Santa Paula Creek, Ventura County
CAP Workbook Threats Assessment Summary Tables
2008

Assessment of Target Viability
Santa Paula Creek, Ventura County

Double-click opens entry form

Bold = Current Indicator Ratings *Italics = Desired*

	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**	perennial flows	Very Good		Sep-05	
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	nn predators in main stem	Fair		Oct-04	
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.	6-10 C.	12-13 C	Fair		Jan-05	
1	Egg	Condition	Substrate quality	Avg. percent fines (<0.85mm) in potential spawning areas	> 17% fines	11-17% fines	5-10 % fines	< 5% fines				Sep-07	
1	Egg	Condition	Substrate quality	Embeddedness	> 75% embedded	50-75% embedded	**25-49% embedded**	< 25% embedded	avg 28.6%	Good		May-05	
2	Fry	Landscape Context	Dispersal	Barriers between redds and rearing habitat	complete barrier	partial barriers common	**partial barriers scarse**	no barriers	perennial flows	Good		Sep-05	
2	Fry	Landscape Context	Non-native species	Non-native fry predators	present throughout watershed	**present > 50% watershed**	present < 50% of watershed	absent	nn species in main stem	Fair		Aug-04	
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				Sep-07	
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**	high amount of instream cover	Very Good		Jan-05	
3	Juvenile	Landscape Context	Dispersal	Barriers between rearing habitat and estuary	**present**			absent	lack of surface flows in SC River; barriers on SP Creek	Poor		Sep-05	
3	Juvenile	Landscape Context	Flow during rearing period	Pool habitat > 3 feet in depth	pools scarse or absent	low abundance of pools	**high abundance of pools**	high abundance of pools with muliple "refuge" pools (> 5 ft deep)	high abundance	Good		Sep-05	
3	Juvenile	Landscape Context	Non-native species	Non-native juvenile predators	present throughout watershed	**present > 50% watershed**	present < 50% watershed	absent	nn species in main stem	Fair		Oct-04	

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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	perennial flows	Good		Sep-05	
3	Juvenile	Landscape Context	Water temperature	Median weekly average temperature (MWAT) in potential rearing habitat	> 21 C.	18-21 C.	< 18 C.	**< 17 C.**	about 12-13 C	Very Good		May-05	
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%				Sep-05	
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				Sep-96	
3	Juvenile	Condition	Food availability	Species richness	< 25 taxa	25-29 taxa	30-40 taxa	> 40 taxa				Sep-07	
3	Juvenile	Condition	Habitat complexity/refugia	Instream refugia	absent			present (boulders, overhanging banks, etc.)	cover common	Good		Sep-05	
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	53.3% avg canopy cover	Good		Sep-05	
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	perennial flows	Good		Dec-05	
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%	perennial flows	Good		Dec-05	
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				Sep-96	

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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	Vern Freeman Diversion Dam	Fair		Sep-05	
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				Sep-96	
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-05	
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.**	12-13 C	Very Good		May-05	
5	Adult	Size	Population size	Mean annual adult spawner abundance		TRT criteria for low extinction risk (by watershed)						May-07	
6	Multiple Life Stages	Landscape Context	Barriers/diversions	Stream crossings/stream mile	> two/mile			< two/mile				Oct-07	
6	Multiple Life Stages	Landscape Context	Channel flow and morphology	Percent of total watercourse length channelized	> 25%	**16-25%**	5-15%	< 5%	lower reaches channelized	Fair		Sep-05	
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%					
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	lower reaches channelized and floodplain encroachment	Fair		Sep-05	

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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	barriers present	Fair		Sep-05	
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	perennial flows	Good		Dec-05	
6	Multiple Life Stages	Landscape Context	Hydrology	Hydrograph	severely modified			natural	some groundwater pumping, but mostly natural flow	Good		Sep-05	
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%				Jun-07	
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				Sep-07	
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				Jun-02	
6	Multiple Life Stages	Landscape Context	Land use	Percent of watershed area in agricultural use	> 30%	20-29%	10-19%	< 10%				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%					
6	Multiple Life Stages	Landscape Context	Land use	Percent of watershed area in public ownership	< 25 % public ownership	25-50%	51-75%	> 75%				Jan-06	
6	Multiple Life Stages	Landscape Context	Land use	Percent of watershed area in urban/residential use	> 25%	10-25%	5-9%	< 5%				Sep-07	
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				Sep-07	
6	Multiple Life Stages	Landscape Context	Water quality	Percent total impervious surfaces as % of watershed area	>40%	21-40%	5-20%	< 5%				Sep-07	
6	Multiple Life Stages	Condition	Estuarine habitat quality	Current lagoon area as percentage of historic total area	**< 25%**	26-50%	51-75%	> 75%	10-15% remaining	Poor		Sep-05	

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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					Sep-96	
6	Multiple Life Stages	Condition	Riparian corridor quality	Riparian canopy cover	< 25% cover	25-49% cover	**50-75% cover**	> 75% cover	53.3% cover; riparian corridor relatively intact	Good		Sep-05	
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				Sep-07	

