

Topanga Canyon Creek, Los Angeles County
CAP Workbook Threats Assessment Summary Tables
2008

**Assessment of Target Viability
Topanga Canyon Creek, Los Angeles County**

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Topanga Canyon Creek, Los Angeles County**

Double-click opens entry form

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			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	absent	Very Good	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	5-10 % fines	< 5% fines	good	Good	Jan-06	
1	Egg	Condition	Substrate quality	Embeddedness	> 75% embedded	50-75% embedded	25-49% embedded	< 25% embedded	avg 50%	Fair	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	present throughout watershed	present > 50% of watershed	present < 50% of watershed	absent	absent	Very Good	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	some	common	abundant	good	Good	Jan-06	
3	Juvenile	Landscape Context	Dispersal	Barriers between rearing habitat and estuary	present			absent	2 partial barriers	Good	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	high abundance of pools with multiple "refuge" pools (> 5 ft deep)	pools present along 50-70% of survey length	Very Good	Jan-06	
3	Juvenile	Landscape Context	Non-native species	Non-native juvenile predators	present throughout watershed	present > 50% watershed	present < 50% watershed	absent	absent	Very Good	Aug-07	
3	Juvenile	Landscape Context	Summer flow	Percent of unimpaired median summer baseflow (based on long-term mean monthly discharge)	< 70% s	70-90%	> 90%	100% over all IP-km	> 90% wetted channel	Very Good	Jan-06	

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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 19.0-20.3 C in May-Oct 2006	Fair		Mar-07	
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	25-29 taxa	30-40 taxa	> 40 taxa	high sp richness	Good		Mar-07	
3 Juvenile	Condition	Habitat complexity/refugia	Instream refugia	absent			present (boulders, overhanging banks, etc.)	good	Good		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	0 days	> 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)	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	2 partial barriers	Good		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					
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)			287 yoy in May 2006	Fair		May-07	
6	Multiple Life Stages	Landscape Context	Barriers/diversions	Stream crossings/stream mile	> two/mile			< two/mile	avg 1.9 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%	medium channelization	Good		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%	32%	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	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				Jun-02	
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	2 partial barriers	Good		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	mostly natural; groundwater extraction	Good		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 1.6 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	4.5 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%	0 % 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%	0% to < 1%	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%	48%	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%	15%	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	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 Total 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%	1.6%	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%	30%	Fair		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	fair to good cover	Good		Jan-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				Jun-07	

Overall Viability Summary
Topanga Canyon Creek, Los Angeles County

Summary of Threats										
Topanga Canyon Creek, Los Angeles 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	Urban development	Medium	Low	Medium	-	-	Very High			High
2	Roads in watershed and/or within 300 feet of watercourses	-	-	-	-	-	Very High			High
3	Recreational facilities and activities (ORV use, campgrounds, etc.)	Low	Low	-	-	-	High			Medium
4	Levees and channelization	Medium	-	-	-	-	Medium			Medium
5	Wildland fires (incl. debris flows following fires)	Medium	-	-	-	-	Medium			Medium
6	Culverts, crossings, and bridges	-	-	-	-	-	Medium			Low
7	Dams and surface water diversions	Medium	-	-	-	-	-			Low
8	Non-native species present (incl. hatchery fish)	Low	Low	-	-	-	-			Low
9	Non-point pollution from roads	Low	-	Low	-	-	-			Low
10	Channel and/or estuary maintenance, dredging, and vegetation control (incl. flood control activities)	-	-	-	-	-	Low			Low
11	Conversion of watershed lands to row crop agriculture	Low	-	-	-	-	-			Low
12	Invasive, non-native plants	-	-	Low	-	-	-			Low
13	Livestock Farming & Ranching	Low	-	-	-	-	-			Low
14	Agricultural effluents	-	-	-	-	-	-			-
15	Artificial lagoon breaching	-	-	-	-	-	-			-
16	Gas, water, and/or other utility pipelines	-	-	-	-	-	-			-
Threat Status for Targets and Project		Medium	Low	Low	-	-	Very High	-	-	High

Overall Viability Summary
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Summary of Threats										
Topanga Canyon Creek, Los Angeles 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	
17	Groundwater extraction	-	-	-	-	-	-			-
18	Illegal collecting, poaching, and/or unauthorized angling	-	-	-	-	-	-			-
19	Mining & Quarrying	-	-	-	-	-	-			-
20	Oil & Gas Drilling	-	-	-	-	-	-			-
21	Public ownership in watershed									-
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	Low	Low	-	-	Very High	-	-	High

Overall Viability Summary
Topanga Canyon Creek, Los Angeles County

Stress Matrix									
Topanga Canyon Creek, Los Angeles 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	Altered fire regime/recent fire in watershed	-	-	-	-	-	Very High	-	-
2	Impaired estuarine habitat quality	-	-	-	-	-	High	-	-
3	Altered land use from natural condition	-	-	-	-	-	High	-	-
4	Impaired water temperature	-	-	High	-	-	-	-	-
5	Altered riparian habitat quality	-	-	-	-	-	Medium	-	-
6	Impaired substrate quality (sedimentation and embeddedness)	Medium	-	-	-	-	-	-	-
7	Impaired floodplain connectivity	-	-	-	-	-	Medium	-	-
8	Impaired access to rearing and/or spawning habitat	-	-	-	-	-	Medium	-	-
9	Impaired instream habitat complexity/refugia	-	-	Medium	-	-	-	-	-
10	Impaired habitat complexity/refugia	-	Medium	-	-	-	-	-	-
11	Impaired access to estuary	-	-	Medium	-	-	-	-	-
12	Impaired food availability	-	-	Medium	-	-	-	-	-
13	Non-native predators	-	Low	Low	-	-	-	-	-
14	Non-native egg predators	Low	-	-	-	-	-	-	-
15	Altered hydrograph	-	-	-	-	-	Low	-	-
16	Impaired summer base flows	-	-	Low	-	-	-	-	-

Overall Viability Summary
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Stress Matrix									
Topanga Canyon Creek, Los Angeles 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	Impaired flows during rearing period	-	-	Low	-	-	-	-	-
18	Impaired access to ocean	-	-	-	Low	-	-	-	-
19	Impaired water quality	-	-	-	-	-	Low	-	-
20	Impaired access to spawning areas	-	-	-	-	Low	-	-	-
21	Impaired riparian habitat quality	-	-	-	-	-	-	-	-
22	Low adult population size	-	-	-	-	-	-	-	-
23	Altered sediment supply	-	-	-	-	-	-	-	-
24	Impaired water temperature in spawning areas	-	-	-	-	-	-	-	-
25	Impaired water temperatures in migration corridor	-	-	-	-	-	-	-	-
26	Impaired access to stream from ocean (stream mouth closed)	-	-	-	-	-	-	-	-
27	Impaired estuarine inflows	-	-	-	-	-	-	-	-
28	Altered base flows during incubation	-	-	-	-	-	-	-	-
29	Dispersal barriers between redds and rearing habitat	-	-	-	-	-	-	-	-
30		-	-	-	-	-	-	-	-
31		-	-	-	-	-	-	-	-
32		-	-	-	-	-	-	-	-

**Overall Viability Summary
Topanga Canyon Creek, Los Angeles County**

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

Overall Viability Summary

Topanga Canyon Creek, Los Angeles County

Detailed Viability Summary

Topanga Canyon Creek, Los Angeles County

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