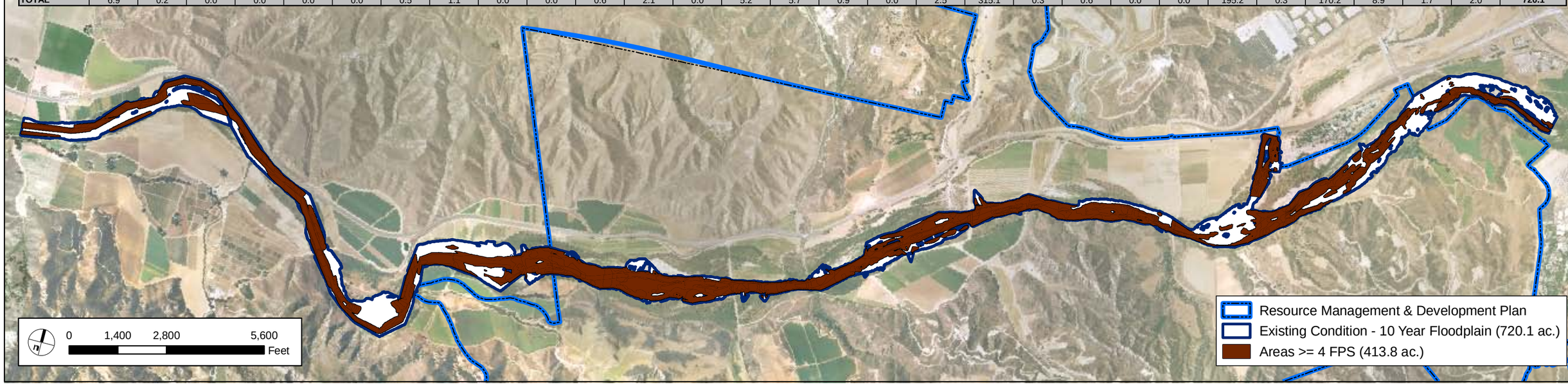
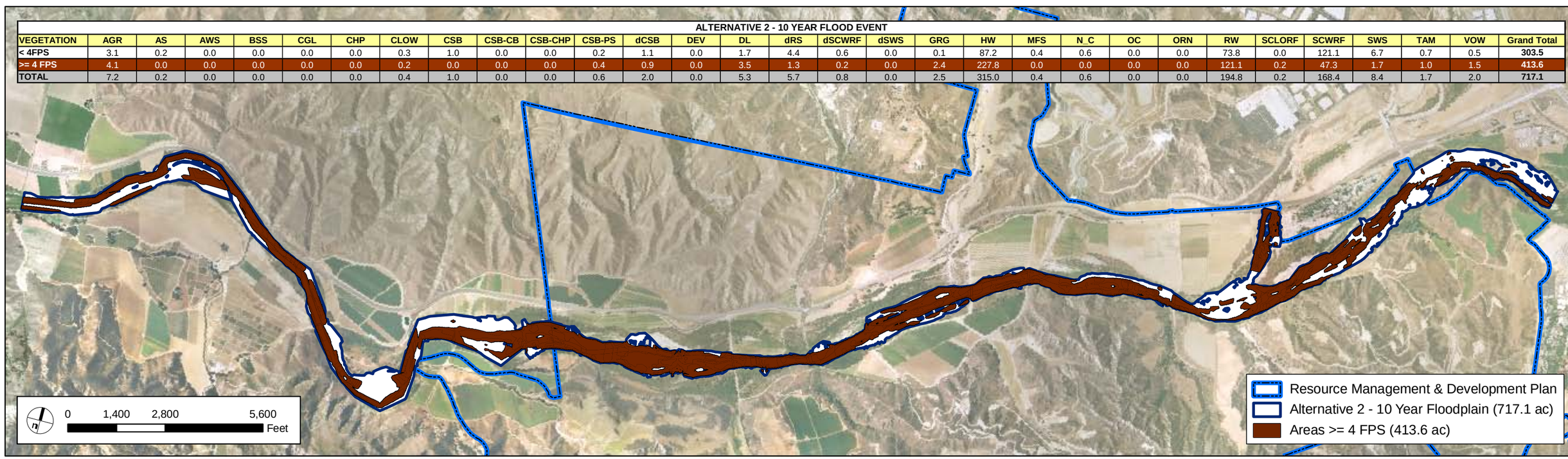
ENTRIX, Inc., "Focused Special-Status Fish Species Habitat Assessment—Santa Clara River and Tributary Drainages, Newhall Ranch, Los Angeles County, California" (2009)
PART 3 OF 5

ALTERNATIVE 1 (EXISTING CONDITION) - 10 YEAR FLOOD EVENT																														
VEGETATION	AGR	AS	AWS	BSS	CGL	CHP	CLOW	CSB	CSB-CB	CSB-CHP	CSB-PS	dCSB	DEV	DL	dRS	dSCWRF	dSWS	GRG	HW	MFS	N_C	OC	ORN	RW	SCLORF	SCWRF	SWS	TAM	VOW	Grand Total
< 4FPS	2.8	0.2	0.0	0.0	0.0	0.0	0.4	1.1	0.0	0.0	0.3	1.3	0.0	1.8	4.4	0.7	0.0	0.1	86.6	0.3	0.5	0.0	0.0	74.4	0.0	123.2	6.8	0.7	0.6	**306.3**
>= 4 FPS	4.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.4	0.9	0.0	3.4	1.3	0.2	0.0	2.4	228.5	0.0	0.0	0.0	0.0	120.8	0.2	47.0	2.0	1.0	1.4	**413.8**
TOTAL	6.9	0.2	0.0	0.0	0.0	0.0	0.5	1.1	0.0	0.0	0.6	2.1	0.0	5.2	5.7	0.9	0.0	2.5	315.1	0.3	0.6	0.0	0.0	195.2	0.3	170.2	8.9	1.7	2.0	**720.1**



ALTERNATIVE 2 - 10 YEAR FLOOD EVENT																														
VEGETATION	AGR	AS	AWS	BSS	CGL	CHP	CLOW	CSB	CSB-CB	CSB-CHP	CSB-PS	dCSB	DEV	DL	dRS	dSCWRF	dSWS	GRG	HW	MFS	N_C	OC	ORN	RW	SCLORF	SCWRF	SWS	TAM	VOW	Grand Total
< 4FPS	3.1	0.2	0.0	0.0	0.0	0.0	0.3	1.0	0.0	0.0	0.2	1.1	0.0	1.7	4.4	0.6	0.0	0.1	87.2	0.4	0.6	0.0	0.0	73.8	0.0	121.1	6.7	0.7	0.5	**303.5**
>= 4 FPS	4.1	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.4	0.9	0.0	3.5	1.3	0.2	0.0	2.4	227.8	0.0	0.0	0.0	0.0	121.1	0.2	47.3	1.7	1.0	1.5	**413.6**
TOTAL	7.2	0.2	0.0	0.0	0.0	0.0	0.4	1.0	0.0	0.0	0.6	2.0	0.0	5.3	5.7	0.8	0.0	2.5	315.0	0.4	0.6	0.0	0.0	194.8	0.2	168.4	8.4	1.7	2.0	**717.1**



SOURCE: PACE 2008

FIGURE 1.1-3

EXISTING CONDITION AND
ALTERNATIVE 2 (PROPOSED CONDITION) - 10 YEAR FLOOD EVENT

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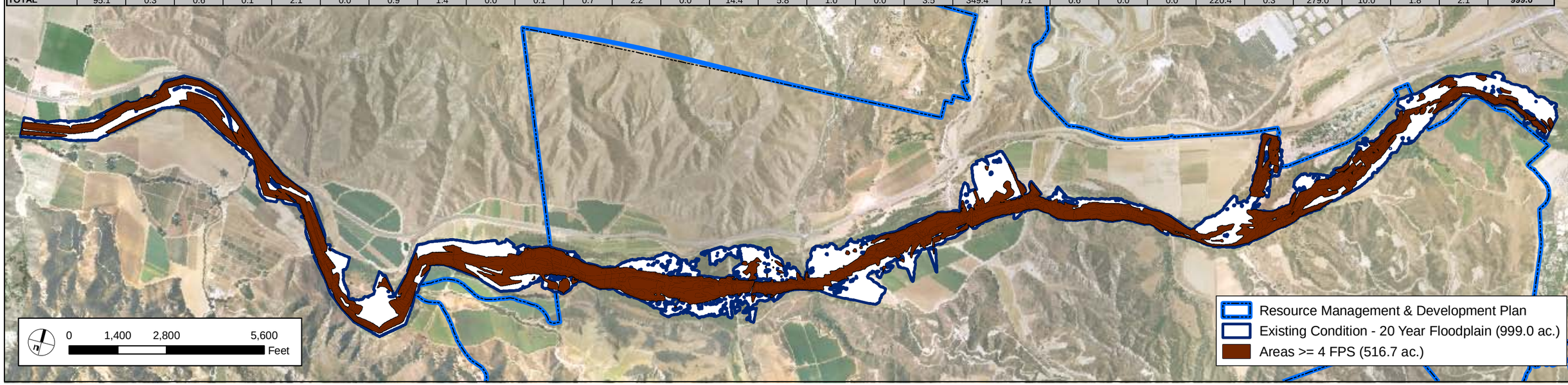
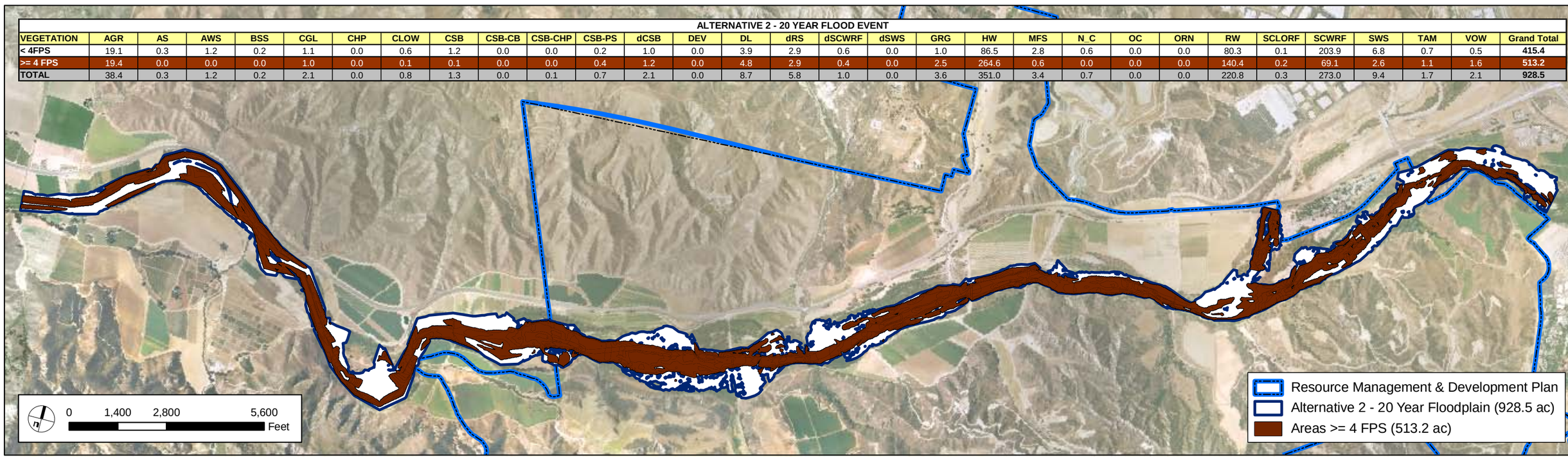
ALTERNATIVE 1 (EXISTING CONDITION) - 20 YEAR FLOOD EVENT

VEGETATION	AGR	AS	AWS	BSS	CGL	CHP	CLOW	CSB	CSB-CB	CSB-CHP	CSB-PS	dCSB	DEV	DL	dRS	dSCWRF	dSWS	GRG	HW	MFS	N_C	OC	ORN	RW	SCLORF	SCWRF	SWS	TAM	VOW	Grand Total
< 4FPS	71.1	0.3	0.6	0.1	1.1	0.0	0.7	1.3	0.0	0.0	0.3	1.0	0.0	9.3	2.9	0.6	0.0	1.0	86.3	6.1	0.6	0.0	0.0	80.5	0.1	209.8	7.1	0.7	0.6	**482.3**
>= 4 FPS	24.1	0.0	0.0	0.0	1.0	0.0	0.1	0.1	0.0	0.1	0.4	1.2	0.0	5.0	2.9	0.4	0.0	2.5	263.1	1.0	0.0	0.0	0.0	139.9	0.2	69.2	2.8	1.1	1.5	**516.7**
TOTAL	95.1	0.3	0.6	0.1	2.1	0.0	0.9	1.4	0.0	0.1	0.7	2.2	0.0	14.4	5.8	1.0	0.0	3.5	349.4	7.1	0.6	0.0	0.0	220.4	0.3	279.0	10.0	1.8	2.1	**999.0**



ALTERNATIVE 2 - 20 YEAR FLOOD EVENT

VEGETATION	AGR	AS	AWS	BSS	CGL	CHP	CLOW	CSB	CSB-CB	CSB-CHP	CSB-PS	dCSB	DEV	DL	dRS	dSCWRF	dSWS	GRG	HW	MFS	N_C	OC	ORN	RW	SCLORF	SCWRF	SWS	TAM	VOW	Grand Total
< 4FPS	19.1	0.3	1.2	0.2	1.1	0.0	0.6	1.2	0.0	0.0	0.2	1.0	0.0	3.9	2.9	0.6	0.0	1.0	86.5	2.8	0.6	0.0	0.0	80.3	0.1	203.9	6.8	0.7	0.5	**415.4**
>= 4 FPS	19.4	0.0	0.0	0.0	1.0	0.0	0.1	0.1	0.0	0.0	0.4	1.2	0.0	4.8	2.9	0.4	0.0	2.5	264.6	0.6	0.0	0.0	0.0	140.4	0.2	69.1	2.6	1.1	1.6	**513.2**
TOTAL	38.4	0.3	1.2	0.2	2.1	0.0	0.8	1.3	0.0	0.1	0.7	2.1	0.0	8.7	5.8	1.0	0.0	3.6	351.0	3.4	0.7	0.0	0.0	220.8	0.3	273.0	9.4	1.7	2.1	**928.5**



SOURCE: PACE 2008

FIGURE 1.1-4

EXISTING CONDITION AND
ALTERNATIVE 2 (PROPOSED CONDITION) - 20 YEAR FLOOD EVENT

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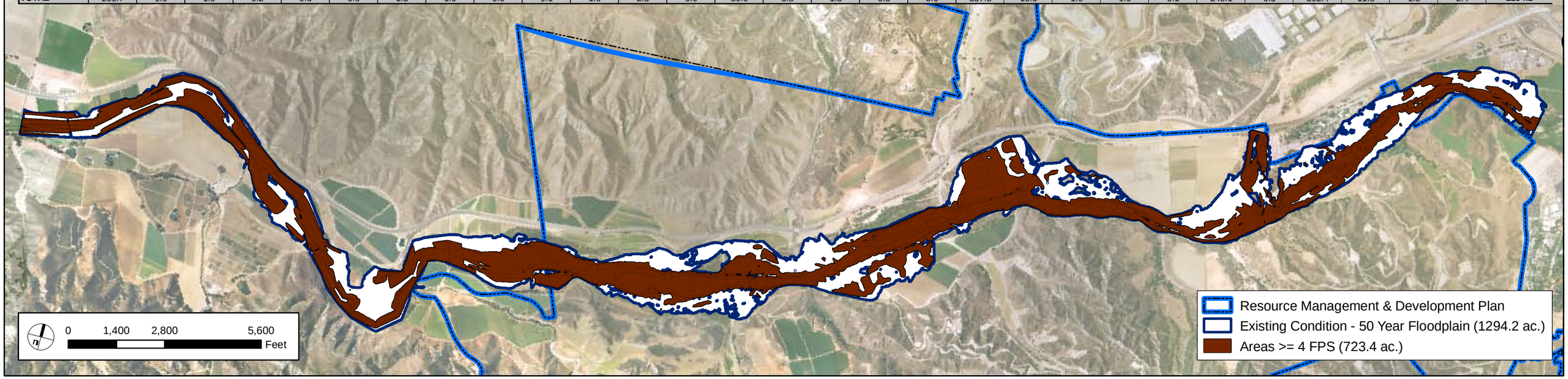
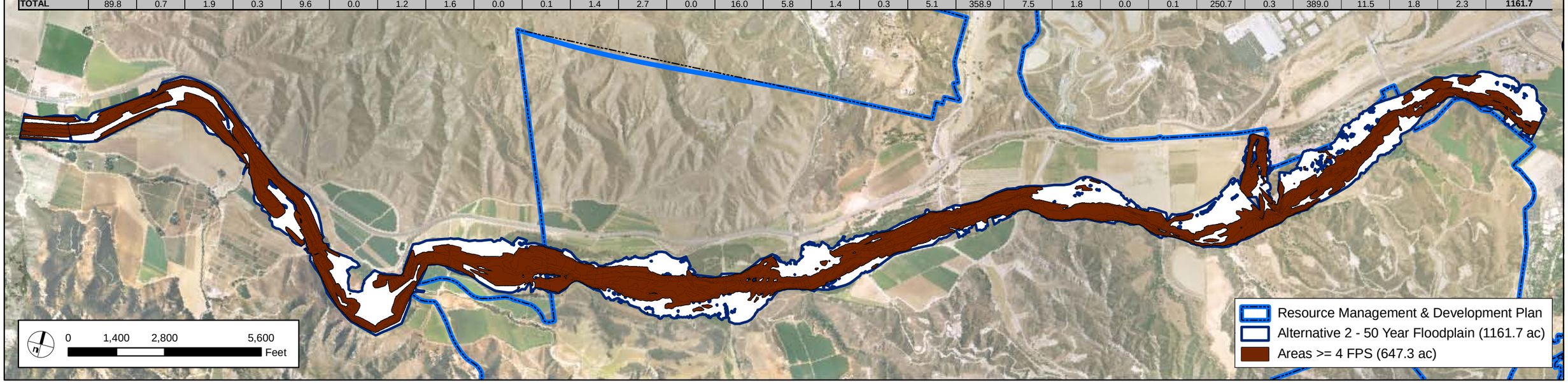
ALTERNATIVE 1 (EXISTING CONDITION) - 50 YEAR FLOOD EVENT

