















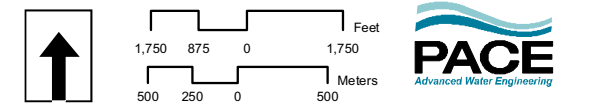
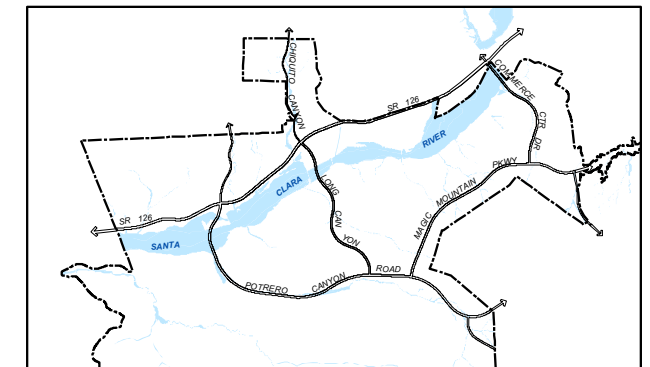


L E G E N D

-  Newhall Ranch Specific Plan Boundary
-  Bank Stabilization
-  Utility Corridor
-  Bridge Locations
-  Cross Sections

Velocity Profile (fps)

-  0 - 2
-  2 - 4
-  4 - 6
-  6 - 8
-  8 - 10
-  10 - 12
-  12 - 15
-  15 - 18
-  18 - 21
-  21 - 24
-  24 - 27
-  27 - 30
-  30 - 39
















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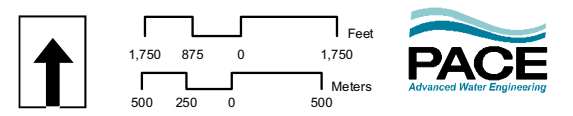
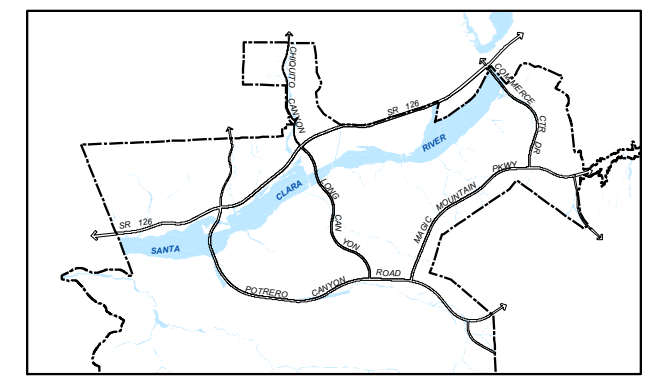
Figure 5.4e
ALTERNATIVE 5
20 YEAR FLOOD EVENT VELOCITY
SANTA CLARA RIVER

L E G E N D

-  Newhall Ranch Specific Plan Boundary
-  Bank Stabilization
-  Utility Corridor
-  Bridge Locations
-  Cross Sections

Velocity Profile (fps)

-  0 - 2
-  2 - 4
-  4 - 6
-  6 - 8
-  8 - 10
-  10 - 12
-  12 - 15
-  15 - 18
-  18 - 21
-  21 - 24
-  24 - 27
-  27 - 30
-  30 - 39
















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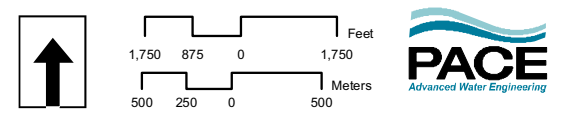
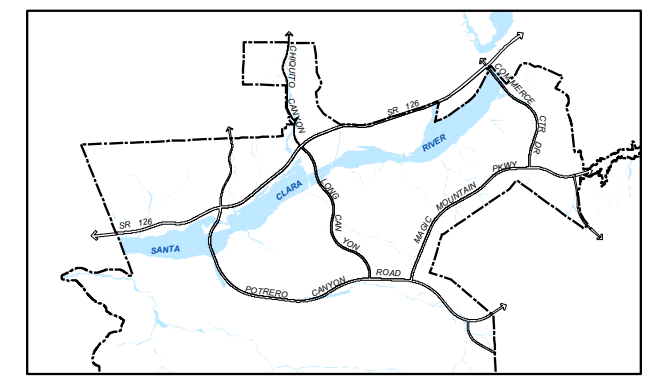
Figure 5.4f
ALTERNATIVE 5
50 YEAR FLOOD EVENT VELOCITY
SANTA CLARA RIVER

L E G E N D

-  Newhall Ranch Specific Plan Boundary
-  Bank Stabilization
-  Utility Corridor
-  Bridge Locations
-  Cross Sections

Velocity Profile (fps)

-  0 - 2
-  2 - 4
-  4 - 6
-  6 - 8
-  8 - 10
-  10 - 12
-  12 - 15
-  15 - 18
-  18 - 21
-  21 - 24
-  24 - 27
-  27 - 30
-  30 - 39
















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Figure 5.4g
ALTERNATIVE 5
100 YEAR FLOOD EVENT VELOCITY
SANTA CLARA RIVER

L E G E N D

-  Newhall Ranch Specific Plan Boundary
-  Bank Stabilization
-  Utility Corridor
-  Bridge Locations
-  Cross Sections

Velocity Profile (fps)

-  0 - 2
-  2 - 4
-  4 - 6
-  6 - 8
-  8 - 10
-  10 - 12
-  12 - 15
-  15 - 18
-  18 - 21
-  21 - 24
-  24 - 27
-  27 - 30
-  30 - 39

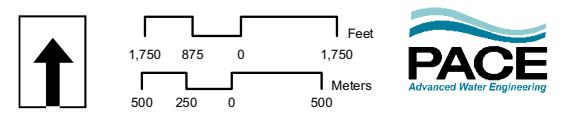
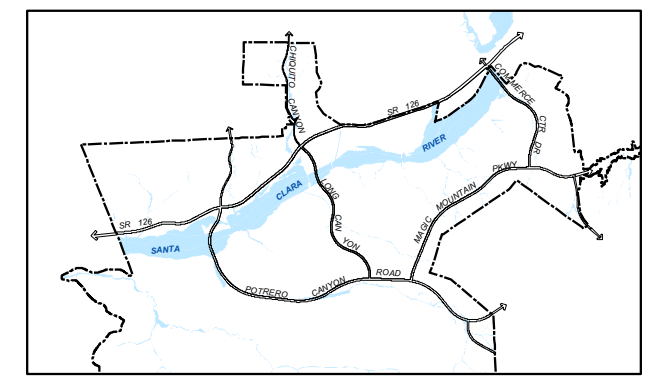


Figure 5.4h
**ALTERNATIVE 5
CAPITAL FLOOD EVENT VELOCITY
SANTA CLARA RIVER**














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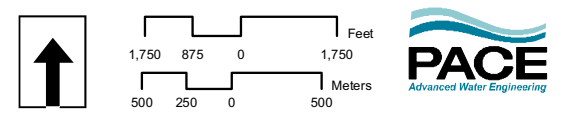
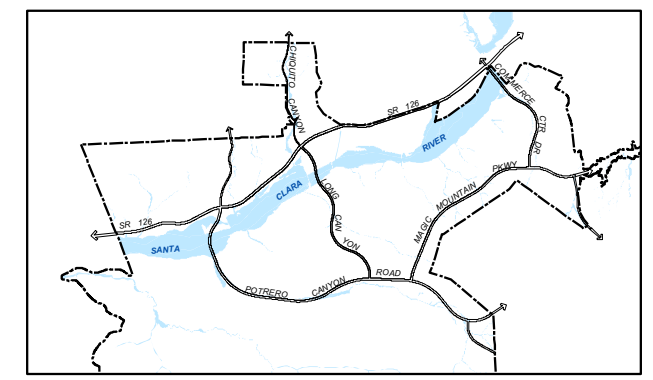


L E G E N D

-  Newhall Ranch Specific Plan Boundary
-  Bank Stabilization
-  Utility Corridor
-  Bridge Locations
-  Cross Sections

Velocity Profile (fps)

-  0 - 2
-  2 - 4
-  4 - 6
-  6 - 8
-  8 - 10
-  10 - 12
-  12 - 15
-  15 - 18
-  18 - 21
-  21 - 24
-  24 - 27
-  27 - 30
-  30 - 39



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











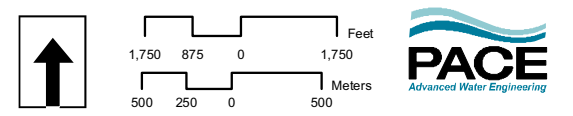
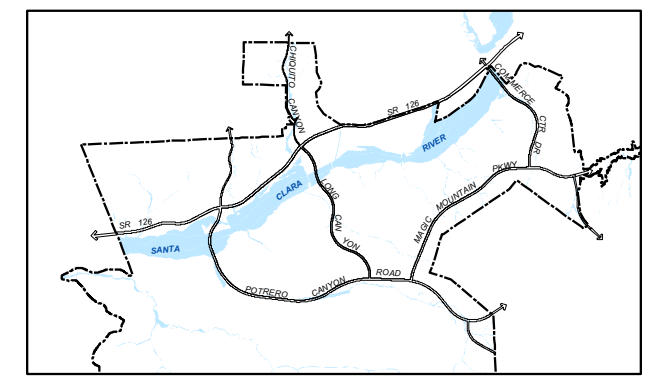
Figure 5.5b
ALTERNATIVE 6
2 YEAR FLOOD EVENT VELOCITY
SANTA CLARA RIVER

L E G E N D

-  Newhall Ranch Specific Plan Boundary
-  Bank Stabilization
-  Utility Corridor
-  Bridge Locations
-  Cross Sections

Velocity Profile (fps)

-  0 - 2
-  2 - 4
-  4 - 6
-  6 - 8
-  8 - 10
-  10 - 12
-  12 - 15
-  15 - 18
-  18 - 21
-  21 - 24
-  24 - 27
-  27 - 30
-  30 - 39
















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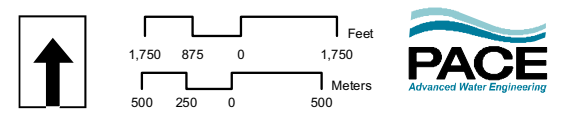
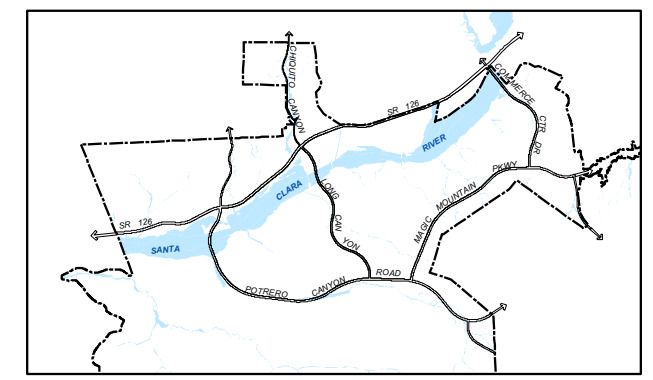
Figure 5.5c
ALTERNATIVE 6
5 YEAR FLOOD EVENT VELOCITY
SANTA CLARA RIVER

L E G E N D

-  Newhall Ranch Specific Plan Boundary
-  Bank Stabilization
-  Utility Corridor
-  Bridge Locations
-  Cross Sections

Velocity Profile (fps)


-  0 - 2
-  2 - 4
-  4 - 6
-  6 - 8
-  8 - 10
-  10 - 12
-  12 - 15
-  15 - 18
-  18 - 21
-  21 - 24
-  24 - 27
-  27 - 30
-  30 - 39
















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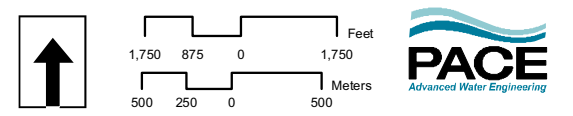
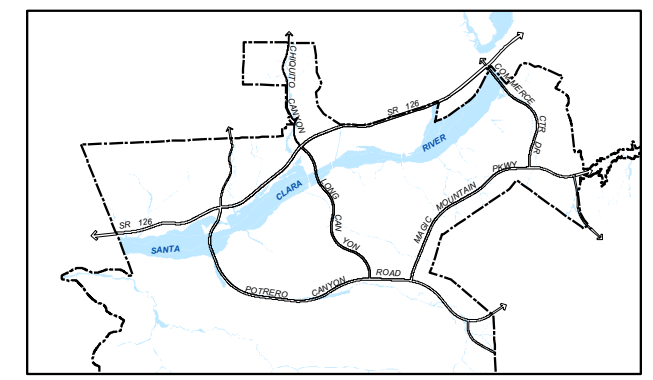
Figure 5.5d
ALTERNATIVE 6
10 YEAR FLOOD EVENT VELOCITY
SANTA CLARA RIVER

L E G E N D

-  Newhall Ranch Specific Plan Boundary
-  Bank Stabilization
-  Utility Corridor
-  Bridge Locations
-  Cross Sections

Velocity Profile (fps)




-  0 - 2
-  2 - 4
-  4 - 6
-  6 - 8
-  8 - 10
-  10 - 12
-  12 - 15
-  15 - 18
-  18 - 21
-  21 - 24
-  24 - 27
-  27 - 30
-  30 - 39
















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Figure 5.5e
ALTERNATIVE 6
20 YEAR FLOOD EVENT VELOCITY
SANTA CLARA RIVER

L E G E N D

-  Newhall Ranch Specific Plan Boundary
-  Bank Stabilization
-  Utility Corridor
-  Bridge Locations
-  Cross Sections

Velocity Profile (fps)

-  0 - 2
-  2 - 4
-  4 - 6
-  6 - 8
-  8 - 10
-  10 - 12
-  12 - 15
-  15 - 18
-  18 - 21
-  21 - 24
-  24 - 27
-  27 - 30
-  30 - 39

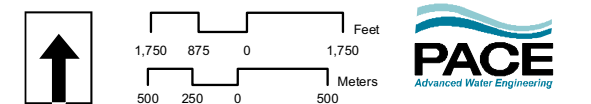
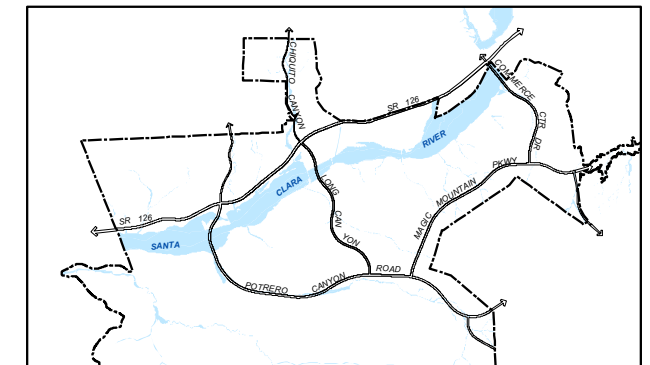


Figure 5.5f

ALTERNATIVE 6
50 YEAR FLOOD EVENT VELOCITY
SANTA CLARA RIVER














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L E G E N D

-  Newhall Ranch Specific Plan Boundary
-  Bank Stabilization
-  Utility Corridor
-  Bridge Locations
-  Cross Sections

Velocity Profile (fps)

-  0 - 2
-  2 - 4
-  4 - 6
-  6 - 8
-  8 - 10
-  10 - 12
-  12 - 15
-  15 - 18
-  18 - 21
-  21 - 24
-  24 - 27
-  27 - 30
-  30 - 39

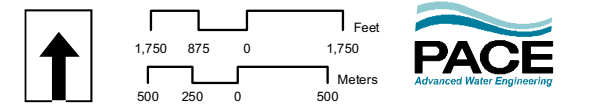
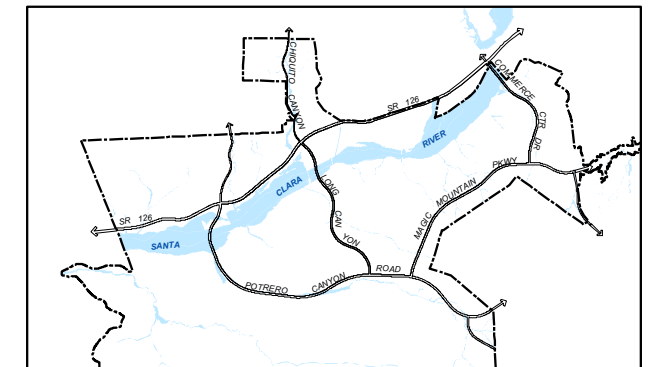
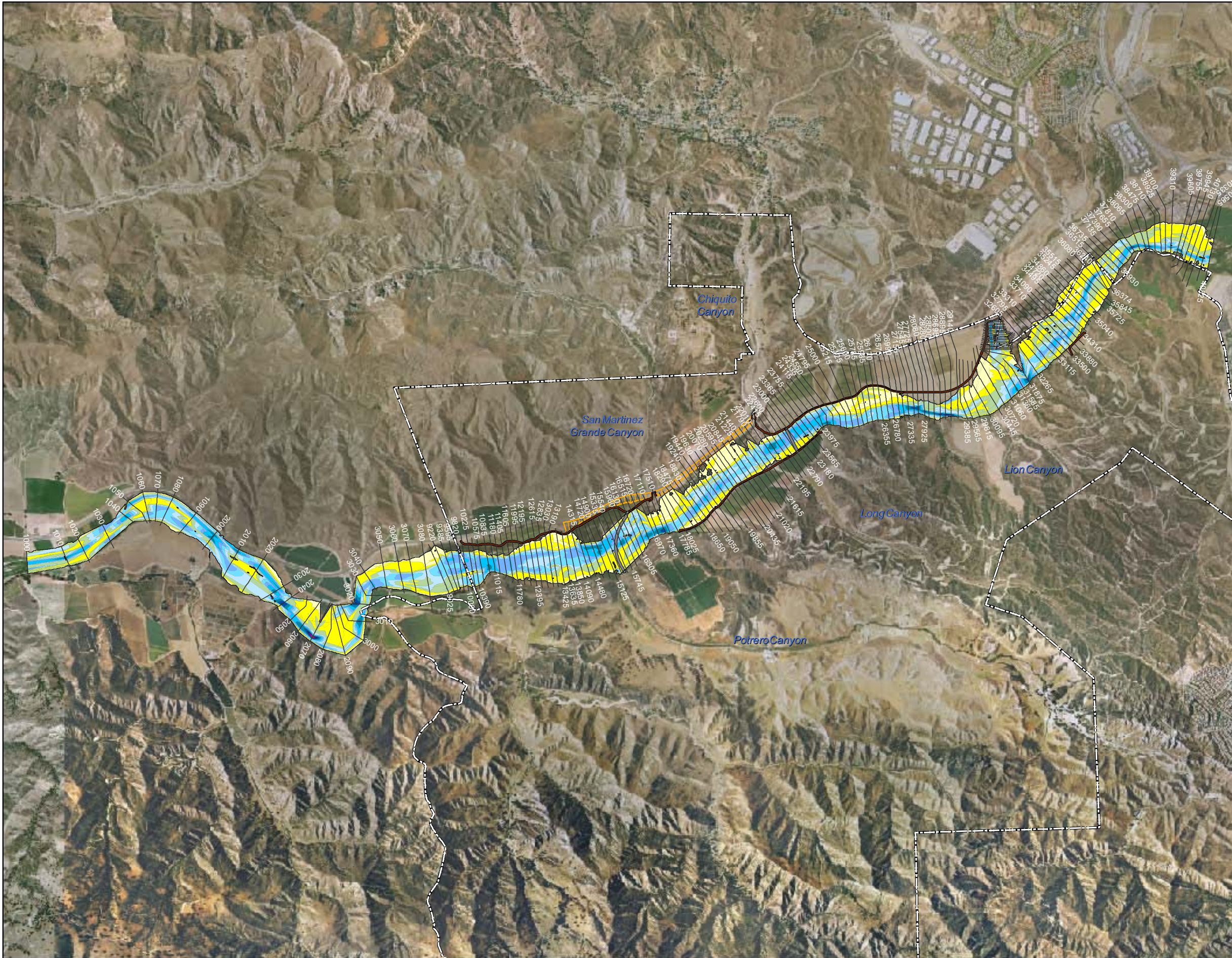


Figure 5.5g

ALTERNATIVE 6
100 YEAR FLOOD EVENT VELOCITY
SANTA CLARA RIVER














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L E G E N D

-  Newhall Ranch Specific Plan Boundary
-  Bank Stabilization
-  Utility Corridor
-  Bridge Locations
-  Cross Sections

Velocity Profile (fps)

-  0 - 2
-  2 - 4
-  4 - 6
-  6 - 8
-  8 - 10
-  10 - 12
-  12 - 15
-  15 - 18
-  18 - 21
-  21 - 24
-  24 - 27
-  27 - 30
-  30 - 39

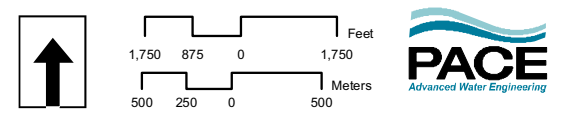
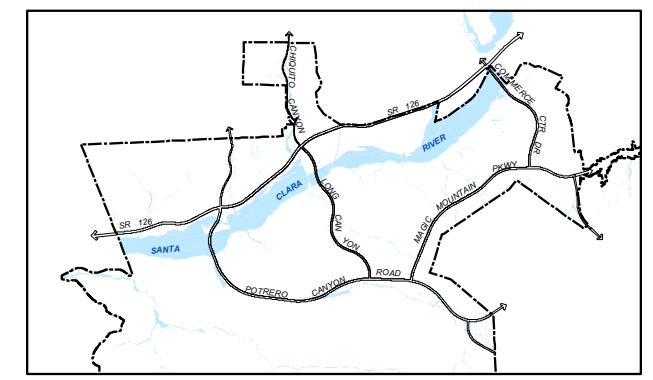


Figure 5.5h
ALTERNATIVE 6
CAPITAL FLOOD EVENT VELOCITY
SANTA CLARA RIVER














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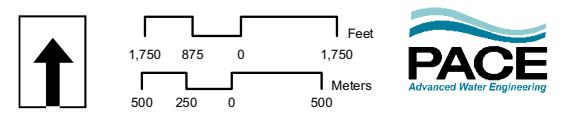
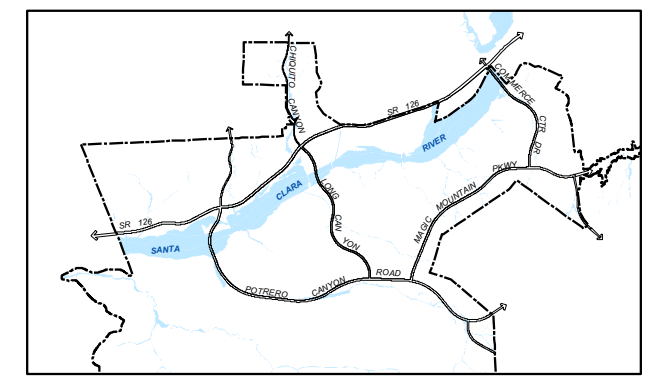


