

## Steelhead/rainbow trout resources of San Mateo County

### San Pedro

San Pedro Creek flows northwesterly, entering the Pacific Ocean at Pacifica State Beach. It drains a watershed about eight square miles in area. The upper portions of the drainage contain springs (feeding the south and middle forks) that produce perennial flow in the creek. Documents with information regarding steelhead in the San Pedro Creek watershed may refer to the North Fork San Pedro Creek and the Sanchez Fork. For purposes of this report, these tributaries are considered as part of the mainstem.

A 1912 letter regarding San Mateo County streams indicates that San Pedro Creek was stocked. A fishway also is noted on the creek (Smith 1912). Titus *et al.* (in prep.) note DFG records of steelhead spawning in the creek in 1941.

In 1968, DFG staff estimated that the San Pedro Creek steelhead run consisted of 100 individuals (Wood 1968). A 1973 stream survey report notes, "Spawning habitat is a limiting factor for steelhead" (DFG 1973a, p. 2). The report called the steelhead resources of San Pedro Creek "viable and important" but cited passage at culverts, summer water diversion, and urbanization effects on the stream channel and watershed hydrology as placing "the long-term survival of the steelhead resource in question" (DFG 1973a, p. 5).

The lower portions of San Pedro Creek were surveyed during the spring and summer of 1989. Three *O. mykiss* year classes were observed during the study throughout the lower creek. Researchers noticed "a marked exodus from the lower creek during the late summer" of yearling and age 2+ individuals, many of which showed "typical smolt characteristics" (Sullivan 1990). The riparian area between the mouth and the Highway 1 bridge was noted to be "very degraded."

Surveys performed for a recent study found *O. mykiss* in mainstem San Pedro Creek and several tributaries (HES 2002a). The report concluded that the mainstem and the Middle Fork provide the primary steelhead habitat in the watershed. The study author noted several significant factors limiting *O. mykiss* in the San Pedro Creek watershed including passage barriers, low stream flows, sedimentation, and others (HES 2002a).

### Middle Fork San Pedro

Middle Fork San Pedro Creek consists of about 1.5 stream miles. Its confluence with the South Fork comprises the headwaters of San Pedro Creek.

Staff from DFG sampled Middle Fork San Pedro Creek in 1973 and collected juvenile *O. mykiss*. The sampling was used to prepare a population estimate for the creek (DFG 1973b).

Surveys performed for a recent study found *O. mykiss* in Middle Fork San Pedro Creek. The report concluded that the mainstem and the Middle Fork provide the primary steelhead habitat in the watershed, with "the best quality spawning habitat...in the Middle Fork" as well as "good conditions for steelhead rearing" (HES 2002a, p. 1).

### **South Fork San Pedro**

South Fork San Pedro Creek consists of about 1.3 stream miles. Its confluence with the Middle Fork comprises the headwaters of San Pedro Creek.

Staff from DFG sampled South Fork San Pedro Creek in 1973 and collected juvenile *O. mykiss*. The sampling was used to prepare a population estimate for the creek (DFG 1973b).

Surveys performed for a 2002 study found *O. mykiss* in South Fork San Pedro Creek. The resulting report stated, “[S]teelhead... abundance appeared extremely low based on visual counts. Suitable spawning sites were very scarce in the South Fork” (HES 2002a, p. 1).

### **Martini**

Martini Creek consists of about 1.7 stream miles. It flows southwest, entering the Pacific Ocean at Montara State Beach.

In a 1976 memo regarding Martini Creek, DFG staff noted that the creek is in a 100 foot long culvert under Highway 1. The culvert was suspected to be a barrier to upstream passage of steelhead (DFG 1976a).

A 1995 DFG memo indicates that Martini Creek is “...now inhabited by steelhead/resident rainbow trout” (DFG 1995). An undated DFG creek inventory states, “The Highway 1 culvert, which has a four foot drop at both ends, represents an impassable barrier to any migratory fish. Additionally, an instream impoundment blocks the flow approximately 100 yards upstream from highway 1” (DFG ca 1994).

### **San Vicente**

San Vicente Creek consists of about 3.9 stream miles and drains a watershed of approximately five square miles. It flows southwest, entering the Pacific Ocean south of the town of Moss Beach.

We did not encounter reliable evidence that steelhead used the San Vicente Creek watershed historically. According to a DFG creek inventory, “Steelhead migration is effectively blocked by the culvert located by the parking lot in Fitzgerald Marine Reserve” (DFG ca 1994). The inventory also states, “Agricultural diversions and streamside wells dewater most of the stream during the summer months” (DFG ca 1994).

A fish passage assessment included an examination of potential habitat in March 2004. The report states, “...this watershed may not be fish-bearing, at least for anadromous salmonids” (Taylor 2004, p. 40).

### **Denniston**

Denniston Creek consists of about 4.4 stream miles. It flows southwest, entering the Pacific Ocean at Half Moon Bay. According to a DFG memo, a ten foot high instream impoundment at about stream mile 1.2 is a total barrier to fish passage (DFG ca 1994).

Notes taken in 1941 by DFG staff indicated that Denniston Creek historically supported spawning runs of coho salmon and steelhead (Moore 1941). A 1953 stream survey report indicates the presence of steelhead and rainbow trout in the creek (DFG 1953a). Sampling in 1974 produced observations of *O. mykiss*, including YOY and additional year classes upstream of the impoundment (DFG 1974a).

An undated DFG creek inventory summarizes conditions in Denniston Creek. It states, “The creek and its tributaries provide a good potential habitat for steelhead trout if the barriers to migration were removed. Steelhead were observed in the lower stretches of the stream as late as 1987 when drought and agricultural pumping trapped steelhead in pools in the area adjacent to the Clipper Ridge subdivision” (DFG ca 1994). The inventory adds, “The final mile is usually dewatered in the summer due to agricultural diversions and withdrawal by the Coastside Water District which maintains a 10 foot high instream impoundment with a 100 foot downstream apron” (DFG ca 1994).

During a 1992 DFG survey, *O. mykiss* was observed “throughout the drainage” (DFG 1992a). Staff from DFG surveyed Denniston Creek downstream from the dam in May and June 2006 and observed *O. mykiss* fry and individuals to about six inches in length. The survey report contains by pass flow recommendations and also recommended non-native vegetation removal, and investigation of habitat upstream from the dam and the source of sediment producing high turbidity in the survey reach (DFG 2006).

## **Deer**

Deer Creek consists of about 1.9 stream miles. It flows southwest, entering the Pacific Ocean at the city of El Granada.

According to a DFG creek inventory, “CalTrans and the Pillar Point Harbor district have diverted the mouth of the creek into culverts terminating near the southern breakwater” (DFG ca 1994). The inventory also cites the presence of a small impoundment for agricultural purposes (DFG ca 1994).

According to the creek inventory, “Deer Creek is currently little more than an urban ditch although it was a producing trout stream within the memory of local area residents (DFG ca 1994).

## **Frenchmans**

Frenchmans Creek consists of about 4.3 stream miles and drains a watershed of about 4.3 square miles. It flows south, entering the Pacific Ocean at Half Moon Bay State Park.

A 1912 letter regarding San Mateo County streams describes Frenchmans Creek. The letter notes a steelhead run and states, “Has not been stocked by Commission, but has trout” (Smith 1912). A 1953 report notes stocking in 1930 and 1932 (DFG 1953b).

Staff from DFG surveyed Frenchmans Creek in 1953 and observed *O. mykiss*. The survey report states, “A good creek for migratory salmonids however water used by nursery farms for floral crops. Very extensive and is a threat to any crop of small fishes in creek” (DFG 1953b). In a 1958 stream survey, DFG staff suggested that Frenchman’s Creek should be “considered as a minor steelhead stream” (DFG 1958a).

An undated DFG document notes, “1979 DFG Stream Survey and e[lectrofishing] sample found SH...” (DFG ca 1992). A DFG stream inventory notes the presence of steelhead in Frenchmans Creek and states, “Frenchmans Creek is heavily sedimented...” (DFG ca 1994).

Multiple *O. mykiss* year classes were observed both upstream and downstream from a flashboard dam in Frenchmans Creek during sampling in 2004 (Atkinson pers. comm.). Staff from DFG electrofished reaches immediately upstream and downstream from the dam in 2006 and again found *O. mykiss*. The upstream sampling group varied between about 0.9 and 7.5 inches in length, while the downstream size ranged between about 1.6 and 6.0 inches. The dam is “problematic” for fish passage (Nelson pers. comm.). According to staff from the RCD, seasonal water diversions are “affecting the system” (K. Nelson, pers. comm.).

### **Locks**

Locks Creek consists of about 1.9 stream miles and is tributary to Frenchmans Creek. It flows southeast, entering Frenchmans Creek in the headwaters area.

A DFG stream inventory characterizes the fishery resources of Locks Creek as “good”. It cites the creek’s value to the watershed in providing “winter flow and some steelhead spawning” (DFG ca 1965).

### **Pilarcitos**

Pilarcitos Creek consists of about 12.8 stream miles and drains a watershed of about 30 square miles. Stone Dam, constructed in the 1880s, is located at about stream mile 8.5, while the dam forming Pilarcitos Lake, constructed in 1861, is located approximately 10.8 miles from the creek mouth.

Staff from DFG surveyed Pilarcitos Creek in 1953 and observed *O. mykiss*. The survey report states, “A fair creek for the reproduction of migratory fish not a summer trout stream” (DFG 1953c). A 1958 survey report characterizes the creek, “A fair to good SH spawning and nursery stream, which has been mistreated by local residents and public utilities – but still produces SH (what was it like before settlement?)” (DFG 1958b). In 1960, DFG staff estimated the steelhead run in Pilarcitos Creek to consist of about 50 to 100 individuals (Entrix 2006).

