

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

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

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Gaviota Creek, Santa Barbara County**

Double-click opens entry form

Bold = Current Indicator Ratings *Italics = Desired*

Conservation Target	Category	Key Attribute	Indicator	Indicator Ratings				Current Indicator Status	Current Rating	Desired Rating	Date of Current Rating	Date for Desired Rating
				Poor	Fair	Good	Very Good					
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	Variable flows	Good		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.	6-10 C.					
1 Egg	Condition	Substrate quality	Avg. percent fines (<0.85mm) in potential spawning areas	> 17% fines	11-17% fines	5-10 % fines	< 5% fines	Low to moderate abundance of spawning substrate	Fair		Jun-02	
1 Egg	Condition	Substrate quality	Embeddedness	> 75% embedded	50-75% embedded	25-49% embedded	< 25% embedded	25-50% avg. embeddedness	Good		Jun-02	
2 Fry	Landscape Context	Dispersal	Barriers between redds and rearing habitat	complete barrier	partial barriers common	partial barriers scarce	no barriers	several barriers present	Fair		Jun-02	
2 Fry	Landscape Context	Non-native species	Non-native fry predators	present throughout watershed	present > 50% of 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	low to moderate abundance of instream cover	Fair		Jun-02	
3 Juvenile	Landscape Context	Dispersal	Barriers between rearing habitat and estuary	present			absent	multiple, significant barriers	Poor		Jun-02	
3 Juvenile	Landscape Context	Flow during rearing period	Pool habitat > 3 feet in depth	pools scarce or absent	low abundance of pools	high abundance of pools	high abundance of pools with multiple "refuge" pools (> 5 ft deep)	low to moderate abundance of pools	Fair		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	variable flows	Good		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.					
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.)	low to moderate abundance of instream cover	Fair		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					
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%	probably < 50%	Very Good		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		Jun-02	
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%	probably < 3%	Very Good		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.					
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	avg 1.1 crossings/mile	Fair		Jan-08	
6 Multiple Life Stages	Landscape Context	Channel flow and morphology	Percent of total watercourse length channelized	> 25%	16-25%	5-15%	< 5%	probably < 20%	Fair		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%	10%	Fair		Jan-08	
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	Highway 101	Fair		Jul-07	

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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	Historic vs Current Spawning Habitat	Fraction of historic spawning tributaries currently accessible to spawners	< 15% available	16-50% available	51-90% available	>90% available	57%	Poor		Jun-02	
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	21% dry reaches	Good		Jun-02	
6	Multiple Life Stages	Landscape Context	Hydrology	Hydrograph	severely modified			natural	slightly modified	Good		Jun-02	
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%	26.7 % ownership in watershed	Fair		Jun-02	
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	avg 1.1 mi/square mile	Poor		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	2.3 - 2.5 mi/sq. mi.	Good		Jun-02	
6	Multiple Life Stages	Landscape Context	Land use	Percent of watershed area in agricultural use	> 30%	20-29%	10-19%	< 10%	0.025% to 1%	Very 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%	0.6%	Very Good		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%	26.7% public ownership	Fair		Jun-02	
6	Multiple Life Stages	Landscape Context	Land use	Percent of watershed area in urban/residential use	> 25%	10-25%	5-9%	< 5%	0.008%	Very Good		Jun-02	
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	low total N and P	Good		Jan-08	
6	Multiple Life Stages	Landscape Context	Water quality	Percent total impervious surfaces as % of watershed area	>40%	21-40%	5-20%	< 5%	0.4%	Very Good		Jan-08	
6	Multiple Life Stages	Condition	Estuarine habitat quality	Current lagoon area as percentage of historic total area	< 25%	26-50%	51-75%	> 75%	25%	Poor		Jan-08	

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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	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	56% to 60% canopy cover	Good		Jun-02	
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					

Overall Viability Summary
Gaviota Creek, Santa Barbara County

Threats Across Targets		Egg	Fry	Juvenile	Smolt	Adult	Multiple Life Stages			Overall Threat Rank
		1	2	3	4	5	6	7	8	
1	Culverts, crossings, and bridges	Medium	High	Very High	Very High	Very High	Very High			Very High
2	Roads in watershed and/or within 300 feet of watercourses	Medium	High	Very High	Very High	Very High	Very High			Very High
3	Levees and channelization	-	-	High	-	Very High	Very High			Very High
4	Wildland fires (incl. debris flows following fires)	Medium	Medium	High	High	High	Very High			Very High
5	Recreational facilities and activities (ORV use, campgrounds, etc.)	-	-	High	High	Medium	Very High			High
6	Channel and/or estuary maintenance, dredging, and vegetation control (incl. flood control activities)	Medium	Medium	-	-	High	Medium			Medium
7	Non-point pollution from roads	Medium	Medium	-	-	-	High			Medium
8	Livestock Farming & Ranching	Low	Low	Medium	-	-	Low			Low
9	Artificial lagoon breaching	-	-	-	-	-	Medium			Low
10	Non-native species present (incl. hatchery fish)	-	-	-	-	Medium	-			Low
11	Agricultural effluents	-	-	-	-	-	-			-
12	Conversion of watershed lands to row crop agriculture	-	-	-	-	-	-			-
13	Dams, diversion, and/or other barriers	-	-	-	-	-	-			-
14	Gas, water and other utility pipelines, and/or electrical transmission lines	-	-	-	-	-	-			-
15	Groundwater extraction	-	-	-	-	-	-			-
16	Illegal collecting, poaching, and/or unauthorized angling	-	-	-	-	-	-			-
Threat Status for Targets and Project		Medium	High	Very High	Very High	Very High	Very High	-	-	Very High