Detailed Viability Summary
San Miguel/Dolores River

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	Conversion of watershed lands to row crop agriculture	Medium	Low	High	Very High	High	High			Very High
2	Dams and surface water diversions	Low	Medium	High	Very High	High	High			Very High
3	Groundwater extraction	Low	Medium	High	Very High	High	High			Very High
4	Non-native species present (incl. hatchery fish)	Medium	High	High	-	-	-			High
5	Urban development	Medium	High	Medium	Medium	Medium	Medium			High
6	Channel and/or estuary maintenance, dredging, and vegetation control (incl. flood control activities)	Medium	Low	High	-	Low	Medium			Medium
7	Levees and channelization	Medium	Low	Medium	-	Low	High			Medium
8	Culverts, crossings, and bridges	-	Medium	High	-	-	-			Medium
9	Mining & Quarrying	-	-	-	Low	Medium	-			Low
10	Recreational facilities and activities (ORV use, campgrounds, etc.)	Low	Medium	-	-	-	-			Low
11	Agricultural effluents	Medium	-	-	-	-	-			Low
12	Non-point pollution from roads	Medium	-	-	-	-	-			Low
13	Invasive, non-native plants	-	Low	Low	-	-	Low			Low
14	Livestock Farming & Ranching	Low	-	-	-	-	-			Low
15	Wildland fires (incl. debris flows following fires)	Low	-	-	-	-	-			Low
16	Artificial lagoon breaching	-	-	-	-	-	-			-
Threat Status for Targets and Project		Medium	High	Very High	Very High	High	High	-	-	Very High

Detailed Viability Summary
San Miguel/Dolores River

	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	Gas, water, and/or other utility pipelines	-	-	-	-	-	-			-
18	Illegal collecting, poaching, and/or unauthorized angling	-	-	-	-	-	-			-
19	Oil & Gas Drilling	-	-	-	-	-	-			-
20	Public ownership in watershed									-
21	Roads in watershed and/or within 300 feet of watercourses	-	-	-	-	-	-			-
22	Urban wastewater effluents (incl. industrial and commercial effluents)	-	-	-	-	-	-			-
23										-
24										-
25										-
26										-
27										-
28										-
29										-
30										-
31										-
32										-
Threat Status for Targets and Project		Medium	High	Very High	Very High	High	High	-	-	Very High

Detailed Viability Summary
San Miguel/Dolores River

Stress Matrix

Santa Paula Creek, Ventura County

	Stresses (Altered Key Ecological Attributes) Across Targets	Egg	Fry	Juvenile	Smolt	Adult	Multiple Life Stages		
		1	2	3	4	5	6	7	8
1	Impaired access to rearing and/or spawning habitat	-	-	-	-	-	Very High	-	-
2	Impaired access to spawning areas	-	-	-	-	Very High	-	-	-
3	Impaired access to ocean	-	-	-	Very High	-	-	-	-
4	Impaired access to estuary	-	-	Very High	-	-	-	-	-
5	Non-native predators	-	High	High	-	-	-	-	-
6	Impaired floodplain connectivity	-	-	-	-	-	High	-	-
7	Impaired riparian habitat quality	-	-	Medium	-	-	-	-	-
8	Impaired substrate quality (sedimentation and embeddedness)	Medium	-	-	-	-	-	-	-
9	Altered riparian habitat quality	-	-	-	-	-	Medium	-	-
10	Altered hydrograph	-	-	-	-	-	Medium	-	-
11	Impaired water temperature in spawning areas	Medium	-	-	-	-	-	-	-
12	Dispersal barriers between redds and rearing habitat	-	Medium	-	-	-	-	-	-
13	Non-native egg predators	Medium	-	-	-	-	-	-	-
14	Impaired instream habitat complexity/refugia	-	-	Medium	-	-	-	-	-
15	Impaired habitat complexity/refugia	-	Low	-	-	-	-	-	-
16	Impaired flows during rearing period	-	-	Low	-	-	-	-	-

Detailed Viability Summary
San Miguel/Dolores River

	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	-	-	Low	-	-	-	-	-
18	Impaired water temperature	-	-	Low	-	-	-	-	-
19	Impaired water temperatures in migration corridor	-	-	-	-	Low	-	-	-
20	Altered base flows during incubation	Low	-	-	-	-	-	-	-
21	Altered sediment supply	-	-	-	-	-	-	-	-
22	Low adult population size	-	-	-	-	-	-	-	-
23	Impaired water quality	-	-	-	-	-	-	-	-
24	Impaired access to stream from ocean (stream mouth closed)	-	-	-	-	-	-	-	-
25	Altered fire regime/recent fire in watershed	-	-	-	-	-	-	-	-
26	Impaired estuarine inflows	-	-	-	-	-	-	-	-
27	Altered land use from natural condition	-	-	-	-	-	-	-	-
28	Impaired estuarine habitat quality	-	-	-	-	-	-	-	-
29	Impaired food availability	-	-	-	-	-	-	-	-
30		-	-	-	-	-	-	-	-
31		-	-	-	-	-	-	-	-
32		-	-	-	-	-	-	-	-

Detailed Viability Summary
San Miguel/Dolores River

Overall Viability Summary

Santa Paula Creek, Ventura County

	Conservation Targets	Landscape Context		Condition		Size		Viability Rank
		Grade	Weight	Grade	Weight	Grade	Weight	
1	Egg	Fair	1	Good	1	-	1	**Good**
2	Fry	Fair	1	Very Good	1	-	1	**Good**
3	Juvenile	Poor	1	Good	1	-	1	**Fair**
4	Smolt	Good	1	-	1	-	1	**Good**
5	Adult	Fair	1	-	1	-	1	**Fair**
6	Multiple Life Stages	Fair	1	Poor	1	-	1	**Fair**
7		-	1	-	1	-	1	**-**
8		-	1	-	1	-	1	**-**
Project Biodiversity Health Rank								**Good**

Detailed Viability Summary
San Miguel/Dolores River

Detailed Viability Summary

Santa Paula Creek, Ventura County

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