

**Historical Distribution and Current Status of Steelhead/Rainbow Trout (*Oncorhynchus mykiss*)  
in Streams of the San Francisco Estuary, California**

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This report should be cited as:

Leidy, R.A., G.S. Becker, B.N. Harvey. 2005. Historical distribution and current status of steelhead/rainbow trout (*Oncorhynchus mykiss*) in streams of the San Francisco Estuary, California. Center for Ecosystem Management and Restoration, Oakland, CA.

Center for Ecosystem Management and Restoration



## SAN MATEO AND SAN FRANCISCO COUNTIES

### San Francisquito Creek Watershed

San Francisquito Creek enters the San Francisco Estuary south of the Dumbarton Bridge and north of the Palo Alto Flood Basin. The watershed covers 42 square miles including drainages of the major tributaries, Los Trancos Creek, West Union Creek and Bear Creek. Searsville Dam, constructed in 1890 about 12.7 miles from the creek mouth, is impassable to in-migrating fish. The Lake Lagunita diversion dam is located about 2.5 miles downstream of Searsville Dam and also poses a significant barrier to spawning salmonids (Cogger et al. 1976d). A fishway was constructed on Lake Lagunita diversion dam in 1976.

#### *San Francisquito Creek*

A 1905 report notes *O. mykiss* in San Francisquito Creek (Snyder 1905). A 1953 DFG correspondence states that steelhead in San Francisquito Creek persist in portions of the creek even when the stream becomes intermittent, and that young steelhead have been observed in Lake Lagunita on the Stanford University campus (CDFG 1953). This lake receives creek water diverted via a dam and diversion channel.

A 1961 DFG letter regarding freeway construction notes a small run of steelhead most winters in San Francisquito Creek (Dillinger 1961). In March 1966, a DFG memorandum discussing a potential fish screen on the Lake Lagunita diversion channel noted reports that hundreds of small trout die there every year as it dries up (Strohschein 1966).

In July 1976, DFG visually surveyed San Francisquito Creek from the confluence with Bear Creek to the mouth. Staff cited severe drought conditions as resulting in low *O. mykiss* abundance (only ten YOY steelhead were observed) (Cogger et al. 1976d). Later that month, DFG electrofished four sites on San Francisquito Creek. Eight steelhead ranging from 43 to 147 mm were found in the vicinity of Junipero Serra Boulevard (Cogger et al. 1976a).

In June 1981, DFG visually surveyed San Francisquito Creek between El Camino Real and the Sand Hill Road crossing (on Bear Gulch Creek). Steelhead were common in the upper reaches and appeared to have recovered from the effects of the 1975-1976 drought (Emig and Chapman 1981).

San Francisquito Creek was sampled at five locations in August 1981 as part of a fish distribution study. Two *O. mykiss* (51, 73 mm) were collected near Alpine Road (Leidy 1984). Four downstream locations (three consisting of intermittent pools) did not appear to contain *O. mykiss*.

Leidy electrofished San Francisquito Creek upstream from the Los Trancos Creek confluence in January 1994. No *O. mykiss* were caught. However, in September 1994, he caught a 212 mm FL *O. mykiss* while sampling a 30-meter reach below Sand Hill Road (Leidy 2002).

*Oncorhynchus mykiss* were collected from San Francisquito Creek in summer and fall 1996 for a genetics study. Samples from 47 *O. mykiss* were analyzed, and the analysis report indicated that the fish were of native trout separable from hatchery strains (Nielsen 2000). In 1998, SCVWD staff rescued *O. mykiss* from the lower reach during dewatering of the channel (J. Abel pers.

comm.). Surveys conducted between 1999 and 2001 identified steelhead juveniles throughout San Francisquito Creek from Highway 101 to Searsville Dam (M. Stoecker pers. comm.).

In May 2002, photographs were taken of two adult steelhead (~630 mm) in lower San Francisquito Creek. A May 2002 migration barrier study reported Searsville Dam as the only complete barrier to migration on mainstem San Francisquito Creek. Removal of this dam was said to have the potential to restore ten miles of historic steelhead habitat (Stoecker 2002).

