

Appendix D ■ Essential Watersheds

Essential Watersheds and Priority Stream Segments for Focused Conservation Actions to Protect Native Fishes, San Francisco Estuary, California.

Robert A. Leidy, U.S. Environmental Protection Agency, San Francisco, CA

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Working Assumptions and Guiding Principles

1. There is a strong correlation between watershed area and native fish species diversity. Therefore, conservation actions focused on the largest watersheds, which have the potential to protect the greatest number of native fish species. Similarly, there is a high correlation between anchor watersheds and essential streams for steelhead (as identified by Becker *et al.* 2007) and the diversity of other native fish species of conservation focus. All identified anchor watersheds and essential streams for steelhead are included as Priority 1 watersheds for conservation actions for other native fishes.
2. Anchor watersheds and essential streams identified in Becker *et al.* 2007 constitute the best remaining habitat for steelhead and have the most immediate restoration needs and potential. But other streams in anchor and non-anchor watersheds that support steelhead and/or assemblages of native fishes should also be considered in establishing conservation goals.
3. Any prioritization of streams for fishes must consider the ecological importance of maintaining lateral (riparian) and longitudinal connectivity (tidal to headwaters) in streams. This is important when considering buffer widths, fish immigration and emigration, and dispersal for recolonization and maintenance of populations.
4. Fishless streams, particularly low order (*i.e.*, first- and second-order) headwaters, are critical to maintaining native fishes, especially rainbow trout that may occur immediately downstream. The protection of first- and second- order streams and undeveloped headwaters through easements and fee acquisition, and other innovative mechanisms, is a conservation priority.
5. All freshwater dispersant fishes in estuary watersheds are variously isolated from other watersheds depending on geographic location and other physical and biological factors. Within the estuary there is a general geographic gradient of increasing watershed isolation from north to south and from large to small drainage area. Therefore, whenever possible, conservation targets should be in close proximity, in order to decrease isolation.
6. Several relatively small-to-medium sized watersheds support intact assemblages of native fishes. Any conservation prioritization for native fishes must include a full range of watershed sizes.
7. Watersheds and stream segments from all landscape units should be represented in the conservation strategy where possible and supported by the data.
8. Ecological redundancy of conservation targets is a priority. Goals should be set for a conservation target in each landscape unit included in a given target's geographic range.
9. All watershed segments dominated by wildland landscapes are high priority conservation targets. Maintenance of existing land uses should be primarily through easements, fee acquisition, and other novel management approaches. For example, the headwaters of Alameda Creek and Coyote Creek watersheds are high priority for conservation targets and actions there should focus on maintaining existing ranching land use.
10. Streams flowing through urbanized baylands are important components to the ecological functioning of less-developed headwater landscapes, especially in terms of longitudinal connectivity.
11. Recommended conservation actions for all stream segments flowing through landscapes dominated by low-to-high density urban, residential, residential-commercial, and agricultural landscapes include, at a minimum: (1) limiting additional streamside encroachment through the establishment of appropriate riparian buffers, (2) maintaining the corridor for potential restoration of steelhead habitat, including strategic removal of structures, where appropriate, and (3) implementing aggressive sediment and non-point source pollution control measures. Additional measures may include (4) securing additional undeveloped streamside lands and (5) consideration of seasonal water releases.

Recommended Priority Actions (1- 5 in Table)

1. Limit additional streamside encroachment by establishing appropriate riparian buffers.
2. Implement channel and riparian restoration measures, including the strategic removal of structures where appropriate.
3. Implement aggressive sediment and/or non-point source pollution control measures.
4. Secure remaining sensitive undeveloped streamside lands through easements and fee acquisition.
5. Investigate seasonal water releases to benefit native fishes, especially rearing and smolting steelhead.

Note: Anchor watersheds and essential streams (after Becker *et al.* 2007) are highlighted in grey.

AN = Anadromous or reach open to anadromy.

LL = landlocked population, not currently open to anadromy

RA = reservoir anadromy or adfluvial populations

Watershed	Priority Stream Segment	Target Species / Assemblage Present AN – anadromous LL – land-locked RA– reservoir anadromy	Notes	Priority Actions
ALAMEDA COUNTY				
Alameda Creek	Alameda Creek from the Calaveras Creek confluence to the SFPUC diversion dam (Alameda Creek to Calaveras reservoir diversion)	California roach rainbow trout (LL) Sacramento sucker (<i>Little Yosemite reach only</i>)	This segment is owned and managed by EBRPD and SFPUC. Protection of the stream and riparian zone for native fishes is high priority. Reaches downstream from Camp Ohlone and Little Yosemite maintain cool, perennial flows and healthy populations of rainbow trout.	1
	Alameda Creek from the head of Niles Canyon to Calaveras Creek confluence	California roach hitch Pacific lamprey prickly sculpin rainbow trout (LL) Sacramento pikeminnow Sacramento sucker threespine stickleback	Like the Niles Canyon stretch, this reach is a high priority for the conservation of the native lowland fish assemblage, especially hitch. This reach will function as an important migration corridor for steelhead once barriers are modified in the lower watershed. Much of this reach is on lands owned by the SFPUC and EBRPD, and presumably is managed for the protection of Alameda Creek. However, private lands that are mostly in grazing should be a high priority for conservation management through easements or fee acquisition in order to protect Alameda Creek, especially adjacent foothills.	1, 2, 3, 4, 5
	Alameda Creek, Niles Canyon	California roach hardhead? hitch Pacific lamprey prickly sculpin rainbow trout (LL) Sacramento pikeminnow Sacramento sucker threespine stickleback tule perch?	The approximately six-mile Niles Canyon reach supports 8-10 native fishes of the twelve known to occur there historically. Niles Canyon also includes two tributaries important to native fish conservation: Stonybrook and Sinbad Creeks. Niles Canyon is a high priority reach for the protection of native fishes, as it represents one of the few low gradient and elevation reaches in the estuary with a relatively intact natural channel and riparian corridor. Much of the land adjacent to Niles Canyon is in public ownership; the protection of the remaining private lands in this reach should be a high priority, especially those lands not immediately adjacent to the stream that contribute runoff.	1, 2, 3, 4, 5
	Alameda Creek, upstream from SFPUC diversion dam	California roach prickly sculpin rainbow trout (LL) Sacramento sucker	Most of upper Alameda Creek watershed is privately owned and used for grazing. Because of its remoteness and private land ownership, the status of native fishes in many of the smaller streams is unknown. Presumably, many of these waters support healthy populations of native fishes. A high priority should be given to conservation management of remaining private lands. Grazing should be managed to protect the riparian buffer zone.	1, 4
	Apperson Creek, upstream from San Antonio Reservoir	rainbow trout (LL, RA)	The status of rainbow trout in this stream is unknown. A high priority should be given to conservation management of surrounding private lands. Grazing should be managed to protect riparian buffer zone.	1, 2, 3, 4

Watershed	Priority Stream Segment	Target Species / Assemblage Present AN – anadromous LL – land-locked RA– reservoir anadromy	Notes	Priority Actions
ALAMEDA COUNTY continued				
Alameda Creek continued	Arroyo Bayo Creek	California roach Sacramento sucker	This entire sub-watershed is a high priority for the conservation of native fishes. Because of its remoteness and private ownership, the status of native fishes in many of this stream is poorly known. Most of the Arroyo Bayo watershed is privately owned and used for grazing. A high priority should be given to conservation management of remaining private lands. Grazing should be managed to protect the riparian buffer zone.	1, 4
	Arroyo Hondo, upstream from Calaveras Reservoir	California roach prickly sculpin rainbow trout (LL, RA) Sacramento sucker	This reach is high priority for the conservation of native fishes. Significant acreages of the watershed are owned and managed by SFPUC to protect water quality in Calaveras Reservoir. However, much of upper Alameda Creek watershed remains privately owned and is used for grazing. A high priority should be given to conservation management of private lands. Grazing should be managed to protect the riparian buffer zone.	1, 4
	Arroyo de la Laguna, confluence with Alameda Creek upstream to confluence with Arroyo Valle Creek	California roach Hitch prickly sculpin rainbow trout (LL) Sacramento pikeminnow Sacramento sucker threespine stickleback	Arroyo de la Laguna is a high priority reach for the protection of native fishes as it represents one of the few low-gradient and low-elevation reaches in the estuary with a relatively intact natural channel and riparian corridor. This reach connects with Alameda Creek near the head of Niles Canyon, another important reach for native fishes. It may serve as an important migration corridor for steelhead once the remaining BART weir barrier is modified in the lower watershed. A significant portion of this reach is owned by the SFPUC; the protection of the remaining private riparian lands should be a high priority.	1, 2, 3, 4, 5
	Arroyo Mocho (entire)	California roach rainbow trout (LL) Sacramento sucker	This entire sub-watershed is a high priority for the conservation of native fishes. This stream supports a population of rainbow trout. Because of its remoteness and private ownership, the status of native fishes in many of this stream is poorly known. Most of the Arroyo Mocho watershed is privately owned and used for grazing. A high priority should be given to conservation management of private lands. Grazing should be managed to protect the riparian buffer zone.	1, 2, 3, 4

Watershed	Priority Stream Segment	Target Species / Assemblage Present AN – anadromous LL – land-locked RA– reservoir anadromy	Notes	Priority Actions
ALAMEDA COUNTY continued				
Alameda Creek continued	Arroyo Valle, confluence with Arroyo de la Laguna upstream to Del Valle Reservoir	California roach hitch prickly sculpin Sacramento pikeminnow Sacramento sucker	This reach supports a diverse mixture of native and non-native fishes; native fishes tend to dominate the upper portions of the reach below Del Valle Reservoir. Land is almost entirely in private ownership, primarily in urban to medium-to-low density suburban development. Priority should be given to limiting streamside encroachment from development and other activities through the use of buffers; streamside structures should be strategically removed. Flow releases from Del Valle Reservoir could improve habitat conditions for native fishes.	1, 2, 3, 4, 5
	Arroyo Valle, upstream from Del Valle Reservoir (entire)	California roach prickly sculpin rainbow trout Sacramento sucker	This entire sub-watershed is a high priority for the conservation of native fishes. Because of its remoteness and private ownership, the status of native fishes in many of this stream is poorly known. Several of the smaller named and unnamed perennial streams tributary to this reach may support populations of rainbow trout, among other native fishes. Most of the Arroyo Valle watershed remains privately owned and is used for grazing. High priority should be given to conservation management of private lands. Grazing should be managed to protect the riparian buffer zone.	1, 4
	Bear Gulch Creek (entire)	rainbow trout (LL)	These lands are in private ownership. Historical records indicate presence of rainbow trout. A high priority should be given to conservation management of private lands. Grazing should be managed to protect the riparian buffer zone.	1, 4
	Beauregard	California roach Sacramento sucker	This entire sub-watershed is a high priority for the conservation of native fishes. Because of its remoteness and private land ownership the status of native fishes in many of this stream is poorly known. Most of the Arroyo Valle watershed is privately owned and used for grazing. A high priority should be given to conservation management of private lands. Grazing should be managed to protect the riparian buffer zone.	1, 4
	Colorado Creek	rainbow trout (LL)	This entire sub-watershed is a high priority for the conservation of native fishes. This stream supports a population of rainbow trout. Because of its remoteness and private ownership, the status of native fishes in many of this stream is poorly known. Presumably, Colorado Creek supports healthy populations of other native fishes, most notably California roach, Sacramento sucker, and prickly sculpin. Most of the Colorado Creek watershed is privately owned and used for grazing. A high priority should be given to conservation management of private lands. Grazing should be managed to protect the riparian buffer zone.	1, 4

