	S3-23.1	S3-23.2	S3-23.3	S3-24	S4-01	S4-02	S4-03	S4-04	S4-05	S4-06	S4-07
	Feature Type Code	PW	PW	PW	R	HW1	HW2	LWS	PW	PW	PW	ALJ	HW1	HW2	LW	HW1	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	HU16_2	HU04_D	HU04_D	HU04_D	HU20_W	HU20_W	HU20_W	HU20_W
	Habitat Type	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Flatwater	Dry	Dry	Dry	Pond	Pond	Pond	Pond
1.	Length of targeted treatment (ft)	18	18	18		18	12	17	13	13	10	21	11	11	35	15	12	15	15
2.	Width of targeted treatment: (ft)	12	12	12		6	8	17	10	10	10	33	14	10	14	12	10	6	8
3.	Estimate area of the targeted **feature**: (ft^2)	216	216	216		108	96	289	130	130	100	693	154	110	490	180	120	90	120
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	POOR	POOR	POOR	FAIL	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	GOOD	UNKN	UNKN	UNKN	FAIR	FAIR	FAIR	FAIR
5a	Are problems with the **feature** visible?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	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	BBB	BBB	BBB	BBB	BBB	NON	BBB	BBB	BBB	STR	STR	STR	STR
6a	Is the **feature** still in its original location?	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	UNK	UNK	UNK	YES	YES	YES	YES
6b	Is the **feature** still in its original position?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	UNK	UNK	NO	NO	NO	NO	NO
6c	If yes: LBK, MDC, RBK, SPN, OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH	LBK	UNK	UNK	UNK	OTH	OTH	OTH	OTH
6d	Is the **feature** still in its original orientaton?	NO	NO	NO	NO	UNK	UNK	UNK	UNK	UNK	UNK	YES	UNK	UNK	UNK	YES	YES	YES	YES
6e	If yes: DNS, MUL, PRL, PRP, UPS, OTH	OTH	OTH	OTH	OTH	UNK	UNK	UNK	UNK	UNK	UNK	UPS	UNK	UNK	UNK	DNS	UPS	DNS	DNS
7.	Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	FLT	DRY	DRY	DRY	PND	PND	PND	PND
8.	If an objective, did the **feature** create the targeted instream habitat type?	NO	NO	NO	NO	NO	NO	NO	NO	NO	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.	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	1.4	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	3.2	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: (ft2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2324.9	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: (ft2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	458.0	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: (ft2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2782.9	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%	74%	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%	15%	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%	88%	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	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	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.	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	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	3	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	35	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	BOL	NON	NON	NON	NR	NR	NR	NR
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	TVG	NON	NON	NON	NR	NR	NR	NR
17a	If an objective, did the **feature** increase instream shelter rating?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	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	105	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	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	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	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	NON	NON	NR	NR	NR	NR
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	AGG	AGG	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	AGG	AGG	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	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	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	YES	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	3.7	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	1.1	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	851.6	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%	27%	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	NO	YES	YES	YES	YES	YES	YES	YES
30a	1st/2nd dominant substrate in **habitat unit**: BED, BOL, COB, GRV, SND, SLC, OTH	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	GRV	NR	NR	NR	NR	NR	NR	NR
30b	2nd dominant substrate in **habitat unit**: BED, BOL, COB, GRV, SND, SLC, OTH	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	BOL	NR	NR	NR	NR	NR	NR	NR
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	597.1	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	572.0	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	25.0	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%	19%	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%	18%	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%	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	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

Geyser Peak, July 2019

Depth and Velocity

Table 57. Areas and percentages of: wetted area, optimal depth and velocity, and optimal hydraulic habitat within the Geyser Peak enhancement reach, July 2019.

Geyser Peak Post-effective flow July 2019	Wetted area (ft^2)	Optimal depth (ft^2)			Optimal velocity (ft^2)	Optimal habitat (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	42,954	27,633	7,656	35,289	12,013	5,271	1,208	6,479
Side channel area	0	0	0	0	0	0	0	0
Total area	**42,954**	**27,633**	**7,656**	**35,289**	**12,013**	**5,271**	**1,208**	**6,479**
Main channel % of wetted area	100%	64%	18%	82%	28%	12%	3%	15%
Side channel % of wetted area	0	0	0	0	0	0	0	0
Total % of wetted area	**100%**	**64%**	**18%**	**82%**	**28%**	**12%**	**3%**	**15%**

Figure 96. Measured water depth within the Geyser Peak enhancement reach, July 2019.

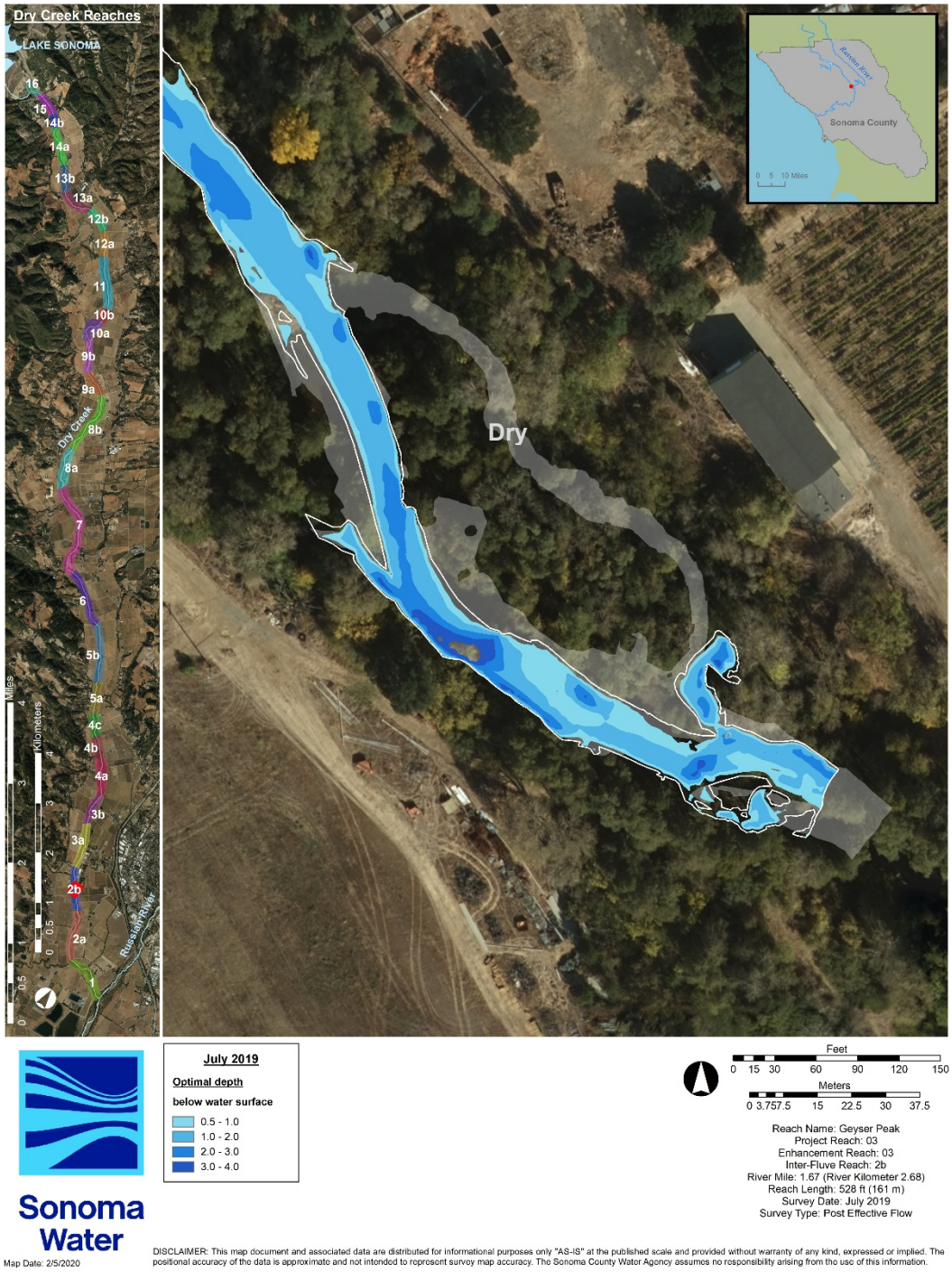

Figure 97. Optimal water depth for fry (0.5-2.0 ft) and parr (2.0-4.0 ft) within the Geyser Peak enhancement reach, July 2019.