### *Los Trancos Creek*

Los Trancos Creek drains an area of about seven square miles and consists of about 6.5 miles of channel (SCBWMI 2001). The creek flows generally north to join San Francisquito Creek near Interstate 280 west of Palo Alto.

In a 1962 report, Skinner indicated that Los Trancos Creek was “lightly used” as steelhead habitat (Skinner 1962).

The Department of Fish and Game electrofished three Los Trancos Creek sites in July 1976. At the lowermost Los Trancos Road crossing, a 300-meter reach produced 46 *O. mykiss* (38-236 mm FL), and YOY were numerous (Cogger et al. 1976b). According to DFG, most of the salmonids electroshocked from the receding flow of Los Trancos Creek were released into the large pools of upper San Francisquito Creek (Anderson 1976).

According to a 1979 DFG letter, sampling was performed on Los Trancos Creek under the I-280 bridge in June 1978. At that time, 412 YOY *O. mykiss* were found in the plunge pools of the fish passage weirs (Paulsen 1979).

Three sites on Los Trancos Creek were sampled in 1981 as part of a fish distribution study. Three-year classes of *O. mykiss* appeared to be represented in a 20 meter isolated pool immediately downstream of Arastradero Road. Fish collected included five *O. mykiss* measuring 71-92 mm FL and two larger individuals (190, 335 mm). Surveys at two downstream locations (at Westridge Drive and upstream from Interstate 280) and one upstream location (at the second Los Trancos Road crossing) revealed no *O. mykiss* (Leidy 1984).

In January and September 1994, Leidy electrofished a reach of Los Trancos Creek just upstream from the San Francisquito Creek confluence. He caught four *O. mykiss* (68, 68, 89, 90 mm FL) in January and estimated density at 10 per 30 meters (Leidy 2002). In September, he caught five *O. mykiss* (65–90 mm) and estimated density at 20 per 30 meters. In June 1998, Leidy electrofished Los Trancos Creek approximately 325 feet upstream from Pleasant Hill Road. No *O. mykiss* were found (Leidy 2002).

Stream surveys conducted from 1999-2001 found *O. mykiss* in Los Trancos Creek up to approximately 0.7 miles upstream from the east fork confluence. *Oncorhynchus mykiss* also were observed 150 feet upstream of the “PV Ranch tributary” and in the east fork up to a culvert under Los Trancos Road (M. Stoecker pers. comm.). In April 2003, an adult steelhead was sighted in Los Trancos Creek. Multiple age classes of *O. mykiss* and redds have been consistently identified from 1997 to the present (M. Stoecker pers. comm.).

## Bear Creek

Bear Creek drains an area of about 13 square miles and is formed by two major tributaries, Bear Gulch Creek and West Union Creek. It flows generally south in the vicinity of the town of Woodside.

In July 1974, DFG electrofished three sites on Bear Creek. Results are presented in Table VI-1.

Table VI-1. DFG *O. mykiss* electrofishing results, Bear Creek, 1974

Location	No.	Age Class (years)	Size Range (mm FL)
50 m reach upstream from Sand Hill Rd.	31	YOY	~50
50 m reach downstream from Fox Hollow Rd.	17	1+	94-107
	7	YOY	61-64
	21	1+	79-97
	1	2+	145
At the Mountain Home Rd. bridge	23	YOY	71-20
	12	2+	160-211

(Strohschein 1974).

In June 1976, DFG visually surveyed Bear Creek between its mouth and headwaters at the confluence of West Union and Bear Gulch Creeks. The Department of Fish and Game found about 150 *O. mykiss* fingerlings, despite severe drought conditions in that year (Cogger et al. 1976c). In July 1976, DFG followed up the stream survey on Bear Creek with an electrofishing survey. A total of 36 *O. mykiss* (41-211 mm) were sampled from sites upstream of Sand Hill Road and upstream of Mountain Home Road (Cogger et al. 1976a). According to DFG, most of the salmonids electroshocked from the isolated pools of Bear Creek were released into the large pools of upper San Francisquito Creek (Anderson 1976).

