

Fish and Wildlife in the Corte Madera Creek Watershed

Prepared by
Friends of Corte Madera Watershed
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Many creatures are found in the watershed. The following categories are discussed below: invertebrates, fish, amphibians and reptiles, birds, and mammals.

Invertebrates

Detailed information regarding the aquatic invertebrate populations is limited to the middle, lower, and tidally influenced portions of the watershed. Information about the Ross area provided by the Corps of Engineers (1987) suggests that the creeks support a diverse aquatic insect population. Insects observed include water striders, water scorpions, giant water bugs, water boatmen, water bugs (*Naucoridia* and *Dytiscidae*), diving beetles, whirligigs, Dobson fly larvae, caddis fly larvae, damselfly nymphs, dragonfly nymphs, mayfly nymphs, mosquitoes, gnats, and black flies. Crayfish are commonly observed in the freshwater reaches of the creek.

Benthic sampling of the non-tidal reaches of the creek (COE 1987) indicated that dipteran (fly) larvae were numerically dominant. