10. Conception Coast Biogeographic Population Group

"To the degree that trout are numerous and that they can give rise to anadromous fish, the viability of the steelhead population may be enhanced: by contributions to abundance and productivity, and by allowing the population to persist through multi-year droughts that interfere with steelhead migration from the ocean."

NOAA Fisheries Technical Recovery Team
Steelhead of the South-Central and Southern California Coast, 2006

10.1 LOCATION AND PHYSICAL CHARACTERISTICS

The Conception Coast BPG region encompasses eight small, coastal watersheds that drain a 50-mile long stretch of the south-facing slopes of the Santa Ynez Mountains in southern Santa Barbara County and extreme southwestern Ventura County (Figure 10-1). The Santa Ynez Mountains are an east-west trending spur of the Transverse Range that creates some of the steepest watersheds in any of the five BPG regions in the SCS Recovery Planning Area. Peak elevations reach 4,300 feet within a few miles of the Pacific Ocean. These watersheds are relatively homogeneous in slope, aspect, and size, with steep upper watersheds and lower watersheds that cut across a relatively narrow coastal terrace.

Conception Coast Watersheds

Stream lengths are relatively short in this BPG region. The Gaviota Creek watershed penetrates the furthest inland (about seven miles). Goleta Slough, the largest estuary in this BPG region, is formed by the confluence of several sub-watersheds: Tecolotito Creek, Los Carneros Creek, San Pedro Creek, Las Vegas Creek, Maria Ygnacio Creek, San Jose Creek, and Atascadero Creek. Of these, the latter three watersheds were evaluated using the CAP analyses. The majority of the watersheds within this BPG maintain perennial flow in their upper reaches, often in association with deep bed-rock pools, and supported by groundwater and flow

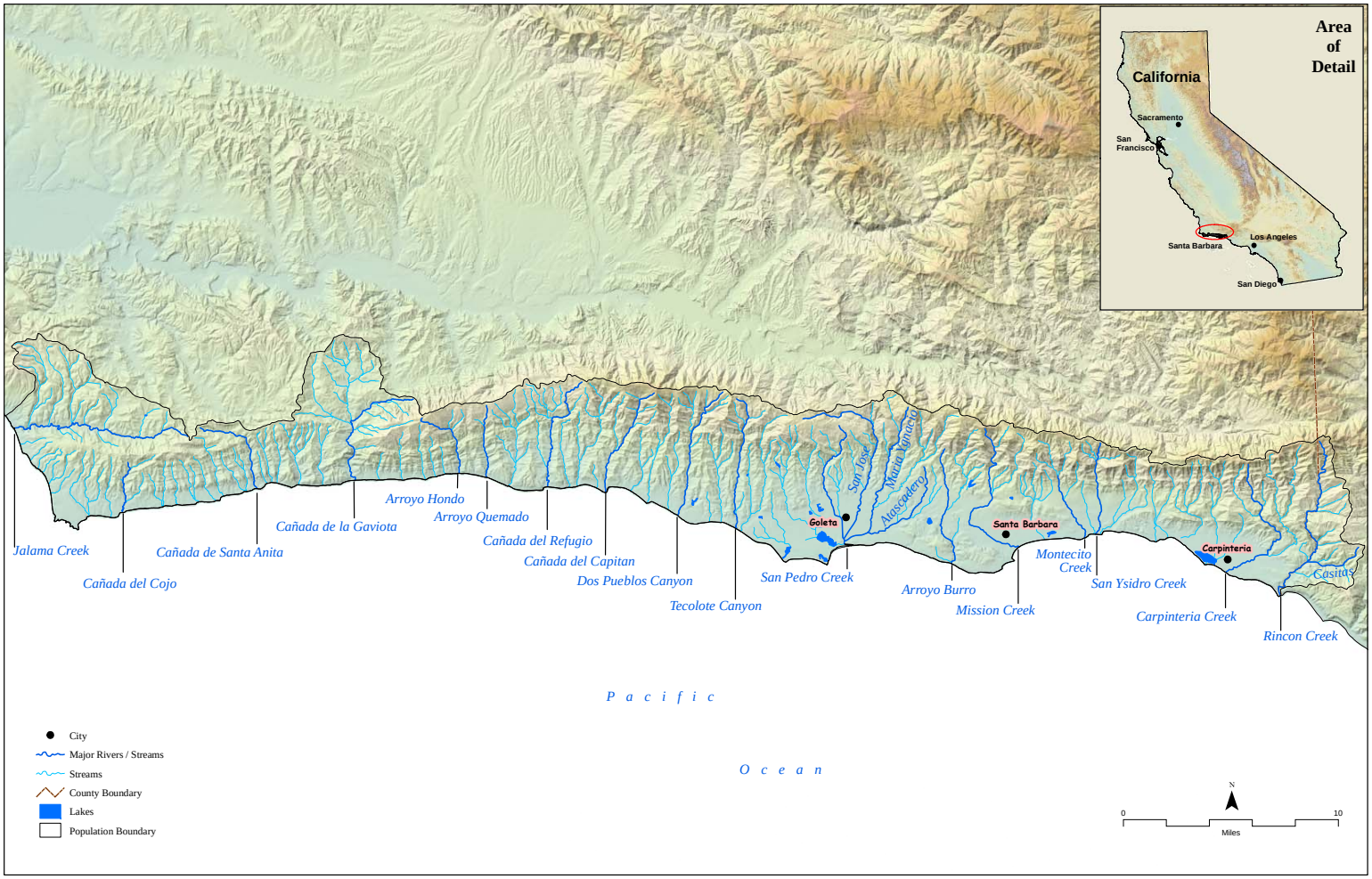

Figure 10-1. The Conception Coast BPG region. Ten populations/watersheds were analyzed in this region: Jalama, Santa Anita, Gaviota, Arroyo Hondo, Tecolote, Mission, Montecito, Carpinteria, and Rincon Creeks, and four sub-watersheds in the Goleta Slough watershed.

through fractured rock along geologic fault lines.

Maria Ygnacio Creek

The second largest estuary in this BPG region, Carpinteria Slough, is formed by a synclinal Watershed fed by Santa Monica Creek and several minor drainages that are not included in the basin covered in the Conception Coast BPG region.

Carpinteria Creek

Precipitation in this region increases strongly with increasing elevation. Rainfall amounts in the upper watersheds can be five to six times higher than on the coastal terrace of these watersheds during the same storm event, and the steep topography creates extremely "flashy" flows.

Gaviota Creek

In addition to the watersheds considered here, there are a number of smaller watersheds within this BPG (*e.g.*, San Antonio, Los Carneros, Glen Annie, and McCloy Creeks) which may also be used by steelhead when water conditions are favorable (Hunt & Associates 2008a, Kier Associates 2008b).

10.2 LAND USE

Table 10-1 summarizes land use and population density in this region. The coastal terrace and middle portions of these watersheds receive the most intensive land use. Human population density varies widely between the component watersheds, averaging about 605 persons per square mile over the entire BPG region. The western half of the BPG region has very low population density (1 - 59 persons/square mile), while the Goleta Slough and Mission Creek watersheds average 1,201 and 3,491 persons per square mile, respectively (see Table 10-1 for additional comparisons).

In most of the watersheds in this BPG region, the first land use change was livestock ranching and dry farming, followed by irrigated row-crop agriculture, particularly orchard crops such as avocados, lemons, and walnuts. Most recently, steeper slopes in the middle reaches of some watersheds have been developed with

avocado and other orchard crops. Urbanization followed this trend on the coastal plain in the eastern half of this BPG region then moved up into the more mountainous portions of the watersheds as cities grew in size. The upper watersheds throughout this region are located within the Los Padres National Forest, whereas the coastal and middle watersheds are mostly privately owned. Semi-developed rural land and orchards cover extensive portions of the coastal and middle portions of the western watersheds. Most of the Arroyo Hondo watershed has recently been put under a conservation easement and is managed by the Land Trust of Santa Barbara County.

A number of coastal areas in this region have been developed as County and State Parks, including Jalama Beach County Park (Jalama Creek), Gaviota State Beach (Gaviota Creek), Refugio State Beach (Refugio Creek), El Capitan State Beach (El Capitan Creek), Goleta Beach County Park (mouth of Goleta Slough), Arroyo Burro Beach County Park (Arroyo Burro Creek), City of Santa Barbara beaches (east and west of mouth of Mission Creek), Carpinteria State Beach (Carpinteria Creek), and Rincon Beach County Park (Rincon Creek). Each of these parks is situated along lower reaches of these drainages, including the estuary.

Carpinteria Valley Agriculture

Agriculture (orchard cultivation and livestock ranching), are important land uses that directly or indirectly impact watershed processes throughout these watersheds. Most of the municipal water for Goleta, Santa Barbara, Montecito, Summerland, and Carpinteria is supplied by reservoirs on the middle and upper mainstem of the Santa Ynez River on the north side of the Santa Ynez Range. This municipal water source is supplemented by groundwater wells located throughout the coastal terrace. The ranches that support irrigated orchard crops in these watersheds also depend heavily on groundwater as their source for agricultural water. Some large ranches have diversions and dams on their property to create reservoirs for agricultural use (*e.g.*, Glen Annie Canyon, an unnamed tributary of Dos Pueblos Creek, and Gato Creek).

Some of these reservoirs support small populations of bullfrogs and non-native predatory fish (*e.g.*, Dos Pueblos Creek tributary reservoir), but the majority of the drainages in these watersheds are relatively free from these predators. Non-native crayfish and western mosquitofish, which may prey on *O. mykiss* eggs, occur in many urbanized drainages. Tecolotito Creek in the Goleta Slough watershed supports a reproducing population of African clawed frogs (*Xenopus laevis*), which may be a predator on certain *O. mykiss* life stages.

10.3 CURRENT WATERSHED CONDITIONS

Watershed conditions were assessed for ten watersheds in the Conception Coast BPG region. In general, instream, riparian, and floodplain conditions for steelhead in these watersheds offer fair to good habitat conditions for anadromous *O. mykiss*, although conditions vary widely within and between watersheds, depending on land uses. The upper watersheds consistently

Table 10-1. Physical and Land-Use Characteristics of Major Watersheds in the Conception Coast BPG region.