In June 1978, DFG electrofished Bear Creek at Sand Hill Road and at Mountain Home Road. Two *O. mykiss* (81 and 97 mm FL) were caught and measured, while 50-75 YOY and three larger individuals (~125 mm) were observed but could not be captured due to faulty equipment (Torres and Paulsen 1978). In August 1979, DFG electrofished Bear Creek at Mountain Home Road. Three *O. mykiss* (170, 188, and 216 mm FL) and 82 YOY (51-104 mm) were collected. The Department of Fish and Game noted an apparent lack of age 1+ fish and attributed it to a lack of recruitment in 1978 (Anderson 1979).

In 1984, an isolated pool 0.2 miles downstream from Adobe Corner was sampled as part of a fish distribution study. Five *O. mykiss* (59-111 mm) were found in a ten-meter reach (Leidy 1984). In June 1985, DFG visually surveyed Bear Creek from the confluence of West Union and Bear Gulch Creeks to Sandhill Road. *Oncorhynchus mykiss* was observed, but the surveyor stated that positive identification could not be confirmed until electrofishing was employed (Bordenave and Ford 1985).

An adult steelhead was observed in Bear Creek in 1995 (685 mm) and in 1998 (760 mm), respectively (M. Stoecker pers. comm.). Surveys conducted from 1999 to 2001 identified juvenile steelhead throughout Bear Creek (M. Stoecker pers. comm.). As of 2003, an anadromous *Oncorhynchus mykiss* population appears to utilize the entire length of Bear Creek from the confluence of West Union and Bear Gulch creeks to the San Francisquito Creek confluence (M. Stoecker pers. comm.).

### *Dry Creek*

Dry Creek is tributary to Bear Creek and runs from north to south parallel to Canada Road. In 1999 juvenile steelhead were observed fifty feet upstream from the Woodside Road crossing (M. Stoecker pers. comm.).

### *Bear Gulch Creek*

Bear Gulch Creek is tributary to Bear Creek. An isolated pool at La Honda Road was sampled in August 1981 as part of a fish distribution study. Three *O. mykiss* (140, 143, 245 mm) were caught in a seven-meter reach (Leidy 1984).

In June 1999, an adult steelhead (790 mm) was rescued from a pool above Highway 84. Juvenile steelhead were observed throughout the creek below the diversion dam during surveys conducted between 1999 and 2001 (M. Stoecker pers. comm.).

A study of salmonid migration barriers on Bear Gulch Creek found the CalWater diversion dam, located approximately 0.25 miles upstream of the Highway 84 crossing, to be an impassable barrier for upstream migrating adult steelhead under most flow conditions (Stoecker 2002). An anadromous *O. mykiss* population successfully reproduces below this barrier. The creek upstream from this barrier is considered to provide high quality salmonid habitat, and currently supports a resident *O. mykiss* population (M. Stoecker pers. comm.).

### *West Union Creek*

West Union Creek is tributary to Bear Creek and drains an area of about seven square miles. It flows generally south through the San Andreas rift zone.

The Department of Fish and Game electrofished a site on West Union Creek at the confluence with Bear Gulch Creek in July 1974. A total of 27 *O. mykiss* representing three age classes were collected (11: 48-53 mm FL; 15: 86-97 mm FL; 1: 173 mm FL) (Strohschein 1974).

In June 1976 (a drought year), DFG visually surveyed West Union Creek between the mouth and a twin natural falls. YOY and age 1+ and 2+ *O. mykiss* were observed in intermittent reaches from the mouth to 75 yards upstream of Kings Mountain Road (Cogger et al. 1976e). In July 1976, DFG followed up the stream survey on West Union Creek with an electrofishing survey. A total of 31 *O. mykiss* (43-224 mm FL) were collected upstream of Huddart Park and downstream of Kings Mountain Road (Cogger et al. 1976a). According to DFG, most of the salmonids electroshocked from isolated pools of West Union Creek were released into the large pools of upper San Francisquito Creek (Anderson 1976).