Watershed	Priority Stream Segment	Target Species / Assemblage Present AN – anadromous LL – land-locked RA– reservoir anadromy	Notes	Priority Actions
ALAMEDA COUNTY continued				
Alameda Creek continued	Indian Creek, upstream from San Antonio Reservoir	prickly sculpin rainbow trout (LL, RA) Sacramento sucker	Reservoir rainbow trout maintain anadromous life history behavior. Much of the watershed is owned and managed by the SFPUC to protect water quality in San Antonio Lake. A high priority should be given to conservation of remaining private lands. Grazing should be managed to protect the riparian buffer zone.	1, 2, 3, 4
	Indian Joe Creek	rainbow trout (LL)	Much of the watershed is within the Sunol Regional Wilderness. A high priority should be given to conservation management of private lands. Grazing should be managed to protect riparian buffer zone.	1, 2, 3, 4
	Isabel Creek (entire)	California roach prickly sculpin rainbow trout (LL) Sacramento sucker speckled dace?	This entire sub-watershed is a high priority for the conservation of native fishes. This stream and others within the upper watershed may support speckled dace, one of only two historically known populations within the estuary. In addition, many smaller tributaries to Isabel Creek may support populations of rainbow trout. Because of its remoteness and private ownership, the status of native fishes in many of the smaller streams is unknown. Presumably, many of these waters support healthy populations of native fishes. Most of the Isabel Creek watershed is privately owned and used for grazing. A high priority should be given to conservation management of private lands. Grazing should be managed to protect the riparian buffer zone.	1, 4
	Jumpoff Creek	unknown	This entire sub-watershed is a high priority for the conservation of native fishes. Because of its remoteness and private ownership, the status of native fishes in many of this stream is poorly known. Most of the Arroyo Valle watershed is privately owned and used for grazing. A high priority should be given to conservation management of private lands. Grazing should be managed to protect the riparian buffer zone.	1, 4
	La Costa Creek, upstream from San Antonio Reservoir	prickly sculpin rainbow trout (LL, RA)	Reservoir rainbow trout maintain anadromous life history behavior. Much of the watershed is owned and managed by the SFPUC to protect water quality in San Antonio Lake. A high priority should be given to conservation of remaining private lands. Grazing should be managed to protect the riparian buffer zone.	1, 2, 3, 4

Watershed	Priority Stream Segment	Target Species / Assemblage Present AN – anadromous LL – land-locked RA– reservoir anadromy	Notes	Priority Actions
ALAMEDA COUNTY continued				
Alameda Creek continued	Mainstem, tidal riverine to mouth of Niles Canyon	California roach hardhead? hitch Pacific lamprey Pacific staghorn sculpin prickly sculpin rainbow trout (AN) Sacramento blackfish Sacramento pikeminnow Sacramento sucker threespine stickleback tule perch	Lower Alameda Creek currently supports 10-12 native fishes of an original 13-15 species. The status of hardhead and tule perch in this reach is unknown. Tule perch appear to persist in low numbers within ponds adjacent to the flood channel. These ponds are owned and managed by the East Bay Regional Park District. Steelhead use the reach as a migration corridor, but are currently blocked from suitable spawning habitat in the upper watershed by a migration barrier at the BART weir. There are plans to modify this barrier to allow steelhead access to the upper watershed. The flood channel is soft bottom, and much of this reach contains pools that persist through the summer months and benefit native fishes. The flood channel also supports extensive wetlands, especially near and within tidally influenced reaches. While the lower channel is in public ownership under the Alameda County Flood Control District, and is almost exclusively for flood control and groundwater recharge purposes, it also serves as important habitat for native fishes. In addition to steelhead concerns, future management actions should support other native fishes by maintaining the channel's topographic complexity and wetland vegetation.	1, 2, 3, 4
	San Antonio Creek	California roach Sacramento sucker	This entire sub-watershed is a high priority for the conservation of native fishes. Because of its remoteness and private ownership, the status of native fishes in many of this stream is poorly known. Several of the smaller named and unnamed perennial streams tributary to this reach may support populations of rainbow trout, among other native fishes. Most of the Arroyo Valle watershed is privately owned and used for grazing. A high priority should be given to conservation management of private lands. Grazing should be managed to protect the riparian buffer zone.	1, 4
	San Antonio Creek, downstream from San Antonio Dam	rainbow trout (<i>potential – not currently present</i>)	Land in this stretch is owned by the SFPUC. With managed water releases from San Antonio Reservoir, the reach may have potential for future steelhead use.	1, 2, 3, 5

Watershed	Priority Stream Segment	Target Species / Assemblage Present AN – anadromous LL – land-locked RA– reservoir anadromy	Notes	Priority Actions
ALAMEDA COUNTY continued				
Alameda Creek continued	San Antonio Creek, upstream from San Antonio Reservoir	prickly sculpin rainbow trout (LL, RA) Sacramento sucker	Reservoir rainbow trout maintain anadromous life history behavior. Much of the watershed is owned and managed by the SFPUC to protect water quality in San Antonio Lake. A high priority should be given to conservation of remaining private lands. Grazing should be managed to protect the riparian buffer zone.	1, 2, 3
	Smith Creek (entire)	California roach rainbow trout (LL) Sacramento sucker	This entire sub-watershed is a high priority for the conservation of native fishes. This stream and or others within the upper watershed may support speckled dace, one of only two historically known populations within the estuary. In addition, many smaller tributaries to Smith Creek may support populations of rainbow trout. Because of its remoteness and private ownership, the status of native fishes in many of the smaller streams is unknown. Presumably, many of these waters support healthy populations of native fishes. Most of the Smith Creek watershed is privately owned and used for grazing. A high priority should be given to conservation management of private lands. Grazing should be managed to protect the riparian buffer zone.	1, 4
	Stonybrook Creek	rainbow trout (LL)	Stonybrook Creek contains priority spawning and rearing habitat for rainbow trout, and is a critical part of future plans to restore steelhead to the watershed. Most of the lands surrounding Stonybrook Creek are privately owned and should be targeted for conservation.	1, 2, 3, 4
	Sulphur Creek (entire)	rainbow trout (LL)	This perennial stream contains high quality spawning and rearing habitat for rainbow trout. Much of the sub-watershed remains in private ownership as grazing land. A high priority should be given to conservation management of remaining private lands through easements or fee acquisition. Grazing should be managed to protect riparian buffer zone.	4
	Trout Creek	rainbow trout (LL)	This stream is known to support rainbow trout. A high priority should be given to conservation management of remaining private lands. Grazing should be managed to protect the riparian buffer zone.	1, 4
	Valpe Creek	rainbow trout (LL)	A high priority should be given to conservation management of private lands. Grazing should be managed to protect the riparian buffer zone.	1, 4
San Leandro Creek	Indian Creek, entire	prickly sculpin rainbow trout (LL)	Reservoir rainbow trout maintain anadromous life history behavior.	1, 2, 3

Watershed	Priority Stream Segment	Target Species / Assemblage Present AN – anadromous LL – land-locked RA– reservoir anadromy	Notes	Priority Actions
ALAMEDA COUNTY continued				
San Leandro Creek continued	Lower mainstem, downstream from Lake Chabot	prickly sculpin rainbow trout / steelhead (AN) Sacramento sucker threespine stickleback	Stream reaches between Chabot Dam and Fwy 880 support habitat suitable for native fishes. The reach includes suitable spawning substrate for rainbow trout. Recommendations include study of potential measures to improve fish passage through the concrete channel below Fwy 880, and investigation of the potential for flow releases from Lake Chabot to improve fish habitat.	1, 2, 3, 4, 5
	Moraga Creek	hitch? prickly sculpin rainbow trout (LL)	Reservoir rainbow trout maintain anadromous life history behavior. Much of the upper watershed flows through moderate to high density suburban land.	1, 2, 3
	Redwood Creek, including Redwood Canyon	prickly sculpin rainbow trout (LL)	Reservoir rainbow trout maintain anadromous life history behavior. Stream habitat for rainbow trout is severely threatened by channel erosion and sedimentation.	1, 2, 3
	Upper mainstem, upstream from Upper San Leandro Reservoir	prickly sculpin rainbow trout (LL)	Reservoir rainbow trout maintain anadromous life history behavior. Lands are primarily owned by EBRPD and EBMUD.	1, 2, 3
San Lorenzo Creek	Mainstem, upstream from concrete channel near downtown Hayward	California roach prickly sculpin rainbow trout (AN) Sacramento pikeminnow Sacramento sucker threespine stickleback	This is a surprising example of a stream in suburban setting with a diverse assemblage of native fishes.	1, 2, 3
	Palomares Creek	rainbow trout (LL) Sacramento sucker threespine stickleback	Lands are primarily in private low-density development.	1, 2, 3
Sausal Creek	Diamond Canyon Park to headwaters, including Palo Seco Creek	rainbow trout (LL/AN?)	The headwaters support an isolated population of native rainbow trout.	1, 2, 3
	Mouth to Diamond Canyon Park	Pacific staghorn sculpin threespine stickleback	The headwaters support an isolated population of native rainbow trout.	1, 2, 3
CONTRA COSTA COUNTY				
Alhambra Creek (Arroyo del Hambre)	Mainstem to headwaters in Franklin Canyon, Vaca Canyon, and Alhambra Creek.	California roach Chinook salmon Pacific staghorn sculpin rainbow trout (AN) Sacramento sucker threespine stickleback	Upper watershed is in regional park and low density suburban development status. Status of rainbow trout in watershed should be investigated.	1, 2, 3, 4
Marsh Creek	Curry Canyon	unknown	The headwaters of this large tributary to Marsh Creek are in Mt. Diablo State Park. Protection of lower reaches that remain in private ownership is recommended.	1, 3, 4

