

9. Monte Arido Highlands Biogeographic Population Group

“Assessment at the group level indicates a priority for securing inland populations in southern Coast Ranges and Transverse Ranges, and a need to maintain not just the fluvial-anadromous life-history form, but also lagoon-anadromous and freshwater-resident forms in each population.”

NOAA Fisheries Technical Recovery Team, Viability Criteria for the South-Central and Southern California, 2007

9.1 LOCATION AND PHYSICAL CHARACTERISTICS

The Monte Arido Highlands BPG region encompasses four medium to large coastal watersheds and eight sub-watersheds that drain the western half of the Transverse Range in southern San Luis Obispo, Santa Barbara, Ventura, and eastern Los Angeles counties.



Monte Arido Highlands Watersheds

The Santa Maria River is a relatively short coastal river formed by the confluence of two large interior watersheds: the Cuyama River and the Sisquoc River, which together

drain most of the Sierra San Rafael, Sierra Madre, and Caliente mountain ranges.



Santa Maria River

The Santa Ynez River drains the south-facing slopes of the Sierra San Rafael and north-facing slopes of the Santa Ynez Mountains. The Ventura River drains the coastal slopes of the eastern end of the Santa Ynez Mountains and the western end of the Transverse Range. The Santa Clara River drains much of the western Transverse Range, including the northern slopes of the San Gabriel Mountains. The mainstems of the Santa Maria and Santa Ynez rivers are oriented east-to-west and discharge to the

Pacific Ocean in western Santa Barbara County, North of Point Conception. The Ventura and Santa Clara watersheds border the upper watersheds of the Santa Maria and Santa Ynez rivers, but their mainstems flow south and southwest into the Pacific Ocean in southern Ventura County (Figure 9-1).



Santa Ynez River

These watersheds are highly disparate in terms of slope, aspect, and size, but share one common feature: the interior portions are mountainous and include high peak elevations, ranging between 5,700 and 8,600 feet above sea level. Each of these watersheds flows across a coastal terrace, but the Santa Maria, Santa Ynez, and Santa Clara rivers traverse broad coastal plains before entering the Pacific Ocean. Overall, stream lengths tend to be very long, owing to high topographic relief in the interior watersheds. The Santa Maria River watershed (Cuyama River sub-watershed) extends the furthest inland—over 90 miles between the mouth and the limits of the upper watershed.



Ventura River

Average annual precipitation in the Santa Maria River and Santa Clara River watersheds is much lower than the other two because the former include extensive arid interior regions. Although rainfall amounts generally increase with elevation, such orographic (*i.e.*, lifting) effects are concentrated in the most coastal mountainous portions of these watersheds, and much of the interior portions lie in “rain shadows” of the coastal portions of the watersheds. For example, Old Man Mountain at 5,500 feet above sea level in the Ventura River watershed not only receives five to ten times the amount of precipitation that falls on lower coastal locations only a few miles away, but also receives much more rainfall than interior peaks of comparable elevation in this region. The drainages in these watersheds exhibit “flashy” flow patterns during and after storm events; peak winter and summer base flows can vary by several orders of magnitude.

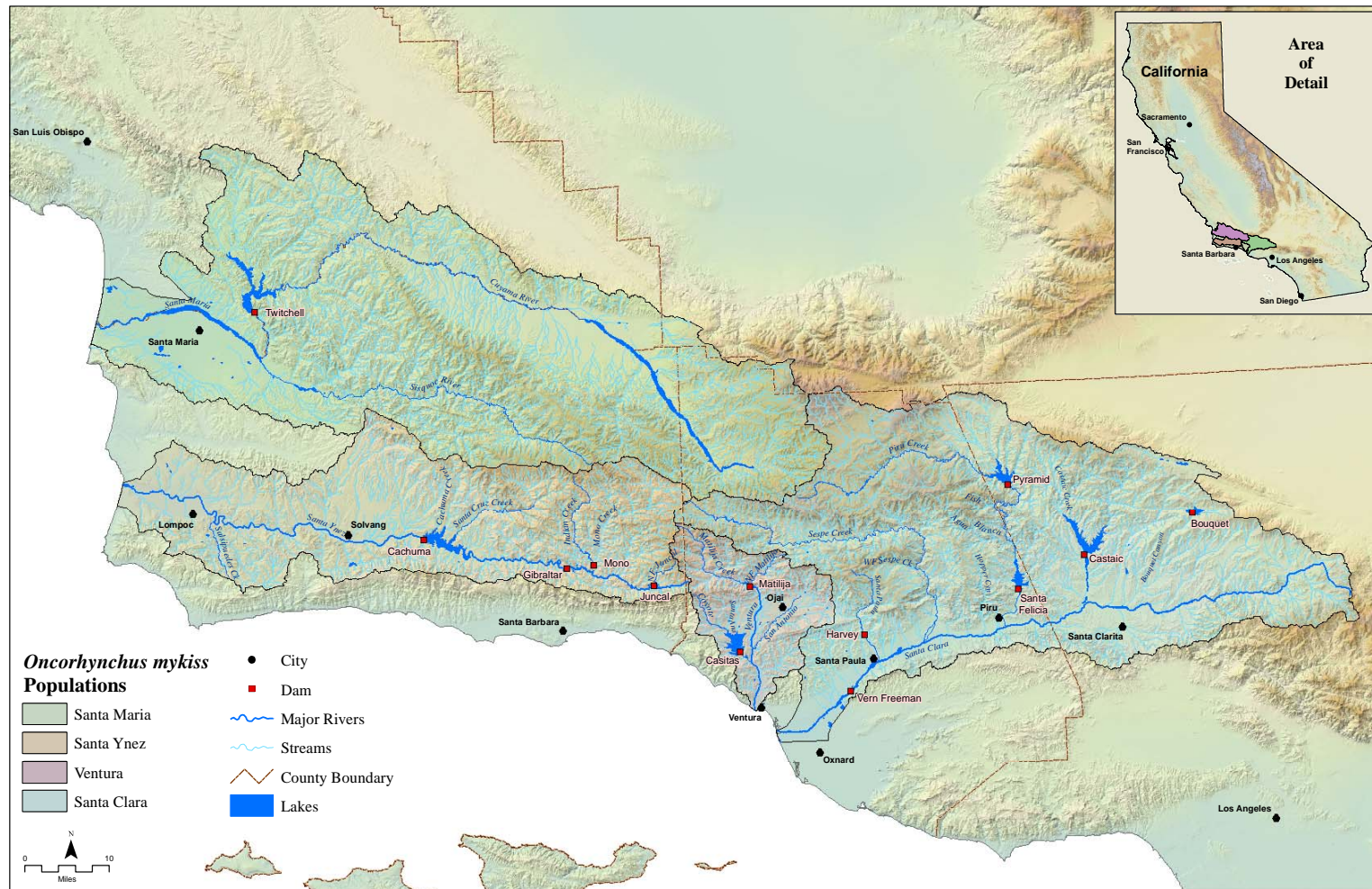


Figure 9-1. The Monte Arido Highlands BGP region. Thirteen populations/watersheds were analyzed in this region: three in the Santa Maria River watershed; one in the Santa Ynez River watershed, five in the Ventura River watershed, and four in the Santa Clara River watershed.



Santa Clara River

Extensive portions of the mainstems of all four major watersheds in the Monte Arido Highlands BPG region exhibit intermittent flows (with isolated pools) in summer because of a combination of strong seasonal variation in rainfall and anthropogenic factors. However, the tributaries in these watersheds exhibit perennial flow along significant reaches supported by groundwater and flow through fractured rock along geologic fault lines.

9.2 LAND USE

Table 9-1 summarizes land use and population density in Monte Arido Highlands BPG region. The coastal terrace and floodplains of these watersheds are subjected to the most intensive land use. The interiors are largely uninhabited and include several federally-designated wilderness areas within the Los Padres National Forest: San Rafael, Dick Smith, Matilija, Chumash, and Sespe. Additionally, there are two federally-designated Wild and Scenic rivers within the Los Padres National Forest: the Sisquoc River (Wild) in the Santa Maria River watershed, and Sespe Creek (Wild and Scenic) in the Santa Clara River watershed. A number of additional river and stream reaches have been evaluated and may be eligible for inclusion in the federal Wild and Scenic rivers program. Human population density increases steadily to the

south, and averages about 129 persons per square mile over the BPG region. The Santa Maria River watershed has the lowest population density (66 persons/square mile), while the Santa Clara River watershed, which extends into northeastern Los Angeles County, has the highest population density (216 persons/square mile).



Ventura County Coastline

In most of these watersheds, the first land-use change was livestock ranching and dry farming, followed by irrigated row-crop agriculture. Urbanization followed this trend on the coastal plain, with current coastal population centers at Santa Maria, Lompoc, Buellton, Ventura, and Oxnard. More recently (decades ago), interior portions of the floodplain of the Santa Clara River that were converted to agriculture (primarily orchards), have experienced strong urban growth and now include population centers at Santa Paula, Fillmore, and, most recently, the Santa Clarita-Castaic-Newhall area in Los Angeles County. The upper watersheds throughout this region are in the Los Padres and Angeles national forests; the coastal and middle watersheds are mostly privately owned. Semi-developed rural land, used for livestock ranching and orchard production covers extensive portions of the coastal and middle portions of these watersheds (Hunt & Associates 2008a, Kier Associates 2008b).

Table 9-1. Physical and Land-Use Characteristics of Major Watersheds in the Monte Arido Highlands BPG.

PHYSICAL CHARACTERISTICS					LAND USE				
WATERSHEDS (north to south)	Area (acres) ¹	Area (sq. miles) ¹	Stream Length ² (miles)	Ave. Ann. Rainfall ³ (inches)	Total Human Population ⁴	Public Ownership*	Urban Area ⁵	Agriculture/ Barren ⁵	Open Space ⁵
Santa Maria River**	1,187,491	1,855	2,941	17.2	123,043	49%	10%	3%	87%
Santa Ynez River	576,717	901	1,543	18.3	74,900	39%	7%	3%	90%
Ventura River	144,967	227	409	18.8	44,550	48%	6%	9%	85%
Santa Clara River	1,040,223	1,625	2,485	16.7	350,363	54%	6%	7%	87%
TOTAL or AVERAGE	2,949,398	4,608	7,378	17.7	592,856	48%	7%	6%	87%

¹ From: CDFFP CalWater 2.2 Watershed delineation, 1999 (www.ca.nrcs.usda.gov/features/calwater/)

² From: CDFG 1:1,000,000 Routed stream network, 2003 (www.calfish.org/)

³ From: USGS Hydrologic landscape regions of the U.S., 2003 (1 km grid cells)

⁴ From: CDFFP Census 2000 block data (migrated), 2003; preliminary analysis of the Census 2010 indicates the population in the BPG has increased to 713,913

⁵ From: CDFFP Multi-source land cover data (v02_2), 2002 (100 m grid cells) (<http://frap.cdf.ca.gov/data/frapgisdata/select.asp>)

* Includes National Forest Lands only; does not include State or County Parks or Military Reservations (from: <http://old.casil.ucdavis.edu/casil/gis.ca.gov/teale/govtowna/>)

** The Santa Maria River watershed includes the Cuyama River and Sisquoc River sub-watersheds

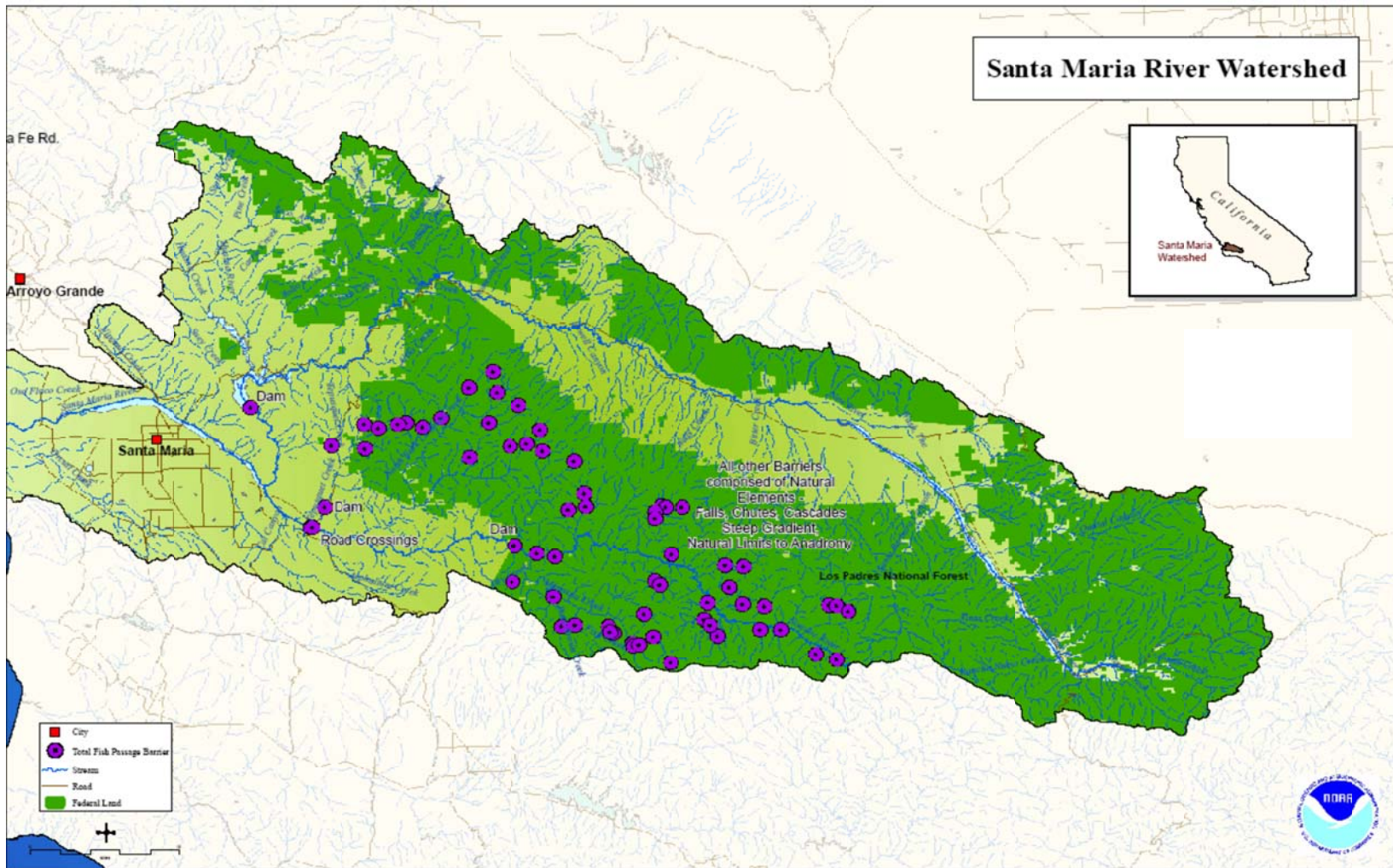


Figure 9-2. Santa Maria River Watershed.

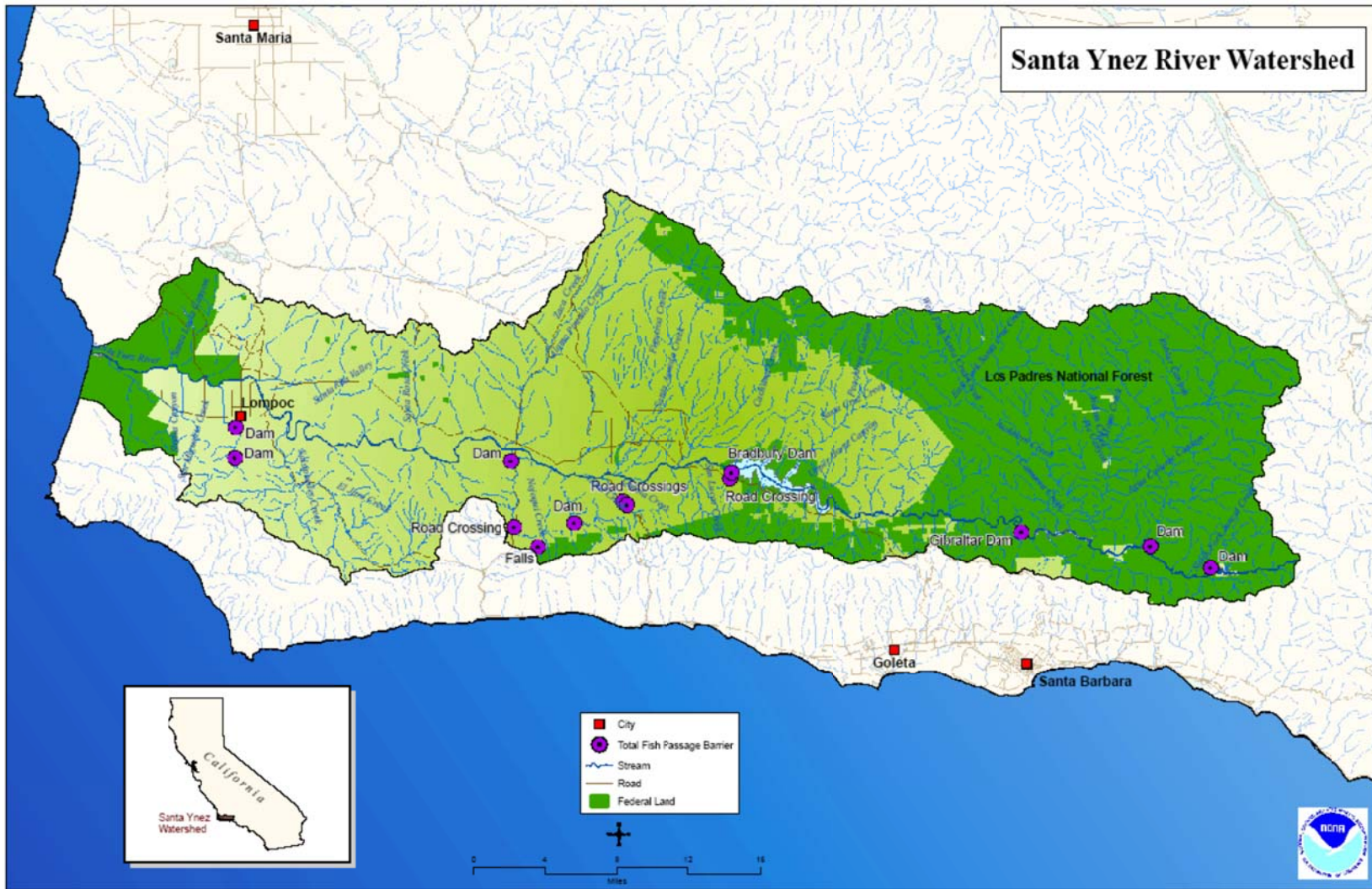


Figure 9-3. Santa Ynez River Watershed.