	PHYSICAL CHARACTERISTICS					LAND USE			
WATERSHEDS (west to east)	**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]
Jalama Creek	15800	25	45	17.4	59			< 1%	
Canada de Santa Anita	2067	3	5	17.4	16			< 1%	
Gaviota Creek	12912	20	39	17.5	40			1%	
Arroyo Hondo	2796	4	6	17.8	1			< 1%	
Tecolote Creek	3726	6	11	19	339			18%	
Goleta Slough**	30410	48	92	19.2	57,664			16%	
Mission Creek	7760	12	16	19.6	41,890			3%	
Montecito Creek	3970	6	11	19.5	2,453			< 1%	
Carpinteria Creek	10712	17	25	19.8	3,493			20%	
Rincon Creek	9422	15	25	19.3	324			23%	
TOTAL or AVERAGE	**213099**	**333**	**560*** **	**18.6**	**201,459*** **		**16%**	**8%**	**74%**

[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 Census 2010 indicates the population in component watersheds is 122,787
[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/)*
** Goleta Slough" includes analyses only for San Jose, San Pedro, Maria Ygnacio, and Atascadero creeks
**** Total for entire BPG region, not component watersheds*

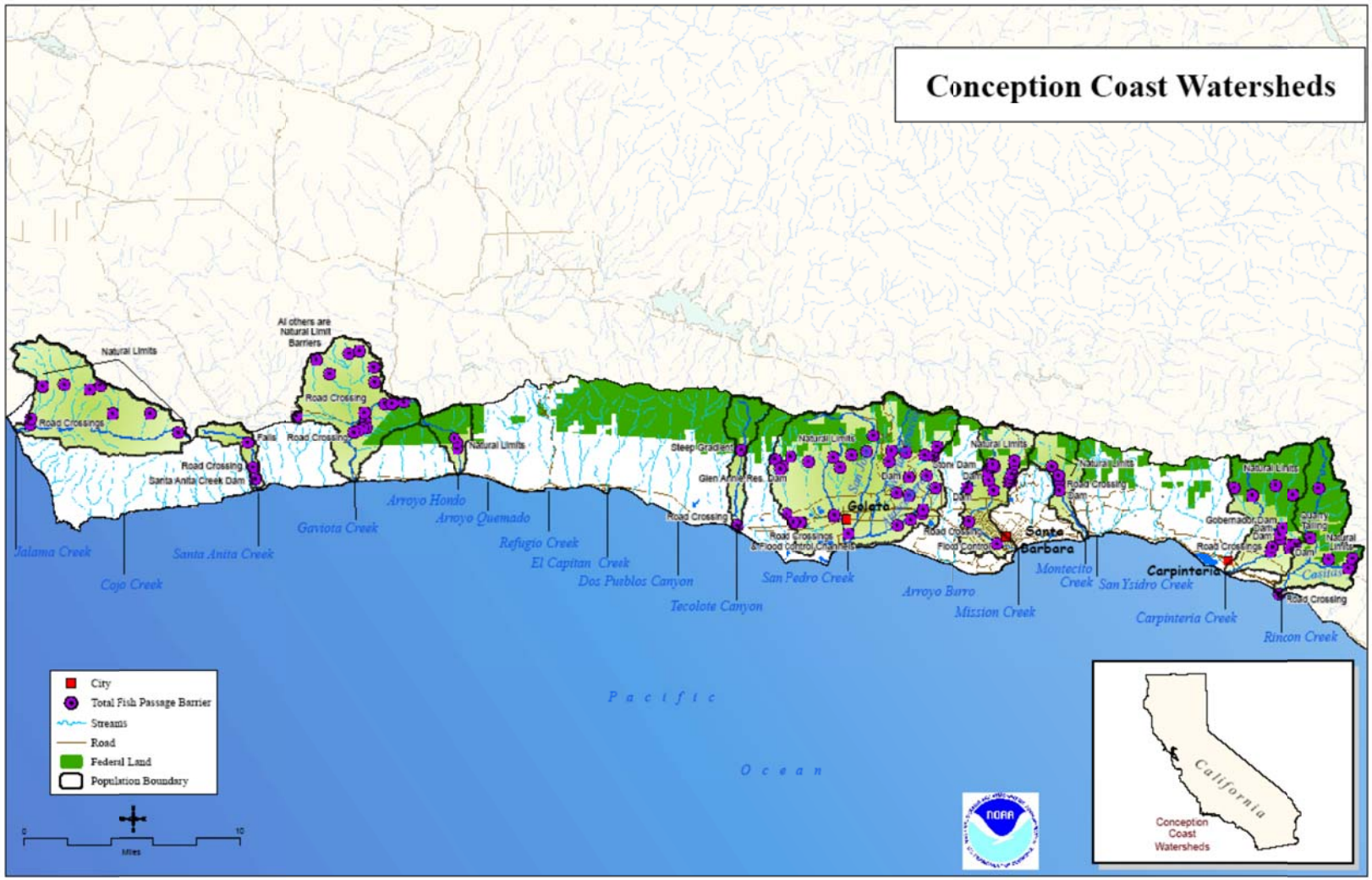

Figure 10-2. Conception Coast BPG Watersheds.

support good to excellent quality spawning and rearing habitat; however, conditions in each of these watersheds deteriorate downstream on the coastal plain. Highway 101 and the Union Pacific Railroad tracks and U.S. Highway 101 traverse the mainstem of each of these watersheds at or in close proximity to their mouths, which has damaged estuarine habitat and created passage impediments for anadromous *O. mykiss*.

Arroyo Hondo Creek Estuary

Agricultural activities, such as groundwater extraction, have reduced surface flows and degraded habitat conditions in the lower and middle portions of these watersheds. Urban development dominates the lower reaches of the Goleta Slough, Mission Creek, Montecito Creek, and Carpinteria Creek watersheds (Hunt & Associates 2008a, Kier Associates 2008b).

Rincon Creek

Most of these watersheds also exhibit high road densities. The Arroyo Hondo watershed provides the least disturbed conditions for steelhead in this BPG because of low-intensity land use and its inclusion in a natural reserve system managed by the Land Trust of Santa Barbara County. The Goleta Slough watershed (San Jose, San Pedro, Maria Ygnacio, and Atascadero creeks) and the Mission Creek and Rincon Creek watersheds exhibit the least favorable conditions; however, their upper watersheds sustain reproducing populations of non-anadromous *O. mykiss* and occasionally anadromous forms despite urbanization, channelization, channel maintenance, and other urban land uses throughout their lower reaches.

Mission Creek

The terrain of the Santa Ynez Mountains results in development on steep slopes, often accompanied by road cuts to provide access, thus affecting watershed processes such as erosion and sedimentation. Development has also occurred along narrow riparian corridors, which encourages bank stabilization, levee construction, and other flood control activities that physically constrain the ability of streams to maintain natural channel morphology and riparian vegetation.

Montecito Creek

The increase of impermeable surfaces as a result of urbanization (including roads) along the coastal terraces, and the development of agricultural homes on steep slopes, has altered the natural flow regime of streams, particularly in the lower reaches, increasing the frequency and intensity of flood flows.

Rincon Creek Estuary (Courtesy California Coastal Commission)

Estuarine habitats at the mouths of these watersheds in this BPG region have been reduced in size by 70 to 95 percent by the development of roads and railroads, urbanization, and development of recreational facilities. Historically, these estuaries were relatively small with two notable exceptions: Goleta Slough, formed by the confluence of several watersheds, and the estuary associated with Mission Creek, comprised extensive wetland habitats in this BPG region that encompassed 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.

10.4 THREATS AND THREAT SOURCES

Varying numbers and intensity of habitat impairments (sources of threats) were identified in the CAP Workbooks analyses, ranging from 10 in the Gaviota Creek and Arroyo Hondo watersheds to 17 in the Rincon Creek watershed. "Severe" and "Very Severe" sources of threats exist in all of the watersheds in this BPG region, but the Arroyo Hondo watershed has the least number and severity of threats for anadromous *O. mykiss*. Threat sources are concentrated in the middle and lower portions of the watersheds and are associated with urban and agricultural development. The number and severity of threats generally diminishes in the upper, undeveloped portion of these watersheds. Anadromous and non-anadromous *O. mykiss* spawn in the upper reaches of most, even in the degraded lower reaches, of some of these drainages, such as Maria Ygnacio, Mission, and Carpinteria creeks (Hunt & Associates 2008a, Kier Associates 2008b).

Thirteen anthropogenic activities, all strongly associated with urban and agricultural development, ranked as the top sources of stress to *O. mykiss* in the Conception Coast BPG watersheds (Table 10-2). Road density, including roads in close proximity to stream riparian zones, and passage barriers associated with transportation corridors, consistently ranked as "Severe" to "Very Severe" threat sources. Proximal stressors associated with increased road density, especially roads near the drainage, include increased non-point

pollution, sedimentation, substrate embeddedness, floodplain encroachment and constriction, channel incision, and loss of channel structural complexity.

Increased road density also leads to increased frequency of road crossings, culverts, and other structures that can form passage barriers, preventing anadromous *O. mykiss* from accessing spawning and rearing habitat. As previously stated, Highway 101 and the Union Pacific Railroad tracks cross the mainstem of each of these watersheds near their mouths, in most cases through culverts. Highway 101 and the railroad tracks typically crossed these drainages by filling streambeds with earthen berms and forcing streams to flow through culverts of varying lengths. In some cases, construction of these transportation corridors reduced the extent of estuarine habitat. The Highway 101 culvert on Rincon Creek and a number of other creeks is an impassable barrier preventing anadromous *O. mykiss* from reaching spawning and rearing habitat and isolating formerly anadromous populations in the upper watershed.

Groundwater extraction for municipal and agricultural use also is a pervasive threat source among these watersheds. Widespread pumping of groundwater routinely eliminates surface flows and de-waters pools in portions of most of these drainages. The magnitude of loss of surface flows and the severity of passage barriers is exacerbated during years of below-average precipitation. Numerous diversions (*e.g.*, McCloy, Glen Annie, Carneros, San Pedro, Fremont, an unnamed tributary to San Jose, Maria Ygnacio, and San Antonio Creeks) and debris basins have further altered natural flow and sediment regimes, impeding access to and degrading spawning and rearing habitats, including estuarine habitats. These effects negatively impact multiple *O. mykiss* life stages (*e.g.*, development of eggs, alevins, fry, and parr).

Increasing urbanization of the Tecolote Creek, Goleta Slough, Mission Creek, Montecito Creek, and Carpinteria Creek watersheds creates a number of threat sources ranging from increased road density to floodplain encroachment and the heightened need for flood control structures, such as levees and channelization, and greater channel maintenance.

Six other threat sources are specific to one or two watersheds and have seriously degraded habitat conditions for steelhead there. For example, past quarrying activities in Rincon Creek have created a rock barrier that completely blocks upstream migration of anadromous *O. mykiss* and severely impedes downstream migration of resident non-anadromous *O. mykiss* above this barrier. Fire has recently burned much of the Gaviota Creek watershed and erosion of burned slopes in the watershed is a significant, though diminishing source of sediment. Recently non-native species of sunfish have been observed in upper Rattlesnake Creek, an important steelhead spawning and rearing tributary to Mission Creek. Gaviota State Beach campground was developed along the margins of the estuary at the mouth of the Gaviota Creek watershed and has substantially reduced the size and complexity of the estuary, degraded water quality, and created a severe passage impediment at a road crossing that provides access to Gaviota State Beach campground and Hollister Ranch. Jalama Creek and Canada de Santa Anita also have dams or other severe passage impediments on their mainstems and tributaries (Hunt & Associates 2008b, Kier Associates 2008b).

