

**Arroyo Sequit, Los Angeles and Ventura counties
CAP Workbook Threats Assessment Summary Tables
2008**

Assessment of Target Viability
Arroyo Sequit, Los Angeles and Ventura counties

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Arroyo Sequit, Los Angeles and Ventura counties

Double-click opens entry form

				Indicator Ratings									
				Bold = Current				<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	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	good to excellent	Very Good		Jan-06	
1	Egg	Condition	Substrate quality	Embeddedness	> 75% embedded	50-75% embedded	25-49% embedded	< 25% embedded	avg 41%	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	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	fair	Fair		Jan-06	
3	Juvenile	Landscape Context	Dispersal	Barriers between rearing habitat and estuary	present			absent	3 severe to impassable barriers	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	high abundance of pools with multiple "refuge" pools (> 5 ft deep)	30-70% of survey length	Good		Jan-06	
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% s	70-90%	> 90%	100% over all IP-km	probably poor	Poor		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.				
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				
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	0 days				Jun-02
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	< 10 days in 2006	Poor		Mar-07
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	3 severe to impassable barriers	Poor		Jan-06

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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	< 10 days in 2006	Poor		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)			one fish observed June-Nov 2005	Poor		May-07	
6	Multiple Life Stages	Landscape Context	Barriers/diversions	Stream crossings/stream mile	> two/mile			< two/mile	mean 1.2 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%	little channelization	Very 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%	80% in past 25 yrs	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				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	3 severe to impassable barriers; 99.6% of reaches inaccessible	Poor		Jan-08	

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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	79-85% dry	Poor		Jan-06	
6	Multiple Life Stages	Landscape Context	Hydrology	Hydrograph	severely modified			natural	mostly natural	Very 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	mean 1.2 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	3.29 mi/sq mi.	Poor		Jun-08	
6	Multiple Life Stages	Landscape Context	Land use	Percent of watershed area in agricultural use	> 30%	20-29%	10-19%	< 10%	1% in agriculture	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%	0-1%	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%	54% to 70%	Good		Jan-08	
6	Multiple Life Stages	Landscape Context	Land use	Percent of watershed area in urban/residential use	> 25%	10-25%	5-9%	< 5%	0.6% to 3%	Very Good		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	Total N and P low	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%	0.6%	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%	10%	Poor		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						

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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	Riparian corridor quality	Riparian canopy cover	< 25% cover	25-49% cover	50-75% cover	> 75% cover	avg 87.5% cover	Very Good		Jan-08	
6	Multiple Life Stages	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
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Summary of Threats Click the page-down icon ▼ to the right to view more summary tables.										
Arroyo Sequit, Los Angeles and Ventura counties										
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	Low	High	High	High	Very High	Very High			Very High
2	Roads in watershed and/or within 300 feet of watercourses	Low	High	High	High	Very High	Very High			Very High
3	Recreational facilities and activities (ORV use, campgrounds, etc.)	Low	Medium	High	High	Very High	Very High			Very High
4	Wildland fires (incl. debris flows following fires)	Low	-	-	-	-	High			Medium
5	Non-point pollution from roads	Low	-	Low	-	-	Medium			Low
6	Urban development	Low	-	Medium	-	-	-			Low
7	Agricultural effluents	-	-	-	-	-	Low			Low
8	Conversion of watershed lands to row crop agriculture	-	-	-	-	-	Low			Low
9	Invasive, non-native plants	-	-	Low	-	-	-			Low
10	Levees and channelization	-	Low	-	-	-	-			Low
11	Livestock Farming & Ranching	-	-	-	-	-	Low			Low
12	Artificial lagoon breaching	-	-	-	-	-	-			-
13	Channel and/or estuary maintenance, dredging, and vegetation control (incl. flood control activities)	-	-	-	-	-	-			-
14	Dams and surface water diversions	-	-	-	-	-	-			-
15	Gas, water, and/or other utility pipelines	-	-	-	-	-	-			-
16	Groundwater extraction	-	-	-	-	-	-			-
Threat Status for Targets and Project		Low	High	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	Illegal collecting, poaching, and/or unauthorized angling	-	-	-	-	-	-			-
18	Mining & Quarrying	-	-	-	-	-	-			-
19	Non-native species present (incl. hatchery fish)	-	-	-	-	-	-			-
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		Low	High	High	High	Very High	Very High	-	-	Very High

Overall Viability Summary
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Stress Matrix									
Arroyo Sequit, Los Angeles and Ventura counties									
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	Impaired access to rearing and/or spawning habitat	-	-	-	-	-	Very High	-	-
4	Low adult population size	-	-	-	-	Very High	-	-	-
5	Impaired access to spawning areas	-	-	-	-	Very High	-	-	-
6	Impaired access to stream from ocean (stream mouth closed)	-	-	-	-	Very High	-	-	-
7	Impaired access to ocean	-	-	-	High	-	-	-	-
8	Impaired instream habitat complexity/refugia	-	-	High	-	-	-	-	-
9	Impaired summer base flows	-	-	High	-	-	-	-	-
10	Impaired habitat complexity/refugia	-	High	-	-	-	-	-	-
11	Impaired access to estuary	-	-	High	-	-	-	-	-
12	Impaired water quality	-	-	-	-	-	Medium	-	-
13	Impaired flows during rearing period	-	-	Medium	-	-	-	-	-
14	Altered land use from natural condition	-	-	-	-	-	Medium	-	-
15	Altered hydrograph	-	-	-	-	-	Medium	-	-
16	Altered riparian habitat quality	-	-	-	-	-	Low	-	-

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Stress Matrix									
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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
17	Impaired floodplain connectivity	-	-	-	-	-	Low	-	-
18	Impaired substrate quality (sedimentation and embeddedness)	Low	-	-	-	-	-	-	-
19	Impaired riparian habitat quality	-	-	-	-	-	-	-	-
20	Dispersal barriers between redds and rearing habitat	-	-	-	-	-	-	-	-
21	Impaired water temperatures in migration corridor	-	-	-	-	-	-	-	-
22	Impaired water temperature in spawning areas	-	-	-	-	-	-	-	-
23	Non-native egg predators	-	-	-	-	-	-	-	-
24	Non-native predators	-	-	-	-	-	-	-	-
25	Altered base flows during incubation	-	-	-	-	-	-	-	-
26	Impaired food availability	-	-	-	-	-	-	-	-
27	Impaired estuarine inflows	-	-	-	-	-	-	-	-
28	Impaired water temperature	-	-	-	-	-	-	-	-
29	Altered sediment supply	-	-	-	-	-	-	-	-
30		-	-	-	-	-	-	-	-
31		-	-	-	-	-	-	-	-
32		-	-	-	-	-	-	-	-

Overall Viability Summary
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Overall Viability Summary								
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Conservation Targets		Landscape Context		Condition		Size		Viability Rank
		Grade	Weight	Grade	Weight	Grade	Weight	
1	Egg	-	1	Very Good	1	-	1	Very Good
2	Fry	-	1	Fair	1	-	1	Fair
3	Juvenile	Poor	1	Fair	1	-	1	Fair
4	Smolt	Poor	1	-	1	-	1	Poor
5	Adult	Poor	1	-	1	Poor	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

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Detailed Viability Summary

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