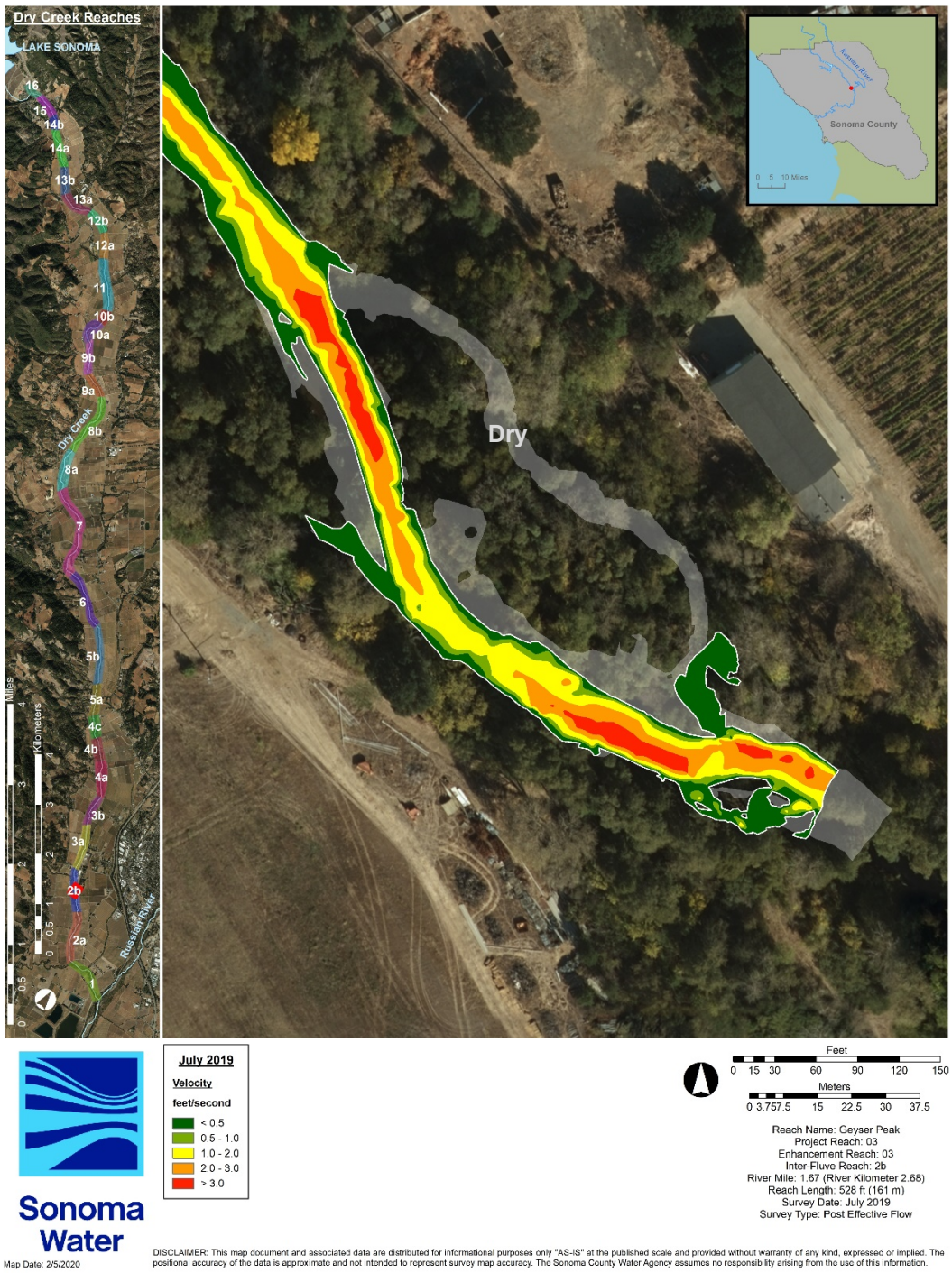

Figure 98. Measured water velocity within the Geyser Peak enhancement reach, July 2019.

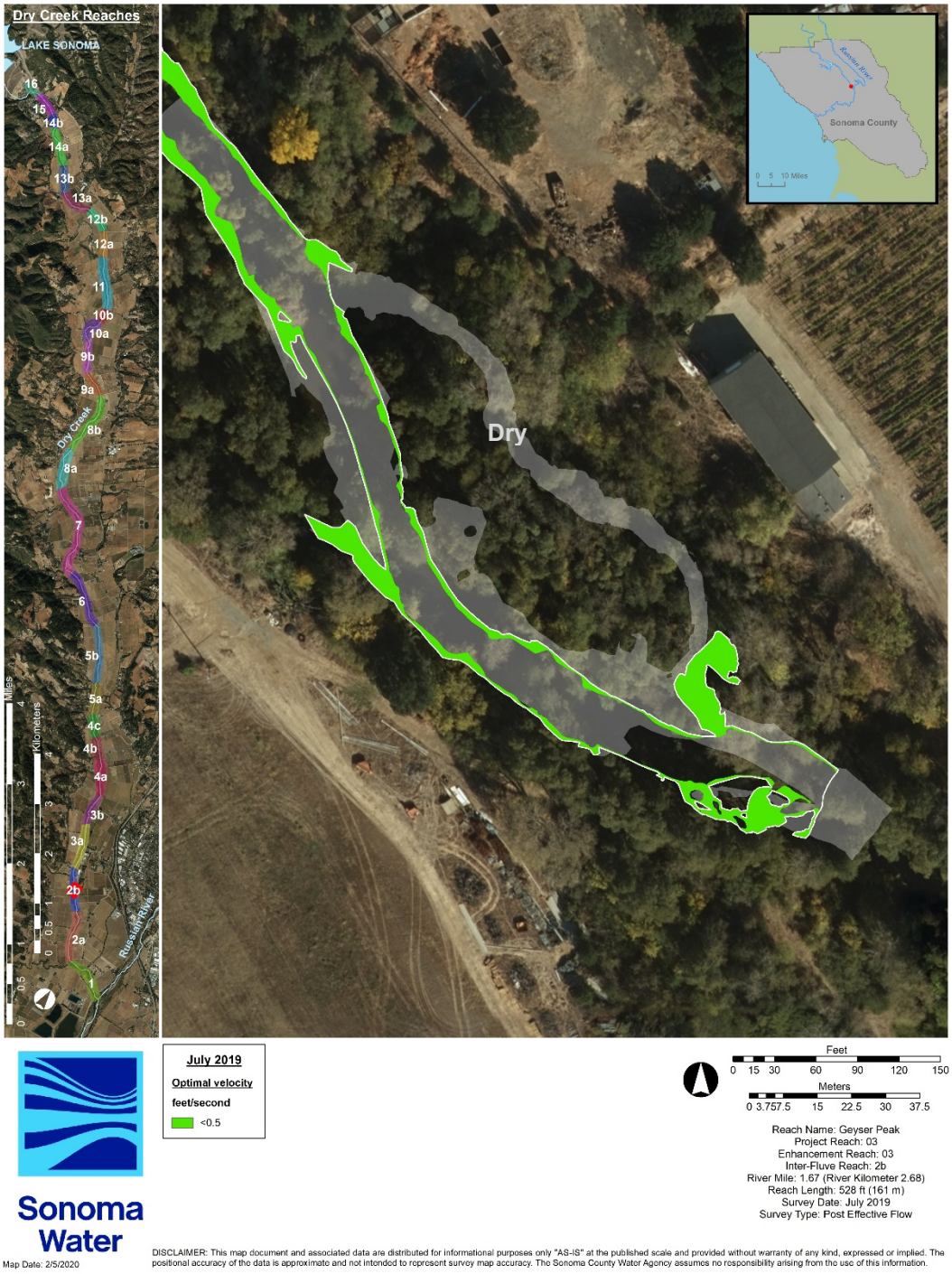

Figure 99. Optimal water velocity for fry and parr (< 0.5 ft/s) within the Geyser Peak enhancement reach, July 2019.

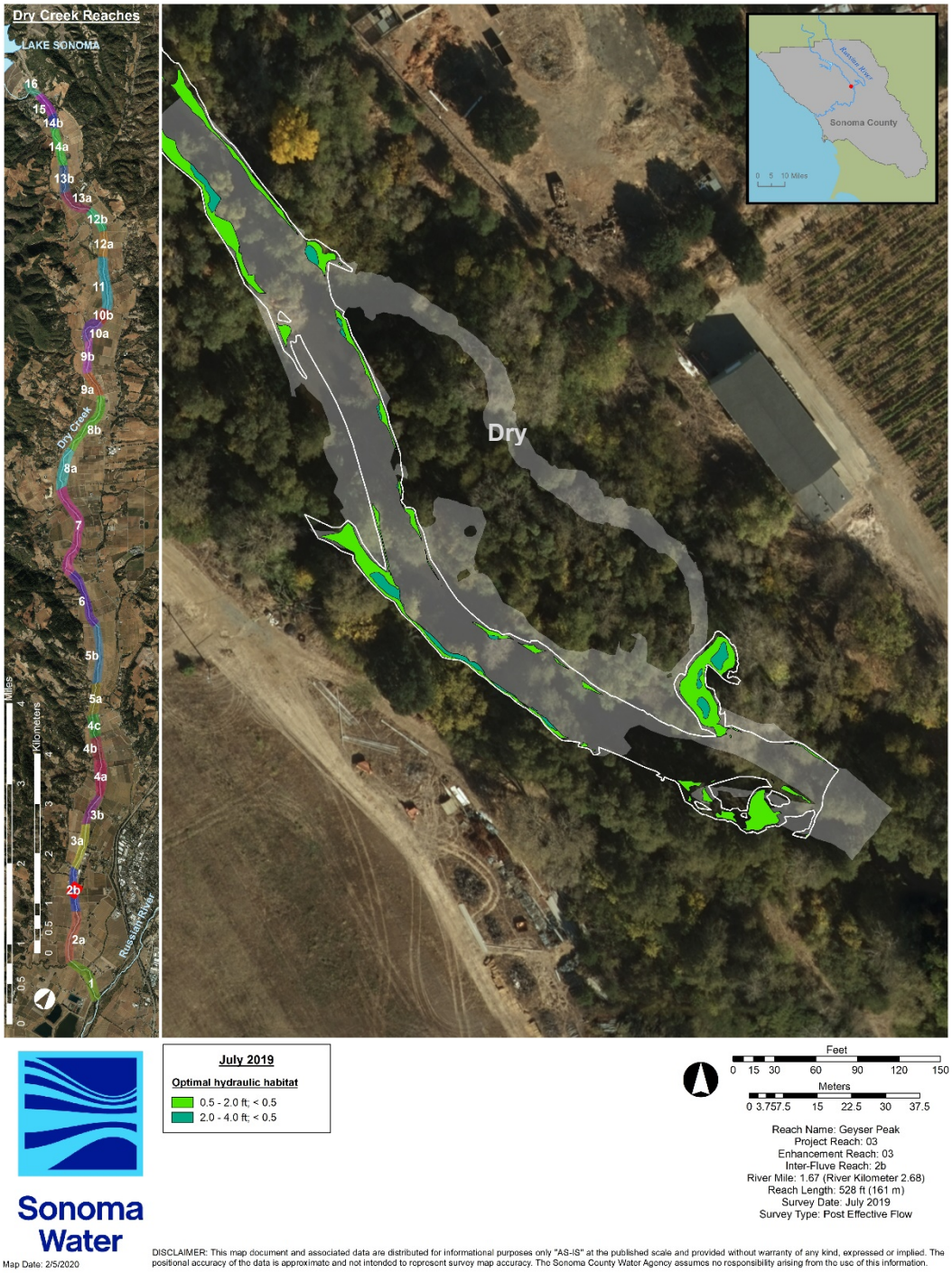

Figure 100. Optimal hydraulic habitat for fry (<0.5 ft/s, 0.5-2.0 ft) and parr (<0.5 ft/s, 2.0-4.0 ft) within the Geyser Peak enhancement reach, July 2019.

