NMFS California Anadromous Fish Distributions

Southern California Steelhead ESU

(Santa Maria River to Malibu Creek)

Current Stream Habitat Distribution Table

Table to be used with Bibliography and 'Contacts and Expertise' List

(Streams listed from north - to south)

Stream / *Tributary*	Species[1]	Upper Limit of Run	Sources References/ Pers. comm.	Comments	Survey Dates [2]
Southern Steelhead[1] - Southern steelhead may have occupied as much as 15% of the winter steelhead range in California, but the present distribution in southern California has been reduced to perhaps 1% of the stream miles they formerly inhabited (E. Gerstung, in: CDFG, 1995). Juvenile steelhead rear in fresh water 1- 4 years and then spend 1-5 years (usually 2-3 in California) in the ocean. Southern steelhead usually spend less time in fresh water because of inhospitable conditions in the lower reaches of Southern California streams. Therefore they may migrate to the ocean or have greater dependancy on coastal lagoons during the first year. Fish movements both upstream and downstream coincide with flow pulses from storms. These coastal streams are characterized by sand bar build up during low flow summer months at the mouth.					
SOUTHERN CALIFORNIA ESU - STEELHEAD Listed as an endangered species on 8/18/97. The ESU includes all naturally spawned populations of steelhead (and their progeny) in streams from the Santa Maria River to Malibu Creek.					
Santa Barbara County (line follows the Santa Maria R. and Cuyama R.)					
Santa Maria R.	SH-W	(Santa Maria ends at confluence of Cuyama and Sisquoc Rivers)	Titus et al. 2000	Primarily used as a migration corridor	?
Cuyama R.	SH-W	Up to the Vaquero Dam (Twichell Reservoir) ~ 6.5 miles (11 km) upstream.	Titus et al. 2000	No current info.	?
Sisquoc R.	SH-W RT	Unimpeded access to Lower Bear Camp	Titus et al. 2000 Trautwein, pers.comm Cardenas, pers.comm. Cooper, pers. comm.	Large pools on USFS lands held 20-28" SH adults in recent years, particularly in El Nino years. Good rearing habitat in upper reach, middle reach has intermittent pools, and lower reach is often dry. RT reported common with several	1984, 1992 1995, 1999 2000

				size classes present. Genetic SH/RT studies reveal "native" gene pool is still present.	
Tepusquet Cr.	?				
Shuman (Canyon) Cr.		8-10 ft. Barrier at upper end of lagoon	Swift 2000	No SH/RT detected in Spring 2000 trapping. Lagoon barrier precluded use by steelhead.	2000
Casmalia Canyon Cr.					
San Antonio Cr.	?	Probable flow barrier @ Barkas Slough, at crossing of San Antonio Rd. East.	Titus et al. 2000 Parmenter 1993 Swift 2000 Read, pers. comm.	Casual survey of general conditions of the lower creek concluded that the low gradient and soft sediment substrate did not give the stream a high priority status for further investigation. Lower 8 mi. is on Vandenburg Air Force Base & focus of new SH habitat study. Winter flow almost non-existent upstream of Barkas Slough.	(1993) 2000
Santa Ynez R.	SH-W RT	To Bradbury Dam/ Cachuma Lake (1953) ~45.5 miles (76 km) upstream. Gibralter Dam (1920) ~69.5 miles (116 km) upstream Jameson Reservoir - above Gibralter Dam	Engblom 1995-2000 Titus et al. 2000 Trautwein 1993 CDFG 1975 Engblom, pers. comm	Construction of Cachuma Project (Bradbury Dam) as an emergency measure in 1949-1953 blocked access to almost all historic spawning and rearing habitat and almost entirely reduced the run by 1975. A 1986 CDFG survey noted the presence of suitable spawning areas below Bradbury Dam, but even when adults could enter the river with high flows, low summer flow levels would not be maintained to ensure juvenile survival. Greater rainfall in 1993-94 provided suitable flows and large SH/RT were observed. Some fish flows released below dam by BOR as of 1996. In 1997, 2 SH/RT seen; in 1999, 8 adult SH found below Bradbury Dam	1972, 1986 1993, 1994 1995-present
Santa Ynez Lagoon	SH-W RT	Sand bar usually open Jan-May; opens sporadically rest of year	USFWS 1995 Engblom 1995-2000 Engblom, pers. comm	Long linear lagoon (~13,000 ft. and 300 ft. width, ave. depth ~4 ft. deep). On-going passive trapping surveys for one week periods, three times per year, to assess steelhead use. Upstream discharge of treated wastewater contributes to periodic opening of sandbar during low flow/dry periods in lower reach.	1987-88 (1993) 1995-2000
San Miguelito	RT	Physical barriers :	SYR Fish Mgt. Plan 1999	Good habitat with ephemeral flows. Resident rainbow population	1997-present

Cr.		(1) Lower 3 miles - concrete channel; (2) 3 miles debris basin with 12 ft. wall; (3) 4 miles concrete ford with 4.5 ft. drop; (4) 5 miles concrete apron 19 ft. high with 9 ft. vertical drop.	Engblom 1997-2000 Engblom, pers. comm	present. 1997 survey found 50 SH/RT redds in about 2 mi. of creek. 1984 channelization effectively blocked steelhead.	
Salsipuedes Cr.	SH-W RT	Trib. mouth ~24km upstream from the Pacific. Low flow barrier at Hwy 1 crossing @ 3.6 mi. above creek mouth.	Engblom 1995-2000 BOR 1994 Sasaki in: *Titus et al. 2000* Cardenas 1993 Trautwien 1993 Harper 1988 Engblom, pers.comm.	Stream has suitable and accessible spawning areas, perennial flows, and an intact riparian canopy. Although spawning surveys were not conducted, Sasaki (CDFG) noted many steelhead fingerlings in creek during his 17 year employment. SH adults and juveniles noted in many years. Redds seen in 1997 between Santa Rosa Rd. and confluence, & upstream of El Jaro Cr. confluence.	1974, (1986) 1987, 1988 1993, 1994-present
El Jaro Cr.	SH-W RT	Low flow passage barrier ~1/3 mi. up from confluence.	SYR Fish Mgt. Plan 1999 Engblom 1995-2000 BOR 1994 Titus et al. 2000 CDFG 1993b Harper 1988	Stream characterized by clay (silt) and sandy substrate, several deep pools, abundant algae, limited spawning habitat and eroding banks (1993). Electrofishing surveys observed juveniles and 2 adults in 1987; 1 adult in 1993. Redds identified in 1997 from mouth to Cross Creek. Decent habitat ~0.5 mi. above mouth.	1974, 1986, 1987, 1993, 1995-present
Santa Rosa Cr.	none	n/a	Engblom, pers.comm.	Small tributary, no current use. Dries completely.	(1995)
La Purisma Cr.	none	n/a	Ed Ballard (USFWS), cited by Engblom, pers. comm.	No fish observed. No water in creek.	(1995)
Nojoqui Cr.	SH-W RT	Low flow passage barrier (Concrete boulder dascade >4 ft.) 2.5 mi., possible barrier (culvert(at 3.5 mi.) Falls in headwaters	SYR Fish Mgt. Plan. 1999 Engblom 1995-2000 BOR 1994 Engblom, pers.comm. Cardenas, pers.comm	"Good" habitat noted in one study while DFG biologist calls it "poor". Large portions of stream dry. Two SH/RT of 11-12" fish documented migrating upstream (1998); subsequent snorkeling survey found no young-of-the year. Nojoqui Falls on Los Padres N.F.	1995-present
Alisal Cr.	SH-W RT	Blocked at dam and reservoir ~2.5 miles upstream. Concrete apron ~100' from the mouth (5' wall 50 ft. apron)	Engblom 1995-2000 BOR 1994 Titus et al. 2000 Engblom, pers.comm. Harrison, pers.comm	Good habitat throughout primarily private property. Access granted in 1995 to trap, which observed 2 (16") SH and a RT population. An adult SH (~38cm) was captured in 1993-94 and 2 spawning SH (24") seen by warden within golf course reach in 2000. RT inhabit creek upstream of reservoir.	1993, 1995-2000
Alamo		No known barriers.		Sandbars present within a dry	1995-2000