Table 10-2. Threat source rankings in component watersheds in the Conception Coast BPG region (see CAP Workbooks for individual watersheds for details).

Conception Coast BPG Component Watersheds (north to south)										
Threat Source	Jalama Creek	Canada de Santa Anita	Gaviota Creek	Arroyo Hondo	Tecolote Creek	Goleta Slough*	Mission Creek	Montecito Creek	Carpinteria Creek	Rincon Creek
Roads										
Culverts & Crossings (passage barrier)										
Groundwater Extraction										
Levees and Channelization										
Urban Development										
Wildfires										
Recreational Facilities										
Upslope/ Upstream Activities										
Flood Control Maintenance										
Mining and Quarrying										
Agricultural Development										
Dams and Surface Water Diversions										

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. A number of diversions to stream tributaries to the Goleta Slough Complex have been identified, along with recent reports of non-native species in several watersheds; these threats should be further evaluated, and if necessary, addressed to protect affected steelhead habitats.*

10.5 SUMMARY

Culverts and road crossings (along with other fish passage barriers such as small dams) are widespread throughout the Conception Coast BPG region, cutting off or severely reducing access to upstream spawning and rearing habitats for anadromous *O. mykiss*. Groundwater extraction and numerous small surface diversions have significantly altered flow regimes, particularly in the lower stream reaches, and thus adversely affected both upstream and downstream fish passage and spawning and rearing opportunities. Levees and channelization associated with urban encroachment have restricted or eliminated riparian habitat, and urban and agricultural development (particularly on steep slopes) has altered run-off patterns and increased erosion and sedimentation, particularly in lower stream reaches. 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, pose potential threats to watersheds in this BPG. Table 10-3 summarizes the critical recovery actions needed within the Core 1 populations of this BPG, including the estimated cost for implementing such actions in five year increments over the first 25 years, and where applicable extended out to 100 years, though most recovery actions can be achieved within a shorter period.

Restoring conditions for anadromous *O. mykiss* passage, spawning, and/or rearing in these watersheds will require multiple, long-term, measures related to water management, and barrier removal or improvements. Impediments to fish passage stemming from the construction and maintenance of roads and other transportation corridors, privately-owned dams and other passage barriers on some drainages, groundwater extraction, modification of channel morphology and adjacent riparian habitats for flood control, and other instream activities need to be further evaluated for this BPG. Additionally, the loss of estuarine functions caused by filling and pollution from point and non-point agricultural and other anthropogenic waste discharges need to be addressed further in this region.

Carpinteria Creek Steelhead –1942

The threat sources discussed in this section should be the focus of a variety of recovery actions to address addresses 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 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 Conception Coast.

Tables 9-4 through 9-13 below rank and describe proposed recovery actions for each sub-watershed in the Conception Coast 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 10-3. Critical recovery actions for Core 1 populations within the Conception Coast BPG.

POPULATION	CRITICAL RECOVERY ACTION
Goleta Slough Complex	Modify road and railroad crossings and, remove or modify flood control channels and grade control structures to allow natural migration of steelhead to upstream spawning and rearing habitats and passage of smolts and kelts downstream to the estuary and the ocean. Identify, protect, and where necessary restore estuarine and freshwater rearing habitats. Develop restoration and management for the Goleta Slough Estuary to restore estuarine functions
Mission Creek	Halt the unnatural dry-season reduction in the amount and extent of surface water to restore natural or pre-impact over-summering habitat characteristics and condition for steelhead. Physically modify channelized reaches of lower Mission Creek, and upstream road crossings, to allow natural migration of steelhead to upstream spawning and rearing habitats and passage of smolts and kelts downstream to the estuary and the ocean. Identify, protect, and where necessary restore estuarine and freshwater rearing habitats. Develop restoration and management for the Mission Creek Estuary to restore estuarine functions.
Carpinteria Creek	Halt the unnatural dry-season reduction in the amount and extent of surface water to restore natural or pre-impact over-summering habitat characteristics and condition for steelhead. Physically modify upstream debris basins to allow natural migration of steelhead to upstream spawning and rearing habitats and passage of smolts and kelts downstream to the estuary and the ocean. Identify, protect, and where necessary restore estuarine and freshwater rearing habitats. Develop restoration and management for the Carpinteria Creek Estuary to restore estuarine functions.
Rincon Creek	Halt the unnatural dry-season reduction in the amount and extent of surface water to restore natural or pre-impact over-summering habitat characteristics and condition for steelhead. Physically modify Highway I and railroad culvert in lower Rincon Creek, and upstream road crossings to allow natural migration of steelhead to upstream spawning and rearing habitats and passage of smolts and kelts downstream to the estuary and the ocean. Identify, protect, and where necessary restore estuarine and freshwater rearing habitats. Develop restoration and management for the Rincon Creek Estuary to restore estuarine functions.

Southern California Steelhead DPS Recovery Action Tables Identification Key, Conception Coast BPG (Tables 10-4 – 10-13).

Recovery Action Number Key: XXXX – SCS – 1.2	
XXXX	Watershed
SCS	Species Identifier – Southern California Steelhead
1	Threat Source
2	Action Identity Number
Action Rank	
A	Action addresses the first listing factor regarding the destruction or curtailment of the species' habitat
B	Action addresses one of the other four listing factors

XXXX ID Table	
JC	Jalama Creek
Sac	Santa Anita Creek
GC	Gaviota Creek
AHC	Arroyo Honda Creek
TC	Tecolote Creek
GS	Goleta Slough
MisC	Mission Creek
MonC	Montecito Creek
CarC	Carpinteria Creek
RC	Rincon Creek

Threat Source Legend	
1	Agricultural Development
2	Agricultural Effluents
3	Culverts and Road Crossings
4	Dams and Surface Water Diversions
5	Flood Control Maintenance
6	Groundwater Extraction
7	Levees and Channelization
8	Mining and Quarrying
9	Non-Native Species
10	Recreational Facilities
11	Roads
12	Upslope/Upstream Activities
13	Urban Development
14	Urban Effluents
15	Wildfires

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

Table 10-4. Southern California Steelhead DPS Recovery Action Table for the Jalama Creek Watershed (Conception Coast 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
Jalama Creek												
JC-SCS-1.1	Develop, adopt, and implement agricultural land-use planning policies and standards	NRCS,USGS, NMFS,USFWS, CDFG,CSCC CT,TCFT,SCHR, EII,SBC	Agricultural Development	1, 4	3B	ongoing -cost of doing business	0	0	0	0	0	0
JC-SCS-1.2	Manage livestock grazing to maintain or restore aquatic habitat functions	NRCS,BLM,USF WS,NMFS, CT,TCFT,SCHR, EII,SBC	Agricultural Development	1, 4,	3B	5	47520	0	0	0	0	47520
JC-SCS-3.1	Develop and implement plan to remove or modify fish passage barriers within the watershed	NMFS,USFWS, DWR,CDFG, CSCC,CT, TCFT,SCHR,EII, SBC	Culverts and Road Crossings (Passage Barriers)	1, 4	1A	20 – refer to regional costs	0	0	0	0	0	0
JC-SCS-5.1	Develop and implement flood control maintenance program	USGS,ACOE, BLM,NMFS, USFWS,CDFG CT,TCFT, SCHR,EII,SBC	Flood Control Maintenance	1, 4	3B	100	0	0	0	0	0	0
JC-SCS-6.1	Conduct groundwater extraction analysis and assessment	USGS,DWR, NMFS,CDFG, CT,TCFT,SCHR, EII, SBC	Groundwater Extraction	1, 4	2B	5	275550	0	0	0	0	275550
JC-SCS-6.2	Develop and implement a groundwater monitoring and management program	USGS,NMFS,US FWS,SWRCB, CDFG,CT, TCFT,SCHR,EII, SBC	Groundwater Extraction	1, 4	2B	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
JC-SCS-7.1	Develop and implement a stream bank and riparian corridor restoration plan	USGS,ACOE, BLM,NMFS, USFWS,CDFG, CSCC,CT, TCFT,SCHR,EII, SBC	Levees and Channelization	1, 4	3B	10	10521940	10521940	0	0	0	21043880
JC-SCS-9.1	Develop and implement a watershed-wide plan to assess the impacts of non-native species and develop control measures	CDFG,NMFS, USFWS,CSCC, CDFG,CT, TCFT,SCHR,EII, SBC	Non-Native Species	1, 3, 5	3B	100 - refer to regional costs	0	0	0	0	0	0
JC-SCS-9.2	Develop and implement non-native species monitoring program	CDFG,NMFS, USFWS,CSCC, CDFG,CT, TCFT,SCHR,EII, SBC	Non-Native Species	1, 3, 5	3B	100 - refer to regional costs	0	0	0	0	0	0
JC-SCS-9.3	Develop and implement public education program on non-native species impacts	CDFG,NMFS, USFWS,CSCC, CDFG,CT, TCFT, SCHR,EII, SBC	Non-Native Species	1, 3, 5	3B	20	76140	76140	76140	76140	0	304560
JC-SCS-11.1	Manage roadways and adjacent riparian corridor and restore abandoned roadways	CDOT,CDFG, CSCC,CT, TCFTS,CHR,EII, SBC	Roads	1, 4	3B	20 - refer to regional costs	0	0	0	0	0	0
JC-SCS-11.2	Retrofit storm drains to filter runoff from roadways	CDOT,NMFS, USFWS.CDFG, CT,TCFT,SCHR, EII,SBC	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
JC-SCS-12.1	Develop and implement an estuary restoration and management plan	NMFS,USFWS, CDFG,CSCC, CT,TCFT,SCHR, EII,SBC	Upslope/ Upstream activities	1, 2, 3, 4, 5	2B	5	100500	0	0	0	0	100500
JC-SCS-12.2	Review and modify applicable County and/or City Local Coastal Plans	CCC,NMFS, USFWS,CT,TCFT , SCHR,EII, SBC	Upslope/ Upstream activities	1, 2, 3, 4, 5	3B	5	62400	0	0	0	0	62400
JC-SCS-13.1	Develop, adopt, and implement urban land-use planning policies and standards	CSCC,CDFG, CT,TCF,SCHR, EII,SBC	Urban Development	1, 4	3B	5	62400	0	0	0	0	62400
JC-SCS-13.2	Retrofit storm drains in developed areas	CDOT,CSCC, CDFG,CT, TCFT, SCHR,EII, SBC	Urban Development	1, 4	3B	20	0	0	0	0	0	0
JC-SCS-14.1	Review, assess and modify NPDES wastewater discharge permits	RWQCB, CDFG,NMFS, CT,TCFT,SCHR, EII,SBC	Urban Effluents	1, 4	2B	ongoing - cost of doing business	0	0	0	0	0	0
JC-SCS-14.2	Review California Regional Water Quality Control Board Watershed Plans and modify Stormwater Permits	RWQCB, SWRCB,CDFG, NMFS,CT,TCFT, SCHR,EII,SBC	Urban Effluents	1, 4	3B	ongoing - cost of doing business	0	0	0	0	0	0
JC-SCS-15.1	Develop and implement an integrated wildland fire and hazardous fuels management plan	USFS,USFWS,N MFS,USGS, CDFG, CT,TCFT,LPFW SCHR,EII, SBC	Wildfires	1, 4, 5	1B	100 - refer to regional costs	0	0	0	0	0	0