Habitat Types and Shelter Values

Table 58. Habitat, types, shelter value, percent cover, and shelter score for habitat units within the Geyser Peak enhancement reach, July 2019.

Post-effective flow (July 2019)				
Habitat Unit #	**Habitat Type**	**Shelter Value**	**Percent Cover**	**Shelter Score**
HU01	Riffle	3	35	105
HU02	Alcove	3	30	90
HU03	Pool	2	40	80
HU04	Alcove	2	65	130
HU05	Flatwater	1	10	10
HU06	Riffle	2	35	70
HU07	Flatwater	2	20	40
HU08	Riffle	2	50	100
HU09	Pool	3	30	90
Pool: riffle	**2:3 (0.67)**			**Avg = 79**

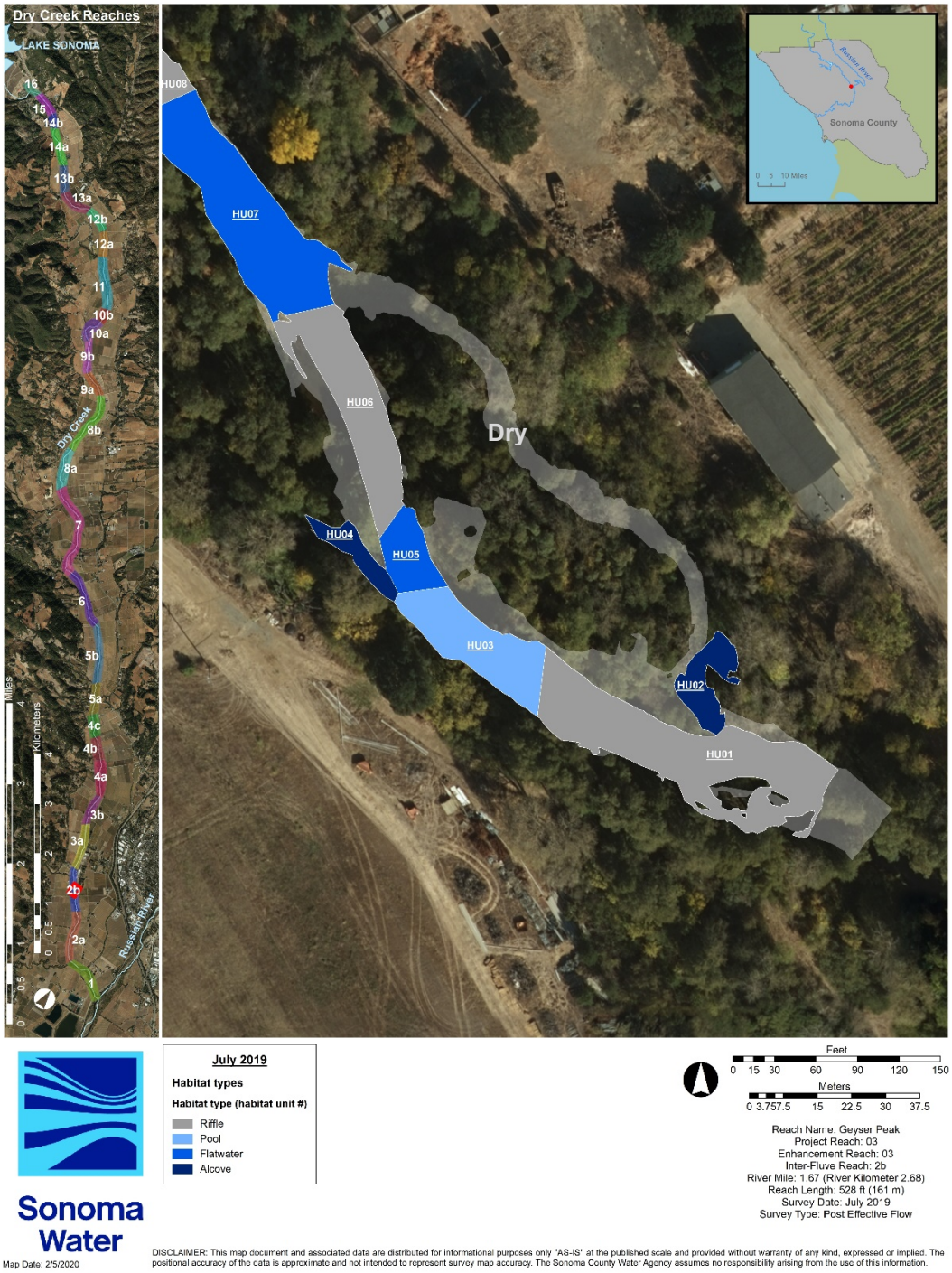

Figure 101. Habitat unit number and type within the Geyser Peak enhancement reach, July 2019.

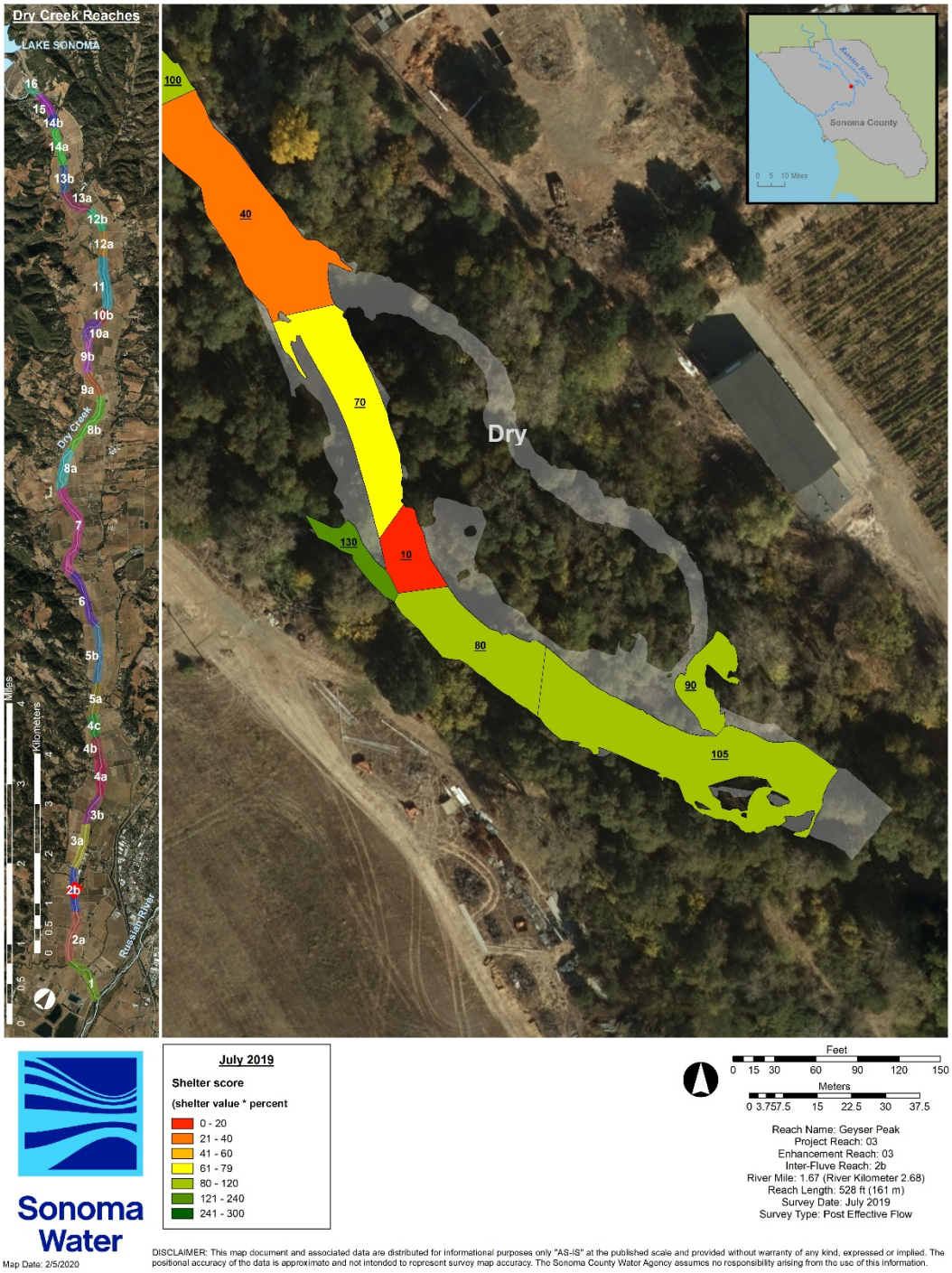

Figure 102. Habitat unit shelter scores within the Geyser Peak enhancement reach, July 2019.