An isolated pool on West Union Creek near the confluence with Bear Creek was sampled in August 1984 as part of a fish distribution study. Four *O. mykiss* (51, 53, 106, 162 mm FL) were found in a three-meter reach, and another 12 (52-69 mm) in a five-meter pool immediately upstream (Leidy 1984).

In July 1985, DFG electrofished five West Union Creek sites above and below a diversion at 345 King's Mountain Road. Sixty-two *O. mykiss* (52-250 mm FL) were collected representing multiple age classes (Ford 1985b). The Department of Fish and Game also surveyed West Union Creek between the mouth and the twin falls in July 1985. *Oncorhynchus mykiss* (50-75 mm) were

observed to be moderately abundant in pools from the mouth of West Union Creek to the second logjam above Squeler Gulch. A larger individual (100-125 mm) was seen upstream of Squeler Gulch (Ford 1985a).

The National Park Service (NPS) conducted snorkel surveys of West Union Creek sites in July 1996. The counts noted 143 steelhead in nine surveyed pools totaling 132 meters in length. Steelhead were mostly between 30 and 89 mm, with larger individuals (>120 mm) recorded at only two sites. Juvenile *O. mykiss* densities varied from about 0.3-5.4 per square meter (Fong 2002).

Leidy noted juvenile *O. mykiss* (50-75 mm TL) in pools between Huddart Park and the Phleger Estate fence in October 1999 (Leidy 2002). In July and November 1999, NPS again conducted snorkel surveys coupled with electrofishing in West Union Creek. About 69 *O. mykiss* were collected representing YOY and age 1+ and 2+ fish (44-178 mm) (Fong 2002). *Oncorhynchus mykiss* currently reproduce in West Union Creek from its confluence with Bear Gulch Creek upstream to a natural waterfall that presents a complete barrier to migration (M. Stoecker pers. comm.).

#### *Squeler Gulch Creek*

Squeler Gulch Creek is tributary to West Union Creek. In a 1990 survey, Smith found juvenile *O. mykiss* in the lower 0.5 mile of the creek (J. Smith pers. comm.).

#### *McGarvey Gulch Creek*

McGarvey Gulch Creek is tributary to Bear Creek. In July 1974, DFG electrofished a 90 meter reach of McGarvey Gulch Creek downstream from the Woodside Road Bridge. The survey noted 11 YOY *O. mykiss* (48-53 mm FL), 15 age 1+ (86-97 mm) and one larger individual (173 mm) (Strohschein 1974).

Stream surveys conducted between 1999 and 2001 identified juvenile steelhead in the lower 0.3 miles of the McGarvey Gulch Creek (M. Stoecker pers. comm.). Anadromous *O. mykiss* currently utilize McGarvey Gulch creek up to a bridge apron and culvert located about 0.7 miles upstream from the mouth (M. Stoecker pers. comm.).

#### *Corte Madera Creek*

Corte Madera Creek is tributary to San Francisquito Creek via Searsville Lake. It drains the San Andreas rift zone area south of the lake in the vicinity of Portola Valley.

In a 1962 report, Skinner indicated that Corte Madera Creek was an historical migration route for steelhead (Skinner 1962).

*Oncorhynchus mykiss* have been observed in Corte Madera Creek since at least the late 1970s (M. Stoecker pers. comm.). Three Corte Madera Creek locations were sampled in September 1981 as part of a fish distribution study. Fifty-two *O. mykiss* (35-86 mm FL) were found in a ten-meter reach at Willowbrook Road. At the junction of Coal Creek, 26 *O. mykiss* (32-62 mm) were caught in a 25-meter reach along with two larger *O. mykiss* (98, 137 mm). A 15 meter isolated pool at Portola Valley Road produced no fish (Leidy 1984). In the spring of 1991, an adult steelhead (740 mm) was observed jumping at the base of Searsville Dam (M. Stoecker pers. comm.).