Watershed	Priority Stream Segment	Target Species / Assemblage Present AN – anadromous LL – land-locked RA– reservoir anadromy	Notes	Priority Actions
CONTRA COSTA COUNTY continued				
Marsh Creek continued	Marsh Creek, headwater adjacent to Morgan Territory Road	unknown	This is an intermittent to perennial reach with a largely intact riparian corridor. It contains zones characterized by cool groundwater discharges. Priority should be given to maintaining the upper watershed in grazing and/or low-density development.	1, 3, 4
	Marsh Creek Springs	California roach prickly sculpin Sacramento sucker threespine stickleback	This is a series of perennial springs that contribute to persistence of surface water in Marsh Creek. Protection of springs and Marsh Creek is a high priority, as most of the adjacent private lands are recreational or low-density development.	1, 3, 4
	Marsh Creek Reservoir (elevation 200') upstream to headwaters.	California roach prickly sculpin hitch Sacramento sucker threespine stickleback	The mainstem above the reservoir has healthy populations of native fishes, as well as a relatively intact riparian corridor. Headwaters are poorly sampled but could contain habitat suitable for rainbow trout. Most of the land adjacent to the mainstem is privately owned and either in grazing or low-density rural status.	1, 3, 4
	Round Valley Creek	California roach	California roach occur from confluence with Marsh Creek upstream approximately 0.08 mile to an apparent migration barrier.	1, 3, 4
	Suisun Bay – Big Break upstream to Marsh Creek Reservoir	Chinook salmon (AN) hitch prickly sculpin Sacramento blackfish Sacramento pikeminnow Sacramento splittail Sacramento sucker threespine stickleback	Marsh Creek is one of only tributaries to Suisun Bay, and as such should be a conservation priority. The stream supports a lowland fish fauna that is uncommon in the estuary. Lands bordering this reach are mostly in private ownership characterized by suburban development and agriculture. Priority should be given to securing adequate streamside buffers through the use of either conservation easements and/or fee acquisition, in order to re-establish floodplain and riparian corridor functions. The practicality of restoring connectivity between the lower and upper watershed by removing Marsh Creek Reservoir should be assessed.	1, 2, 3, 4
	Sycamore Creek (Hog Canyon)	unknown	This major tributary to lower Marsh Creek drains mostly grazing lands. It is important for maintaining overall watershed integrity and habitat support functions for native fishes found in downstream reaches of Marsh Creek.	1, 3, 4
Mt. Diablo Creek	Donner Creek	California roach	This creek's headwaters are within Mt. Diablo State Park. The lower reaches flow through dense suburban development.	1, 2, 3, 4
	Lower mainstem, downstream Hwy. 4 to Hastings Slough (HS)	prickly sculpin Sacramento splittail (HS) Sacramento sucker threespine stickleback tule perch (HS)	This stream has historically supported steelhead. Priority should be given to conserving lands adjoining Hastings Slough at the tidal-stream interface, and maintaining low-density development status, especially on undeveloped portions of the adjacent Concord Municipal Golf Course.	1, 2, 3, 4

Watershed	Priority Stream Segment	Target Species / Assemblage Present AN – anadromous LL – land-locked RA– reservoir anadromy	Notes	Priority Actions
CONTRA COSTA COUNTY continued				
Mt. Diablo Creek continued	Lower mainstem, Hwy. 4 to Clayton	California roach prickly sculpin Sacramento sucker threespine stickleback	This stream has historically supported steelhead. It runs through mostly private lands, but the riparian corridor has few protections. Priority should be given to maintaining the upper watershed in grazing and/or low-density development, especially on undeveloped portions of former Concord Naval Weapons station lands upstream from Hwy. 4.	1, 2, 3, 4
	Mitchell Canyon Creek, Mt. Diablo State Park	rainbow trout (LL)	A small population of rainbow trout restricted to a relatively short reach of this stream within Mt. Diablo State Park.	1, 3
	Upper mainstem, near confluence of Mitchell Canyon Creek	California roach threespine stickleback	The stream is bordered mostly by private lands; the riparian corridor has some protections.	1, 2, 3, 4
Pinole Creek	Mainstem (entire)	California roach prickly sculpin rainbow trout (AN) Sacramento sucker threespine stickleback	Surprising diverse assemblage of native fishes including rainbow trout/steelhead. Portions of upper watershed are in EBMUD watershed status and low density suburban development. The status of rainbow trout/steelhead in the watershed should be further investigated.	1, 2, 3, 4
Walnut Creek	Bollinger Canyon Creek	rainbow trout (LL)	The resident population of rainbow trout that should receive priority protection. Portions of the headwaters are within Las Trampas Regional Park; however, significant portions of Bollinger Canyon are bordered by private lands that should receive conservation protection through the establishment of easements or fee acquisition. There is a need to protect and manage the riparian corridor with buffers.	1, 2, 3, 4
	Lafayette Creek, entire	California roach Sacramento sucker threespine stickleback	Example of creek in a suburban setting with assemblage of native fishes.	1, 3
	Las Trampas Creek, entire	California roach prickly sculpin Sacramento sucker threespine stickleback	Example of creek in a suburban setting with assemblage of native fishes.	1, 2, 3
	Lower mainstem, tidal limit upstream to Hwy 24 drop structure	California roach Chinook salmon Pacific lamprey prickly sculpin Pacific lamprey rainbow trout (AN) Sacramento sucker threespine stickleback	The oversized, soft-bottom flood channel provides habitat for an assemblage of native- and non-native fish. The flood channel also supports wetlands and maintained herbaceous ruderal vegetation. While the lower channel is in public ownership under the CCCFCD, and managed almost exclusively for flood control, it also serves as important habitat for native fishes. Future management should consider native fishes by maintaining encouraging riparian vegetation diversity.	1, 3

Watershed	Priority Stream Segment	Target Species / Assemblage Present AN – anadromous LL – land-locked RA– reservoir anadromy	Notes	Priority Actions
CONTRA COSTA COUNTY continued				
Walnut Creek continued	Mainstem San Ramon Creek, upstream from Las Trampas Creek confluence upstream to headwaters (Bollinger Canyon)	California roach hitch prickly sculpin Pacific lamprey Sacramento sucker threespine stickleback	This is a surprising example of a stream in a suburban setting with a diverse assemblage of native fishes. Priority should be given to limiting development encroachment by establishing appropriate buffers aggressive sediment control measures.	1, 2
	Sycamore Creek	California roach Sacramento sucker threespine stickleback	In a suburban setting, this creek hosts an assemblage of native fishes.	1, 3
	Tice Creek	California roach rainbow trout (LL?) Sacramento sucker threespine stickleback	In a suburban setting, this creek hosts an assemblage of native fishes. Status of rainbow trout should be further investigated.	1, 3
	Tidal riverine/estuarine – Pacheco Creek	Chinook salmon hitch Pacific lamprey Pacific staghorn sculpin prickly sculpin rainbow trout (AN) Sacramento blackfish Sacramento pikeminnow Sacramento splittail Sacramento sucker threespine stickleback tule perch	The tidal riverine portions of lower Walnut-Pacheco Creek support a diverse assemblage of native lowland fishes. Priority should be given to protection of stream channel and adjacent wetlands from bordering industrial activities.	1, 4
Wildcat Creek	Lower mainstem	threespine stickleback	These riparian lands are primarily in an urbanized setting, except for reaches downstream from the 13th Street/railroad crossing.	1, 2, 3, 4
	Upper mainstem, upstream from Interstate 80	rainbow trout (LL) threespine stickleback	Lands around this creek are primarily already protected.	3
MARIN COUNTY				
Arroyo Corte Madera del Presidio	Cascade Creek	rainbow trout (AN)	This stream is a priority for steelhead conservation. Most, if not all, of this watershed is in public ownership. Priority should be given to proper management of riparian buffers and aggressive sediment control measures.	1, 2, 3, 4

Watershed	Priority Stream Segment	Target Species / Assemblage Present AN – anadromous LL – land-locked RA– reservoir anadromy	Notes	Priority Actions
MARIN COUNTY continued				
Arroyo Corte Madera del Presidio continued	Mainstem, entire	California roach Pacific staghorn sculpin prickly sculpin rainbow trout (AN) threespine stickleback	This stream is a priority for the conservation of native fishes, especially steelhead. A significant amount of the upper watershed is already protected. The middle-to-lower mainstem is surrounded by medium-to-high density urban uses; the riparian corridor is generally narrow and the channel confined.	1, 2, 3, 4
	Old Mill Creek	rainbow trout (AN)	This stream is a priority for steelhead conservation. A significant amount of the upper watershed is already protected. The middle-to-lower mainstem is surrounded by medium-to-high density urban uses; the riparian corridor is generally narrow and the channel confined.	1, 2, 3, 4
	Warner Canyon Creek	rainbow trout (AN) threespine stickleback	This stream is a priority for steelhead conservation. A small amount of the upper watershed is within public conservation status. The middle-to-lower mainstem is surrounded by medium-to-high density urban uses; the riparian corridor is generally narrow and the channel confined.	1, 2, 3, 4
	Willow Reed (Widow Reed) Creek	rainbow trout (AN)	This stream is a priority for steelhead conservation. A small amount of the upper watershed is already protected. The middle-to-lower mainstem is surrounded by medium-to-high density urban uses; the riparian corridor is generally narrow and the channel confined.	1, 2, 3, 4
Corte Madera Creek	Cascade Creek	rainbow trout (AN)	This stream may support a resident population of rainbow trout above migration barriers. This stream lies almost entirely within projected parkland.	1
	Deer Park Creek	unknown	This stream lies almost entirely within protected parkland. There is a need to survey the stream to determine whether it is used by rainbow trout.	1
	Fairfax Creek	California roach rainbow trout (AN) riffle sculpin threespine stickleback	Fairfax Creek supports an important assemblage of native fishes, including steelhead. Most of the lower watershed is bordered by medium density residential land uses, but the riparian corridor is intact.	1, 2, 3, 4
	Larkspur Creek	prickly sculpin rainbow trout (AN) threespine stickleback	The middle-to-lower mainstem of Larkspur Creek surrounded by medium-to-high density urban uses. The riparian corridor is generally narrow, but high quality, and the channel is confined. The upper watershed in Baltimore Canyon is in open space with a redwood riparian canopy.	1, 2, 3, 4