Table 10-5. Southern California Steelhead DPS Recovery Action Table for the Canada de Santa Anita Creek Watershed (Conception Coast 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 Anita Creek												
Sac-SCS-1.1	Develop, adopt, and implement agricultural land-use planning policies and standards	NRCS,USGS, USFWS,NMFS, CT,TCFT,SCHR, EII,SBC	Agricultural Development	1, 4	3B	ongoing –cost of doing business	0	0	0	0	0	0
Sac-SCS-1.2	Manage livestock grazing to maintain or restore aquatic habitat functions	NRCS,BLM, USFWS,NMFS, CDFG,CT, TCFT, SCHR,EII, SBC	Agricultural Development	1, 4	3B	5	47520	0	0	0	0	47520
Sac-SCS-1.3	Manage agricultural development and restore riparian zones	NRCS,NMFS, USFWS,CSCC, CDFG,CT, TCFT,SCHR,EII, SBC	Agricultural Development	1, 4	3B	20	6200	499840	499840	499840	499840	1505720
Sac-SCS-3.1	Develop and implement plan to remove or modify fish passage barriers within the watershed	NMFS,ACOE,U SFWS,BLM, DWR,CSCC, CDFG,CT, TCFT,SCHR,EII, SBC	Culverts and Road Crossings (Passage Barriers)	1, 4	1A	20 - refer to regional costs	0	0	0	0	0	0
Sac-SCS-3.2	Provide fish passage around dams and diversions	NMFS,ACOE,U SFWS,BLM, DWR,CSCC, CDFG,CT, TCFT,SCHR,EII, SBC	Dams and Surface Water Diversions	1,4	1A	TBD	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
Sac-SCS-5.1	Develop and implement flood control maintenance program	USGS,ACOE, BLM,NMFS, USFWS,CDFG, CT,TCFT,SCHR, EII,SBC	Flood Control Maintenance	1, 4	3B	100	0	0	0	0	0	0
Sac-SCS-6.1	Conduct groundwater extraction analysis and assessment	USGS,NMFS, USFWS,DWR, CDFG,CT, TCFT,SCHR,EII, SBC	Groundwater Extraction	1, 4	3B	5	275550	0	0	0	0	275550
Sac-SCS-6.2	Develop and implement groundwater monitoring and management program	USGS,NMFS, CDFG,DWR, CT,TCFT,SCHR, EII,SBC	Groundwater Extraction	1, 4	3B	10	254350	39775	0	0	0	294125
Sac-SCS-7.1	Develop and implement stream bank and riparian corridor restoration plan	NRCS,USFWS,NMFS, USGS,ACOE, BLM,CSCC, CDFG,CT, TCFT, SCHR,EII, SBC	Levees and Channelization	1, 4	3B	10	10521940	10521940	0	0	0	21043880
Sac-SCS-9.1	Develop and implement watershed-wide plan to assess the impacts of non-native species and develop control measures	CDFG,CSCC, NMFS,USFWS, CT,TCFT, SCHR,EII,SBC	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 non-native species monitoring program	CDFG,CSCC, NMFS,USFWS, CT,TCFT,SCHR, EII,SBC	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
Sac-SCS-9.3	Develop and implement public education program on non-native species impacts	CDFG,CSCC, NMFS,USFWS CT,TCFT,SCHR, EII,SBC	Non-Native Species	1, 3, 5	3B	20	76140	76140	76140	76140	0	304560
Sac-SCS-11.1	Develop and implement plan to remove or reduce approach-fill for railroad lines and road (*e.g.*, Union Pacific Railroad line and Hollister Ranch Road)	USDOT,USFWS, NMFS,CDOT, CSCC,CDFG, CT,TCFT,SCHR, EII,SBC	Roads	1, 4	2B	ongoing - cost of doing business	0	0	0	0	0	0
Sac-SCS-11.2	Manage roadways and adjacent riparian corridor and restore abandoned roadways	CDOT,CSCC, CDFG,CT,TCFS CHR,EII,SBC	Roads	1, 4	3B	20 - refer to regional costs	0	0	0	0	0	0
Sac-SCS-12.1	Develop and implement an estuary restoration and management plan	NMFS,USFWS, CSCC,CDFG, CT,TCFT,SCHR, EII,SBC	Upslope/ Upstream activities	1, 2, 3, 4, 5	3B	5	4628920	0	0	0	0	4628920
Sac-SCS-12.2	Review and modify applicable County and/or City Local Coastal Plans	CCC,CDFG, USFWS,NMFS, CT,TCFT, SCHR,EII,SBC	Upslope/ Upstream activities	1, 3, 4, 5	3B	5	62400	0	0	0	0	62400
Sac-SCS-13.1	Retrofit storm drains in developed areas	CDOT,CDFG,N MFS,USFWS, CT,TCFT,SCHR, EII,SBC	Urban Development	1, 4	3B	20 – refer to regional costs	0	0	0	0	0	0
Sac-SCS-14.1	Review, assess and modify NPDES wastewater discharge permits	RWQCB, CDFG,NMFS, CT,TCFT,SCHR, EII,SBC	Urban Effluents	1,4,5	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
Sac-SCS-15.1	Develop and implement an integrated wildland fire and hazardous fuels management plan	USFS,USFWS, NMFS,USGS, CDFG,CT, TCFT,LPFW, SCHR,EII,SBC	Wildfires	1, 4, 5	1B	100 - refer to regional costs	0	0	0	0	0	0

Table 10-6. Southern California Steelhead DPS Recovery Action Table for the Gaviota Creek Watershed (Conception Coast 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
Gaviota Creek												
GC-SCS-1.1	Manage agricultural development and restore riparian zones	NRCS,USGS, NMFS,USFWS, BLMCDFG,CSCC,CT,TCFT, SCHR,EII,SBC	Agricultural Development	1, 4	3B	20	48360	3898752	3898752	3898752	0	11744616
GC-SCS-1.2	Manage livestock grazing to maintain or restore aquatic habitat functions	NRCS,NMFS, USFWS,BLM, CDFG,CSCC, CT,TCFT,SCHR, EII,SBC	Agricultural Development	1, 4,	3B	5	47520	0	0	0	0	47520
GC-SCS-1.3	Develop, adopt, and implement agricultural land-use planning policies and standards	NRCS,BLM, NMFS,USFWS, CDFG,CSCC, CT,TCFT,SCHR, EII,SBC	Agricultural Development	1, 4	3B	5	62400	0	0	0	0	62400
GC-SCS-3.1	Develop and implement plan to remove or modify fish passage barriers within the watershed	CDOT,CDPR, CDFG,CSCC, USDOT,ACOE, BLM,USFWS, NMFS,CT,TCFT, SCHR,EII,SBC	Culverts and Road Crossings (Passage Barriers)	1, 4	1A	20 - refer to regional costs	0	0	0	0	0	0
GC-SCS-5.1	Develop and implement flood control maintenance program	NRCS,USGS, ACOE,BLM, NMFS,CDFG, CT,TCFT,SCHR, EII,SBC	Flood Control Maintenance	1, 4	2B	100	0	0	0	0	0	0
GC-SCS-6.1	Conduct groundwater extraction analysis and assessment	USGS,NMFS, SWRCB,CDFG CT,TCFT,SCHR, EII,SBC	Groundwater Extraction	1, 4	2B	5	275550	0	0	0	0	275550
GC-SCS-6.2	Develop and implement groundwater monitoring and monitoring program	USGS,SWRCB, CDFG,CT, TCFT,SCHR,EII	Groundwater Extraction	1, 4	2B	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
GC-SCS-7.1	Develop and implement stream bank and riparian corridor restoration plan	NRCS,USGS, ACOE,BLM, NMFS,CDFG,CSCC,CT,TCFT, SCHR,EII,SBC	Levees and Channelization	1, 4	2B	10	10521940	10521940	0	0	0	21043880
GC-SCS-9.1	Develop and implement watershed-wide plan to assess the impacts of non-native species and develop control measures	CDFG,CDPR, CSCC,USFWS, NMFS,CT,TCFT, SCHR,EII,SBC	Non-Native Species	1, 3, 5	3B	100 - refer to regional costs	0	0	0	0	0	0
GC-SCS-9.2	Develop and implement non-native species monitoring program	CDFG,CDPR, CSCC,USFWS, NMFS,CT,TCFT, SCHR,EII,SBC	Non-Native Species	1, 3, 5	3B	100 - refer to regional costs	0	0	0	0	0	0
GC-SCS-9.3	Develop and implement public education program on non-native species impacts	CDFG,CDPR, USFWS,NMFS, CDFG,CSCC, CT,TCFT,SCHR, EII,SBC	Non-Native Species	1, 3, 5	3B	20	76140	76140	76140	76140	0	304560
GC-SCS-11.1	Manage roadways and adjacent riparian corridor and restore abandoned roadways (*e.g.,* Gaviota State Beach/Hollister Ranch access road)	NRCS,USDOT, CDOT,ACOE, BLM,CDFG,CT, TCFT, SCHR,EII, SBC	Roads	1, 4	2B	20 - refer to regional costs	0	0	0	0	0	0
GC-SCS-11.2	Retrofit storm drains to filter runoff from roadways (*e.g.*, U.S. Highway 101)	USDOT,NMFS, USFWS,CDOT, CDFG,CT, TCFT, SCHR,EII, SBC	Roads	1, 4	2B	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
GC-SCS-12.1	Develop and implement estuary restoration and management plan	CSCS,CDFG, NMFS,BLM, USFWS,CT, TCFT,SCHR,EII, SBC	Upslope/ Upstream activities	1, 2, 3, 4, 5	1B	5	911200	0	0	0	0	911200
GC-SCS-12.2	Review and modify applicable County and/or City Local Coastal Plans	CCC,NMFS, CDFG,CT, TCFT, SCHR,EII, SBC	Upslope/ Upstream activities	1, 2, 3, 4, 5	3B	5	62400	0	0	0	0	62400
GC-SCS-13.1	Develop, adopt, and implement urban land-use planning policies and standards	NMFS,BLM, USFWS,CDFG, CCC,CT,TCFT, SCHR,EII,SBC	Urban Development	1, 4	2B	5	62400	0	0	0	0	62400
GC-SCS-13.2	Retrofit storm drains in developed areas	USDOT,NMFS, CDOT,CDFG, CT,TCFT,SCHR, EII,SBC	Urban Development	1, 4	2B	20	0	0	0	0	0	0
GC-SCS-13.3	Develop and implement riparian restoration plan to replace artificial bank stabilization structures	NMFS,USFWS, USDOT,CDFG, CSCC,CDPR, TCFT,SCHR,EII, SBC	Urban Development	1, 4	2B	10	10521940	10521940	0	0	0	21043880
GC-SCS-14.1	Review California Regional Water Quality Control Board Watershed Plans and modify Stormwater Permits	RWQCB, SWRCB,CDFG, NMFS,USFWS, CT,TCFT,SCHR, EII,SBC	Urban Effluents	1, 4, 5	3B	ongoing - cost of doing business	0	0	0	0	0	0
GC-SCS-14.2	Review, assess and modify NPDES wastewater discharge permits	RWQCB, SWRCB,CDFG, NMFS,USFWS, CT,TCFT,SCHR, EII,SBC	Urban Effluents	1, 4, 5	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
GC-SCS-15.1	Develop and implement an integrated wildland fire and hazardous fuels management plan	USFS,USFWS, USGS,CDFG, CT,TCF,LPFW, SCHR,EII,SBC	Wildfires	1, 4, 5	1B	100 - refer to regional costs	0	0	0	0	0	0