*Oncorhynchus mykiss* were observed throughout Corte Madera Creek from Searsville Reservoir upstream to a point 400 feet upstream of the Coal Creek confluence during barrier surveys conducted between 1999-2001 (M. Stoecker pers. comm.). In May 2002, the San Francisquito Watershed Council released a barrier survey including Corte Madera Creek. A private bridge apron adjacent to Willowbrook Drive and another downstream of the confluence with Damiani Creek (upstream from Searsville Lake) were described as impassable barriers to upstream migrating *O. mykiss* (Stoecker 2002).

Corte Madera Creek below Searsville Dam currently supports an anadromous *O. mykiss* population, and observations of juvenile *O. mykiss* have been made as recently as September 2003. A resident population exists above Searsville Reservoir upstream to the Old Alpine Road crossing (M. Stoecker pers. comm.).

#### *Alambique Creek*

The historical confluence of Alambique Creek with Corte Madera Creek was inundated by the construction of Searsville Lake. One Alambique Creek site was sampled in August 1981 as part of a fish distribution study. Two *O. mykiss* (45, 52 mm FL) were collected where the creek crosses La Honda Road (Leidy 1984). In May 2002, the culvert beneath Highway 84 was identified as an impassable barrier to upstream migration (Stoecker 2002).

#### *Hamms Gulch Creek*

Hamms Gulch is tributary to Corte Madera Creek. *Oncorhynchus mykiss* currently uses the lower 150 feet of Hamms Gulch Creek (M. Stoecker pers. comm.).

#### *Damiani Gulch Creek*

Damiani Gulch is one of the larger tributaries of Corte Madera Creek. *Oncorhynchus mykiss* are currently present in the lower 150 feet of Jones Gulch Creek (M. Stoecker pers. comm.).

#### *Coal Creek*

Coal Creek is tributary to Corte Madera Creek. Surveys from 1999-2001 consistently found *O. mykiss* in the lower 250 feet of the stream (M. Stoecker pers. comm.).

**Assessment:** The San Francisquito Creek drainage historically supported a steelhead run that continues, albeit in limited numbers, to the present day. Rearing habitat on mainstem San Francisquito Creek was reduced by the construction of Searsville Dam in 1890. Habitat is available in Los Trancos Creek, in the lower reaches of West Union Creek and Bear Creek, and in the upper reaches of San Francisquito Creek (Cogger et al. 1976e).

### **Redwood Creek Watershed**

Redwood Creek drains the primarily urbanized environs of Redwood City. It issues into San Francisco Bay at Redwood Point.



### *Redwood Creek*

Two Redwood Creek sites were sampled in August 1981 as part of a fish distribution study. Neither the north branch nor the south branch site contained *O. mykiss* (Leidy 1984).

### *Arroyo Ojo*

Two Arroyo Ojo sites were sampled in August 1981 as part of a fish distribution study. *Oncorhynchus mykiss* was not detected (Leidy 1984).

**Assessment:** Insufficient information exists to assess the historical distribution and current status of salmonids in the Redwood Creek watershed.

## **Cordilleras Creek Watershed**

Cordillera Creek originates in the Pulgras-Ridge Open Space Preserve west of Redwood City. It drains a primary urbanized landscape before issuing into Smith Slough at the San Carlos Airport.

### *Cordilleras Creek*

Three Cordilleras Creek sites were sampled in August 1981 as part of a fish distribution study. No *O. mykiss* were found by seining at any of the sites between Grant-Industrial Road and Cordilleras Road (Leidy 1984).

**Assessment:** Insufficient information exists to assess the historical distribution and current status of salmonids in the Cordilleras Creek watershed.

## **Belmont Creek Watershed**

Belmont Creek drains urbanized portions of the cities of Belmont and San Carlos. It enters the San Francisco Bay via Belmont Slough in the vicinity of Foster City.