Pintado Cr.	SH-W RT		Engblom 1995-2000 Engblom, pers.comm.	portion upstream of Hwy 154. Seasonally wet with higher reaches usually perennial. No fish observed in higher reaches while trapping in 1995/96. SH/RT known to present about 10 mi. upstream.	
Zanja de Cota Cr.	SH-W RT			Santa Ynez Valley. Historically used for SH spawning and RT stocking.	
Quiota Cr.	SH-W RT	No known barrier to steelhead (Cardenas), but low/high flow passage barriers noted @1.3-1.6 miles upstream (9 road crossings) in Plan	SYR Fish Mgt. Plan. 1999 Engblom 1995-2000 BOR 1994 Engblom, pers.comm. Cardenas, pers.comm	Contains best habitat of the system. Lower portion (private) of stream influenced by intermittent flows and cattle presence. Trapped in 1995 with 16" adult found; spawning activity documented. Juvenile trout noted every year 1994-2000 within one mile reach ~2 mi. above mouth (Cardenas).	1994-2000
Unnamed south trib. to Quiota .	RT	To upper extent of drainage.	Engblom, pers.comm.	Spring-fed areas with healthy resident populations observed in upper area in 1994.	1994
Santa Agueda Cr.	(SH-W)	n/a	Engblom 1995-2000 CH2M-Hill 1998	May serve as intermittent corridor for immigrant adult and emigrant juvenile steelhead. Potential spawning and rearing reaches in the headwaters (past Barrack Ranch). Dries during summer.	(1998) 1995-2000
Hilton Canyon Cr.	SH-W	Barriers: (1) high flow barrier at cascade and bedrock chute. (~1300' upstream); (2) concrete culvert (velocity barrier) below Hwy 154	Engblom 1995-2000 Fusaro 1995 BOR 1994 Titus et al. 2000 Engblom ,pers.comm.	Upper portion on private property, with ~2800' on public lands. 1500' of stream presently available for spawning and rearing. Usually an ephemeral stream, Hilton recently began to receive supplemental flows from Lake Cachuma (<18C water) into 2 locations as mitigation for dam. Spawning documented since 1995(excluding 1996). Several large RT/SH were observed in 1993 and 1995. Fish passage improvement project (CalTrans) will extend upper limit.	1993,1995- present
(Canada) Honda Cr.	?	No barriers were found	Titus et al. 2000 Parmenter 1993 Swift 2000	Creek is contained within the boundaries of the Vandenburg Air Force Base. A brief CDFG survey showed highly suitable SH habitat (favorable spawning and rearing conditions with intact riparian and instream habitat) with no apparent migration barriers at Highway 1 and railroad crossings. Creek was dry in 1987-1992 drought. No evidence of SH in spring 2000	? 2000

				trapping.	
Jalama Cr.	SH-W	Lagoon's gravel bars can be barriers to upstream migration	Cardenas, pers.comm Swift 2000	DFG Wild Trout Team survey data noted adult steelhead. No SH found in spring 2000 trapping. No SH taken for several years.	1996(?) 2000
Canada del Cojo Cr.				Point Conception divide	
Arroyo San Augustine					
Arroyo el Bulito					
Canada Santa Anita	SH-W?		Trautwein, pers.comm	Some creeks on Hollister Ranch in this area have SH; may be adjacent streams.	
Canada Alegria					
Canada Aqua Caliente					
Gaviota Cr.	SH-W RT	Partial barriers caused by: (1) Gaviota State Park road crossing; (2) grade stabilization structures in reach near Hwy 101 between State Park and Hwy 1 - 101 junction.	CDPR 1999 Trautwein 1999 Parmenter & McEwan 1999 Carpanzano 1996 Glick, pers. comm.	Adult steelhead reported almost annually attempting to ascend the stream at the Gaviota State Park Rd. crossing. Perennial flows. State Park pipe culvert replaced by a freespan one in 1997 but is still a barrier at certain flows. Boulder weirs placed to help passage at lowest grade structure were washed out in 2/00.	1986,1992, 1993,1998, (1998),1999
Las Canovas Cr.		Hwy 101 culvert/tunnel on Gaviota Cr.	Johnson 1999 CDPR 1999 Glick, pers. comm.	No SH/RT observed while snorkeling 7 pools. Water quality and habitat conditions suitable for steelhead. Best fish habitat in State Park.	(1998)
Las Cruces (Canyon) Cr.		No mention of upper limit	Trautwein, pers. comm.	Water quality changed in the last 5-6 years. Previous years not as muddy.	?
San Onofre Cr.	SH-W	To natural barrier, .75 mi from ocean - impassable. Possible barrier at Hwy 101 under certain flows.	Johnson 1999 Trautwein, pers. comm.	Steelhead observed until 1991. More than usual seen during wet years ('95 and '97). Good habitat and fishing pressure.	<1991 1995, 1997
Canada del Molino	?	To Brinkman agricultural dam (15-20 ft. built 1980's)	Johnson 1999		?
Arroyo Hondo Cr.	SH-W	Barrier at culvert under Hwy 101	Johnson 1999 Cardenas, pers.comm	May support the "best anadromous steelhead run in the southern part of county". Small and functional estuary at the mouth. Juveniles and adults observed.	?