VEGETATION	AGR	AS	AWS	BSS	CGL	CHP	CLOW	CSB	CSB-CB	CSB-CHP	CSB-PS	dCSB	DEV	DL	dRS	dSCWRF	dSWS	GRG	HW	MFS	N_C	OC	ORN	RW	SCLORF	SCWRF	SWS	TAM	VOW	Grand Total
< 4FPS	82.3	0.5	1.7	0.1	6.5	0.0	1.1	1.5	0.0	0.0	0.5	1.0	0.0	17.8	2.0	0.6	0.2	2.4	68.0	7.8	1.5	0.0	0.1	79.1	0.1	288.1	6.7	0.7	0.7	**570.8**
>= 4 FPS	123.3	0.1	0.1	0.2	3.1	0.0	0.2	0.4	0.0	0.1	0.6	1.5	0.0	12.2	3.8	0.7	0.1	2.6	289.9	2.7	0.1	0.0	0.0	169.0	0.3	104.2	5.1	1.2	1.7	**723.4**
TOTAL	205.7	0.6	1.9	0.2	9.6	0.0	1.3	1.9	0.0	0.1	1.0	2.5	0.0	30.0	5.8	1.3	0.3	5.0	357.8	10.5	1.6	0.0	0.1	248.1	0.3	392.4	11.8	1.8	2.4	**1294.2**



ALTERNATIVE 2 - 50 YEAR FLOOD EVENT

VEGETATION	AGR	AS	AWS	BSS	CGL	CHP	CLOW	CSB	CSB-CB	CSB-CHP	CSB-PS	dCSB	DEV	DL	dRS	dSCWRF	dSWS	GRG	HW	MFS	N_C	OC	ORN	RW	SCLORF	SCWRF	SWS	TAM	VOW	Grand Total
< 4FPS	37.9	0.6	1.7	0.1	6.2	0.0	1.0	1.2	0.0	0.0	0.7	1.3	0.0	7.5	2.2	0.7	0.2	2.4	69.9	5.4	1.6	0.0	0.1	80.7	0.1	284.3	7.7	0.6	0.5	**514.4**
>= 4 FPS	51.9	0.1	0.1	0.2	3.4	0.0	0.2	0.4	0.0	0.1	0.6	1.4	0.0	8.5	3.6	0.8	0.1	2.7	289.1	2.1	0.2	0.0	0.0	170.0	0.3	104.7	3.8	1.2	1.8	**647.3**
TOTAL	89.8	0.7	1.9	0.3	9.6	0.0	1.2	1.6	0.0	0.1	1.4	2.7	0.0	16.0	5.8	1.4	0.3	5.1	358.9	7.5	1.8	0.0	0.1	250.7	0.3	389.0	11.5	1.8	2.3	**1161.7**



SOURCE: PACE 2008

FIGURE 1.1-5

EXISTING CONDITION AND
ALTERNATIVE 2 (PROPOSED CONDITION) - 50 YEAR FLOOD EVENT

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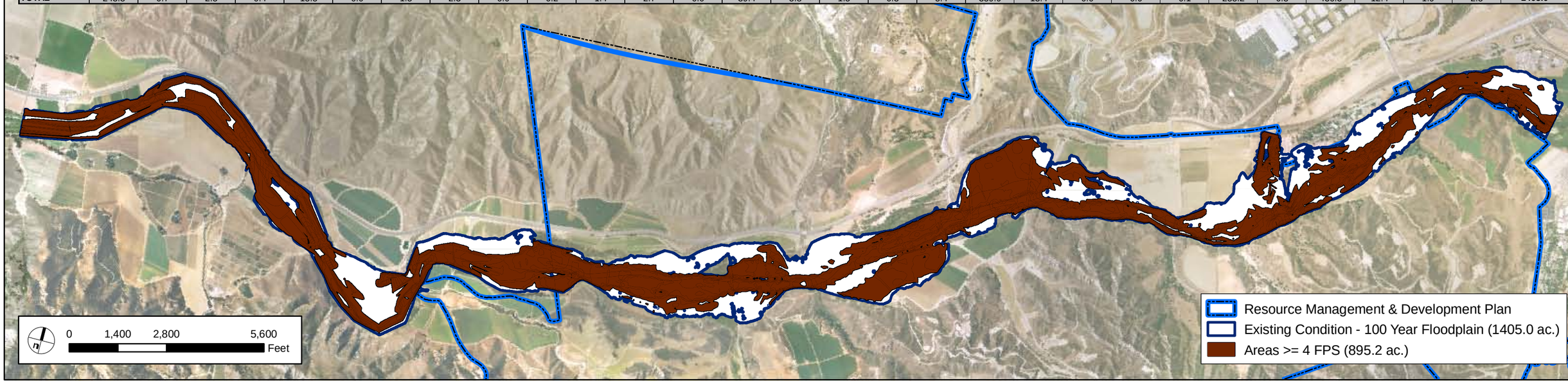
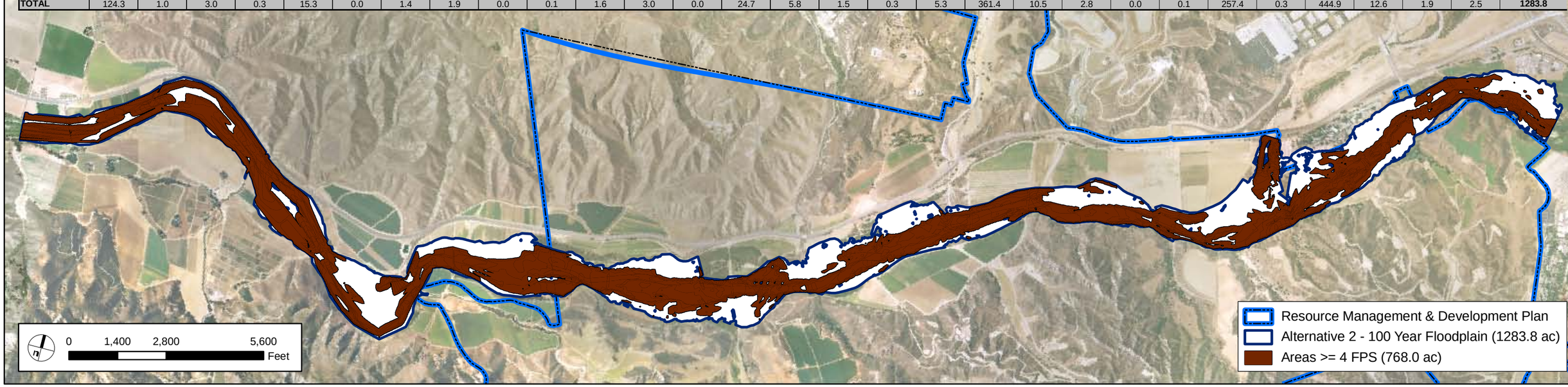
ALTERNATIVE 1 (EXISTING CONDITION) - 100 YEAR FLOOD EVENT

VEGETATION	AGR	AS	AWS	BSS	CGL	CHP	CLOW	CSB	CSB-CB	CSB-CHP	CSB-PS	dCSB	DEV	DL	dRS	dSCWRF	dSWS	GRG	HW	MFS	N_C	OC	ORN	RW	SCLORF	SCWRF	SWS	TAM	VOW	Grand Total
< 4FPS	49.4	0.4	2.2	0.2	11.5	0.0	1.2	1.8	0.0	0.1	0.6	1.3	0.0	18.6	0.9	0.5	0.1	2.3	54.0	7.9	0.0	0.0	0.1	60.7	0.1	288.9	5.9	0.7	0.6	**509.8**
>= 4 FPS	193.9	0.3	0.3	0.2	4.0	0.0	0.3	0.6	0.0	0.1	0.8	1.4	0.0	20.8	4.9	1.1	0.3	3.1	305.8	5.4	0.0	0.0	0.0	194.5	0.3	147.4	6.5	1.2	1.9	**895.2**
TOTAL	243.3	0.7	2.5	0.4	15.5	0.0	1.5	2.3	0.0	0.2	1.4	2.7	0.0	39.4	5.8	1.5	0.3	5.4	359.9	13.4	0.0	0.0	0.1	255.2	0.3	436.3	12.4	1.9	2.5	**1405.0**



ALTERNATIVE 2 - 100 YEAR FLOOD EVENT

VEGETATION	AGR	AS	AWS	BSS	CGL	CHP	CLOW	CSB	CSB-CB	CSB-CHP	CSB-PS	dCSB	DEV	DL	dRS	dSCWRF	dSWS	GRG	HW	MFS	N_C	OC	ORN	RW	SCLORF	SCWRF	SWS	TAM	VOW	Grand Total
< 4FPS	41.4	0.6	2.8	0.1	11.2	0.0	1.1	1.3	0.0	0.0	0.7	1.5	0.0	12.6	0.9	0.5	0.0	2.2	56.7	7.5	1.5	0.0	0.1	64.1	0.0	299.8	7.8	0.7	0.5	**515.9**
>= 4 FPS	82.9	0.3	0.2	0.2	4.0	0.0	0.3	0.6	0.0	0.1	0.9	1.4	0.0	12.1	4.9	1.1	0.3	3.1	304.7	2.9	1.3	0.0	0.0	193.3	0.3	145.1	4.8	1.2	1.9	**768.0**
TOTAL	124.3	1.0	3.0	0.3	15.3	0.0	1.4	1.9	0.0	0.1	1.6	3.0	0.0	24.7	5.8	1.5	0.3	5.3	361.4	10.5	2.8	0.0	0.1	257.4	0.3	444.9	12.6	1.9	2.5	**1283.8**



SOURCE: PACE 2008

FIGURE 1.1-6

EXISTING CONDITION AND
ALTERNATIVE 2 (PROPOSED CONDITION) 100 YEAR FLOOD EVENT

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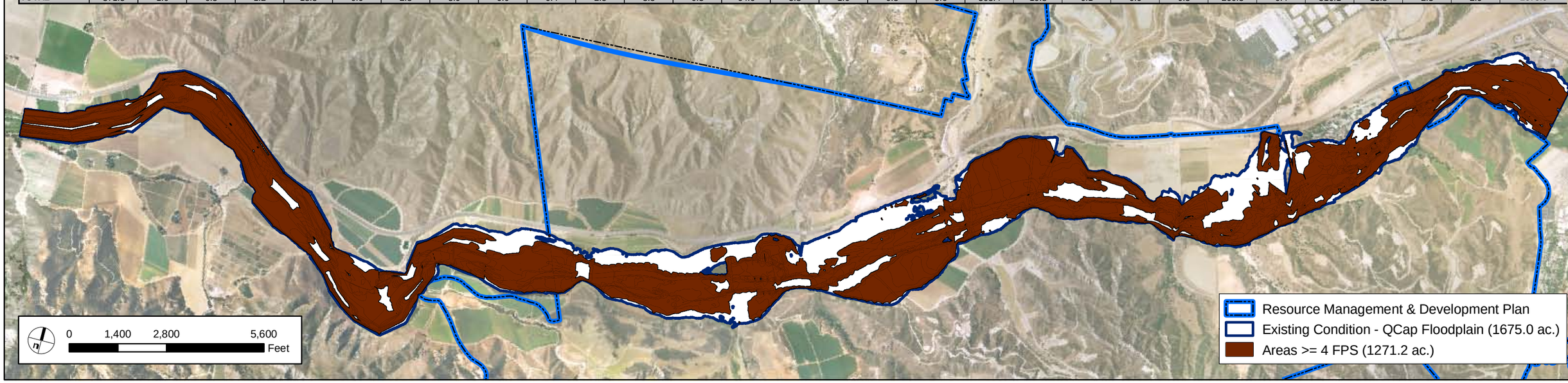
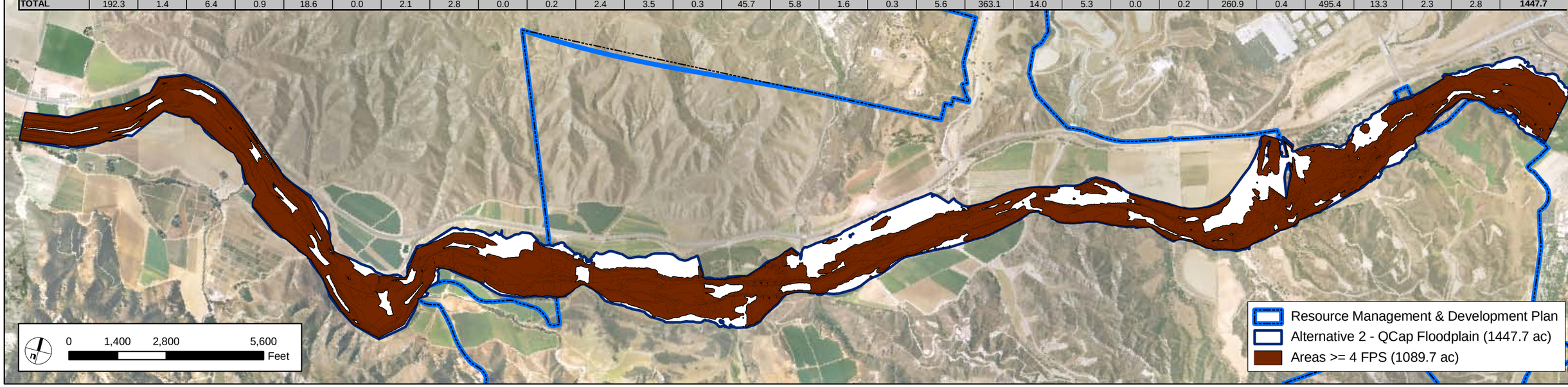
ALTERNATIVE 1 (EXISTING CONDITION) - CAPITAL FLOOD EVENT

VEGETATION	AGR	AS	AWS	BSS	CGL	CHP	CLOW	CSB	CSB-CB	CSB-CHP	CSB-PS	dCSB	DEV	DL	dRS	dSCWRF	dSWS	GRG	HW	MFS	N_C	OC	ORN	RW	SCLORF	SCWRF	SWS	TAM	VOW	Grand Total
< 4FPS	62.1	0.5	4.4	0.8	5.0	0.0	2.0	2.6	0.0	0.1	1.0	1.4	0.2	22.3	0.0	0.0	0.0	0.0	28.3	7.1	3.2	0.0	0.2	36.2	0.1	220.4	4.0	1.2	0.6	**403.8**
>= 4 FPS	309.4	0.5	2.2	0.3	13.6	0.0	0.8	1.2	0.0	0.3	1.5	2.2	0.0	42.3	5.8	1.6	0.3	5.5	335.0	12.8	2.8	0.0	0.1	224.2	0.3	295.7	9.5	1.1	2.2	**1271.2**
TOTAL	371.5	1.0	6.5	1.2	18.5	0.0	2.8	3.9	0.0	0.4	2.5	3.5	0.3	64.6	5.8	1.6	0.3	5.6	363.4	19.8	6.1	0.0	0.3	260.3	0.4	516.1	13.5	2.3	2.9	**1675.0**