A 1977 stream survey report indicated the impact of drought on the Pilarcitos Creek fishery. It also stated, “Adjacent agricultural and urban developments impose severe limitations upon aquatic habitats. Pollution and the dumping of urban debris into the channel are major problems... Removal of riparian vegetation and the presence of cattle in the channel are additional degrading factors” (DFG 1977a). The creek was stocked in 1978 and in subsequent years (DFG 1985a).

In 1985, DFG found that about 7.5 miles of Pilarcitos Creek was available as spawning and rearing habitat (DFG 1985a). The survey report noted aquatic plant growth as a limiting factor, and recommended planting riparian vegetation and “limiting water diversion to preserve the minimum flows” (DFG 1985a). An undated creek inventory characterizes negative impacts on Pilarcitos Creek by stating, “The creek has severe overdraft, dumping of agricultural and domestic debris, effluent from several sources, degraded streambanks due to livestock and severe siltation downstream from Highway 92 and the Ox Mountain Landfill” (DFG ca 1994).

A 1992 DFG stream survey report stated that because the “area is pumped dry during the summer it does not provide rearing space” (DFG 1992b). The report also recommended re-vegetation in the lower watershed. A restoration plan for the Pilarcitos Creek watershed was prepared in 1996 and reported observations of *O. mykiss* YOY and “smolt-sized” individuals. The report identified several issues of concern including reduced stream flow, sedimentation, and riparian condition (PWA 1996).

In response to a 2003 notice from NMFS, the SFPUC commissioned fisheries studies in the Pilarcitos watershed that are reported in a 2006 publication. The investigations concerned the five mile reach centered at Stone Dam. Multiple *O. mykiss* year classes were observed at three sampling sites between Stone and Pilarcitos dams. The report concludes, “About 2.3 miles of potential steelhead habitat exists upstream of Stone Dam Reservoir compared to 2.7 miles from Stone Dam to the downstream boundary of the CCWD property” (Entrix 2006, p. 3-9). According to the study, the reach between the dams “...will support the production of about 8 pairs of adult steelhead” (Entrix 2006, p. 4-1). The study also used average population densities from previous surveys to estimate production of juvenile steelhead between Stone Dam and the CCWD property boundary at about 5,500 individuals (Entrix 2006).

An assessment of Pilarcitos Creek fish habitat is included in a recent draft watershed management plan. Spawning and rearing habitat are cited as ranging from “poor” to “fair-good,” and limiting factors are considered to be flow and fine sediment (PWA 2007). Information regarding the resident *O. mykiss* population of Pilarcitos Lake tributaries is being developed (Sak pers. comm.).

### **Arroyo Leon**

Arroyo Leon consists of about 6.5 stream miles and is tributary to Pilarcitos Creek. It flows northwest, entering Pilarcitos Creek on the eastern side of the city of Half Moon Bay. Two seasonal dams on Arroyo Leon between Half Moon Bay and the Johnston Historic Site may comprise passage barriers (DFG ca 1994).

A 1941 DFG note relays reports of steelhead spawning in Arroyo Leon. The note also indicates the impact of agricultural water diversion, but notes “summer fishing” upstream from diversion dams in the creek (DFG 1941).

Staff from DFG surveyed Arroyo Leon in 1958 and observed multiple *O. mykiss* year classes. The survey report states, “At least and probably better than Pilarcitos Creek...as regards steelhead spawning and nursery areas” (DFG 1958c).

Arroyo Leon was surveyed in 1977 and was said to have “...lost its former value as an anadromous fishery resource” (DFG 1977b). Limiting factors included removal of riparian vegetation, dumping of debris and fill, and siltation due to reduced flows and bank erosion.

A restoration plan for the Pilarcitos Creek watershed was prepared in 1996 and reported observations of “smolt-sized” *O. mykiss* individuals in Arroyo Leon. The report identified “potential migration barriers created by inadequate flow during smolt migration periods” (PWA 1996, p. 31). Studies of Arroyo Leon and its reservoirs were performed in 2000. The resulting report states, “It is possible that in years like 2000 the Arroyo Leon reservoirs could account for the majority of smolt production in the Arroyo Leon watershed” (Smith 2001, p. 6).

During a consultant's site visit to Arroyo Leon in 2002, multiple *O. mykiss* year classes, including YOY and an individual about 21 inches in length, were observed (HES 2002b). An assessment of Arroyo Leon fish habitat is included in a recent draft management plan for the Pilarcitos Creek watershed. Spawning and rearing habitat are cited as mostly "poor" or "fair," and limiting factors are considered to be flow and fine sediment (PWA 2007).

### **Mills**

Mills Creek consists of about 3.8 stream miles and is tributary to Arroyo Leon. It flows west, entering Arroyo Leon in Higgins Canyon. According to a 1996 report, "scour downstream of the historic bridge has created a potential migration barrier" (PWA 1996, p. 31). A series of rock weirs downstream of the historic bridge were placed in the creek in 2001 to facilitate passage (Nelson pers. comm.).

Staff from DFG surveyed Mills Creek in 1958 and observed *O. mykiss* juveniles. The survey report states, "Mills Creek should be an excellent SH spawning ground but appears to be a weak nursery area because of lack of cover" (DFG 1958d).

An undated creek inventory states, "Mills Creek is a pristine stream" (DFG ca 1994). Sampling in 1995 in Mills Creek produced observations of multiple *O. mykiss* year classes (HRG 1996). A restoration plan for the Pilarcitos Creek watershed was prepared in 1996 and reported observations of *O. mykiss* at "relatively high" densities. The report recommended addressing the Mills Creek passage barrier (PWA 1996).

An assessment of Mills Creek fish habitat is included in a recent draft management plan for the Pilarcitos Creek watershed. Spawning and rearing habitat are cited as mostly "fair," and limiting factors are considered to be flow and fine sediment (PWA 2007).

### **Madonna**

Madonna Creek consists of about 2.5 stream miles and is tributary to Pilarcitos Creek. It flows west, entering Pilarcitos Creek northwest of the city of Half Moon Bay. According to a 1996 consultants' report, a fish passage barrier is located approximately 0.3 miles upstream from the Pilarcitos Creek confluence (PWA 1996).

A restoration plan for the Pilarcitos Creek watershed was prepared in 1996 and reported no observations of *O. mykiss* during "spot" checks in 1995. The creek was said to have "low potential for salmonid fisheries" due to the passage barrier and low streamflow (PWA 1996).

An assessment of Madonnas Creek fish habitat is included in a recent draft management plan for the Pilarcitos Creek watershed. Spawning and rearing habitat are cited as mostly "poor," and limiting factors are considered to be flow and fine sediment (PWA 2007).

### **Apanolio**

Apanolio Creek consists of about 3.4 stream miles and is tributary to Pilarcitos Creek. It flows south, entering Pilarcitos Creek near the entrance to Diggs Canyon. According to a 1996 consultants' report, the Bongard Diversion Dam "...is impassable for

upstream migration during most flow conditions” (PWA 1996). A second diversion dam also is a passage barrier (Nelson pers. comm.).

Staff from DFG sampled Apanolio Creek in 1987 and observed multiple *O. mykiss* year classes (DFG 1987). A 1988 memo characterizes the fishery, “Adult steelhead probably utilize the headwaters area for spawning and nursery habitat during favorable flow conditions coexisting with a resident trout population that reproduces without ever leaving the stream” (DFG 1988a).

In 1990, Apanolio Creek was studied in relation to the steelhead fishery of the Pilarcitos Creek watershed. The resulting report notes passage problems limiting use by steelhead and states, “...Apanolio Creek probably can make a major contribution to watershed steelhead production in wetter years” (Smith 1990a, p. 9). Multiple *O. mykiss* year classes were observed during sampling in 1995 (HRG 1996).

A restoration plan for the Pilarcitos Creek watershed was prepared in 1996 and reported observations of multiple *O. mykiss* year classes with “relatively high” densities in 1995. The report recommended modifying the fish passage barrier on Apanolio Creek (PWA 1996).

An assessment of Apanolio Creek fish habitat is included in a recent draft management plan for the Pilarcitos Creek watershed. Spawning and rearing habitat are cited as mostly “poor” or “fair,” and limiting factors are considered to be flow and fine sediment (PWA 2007).

### **Corinda Los Trancos**

Corinda Los Trancos Creek consists of about 1.6 stream miles and is tributary to Pilarcitos Creek. It flows south, entering Pilarcitos Creek at about stream mile three.

A 1974 DFG letter reported on a survey of Corinda Los Trancos Creek. It states, “Juvenile steelhead trout were found in the lower reach of Corinda Los Trancos Creek, but no fish were found in the upper stream reaches...” (DFG 1974b).

A 1992 stream survey of Pilarcitos Creek indicated that sediment produced in association with the landfill in the Corinda Los Trancos Creek watershed was impacting downstream reaches (DFG 1992b). A restoration plan for the Pilarcitos Creek watershed was prepared in 1996 and reported observations of YOY/yearling *O. mykiss* in 1995. Corinda Los Trancos Creek was said to have “low quality salmonid fisheries habitat” (PWA 1996).

### **Nuff**

Nuff Creek consists of about 1.9 stream miles and is tributary to Pilarcitos Creek. It flows south, entering Pilarcitos Creek in lower Albert Canyon. Quarrying operations near the Pilarcitos Creek confluence involved installation of a culvert in the 1960s that is considered a total passage barrier (DeAtley pers. comm.).

The creek was spot checked in 1995 as part of a watershed assessment and *O. mykiss* was not observed. The resulting report states, “...fish have not been known to reside in Nuff Creek for at least thirty years” (PWA 1996).