Arroyo Quemado	?	Possible barrier at Hwy 101 culvert.	Johnson 1999 Arve Sjvold as cited by Trautwein, pers. comm.	No fish observed, however the creek was fished up until the 1980's. Good habitat observed in the foothills. Water diversions and excess sediment noted.	?
Tajiguas Cr.	?	?	Trautwein, pers. comm.	No fish observed during visits to the drainage (during the drought).	?
Canada Del Refugio (Refugio Cr.)	SH-W? RT	To natural falls up the canyon. Possible barriers: (1) Hwy. 101 culvert;(2) low water crossing in lower creek.	Johnson 1999 Titus et. al. 1994 Trautwein, pers. comm.	The current status of the population is unknown. Juvenile rainbow trout seen in 1990 (12" to 13").	1990
Las Flores Canyon Cr.	?	no mention of upper limit	Trautwein, pers. comm.		1986
Canada Del Corral Cr.	?	n/a	Titus et. al. 1994 Trautwein, pers. comm.	Documents in the CDFG file expressed concern for the steelhead resource in relation to pollution from oil extraction operations in the lower stream area. Big creek with suitable habitat and perennial flows in sections.	1986
Canada del Capitan	?	Possible barrier at Hwy 101 crossing	Johnson 1999		?
Gato (Canyon) Cr.	?	Possible barriers include: (1) Hwy. 101 culvert, (2) water diversion dam (3) water diversion	Johnson 1999 Trautwein, pers. comm.	Fish observed (not personally) in 1980. Diversion started in mid 1980's (lower portions of the stream dewatered).	1980
Dos Pueblos Canyon Cr.	SH-W RT	To at least 4 miles upstream. Partial barriers include:(1) Hwy 101 bridge check structure (2) ag water diversion dams	Johnson 1999 Titus et. al. 1994 Trautwein, pers. comm.	Apparently contains adequate habitat as it has received CDFG plants of rainbow trout . Juvenile rainbow and steelhead observed throughout. Excellent riparian habitat (alders present). 15" fish observed downstream Hwy 101 bridge ('93 and '94)	1993,1994,
Eagle Canyon Cr.	?	Culvert at Hwy 101 with long sloping concrete section may pose a barrier.	?	Potential use in wet years. Small berm forms at the mouth during low flow months. NMFS review of proposed golf course.	?
Tecolote (Canyon) Cr.	SH-W	~6 miles (10km) of stream available. 18 ft. (6m) waterfall at this point. Barriers downstream of the falls included: (1) flood control dams (~6 ft, 12 ft.); (2)75 ft. inclined concrete culvert (hwy 101); (3)	Johnson 1999 Gantt 1973	In 1973, high quality spawning and rearing areas were located along most of the stream. A landowner group stocked steelhead (from Waddell Cr) and rainbow trout. Groundwater extraction and surface diversion and 2 drought periods most likely have negatively impacted the	1973

		railroad crossing culvert and (4) ag water diversion dams / surficial flows in the lower mile of stream during the dry season.		population.	
Elwood Canyon Cr.	?	No mention of upstream habitat.	Trautwein, pers. comm.	Good habitat observed within National Forest in 1999.	(1999)
Winchester Canyon Cr.	?		Swift et al. 1993		?
Devereaux Slough	?		Swift et al. 1993		?
The drainages listed below feed the **Goleta Slough** area.					
Tecolotito Cr. **(Glen Annie Cr.)**	?	To Glen Annie Reservoir Dam (90 ft.). Barrier at Hwy. 101 culvert, channel and check structure	Johnson 1999 SB Co. Flood Control Dist. 1999 Trautwein, pers. comm.	Superb habitat with usually some water all year. Lower portion or the creek called Tecolotito Cr. and upper portion Glenn Annie (Canyon) Cr.	(1999) ?
McCoy (Canyon) Cr.	?	See above	Trautwein, pers. comm.	Best habitat of Tecolotito system.	1984-1999
Carneros Cr.	?	Barriers at Hwy 101 culvert and channel and check structure above (if still there)	Johnson 1999 Johnson, pers. comm. Trautwein, pers. comm.	Moderate to good habitat above in mountains. Occasional use by steelhead in lower potions of stream	1999
San Pedro Cr.	SH-W	To Fairview Falls if barriers at Hwy 101 are passable (culvert and channel, railroad crossing check sturcture)	Johnson 1999 SB Co. Flood Control Dist. 1999b Trautwein 1999	Steelhead records include: (1)1983 photo of 30" steelhead caught below railroad check dam, (2) Juvenile fish observed below Fairview Falls (5 fish 4-6" long), (3) 29" gravid female carcass recovered in lower esturary (in UCSB freezer - scale sample Dr. J. Neilson). From Cathedral Oaks Rd. to Covington Way, creek has steep wide banks with well-developed canopy. Below Hwy. 101, vegetation is sparse, flow intermittent.	1983,1992, 1995, (1999)
Las Vegas Cr.	?	n/a	Santa Barbara Co. Flood Control Dist. 1999b	Intermittent flows with vegetation colonizing the channel bottom, subject to sedimentation (chronic erosion upstream) in low gradient areas.	(1999)
San Jose Cr.	SH-W RT	To natural waterfall above Trout Club by Hwy 154. Barriers include: (1) below Hollister Ave.	Johnson 1999 Santa Barbara Co. Works Dept. 1999 Titus et al. 2000 Trautwein, pers. comm.	1 adult steelhead caught in 1975. Rainbow observed in 1994. Lower portion of creek is channelized with a concrete lining for flood control (no pools/ resting areas for immigrating fish). Most fish observed above water diversion in	1975, 1980+ 1994 1999