L E G E N D

-  Newhall Ranch Specific Plan Boundary
-  Bank Stabilization
-  Utility Corridor
-  Bridge Locations
-  Cross Sections

Velocity Profile (fps)

-  0 - 2
-  2 - 4
-  4 - 6
-  6 - 8
-  8 - 10
-  10 - 12
-  12 - 15
-  15 - 18
-  18 - 21
-  21 - 24
-  24 - 27
-  27 - 30
-  30 - 39
















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Figure 5.6b
ALTERNATIVE 7 (Avoidance)
2 YEAR FLOOD EVENT VELOCITY
SANTA CLARA RIVER

L E G E N D

-  Newhall Ranch Specific Plan Boundary
-  Bank Stabilization
-  Utility Corridor
-  Bridge Locations
-  Cross Sections

Velocity Profile (fps)

-  0 - 2
-  2 - 4
-  4 - 6
-  6 - 8
-  8 - 10
-  10 - 12
-  12 - 15
-  15 - 18
-  18 - 21
-  21 - 24
-  24 - 27
-  27 - 30
-  30 - 39

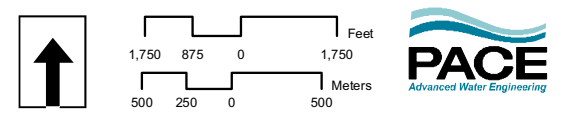
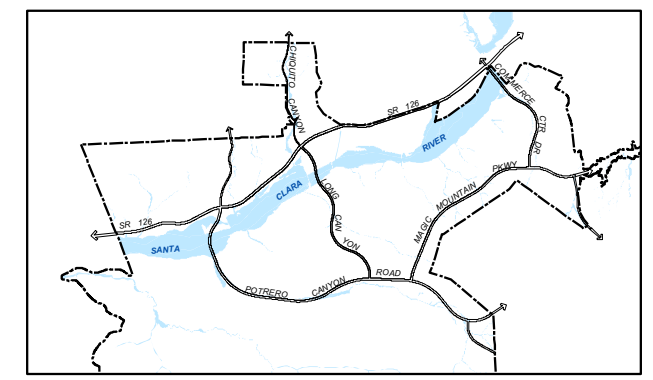





Figure 5.6c

**ALTERNATIVE 7 (Avoidance)
5 YEAR FLOOD EVENT VELOCITY
SANTA CLARA RIVER**














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L E G E N D

-  Newhall Ranch Specific Plan Boundary
-  Bank Stabilization
-  Utility Corridor
-  Bridge Locations
-  Cross Sections

Velocity Profile (fps)

-  0 - 2
-  2 - 4
-  4 - 6
-  6 - 8
-  8 - 10
-  10 - 12
-  12 - 15
-  15 - 18
-  18 - 21
-  21 - 24
-  24 - 27
-  27 - 30
-  30 - 39

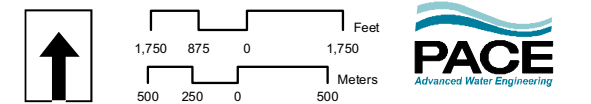
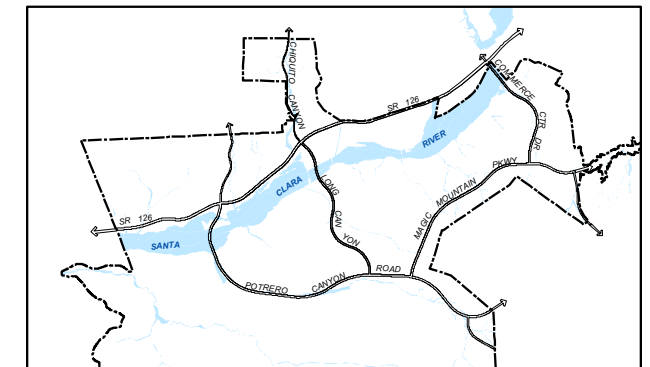


Figure 5.6d

ALTERNATIVE 7 (Avoidance)
10 YEAR FLOOD EVENT VELOCITY
SANTA CLARA RIVER
















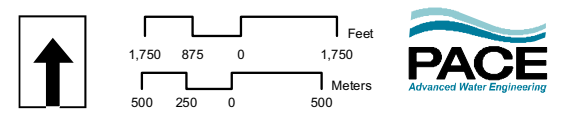
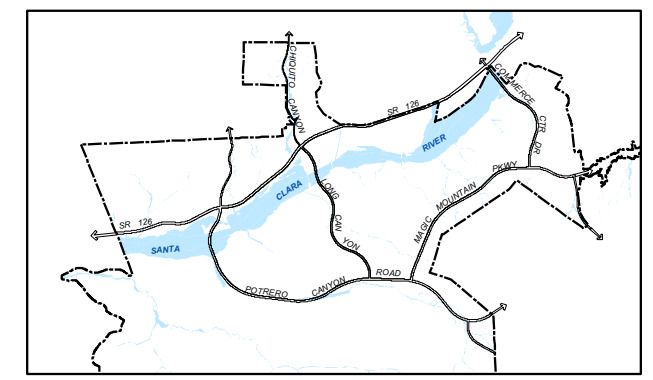
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L E G E N D

-  Newhall Ranch Specific Plan Boundary
-  Bank Stabilization
-  Utility Corridor
-  Bridge Locations
-  Cross Sections

Velocity Profile (fps)



-  0 - 2
-  2 - 4
-  4 - 6
-  6 - 8
-  8 - 10
-  10 - 12
-  12 - 15
-  15 - 18
-  18 - 21
-  21 - 24
-  24 - 27
-  27 - 30
-  30 - 39
















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Figure 5.6e
ALTERNATIVE 7 (Avoidance)
20 YEAR FLOOD EVENT VELOCITY
SANTA CLARA RIVER

L E G E N D

-  Newhall Ranch Specific Plan Boundary
-  Bank Stabilization
-  Utility Corridor
-  Bridge Locations
-  Cross Sections

Velocity Profile (fps)

-  0 - 2
-  2 - 4
-  4 - 6
-  6 - 8
-  8 - 10
-  10 - 12
-  12 - 15
-  15 - 18
-  18 - 21
-  21 - 24
-  24 - 27
-  27 - 30
-  30 - 39

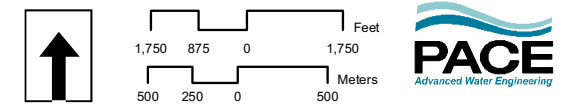
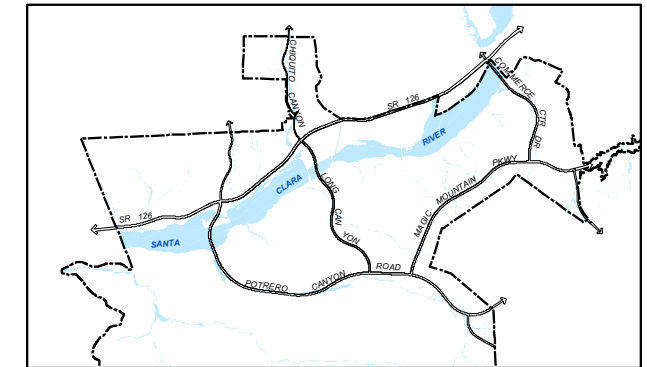





Figure 5.6f

ALTERNATIVE 7 (Avoidance)
50 YEAR FLOOD EVENT VELOCITY
SANTA CLARA RIVER
















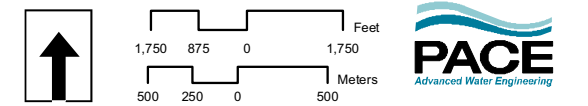
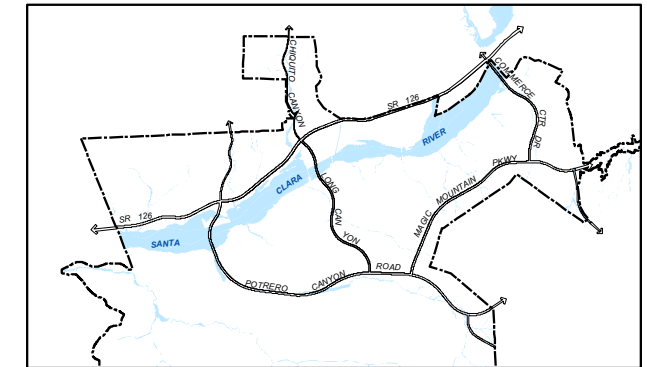
P:\17104E16-GIS\mxd\RMDDP_RiverDrainageAnalysis_2008\17104E_Figure-5-of_scr_A17_50yr_112108.mxd

L E G E N D

-  Newhall Ranch Specific Plan Boundary
-  Bank Stabilization
-  Utility Corridor
-  Bridge Locations
-  Cross Sections

Velocity Profile (fps)

-  0 - 2
-  2 - 4
-  4 - 6
-  6 - 8
-  8 - 10
-  10 - 12
-  12 - 15
-  15 - 18
-  18 - 21
-  21 - 24
-  24 - 27
-  27 - 30
-  30 - 39
















P:\17104E16-GIS\mxds\RMDDP_RiverDrainageAnalysis_2008\104E_Figure-5-6g_scr_Alt7_100yr_112108.mxd

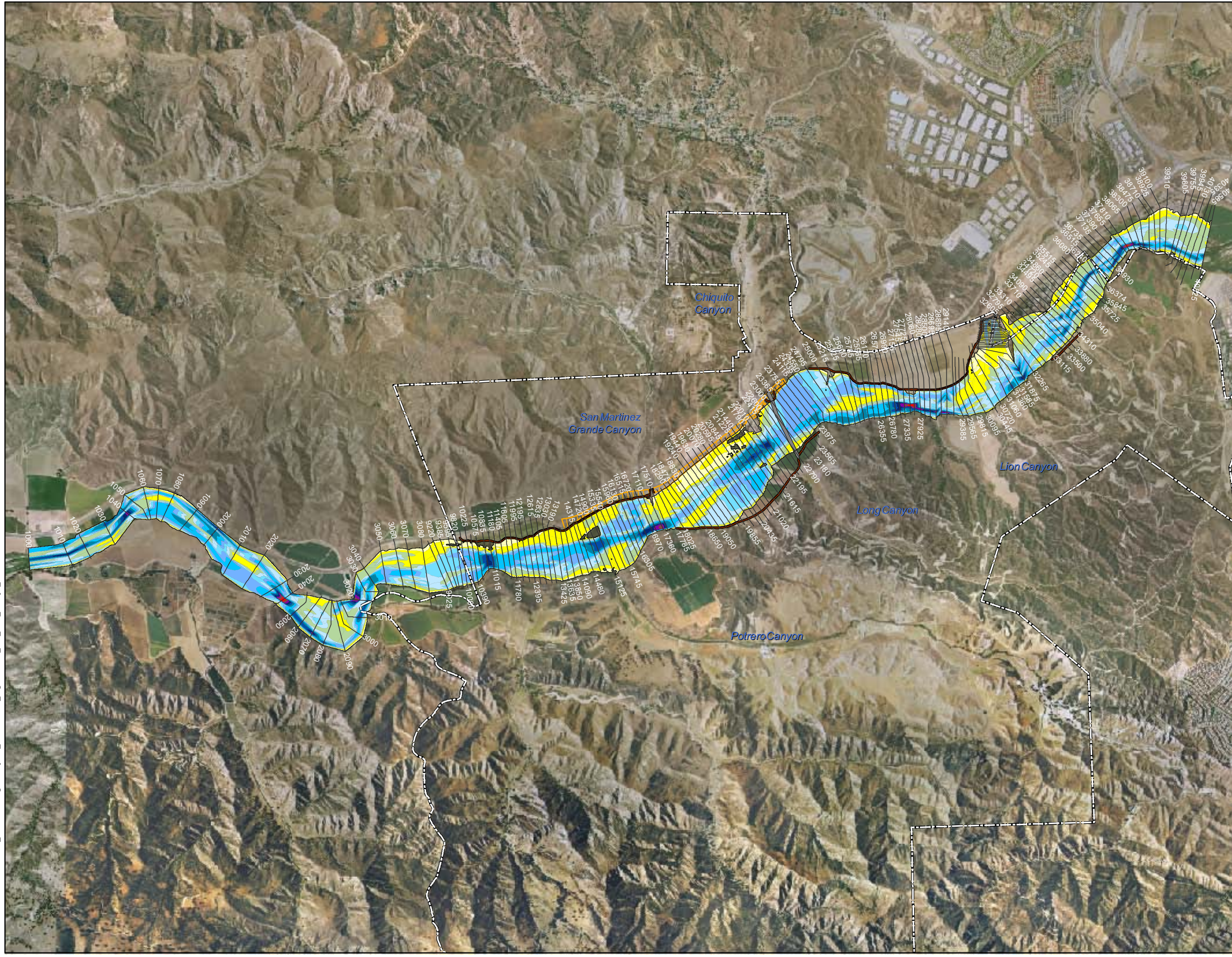
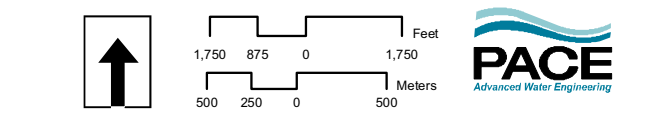
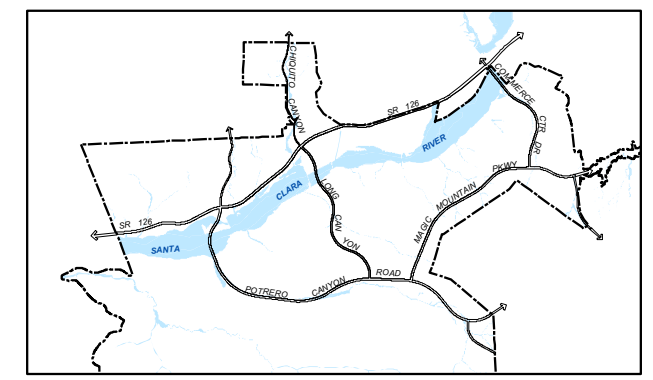
Figure 5.6g
ALTERNATIVE 7 (Avoidance)
100 YEAR FLOOD EVENT VELOCITY
SANTA CLARA RIVER

L E G E N D

-  Newhall Ranch Specific Plan Boundary
-  Bank Stabilization
-  Utility Corridor
-  Bridge Locations
-  Cross Sections

Velocity Profile (fps)

-  0 - 2
-  2 - 4
-  4 - 6
-  6 - 8
-  8 - 10
-  10 - 12
-  12 - 15
-  15 - 18
-  18 - 21
-  21 - 24
-  24 - 27
-  27 - 30
-  30 - 39



P:\17104E16-GIS\mxd\RM DP_RiverDrainageAnalysis_2008\17104E_Figure-5-6h_scr_Alt7_CAPYr_112108.mxd

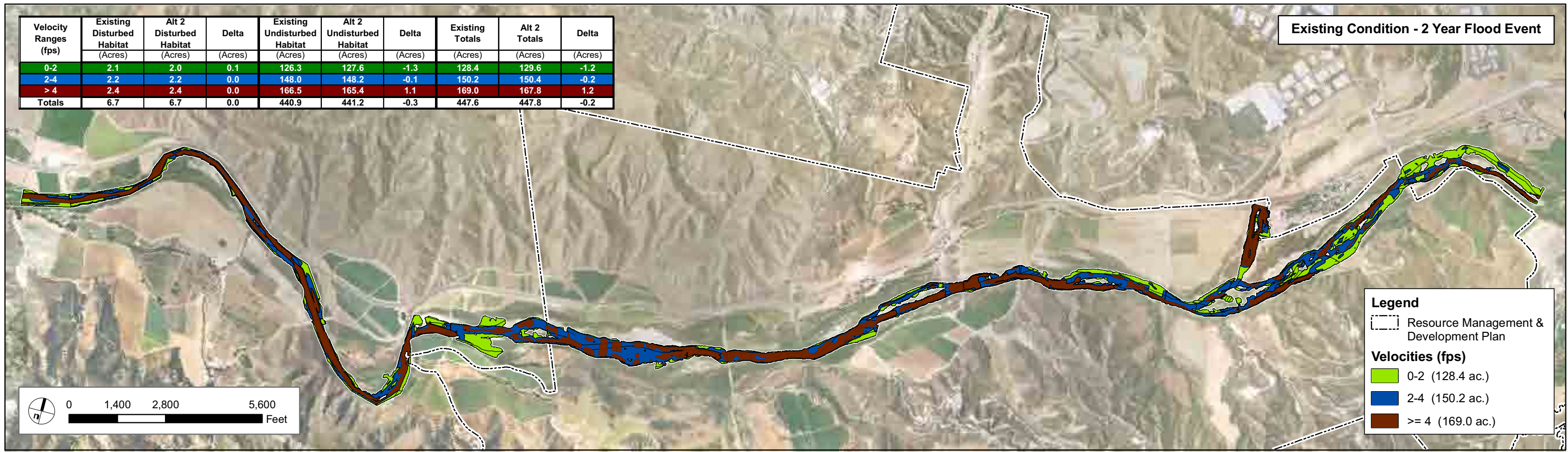
Figure 5.6h
ALTERNATIVE 7 (Avoidance)
CAPITAL FLOOD EVENT VELOCITY
SANTA CLARA RIVER

APPENDIX D

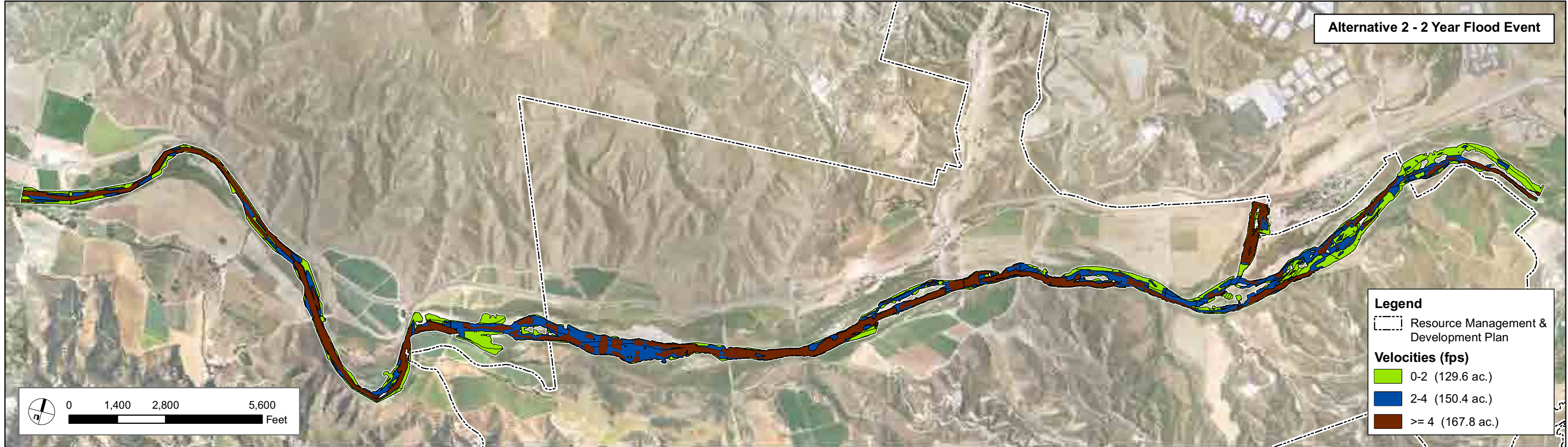
~~PACE RIPARIAN VELOCITY COMPARISON GRAPHICS~~
PACE ANALYSIS OF FLOOD REFUGIA (0 TO 2 FPS)

Velocity Ranges (fps)	Existing Disturbed Habitat (Acres)	Alt 2 Disturbed Habitat (Acres)	Delta (Acres)	Existing Undisturbed Habitat (Acres)	Alt 2 Undisturbed Habitat (Acres)	Delta (Acres)	Existing Totals (Acres)	Alt 2 Totals (Acres)	Delta (Acres)
0-2	2.1	2.0	0.1	126.3	127.6	-1.3	128.4	129.6	-1.2
2-4	2.2	2.2	0.0	148.0	148.2	-0.1	150.2	150.4	-0.2
> 4	2.4	2.4	0.0	166.5	165.4	1.1	169.0	167.8	1.2
Totals	6.7	6.7	0.0	440.9	441.2	-0.3	447.6	447.8	-0.2