Feature, Habitat Unit, Site, and Reach Ratings

Table 59. Post-effective flow feature ratings for the Geyser Peak enhancement reach, July 2019.

	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	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519
	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 Site Type	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
	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 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	FAIR	UNKN	UNKN	UNKN	UNKN	FAIR	FAIL	FAIL	FAIL	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?	YES	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 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	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)	3	0	0	0	0	3	1	1	1	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)	1	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 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	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	6	0	0	0	0	5	1	2	2	6	6	6	0	1	0	0	0	0
	Feature qualitative rating Excellent (>=12), Good (>=9), Fair(>=6), Poor (>=3), Fail (<3)	Fair	Not rated	Not rated	Not rated	Not rated	Poor	Fail	Fail	Fail	Fair	Fair	Fair	Not rated	Fail	Fail	Fail	Fail	Fail

Table 59. Post-effective flow feature ratings for the Geyser Peak enhancement reach, July 2019.

	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	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519
	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 Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
	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 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	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	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 shelter 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 shelter 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 59. Post-effective flow feature ratings for the Geyser Peak enhancement reach, July 2019.

	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	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519
	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	HU02_D	HU02_D	HU02_D	HU02_2	HU03_D	HU03_D	HU03_D
	Habitat Type	Dry	Dry	Dry	Dry	Dry	Dry	Dry	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

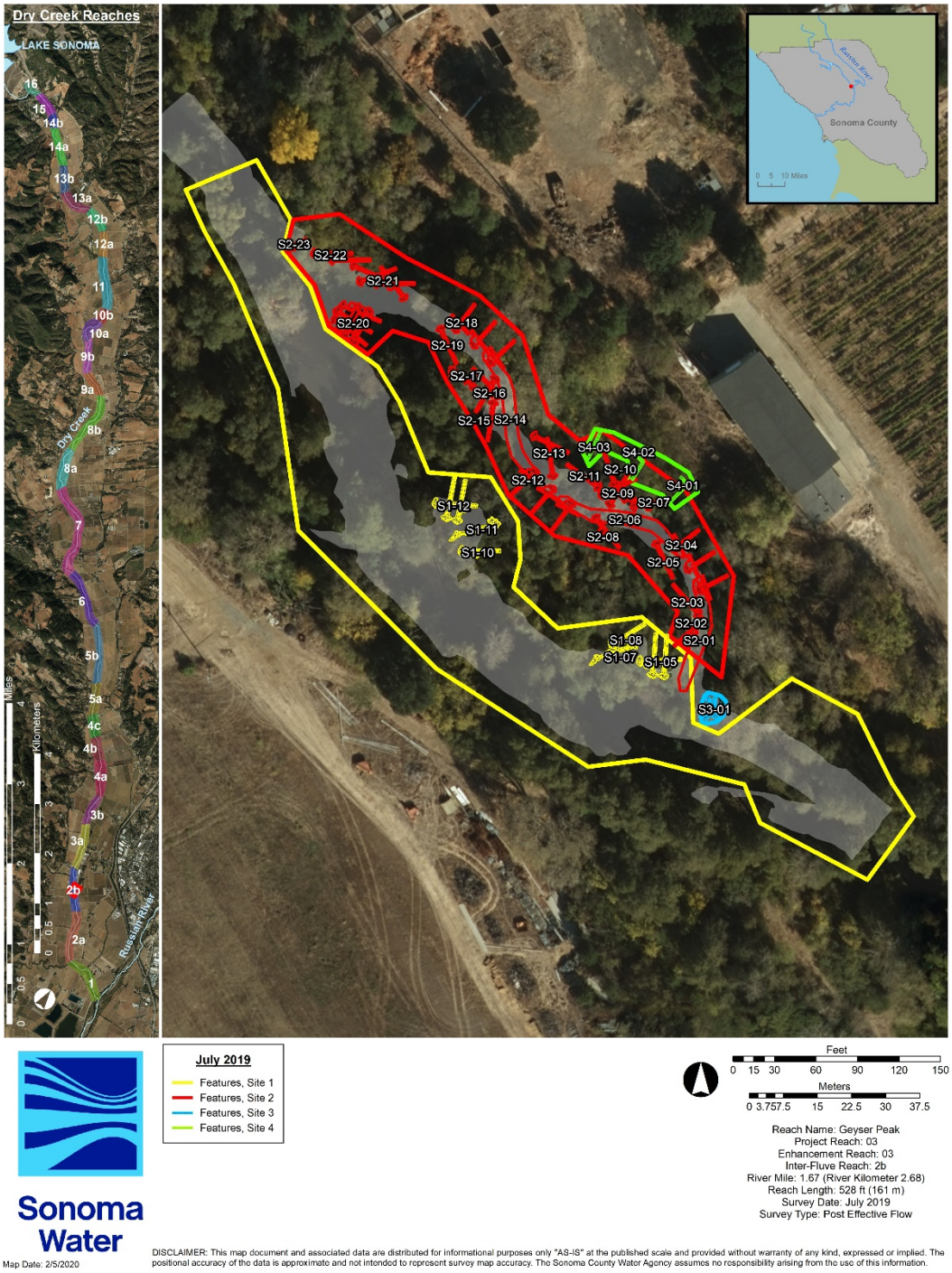

Figure 103. Enhancement sites and features within the Geyser Peak enhancement reach, July 2019.

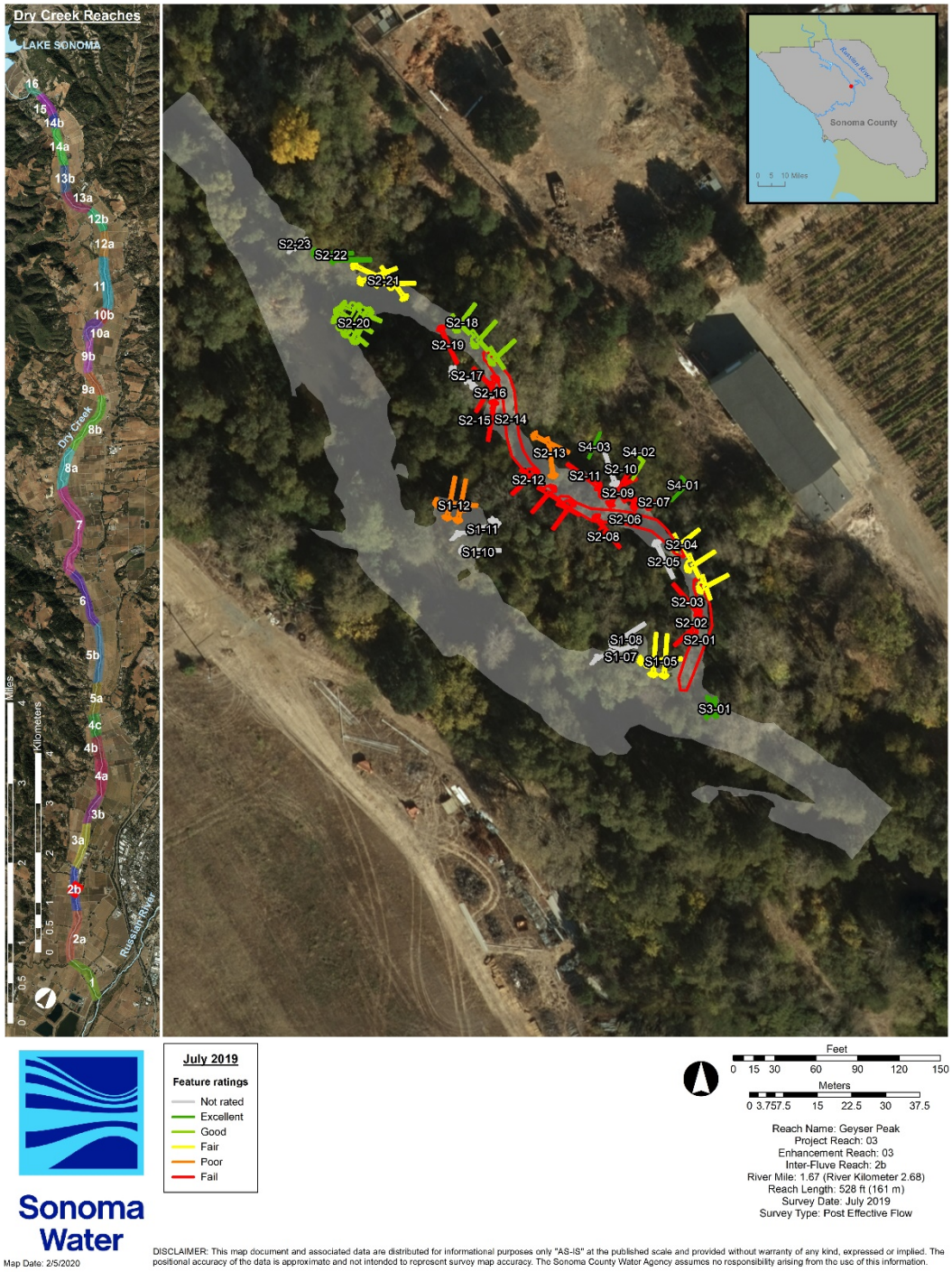

Figure 104. Feature ratings for the Geyser Peak enhancement reach, July 2019.

Table 60. Post-effective flow habitat unit ratings for the Geyser Peak enhancement reach, July 2019.

	Project Reach	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
	Colloquial Name	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP
	mmddyy	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519
	Survey Type	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF	PEF
	HABITAT UNIT NUMBER	**HU01**	**HU02**	**HU02_2**	**HU03**	**HU04**	**HU05**	**HU06**	**HU07**	**HU08**	**HU09**	**HU01_D**	**HU02_D**	**HU03_D**
	Habitat Type	Riffle	Alcove	Alcove	Pool	Alcove	Flatwater	Riffle	Flatwater	Riffle	Pool	Dry	Dry	Dry
	PROJECT SITE NUMBER	**1**	**1**	**3**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**2**	**4**
	Project Site Type	MainChan	MainChan	SideChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	SideChan	SC Bank FP
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	71%	58%	58%	46%	51%	62%	71%	72%	56%	62%	0%	0%	0%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	8%	15%	15%	41%	14%	27%	12%	17%	13%	28%	0%	0%	0%
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	3	3	3	2	2	1	2	2	2	3	0	0	0
15.	Percent of **habitat unit** covered by shelter: %	35	30	30	40	65	10	35	20	50	30	0	0	0
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	105	90	90	80	130	10	70	40	100	90	0	0	0
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	23%	100%	100%	21%	100%	18%	21%	30%	19%	21%	0%	0%	0%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	8%	58%	58%	7%	51%	6%	7%	17%	4%	9%	0%	0%	0%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	15%	15%	5%	14%	0%	1%	3%	0%	4%	0%	0%	0%
	HABITAT UNIT NUMBER	**HU01**	**HU02**	**HU02_2**	**HU03**	**HU04**	**HU05**	**HU06**	**HU07**	**HU08**	**HU09**	**HU01_D**	**HU02_D**	**HU03_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)	4	4	4	4	4	4	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)	0	1	1	4	1	2	1	1	1	2	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	3	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)	2	2	2	3	4	1	2	2	3	2	0	0	0
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	4	3	3	3	4	0	2	1	4	3	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	4	2	4	1	2	2	1	2	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	4	4	0	4	0	0	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	1	1	0	1	0	0	0	0	0	0	0	0
	HABITAT UNIT NUMBER	**HU01**	**HU02**	**HU02_2**	**HU03**	**HU04**	**HU05**	**HU06**	**HU07**	**HU08**	**HU09**	**HU01_D**	**HU02_D**	**HU03_D**
HABITAT UNIT RATING	Habitat unit quantitative rating (out of 35)	17	24	24	20	26	11	15	15	17	18	0	0	0
	Habitat unit qualitative rating: Excellent (>=28), Good (>=21), Fair(>=14), Poor (>=7), Fail (<7)	Fair	Good	Good	Fair	Good	Poor	Fair	Fair	Fair	Fair	Fail	Fail	Not rated

Figure 105. Post-effective flow habitat unit rating for the Geyser Peak enhancement reach, July 2019.

Table 61. Post-effective flow average feature, habitat unit, site, and reach ratings (rounded to the nearest whole number) for the Geyser Peak enhancement reach, July 2019.

	Project Reach	3	3	3	3
	Enhancement Reach	3	3	3	3
	ENHANCEMENT REACH NAME	**GP**	**GP**	**GP**	**GP**
	mmddyy	72519	72519	72519	72519
	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)	6	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	24	**0**
	Site average qualitative rating Excellent (>=28), Good (>=21), Fair(>=14), Poor (>=7), Fail (<7), Not rated (not used to rate site)	Fair	Fail	Good	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)	22	3	36	11
	Site qualitative rating: Excellent (>=40), Good (>=30), Fair(>=20), Poor (>=10), Fail (<10)	Fair	Fail	Good	Good
	ENHANCEMENT REACH NAME	**GP**			
ENHANCEMENT REACH RATING	Enhancement reach quantitative rating (average of site ratings) (out of 42)	18			
	Enhancement reach qualitative rating: Excellent (>=33), Good (>=25), Fair(>=17), Poor (>=8), Fail (<8)	Fair			

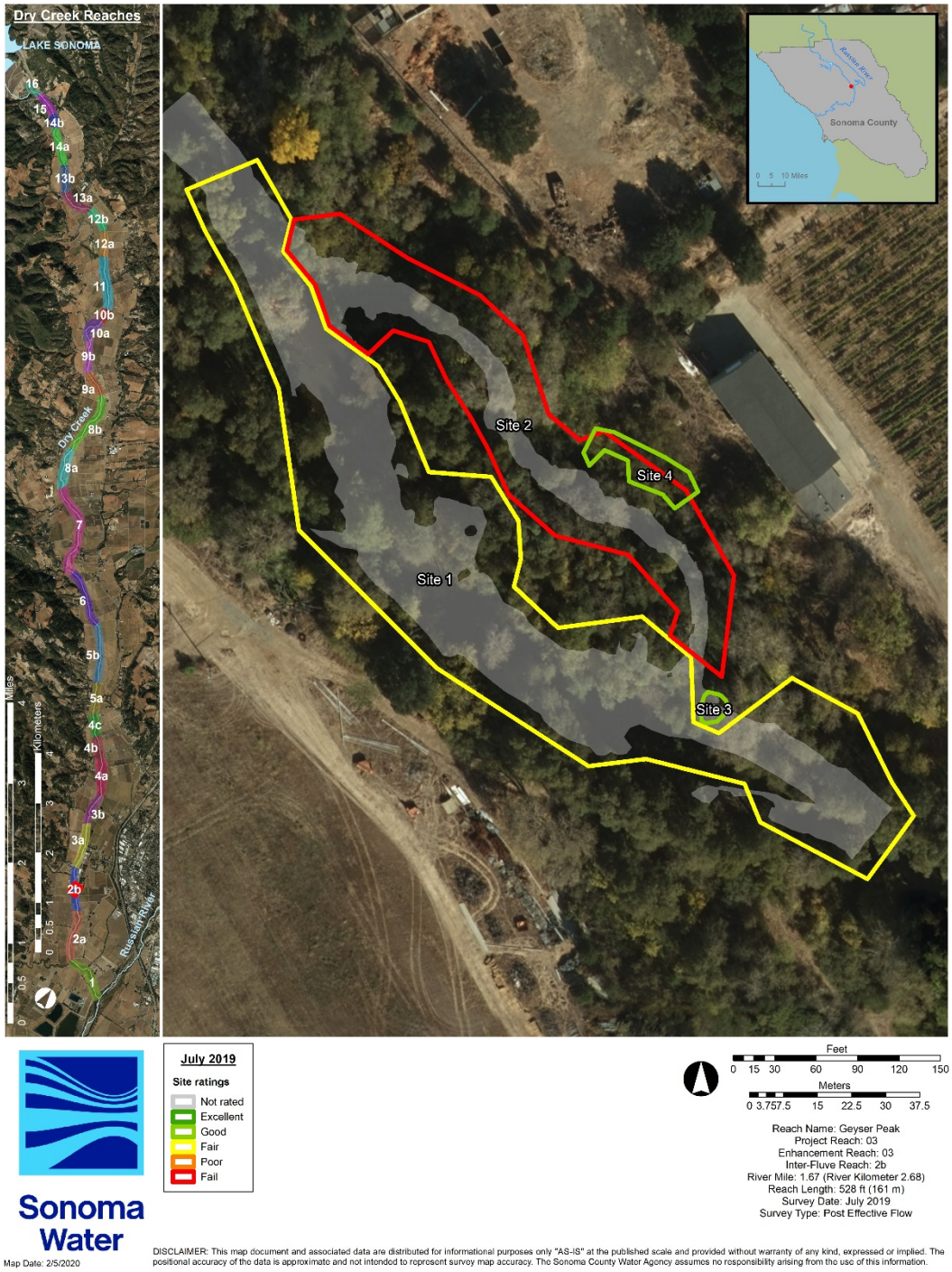

Figure 106. Post-effective flow site ratings for the Geyser Peak enhancement reach, July 2019.