Watershed	Priority Stream Segment	Target Species / Assemblage Present AN – anadromous LL – land-locked RA– reservoir anadromy	Notes	Priority Actions
MARIN COUNTY continued				
Corte Madera Creek continued	Mainstem	California roach prickly sculpin rainbow trout (AN) riffle sculpin Sacramento pikeminnow? Sacramento sucker threespine stickleback	Corte Madera Creek supports at least seven native fish species, and is a high priority for conservation. It has been identified as an anchor watershed containing essential streams for the conservation of steelhead. The middle-to-lower mainstem is surrounded by medium-to-high density urban uses; the riparian corridor is generally narrow, but high quality, and the channel is confined.	1, 2, 3, 4
	Ross Creek	rainbow trout (AN) threespine stickleback	Ross Creek is an important tributary for steelhead conservation. Much of the watershed immediately below Phoenix Lake is in public parkland. The lower watershed includes medium-to-high-density residential land uses.	1, 2, 3, 5
	San Anselmo Creek	California roach rainbow trout (AN) riffle sculpin Sacramento sucker threespine stickleback	San Anselmo Creek supports an important assemblage of native fishes, including steelhead. Most of the middle-to-lower watershed is bordered by medium-to-high-density residential land uses, but the riparian corridor is intact. The upper watershed is mostly in protected parkland.	1, 2, 3, 4
	Sleepy Hollow Creek	California roach rainbow trout (AN) threespine stickleback	Sleepy Hollow is an important tributary for steelhead conservation. Most of the middle-to-lower watershed is bordered by medium-to-high-density residential land uses.	1, 2, 3, 4
	Tamalpais Creek	rainbow trout (AN) threespine stickleback	Tamalpais Creek is surrounded by medium-to-high density urban uses. The riparian corridor is generally narrow, but high-quality, and the channel is confined. The upper watershed in Baltimore Canyon is in open space with a redwood riparian canopy.	1, 2, 3, 4
Miller Creek	Mainstem	California roach prickly sculpin rainbow trout (AN) riffle sculpin threespine stickleback	This watershed has an intact native assemblage with few exotic fish species, and is a high priority for conservation. Middle stream reaches have high quality rearing habitat for steelhead with small, cool summer pools, well-developed riparian vegetation, and areas of groundwater discharge. Habitat and dispersal links with Novato-Petaluma-Sonoma-Napa watersheds add to the conservation significance of this watershed. Priority should be given to securing remaining undeveloped streamside lands downstream from Hwy. 101 for conservation.	1, 2, 3, 4
Novato Creek	Arroyo San Jose Creek	California roach Chinook salmon prickly sculpin rainbow trout (AN) Sacramento sucker threespine stickleback	This watershed has an intact native assemblage and is a high priority for conservation. The lower watershed is mostly in medium density residential uses. The uppermost watershed is open space.	1, 2, 3, 4

Watershed	Priority Stream Segment	Target Species / Assemblage Present AN – anadromous LL – land-locked RA– reservoir anadromy	Notes	Priority Actions
MARIN COUNTY continued				
Novato Creek continued	Bowman Canyon	rainbow trout (AN)	This tributary is a high priority for conservation actions due to its importance for steelhead. The watershed is mostly private ownership, and grazed. A high priority should be given to conservation management of remaining private lands.	1, 2, 3, 4
	Mainstem, upstream to Stafford Lake	California roach Pacific staghorn sculpin prickly sculpin rainbow trout (AN) Sacramento sucker threespine stickleback	This watershed has an intact native assemblage with few exotic fish species, and is a high priority for conservation. Habitat and dispersal links with Novato-Petaluma-Sonoma-Napa watersheds add to the conservation significance of this watershed. Priority should be given to investigating seasonal water releases from Stafford Lake to benefit native fishes, especially rearing and smolting steelhead.	1, 2, 3, 4
	Vineyard Creek	rainbow trout (AN)	Vineyard Creek is an important tributary for steelhead conservation. The lower watershed traverses medium density residential land uses.	1, 2, 3, 4
NAPA COUNTY				
Huichica Creek	Mainstem and tributaries	California roach Pacific lamprey rainbow trout (AN) threespine stickleback	Huichica Creek is lies geographically between the Sonoma and Napa river watersheds and therefore may serve an important link between steelhead populations in all three streams. Huichica Creek also supports several other native fishes, as well as California freshwater shrimp. Lands are primarily are in agricultural and grazing uses.	1, 2, 3, 4
Napa River	Bale Slough	California roach rainbow trout (AN)	Steelhead are known to use Bale Slough. Most of this creek goes completely dry by early summer with a few isolated pools in the middle reaches. The lower reaches are channelized.	1, 2, 3, 4
	Bear Canyon (downstream from dam)	rainbow trout (AN) Sacramento sucker sculpin sp. (<i>unidentified</i>)	This stream supports steelhead. This stream has perennial flow above an onstream dam that disconnects the upper and lower watershed. A short reach below the dam contains perennial flow; most of the lower reaches to Bale Slough go dry by early summer.	1, 2, 3, 4
	Bell Canyon (Howell Creek)	California roach Pacific lamprey rainbow trout (AN) Sacramento pikeminnow Sacramento sucker sculpin sp. (<i>unidentified</i>) threespine stickleback	Bell Canyon supports at least seven native fishes, including steelhead. Chinook salmon have occasionally been documented spawning downstream of the Silverado Trail. Flow is perennial and regulated by releases from Bell Canyon Reservoir.	1, 2, 3, 4

Watershed	Priority Stream Segment	Target Species / Assemblage Present AN – anadromous LL – land-locked RA – reservoir anadromy	Notes	Priority Actions
NAPA COUNTY continued				
Napa River continued	Browns Valley Creek	California roach rainbow trout (AN) threespine stickleback	This stream supports steelhead. This stream is perennial in most reaches, possibly from urban runoff.	1, 2, 3, 4
	Carneros Creek	California roach prickly sculpin rainbow trout (AN) Sacramento sucker	This stream supports steelhead and contains high quality perennial rearing habitat in the middle reaches above Old Sonoma Rd. The lower reaches go dry in most years by July. Land use is primarily agricultural.	1, 2, 3, 4
	Chiles Creek	California roach rainbow trout (LL) Sacramento pikeminnow Sacramento sucker sculpin sp. (<i>unidentified</i>) threespine stickleback	This is a tributary to the northern arm of Lake Hennessey. Rainbow trout in reservoir may retain anadromous life history behavior.	1, 2, 3, 4
	Conn Creek, downstream from Lake Hennessey	California roach Pacific lamprey prickly sculpin rainbow trout (AN) riffle sculpin Sacramento pikeminnow Sacramento sucker threespine stickleback	Conn Creek supports a diverse assemblage of native fishes, including steelhead. Much of this stream goes dry from the Silverado Trail to the Napa River. Flow is regulated by releases from Lake Hennessey. There is perennial flow in the ~1/2 mile reach downstream from the dam.	1, 2, 3, 4
	Conn Creek, upstream from Lake Hennessey	California roach rainbow trout (LL, RA) riffle sculpin Sacramento pikeminnow Sacramento sucker		1, 2, 3, 4
	Cyrus Canyon, downstream from reservoir	California roach rainbow trout (AN)	This stream supports steelhead.	1, 2, 3, 4
	Cyrus Canyon, upstream from reservoir	rainbow trout (LL, RA?)	This stream supports resident rainbow trout.	1, 2, 3, 4
	Diamond Mountain Creek	rainbow trout (AN)	This stream supports steelhead.	1, 2, 3, 4
	Dutch Henry Creek	rainbow trout (AN)	This stream supports steelhead. Lower reaches go completely dry very early in summer. Upper reaches contain perennial pools.	1, 2, 3, 4
	Dry Creek, mainstem	California roach rainbow trout (AN) riffle sculpin Sacramento sucker threespine stickleback	Dry Creek supports at least six native fishes, including steelhead. The stream is listed as essential for steelhead (Becker <i>et al.</i> , 2007). Dry Creek is also one of the highest quality streams for native fishes. The lower alluvial reaches go dry in summer. High quality perennial steelhead rearing habitat exists in the middle reaches to Wing Canyon Creek; the creek is mostly dry upstream from there, with a few isolated pools in summer.	1, 2, 3, 4

Watershed	Priority Stream Segment	Target Species / Assemblage Present AN – anadromous LL – land-locked RA– reservoir anadromy	Notes	Priority Actions
NAPA COUNTY continued				
Napa River continued	Dry Creek, Campbell Creek	rainbow trout (AN)	This stream supports steelhead. Lower reaches go dry in summer. Upper reaches contain perennial flow in some years and isolated pools in most.	1, 2, 3, 4
	Dry Creek, Montgomery Creek	rainbow trout (AN)	This stream supports steelhead. Most of this stream goes dry in early summer. Isolated pools in middle and upper reaches support steelhead rearing.	1, 2, 3, 4
	Dry Creek, Segassia Canyon	rainbow trout (AN)	This stream supports steelhead. Flow is perennial flow for the entire length of the stream, and includes high quality steelhead rearing habitat.	1, 2, 3, 4
	Dry Creek, Wing Canyon	rainbow trout (AN)	This stream supports steelhead. Flow is perennial flow for the entire length of the stream, and includes high quality steelhead rearing habitat.	1, 2, 3, 4
	Garnett Creek	California roach rainbow trout (AN) Sacramento sucker sculpin sp. (<i>unidentified</i>) threespine stickleback	This stream supports steelhead. The lower reaches of this stream go dry very early in summer.	1, 2, 3, 4
	Heath Canyon	rainbow trout (AN)	This stream is known to support steelhead. This stream has perennial flow for all but the lowest reach into Sulphur Creek. The middle and upper reaches contain high quality steelhead rearing habitat.	1, 2, 3, 4
	Hopper Creek	California roach rainbow trout (AN)	This stream appears to support steelhead in some years. The lower reaches are channelized and flow through the town of Yountville. Upper reaches are perennial in some years and maintain isolated pools in most.	1, 2, 3, 4
	Hinman Creek	California roach rainbow trout (AN) Sacramento sucker sculpin sp. (<i>unidentified</i>) threespine stickleback	This stream appears to support steelhead in some years.	1, 2, 3, 4
	Iron Mine Creek	rainbow trout (AN)	This stream is known to support steelhead. This stream has perennial flow and high quality steelhead rearing habitat. Several natural migration barriers may isolate populations of rainbow trout.	1, 2, 3, 4
	Jericho Canyon Creek	rainbow trout (AN)	This stream is tributary to Garnett Creek and supports steelhead. This stream goes dry in early summer. The upper watershed may contain perennial reaches or isolated pools.	1, 2, 3, 4
	Kimball Canyon Creek, upstream from Kimball Canyon Dam	rainbow trout (LL) riffle sculpin	The Napa River upstream from Kimball Canyon Dam contains high quality habitat for resident rainbow trout and riffle sculpin. Lands are used primarily for private grazing.	1, 4