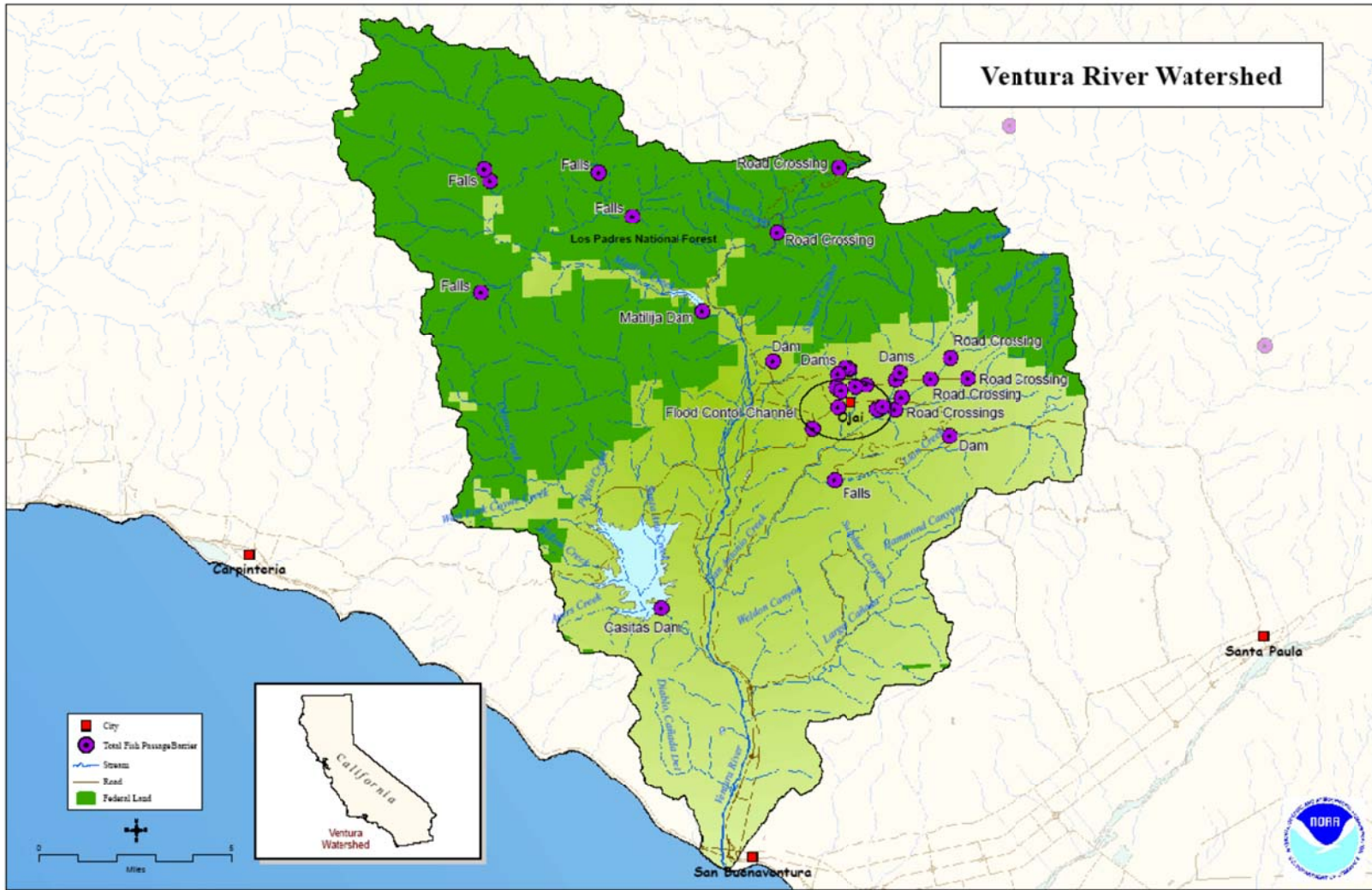


Figure 9-4. Ventura River Watershed.

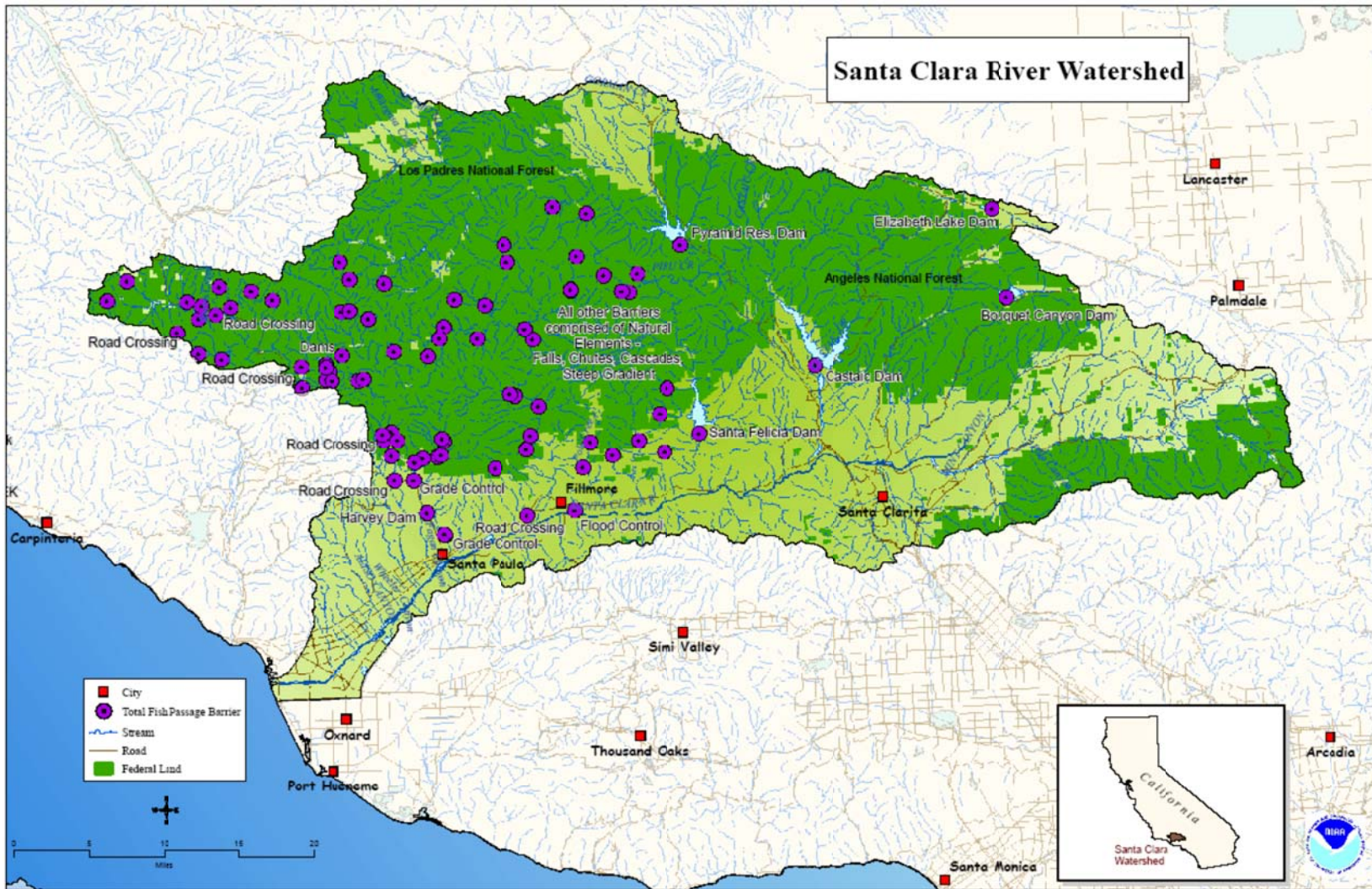


Figure 9-5. Santa Clara River Watershed.



Ventura River Valley Agriculture

Agricultural uses (orchard production, row crops, and livestock ranching), are important land uses that directly or indirectly impact watershed processes throughout these watersheds. Particularly in the lower Santa Maria, Santa Ynez, and Santa Clara River watersheds, transverse broad coastal watersheds or plains have mostly been converted to agriculture. The Santa Ynez River and the Ventura River watersheds have been transformed by a series of dams constructed to serve municipal water needs for the cities of Goleta, Santa Barbara, Montecito, Summerland, Carpinteria, and Ventura. A major diversion on the lower mainstem and three large dams in the upper watershed on Piru and Castaic creeks has similarly affected habitat and accessibility for anadromous *O. mykiss* in the Santa Clara River drainage. Municipal and agricultural water sources also include numerous groundwater wells located throughout the floodplains of these watersheds.

9.3 CURRENT WATERSHED CONDITIONS

Watershed conditions were assessed for the mainstems of the four major rivers and for nine sub-watersheds in the Monte Arido Highlands BPG region. The lower mainstem of most of the drainages in this BPG region offer fair to poor habitat conditions for

anadromous *O. mykiss*. Some tributaries to the Santa Maria River (e.g., Sisquoc River, Manzana Creek), Santa Ynez River (e.g., Cachuma, Indian, and Juncal Creeks), Ventura River (e.g., upper Coyote and Santa Ana Creeks, Matilija Creek), and the Santa Clara River (e.g., upper Santa Paula, Sespe Creek, Hopper, and upper Piru and Reyes Creeks) afford better habitat quality. Indicator ratings for the watersheds were typically downgraded during the threats assessment due to the presence of fish-passage barriers (see below).



Santa Ana Creek – Ventura River Tributary

Good-quality to excellent-quality habitat is generally found in the upper watersheds above these barriers, particularly in the Sisquoc River, Matilija Creek mainstem, North Fork Matilija Creek, San Antonio Creek, Santa Paula Creek, and Sespe Creek drainages.



Sespe Creek – Santa Clara River Tributary

Sespe Creek probably supports the highest-quality and most extensive spawning and

rearing habitat for anadromous *O. mykiss* in this BPG region, but is frequently isolated from the estuary and ocean by water management activities elsewhere in the watershed that reduce or eliminate surface flows along extensive reaches of the mainstem (Hunt & Associates 2008a, Kier Associates 2008b).



Twitchell Dam – Cuyama River

Twitchell Dam on the Cuyama River is located near the Sisquoc River confluence and blocks passage to the very large Cuyama River watershed, including several tributaries (e.g., Pine Creek). Surface flows in the Cuyama River disappear for most of the year because of groundwater pumping throughout the arid Cuyama Valley to water row crops that have been extensively planted on the floodplain. Access to the equally large Sisquoc River watershed for anadromous *O. mykiss* is severely limited because Twitchell Dam is managed for aquifer recharge in the Santa Maria Valley with the aim of minimizing surface flows to the ocean. Consequently, the Santa Maria River, which is the access corridor for both the Cuyama and Sisquoc rivers, only flows to the ocean during high rainfall years. The substantial increase of impermeable surfaces as a result of urbanization (including roads) along the coastal terraces, and in the several of the inland valleys (e.g., Ventura and Santa Clara) has altered the natural flow regimes of rivers and streams, particularly in the

lower reaches, increasing the frequency and intensity of flood flows.

Estuarine habitats at the mouths of these watersheds in this BPG region have been reduced in size by 19 percent to 85 percent by the development of roads and railroads, urbanization, and development of recreational facilities. Historically, these estuaries were large and complex, with extensive distributary and backwater channels, encompassing thousands of acres. The remaining estuarine habitats are subject to constriction and isolation by development, surface runoff from roads and other impervious surfaces, as well as a reduction in the amount and quality of surface flows resulting from groundwater extraction. The occurrence of non-native invasive species in these highly regulated watersheds has spread and increased since this initial threats assessment, and will likely continue to do so unless recovery actions identified in this Recovery Plan are implemented. Bradbury Dam, Gibraltar Dam, and Juncal Dam on the middle and upper mainstem of the Santa Ynez River and the Mono Debris Watershed Dam on Mono Creek, an upper tributary the Santa Ynez River, block access to at least 70% of the highest quality spawning and rearing habitat within this watershed. There are also a number of smaller debris dams built on smaller tributaries within the major watersheds which remove sediment from the fluvial system and block the seasonal movement of fish. Union Pacific Railroad tracks traverse the mainstem of each of the rivers and streams near their mouths, which has damaged estuarine habitat and created additional passage impediments for anadromous *O. mykiss*.



Bradbury Dam – Santa Ynez River

Matilija Dam and Casitas Dam on the mainstem of Matilija Creek and Coyote Creek, respectively, have eliminated access to 90% of the highest quality spawning habitat in the Ventura River watershed. The planning and implementation of a project to remove Matilija Dam is underway. The Robles Diversion Dam on the mainstem has recently been retrofitted with a fish-passage facility, but operational limitations still limit pre-project fish passage below and above the facilities as a result of modification to downstream flows during the migration window and periodic malfunctions of the fish screening mechanism (Casitas Municipal Water District 2005, 2006, 2008, 2009, National Marine Fisheries Service 2003).



Matilija Dam – Matilija Creek

The Vern Freeman Diversion, Santa Felicia Dam and Pyramid Dam on Piru Creek effectively impeded or block fish passage to spawning and rearing habitat in the major

tributaries of the Santa Clara River. The fish passage and flow restrictions associated with the Vern Freeman Diversion and Santa Felicia Dam has been addressed in two Biological Opinions issued by NMFS for the operation of these facilities (National Marine Fisheries Service 2008a, 2008b.) Additionally, the operation of these two dams restricts access to all of the major tributaries below Piru Creek by the reduction of surface flows (including magnitude and duration) in the mainstem of the Santa Clara River and to the estuary. Fish passage is further impacted by the operation of Castaic Dam on Castaic Creek, an upper tributary of the Santa Clara River. Additionally there are a number of smaller passage barriers that impede fish passage to important steelhead spawning and rearing tributaries such as Santa Paula, Sisar, Pole, and Hopper, Creeks (Francis 2010a, Kajtaniak 2008, Stoecker and Kelley 2005).



Santa Felicia Dam – Piru Creek

Agricultural and urban development has severely constrained floodplain connectivity between sections of the floodplains of the Santa Maria River, lower Sisquoc River, Santa Ynez River, Ventura River, Coyote Creek, San Antonio Creek, Santa Clara River, and lower Sespe Creek. Levees, channelization, and other flood control structures and activities, including related flood control activities (levee and vegetation management, *etc.*), constrict the floodplain and alter natural channel morphology (and

affect sediment transport processes), which limits instream habitat diversity and riparian corridor structure.

Non-native species are a widespread threat source in the Monte Arido Highlands BPG. Most or all of the reservoirs formed by these dams support sport fishing that has intentionally or accidentally introduced non-native fishes that prey on or compete with *O. mykiss*. These species have moved out of the reservoirs into the mainstem and tributaries, including reaches above and below the dams and established reproducing populations (e.g., crayfish, large and smallmouth bass, sunfish, bullhead catfish, carp, western mosquitofish, bullfrogs, etc.). Bullfrogs and carp are common throughout the mainstem of the Santa Ynez and Ventura rivers. The African clawed frog (*Xenopus laevis*), a significant predator of native amphibians and fish, infests much of the mainstem of the Santa Clara River from the estuary upstream to Fillmore, including large tributaries such as Santa Paula Creek and Hopper Canyon Creek. Additionally, the highly invasive non-native giant reed (*Arundo donax*) has displaced large areas of native riparian vegetation in the Ventura River and Santa Clara River watersheds, and continues to spread to other areas.

Because of the chaparral-dominated upland areas, fire is an important factor in slope erosion and sediment inputs to watersheds throughout this region. Increased fire frequency can increase slope erosion and sediment input to streams, resulting in long-term changes to substrate texture and embeddedness, water quality (e.g., turbidity), and water temperature (loss of riparian canopy cover). The Sisquoc River, North Fork Matilija Creek, and Piru Creek watersheds were identified as potentially severely threatened by mass wasting of

slopes and loss of riparian canopy cover due to fires that occurred in 2006 and 2007 that covered most of their watersheds, but substantial portions of each of these watersheds have burned in the past 50 years. All of the watersheds in this BPG region are naturally susceptible to wildfires, but have experienced larger and more intense fires because of the development and management of these watersheds (Hunt & Associates 2008a, Kier Associates 2008b).



Santa Maria River Estuary

The estuaries at the mouth of the Santa Maria River and Santa Ynez River are relatively physically intact, retaining 81% to 94% of their historic size, respectively, although both are impacted by agricultural and urban effluent discharge. The Ventura River estuary has been reduced by approximately 68% due to urban and agricultural encroachment (e.g., Ventura County Fairgrounds, Emma Wood State Beach, Union Pacific Railroad Bridge, and Highway 101 Bridge). The Santa Clara River estuary has been reduced by approximately 85% due to agricultural and oil development, levee construction, and the development of the Ventura Marina and McGrath State Beach. Because estuaries are the gateway used by both immigrating adults and emigrating juveniles moving between the marine and freshwater environments, estuarine loss affects anadromous *O. mykiss* throughout the entire watershed. The remaining estuarine habitats

are subject to degradation from urban, agricultural, and/or recreational development and loss of freshwater inflows. Surface flows diverted from the mainstem for urban and agricultural use adversely affect both water quality and the seasonal breaching pattern of the sandbar at the mouth of the estuary.