		Concrete lined flood channel for ~3000; (2) the channel lined with vertical cement walls and straightened (Calle Real Bridge to Hwy 101); (3) and water diversion (ag check dam)		orchard (~3.5 mi. from the ocean). Trout Club raised fish relocated from the Santa Ynez River.	
Fremont Cr.	?	n/a	Trautwein, pers. comm.	Anecdotal (not personal) record of having to relocate fish. Perennial flow.	?
Atascadero Cr.	SH-W	Barriers include: (1)Check structures at Modoc Rd. (2)Flood control concrete channels above Modoc. Rd.	Johnson 1999 Trautwein, pers. comm.	Steelhead runs in recent years. Juvenile fish captured in 1984/85. Fish kill (12) occurred in 1999.	1984,1985 1999
Cienequitas Cr.	SH-W?	n/a	Santa Barbara Co. Flood Control Dist. 1999b Trautwein, pers.comm Cardenas, pers.comm	Small creek with perennial flows and poor habitat (large amounts of rubbish, polluted water). Habitat below Modoc Rd. improving. Fish believed to stray from San Jose Cr.. "Trout" noted as present. Stunted adult found on bank on 4/00.	<1999 2000
Maria Ygnacio Cr.	SH-W	To debris basin dam. ~ 3000' north of San Marcos Rd. (1990 by U.S.SCS & SBCFCD)	Johnson 1999 Santa Barbara News-Press 4/23/82 Nehlsen et al. 1991 Trautwein, pers.comm Cardenas, pers. comm	Two adults (5 and 10 lbs.) captured in 1982 Juveniles seen from summer 1999 to fall 1999 around San Marcos Rd., and adult SH identified at Old San Marcos Bridge. Nehlsen et al. listed the native stock as extinct. Debris basin built after the Painted Cave Fire in 1990.	1982,1999 2000
E.F. Maria Ygnacio	?	To debris basin dam (1990) 1000' north of Via Regina.	SB Co. Flood Control Dist. 1996 Trautwein, pers.comm	Marginal habitat. Debris basin built after the Painted Cave Fire in 1990, by U.S. Soil Conservation Service and SBCFCD.	?
San Antonio Cr.	SH-W RT	Probable barrier at Hwy 101. Barrier @ Debris basin (built 1964) @ 2000' ft. upstream of Tuckers Grove County Park. Natural falls higher in system.	Johnson 1999 Trautwein 1999 SB Co. Flood Control Dist. 1996	SH/RT seen in 1985 above the debris basin and Hwy 154 at the onset of drought. Good habitat above debris basin. Ancedotal report in 1970 of 18" fish below basin. Debris basin built after Coyote Fire.	1970, 1985 1999
Drainages that feed the **Goleta Slough** are listed above.					
Arroyo Burro Cr.	SH-W	Culverts & structures at Modoc Rd., Hwy. 101, and Calle Real may be potential major barriers	SB Co. Flood Control Dist. 1999b Johnson 1999 Trautwein, pers. comm.	Adults seen by Santa Barbara City Public Works in early 1980's in lower portion -anecdotal. Debris basin present in the drainage. Generally perennial flows, good riparian habitat, poor water quality	1980s (1999)

				has resulted in beach closure at Hendry's Beach.	
San Roque Cr.	?	Debris basin ~ 2000' north of Foothill Rd. (1964-COE)	Johnson 1999 Trautwein, pers. comm.	Ephemeral flows and fair habitat. Debris basin built after the Coyote Fire.	1999
Mission Cr.	SH-W RT	To Old Indian Dam, historic structure at the Botanical Gardens. Debris Basin ~2000' upstream of Botanical Gardens off Mission Rd. (built in 1964).	Trautwein 1998 SB Co. Flood Control Dist. 1996 COE 1995 Titus et al. 2000 Cooper et al. 1986 Santa Barbara News-Press, 6/3/84 Trautwein, pers.comm Cardenas, pers. comm Johnson, pers. comm.	SH greater than 15" observed for past 3 years throughout creek. Adult SH identified in reach from lower Mission Cr. to lower Rattlesnake Cr., including a 27" spawner in lower creek just below CalTrans channel lining. In 1998, 5-6 SH observed near S.B. Museum of Natural History/ S.B. Mission. Migration barriers (flood control structures). Lower creek typically dry, but suitable habitat above and below debris dam. Debris Basin built after Coyote Fire.	1984,1995, 1998-2000
Rattlesnake Cr.	SH-W RT	Significant falls and steep channel at about 2 mi. up canyon. Debris dam ~800' upstream of Las Canoas Rd. (built in 1964) forms barrier. *Old Rattlesnake Can. Dam*	SB Co. Flood Control Dist. 1996 COE 1995 Titus et al. 2000 Cooper et al. 1986 Trautwein, pers. comm. Johnson, pers. comm	Seven RT caught in lower reaches in 1995 and seen in pools in 1999. Stocked by CDFG in 1975 with juvenile RT. Perennial flows high in system, with mid-section dry. Debris Basin built after Coyote Fire.	1995, 1999
Sycamore (Canyon) Cr.	SH/RT	Barriers suspected	Santa Barbara Co. Flood Control Dist. 1999b Trautwein, pers.comm Johnson, pers. comm	Juvenile SH/RT noted in 1999 by Johnson. Suitable habitat (riparian canopy, deep channel) found from 1-2 miles upstream. Many (5-6 ft.) drop structures noted. Section 2 (around Carpinteria St.) is primarily "dirt bottomed" channel. Water present the entire length surveyed.	1999
Montecito Cr.	SH-W RT	Ten partial barriers present (grade stabilizers, pipeline crossings) with drop 18" to 60". Fish passage project proposed for debris	McInnis 2000 Santa Barbara Co. Flood Control Dist. 1999 Trautwein 1999 Santa Barbara News-Press 4/26-4/27/97	Suitable spawning and rearing habitat downstream of Ashley Rd. limited (few deep pools, continual human disturbance). Suitable habitat in upper reaches obtainable infrequently under favorable flows and conditions. RT (20-30)	1999

		basin. Fully lined, smooth concrete channel from Hot Springs Rd. to below debris basin project site (~1100 ft.). Lined with concrete from Hwy. 101 to 700' from ocean.	Johnson, pers. comm.	observed downstream of debris basin project site in 1999. Also above and below Cold Spring basin. Population observed through the 1980's extirpated by 1990 and recently re-established.	
Cold Springs Cr.	SH-W	To debris basin (built in 1964) at Mountain Dr. in Montecito. Forms a complete barrier.	Santa Barbara Co. Flood Control Dist. 1996,1999 Trautwein, pers. comm.	Fish presence noted. Suitable spawning habitat and rearing habitat .	(1999)
E.F. Cold Springs Cr.	SH-W	No barriers noted (human or natural)	Trautwein ,pers. comm.	Juvenile presence observed.	1999
W.F. Cold Springs Cr.	?	No barriers noted (human or natural).	Trautwein, pers. comm.	Suitable habitat for steelhead but no fish observed when surveyed.	1999
Hot Springs Cr.	?	No barriers noted (human or natural).	Santa Barbara Co. Flood Control Dist. 1999	Suitable spawning habitat and possible rearing habitat .	(1999)
Oak Cr.	?				
San Ysidro Cr.	SH-W	8 ft. possible barrier (falls) downstream of where San Ysidro trail leaves the creek (~4.5 mi). Debris basin 2.2 mi. upstream, end of West Park Lane.	Johnson 1999 Santa Barbara Co. Flood Control Dist. 1996 Trautwein, pers. comm.	Juveniles observed in 1999-2000. Good habitat ~ 1 mile upstream of the ocean to upper trail crossing (~4.5 mi.). Debris basin built in 1964 by the U.S. Army Corps of Engineers after the Coyote Fire.	1999, 2000
Romero Cr.	?	Culverts at all 101 crossings but impediments or barriers unknown. Debris basin 2.8 mi. upstream.	Johnson 1999 Santa Barbara Co. Flood Control Dist. 1996 Trautwein, pers. comm.	Small stream with some suitable habitat. No fish observed during few visits. Used during wet years only. Debris basin off of Romero Canyon Rd. in Montecito, built in 1971 by U.S. Army Corps of Engineers.	?
Picay Cr.	?				
Toro (Canyon) Cr.	?	Three debris basins in system (see comments)	Santa Barbara Co. Flood Control Dist. 1996	Debris basins in Montecito. (1) East Toro Canyon Cr. ~5000' NE of East Valley Road (1971-COE). (2) Lower West Toro Canyon Cr. ~800' South of East Valley Road (1971-COE). (3) Upper West Toro Canyon Cr. ~500' north of Hidden Valley Ln. (1971-COE). All built after Romero Fire.	?
Garapata	?	No mention of barrier	Trautwein , pers.	No fish observed during few visits.	1985