Watershed	Priority Stream Segment	Target Species / Assemblage Present AN – anadromous LL – land-locked RA– reservoir anadromy	Notes	Priority Actions
NAPA COUNTY continued				
Napa River continued	Mainstem from tidal riverine upstream to Kimball Canyon Dam	California roach Chinook salmon (AN) hardhead river lamprey Pacific lamprey western brook lamprey prickly sculpin rainbow trout (AN) riffle sculpin Sacramento pikeminnow Sacramento sucker threespine stickleback tule perch	The Napa River supports the highest diversity of native fishes in the estuary (28 species) and therefore is of the highest priority for conservation actions. The middle reaches of the Napa River support a regionally significant assemblage of native minnows, including the only confirmed hardhead population in the estuary (hardhead may persist in lower Alameda Creek). Primarily private agricultural lands border the mainstem Napa River. The reestablishment of floodplain function is a high priority conservation focus.	1, 2, 3, 4
	Mill Creek	rainbow trout (AN) sculpin sp. (<i>unidentified</i>)	This stream supports steelhead. Much of this creek goes dry by early summer. The middle and upper reaches contain isolated pools in most years.	1, 2, 3, 4
	Milliken Creek, downstream from Milliken Reservoir	California roach prickly sculpin rainbow trout (AN) riffle sculpin river lamprey Sacramento pikeminnow Sacramento sucker threespine stickleback	This stream supports at least eight native fishes, including steelhead. Priority should be given to investigating seasonal water releases from Milliken reservoir to benefit native fishes, especially rearing and smolting steelhead.	1, 2, 3, 4
	Milliken Creek, upstream from Milliken Reservoir, including Camp Creek	rainbow trout (LL, RA?)	The status of most native fishes upstream of the reservoir is poorly known. Priority should be given to securing protections for remaining sensitive undeveloped streamside lands.	1, 4
	Moore Creek	California roach rainbow trout (LL) sculpin sp. (<i>unidentified</i>)	This is a tributary to Chiles Creek and supports rainbow trout. Flow is perennial in most years.	1, 2, 3, 4
	Murphy Creek	California roach rainbow trout (AN) riffle sculpin	This stream supports steelhead. The stream maintains perennial flow for its entire length in most years.	1, 2, 3, 4
	Napa Creek	California roach prickly sculpin rainbow trout (AN) Sacramento splittail Sacramento sucker threespine stickleback	In addition to supporting native fishes, Napa Creek functions as habitat and an important migratory corridor for steelhead between the Napa River and Redwood and Browns Valley creeks. Napa Creek has perennial flow in all reaches. Chinook salmon spawn upstream of Jefferson Street in some years.	1, 2, 3

Watershed	Priority Stream Segment	Target Species / Assemblage Present AN – anadromous LL – land-locked RA– reservoir anadromy	Notes	Priority Actions
NAPA COUNTY continued				
Napa River continued	Nash Creek		This stream appears to dry seasonally, and does not appear to contain fish.	1,4
	Rector Creek, downstream from Rector Lake	California roach rainbow trout (AN)	Steelhead use Rector Creek downstream from Rector Reservoir. Most of this creek goes dry in early summer except for a few isolated pools.	1, 2, 3, 4
	Rector Creek, upstream from Rector Lake	rainbow trout (LL, RA?)	Rainbow trout are found upstream from Rector Reservoir; they may retain anadromous life history behavior.	1, 2, 3, 4
	Redwood Creek, mainstem	California roach rainbow trout (AN) Sacramento pikeminnow Sacramento sucker sculpin sp. (<i>unidentified</i>) threespine stickleback	Redwood Creek supports at least six native fishes, including steelhead. The stream is listed as essential for steelhead (Becker <i>et al.</i> , 2007). Chinook salmon spawn in the lower reaches of this creek in some years. Most of the upper watershed is undeveloped or in agriculture. The upper reaches have perennial flow, while the middle and lower reaches become intermittent by June and support isolated pools.	1, 2, 3, 4
	Redwood Creek, Pickle Canyon	California roach rainbow trout (AN)	Pickle Canyon is listed as essential for steelhead (Becker <i>et al.</i> , 2007). Most of the upper watershed is undeveloped. Much of this stream goes dry in summer.	1, 2, 3, 4
	Ritchie Creek	California roach rainbow trout (AN) sculpin sp. (<i>unidentified</i>)	This stream supports steelhead. The middle and upper reaches above Highway 29 contain high quality perennial steelhead rearing habitat. Much of the watershed is within Bothe State Park.	1, 2, 3, 4
	Sage Creek	California roach rainbow trout (LL, RA) Sacramento sucker	This is a tributary to the northern arm of Lake Hennessey. Rainbow trout in reservoir may retain anadromous life history behavior. Flow is perennial in most years.	1, 2, 3, 4
	Salvador Creek	California roach Chinook salmon (AN) rainbow trout (AN) threespine stickleback	The lowest reach is tidal and likely supports additional estuarine species. Chinook spawning has been documented every year since ~2001 and juveniles were observed in 2008. Steelhead likely use this stream only occasionally. This stream has perennial flow, likely from urban runoff.	1, 4
	Sarco Creek	California roach prickly sculpin rainbow trout (AN) Sacramento sucker threespine stickleback	This stream supports steelhead and other native fishes. A few cold isolated pools in the upper watershed support rainbow trout. Most of this creek goes completely dry by early summer.	1, 2, 3, 4
	Simmons Creek	rainbow trout (AN?)	This stream may support steelhead. Most of this creek goes dry by early summer.	1, 2, 3, 4

Watershed	Priority Stream Segment	Target Species / Assemblage Present AN – anadromous LL – land-locked RA– reservoir anadromy	Notes	Priority Actions
NAPA COUNTY continued				
Napa River continued	Soda Creek	California roach prickly sculpin rainbow trout (AN) Sacramento sucker threespine stickleback	This stream supports steelhead. High quality perennial steelhead rearing habitat exists above a natural waterfall in the middle reach of this creek. Rainbow trout are present above these falls, which likely create a complete barrier in some years. Most of this creek goes completely dry each year.	1, 2, 3, 4
	Spencer Creek	California roach rainbow trout (AN) riffle sculpin	This stream supports steelhead. Much of this stream goes dry in summer, although isolated pools support steelhead rearing in the middle and lower reaches. There is perennial flow in the upper reaches of this stream. Resident rainbow trout exist in perennial reaches near the headwaters above a 30-foot natural waterfall.	1, 2, 3, 4
	Sulphur Creek	California roach Pacific lamprey rainbow trout (AN) Sacramento sucker sculpin sp. (<i>unidentified</i>) threespine stickleback	This stream is known to support steelhead. Successful Chinook spawning was documented in 2005, but likely only occurs occasionally. The upper watershed contains high quality perennial steelhead rearing habitat. The lower reaches go dry by early summer.	1, 2, 3, 4
	Suscol Creek	California roach prickly sculpin rainbow trout (AN) Sacramento sucker threespine stickleback tule perch?	This small watershed supports at least five native fishes, including steelhead. The lowermost reaches near the confluence with the Napa River may support tule perch. The lowermost watershed is primarily agriculture, while the upper watershed is used for grazing.	1, 2, 3, 4
	Tulucay Creek	California roach prickly sculpin rainbow trout (AN) Sacramento pikeminnow Sacramento splittail Sacramento sucker threespine stickleback tule perch?	Tulucay Creek supports at least six native fishes, including steelhead. Tule perch may occur in this stream near its confluence with the Napa River. Chinook salmon spawn in the lower reaches in some years. Lower Tulucay Creek is channelized with little woody riparian cover. The upper watershed is low-to-medium density residential and private open. Tulucay is an important migratory corridor between the Napa River and Murphy, Spencer, and Kreuse creeks.	1, 2, 3, 4
	York Creek, downstream from dam	California roach rainbow trout (AN) Sacramento sucker sculpin sp. (<i>unidentified</i>)	This stream is used by steelhead. The middle reaches to the dam support high quality perennial steelhead rearing habitat. The lower reach of this stream is channelized and goes dry by mid-summer.	1, 2, 3, 4
	York Creek, upstream from dam	rainbow trout (LL, RA?)	This stream is used by resident rainbow trout. Flow is perennial.	1, 2, 3, 4