Despite widespread and varied habitat degradation to the coastal and middle mainstems of all four major river systems, native rainbow trout populations still inhabit the relatively high-quality habitat upstream of the dams in this region, and small numbers of steelhead attempt to enter and spawn in each of the watersheds of the Monte Arido Highlands BPG region when flow conditions are suitable.

9.4 THREATS AND THREAT SOURCES

Varying numbers and intensities of habitat impairments (sources of threats) were identified in the CAP Workbooks analyses, ranging from seven sources in the North Fork Matilija Creek watershed to 21 in the

Cuyama River watershed. “High” and “Very High” sources of threats involving fish-passage barriers created by dams and lack of surface flows caused by groundwater extraction or surface flow diversions disproportionately impact habitat conditions in all of the watersheds in this BPG region. For example, Sespe Creek, which is relatively undisturbed and supports some of the best spawning habitat in the BPG region, is nevertheless threatened by urban development occurring downstream along the mainstem of the Santa Clara River watershed. This development includes water management activities, such as the Vern Freeman Diversion, that interrupt the connection between this sub-watershed, the mainstem, estuary, and ocean (Hunt & Associates 2008a, Kier Associates 2008b).

Fourteen anthropogenic activities ranked as the top sources of stress to steelhead within each watershed in the Monte Arido BPG and are strongly associated with urban and agricultural development (and the water diversion and consumption associated with them) (Table 9-2).

Table 9-2. Threat source rankings in each watershed in the Monte Arido Highlands BPG (see CAP Workbooks for details).

Monte Arido Highlands BPG Component Watersheds (north to south)													
Threat Sources	Santa Maria River	Cuyama River	Sisquoc River	Santa Ynez River	Ventura River	Coyote Creek	Matilija Creek mainstem	North Fork Matilija Creek	San Antonio Creek	Santa Clara River*	Santa Paula Creek	Sespe Creek	Piru Creek
Dams and Surface Water Diversions	Red	Red	Red	Red	Red	Red	Red	Dark Green	Dark Green	Red	Red	Red	Red
Groundwater Extraction	Red	Red	Dark Green	Red	Red	Red	Dark Green	Dark Green	Light Green	Red	Red	Red	Dark Green
Agricultural Development	Red	Red	Dark Green	Red	Red	Dark Green	Dark Green	Dark Green	Yellow	Red	Red	Red	Dark Green
Urban Development	Light Green	Red	Red	Light Green	Red	Red	Light Green	Dark Green	Yellow	Red	Red	Red	Dark Green
Recreational Facilities	Dark Green	Dark Green	Dark Green	Red	Red	Red	Dark Green	Light Green	Light Green	Light Green	Light Green	Dark Green	Red
Non-Native Species	Light Green	Dark Green	Dark Green	Red	Red	Red	Dark Green	Dark Green	Light Green	Red	Yellow	Red	Red
Levees and Channelization	Red	Dark Green	Red	Light Green	Yellow	Dark Green	Dark Green	Dark Green	Dark Green	Light Green	Red	Red	Dark Green
Flood Control Maintenance	Light Green	Red	Red	Yellow	Yellow	Light Green	Dark Green	Dark Green	Yellow	Yellow	Red	Light Green	Yellow
Wildfires	Dark Green	Light Green	Red	Red	Red	Yellow	Red	Red	Yellow	Yellow	Red	Red	Red
Mining and Quarrying	Yellow	Yellow	Yellow	Light Green	Dark Green	Dark Green	Dark Green	Red	Dark Green	Yellow	Dark Green	Dark Green	Dark Green
Roads	Dark Green	Light Green	Dark Green	Light Green	Light Green	Dark Green	Dark Green	Red	Light Green	Light Green	Yellow	Dark Green	Dark Green
Urban Effluents	Light Green	Dark Green	Dark Green	Light Green	Yellow	Dark Green	Dark Green	Dark Green	Yellow	Light Green	Light Green	Dark Green	Dark Green
Agricultural Effluents	Red	Light Green	Dark Green	Light Green	Yellow	Dark Green	Dark Green	Dark Green	Yellow	Yellow	Light Green	Dark Green	Light Green
Culverts & Road Crossings	Dark Green	Dark Green	Dark Green	Light Green	Dark Green	Dark Green	Dark Green	Light Green	Light Green	Dark Green	Yellow	Dark Green	Dark Green

Key: Red = Very High threat; Yellow = High threat; Light green = Medium threat; Dark green = Low threat (Threat cell colors represent threat rating from CAP Workbook)

*Wildfires were not identified during the CAP Workbook analyses as one of the top five threats in several of these watersheds, but recent fires in coastal watersheds since 2007 could result in significant habitats impacts.

9.5 SUMMARY

Dams, surface water diversions (including groundwater extraction) driven by agricultural and urban development on the major rivers of the Monte Arido Highlands BPG region (Santa Maria River, Santa Ynez River, Ventura River, and Santa Clara River) have had the most severe impacts on the steelhead populations in this BPG region, cutting off access to upstream spawning and rearing habitats and reducing both the magnitude and duration of flows, as well as altering the timing of flows necessary for immigration of adults and emigration of juveniles. Non-point sources of pollutants, including fine sediments and pesticides/herbicides, from agricultural, commercial, and residential development have also impacted steelhead habitats, particularly spawning and rearing habitats by degrading water quality and covering rocky cobble substrate important to steelhead reproduction and growth. Additionally, impacts associated with wildland fires, including fire-fighting measures to control or extinguish them, and the post-fire measures to repair damages incurred in fighting wildland fires, poses a potential threat to watersheds in this BPG. Table 9-3 summarizes the critical recovery actions needed within the Core 1 populations of this BPG.

Restoring conditions for steelhead passage, spawning, and/or rearing in these watersheds will require multiple, long-term, measures related to water management, recreation, and fish passage past large dams. Impediments to fish passage, stemming from the construction and operation of dams and groundwater extraction, or modification of channel morphology and adjacent riparian habitats through flood control, or other instream activities (such as sand gravel mining) should be further

evaluated. Additionally loss of estuarine functions caused by filling and point and non-point water discharges from agriculture and other anthropogenic activities, should be further investigated.



Ventura River Steelhead – 1918.

The threat sources discussed in this section should be the focus of a variety of recovery actions to address specific risks to anadromous *O. mykiss* viability. Spatial and temporal data, for water temperature, pH, nutrients, *etc.*, are not uniformly available, and should be further developed, along with general habitat typing assessments, to better identify natural as well as anthropogenic limiting factors. This type of data acquisition should be the subject of site-specific investigation in order to refine the primary recovery actions or to target additional recovery actions as part of any recovery strategy for the Monte Arido Highlands BPG. Tables 9-4 through 9-7, below, rank and describe proposed recovery actions for each sub-watershed in the Monte Arido BPG, including the estimated cost for implementing the actions in five year increments over the first 25 years, and where applicable extended out to 100 years, though many recovery actions can be achieved within a shorter period.

Table 9-3. Critical recovery actions for Core 1 populations within the Monte Arido Highlands BPG.

POPULATION	CRITICAL RECOVERY ACTION
<p>Santa Maria River</p>	<p>Implement operating criteria to ensure the pattern and magnitude of water releases from Twitchell Dam provide the essential habitat functions to support the life history and habitat requirements of adult and juvenile steelhead. Physically modify Twitchell Dam to allow steelhead natural rates of migration to upstream spawning and rearing habitats and passage of smolts and kelts downstream to the estuary and ocean.</p>
<p>Santa Ynez River</p>	<p>Implement operating criteria to ensure the pattern and magnitude of water releases from Bradbury, Gibraltar, and Juncal dams provide the essential habitat functions to support the life history and habitat requirements of adult and juvenile steelhead. Physically modify Bradbury, Gibraltar, Mono, and Juncal dams to allow steelhead natural rates of migration of steelhead to upstream spawning and rearing habitats, and passage of smolts and kelts downstream to the estuary and ocean. Identify, protect, and where necessary restore estuarine and freshwater rearing habitats.</p>
<p>Ventura River</p>	<p>Implement operating criteria to ensure the pattern and magnitude of water releases, including bypass flows from diversions from Casitas, Matilija, and Robles Diversion dams provide the essential habitat functions to support the life history and habitat requirements of adult and juvenile steelhead. Physically modify Casitas, Matilija, and Robles Diversion dams to allow steelhead natural rates of migration to upstream spawning and rearing habitats, and passage of smolts and kelts downstream to the estuary and ocean.</p>
<p>Santa Clara River</p>	<p>Implement operating criteria to ensure the pattern and magnitude of water releases, including bypass flows from diversions from Vern Freeman Diversion, Santa Felicia, Pyramid and Castaic dams provide the essential habitat functions to support the life history and habitat requirements of adult and juvenile steelhead. Physically modify Vern Freeman Diversion, Harvey Diversion, Santa Felicia, and Pyramid dams, and the lower Santa Paula Creek flood control channel to allow steelhead natural rates of migration to upstream spawning and rearing habitats, and passage of smolts and kelts downstream to the estuary and ocean.</p>

Southern California Steelhead DPS Recovery Action Tables Identification Key, Monte Arido Highlands BPG (Tables 9-4 – 9-7).

Recovery Action Number Key: XXXX – SCS – 1.2		XXXX ID Table		Threat Source Legend	
XXXX	Watershed	SMM	Santa Maria Mainstem	1	Agricultural Development
SCS	Species Identifier – Southern California Steelhead	CR	Cuyama River	2	Agricultural Effluents
1	Threat Source	Sis	Sisquoc River	3	Culverts and Road Crossings
2	Action Identity Number	SYR	Santa Ynez River	4	Dams and Surface Water Diversions
Action Rank		VenR	Ventura River	5	Flood Control Maintenance
A	Action addresses the first listing factor regarding the destruction or curtailment of the species' habitat	CC	Coyote Creek	6	Groundwater Extraction
B	Action addresses one of the other four listing factors	MC	Matilija Creek	7	Levees and Channelization
		NFMC	North Fork Matilija Creek	8	Mining and Quarrying
		SAC	San Antonio Creek	9	Non-Native Species
		SCR	Santa Clara River	10	Recreational Facilities
		SP	Santa Paula	11	Roads
		SesC	Sespe Creek	12	Upslope/Upstream Activities
		PC	Piru Creek	13	Urban Development
				14	Urban Effluents
				15	Wildfires

See Chapter 8, Table 8.1 for Detailed Description of Recovery Actions

Table 9-4. Southern California Steelhead DPS Recovery Action Table for Santa Maria River Sub-Watersheds (Monte Arido Highlands BPG).

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
Santa Maria Mainstem												
SMM-SCS-1.1	Develop, adopt, and implement agricultural land-use planning policies and standards	BLM,CCC, NRCS,CT, SCHR,EII,TCFT, SBC	Agricultural Development	1, 4	2B	5	62400	0	0	0	0	62400
SMM-SCS-1.2	Develop and implement plan to minimize runoff from agricultural activities	USGS,CT, SCHR,EII,TCFT, SBC	Agricultural Effluent	1, 4	3B	20	128464	51783424	51783424	51783424	0	155478736
SMM-SCS-1.3	Manage livestock grazing to maintain or restore aquatic habitat functions	BLM,CT, SCHR,EII,TCFT, SBC	Agricultural Development	1, 4,	3B	5	47520	0	0	0	0	47520
SMM-SCS-1.4	Manage agricultural development and restore riparian zones	NRCS,USFS, CT,SCHR,EII, TCFT,SBC	Agricultural Development	1, 4	2B	20 – refer to regional costs	0	0	0	0	0	0
SMM-SCS-2.1	Develop and implement a plan to minimize runoff from agricultural activities	SWRCB,CT, SCHR,EII,TCFT, SBC	Agricultural Effluents	1, 4	2B	20 – refer to regional costs	0	0	0	0	0	0
SMM-SCS-3.1	Develop and implement a plan to remove or modify all fish passage barriers within the watershed (See	ACOE,BLM, USFS,DWR, CT,SCHR,EII, TCFT,SBC	Culverts and Road Crossings (Passage Barriers)	1, 4	3A	20- refer to regional costs	0	0	0	0	0	0

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
	Steelhead Migration Assessment and Recovery Opportunities for the Sisquoc River, California 2003.)											
SMM-SCS-4.1	Develop and implement a water management plan dam operations	BOR, CDFG, CT,SCHR,EII, TCFT,SBC	Dams and Surface Water Diversions	1, 3, 4	1A	5	TBD	0	0	0	0	91850
SMM=SCS-4.2	Develop and implement water management plan for diversion operations	CDFG, CT, SCHR, EII, TCFT,SBC	Dams and Surface Water Diversions	1,3, 4	1A	5	91850	0	0	0	0	TBD
SMM-SCS-5.1	Develop and implement flood control maintenance program	USGS,ACOE, BLM,NMFS, CDFG CT,SCHR,EII, TCFT,SBC	Flood Control Maintenance	1, 4	3B	100	0	0	0	0	0	0
SMM-SCS-5.2	Develop and implement flood control maintenance program	CCC,NMFS, CDFG,NMFS, CT,SCHR,EII, TCFT,SBC	Flood Control Maintenance	1, 4	3B	100	0	0	0	0	0	0
SMM-SCS-6.1	Conduct groundwater extraction analysis and assessment	USGS,CT, SCHR,EII,TCFT, SBC	Groundwater Extraction	1, 4	1B	5	275550	0	0	0	0	275550
SMM-SCS-6.2	Develop and implement groundwater monitoring and management program	USGS,CDFG, CT,SCHR,EII, TCFT.SBC	Groundwater Extraction	1, 4	1B	10	254350	39775	0	0	0	294125

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
SMM-SCS-7.1	Develop and implement plan to vegetate levees and eliminate minimize herbicide use near levees	FEMA,USGS, ACOE,BLM, NMFS,CDFG, CT,SCHR,EII, TCFT,SBC	Levees and Channelization	1, 4	3B	100	0	0	0	0	0	0
SMM-SCS-7.2	Develop and implement a plan to restore natural channel features	CCC,NMFS, CDFG,NMFS, CT,SCHR,EII, TCFT,SBC,SBC	Levees and Channelization	1, 4	3B	20	4217625	4217625	4217625	4217625	0	16870500
SMM-SCS-8.1	Review and modify mining operations	USGS,NMFS, USFWS, CDFG,CDMG CT,SCHR,EII, TCFT,SBC	Mining and Quarrying	1, 4, 5	2B	5	68030	0	0	0	0	68030
SMM-SCS-9.1	Develop and implement a watershed-wide plan to assess the impacts of non-native species and develop control measures	CDFG,NMFS, CT,SCHR,EII, TCFT,SBC	Non-Native Species	1, 3, 5	3B	100 - refer to regional costs	0	0	0	0	0	0
SMM-SCS-9.2	Develop and implement a non-native species monitoring program	CDFG,NMFS, CT,SCHR,EII, TCFT,SBC	Non-Native Species	1, 3, 5	3B	100 - refer to regional costs	0	0	0	0	0	0
SMM-SCS-9.3	Develop and implement a public education program on non-native species impacts	CDFG,NMFS, CT,SCHR,EII, TCFT,SBC	Non-Native Species	1, 3, 5	3B	20	76140	76140	76140	76140	0	304560

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
SMM-SCS-10.1	Review and modify development and management plans for recreational areas and national forests	NRCS,CCC, CDFG,ACOE, CT,SCHR,EII, TCFT,SBC	Recreational Facilities	1, 2, 3, 4, 5	1B	ongoing -cost of doing business	0	0	0	0	0	0
SMM-SCS-10.2	Develop and implement a public education program on watershed processes	CDFG,CT, SCHR,EII,TCFT, SBC	Recreational Facilities	1,3,5	2B	20	76140	76140	76140	76140	0	304560
SMM-SCS-10.3	Review and modify development and management plans for recreational areas and national forests (Southern California National Forest Vision, Forest Strategy, and Design Criteria)	USFS, CT, SCHR,EII,TCFT, SBC	Recreational Facilities	1, 2, 3, 4, 5	2B	ongoing - cost of doing business	0	0	0	0	0	0
SMM-SCS-11.1	Retrofit storm drains to filter runoff from roadways	NMFS,DOT, CT,SCHR,EII, TCFT,SBC	Roads	1, 4	3B	20	32260	32260	32260	32260	0	129040
SMM-SCS-11.2	Manage roadways and adjacent riparian corridor and restore abandoned roadways	DOT,CT, SCHR,EII,TCFT, SBC	Roads	1, 4	3B	20 – refer to regional costs	0	0	0	0	0	0

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
SMM-SCS-12.1	Develop and implement an estuary restoration and management plan for the Santa Maria River Estuary	CDFG,EPA, NFWF,NMFS, ACOE,FWS, CT,SCHR,EII, TCFT,SBC	Upslope/ Upstream activities	1, 2, 3, 4, 5	1B	5	13234570	0	0	0	0	13234570
SMM-SCS-12.2	Review and modify applicable County and/or City Local Coastal Plans	CCC,NMFS, CT,SCHR,EII, TCFT,SBC	Upslope/ Upstream activities	1, 2, 3, 4, 5	2B	5	62400	0	0	0	0	62400
SMM-SCS-13.1	Develop, adopt, and implement urban land-use planning policies and standards	BLM,CT, SCHR, EII,TCFT,SBC	Urban Development	1, 4	3B	5	62400	0	0	0	0	62400
SMM-SCS-13.2	Retrofit storm drains in developed areas	NMFS,DOT, CT,SCHR,EII, TCFT,SBC	Urban Development	1, 4	3B	20	0	0	0	0	0	0
SMM-SCS-14.1	Review California Regional Water Quality Control Board Watershed Plans and modify Stormwater Permits	RWQCB, SWRCB,CT,SC HR,EII,TCFT, SBC	Urban Effluents	1, 4	2B	ongoing - cost of doing business	0	0	0	0	0	0
SMM-SCS-14.2	Review, assess and modify NPDES wastewater discharge permits (e.g., Santa Maria Wastewater Treatment Facility)	RWQCB,CT, SCHR,EII,TCFT, SBC	Urban Effluents	1, 4	2B	ongoing - cost of doing business	0	0	0	0	0	0

