

Malibu Creek, Los Angeles and Ventura counties  
CAP Workbook Threats Assessment Summary Tables  
2008

**Assessment of Target Viability  
Malibu Creek, Los Angeles and Ventura counties**

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Double-click opens entry form

				<b>Bold = Current</b>	Indicator Ratings			<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	<b>present throughout watershed</b>	present in >50% of watershed	present in < 50% of watershed	absent	present throughout watershed	Poor		Aug-07
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	<b>5-10 % fines</b>	< 5% fines	good	Good		Jan-06
1	Egg	Condition	Substrate quality	Embeddedness	> 75% embedded	50-75% embedded	<b>25-49% embedded</b>	< 25% embedded	avg 38%	Good		Jan-06
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	<b>present throughout watershed</b>	present > 50% watershed	present < 50% of watershed	absent	present throughout watershed	Poor		Aug-07
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	<b>some</b>	common	abundant	fair	Fair		Jan-06
3	Juvenile	Landscape Context	Dispersal	Barriers between rearing habitat and estuary	<b>present</b>			absent	4 severe to impassable barriers, incl Rindge Dam	Poor		Jan-06
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	<b>high abundance of pools with multiple "refuge" pools (&gt; 5 ft deep)</b>	pools present along 50-70% of survey length	Very Good		Jan-06
3	Juvenile	Landscape Context	Non-native species	Non-native juvenile predators	<b>present throughout watershed</b>	present > 50% watershed	present < 50% watershed	absent	present throughout watershed	Poor		Aug-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
3	Juvenile	Landscape Context	Summer flow	Percent of unimpaired median summer baseflow (based on long-term mean monthly discharge)	< 70% <b>s</b>	70-90%	> 90%	<b>100% over all IP-km</b>	> 90% wetted channel	Very Good		Jan-06	
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%				Jun-02	
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	<b>25-29 taxa</b>	30-40 taxa	> 40 taxa	limited richness	Fair		Mar-07	
3	Juvenile	Condition	Habitat complexity/refugia	Instream refugia	absent			present (boulders, overhanging banks, etc.)	fair	Fair		Jan-06	
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					
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	<b>0 days</b>	> 90% wetted channel	Very Good		Mar-07	
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-02	
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)	<b>accessible sites are clumped in one location or &lt; 25% of all tributaries are accessible</b>	25-50% of all tributaries are accessible	50-75% of all tributaries are accessible	> 75% of all tributaries are accessible	4 severe to impassable barriers	Poor		Jan-06	
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	160 days in 2004/2005.	Very Good		May-07	
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-02	
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)			no fish observed in 2007	Poor		May-07	
6 Multiple Life Stages	Landscape Context	Barriers/diversions	Stream crossings/stream mile	> two/mile			< two/mile	avg 2.5 crossings/mile	Poor		Jan-08	
6 Multiple Life Stages	Landscape Context	Channel flow and morphology	Percent of total watercourse length channelized	> 25%	16-25%	5-15%	< 5%	lower reach levees	Fair		Jan-08	
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%	71%	Poor		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	lower reach has levee	Fair		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	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	4 severe to impassable barriers	Poor		Jan-06	
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	>90% wetted channel	Very Good		Jan-06	
6	Multiple Life Stages	Landscape Context	Hydrology	Hydrograph	severely modified			natural	severely modified	Poor		Jan-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%				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	avg 1.7 mi/sq mi.	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	5.30 mi/sq mi.	Poor		Jan-08	
6	Multiple Life Stages	Landscape Context	Land use	Percent of watershed area in agricultural use	> 30%	20-29%	10-19%	< 10%	1.9% to 2%	Very Good		Jan-08	
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%	1.4% to 2%	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%	37%	Fair		Jan-06	
6	Multiple Life Stages	Landscape Context	Land use	Percent of watershed area in urban/residential use	> 25%	10-25%	5-9%	< 5%	23%	Fair		Jan-08	
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	polluted, seasonally eutrophic	Poor		May-00	
6	Multiple Life Stages	Landscape Context	Water quality	Percent total impervious surfaces as % of watershed area	>40%	21-40%	5-20%	< 5%	6%	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%	34% remaining	Fair		Nov-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	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	<b>50-75% cover</b>	> 75% cover	55%	Good		Jan-08
6	Multiple Life Stages	Condition	Riparian corridor quality	Riparian corridor species composition	< 25% native composition	<b>25-50% native composition</b>	50-75% native composition	> 75% native composition	non-natives common	Fair		May-00