### *Belmont Creek*

Three Belmont Creek sites were sampled in August 1981 as part of a fish distribution study. *Oncorhynchus mykiss* was not found at any of the sites between Industrial Road and Belmont Reservoir. The survey noted that Belmont Creek was highly disturbed (Leidy 1984).

**Assessment:** Insufficient information exists to assess the historical distribution and current status of salmonids in the Belmont Creek watershed.

## Laurel Creek Watershed

Laurel Creek originates in the developed area west of the city of Belmont and east of Highway 92. The creek appears to enter a below-grade culvert between El Camino Real and Highway 101 that carries the creek to the San Francisco Estuary.

### *Laurel Creek*

Five Laurel Creek sites were sampled in August 1981 as part of a fish distribution study. No *O. mykiss* were found during seining at the sites between Hillsdale Mall and the end of Laurelwood Road. However, high quality habitat was noted at the upper location, and the researcher noted that a diversion tunnel just downstream of the sampling area appeared to pose a total barrier to migration (Leidy 1984).

**Assessment:** Insufficient information exists to assess the historical distribution and current status of salmonids in the Laurel Creek watershed.

## San Mateo Creek Watershed

Crystal Springs Reservoir, constructed in 1877 and operated by the SFPUC, separated upstream and downstream salmonid populations. The outlet of Lower Crystal Springs Reservoir is located near the junction of Crystal Springs Road and Interstate 280. The creek flows then flows east to enter the San Francisco Bay near Seal Point Shoreline Park.

### *San Mateo Creek*

In 1860, prior to the construction of San Andreas and Lower Crystal Springs reservoirs, *O. mykiss* specimens were collected from San Mateo Creek (Museum of Comparative Zoology 1860).

San Mateo Creek was sampled in August 1981 as part of a fish distribution study. Seven *O. mykiss* (50-131 mm FL) were collected by net in a 20-meter reach below Sierra Drive near Crystal Springs School. A single 108 mm *O. mykiss* was found in a 30-meter metreach on Crystal Springs Road (0.6 miles downstream from Polhemus Road), and two *O. mykiss* (91, 106 mm) were captured in a ten-meter reach at the junction of Crystal Springs and Polhemus Roads. An additional site 0.1-mile reach upstream produced no *O. mykiss* (Leidy 1984).

Leidy electrofished San Mateo Creek immediately upstream from Crystal Springs Reservoir in March 1988 and found 11 *O. mykiss* (9: 100-130mm; 2: ~90mm) in a 30-meter reach (Leidy 2002). During a survey of peninsula watershed lands in November 1991, *O. mykiss* was collected by electrofishing at two San Mateo Creek sites, the first immediately downstream of Mud Dam Lake and the second downstream of Crystal Springs Reservoir (Smith 1991). An additional six sites did not contain *O. mykiss*. The sampling was conducted during an extreme drought, which was said to have limited otherwise much more extensive habitat (Smith 1991). The survey report noted that the watershed lands around Crystal Springs Reservoir have been protected over a long period of time, offering the potential for retaining significant native fish populations (Smith 1991).

Leidy electrofished San Mateo Creek again in December 1993, finding *O. mykiss* at all four locations sampled (Leidy 2002). At Baywood Avenue, a 198 mm *O. mykiss* was the only fish in a 100-meter reach. However, upstream at Sierra Drive he caught 23 *O. mykiss* (59-280 mm) and observed ten in the same size range in a 30-meter reach. At the Tartan Trail Drive crossing, 13 *O. mykiss* (71-225 mm) were collected in a 50-meter reach, and five were observed in the same size range. And at Arroyo Court, just upstream from the De Ana Camp Historical Marker, Leidy caught two *O. mykiss* (192, 202mm) in a 30-meter reach.