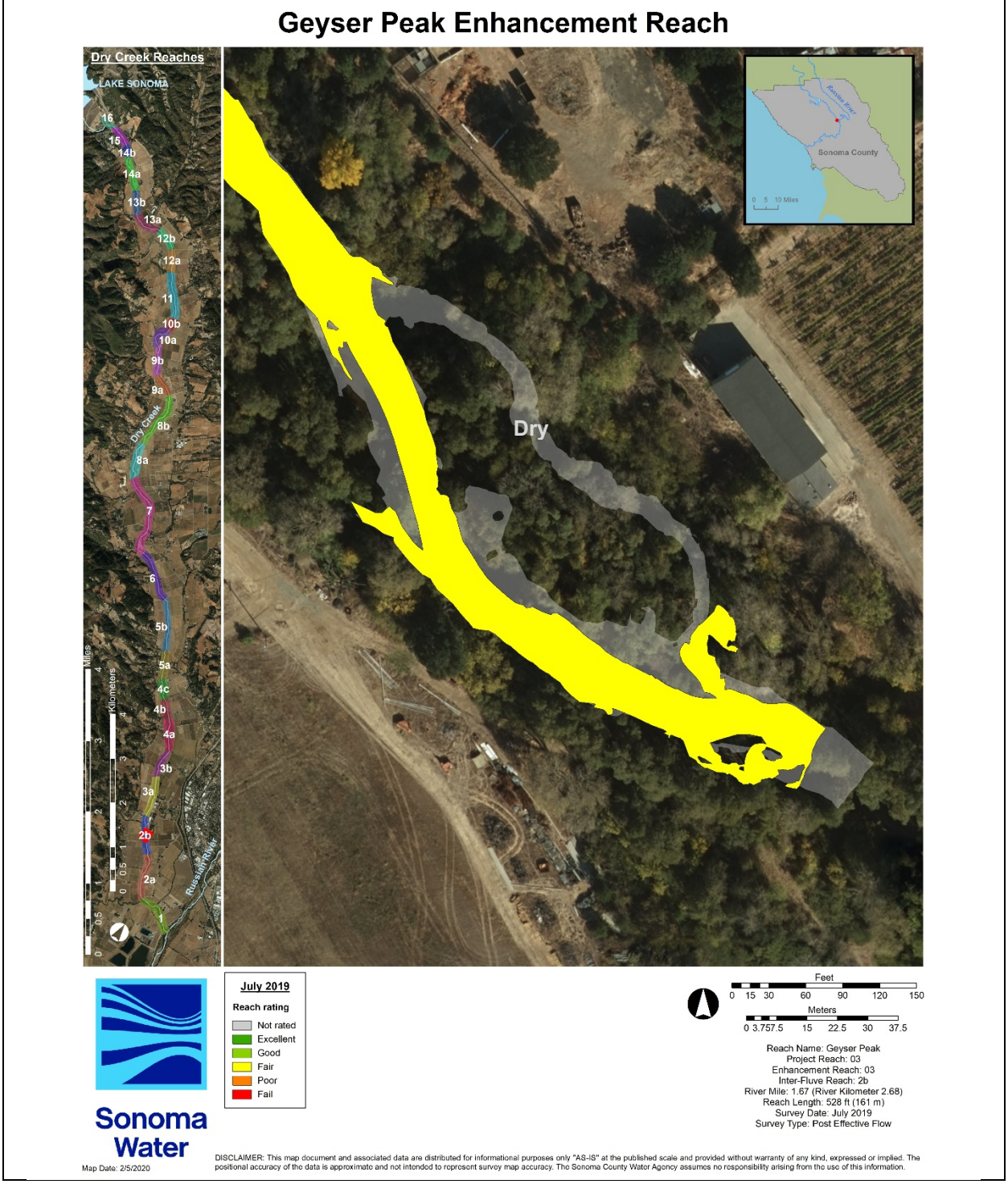

Figure 107. Post-effective flow reach rating for the Geyser Peak enhancement reach, July 2019.

Feature and Habitat Unit Checklists

Table 62. Adaptive Management Plan targeted checklist for the Geyser Peak enhancement reach, July 2019.

	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	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519
	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	2	2	2
	Project Site Type	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	SideChan	SideChan	SideChan
	Project Feature Number	NA	NA	NA	NA	NA	NA	NA	NA	NA	S1-05	S1-07	S1-08	S1-10	S1-11	S1-12	S2-01	S2-02	S2-03
	Feature Type Code	NA	NA	NA	NA	NA	NA	NA	NA	NA	LWS	LW	HW2	HW2	LW	LW	R	HW2	HW1
	Habitat Unit	HU01	HU02	HU03	HU04	HU05	HU06	HU07	HU08	HU09	HU01_D	HU01_D	HU01_D	HU01_D	HU01_D	HU01_D	HU02_D	HU02_D	HU02_D
	Habitat Type	Riffle	Alcove	Pool	Alcove	Flatwater	Riffle	Flatwater	Riffle	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	NA	NA	FAIR	UNKN	UNKN	UNKN	UNKN	FAIR	FAIL	FAIL	FAIL
5a	Are problems with the **feature** visible?	NA	NA	NA	NA	NA	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES
6a	Is the **feature** still in its original location?	NA	NA	NA	NA	NA	NA	NA	NA	NA	YES	NO	NO	NO	NO	YES	NO	YES	YES
6b	Is the **feature** still in its original position?	NA	NA	NA	NA	NA	NA	NA	NA	NA	YES	NO	NO	NO	NO	NO	NO	UNK	UNK
6d	Is the **feature** still in its original orientaton?	NA	NA	NA	NA	NA	NA	NA	NA	NA	YES	NO	NO	NO	NO	UNK	NO	UNK	UNK
8.	If an objective, did the **feature** create the targeted instream habitat type?	NA	NA	NA	NA	NA	NA	NA	NA	NA	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.	NA	NA	NA	NA	NA	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	71%	58%	46%	51%	62%	71%	72%	56%	62%	0%	0%	0%	0%	0%	0%	0%	0%	0%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	8%	15%	41%	14%	27%	12%	17%	13%	28%	0%	0%	0%	0%	0%	0%	0%	0%	0%
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	3	3	2	2	1	2	2	2	3	0	0	0	0	0	0	0	0	0
15.	Percent of **habitat unit** covered by shelter: %	35	30	40	65	10	35	20	50	30	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	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	105	90	80	130	10	70	40	100	90	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	NA	NA	NO	NO	NO	NO	NO	YES	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	NO	NO	NO	NO	NO	NO	NO	NO	NO
25.	Did the **feature** achieve the targeted velocity?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	23%	100%	21%	100%	18%	21%	30%	19%	21%	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	8%	58%	7%	51%	6%	7%	17%	4%	9%	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%	15%	5%	14%	0%	1%	3%	0%	4%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	FEATURE NUMBER	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**S1-05**	**S1-07**	**S1-08**	**S1-10**	**S1-11**	**S1-12**	**S2-01**	**S2-02**	**S2-03**
	HABITAT UNIT NUMBER	**HU01**	**HU02**	**HU03**	**HU04**	**HU05**	**HU06**	**HU07**	**HU08**	**HU09**	**HU01_D**	**HU01_D**	**HU01_D**	**HU01_D**	**HU01_D**	**HU01_D**	**HU02_D**	**HU02_D**	**HU02_D**
	SITE NUMBER	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**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	0	0	0	0	0	0	0	3	0	0	0	0	3	1	1	1
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	1	0	0	0	0	1	0	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	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	0	0	1	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
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	4	4	4	4	4	4	4	4	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	1	4	1	2	1	1	1	2	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	5	4	4	3	4	4	4	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)	2	2	3	4	1	2	2	3	2	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
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	4	3	3	4	0	2	1	4	3	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	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	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)	2	4	2	4	1	2	2	1	2	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	4	0	4	0	0	1	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	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 62. Adaptive Management Plan targeted checklist for the Geyser Peak enhancement reach, July 2019.

	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	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519
	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 Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
	Project Feature Number	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	S2-12.2	S2-12.3	S2-13.1	S2-13.2	S2-14
	Feature Type Code	PW	PW	PW	HW1	R	HW2	HW1	HW2	HW2	HW1	HW1	HW1	PW	PW	PW	HW1	HW1	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	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	GOOD	GOOD	GOOD	UNKN	FAIL	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	FAIR	FAIR	FAIL
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	YES	YES	UNK	NO	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	YES	YES	NO
6b	Is the **feature** still in its original position?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
6d	Is the **feature** still in its original orientaton?	YES	YES	YES	UNK	NO	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	NO
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
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%
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
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
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?	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
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%
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%
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	**S2-04.1**	**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**	**S2-12.2**	**S2-12.3**	**S2-13.1**	**S2-13.2**	**S2-14**
	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**	**HU02_D**	**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)	4	4	4	0	1	0	0	0	0	0	0	0	0	0	0	3	3	1
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	1	1	0	0	0	0	0	0	0	0	0	0	0	0	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	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	0	0	0	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
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)	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
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
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	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
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)	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
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 62. Adaptive Management Plan targeted checklist for the Geyser Peak enhancement reach, July 2019.

	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	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519
	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	3	4
	Project Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SC Bank FP
	Project Feature Number	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	S2-22.1	S2-22.2	S2-23	S3-01	S4-01
	Feature Type Code	HW2	HW2	HW1	LW	PW	PW	PW	HW1	ALJ	HW1	HW2	HW1	HW1	HW1	HW1	TT	LW	FB
	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_2	HU03_D
	Habitat Type	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Alcove	Dry
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	UNKN	UNKN	UNKN	UNKN	GOOD	GOOD	GOOD	UNKN	GOOD	FAIR	FAIR	FAIR	FAIR	GOOD	GOOD	UNKN	GOOD	GOOD
5a	Are problems with the **feature** visible?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO	NO
6a	Is the **feature** still in its original location?	UNK	UNK	UNK	UNK	YES	YES	YES	UNK	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES
6b	Is the **feature** still in its original position?	NO	NO	NO	NO	YES	YES	YES	NO	NO	YES	YES	YES	YES	YES	YES	NO	NO	YES
6d	Is the **feature** still in its original orientaton?	UNK	UNK	UNK	UNK	YES	YES	YES	UNK	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES
8.	If an objective, did the **feature** create the targeted instream habitat type?	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	YES	YES	NO	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	NO	YES	YES	YES	YES	NO	NO	YES	NO	NO
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%	58%	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%	15%	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	3	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	30	0
17a	If an objective, did the **feature** increase instream shelter rating?	NO	NO	NO	NO	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	NO	YES	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	90	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	YES	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	YES
25.	Did the **feature** achieve the targeted velocity?	NO	NO	NO	NO	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	NO	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%	0%	0%	100%	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%	58%	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%	15%	0%
	FEATURE NUMBER	**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**	**S2-22.1**	**S2-22.2**	**S2-23**	**S3-01**	**S4-01**
	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**	**HU02_D**	**HU02_D**	**HU02_D**	**HU02_2**	**HU03_D**
	SITE NUMBER	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**3**	**4**
	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	4	4	4	0	4	3	3	3	3	4	4	0	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	1	1	0	1	1
6a	Is the **feature** still in its original location? (YES = 1 pt, NO = 0 pt)	0	0	0	0	1	1	1	0	1	1	1	1	1	1	1	0	1	1
6b	Is the **feature** still in its original position? (YES = 1 pt, NO = 0 pt)	0	0	0	0	1	1	1	0	0	1	1	1	1	1	1	0	0	1
6d	Is the **feature** still in its original orientaton? (YES = 1 pt, NO = 0 pt)	0	0	0	0	1	1	1	0	1	1	1	1	1	1	1	0	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	1	0	0	0	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)	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	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	0	0	0	0	0	0	0	0	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)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
17a	If an objective, did the **feature** increase instream shelter rating? (YES = 1 pt, NO = 0 pt)	0	0	0	0	1	1	1	0	1	1	1	1	1	1	1	0	1	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	3	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	1	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
25.	Did the **feature** achieve the targeted velocity? (YES = 1 pt, NO = 0 pt)	0	0	0	0	1	1	1	0	1	1	1	1	1	1	1	0	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	0	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)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0

Table 63. Adaptive Management Plan full checklist for the Geyser Peak enhancement reach, July 2019.