Watershed	Priority Stream Segment	Target Species / Assemblage Present AN – anadromous LL – land-locked RA– reservoir anadromy	Notes	Priority Actions
SAN MATEO COUNTY				
San Mateo Creek	Middle-to-upper mainstem, downstream from Crystal Springs Reservoir	rainbow trout (AN) threespine stickleback	This stream may support steelhead in addition to resident rainbow trout. Portions of the watershed downstream from Crystal Springs Reservoir are owned and protected by SFPUC. The middle watershed is in medium-to-high density residential uses, but there is still suitable habitat for rainbow trout.	1, 3, 5
	Polhemus Creek	rainbow trout (AN)	The stream supports a riparian corridor with medium density residential development in the surrounding watershed. This land includes private holdings as well as that owned and managed by the SF Public Utilities Commission. The current status of the rainbow trout population (and potential migration barriers) is unknown. Private lands should be managed to protect the riparian zone.	1, 2, 3, 4
SANTA CLARA COUNTY				
Adobe Creek	Mainstem, downstream from Hwy. 280	California roach prickly sculpin Sacramento sucker threespine stickleback	Much of the lower watershed is heavily urbanized with a narrow riparian corridor along the stream. The lower watershed is almost entirely in private ownership.	1, 2, 3, 4
	Mainstem and tributaries upstream from Fwy. 280	California roach rainbow trout (AN?)	The upper watershed is in low-to-medium suburban development. The conservation management of remaining private lands should be a priority. An assessment of the potential value of the West Fork and mainstem Adobe Creek above 800' is recommended.	1, 4
Coyote Creek	Arroyo Aguague, above falls	rainbow trout (LL?)	Much of the reach above the falls is privately owned. In order to protect Upper Penitencia Creek and Arroyo Aguague Creek below the falls, a high priority should be given to conservation management of private lands.	1, 4
	Arroyo Aguague, below falls	rainbow trout (AN) riffle sculpin	This reach is of the highest priority for the conservation of native fishes, especially steelhead. Most of this reach lies within Alum Rock Park.	1, 2, 3
	Big Canyon	rainbow trout (LL)	Most of this land is in public ownership and/or under conservation easement. A high priority should be given to conservation management of remaining private lands. Grazing should be managed to protect the riparian buffer zone.	1, 4
	Cañada de los Osos	rainbow trout (LL, RA?)	The status of rainbow trout in this stream is unknown. Much of the watershed is privately owned and used for grazing. A high priority should be given to conservation management of remaining private lands. Grazing should be managed to protect the riparian buffer zone.	1, 4

Watershed	Priority Stream Segment	Target Species / Assemblage Present AN – anadromous LL – land-locked RA– reservoir anadromy	Notes	Priority Actions
SANTA CLARA COUNTY continued				
Coyote Creek continued	Cow Creek	rainbow trout (LL, RA?)	This stream is highest priority for the conservation of native fishes. Significant acreages of the watershed are owned by The Nature Conservancy and managed for conservation on the San Felipe Ranch. However, much of the watershed is privately owned and used for grazing. A high priority should be given to conservation management of remaining private lands. Grazing should be managed to protect the riparian buffer zone.	1, 4
	Coyote Creek, between Anderson Reservoir and Coyote Lake	rainbow trout (LL, RA?)		1
	Coyote Creek, mainstem upstream from Coyote Lake	California roach Pacific lamprey prickly sculpin rainbow trout (LL, RA) riffle sculpin Sacramento pikeminnow Sacramento sucker	This reach is highest priority for the conservation of native fishes. Significant acreages of the watershed are within Henry Coe State Park. However, much of upper Coyote Creek watershed is privately owned and used for grazing. A high priority should be given to conservation management of remaining private lands. Grazing should be managed to protect the riparian buffer zone.	1, 4
	East Fork Coyote Creek and tributaries, including Grizzly Creek watershed	California roach rainbow trout (LL, RA) Sacramento pikeminnow Sacramento sucker	This reach is highest priority for the conservation of native fishes. Significant acreages of the watershed are owned and managed within Henry Coe State Park. However, portions of the East Fork Coyote Creek watershed remain privately owned and are used for grazing. A high priority should be given to conservation management of remaining private lands through easements and fee acquisition. Grazing should be managed to protect riparian buffer zone.	1, 4
	Hoover Creek	rainbow trout (LL, RA?)	This stream is highest priority for the conservation of native fishes. Significant acreages of the watershed are owned by The Nature Conservancy and managed for conservation on the San Felipe Ranch. However, much of the watershed is privately owned and used for grazing. A high priority should be given to conservation management of remaining private lands. Grazing should be managed to protect the riparian buffer zone.	1, 4
	Kelly Cabin Canyon	California roach Sacramento pikeminnow Sacramento sucker	This reach is highest priority for the conservation of native fishes. The entire watershed is owned and managed within Henry Coe State Park. Grazing should be managed to protect riparian buffer zone.	1
	Las Animas Creek, confluence with San Felipe Creek upstream	California roach prickly sculpin Sacramento sucker	Because most of the watershed is in private ownership, the status of native fishes in many of this stream is poorly known. A high priority should be given to conservation management of private lands. Grazing should be managed to protect the riparian buffer zone.	1, 4

Watershed	Priority Stream Segment	Target Species / Assemblage Present AN – anadromous LL – land-locked RA– reservoir anadromy	Notes	Priority Actions
SANTA CLARA COUNTY continued				
Coyote Creek continued	Mainstem, from tidal estuarine to Anderson Dam	California roach Chinook salmon hitch Pacific lamprey Pacific staghorn sculpin prickly sculpin rainbow trout (AN) Sacramento blackfish Sacramento sucker threespine stickleback tule perch western brook lamprey?	<p>Although much of the lower watershed is heavily urbanized with a narrow riparian corridor along Coyote Creek, the stream supports native fishes of conservation concern. Notably, lower Coyote Creek may support western brook lamprey, a species not recorded in any other estuary watershed. The status of western brook lamprey needs further investigation.</p> <p>Lower Coyote Creek also serves as an important migration corridor for steelhead migration and emigration in Upper Penitencia Creek. The middle reaches below Anderson Dam to about Hellyer County Park are characterized by an extensive riparian corridor. The stream supports hitch and tule perch, among other native fishes.</p> <p>Land in the lower watershed is almost entirely urbanized, and in private ownership. A large portion of the riparian floodplain along the middle reaches is on county parkland. The priority in the middle reaches should be on maintaining and managing adequate buffers and acquiring remaining private streamside properties for conservation. The potential for flow releases from Anderson Reservoir to improve habitat conditions for native fishes should be explored.</p>	1, 2, 3, 4, 5
	Middle Fork Coyote Creek and tributaries	California roach rainbow trout (LL, RA) riffle sculpin Sacramento sucker	This reach is highest priority for the conservation of native fishes. Significant acreages of the watershed are within Henry Coe State Park. Portions of the Middle Fork Coyote Creek watershed are privately owned and used for grazing. A high priority should be given to conservation management of remaining private lands. Grazing should be managed to protect the riparian buffer zone.	1, 4
	Packwood Creek, including Packwood Valley	rainbow trout (LL)	This stream is highest priority for the conservation of native fishes. Significant acreages of the watershed are owned by The Nature Conservancy and managed for conservation on the San Felipe Ranch. However, much of the watershed is privately owned and used for grazing. A high priority should be given to conservation management of remaining private lands. Grazing should be managed to protect the riparian buffer zone.	1, 4
	San Felipe Creek	California roach rainbow trout (LL) riffle sculpin Sacramento sucker	This stream is highest priority for conservation of native fishes. Significant acreages of the watershed are owned by The Nature Conservancy and managed for conservation on the San Felipe Ranch. However, much of the watershed is privately owned and used for grazing. A high priority should be given to conservation management of remaining private lands. Grazing should be managed to protect the riparian buffer zone.	1, 4

Watershed	Priority Stream Segment	Target Species / Assemblage Present AN – anadromous LL – land-locked RA– reservoir anadromy	Notes	Priority Actions
SANTA CLARA COUNTY continued				
Coyote Creek continued	Upper Penitencia Creek, above uppermost waterfall and below Cherry Flat Reservoir	California roach (isolated)	The perennial reach below Cherry Flat Reservoir supports an isolated population of California roach. Most lands are in private ownership. A high priority should be given to conservation management of private lands.	1, 4
	Upper Penitencia Creek, Alum Rock Park to below waterfalls	California roach Pacific lamprey rainbow trout (AN) riffle sculpin Sacramento sucker	This reach is highest priority for the conservation of native fishes, especially steelhead. Most this reach lies with Alum Rock Park.	1, 2, 3, 4
	Upper Penitencia Creek, mouth at Coyote Creek to Alum Rock Park	California roach Chinook salmon (AN) hitch Pacific lamprey prickly sculpin rainbow trout (AN) riffle sculpin Sacramento blackfish Sacramento pikeminnow Sacramento sucker	Upper Penitencia Creek is a high priority for the protection of native fishes as it represents one of the few low-gradient and low-elevation reaches in the estuary with a relatively intact natural channel and riparian corridor. It hosts 5-10 native fish species. Land adjacent to lower Penitencia is controlled, in part, by the SCVWD, but other parcels are in private ownership.	1, 2, 3, 4, 5
Guadalupe River	Alamitos Creek, including Arroyo Calero	California roach Pacific lamprey prickly sculpin rainbow trout (AN) Sacramento sucker tule perch	This reach supports a diverse assemblage of native fishes. Land is almost entirely in private ownership, with land uses dominated by urban and medium-to-low density suburban development.	1, 2, 3
	Austrian Gulch	rainbow trout (LL, RA?)	Portions of the watershed are in public ownership. Priority should be given to conservation management of remaining private lands.	1, 4
	Barret Canyon	rainbow trout (LL, RA?)	Portions of the watershed are in public ownership. Priority should be given to conservation management of remaining private lands.	1, 4
	Guadalupe Creek, upstream from Guadalupe Reservoir	rainbow trout (LL, RA?) riffle sculpin	This reach is a priority for the conservation of native fishes. Significant acreages of the watershed are in public ownership. A high priority should be given to conservation management of remaining private lands.	1, 4
	Herbert Creek	rainbow trout (LL, RA?)	Portions of the watershed are in public ownership. Priority should be given to conservation management of remaining private lands.	1, 4
	Hicks Creek	rainbow trout (AN?)	Status of rainbow trout unknown.	1, 4
	Hooker Gulch	rainbow trout (LL, RA?)	Portions of the watershed are in public ownership. Priority should be given to conservation management of remaining private lands.	1, 4