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
SMM-SCS-15.1	Develop and implement an integrated wildland fire and hazardous fuels management plan	CDFFP, BLM, USFS, LPFW, CT, SCHR, EII, TCFT, SBC	Wildfires	1, 4, 5	1B	100 - refer to regional costs	0	0	0	0	0	0

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
Cuyama River												
CR-SCS-1.1	Develop and implement a watershed-wide sediment management plan	NRCS, USGS, NMFS, CDFG, CT, SCHR, EII, TCFT, SBC, VC	Agricultural Development	1, 4	3B	20	7440	2999040	2999040	2999040	0	9004560
CR-SCS-1.2	Develop, adopt, and implement agricultural land-use planning policies and standards	NRCS, BLM, NMFS, CT, SCHR, EII, TCFT, SBC, VC	Agricultural Development	1, 4	3B	5	62400	0	0	0	0	62400
CR-SCS-1.3	Manage agricultural development and restore riparian zones	BLM, NMFS, CT, SCHR, EII, TCFT, SBC, VC	Agricultural Development	1, 4	3B	20 - refer to regional costs	0	0	0	0	0	0
CR-SCS-1.4	Manage livestock grazing to maintain or restore aquatic habitat functions	NRCS, BLM, NMFS, CT, SCHR, EII, TCFT, SBC, VC	Agricultural Development	1, 4,	3B	5	47520	0	0	0	0	47520

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
CR-SCS-2.1	Develop and implement a plan to minimize runoff from agricultural activities	NRCS, USFS,USGS, NMFS, CDFG, CT,SCHR,EII, TCFT,SBC,VC	Agricultural Effluents	1, 4	2B	20 – refer to regional costs	0	0	0	0	0	0
CR-SCS-3.1	Develop and implement a plan to remove or modify fish passage barriers in the watershed (See Steelhead Migration Assessment and Recovery Opportunities for the Sisquoc River, California, 2003)	NMFS, CDFG, USFS, ACOE,BLM, DWR, CT,SCHR,EII, TCFT,SBC,VC	Culverts and Road Crossings (Passage Barriers)	1, 4	3A	20 – refer to regional costs	0	0	0	0	0	0
CR-SCS-4.1	Provide fish passage around dams and diversions (e.g., Twitchell Dam)	BOR,CDFG, NMFS, USFWS, USFS,DWR, CT,SCHR,EII, TCFT,SBC,VC	Dams and Surface Water Diversions	1, 3, 4	1A	20	TBD	TBD	TBD	TBD	TBD	TBD
CR-SCS-4.2	Develop and implement water management plan for dam operations (e.g., Twitchell Dam)	BOR, CDFG, NMFS, USGS,CT, SCHR,EII, TCFT,SBC	Dams and Surface Water Diversions	1, 3, 4	1B	5	TBD	TBD	TBD	TBD	TBD	TBD
CR-SCS-5.1	Develop and implement flood control maintenance program	USGS,ACOE, BLM,NMFS,CT, SCHR,EII, TCFT, SBC,VC	Flood Control Maintenance	1, 4	3B	100	0	0	0	0	0	0

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
CR-SCS-5.2	Develop and implement flood control maintenance program	CCC,NMFS, CDFG,CT, SCHR,EII, TCFT	Flood Control Maintenance	1, 4	3B	100	0	0	0	0	0	0
CR-SCS-6.1	Conduct groundwater extraction analysis and assessment	USGS,NMFS, CDFG, CT, SCHR,EII,TCFT, SBC,VC	Groundwater Extraction	1, 4	3B	5	275550	0	0	0	0	275550
CR-SCS-6.2	Develop and implement a groundwater monitoring and management program	USGS,NMFS, CDFG, CT, SCHR,EII,TCFT, SBC,VC	Groundwater Extraction	1, 4	3B	10	254350	39775	0	0	0	294125
CR-SCS-7.1	Develop and implement a plan to vegetate levees and eliminate or minimize herbicide use near levees	FEMA,USGS, ACOE,BLM, NMFS,CDFG, CT,SCHR,EII, TCFT,SBC,VC	Levees and Channelization	1, 4	3B	100	0	0	0	0	0	0
CR-SCS-7.2	Develop and implement plan to restore natural channel features	CCC,NMFS, CDFG,CT, SCHR,EII,TCFT, SBC,VC	Levees and Channelization	1, 4	3B	20	4217625	4217625	4217625	4217625	0	16870500
CR-SCS-8.1	Review and modify mining operations	USGS,NMFS, USFWS,CDFG, CDMGCT, SCHR,EII,TCFT, SBC,VC	Mining and Quarrying	1, 4, 5	3B	5	68030	0	0	0	0	68030
CR-SCS-9.1	Develop and implement watershed-wide plan to assess the impacts of non-native species and develop control measures	CDFG,NMFS, CT,SCHR,EII, TCFT,SBC,VC	Non-Native Species	1, 3, 5	3B	100 - refer to regional costs	0	0	0	0	0	0

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
CR-SCS-9.2	Develop and implement a non-native species monitoring program	CDFG,NMFS, CT,SCHR,EII, TCFT,SBC,VC	Non-Native Species	1, 3, 5	3B	100 - refer to regional costs	0	0	0	0	0	0
CR-SCS-9.3	Develop and implement public education program on non-native species impacts	CDFG,NMFS, CT,SCHR,EII, TCFT,SBC,VC	Non-Native Species	1, 3, 5	3B	20	76140	76140	76140	76140	0	304560
CR-SCS-10.1	Develop and implement a public education program on watershed processes	CDFG,CT, SCHR,EII, TCFT,SBC,VC	Recreational Facilities	1,3,5	2B	20	76140	76140	76140	76140	0	304560
CR-SCS-10.2	Review and modify development and management plans for recreational areas and national forests	USFS,USFWS, NMFS,CDFG, CDPR,BLM,CT, SCHR,EII,TCFT, SBC,VC	Recreational Facilities	1, 4	3B	5	62400	0	0	0	0	62400
CR-SCS-10.3	Review and modify development and management plans for recreational areas and national forests (Southern California National Forest Vision, Forest Strategy, and Design Criteria)	USFS,USFWS, NMFS,CDFG CDFFP,CT, SCHR,EII,TCFT, SBC,VC	Recreational Facilities	1, 2, 3, 4, 5	2B	ongoing - cost of doing business	0	0	0	0	0	0

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
CR-SCS-11.1	Manage roadways and adjacent riparian corridor and restore abandoned roadways	DOT, NMFS, CDOT, CDFG, CT, SCHR, EII, TCFT, SBC, VC	Roads	1, 4	3B	20 – refer to regional costs	0	0	0	0	0	0
CR-SCS-11.2	Retrofit storm drains to filter runoff from roadways	DOT, NMFS, CDOT, CDFG, CT, SCHR, EII, TCFT, SBC, VC	Roads	1, 4	3B	20 – refer to regional costs	0	0	0	0	0	0
CR-SCS-12.1	Review and modify applicable County and/or City Local Coastal Plans	CCC, NMFS, CDFG, CT, SCHR, EII, TCFT, SBC, VC	Upslope/ Upstream activities	1, 2, 3, 4, 5	2B	5	312000	0	0	0	0	312000
CR-SCS-13.1	Develop, adopt, and implement urban land-use planning policies and standards	NMFS, CDFG, CT, SCHR, EII, TCFT, SBC, VC	Urban Development	1, 4	3B	5	62400	0	0	0	0	62400
CR-SCS-13.2	Retrofit storm drains in developed areas	NMFS, DOT, CDFG, CT, SCHR, EII, TCFT	Urban Development	1, 4	3B	20	0	0	0	0	0	0
CR-SCS-14.1	Review California Regional Water Quality Control Board Region Watershed Plans and modify Stormwater Permits	RWQCB, SWRCB, CT, SCHR, EII, TCFT, SBC, VC	Urban Effluents	1, 4	3B	ongoing - cost of doing business	0	0	0	0	0	0

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
CR-SCS-14.2	Review, assess and modify NPDES wastewater discharge permits (e.g., Cuyama Community Sanitation District Treatment Facility)	RWQCB, SWRCB, DOT, NMFS, CDFG, CDOT, CT, SCHR, EII, TCFT, SBC, VC	Urban Effluents	1, 4	2B	ongoing - cost of doing business	0	0	0	0	0	0
CR-SCS-15.1	Develop and implement an integrated wildland fire and hazardous fuels management plan	USFS, USFWS, LPFW, CDFG, USGS, CT, SCHR, EII, TCFT, SBC, VC	Wildfires	1, 4, 5	2B	100 - refer to regional costs	0	0	0	0	0	0

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
Sisquoc River												
Sis-SCS-1.1	Develop, adopt, and implement agricultural land-use planning policies and standards	NRCS, BLM, NMFS, CDFG, CT, SCHR, EII, TCFT, SBC	Agricultural Development	1, 4	3B	5	62400	0	0	0	0	62400
Sis-SCS-1.2	Manage agricultural development and restore riparian zones	BLM, NMFS, CT, SCHR, EII, TCFT, SBC	Agricultural Development	1, 4	3B	20 – refer to regional costs	0	0	0	0	0	0
Sis-SCS-1.3	Manage livestock grazing to maintain or restore aquatic habitat functions	NRCS, BLM, NMFS, CDFG, CT, SCHR, EII, TCFT, SBC	Agricultural Development	1, 4,	3B	5	47520	0	0	0	0	47520
Sis-SCS-2.1	Develop and implement a plan to minimize runoff from agricultural activities	NRCS, USFS, NMFS, SWRCB, CT, SCHR, EII, TCFT, SBC	Agricultural Effluents	1, 4	2B	20 – refer to regional costs	0	0	0	0	0	0
Sis-SCS-3.1	Develop and implement plan to remove or modify fish passage barriers within the watershed (See Steelhead Migration Assessment and Recovery Opportunities for the Sisquoc River, California 2003.)	NMFS, USFS, UACOE, BLM, USFS, CDOT, CDFG, DWR, CT, SCHR, EII, TCFT, SBC	Culverts and Road Crossings (Passage Barriers)	1, 4	3A	20 – refer to Santa Maria main-stem, costs are aggregated	0	0	0	0	0	0

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
Sis-SCS-4.1	Develop and implement water management plan for diversion operations	NRCS,USFS, USFWS,NMFS, CDFG,CT, SCHR,EII,TCFT, SBC	Dams and Surface Water Diversions	1, 3, 4	3B	5	91850	0	0	0	0	91850
Sis-SCS-5.1	Develop and implement flood control maintenance program	USGS,ACOE, BLM,NMFS,CT, SCHR,EII,TCFT, SBC	Flood Control Maintenance	1, 4	3B	100	0	0	0	0	0	0
Sis-SCS-5.2	Develop and implement flood control maintenance program	CCC,NMFS, CDFG,CT, SCHR,EII,TCFT, SBC	Flood Control Maintenance	1, 4	3B	100	0	0	0	0	0	0
Sis-SCS-6.1	Conduct groundwater extraction analysis and assessment	USGS,USFS, USFWS,NMFS, CDFG,CT, SCHR,EII,TCFT, SBC	Groundwater Extraction	1, 4	3B	5	275550	0	0	0	0	275550
Sis-SCS-6.2	Develop and implement a groundwater monitoring and management program	USGS,USFS,USF WS,NMFS, CDFG,CT, SCHR,EII,TCFT, SBC	Groundwater Extraction	1, 4	3B	10	254350	39775	0	0	0	294125
Sis-SCS-7.1	Develop and implement plan to vegetate levees and eliminate or minimize herbicide use near levees	FEMA,ACOE, BLM,NMFS, CDFG,CT, SCHR,EII,TCFT, SBC	Levees and Channelization	1, 4	3B	100	0	0	0	0	0	0
Sis-SCS-7.2	Develop and implement a plan to restore natural channel features	CCC,NMFS, CDFG,CT, SCHR,EII,TCFT, SBC	Levees and Channelization	1, 4	3B	20	4217625	4217625	4217625	4217625	0	16870500

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
Sis-SCS-8.1	Review and modify mining operations	USGS,NMFS, USFWS,CDFG, CDMGCT, SCHR,EII,TCFT, SBC	Mining and Quarrying	1, 4, 5	3B	5	68030	0	0	0	0	68030
Sis-SCS-9.1	Develop and implement watershed-wide plan to assess the impacts of non-native species and develop control measures	USFWS,USFS, NMFS,CDFG, CT,SCHR,EII, TCFT,SBC	Non-Native Species	1, 3, 5	3B	100 - refer to regional costs	0	0	0	0	0	0
Sis-SCS-9.2	Develop and implement a non-native species monitoring program	CDFG,NMFS, CT,SCHR,EII, TCFT,SBC	Non-Native Species	1, 3, 5	2B	100 - refer to regional costs	0	0	0	0	0	0
Sis-SCS-9.3	Develop and implement public education program on non-native species impacts	USFWS,USFS, NMFS,CDFG, CT,SCHR,EII, TCFT,SBC	Non-Native Species	1, 3, 5	2B	20	76140	76140	76140	76140	0	304560
Sis-SCS-10.1	Develop and implement public education program on watershed processes	USFS, USFWS, NMFS,CDFG, CT,SCHR,EII, TCFT,SBC	Recreational Facilities	1,2,3,4, 5	2B	20	76140	76140	76140	76140	0	304560
Sis-SCS-10.2	Review and modify development and management plans for recreational areas and national forests	USFS,USFWS, NMFS,BLM, CDPR,CDFG, CT,SCHR,EII, TCFT,SBC	Recreational Facilities	1, 2, 4	2B	5	62400	0	0	0	0	62400

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
Sis-SCS-10.3	Review and modify development and management plans for recreational areas and national forests (Southern California National Forest Vision, Forest Strategy, and Design Criteria)	USFS,CT,SCHR, EII,TCFT,SBC	Recreational Facilities	1, 2, 3, 4, 5	2B	ongoing - cost of doing business	0	0	0	0	0	0
Sis-SCS-11.1	Manage roadways and adjacent riparian corridor and restore abandoned roadways	DOT,CT,SCHR, EII,TCFT,SBC	Roads	1, 4	3B	20 - refer to regional costs	0	0	0	0	0	0
Sis-SCS-11.2	Retrofit storm drains to filter runoff from roadways	NMFS,DOT, CT,SCHR,EII, TCFT,SBC	Roads	1, 4		20	32260	32260	32260	32260	0	129040
Sis-SCS-12.1	Review and modify applicable County and/or City Local Coastal Plans	CCC,CDFG, USFWS,NMFS, CT,SCHR,EII, TCFT,SBC	Upslope/ Upstream activities	1, 2, 3, 4, 5	3B	5	312000	0	0	0	0	312000
Sis-SCS-13.1	Develop, adopt, and implement urban land-use planning policies and standards	CDFG,CT, SCHR,EII,TCFT, SBC	Urban Development	1, 4	3B	5	62400	0	0	0	0	62400
Sis-SCS-13.2	Retrofit storm drains in developed areas	NMFS,DOT, CT,SCHR,EII, TCFT,SBC	Urban Development	1, 4	3B	20	0	0	0	0	0	0

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
Sis-SCS-14.1	Review California Regional Water Quality Control Board Watershed Plans and modify Stormwater Permits	RWQCB, SWRCB,CT, SCHR,EII,TCFT, SBC	Urban Effluents	1, 4	3B	ongoing - cost of doing business	0	0	0	0	0	0
Sis-SCS-14.2	Review, assess and modify if necessary all NPDES wastewater discharge permits	RWQCB,CT, SCHR,EII,TCFT, SBC	Urban Effluents	1, 4	3B	ongoing - cost of doing business	0	0	0	0	0	0
Sis-SCS-15.1	Develop and implement an integrated wildland fire and hazardous fuels management plan	USFS,USFWS, NMFS,USGS, CDFG,LPFW, CT,SCHR,EII, TCFT,SBC	Wildfires	1, 4, 5	2B	100 - refer to regional costs	0	0	0	0	0	0

Table 9-5. Southern California Steelhead DPS Recovery Action Table for Santa Ynez River Watershed (Monte Arido Highlands BPG).