An assessment of Nuff Creek fish habitat is included in a recent draft management plan for the Pilarcitos Creek watershed. Spawning and rearing habitat are cited as mostly “poor,” and sediment is noted as a limiting factor (PWA 2007).

### **Albert Canyon**

Albert Canyon Creek consists of about 1.5 stream miles and is tributary to Pilarcitos Creek. It flows northwest, entering Pilarcitos Creek west of Cahill Ridge. A boulder falls located about 0.5 miles upstream from the Pilarcitos Creek confluence is believed to be the upstream limit of anadromy (PWA 2007).

Staff from DFG surveyed Albert Canyon Creek in 1988 and observed multiple *O. mykiss* year classes. The latter creek was deemed “an important spawning and nursery stream for steelhead trout” (DFG 1988b, p. 2).

In 1997, DFG staff documented sedimentation impacts of road construction on Albert Canyon Creek and observed *O. mykiss*. The records state in part, “In summer when the creek water level is lowest, the steelhead trout are limited to the pools of the creek bottom; ...the effect of the silt and sediment...[was] especially serious...” (Vonarb 1997). Sampling in 1998 and 1999 also produced *O. mykiss* (PWA 2007).

An assessment of Albert Canyon Creek fish habitat is included in a recent draft management plan for the Pilarcitos Creek watershed. Rearing habitat is cited as mostly “poor-fair,” and flow, sediment, and access are noted as limiting factors (PWA 2007). However, the creek is called “...probably a very important spawning site that seeds much of the rearing habitat downstream in Pilarcitos Creek” (PWA 2007).

### **Cañada Verde**

Cañada Verde Creek consists of about 2.5 stream miles. It flows west, entering the Pacific Ocean south of Miramontes Point.

A 1912 letter regarding San Mateo County streams describes Cañada Verde Creek, which it refers to as Franklin or Cowell Ranch creek. The letter states, “Has not been stocked by Commission for past three years, but has trout” (Smith 1912). A fishway also is noted on the creek at about stream mile 1.5.

### **Purissima**

Purissima Creek consists of about 7.9 stream miles and drains a watershed of about nine square miles. It flows west, entering the Pacific Ocean south of Eel Rock. The creek is inaccessible to migratory fish due to a 30 foot waterfall at the Pacific Ocean (DFG ca 1994).

A 1912 letter described Purissima Creek and noted that steelhead could not enter the stream. The creek was said to offer “fine fishing,” presumably of stocked rainbow trout (Smith 1912).

Staff from DFG surveyed Purissima Creek in the 1930s and noted the presence of rainbow trout and steelhead. The survey report indicates that steelhead were stocked with “poor” success” and rainbow trout stocking was “successful” (DFG ca 1934a). It is unclear what differentiated between the two *O. mykiss* forms.

Purisima Creek was surveyed in 1958 and *O. mykiss* was observed. The survey report states, “Judging from the present population a fair trout stream supporting resident trout that are apparently self-sustaining” (DFG 1958e).

An undated creek inventory states, “Much of the upper drainage is located within the Purisima Creek Open Space Preserve and presents a pristine appearance although heavily logged in the past” (DFG ca 1994). It adds, “Extensive grazing has caused streambank degradation in the lower portions of the creek. Coliform bacteria are present in much of the downstream area” (DFG ca 1994).

Staff from NMFS observed multiple *O. mykiss* year classes in Purisima Creek in 1995 (NMFS 1996). In June 2006, multiple *O. mykiss* year classes were observed “in moderate abundance” near two road crossings of the creek (Stoecker pers. comm.).

### **Lobitos**

Lobitos Creek consists of about five stream miles and has a watershed of about four square miles. It flows southwest, entering the Pacific Ocean at Martins Beach. According to DFG staff, the Highway 1 and Verde Road crossings are total passage barriers (Nelson pers. comm.).

According to DFG records reviewed by Titus *et al.* (in prep.), *O. mykiss* was stocked in Lobitos Creek in the 1930s. Shapovalov reported steelhead caught from this stream in 1939 (DFG 1939). Staff from DFG surveyed Lobitos Creek in 1953 and observed *O. mykiss* fingerlings. The survey report calls Lobitos Creek, “A small coastal stream used as a nursery by migratory fish” (DFG 1953d).

A 1975 survey report states, “Lobitos Creek presently supports a minimal rainbow trout/steelhead resource. Steelhead usage appears to be restricted to the lowermost 0.2-mile reach because of fish passage problems (DFG 1975a). It adds, “Fair spawning habitat exists above the fish passage hazards” (DFG 1975a).

An undated creek inventory states, “While the downstream portion of Lobitos flows through an agricultural terrace, the stream is [in] fair condition and reportedly supports an annual steelhead run” (DFG ca 1994). In a 1999 memo DFG staff state, “One of the most predominant problems in the watershed is siltation” (DFG 1999). Necessary remediation efforts were said to include debris removal, revegetation, and control of stormwater runoff for improving water quality and decreasing sedimentation.

A brief survey was conducted in the Lobitos Creek reach between the Highway 1 crossing and the lagoon in 2002. The reach had “low densities of fry” and *O. mykiss* between about six and seven inches in length (Nelson pers. comm.). Extensive habitat typing was conducted in Lobitos Creek in 2006. Multiple *O. mykiss* year classes were observed upstream from the Highway 1 crossing. Staff from DFG indicate that *O. mykiss* in the creek likely have been stream reproducing since the 1920s (Nelson pers. comm.).

### **Schoolhouse**

Schoolhouse Creek consists of about 0.5 stream miles and is tributary to Lobitos Creek. It flows northwest, entering Lobitos Creek at the town of Lobitos.

Since Schoolhouse Creek enters Lobitos Creek upstream from a total passage barrier, DFG staff speculates that steelhead spawners have not had access to the creek since the 1920s (Nelson pers. comm.). The lower reach of the creek was found to be dry during a 2006 DFG survey.

### **Rogers Gulch**

Rogers Gulch Creek consists of about 0.5 stream miles and is tributary to Lobitos Creek. It flows northwest, entering Lobitos Creek at about stream mile 1.6.

Since Rogers Gulch Creek enters Lobitos Creek upstream from a total passage barrier, DFG staff speculates that steelhead spawners have not had access to the creek since the 1920s (Nelson pers. comm.).

### **Tunitas**

Tunitas Creek consists of about 6.6 stream miles and has a watershed of about 15 square miles. It flows southwest, entering the Pacific Ocean at Tunitas Beach. The upstream limit of anadromy appears to be a boulder/bedrock falls at about stream mile 6.2 (Nelson pers. comm.).

Shapovalov reported smolts of anadromous origin in Tunitas Creek in 1939 (DFG 1939). According to a 1962 stream survey report, steelhead normally had access to good spawning and nursery areas in at least the lower two miles of Tunitas Creek (DFG 1962a). The survey report cites the local warden as estimating the run to be 100 to 200 individuals.

Staff from NMFS found *O. mykiss* in Tunitas Creek during two visits to the headwaters in 1995 (NMFS 1996). Extensive habitat typing was conducted by DFG staff in the Tunitas Creek watershed in 2006. The watershed's *O. mykiss* population appeared to be at relatively low abundance overall, with the greatest density of juveniles occurring in the upper creek reach (Nelson pers. comm.). Limiting factors include excessive sedimentation, low creek flows, and water quality issues.

### **Dry Creek**

Dry Creek consists of about 2.5 stream miles and is tributary to Tunitas Creek. It flows west, entering Tunitas Creek at about stream mile 0.5.

Dry Creek was named as an important source of Tunitas Creek flows in a 1962 DFG stream survey report (DFG 1962a). The survey also found *O. mykiss* in the lower portion of the creek (DFG 1962a).

Extensive habitat typing was conducted by DFG staff in the Tunitas Creek watershed in 2006. *Oncorhynchus mykiss* fry and parr were observed at very low densities (Nelson pers. comm.).

## East Fork Tunitas

East Fork Tunitas Creek consists of about 2.1 stream miles and is tributary to Tunitas Creek. It flows west, entering Tunitas Creek at about stream mile 2.3. The creek passes under Tunitas Creek Road in a culvert immediately upstream from the Tunitas Creek confluence. The culvert is believed to be passable by migrating steelhead (Nelson pers. comm.).

A 1964 stream survey report called the East Fork “an important steelhead spawning and nursery tributary and a main source of summer and winter flow to Tunitas Creek (DFG 1964a). *Oncorhynchus mykiss* YOY were observed during the survey.

Staff from DFG visited East Fork Tunitas Creek in 2006. *Oncorhynchus mykiss* parr and age 1+ individuals were observed (Nelson pers. comm.).

## San Gregorio

San Gregorio Creek consists of about ten stream miles and drains a watershed of about 51 square miles. It is formed by the confluence of La Honda and Alpine Creeks and flows west, entering the Pacific Ocean at San Gregorio State Beach. Other important tributaries include El Corte de Madera, Bogess, and Harrington creeks.

San Gregorio Creek was one of four “A-1” streams noted in San Mateo County in a 1912 memo, which also noted that the stream was stocked (Smith 1912). A DFG field note from 1962 relays the warden’s estimate of the maximum steelhead run at about 1,000 individuals. The 1961-1962 run was estimated to be about 300 individuals (DFG 1962b). Estimation methods are not provided in the note.

A 1971 report states, “critical summer flows are likely an important factor that limits steelhead production in the creek” (DFG 1971a, p. 6). In 1975, DFG staff stated, “the San Gregorio River system is one of the more important salmonid spawning and nursery resources along the coast of central California” (DFG 1975b).

A 1984 SWRCB report delineates bypass flow requirements for San Gregorio Creek and some tributaries. Flow recommendations in the report include seasonal minimum flows and migration flows following storm events (SWRCB 1984).