#### *Polhemus Creek*

Polhemus Creek was sampled in August 1981 as part of a fish distribution study. Seven *O. mykiss* (196-322 mm FL) were collected in a ten-meter pool below a culvert located 0.3 miles upstream from the junction of Crystal Springs Road and Polhemus Road. Nine *O. mykiss* (72-122 mm) were found in a series of steep cascade pools about 160 feet downstream. The surveyors judged the culvert to be a migration barrier, which was supported by the absence of fish at an upstream location (Leidy 1984).

**Assessment:** The San Mateo Creek watershed historically supported *O. mykiss*, and small numbers of anadromous steelhead may use the area below Crystal Springs Reservoir. Additional sampling is recommended to characterize the *O. mykiss* resources of the reservoir and tributary areas upstream.

#### **Sanchez Creek Watershed**

Sanchez Creek drains urbanized areas in the vicinity of the cities of Hillsborough and Burlingame. It enters the San Francisco Estuary west of Coyote Point County Park.

#### *Sanchez Creek*

One Sanchez Creek site was sampled in August 1981 as part of a fish distribution study. No *O. mykiss* were found at the South Pacific Railroad Crossing and at Front View Avenue in Hillborough (Leidy 1984).

**Assessment:** Insufficient information exists to assess the historical distribution and current status of salmonids in the Sanchez Creek watershed.

#### **Easton Creek Watershed**

Easton Creek drains urbanized areas north of Hillsborough and west of Burlingame. The creek appears to enter a below-grade culvert in the vicinity of El Camino Real that carries flows to the San Francisco Estuary.

#### *Easton Creek*

Easton Creek was sampled near Roosevelt School as part of a fish distribution study in September 1981. No fish of any kind were encountered (Leidy 1984).

**Assessment:** Insufficient information exists to assess the historical distribution and current status of salmonids in the Easton Creek watershed.

### **Mills Creek Drainage**

Mills Creek drains developed areas south of Millbrae. The creek appears to be channelized between the Southern Pacific Railroad right of way and the estuary to the east.

#### *Mills Creek*

A 1958 stream survey identified *O. mykiss* in Mills Creek (CDFG 1958). Mills Creek was sampled by pole-seine at California Drive in September 1981 as part of a fish distribution study. No *O. mykiss* were found (Leidy 1984).

**Assessment:** Insufficient information exists to assess the historical distribution and current status of salmonids in the Mills Creek watershed.

### **Colma Creek Watershed**

Colma Creek originates in the town of Colma, draining portions of Colma, San Bruno and South San Francisco. It enters the San Francisco Estuary south of Point San Bruno.

#### *Colma Creek*

Two Colma Creek sites were sampled in September 1981 as part of a fish distribution study. No *O. mykiss* were collected, and field notes state the creek was very disturbed (Leidy 1984).

In May 2002, Leidy surveyed Colma Creek between the mouth and headwaters. No *O. mykiss* were observed, nor was suitable habitat present (Leidy 2002).

**Assessment:** Insufficient information exists to assess the historical distribution of salmonids in the Colma Creek watershed. The watershed currently does not contain suitable habitat to support salmonids.

Table VI-2. Distribution status of *O. mykiss* in San Francisco Estuary streams of San Mateo and San Francisco Counties, California<sup>a</sup>