Existing Condition - 2 Year Flood Event



Alternative 2 - 2 Year Flood Event



SOURCE: PACE 2008

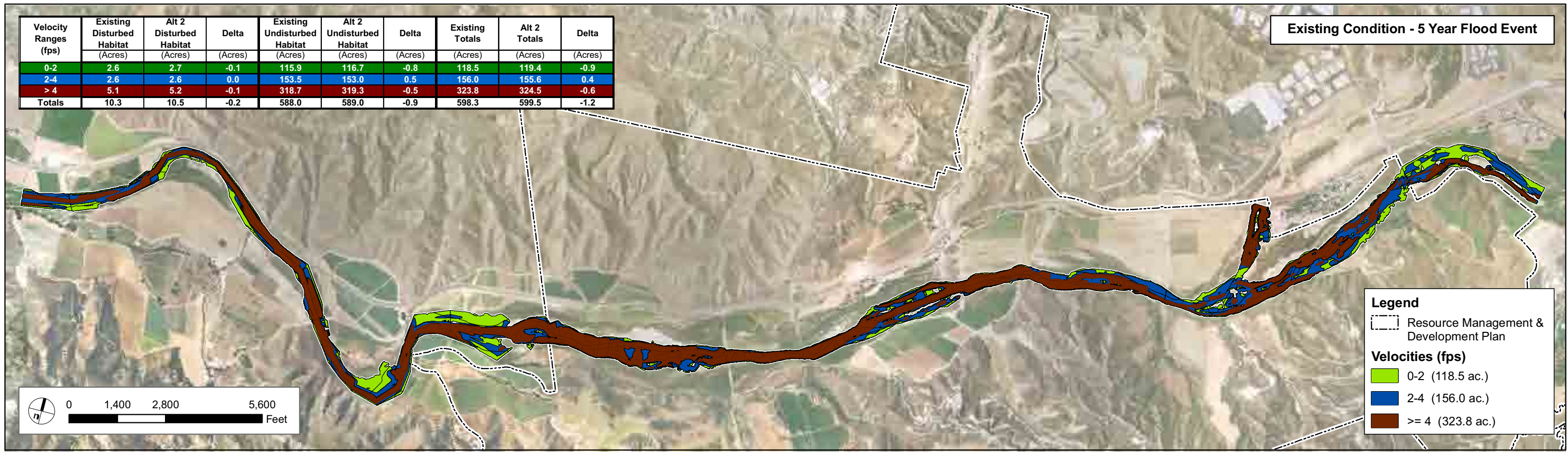
FIGURE 1.1-1

POTENTIAL REFUGIA HABITAT 2 YEAR FLOOD EVENT
EXISTING CONDITION AND ALTERNATIVE 2 VELOCITY COMPARISON

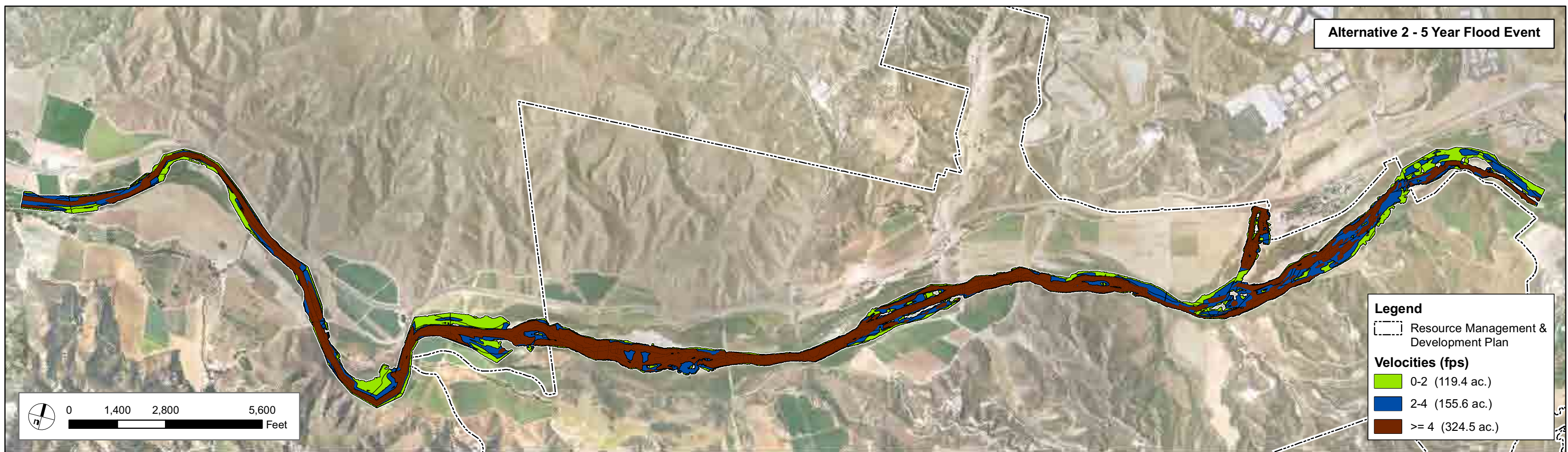
P:\8238E\GIS\mxd\IEIR_2008\RefugiaAnalysis\8238E_FIGURE-1.1-1_RefugiaVelocityAnalysisAlt2_2Yr_110508.mxd

Velocity Ranges (fps)	Existing Disturbed Habitat (Acres)	Alt 2 Disturbed Habitat (Acres)	Delta (Acres)	Existing Undisturbed Habitat (Acres)	Alt 2 Undisturbed Habitat (Acres)	Delta (Acres)	Existing Totals (Acres)	Alt 2 Totals (Acres)	Delta (Acres)
0-2	2.6	2.7	-0.1	115.9	116.7	-0.8	118.5	119.4	-0.9
2-4	2.6	2.6	0.0	153.5	153.0	0.5	156.0	155.6	0.4
> 4	5.1	5.2	-0.1	318.7	319.3	-0.5	323.8	324.5	-0.6
Totals	10.3	10.5	-0.2	588.0	589.0	-0.9	598.3	599.5	-1.2

Existing Condition - 5 Year Flood Event



Alternative 2 - 5 Year Flood Event



SOURCE: PACE 2008

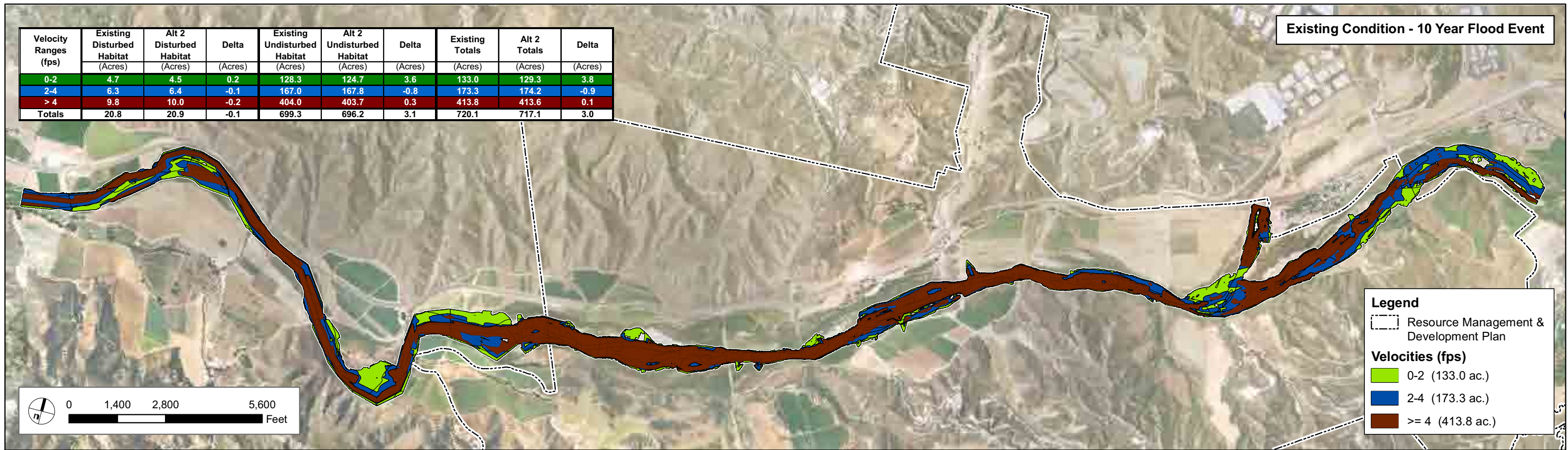
FIGURE 1.1-2

POTENTIAL REFUGIA HABITAT 5 YEAR FLOOD EVENT
EXISTING CONDITION AND ALTERNATIVE 2 VELOCITY COMPARISON

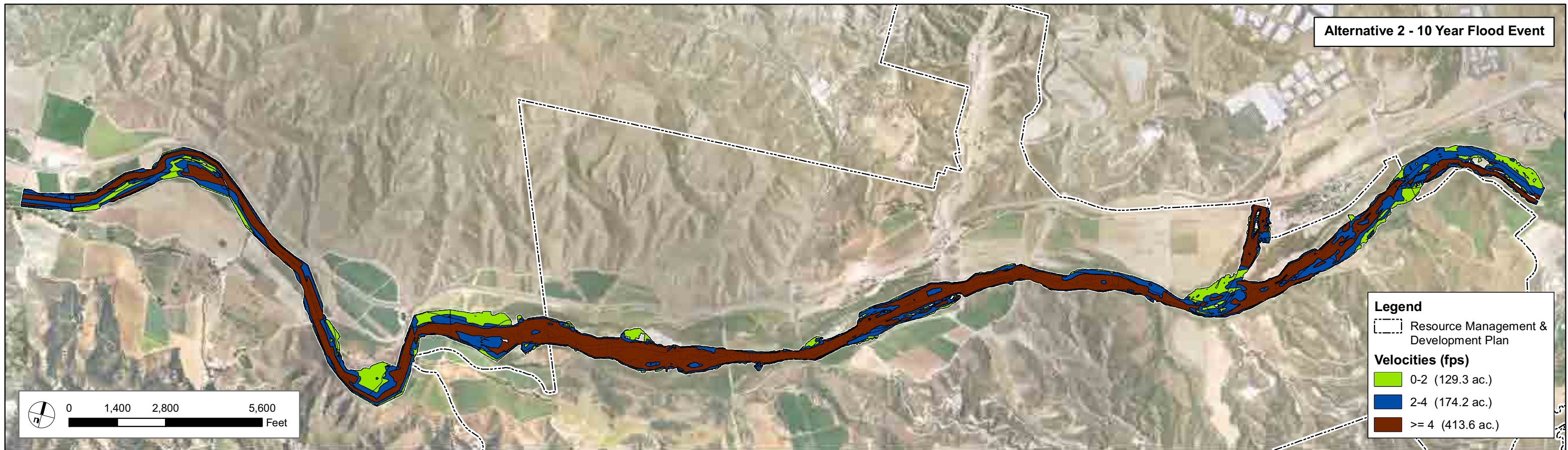
P:\8238E\GIS\mxd\IEIR_2008\RefugiaAnalysis\8238E_FIGURE-1-1-2_RefugiaVelocityAnalysisAlt2_5Yr_110508.mxd

Velocity Ranges (fps)	Existing Disturbed Habitat (Acres)	Alt 2 Disturbed Habitat (Acres)	Delta (Acres)	Existing Undisturbed Habitat (Acres)	Alt 2 Undisturbed Habitat (Acres)	Delta (Acres)	Existing Totals (Acres)	Alt 2 Totals (Acres)	Delta (Acres)
0-2	4.7	4.5	0.2	128.3	124.7	3.6	133.0	129.3	3.8
2-4	6.3	6.4	-0.1	167.0	167.8	-0.8	173.3	174.2	-0.9
> 4	9.8	10.0	-0.2	404.0	403.7	0.3	413.8	413.6	0.1
Totals	20.8	20.9	-0.1	699.3	696.2	3.1	720.1	717.1	3.0

Existing Condition - 10 Year Flood Event



Alternative 2 - 10 Year Flood Event



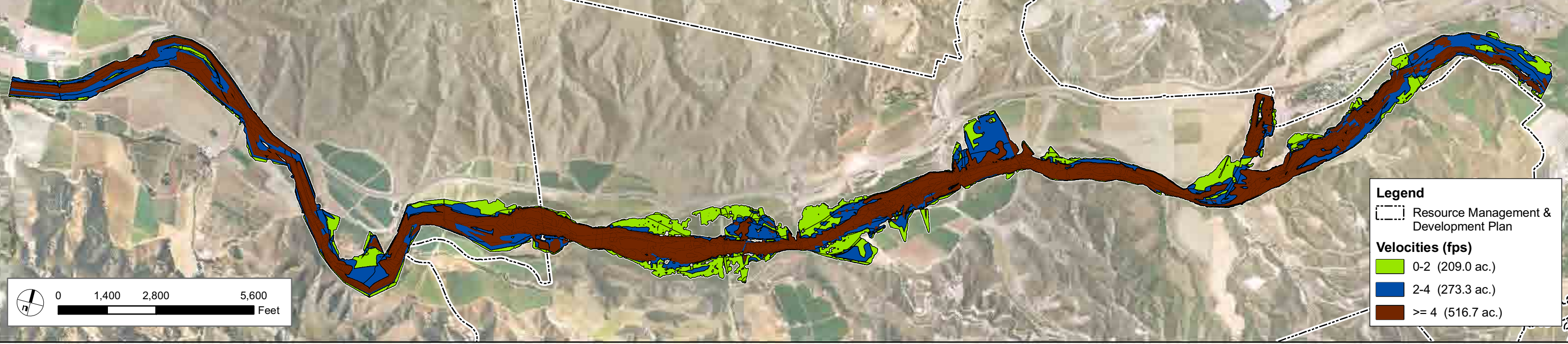
SOURCE: PACE 2008

FIGURE 1.1-3

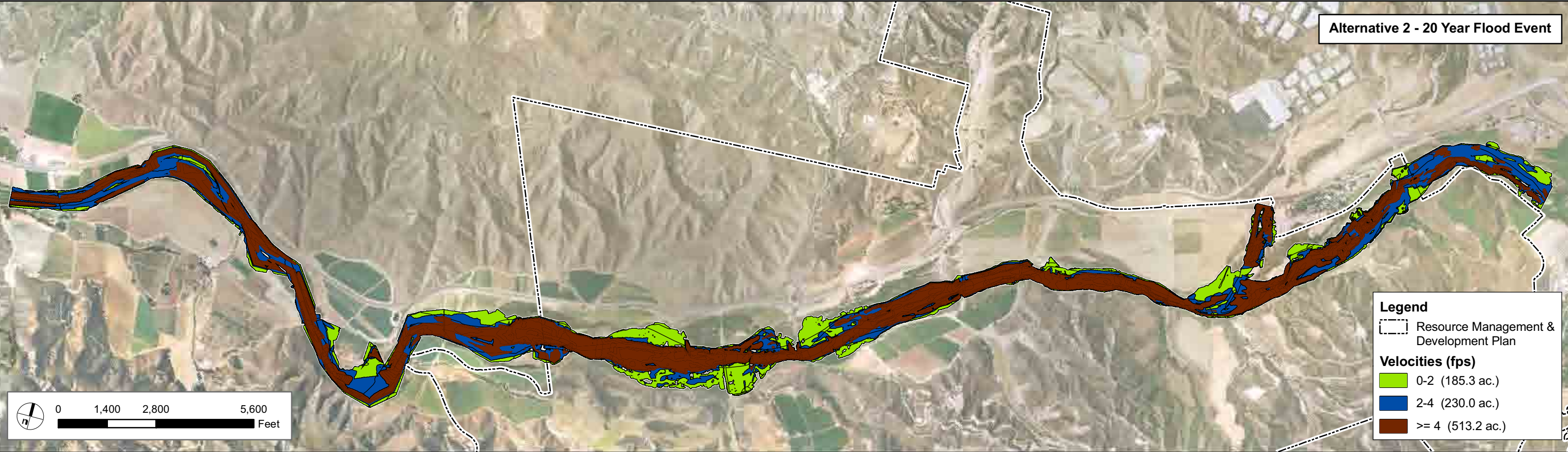
POTENTIAL REFUGIA HABITAT 10 YEAR FLOOD EVENT EXISTING CONDITION AND ALTERNATIVE 2 VELOCITY COMPARISON

Velocity Ranges (fps)	Existing Disturbed Habitat (Acres)	Alt 2 Disturbed Habitat (Acres)	Delta (Acres)	Existing Undisturbed Habitat (Acres)	Alt 2 Undisturbed Habitat (Acres)	Delta (Acres)	Existing Totals (Acres)	Alt 2 Totals (Acres)	Delta (Acres)
0-2	27.0	10.3	-16.7	182.0	175.1	-6.9	209.0	185.3	-23.7
2-4	58.0	17.2	-40.7	215.3	212.8	-2.5	273.3	230.0	-43.2
> 4	33.6	28.7	-4.9	483.1	484.5	1.4	516.7	513.2	-3.5
Totals	118.6	56.1	-62.5	880.4	872.4	-8.0	999.0	928.5	-70.4

Existing Condition - 20 Year Flood



Alternative 2 - 20 Year Flood Event



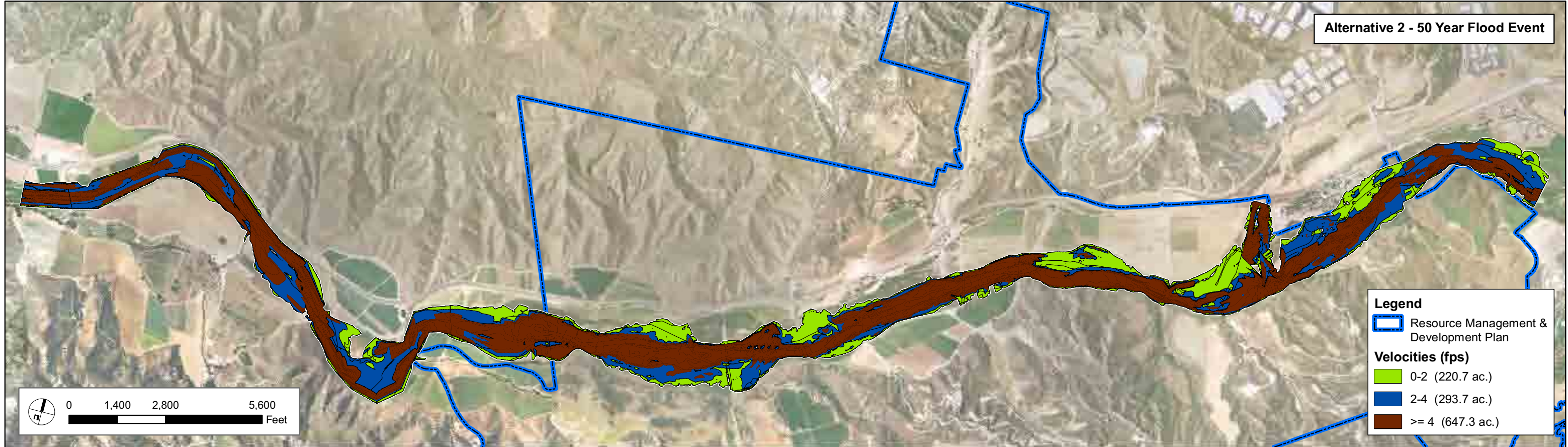
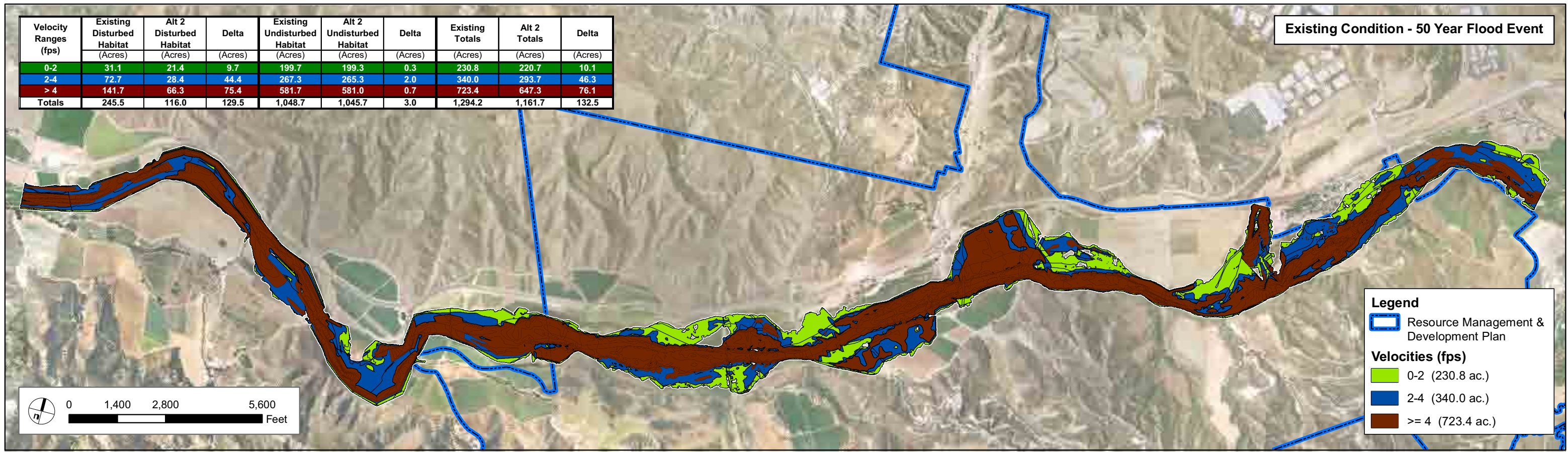
SOURCE: PACE 2008