Cr.		or upper limit.	comm.	Small creek with perennial flow and some suitable spawning areas.	
Arroyo Paredo (Paredon) Cr.	?	Debris basin 1000' usptream of Oil Canyon Cr. (1971-COE).	Santa Barbara Co. Flood Control Dist. 1996, 1999b Trautwein, pers. comm.	No fish observed during few visits. Good riparian habitat although channel bottom thickly colonized (grasses, watercress). Debris basin built after Romero Fire.	(1999)
Santa Monica Cr.	?	Steep concrete spillway (1600') and debris basin dam (150') form complete barriers (1977 - U.S. Soil Conservation Service).	Trautwein 1999 Santa Barbara Co. Flood Control Dist. 1996 Trautwein, pers. comm.	Good habitat found above the concrete channel. Debris basin built as part of Carpenteria Valley Watershed Project.	?
Franklin Cr.	?	Entire lower sections of creek concreted. Debris Basin ~4800' north of Casitas Pass Rd.- Carpenteria	Santa Barbara Co. Flood Control Dist. 1996 Trautwein, pers. comm.	No fish observed . Debris basin (1971-COE) built after Romero Fire.	?
Carpinteria Salt Marsh					
Carpinteria Cr.	SH-W	Santa Barbara Co. debris basin forms partial barrier. Natural waterfall 5 to 6 mi. upstream creates barrier.	Santa Barbara New-Press 2/29/00 Johnson 1999 Trautwien 1999 Hamilton 1997 Trautwein, pers. comm.	Juveniles seen every year since the 1980's primarily above the confluence of Gobenador Canyon Cr. A 28" adult female SH caught illegally and confiscated by Warden Boyle (2/27/00).. Best rearing habitat in the foothills. Excellent habitat noted.	1980 to present.
Gobernador Cr.	SH-W	Debris basin (1971) forms potentially complete barrier @ ~500' north of Peleter Property- Carpenteria	Santa Barbara Co. Flood Control Dist. 1996 Trautwien 1999 Trautwein, pers. comm.	Fish observed yearly. Debris basin built after Romero Fire.	1980 to present
El Dorado Cr.	SH-W	No barriers mentioned	Trautwein, pers. comm.	Juveniles observed in the very lower reaches only.	1987
Ventura County					
Rincon Cr.	SH-W RT	Passage impaired at Highway 101 culvert near the mouth. (Cal Trans not completed proposed fish passage project, but now ACOE has instigated modification.)	Henke 1998b Hamilton 1997 Douglas & Carpinzo 1993 CalTrans 1995 Titus et al. 2000 Johnson, pers. comm.	Lagoon oceanside of Hwy 101 is ~0.5 acres. A riparian corridor extends ~ 2 mi. upstream. Downstream of Casitas Cr. heavy siltation and turbidity are reported. Above this good instream habitat, intact riparian zone and typically adequate summer (perennial) flows are found. Creek bed is natural with the exception of the culvert at	1993, 1997

				Highway 101. Study in 1993 found no fish present. Henke observed 5-6 small juvenile steelhead in 1997. Stocked in 1997.	
Los Sauces Cr.					
Ventura R.	SH-W RT	Up to Matilija Dam (1948) @ 16.2 mi. (dam removal study ongoing) Artificial barrier about 500 ft. below Robles Diversion Dam (may be passable during high flows) Partial barrier at Robles Diversion Dam @ 14 mi.	Parmenter & McEwan 1999 Entrix et al. 1997 Capelli 1995b Titus et al. 2000 Moore 1980a Tippets 1979 Capelli 1974	Small numbers of adult steelhead reported in most years. Robles Diversion Dam (1958) diverts water to Casitas Reservoir on Coyote Cr. It can cause de-watering of lower river and block steelhead migration. Above Diversion Dam, riparian vegetation abundant and good spawning and rearing habitat to at least 1.5 mi. (Soper Ranch). Habitat just below Diversion Dam generally poor. Further downstream at Casitas Springs ("The Narrows") is very good habitat with thick riparian cover, abundant spawning areas and perennial flows present. Juvenile SH/RT captured in this live stretch in 1995.	1973,1976, 1977,1984, 1989,1991, 1992,1993 1995
Ventura River Lagoon / Estuary	SH-W	Sandbar breaches readily each winter. Subsurface or intemittent flows in lower mainstem can block upstream migration.	Entrix et al. 1997 Fugro 1996 Wetlands Research Assoc. et al. 1992 Leidy 1991	Observed 14-25 adult steelhead about 100 ft. upstream of railroad bridge. Tidal prism extends 2000 ft. upriver. During flood events the river may create a second mouth to the west ~1500 ft. Base flow at estuary is ~5 cfs of which ~2 is from Ojai Wastewater Treatment Plant. Lagoon shallow until sandbar closes during summer.	1991 (1997)
Coyote Cr.	SH-W RT	To Casitas Dam (1958) ~ 1.5 mi. Complete barriers > 3 miles above Lake Casitas.	Entrix et al. 1997 Chubb 1997 Titus et al. 2000 Moore 1980c	Some steelhead spawning and rearing occurs below the Casitas Dam. Usually dry below the Dam except for short periods. Rainbow trout common to 8 miles above Casitas Lake. Upper reach has generally excellent spawning habitat but intermittent rearing habitat for most reaches.	1991 (1997)