**Overall Viability Summary**  
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Summary of Threats										
Click the page-down icon ▼ to the right to view more summary tables.										
Malibu Creek, Los Angeles and Ventura counties										
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	Non-native species present (incl. hatchery fish)	Very High	Very High	Very High	-	-	Very High			Very High
2	Recreational facilities and activities (ORV use, campgrounds, etc.)	Very High	Very High	Very High	-	-	Very High			Very High
3	Dams and surface water diversions	Medium	High	Very High	High	Very High	Very High			Very High
4	Culverts, crossings, and bridges	-	High	Very High	High	Very High	Very High			Very High
5	Roads in watershed and/or within 300 feet of watercourses	-	High	Very High	High	Very High	Very High			Very High
6	Urban development	Very High	Very High	Medium	-	-	Very High			Very High
7	Wildland fires (incl. debris flows following fires)	Medium	-	-	-	-	Very High			High
8	Levees and channelization	Medium	-	-	-	-	High			Medium
9	Non-point pollution from roads	Low	-	Low	-	-	High			Medium
10	Artificial lagoon breaching	-	-	High	-	-	-			Medium
11	Channel and/or estuary maintenance, dredging, and vegetation control (incl. flood control activities)	-	-	-	-	-	High			Medium
12	Urban wastewater effluents (incl. industrial and commercial effluents)	-	-	-	-	-	High			Medium
13	Invasive, non-native plants	-	-	Low	-	-	Medium			Low
14	Conversion of watershed lands to row crop agriculture	Low	-	-	-	-	-			Low
15	Livestock Farming & Ranching	Low	-	-	-	-	-			Low
16	Agricultural effluents	-	-	-	-	-	-			-
<b>Threat Status for Targets and Project</b>		Very High	Very High	Very High	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	Gas, water, and/or other utility pipelines	-	-	-	-	-	-			-
18	Groundwater extraction	-	-	-	-	-	-			-
19	Illegal collecting, poaching, and/or unauthorized angling	-	-	-	-	-	-			-
20	Mining & Quarrying	-	-	-	-	-	-			-
21	Oil & Gas Drilling	-	-	-	-	-	-			-
22	Public ownership in watershed									-
23										-
24										-
25										-
26										-
27										-
28										-
29										-
30										-
31										-
32										-
<b>Threat Status for Targets and Project</b>		Very High	Very High	Very High	High	Very High	Very High	-	-	Very High

**Overall Viability Summary**  
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<b>Stress Matrix</b>									
<b>Malibu Creek, Los Angeles and Ventura counties</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	Non-native predators	-	Very High	Very High	-	-	-	-	-
2	Altered hydrograph	-	-	-	-	-	Very High	-	-
3	Altered fire regime/recent fire in watershed	-	-	-	-	-	Very High	-	-
4	Non-native egg predators	Very High	-	-	-	-	-	-	-
5	Impaired access to rearing and/or spawning habitat	-	-	-	-	-	Very High	-	-
6	Impaired access to spawning areas	-	-	-	-	Very High	-	-	-
7	Impaired access to estuary	-	-	Very High	-	-	-	-	-
8	Altered riparian habitat quality	-	-	-	-	-	High	-	-
9	Impaired estuarine habitat quality	-	-	-	-	-	High	-	-
10	Impaired habitat complexity/refugia	-	High	-	-	-	-	-	-
11	Impaired water quality	-	-	-	-	-	High	-	-
12	Altered land use from natural condition	-	-	-	-	-	High	-	-
13	Impaired floodplain connectivity	-	-	-	-	-	High	-	-
14	Impaired access to ocean	-	-	-	High	-	-	-	-
15	Impaired instream habitat complexity/refugia	-	-	High	-	-	-	-	-
16	Impaired food availability	-	-	High	-	-	-	-	-

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<b>Stress Matrix</b>									
<b>Malibu Creek, Los Angeles and Ventura counties</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
17	Impaired substrate quality (sedimentation and embeddedness)	Medium	-	-	-	-	-	-	-
18	Impaired flows during rearing period	-	-	Low	-	-	-	-	-
19	Impaired summer base flows	-	-	Low	-	-	-	-	-
20	Impaired riparian habitat quality	-	-	-	-	-	-	-	-
21	Impaired water temperatures in migration corridor	-	-	-	-	-	-	-	-
22	Low adult population size	-	-	-	-	-	-	-	-
23	Impaired estuarine inflows	-	-	-	-	-	-	-	-
24	Impaired water temperature	-	-	-	-	-	-	-	-
25	Impaired water temperature in spawning areas	-	-	-	-	-	-	-	-
26	Altered base flows during incubation	-	-	-	-	-	-	-	-
27	Dispersal barriers between redds and rearing habitat	-	-	-	-	-	-	-	-
28	Impaired access to stream from ocean (stream mouth closed)	-	-	-	-	-	-	-	-
29	Altered sediment supply	-	-	-	-	-	-	-	-
30		-	-	-	-	-	-	-	-
31		-	-	-	-	-	-	-	-
32		-	-	-	-	-	-	-	-

**Overall Viability Summary  
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<b>Overall Viability Summary Malibu Creek, Los Angeles and Ventura counties</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	Poor	1	Good	1	-	1	Fair
2	Fry	Poor	1	Fair	1	-	1	Fair
3	Juvenile	Poor	1	Fair	1	-	1	Fair
4	Smolt	Very Good	1	-	1	-	1	Very Good
5	Adult	Fair	1	-	1	Poor	1	Fair
6	Multiple Life Stages	Poor	1	Fair	1	-	1	Fair
7		-	1	-	1	-	1	-
8		-	1	-	1	-	1	-
<b>Project Biodiversity Health Rank</b>								<b>Fair</b>

# Overall Viability Summary

## Malibu Creek, Los Angeles and Ventura counties

### Detailed Viability Summary

#### Malibu Creek, Los Angeles and Ventura counties

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