FIGURE 5.2-1

POTENTIAL REFUGIA HABITAT 2 YEAR FLOOD EVENT
EXISTING CONDITION AND ALTERNATIVE 2 VELOCITY COMPARISON

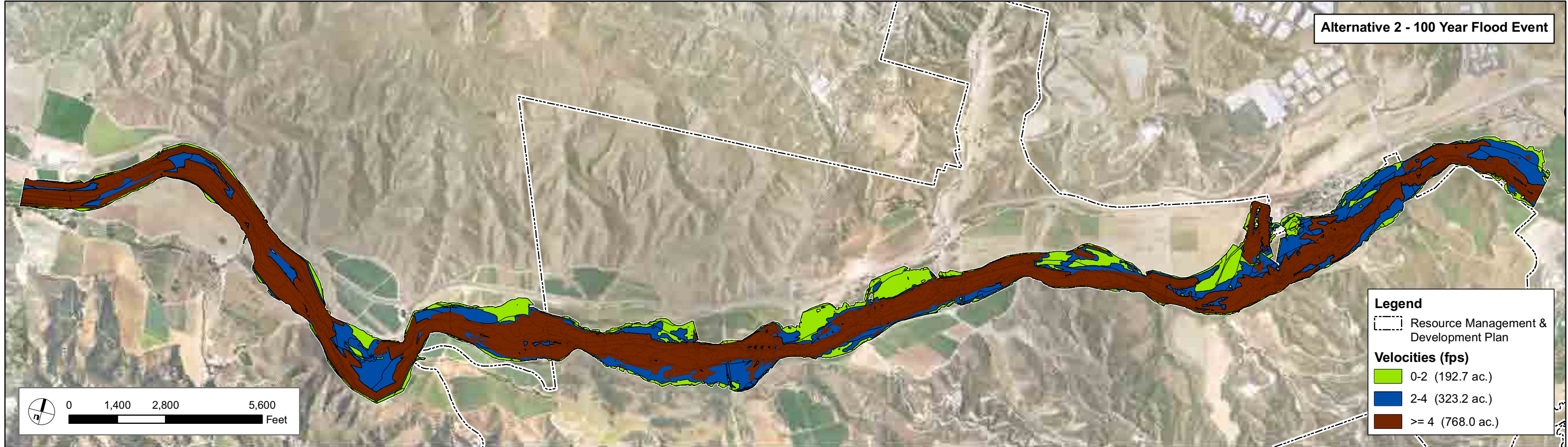
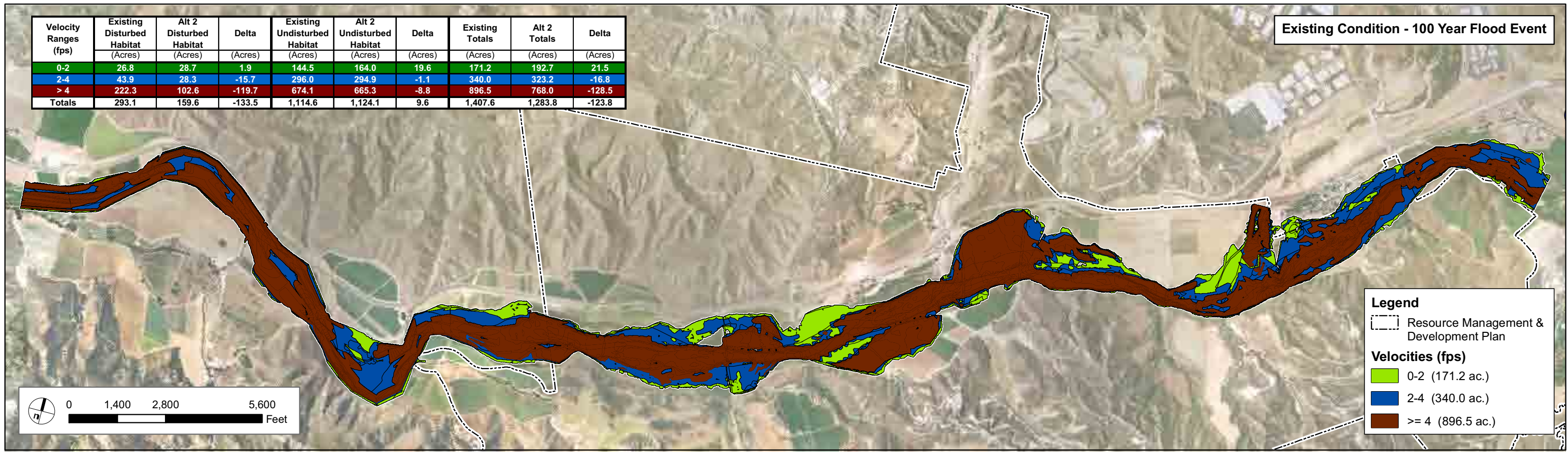
P:\8238E\GIS\mxds\EIR_2008\Section5_2\8238E_RefugiaVelocityAnalysisAlt2_20Yr_110508.mxd

Velocity Ranges (fps)	Existing Disturbed Habitat (Acres)	Alt 2 Disturbed Habitat (Acres)	Delta (Acres)	Existing Undisturbed Habitat (Acres)	Alt 2 Undisturbed Habitat (Acres)	Delta (Acres)	Existing Totals (Acres)	Alt 2 Totals (Acres)	Delta (Acres)
0-2	31.1	21.4	9.7	199.7	199.3	0.3	230.8	220.7	10.1
2-4	72.7	28.4	44.4	267.3	265.3	2.0	340.0	293.7	46.3
> 4	141.7	66.3	75.4	581.7	581.0	0.7	723.4	647.3	76.1
Totals	245.5	116.0	129.5	1,048.7	1,045.7	3.0	1,294.2	1,161.7	132.5



SOURCE: PACE 2008

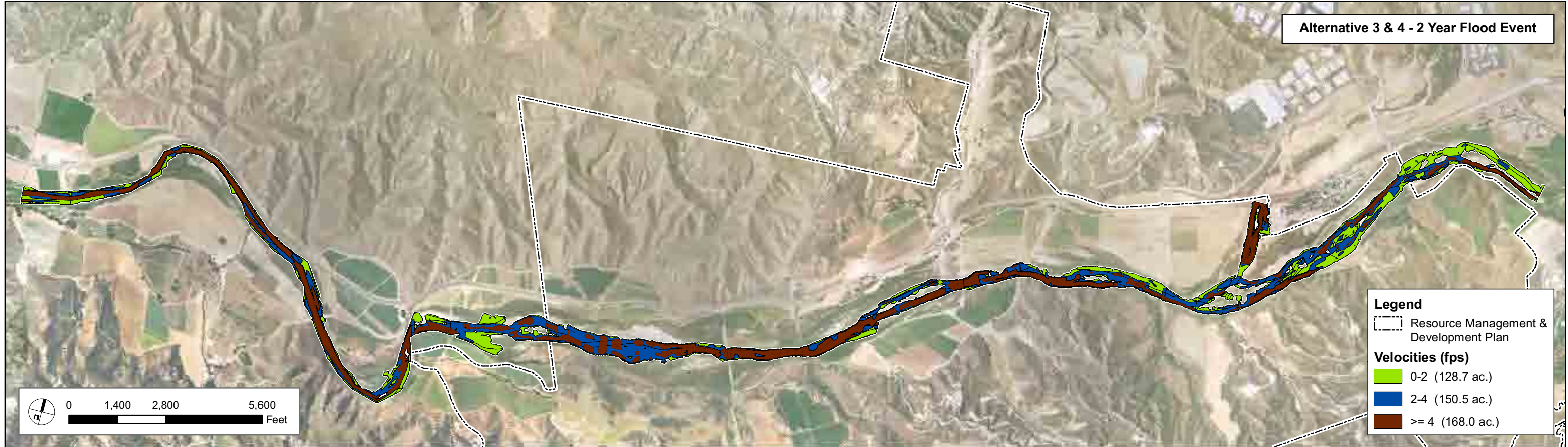
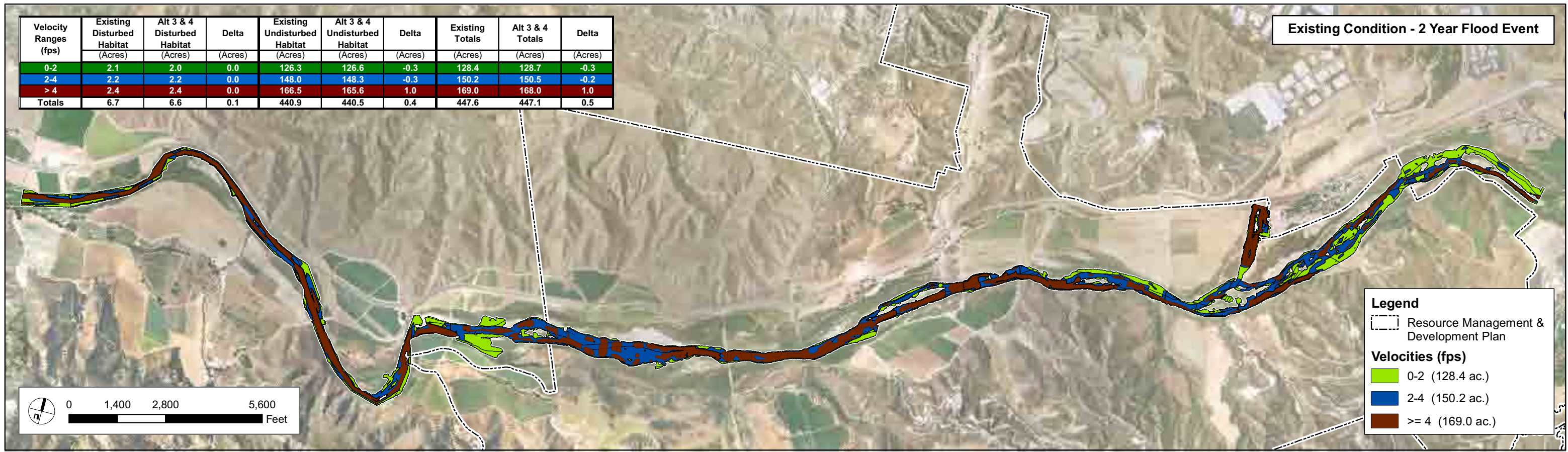
FIGURE 1.1-5
 POTENTIAL REFUGIA HABITAT 50 YEAR FLOOD EVENT
 EXISTING CONDITION AND ALTERNATIVE 2 VELOCITY COMPARISON



SOURCE: PACE 2008

FIGURE 5.2-2
POTENTIAL REFUGIA HABITAT 100 YEAR FLOOD EVENT
EXISTING CONDITION AND ALTERNATIVE 2 VELOCITY COMPARISON

Velocity Ranges (fps)	Existing Disturbed Habitat (Acres)	Alt 3 & 4 Disturbed Habitat (Acres)	Delta (Acres)	Existing Undisturbed Habitat (Acres)	Alt 3 & 4 Undisturbed Habitat (Acres)	Delta (Acres)	Existing Totals (Acres)	Alt 3 & 4 Totals (Acres)	Delta (Acres)
0-2	2.1	2.0	0.0	126.3	126.6	-0.3	128.4	128.7	-0.3
2-4	2.2	2.2	0.0	148.0	148.3	-0.3	150.2	150.5	-0.2
> 4	2.4	2.4	0.0	166.5	165.6	1.0	169.0	168.0	1.0
Totals	6.7	6.6	0.1	440.9	440.5	0.4	447.6	447.1	0.5

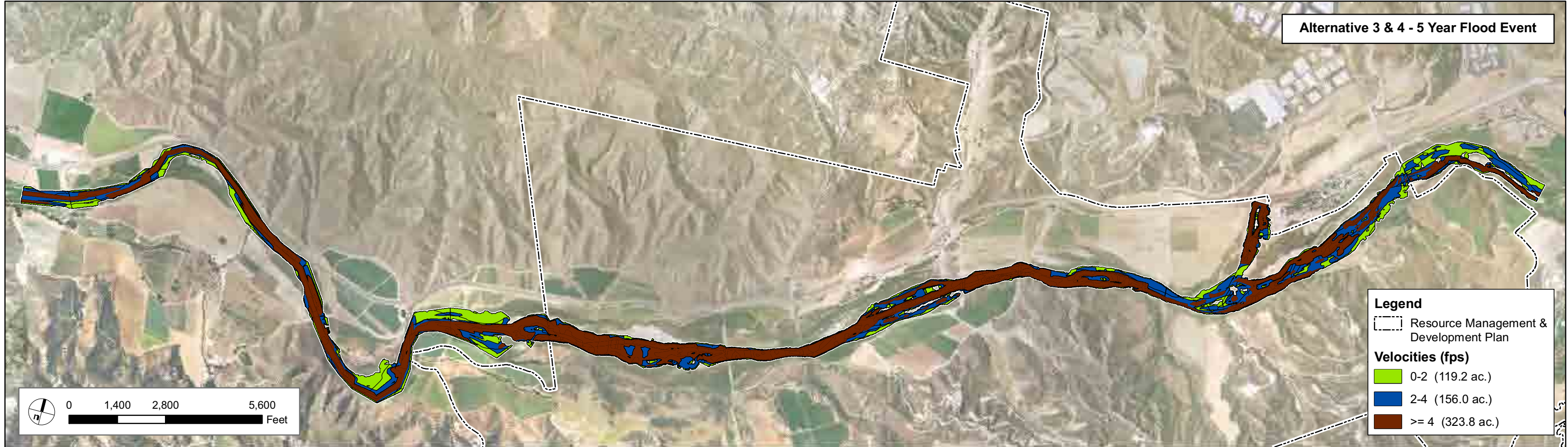
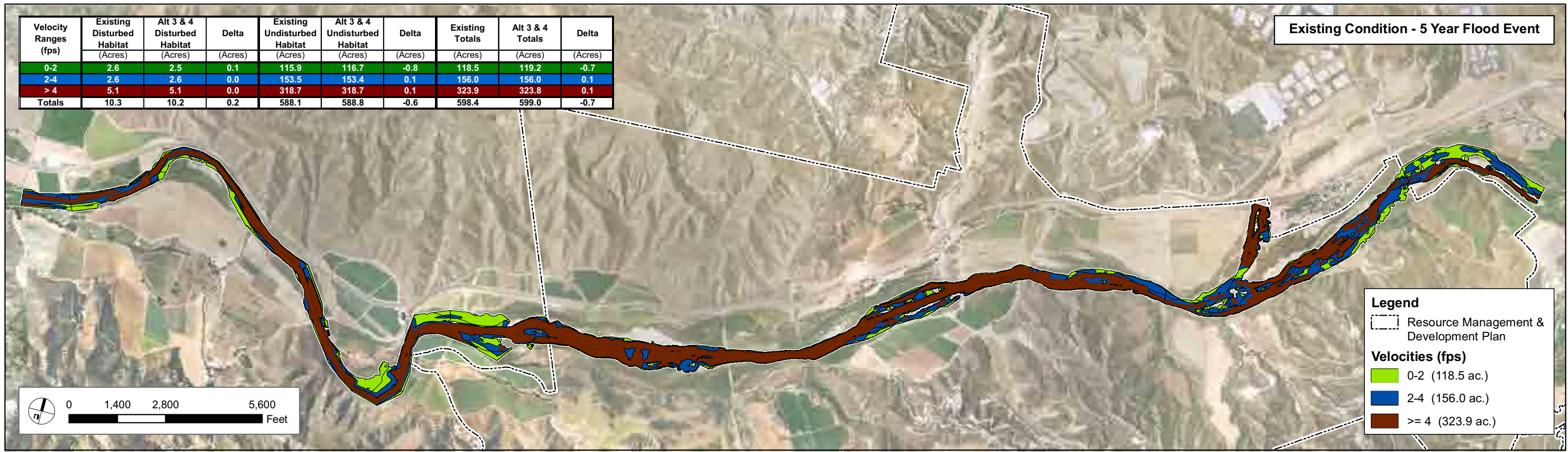


SOURCE: PACE 2008

FIGURE 1.1-8

POTENTIAL REFUGIA HABITAT 2 YEAR FLOOD EVENT
EXISTING CONDITION AND ALTERNATIVE 3 & 4 VELOCITY COMPARISON

Velocity Ranges (fps)	Existing Disturbed Habitat (Acres)	Alt 3 & 4 Disturbed Habitat (Acres)	Delta (Acres)	Existing Undisturbed Habitat (Acres)	Alt 3 & 4 Undisturbed Habitat (Acres)	Delta (Acres)	Existing Totals (Acres)	Alt 3 & 4 Totals (Acres)	Delta (Acres)
0-2	2.6	2.5	0.1	115.9	116.7	-0.8	118.5	119.2	-0.7
2-4	2.6	0.0	2.6	153.5	153.4	0.1	156.0	156.0	0.1
> 4	5.1	5.1	0.0	318.7	318.7	0.1	323.9	323.8	0.1
Totals	10.3	10.2	0.2	588.1	588.8	-0.6	598.4	599.0	-0.7



SOURCE: PACE 2008

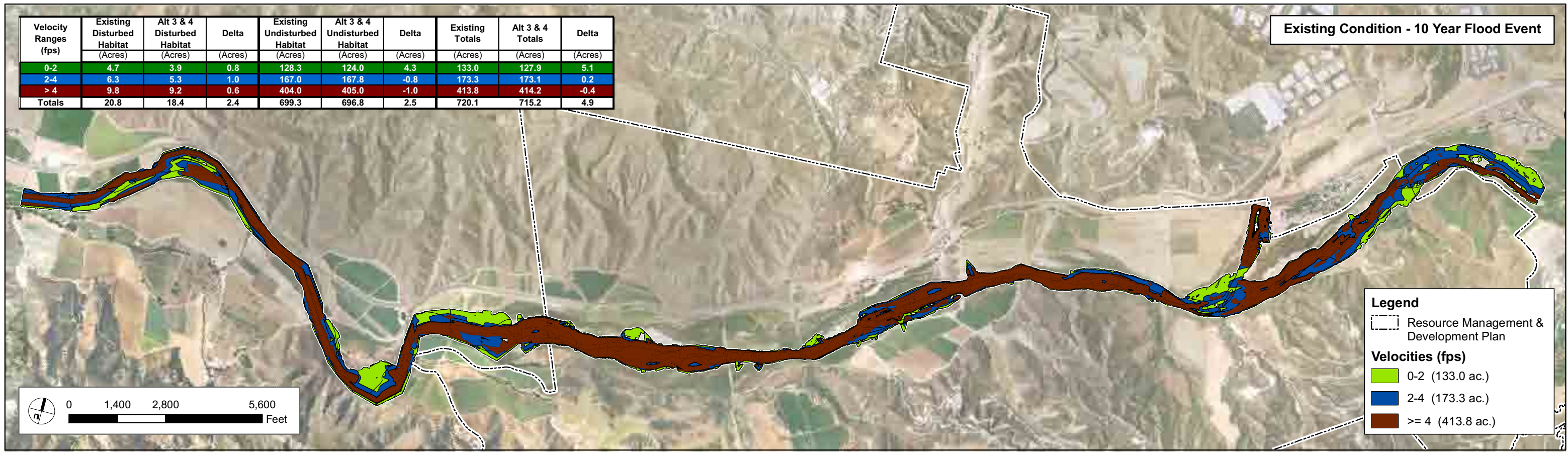
FIGURE 1.1-9

POTENTIAL REFUGIA HABITAT 5 YEAR FLOOD EVENT
EXISTING CONDITION AND ALTERNATIVE 3 & 4 VELOCITY COMPARISON

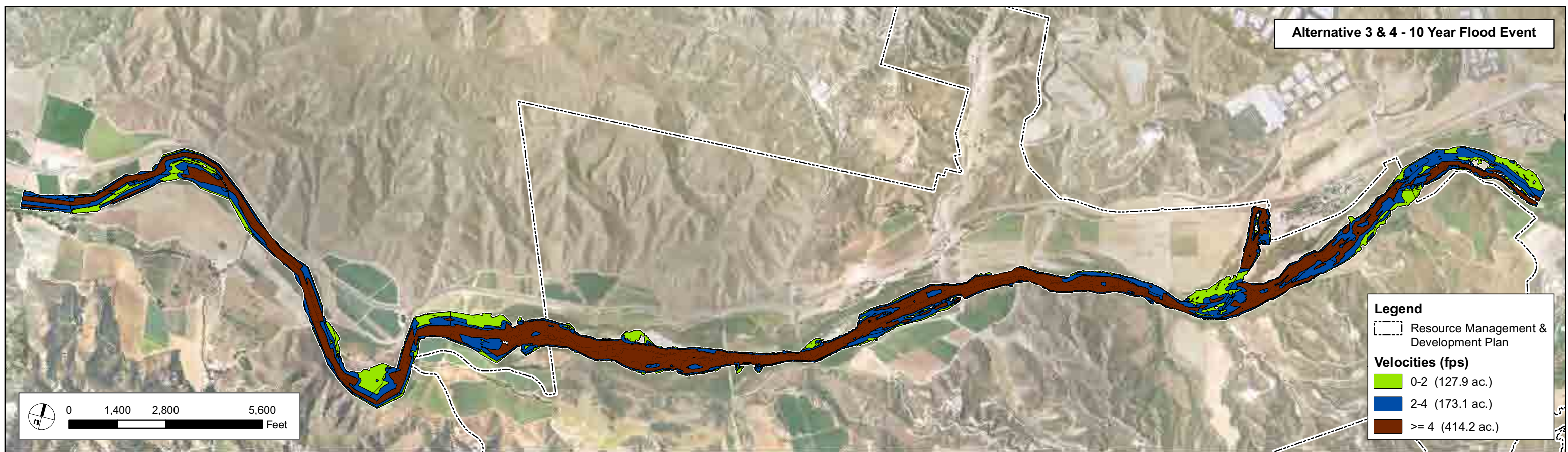
P:\8238\E\GIS\mxds\EIR_2008\RefugiaAnalysis\8238E_FIGURE-1-1-9_RefugiaVelocityAnalysisAlt3-4_5Yr_110508.mxd

Velocity Ranges (fps)	Existing Disturbed Habitat (Acres)	Alt 3 & 4 Disturbed Habitat (Acres)	Delta (Acres)	Existing Undisturbed Habitat (Acres)	Alt 3 & 4 Undisturbed Habitat (Acres)	Delta (Acres)	Existing Totals (Acres)	Alt 3 & 4 Totals (Acres)	Delta (Acres)
0-2	4.7	3.9	0.8	128.3	124.0	4.3	133.0	127.9	5.1
2-4	6.3	5.3	1.0	167.0	167.8	-0.8	173.3	173.1	0.2
> 4	9.8	9.2	0.6	404.0	405.0	-1.0	413.8	414.2	-0.4
Totals	20.8	18.4	2.4	699.3	696.8	2.5	720.1	715.2	4.9