San Antonio Cr.	SH-W	No complete barriers but many potential impediments (12 road crossings). 2 potential low flow barriers: concrete road crossings at Fraser Lane & Old Creek Rd.	Parmenter & McEwan 1999 Shott 1999 Entrix et al. 1997 Fugro (West), Inc. 1996 Titus et al. 2000 Friends of Ventura River 1992 Cardenas, pers. comm	Steelhead found in the lower creek in 1982, 1992, and 1999. Most recent siting @ 7.5 mi. upstream of mouth. Habitat throughout very good. Stream has most abundant steelhead spawning areas now available in the Ventura River system. Seven primary locations were identified for suitable spawning in 1996. Rearing habitat located primarily in the lower reaches Large sediment load.	1982, 1992, (1996-97) 1999
Lion (Canyon) Cr.	(SH-W)	Small reservoir near Hwy 150 forms a barrier to steelhead migration in the upper Ojai valley area.	Entrix et al. 1997	Suitable spawning substrate and usually has access during winter storm flows. Rearing habitat is usually suitable due to adequate, cool water and appropriate habitat features	(1997)
Gridley (Canyon) Cr.	RT	To at least 5 mi. upstream to 10' waterfall	Moore 1980c	In 1971 50 rainbow trout were moved from Matilija Cr. to ~1960' elevation (10 ft. falls). Trout common from 1520' to 1960' elevation. Dense riparian habitat.	1979
Senior Canyon	?	n/a	Entrix et al. 1997 Cardenas, pers. comm	No rearing habitat due to lack of flows and appropriate habitat. Potential spawning habitat but dries up quickly. (Spawning and rearing habitat needs to be reevaluated - DFG, 2000.)	(1997)
Reeves Cr.	?	n/a	Entrix et al. 1997	No rearing habitat due to lack of flows and appropriate habitat. Potential spawning habitat but dries up quickly.	(1997)
Thacher Cr.	(SH-W) RT	At least to the Soule Golf Course. Passage problem at Thacher School (Horn Canyon), no pool at base of boulder road crossing.	Shott 1999 Entrix et al. 1997 Capelli 1995	Juvenile fish ("RT") observed in small pool below concrete golf crossing. Potential spawning habitat, but dries up quickly, limiting production potential. No rearing habitat due to lack of flows and appropriate habitat.	1995 (1997) 1999
N.F. Matilija Cr. (a.k.a. N.F. Ventura R .)	(SH-W) RT	Probably to 10 mi.: Wheeler Gorge Campground area has head cut and upper road crossing with 8 ft. drop. 500 ft. upstream of mouth, cascades (up to 15 ft. high) extend for 600 to 1000 ft. but are probably passable by steelhead.	Parmenter & McEwan 1999 Shott 1999 Caron 1998 Entrix et al. 1997 Chubb 1997 Titus et al. 2000 USFS 1993 Moore 1980c Cardenas, pers. comm	Considered key habitat for restoring steelhead in Ventura system. With successful fish passage, 7 miles on N.F. Matilija Cr. would be available. Habitat and spawning areas above the cascades are very good. No mention of steelhead presence in a 1985 electrofishing survey. 3 RT observed in mid-channel pool in 1993. Perennial flows. Riparian cover affected by Wheeler Fire in 1985. Heavy fishing and recreation pressure with regular plants from	1979, (1985) (1992) 1993, (1997) (1999)

				Fillmore Hatchery in 1980.	
Bear Cr.	SH-W	Upper crossing is a problem for passage.	Shott 1999 Engblom, pers. comm	Young-of-the-year SH observed.	1999
Matilija Cr.	(SH-W) RT	To Matilija Dam (1948) Above Dam - "West Fork" blocked by two 30 ft. waterfalls @ 225 ft. upstream. Main fork has 30-40 ft. waterfall @ 9 mi.	Parmenter & McEwan 1999 Chubb 1997 Entrix et al. 1997 Titus et al. 2000 Moore 1980c Trautwein, pers.comm Cardenas, pers. comm	Access to almost all of Matilija Creek blocked by Matilija Dam (1948). Below dam, spawning habitat is scoured and poor but rearing habitat is fair due to constant surface flow. Between Dam and its North Fork, the creek had few to no spawning areas. The middle reach above had best habitat and fish numbers in 1980, not abundant. Dense pop. of RT in 12/99, with 20" adult found 4/00. Creek considered key to restoring steelhead in Ventura system.	1985 (1992) (1997) 1999-2000
The following Matilija Creek tributaries are included in the event that Matilija Dam is removed. They currently are blocked to steelhead.					
Murrieta Cr.	RT	Upstream migration barrier about 1 mi. upstream from mouth	Moore 1980c USFS 1985 Chubb 1997 Trautwein, pers.comm	Good rearing habitat. In 1985, perennial flows from 0.75 miles upstream of south fork to 150 yards upstream from the confluence with Matilija Cr. Trout population present using large pools. Riparian cover affected by Wheeler Fire in 1985. A 5 mile stream survey in 1979 to 2500' elev. found RT common. None in 2000.	1979 (1985) (1997) 2000
Upper North Fork Matilijia Cr.	RT	Low flow barriers noted near the confluence with the "East" Fork. 1st barrier at ~2250' elev. or 2.5 mi. upstream.	Moore 1980c Chubb 1997 Cardenas, pers. comm	Good rearing habitat. 7 miles of stream surveyed with rainbow trout observed to ~2400' elevation. Several sections affected by 1978 flood. Genetics of trout population being evaluated.	1979 (1997) 1999-2000
Old Man (Canyon) Cr.	RT		USFS 1996	Rainbow trout found in pool habitat in stream snorkel survey (young-of-the-year to 10").	1996
Santa Clara R.	SH-W	Access to upper river limited by sandy substrate and low flows. Vern Freeman Diversion dam (~20' high concrete sill (1928/1991) at Saticoy may affect access during low flow	Entrix 1999 Capelli 1997 Titus et al. 2000 Comstock 1992 Puckett & Villa 1985 Areta & Willsrud 1980 Moore 1980b Bell 1978 Magney, pers.comm.	Lower mainstem is primarily a migration corridor for steelhead and is less used as a spawning and rearing area, with the exception of the estuary. The Vern Freeman Diversion was equipped with a fish ladder and intake screens in 1989 and became operational in March 1991. Downstream migrant trap at Diversion collects steelhead smolt data. 1995 survey of mainstem (RM 2.5 to 14.0) found 52 RT/SH, with majority of non-hatchery origin.	1949,1978, 1980,1985, 1993,1995 1994-98 smolt trap