	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	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519
	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	2	2	2
	Project Site Type	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	MainChan	SideChan	SideChan	SideChan
	Project Feature Number	NA	NA	NA	NA	NA	NA	NA	NA	NA	S1-05	S1-07	S1-08	S1-10	S1-11	S1-12	S2-01	S2-02	S2-03
	Feature Type Code	NA	NA	NA	NA	NA	NA	NA	NA	NA	LWS	LW	HW2	HW2	LW	LW	R	HW2	HW1
	Habitat Unit	HU01	HU02	HU03	HU04	HU05	HU06	HU07	HU08	HU09	HU01_D	HU01_D	HU01_D	HU01_D	HU01_D	HU01_D	HU02_D	HU02_D	HU02_D
	Habitat Type	Riffle	Alcove	Pool	Alcove	Flatwater	Riffle	Flatwater	Riffle	Pool	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
1.	Length of targeted treatment (ft)	NA	NA	NA	NA	NA	NA	NA	NA	NA	10	NA	NA	NA	NA	NA	NR	8	10
2.	Width of targeted treatment: (ft)	NA	NA	NA	NA	NA	NA	NA	NA	NA	15	NA	NA	NA	NA	NA	NR	10	5
3.	Estimate area of the targeted **feature**: (ft^2)										150							80	50
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	NA	NA	NA	NA	NA	NA	NA	NA	NA	FAIR	UNKN	UNKN	UNKN	UNKN	FAIR	FAIL	FAIL	FAIL
5a	Are problems with the **feature** visible?	NA	NA	NA	NA	NA	NA	NA	NA	NA	YES	YES	YES	YES	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	NA	NA	STR	BBB	BBB	BBB	BBB	BBB	BBB	BBB	BBB
6a	Is the **feature** still in its original location?	NA	NA	NA	NA	NA	NA	NA	NA	NA	YES	NO	NO	NO	NO	YES	NO	YES	YES
6b	Is the **feature** still in its original position?	NA	NA	NA	NA	NA	NA	NA	NA	NA	YES	NO	NO	NO	NO	NO	NO	UNK	UNK
6c	If yes: LBK, MDC, RBK, SPN, OTH	NA	NA	NA	NA	NA	NA	NA	NA	NA	LBK	UNK	UNK	UNK	UNK	OTH	OTH	OTH	OTH
6d	Is the **feature** still in its original orientaton?	NA	NA	NA	NA	NA	NA	NA	NA	NA	YES	NO	NO	NO	NO	UNK	NO	UNK	UNK
6e	If yes: DNS, MUL, PRL, PRP, UPS, OTH	NA	NA	NA	NA	NA	NA	NA	NA	NA	PRP	UNK	UNK	UNK	UNK	UNK	OTH	UNK	UNK
7.	Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	RIF	ALC	POO	ALC	FLT	RIF	FLT	RIF	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	NA	NA	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.	NA	NA	NA	NA	NA	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES
10.	Mean water depth in **habitat unit**: ft	1.0	1.1	2.0	1.0	1.5	1.3	1.4	1.0	1.5	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	3.5	3.7	4.7	3.4	2.6	3.0	3.4	2.8	3.5	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: (ft2)	7104.0	987.8	1916.7	558.1	1102.2	3835.5	6144.1	2643.2	3341.4	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: (ft2)	768.4	259.7	1742.8	153.4	486.7	645.3	1455.4	613.9	1530.7	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: (ft2)	7872.4	1247.5	3659.5	711.5	1588.9	4480.7	7599.4	3257.1	4872.1	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	71%	58%	46%	51%	62%	71%	72%	56%	62%	0%	0%	0%	0%	0%	0%	0%	0%	0%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	8%	15%	41%	14%	27%	12%	17%	13%	28%	0%	0%	0%	0%	0%	0%	0%	0%	0%
11g	% Area of **habitat** unit within 0.5-4.0 ft depth	78%	73%	87%	65%	89%	83%	89%	69%	90%	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	NA	NA	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	0	0	0	0	0	0	0	55	0	0	0	0	0		40	30
13.	Were there any unintended effects of the **feature** on the water depth? If Y, comment.	NA	NA	NA	NA	NA	NA	NA	NA	NA	YES	YES	YES	YES	YES	YES	YES	YES	YES
14.	Instream shelter value in the **habitat unit**: 0, 1, 2, 3	3	3	2	2	1	2	2	2	3	0	0	0	0	0	0	0	0	0
15.	Percent of **habitat unit** covered by shelter: %	35	30	40	65	10	35	20	50	30	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	SWD	UCB	SWD	SWD	BUB	TVG	TVG	BUB	TVG	NON	NON	NON	NON	NON	NON	NON	NON	NON
16b	2nd dominant in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	LWD	LWD	UCB	TVG	TVG	BUB	SWD	TVG	LWD	NON	NON	NON	NON	NON	NON	NON	NON	NON
17a	If an objective, did the **feature** increase instream shelter rating?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	105	90	80	130	10	70	40	100	90	0	0	0	0	0	0	0	0	0
18a	Large woody debris count in **habitat unit**: D >1', L 6-20'	2	0	0	0	0	3	1	0	1	0	0	0	0	0	0	0	0	0
18b	Large woody debris count in **habitat unit**: D >1', L >20'	3	2	1	3	0	0	0	0	2	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	NA	NA	NO	NO	NO	NO	NO	YES	NO	NO	NO
19b	LWD recruitment mechanisms in **habitat unit**: ANC, EXC, EXH, INT, RPR, UNA, OTH	RPR	EXC	RPR	RPR	NON	OTH	OTH	NON	RPR	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	AGG	AGG	NON	NON	NON	NON	AGG	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	NA	NA	NA	NA	NA	NA	NA	NA	NO	NO	NO	NO	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	NA	NA	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	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	AGG	AGG	AGG
21d	Inlet Conditions (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	AGG	AGG	AGG
22.	Were there any unintended effects on the stream channel at the **feature**? If Y, comment.	NA	NA	NA	NA	NA	NA	NA	NA	NA	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?	NA	NA	NA	NA	NA	NA	NA	NA	NA	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**	4.4	0.1	2.9	0.4	2.9	3.8	3.7	4.3	2.6	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**	1.6	0.0	1.1	0.0	1.4	1.8	1.3	1.6	1.1	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)	2305.0	1714.3	862.8	1092.7	314.7	1144.8	2518.8	907.7	1151.8	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): (%)	23%	100%	21%	100%	18%	21%	30%	19%	21%	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	NA	NA	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	SND	SND	SLC	GRV	GRV	SND	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	SLC	GRV	SND	SND	SND	GRV	SND	SND	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	NA	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
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	857.9	1247.5	506.8	711.5	120.8	436.9	1696.1	201.6	700.3	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	826.1	987.8	301.4	558.1	114.6	384.1	1426.7	199.9	472.7	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	31.8	259.7	205.3	153.4	6.2	52.8	269.4	1.7	227.6	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	9%	73%	12%	65%	7%	8%	20%	4%	13%	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	8%	58%	7%	51%	6%	7%	17%	4%	9%	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%	15%	5%	14%	0%	1%	3%	0%	4%	0%	0%	0%	0%	0%	0%	0%	0%	0%
37.	Does this **feature** need: DEC, ENH, MNT, REP, NON, OTH	NA	NA	NA	NA	NA	NA	NA	NA	NA	NON	NON	NON	NON	NON	NON	NON	NON	NON
38.	Are additional restoration treatments recommended at this **site**?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO

Table 63. Adaptive Management Plan full checklist for the Geyser Peak enhancement reach, July 2019.