Staff from DFG surveyed San Gregorio Creek in 1985 and observed *O. mykiss*, including individuals to 22 inches in length. The survey report states, “All illegal dams and diversions should be investigated. Additional water diversions should be considered very carefully to avoid reducing the water level of the creek below the minimal flow to sustain fish life” (DFG 1985b).

Jerry Smith notes that “a substantial portion of potential smolt production is in the relatively large lagoon...” of San Gregorio Creek and deduces that “actions affecting lagoon quality probably have the biggest effect on steelhead production” (Smith 1994, p. 6). Staff from NMFS observed multiple *O. mykiss* year classes in San Gregorio Creek in 1995 (NMFS 1996).

In a 2001 letter staff from the Division of Water Rights states, “...our preliminary analysis of water availability in the San Gregorio Creek watershed indicates that collectively, existing approved water demands exceed 50 percent of the estimated average unimpaired flow from October 1 to March 31 at the San Gregorio gage. According to guidelines...diversion of over 10 percent of

the average unimpaired flow is likely to cause adverse effects on coho salmon and steelhead trout habitat in San Gregorio Creek” (SWRCB 2001). The watershed is fully adjudicated and there are numerous individuals seeking to obtain water rights.

### **Coyote**

Coyote Creek consists of about 2.2 stream miles and is tributary to San Gregorio Creek. It flows south, entering San Gregorio Creek at about stream mile 2.6.

Staff from DFG surveyed Coyote Creek in 1973. The survey report deems the creek “...an intermittent seasonal tributary to San Gregorio Creek” and states, “Coyote Creek provides minimal spawning and no summer nursery habitat for anadromous salmonids. This creek has been heavily damaged by man and livestock” (DFG 1973c). A total barrier to fish passage was noted in the lower reach of the stream.

### **Clear**

Clear Creek consists of about three stream miles and is tributary to San Gregorio Creek. It flows south, entering San Gregorio Creek less than one mile upstream from the Coyote Creek confluence.

Staff from DFG surveyed Coyote Creek in 1973. The survey report deems the creek “...an intermittent seasonal tributary to San Gregorio Creek” and states, “It does not provide salmonid summer nursery habitat, and offers minimal spawning habitat” (DFG 1973d).

### **El Corte de Madera**

El Corte de Madera Creek is tributary to San Gregorio Creek and consists of about 8.5 stream miles draining an area of about ten square miles. It flows south, entering San Gregorio Creek about 1.5 miles upstream from the Clear Creek confluence.

Staff from DFG surveyed El Corte de Madera Creek in the 1930s, noting the presence of steelhead and observations of spawning. The survey report notes the impact of fishing on the run in the creek (DFG ca 1934b). A 1942 DFG letter indicates stocking between 1930 and 1941 (DFG 1942).

A 1962 letter characterizes El Corte De Madera Creek in stating, “The stream has only fair spawning gravel, but its length and relatively permanent flow make it a fairly important steelhead spawning and nursery tributary to the San Gregorio Creek drainage” (DFG 1962c). In 1964, DFG surveyed El Corte de Madera Creek and noted impacts of sediment produced by poor logging practices (DFG 1964b).

Staff from DFG surveyed the creek in 1985 and observed multiple *O. mykiss* year classes, including individuals to 18 inches in length. The survey report states, “Cattle grazing and logging have been the two major problems which have greatly reduced the amount of salmonid spawning habitat” (DFG 1985c). These land uses also were said to have reduced rearing habitat.

Staff from DFG conducted a stream inventory of El Corte de Madera Creek in 1996. Steelhead were observed at each of the four sample sites and ranged in size between about two and 9.5 inches in length. The resulting report recommended allowing recruitment of woody debris and decreasing impacts of cattle on the stream and riparian areas (Hickethier and Miles 1996).

El Corte Madera Creek was the subject of a 2001 NMFS letter to the regional open space district. The letter indicated that roads and trails in the upper portion of the basin were producing high sedimentation rates in the creek and recommended a program of maintenance and closure (NMFS 2001).

### **Bogess**

Bogess Creek is tributary to San Gregorio Creek and consists of about 4.7 stream miles draining an area of about 3.3 square miles. It flows south, entering San Gregorio Creek about 0.7 miles upstream from the El Corte de Madera Creek confluence.

A field note from 1964 states, "It was the opinion of the observers that [Bogess Creek] would not support fishlife during the summer..." (DFG 1964c). However, in an inventory of San Mateo County streams, the creek is said to be "important for steelhead spawning and nursery" (DFG ca 1965).

A 1984 SWRCB report delineates bypass flow requirements for San Gregorio Creek and some tributaries. Flow recommendations in the report include seasonal minimum flows for Bogess Creek (SWRCB 1984).

Staff from DFG conducted a stream inventory of Bogess Creek in 1996. Steelhead were observed at each of the 16 sample sites and ranged in size between about 1.5 and ten inches in length. The resulting report recommended allowing recruitment of woody debris, identifying and treating sediment sources, decreasing impacts of cattle on riparian areas, and modifying the culvert under Highway 84 to improve passage conditions (Dunn and Renger 1996).

Staff from DFG sampled two Bogess Creek sites in September 2007. Multiple *O. mykiss* year classes were observed at both the lower and upper creek locations (Nelson pers. comm.).

### **Kingston**

Kingston Creek consists of about 1.6 stream miles and is tributary to San Gregorio Creek. It flows northwest, entering San Gregorio Creek north of Deer Park Ridge.

A 1985 DFG survey found that Kingston Creek provided "good rearing habitat for salmonid fish" and supported a population of resident rainbow trout (DFG 1985d). The survey report said that natural propagation appeared to be poor and also described barriers that limited or precluded steelhead migration. The report recommended, "water diversions should be kept to a minimum to guarantee minimum flows to sustain fish life" (DFG 1985d, p. 3).

### **Harrington**

Harrington Creek consists of about five stream miles and is tributary to San Gregorio Creek. It flows south, entering San Gregorio Creek west of the town of Redwood Terrace.

Staff from DFG surveyed Harrington Creek in 1964 and observed multiple *O. mykiss* year classes and “good” natural propagation. The survey report states, “Harrington Creek is an important spawning and rearing area for RT-SH” (DFG 1964d). The report noted that siltation resulting from cattle use of the stream was decreasing the creek’s productivity.

Staff from DFG conducted a stream inventory of Harrington Creek in 1996. Steelhead were observed at each of the three sample sites and ranged in size between about 1.8 and 7.4 inches in length. The resulting report recommended allowing recruitment of woody debris and identifying and treating sediment sources (DFG 1996a).

Staff from DFG sampled two Harrington Creek sites in September 2007. Multiple *O. mykiss* year classes were observed at both the lower and upper creek locations (Nelson pers. comm.)

### **La Honda**

La Honda Creek consists of about 7.6 stream miles and is tributary to San Gregorio Creek. It flows south, entering San Gregorio Creek at the town of La Honda.

A field note from 1962 indicates “a bad siltation problem” in La Honda Creek due to logging. It states, “The steelhead run in this stream has been steadily going downhill...” (DFG 1962d). Staff from DFG surveyed La Honda Creek in 1964 and noted multiple *O. mykiss* year classes. The survey report states, “...the lower three miles of the stream provide a highly productive spawning and nursery area for steelhead” (DFG 1964e).

A 1973 survey report notes that La Honda Creek provides “good to excellent spawning and summer nursery habitat for steelhead trout...” (DFG 1973e). The report recommends protesting additional diversion applications and improving operations of flashboard dams.

In 1985, DFG staff surveyed the creek and found “fair” habitat. The survey report states, “The limiting factor for rearing habitat is the amount of food available to the fish. Due to the low flow over the riffles, food is not being carried into the pools where the fish are holding” (DFG 1985e).

Sampling was performed in 1995 as part of a comprehensive stream survey and multiple *O. mykiss* year classes were observed. The survey report recommends revegetation and improved road maintenance among other measures to control sediment (DFG 1997a). A 1996 review of habitat limitations noted additional stream impacts including encroachment within the floodplain and on streambanks, decreased streamflow due to diversion, and water quality impacts from dumping and discharge to the creek (DFG 1996b).

Staff from DFG sampled two LaHonda Creek sites in September 2007. Multiple *O. mykiss* year classes were observed at both the lower and upper creek locations (Nelson pers. comm.)

## **Woodhams**

Woodhams Creek consists of about 1.8 stream miles and is tributary to La Honda Creek. It flows west, entering La Honda Creek north of the town of La Honda. A mutual water company diverts water from Woodhams Creek for storage in an unnamed tributary to Woodhams Creek.

In a 1964 field note, DFG staff noted that Woodhams Creek was “not suitable for spawning or nursery by [steelhead]” due to the presence of total passage barriers near the La Honda Creek confluence” (DFG 1964f). The cited barrier is a 12 foot high waterfall (Nelson pers. comm.).

## **Langley**

Langley Creek consists of about 1.7 stream miles and is tributary to La Honda Creek. It flows west, entering La Honda Creek approximately 0.6 miles upstream from the Woodhams Creek confluence.

A 1964 field note indicates that Langley Creek is “not suitable for spawning or nursery” by steelhead (DFG 1964f). Low flows and substrate are cited as limiting factors.

In a 1996 stream inventory report, DFG noted that steelhead were sampled in the previous year. The report recommended management as a “natural production steelhead stream” including increasing woody debris recruitment and reducing sedimentation (McKernan and Ouradnik 1996).

## **Woodruff**

Woodruff Creek consists of about 3.1 stream miles and is tributary to La Honda Creek. It flows west, entering La Honda Creek about 0.6 miles north of the Langley Creek confluence.