Watershed	Priority Stream Segment	Target Species / Assemblage Present AN – anadromous LL – land-locked RA– reservoir anadromy	Notes	Priority Actions
SANTA CLARA COUNTY continued				
Guadalupe River continued	Los Gatos Creek, downstream from Lexington Reservoir	California roach prickly sculpin rainbow trout (AN?) Sacramento sucker	Much of the lower watershed is heavily urbanized with a narrow riparian corridor along the stream. The lower watershed is almost entirely in private ownership.	1, 2, 3, 4
	Los Gatos Creek, from Lexington Reservoir upstream	rainbow trout (LL, RA?)	The mainstem of Los Gatos Creek upstream from Lexington Reservoir contains rainbow trout. In addition, Los Gatos Creek upstream from Lake Elsmán likely supports rainbow trout. Many smaller tributaries to Los Gatos Creek may also support populations of rainbow trout. Because of its remoteness and private land ownership, the status of native fishes upstream of Lake Elsmán and in many of the smaller streams is unknown. A priority should be given to conservation management of remaining private lands.	1, 4
	Mainstem from tidal estuarine upstream to Guadalupe Dam	California roach Chinook salmon (AN) Hitch Pacific lamprey Pacific staghorn sculpin prickly sculpin rainbow trout (AN) riffle sculpin Sacramento blackfish Sacramento pikeminnow Sacramento sucker threespine stickleback tule perch	Much of the lower watershed is heavily urbanized with a narrow riparian corridor along the stream. However, the stream supports a high diversity of native fishes of conservation concern. The lower Guadalupe River also serves as an important migration corridor for steelhead migration and emigration. The Guadalupe River from Almaden Expressway to Guadalupe Dam is a largely intact riparian corridor. A large portion of the floodplain of the upper reaches is surrounded by low-to-medium density urban/suburban development. Priority in the upper reaches should be on maintaining and managing adequate buffers and acquiring remaining private streamside properties for conservation. The potential for flow releases from Guadalupe Reservoir to improve habitat conditions for native fishes should be explored.	1, 2, 3, 4, 5
	Pheasant Creek	rainbow trout (AN)	This reach is a priority for the conservation of rainbow trout. Significant acreages of the uppermost watershed are in public ownership. A high priority should be given to conservation management of remaining private lands.	1, 4
	Rincon Creek, upstream from Guadalupe Reservoir	rainbow trout (LL, RA?)	This reach is a priority for the conservation of native fishes. Significant acreages of the watershed are in public ownership. A high priority should be given to conservation management of remaining private lands.	1, 4
Permanente Creek	Mainstem downstream from Fwy. 280	California roach threespine stickleback	Much of the lower watershed is heavily urbanized with a narrow riparian corridor along the stream. The lower watershed is almost entirely in private ownership.	1, 2, 3, 4

Watershed	Priority Stream Segment	Target Species / Assemblage Present AN – anadromous LL – land-locked RA– reservoir anadromy	Notes	Priority Actions
SANTA CLARA COUNTY continued				
Permanente Creek continued	Mainstem, upstream from Fwy. 280	rainbow trout (LL) Sacramento sucker	The population of rainbow trout in the headwaters is of conservation significance. Portions of the upper watershed are in public ownership managed for conservation. However, the quarry/cement operation in the upper watershed poses a threat to the rainbow trout population. Riparian buffers are recommended to protect the stream from the quarry. In addition, the conservation management of remaining private lands should be a priority.	1, 4
San Francisquito Creek	Alambique Creek, upstream from Searsville Lake	rainbow trout (LL, RA?)	Land use is mostly low density residential and open space.	1, 3
	Bear Creek	California roach prickly sculpin rainbow trout (AN) Sacramento sucker threespine stickleback	Bear Creek is a high priority for the protection of native fishes, especially steelhead. Land is mostly in low density residential and open space uses.	1, 2, 3, 4
	Corte Madera Creek, upstream from Searsville Lake	rainbow trout (LL, RA?)	Land use is mostly low density residential and open space.	1, 2, 3, 4
	Coal Creek, upstream from Searsville Lake	rainbow trout (LL, RA?)	Land use is mostly open space. Private lands should be managed to protect the riparian zone.	1, 4
	Damiani Gulch, upstream from Searsville lake	rainbow trout (LL, RA?)	Land use is mostly open space. Private lands should be managed to protect the riparian zone.	1, 4
	Hamms Gulch Creek, upstream from Searsville Lake	rainbow trout (LL, RA?)	Land use is mostly open space. Private lands should be managed to protect the riparian zone.	1,4
	Los Trancos Creek	California roach prickly sculpin rainbow trout (AN) Sacramento sucker threespine stickleback	Los Trancos Creek is a high priority for the protection of native fishes, especially steelhead. Land use is mostly in low-to-medium density residential and open space uses.	1, 2, 3, 4
	Mainstem, upstream to Searsville Dam	California roach prickly sculpin rainbow trout (AN) Sacramento sucker threespine stickleback	San Francisquito Creek is a high priority for the protection of native fishes, especially steelhead. Much of the lower watershed is heavily urbanized with a narrow riparian corridor along the stream. The lower watershed is almost entirely in private ownership.	1, 2, 3, 4
	McGarvey Gulch	rainbow trout (AN)	McGarvey Gulch is a high priority for the protection of steelhead. Land use is mostly low-density residential and open space.	1, 2, 3, 4
	Squeler Gulch	rainbow trout (AN)	Squeler Gulch is a high priority for the protection of steelhead. Land use is mostly low-density residential and open space.	1, 2, 3, 4
	West Union Creek	rainbow trout (AN)	Bear Creek is a high priority for the protection of steelhead. Land use is mostly low-density residential and open space.	1, 2, 3, 4

Watershed	Priority Stream Segment	Target Species / Assemblage Present AN – anadromous LL – land-locked RA– reservoir anadromy	Notes	Priority Actions
SANTA CLARA COUNTY continued				
San Tomas Aquino/Saratoga Creek	Bonjetti Creek	rainbow trout (LL)	Portions of the watershed are in public ownership. A high priority should be given to conservation management of remaining private lands.	1, 4
	Booker Creek	rainbow trout (LL?)	Portions of the watershed are in public ownership. A high priority should be given to conservation management of remaining private lands through easements and fee acquisition.	1, 4
	Mainstem downstream from confluence of San Tomas Aquino and Saratoga Creeks	California roach hitch prickly sculpin rainbow trout (AN?) Sacramento sucker threespine stickleback	Flood channel provides habitat for mixed native- non-native fish assemblage. Historically, this stream supported steelhead. Lower channel almost exclusively for flood control. Priority given to barrier removal to at confluence of Saratoga and San Tomas Aquinas Creeks.	
	McElroy Creek	rainbow trout (LL)	Portions of the watershed are in public ownership. A high priority should be given to conservation management of remaining private lands.	1, 4
	Saratoga Creek, from about Prospect Avenue upstream to headwaters	California roach prickly sculpin rainbow trout (LL) Sacramento sucker threespine stickleback	Land use between about elevation 300' and 550' mostly in medium-to-high density suburban development. The soft-bottomed flood channel supports an assemblage of native fishes, including rainbow trout in reaches supported by perennial flows. Saratoga Creek upstream from the canyon mouth (> 550') supports a population of rainbow trout, and likely other native fishes such as California roach and prickly sculpin. Major portions of the watershed are in public ownership. A high priority should be given to conservation management of remaining private lands.	1, 2, 3, 4
Stevens Creek	Mainstem, downstream from Stevens Creek Reservoir	California roach prickly sculpin rainbow trout (LL) Sacramento sucker threespine stickleback	The flood channel on the lower watershed provides habitat for native fish. Most of the lower watershed is in high-density urban development. Historically, this stream supported steelhead.	1, 2, 3, 4
	Mainstem, upstream from Stevens Creek Reservoir	California roach rainbow trout (LL, RA?) Sacramento sucker	Significant portions of the watershed are in public ownership. A high priority should be given to conservation management of remaining private lands.	1, 4

Watershed	Priority Stream Segment	Target Species / Assemblage Present AN – anadromous LL – land-locked RA– reservoir anadromy	Notes	Priority Actions
SOLANO COUNTY				
Green Valley Creek	Mainstem	California roach prickly sculpin rainbow trout (AN) riffle sculpin Sacramento pikeminnow Sacramento sucker threespine stickleback tule perch	<p>Green Valley Creek is one of the few streams within the region that is tributary to Suisun Bay from the Vaca Mountains and Blue Ridge Berryessa landscape units. The transitional location of Green Valley Creek between the Central Valley-Delta and San Francisco Bay regions contributes to it being an important conservation target.</p> <p>Green Valley Creek supports a diverse assemblage of at least eight native fishes, notably including steelhead and tule perch. Land use in the lower-to-middle stream reaches is characterized by medium-to-high density commercial and residential development. Significant reaches are bordered by a well-developed wetland and riparian system. The reach below Interstate 80 is an earthen flood channel with little woody riparian overstory. The upper watershed is a mixture of low-density residential, agriculture, grazing, and open space uses.</p>	1, 2, 3, 4
	Wild Horse Creek	rainbow trout (LL)	<p>Wild Horse Creek is a major tributary to Green Valley Creek. The status of rainbow trout and other native fishes in Wild Horse Creek above and below Green Valley Falls, and between Lakes Frey and Madigan, should be investigated. This perennial stream drains south and east into Green Valley Creek from the Mayacama Mtns. from privately owned lands in grazing. Some reservoir watershed lands are in public ownership.</p> <p>Priority should be given to protecting remaining sensitive undeveloped streamside lands through easements and fee acquisition, especially in the watershed upstream from Green Valley Picnic Ground.</p>	1, 2, 3, 4
Suisun Creek	Mainstem from tidal riverine upstream to Curry Lake	California roach hitch Pacific lamprey prickly sculpin rainbow trout (AN) riffle sculpin Sacramento sucker threespine stickleback tule perch (Suisun Marsh)	<p>Suisun Creek is another important transitional watershed between the Central Valley-Delta and San Francisco Bay estuary regions. It drains south to Suisun Bay from the Blue Ridge Berryessa landscape unit.</p> <p>Suisun Creek supports at least nine native fishes, including Pacific lamprey and steelhead. Tule perch likely occur in the Suisun Marsh reach of the stream.</p> <p>An important tributary is Wooden Valley Creek. Priority should be given to investigation into seasonal water releases from Curry Lake to benefit native fishes, especially rearing and smolting steelhead.</p>	1, 2, 3, 4
	Mainstem above Curry Lake	rainbow trout (LL, RA?)	Little is known about native fishes in Suisun Creek and its tributaries upstream of Lake Curry, but Gordon Valley and surrounding wildlands should be a high priority for watershed protection.	1, 2, 3, 4