Table 10-7. Southern California Steelhead DPS Recovery Action Table for the Arroyo Hondo Creek Watershed (Conception Coast 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
Arroyo Hondo												
AHC-SCS-3.1	Develop and implement plan to remove or modify fish passage barriers within the watershed	NMFS,ACOE, USFWS,BLM, USFS,DWR,CDFG,CSCC,CT, TCFT,SCHR,EII	Culverts and Road Crossings (Passage Barriers)	1, 4	1A	20 - refer to regional costs	0	0	0	0	0	0
AHC-SCS-5.1	Develop and implement flood control maintenance program	USGS,ACOE, BLM,NMFS, CDFG,CT,TCF, SCHR,EII, SBC	Flood Control Maintenance	1, 4	3B	100	0	0	0	0	0	0
AHC-SCS-9.1	Develop and implement watershed-wide plan to assess the impacts of non-native species and develop control measures	CDFG,NMFS, USFWS,CSCC, CT,TCFT,SCHR, EII,SBC	Non-Native Species	1, 3, 5	3B	100 - refer to regional costs	0	0	0	0	0	0
AHC-SCS-9.2	Develop and implement non-native species monitoring program	CDFG,NMFS, USFWS,CSCC, CT,TCFT,SCHR, EII,SBC	Non-Native Species	1, 3, 5	3B	100 - refer to regional costs	0	0	0	0	0	0
AHC-SCS-9.3	Develop and implement public education program on non-native species impacts	CDFG,NMFS, USFWS,CSCC, CT,TCFT,SCHR, EII,SBC	Non-Native Species	1, 3, 5	3B	20	76140	76140	76140	76140	0	304560
AHC-SCS-11.1	Manage roadways and adjacent riparian corridor and restore abandoned roadways.	USDOT,CDOT, NRCS,NMFS, USFWS,CDFG, CT,TCFT,SCHR, EII,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
AHC-SCS-11.2	Develop and implement plan to remove or reduce approach-fill for railroad lines and roads (*e.g.,* U.S. Highway 1, Union Pacific Railroad)	USDOT,NMFS, USFWS,CDFG, CSCC,CT, TCFT,SCHR,EII, SBC	Roads	1, 4	3B	ongoing - cost of doing business	0	0	0	0	0	0
AHC-SCS-11.3	Retrofit storm drains to filter runoff from roadways	USDOT,NMFS, CDOT,CDFG, CT,TCFT,SCHR, EII,SBC	Roads	1, 4	3B	20	32260	32260	32260	32260	0	129040
AHC-SCS-12.1	Develop and implement estuary restoration and management plan	NMFS,USFWS, CSCC,CDFG, CT,TCFT,SCHR, EII,SBC	Upslope/ Upstream activities	1, 2, 3, 4, 5	1B	5	67000	0	0	0	0	67000
AHC-SCS-12.2	Review and modify applicable County and/or City Local Coastal Plans	CCC,NMFS, USFWS,CDFG, CT,TCFT,SCHR, EII,SBC	Upslope/ Upstream activities	1, 2, 3, 4, 5	3B	5	62400	0	0	0	0	62400
AHC-SCS-13.1	Retrofit storm drains in developed areas	CDOT,CDFG, NMFS,CT,TCFT, SCHR,EII,SBC	Urban Development	1, 4	3B	20	0	0	0	0	0	0
AHC-SCS-14.1	Review California Regional Water Quality Control Board Watershed Plans and modify Stormwater Permits	RWQCB, SWRCB,CDFG, NMFS,USFWS, CT,TCFT,SCHR, EII,SBC	Urban Effluents	1, 4	3B	ongoing - cost of doing business	0	0	0	0	0	0
AHC-SCS-14.2	Review, assess and modify NPDES wastewater discharge permits	RWQCB, CDFG,NMFS, USFWS,CT, TCFT,SCHR,EII, SBC	Urban Effluents	1, 4, 5	3B	ongoing - cost of doing business	0	0	0	0	0	0
AHC-SCS-15.1	Develop and implement an integrated wildland fire and hazardous fuels management plan	USFS,USFWS, NMFS,USGS, CDFG,CT, TCFT,LPFW, SCHR,EII,SBC	Wildfires	1, 4, 5	1B	100 - refer to regional costs	0	0	0	0	0	0

Table 10-8. Southern California Steelhead DPS Recovery Action Table for the Tecolote Creek Watershed (Conception Coast 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
Tecolote Creek												
TC-SCS-1.1	Develop, adopt, and implement agricultural land-use planning policies and standards	NRCS,BLM, USFWS,NMFS, CDFG,CSCC, CT,TCF,SCHR, EII,SBC	Agricultural Development	1, 4	2B	5	62400	0	0	0	0	62400
TC-SCS-1.2	Manage livestock grazing to maintain or restore aquatic habitat functions	NRCS,USFWS,USFS,BLM, NMFS,CDFG, CT,TCFT, SCHR,EII,SBC	Agricultural Development	1, 4,	3B	5	47520	0	0	0	0	47520
TC-SCS-1.3	Manage agricultural development and restore riparian zones	NRCS,BLM, USFWS,NMFS, CDFG,CT, TCFT,SCHR,EII, SBC	Agricultural Development	1, 4,		10 - refer to regional costs	0	0	0	0	0	0
TC-SCS-3.1	Develop and implement plan to remove or modify fish passage barriers within the watershed	NMFS,USFWS, ACOE,BLM, USFS,CDFG, CSCC,DWR, CT,TCFT,SCHR, EII,SBC	Culverts and Road Crossings (Passage Barriers)	1, 4	1A	20 - refer to regional costs	0	0	0	0	0	0
TC-SCS-5.1	Develop and implement flood control maintenance program	NRCS,USGS, ACOE,BLM, NMFS,CDFG, CT,TCFT,SCHR, EII,SBC	Flood Control Maintenance	1, 4	3B	100	0	0	0	0	0	0
TC-SCS-6.1	Conduct groundwater extraction analysis and assessment	USGS,DWR, NMFS,CDFG, CT,TCFT,SCHR, EII,SBC	Groundwater Extraction	1, 4	3B	5	275550	0	0	0	0	275550
TC-SCS-6.2	Develop and implement a groundwater monitoring and management program	USGS,DWR, SWRCB,CDFG, CT,TCFT,SCHR, EII,SBC	Groundwater Extraction	1, 4	2B	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
TC-SCS-7.2	Develop and implement stream bank and riparian corridor restoration plan	NRCS,USGS, ACOE,USFWS, BLM,NMFS, CDFG,CT, TCFT,SCHR,EII, SBC	Levees and Channelization	1, 4	3B	10	10521940	10521940	0	0	0	21043880
TC-SCS-9.1	Develop and implement watershed-wide plan to assess the impacts of non-native species and develop control measures	CDFG,USFWS, NMFS,CSCC, CT,TCFT,SCHR, EII,SBC	Non-Native Species	1, 3, 5	3B	100 - refer to regional costs	0	0	0	0	0	0
TC-SCS-9.2	Develop and implement non-native species monitoring program	CDFG,UNMFS, USFWS,CSCC, CT,TCFT,SCHR, EII,SBC	Non-Native Species	1, 3, 5	3B	100 - refer to regional costs	0	0	0	0	0	0
TC-SCS-9.3	Develop and implement public education program on non-native species impacts	CDFG,NMFS, USFWS,CSCC, CT,TCFT,SCHR, EII,SBC	Non-Native Species	1, 3, 5	3B	20	76140	76140	76140	76140	0	304560
TC-SCS-11.1	Retrofit storm drains to filter runoff from roadways	USDOT,NMFS, USFWS,CDOT, CDFG,CT, TCFT,SCHR,EII, SBC	Roads	1, 4	3B	20	32260	32260	32260	32260	0	129040
TC-SCS-11.2	Manage roadways and adjacent riparian corridor and restore abandoned roadways	NRCS,NMFS, USFWS,CDOT, CDFG,CT, TCFT,SCHR,EII, SBC	Roads	1, 4	3B	20 – refer to regional costs	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
TC-SCS-11.3	Develop and implement plan to remove or reduce approach-fill for railroad lines and roads (*e.g.,* U.S. Highway 101, Union Pacific Railroad)	USDOT,USFWS, NMFS,CDOT, CDFG,CSCC, CT,TCFT,SCHR, EII,SBC	Roads	1, 4	3B	ongoing - costs of doing business	0	0	0	0	0	0
TC-SCS-12.1	Develop and implement an estuary restoration and management plan	CSCC,CDFG, NMFS,USFWS, BLM,CT,TCFT, SCHR,EII,SBC	Upslope/ Upstream activities	1, 2, 3, 4, 5	1B	5	268000	0	0	0	0	268000
TC-SCS-12.2	Review and modify applicable County and/or City Local Coastal Plans	CCC,NMFS, USFWS,CDFG, CT,TCFT,SCHR, EII,SBC	Upslope/ Upstream activities	1, 2, 3, 4, 5	3B	5	62400	0	0	0	0	62400
TC-SCS-13.2	Retrofit storm drains in developed areas	USDOT,NMFS, USFWS,CDOT, CDFG,CT, TCFT, SCHR,EII, SBC	Urban Development	1, 4	3B	20	0	0	0	0	0	0
TC-SCS-14.1	Review California Regional Water Quality Control Board Watershed Plans and modify Stormwater Permits	RWQCB, SWRCB,CDFG, NMFS,USFWS, CT,TCFT,SCHR, EII,SBC	Urban Effluents	1, 4	2B	ongoing - cost of doing business	0	0	0	0	0	0
TC-SCS-14.2	Review, assess and modify NPDES wastewater discharge permits	RWQCB, CDFG,NMFS, USFWS,CT, TCFT,SCHR,EII, SBC	Urban Effluents	1, 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
TC-SCS-15.1	Develop and implement an integrated wildland fire and hazardous fuels management plan,	USFS,USFWS, NMFS,USGS, CDFG,CT, TCFT,LPFW, SCHR,EII,SBC	Wildfires	1, 4, 5	1B	100 - refer to regional costs	0	0	0	0	0	0