Existing Condition - 10 Year Flood Event



Alternative 3 & 4 - 10 Year Flood Event



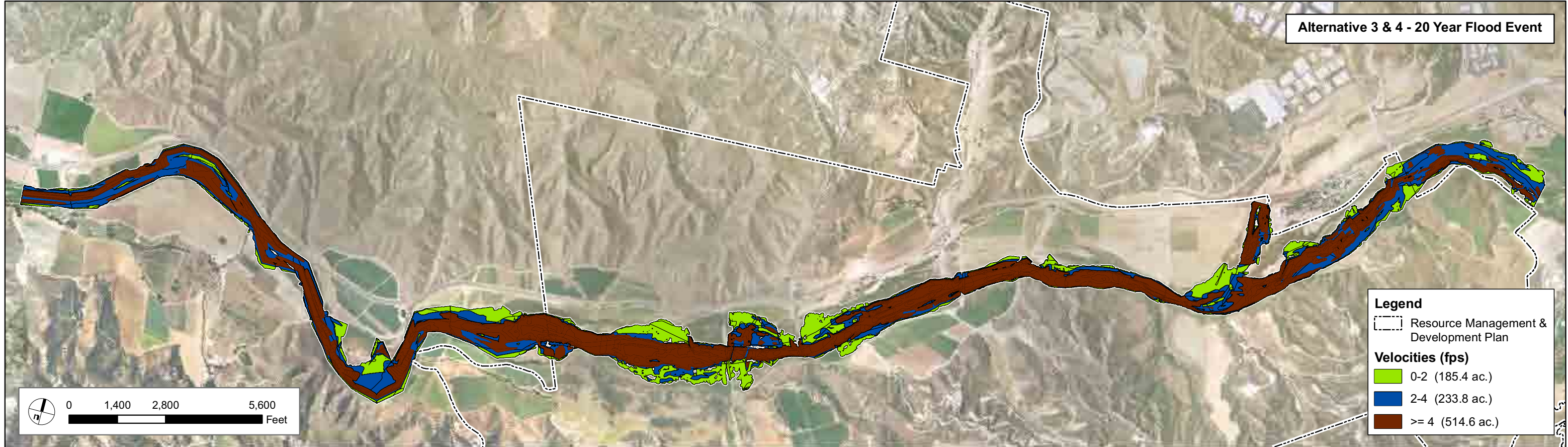
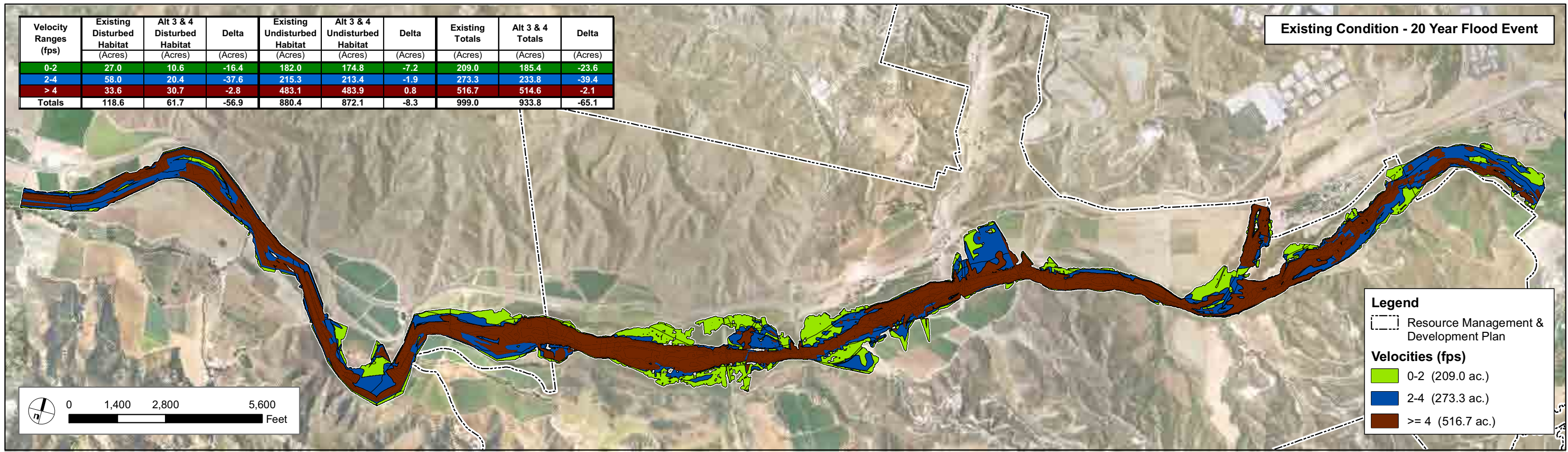
SOURCE: PACE 2008

FIGURE 1.1-10

POTENTIAL REFUGIA HABITAT 50 YEAR FLOOD EVENT EXISTING CONDITION AND ALTERNATIVE 3 & 4 VELOCITY COMPARISON

P:\8238E\GIS\mxd\8238E\8238E\FIGURE-1-1-10_RefugiaVelocityAnalysisAlt3_4_10Yr_110508.mxd

Velocity Ranges (fps)	Existing Disturbed Habitat (Acres)	Alt 3 & 4 Disturbed Habitat (Acres)	Delta (Acres)	Existing Undisturbed Habitat (Acres)	Alt 3 & 4 Undisturbed Habitat (Acres)	Delta (Acres)	Existing Totals (Acres)	Alt 3 & 4 Totals (Acres)	Delta (Acres)
0-2	27.0	10.6	-16.4	182.0	174.8	-7.2	209.0	185.4	-23.6
2-4	58.0	20.4	-37.6	215.3	213.4	-1.9	273.3	233.8	-39.4
> 4	33.6	30.7	-2.8	483.1	483.9	0.8	516.7	514.6	-2.1
Totals	118.6	61.7	-56.9	880.4	872.1	-8.3	999.0	933.8	-65.1

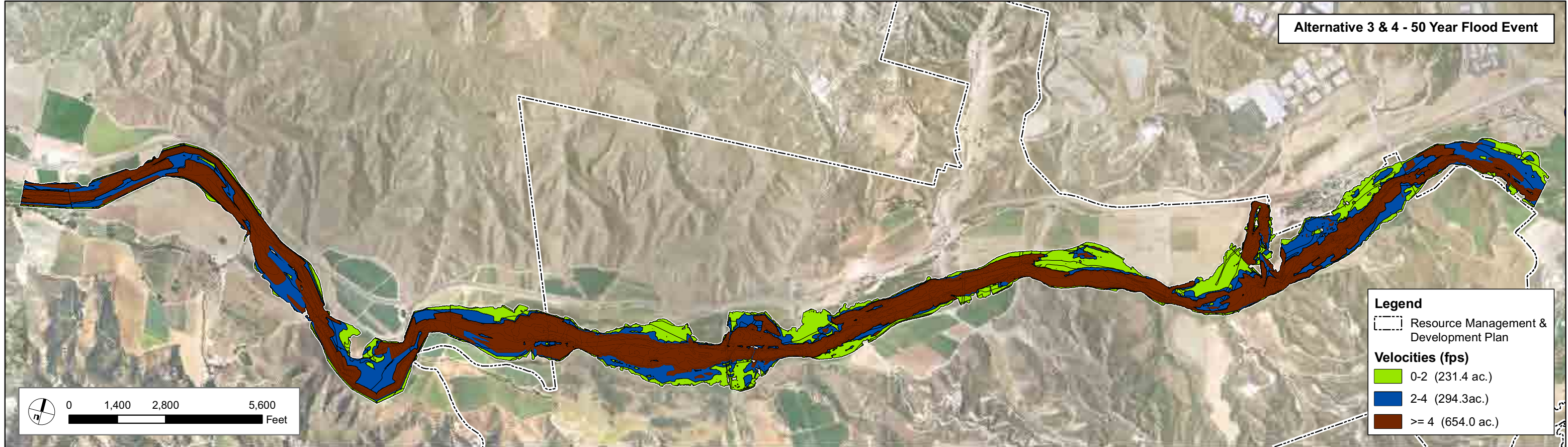
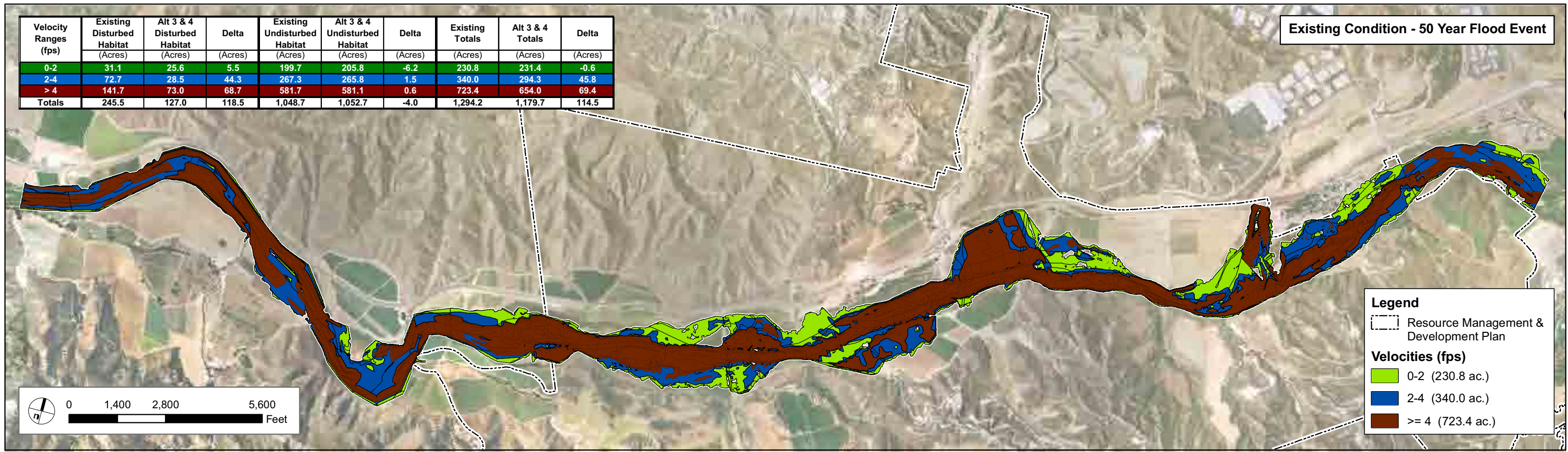


SOURCE: PACE 2008

FIGURE 5.3-1

POTENTIAL REFUGIA HABITAT 20 YEAR FLOOD EVENT
EXISTING CONDITION AND ALTERNATIVE 3 & 4 VELOCITY COMPARISON

Velocity Ranges (fps)	Existing Disturbed Habitat (Acres)	Alt 3 & 4 Disturbed Habitat (Acres)	Delta (Acres)	Existing Undisturbed Habitat (Acres)	Alt 3 & 4 Undisturbed Habitat (Acres)	Delta (Acres)	Existing Totals (Acres)	Alt 3 & 4 Totals (Acres)	Delta (Acres)
0-2	31.1	25.6	5.5	199.7	205.8	-6.2	230.8	231.4	-0.6
2-4	72.7	28.5	44.3	267.3	265.8	1.5	340.0	294.3	45.8
> 4	141.7	73.0	68.7	581.7	581.1	0.6	723.4	654.0	69.4
Totals	245.5	127.0	118.5	1,048.7	1,052.7	-4.0	1,294.2	1,179.7	114.5



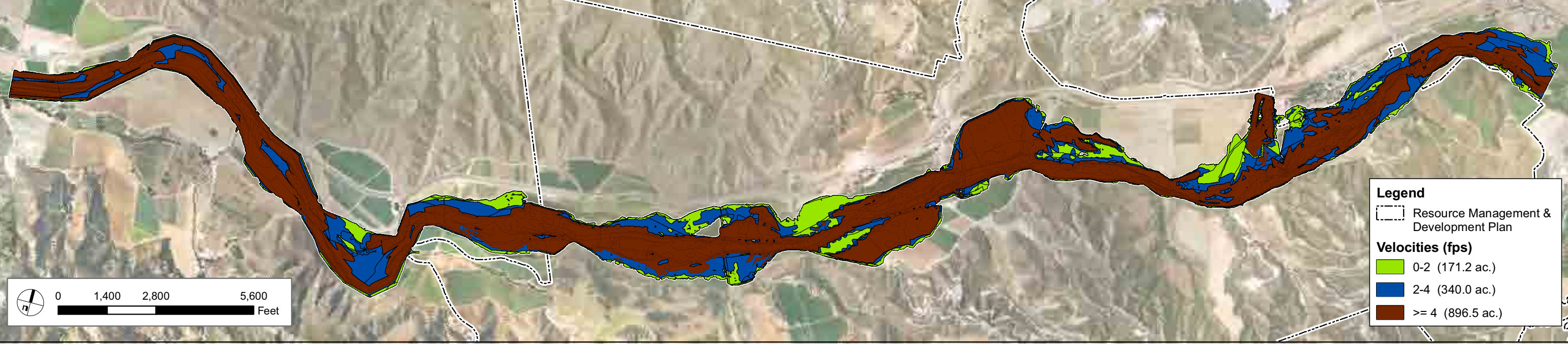
SOURCE: PACE 2008

FIGURE 1.1-12
 POTENTIAL REFUGIA HABITAT 50 YEAR FLOOD EVENT
 EXISTING CONDITION AND ALTERNATIVE 3 & 4 VELOCITY COMPARISON

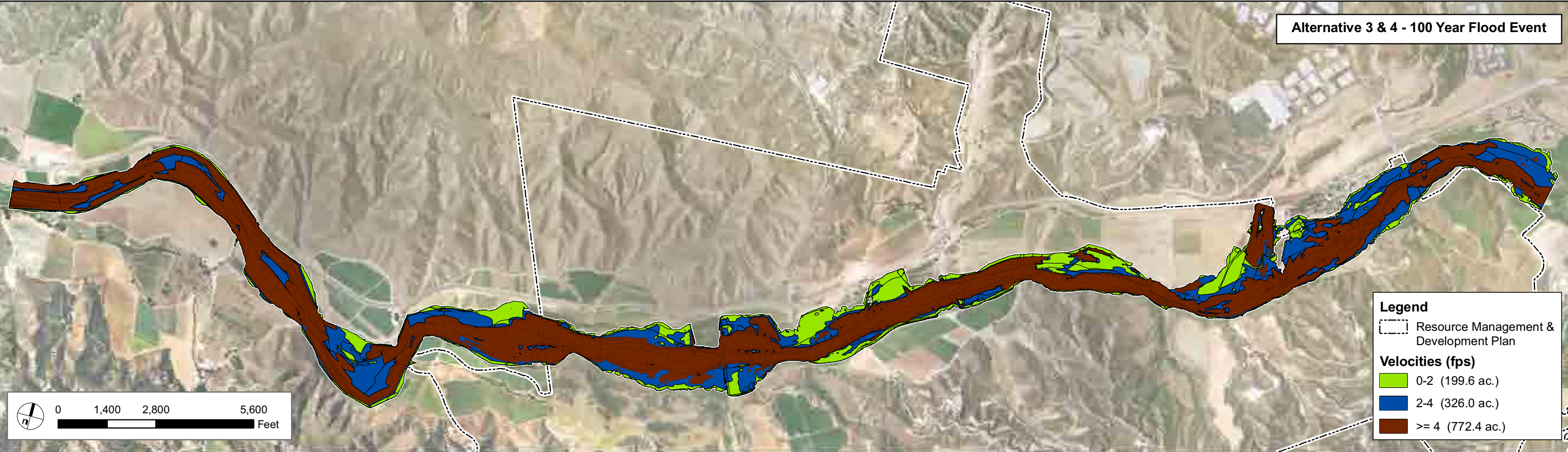
P:\8238E\GIS\mxd\EIR_2008\RefugiaAnalysis\8238E_FIGURE-1-1-12_RefugiaVelocityAnalysisAlt3_4_50Yr_110508.mxd

Velocity Ranges (fps)	Existing Disturbed Habitat (Acres)	Alt 3 & 4 Disturbed Habitat (Acres)	Delta (Acres)	Existing Undisturbed Habitat (Acres)	Alt 3 & 4 Undisturbed Habitat (Acres)	Delta (Acres)	Existing Totals (Acres)	Alt 3 & 4 Totals (Acres)	Delta (Acres)
0-2	26.8	34.4	7.6	144.5	165.2	20.7	171.2	199.6	28.4
2-4	43.9	27.3	-16.7	296.0	298.8	2.8	340.0	326.0	-13.9
> 4	222.3	107.6	-114.8	674.1	664.8	-9.3	896.5	772.4	-124.0
Totals	293.1	169.2	-123.8	1,114.6	1,128.8	14.2	1,407.6	1,298.0	-109.6

Existing Condition - 100 Year Flood Event



Alternative 3 & 4 - 100 Year Flood Event



SOURCE: PACE 2008

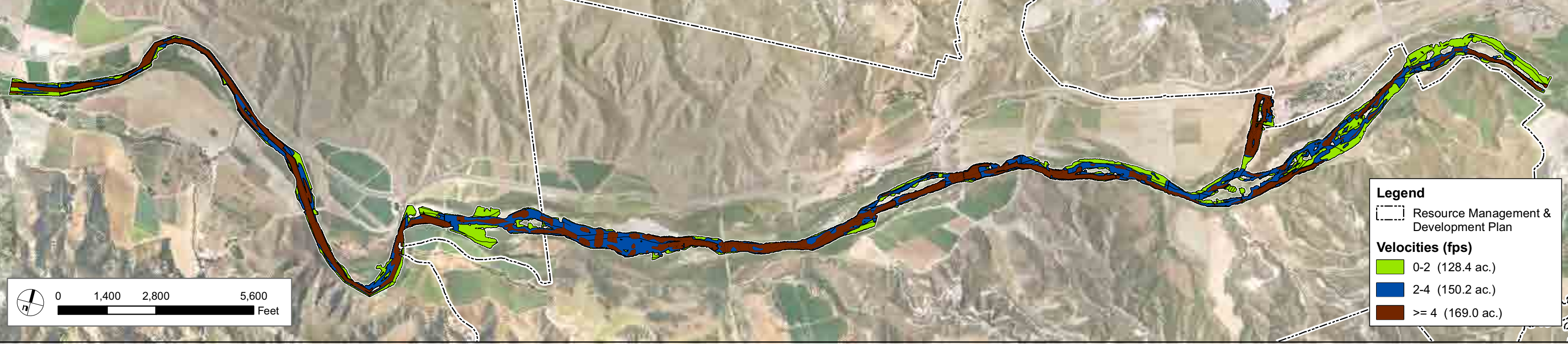
FIGURE 5.3-2

POTENTIAL REFUGIA HABITAT 100 YEAR FLOOD EVENT EXISTING CONDITION AND ALTERNATIVE 3 & 4 VELOCITY COMPARISON

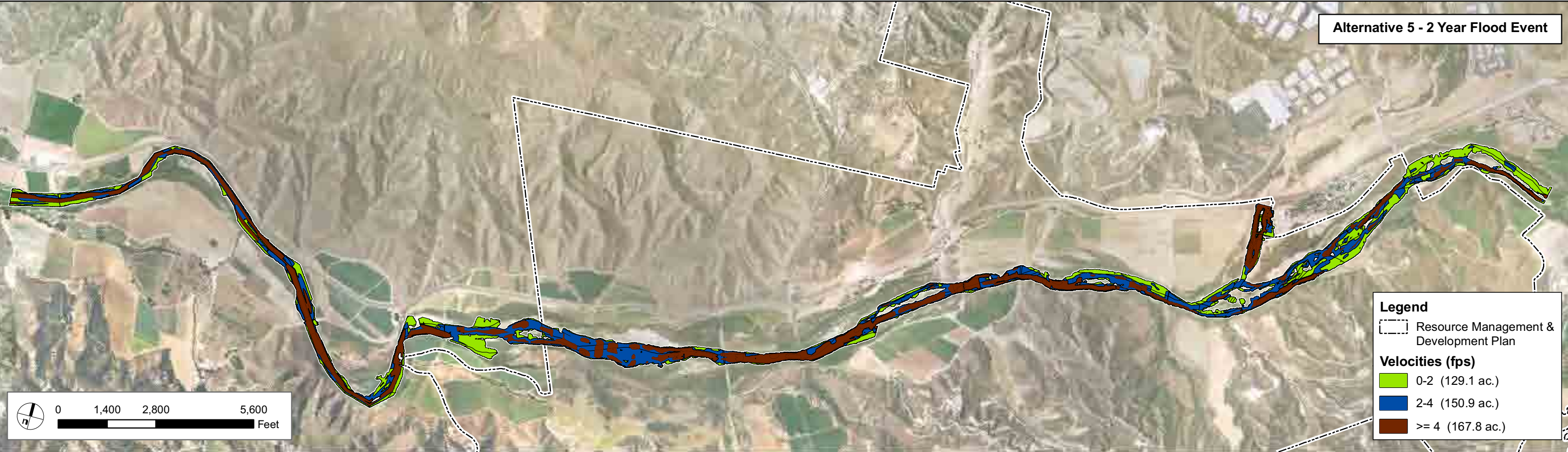
P:\6238E\GIS\mxds\EIR_2008\Section5_2\6238E_RefugiaVelocityAnalysisAlt3-4_100Yr_011209.mxd

Velocity Ranges (fps)	Existing Disturbed Habitat (Acres)	Alt 5 Disturbed Habitat (Acres)	Delta (Acres)	Existing Undisturbed Habitat (Acres)	Alt 5 Undisturbed Habitat (Acres)	Delta (Acres)	Existing Totals (Acres)	Alt 5 Totals (Acres)	Delta (Acres)
0-2	2.1	2.0	0.1	126.3	127.0	-0.7	128.4	129.1	-0.7
2-4	2.2	2.4	-0.2	148.0	148.5	-0.5	150.2	150.9	-0.6
> 4	2.4	2.3	0.2	166.5	165.5	1.1	169.0	167.8	1.1
Totals	6.8	6.7	0.1	440.9	441.1	-0.2	447.6	447.8	-0.1