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
Santa Ynez River												
SYR-SCS-1.1	Develop adopt, and implement agricultural land-use planning policies and standards	NRCS, USGS,USFWS, NMFS,CT, SCHR,EII,TCFT, SBC	Agricultural Development	1, 4	2B	20	114800	46285184	46285184	46285184	0	138970352
SYR-SCS-1.2	Manage agricultural development and restore riparian zones	NRCS,BLM, NMFS,CDFG, CT,SCHR,EII, TCFT, SBC	Agricultural Development	1, 4	2B	20 - refer to regional costs	0	0	0	0	0	0
SYR-SCS-1.3	Manage livestock grazing to maintain or restore aquatic habitat functions	BLM,NMFS, CT,SCHR,EII, TCFT,SBC	Agricultural Development	1, 4,	3B	5	47520	0	0	0	0	47520
SYR-SCS-2.1	Develop and implement plan to minimize runoff from agricultural activities	NRCS, FEMA NMFS,SWRCB, CDFG,CT, SCHR,EII,TCFT, SBC	Agricultural Effluents	1, 4	2B	20 - refer to regional costs	0	0	0	0	0	0

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
SYR-SCS-3.1	Develop and implement plan to remove or modify fish passage barriers within the watershed (See Steelhead Migration Assessment and Recovery Opportunities for the Santa Ynez River, California 2003; and Lower Santa Ynez River Fish Management Plan, 2009.)	USFS, NMFS, USFWS, ACOE, BLM, CDFG, DWR, CT, SCHR, EII, TCFT, SBC	Culverts and Road Crossings (Passage Barriers)	1, 4	2A	20-refer to regional costs	0	0	0	0	0	0
SYR-SCS-4.1	Provide fish passage around dams and diversions (e.g., Bradbury, Gibraltar, and Juncal dams)	BOR, NMFS, ACOE, BLM, USFS, CDFG, DWR, CT, SCHR, EII, TCFT, SBC	Dams and Surface Water Diversions	1, 3, 4	1A	20	TBD	TBD	TBD	TBD	TBD	TBD
SYR-SCS-4.2	Develop and implement water management plan for diversion operations	NRCS, NMFS, SWRCB, CDFG, CT, SCHR, EII, TCFT, SBC	Dams and Surface Water Diversions	1, 3, 4	1B	5	TBD	TBD	TBD	TBD	TBD	TBD
SYR-SCS-4.3	Develop and implement water management plan for dam operations (e.g., Bradbury, Gibraltar, and Juncal dams)	BOR, SWRCB, NMFS, CDFG, USGS, CT, SCHR, EII, TCFT, SBC	Dams and Surface Water Diversions	1, 3, 4	1B	100	TBD	TBD	TBD	TBD	TBD	TBD

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
SYR-SCS-5.1	Develop and implement flood control maintenance program	USCOE, RWQCB,NMF, CDFG,CT, SCHR,EII,TCFT, SBC	Flood Control Maintenance	1, 4	2B	100	0	0	0	0	0	0
SYR-SCS-6.1	Conduct groundwater extraction analysis and assessment	USGS,NMFS, SWRCB,CDFG, CT,SCHR,EII, TCFT,SBC	Groundwater Extraction	1, 4	1B	5	275550	0	0	0	0	275550
SYR-SCS-6.2	Develop and implement a groundwater monitoring and management program	USGS,CT, SCHR,EII,TCFT, SBC	Groundwater Extraction	1, 4	1B	10	254350	39775	0	0	0	294125
SYR-SCS-7.1	Develop and implement plan to restore natural channel features	CCC,NMFS, CDFG,CT, SCHR,EII,TCFT, SBC	Levees and Channelization	1, 4	2B	20	4217625	4217625	4217625	4217625	0	16870500
SYR-SCS-7.2	Develop and implement a plan to vegetate levees and eliminate or minimize herbicide use near levees	FEMA,USGS, ACOE,BLM, NMFS,CT, SCHR,EII,TCFT, SBC	Levees and Channelization	1, 4	2B	100	0	0	0	0	0	0
SYR-SCS-7.3	Develop and implement stream bank and riparian corridor restoration plan	NRCS, FEMA, USFS,USFWS, NMFS,ACOE, BLM,CT,SCHR, EII,TCFT,SBC	Levees and Channelization	1,4	2B	20	4717625	4717625	4717625	4717625		16870500
SYR-SCS-8.1	Review and modify mining operations	USGS,NMFS, USFWS,CDFG, CDMG,CT,SC HR,EII,TCFT, SBC	Mining and Quarrying	1, 4, 5	2B	5	68030	0	0	0	0	68030

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
SYR-SCS-9.1	Develop and implement a watershed-wide plan to assess the impacts of non-native species and develop control measures	USFWS,USFS, NMFS,CDFG, CT,SCHR,EII, TCFT,SBC	Non-Native Species	1, 3, 5	2B	100 - refer to regional costs	0	0	0	0	0	0
SYR-SCS-9.2	Develop and implement a non-native species monitoring program	CDFG,USFWS, USFS,NMFS, CT,SCHR,EII, TCFT,SBC	Non-Native Species	1, 3, 5	2B	100 - refer to regional costs	0	0	0	0	0	0
SYR-SCS-9.3	Develop and implement a public education program on non-native species impacts	CDFG,USFWS, USFS,NMFS, CT,SCHR,EII, TCFT,SBC	Non-Native Species	1, 3, 5	2B	20	76140	76140	76140	76140	0	304560
SYR-SCS-10.1	Review and modify development and management plans for recreational areas and national forests (e.g., U.S. Forest Service Los Padres National Forest Land Management Plan, Southern California National Forest Vision, Forest Strategy, and Design Criteria)	USFS,USFWS, NMFS,CDFG, CT,AC, SCHR,EII, TCFT,SBC	Recreational Facilities	1, 2, 3, 4, 5	2B	ongoing - cost of doing business	0	0	0	0	0	0

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
SYR-SCS-10.2	Manage off-road recreational vehicle activity in riparian floodplain corridors	USFS,USFWS, NMFS,CDFG, SCHR,EII,TCFT, SBC	Recreational Facilities	1, 2, 3, 4, 5	2B	ongoing -cost of doing business	0	0	0	0	0	0
SYR-SCS-10.3	Develop and implement public education program on watershed processes	CDFG,NMFS, CT,SCHR,EII, TCFT,SBC	Recreational Facilities	1, 2, 3, 4, 5	2B	20	76140	76140	76140	76140	0	304560
SYR-SCS-11.1	Retrofit storm drains to filter runoff from roadways	NRCS,NMFS, DOT,CDOT, CDFG,CT, SCHR,EII,TCFT, SBC	Roads	1, 4	2B	20	32260	32260	32260	32260	0	129040
SYR-SCS-11.2	Manage roadways and adjacent riparian corridor and restore abandoned roadways	DOT,USFS, NMFS,CDOT, CDFG,CT, SCHR,EII,TCFT, SBC	Roads	1, 4	2B	20 - refer to regional costs	0	0	0	0	0	0
SYR-SCS-12.1	Review and modify applicable County and/or City Local Coastal Plans	CCC,NMFS, CT,SCHR,EII, TCFT,SBC	Upslope/ Upstream activities	1, 2, 3, 4, 5	1B	5	312000	0	0	0	0	312000
SYR-SCS-12.2	Review and modify the Vandenberg Air Force Base Integrated Natural Resources Management Plan	USAF, USFWS, NMFS,CCC, CT,SCHR,EII, TCFT,SBC	Upslope/ Upstream activities	1, 2, 3, 4, 5	1B	CDB	0	0	0	0	0	0

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
SYR-SCS-12.3	Develop and implement an estuary restoration and management plan	VAFB,NMFS, CCC, AC, BLM,USFS,CT, SCHR,EII,TCFT, SBC	Upslope/ Upstream activities	1, 2, 3, 4, 5	1B	5	38133615	0	0	0	0	38133615
SYR-SCS-13.1	Develop, adopt, and implement urban land-use planning policies and standards	NMFS,BLM, RWQCB, CDFG,CT, SCHR,EII,TCFT, SBC	Urban Development	1, 4	2B	5	62400	0	0	0	0	62400
SYR-SCS-13.2	Retrofit storm drains in developed areas	NMFS,DOT, CT,SCHR,EII, TCFT,SBC	Urban Development	1, 4	2B	20	0	0	0	0	0	0
SYR-SCS-14.1	Review California Regional Water Quality Control Board Watershed Plans and modify Stormwater Permits	RWQCB, SWRCB,NMFS, CDFG,CT, SCHR,EII,TCFT, SBC	Urban Effluents	1, 4	2B	ongoing - cost of doing business	0	0	0	0	0	0
SYR-SCS-14.2	Review, assess and modify NPDES wastewater discharge permits (e.g., Lompoc Regional Wastewater Treatment Facility and Santa Ynez Band Wastewater Treatment Facility)	RWQCB,CDFG NMFS, CT, SCHR,EII,TCFT, SBC	Urban Effluents	1, 4	2B	ongoing - cost of doing business	0	0	0	0	0	0
SYR-SCS-15.1	Develop and implement an integrated wildland fire and hazardous fuels management plan	USFS,USFWS, NMFS,USGS, CDFG,LFPW, CT,SCHR,EII, TCFT,SBC	Wildfires	1, 4, 5	1B	100 - refer to regional costs	0	0	0	0	0	0

Table 9-6. Southern California Steelhead DPS Recovery Action Table for Ventura River Sub-Watersheds (Monte Arido Highlands BPG).

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
Mainstem Ventura River												
VenR-SCS-1.1	Develop, adopt, and implement agricultural land-use planning policies and standards	NRCS, USFWS, NMFS, CDFG, CT, SCHR, EII, TCFT, VC	Agricultural Development	1, 4	2B	20 – refer to regional costs	0	0	0	0	0	0
VenR-SCS-1.2	Manage livestock grazing to maintain or restore aquatic habitat functions	NRCS, BLM, USFWS, NMFS, CDFG, CT, SCHR, EII, TCFT, VC	Agricultural Development	1, 4,	2B	5	47520	0	0	0	0	47520
VenR-SCS-1.3	Manage agricultural development and restore riparian zones	NRCS, BLM, USFWS, NMFS, CDFG, CT, SC HR, EII, TCFT, VC	Agricultural Development	1, 4	2B	2 – refer to regional costs	0	0	0	0	0	0
VenR-SCS-2.1	Develop and implement a plan to minimize runoff from agricultural activities	NRCS, NMFS, R WQCB, CDFG, CT, SCHR, EII, TCFT, VC	Agricultural Effluents	1, 4	2B	20 - refer to regional costs	0	0	0	0	0	0
VenR-SCS-3.1	Develop and implement plan to remove or modify fish passage barriers within the watershed	USFS, USFWS, USDOT, NMFS, CDFG, CDOT DWR, CT, SCHR, EII, TCFT, VC	Culverts and Road Crossings (Passage Barriers)	1, 4	3A	20 - refer to regional costs	0	0	0	0	0	0

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
VenR-SCS-4.1	Provide fish passage around dams and diversions (e.g., Foster Park, Robles diversions)	BOR,NMFS, USFWS, SWRCB, CDFG,DWR, CT,SCHR,EII, TCFT,VC	Dams and Surface Water Diversions	1, 3, 4	1A	20	TBD	TBD	TBD	TBD	TBD	TBD
VenR-SCS-4.2	Develop and implement a water management plan for diversion operations (e.g., Foster Park, Robles diversions, etc.)	BOR,NMFS, CDFG,CT, SCHR,EII,TCFT, VC	Dams and Surface Water Diversions	1, 3, 4	1B	5	TBD	TBD	TBD	TBD	TBD	TBD
VenR-SCS-4.3	Develop and implement a water management plan for dam operations (e.g., Casitas and Matilija)	BOR,NMFS, USGS,CDFG, CT,SCHR,EII, TCFT,VC	Dams and Surface Water Diversions	1, 3, 4	1B	100	TBD	TBD	TBD	TBD	TBD	TBD
VenR-SCS-5.1	Develop and implement flood control maintenance program	NRCS,ACOE, USFWS,NMF, CCC,CDFG, CT,SCHR,EII, TCFT,VC	Flood Control Maintenance	1, 4	2B	100	0	0	0	0	0	0
VenR-SCS-6.1	Conduct groundwater extraction analysis and assessment	USGS,NMFS, CDFG,CT, SCHR,EII,TCFT, VC	Groundwater Extraction	1, 4	1A	5	275550	0	0	0	0	275550
VenR-SCS-6.2	Develop and implement groundwater monitoring and management program	USGS,NMFS, CDFG,CT, SCHR,EII,TCFT, VC	Groundwater Extraction	1, 4	1A	10	254350	39775	0	0	0	294125

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
VenR-SCS-7.1	Develop and implement stream bank and riparian corridor restoration plan	NRCS,USGS,A COE,BLM, USFWS,NMFS, CDFG,CT, SCHR,EII,TCFT, VC	Levees and Channelization	1, 4	2B	100	0	0	0	0	0	0
VenR-SCS-7.2	Develop and implement a plan to restore natural channel features	NRCS,USGS,U SFWS, ACOE,BLM,N MFS,CCC, CDFG,CT, SCHR,EII,TCFT, VC	Levees and Channelization	1, 4	2B	20	4217625	4217625	4217625	4217625	0	16870500
VenR-SCS-7.3	Develop and implement plan to vegetate levees and eliminate or minimize herbicide use near levees	FEMA,USGS, ACOE,BLM, NMFS,CT, SCHR,EII,TCFT, VC	Levees and Channelization	1, 4	2B	100	0	0	0	0	0	0
VenR-SCS-8.1	Review and modify mining operations	USGS,NMFS, USFWS,CDFG, CDMG,CT, SCHR,EII, TCFT,VC	Mining and Quarrying	1, 4, 5	3B	5	68030	0	0	0	0	68030
VenR-SCS-9.1	Develop and implement a non-native species monitoring program	CDFG,NMFS, CT,SCHR,EII, TCFT,VC	Non-Native Species	1, 3, 5	2B	100 - refer to regional costs	0	0	0	0	0	0
VenR-SCS-9.2	Develop and implement watershed-wide plan to assess the impacts of non-native species and develop control measures	CDFG,USFW, NMFS,CDFG, CT,SCHR,EII, TCFT,VC	Non-Native Species	1, 3, 5	2B	100 - refer to regional costs	0	0	0	0	0	0

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
VenR-SCS-9.3	Develop and implement public education program on non-native species impacts	CDFG,USFWS, NMFS,CT, SCHR,EII,TCFT, VC	Non-Native Species	1, 3, 5	2B	20	76140	76140	76140	76140	0	304560
VenR-SCS-10.1	Review and modify development and management plans for recreational areas and national forests	USFS,USFWS, NMFS,CDFG, CCC,NMFS, BLM,CT, SCHR,EII,TCFT, VC	Recreational Facilities	1, 2, 3, 4, 5	1B	ongoing - cost of doing business	0	0	0	0	0	0
VenR-SCS-10.2	Develop and implement a public education program on watershed processes	NRCS,USFS, USFWS,NMFS, CDFG,CT, SCHR,EII, TCFT,VC	Recreational Facilities	1, 3, 5	2B	20	76140	76140	76140	76140	0	304560
VenR-SCS-10.3	Review and modify development and management plans for recreational areas and national forests (e.g., U.S. Forest Service Los Padres National Forest Land Management Plan, Southern California National Forest Vision, Forest Strategy, and Design Criteria	USFS,USFWS, CDPR,CDFG, CT,SCHR,EII, TCFT,VC	Recreational Facilities	1, 2, 3, 4, 5	2B	ongoing - cost of doing business	0	0	0	0	0	0

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
VenR-SCS-10.4	Review and modify development and management plans for recreational areas and national forests	USFS,USFWS, BLM,NMFS, CDFG,OVLC, CT,SCHR,EII, TCFT,VC	Recreational Facilities	1,2,3, 4,5	2B	5	62400	0	0	0	0	62400
VenR-SCS-11.1	Manage roadways and adjacent riparian corridor and restore abandoned roadways	USDOT, USFWS, NRCS,NMFS, CDOT,CDFG, CT,SCHR,EII, TCFT,VC	Roads	1, 4	2B	20 - refer to regional costs	0	0	0	0	0	0
VenR-SCS-11.2	Retrofit storm drains to filter runoff from roadways	NRCS,NMFS,U SDOT,USFS, USFWS,CDOT, CDFG,CT, SCHR,EII,TCFT, VC	Roads	1, 4	2B	20	32260	32260	32260	32260	0	129040
VenR-SCS-12.1	Review and modify applicable County and/or City Local Coastal Plans	CCC,CDFG, NMFS,USFWS, CT,SCHR,EII, TCFT,VC	Upslope/ Upstream activities	1, 2, 3, 4, 5	2B	5	312000	0	0	0	0	312000
VenR-SCS-12.2	Develop and implement an estuary restoration and management plan	USFWS,NMFS, CDFG,CCC, AC,BLM,USFS, CT,SCHR,EII,T CFT,VC	Upslope/ Upstream activities	1, 2, 3, 4, 5	1B	5	4606250	0	0	0	0	4606250
VenR-SCS-13.1	Develop, adopt, and implement urban land-use planning policies and standards	NMFS,CDFG, CT,SCHR,EII, TCFT,VC	Urban Development	1, 4	2B	5	62400	0	0	0	0	62400

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)						
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100	
VenR-SCS-13.2	Develop, adopt, and implement urban land-use planning policies and standards	NMFS,CDFG, CT,SCHR,EII, TCFT,VC	Urban Development	1, 4	2B	5	62400	0	0	0	0	0	62400
VenR-SCS-13.3	Retrofit storm drains in developed areas	NMFS,USDOT, CDOT,CDFG, RWQCB, CT,SCHR,EII, TCFT,VC	Urban Development	1, 4	2B	20	0	0	0	0	0	0	0
VenR-SCS-14.1	Review California Regional Water Quality Control Board Watershed Plans and modify Stormwater Permits	RWQCB, NMFS, SWRCB, CDFG,CT, SCHR,EII,TCFT, VC	Urban Effluents	1, 4	2B	ongoing - cost of doing business	0	0	0	0	0	0	0
VenR-SCS-14.2	Review, assess and modify if necessary all NPDES wastewater discharge permits (e.g., Ojai Valley Sanitary District Wastewater Treatment Facility)	RWQCB, USFWS,NMFS, CDFG,CT, SCHR,EII,TCFT, VC	Urban Effluents	1, 4	2B	ongoing - cost of doing business	0	0	0	0	0	0	0
VenR-SCS-15.1	Develop and implement an integrated wildland fire and hazardous fuels management plan	USFS,NMFS, USGS,CDFG, LPFW,CT, SCHR,EII,TCFT, VC	Wildfires	1, 4, 5	1B	100 - refer to regional costs	0	0	0	0	0	0	0

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
Coyote Creek												
CC-SCS-1.1	Manage agricultural development and restore riparian zones	BLM,NMFS, CT,SCHR,EII, TCFT,VC	Agricultural Development	1, 4	2B	20 - refer to regional costs	0	0	0	0	0	0
CC-SCS-1.2	Manage livestock grazing to maintain or restore aquatic habitat functions	NRCS,BLM, USFS,USFWS, NMFS,CDFG, CT,SCHR,EII, TCFT,VC	Agricultural Development	1, 4,	2B	5	47520	0	0	0	0	47520
CC-SCS-1.3	Develop, adopt, and implement agricultural land-use planning policies and standards	NRCS,BLM, USFWS,NMFS, CDFG,CT, SCHR,EII,TCFT, VC	Agricultural Development	1, 4	2B	20	12400	4998400	4998400	4998400	0	15007600
CC-SCS-2.1	Develop and implement a plan to minimize runoff from agricultural activities	NRCS,SWRCB, RWQCB, CDFG,CT, SCHR,EII,TCFT, VC	Agricultural Effluents	1, 4	2B	20 - refer to regional costs	0	0	0	0	0	0
CC-SCS-3.1	Develop and implement plan to remove or modify fish passage barriers within the watershed	NMFS,BOR, CDFG,CDOT, CT,SCHR,EII, TCFT,VC	Culverts and Road Crossings (Passage Barriers)	1, 4	2A	20 - refer to regional costs	0	0	0	0	0	0
CC-SCS-4.1	Provide fish passage around dams and diversions (e.g., Casitas dam)	BOR,NMFS, USFWS, SWRCB,CDFG, DWR,CT,SCHR, EII,TCFT,VC	Dams and Surface Water Diversions	1, 3, 4	1A	20	TBD	TBD	TBD	TBD	TBD	TBD
CC-SCS-4.2	Develop and implement water management plan for dam operations (e.g.,	BOR,NMFS, USFWS, SWRCB,CDFG, CT,SCHR,EII, TCFT,VC	Dams and Surface Water Diversions	1, 3, 4	1A	5	TBD	TBD	TBD	TBD	TBD	TBD