		periods.			
Santa Clara Estuary / Lagoon	SH-W	Migratory access for juveniles and adult steelhead. Sandbar breached artificially by State Park when water levels high enough.	Greenwald, pers. comm. Entrix 1999	Lagoon shallow due to siltation. Recent seining found no suitable habitat and no steelhead. Lack of cover minimizes chances for a successful outmigration of steelhead smolts.	(1997-98)
Castaic Cr.	?	n/a	Titus et al. 2000 Bell 1978	No steelhead found below Castaic Lake during a 1978 seining survey.	(1978)
Soledad (Canyon) Cr.	?	n/a	Titus et al. 2000 Bell 1978	No steelhead found during a 1978 seining survey.	(1978)
Todd Baranca	?	Probable culverts at road crossings.	Shott 1999 Titus et al. 2000 Bell 1978	No steelhead found during a seining survey. Habitat value unknown.	(1978)
Santa Paula Cr.	SH-W	New fish ladder operating (4/00) over Santa Paula Water Works Diversion Dam (Harvey Dam - built 1923 (23 ft.), ~3.8 mi. (6.4 km) upstream from Santa Clara R. Second barrier exists below Hwy 150 bridge downstream of Sisar Cr. (concrete step pools wiers) Natural barrier (12-30ft) - series of waterfalls in Big Cone Camp area.	Parmenter & McEwan 1999 Edmondson 1999 Shott 1999 Titus et al. 2000 Harper 1988 Moore 1980b Cardenas, pers. comm	First major tributary available above the Vern Freeman Diversion. Adult steelhead still occur but in low numbers. Water cool and turbid at mouth in 6/92, warmer in mid-section, and then good habitat (clear, cool) with abundant spawning areas above dam about 5 miles further. Heavily fished in certain reaches on USFS lands. East Fork's habitat limiting factor is turbidity due to extensive mass wasting from unstable canyon walls. Harvey Dam was first built prior to 1910 (~6 ft.), fish ladder built circa 1939 and effective until the 1969-70 floods created 25' barrier. About 10-11 mi. good habitat above dam.	1987,1988, 1992
E.F. Santa Paula Cr.	?	Low flow barriers encountered.	Moore 1980c	No fish observed in survey.	(1979)
Sisar (Canyon) Cr.	RT	Potential artificial barrier 1.8 miles upstream of mouth at road crossing	Parmenter & McEwan 1999 Moore, 1980c	No trout observed in '92. Generally good trout habitat including spawning areas.	1979 (1992)

		(second). Up to the East Fork.		Small stable stream with good riparian. Stocked with fingerlings in March 1979.	
Sespe Cr.	SH-W	No barriers to adult migration noted. Fillmore Diversion Dam (1915) built with fish ladder, reportedly functional.	Entrix 1999 Shott 1999 Titus et al. 2000 Moore 1980b	Only tributary with unregulated flows. About 48 mi. (80km) are presently available for steelhead spawning and rearing. Fillmore Diversion may impound juvenile steelhead in artificial pond but not significant to adult passage.	1978, 1983-1986, 1988,
Pine Cr.	?	To ~ 2580' elev.	Moore 1980c	No fish observed. Condor area closed to human entry .	(1979)
Alder Cr.	RT	Barrier 1/3 mile up from Sespe Cr.	Moore 1980c	Survey found no rainbow trout. Upper half of stream affected by granitic sediment producing shallow pools (4ft.). Fish present before 1975-76 drought.	(1979)
Timber (Canyon) Cr.	RT	To ~ 3250' elevation where natural barriers exist.	Moore 1980c	Rainbow trout observed to ~3250' elevation. Barriers in middle section. Cool water addition to Sespe Cr.	1979
Bear (Canyon) Cr.	RT	At least to 2 miles upstream.	Moore 1980c	Good habitat (summer nursery) and trout numbers in the lower river, the middle section was dry with boulders as barriers and the upper reach capable of supporting rainbow trout spawning.	1979
Trout Cr.	RT	To at least 2.5 miles upstream. (~3350' elev.)	Moore 1980c	Rainbow trout common.	1979
Piedra Blanca Cr.	RT	Below ~5750' elev.	Moore 1980c	Perennial flow to ~4150' elev. With stretches of intermittent stream to below 5750'. Few trout in upper reach observed in well shaded bedrock pool. 11 mile stream survey.	1979
Lion Cr.	RT	Possible barrier - Concrete check dam ~1.5 miles upstream from Sespe Cr. (~3175' elev.)	Moore 1980c	Rainbow trout abundant, excellent riparian canopy. Provides flood escape for spawning adults in Sespe Cr.	1979
North Fork Sespe Cr.	?				
Howard Cr.	RT	To point where stream goes intermittent. (~3250' elevation)	Moore 1980c	Rainbow trout abundant, excellent riparian canopy. Important spawning and rearing habitat and cool water trib.	1979
Rose Valley Cr.	RT	n/a	Moore 1980c	Many 0+ and 6-10" trout observed.	1979

Rock Cr.	?				
Tule Cr.	RT	To ~3700' elev.	Caron 1998 Moore 1980c	Important spawning tributary to rainbow trout. 4 miles of stream surveyed in 1980.	1979
Cherry Cr.	RT	To ~4500' elev.	Moore 1980c	2 miles surveyed in 1980. Marginal spawning gravel, but perennial flow provides summering habitat for juvenile trout (abundant).	1979
Pole Cr.	?	Natural, impassable 30 ft waterfall 3.9 mi upstream of Fillmore city limits. Potential artificial barrier 0.8 miles above Hwy 126.	Parmenter & McEwan 1999	Trout habitat above concrete channel good, with thick riparian vegetation and abundant spawning gravel throughout. No fish observed in '92 survey. Cool water (17 C) at mouth.	(1992)
Hopper (Canyon) Cr.	RT	30-45 ft. waterfall. 2.4 mi. from road end	Parmenter & McEwan 1999	Rainbow trout observed. Fair to good spawning and rearing areas throughout upper portions. All fish in appeared in very good condition.	1992
Tom (Canyon) Cr.	?	n/a	Parmenter & McEwan 1999	No fish observed. Channel dry 1987-92.	(1992)
Piru Cr.	(SH-W) RT	Downstream access generally limited by Piru Diversion Dam (<1933). Upstream access stops at 6 miles above mouth at Santa Felicia Dam (Lake Piru) (1955). Pyramid Dam/Lake in headwaters.	Titus et al. 2000 Dienstadt et al.1990 Moore 1980b Bell 1978	No steelhead were found below Santa Felicia Dam in a seining survey (Bell). Some potential as steelhead spawning and rearing area since 5 cfs flow is guaranteed below Santa Felicia Dam. Compared to 25 mi. habitat historically, 0 mi. estimated in 1980. Abundance of naturally-reproduced RT found in 1987 (in reaches near old Hwy. 99).	(1946,19491951,1978 1980) 1987
Castaic Cr.	?	To Castaic Dam and Lake (1973)	Bell 1978	No steelhead found in seining survey.	(1978)
Bouquet (Canyon) Cr.	?	Bouquet Reservoir (1934)			
Calleguas Cr. (Arroyo Los Posas) (Arroyo Simi)	SH-W	No fish passage impediments noted in lower reach with adequate flows. Farthest upstream limit appears to be 15 ft. drop structures at Simi Valley (Madera Rd.). DFG requested fish ladder on county drop structures: (1) Lewis Rd. (2) Camarrilo Hospital Rd. (1991)	Titus et al. 2000 COE 1991 Keegan 1990b USFWS 1973 Magney, pers.comm.	Constant flow (5 cfs) from sanitary district discharge. Low quality adult resting habitat and poor quality juvenile rearing habitat (sediment). No impediments from Conejo Cr. to mouth (perennial flow) with best developed riparian vegetation downstream from Conejo Cr. ~ 1.1 miles. Channel upstream of Conejo Cr. is channelized with a large fine sediment load, and frequent subsurface flows. Upper reach (Simi Valley to Moorpark) is known as Arroyo	1973 1989-90