Existing Condition - 2 Year Flood Event



Alternative 5 - 2 Year Flood Event



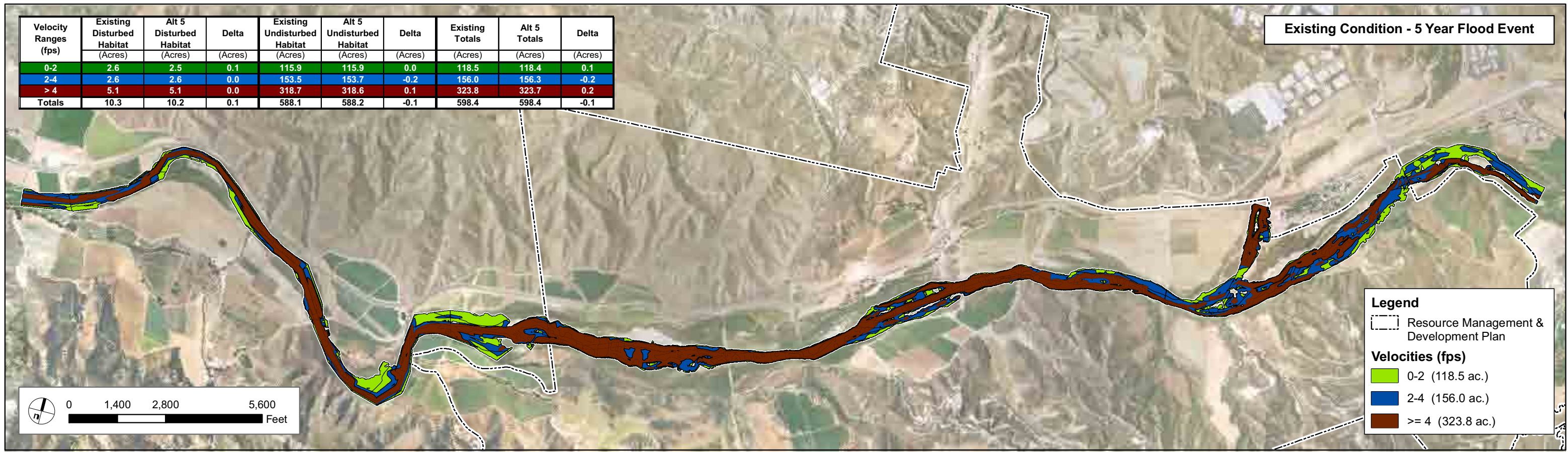
SOURCE: PACE 2008

FIGURE 1.1-15
 POTENTIAL REFUGIA HABITAT 2 YEAR FLOOD EVENT
 EXISTING CONDITION AND ALTERNATIVE 5 VELOCITY COMPARISON

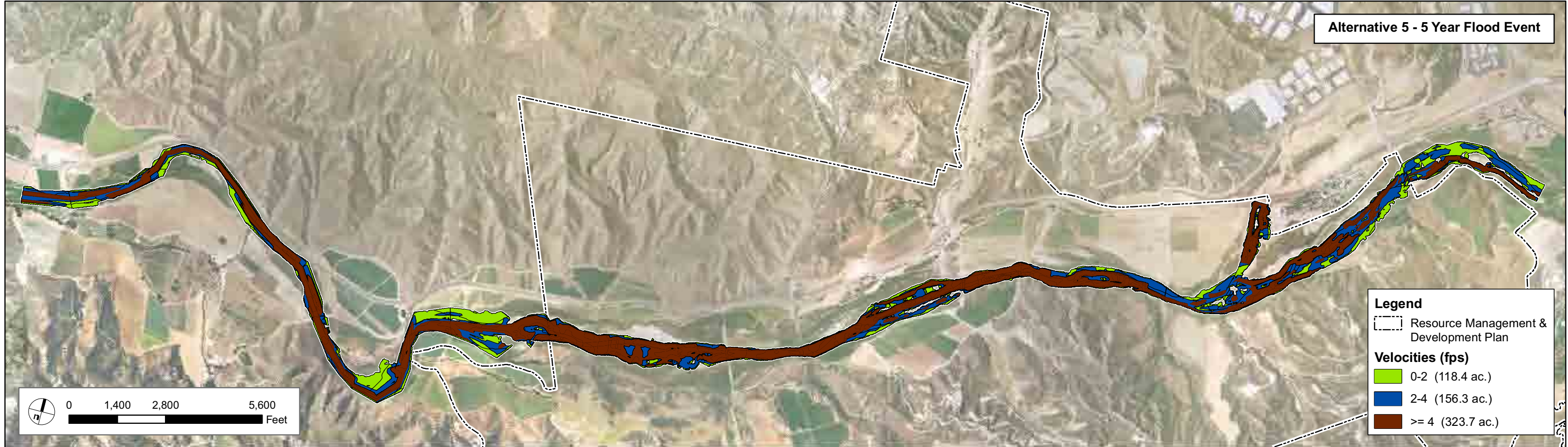
P:\8238E\GIS\mxds\EIR_2008\RefugiaAnalysis\8238E_FIGURE-1-1-15_RefugiaVelocityAnalysisAlt5_2Yr_110508.mxd

Velocity Ranges (fps)	Existing Disturbed Habitat (Acres)	Alt 5 Disturbed Habitat (Acres)	Delta (Acres)	Existing Undisturbed Habitat (Acres)	Alt 5 Undisturbed Habitat (Acres)	Delta (Acres)	Existing Totals (Acres)	Alt 5 Totals (Acres)	Delta (Acres)
0-2	2.6	2.5	0.1	115.9	115.9	0.0	118.5	118.4	0.1
2-4	2.6	2.6	0.0	153.5	153.7	-0.2	156.0	156.3	-0.2
> 4	5.1	5.1	0.0	318.7	318.6	0.1	323.8	323.7	0.2
Totals	10.3	10.2	0.1	588.1	588.2	-0.1	598.4	598.4	-0.1

Existing Condition - 5 Year Flood Event



Alternative 5 - 5 Year Flood Event



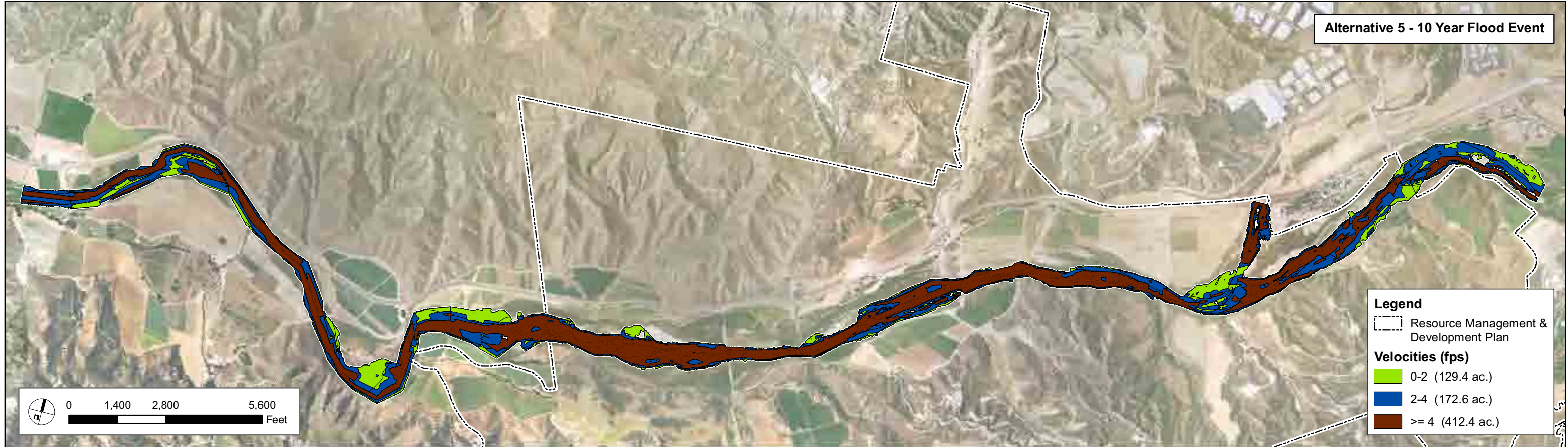
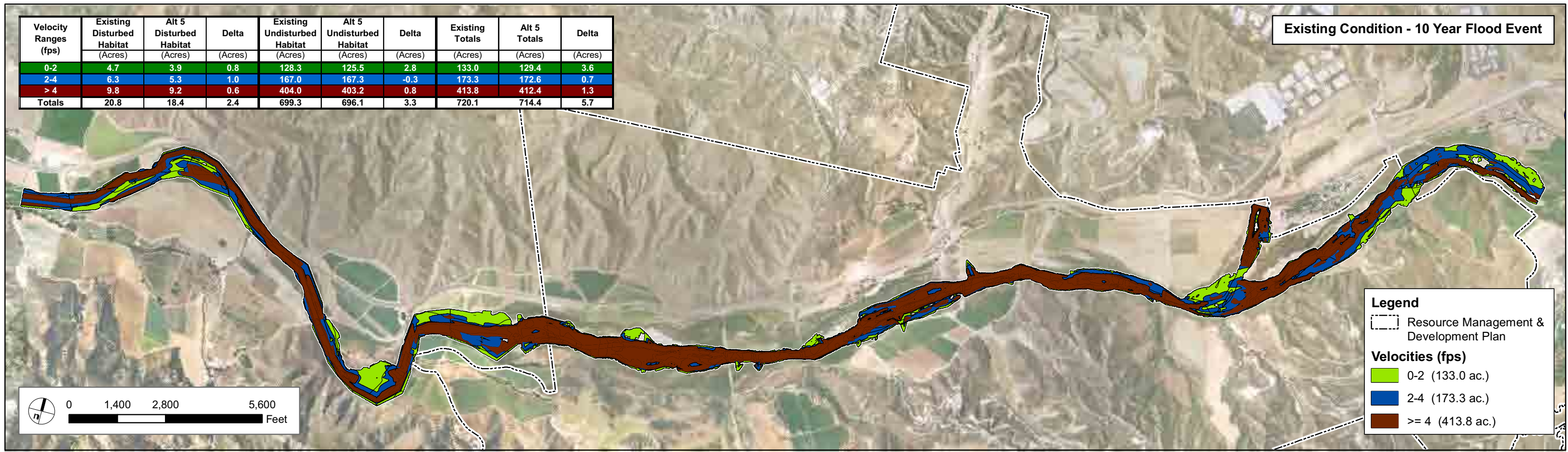
SOURCE: PACE 2008

FIGURE 1.1-16

POTENTIAL REFUGIA HABITAT 5 YEAR FLOOD EVENT EXISTING CONDITION AND ALTERNATIVE 5 VELOCITY COMPARISON

P:\8238E\GIS\mxds\EIR_2008\RefugiaAnalysis\8238E_FIGURE-1-1-16_RefugiaVelocityAnalysisAlt5_5Yr_110508.mxd

Velocity Ranges (fps)	Existing Disturbed Habitat (Acres)	Alt 5 Disturbed Habitat (Acres)	Delta (Acres)	Existing Undisturbed Habitat (Acres)	Alt 5 Undisturbed Habitat (Acres)	Delta (Acres)	Existing Totals (Acres)	Alt 5 Totals (Acres)	Delta (Acres)
0-2	4.7	3.9	0.8	128.3	125.5	2.8	133.0	129.4	3.6
2-4	6.3	5.3	1.0	167.0	167.3	-0.3	173.3	172.6	0.7
> 4	9.8	9.2	0.6	404.0	403.2	0.8	413.8	412.4	1.3
Totals	20.8	18.4	2.4	699.3	696.1	3.3	720.1	714.4	5.7

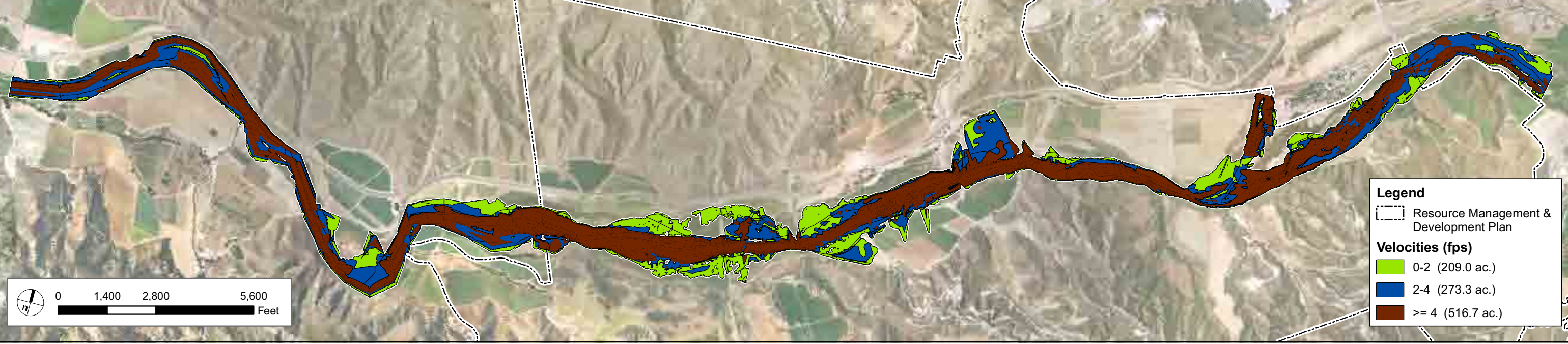


SOURCE: PACE 2008

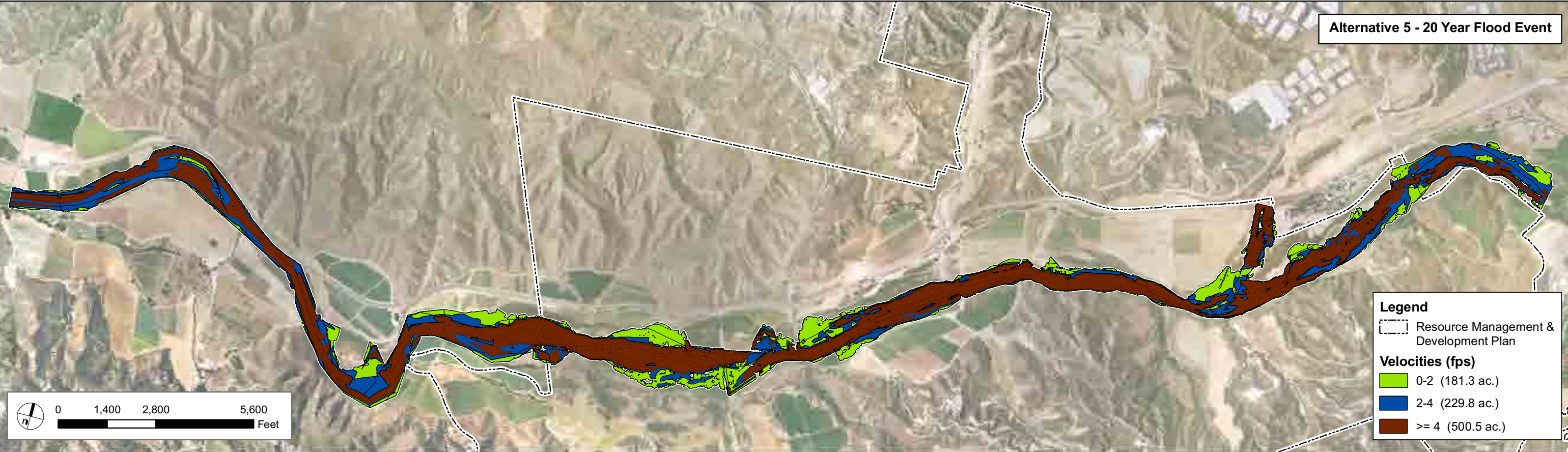
FIGURE 1.1-17
 POTENTIAL REFUGIA HABITAT 10 YEAR FLOOD EVENT
 EXISTING CONDITION AND ALTERNATIVE 5 VELOCITY COMPARISON

Velocity Ranges (fps)	Existing Disturbed Habitat (Acres)	Alt 5 Disturbed Habitat (Acres)	Delta (Acres)	Existing Undisturbed Habitat (Acres)	Alt 5 Undisturbed Habitat (Acres)	Delta (Acres)	Existing Totals (Acres)	Alt 5 Totals (Acres)	Delta (Acres)
0-2	27.0	9.3	-17.7	182.0	172.0	-10.1	209.0	181.3	-27.7
2-4	58.0	15.1	-42.9	215.3	214.7	-0.6	273.3	229.8	-43.4
> 4	33.6	22.5	-11.1	483.1	478.0	-5.1	516.7	500.5	-16.2
Totals	118.6	46.9	-71.7	880.4	864.7	-15.7	999.0	911.6	-87.3

Existing Condition - 20 Year Flood Event



Alternative 5 - 20 Year Flood Event



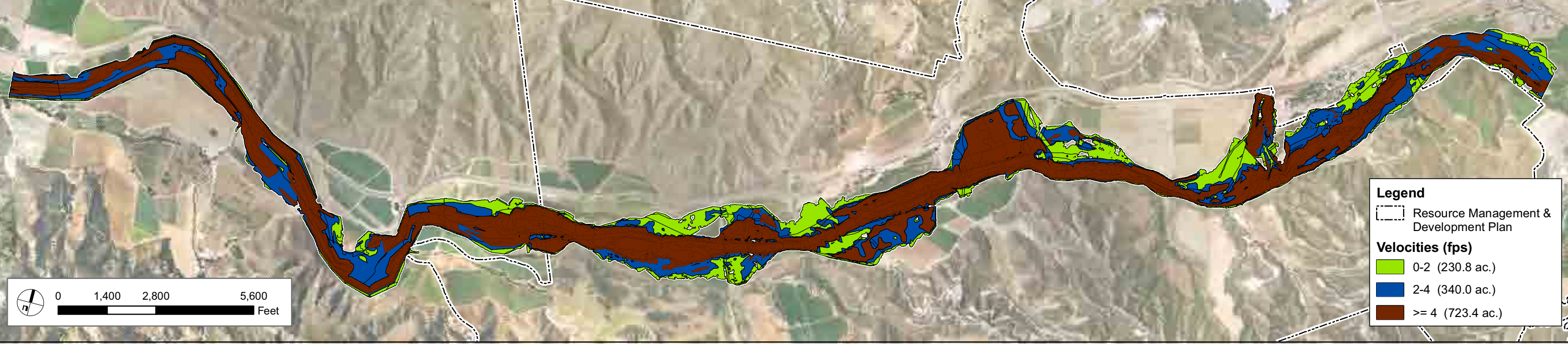
SOURCE: PACE 2008

FIGURE 5.4-1
POTENTIAL REFUGIA HABITAT 20 YEAR FLOOD EVENT
EXISTING CONDITION AND ALTERNATIVE 5 VELOCITY COMPARISON

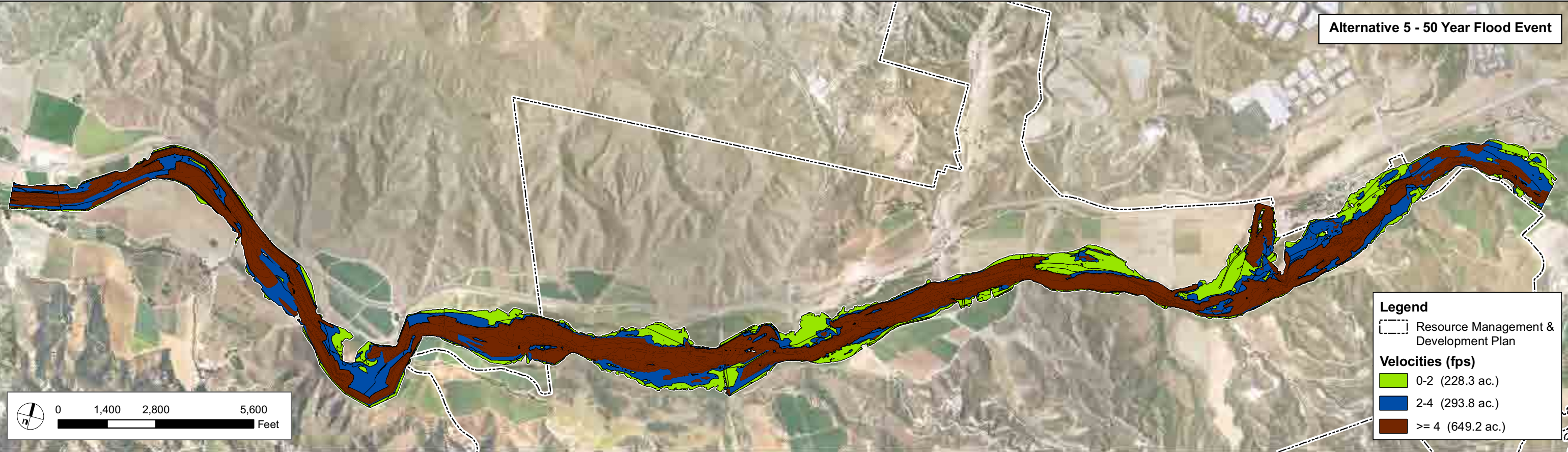
P:\8238E\GIS\mxds\EIR_2008\Section5_2\8238E_RefugiaVelocityAnalysisAlt5_20Yr_011209.mxd

Velocity Ranges (fps)	Existing Disturbed Habitat (Acres)	Alt 5 Disturbed Habitat (Acres)	Delta (Acres)	Existing Undisturbed Habitat (Acres)	Alt 5 Undisturbed Habitat (Acres)	Delta (Acres)	Existing Totals (Acres)	Alt 5 Totals (Acres)	Delta (Acres)
0-2	31.1	25.7	5.4	199.7	202.6	-2.9	230.8	228.3	2.5
2-4	72.7	29.2	43.5	267.3	264.6	2.7	340.0	293.8	46.2
> 4	141.7	68.0	73.7	581.7	581.2	0.5	723.4	649.2	74.2
Totals	245.5	122.9	122.7	1,048.7	1,048.4	0.3	1,294.2	1,171.3	122.8

Existing Condition - 50 Year Flood Event



Alternative 5 - 50 Year Flood Event



SOURCE: PACE 2008

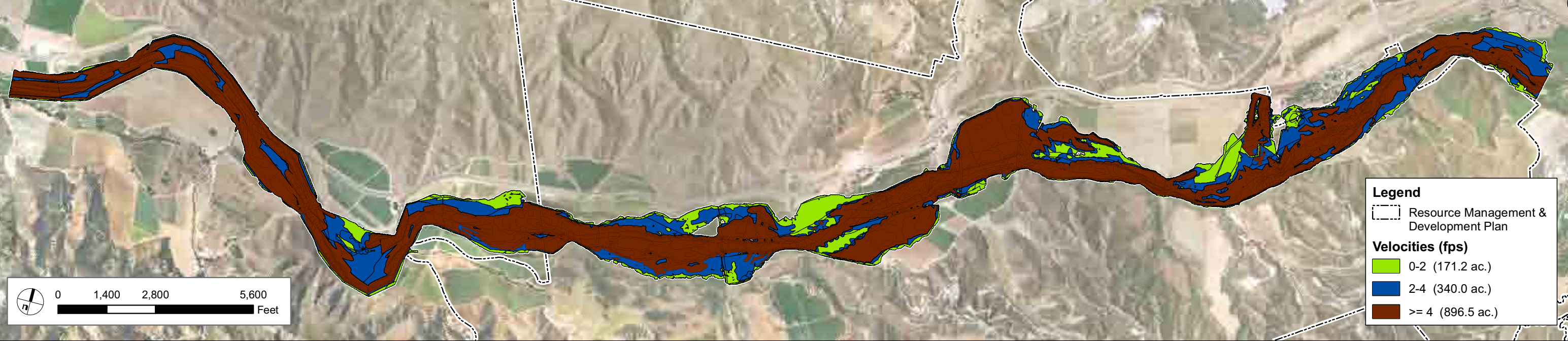
FIGURE 1.1-19

POTENTIAL REFUGIA HABITAT 50 YEAR FLOOD EVENT EXISTING CONDITION AND ALTERNATIVE 5 VELOCITY COMPARISON

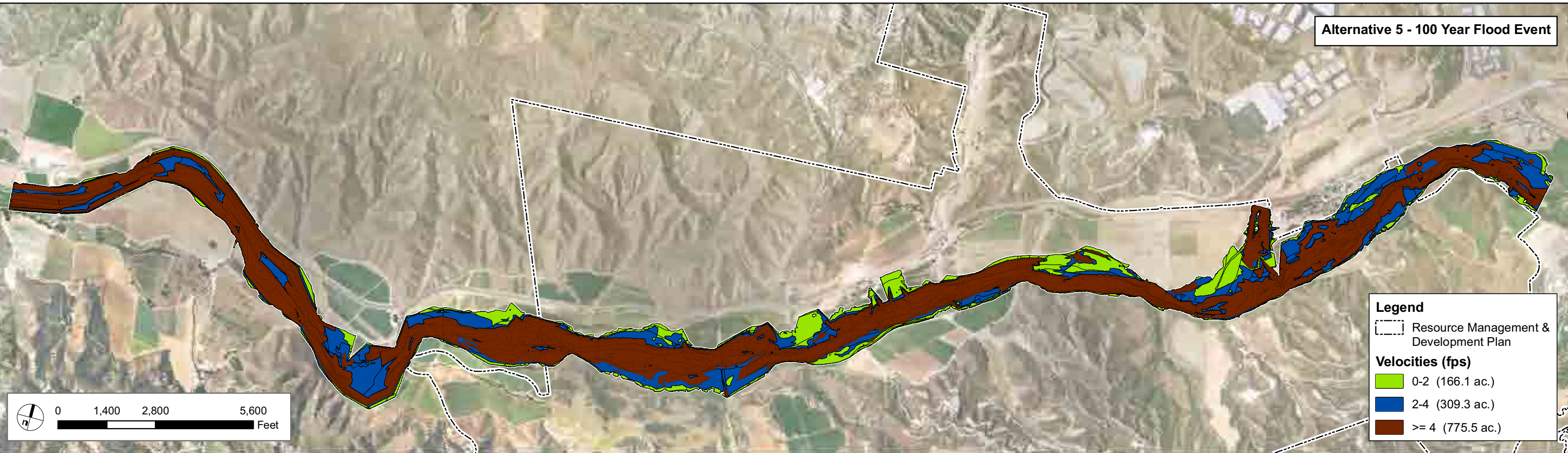
P:\8238E\GIS\mxds\EIR_2008\RefugiaAnalysis\8238E_FIGURE-1-1-19_RefugiaVelocityAnalysisAlt5_50Yr_110508.mxd

