

**Santa Anita Creek, Santa Barbara County  
CAP Workbook Threats Assessment Summary Tables  
2008**

**Assessment of Target Viability**  
**Santa Anita Creek, Santa Barbara County**

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Double-click opens entry form

				Indicator Ratings									
				<b>Bold = Current</b>				<i>Italics = Desired</i>					
Conservation Target	Category	Key Attribute	Indicator	Poor	Fair	Good	Very Good	Current Indicator Status	Current Rating	Desired Rating	Date of Current Rating	Date for Desired Rating	
1	Egg	Landscape Context	Flow during incubation period	Baseflow in relation to avg. annual daily flow	< 25% of avg. annual daily flow	26-50% of avg. annual daily flow		> 50% of avg. annual daily flow				Jun-02	
1	Egg	Landscape Context	Non-native species	Non-native egg predators	present throughout watershed	present in >50% of watershed	present in < 50% of watershed	absent					
1	Egg	Landscape Context	Water temperature	Mean weekly avg. temperature in redds	< 5 C. and > 13 C.	11.1-13 C.	10.1-11 C.	<b>6-10 C.</b>	avg 10 C.	Very Good		Mar-08	
1	Egg	Condition	Substrate quality	Avg. percent fines (<0.85mm) in potential spawning areas	> 17% fines	11-17% fines	<b>5-10 % fines</b>	< 5% fines		Good		Jun-02	
1	Egg	Condition	Substrate quality	Embeddedness	> 75% embedded	50-75% embedded	<b>25-49% embedded</b>	< 25% embedded	25-50%	Good		Jun-02	
2	Fry	Landscape Context	Dispersal	Barriers between redds and rearing habitat	complete barrier	partial barriers common	partial barriers scarce	no barriers				Jun-02	
2	Fry	Landscape Context	Non-native species	Non-native fry predators	present throughout watershed	present > 50% watershed	present < 50% of watershed	absent					
2	Fry	Landscape Context	Sediment supply	Turbidity (no. days turbidity is > 25 NTUs)	> 30 days during fry development period	20-30 days	10-19 days	< 10 days					
2	Fry	Condition	Habitat complexity/refugia	Amount of functional high velocity refuge habitat with flows < 15 cm/sec (boulders, overhanging banks, etc.)	none; watercourse in rearing habitat is channelized	some	common	abundant				Jun-02	
3	Juvenile	Landscape Context	Dispersal	Barriers between rearing habitat and estuary	<b>present</b>			absent	several severe to impassable barriers	Poor		Mar-08	
3	Juvenile	Landscape Context	Flow during rearing period	Pool habitat > 3 feet in depth	pools scarce or absent	low abundance of pools	<b>high abundance of pools</b>	high abundance of pools with multiple "refuge" pools (> 5 ft deep)		Good		Jun-02	
3	Juvenile	Landscape Context	Non-native species	Non-native juvenile predators	present throughout watershed	present > 50% watershed	present < 50% watershed	absent					

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3	Juvenile	Landscape Context	Summer flow	Percent of unimpaired median summer baseflow (based on long-term mean monthly discharge)	< 70%	70-90%	> 90%	100% over all IP-km				Jun-02	
3	Juvenile	Landscape Context	Water temperature	Median weekly average temperature (MWAT) in potential rearing habitat	> 21 C.	18-21 C.	< 18 C.	< 17 C.	avg 14.7C.	Very Good		Mar-08	
3	Juvenile	Condition	Estuarine inflows	Percentage of unimpaired freshwater inflow to estuary (necessary for maintaining brackish water < 15 ppt salinity)	< 25%	25-49%	50-75%	> 75%					
3	Juvenile	Condition	Estuarine inflows	Persistence of hypoxic or anoxic saline layer (> 15 ppt) in potential rearing habitat areas between May and onset of winter rains	3 months	1 month	1 week	< 3 days					
3	Juvenile	Condition	Food availability	Species richness	< 25 taxa	25-29 taxa	30-40 taxa	> 40 taxa					
3	Juvenile	Condition	Habitat complexity/refugia	Instream refugia	absent			present (boulders, overhanging banks, etc.)		Good		Jun-02	
3	Juvenile	Condition	Riparian corridor species composition and structure	Mean percent native, undisturbed composition and structure in 100-foot riparian buffer	< 25%	25-50%	51-75%	historic conditions				Jun-02	
4	Smolt	Landscape Context	Dispersal	Number of days when depths are < 0.4 ft anywhere in migration corridor during outmigration period (March through June)	> 10 days	6-10 days	1-5 days	0 days	probably > 10 days	Poor		Mar-08	
4	Smolt	Landscape Context	Flow for downstream passage March through June	Maximum potential rate of diversion by pumping during April and May (expressed as percent of estimate unimpaired median flow in April)	> 150%	100-150%	50-99%	< 50%				Jun-07	
4	Smolt	Landscape Context	Passage to ocean	Number of days stream mouth is open with adequate flow during outmigration period (March through June)	< 30 days	30-60 days	60-90 days	> 90 days					