Table 10-9. Southern California Steelhead DPS Recovery Action Table for the Goleta Slough Watershed (Conception Coast 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
Goleta Slough												
GS-SCS-1.1	Develop and implement plan to minimize runoff from agricultural activities	NRCS,USGS, USFWS,NMFS, CDFG,CT, TCFT,SCHR,EII, SBC	Agricultural Effluents	1, 4	2B	20	114080	9197056	9197056	9197056	0	27705248
GS-SCS-1.2	Develop, adopt, and implement agricultural land-use planning policies and standards	NRCS,BLM, NMFS,USFWS, CT,TCFT,SCHR, EII,SBC	Agricultural Development	1, 4	2B	5	62400	0	0	0	0	62400
GS-SCS-1.3	Manage agricultural development and restore riparian zones	NRCS,NMFS, USFWS,CDFG, CT,TCFT,SCHR, EII,SBC	Agricultural Development	1, 4,	2B	10 - refer to regional costs	0	0	0	0	0	0
GS-SCS-3.1	Develop and implement plan to remove or modify fish passage barriers within the watershed	NMFS,ACOE, BLM,USFS, DWR,CDFG, CSCC,CT, TCFT,SCHR,EII, SBC	Culverts and Road Crossings (Passage Barriers)	1, 4	1A	20 - refer to regional costs	0	0	0	0	0	0
GS-SCS-4.1	Develop and implement water management plan for diversion operations	NMFS,ACOE, BLM,USFS, DWR,CDFG, CSCC,CT, TCFT,SCHR,EII, SBC	Dams and surface water diversions	1, 4	1A	20 - refer to regional costs	0	0	0	0	0	0
GS-SCS-5.1	Develop and implement flood control maintenance program	USGS,ACOE, BLM,NMFS, USFWS,CDFG, CT,TCFT,SCHR, EII,SBC	Flood Control Maintenance	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
GS-SCS-6.1	Conduct groundwater extraction analysis and assessment	USGS,NMFS, USFWS,DWR, CDFG,CT, TCFT,SCHR,EII, SBC	Groundwater Extraction	1, 4	2B	5	275550	0	0	0	0	275550
GS-SCS-6.2	Develop and implement groundwater monitoring and management program	USGS,DWR, NMFS,USFWS, CT,CDFG TCFT,SCHR,EII, SBC	Groundwater Extraction	1, 4	2B	10	254350	39775	0	0	0	294125
GS-SCS-7.1	Develop and implement stream bank and riparian corridor restoration plan	USGS,ACOE, BLM,NMFS, CT,TCFT,SCHR, EII,SBC	Levees and Channelization	1, 4	2B	10	10521940	10521940	0	0	0	21043880
GS-SCS-7.2	Develop and implement plan to restore natural channel features	CSCC,CDFG, NMFS,USFWS, CT,TCFT,SCHR, EII,SBC	Levees and Channelization	1, 4	2B	ongoing - cost of doing business	0	0	0	0	0	0
GS-SCS-9.1	Develop and implement watershed-wide plan to assess the impacts of non-native species and develop control measures	CDFG,CSCC, NMFS,USFWS, CT,TCFT,SCHR, EII,SBC	Non-Native Species	1, 3, 5	3B	100 - refer to regional costs	0	0	0	0	0	0
GS-SCS-9.2	Develop and implement non-native species monitoring program	CDFG,CSCC, NMFS,USFWS, CT,TCFT,SCHR, EII,SBC	Non-Native Species	1, 3, 5	3B	100 - refer to regional costs	0	0	0	0	0	0
GS-SCS-9.3	Develop and implement public education program on non-native species impacts	CDFG,CSCC, NMFS,USFWS, CT,TCFT,SCHR, EII,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
GS-SCS-11.1	Manage roadways and adjacent riparian corridor and restore abandoned roadways	USDOT,USFWS, NMFS,CDOT, CDFG,CT, TCFT,SCHR,EII, SBC	Roads	1, 4	2B	20 - refer to regional costs	0	0	0	0	0	0
GS-SCS-11.2	Retrofit storm drains to filter runoff from roadways	USDOT,USFWS, NMFS,CDOT, CDFG,CT, TCFT,SCHR,EII, SBC	Roads	1, 4	2B	20	32260	32260	32260	32260	0	129040
GS-SCS-12.1	Develop and implement an estuary restoration and management plan	CDFG,CSCC, NMFS,USFWS, BLM,CT,TCFT, SCHR,EII, SBC	Upslope/ Upstream activities	1, 2, 3, 4, 5	1B	5	53383870	0	0	0	0	53383870
GS-SCS-12.2	Review and modify applicable County and/or City Local Coastal Plans	CCC,NMFS, USFWS,CDFG, CT,TCFT,SCHR, EII,SBC	Upslope/ Upstream activities	1, 2, 3, 4, 5	2B	5	62400	0	0	0	0	62400
GS-SCS-13.1	Develop, adopt, and implement urban land-use planning policies and standards	NRCS,NMFS, USFWS,BLM, CDFG,CT, TCFT, SCHR,EII, SBC	Urban Development	1, 4	3B	5	62400	0	0	0	0	62400
GS-SCS-13.2	Retrofit storm drains in developed areas	USDOT,NMFS, USFWS,CDOT, CDFG,CT, TCFT, SCHR,EII, SBC	Urban Development	1, 4	3B	20	0	0	0	0	0	0
GS-SCS-13.3	Develop and implement riparian restoration plan to replace artificial bank stabilization structures	ACOE,BLM, USFWS,NMFS, CSCC,CDFG, DWR,CT,TCFT, SCHR,EII,SBC	Urban Development	1, 4	2B	10	10521940	10521940	0	0	0	21043880

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
GS-SCS-14.1	Review, assess and modify NPDES wastewater discharge permits (*e.g.,* Goleta Sanitary District Wastewater Treatment Facility)	RWQCB, CDFG,NMFS, USFWS,CT, TCFT,SCHR,EII, SBC	Urban Effluents	1, 4	2B	ongoing - cost of doing business	0	0	0	0	0	0
GS-SCS-14.2	Review California Regional Water Quality Control Board Watershed Plans and modify Stormwater Permits	RWQCB, SWRCB,CDFG, NMFS,USFWS, CT,TCFT,SCHR, EII,SBC	Urban Effluents	1, 4	3B	ongoing - cost of doing business	0	0	0	0	0	0
GS-SCS-15.1	Develop and implement an integrated wildland fire and hazardous fuels management plan	USFS,USFWS, NMFS,USGS, CDFG,CT, TCFT,LPFW, SCHR,EII,SBC	Wildfires	1, 4, 5	1B	100 - refer to regional costs	0	0	0	0	0	0

Table 10-10. Southern California Steelhead DPS Recovery Action Table for the Mission Creek Watershed (Conception Coast 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
Mission Creek												
MisC-SCS-3.1	Develop and implement plan to remove or modify fish passage barriers within the watershed	NMFS,ACOE, BLM,USFWS, USFS,DWR, CDFG,CSCC, CT,TCFT,SCHR, EII,SBC	Culverts and Road Crossings (Passage Barriers)	1, 4	1A	20 - refer to regional costs	0	0	0	0	0	0
MisC-SCS-4.1	Develop and implement water management plan for diversion operations	NMFS,ACOE, BLM,USFWS, USFS,DWR, CDFG,CSCC, CT,TCFT,SCHR, EII,SBC	Dams and surface water diversions	1, 4	1A	20 - refer to regional costs	0	0	0	0	0	0
MisC-SCS-5.1	Develop and implement flood control maintenance program	USGS,ACOE, BLM,NMFS, USFWS,CDFG, CT,TCFT,SCHR, EII,SBC	Flood Control Maintenance	1, 4	3B	100	0	0	0	0	0	0
MisC-SCS-6.1	Conduct groundwater extraction analysis and assessment	USGS,DWR, SWRCB,NMFS, USFWS,CT, TCFT,SCHR,EII, SBC	Groundwater Extraction	1, 4	2B	5	275550	0	0	0	0	275550
MisC-SCS-6.2	Develop and implement a groundwater monitoring and management program	USGS,DWR,SW RCB,NMFS, USFWS,CT, TCFT,SCHR,EII, SBC	Groundwater Extraction	1, 4	2B	10	254350	39775	0	0	0	294125
MisC-SCS-7.1	Develop and implement a stream bank and riparian corridor restoration plan	NMFS,USFWS, USGS,ACOE, BLM,CDFG, CSCC,CT, TCFT,SCHR,EII, SBC	Levees and Channelization	1, 4	3B	10	10521940	10521940	0	0	0	21043880

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
MisC-SCS-9.1	Develop and implement watershed-wide plan to assess the impacts of non-native species and develop control measures	CDFG,CSCC, USFWS,NMFS, CT,TCFT,SCHR, EII,SBC	Non-Native Species	1, 3, 5	3B	100 - refer to regional costs	0	0	0	0	0	0
MisC-SCS-9.2	Develop and implement non-native species monitoring program	CDFG,CSCSS, USFWS,NMFS, CT,TCFT,SCHR, EII,SBC	Non-Native Species	1, 3, 5	3B	100 - refer to regional costs	0	0	0	0	0	0
MisC-SCS-9.3	Develop and implement public education program on non-native species impacts	CDFG,CSCC, USFWS,NMFS, CT,TCFT,SCHR, EII,SBC	Non-Native Species	1, 3, 5	2B	20	76140	76140	76140	76140	0	304560
MisC-SCS-11.1	Retrofit storm drains to filter runoff from roadways	USDOT,NMFS, CDOT,CDFG, CT,TCFT,SCHR, EII,SBC	Roads	1, 4	2B	20	32260	32260	32260	32260	0	129040
MisC-SCS-11.2	Manage roadways adjacent riparian corridor and restore abandoned roadways	USDOT,USFWS, NRCS,NMFS, CDOT,CDFG, CT,TCFT,SCHR, EII,SBC	Roads	1, 4	3B	20 - refer to regional costs	0	0	0	0	0	0
MisC-SCS-12.1	Develop and implement an estuary restoration and management plan	CSCC,CDFG, NMFS,USFWS, CT,TCFT,SCHR, EII,SBC	Upslope/ Upstream activities	1, 2, 3, 4, 5	1B	5	1340000	0	0	0	0	1340000

