

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

**Assessment of Target Viability**  
**Arroyo Hondo Creek, Santa Barbara County**

Assessment of Target Viability													
Arroyo Hondo Creek, Santa Barbara County													
				Double-click opens entry form									
				Indicator Ratings									
				<i>Italics = Desired</i>									
				<b>Bold = Current</b>									
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	< 50%	Very 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	high abundance of high quality spawning substrate	Very Good		Jun-02	
1	Egg	Condition	Substrate quality	Embeddedness	> 75% embedded	50-75% embedded	25-49% embedded	< 25% embedded	< 25% embeddedness	Very Good		Jun-02	
2	Fry	Landscape Context	Dispersal	Barriers between redds and rearing habitat	complete barrier	partial barriers common	partial barriers scarce	no barriers	no barriers	Very Good		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					

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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		Jun-02	
3 Juvenile	Landscape Context	Dispersal	Barriers between rearing habitat and estuary	present			absent	culverts present, but permeable	Good		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)	high abundance of pools, with refuge pools	Very Good		Jun-02	
3 Juvenile	Landscape Context	Non-native species	Non-native juvenile predators	present throughout watershed	present > 50% watershed	present < 50% watershed	absent					
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 surface flows	Very 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%	perennial surface flows	Very Good		Jun-02	

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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.)	high amount of instream cover	Very 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					
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%	< 50%	Very Good		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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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	Hwy 101 & UPRR culverts improved in 2007; remainder of main stem is accessible	Good		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%	perennial surface flows	Very Good		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)							
6	Multiple Life Stages	Landscape Context	Barriers/diversions	Stream crossings/stream mile	> two/mile			< two/mile	avg 0.7 crossings/mile	Good		Jan-08	
6	Multiple Life Stages	Landscape Context	Channel flow and morphology	Percent of total watercourse length channelized	> 25%	16-25%	5-15%	< 5%	< 5%	Very Good		Jun-02	

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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%	44%	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	> 80%	Very Good		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	67%	Good		Jan-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	perennial surface flows	Very Good		Jun-02	
6	Multiple Life Stages	Landscape Context	Hydrology	Hydrograph	severely modified			natural	largely natural	Very 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%	69% of watershed is publicly owned; > 75% along main stem	Very Good		Jun-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	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 0.68 mi/sq mile	Fair		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	1.8 mi/sq mile to 2.51 miles/sq. mi.	Fair		May-08
6	Multiple Life Stages	Landscape Context	Land use	Percent of watershed area in agricultural use	> 30%	20-29%	10-19%	< 10%	0.2% to 4.8%	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%	0.8%	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%	69% public ownership	Good		Jun-02
6	Multiple Life Stages	Landscape Context	Land use	Percent of watershed area in urban/residential use	> 25%	10-25%	5-9%	< 5%	< 0.2%	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	probably very low	Very Good		Jun-02
6	Multiple Life Stages	Landscape Context	Water quality	Percent total impervious surfaces as % of watershed area	>40%	21-40%	5-20%	< 5%	0.09% to 0.2%	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%	5%	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	81% to 96%	Very 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	probably > 75%	Very Good		Jun-07	

**Overall Viability Summary**  
**Arroyo Hondo Creek, Santa Barbara County**

<b>Summary of Threats</b> <span style="float: right; color: red;">Click the page-down icon ▼ to the right to view more summary tables.</span>										
<b>Arroyo Hondo Creek, Santa Barbara County</b>										
<b>Threats Across Targets</b>		Egg	Fry	Juvenile	Smolt	Adult	Multiple Life Stages			<b>Overall Threat Rank</b>
		1	2	3	4	5	6	7	8	
1	Roads in watershed and/or within 300 feet of watercourses	Low	Low	Medium	Medium	Medium	Very High			High
2	Culverts, crossings, and bridges	-	Low	Low	Low	Low	Very High			High
3	Levees and channelization	-	-	-	-	-	Very High			High
4	Wildland fires (incl. debris flows following fires)	Low	Low	-	-	Low	High			Medium
5	Non-point pollution from roads	Low	-	Low	-	-	High			Medium
6	Livestock Farming & Ranching	Low	Low	Low	-	-	Low			Low
7	Conversion of watershed lands to row crop agriculture	Low	-	Low	-	-	Low			Low
8	Channel and/or estuary maintenance, dredging, and vegetation control (incl. flood control activities)	-	Low	-	-	-	-			Low
9	Invasive, non-native plants	-	-	Low	-	-				Low
10	Recreational facilities and activities (ORV use, campgrounds, etc.)	-	-	-	-	-	Low			Low
11	Agricultural effluents	-	-	-	-	-	-			-
12	Artificial lagoon breaching	-	-	-	-	-	-			-
13	Dams and surface water diversions	-	-	-	-	-	-			-
14	Gas, water, and/or other utility pipelines	-	-	-	-	-	-			-
15	Groundwater extraction	-	-	-	-	-	-			-
16	Illegal collecting, poaching, and/or unauthorized angling	-	-	-	-	-	-			-
<b>Threat Status for Targets and Project</b>		Low	Low	Low	Low	Low	Very High	-	-	High

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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
1	Impaired estuarine habitat quality	-	-	-	-	-	Very High	-	-
2	Altered fire regime/recent fire in watershed	-	-	-	-	-	Very High	-	-
3	Altered land use from natural condition	-	-	-	-	-	Medium	-	-
4	Impaired access to rearing and/or spawning habitat	-	-	-	-	-	Medium	-	-
5	Impaired access to spawning areas	-	-	-	-	Medium	-	-	-
6	Impaired access to ocean	-	-	-	Medium	-	-	-	-
7	Impaired access to estuary	-	-	Medium	-	-	-	-	-
8	Altered riparian habitat quality	-	-	-	-	-	Low	-	-
9	Impaired water quality	-	-	-	-	-	Low	-	-
10	Impaired habitat complexity/refugia	-	Low	-	-	-	-	-	-
11	Altered hydrograph	-	-	-	-	-	Low	-	-
12	Impaired flows during rearing period	-	-	Low	-	-	-	-	-
13	Impaired summer base flows	-	-	Low	-	-	-	-	-
14	Altered base flows during incubation	Low	-	-	-	-	-	-	-
15	Impaired estuarine inflows	-	-	Low	-	-	-	-	-
16	Impaired floodplain connectivity	-	-	-	-	-	Low	-	-

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

## Overall Viability Summary

### Arroyo Hondo 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	Very Good	
	Size									-	
2	<b>Fry</b>	<b>Very Good</b>									
	Landscape Context				1				1	Very Good	
	Condition				1				1	Very Good	
	Size									-	
3	<b>Juvenile</b>	<b>Very Good</b>									
	Landscape Context			1	2			1	2	Very Good	
	Condition				2				2	Very Good	
	Size									-	
4	<b>Smolt</b>	<b>Very Good</b>									
	Landscape Context				1				1	Very Good	
	Condition									-	
	Size									-	
5	<b>Adult</b>	<b>Good</b>									
	Landscape Context			1	1			1	1	Good	
	Condition									-	
	Size									-	
6	<b>Multiple Life Stages</b>	<b>Poor</b>									
	Landscape Context	1		3	4	1	2	3	10	Poor	
	Condition	1			1	1			2	Poor	
	Size									-	
7											
	Landscape Context									-	
	Condition									-	
	Size									-	
8											
	Landscape Context									-	
	Condition									-	
	Size									-	