See **www.Acterra.org/watershed** for more information about steelhead and how you can help restore habitat through these San Francisquito Watershed Council programs:

Volunteer workdays

Grab some friends and join us to plant native plants or clean up the creek!

Citizen Streamkeepers

Adopt a stretch of creek in the San Francisquito watershed and help track the health of the creek.

Creek walks

Learn first-hand about this unique ecosystem on one of our guided tours of the creek.

Funded by the San Francisco Foundation - Bay Fund
Brochure design by Rebecca Raybin and the San Francisquito Watershed Council
Steelhead drawing (cover) by Paula McKenzie Nelsen

San Francisquito Watershed Council
a project of Acterra
3921 East Bayshore Road
Palo Alto, CA 94303

steelhead

A Protected Species in San Francisquito Creek

2004 Acterra

Steelhead in San Francisquito Creek?

Yes! They're here!

30" steelhead in pool under San Mateo bike bridge, May 2002. Photo by Jay Gertridge.

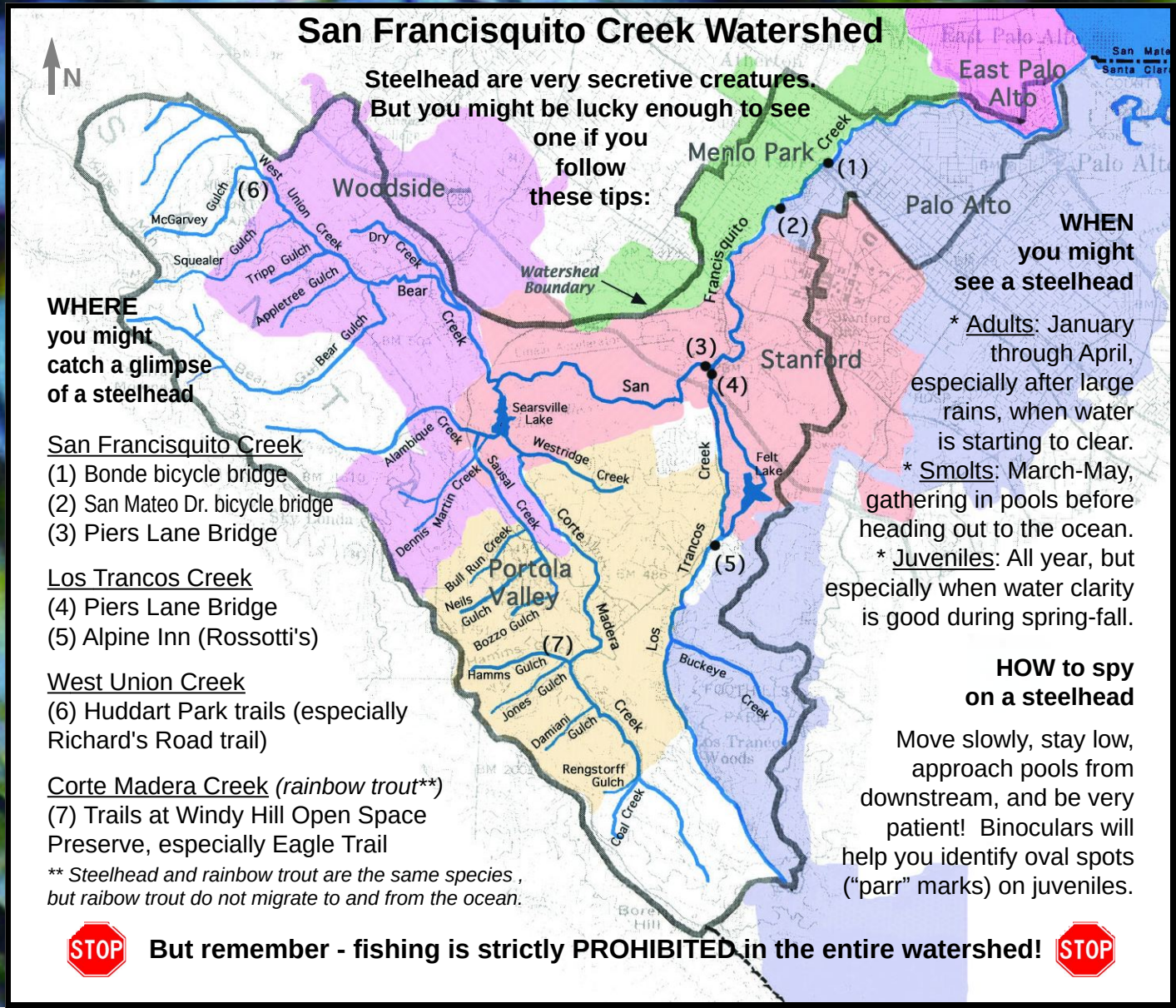
Steelhead are *anadromous* – they are born in freshwater creeks, migrate to the ocean to mature, then return to their natal creek to spawn.

San Francisquito's steelhead, so numerous in the early 1900s that sport fishing helped put the area on the map, have declined over time. But thanks to the wild nature of much of the upper watershed, these fish have persisted in our creek and are an important regional population for potentially repopulating other nearby creeks where steelhead have been lost.

While steelhead are found along the entire west coast of the United States, the California population is less than half what it was 30 years ago* and steelhead of Central California (from the Russian River to Soquel Creek) were listed as "threatened" under the Endangered Species Act in 1997.