Watershed	Priority Stream Segment	Target Species / Assemblage Present AN – anadromous LL – land-locked RA– reservoir anadromy	Notes	Priority Actions
SOLANO COUNTY continued				
Suisun Creek continued	Wooden Valley Creek	California roach rainbow trout (AN)	This stream appears to support a small run of steelhead. Much of the lower creek goes dry in summer. Perennial steelhead rearing habitat exists in the upper and middle reaches.	1, 2, 3, 4
	White Creek	rainbow trout (AN?)	White Creek is a tributary to Wooden Valley Creek. Much of this creek goes dry in summer. Isolated pools in the upper reaches support rainbow trout rearing. Historically, this stream supported steelhead, but the status of rainbow trout is unknown and should be investigated.	1, 2, 3, 4
SONOMA COUNTY				
Petaluma River	Adobe Creek	rainbow trout (AN)	Adobe Creek is an important tributary for the production of steelhead. The lower watershed traverses low-to-medium density residential and agricultural land uses.	1, 2, 3, 4
	Lichau Creek	rainbow trout (AN?) Sacramento sucker threespine stickleback		1, 2, 3, 4
	Lynch Creek	rainbow trout (A)		1, 2, 3, 4
	Mainstem, non-tidal	California roach Chinook salmon (AN) Pacific lamprey prickly sculpin rainbow trout (AN) Sacramento blackfish Sacramento splittail threespine stickleback tule perch	Land use is a mixture of low-to-high density residential and commercial embedded with remnant agriculture.	1, 2, 3, 4

Watershed	Priority Stream Segment	Target Species / Assemblage Present AN – anadromous LL – land-locked RA– reservoir anadromy	Notes	Priority Actions
SONOMA COUNTY continued				
Petaluma River continued	Mainstem tidal riverine	California roach Chinook salmon (AN) Delta smelt green sturgeon Pacific lamprey Pacific staghorn sculpin prickly sculpin rainbow trout (AN) Sacramento blackfish Sacramento splittail shiner surfperch starry flounder threespine stickleback tule perch white sturgeon	<p>The Petaluma River supports the second highest diversity of native fishes in the estuary – 20 species. As one of the few large tidal riverine environments, it contains a diverse mixture of euryhaline marine and saltwater dispersant fishes, as well as a diversity of freshwater dispersant fishes. There may be a tidal estuarine spawning population of Chinook salmon.</p> <p>The Petaluma River is unique among estuary streams in that tidal influence extends far upstream and therefore the channel functions more as a tidal slough in character than as a lowland stream. The Petaluma River may serve as a critical dispersal link for some fishes between the Sonoma Creek – Napa River complex and streams of northern Marin County.</p> <p>Land use near downtown Petaluma is dense urban-commercial. Land use further upstream is a mixture of low-to-high density residential and commercial embedded with remnant agriculture.</p>	1, 2, 3, 4
	San Antonio Creek	California roach? threespine stickleback	Most of the watershed is in private agricultural and ranching uses. Priority should be given to conservation management of remaining private lands to protect biogeochemical and habitat functions in support of native fishes in the lower Petaluma River.	1, 2, 3, 4
	Willow Brook	rainbow trout (AN)		1, 2, 3, 4
Sonoma Creek	Agua Caliente	rainbow trout (AN)	This stream supports steelhead. The upper watershed lies within a steep canyon with perennial flows as predominantly private open space. The lower watershed flows through urban and residential land uses.	1, 2, 3, 4
	Arroyo Seco	rainbow trout (AN)	This stream appears to support steelhead.	1, 2, 3, 4
	Asbury Creek	rainbow trout (AN)	This is an important steelhead stream.	1, 2, 3, 4
	Bear Creek	California roach rainbow trout (AN) riffle sculpin	<p>This is a critical stream for steelhead production in the Sonoma Creek watershed. This reach is perennial, with many seeps and springs maintaining cool water temperatures through summer. The riparian canopy is well-developed.</p> <p>Land use is mostly in open space conservation status. Priority should be given to securing remaining sensitive undeveloped streamside lands within the watershed through easements and fee acquisition, especially in the watershed upstream from migration barriers.</p>	1, 2, 3, 4

Watershed	Priority Stream Segment	Target Species / Assemblage Present AN – anadromous LL – land-locked RA– reservoir anadromy	Notes	Priority Actions
SONOMA COUNTY continued				
Sonoma Creek continued	Calabazas Creek, Atwood Ranch upstream to falls	California roach (lower only) rainbow trout (AN) riffle sculpin	This is a critical stream for steelhead production in the Sonoma Creek watershed. This reach is perennial with many seeps and springs maintaining cool water temperatures through summer. The riparian canopy is well-developed. There is a waterfall in the lower canyon that blocks upstream migration of steelhead. Land use is agricultural on below the canyon mouth. There is some low density residential land use within the canyon; the upper watershed is largely private open space and grazing.	1, 2, 3, 4
	Calabazas Creek, confluence with Sonoma Creek upstream to Atwood Ranch	California roach rainbow trout (AN) riffle sculpin Sacramento pikeminnow Sacramento sucker	The fish assemblage is almost entirely dominated by native fishes. This is a critical stream for steelhead production in the Sonoma Creek watershed, in large part as a migration corridor between Sonoma Creek and the upper watershed. The riparian canopy is well developed. Land use is mostly agricultural with associated low density residential.	1, 2, 3, 4
	Carriger Creek	prickly sculpin rainbow trout (AN)	This stream is likely important for steelhead production; its location in the lower watershed may afford survival benefits to migrating fish. The watershed is in ranching and low-density residential land uses.	1, 2, 3, 4
	Dowdall Creek	rainbow trout (AN?)	The status of steelhead use in this stream is poorly known. The headwaters are in ranching use while the lower reach flows through urban and residential uses.	1, 2, 3, 4
	Felder Creek	rainbow trout (AN)	This stream appears to supports steelhead in some years. Land is primarily used for private agriculture and ranching.	1, 2, 3, 4
	Fowler Creek	rainbow trout (AN)	This stream appears to supports steelhead in some years. Land is primarily used for private agriculture and ranching.	1, 2, 3, 4
	Graham Creek	rainbow trout (AN) riffle sculpin	This is an important steelhead stream. Portions of the headwaters are in protected state park while the lower watershed is primarily low- density residential and private open space.	1, 2, 3, 4
	Haraszathy Creek	rainbow trout (AN?)	This stream may support steelhead upstream to the falls near the canyon mouth.	1, 2, 3, 4
	Hooker Creek	rainbow trout (AN?)	This stream appears to support steelhead.	1, 2, 3, 4
	Mainstem, above waterfall, Sugarloaf Ridge State Park	rainbow trout (LL)	There is an isolated population of rainbow trout above the falls. The upper watershed is almost entirely within Sugarloaf Ridge State Park.	1, 2, 3, 4

Watershed	Priority Stream Segment	Target Species / Assemblage Present AN – anadromous LL – land-locked RA– reservoir anadromy	Notes	Priority Actions
SONOMA COUNTY continued				
Sonoma Creek continued	Mainstem, non-tidal	California roach Chinook salmon (AN) Pacific lamprey prickly sculpin rainbow trout (AN) riffle sculpin Sacramento pikeminnow Sacramento sucker threespine stickleback tule perch	This reach is highest priority for the conservation of native fishes.	1, 2, 3, 4
	Mill Creek	California roach rainbow trout (AN) riffle sculpin	From its confluence with Sonoma Creek upstream to Hwy 12, Mill Creek supports three native fishes, including steelhead. The culvert at Hwy 12 may continue to be a barrier to upstream migration. The upper watershed is primarily undeveloped open space. The lower watershed flows through the grounds of Sonoma State Hospital.	1, 2, 3, 4
	Nathanson Creek, mouth at Schell Creek upstream to falls	California roach rainbow trout (AN)	This stream appears to support steelhead.	1, 2, 3, 4
	Nathanson Creek, upstream from falls	rainbow trout (LL)	This stream supports resident rainbow trout above the falls.	1, 2, 3, 4
	Redwood Creek	rainbow trout (AN)	This tributary to Calabazas Creek apparently supports steelhead. Much of the upper watershed is in private open space.	1, 2, 3, 4
	Rodgers Creek	California roach <i>Cottius</i> sp. rainbow trout (A) Sacramento pikemnnow Sacramento sucker	This stream appears to supports steelhead in some years. Land is primarily used for private agriculture and grazing.	1, 2, 3, 4
	Schell Creek	threespine stickleback rainbow trout (AN)	This creek is important as migration corridor for steelhead to tributaries in upper watershed, such as Nathanson, Arroyo Seco, and Haraszathy creeks. It should be a priority to limit streamside encroachment from development and other activities through the use of appropriate buffers and/or conservation easements.	1, 2, 3, 4
	Stuart Creek, above falls	rainbow trout (LL?)	This stream has resident rainbow trout. Land use is private open space.	1, 2, 3, 4
	Stuart Creek, mouth to falls	California roach rainbow trout (AN) riffle sculpin	This stream supports steelhead and two other native fishes below the falls.	1, 2, 3, 4

Watershed	Priority Stream Segment	Target Species / Assemblage Present AN – anadromous LL – land-locked RA– reservoir anadromy	Notes	Priority Actions
SONOMA COUNTY continued				
Sonoma Creek continued	Tidal riverine	Chinook salmon (AN) longfin smelt longjaw mudsucker Pacific lamprey Pacific staghorn sculpin rainbow trout (AN) Sacramento splittail threespine stickleback tule perch	Sonoma Creek supports at least 18 native fish species and contains some of the best remaining habitats for native fishes, especially steelhead. Sonoma Creek is hydrologically connected to the Napa River through the tidal slough complex that forms an ecological linkage important to fishes in both watersheds. Most of the tidal riverine mainstem segment is privately owned and bordered by agricultural and wetlands. There is a critical need to protect streamside lands in this segment from encroachment and development.	1, 2, 3, 4
	Upper mainstem, Hwy. 120 to waterfall, Sugarloaf Ridge State Park	California roach Pacific lamprey rainbow trout (AN) riffle sculpin Sacramento sucker	This is a critical stream for steelhead production in the Sonoma Creek watershed. This reach is largely perennial with many seeps and springs, and maintains cool water temperatures through summer. The riparian canopy is well developed. Land use is primarily agricultural below the canyon mouth, and low density residential within the canyon. Residential structures pinch the stream channel and impact the riparian zone along much of the stream adjacent to Adobe Canyon Road below Sugarloaf Ridge State Park. This development is adversely impacting stream function in some locations.	1, 2, 3, 4
	Yulupa	California roach rainbow trout (AN?) riffle sculpin	This stream apparently supports steelhead.	1, 2, 3, 4
Tolay Creek	Mainstem, entire	threespine stickleback	Significant portions of the upper watershed are in public ownership. Also present are historically extensive lacustrine wetlands areas that can be restored. Land use is mostly agricultural and grazing.	1, 2, 3, 4

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