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Conservation Target		Category	Key Attribute	Indicator	Poor	Fair	Good	Very Good	Current Indicator Status	Current Rating	Desired Rating	Date of Current Rating	Date for Desired Rating
5	Adult	Landscape Context	Dispersal	Accessibility of suitable spawning areas (based on TRT criteria)	accessible sites are clumped in one location or < 25% of all tributaries are accessible	25-50% of all tributaries are accessible	50-75% of all tributaries are accessible	> 75% of all tributaries are accessible	multiple moderate to high severity barriers	Poor		Mar-08	
5	Adult	Landscape Context	Dispersal	Number of days stream mouth is open with adequate flow during entry period (1 November to 1 June)	< 30 days	30-60 days	60-90 days	> 90 days					
5	Adult	Landscape Context	Flow during spawning period (spawning and upstream/downstream passage)	Percent of net discharge (unimpaired flow minus total diversions) occurring between 1 December to 1 June, in all water years	> 10%	6-10%	3-5%	< 3%				Jun-07	
5	Adult	Landscape Context	Water temperature	Median weekly average temperature in migration corridor	> 17 C.	15-16.9 C.	13-14.9 C.	10-12.9 C.	avg 14.7 C	Good		Mar-08	
5	Adult	Size	Population size	Mean annual adult spawner abundance		TRT criteria for low extinction risk (by watershed)							
6	Multiple Life Stages	Landscape Context	Barriers/diversions	Stream crossings/stream mile	> two/mile			< two/mile	several severe to impassable barriers	Poor		Mar-08	
6	Multiple Life Stages	Landscape Context	Channel flow and morphology	Percent of total watercourse length channelized	> 25%	16-25%	5-15%	< 5%				Jul-07	
6	Multiple Life Stages	Landscape Context	Fire regime/vegetation maturity	Percent of watershed affected by high intensity fire within previous 100 yrs	> 25%	10-24%	5-9%	< 5%				Jan-08	

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6	Multiple Life Stages	Landscape Context	Floodplain connectivity	Floodplain connectivity	< 50% of response reaches in watershed have inundation of historic floodplains by bankfull flows (connectivity)	50-65% of response reaches in watershed demonstrate floodplain connectivity	66-80% of response reaches in watershed demonstrate floodplain connectivity	> 80% of response reaches in watershed demonstrate connectivity		Very Good		Mar-08	
6	Multiple Life Stages	Landscape Context	Historic vs Current Spawning Habitat	Fraction of historic spawning tributaries currently accessible to spawners	< 15% available	16-50% available	51-90% available	>90% available	19% accessible	Fair		Mar-08	
6	Multiple Life Stages	Landscape Context	Hydrology	Dry stream reaches	> 75% dry reaches	26-75% dry reaches	1-25% dry reaches	no dry reaches; perennial surface flows	42% intermittent	Fair		Jun-02	
6	Multiple Life Stages	Landscape Context	Hydrology	Hydrograph	severely modified			natural		Fair		Mar-08	
6	Multiple Life Stages	Landscape Context	Land use	Distribution of public ownership along main stem of watercourse	< 25% of land bordering main stem of drainage is publicly owned	25-50%	51-75%	> 75%	0% public ownership	Poor		Mar-08	
6	Multiple Life Stages	Landscape Context	Land use	Miles of road per square mile of watershed within 100 meters of watercourse	> 1 mi	0.5-1.0 mi	0.1-0.49 mi	< 0.1 mi				Jan-08	
6	Multiple Life Stages	Landscape Context	Land use	Miles of roads per square mile of watershed	> 3.0 mi	2.6-3.0 mi	1.6-2.5 mi	< 1.6 mi	3.0 mi/ sq. mile	Fair		Jun-02	
6	Multiple Life Stages	Landscape Context	Land use	Percent of watershed area in agricultural use	> 30%	20-29%	10-19%	< 10%	11%	Good		Jun-02	
6	Multiple Life Stages	Landscape Context	Land use	Percent of watershed area in agriculture within 100 meters of watercourse	> 20%	11-20%	5-10%	< 5%				Jan-08	
6	Multiple Life Stages	Landscape Context	Land use	Percent of watershed area in public ownership	< 25 % public ownership	25-50%	51-75%	> 75%	0% ownership	Poor		Mar-08	
6	Multiple Life Stages	Landscape Context	Land use	Percent of watershed area in urban/residential use	> 25%	10-25%	5-9%	< 5%	0.8%	Very Good		Jun-02	