Velocity Ranges (fps)	Existing Disturbed Habitat (Acres)	Alt 5 Disturbed Habitat (Acres)	Delta (Acres)	Existing Undisturbed Habitat (Acres)	Alt 5 Undisturbed Habitat (Acres)	Delta (Acres)	Existing Totals (Acres)	Alt 5 Totals (Acres)	Delta (Acres)
0-2	26.8	26.8	0.0	144.5	139.3	-5.2	171.2	166.1	-5.1
2-4	43.9	24.0	-19.9	296.0	285.3	-10.7	340.0	309.3	-30.6
> 4	222.3	102.1	-120.2	674.1	673.3	-0.8	896.5	775.5	-121.0
Totals	293.1	153.0	-140.1	1,114.6	1,097.9	-16.7	1,407.6	1,250.9	-156.8

Existing Condition - 100 Year Flood



Alternative 5 - 100 Year Flood Event



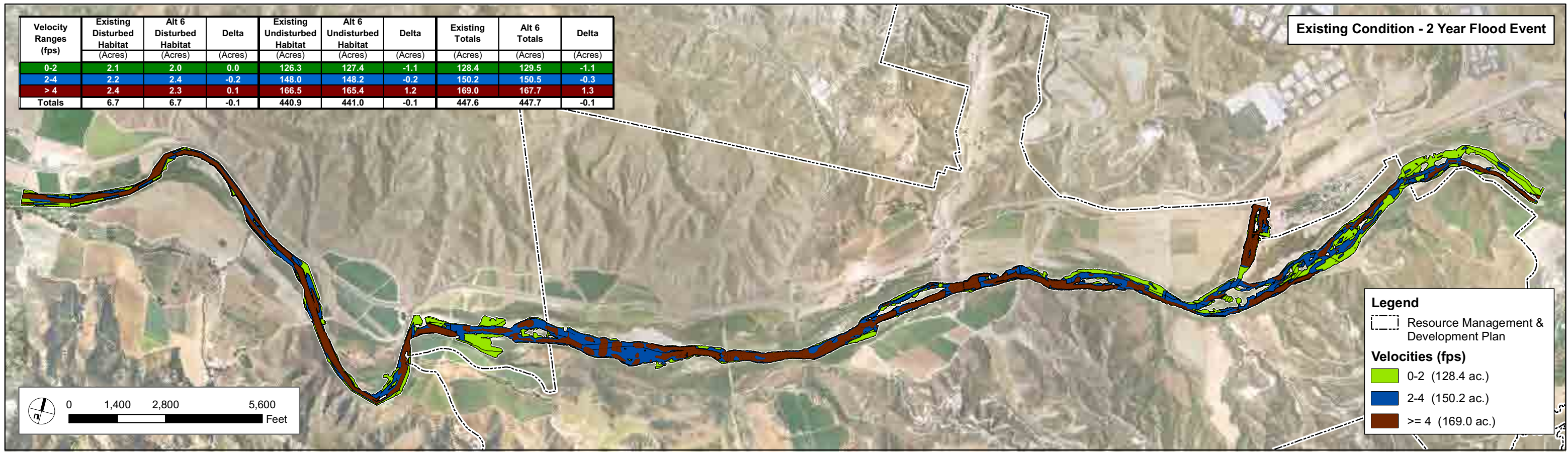
SOURCE: PACE 2008

FIGURE 5.4-2

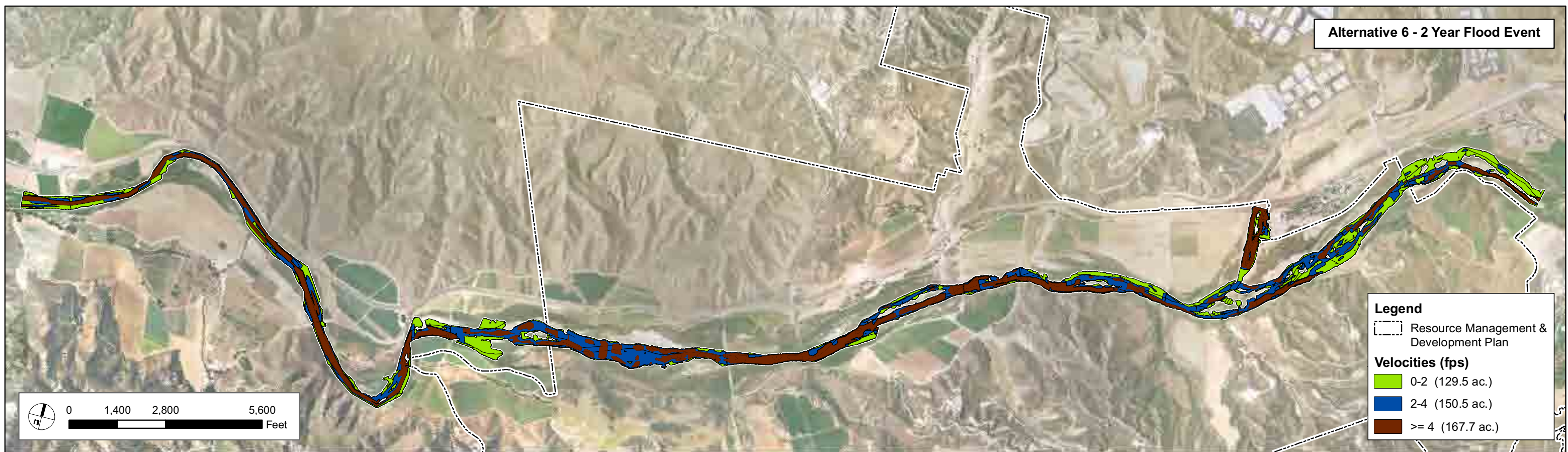
POTENTIAL REFUGIA HABITAT 100 YEAR FLOOD EVENT EXISTING CONDITION AND ALTERNATIVE 5 VELOCITY COMPARISON

Velocity Ranges (fps)	Existing Disturbed Habitat (Acres)	Alt 6 Disturbed Habitat (Acres)	Delta (Acres)	Existing Undisturbed Habitat (Acres)	Alt 6 Undisturbed Habitat (Acres)	Delta (Acres)	Existing Totals (Acres)	Alt 6 Totals (Acres)	Delta (Acres)
0-2	2.1	2.0	0.0	126.3	127.4	-1.1	128.4	129.5	-1.1
2-4	2.2	2.4	-0.2	148.0	148.2	-0.2	150.2	150.5	-0.3
> 4	2.4	2.3	0.1	166.5	165.4	1.2	169.0	167.7	1.3
Totals	6.7	6.7	-0.1	440.9	441.0	-0.1	447.6	447.7	-0.1

Existing Condition - 2 Year Flood Event



Alternative 6 - 2 Year Flood Event

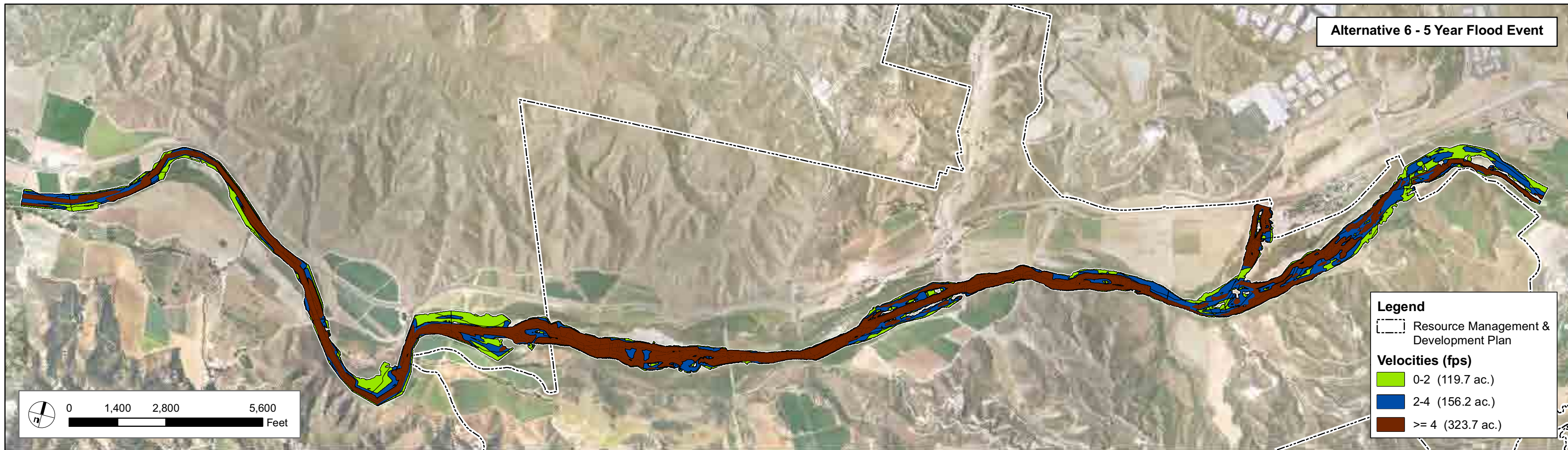
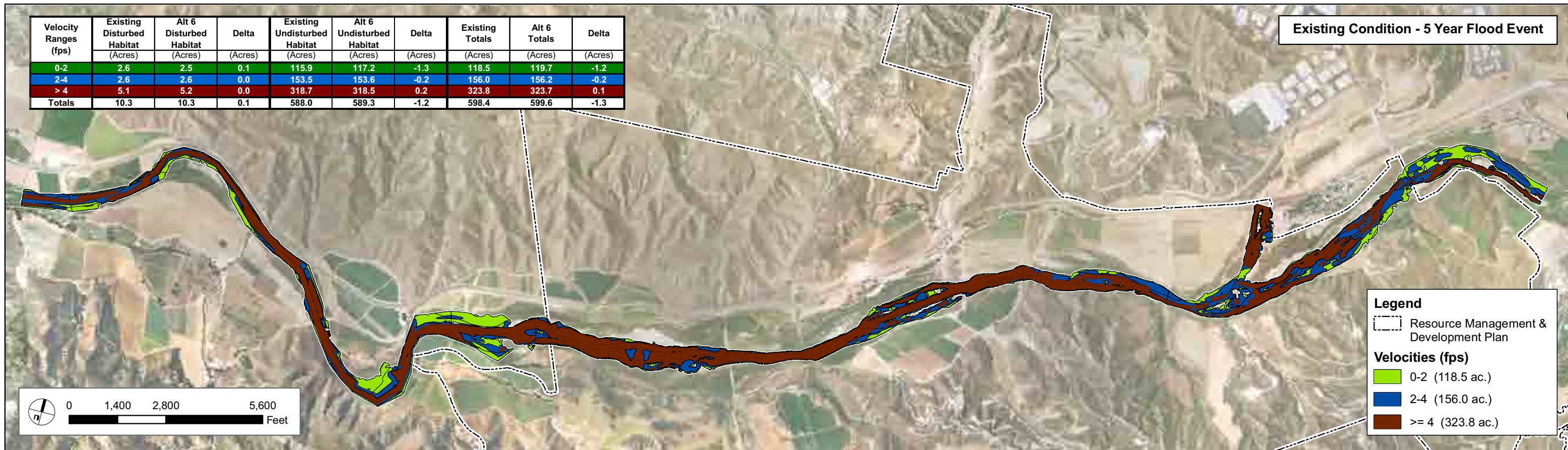


SOURCE: PACE 2008

FIGURE 1.1-22

POTENTIAL REFUGIA HABITAT 2 YEAR FLOOD EVENT EXISTING CONDITION AND ALTERNATIVE 6 VELOCITY COMPARISON

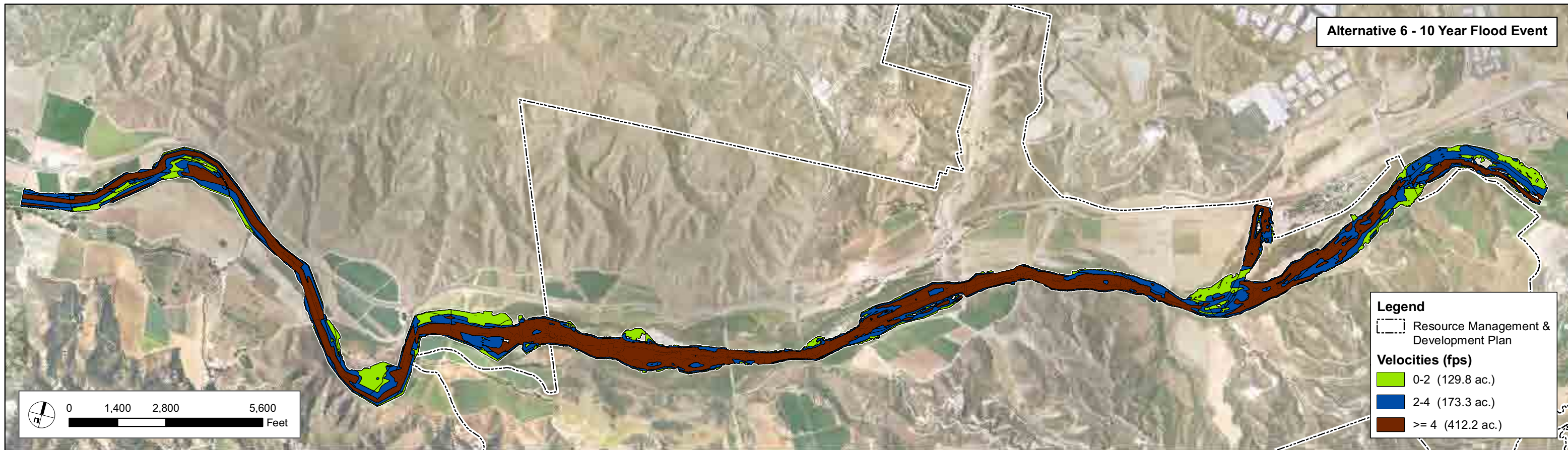
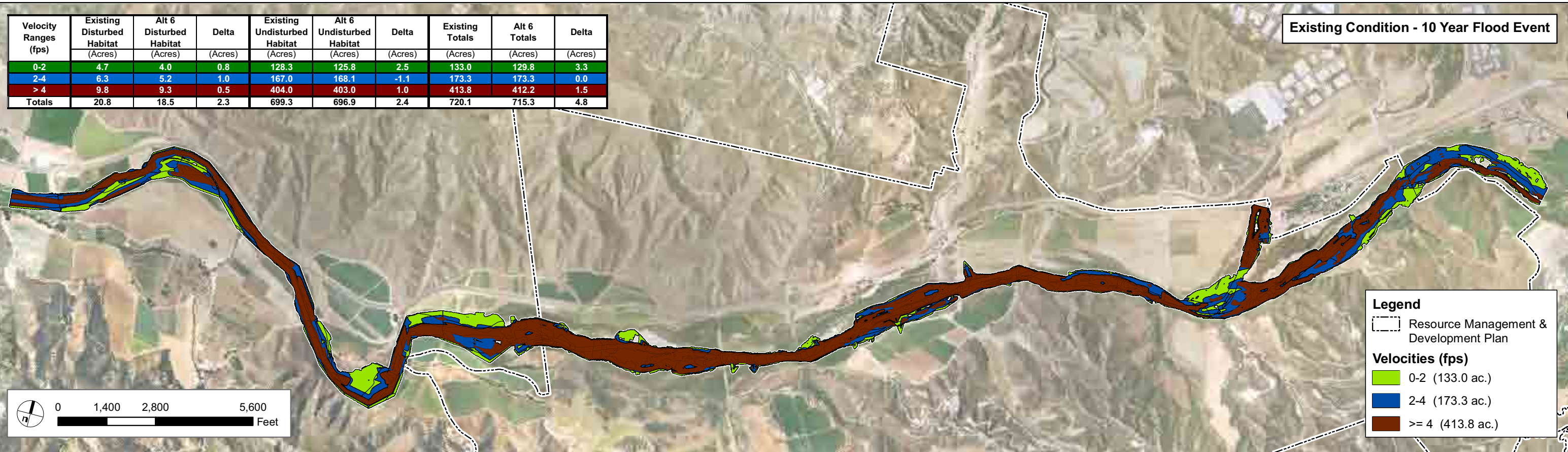
P:\8238E\GIS\mxds\EIR_2008\RefugiaAnalysis\8238E_FIGURE-1-1-22_RefugiaVelocityAnalysisAlt6_2Yr_110508.mxd



SOURCE: PACE 2008

FIGURE 1.1-22

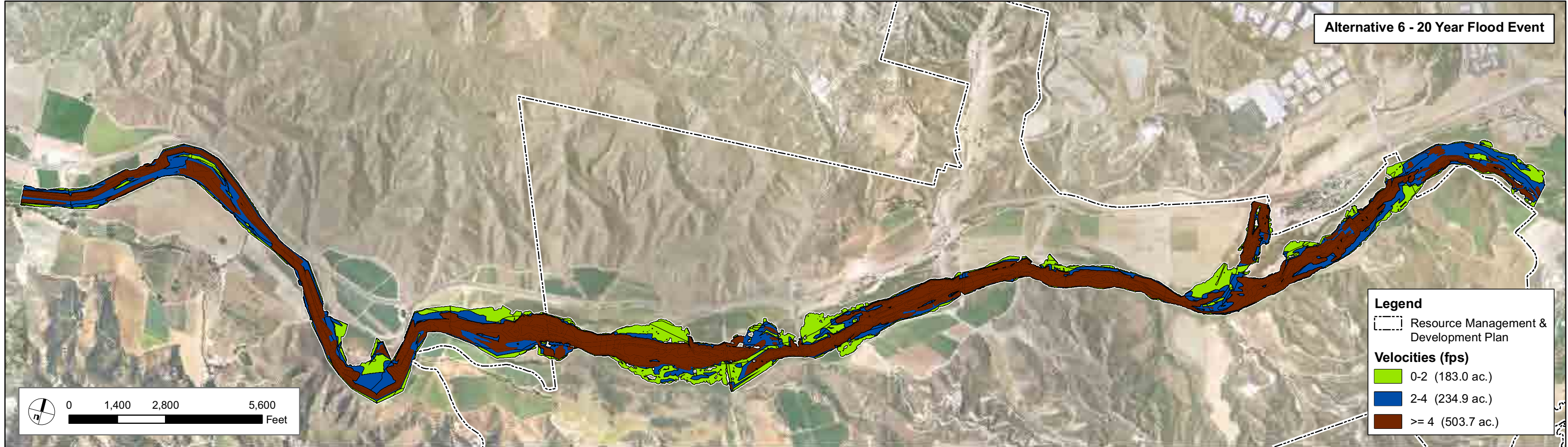
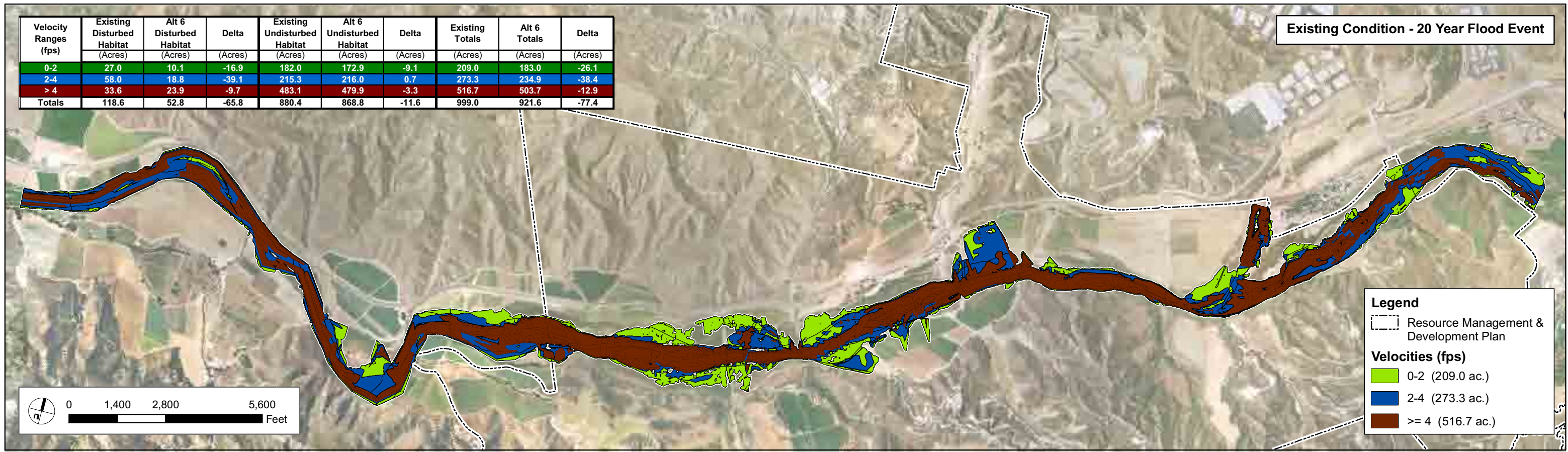
POTENTIAL REFUGIA HABITAT 5 YEAR FLOOD EVENT
EXISTING CONDITION AND ALTERNATIVE 6 VELOCITY COMPARISON