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
	Casitas dam)											
CC-SCS-5.1	Develop and implement flood control maintenance program	NRCS, ACOE, NMFS, CDFG, CT, SCHR, EII, TCFT, VC	Flood Control Maintenance	1, 4	2B	100	0	0	0	0	0	0
CC-SCS-6.1	Conduct groundwater extraction analysis and assessment	USGS, NMFS, CDFG, CT, SCHR, EII, TCFT, VC	Groundwater Extraction	1, 4	2B	5	275550	0	0	0	0	275550
CC-SCS-6.2	Develop and implement a groundwater monitoring and management program	USGS, NMFS, CDFG, CT, SCHR, EII, TCFT, VC	Groundwater Extraction	1, 4	2B	10	254350	39775	0	0	0	294125
CC-SCS-7.1	Develop and implement plan to restore natural channel features	NRCS, NMFS, USFWS, CDFG, CT, SCHR, EII, TCFT, VC	Levees and Channelization	1, 4	3B	20	4217625	4217625	4217625	4217625	0	16870500
CC-SCS-7.2	Develop and implement plan to vegetate levees and eliminate or minimize herbicide use near levees	FEMA, NRCS, ACOE, NMFS, CDFG, CT, SCHR, EII, TCFT, VC	Levees and Channelization	1, 4	3B	100	0	0	0	0	0	0
CC-SCS-9.1	Develop and implement watershed-wide plan to assess the impacts of non-native species and develop control measures	CDFG, CDPR, USFWS, USFS, NMFS, CT, SCHR, EII, TCFT, VC	Non-Native Species	1, 3, 5	3B	100 - refer to regional costs	0	0	0	0	0	0

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
CC-SCS-9.2	Develop and implement non-native species monitoring program	CDFG,CDPR, NMFS,USFWS, USFS,CT,SCHR, EII,TCFT,VC	Non-Native Species	1, 3, 5	2B	100 - refer to regional costs	0	0	0	0	0	0
CC-SCS-9.3	Develop and implement public education program on non-native species impacts	CDFG,CDPR, NMFS,USFWS, USFS,CT,SCHR, EII,TCFT,VC	Non-Native Species	1, 3, 5	2B	20	76140	76140	76140	76140	0	304560
CC-SCS-10.1	Review and modify development and management plans for recreational areas and national forests (e.g. E.P. Foster Memorial Park, Casitas Recreational Area, Charles M. Teague Memorial Watershed, Los Padres National Forest, Ojai Ranger District)	BOR,USFS, USFWS,NMFS, CDFG,CT, SCHR,EII,TCFT, VC	Recreational Facilities	1, 3, 5	2B	20	76140	76140	76140	76140	0	304560
CC-SCS-11.1	Manage roadways and adjacent riparian corridor and restore abandoned roadways	NRCS,USDOT, NMFS,CDFG, CT,SCHR,EII, TCFT,VC	Roads	1, 4	2B	20 - refer to regional costs	0	0	0	0	0	0

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
CC-SCS-11.2	Retrofit storm drains to filter runoff from roadways	NMFS,USDOT, CDOT,CDFG, CT,SCHR,EII, TCFT,VC	Roads	1, 4	3B	20	32260	32260	32260	32260	0	129040
CC-SCS-13.1	Develop, adopt, and implement land-use planning policies and standards	NMFS,CCC, CDFG,CT, SCHR,EII,TCFT, VC	Urban Development	1, 4	2B	5	62400	0	0	0	0	62400
CC-SCS-13.2	Develop, adopt, and implement urban land-use planning policies and standards	USDOT,NMFS, USFWS,CDFG, CT,SCHR,EII, TCFT,VC	Urban Development	1, 4	3B	5	62400	0	0	0	0	62400
CC-SCS-13.3	Retrofit storm drains in developed areas	NMFS,USDOT, CDOT,CDFG, USFWS,CT, SCHR,EII,TCFT, VC	Urban Development	1, 4	3B	20	0	0	0	0	0	0
CC-SCS-14.1	Review California Regional Water Quality Control Board Watershed Plans and modify Stormwater Permits	RWQCB, SWRCB,CDFG, NMFS,CT, SCHR,EII,TCFT, VC	Urban Effluents	1, 4	2B	ongoing	0	0	0	0	0	0
CC-SCS-14.1	Review, assess and modify NPDES wastewater discharge permits	SWRCB, RWQCB, NMFS CDFG,CT, SCHR,EII,TCFT, VC	Urban Effluents	1, 4	3B	ongoing	0	0	0	0	0	0

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
CC-SCS-15.1	Develop and implement an integrated wildland fire and hazardous fuels management plan	USFS,USFWS, NMFS,USGS, CDFG,LPFW, CT,SCHR,EII, TCFT,VC	Wildfires	1, 4, 5	1B	100 - refer to regional costs	0	0	0	0	0	0

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
Matilija Creek												
MC-SCS-1.1	Develop, adopt and implement agricultural land-use planning policies and	NRCS,USFWS, NMFS,CDFG, RWQCB,CT, SCHR,EII,TCFT, VC	Agricultural Development	1, 4	2B	20	13640	5498240	5498240	5498240	0	16508360
MC-SCS-2.1	Manage agricultural development and restore riparian zones	NRCS,USFWS, NMFS,CDFG, RWQCB,CT, SCHR,EII,TCFT, VC	Agricultural Development	1, 4	2B	20 - refer to regional costs	0	0	0	0	0	0
MC-SCS-3.1	Develop and implement plan to remove or modify fish passage barriers within the watershed	USFS,USFWS, NMFS,CDFG, CT,SCHR,EII, TCFT,VC	Culverts and Road Crossings (Passage Barriers)	1, 4	3A	20 - refer to regional costs	0	0	0	0	0	0
MC-SCS-4.1	Provide fish passage around dams and diversions (e.g., remove Matilija dam)	ACOE,BOR, NMFS,USFS, USFWS,CCC CDFG, RWQCB,MC, CT,SCHR,EII, TCFT,VC	Dams and Surface Water Diversions	1, 3, 4	1A	20	TBD	TBD	TBD	TBD	TBD	TBD
MC-SCS-4.2	Develop and implement water management plan for diversion operations	ACOE,BOR, NMFS,CDFG, SWRCB,CT,MC SCHR,EII,TCFT	Dams and Surface Water Diversions	1, 3, 4	1B	5	TBD	TBD	TBD	TBD	TBD	TBD
MC-SCS-5.1	Develop and implement flood control maintenance program	NRCS,USFS, USFWS,NMFS, CDFG,CT, SCHR,EII,TCFT, VC	Flood Control Maintenance	1, 4	3B	100	0	0	0	0	0	0

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
MC-SCS-6.1	Conduct groundwater extraction analysis and assessment	USGS,NMFS, SWRCB,CDFG CT,SCHR,EII, TCFT,VC	Groundwater Extraction	1, 4	1B	5	275550	0	0	0	0	275550
MC-SCS-6.2	Develop and implement groundwater monitoring and management program	USGS,NMFS, SWRCB,CDFG, CT,SCHR,EII, TCFT,VC	Groundwater Extraction	1, 4	1B	10	254350	39775	0	0	0	294125
MC-SCS-7.1	Develop and implement stream bank and riparian corridor restoration plan	NRCS,USFS,USFWS,USGS, ACOE, BLM,NMFS, CT,SCHR,EII, TCFT,VC	Levees and Channelization	1, 4	2B	100	0	0	0	0	0	0
MC-SCS-7.2	Develop and implement plan to restore natural channel features	CCC,NMFS, CDFG,CT, SCHR,EII,TCFT, VC	Levees and Channelization	1, 4	3B	20	4217625	4217625	4217625	4217625	0	16870500
MC-SCS-7.3	Develop and implement plan to vegetate levees and eliminate or minimize herbicide use near levees	FEMA,USGS, ACOE,BLM, NMFS,CT, SCHR,EII,TCFT, VC	Levees and Channelization	1, 4	3B	100	0	0	0	0	0	0
MC-SCS-8.1	Review and modify mining operations	USGS,NMFS, USFWS, CDFG,CDMG CT,SCHR,EII, TCFT,VC	Mining and Quarrying	1, 4, 5	3B	5	68030	0	0	0	0	68030
MC-SCS-9.1	Develop and implement watershed-wide plan to assess the impacts of non-native species and develop control measures	CDFG,NMFS, UFWS,USFS CT,SCHR,EII, TCFT,VC	Non-Native Species	1, 3, 5	2B	100 - refer to regional costs	0	0	0	0	0	0

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
MC-SCS-9.2	Develop and implement non-native species monitoring program	CDFG,NMFS, USFWS,USFS, CT,SCHR,EII, TCFT,VC	Non-Native Species	1, 3, 5	2B	100 - refer to regional costs	0	0	0	0	0	0
MC-SCS-9.3	Develop and implement public education program on non-native species impacts	CDFG,NMFS, USFWS,USFS, CT,SCHR,EII, TCFT,VC	Non-Native Species	1, 3, 5	2B	20	76140	76140	76140	76140	0	304560
MC-SCS-10.1	Review and modify development and management plans for recreational areas and national forests	USFS,USFWS, NMFS,CDFG, MC,CT, SCHR,EII,TCFT, VC	Recreational Facilities	1, 2, 3, 4, 5	2B	ongoing - cost of doing business	0	0	0	0	0	0
MC-SCS-10.2	Manage off-road recreational vehicle activity in riparian floodplain corridors	USFS,USFWS, NMFS,CDFG, CT,SCHR,EII, TCFT,VC	Recreational Facilities	1, 2, 3, 4, 5	2B	ongoing -cost of doing business	0	0	0	0	0	0
MC-SCS-11.1	Manage roadways and adjacent riparian corridor and restore abandoned roadways	USDOT,CDOT, USFS,USFWS, NMFS,CDFG, CT,SCHR,EII, TCFT,VC	Roads	1, 4	3B	20 - refer to regional costs	0	0	0	0	0	0
MC-SCS-11.2	Retrofit storm drains to filter runoff from roadways	USDOT,NMFS, CDOT,CDFG, RWQCB CT,SCHR,EII, TCFT,VC	Roads	1, 4	3B	20	32260	32260	32260	32260	0	129040

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
MC-SCS-13.1	Develop, adopt, and implement urban land-use planning policies and standards	NMFS,USFWS, CDFG,CT, SCHR,EII,TCFT, VC	Urban Development	1, 4	3B	5	62400	0	0	0	0	62400
MC-SCS-13.2	Retrofit storm drains in developed areas	USDOT,NMFS, CDOT,CDFG, CT,SCHR,EII, TCFT,VC	Urban Development	1, 4	3B	20	0	0	0	0	0	0
MC-SCS-14.1	Review, assess and modify NPDES wastewater discharge permits	RWQCB, CDFG,NMFS, MC,CT,SCHR, EII,TCFT,VC	Urban Effluents	1, 4	2B	ongoing	0	0	0	0	0	0
MC-SCS-14.2	Review, assess and modify residential and commercial wastewater septic treatment facilities	RWQCB, CDFG,NMFS, MC,CT,SCHR, EII,TCFT,VC	Urban Effluents	1, 4	2B	ongoing	0	0	0	0	0	0
MC-SCS-14.3	Review California Regional Water Quality Control Board Watershed Plans and modify Stormwater Permits	RWQCB, SWRCB,CDFG, USFWS,NMFS, CT,SCHR,EII, TCFT,VC	Urban Effluents	1, 4	3B	ongoing	0	0	0	0	0	0
MC-SCS-15.1	Develop and implement an integrated wildland fire and hazardous fuels management plan	USFS,USFWS, NMFS,CDFG, LPFW,CT, SCHR,EII,TCFT, VC	Wildfires	1, 4, 5	1B	100 - refer to regional costs	0	0	0	0	0	0

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
North Fork Matilija Creek												
NFMC-SCS-1.1	Manage livestock grazing to maintain or restore aquatic habitat functions	USFS,USFWS, NMFS,CDFG, CT,SCHR,EII, TCFT,VC	Agricultural Development	1, 4,	2B	5	47520	0	0	0	0	47520
NFMC-SCS-1.2	Develop, adopt, and implement agricultural land-use planning policies and standards	USFS,USFWS, NMFS,CDFG, CT,SCHR,EII, TCFT,VC	Agricultural Development	1, 4	2B	0	0	0	0	0	0	0
NFMC-SCS-2.1	Develop and implement plan to minimize runoff from agricultural activities	NRCS,USFWS,U SFWS,NMFS, SWRCB, REWQCB, CDFG,CT, SCHR,EII,TCFT, VC	Agricultural Effluents	1, 4	2B	20 - refer to regional costs	0	0	0	0	0	0
NFMC-SCS-3.1	Develop and implement plan to remove or modify fish passage barriers within the watershed	USFS,USFWS,N MFS,CDFG,CT, SCHR,EII,TCFT, VC	Culverts and Road Crossings (Passage Barriers)	1, 4	1A	20 - refer to regional costs	0	0	0	0	0	0
NFMC-SCS-4.1	Develop and implement water management plan for diversion operations	USFS,USFWS, NMFS,CDFG, CT,SCHR,EII, TCFT,VC	Dams and Surface Water Diversions	1, 3, 4	2B	5	91850	0	0	0	0	91850
NFMC-SCS-4.2	Provide fish passage around dams and diversions	USFS,USFWS, NMFS,CDFG, CT,SCHR,EII, TCFT,VC	Dams and Surface Water Diversions	1, 3, 4	1A	5	91850	0	0	0		91850

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
NFMC-SCS-5.1	Develop and implement flood control maintenance program	USFS,USFWS, NMFS,CDFG, CDOT,CT, SCHR,EII,TCFT, VC	Flood Control Maintenance	1, 4	3B	100	0	0	0	0	0	0
NFMC-SCS-6.1	Conduct groundwater extraction analysis and assessment	USGS,USFS, USFWS,NMFS, CDFG,CT, SCHR,EII,TCFT, VC	Groundwater Extraction	1, 4	3B	5	275550	0	0	0	0	275550
NFMC-SCS-6.2	Develop and implement groundwater monitoring and management program	USGS,USFWS, USFS,NMFS, CDFG,CT, SCHR,EII,TCFT, VC	Groundwater Extraction	1, 4	3B	10	254350	39775	0	0	0	294125
NFMC-SCS-7.1	Develop and implement stream bank and riparian corridor restoration plan	NMFS,USFWS, ACOE, CDFG, CT,SCHR,EII, TCFT,VC	Levees and Channelization	1, 4	3B	100	0	0	0	0	0	0
NFMC-SCS-7.2	Develop and implement plan to restore natural channel features	NMFS, USFWS,ACOE, CDFG,CT, SCHR,EII,TCFT, VC	Levees and Channelization	1, 4	3B	20	4217625	4217625	4217625	4217625	0	16870500
NFMC-SCS-8.1	Develop and implement plan to remove and maintain quarry and landslide debris from the channel	USGS,NMFS, USFS,USFWS, CDFG,CDMG, MC,CT, SCHR,EII,TCFT, VC	Mining and Quarrying	1, 4, 5	1A	5	68030	0	0	0	0	68030
NFMC-SCS-8.2	Review and modify mining operations	USGS,NMFS, USFWS,CDFG, CDMG,CT, SCHR,EII, TCFT,VC	Mining and Quarrying	1, 4, 5	2B	5	68030	0	0	0	0	68030

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
NFMC-SCS-9.1	Develop and implement watershed-wide plan to assess the impacts of non-native species and develop control measures	USFS,USFWS, NMFS,CDFG, CT,SCHR,EII, TCFT,VC	Non-Native Species	1, 3, 5	3B	100 - refer to regional costs	0	0	0	0	0	0
NFMC-SCS-9.2	Develop and implement non-native species monitoring program	USFS,USFWS, NMFS,CDFG, CT,SCHR,EII, TCFT,VC	Non-Native Species	1, 3, 5	2B	100 - refer to regional costs	0	0	0	0	0	0
NFMC-SCS-9.3	Develop and implement public education program on non-native species impacts	USFS,USFWS, NMFS,CDFG, CT,SCHR,EII, TCFT,VC	Non-Native Species	1, 3, 5	2B	20	76140	76140	76140	76140	0	304560
NFMC-SCS-10.1	Develop and implement public education program on watershed processes	CDFG,NMFS, CT,SCHR,EII, TCFT,VC	Recreational Facilities	1, 3,5	2B	20	76140	76140	76140	76140	0	304560
NFMC-SCS-10.2	Review and modify develop and management plans for recreational areas and national forests (e.g., U.S. Forest Service Los Padres National Forest Land Management Plan, Southern California National Forest Vision, Forest	USFS,USFWS, NMFS,CDFG, CT,SCHR,EII, TCFT,VC	Recreational Facilities	1, 2, 3, 4, 5	2B	ongoing - cost of doing business	0	0	0	0	0	0