In 1964, DFG surveyed Woodruff Creek and noted steelhead in the lower part (~1.25 miles) of the stream and rainbow trout throughout the surveyed reach (DFG 1964g). The report stated that the creek “contributes significant unpolluted winter and summer flow to La Honda Creek and extends [steelhead] spawning and nursery grounds of La Honda Creek by 15/100 of a mile” (DFG 1964g).

The stream has been stocked historically. However, a 1978 DFG report cites Woodruff Creek *O. mykiss* as being “a remnant of the historic runs once utilizing the San Gregorio Creek drainage” (DFG 1978a).

## **Alpine**

Alpine Creek consists of about 5.2 stream miles and is tributary to San Gregorio Creek. It flows west, entering San Gregorio Creek south of the town of La Honda. A fishway was constructed in 1974 at the “Pescadero Road culvert”.

A field note from 1962 states, “A good run of adult steelhead enters Alpine Creek normally” (DFG 1962d). Staff from DFG surveyed Alpine Creek in 1963 and observed multiple *O. mykiss* year classes. The survey report states, “It is an important spawning and nursery area for steelhead. It has a good summer flow” (DFG 1963a).

A 1996 memo concerning coho salmon habitat in San Mateo and Santa Cruz counties discusses Alpine Creek. The memo notes sedimentation impacts from road maintenance and home construction, as well as decreased stream flow due to diversion (DFG 1996b). Alpine Creek was surveyed in 1995 and multiple *O. mykiss* year classes were observed, including YOY. The survey report recommended removing exotic riparian plants and re-vegetating with native species, controlling sediment input into the creek, and other habitat protection measures (DFG 1997b). Staff from NMFS surveyed Alpine Creek in 2006 and observed multiple *O. mykiss* year classes (Spence pers. comm.).

### **Mindego**

Mindego Creek is tributary to Alpine Creek and consists of about 4.5 stream miles. It flows southwest, entering Alpine Creek at about stream mile 1.8. A dam is located at stream mile 0.75 that has a fishway. A mutual water company diverts water from Mindego Creek for storage in an unnamed tributary to Woodhams Creek.

In a 1964 survey report, DFG staff noted that “Mindego Creek is [an] important supplement to [the] water supply of Alpine Creek, and contributes approximately 1/2 mile of fair silver salmon and steelhead trout spawning grounds to [the] San Gregorio river system” (DFG 1964h, p. 1). The survey found steelhead downstream from Log Cabin Ranch dam and “native” rainbow trout upstream from the dam (DFG 1964h).

A 1973 DFG survey report recommended management of Mindego Creek for steelhead spawning and nursery purposes, including discontinuing the practice of seasonal damming and protesting additional water diversion during the summer and fall months (DFG 1973f). A 1984 SWRCB report delineates bypass flow requirements for San Gregorio Creek and some tributaries. Flow recommendations in the report include seasonal minimum flows for Mindego Creek (SWRCB 1984).

In sampling during the summer of 1996, DFG found *O. mykiss* at two sites. The survey report recommended identifying and treating sediment sources, and monitoring and maintaining the fishway at the dam (DFG 1996a). Staff from NMFS sampled Mindego Creek in 2006 and observed multiple *O. mykiss* year classes (Spence pers. comm.).

### **Rodgers Gulch**

Rodgers Gulch Creek consists of about 1.4 stream miles and is tributary to Alpine Creek. It flows southwest, entering Alpine Creek about one quarter mile upstream from the Mindgego Creek confluence.

As part of a fish passage evaluation, Rodger’s Gulch Creek was inspected in March 2004. A single three inch long “salmonid” was observed near the Alpine Road crossing (Taylor 2004).

## **Pomponio**

Pomponio Creek consists of about seven stream miles. It flows west, entering the Pacific Ocean at Pomponio State Beach. The dam forming Pomponio Reservoir is located at about stream mile 6.2. A 15 foot high bedrock waterfall is located about 2.3 miles upstream from the creek mouth.

In 1958, a DFG survey found *O. mykiss* fingerlings “common” downstream from a 25 foot bedrock falls on Pomponio Creek and absent upstream (DFG 1958f). The survey report noted that about one mile of the creek was open to, and used by, steelhead. The five mile reach upstream of the falls was estimated to have a “small native trout population” (DFG 1958f).

Pomponio Creek was part of a study of estuary/lagoon systems between 1985 and 1989. The resulting report states, “Pomponio Creek is...a very small stream with negligible summer flow...” (Smith 1990b). During the study, two steelhead smolts were collected from the creek’s lagoon.

Staff from DFG surveyed Pomponio Creek in 2000. The survey report noted “adequate” steelhead spawning and rearing habitat downstream of the waterfall (DFG 2000). Two *O. mykiss* year classes were collected during the sampling. The report recommended decreasing sedimentation through cattle exclusion, evaluating instream flow availability, and riparian revegetation with native species (DFG 2000).

## **Pescadero**

The Pescadero-Butano watershed has headwaters in the Santa Cruz Mountains and drains an area of about 81 square miles. Portions of this system often cited as most important in terms of salmonid resources include the Pescadero mainstem (especially the lagoon) and the upper watershed tributaries Tarwater, Peters, Slate, Oil and Lambert creeks.

Pescadero Creek was one of four “A-1” streams noted in San Mateo County in a 1912 DFG letter and appears to have supported the largest steelhead run in the county historically (DFG 1912). Staff from DFG visited Pescadero Creek in 1946. The resulting report states, “Undoubtedly, the condition of Pescadero Lagoon and the lower part of Pescadero Creek has deteriorated over the years, the lagoon becoming shallower and the summer flows in the stream smaller. The principal causes have been the increasing use of water for irrigation and domestic use, deforestation of the drainage basin, and silting created by highway construction and erosion of cultivated fields” (DFG 1946).

The report from a 1962 DFG survey noted that Pescadero Creek was “under-utilized” due to passage barriers and sedimentation (DFG 1962e). In a 1967 report concerning Love Creek (tributary to the San Lorenzo River), the annual steelhead run of Pescadero Creek was estimated to consist of 1,500 individuals (DFG 1967). (The estimation method is not provided in the report.) Pescadero Creek has been the object of extensive “annual maintenance stockings” and the population may reflect mixed wild, hatchery origin.

Research on the Pescadero Creek watershed indicates the relative importance of the lagoon to the system. According to a principal researcher, up to 80 percent of the steelhead population of the watershed may rear in the lagoon (SWRCB 1996, p. 4).

Staff from DFG surveyed Pescadero Creek in 1996 and observed multiple *O. mykiss* year classes, including YOY and individuals to about 10.5 inches in length. The survey report recommends assuring adequate stream flows for over-summering, reducing nutrient loading, and decreasing sedimentation through land use improvements and re-vegetation (DFG 1996c). Staff from DFG also has recommended only off-stream reservoirs in the watershed and establishing minimum flows to be measured in the area near the mouth of the creek (SWRCB 1996).

A watershed assessment noted abundant salmonid habitat, including areas of high quality habitat in the mid and upper Pescadero Creek watershed (ESA 2004, p. 8-14). The assessment identified several primary limiting factors for the Pescadero Creek system including lack of pool habitat (due in part to logging effects) and sedimentation (ESA 2004). Staff from NMFS observed multiple *O. mykiss* year classes throughout a 13-mile section of Pescadero Creek in 2005, and in four locations in 2006 (Spence pers. comm.). Spawning steelhead were observed in the creek in April 2005 and March 2006 (Stoecker pers. comm.).

In recent years, fishkills have been associated with the breaching of the sandbar forming the Pescadero Creek lagoon. An on-going stakeholder process is being conducted to identify the mechanism for the kills. Recent lagoon sampling produced *O. mykiss* individuals between about 4.5 and 12.5 inches in length (DPR 2007).

### **Butano**

Butano Creek consists of about 14.7 stream miles and is tributary to Pescadero Creek. It flows largely west, entering Pescadero Creek in the Pescadero Marsh.

Titus *et al.* (in prep.) reported DFG observations of juvenile and adult steelhead in Butano Creek in the 1930s. Stocking of the stream was noted in the 1930s as well.

Staff from DFG surveyed Butano Creek in 1964 and noted *O. mykiss* with “fair” natural propagation. The survey report noted that the creek supported both a residualized population of hatchery origin rainbow trout and reproduction by steelhead. The survey report states, “Logging practices have resulted in damage to watershed. Erosion is noticeable. Stream channels have a deep layer of silt” (DFG 1964i).

A 1996 memo concerning habitat limitations notes removal of riparian vegetation and lack of instream flow due to water diversions as factors affecting Butano Creek (DFG 1996b). A 1997 letter from staff at the San Mateo County RCD indicates that Butano Creek supports a steelhead population (Schroeder 1997).

A 2004 watershed assessment assigned low habitat rating scores to Butano Creek and noted sedimentation as the limiting factor in the drainage (ESA 2004). Staff from NMFS surveyed Butano Creek in 2006 and observed multiple *O. mykiss* year classes (Spence pers. comm.). Conversations with a local resident indicate that adult steelhead have been observed up to the base of Butano Falls in recent years (Stoecker pers. comm.).

### **Little Butano**

Little Butano Creek consists of about 4.9 stream miles and is tributary to Butano Creek. It flows west, entering Butano Creek at about stream mile 5.3. In 1958, DFG noted a dam 180 yards upstream from the “bridge on Little Butano” that constituted a

passage barrier (DFG 1958g). A natural falls at stream mile 0.15 (~300 yards upstream from the mouth) was considered a total migration barrier in a 1962 survey (DFG 1962f).

Titus *et al.* (in prep.) noted stocking of Little Butano Creek in the 1930s. During a 1958 survey, DFG noted *O. mykiss* “common to abundant” downstream of the dam and speculated that *O. mykiss* observed upstream of the dam “must be off-spring of resident trout” (DFG 1958g). The survey report recommended dam removal to provide access to “fairly good spawning areas” upstream (DFG 1958g).