ALTERNATIVE 2 - CAPITAL FLOOD EVENT

VEGETATION	AGR	AS	AWS	BSS	CGL	CHP	CLOW	CSB	CSB-CB	CSB-CHP	CSB-PS	dCSB	DEV	DL	dRS	dSCWRF	dSWS	GRG	HW	MFS	N_C	OC	ORN	RW	SCLORF	SCWRF	SWS	TAM	VOW	Grand Total
< 4FPS	42.3	0.9	3.8	0.6	5.1	0.0	1.4	1.7	0.0	0.0	0.8	1.3	0.3	19.4	0.0	0.0	0.0	0.0	28.0	5.7	2.5	0.0	0.1	37.7	0.1	201.0	3.7	1.2	0.6	**358.0**
>= 4 FPS	150.0	0.5	2.6	0.3	13.5	0.0	0.8	1.1	0.0	0.2	1.6	2.2	0.0	26.4	5.8	1.6	0.3	5.5	335.2	8.2	2.8	0.0	0.1	223.2	0.3	294.4	9.7	1.1	2.2	**1089.7**
TOTAL	192.3	1.4	6.4	0.9	18.6	0.0	2.1	2.8	0.0	0.2	2.4	3.5	0.3	45.7	5.8	1.6	0.3	5.6	363.1	14.0	5.3	0.0	0.2	260.9	0.4	495.4	13.3	2.3	2.8	**1447.7**



SOURCE: PACE 2008

FIGURE 1.1-7

EXISTING CONDITION AND
ALTERNATIVE 2 (PROPOSED CONDITION) - QCAP FLOOD EVENT

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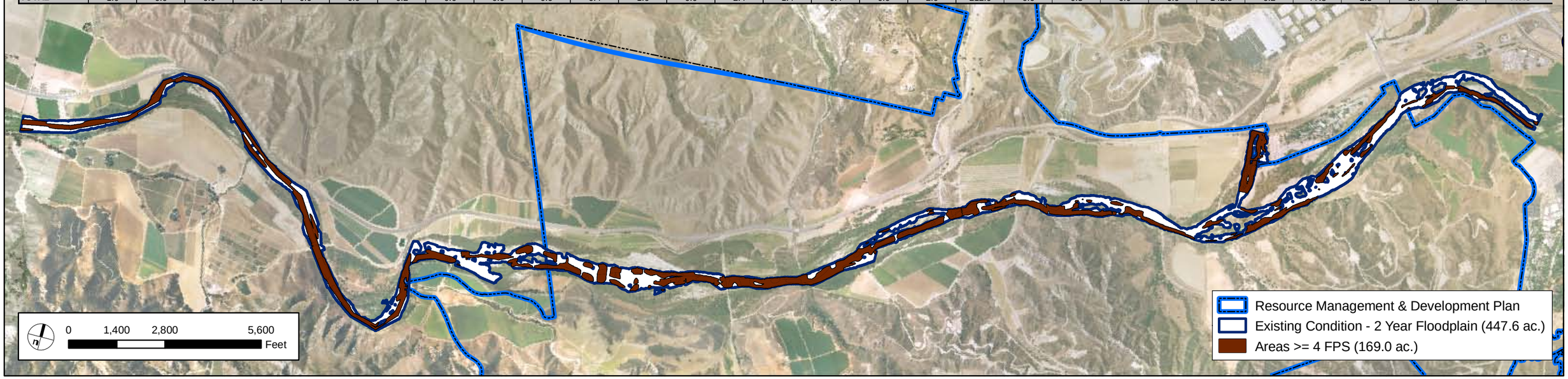
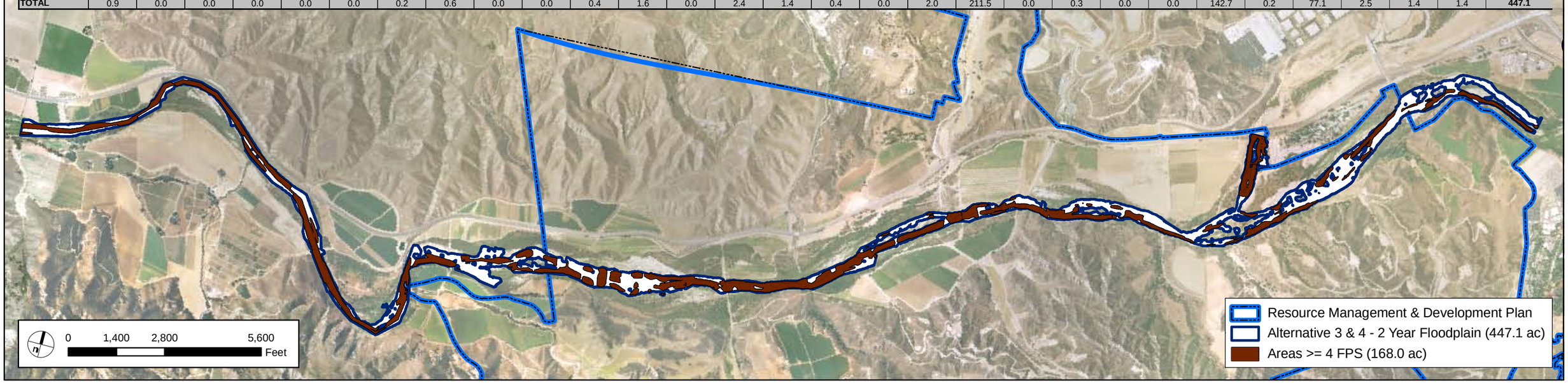
ALTERNATIVE 1 (EXISTING CONDITION) - 2 YEAR FLOOD EVENT

VEGETATION	AGR	AS	AWS	BSS	CGL	CHP	CLOW	CSB	CSB-CB	CSB-CHP	CSB-PS	dCSB	DEV	DL	dRS	dSCWRF	dSWS	GRG	HW	MFS	N_C	OC	ORN	RW	SCLORF	SCWRF	SWS	TAM	VOW	Grand Total
< 4FPS	0.5	0.0	0.0	0.0	0.0	0.0	0.2	0.6	0.0	0.0	0.2	1.5	0.0	1.2	0.8	0.4	0.0	1.5	115.0	0.0	0.3	0.0	0.0	87.0	0.0	64.9	2.4	1.4	0.8	**278.6**
>= 4 FPS	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	1.2	0.6	0.0	0.0	0.5	97.0	0.0	0.0	0.0	0.0	55.6	0.2	12.4	0.1	0.0	0.6	**169.0**
TOTAL	1.0	0.0	0.0	0.0	0.0	0.0	0.2	0.6	0.0	0.0	0.4	1.6	0.0	2.4	1.4	0.4	0.0	2.0	212.0	0.0	0.3	0.0	0.0	142.5	0.2	77.3	2.5	1.4	1.4	**447.6**



ALTERNATIVE 3 & 4 - 2 YEAR FLOOD EVENT

VEGETATION	AGR	AS	AWS	BSS	CGL	CHP	CLOW	CSB	CSB-CB	CSB-CHP	CSB-PS	dCSB	DEV	DL	dRS	dSCWRF	dSWS	GRG	HW	MFS	N_C	OC	ORN	RW	SCLORF	SCWRF	SWS	TAM	VOW	Grand Total
< 4FPS	0.4	0.0	0.0	0.0	0.0	0.0	0.2	0.6	0.0	0.0	0.2	1.5	0.0	1.2	0.8	0.3	0.0	1.5	115.0	0.0	0.3	0.0	0.0	87.2	0.0	65.2	2.4	1.4	0.8	**279.1**
>= 4 FPS	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	1.2	0.6	0.0	0.0	0.5	96.6	0.0	0.0	0.0	0.0	55.6	0.2	11.9	0.1	0.0	0.6	**168.0**
TOTAL	0.9	0.0	0.0	0.0	0.0	0.0	0.2	0.6	0.0	0.0	0.4	1.6	0.0	2.4	1.4	0.4	0.0	2.0	211.5	0.0	0.3	0.0	0.0	142.7	0.2	77.1	2.5	1.4	1.4	**447.1**



SOURCE: PACE 2008

FIGURE 1.2-1

EXISTING CONDITION AND
ALTERNATIVE 3 & 4 - 2 YEAR FLOOD EVENT

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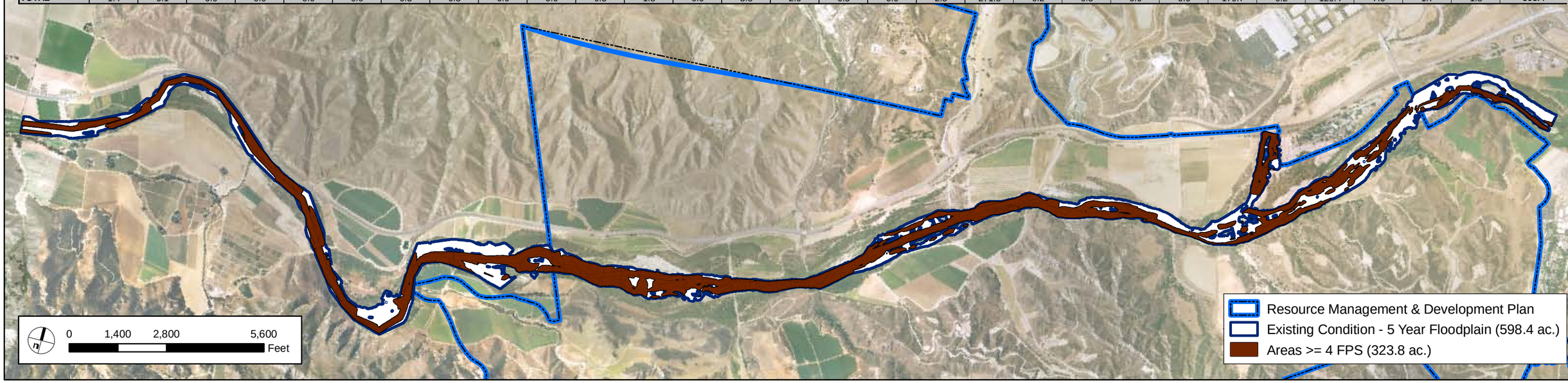
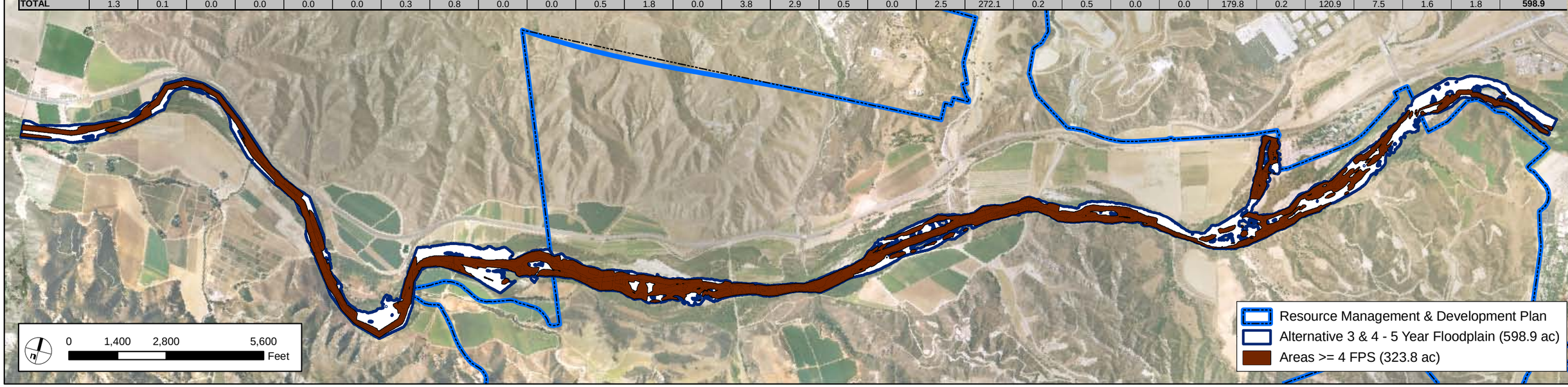
ALTERNATIVE 1 (EXISTING CONDITION) - 5 YEAR FLOOD EVENT

VEGETATION	AGR	AS	AWS	BSS	CGL	CHP	CLOW	CSB	CSB-CB	CSB-CHP	CSB-PS	dCSB	DEV	DL	dRS	dSCWRF	dSWS	GRG	HW	MFS	N_C	OC	ORN	RW	SCLORF	SCWRF	SWS	TAM	VOW	Grand Total
< 4FPS	0.6	0.1	0.0	0.0	0.0	0.0	0.3	0.7	0.0	0.0	0.2	1.1	0.0	1.5	1.6	0.4	0.0	0.7	90.0	0.2	0.5	0.0	0.0	78.9	0.0	89.2	6.7	1.2	0.6	**274.5**
>= 4 FPS	0.8	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.3	0.7	0.0	2.3	1.2	0.2	0.0	1.8	181.8	0.0	0.0	0.0	0.0	100.8	0.2	31.2	0.9	0.5	1.1	**323.8**
TOTAL	1.4	0.1	0.0	0.0	0.0	0.0	0.3	0.8	0.0	0.0	0.5	1.8	0.0	3.8	2.9	0.5	0.0	2.5	271.8	0.2	0.5	0.0	0.0	179.7	0.2	120.4	7.6	1.7	1.8	**598.4**



ALTERNATIVE 3 & 4 - 5 YEAR FLOOD EVENT

VEGETATION	AGR	AS	AWS	BSS	CGL	CHP	CLOW	CSB	CSB-CB	CSB-CHP	CSB-PS	dCSB	DEV	DL	dRS	dSCWRF	dSWS	GRG	HW	MFS	N_C	OC	ORN	RW	SCLORF	SCWRF	SWS	TAM	VOW	Grand Total
< 4FPS	0.5	0.1	0.0	0.0	0.0	0.0	0.3	0.8	0.0	0.0	0.2	1.1	0.0	1.5	1.6	0.4	0.0	0.7	90.2	0.2	0.5	0.0	0.0	79.2	0.0	89.6	6.6	1.1	0.6	**275.1**
>= 4 FPS	0.7	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.3	0.7	0.0	2.3	1.2	0.2	0.0	1.8	181.9	0.0	0.0	0.0	0.0	100.6	0.2	31.2	0.9	0.5	1.1	**323.8**
TOTAL	1.3	0.1	0.0	0.0	0.0	0.0	0.3	0.8	0.0	0.0	0.5	1.8	0.0	3.8	2.9	0.5	0.0	2.5	272.1	0.2	0.5	0.0	0.0	179.8	0.2	120.9	7.5	1.6	1.8	**598.9**



SOURCE: PACE 2008

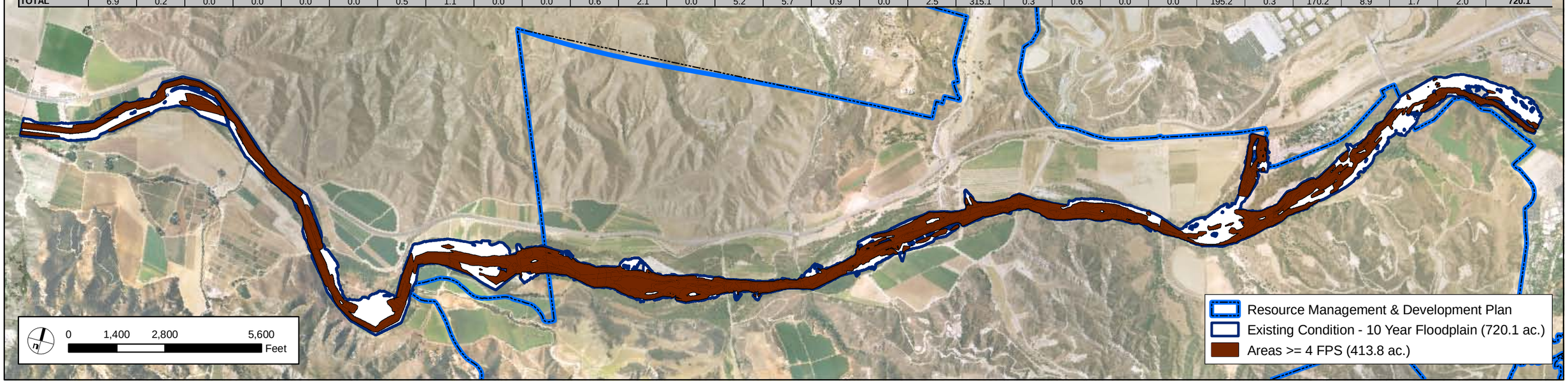
FIGURE 1.2-2

EXISTING CONDITION AND
ALTERNATIVE 3 & 4 - 5 YEAR FLOOD EVENT

P:\8238E\GIS\mxds\EIR_2008\RiparianScour\8238E_RiparianScourVelocityAnalysisAlt3_4_5Yr_082108.mxd