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
	Strategy, and Design Criteria)											
NFMC-SCS-11.1	Manage roadways and adjacent riparian corridor and restore abandoned roadways	CDOT,USFS, USFWS,NMFS, CDFG,CT, SCHR,EII,TCF, VC	Roads	1, 4	3B	20 - refer to regional costs	0	0	0	0	0	0
NFMC-SCS-11.2	Retrofit storm drains to filter runoff from roadways	CDOT,USFS, USFWS,NMFS, CDFG,CT,SCH R,EII, TCFT,VC	Roads	1, 4	3B	20	32260	32260	32260	32260	0	129040
NFMC-SCS-15.1	Develop and implement an integrated wildland fire and hazardous fuels management plan	USFS,USFWS, USGS,NMFS, CDFG,LPFW, CT,SCHR,EII, TCFT,VC	Wildfires	1, 4, 5	1B	100 - refer to regional costs	0	0	0	0	0	0

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)						
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100	
San Antonio Creek													
SAC-SCS-1.1	Develop, adopt, and implement agricultural land-use planning policies and standards	NRCS,NMFS, CDFG,CT, SCHR,EII,TCFT, VC	Agricultural Development	1,4	2B	5	62400	0	0	0	0	0	62400
SAC-SCS-1.2	Manage agricultural development and restore riparian zones	NRCS,NMFS, CDFG,CT, SCHR,EII,TCFT, VC	Agricultural Development	1, 4	2B	20 - refer to regional costs	0	0	0	0	0	0	0
SAC-SCS-1.3	Manage livestock grazing to maintain or restore aquatic habitat functions	NRCS,NMFS, CDFG,CT, SCHR,EII,TCFT, VC	Agricultural Development	1, 4,	2B	5	47520	0	0	0	0	0	47520
SAC-SCS-2.1	Develop and implement plan to minimize runoff from agricultural activities	NRCS,UWFWS, NMFS, RWQCB, CDFG,CT, SCHR,EII,TCFT, VC	Agricultural Effluents	1, 4	1A	20 - refer to regional costs	0	0	0	0	0	0	0
SAC-SCS-2.2	Develop and implement plan to minimize runoff from agricultural activities	USSC,USFWS, NMFS,CDFG, SWRCB,CT, SCHR,EII,TCFT, VC	Agricultural Effluents	1, 4	2B	20 - refer to regional costs	0	0	0	0	0	0	0
SAC-SCS-3.1	Develop and implement plan to remove or modify fish passage barriers within the watershed	NMFS,USFWS, CDOT,CDFG, CT,SCHR,EII, TCFT,VC	Culverts and Road Crossings (Passage Barriers)	1, 4	2A	20 - refer to regional costs	0	0	0	0	0	0	0

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
SAC-SCS-4.1	Develop and implement water management plan for diversion operations	NMFS,USFWS, SWRCB,CDFG, CT,SCHR,EII, TCFT,VC	Dams and Surface Water Diversions	1, 4	1A	5	TBD	TBD	TBD	TBD	TBD	TBD
SAC-SCS-5.1	Develop and implement flood control maintenance program	NMFS,NRCS, CDFG,CT, SCHR,EII,TCFT, VC	Flood Control Maintenance	1, 4	2B	100	0	0	0	0	0	0
SAC-SCS-6.1	Conduct groundwater extraction analysis and assessment	USGS,NMFS,US FWS,CDFG,CT, SCHR,EII,TCFT, VC	Groundwater Extraction	1, 4	1B	5	275550	0	0	0	0	275550
SAC-SCS-6.2	Develop and implement groundwater monitoring and management program	USGS,NMFS,US FWS,CDFG,CT, SCHR,EII,TCFT	Groundwater Extraction	1, 4	1B	10	254350	39775	0	0	0	294125
SAC-SCS-7.1	Develop and implement stream bank and riparian corridor restoration plan	USGS,ACOE, BLM,NMFS, CDFG,CT, SCHR,EII,TCFT, VC	Levees and Channelization	1, 4	2B	100	0	0	0	0	0	0
SAC-SCS-7.2	Develop and implement plan to restore natural channel features	NRCS,ACOE,N MFS,CDFG, CT,SCHR,EII, TCFT,VC	Levees and Channelization	1, 4	2B	20	4217625	4217625	4217625	4217625	0	16870500
SAC-SCS-7.3	Develop and implement plan to vegetate levees and eliminate or minimize herbicide use near levees	FEMA,NRCS, NMFS,ACOE, CDFG,CT, SCHR,EII,TCFT, VC	Levees and Channelization	1, 4	2B	100	0	0	0	0	0	0

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
SAC-SCS-9.1	Develop and implement non-native species monitoring program	CDFG,USFWS, NMFS,CT, SCHR,EII,TCFT, VC	Non-Native Species	1, 3, 5	2B	100 - refer to regional costs	0	0	0	0	0	0
SAC-SCS-9.2	Develop and implement watershed-wide plan to assess the impacts of non-native species and develop control measures	CDFG,USFWS, NMFS,CT, SCHR,EII,TCFT, VC	Non-Native Species	1, 3, 5	2B	100 - refer to regional costs	0	0	0	0	0	0
SAC-SCS-9.3	Develop and implement public education program on non-native species impacts	CDFG,USFWS, NMFS,CT, SCHR,EII,TCFT, VC	Non-Native Species	1, 3, 5	2B	20	76140	76140	76140	76140	0	304560
SAC-SCS-10.1	Review and modify development and management plans for recreational areas and national forests (e.g., Camp Comfort)	USFS,USFWS, NMFS,CDFG, NMFS,CT, SCHR,EII,TCFT, VC	Recreational Facilities	1, 3, 5	2B	ongoing - doing business	0	0	0	0	0	0
SAC-SCS-10.2	Develop, adopt, and implement recreational land-use planning policies	USFS,NMFS, CDFG,CT, SCHR,EII,TCFT, VC	Recreational Facilities	1, 2, 3, 4, 5	2B	5	62400	0	0	0	0	62400
SAC-SCS-10.3	Develop and implement public education program on watershed processes	USFWS,NMFS, CDFG,CT, SCHR,EII,TCFT, VC	Recreational Facilities	1, 2, 3, 4	2B	5	62400	0	0	0	0	62400

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
SAC-SCS-11.1	Retrofit storm drains to filter runoff from roadways	CDOT,RWQC, CDFG,NMFS, USFWS,SCHR, EII,TCFT,VC	Road	1, 4	2B	20- regional costs	0	0	0		0	0
SAC-SCS-11.2	Manage roadways adjacent riparian corridor and restore abandoned roadways	CDOT,NRCSUS FWS,NMFS, CDFG,CT, SCHR,EII,TCFT, VC	Roads	1, 4	2B	20 - refer to regional costs	0	0	0	0	0	0
SAC-SCS-13.1	Develop, adopt, and implement urban land-use planning policies and standards	NMFS,USFWS, CDFG,CT, SCHR,EII,TCFT, VC	Urban Development	1, 4	2B	5	62400	0	0	0	0	62400
SAC-SCS-13.2	Retrofit storm drains in developed areas	CDOT,CDFG, NMFS,USFWS, CT,SCHR,EII, TCFT,VC	Urban Development	1, 4	2B	20	0	0	0	0	0	0
SAC-SCS-14.1	Review California Regional Water Quality Control Board Watershed Plans and modify Stormwater Permits	RWQCB,CDF G SWRCB,NMFS, USFWS,CT, SCHR,EII,TCFT, VC	Urban Effluents	1, 4	2B	ongoing - cost of doing business	0	0	0	0	0	0
SAC-SCS-14.2	Review, assess and modify NPDES wastewater discharge permits	RWQCB, CDFG,NMFS, USFWS,CT, SCHR,EII,TCFT, VC	Urban Effluents	1, 4	2B	ongoing - cost of doing business	0	0	0	0	0	0
SAC-SCS-15.1	Develop and implement an integrated wildland fire and hazardous fuels management plan	USFS,USFWS, NMFS,USGS, CDFG,LFPW, CT,SCHR,EII, TCFT,VC	Wildfires	1, 4, 5	1B	100 - refer to regional costs	0	0	0	0	0	0

Table 9-7. Southern California Steelhead DPS Recovery Action Table for Santa Clara River Sub-Watersheds (Monte Arido Highlands BPG).

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)						
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100	
Mainstem Santa Clara River													
SCR-SCS-1.1	Develop, adopt, and implement agricultural land-use planning policies and standards	NRCS,USFS, USFWS,NMFS, CDFG,CT, SCHR,EII, TCFT,VC,LAC	Agricultural Development	1, 4,	2B	20	62400	0	0	0	0	0	62400
SCR-SCS-1.2	Manage agricultural development and restore riparian zones	NRCS,USFWS,N MFS,BLM, CDFG,CT, SCHR,EII,TCFT, VC,LAC	Agricultural Development	1, 4	2B	5	62400	0	0	0	0	0	62400
SCR-SCS-1.3	Manage livestock grazing to maintain or restore aquatic habitat functions	NRCS,USFWS,N MFS,BLM, CDFG,CT, SCHR,EII,TCFT, VC,LAC	Agricultural Development	1,4	2B	5	62400	0	0	0	0	0	62400
SCR-SCS-2.1	Develop and implement plan to minimize runoff from agricultural activities	NRCS,USFWS SWRCB, RWQCB, CDFG,CT, SCHR,EII,TCFT, VC,LAC	Agricultural Effluents	1, 4	2B	20 - refer to regional costs	0	0	0	0	0	0	0

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
SCR-SCS-3.1	Develop and implement plan to remove or modify fish passage barriers within the watershed (See Santa Clara River Steelhead Trout Assessment and Recovery Opportunities, 2005.)	NMFS,USFWS, ACOE,CDFG, DWR,CT,SCHR, EII,TCFT,VC, LAC	Culverts and Road Crossings (Passage Barriers)	1, 4	2A	20 - refer to regional costs	0	0	0	0	0	0
SCR-SCS-4.1	Provide fish passage around dams and diversions (e.g., Vern Freeman Diversion)	NMFS,BOR, ACOE, USFWS, SWRCB,CDFG, DWR,CT,SCHR, EII,TCFT,VC	Dams and Surface Water Diversions	1, 3, 4	1A	20	TBD	TBD	TBD	TBD	TBD	TBD
SCR-SCS-4.2	Develop and implement water management plan for diversion operations (e.g., Vern Freeman Diversion)	NMFS,BOR, SWRCB,USGS, USFWS,CDFG, CT, SCHR,EII, TCFT,VC	Dams and Surface Water Diversions	1, 3, 4	1A	5	50440	0	0	0	0	50440
SCR-SCS-5.1	Develop and implement flood control maintenance program	USGS,USFWS, ACOE,BLM, NMFS,CDFG, CT,SCHR,EII, TCFT,VC,LAC	Flood Control Maintenance	1, 4	1B	100	0	0	0	0	0	0
SCR-SCS-6.1	Conduct groundwater extraction analysis and assessment	USGS,NMFS, SWRB,CDFG, CT,SCHR,EII, TCFT,VC,LAC	Groundwater Extraction	1, 4	1A	5	275550	0	0	0	0	275550

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
SCR-SCS-6.2	Develop and implement groundwater monitoring and management program	USGS,SWRCB, NMFS,CDFG, CT, SCHR,EII, TCFT,VC,LAC	Groundwater Extraction	1, 4	1B	10	254350	39775	0	0	0	294125
SCR-SCS-7.1	Develop and implement stream bank and riparian corridor restoration plan	CCC,NMFS, CDFG,CT, SCHR,EII,TCFT, VC,LAC	Levees and Channelization	1, 4	1B	20	4217625	4217625	4217625	4217625	0	16870500
SCR-SCS-7.2	Develop and implement plan to vegetate levees and eliminate or minimize herbicide use near levees	FEMA,USGS, ACOE,BLM, NMFS,CT, SCHR,EII,TCFT, VC,LAC	Levees and Channelization	1, 4	1B	100	0	0	0	0	0	0
SCR-SCS-8.1	Review and modify mining operations	USGS,NMFS, USFWS,CDFG, CDMGCT, SCHR,EII,TCFT, VC,LAC	Mining and Quarrying	1, 4, 5	2B	5	68030	0	0	0	0	68030
SCR-SCS-9.1	Develop and implement watershed-wide plan to assess the impacts of non-native species and develop control measures	USFS,USFWS, NMFS,CDFG, CDPR,CT, SCHR,EII,TCFT, VC,LAC	Non-Native Species	1, 3, 5	2B	100 - refer to regional costs	0	0	0	0	0	0
SCR-SCS-9.2	Develop and implement non-native species monitoring program	USFS,USFWS, NMFS,CDFG, CDPR,CT, SCHR,EII,TCFT, VC,LAC	Non-Native Species	1, 3, 5	2B	100 - refer to regional costs	0	0	0	0	0	0

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
SCR-SCS-9.3	Develop and implement public education program on non-native species impacts	USFS,UFWS,NMFS,CDFG,CDPR,CT,SCHR,EII,TCFT,VC,LAC	Non-Native Species	1, 3, 5	2B	20	76140	76140	76140	76140	0	304560
SCR-SCS-10.1	Review and modify development and management plans recreational areas and national forests	CCC,NMFS,BLM,CT,SCHR,EII,TCFT,VC,LAC	Recreational Facilities	1, 2, 3, 4, 5	1B	1	68030	0	0	0	0	68030
SCR-SCS-12.1	Develop and implement an estuary restoration and management plan	NMFS,USFS,USFWS,CCC,CDFG,FOSCR,CT,SCHR,EII,TCFT,VC,LAC	Upslope/Upstream activities	1, 2, 3, 4, 5	1B	5	156333335	0	0	0	0	156333335
SCR-SCS-12.2	Review and modify applicable County and/or City Local Coastal Plans	CCC,CDFG,NMFS,CT,SCHR,EII,TCFT,VC,LAC	Upslope/Upstream activities	1, 2, 3, 4, 5	2B	5	312000	0	0	0	0	312000
SCR-SCS-15.1	Develop and implement an integrated wildland fire and hazardous fuels management plan	USFS,USFWS,USGS,NMFS,CDFG,LPFW,CT,SCHR,EII,TCFT,VC,LAC	Wildfires	1, 4, 5	1B	100 - refer to regional costs	0	0	0	0	0	0

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
Santa Paula Creek												
SP-SCS-1.1	Manage Livestock grazing to maintain or restore aquatic habitat functions	NRCS,USFWS,NMFS,CDFG,CT,SCHR,EII,TCFT,KSW,VC	Agricultural Development	1, 4	2B	20	12400	4998400	4998400	4998400	0	4998400
SP-SCS-1.2	Develop, adopt, and implement agricultural land-use planning policies and standards	NRCS,USFWS,NMFS,CDFG,CT,SCHR,EII,TCFT,KSW,VC	Agricultural Development	1, 4	2B	5	62400	0	0	0	0	62400
SP-SCS-1.3	Manage agricultural development and restore riparian zones	NRCS,USFWS,NMFS,CDFG,CT,SCHR,EII,TCFT,KSW,VC	Agricultural Development	1, 4	2B	20	12400	4998400	4998400	4998400	0	4998400
SP-SCS-2.1	Develop and implement plan to minimize runoff from agricultural activities	NRCS,NMFS,USFWS,SWRCB,RWQCB,CDFG,CT,SCHR,EII,TCFT,VC	Agricultural Effluents	1, 4	2B	20 - refer to regional costs	0	0	0	0	0	0
SP-SCS-3.1	Develop and implement plan to remove or modify fish passage barriers within the watershed (See Santa Clara River Steelhead Trout Assessment and Recovery Opportunities, 2005.)	NMFS,USFS,USFWS,ACOE,CDFG,CT,SCHR,EII,TCFT,KSW,VC	Culverts and Road Crossings (Passage Barriers)	1, 4	3A	20 - refer to regional costs	0	0	0	0	0	0

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
SP-SCS-4.1	Provide fish passage around dams and diversions (e.g., Harvey Diversion)	NMFS, ACOE, USFWS, DWR, CT, SCHR, EII, TCFT, KSW, VC	Dams and Surface Water Diversions	1, 3, 4	1A	5	TBD	TBD	TBD	TBD	TBD	TBD
SP-SCS-4.2	Develop and implement water management plan for diversion operations	USGS, USFS, USFWS, NMFS, CDFG, CT, SCHR, EII, TCFT, KSW, VC	Dams and Surface Water Diversions	1, 3, 4	1A	5	TBD	TBD	TBD	TBD	TBD	TBD
SP-SCS-5.1	Develop and implement flood control maintenance program	ACOE, NRCS, BLM, NMFS, USFWS, CDFG, CT, SCHR, EII, TCFT, KSW, VC	Flood Control Maintenance	1, 4	1B	100	0	0	0	0	0	0
SP-SCS-6.1	Conduct groundwater extraction analysis and assessment	USGS, NMFS, USFWS, CDFG, SWRCB, CT, SCHR, EII, TCFT, KSW, VC	Groundwater Extraction	1, 4	2B	5	275550	0	0	0	0	275550
SP-SCS-6.2	Develop and implement groundwater monitoring and management program	USGS, NMFS, USFWS, CDFG, SWRCB, CT, SCHR, EII, TCFT, KSW, VC	Groundwater Extraction	1, 4	2B	3	275550	0	0	0	0	275550
SP-SCS-7.1	Develop and implement plan to restore natural channel features	NMFS, NRCS, USFWS, CDFG, CT, SCHR, EII, TCFT, KSW, VC	Levees and Channelization	1, 4	1B	20	4217625	4217625	4217625	4217625	0	16870500

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
SP-SCS-7.2	Develop and implement plan to vegetate levees and eliminate or minimize herbicide use near levees	FEMA,NRCS, USGS,ACOE, BLM,NMFS, CDFG,CT, SCHR,EII,TCFT, KSW,VC	Levees and Channelization	1, 4	1B	100	0	0	0	0	0	0
SP-SCS-7.3	Develop and implement stream bank and riparian corridor restoration plan	NRCS,USGS, ACOE,BLM, NMFS,CDFG CT,SCHR,EII, TCFT,KSW,VC	Levees and Channelization	1, 4	1B	20	4217625	4217625	4217625	4217625	4217625	16870500
SP-SCS-9.1	Develop and implement watershed-wide plan to assess the impacts of non-native species and develop control measures	CDFG,USFS, USFWS,NMFS, CDFG,CT, SCHR,EII, TCFT,KSW,VC	Non-Native Species	1, 3, 5	3B	100 - refer to regional costs	0	0	0	0	0	0
SP-SCS-9.2	Develop and implement non-native species monitoring program	CDFG,NMFS, USFWS,USFS, CT,SCHR,EII, TCFT,KSW,VC	Non-Native Species	1, 3, 5	2B	100 - refer to regional costs	0	0	0	0	0	0
SP-SCS-9.3	Develop and implement public education program on non-native species impacts	CDFG,NMFS, USFS,USFWS, CT,SCHR,EII, TCFT,KSW,VC	Non-Native Species	1, 3, 5	2B	20	76140	76140	76140	76140	0	304560
SP-SCS-10.1	Review and modify development and management plans for	USFS,USFWS, NMFS,CDFG, CT,SCHR,EII, TCFT,KSW,VC	Recreational Facilities	1, 2, 3, 4, 5	2B	ongoing - cost of doing business	0	0	0	0	0	0