In a 1962 survey report, DFG noted “much damage from old logging” in Little Butano Creek (DFG 1962f). The report noted that the creek “had good possibilities for spawning and nursery for trout” but largely was inaccessible due to a culvert and the natural falls in the lower channel (DFG 1962f). In 1977, DFG characterized the creek as “an important tributary to Butano Creek in providing both winter and summer flows” and recommended conserving flows by protesting additional water diversion (DFG 1977c).

Staff from NMFS observed multiple *O. mykiss* year classes in Little Butano Creek in October 1995 (NMFS 1996). A 1996 DFG memo concerning habitat limitations noted sedimentation effects from poorly constructed dirt road crossings and cattle grazing, and nutrient loading from cattle grazing in the Little Butano Creek watershed (DFG 1996b). A 2004 Pescadero Creek watershed assessment found the creek to have “optimal” aquatic habitat and placed priority on conserving and improving habitat in this tributary (ESA 2004). Staff from NMFS surveyed Little Butano Creek in 2006 and observed multiple *O. mykiss* year classes (Spence pers. comm.).

### **South Fork Butano**

South Fork Butano Creek consists of about four stream miles and is tributary to Butano Creek. It flows northwest, entering Butano Creek upstream from Butano Falls.

Staff from DFG surveyed South Fork Butano Creek in 1964 and observed multiple *O. mykiss* year classes, including YOY. The survey report indicates that the population was established by stocking and states, “...under poor stream conditions, ...success is remarkably good” (DFG 1964j). The report adds, “Logging has resulted in erosion problems” (DFG 1964j).

### **Bradley**

Bradley Creek consists of about 2.9 stream miles and is tributary to Pescadero Creek. It flows south, entering Pescadero Creek west of the town of Pescadero.

A 1996 memo regarding coho salmon habitat in San Mateo and Santa Cruz counties addresses Bradley Creek. The memo notes habitat impacts from grazing and over allocation of water rights (DFG 1996b). Staff from DFG visited Bradley Creek in April 1997 and found multiple *O. mykiss* age classes in multiple locations (SWRCB 1997). The resulting report expressed DFG’s opinion that the fish were progeny of steelhead and possibly resident rainbow trout (DFG 1997c). The report stated, “no new diversions should be allowed from March through December” in order to maintain rearing habitat (SWRCB 1997, p. 3).

Bradley Creek was evaluated in 2004 as part of a fish passage study. The resulting report states, “On repeated site visits in spring of 2002..., numerous juvenile steelhead and a single adult steelhead were observed...” (Taylor 2004, App. B)

### **Shaw Gulch**

Shaw Gulch Creek consists of about 1.1 stream miles and is tributary to Bradley Creek. It flows west, entering Bradley Creek at about stream mile 1.9. A reservoir on Shaw Gulch Creek is a total barrier to fish passage (SWRCB 1998).

Staff from several State agencies visited Shaw Gulch Creek in 1998 as part of a water rights investigation and noted the presence of “excellent” spawning and rearing habitat (SWRCB 1998).

### **Bradley Creek tributary (Tahana Gulch)**

This unnamed tributary to Bradley Creek consists of about 1.4 stream miles. It flows southwest, joining Bradley Creek immediately upstream from the Chandler Gulch Creek confluence.

Tahana Gulch Creek was evaluated as part of a 2004 fish passage study. The resulting report states, “Seems like a good fish stream” (Taylor 2004, App. A).

### **Honsinger**

Honsinger Creek consists of about 2.7 stream miles and is tributary to Pescadero Creek. It flows south, entering Pescadero Creek east of the town of Pescadero.

A field note from 1962 indicates the Honsinger Creek does not carry flow during the summer (DFG 1963b). Staff from DFG visited the creek again in 1963. *Oncorhynchus mykiss* of unknown origin were seen upstream of a dam, and a person familiar with the site reported “steelhead...pass over the spillway at the dam site” (DFG 1963c). The dam has since been removed and perennial flow re-established (Nelson pers. comm.).

Staff from DFG visited Honsinger Creek in 1976. The resulting memo states, “It appears the stream will become intermittent shortly and possibly dry up late this summer” (DFG 1976b).

As part of a fish passage evaluation, Honsinger Creek was visited in March 2004. The resulting report states, “Steelhead are currently present in Honsinger Creek and young-of-the-year were observed...in spring of 2002 and March of 2004” (Taylor 2004, p. 43). Eight Honsinger Creek locations were sampled in October 2005 and “Steelhead/rainbow trout were relatively abundant at all sites...” (HES 2005). The resulting report adds, “The future health of these populations is most sensitive to fine sediments (silt and sand) entering the stream from the surrounding watershed lands and reductions in summer flow levels from direct diversion or change in watershed runoff characteristics...” (HES 2005, p. 5).

## **Weeks**

Weeks Creek consists of about 1.5 stream miles and is tributary to Pescadero Creek. It flows northwest, entering Pescadero Creek in the vicinity of Dearborn Park.

In 1993, staff from DFG noted that steelhead historically occurred in Weeks Creek. A water rights protest indicates that construction of on-stream reservoirs prevented access by steelhead and that required bypass flows were not provided despite a requirement to maintain a “live stream” (DFG 1993).

Staff from DFG observed *O. mykiss* in Weeks Creek in 1994 and noted that the individuals could have been from anadromous or resident parents (DFG 1994). The survey report noted several limiting factors including a total passage barrier (*i.e.*, culvert), debris in the channel, and minimal spawning habitat (DFG 1994).

## **McCormick**

McCormick Creek consists of about 1.5 stream miles and is tributary to Pescadero Creek. It flows south, entering Pescadero Creek southeast of Mount Ellen.

Staff from DFG investigated McCormick Creek in 1971 in relation to an application to divert water. The field notes from the visit indicate that juvenile “steelhead trout” were present (DFG 1976c); (DFG 1971b).

As part of a fish passage evaluation, McCormick Creek was visited in October 2003. Several juvenile “salmonids” were observed (Taylor 2004)

## **Hoffman**

Hoffman Creek consists of about 1.2 stream miles and is tributary to Pescadero Creek. It flows north, entering Pescadero Creek west of Oakland Camp.

In the late 1970s and early 1980s, *O. mykiss* was caught in the most downstream one quarter mile of Hoffman Creek according to a personal account (Stoecker pers. comm.).

Hoffman Creek was evaluated as part of a 2004 fish passage study. The resulting report states, “Steep – Deemed not fish bearing” (Taylor 2004, App. A).

## **Tarwater**

Tarwater Creek consists of about 2.2 stream miles and is tributary to Pescadero Creek. It flows south, entering Pescadero Creek approximately two miles downstream from the park headquarters.

In a 1962 DFG stream report, staff found juvenile *O. mykiss* in Tarwater Creek at low densities and attributed limited production to migration barriers (DFG 1962g). The report provides recommended fish flows by season.

Staff from DFG observed *O. mykiss* in Tarwater Creek in 1995, 2000, and 2001 (Nelson pers. comm.). Tarwater Creek was examined as part of a watershed assessment published in 2004. The report finds “optimal” habitat in Tarwater Creek and notes that the tributary requires “special attention in regards to conservation and restoration” (ESA 2004, p. 8-14).

### **Peters**

Peters Creek consists of about 7.3 stream miles and is tributary to Pescadero Creek. It flows southwest, entering Pescadero Creek at the park headquarters. The headwaters of Peters Creek flow through Devils Canyon and this portion of the creek is referred to in some reports as Devils Canyon Creek.

A 1962 memo relays reports of “nearly 200 steelhead in Peters Creek” in that year (DFG 1962h). Also in 1962, DFG found steelhead and rainbow trout “abundant throughout all areas of the stream (DFG 1962i, p. 2). The creek was assessed as having “conditions favorable for silver salmon, steelhead, and rainbow trout spawning and rearing” (DFG 1962i, p. 1).

Staff from DFG surveyed Peters Creek in 1996 and observed multiple *O. mykiss* year classes, including YOY and individuals to about 10 inches in length (DFG 1996d). The creek was examined as part of a watershed assessment published in 2004. The report finds “optimal” habitat in Peters Creek and notes that the tributary requires “special attention in regards to conservation and restoration” (ESA 2004, p. 8-14).

### **Evans**

Evans Creek consists of about 1.3 stream miles and is tributary to Peters Creek. It flows south, entering Peters Creek at about stream mile 0.7. The culvert under Portola Park Road is considered a passage barrier under most, if not all, flows. Additionally, a 13 foot high dam located 1,200 feet upstream from the Peters Creek confluence is a total passage barrier (Nelson pers. comm.).

Staff from DFG surveyed Evans Creek in 1995 and observed multiple *O. mykiss* year classes, including YOY. The creek was deemed to be perennial (DFG 1997d).

### **Bear**

Bear Creek consists of about 1.3 stream miles and is tributary to Peters Creek. It flows west, entering Peters Creek about 1.5 miles upstream from the Evans Creek confluence.

Staff from DFG surveyed Bear Creek in July 1995. The survey report noted that potential spawning sites were “heavily inundated with silt” (DFG 1997e). A small number of *O. mykiss* were observed in the most downstream portion of the creek and DFG reported that the upstream area had “overall poor condition” and was not expected to provide fish habitat (DFG 1997e).

### **Lambert**

Lambert Creek consists of about 1.3 stream miles and is tributary to Peters Creek. It flows southwest, entering Peters Creek approximately 1.7 miles upstream from the Bear Creek confluence.