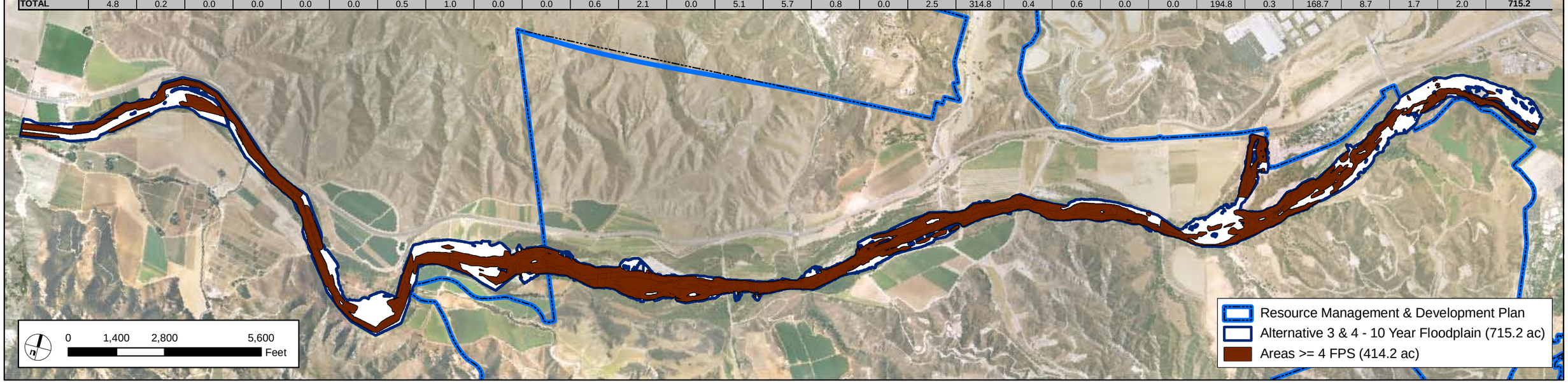
ALTERNATIVE 1 (EXISTING CONDITION) - 10 YEAR FLOOD EVENT

VEGETATION	AGR	AS	AWS	BSS	CGL	CHP	CLOW	CSB	CSB-CB	CSB-CHP	CSB-PS	dCSB	DEV	DL	dRS	dSCWRF	dSWS	GRG	HW	MFS	N_C	OC	ORN	RW	SCLORF	SCWRF	SWS	TAM	VOW	Grand Total
< 4FPS	2.8	0.2	0.0	0.0	0.0	0.0	0.4	1.1	0.0	0.0	0.3	1.3	0.0	1.8	4.4	0.7	0.0	0.1	86.6	0.3	0.5	0.0	0.0	74.4	0.0	123.2	6.8	0.7	0.6	**306.3**
>= 4 FPS	4.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.4	0.9	0.0	3.4	1.3	0.2	0.0	2.4	228.5	0.0	0.0	0.0	0.0	120.8	0.2	47.0	2.0	1.0	1.4	**413.8**
TOTAL	6.9	0.2	0.0	0.0	0.0	0.0	0.5	1.1	0.0	0.0	0.6	2.1	0.0	5.2	5.7	0.9	0.0	2.5	315.1	0.3	0.6	0.0	0.0	195.2	0.3	170.2	8.9	1.7	2.0	**720.1**



ALTERNATIVE 3 & 4 - 10 YEAR FLOOD EVENT

VEGETATION	AGR	AS	AWS	BSS	CGL	CHP	CLOW	CSB	CSB-CB	CSB-CHP	CSB-PS	dCSB	DEV	DL	dRS	dSCWRF	dSWS	GRG	HW	MFS	N_C	OC	ORN	RW	SCLORF	SCWRF	SWS	TAM	VOW	Grand Total
< 4FPS	1.3	0.2	0.0	0.0	0.0	0.0	0.3	1.0	0.0	0.0	0.3	1.2	0.0	1.7	4.4	0.6	0.0	0.1	86.1	0.4	0.6	0.0	0.0	73.4	0.0	121.2	6.9	0.7	0.6	**301.0**
>= 4 FPS	3.4	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.4	0.9	0.0	3.4	1.3	0.2	0.0	2.4	228.6	0.0	0.0	0.0	0.0	121.4	0.2	47.5	1.7	1.0	1.4	**414.2**
TOTAL	4.8	0.2	0.0	0.0	0.0	0.0	0.5	1.0	0.0	0.0	0.6	2.1	0.0	5.1	5.7	0.8	0.0	2.5	314.8	0.4	0.6	0.0	0.0	194.8	0.3	168.7	8.7	1.7	2.0	**715.2**



SOURCE: PACE 2008

FIGURE 1.2-3

EXISTING CONDITION AND
ALTERNATIVE 3 & 4 - 10 YEAR FLOOD EVENT

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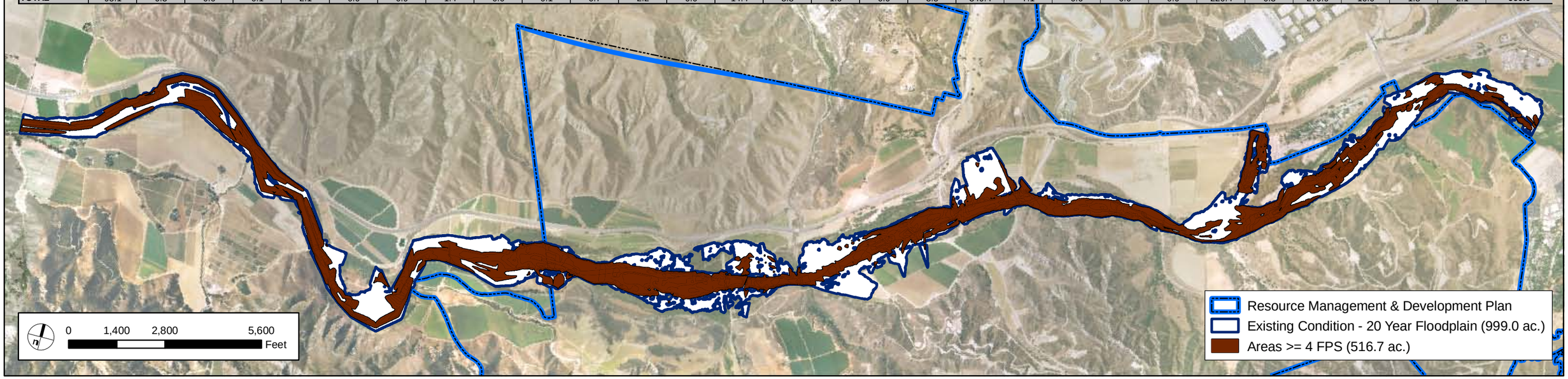
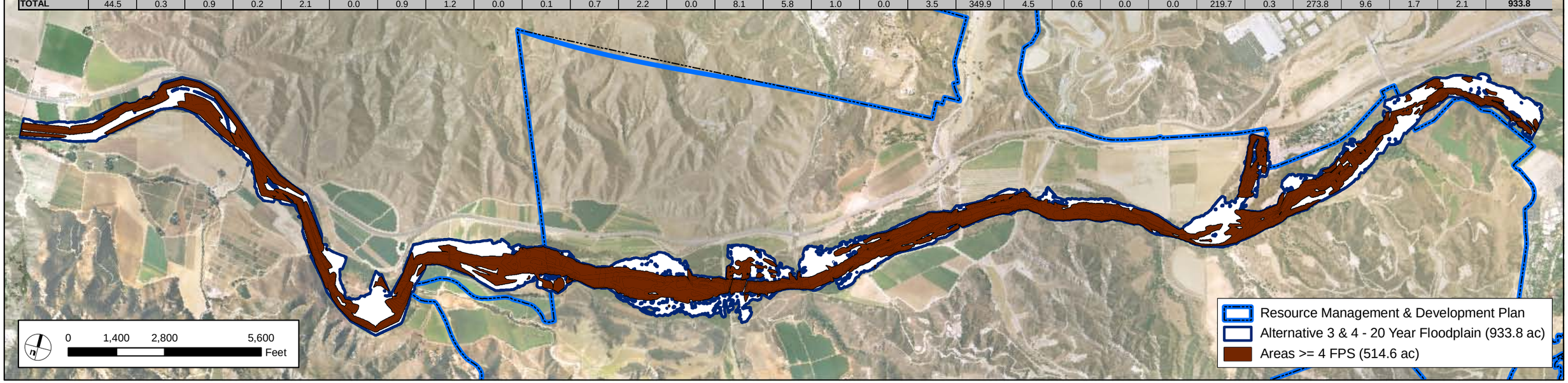
ALTERNATIVE 1 (EXISTING CONDITION) - 20 YEAR FLOOD EVENT

VEGETATION	AGR	AS	AWS	BSS	CGL	CHP	CLOW	CSB	CSB-CB	CSB-CHP	CSB-PS	dCSB	DEV	DL	dRS	dSCWRF	dSWS	GRG	HW	MFS	N_C	OC	ORN	RW	SCLORF	SCWRF	SWS	TAM	VOW	Grand Total
< 4FPS	71.1	0.3	0.6	0.1	1.1	0.0	0.7	1.3	0.0	0.0	0.3	1.0	0.0	9.3	2.9	0.6	0.0	1.0	86.3	6.1	0.6	0.0	0.0	80.5	0.1	209.8	7.1	0.7	0.6	**482.3**
>= 4 FPS	24.1	0.0	0.0	0.0	1.0	0.0	0.1	0.1	0.0	0.1	0.4	1.2	0.0	5.0	2.9	0.4	0.0	2.5	263.1	1.0	0.0	0.0	0.0	139.9	0.2	69.2	2.8	1.1	1.5	**516.7**
TOTAL	95.1	0.3	0.6	0.1	2.1	0.0	0.9	1.4	0.0	0.1	0.7	2.2	0.0	14.4	5.8	1.0	0.0	3.5	349.4	7.1	0.6	0.0	0.0	220.4	0.3	279.0	10.0	1.8	2.1	**999.0**



ALTERNATIVE 3 & 4 - 20 YEAR FLOOD EVENT

VEGETATION	AGR	AS	AWS	BSS	CGL	CHP	CLOW	CSB	CSB-CB	CSB-CHP	CSB-PS	dCSB	DEV	DL	dRS	dSCWRF	dSWS	GRG	HW	MFS	N_C	OC	ORN	RW	SCLORF	SCWRF	SWS	TAM	VOW	Grand Total
< 4FPS	22.8	0.3	0.9	0.2	1.2	0.0	0.7	1.1	0.0	0.0	0.3	1.0	0.0	3.6	2.9	0.6	0.0	1.0	85.9	3.8	0.6	0.0	0.0	79.5	0.0	204.4	7.0	0.7	0.6	**419.2**
>= 4 FPS	21.7	0.0	0.0	0.0	1.0	0.0	0.1	0.1	0.0	0.1	0.4	1.2	0.0	4.6	2.9	0.4	0.0	2.5	264.0	0.6	0.0	0.0	0.0	140.2	0.2	69.4	2.6	1.1	1.5	**514.6**
TOTAL	44.5	0.3	0.9	0.2	2.1	0.0	0.9	1.2	0.0	0.1	0.7	2.2	0.0	8.1	5.8	1.0	0.0	3.5	349.9	4.5	0.6	0.0	0.0	219.7	0.3	273.8	9.6	1.7	2.1	**933.8**



SOURCE: PACE 2008

FIGURE 1.2-4

EXISTING CONDITION AND
ALTERNATIVE 3 & 4 - 20 YEAR FLOOD EVENT

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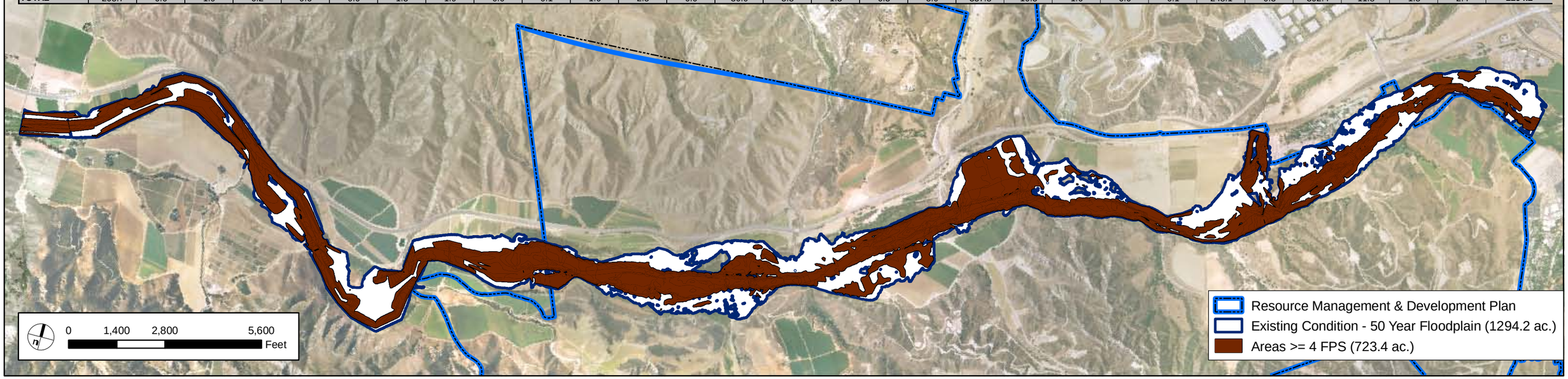
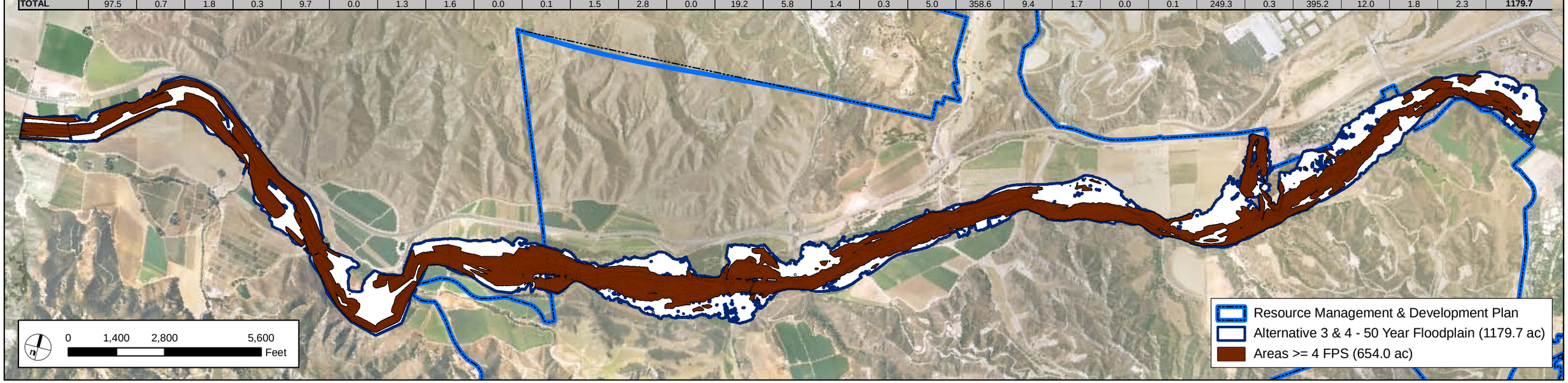
ALTERNATIVE 1 (EXISTING CONDITION) - 50 YEAR FLOOD EVENT

VEGETATION	AGR	AS	AWS	BSS	CGL	CHP	CLOW	CSB	CSB-CB	CSB-CHP	CSB-PS	dCSB	DEV	DL	dRS	dSCWRF	dSWS	GRG	HW	MFS	N_C	OC	ORN	RW	SCLORF	SCWRF	SWS	TAM	VOW	Grand Total
< 4FPS	82.3	0.5	1.7	0.1	6.5	0.0	1.1	1.5	0.0	0.0	0.5	1.0	0.0	17.8	2.0	0.6	0.2	2.4	68.0	7.8	1.5	0.0	0.1	79.1	0.1	288.1	6.7	0.7	0.7	**570.8**
>= 4 FPS	123.3	0.1	0.1	0.2	3.1	0.0	0.2	0.4	0.0	0.1	0.6	1.5	0.0	12.2	3.8	0.7	0.1	2.6	289.9	2.7	0.1	0.0	0.0	169.0	0.3	104.2	5.1	1.2	1.7	**723.4**
TOTAL	205.7	0.6	1.9	0.2	9.6	0.0	1.3	1.9	0.0	0.1	1.0	2.5	0.0	30.0	5.8	1.3	0.3	5.0	357.8	10.5	1.6	0.0	0.1	248.1	0.3	392.4	11.8	1.8	2.4	**1294.2**



ALTERNATIVE 3 - 50 YEAR FLOOD EVENT

VEGETATION	AGR	AS	AWS	BSS	CGL	CHP	CLOW	CSB	CSB-CB	CSB-CHP	CSB-PS	dCSB	DEV	DL	dRS	dSCWRF	dSWS	GRG	HW	MFS	N_C	OC	ORN	RW	SCLORF	SCWRF	SWS	TAM	VOW	Grand Total
< 4FPS	39.2	0.5	1.6	0.1	6.4	0.0	1.1	1.3	0.0	0.0	0.9	1.4	0.0	10.4	2.1	0.7	0.2	2.4	70.1	6.9	1.5	0.0	0.1	78.7	0.1	290.5	8.1	0.6	0.6	**525.7**
>= 4 FPS	58.3	0.1	0.2	0.2	3.3	0.0	0.2	0.4	0.0	0.1	0.6	1.4	0.0	8.8	3.6	0.8	0.1	2.7	288.4	2.5	0.2	0.0	0.0	170.6	0.3	104.6	3.9	1.2	1.7	**654.0**
TOTAL	97.5	0.7	1.8	0.3	9.7	0.0	1.3	1.6	0.0	0.1	1.5	2.8	0.0	19.2	5.8	1.4	0.3	5.0	358.6	9.4	1.7	0.0	0.1	249.3	0.3	395.2	12.0	1.8	2.3	**1179.7**