				Simi, middle reach (Moorpark/Somis to Conejo Cr.) is called Arroyo Los Posas.	
Mugu Lagoon	SH-W	Migratory corridor for steelhead.	Magney, pers.comm. COE 1991	Management responsibility of U.S. Navy. Suffers from water quality and sedimentation problems.	(?)
Revolon Slough	?				
(Arroyo) Conejo Cr.	?		Magney, pers.comm.	Suitable steelhead habitat in portions of stream.	(?)
Santa Rosa Cr.	?		Magney, pers.comm.	Travels through orchards with highly treated water from Hill Canyon Treatment Plant. Good habitat with perennial water.	(?)
Big Sycamore (Canyon) Cr.	?	Potential entrance problem at beach.	Keegan 1990b	Relatively low restoration potential due to lack of perennial stream flows. Dry at time of survey.	(1989-90)
Deer Cr.					
Little Sycamore (Canyon) Cr.					
Los Angeles County - streams may cross county boundaries upstream.					
Arroyo Sequit Cr.	SH-W	At least to ~2 miles (3.2km) upstream from Leo Carrillo State Beach Park. Partial barrier (concrete apron - Arizona Crossing) in lower section may affect adults at low flows. Potential impassable falls.	Titus et al. 2000 Keegan 1990b Drake 1980 Greenwald, pers. comm. Trautwein, pers.comm Cardenas, pers.comm	Juvenile and adult SH observed most years from 1993. No stocking records found for the stream. Steelhead juveniles found ~2 miles (3.2km) upstream from Leo Carrillo State Beach Park in 1980. Larger fish rescued from 1- 3 mi. in 1998 and relocated within the drainage. [mtDNA type 8] Excellent native riparian vegetation. Remnant lagoon.	1979,1989-90,1992, 1993-2000
Zuma Cr.	?	Potential entrance problems (road crossings).	Keegan 1990b Drake 1980	No confirmed steelhead sitings. Marginal at flows greater than 2 cfs for adult and juvenile habitat. Dry at time of survey (Nov.). Fishing reportedly occurring in upper reaches in 1980. Remnant lagoon.	1989-90
Solistice (Canyon) Cr.	SH-W	Hwy. 1 at mouth. Blockages are: 2 highway culverts, 4 Arizona Crossings, and several man-made structures up to 1.5 miles where series of natural falls begins.	Keegan 1990b Spina & Johnson 1999 Manion, pers. comm	Spring fed perennial creek, with good riparian and large portion of federal ownership. Water quality and quantity appears capable of supporting small numbers of juvenile steelhead in the most suitable habitat. Fish passage projects proposed (2000).	1989,1990, 1999
Malibu Cr.	SH-W	To Rindge Dam	Titus et al. 2000	Juvenile steelhead abundance	1947,1968,

		(constructed 1924-1925) 2.7 mi (4.2 km) upstream If dam removed, other partial or complete barriers identified were: (1) ~ 15ft. falls near the tunnel on Malibu Canyon Rd.; (2) a concrete apron at stream gage below Cold Cr.; (3) concrete road crossing in Century Ranch State Park (~7.5 miles at Las Virgenes Cr.). (4) Century Dam.	Keegan 1990a Franklin & Dobush 1989 Drake 1980	highest in the upper gorge reach 0.5 mi. directly below Rindge Dam. Fish passage at dam would allow access to 4.8 mi. of potential steelhead habitat (23% of useable rearing and 56% of useable spawning habitats estimated to be good to excellent). Summer stream flows supplemented from the late1960's up to 1999 by discharges of the Tapia Water Reclamation Facility. Supplemental discharge. A 10 ft. natural bedrock waterfall exists beneath the deposited sediments behind Ringe Dam, but most biologists do not believe it will be a barrier.	1969,1972, 1979,1980 1986,1987, 1989
Malibu Lagoon	SH-W	Sandbar artificially breached.	Ambrose et al. 1995 Topanga-Las Virgenes RCD 1989	Lagoon serves as migratory habitat to steelhead. Historically, breaching of sand barrier occurred in winter/spring runoff but year-round flows (from 1960s to 1999) created by artificial discharge altered this regimen. More brackish than salt water lagoon. Fish kills have occurred in eutrophic conditions. Restoration efforts began in 1983.	(1995)
The following tributaries are included in the event that Matilija Dam is removed. They currently are blocked to steelhead. (See Historic Table for sources.)					
Cold Cr.	RT	Currently blocked by Rindge Dam (1924)	Franklin & Dobush 1989	Good to excellent potential rearing habitat, however flow and channel barriers apparently would block adult migration.	(1989)
Las Virgenes Cr.		Upper limit of run not discovered	Titus et al. 2000	Spawning occurred in lower reaches before Rindge Dam blocked access in 1924.	
Triunfo (Canyon) Cr.		Malibou Lake built in 1923 at outlet of sub-basin. Other dams constructed throughout the upper watershed include Eleanor built in 1881, Sherwood in 1904, Crags in 1913, and Westlake in 1965.	Manion, pers. comm. Manwaring 1999 Orme 1991	Trout farm and fishing pond on creek above falls from the 1930's to the 1980's. Trout caught below the falls in the 1950's.	
Lobo (Canyon) Cr.		No mention of upstream distribution	Dave Brown, as cited by Manion, pers.comm	Adults observed by local resident in lower reaches.	

FOOTNOTES

1/ Species: SH-W = Steelhead, Winter-run; (SH-W) = potentially winter steelhead habitat, but no documented presence; RT = Rainbow trout; ? - no documentation of SH or RT in surveys to date. Steelhead (SH) or Rainbow Trout (RT) - The surveyor's preference for designation varied and the above table uses the surveyor's term. While steelhead and rainbow "trout" are the same species (Oncorhynchus mykiss), it is important to distinguish landlocked (RT) from the anadromous form (SH) for the purposes of NMFS's jurisdiction.

2/ Survey Dates - Indicates years that fish (either SH or RT) were observed in the stream or, if in parentheses, the date of recent habitat evaluation.

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