Staff from DFG observed YOY and age 1+ *O. mykiss* in the lower portion of Lambert Creek during a Peters Creek survey in 1995 (Nelson pers. comm.). Lambert Creek was examined as part of a watershed assessment published in 2004. The report notes that the tributary requires “special attention in regards to conservation and restoration” due to its high quality habitat (ESA 2004, p. 8-14).

## **Fall**

Fall Creek consists of about 1.4 stream miles and is tributary to Pescadero Creek. It flows northeast, entering Pescadero Creek south of the park headquarters. A 1962 survey report noted a natural rock barrier about 300 yards upstream from the mouth of Fall Creek.

A 1962 memo relays a report of “about 25 spawning steelhead” observed in Fall Creek in that year (DFG 1962h). Staff from DFG surveyed the creek in 1962 and observed *O. mykiss* fingerlings. The survey report states, “Fall Creek is an important tributary because of its value as a spawning stream and minor nursery area for steelhead. Summer flows are present.” The report also noted, “This stream supports a relatively large run of steelhead for its size” but suggested management for “spawning grounds only” as “Summer flows are not adequate” (DFG 1962j).

In 2008, staff from DFG indicated that Fall Creek is “very small (e.g., three feet wide, 100 feet between Pescadero and the barrier)” (Nelson pers. comm.).

## **Slate**

Slate Creek consists of about 3.2 stream miles and is tributary to Pescadero Creek. It flows southwest, entering Pescadero Creek approximately 1.6 miles upstream from the park headquarters. A “waterfall barrier” is located at stream mile 1.24 (DFG 1997f).

In a 1962 stream survey, DFG found *O. mykiss* downstream and upstream from natural falls believed to limit steelhead migration (DFG 1962k). The survey report stated that the creek was “an excellent spawning and nursery area for steelhead and/or rainbow trout” (DFG 1962k, p. 2). Upstream from Page Mill, DFG staff noted poor condition of the channel (including heavy siltation) resulting from poor logging practices.

In September 1995, DFG sampled Slate Creek downstream from the waterfall by electrofishing. *Oncorhynchus mykiss* was found at the two sampling stations (DFG 1997f).

Slate Creek was examined as part of a watershed assessment published in 2004. The report finds “optimal” habitat in Slate Creek and notes that the tributary requires “special attention in regards to conservation and restoration” (ESA 2004, p. 8-14).

## **Oil**

Oil Creek consists of about 5.1 stream miles and is tributary to Pescadero Creek. It flows south, entering Pescadero Creek approximately 1.1 miles upstream from the Slate Creek confluence. Staff from DFG indicated in 2008 that no permanent barriers occur in the lower 4.5 miles of Oil Creek (Nelson pers. comm.).

In August 1962, DFG found “steelhead and/or trout” in Oil Creek showing “good” natural propagation and success (DFG 1962l). The survey report noted “poor condition because of silted conditions” due to logging in the lower half of the creek with “good spawning grounds” in the upper stream reach (DFG 1962l).

In October 1995, DFG sampled Oil Creek at 11 stations by electrofishing. *Oncorhynchus mykiss* was found throughout the system, and the survey report recommended decommissioning or stabilizing the road along Oil Creek between stream mile 2.7 and 4.0 for erosion control (DFG 1997g).

Oil Creek was examined as part of a watershed assessment published in 2004. The report finds “optimal” habitat in Oil Creek and notes that the tributary requires “special attention in regards to conservation and restoration” (ESA 2004, p. 8-14).

### **Little Boulder**

Little Boulder Creek drains a watershed of about 1.5 square miles. About 0.75 miles of channel are accessible to migratory fish (DFG 1962m). The stream provides summer flows to Pescadero Creek (DFG 1962m).

In 1962, DFG surveyed Little Boulder Creek and observed “abundant” *O. mykiss*. The report noted that the creek had “good spawning gravel for steelhead and/or trout, nursery grounds and summer flows” (DFG 1962m).

A 2004 Pescadero Creek watershed assessment assigned a habitat rating of ten (of a maximum of 14) to Little Boulder Creek. The assessment gave “moderate” priority to improving habitat in the creek (ESA 2004, p. 8-15).

### **Waterman**

Waterman Creek consists of about 2.9 stream miles and is tributary to Pescadero Creek. It flows south, entering Pescadero Creek approximately 0.7 miles upstream from the Little Boulder Creek confluence. In 2008, DFG staff noted that a defunct ten foot high dam located at approximately stream mile 0.5 is a passage barrier (Nelson pers. comm.).

Staff from DFG surveyed Waterman Creek in August 1962 and observed *O. mykiss*. The creek was characterized as “an unimportant tributary to the Pescadero Creek system” due in part to the presence of a 360 foot culvert in the creek channel (DFG 1962n). This structure was subsequently removed (Nelson pers. comm.).

A 1996 memo concerning coho habitat in San Mateo and Santa Cruz counties notes impacts of excavation activities on Waterman Creek (DFG 1996b). A 1997 letter from the San Mateo County Resource Conservation District notes, “Waterman Creek currently supports a resident trout population (Schroeder 1997).

A 2004 Pescadero Creek watershed assessment assigned a habitat rating of eight (of a maximum of 14) to Waterman Creek. The assessment gave “moderate” priority to improving habitat in the creek (ESA 2004, p. 8-15).

## Arroyo de los Frijoles

Arroyo de los Frijoles consists of about 5.9 stream miles. It flows northwest, entering the Pacific Ocean near Bean Hollow State Beach. The dam forming Lake Lucerne is located about 0.2 miles upstream from the mouth. Upstream, additional impoundments form the Bean Hollow Lakes. Water is transferred from Little Butano Creek to Arroyo de los Frijoles via a flume.

According to a 1948 memo, “Steelhead have been known to come over the spillway at the [Lake Lucerne] dam during periods of high water” (DFG 1948). The origin of the fish described in the memo is not provided.

## Gazos

Gazos Creek consists of about 9.4 stream miles and drains a watershed of approximately eight square miles. It flows southwest, entering the Pacific Ocean north of Franklin Point.

A 1912 report on San Mateo County streams noted perennial flow in Gazos Creek. The creek was given an “A-1” rating for fishing (Smith 1912). In a 1955 stream survey report, DFG staff noted “considerable damage to [Gazos Creek] by...logging” (DFG 1955).

Staff from DFG surveyed Gazos Creek in 1964 and observed multiple *O. mykiss* year classes, including YOY and an individual 22 inches in length. The survey report recommended investigating the effect “of the diversion near the mouth, which stops all flow to the ocean, and the downstream migration of young salmon and steelhead” (DFG 1964k, p. 2). It also recommended discontinuing the on-going catchable trout planting program (that was discontinued in 1973).

In a Gazos Creek survey report from 1978, DFG staff found “siltation and flow reduction due to diversion are significant habitat alteration factors in the lowermost reach” (DFG 1978b). The report recommended monitoring and regulating existing diversions, and protesting additional diversion “to insure adequate bypass conditions” (DFG 1978b).

Staff from DFG operated an outmigrant trap on Gazos Creek in 1993. Steelhead parr and smolts were captured during the trapping. Associated documentation notes that Gazos Creek road is a source of sediment introduced into the creek and recommends a program to address the issue (DFG 1996e).

Records from sampling of numerous Gazos Creek sites between the years 1992 and 1997 indicate the consistent presence of 0+ and 1+ age *O. mykiss* (Smith 1997). This research has led to a characterization of the creek as having “relatively high, stable abundances of young-of-the-year” (Alley 2003). A 1996 DFG memo noted high sedimentation rates produced in part by logging operations and road maintenance and high water diversion levels as affecting habitat in mainstem Gazos Creek (DFG 1996b).

A fishery assessment was conducted for Gazos Creek and the results published in 2003. The study reported lower juvenile *O. mykiss* abundance in the reach downstream from the Old Womans Creek confluence and higher abundance in the upstream reaches. Fine sediment originating from Old Womans Creek was said to “likely restrict YOY steelhead and coho production” in Gazos Creek downstream from the confluence (Alley 2003). Regarding lagoon habitat the assessment states, “The Gazos Creek estuary is generally small and shallow, offering no saltwater transition between the Creek and the ocean. A concern is that if too much streamflow is diverted in dry years, the sandbar may close prematurely to block smolt out-migration for coho and steelhead”

(Alley 2003, p. 16). The study also noted low spring baseflow as a factor limiting juvenile salmonid growth in the spring and early summer.

The 2003 Watershed Assessment and Enhancement Plan for Gazos Creek lists prioritized restoration projects including, most importantly, reducing erosion on lower Old Woman's Creek Road, purchasing water rights, improving large wood-formed instream habitat, and constructing off-stream water storage (Alley 2003). The plan also points to the need for conducting erosion risk assessments in various parts of the watershed.

In reporting on 2006 sampling Dr. Jerry Smith states, "Overall steelhead density (18.7/100 feet) was the lowest since sampling began in 1992" (Smith 2007). The density of yearling fish was said to be "similar to that of recent years."

### **Old Womans**

Old Womans Creek consists of about 2.5 stream miles and is tributary to Gazos Creek. It flows west, entering Gazos Creek at about stream mile 2.2.

In 1964, DFG staff found that "not more than 500" salmonids (two to six inches) existed in Old Womans Creek. The survey report notes "adequate" spawning and nursery habitat (DFG 1964l).

A 1994 DFG survey report said that Old Womans Creek "offers marginal and limited spawning and rearing habitat" (DFG 1996e). The report recommended addressing sediment problems (*i.e.*, siltation) in the creek. A 1996 DFG memo noted high sedimentation rates produced in part by poor road construction and road maintenance as affecting habitat in Old Womans Creek (DFG 1996b).