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Conservation Target		Category	Key Attribute	Indicator	Poor	Fair	Good	Very Good	Current Indicator Status	Current Rating	Desired Rating	Date of Current Rating	Date for Desired Rating
6	Multiple Life Stages	Landscape Context	Water quality	General index of toxicity based on severity of adverse effects on fish	Acute lethal effects (fish kill)	Sublethal effects (reduced growth, altered behavior, etc.)	Toxins detected but no sublethal effects	No toxins or contaminants detected				Jan-08	
6	Multiple Life Stages	Landscape Context	Water quality	Percent total impervious surfaces as % of watershed area	>40%	21-40%	5-20%	< 5%	0.8%	Very Good		Jun-02	
6	Multiple Life Stages	Condition	Estuarine habitat quality	Current lagoon area as percentage of historic total area	< 25%	26-50%	51-75%	> 75%				Jan-08	
6	Multiple Life Stages	Condition	Estuarine habitat quality	Depth, LWD, and other habitat elements (e.g. eelgrass)	depth < 1 meter; LWD and/or overhanging banks absent		depth > 1 meter; LWD and/or overhanging banks present						
6	Multiple Life Stages	Condition	Riparian corridor quality	Riparian canopy cover	< 25% cover	25-49% cover	50-75% cover	> 75% cover	avg 65% cover	Good		Mar-08	
6	Multiple Life Stages	Condition	Riparian corridor quality	Riparian corridor species composition	< 25% native composition	25-50% native composition	50-75% native composition	> 75% native composition	>85% native cover	Very Good		Mar-08	

**Overall Viability Summary**  
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Summary of Threats										
Santa Anita Creek, Santa Barbara County										
Threats Across Targets		Egg	Fry	Juvenile	Smolt	Adult	Multiple Life Stages			Overall Threat Rank
Project-specific threats		1	2	3	4	5	6	7	8	
1	Culverts, crossings, and bridges	Low	-	Very High	Very High	Very High	Very High			Very High
2	Dams, diversion, and/or other barriers	Low	-	Very High	Very High	Very High	Very High			Very High
3	Conversion of watershed lands to row crop agriculture	Low	-	-	-	-	Medium			Low
4	Livestock Farming & Ranching	Low	-	Low	-	-	Low			Low
5	Roads in watershed and/or within 300 feet of watercourses	Low	-	-	-	-	Low			Low
6	Agricultural effluents	-	-	-	-	-	-			-
7	Artificial lagoon breaching	-	-	-	-	-	-			-
8	Channel and/or estuary maintenance, dredging, and vegetation control (incl. flood control activities)	-	-	-	-	-	-			-
9	Gas, water and other utility pipelines, and/or electrical transmission lines	-	-	-	-	-	-			-
10	Groundwater extraction	-	-	-	-	-	-			-
11	Illegal collecting, poaching, and/or unauthorized angling	-	-	-	-	-	-			-
12	Levees and channelization	-	-	-	-	-	-			-
13	Mining & Quarrying	-	-	-	-	-	-			-
14	Non-native species present (incl. hatchery fish)	-	-	-	-	-	-			-
15	Non-point pollution from roads	-	-	-	-	-	-			-
16	Oil & Gas Drilling	-	-	-	-	-	-			-
<b>Threat Status for Targets and Project</b>		Low	-	Very High	Very High	Very High	Very High	-	-	Very High

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Summary of Threats										
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Threats Across Targets		Egg	Fry	Juvenile	Smolt	Adult	Multiple Life Stages			Overall Threat Rank
Project-specific threats		1	2	3	4	5	6	7	8	
17	Public ownership in watershed									-
18	Recreational facilities and activities (ORV use, campgrounds, etc.)	-	-	-	-	-	-			-
19	Urban development	-	-	-	-	-	-			-
20	Urban wastewater effluents (incl. industrial and commercial effluents)	-	-	-	-	-	-			-
21	Wildland fires (incl. debris flows following fires)	-	-	-	-	-	-			-
22										-
23										-
24										-
25										-
26										-
27										-
28										-
29										-
30										-
31										-
32										-
<b>Threat Status for Targets and Project</b>		Low	-	Very High	Very High	Very High	Very High	-	-	Very High