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
MisC-SCS-12.2	Review and modify applicable County and/or City Local Coastal Plans	CCC,CDFG, USFWS,NMFS, CT,TCFT,SCHR, EII,SBC	Upslope/ Upstream activities	1, 2, 3, 4, 5	3B	5	62400	0	0	0	0	62400
MisC-SCS-13.1	Develop, adopt, and implement urban land-use planning policies and standards	NMFS,USFWS, BLM,CCC, CDFG,CT,TCFT SCHR,EII,SBC	Urban Development	1, 4	2B	5	62400	0	0	0	0	62400
MisC-SCS-13.2	Retrofit storm drains in developed areas	USDOT,USFWS, NMFS,CDOT, CDFG,CT, TCFT, SCHR,EII, SBC	Urban Development	1, 4	2B	20	0	0	0	0	0	0
MisC-SCS-13.3	Develop and implement public education program on watershed processes	NRCS,NMFS, USFWS,USFS, CDFG, CT, TCFT, SCHR,EII, SBC	Recreational Facilities	1, 2, 3, 4, 5	2B	ongoing -cost of doing business	0	0	0	0	0	0
MisC-SCS-14.1	Review, assess and modify NPDES wastewater discharge permits (*e.g.,* El Estero Wastewater Treatment Facility)	RWQCB, CDFG,SWRCB, CT,TCFT,SCHR, EII,SBC	Urban Effluents	1, 4	2B	ongoing - cost of doing business	0	0	0	0	0	0
MisC-SCS-14.2	Review California Regional Water Quality Control Board Watershed Plans and modify Stormwater Permits	RWQCB, CDFG,SWRCB, CT,TCFT,SCHR, EII,SBC	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
MisC-SCS-15.1	Develop and implement an integrated wildland fire and hazardous fuels management plan	USFS,USFWS, NMFS,USGS, BLM,CDFG,CT, TCFT,LPFW, SCHR,EII,SBC	Wildfires	1, 4, 5	1B	100 - refer to regional costs	0	0	0	0	0	0

Table 10-11. Southern California Steelhead DPS Recovery Action Table for the Montecito Creek Watershed (Conception Coast 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
Montecito Creek												
MonC-SCS-3.1	Develop and implement plan to remove or modify fish passage barriers within the watershed	NMFS,USFWS, ACOE,BLM, CSCC,CDFG, DWR,CT,TCFT, SCHR,EII, SBC	Culverts and Road Crossings (Passage Barriers)	1, 4	2A	20 - refer to regional costs	0	0	0	0	0	0
MonC-SCS-4.1	Develop and implement water management plan for diversion operations	NMFS,USFWS, ACOE,BLM, CSCC,CDFG, DWR,CT,TCFT, SCHR,EII, SBC	Dams and surface water diversions	1, 4	2A	20 - refer to regional costs	0	0	0	0	0	0
MonC-SCS-5.1	Develop and implement flood control maintenance program	USGS,NRCS, ACOE,BLM, NMFS,CDFG, CT,TCFTS,CHR, EII,SBC	Flood Control Maintenance	1, 4	3B	100	0	0	0	0	0	0
MonC-SCS-6.1	Conduct groundwater extraction analysis assessment	USGS,DWR, SWRCB,CDFG, NMFS,CT, TCFT,SCHR,EII	Groundwater Extraction	1, 4	3B	5	275550	0	0	0	0	275550
MonC-SCS-6.2	Develop and implement a groundwater monitoring and management program	USGS,DWR, SWRCB,NMFS, USFWS,CDFG, CT,TCFT,SCHR, EII,SBC	Groundwater Extraction	1, 4	3B	10	254350	39775	0	0	0	294125
MonC-SCS-7.1	Develop and implement stream bank and riparian corridor restoration plan	CSCC,CDFG, USFWS,USGS, ACOE,BLM, NMFS,CT,TCFT, SCHR,EII,SBC	Levees and Channelization	1, 4	3B	10	10521940	10521940	0	0	0	21043880

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
MonC-SCS-7.2	Develop and implement plan to restore natural channel features	NRCS,USFWS,NMFS,CSCC,CDFG,CT,TCFT, SCHR,EII,SBC	Levees and Channelization	1,4	3B	10	10521940	10521940	0	0	0	21043880
MonC-SCS-9.1	Develop and implement watershed-wide plan to assess the impacts of non-native species and develop control measures	CDFG,CSCC, USFWS,USFS, NMFS,CT,TCFT, SCHR,EII,SBC	Non-Native Species	1, 3, 5	3B	100 - refer to regional costs	0	0	0	0	0	0
MonC-SCS-9.2	Develop and implement non-native species monitoring program	CDFG,CSCC, USFWS,USFS, NMFS,CT,TCFT, SCHR,EII,SBC	Non-Native Species	1, 3, 5	3B	100 - refer to regional costs	0	0	0	0	0	0
MonC-SCS-9.3	Develop and implement public education program on non-native species impacts	CDFG,CSCC, USFWS,USFS, NMFS,CT,TCFT, SCHR,EII,SBC	Non-Native Species	1, 3, 5	3B	20	76140	76140	76140	76140	0	304560
MonC-SCS-11.1	Manage roadways adjacent riparian corridor and restore abandoned roadways	USDOT,USFW, NMFS,CDOT, CDFG,CSCC, CT,TCF,SCHR, EII,SBC	Roads	1, 4	3B	20 - refer to regional costs	0	0	0	0	0	0
MonC-SCS-11.2	Develop and implement plan to remove or reduce approach-fill railroad lines and roads	USDOT,NMFS, USFWS,CDGS, CSCC,CT, TCFT,SCHR,EII, SBC	Roads	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
MonC-SCS-11.3	Retrofit storm drains to filter runoff from roadways	USDOT,USFW, NMFS,CDFG, CT,TCFT,SCHR, EII,SBC	Roads	1, 4	3B	20	32260	32260	32260	32260	0	129040
MonC-SCS-12.1	Review and modify applicable County and/or City Local Coastal Plans	CCC,NMFS, USFWS,CDFG, CT,TCFT,SCHR, EII,SBC	Upslope/ Upstream activities	1, 2, 3, 4, 5	3B	5	62400	0	0	0	0	62400
MonC-SCS-13.1	Develop, adopt, and implement urban land-use planning policies and standards	CCC,CDFG, USFWS,NMFS, CT,TCFT,SCHR, EII,SBC	Urban Development	1, 4	3B	5	62400	0	0	0	0	62400
MonC-SCS-13.2	Retrofit storm drains in developed areas	USDOT,USFWS, NMFS,CDOT, CDFG,CSCC, CT,TCFT,SCHR, EII,SBC	Urban Development	1, 4	3B	20	0	0	0	0	0	0
MonC-SCS-13.3	Develop and implement a riparian restoration plan that replace artificial bank stabilization structures	NRCS,USFWS,NMFS,CDFG, CSCC,CT, TCFT, SCHR,EII, SBC	Urban Development	1, 4	3B	10	10521940	10521940	0	0	0	21043880
MonC-SCS-14.1	Review, assess and modify if necessary all NPDES wastewater discharge permits	RWQCB, CDFG,NMFS, USFWS,CT, TCFT,SCHR,EII, SBC	Urban Effluents	1, 4	3B	ongoing - cost of doing business	0	0	0	0	0	0
MonC-SCS-14.2	Review California Regional Water Quality Control Board Watershed Plans and modify Stormwater Permits	RWQCB, SWRCB,CDFG, NMFS,USFWS, CT,TCFT,SCHR, EII,SBC	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
MonC-SCS-15.1	Develop and implement an integrated wildland fire and hazardous fuels management plan	USFS,USFWS, NMFS,USGS, CDFG,CT, TCFT,LPFW,SC HR,EII,SBC	Wildfires	1, 4, 5	1B	100 - refer to regional costs	0	0	0	0	0	0