Staff from DFG observed low densities of *O. mykiss* in the lower portion of Old Womans Creek in 2001 (Nelson pers. comm.). According to a 2003 fishery assessment for Gazos Creek, "[Dr. Jerry] Smith has identified Old Womans Creek as a chronic sediment source with very limited value to the fishery..." (Alley 2003, p. 27).

### **Whitehouse**

Whitehouse Creek consists of about 5.1 miles of channel draining a watershed of about five square miles. It flows southwest, entering the Pacific Ocean south of Franklin Point.

Titus *et al.* (in prep.) note that *O. mykiss* plantings from Scott Creek stock occurred in 1929. A 1954 DFG fish bulletin describes Whitehouse Creek as a "small stream." It is noted to have a "very small steelhead run" (DFG 1954).

A 1978 DFG survey report noted that Whitehouse Creek "has available habitat for steelhead spawning and nursery" (DFG 1978c). The survey found "small salmonids". The report speculated that the 200 yard long, 12 foot wide "tube beneath Highway 1" was a possible barrier to fish migration. Staff from DFG summarized conditions in Whitehouse Creek: "There appears to be little value to the anadromous fishery, due to heavy siltation and downstream barriers" (DFG 1978c).

Whitehouse Creek was surveyed in 1988 by DFG, resulting in multiple observations of *O. mykiss*. Staff distinguished between steelhead and “resident rainbow trout above the concrete dam” (DFG 1988c). Habitat was rated “good to excellent” although degradation by cattle was observed. Other limiting factors cited included barriers and low summer flows.

Staff from DFG surveyed Whitehouse Creek in 1997 and observed “abundant” *O. mykiss* downstream of a perched culvert at about stream mile three (DFG 1997h). The survey report recommended reducing sedimentation in the system and modifying passage barriers, including the concrete apron below Highway 1.

In 2007, staff from DFG characterized the *O. mykiss* population upstream from the Highway 1 crossing as having three year classes in low abundance. Observations made downstream from the highway suggested that only age 1+ individuals were present in low densities (Nelson pers. comm.).

### **Cascade**

Cascade Creek consists of about three stream miles. It flows southwest, entering the Pacific Ocean within the Año Nuevo State Reserve.

A farm manager interviewed as part of a 1978 DFG survey said that the creek formerly supported trout. The survey report noted, “Cascade Creek has little or no value as an anadromous salmonid stream. Damming of the stream prevents fish passage and heavy siltation prevents use of the stream for salmonid spawning” (DFG 1978d).

### **Green Oaks**

Green Oaks Creek consists of about 3.7 miles of channel draining a watershed of approximately three square miles. The creek has several dams in its lower reach.

We did not find information describing conditions on Green Oaks Creek prior to dam construction. Rainbow trout have been stocked in the impoundments in the lower watershed. A 1978 DFG survey report noted, “Green Oaks Creek has little value in its present condition to the anadromous fishery resource” (DFG 1978e).

### **Año Nuevo**

Año Nuevo Creek consists of over four miles of channel draining a 2.3 square mile watershed. A dam at stream mile 0.8 precludes steelhead migration upstream (DFG 1996f).

A 1954 DFG fish bulletin describes Año Nuevo Creek as a “small stream”. It is noted to have a “very small steelhead run” (DFG 1954).

A 1996 DFG survey found multiple year-classes of *O. mykiss* downstream from the dam on Año Nuevo Creek. The survey report recommended surveying habitat resources upstream from the dam (DFG 1996f, p. 8).

## **Finney**

Finney Creek consists of about 1.4 stream miles. It flows southwest into Año Nuevo Bay.

A 1954 DFG fish bulletin describes Finney Creek as a “small stream.” It is noted to have a “very small steelhead run” (DFG 1954).

## **Elliot**

Elliot Creek consists of about 2.1 stream miles. It flows south, entering the Pacific Ocean northwest of the San Mateo/Santa Cruz county border.

A draft inventory of aquatic life in Big Basin Redwoods State Park was prepared in 2000. The report notes that resident rainbow trout occurs in Elliot Creek “...but not within BBRSP boundaries” (Rischbieter 2000, p. AQ-27).

## **Other information regarding San Mateo County steelhead resources**

As part of the 1965 state fish and wildlife plan, DFG prepared an inventory of anadromous salmonids. No major steelhead streams were noted for San Mateo County. However, the county’s streams were estimated to offer about 111 stream miles of steelhead habitat (DFG 1965). The combined spawning steelhead population using these streams was estimated to comprise about 8,000 individuals. The method of estimation was not provided.

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**Table 1. Distribution status of *O. mykiss* in coastal streams of San Mateo County, California<sup>1</sup>**

Watershed	Stream/Tributary	Historical Presence	Current Presence	Evidence of Decline	Anadromy	Current Population Status
San Pedro	San Pedro	DF	DF	Y	Y	3
San Pedro	Middle Fork San Pedro	DF	DF		Y	3
San Pedro	South Fork San Pedro	DF	DF		Y	2
Martini	Martini	DF	PB		N	0
San Vicente	San Vicente	UN	PA		N	0
Denniston	Denniston	DF	DF	Y	Y	3
Deer	Deer	PB	PA		N	0
Arroyo de en Medio	Arroyo de en Medio	PS	UN		UN	0
Frenchmans	Frenchmans	DF	DF	Y	Y	3
Frenchmans	Locks	PB	UN		UN	0
Pilarcitos	Pilarcitos	DF	DF	Y	Y	3
Pilarcitos	Arroyo Leon	DF	DF	Y	Y	3
Pilarcitos	Mills	DF	DF		Y	3
Pilarcitos	Madonna	UN	PA		N	0
Pilarcitos	Apanolio	DF	DF	Y	UN	3
Pilarcitos	Corinda Los Trancos	DF	DF	Y	N	3
Pilarcitos	Nuff	PS	PA		N	0
Pilarcitos	Albert Canyon	DF	DF	Y	Y	3
Cañada Verde	Cañada Verde	DF	UN		UN	0
Purisima	Purisima	DF	DF	Y	N	3
Lobitos	Lobitos	DF	DF	Y	N	3
Lobitos	Schoolhouse	PS	PA		N	0
Lobitos	Rogers Gulch	PS	PA		N	0
Tunitas	Tunitas	DF	DF	Y	Y	3
Tunitas	Dry	DF	DF		Y	3
Tunitas	East Fork Tunitas	DF	DF		Y	3
San Gregorio	San Gregorio	DF	DF	Y	Y	3
San Gregorio	Coyote	UN	PA		N	0
San Gregorio	Clear	UN	PA		UN	0
San Gregorio	El Corte de Madera	DF	DF	Y	Y	3
San Gregorio	Bogess	DF	DF		Y	3

<sup>1</sup>Please see Methods section for an explanation of titles and values used in this table.

**Table 1. Distribution status of *O. mykiss* in coastal streams of San Mateo County, California<sup>1</sup>**

Watershed	Stream/Tributary	Historical Presence	Current Presence	Evidence of Decline	Anadromy	Current Population Status
San Gregorio	Kingston	DF	PA	Y	N	0
San Gregorio	Harrington	DF	DF	Y	Y	3
San Gregorio	La Honda	DF	DF	Y	Y	3
San Gregorio	Woodhams	PS	UN		N	0
San Gregorio	Langley	DF	DF		Y	1
San Gregorio	Woodruff	DF	UN		N	0
San Gregorio	Alpine	DF	DF		Y	3
San Gregorio	Mindego	DF	DF		Y	3
San Gregorio	Rodgers Gulch	DF	DF		UN	1
Pomponio	Pomponio	DF	DF	Y	Y	3
Pescadero	Pescadero	DF	DF	Y	Y	3
Pescadero	Butano	DF	DF	Y	Y	3
Pescadero	Little Butano	DF	DF	Y	UN	3
Pescadero	South Fork Butano	DF	UN	Y	N	0
Pescadero	Bradley	DF	DF		Y	3
Pescadero	Shaw Gulch	UN	UN		UN	0
Pescadero	Bradley Creek tributary (Tahana Gulch)	UN	UN		UN	0
Pescadero	Honsinger	DF	DF	Y	Y	3
Pescadero	Weeks	DF	DF	Y	UN	3
Pescadero	McCormick	DF	DF		Y	2
Pescadero	Hoffman	DF	PA		UN	0
Pescadero	Jones Gulch	PS	UN		UN	0
Pescadero	Tarwater	DF	DF	Y	Y	3
Pescadero	Peters	DF	DF		Y	3
Pescadero	Evans	DF	DF		Y	3
Pescadero	Bear	DF	DF	Y	Y	2
Pescadero	Lambert	DF	DF		Y	3
Pescadero	Fall	DF	UN		UN	0
Pescadero	Slate	DF	DF		Y	3
Pescadero	Oil	DF	DF	Y	Y	3

<sup>1</sup>Please see Methods section for an explanation of titles and values used in this table.

**Table 1. Distribution status of *O. mykiss* in coastal streams of San Mateo County, California<sup>1</sup>**

Watershed	Stream/Tributary	Historical Presence	Current Presence	Evidence of Decline	Anadromy	Current Population Status
Pescadero	Little Boulder	DF	DF		Y	3
Pescadero	Waterman	DF	DF		Y	1
Arroyo de los Frijoles	Arroyo de los Frijoles	DF	UN	Y	N	0
Gazos	Gazos	DF	DF	Y	Y	3
Gazos	Old Womans	DF	DF	Y	Y	3
Whitehouse	Whitehouse	DF	DF	Y	Y	3
Cascade	Cascade	PB	UN		UN	0
Green Oaks	Green Oaks	PS	UN		N	0
Año Nuevo	Año Nuevo	DF	DF	Y	Y	2
Finney	Finney	DF	UN		UN	0
Elliot	Elliot	DF	DF		UN	1

<sup>1</sup>Please see Methods section for an explanation of titles and values used in this table.