* http://www.naparcd.org/steelheadtrout.htm

San Francisquito Creek Watershed



Steelhead are very secretive creatures. But you might be lucky enough to see one if you follow these tips:

WHERE you might catch a glimpse of a steelhead

<u>San Francisquito Creek</u>
(1) Bonde bicycle bridge
(2) San Mateo Dr. bicycle bridge
(3) Piers Lane Bridge

<u>Los Trancos Creek</u>
(4) Piers Lane Bridge
(5) Alpine Inn (Rossotti's)

<u>West Union Creek</u>
(6) Huddart Park trails (especially Richard's Road trail)

<u>Corte Madera Creek</u> *(rainbow trout**)*
(7) Trails at Windy Hill Open Space Preserve, especially Eagle Trail

*** Steelhead and rainbow trout are the same species , but raibow trout do not migrate to and from the ocean.*

WHEN you might see a steelhead

* <u>Adults</u>: January through April, especially after large rains, when water is starting to clear.
* <u>Smolts</u>: March-May, gathering in pools before heading out to the ocean.
* <u>Juveniles</u>: All year, but especially when water clarity is good during spring-fall.

HOW to spy on a steelhead

Move slowly, stay low, approach pools from downstream, and be very patient! Binoculars will help you identify oval spots ("parr" marks) on juveniles.

STOP **But remember - fishing is strictly PROHIBITED in the entire watershed!** STOP

Steelhead face threats at every stage of their life cycle.

Upstream Migration

Smith and Harden, 2001

Some manmade structures in the creeks (culverts and dams) impede upstream migration of steelhead by:

- making water depths too shallow for fish to cross during low flows
- making velocities too fast during high flows
- creating obstacles that are too high for many fish to jump.

Spawning

Manu Esteve, 2000

Steelhead need clean streams with gravel beds in which to lay their eggs. Human activities can accelerate erosion, which covers the streambed with excessive amounts of fine sediment and smothers the eggs in the gravel.

Ocean Rearing

California Coastal Records Project, 2002

Once they reach the ocean, steelhead can be threatened by pollution and over-fishing.

Rearing

Matt Stoecker, 2003

Juvenile steelhead spend two to three years in the creek before migrating to the ocean and need year-round pools to survive the dry summers. Human activities can reduce the amount of water and degrade the water quality in these pools.

Out-Migration

Jim Johnson, 1995

Steelhead smolt wait until late spring to migrate to the Bay. Any influences that cause the creek to dry out earlier than usual can leave smolts stranded in disconnected pools that may dry completely during the summer.

But what can I do to help?

Keep native vegetation where you find it and don't plant exotic shrubs and trees by the creek. Native plants provide food, shelter, and shade for steelhead and other wildlife, prevent bank erosion, and filter pollutants out of runoff as it flows toward the creek.

Wash your car at a car wash or on a grassy area where soapy water will not run into storm drains which empty into the creek. Even "biodegradable" soaps remove a fish's protective mucus coating, making it susceptible to disease and mold.

Image courtesy of the Chester County Water Resources Authority

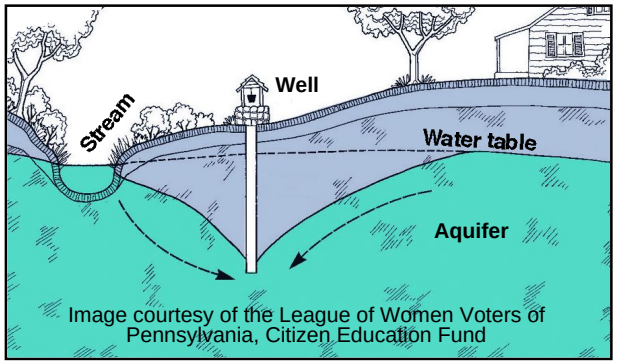


Image courtesy of the League of Women Voters of Pennsylvania, Citizen Education Fund

Be conscious that surface water and groundwater are connected. Pumping groundwater can lead to lower creek levels or even dry creekbeds, especially during the summer. Juvenile steelhead typically spend two years in the creek before they migrate to the ocean.

Compost yard clippings and use pesticides and fertilizers sparingly. Yard clippings and fertilizers in runoff add excess nutrients to the creek and contribute to algae blooms.

Fishing is prohibited in the entire San Francisquito watershed. Also, do not dump aquatic pets into the creek. They are exotic and will disrupt the delicate balance of the stream's ecosystem.

The **Steelhead Task Force** is helping improve habitat for the wild steelhead that call San Francisquito Creek home.

- 2 dead steelhead found in SF Creek, proof that steelhead still run up this creek - 1988

1990

- Natural Resources Task Force formed - 1994
- Began discussions leading to first fish passage project: Stanford installed Felt Lake diversion fish ladder - 1995
- Began posting "No fishing" signs along creeks - 1995
- Began monitoring flows and water quality of important rearing habitat in Bear and West Union Creeks - 1999

2000

- Steelhead Task Force officially established
- 1 barrier modified on SF Creek and 5 barriers removed in upper watershed to improve steelhead migration

2001

- Instream survey identified 24 significant barriers to steelhead migration in SF watershed
- 2 barriers modified (SF Creek and Corte Madera Creek)
- Task Force members join Searsville Dam work group to discuss dam's future

2002

- 2 barriers modified (SF Creek and Bear Creek) and concrete slabs removed from pool on SF Creek
- Raised concerns over observed summer drying of West Union Creek

2003

- 1 barrier modified (West Union Creek)
- Continued planning and design work to improve passage at 8 barriers throughout watershed

The Steelhead Task Force is a voluntary work group spearheaded by the San Francisquito Watershed Council (a project of Acterra), the San Francisquito Creek Joint Powers Authority, the California Department of Fish and Game, and Stanford University. The California Department of Water Resources, American Rivers, the Santa Clara Valley Water District, the Northern California Council Federation of Fly Fishers, the California Coastal Conservancy, the United States Geological Survey, NOAA Fisheries, the cities of Menlo Park and Palo Alto, and other individuals and organizations have provided critical technical and financial support.