	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	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519
	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 Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan
	Project Feature Number	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	S2-12.2	S2-12.3	S2-13.1	S2-13.2	S2-14
	Feature Type Code	PW	PW	PW	HW1	R	HW2	HW1	HW2	HW2	HW1	HW1	HW1	PW	PW	PW	HW1	HW1	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	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
1.	Length of targeted treatment (ft)	20	20	20	NA	NR	8	7	10	6	6	NA	7	8	8	8	11	11	NR
2.	Width of targeted treatment: (ft)	5	5	5	NA	NR	15	10	8	11	10	NA	9	9	9	9	9	9	NR
3.	Estimate area of the targeted **feature**: (ft^2)	100	100	100			120	70	80	66	60		63	72	72	72	99	99	
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	GOOD	GOOD	GOOD	UNKN	FAIL	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	UNKN	FAIR	FAIR	FAIL
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	AGG	AGG	AGG	BBB	BBB	BBB	BBB	BBB	BBB	BBB	BBB	BBB	BBB	BBB	BBB	AGG	AGG	BBB
6a	Is the **feature** still in its original location?	YES	YES	YES	UNK	NO	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	YES	YES	NO
6b	Is the **feature** still in its original position?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
6c	If yes: LBK, MDC, RBK, SPN, OTH	OTH	OTH	OTH	UNK	OTH	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	OTH	OTH	OTH
6d	Is the **feature** still in its original orientaton?	YES	YES	YES	UNK	NO	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	NO
6e	If yes: DNS, MUL, PRL, PRP, UPS, OTH	PRL	PRL	PRL	UNK	OTH	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	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	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: (ft2)	0.0	0.0	0.0	0.0	0.0	0.0	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: (ft2)	0.0	0.0	0.0	0.0	0.0	0.0	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: (ft2)	0.0	0.0	0.0	0.0	0.0	0.0	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:	40	40	40	0		55	25	35	30	30	0	40	30	30	30	30	30	
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	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	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
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	AGG	AGG	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	AGG	AGG	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	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	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	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%	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%
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%
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 63. Adaptive Management Plan full checklist for the Geyser Peak enhancement reach, July 2019.

	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	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519	72519
	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	3	4
	Project Site Type	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SideChan	SC Bank FP
	Project Feature Number	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	S2-22.1	S2-22.2	S2-23	S3-01	S4-01
	Feature Type Code	HW2	HW2	HW1	LW	PW	PW	PW	HW1	ALJ	HW1	HW2	HW1	HW1	HW1	HW1	TT	LW	FB
	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_2	HU03_D
	Habitat Type	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Alcove	Dry
1.	Length of targeted treatment (ft)	12	5	7	NA	20	20	20	8	25	8	10	8	8	6	12	NA	12	13
2.	Width of targeted treatment: (ft)	6	5	5	NA	8	8	8	8	21	6	7	15	8	7	10	NA	10	20
3.	Estimate area of the targeted **feature**: (ft^2)	72	25	35		160	160	160	64	525	48	70	120	64	42	120		120	260
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	UNKN	UNKN	UNKN	UNKN	GOOD	GOOD	GOOD	UNKN	GOOD	FAIR	FAIR	FAIR	FAIR	GOOD	GOOD	UNKN	GOOD	GOOD
5a	Are problems with the **feature** visible?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO	NO
5b	Types: ANC, BBB, CRF, MAT, SHF, STR, SWA, UND, UNS, WSH, OTH, NON	BBB	BBB	BBB	BBB	STR	STR	STR	BBB	AGG	AGG	AGG	AGG	AGG	NON	NON	WSH	NON	NON
6a	Is the **feature** still in its original location?	UNK	UNK	UNK	UNK	YES	YES	YES	UNK	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES
6b	Is the **feature** still in its original position?	NO	NO	NO	NO	YES	YES	YES	NO	NO	YES	YES	YES	YES	YES	YES	NO	NO	YES
6c	If yes: LBK, MDC, RBK, SPN, OTH	UNK	UNK	UNK	UNK	LBK	LBK	LBK	UNK	LBK	LBK	LBK	LBK	LBK	LBK	LBK	UNK	LBK	OTH
6d	Is the **feature** still in its original orientaton?	UNK	UNK	UNK	UNK	YES	YES	YES	UNK	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES
6e	If yes: DNS, MUL, PRL, PRP, UPS, OTH	UNK	UNK	UNK	UNK	PRL	PRL	PRL	UNK	UPS	MUL	MUL	MUL	MUL	UPS	UPS	UNK	PRP	PRP
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	ALC	DRY
8.	If an objective, did the **feature** create the targeted instream habitat type?	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	YES	YES	NO	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	NO	YES	YES	YES	YES	NO	NO	YES	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	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	3.7	0.0
11b	Area of **habitat unit** within 0.5 -2.0 ft depth: (ft2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	987.8	0.0
11c	Area of **habitat unit** within 2.0 -4.0 ft depth: (ft2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	259.7	0.0
11d	Area of **habitat unit** within 0.5-4.0 ft depth: (ft2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1247.5	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%	58%	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%	15%	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%	73%	0%
11h	If an objective, did the **feature** increase/decrease water depth in the treatment area?	NO	NO	NO	NO	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	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
12b	Estimate area of **feature** within targeted depth or range ft^2:	30	15	20	0	60	60	60	30	220	25	55	90	40	25	100	0	50	0
13.	Were there any unintended effects of the **feature** on the water depth? If Y, comment.	YES	YES	YES	YES	NO	NO	NO	YES	NO	YES	YES	YES	YES	NO	NO	YES	NO	NO
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	3	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	30	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	UCB	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	LWD	NON
17a	If an objective, did the **feature** increase instream shelter rating?	NO	NO	NO	NO	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	NO	YES	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	90	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	2	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	YES	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	EXC	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	AGG	NON
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	YES
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	AGG	AGG	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	AGG	AGG	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	NO
23.	If an objective, did the **feature** decrease/increase velocity in the treatment area?	NA	NA	NA	NA	DEC	DEC	DEC	DEC	DEC	DEC	DEC	DEC	DEC	DEC	DEC	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
25.	Did the **feature** achieve the targeted velocity?	NO	NO	NO	NO	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	NO	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**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	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	1714.3	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%	100%	0%
29.	Were there any unintended effects of **feature** on velocity If Y, comment.	YES	YES	YES	YES	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	YES	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	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	SND	SLC	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	1247.5	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	987.8	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	259.7	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%	73%	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%	58%	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%	15%	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 63. Adaptive Management Plan full checklist for the Geyser Peak enhancement reach, July 2019.

	Project Reach	3	3
	Enhancement Reach	3	3
	Colloquial Name	GP	GP
	mmddyy	72519	72519
	Survey Type	PEF	PEF
	Project Site Number	4	4
	Project Site Type	SC Bank FP	SC Bank FP
	Project Feature Number	S4-02	S4-03
	Feature Type Code	FB	FB
	Habitat Unit	HU03_D	HU03_D
	Habitat Type	Dry	Dry
1.	Length of targeted treatment (ft)	13	13
2.	Width of targeted treatment: (ft)	20	20
3.	Estimate area of the targeted **feature**: (ft^2)	260	260
4.	Structural condition of **feature**: EXCL, GOOD, FAIR, POOR, FAIL	FAIR	GOOD
5a	Are problems with the **feature** visible?	YES	NO
5b	Types: ANC, BBB, CRF, MAT, SHF, STR, SWA, UND, UNS, WSH, OTH, NON	OTH	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	OTH	OTH
6d	Is the **feature** still in its original orientaton?	YES	YES
6e	If yes: DNS, MUL, PRL, PRP, UPS, OTH	PRP	PRP
7.	Current level II habitat type: FLT, POO, RIF, DRY, ALC, OTH	DRY	DRY
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	0.0	0.0
11a	Maximum water depth in **habitat unit**: ft	0.0	0.0
11b	Area of **habitat unit** within 0.5 -2.0 ft depth: (ft2)	0.0	0.0
11c	Area of **habitat unit** within 2.0 -4.0 ft depth: (ft2)	0.0	0.0
11d	Area of **habitat unit** within 0.5-4.0 ft depth: (ft2)	0.0	0.0
11e	% Area of **habitat unit** within 0.5 -2.0 ft depth	0%	0%
11f	% Area of **habitat unit** within 2.0 -4.0 ft depth	0%	0%
11g	% Area of **habitat** unit within 0.5-4.0 ft depth	0%	0%
11h	If an objective, did the **feature** increase/decrease water depth in the treatment area?	NO	NO
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:	0	0
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	0	0
15.	Percent of **habitat unit** covered by shelter: %	0	0
16a	1st dominant cover in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	NON	NON
16b	2nd dominant in **habitat unit**: BED, BOL, BUB, LWD, RTW, SWD, UCB, VEG, OTH	NON	NON
17a	If an objective, did the **feature** increase instream shelter rating?	NO	NO
17b	a. Calculate the shelter rating for the **habitat unit**: 0-300	0	0
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	AGG	AGG
21c	Outlet Conditions (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	AGG	AGG
21d	Inlet Conditions (**site**): AGG, FPD, GRC, INC, NAR, SIN, STB, TOG, WID, OTH	AGG	AGG
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?	NA	NA
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**	0.0	0.0
26c	Measured mean velocity (ft/sec) in **habitat unit**	0.0	0.0
27.	Area of **habitat unit** within targeted velocity: (ft^2)	0.0	0.0
28.	Percent of **habitat unit** within targeted velocity (see above): (%)	0%	0%
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	GRV	GRV
30b	2nd dominant substrate in **habitat unit**: BED, BOL, COB, GRV, SND, SLC, OTH	SND	SND
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	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
36c	Total **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0.0	0.0
36d	% **habitat unit** area where targeted depth, velocity and shelter criteria overlap	0%	0%
36e	% **habitat unit** area where < 0.5 f/s; 0.5 to 2 ft and shelter criteria overlap	0%	0%
36f	% **habitat unit** area where < 0.5 f/s; 2 to 4 ft and shelter criteria overlap	0%	0%
37.	Does this **feature** need: DEC, ENH, MNT, REP, NON, OTH	NON	NON
38.	Are additional restoration treatments recommended at this **site**?	NO	NO