**Overall Viability Summary**  
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<b>Stress Matrix</b>									
<b>Santa Anita Creek, Santa Barbara County</b>									
<b>Stresses (Altered Key Ecological Attributes) Across Targets</b>		Egg	Fry	Juvenile	Smolt	Adult	Multiple Life Stages		
		1	2	3	4	5	6	7	8
1	Impaired accessibility to spawning areas	-	-	-	-	Very High	-	-	-
2	Dispersal barriers to ocean	-	-	-	Very High	-	-	-	-
3	Dispersal barriers to estuary	-	-	Very High	-	-	-	-	-
4	Impaired access to rearing and/or spawning habitat	-	-	-	-	-	Very High	-	-
5	Altered land use from natural condition	-	-	-	-	-	High	-	-
6	Altered hydrograph	-	-	-	-	-	High	-	-
7	Altered riparian habitat quality	-	-	-	-	-	Medium	-	-
8	Impaired substrate quality (sedimentation and embeddedness)	Medium	-	-	-	-	-	-	-
9	Impaired instream habitat complexity/refugia	-	-	Medium	-	-	-	-	-
10	Impaired flows during rearing period	-	-	Medium	-	-	-	-	-
11	Impaired water quality	-	-	-	-	-	Low	-	-
12	Impaired estuarine habitat quality	-	-	-	-	-	Low	-	-
13	Impaired water temperature	-	-	Low	-	-	-	-	-
14	Impaired floodplain connectivity	-	-	-	-	-	Low	-	-
15	Impaired water temperature in spawning areas	Low	-	-	-	-	-	-	-
16	Impaired water temperatures in migration corridor	-	-	-	-	Low	-	-	-

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Stresses (Altered Key Ecological Attributes) Across Targets		Egg	Fry	Juvenile	Smolt	Adult	Multiple Life Stages		
		1	2	3	4	5	6	7	8
17	Impaired summer base flows	-	-	-	-	-	-	-	-
18	Low adult population size	-	-	-	-	-	-	-	-
19	Impaired habitat complexity/refugia	-	-	-	-	-	-	-	-
20	Impaired food availability	-	-	-	-	-	-	-	-
21	Altered fire regime/recent fire in watershed	-	-	-	-	-	-	-	-
22	Dispersal barriers between redds and rearing habitat	-	-	-	-	-	-	-	-
23	Altered sediment supply	-	-	-	-	-	-	-	-
24	Impaired estuarine inflows	-	-	-	-	-	-	-	-
25	Non-native predators	-	-	-	-	-	-	-	-
26	Non-native egg predators	-	-	-	-	-	-	-	-
27	Altered riparian species composition and structure	-	-	-	-	-	-	-	-
28	Altered base flows during incubation	-	-	-	-	-	-	-	-
29	Impaired entry to stream (stream mouth closed)	-	-	-	-	-	-	-	-
30		-	-	-	-	-	-	-	-
31		-	-	-	-	-	-	-	-
32		-	-	-	-	-	-	-	-

**Overall Viability Summary  
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<b>Overall Viability Summary</b>								
<b>Santa Anita Creek, Santa Barbara County</b>								
<b>Conservation Targets</b>		<b>Landscape Context</b>		<b>Condition</b>		<b>Size</b>		<b>Viability Rank</b>
		<b>Grade</b>	<b>Weight</b>	<b>Grade</b>	<b>Weight</b>	<b>Grade</b>	<b>Weight</b>	
1	Egg	Very Good	1	Good	1	-	1	Very Good
2	Fry	-	1	-	1	-	1	-
3	Juvenile	Poor	1	Good	1	-	1	Fair
4	Smolt	Poor	1	-	1	-	1	Poor
5	Adult	Poor	1	-	1	-	1	Poor
6	Multiple Life Stages	Poor	1	Very Good	1	-	1	Fair
7		-	1	-	1	-	1	-
8		-	1	-	1	-	1	-
<b>Project Biodiversity Health Rank</b>								<b>Fair</b>

# Overall Viability Summary

## Santa Anita Creek, Santa Barbara County

### Detailed Viability Summary

#### Santa Anita Creek, Santa Barbara County

Conservation Targets		Key Ecological Attributes				Indicators				Calculated Rank	User Override	
		Poor	Fair	Good	Very Good	Poor	Fair	Good	Very Good			
1	<b>Egg</b>										<b>Very Good</b>	
	Landscape Context				1				1	Very Good		
	Condition			1				2		Good		
	Size									-		
2	<b>Fry</b>											-
	Landscape Context									-		
	Condition									-		
	Size									-		
3	<b>Juvenile</b>										<b>Fair</b>	
	Landscape Context	1		1	1	1		1	1	Poor		
	Condition			1				1		Good		
	Size									-		
4	<b>Smolt</b>										<b>Poor</b>	
	Landscape Context	1				1				Poor		
	Condition									-		
	Size									-		
5	<b>Adult</b>										<b>Poor</b>	
	Landscape Context	1		1		1		1		Poor		
	Condition									-		
	Size									-		
6	<b>Multiple Life Stages</b>										<b>Fair</b>	
	Landscape Context	1	3		2	3	4	1	3	Poor		
	Condition				1			1	1	Very Good		
	Size									-		
7												-
	Landscape Context									-		
	Condition									-		
	Size									-		
8												-
	Landscape Context									-		
	Condition									-		
	Size									-		