SOURCE: PACE 2008

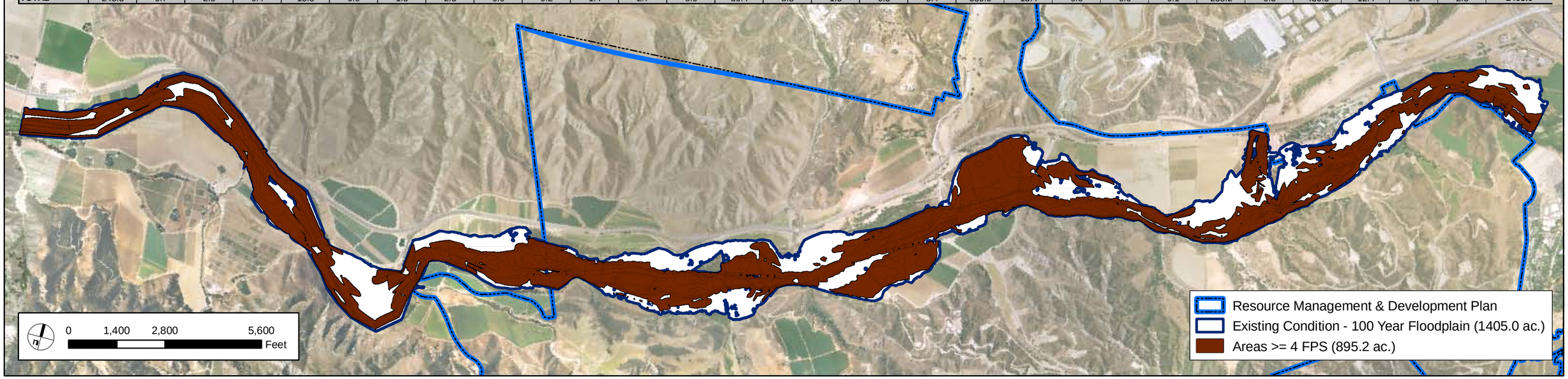
FIGURE 1.2-5

EXISTING CONDITION AND
ALTERNATIVE 3 & 4 - 50 YEAR FLOOD EVENT

P:\8238E\GIS\mxds\EIR_2008\RiparianScour\8238E_RiparianScourVelocityAnalysisAlt3_4_50Yr_082108.mxd

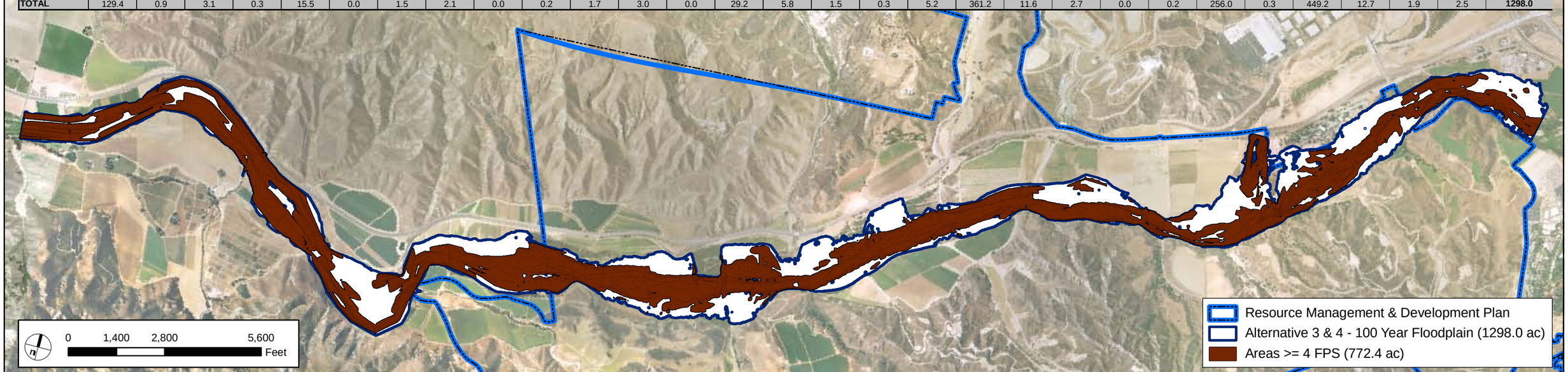
ALTERNATIVE 1 (EXISTING CONDITION) - 100 YEAR FLOOD EVENT

VEGETATION	AGR	AS	AWS	BSS	CGL	CHP	CLOW	CSB	CSB-CB	CSB-CHP	CSB-PS	dCSB	DEV	DL	dRS	dSCWRF	dSWS	GRG	HW	MFS	N_C	OC	ORN	RW	SCLORF	SCWRF	SWS	TAM	VOW	Grand Total
< 4FPS	49.4	0.4	2.2	0.2	11.5	0.0	1.2	1.8	0.0	0.1	0.6	1.3	0.0	18.6	0.9	0.5	0.1	2.3	54.0	7.9	0.0	0.0	0.1	60.7	0.1	288.9	5.9	0.7	0.6	**509.8**
>= 4 FPS	193.9	0.3	0.3	0.2	4.0	0.0	0.3	0.6	0.0	0.1	0.8	1.4	0.0	20.8	4.9	1.1	0.3	3.1	305.8	5.4	0.0	0.0	0.0	194.5	0.3	147.4	6.5	1.2	1.9	**895.2**
TOTAL	243.3	0.7	2.5	0.4	15.5	0.0	1.5	2.3	0.0	0.2	1.4	2.7	0.0	39.4	5.8	1.5	0.3	5.4	359.9	13.4	0.0	0.0	0.1	255.2	0.3	436.3	12.4	1.9	2.5	**1405.0**



ALTERNATIVE 3 - 100 YEAR FLOOD EVENT

VEGETATION	AGR	AS	AWS	BSS	CGL	CHP	CLOW	CSB	CSB-CB	CSB-CHP	CSB-PS	dCSB	DEV	DL	dRS	dSCWRF	dSWS	GRG	HW	MFS	N_C	OC	ORN	RW	SCLORF	SCWRF	SWS	TAM	VOW	Grand Total
< 4FPS	42.3	0.5	2.8	0.1	11.4	0.0	1.2	1.5	0.0	0.1	0.9	1.6	0.0	16.4	0.9	0.5	0.0	2.1	56.8	7.9	1.4	0.0	0.1	62.5	0.1	305.2	8.0	0.7	0.7	**525.6**
>= 4 FPS	87.1	0.4	0.3	0.2	4.1	0.0	0.3	0.6	0.0	0.1	0.9	1.4	0.0	12.8	4.9	1.1	0.3	3.1	304.4	3.6	1.2	0.0	0.0	193.5	0.3	144.0	4.7	1.2	1.9	**772.4**
TOTAL	129.4	0.9	3.1	0.3	15.5	0.0	1.5	2.1	0.0	0.2	1.7	3.0	0.0	29.2	5.8	1.5	0.3	5.2	361.2	11.6	2.7	0.0	0.2	256.0	0.3	449.2	12.7	1.9	2.5	**1298.0**



SOURCE: PACE 2008

FIGURE 1.2-6

EXISTING CONDITION AND
ALTERNATIVE 3 & 4 - 100 YEAR FLOOD EVENT

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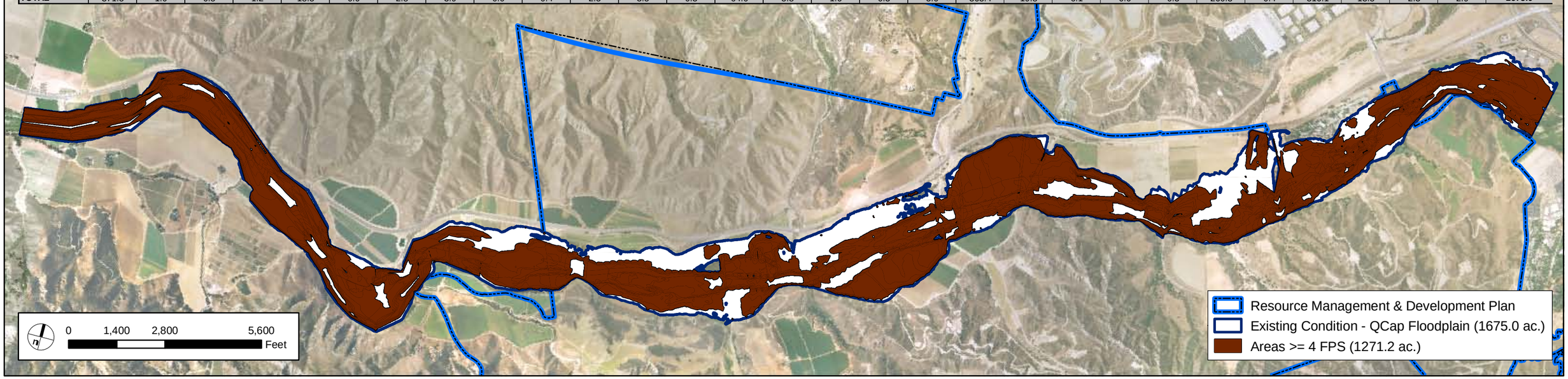
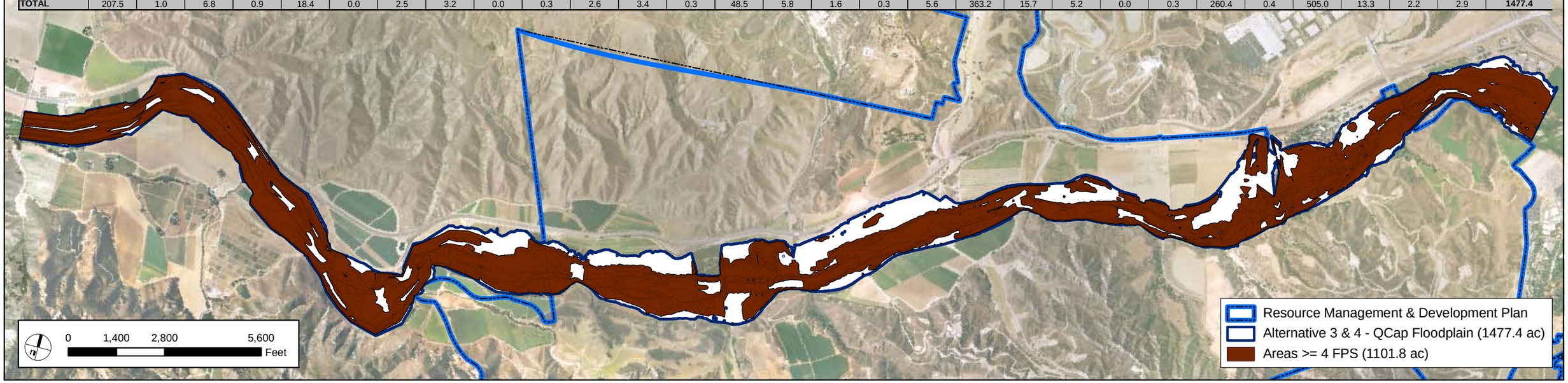
ALTERNATIVE 1 (EXISTING CONDITION) - CAPITAL FLOOD EVENT

VEGETATION	AGR	AS	AWS	BSS	CGL	CHP	CLOW	CSB	CSB-CB	CSB-CHP	CSB-PS	dCSB	DEV	DL	dRS	dSCWRF	dSWS	GRG	HW	MFS	N_C	OC	ORN	RW	SCLORF	SCWRF	SWS	TAM	VOW	Grand Total
< 4FPS	62.1	0.5	4.4	0.8	5.0	0.0	2.0	2.6	0.0	0.1	1.0	1.4	0.2	22.3	0.0	0.0	0.0	0.0	28.3	7.1	3.2	0.0	0.2	36.2	0.1	220.4	4.0	1.2	0.6	**403.8**
>= 4 FPS	309.4	0.5	2.2	0.3	13.6	0.0	0.8	1.2	0.0	0.3	1.5	2.2	0.0	42.3	5.8	1.6	0.3	5.5	335.0	12.8	2.8	0.0	0.1	224.2	0.3	295.7	9.5	1.1	2.2	**1271.2**
TOTAL	371.5	1.0	6.5	1.2	18.5	0.0	2.8	3.9	0.0	0.4	2.5	3.5	0.3	64.6	5.8	1.6	0.3	5.6	363.4	19.8	6.1	0.0	0.3	260.3	0.4	516.1	13.5	2.3	2.9	**1675.0**



ALTERNATIVE 3 & 4 - CAPITAL FLOOD EVENT

VEGETATION	AGR	AS	AWS	BSS	CGL	CHP	CLOW	CSB	CSB-CB	CSB-CHP	CSB-PS	dCSB	DEV	DL	dRS	dSCWRF	dSWS	GRG	HW	MFS	N_C	OC	ORN	RW	SCLORF	SCWRF	SWS	TAM	VOW	Grand Total
< 4FPS	47.3	0.5	4.8	0.6	4.8	0.0	1.7	2.1	0.0	0.1	0.9	1.3	0.3	21.5	0.0	0.0	0.0	0.0	28.2	6.4	2.5	0.0	0.2	36.3	0.1	210.4	3.8	1.1	0.6	**375.5**
>= 4 FPS	160.2	0.5	2.0	0.3	13.5	0.0	0.8	1.1	0.0	0.3	1.7	2.2	0.0	27.0	5.8	1.6	0.3	5.5	335.0	9.3	2.7	0.0	0.1	224.2	0.3	294.6	9.6	1.2	2.2	**1101.8**
TOTAL	207.5	1.0	6.8	0.9	18.4	0.0	2.5	3.2	0.0	0.3	2.6	3.4	0.3	48.5	5.8	1.6	0.3	5.6	363.2	15.7	5.2	0.0	0.3	260.4	0.4	505.0	13.3	2.2	2.9	**1477.4**



SOURCE: PACE 2008

FIGURE 1.2-7

EXISTING CONDITION AND
ALTERNATIVE 3 & 4 - QCAP FLOOD EVENT

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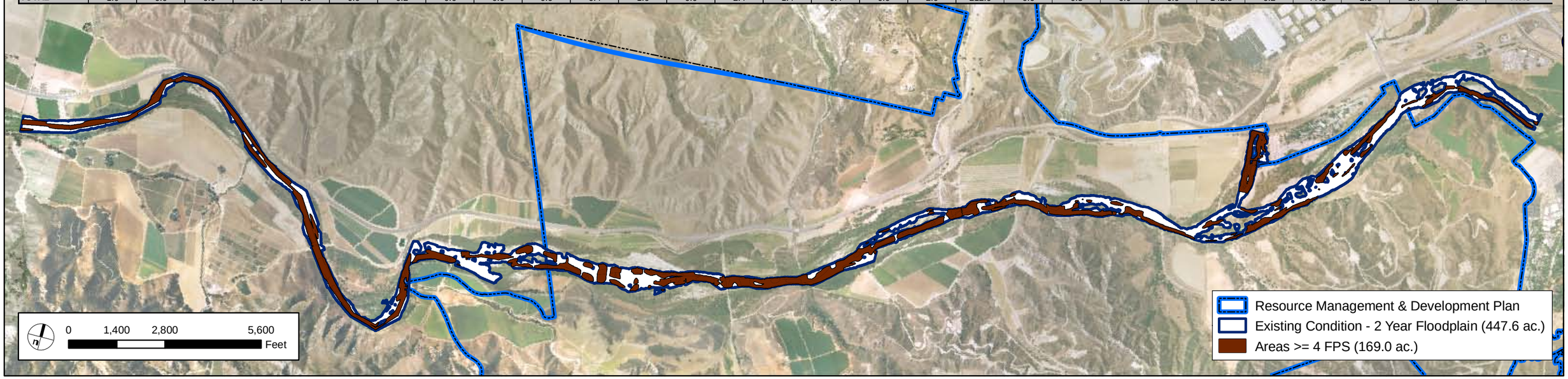
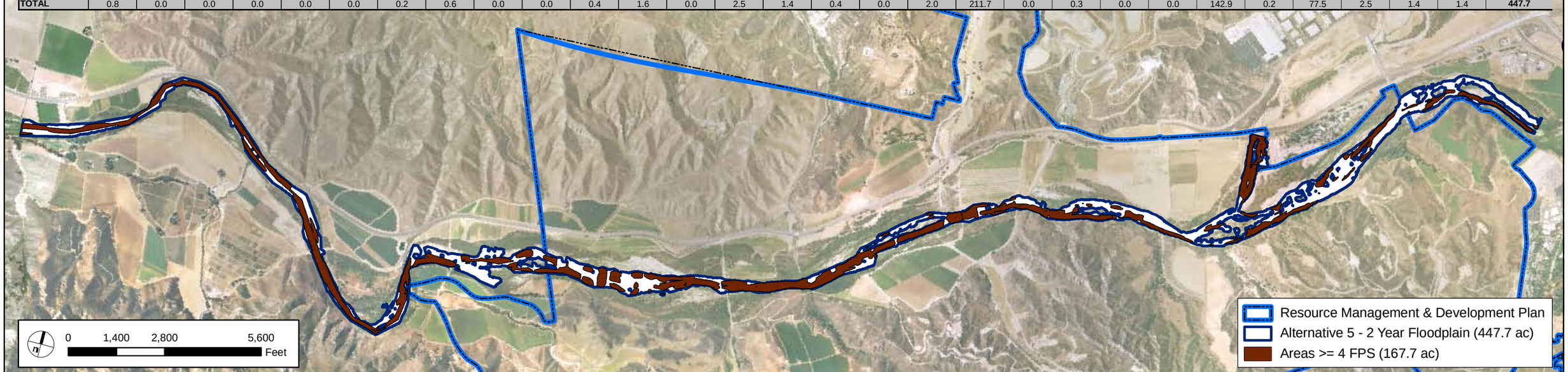
ALTERNATIVE 1 (EXISTING CONDITION) - 2 YEAR FLOOD EVENT