SOURCE: PACE 2008

FIGURE 1.1-23
 POTENTIAL REFUGIA HABITAT 10 YEAR FLOOD EVENT
 EXISTING CONDITION AND ALTERNATIVE 6 VELOCITY COMPARISON

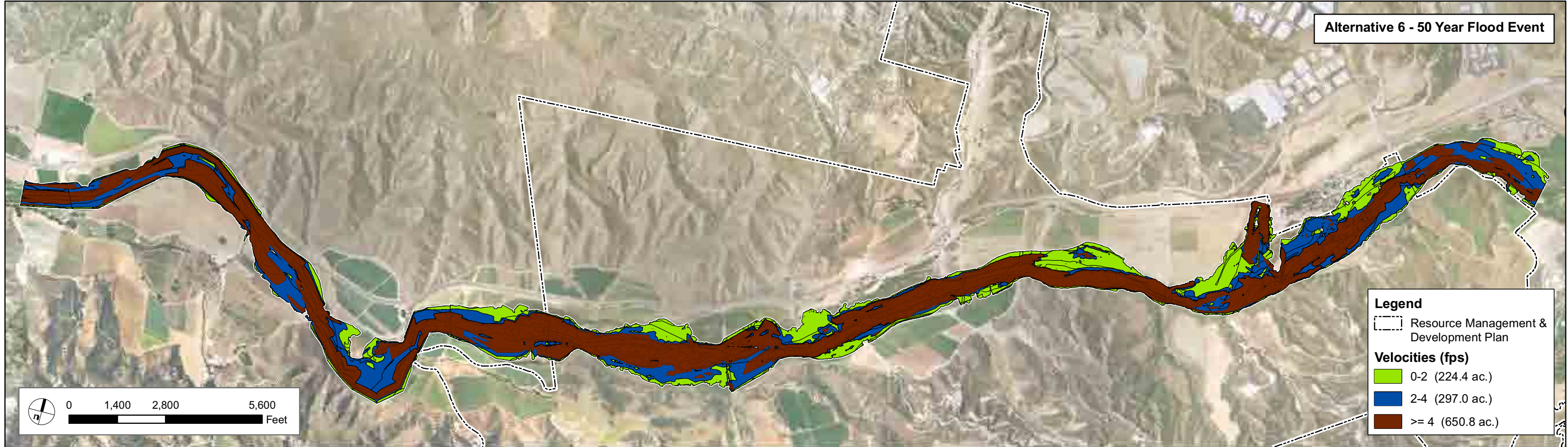
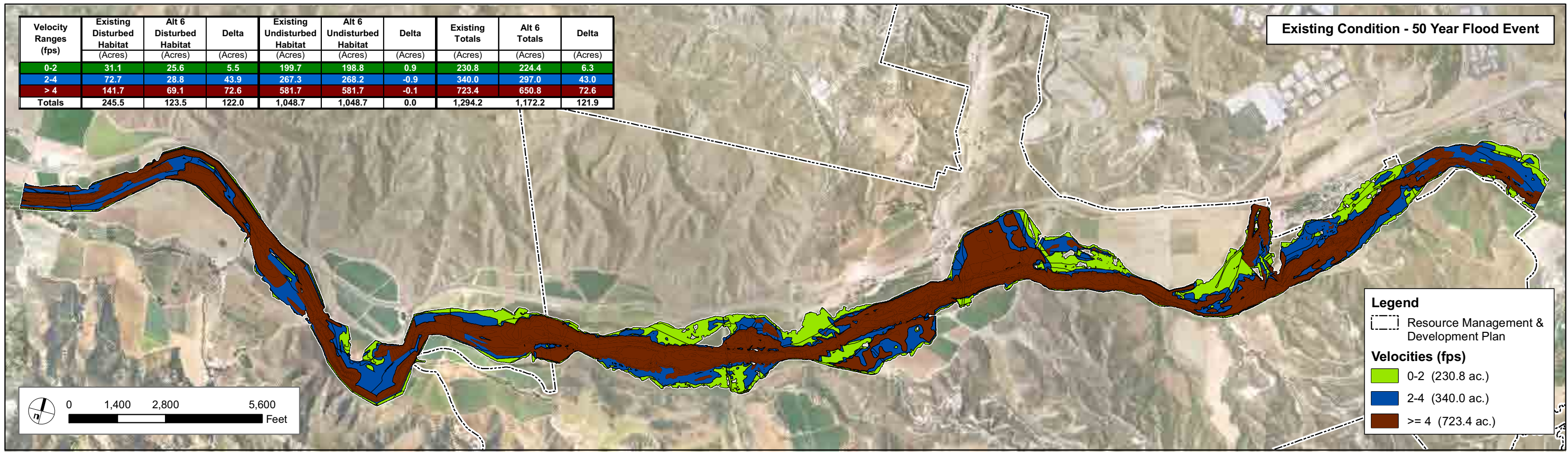
Velocity Ranges (fps)	Existing Disturbed Habitat (Acres)	Alt 6 Disturbed Habitat (Acres)	Delta (Acres)	Existing Undisturbed Habitat (Acres)	Alt 6 Undisturbed Habitat (Acres)	Delta (Acres)	Existing Totals (Acres)	Alt 6 Totals (Acres)	Delta (Acres)
0-2	27.0	10.1	-16.9	182.0	172.9	-9.1	209.0	183.0	-26.1
2-4	58.0	18.8	-39.1	215.3	216.0	0.7	273.3	234.9	-38.4
> 4	33.6	23.9	-9.7	483.1	479.9	-3.3	516.7	503.7	-12.9
Totals	118.6	52.8	-65.8	880.4	868.8	-11.6	999.0	921.6	-77.4



SOURCE: PACE 2008

FIGURE 5.5-1
 POTENTIAL REFUGIA HABITAT 20 YEAR FLOOD EVENT
 EXISTING CONDITION AND ALTERNATIVE 6 VELOCITY COMPARISON

Velocity Ranges (fps)	Existing Disturbed Habitat (Acres)	Alt 6 Disturbed Habitat (Acres)	Delta (Acres)	Existing Undisturbed Habitat (Acres)	Alt 6 Undisturbed Habitat (Acres)	Delta (Acres)	Existing Totals (Acres)	Alt 6 Totals (Acres)	Delta (Acres)
0-2	31.1	25.6	5.5	199.7	198.8	0.9	230.8	224.4	6.3
2-4	72.7	28.8	43.9	267.3	268.2	-0.9	340.0	297.0	43.0
> 4	141.7	69.1	72.6	581.7	581.7	-0.1	723.4	650.8	72.6
Totals	245.5	123.5	122.0	1,048.7	1,048.7	0.0	1,294.2	1,172.2	121.9

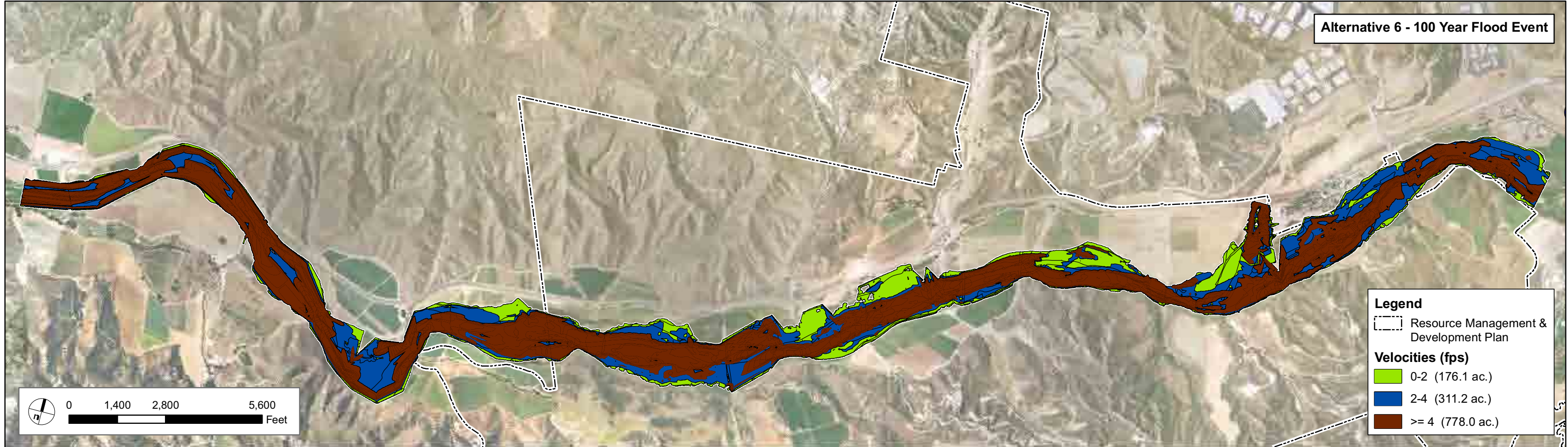
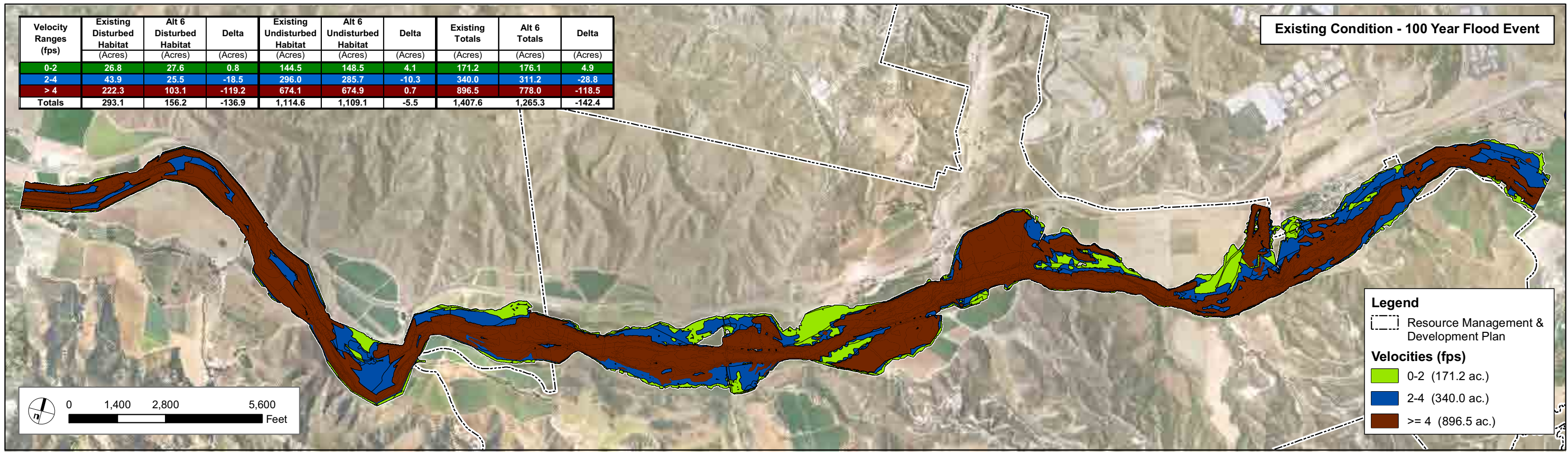


SOURCE: PACE 2008

FIGURE 1.1-25
 POTENTIAL REFUGIA HABITAT 50 YEAR FLOOD EVENT
 EXISTING CONDITION AND ALTERNATIVE 6 VELOCITY COMPARISON

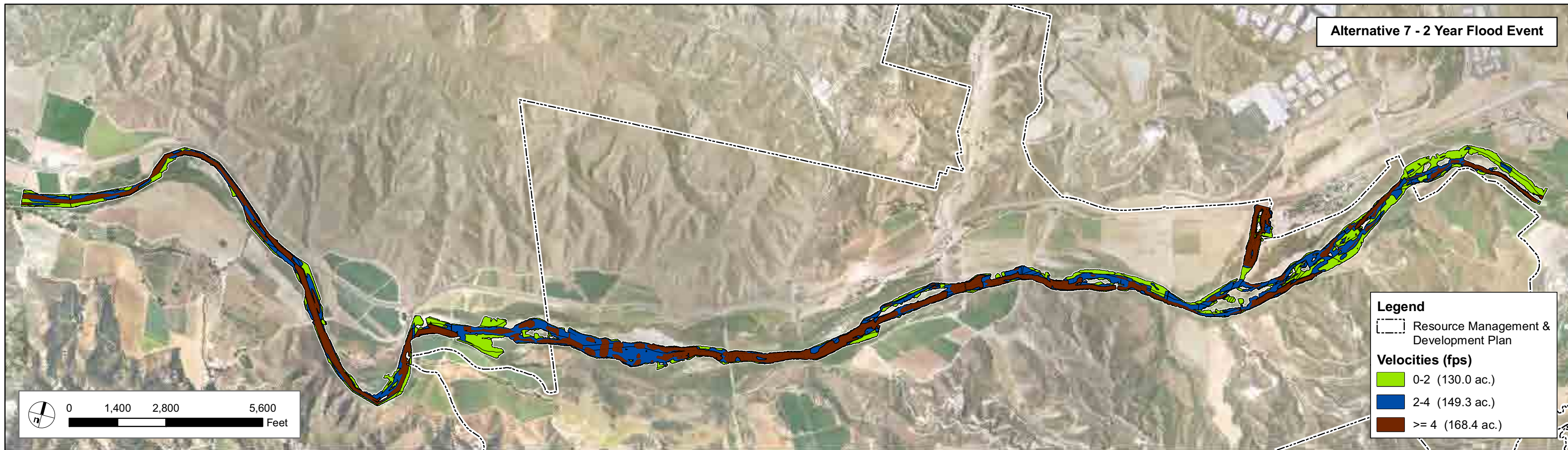
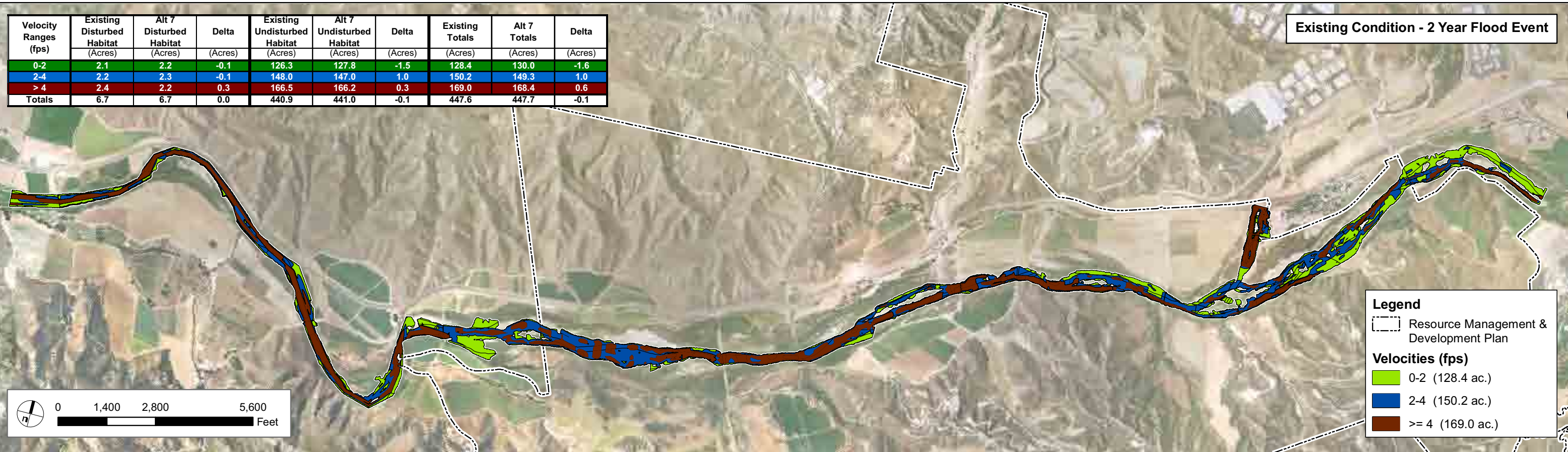
P:\8238E\GIS\mxds\EIR_2008\RefugiaAnalysis\8238E_FIGURE-1-1-25_RefugiaVelocityAnalysisAlt6_50Yr_110508.mxd

Velocity Ranges (fps)	Existing Disturbed Habitat (Acres)	Alt 6 Disturbed Habitat (Acres)	Delta (Acres)	Existing Undisturbed Habitat (Acres)	Alt 6 Undisturbed Habitat (Acres)	Delta (Acres)	Existing Totals (Acres)	Alt 6 Totals (Acres)	Delta (Acres)
0-2	26.8	27.6	0.8	144.5	148.5	4.1	171.2	176.1	4.9
2-4	43.9	25.5	-18.5	296.0	285.7	-10.3	340.0	311.2	-28.8
> 4	222.3	103.1	-119.2	674.1	674.9	0.7	896.5	778.0	-118.5
Totals	293.1	156.2	-136.9	1,114.6	1,109.1	-5.5	1,407.6	1,265.3	-142.4



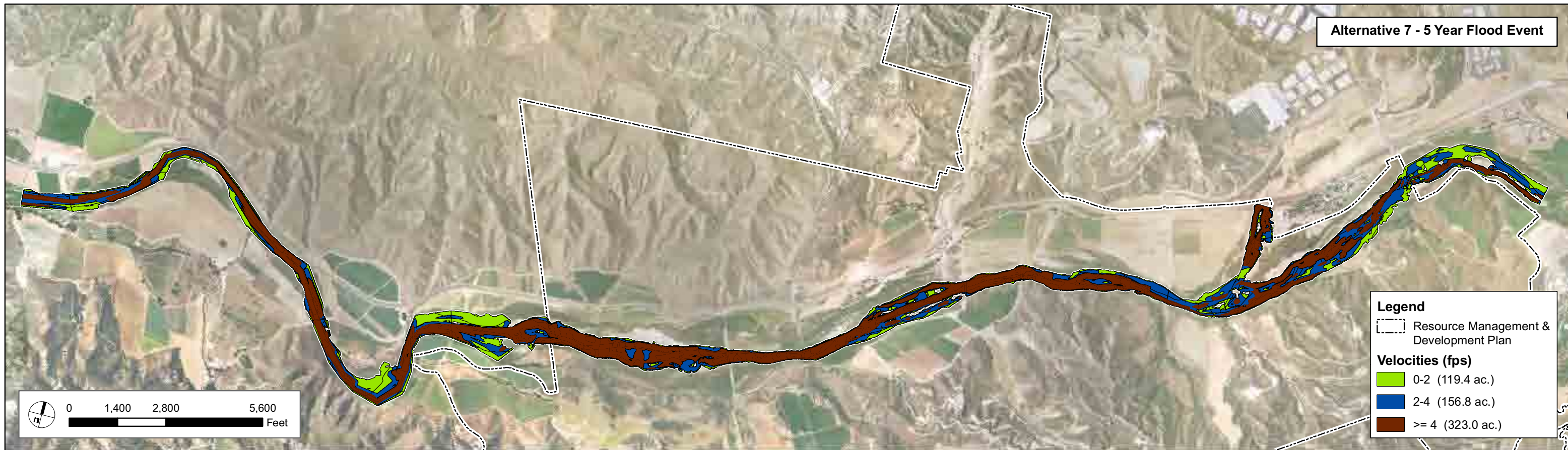
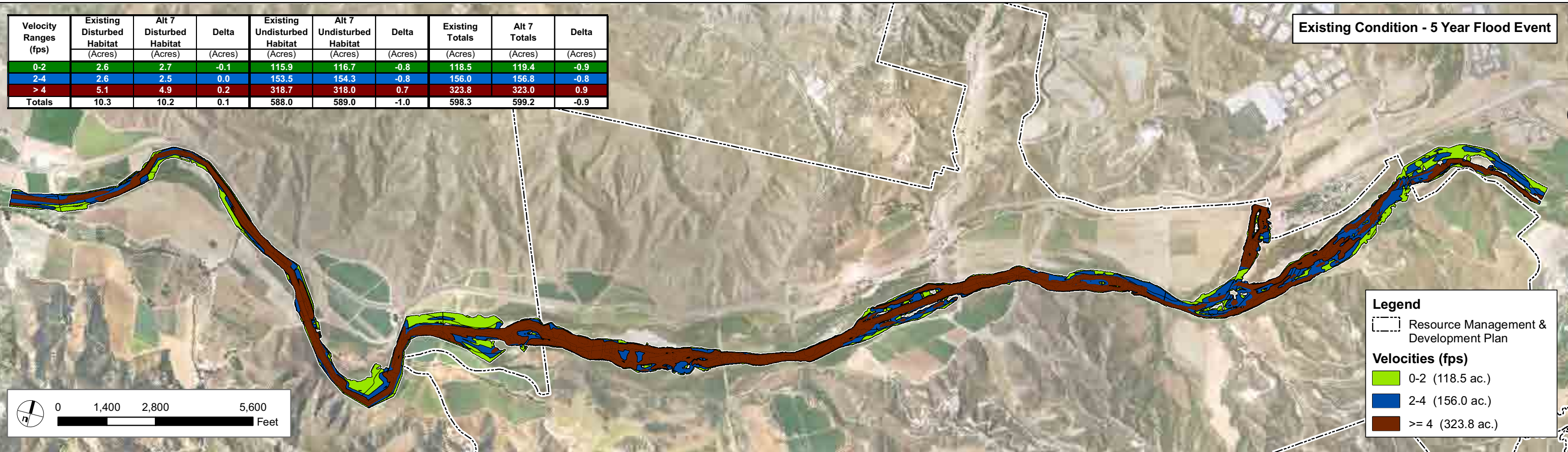
SOURCE: PACE 2008

FIGURE 5.5-2
 POTENTIAL REFUGIA HABITAT 100 YEAR FLOOD EVENT
 EXISTING CONDITION AND ALTERNATIVE 6 VELOCITY COMPARISON



SOURCE: PACE 2008

FIGURE 1.1-28
 POTENTIAL REFUGIA HABITAT 2 YEAR FLOOD EVENT
 EXISTING CONDITION AND ALTERNATIVE 7 VELOCITY COMPARISON



SOURCE: PACE 2008

FIGURE 1.1-29

POTENTIAL REFUGIA HABITAT 5 YEAR FLOOD EVENT
EXISTING CONDITION AND ALTERNATIVE 7 VELOCITY COMPARISON