Overall Viability Summary
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Threats Across Targets		Egg	Fry	Juvenile	Smolt	Adult	Multiple Life Stages			Overall Threat Rank
		1	2	3	4	5	6	7	8	
Project-specific threats		1	2	3	4	5	6	7	8	
17	Mining & Quarrying	-	-	-	-	-	-			-
18	Oil & Gas Drilling	-	-	-	-	-	-			-
19	Public ownership in watershed									-
20	Urban development	-	-	-	-	-	-			-
21	Urban wastewater effluents (incl. industrial and commercial effluents)	-	-	-	-	-	-			-
22										-
23										-
24										-
25										-
26										-
27										-
28										-
29										-
30										-
31										-
32										-
Threat Status for Targets and Project		Medium	High	Very High	Very High	Very High	Very High	-	-	Very High

Overall Viability Summary
Gaviota Creek, Santa Barbara 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 accessibility to spawning areas	-	-	-	-	Very High	-	-	-
2	Dispersal barriers to ocean	-	-	-	Very High	-	-	-	-
3	Dispersal barriers to estuary	-	-	Very High	-	-	-	-	-
4	Impaired estuarine habitat quality	-	-	-	-	-	Very High	-	-
5	Impaired access to rearing and/or spawning habitat	-	-	-	-	-	Very High	-	-
6	Altered fire regime/recent fire in watershed	-	-	-	-	-	High	-	-
7	Dispersal barriers between redds and rearing habitat	-	High	-	-	-	-	-	-
8	Impaired floodplain connectivity	-	-	-	-	-	High	-	-
9	Impaired substrate quality (sedimentation and embeddedness)	High	-	-	-	-	-	-	-
10	Impaired habitat complexity/refugia	-	High	-	-	-	-	-	-
11	Impaired instream habitat complexity/refugia	-	-	High	-	-	-	-	-
12	Impaired water quality	-	-	-	-	-	Medium	-	-
13	Altered base flows during incubation	Medium	-	-	-	-	-	-	-
14	Altered riparian habitat quality	-	-	-	-	-	Medium	-	-
15	Altered land use from natural condition	-	-	-	-	-	Medium	-	-
16	Impaired summer base flows	-	-	Medium	-	-	-	-	-

**Overall Viability Summary
Gaviota Creek, Santa Barbara County**

Stresses (Altered Key Ecological Attributes) Across Targets		Egg	Fry	Juvenile	Smolt	Adult	Multiple Life Stages		
		1	2	3	4	5	6	7	8
17	Altered hydrograph	-	-	-	-	-	Medium	-	-
18	Impaired flows during rearing period	-	-	Medium	-	-	-	-	-
19	Impaired water temperature	-	-	-	-	-	-	-	-
20	Altered sediment supply	-	-	-	-	-	-	-	-
21	Non-native predators	-	-	-	-	-	-	-	-
22	Low adult population size	-	-	-	-	-	-	-	-
23	Impaired water temperatures in migration corridor	-	-	-	-	-	-	-	-
24	Impaired water temperature in spawning areas	-	-	-	-	-	-	-	-
25	Impaired food availability	-	-	-	-	-	-	-	-
26	Loss/fragmentation of estuarine habitat	-	-	-	-	-	-	-	-
27	Degraded estuarine habitat	-	-	-	-	-	-	-	-
28	Degraded riparian habitat	-	-	-	-	-	-	-	-
29	Non-native egg predators	-	-	-	-	-	-	-	-
30	Altered riparian species composition and structure	-	-	-	-	-	-	-	-
31	Impaired estuarine inflows	-	-	-	-	-	-	-	-
32	Impaired entry to stream (stream mouth closed)	-	-	-	-	-	-	-	-

**Overall Viability Summary
Gaviota Creek, Santa Barbara County**

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

Overall Viability Summary

Gaviota Creek, Santa Barbara County

Detailed Viability Summary

Gaviota 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	Egg									Good	
	Landscape Context			1			1			Good	
	Condition			1		1	1			Good	
	Size									-	
2	Fry									Fair	
	Landscape Context		1				1			Fair	
	Condition		1				1			Fair	
	Size									-	
3	Juvenile									Fair	
	Landscape Context	1	1	1		1	1	1		Poor	
	Condition		1				1			Fair	
	Size									-	
4	Smolt									Very Good	
	Landscape Context				1				1	Very Good	
	Condition									-	
	Size									-	
5	Adult									Poor	
	Landscape Context	1			1	1			1	Poor	
	Condition									-	
	Size									-	
6	Multiple Life Stages									Poor	
	Landscape Context	1	4	2	1	2	6	4	4	Poor	
	Condition	1		1		1		1		Poor	
	Size									-	
7										-	
	Landscape Context									-	
	Condition									-	
	Size									-	
8										-	
	Landscape Context									-	
	Condition									-	
	Size									-	