VEGETATION	AGR	AS	AWS	BSS	CGL	CHP	CLOW	CSB	CSB-CB	CSB-CHP	CSB-PS	dCSB	DEV	DL	dRS	dSCWRF	dSWS	GRG	HW	MFS	N_C	OC	ORN	RW	SCLORF	SCWRF	SWS	TAM	VOW	Grand Total
< 4FPS	0.5	0.0	0.0	0.0	0.0	0.0	0.2	0.6	0.0	0.0	0.2	1.5	0.0	1.2	0.8	0.4	0.0	1.5	115.0	0.0	0.3	0.0	0.0	87.0	0.0	64.9	2.4	1.4	0.8	**278.6**
>= 4 FPS	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	1.2	0.6	0.0	0.0	0.5	97.0	0.0	0.0	0.0	0.0	55.6	0.2	12.4	0.1	0.0	0.6	**169.0**
TOTAL	1.0	0.0	0.0	0.0	0.0	0.0	0.2	0.6	0.0	0.0	0.4	1.6	0.0	2.4	1.4	0.4	0.0	2.0	212.0	0.0	0.3	0.0	0.0	142.5	0.2	77.3	2.5	1.4	1.4	**447.6**



ALTERNATIVE 5 - 2 YEAR EVENT

VEGETATION	AGR	AS	AWS	BSS	CGL	CHP	CLOW	CSB	CSB-CB	CSB-CHP	CSB-PS	dCSB	DEV	DL	dRS	dSCWRF	dSWS	GRG	HW	MFS	N_C	OC	ORN	RW	SCLORF	SCWRF	SWS	TAM	VOW	Grand Total
< 4FPS	0.4	0.0	0.0	0.0	0.0	0.0	0.2	0.6	0.0	0.0	0.2	1.5	0.0	1.4	0.8	0.3	0.0	1.5	115.7	0.0	0.3	0.0	0.0	86.9	0.0	65.5	2.4	1.4	0.8	**280.0**
>= 4 FPS	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	1.1	0.6	0.0	0.0	0.5	96.0	0.0	0.0	0.0	0.0	56.0	0.2	12.0	0.1	0.0	0.6	**167.7**
TOTAL	0.8	0.0	0.0	0.0	0.0	0.0	0.2	0.6	0.0	0.0	0.4	1.6	0.0	2.5	1.4	0.4	0.0	2.0	211.7	0.0	0.3	0.0	0.0	142.9	0.2	77.5	2.5	1.4	1.4	**447.7**



SOURCE: PACE 2008

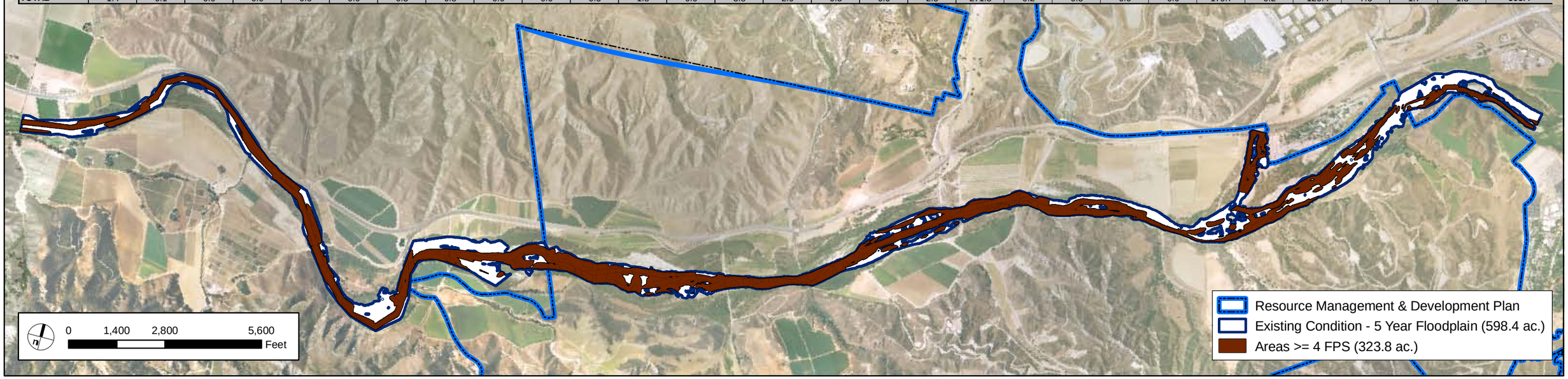
FIGURE 1.3-1

EXISTING CONDITION AND
ALTERNATIVE 5 - 2 YEAR FLOOD EVENT

P:\8238E\GIS\mxds\EIR_2008\RipanianScour\8238E_RipanianScourVelocityAnalysisAlt5_2Yr_082108.mxd

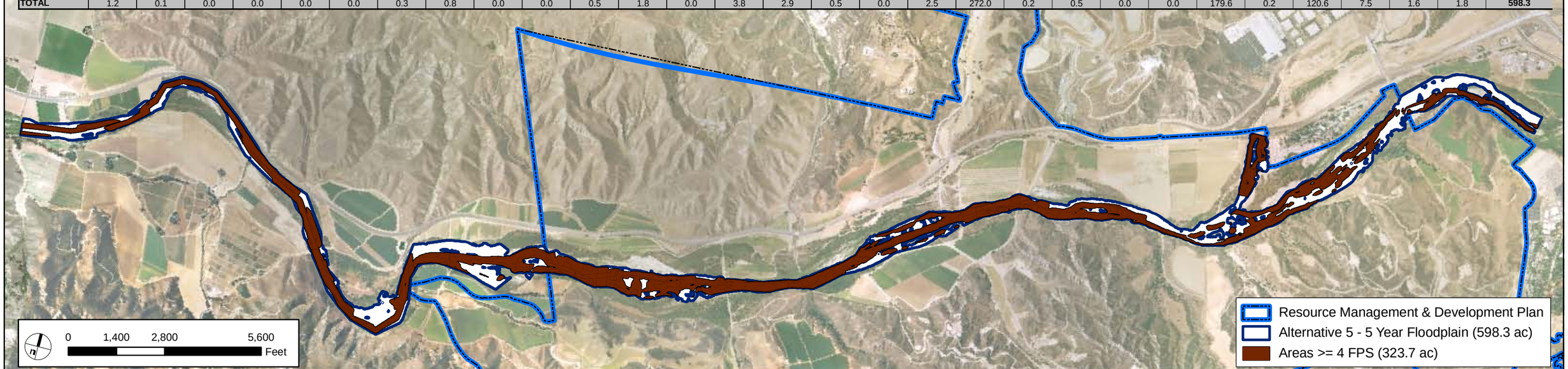
ALTERNATIVE 1 (EXISTING CONDITION) - 5 YEAR FLOOD EVENT

VEGETATION	AGR	AS	AWS	BSS	CGL	CHP	CLOW	CSB	CSB-CB	CSB-CHP	CSB-PS	dCSB	DEV	DL	dRS	dSCWRF	dSWS	GRG	HW	MFS	N_C	OC	ORN	RW	SCLORF	SCWRF	SWS	TAM	VOW	Grand Total
< 4FPS	0.6	0.1	0.0	0.0	0.0	0.0	0.3	0.7	0.0	0.0	0.2	1.1	0.0	1.5	1.6	0.4	0.0	0.7	90.0	0.2	0.5	0.0	0.0	78.9	0.0	89.2	6.7	1.2	0.6	**274.5**
>= 4 FPS	0.8	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.3	0.7	0.0	2.3	1.2	0.2	0.0	1.8	181.8	0.0	0.0	0.0	0.0	100.8	0.2	31.2	0.9	0.5	1.1	**323.8**
TOTAL	1.4	0.1	0.0	0.0	0.0	0.0	0.3	0.8	0.0	0.0	0.5	1.8	0.0	3.8	2.9	0.5	0.0	2.5	271.8	0.2	0.5	0.0	0.0	179.7	0.2	120.4	7.6	1.7	1.8	**598.4**



ALTERNATIVE 5 - 5 YEAR FLOOD EVENT

VEGETATION	AGR	AS	AWS	BSS	CGL	CHP	CLOW	CSB	CSB-CB	CSB-CHP	CSB-PS	dCSB	DEV	DL	dRS	dSCWRF	dSWS	GRG	HW	MFS	N_C	OC	ORN	RW	SCLORF	SCWRF	SWS	TAM	VOW	Grand Total
< 4FPS	0.5	0.1	0.0	0.0	0.0	0.0	0.2	0.7	0.0	0.0	0.2	1.1	0.0	1.5	1.6	0.4	0.0	0.7	90.1	0.2	0.5	0.0	0.0	79.1	0.0	89.4	6.5	1.1	0.6	**274.6**
>= 4 FPS	0.7	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.3	0.7	0.0	2.3	1.2	0.2	0.0	1.8	181.9	0.0	0.0	0.0	0.0	100.5	0.2	31.2	0.9	0.5	1.1	**323.7**
TOTAL	1.2	0.1	0.0	0.0	0.0	0.0	0.3	0.8	0.0	0.0	0.5	1.8	0.0	3.8	2.9	0.5	0.0	2.5	272.0	0.2	0.5	0.0	0.0	179.6	0.2	120.6	7.5	1.6	1.8	**598.3**



SOURCE: PACE 2008

FIGURE 1.3-2

EXISTING CONDITION AND
ALTERNATIVE 5 - 5 YEAR FLOOD EVENT

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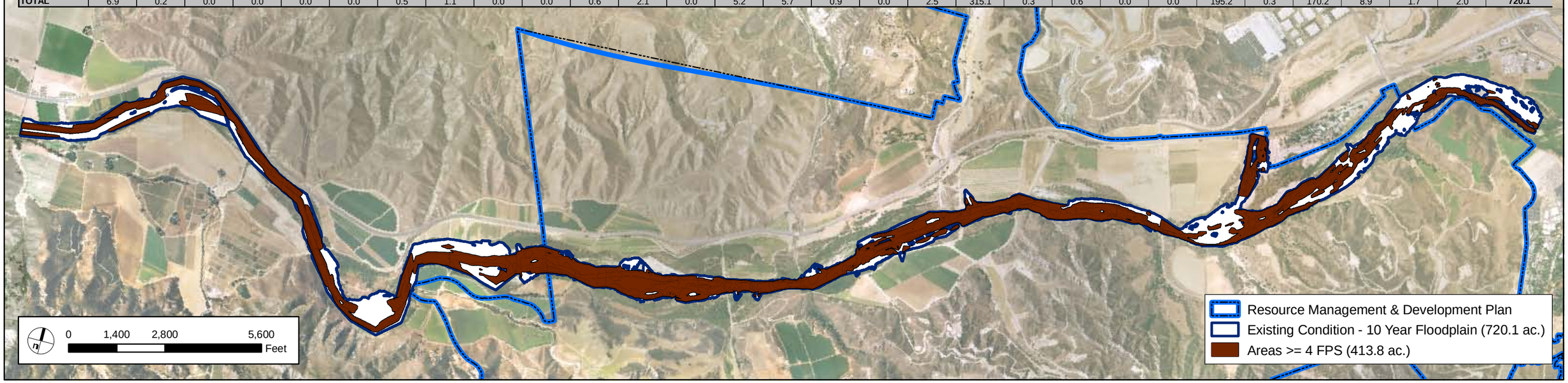
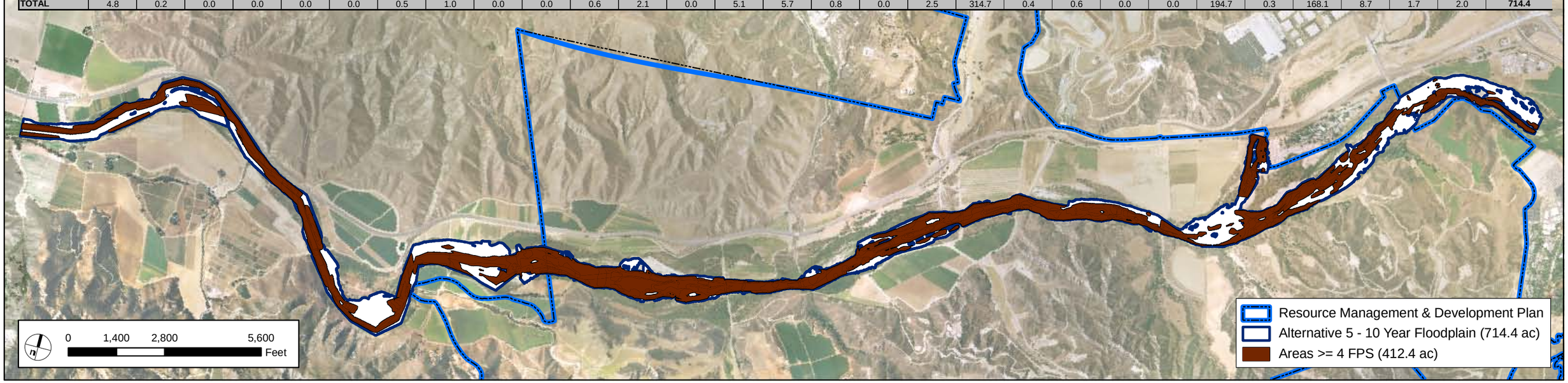
ALTERNATIVE 1 (EXISTING CONDITION) - 10 YEAR FLOOD EVENT

VEGETATION	AGR	AS	AWS	BSS	CGL	CHP	CLOW	CSB	CSB-CB	CSB-CHP	CSB-PS	dCSB	DEV	DL	dRS	dSCWRF	dSWS	GRG	HW	MFS	N_C	OC	ORN	RW	SCLORF	SCWRF	SWS	TAM	VOW	Grand Total
< 4FPS	2.8	0.2	0.0	0.0	0.0	0.0	0.4	1.1	0.0	0.0	0.3	1.3	0.0	1.8	4.4	0.7	0.0	0.1	86.6	0.3	0.5	0.0	0.0	74.4	0.0	123.2	6.8	0.7	0.6	**306.3**
>= 4 FPS	4.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.4	0.9	0.0	3.4	1.3	0.2	0.0	2.4	228.5	0.0	0.0	0.0	0.0	120.8	0.2	47.0	2.0	1.0	1.4	**413.8**
TOTAL	6.9	0.2	0.0	0.0	0.0	0.0	0.5	1.1	0.0	0.0	0.6	2.1	0.0	5.2	5.7	0.9	0.0	2.5	315.1	0.3	0.6	0.0	0.0	195.2	0.3	170.2	8.9	1.7	2.0	**720.1**



ALTERNATIVE 5 - 10 YEAR FLOOD EVENT

VEGETATION	AGR	AS	AWS	BSS	CGL	CHP	CLOW	CSB	CSB-CB	CSB-CHP	CSB-PS	dCSB	DEV	DL	dRS	dSCWRF	dSWS	GRG	HW	MFS	N_C	OC	ORN	RW	SCLORF	SCWRF	SWS	TAM	VOW	Grand Total
< 4FPS	1.3	0.2	0.0	0.0	0.0	0.0	0.3	1.0	0.0	0.0	0.3	1.2	0.0	1.7	4.4	0.6	0.0	0.1	86.6	0.4	0.6	0.0	0.0	73.9	0.0	121.2	6.9	0.7	0.6	**302.0**
>= 4 FPS	3.4	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.4	0.9	0.0	3.4	1.3	0.2	0.0	2.4	228.2	0.0	0.0	0.0	0.0	120.8	0.2	46.9	1.7	1.0	1.4	**412.4**
TOTAL	4.8	0.2	0.0	0.0	0.0	0.0	0.5	1.0	0.0	0.0	0.6	2.1	0.0	5.1	5.7	0.8	0.0	2.5	314.7	0.4	0.6	0.0	0.0	194.7	0.3	168.1	8.7	1.7	2.0	**714.4**