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)						
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100	
	recreational areas and national forests (e.g., Steckel Park)												
SP-SCS-11.1	Manage roadways and adjacent riparian corridor and restore abandoned roadways	CDOT,USFWS, NMFS,CDFG, CT,SCHR,EII, TCFT,KSW,VC	Roads	1, 4	2B	20 - refer to regional costs	0	0	0	0	0	0	0
SP-SCS-13.1	Develop, adopt, and implement urban land-use planning policies and standards	NMFS,USFWS, CDFG,CT, SCHR,EII,TCFT, KSW,VC	Urban Development	1, 4	2B	5	62400	0	0	0	0	0	62400
SP-SCS-13.2	Retrofit storm drains in developed areas	NMFS,CDOT, CDFG,CT, SCHR,EII,TCFT, KSW,VC	Urban Development	1, 4	2B	20	0	0	0	0	0	0	0
SP-SCS-14.1	Review California Regional Water Quality Control Board Watershed Plans and modify Stormwater Permits	RWQCB, SWRCB,CDFG, NMFS,CT, SCHR,EII,TCFT, KSW,VC	Urban Effluents	1, 4	2B	ongoing - cost of doing business	0	0	0	0	0	0	0
SP-SCS-14.2	Review, assess and modify NPDES wastewater discharge permits	RWQCB,CDFG NMFS,USFWS, CT,SCHR,EII, TCFT,KSW,VC	Urban Effluents	1, 4	2B	ongoing - cost of doing business	0	0	0	0	0	0	0
SP-SCS-15.1	Develop and implement an integrated wildland fire and hazardous fuels management plan,	USFS,USFWS, NMFS,USGS, CDFG,LPFW, CT,SCHR,EII, TCFT,KSW,VC	Wildfires	1, 4, 5	1B	100 - refer to regional costs	0	0	0	0	0	0	0

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
Sespe Creek												
SesC-SCS-1.1	Manage livestock grazing to maintain or restore aquatic habitat functions	NRCS,USFS, USFWS,CDFG, CT,SCHR,EII, TCFT,KSW,VC	Agricultural Development	1, 4	2B	20	62000	24992000	24992000	24992000	0	75038000
SesC-SCS-1.2	Develop, adopt, and implement agricultural land-use planning policies and standards	NRCS,NMFS, USFS,USFWS, BLM,CDFG, RWOCB,CT, SCHR,EII,TCFT, KSW,VC	Agricultural Development	1, 4	2B	5	62400	0	0	0	0	62400
SesC-SCS-2.1	Develop and implement plan to minimize runoff from agricultural activities	NRCS,USFS, USFWS,NMFS, RWOCB, SWRCB,CDFG, CT,SCHR,EII, TCFT,KSW,VC	Agricultural Effluents	1, 4	2B	20 - refer to regional costs	0	0	0	0	0	0
SesC-SCS-3.1	Develop and implement plan to remove or modify fish passage barriers within the watershed (See Santa Clara River Steelhead Trout Assessment and Recovery Opportunities, 2005.)	USFS,USFWS, NMFS,CDFG, CT,SCHR,EII, TCFT,KSW,VC	Culverts and Road Crossings (Passage Barriers)	1, 4	3A	20 - refer to regional costs	0	0	0	0	0	0
SesC-SCS-4.1	Develop and implement water management plan for diversion operations	NMFS,USFWS,S WRCB,CDFG, CT,SCHR,EII, TCFT,KSW,VC	Dams and Surface Water Diversions	1, 3, 4	1A	5	91850	0	0	0	0	91850
SESC-SCS-4.2	Provide fish passage around dams and diversions	NMFS,USFWS,S WRCB,CDFG, CT,SCHR,EII, TCFT,KSW,VC	Dams and Surface Water Diversions	1, 3, 4	1A	5	91850	0	0	0	0	91850

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
SesC-SCS-5.1	Develop and implement flood control maintenance program	NRCS,NMFS, USFWS,CDFG, CT,SCHR,EII, TCFT,KSW,VC	Flood Control Maintenance	1, 4	2B	100	0	0	0	0	0	0
SesC-SCS-6.1	Conduct groundwater extraction analysis and assessment	USGS,NMFS, SWRCB,CDFG, CT,SCHR,EII, TCFT,KSW,VC	Groundwater Extraction	1, 4	1B	5	275550	0	0	0	0	275550
SesC-SCS-5.2	Develop and implement groundwater monitoring and management program	USGS,NMFS, SWRCB,CDFG, CT,SCHR,EII, TCFT,KSW,VC	Groundwater Extraction	1, 4	1B	10	254350	39775	0	0	0	294125
SesC-SCS-7.1	Develop and implement plan to restore natural channel features	NRCS,NMFS, USFWS,ACOE, CDFG,CT, SCHR,EII,TCFT, KSW,VC	Levees and Channelization	1, 4	2B	20	4217625	4217625	4217625	4217625	0	16870500
SesC-SCS-7.2	Develop and implement plan to vegetate levees and eliminate or minimize herbicide use near levees	FEMA,NRCS, USGS,USFWS, ACOE,BLM, NMFS,CDFG, CT,SCHR,EII, TCFT,KSW,VC	Levees and Channelization	1, 4	2B	100	0	0	0	0	0	0
SesC-SCS-8.1	Review and modify mining operations	USGS,NMFS, USFWS,CDFG, CDMGCT, SCHR,EII,TCFT, KSW,VC	Mining and Quarrying	1, 4, 5	2B	5	68030	0	0	0	0	68030
SesC-SCS-9.1	Develop and implement watershed-wide plan to assess the impacts of non-native species and develop control measures	CDFG,USFS, USFWS,NMFS, CT,SCHR,EII, TCFT,KSW,VC	Non-Native Species	1, 3, 5	2B	100 - refer to regional costs	0	0	0	0	0	0

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
SesC-SCS-9.2	Develop and implement non-native species monitoring program	CDFG, NMFS, CT, SCHR, EII, TCFT, KSW, VC	Non-Native Species	1, 3, 5	2B	100 - refer to regional costs	0	0	0	0	0	0
SesC-SCS-9.3	Develop and implement public education program on non-native species impacts	CDFG, USFS, USFWS, NMFS, CT, SCHR, EII, TCFT, KSW, VC	Non-Native Species	1, 3, 5	2B	20	76140	76140	76140	76140	0	304560
SesC-SCS-10.1	Develop and implement public education program on watershed processes	USFS, USFWS, NMFS, CDFG, CT, SCHR, EII, TCFT, KSW, VC	Recreational Facilities	1, 2, 3, 4, 5	2B	20	76140	76140	76140	76140	0	304560
SesC-SCS-10.2	Review and modify development and management plans for recreational areas and national forests (e.g., U.S. Forest Service Los Padres National Forest Land Management Plan Southern California National Forest Vision, Forest Strategy, and Design Criteria)	USFS, USFWS, NMFS, CDFG, CT, SCHR, EII, TCFT, KSW, VC	Recreational Facilities	1, 2, 3, 4, 5	2B	ongoing - cost of doing business	0	0	0	0	0	0

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
SesC-SCS-11.1	Manage roadways and adjacent riparian corridor and restore abandoned roadways	USFS,USFWS, NMFS,CDOT,C DFG,CT, SCHR,EII,TCFT, KSW,VC	Roads	1, 4	3B	20 - refer to regional costs	0	0	0	0	0	0
SesC-SCS-11.2	Retrofit storm drains to filter runoff from roadways	USFS,USFWS,N MFS,CDOT, CDFG,CT, SCHR,EII,TCFT, KSW,VC	Roads	1, 4	3B	20	32260	32260	32260	32260	0	129040
SesC-SCS-13.1	Develop and implement riparian restoration plan to replace artificial bank stabilization structures	NRCS,NMFS, FEMA,AOEC, BLM,CT, SCHR,EII,TCFT, KSW,VC	Urban Development	1, 4	2B	5	62400	0	0	0	0	62400
SesC-SCS-13.2	Retrofit storm drains in developed areas	NMFS,CDOT, CDFG,CT, SCHR,EII,TCFT, KSW,VC	Urban Development	1, 4	2B	20	0	0	0	0	0	0
SesC-SCS-14.1	Review California Regional Water Quality Control Board Watershed Plans and modify Stormwater Permits	RWQCB, SWRCB,CDFG, NMFS,USFWS, CT,SCHR,EII, TCFT,KSW,VC	Urban Effluents	1, 4	2B	ongoing - cost of doing business	0	0	0	0	0	0
SesC-SCS-14.2	Review, assess and modify NPDES wastewater discharge permits (e.g., Cuyama Community Sanitation District Treatment Facility)	RWQCB, CDFG,NMFS, USFS,USFWS, CT,SCHR,EII, TCFT,KSW,VC	Urban Effluents	1, 4	3B	ongoing - cost of doing business	0	0	0	0	0	0
SesC-SCS-15.1	Develop and implement an integrated wildland fire and	USFS,USFWS, USGS,NMFS, CDFG,LPFW, CT,SCHR,EII,	Wildfires	1, 4, 5	1B	100 - refer to regional costs	0	0	0	0	0	0

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
	hazardous fuels management plan	TCFT,KSW,VC										

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
Piru Creek												
PC-SCS-1.1	Develop, adopt, and implement agricultural land-use planning policies and standards	NRCS,USFS, USFWS,NMFS, BLM,CDFG,CT, SCHR,EI,TCFT, KSW,VC,LAC	Agricultural Development	1, 4	2B	5	62400	0	0	0	0	62400
PC-SCS-1.2	Manage livestock grazing to maintain or restore aquatic habitat functions	NRCS,USFS, USFWS,NMFS, BLM,CDFG,CT, SCHR,EI,TCFT, VC,LAC	Agricultural Development	1, 4	2B	5	47520	0	0	0	0	47520
PC-SCS-1.3	Manage agricultural development and restore riparian zones	NRCS,USFS, USFWS,NMFS, BLM,CDFG,CT, SCHR,EI,TCFT, KSW,VC,LAC	Agricultural Development	1, 4	2B	20 - refer to regional costs	0	0	0	0	0	0
PC-SCS-2.1	Develop and implement plan to minimize runoff from agricultural activities	NRCS,USFS, USFWS,NMFS, RWQCB,CT, SCHR,EI,TCFT, KSW,VC,LAC	Agricultural Effluents	1, 4	2B	20 - refer to regional costs	0	0	0	0	0	0
PC-SCS-3.1	Develop and implement plan to remove or modify fish passage barriers within the watershed (See Santa Clara River Steelhead Trout Assessment and Recovery Opportunities, 2005.)	NMFS,USFS, USFWS,ACOE, BLM,CDFG, DWR,CTS,CHR, EI,TCFT,KSW, VC,LAC	Culverts and Road Crossings (Passage Barriers)	1, 4	3A	20 - refer to regional costs	0	0	0	0	0	0

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
PC-SCS-4.1	Provide fish passage around dams and diversions (e.g., Santa Felicia and Pyramid dams)	FERC,NMFS, USFS,USFWS, NMFS,DWR, CDFG,CT, SCHR,EII,TCFT, KSW,VC,LAC	Dams and Surface Water Diversions	1, 3, 4	1A	10	TBD	TBD	TBD	TBD	TBD	TBD
PC-SCS-4.2	Develop and implement water management plan for dam operations	U FERC,NMFS, USFS,USFWS, NMFS,DWR, CDFG,CT, SCHR,EII,TCFT, KSW,VC,LAC	Dams and Surface Water Diversions	1, 3, 4	1A	5	TBD	TBD	TBD	TBD	TBD	TBD
PC-SCS-5.1	Develop and implement flood control maintenance program	NRCS,USGS, ACOE, BLM,NMFS, CDFG,CT, SCHR,EII,TCFT, KSW,VC,LAC	Flood Control Maintenance	1, 4	1A	100	0	0	0	0	0	0
PC-SCS-5.2	Develop and implement flood control maintenance program	ACOE,USFWS, NMFS, CDFG, CT,SCHR,EII, TCFT,KSW,VC, LAC	Flood Control Maintenance	1, 4	3B	100	0	0	0	0	0	0
PC-SCS-6.1	Conduct groundwater extraction analysis and assessment	USGS,NMFS, DWR,SWRCB, CDFG,CT, SCHR,EII,TCFT, KSW,VC,LAC	Groundwater Extraction	1, 4	2B	5	275550	0	0	0	0	275550
PC-SCS-6.2	Develop and implement groundwater monitoring and management program	USGS,NMFS, DWR,SWRCB, CDFG,CT, SCHR,EII,TCFT, KSW,VC,LAC	Groundwater Extraction	1, 4	2B	10	254350	39775	0	0	0	294125
PC-SCS-7.1	Develop and implement plan to vegetate levees and eliminate or minimize herbicide	FEMA,USGS, ACOE,BLM, NMFS,CT, SCHR,EII,TCFT, VC,LAC	Levees and Channelization	1, 4	1A	100	0	0	0	0	0	0

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
	use near levees											
PC-SCS-7.2	Develop and implement plan to restore natural channel features	USGS,ACOE, BLM,NMFS, CT,SCHR,EII, TCFT,SW,VC, LAC	Levees and Channelization	1, 4	1B	20	4217625	4217625	4217625	4217625	0	16870500
PC-SCS-9.1	Develop and implement watershed-wide plan to assess the impacts of non-native species and develop control measures	CDFG,NMFS, USFS,USFWS, CDFG,CT, SCHR,EII,TCFT, KSW,VC,LAC	Non-Native Species	1, 3, 5	2B	100 - refer to regional costs	0	0	0	0	0	0
PC-SCS-9.2	Develop and implement non-native species monitoring program	CDFG,NMFS, USFS,USFWS, CDFG,CT, SCHR,EII,TCFT, KSW,VC,LAC	Non-Native Species	1, 3, 5	2B	100 - refer to regional costs	0	0	0	0	0	0
PC-SCS-9.3	Develop and implement public education program on non-native species impacts	CDFG,NMFS, USFS,USFWS, CDFG,CT, SCHR,EII,TCFT, KSW,VC,LAC	Non-Native Species	1, 3, 5	2B	20	76140	76140	76140	76140	0	304560
PC-SCS-10.1	Review and modify development and management plans for recreational areas and national forests (e.g., U.S. Forest Service Los Padres National Forest Land Management Plan Southern California National Forest	USFS,USFWS, NMFS,CDFG, DWR,CT, SCHR,EII,TCFT, KSW,VC,LAC	Recreational Facilities	1, 2, 3, 4, 5		ongoing - cost of doing business	0	0	0	0	0	0

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
	Vision, Forest Strategy, and Design Criteria)											
PC-SCS-10.2	Develop and implement public education program on watershed processes	USFS,USFWS, NMFS,CDFG, DWR,CT, SCHR,EII,TCFT, VC,LAC	Recreational Facilities	1, 2, 3, 4, 5	2B	20	76140	76140	76140	76140		304560
PC-SCS-11.1	Manage roadways and adjacent riparian corridor and restore abandoned roadways	CDOT,CDFG, USFS,USFWS, NMFS,CT, SCHR,EII,TCFT, KSW,VC,LAC	Roads	1, 4	3B	20 - refer to regional costs	0	0	0	0	0	0
PC-SCS-11.2	Retrofit storm drains to filter runoff from roadways	NRCS,NMFS,C DOT,CDFG,CT, SCHR,EII,TCFT, KSW,VC,LAC	Roads	1, 4	3B	20	32260	32260	32260	32260	0	129040
PC-SCS-13.1	Develop, adopt, and implement urban land-use planning policies and standards	NMFS,USFWS, CDFG,CT, SCHR,EII,TCFT, KSW,VC,LAC	Urban Development	1, 4	2B	5	62400	0	0	0	0	62400
PC-SCS-13.2	Retrofit storm drains in developed areas	CDOT,CDFG, NMFS,USFWS, CT,SCHR,EII, TCFT,KSW,VC, LAC	Urban Development	1, 4	2B	20	0	0	0	0	0	0
PC-SCS-14.1	Review California Regional Water Quality Control Board Watershed Plans and modify Stormwater Permits	RWOCB, SWRCB,NMFS, USFWS,CDFG, CT,SCHR,EII, TCFT,KSW,VC, LAC	Urban Effluents	1, 4	2B	ongoing - cost of doing business	0	0	0	0	0	0

Action #	Recovery Action	Potential Collaborators	Threat Source	Listing Factors (1 - 5)	Action Rank (1A, 1B, 2A, 2B, 3A, 3B)	Task Duration	Estimated Costs (\$)					
							FY 1-5	FY 6-10	FY 11-15	FY 16-20	FY 21-25	FY 1-100
PC-SCS-14.2	Review, assess and modify NPDES wastewater discharge permits	RWQCB, CDFG, NMFS, USFWS, CT, SCHR, EII, TCFT, KSW, VC, LAC	Urban Effluents	1, 4	33	ongoing - cost of doing business	0	0	0	0	0	0
PC-SCS-15.1	Develop and implement an integrated wildland fire and hazardous fuels management plan	USFS, USFWS, NMFS, USGS, CDFG, LPFW, CT, SCHR, EII, TCFT, KSW, VC, LAC	Wildfires	1, 4, 5	1B	100 - refer to regional costs	0	0	0	0	0	0