Table 10-12. Southern California Steelhead DPS Recovery Action Table for the Carpinteria Creek Watershed (Conception Coast 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
Carpinteria Creek												
CarC-SCS-1.1	Develop, adopt, and implement agricultural land-use planning policies and standards	NRCS,BLM, USFWS,NMFS, CDFG,CSCC, CT,TCFT,SCHR, EII,SBC	Agricultural Development	1, 4	2B	5	62400	0	0	0	0	62400
CarC-SCS-1.2	Manage agricultural development and restore riparian zone	NRCS,BLM, USFWS,NMFS, CDG,CSCC, CT,TCFT,SCHR, EII,SBC	Agricultural Development	1, 4,	2B	10 - refer to regional costs	0	0	0	0	0	0
CarC-SCS-3.1	Develop and implement plan to remove or modify fish passage barriers within the watershed	NMFS,ACOE, USFWS,BLM, USFS,DWR, CDFG,CSCC, CT,TCFT,SCHR, EII,SBC	Culverts and Road Crossings (Passage Barriers)	1, 4	1A	20 - refer to regional costs	0	0	0	0	0	0
CarC-SCS-4.1	Develop and implement water management plan for diversion operations	NMFS,ACOE, USFWS,BLM, USFS,DWR, CDFG,CSCC, CT,TCFT,SCHR, EII,SBC	Dams and surface water diversions	1, 4	1A	20 - refer to regional costs	0	0	0	0	0	0
CarC-SCS-5.1	Develop and implement flood control maintenance program	USGS,ACOE, BLM,NMFS, USFWS,CDFG, CT,TCFT,SCHR, EII,SBC	Flood Control Maintenance	1, 4	2B	100	0	0	0	0	0	0
CarC-SCS-6.1	Conduct groundwater extraction analysis and assessment	USGS,DWR, SWRCB,NMFS, USFWS,CDFG, CT,TCFT,SCHR, EII,SBC	Groundwater Extraction	1, 4	2B	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
CarC-SCS-6.2	Develop and implement groundwater monitoring and management program	USGS,DWR, SWRCB,NMFS, CDFG,CT, TCFT,SCHR,EII, SBC	Groundwater Extraction	1, 4	2B	10	254350	39775	0	0	0	294125
CarC-SCS-7.1	Develop and implement stream bank and riparian corridor restoration plan	NRCS,USGS, ACOE, BLM,NMFS, CSCC,CDFG, CT,TCFT,SCHR, EII,SBC	Levees and Channelization	1, 4	2B	10	10521940	10521940	0	0	0	21043880
CarC-SCS-9.1	Develop and implement watershed-wide plan to assess the impacts of non-native species and develop control measures	CDFG,CDPR, CSCC,NMFS, USFWS,USFS, CT,TCFT,SCHR, EII,SBC	Non-Native Species	1, 3, 5	3B	100 - refer to regional costs	0	0	0	0	0	0
CarC-SCS-9.2	Develop and implement public education program on non-native species impacts	CDFG,CDPR, CSCC,NMFS, USFWS,USFS, CT,TCFT,SCHR, EII,SBC	Non-Native Species	1, 3, 5	3B	20	76140	76140	76140	76140	0	304560
CarC-SCS-9.3	Develop and implement non-native species monitoring program	CDFG,CPPR, CSCC,NMFS, USFWS,USFS, CT,TCFT,SCHR, EII,SBC	Non-Native Species	1, 3, 5	3B	100 - refer to regional costs	0	0	0	0	0	0
CarC-SCS-11.1	Manage roadways and adjacent riparian corridor and restore abandoned roadways	USDOT,USFWS, NMFS,CDFG, CDOT,CSCC, CT,TCFT,SCHR, EII,SBC	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
CarC-SCS-11.2	Develop and implement plan to remove or reduce approach-fill for railroad lines and roads	USDOT,NMFS, USFWS,CDFG, CSCC,CT, TCFT, SCHR,EII, SBC	Roads	1, 4	2B	ongoing - cost of doing business	0	0	0	0	0	0
CarC-SCS-11.3	Retrofit storm drains to filter runoff from roadways	USDOT,USFWS, NMFS,CDOT, CDFG,CSCC, CT,TCFT,SCHR, EII,SBC	Roads	1, 4	2B	20	32260	32260	32260	32260	0	129040
CarC-SCS-12.1	Develop and implement an estuary restoration and management plan	CDPR,CDFG, CSCC,NMFS, USFWS,BLM, CT,TCFT,SCHR, EII,SBC	Upslope/ Upstream activities	1, 2, 3, 4, 5	1B	5	59630000	0	0	0	0	59630000
CarC-SCS-12.2	Review and modify applicable County and/or City Local Coastal Plans	CCC,CDFG, NMFS,USFWS, CT,TCFT,SCHR, EII,SBC	Upslope/ Upstream activities	1, 2, 3, 4, 5	2B	5	62400	0	0	0	0	62400
CarC-SCS-13.1	Develop, adopt, and implement urban land-use planning policies and standards	CSCC,CDFG, NMFS,USFWS, CT,TCFT, SCHR,EII,SBC	Urban Development	1, 4	2B	5	62400	0	0	0	0	62400
CarC-SCS-13.2	Retrofit storm drains in developed areas	CDOT,CDFG, CSCC,NMFS, USFWS,USDOT, CT,TCFT,SCHR, EII,SBC	Urban Development	1, 4	2B	20	0	0	0	0	0	0
CarC-SCS-13.3	Develop and implement riparian restoration plan replace artificial bank stabilization structures	NRCS,NMFS, USFWS,CDFG, CSCC,CT, TCFT, SCHR,EII, SBC	Urban Development	1, 4	2B	10	10521940	10521940	0	0	0	21043880

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
CarC-SCS-14.1	Review, assess and modify NPDES wastewater discharge permits (*e.g.*, Carpinteria Sanitary District Wastewater Treatment Facility)	RWQCB, CDFG,NMFS, USFWS,CT, TCFT,SCHR,EII, SBC	Urban Effluents	1, 4	2B	ongoing - cost of doing business	0	0	0	0	0	0
CarC-SCS-14.2	Review California Regional Water Quality Control Board Watershed Plans and modify stormwater permits	RWQCB, SWRCB,CDFG, NMFS,USFWS, CT,TCFT,SCHR, EII,SBC	Urban Effluents	1, 4	2B	ongoing - cost of doing business	0	0	0	0	0	0
CarC-SCS-15.1	Develop and implement an integrated wildland fire and hazardous fuels management plan	USFS,USFWS, NMFS,USGS, CDFG,CT, TCFT,LPFW, SCHR,EII,SBC	Wildfires	1, 4, 5	1B	100 - refer to regional costs	0	0	0	0	0	0

Table 10-13. Southern California Steelhead DPS Recovery Action Table for the Rincon Creek Watershed (Conception Coast 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
Rincon Creek												
RC-SCS-1.1	Develop and implement plan to minimize runoff from agricultural activities	NRCS,USGS, USFWS,NMFS, CDFG,CSCC CT,TCFT,SCHR, EII,SBC	Agricultural Effluents	1, 4	2B	20	31000	2499200	2499200	2499200	0	7528600
RC-SCS-1.2	Develop, adopt, and implement agricultural land-use planning policies and standards	NRCS,BLM, USFWS,NMFS, CDFG,CT, TCFT,SCHR,EII, SBC	Agricultural Development	1, 4	2B	5	62400	0	0	0	0	62400
RC-SCS-1.3	Manage agricultural development and restore riparian zones	NRCS,BLM, USFWS,NMFS, CT,TCFT,SCHR, EII,SBC	Agricultural Development	1, 4,	2B	10 - refer to regional costs	0	0	0	0	0	0
RC-SCS-3.1	Develop and implement plan to remove or modify fish passage barriers within the watershed	NMFS,USFWS, ACOE,BLM, USFS,DWR, CDFG,CSCC, CT,TCFT,SCHR, EII,SBC	Culverts and Road Crossings (Passage Barriers)	1, 4	1A	20 - refer to regional costs	0	0	0	0	0	0
RC-SCS-4.1	Develop and implement water management plan for diversion operations	NMFS,USFWS, ACOE,BLM, USFS,DWR, CDFG,CSCC, CT,TCFT,SCHR, EII,SBC	Dams and surface water diversions	1, 4	1A	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
RC-SCS-5.1	Develop and implement flood control maintenance program	USGS,ACOE, BLM,NMFS, NMFS,CDFG, CT,TCFT,SCHR, EII,SBC	Flood Control Maintenance	1, 4	2B	100	0	0	0	0	0	0
RC-SCS-6.1	Conduct groundwater extraction analysis and assessment	USGS,DWR, SWRCB,NMFS, USFWS,CDFG, CSCC,CT, TCFT,SCHR,EII, SBC	Groundwater Extraction	1, 4	2B	5	275550	0	0	0	0	275550
RC-SCS-6.2	Develop and implement a groundwater monitoring and management program	USGS,DWR, SWRCB,NMFS, USFWS,CDFG CT,TCFT,SCHR, EII,SBC	Groundwater Extraction	1, 4	2B	10	254350	39775	0	0	0	294125
RC-SCS-7.1	Develop and implement stream bank and riparian corridor restoration plan	NRCS,USGS, ACOE,BLM, NMFS,CDFG, CT,TCFT,SCHR, EII,SBC	Levees and Channelization	1, 4	2B	10	10521940	10521940	0	0	0	21043880
RC-SCS-8.1	Develop and implement plan to remove quarry and landslide debris from the channel	CDMG,CDFG, CSCC,NMFS, USFWS,CT, TCFT,SCHR,EII, SBC	Mining and Quarrying	1, 4, 5	2B	5	68030	0	0	0	0	68030
RC-SCS-9.1	Develop and implement watershed-wide plan to assess the impacts of non-native species and develop control measures	CDFG,CDPR, CSCC,NMFS, USFWS,CT, TCFT,SCHR,EII, SBC	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
RC-SCS-9.2	Develop and implement non-native species monitoring program	CDFG,CDPR, CSCC,NMFS, CT,USFWS, TCFT,SCHR,EII, SBC	Non-Native Species	1, 3, 5	3B	100 - refer to regional costs	0	0	0	0	0	0
RC-SCS-9.3	Develop and implement public education program on non-native species impacts	CDFG,CDPR, CSCC,NMFS, USFWS,CT, TCFT,SCHR,EII, SBC	Non-Native Species	1, 3, 5	3B	20	76140	76140	76140	76140	0	304560
RC-SCS-11.1	Manage roadways and adjacent riparian corridor and restore abandoned roadways	USDOT,NRCS, NMFS,USFWS, CDOT,CDFG, CSCC,CT, TCFT,SCHR,EII, SBC	Roads	1, 4	2B	20 - refer to regional costs	0	0	0	0	0	0
RC-SCS-11.2	Develop and implement a plan to remove or reduce approach-fill for railroad lines and roads	USDOT,NMFS, USFWS,CDFG, CSCC,CT, TCFT,SCHR,EII, SBC	Roads	1, 4	2B	ongoing - cost of doing business	0	0	0	0	0	0
RC-SCS-11.3	Retrofit storm drains to filter runoff from roadways	USDOT,NMFS, USFWS,CDOT, CDFG,CSCC, CT,TCFT,SCHR, EII,SBC	Roads	1, 4	2B	20	32260	32260	32260	32260	0	129040
RC-SCS-12.1	Develop and implement an estuary restoration and management plan	USDOT,NMFS, BLM,USFWS, CDOT,CDPR, CDFG,CT, TCFT,SCHR,EII, SBC	Upslope/ Upstream activities	1, 2, 3, 4, 5	1B	5	1340000	0	0	0	0	1340000

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
RC-SCS-12.2	Review and modify applicable County and/or City Local Coastal Plans	CCC,CDFG, NMFS,USFWS, CT,TCFT,SCHR, EII,SBC	Upslope/ Upstream activities	1, 2, 3, 4, 5	2B	5	62400	0	0	0	0	62400
RC-SCS-13.1	Develop, adopt, and implement urban land-use planning policies and standards	NRCS,NMFS, USFWS,BLM, CDOT,CDFG, CT,TCFT,SCHR, EII,SBC	Urban Development	1, 4	2B	5	62400	0	0	0	0	62400
RC-SCS-13.2	Develop and implement riparian restoration plan to replace artificial bank stabilization structures	NRCS,USFWS,NUMFS,CDFG,CSCC,CT, TCFT,SCHR,EII, SBC	Urban Development	1, 4	2B	10	10521940	10521940	0	0	0	21043880
RC-SCS-14.1	Review, assess and modify NPDES wastewater discharge permits (*e.g.,* Carpinteria Sanitary District Wastewater Treatment Facility)	RWQCB, USFWS,NMFS, CDFG,CT, TCFT,SCHR,EII, SBC	Urban Effluents	1, 4	2B	ongoing - cost of doing business	0	0	0	0	0	0
RC-SCS-14.2	Review California Regional Water Quality Control Board Watershed Plans and modify Stormwater Permits	RWQCB, SWRCB,CDFG, NMFS,USFWS, CT,TCFT,SCHR, EII,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
RC-SCS-15.1	Develop and implement an integrated wildland fire and hazardous fuels management plan	USFS,USFWS, USGS,NMFS, CDFG,CT, TCFT,LPFW, SCHR,EII,SBC	Wildfires	1, 4, 5	1B	100 - refer to regional costs	0	0	0	0	0	0