SOURCE: PACE 2008

FIGURE 1.3-3

EXISTING CONDITION AND
ALTERNATIVE 5 - 10 YEAR FLOOD EVENT

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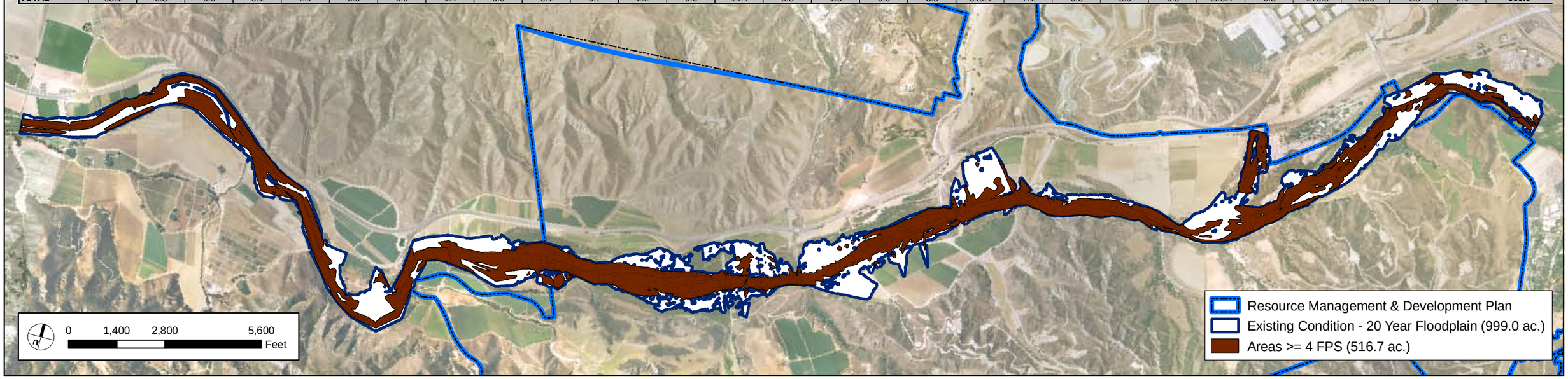
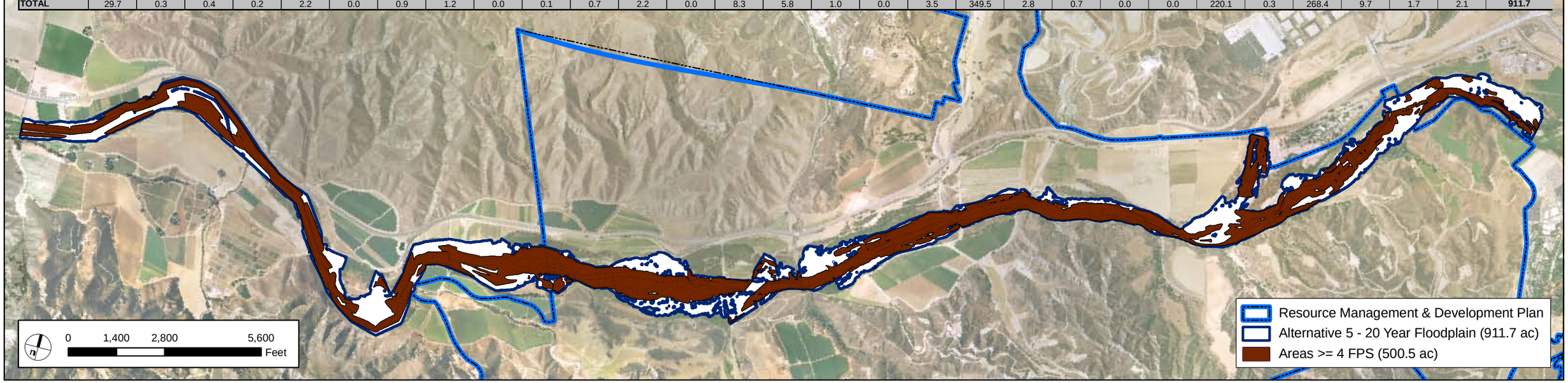
ALTERNATIVE 1 (EXISTING CONDITION) - 20 YEAR FLOOD EVENT

VEGETATION	AGR	AS	AWS	BSS	CGL	CHP	CLOW	CSB	CSB-CB	CSB-CHP	CSB-PS	dCSB	DEV	DL	dRS	dSCWRF	dSWS	GRG	HW	MFS	N_C	OC	ORN	RW	SCLORF	SCWRF	SWS	TAM	VOW	Grand Total
< 4FPS	71.1	0.3	0.6	0.1	1.1	0.0	0.7	1.3	0.0	0.0	0.3	1.0	0.0	9.3	2.9	0.6	0.0	1.0	86.3	6.1	0.6	0.0	0.0	80.5	0.1	209.8	7.1	0.7	0.6	**482.3**
>= 4 FPS	24.1	0.0	0.0	0.0	1.0	0.0	0.1	0.1	0.0	0.1	0.4	1.2	0.0	5.0	2.9	0.4	0.0	2.5	263.1	1.0	0.0	0.0	0.0	139.9	0.2	69.2	2.8	1.1	1.5	**516.7**
TOTAL	95.1	0.3	0.6	0.1	2.1	0.0	0.9	1.4	0.0	0.1	0.7	2.2	0.0	14.4	5.8	1.0	0.0	3.5	349.4	7.1	0.6	0.0	0.0	220.4	0.3	279.0	10.0	1.8	2.1	**999.0**



ALTERNATIVE 5 - 20 YEAR FLOOD EVENT

VEGETATION	AGR	AS	AWS	BSS	CGL	CHP	CLOW	CSB	CSB-CB	CSB-CHP	CSB-PS	dCSB	DEV	DL	dRS	dSCWRF	dSWS	GRG	HW	MFS	N_C	OC	ORN	RW	SCLORF	SCWRF	SWS	TAM	VOW	Grand Total
< 4FPS	16.3	0.3	0.4	0.2	1.2	0.0	0.7	1.1	0.0	0.0	0.3	1.0	0.0	3.6	2.9	0.6	0.0	1.0	87.6	2.2	0.7	0.0	0.0	82.2	0.1	200.3	7.0	0.7	0.6	**411.1**
>= 4 FPS	13.3	0.0	0.0	0.0	1.0	0.0	0.1	0.1	0.0	0.0	0.4	1.2	0.0	4.8	2.9	0.4	0.0	2.5	261.8	0.6	0.0	0.0	0.0	137.9	0.2	68.0	2.6	1.1	1.5	**500.5**
TOTAL	29.7	0.3	0.4	0.2	2.2	0.0	0.9	1.2	0.0	0.1	0.7	2.2	0.0	8.3	5.8	1.0	0.0	3.5	349.5	2.8	0.7	0.0	0.0	220.1	0.3	268.4	9.7	1.7	2.1	**911.7**



SOURCE: PACE 2008

FIGURE 1.3-4

EXISTING CONDITION AND
ALTERNATIVE 5 - 20 YEAR FLOOD EVENT

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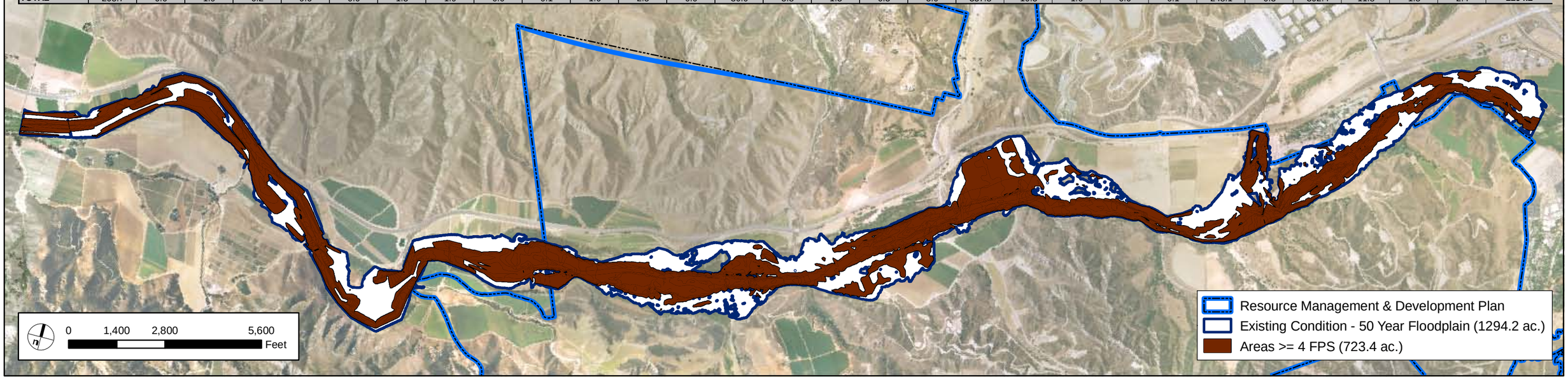
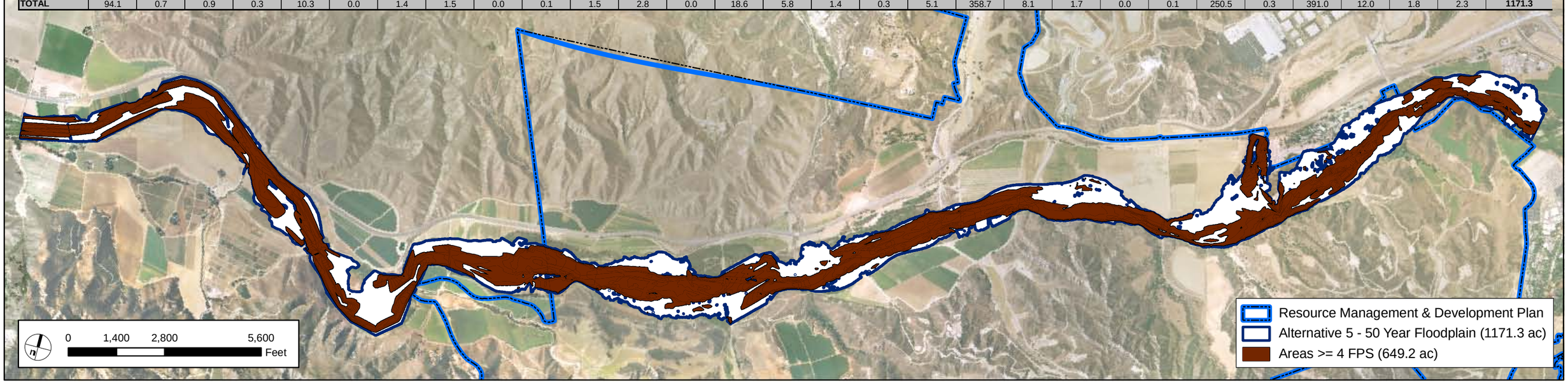
ALTERNATIVE 1 (EXISTING CONDITION) - 50 YEAR FLOOD EVENT

VEGETATION	AGR	AS	AWS	BSS	CGL	CHP	CLOW	CSB	CSB-CB	CSB-CHP	CSB-PS	dCSB	DEV	DL	dRS	dSCWRF	dSWS	GRG	HW	MFS	N_C	OC	ORN	RW	SCLORF	SCWRF	SWS	TAM	VOW	Grand Total
< 4FPS	82.3	0.5	1.7	0.1	6.5	0.0	1.1	1.5	0.0	0.0	0.5	1.0	0.0	17.8	2.0	0.6	0.2	2.4	68.0	7.8	1.5	0.0	0.1	79.1	0.1	288.1	6.7	0.7	0.7	**570.8**
>= 4 FPS	123.3	0.1	0.1	0.2	3.1	0.0	0.2	0.4	0.0	0.1	0.6	1.5	0.0	12.2	3.8	0.7	0.1	2.6	289.9	2.7	0.1	0.0	0.0	169.0	0.3	104.2	5.1	1.2	1.7	**723.4**
TOTAL	205.7	0.6	1.9	0.2	9.6	0.0	1.3	1.9	0.0	0.1	1.0	2.5	0.0	30.0	5.8	1.3	0.3	5.0	357.8	10.5	1.6	0.0	0.1	248.1	0.3	392.4	11.8	1.8	2.4	**1294.2**



ALTERNATIVE 5 - 50 YEAR FLOOD EVENT

VEGETATION	AGR	AS	AWS	BSS	CGL	CHP	CLOW	CSB	CSB-CB	CSB-CHP	CSB-PS	dCSB	DEV	DL	dRS	dSCWRF	dSWS	GRG	HW	MFS	N_C	OC	ORN	RW	SCLORF	SCWRF	SWS	TAM	VOW	Grand Total
< 4FPS	40.6	0.5	0.7	0.1	7.6	0.0	1.2	1.2	0.0	0.0	0.9	1.4	0.0	9.9	2.1	0.7	0.2	2.4	69.9	5.8	1.5	0.0	0.1	81.3	0.1	284.6	8.1	0.6	0.6	**522.1**
>= 4 FPS	53.5	0.1	0.2	0.2	2.8	0.0	0.2	0.4	0.0	0.1	0.6	1.4	0.0	8.7	3.6	0.8	0.1	2.7	288.9	2.2	0.2	0.0	0.0	169.2	0.3	106.5	3.9	1.2	1.7	**649.2**
TOTAL	94.1	0.7	0.9	0.3	10.3	0.0	1.4	1.5	0.0	0.1	1.5	2.8	0.0	18.6	5.8	1.4	0.3	5.1	358.7	8.1	1.7	0.0	0.1	250.5	0.3	391.0	12.0	1.8	2.3	**1171.3**



SOURCE: PACE 2008

FIGURE 1.3-5

EXISTING CONDITION AND
ALTERNATIVE 5 - 50 YEAR FLOOD EVENT

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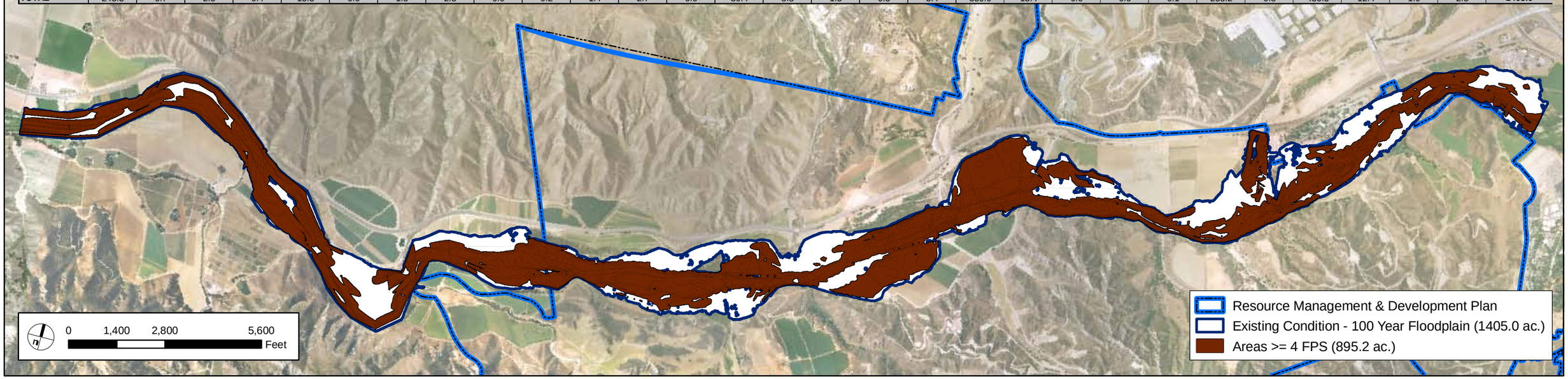
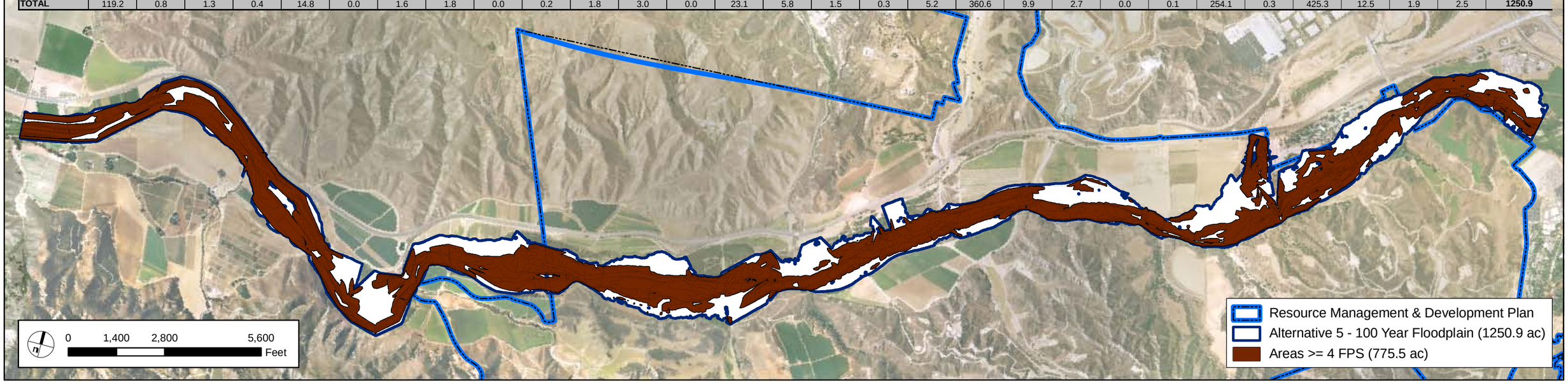
ALTERNATIVE 1 (EXISTING CONDITION) - 100 YEAR FLOOD EVENT