Watershed	Stream/ Tributary	Yrs. Surveyed/ Quant. Data	Max. Period of Record	Data Type	Life Hist. Stage/ No.Yrs. Data	Anad. Life-Cycle Possible	O. mykiss		Evidence of Pop. Decline	Current Pop. Status	References (Pers. Comm.)
							Hist.	Current			
San Francisquito Creek	San Francisquito	12/4	1905- 2002	0, 1, 2, 3	J/7; R/1; M/1	Y	DF	DF	Y	1, 2, 3	4, 6, 9, 11, 12, 16, 17, 19, 24-26 (1, 3)
	Los Trancos	15/4	1976- 2003	1, 2, 3	J/14; R/9; M/1	Y	DF	DF	Y	1, 2, 3	1, 7, 16, 17, 20, 22 (3)
	Bear	11/7	1974- 2003	1, 2	J/8; R/3; M/2	Y	DF	DF	Y	1, 2, 3	1-3, 6, 8, 16, 27, 28 (3)
	Dry	1/1	1999	1	J/1	Y	DF	DF	-	1	(3)
	Bear Gulch	4/2	1981- 2003	3	J/4; R/1; M/1	Y	DF	DF	Y	1, 2, 3	16, 25 (3)
	West Union	6/6	1976- 2003	1, 2, 3	J/6; R/4	Y	DF	DF	Y	1, 2, 3	1, 6, 10, 13-16, 27 (3)
	Squeler Gulch	1/0	1990	1	J/1	N	DF	DF	-	1, 2	(2)
	McGarvey Gulch	4/1	1974- 2003	1, 2	J/4; R/1	Y	DF	DF	-	1, 2, 3	27 (3)
	Corte Madera	3/2	1981- 2003	1, 3	J/2; M/1	Y	DF	DF	Y	1, 2, 3	16, 25 (3)
	Alambique	1/1	1981	3	J/1	N	DF	PB	-	1	16, 25
	Hamms Gulch	1/0	2003	1	-	N	DF	DF	-	1	(3)
	Damiani Gulch	1/0	2003	1	-	N	DF	DF	-	1	(3)

Watershed	Stream/ Tributary	Yrs. Surveyed/ Quant. Data	Max. Period of Record	Data Type	Life Hist. Stage/ No.Yrs. Data	Anad. Life-Cycle Possible	O. mykiss		Evidence of Pop. Decline	Current Pop. Status	References (Pers. Comm.)
							Hist.	Current			
	Coal	1/0	1999- 2001	1	-	N	DF	DF	-	1	(3)
Redwood Creek	Redwood	1/0	0 1981	3	-	N	UNK	NP	-	0	16
	Arroyo Ojo	1/0	0 1981	3	-	N	UNK	NP	-	0	16
Cordilleras Creek	Cordilleras	1/0	0 1981	3	-	N	UNK	UNK	-	0	16
Belmont Creek	Belmont	1/0	0 1981	3	-	N	UNK	UNK	-	0	16
Laurel Creek	Laurel	1/0	0 1981	3	-	N	UNK	UNK	-	0	16
San Mateo Creek	San Mateo	4/4	1860- 93	2,3	J/3; R/1	UNK	DF	DF	Y	1, 2, 3	16-18, 23
	Polhemus	1/1	1981	3	J/1; R/1	UNK	DF	PB	-	0	16
Sanchez Creek	Sanchez	1/0	0 1981	3	-	UNK	UNK	UNK	-	0	16
Easton Creek	Easton	1/0	0 1981	3	-	UNK	UNK	UNK	-	0	16
Mills Creek	Mills	2/0	1958 1981	1,3	-	UNK	DF	UNK	Y	0	5, 16
Colma Creek	Colma	2/0	0 2002	1,3	-	N	UNK	NP	-	0	16, 17

<sup>a</sup> Table headings and codes are defined in the Methods section of this report.

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### **Personal Communications**

1. Abel, J., SCVWD, interview with B. Harvey, CEMAR, March 21, 2002, in San Jose, CA, regarding anadromous salmonid observations in Santa Clara County streams tributary to the San Francisco Bay.
2. Smith, J., San Jose State University, telephone conversation with G. Becker, CEMAR, October 1, 2003, regarding steelhead and rainbow trout distribution in streams of Santa Clara and San Mateo counties.
3. Stoecker, M., telephone conversation with B. Harvey, CEMAR, September 18, 2003, regarding observations of steelhead in the San Francisquito drainage.



## SAN MATEO COUNTY & SAN FRANCISCO COUNTY MAPS

Historical status of *Oncorhynchus mykiss* in streams of San Mateo County & San Francisco County, California.

Current status of *Oncorhynchus mykiss* in streams of San Mateo County & San Francisco County, California.