VEGETATION	AGR	AS	AWS	BSS	CGL	CHP	CLOW	CSB	CSB-CB	CSB-CHP	CSB-PS	dCSB	DEV	DL	dRS	dSCWRF	dSWS	GRG	HW	MFS	N_C	OC	ORN	RW	SCLORF	SCWRF	SWS	TAM	VOW	Grand Total
< 4FPS	49.4	0.4	2.2	0.2	11.5	0.0	1.2	1.8	0.0	0.1	0.6	1.3	0.0	18.6	0.9	0.5	0.1	2.3	54.0	7.9	0.0	0.0	0.1	60.7	0.1	288.9	5.9	0.7	0.6	**509.8**
>= 4 FPS	193.9	0.3	0.3	0.2	4.0	0.0	0.3	0.6	0.0	0.1	0.8	1.4	0.0	20.8	4.9	1.1	0.3	3.1	305.8	5.4	0.0	0.0	0.0	194.5	0.3	147.4	6.5	1.2	1.9	**895.2**
TOTAL	243.3	0.7	2.5	0.4	15.5	0.0	1.5	2.3	0.0	0.2	1.4	2.7	0.0	39.4	5.8	1.5	0.3	5.4	359.9	13.4	0.0	0.0	0.1	255.2	0.3	436.3	12.4	1.9	2.5	**1405.0**



ALTERNATIVE 5 - 100 YEAR FLOOD EVENT

VEGETATION	AGR	AS	AWS	BSS	CGL	CHP	CLOW	CSB	CSB-CB	CSB-CHP	CSB-PS	dCSB	DEV	DL	dRS	dSCWRF	dSWS	GRG	HW	MFS	N_C	OC	ORN	RW	SCLORF	SCWRF	SWS	TAM	VOW	Grand Total
< 4FPS	37.2	0.5	0.9	0.2	10.0	0.0	1.3	1.3	0.0	0.1	0.9	1.5	0.0	10.8	0.9	0.5	0.0	2.2	55.0	6.6	1.4	0.0	0.1	59.2	0.1	276.0	7.6	0.7	0.6	**475.4**
>= 4 FPS	82.0	0.3	0.4	0.2	4.8	0.0	0.3	0.6	0.0	0.1	0.9	1.6	0.0	12.3	4.9	1.1	0.3	3.0	305.6	3.3	1.2	0.0	0.0	195.0	0.3	149.3	4.9	1.2	1.9	**775.5**
TOTAL	119.2	0.8	1.3	0.4	14.8	0.0	1.6	1.8	0.0	0.2	1.8	3.0	0.0	23.1	5.8	1.5	0.3	5.2	360.6	9.9	2.7	0.0	0.1	254.1	0.3	425.3	12.5	1.9	2.5	**1250.9**



SOURCE: PACE 2008

FIGURE 1.3-6

EXISTING CONDITION AND
ALTERNATIVE 5 - 100 YEAR FLOOD EVENT

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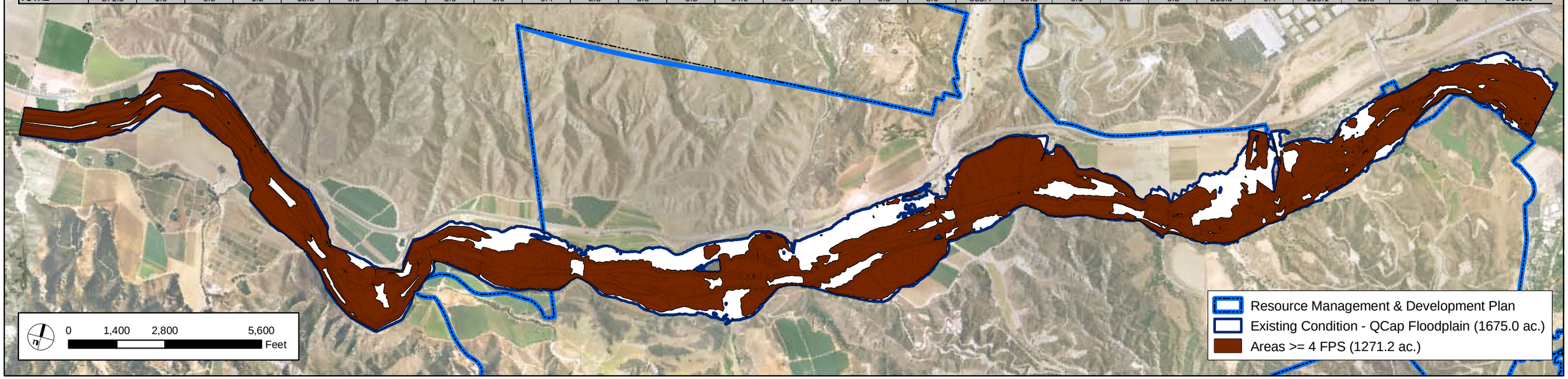
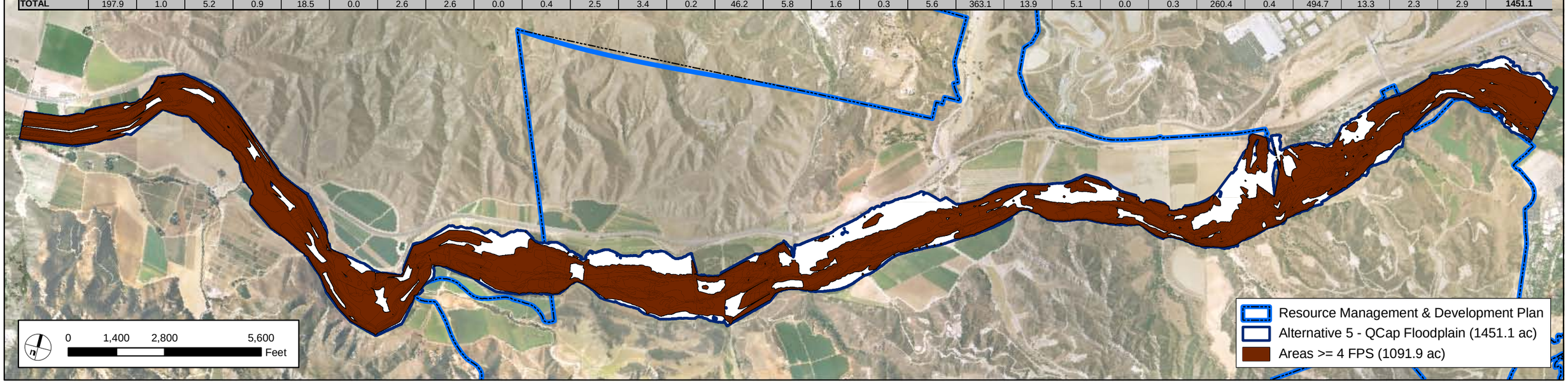
ALTERNATIVE 1 (EXISTING CONDITION) - CAPITAL FLOOD EVENT

VEGETATION	AGR	AS	AWS	BSS	CGL	CHP	CLOW	CSB	CSB-CB	CSB-CHP	CSB-PS	dCSB	DEV	DL	dRS	dSCWRF	dSWS	GRG	HW	MFS	N_C	OC	ORN	RW	SCLORF	SCWRF	SWS	TAM	VOW	Grand Total
< 4FPS	62.1	0.5	4.4	0.8	5.0	0.0	2.0	2.6	0.0	0.1	1.0	1.4	0.2	22.3	0.0	0.0	0.0	0.0	28.3	7.1	3.2	0.0	0.2	36.2	0.1	220.4	4.0	1.2	0.6	**403.8**
>= 4 FPS	309.4	0.5	2.2	0.3	13.6	0.0	0.8	1.2	0.0	0.3	1.5	2.2	0.0	42.3	5.8	1.6	0.3	5.5	335.0	12.8	2.8	0.0	0.1	224.2	0.3	295.7	9.5	1.1	2.2	**1271.2**
TOTAL	371.5	1.0	6.5	1.2	18.5	0.0	2.8	3.9	0.0	0.4	2.5	3.5	0.3	64.6	5.8	1.6	0.3	5.6	363.4	19.8	6.1	0.0	0.3	260.3	0.4	516.1	13.5	2.3	2.9	**1675.0**



ALTERNATIVE 5 - CAPITAL FLOOD EVENT

VEGETATION	AGR	AS	AWS	BSS	CGL	CHP	CLOW	CSB	CSB-CB	CSB-CHP	CSB-PS	dCSB	DEV	DL	dRS	dSCWRF	dSWS	GRG	HW	MFS	N_C	OC	ORN	RW	SCLORF	SCWRF	SWS	TAM	VOW	Grand Total
< 4FPS	45.2	0.5	3.9	0.7	5.0	0.0	1.7	1.6	0.0	0.1	0.8	1.3	0.2	20.5	0.0	0.0	0.0	0.0	28.0	5.8	2.4	0.0	0.2	36.2	0.1	199.7	3.6	1.2	0.6	**359.2**
>= 4 FPS	152.7	0.5	1.3	0.3	13.5	0.0	0.8	1.1	0.0	0.3	1.6	2.2	0.0	25.8	5.8	1.6	0.3	5.5	335.1	8.1	2.7	0.0	0.1	224.2	0.3	295.0	9.7	1.1	2.2	**1091.9**
TOTAL	197.9	1.0	5.2	0.9	18.5	0.0	2.6	2.6	0.0	0.4	2.5	3.4	0.2	46.2	5.8	1.6	0.3	5.6	363.1	13.9	5.1	0.0	0.3	260.4	0.4	494.7	13.3	2.3	2.9	**1451.1**



SOURCE: PACE 2008

FIGURE 1.3-7

EXISTING CONDITION AND
ALTERNATIVE 5 - QCAP FLOOD EVENT

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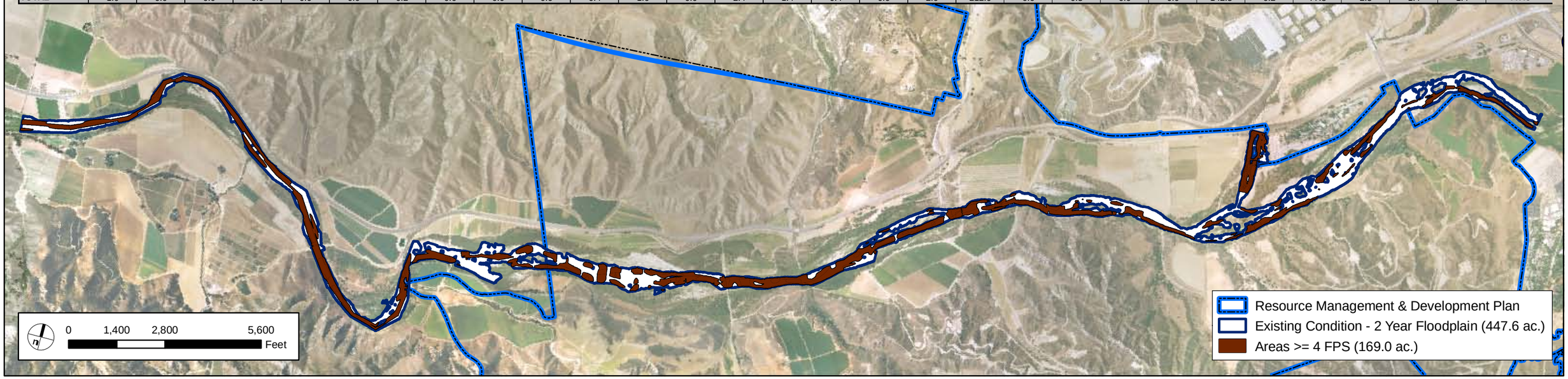
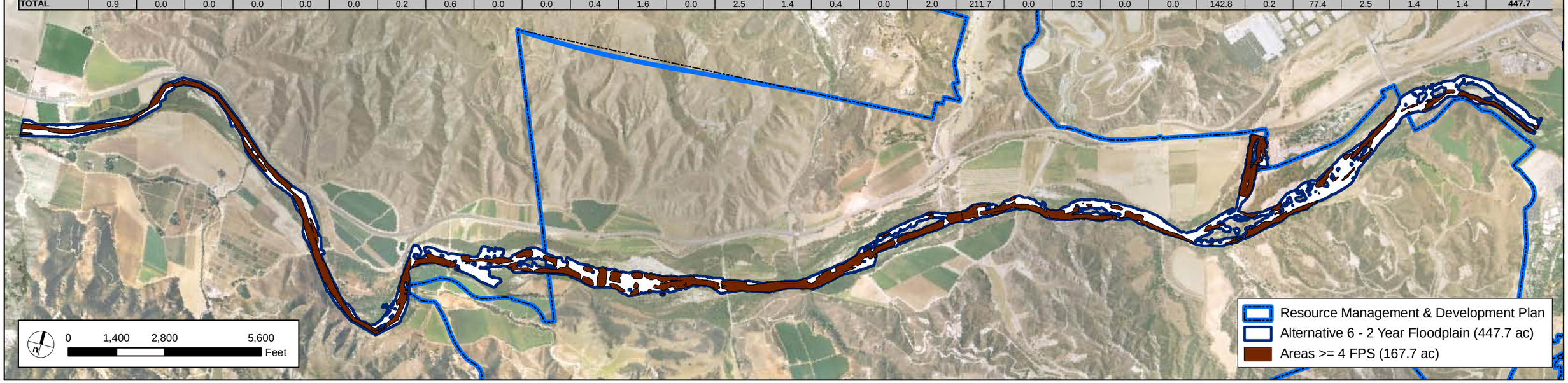
ALTERNATIVE 1 (EXISTING CONDITION) - 2 YEAR FLOOD EVENT

VEGETATION	AGR	AS	AWS	BSS	CGL	CHP	CLOW	CSB	CSB-CB	CSB-CHP	CSB-PS	dCSB	DEV	DL	dRS	dSCWRF	dSWS	GRG	HW	MFS	N_C	OC	ORN	RW	SCLORF	SCWRF	SWS	TAM	VOW	Grand Total
< 4FPS	0.5	0.0	0.0	0.0	0.0	0.0	0.2	0.6	0.0	0.0	0.2	1.5	0.0	1.2	0.8	0.4	0.0	1.5	115.0	0.0	0.3	0.0	0.0	87.0	0.0	64.9	2.4	1.4	0.8	**278.6**
>= 4 FPS	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	1.2	0.6	0.0	0.0	0.5	97.0	0.0	0.0	0.0	0.0	55.6	0.2	12.4	0.1	0.0	0.6	**169.0**
TOTAL	1.0	0.0	0.0	0.0	0.0	0.0	0.2	0.6	0.0	0.0	0.4	1.6	0.0	2.4	1.4	0.4	0.0	2.0	212.0	0.0	0.3	0.0	0.0	142.5	0.2	77.3	2.5	1.4	1.4	**447.6**



ALTERNATIVE 6 - 2 YEAR FLOOD EVENT

VEGETATION	AGR	AS	AWS	BSS	CGL	CHP	CLOW	CSB	CSB-CB	CSB-CHP	CSB-PS	dCSB	DEV	DL	dRS	dSCWRF	dSWS	GRG	HW	MFS	N_C	OC	ORN	RW	SCLORF	SCWRF	SWS	TAM	VOW	Grand Total
< 4FPS	0.4	0.0	0.0	0.0	0.0	0.0	0.2	0.6	0.0	0.0	0.2	1.5	0.0	1.4	0.8	0.3	0.0	1.5	115.6	0.0	0.3	0.0	0.0	87.1	0.0	65.5	2.4	1.4	0.8	**280.0**
>= 4 FPS	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	1.1	0.6	0.0	0.0	0.5	96.1	0.0	0.0	0.0	0.0	55.7	0.2	12.0	0.1	0.0	0.6	**167.7**
TOTAL	0.9	0.0	0.0	0.0	0.0	0.0	0.2	0.6	0.0	0.0	0.4	1.6	0.0	2.5	1.4	0.4	0.0	2.0	211.7	0.0	0.3	0.0	0.0	142.8	0.2	77.4	2.5	1.4	1.4	**447.7**



SOURCE: PACE 2008

FIGURE 1.4-1

EXISTING CONDITION AND
ALTERNATIVE 6 - 2 YEAR FLOOD EVENT

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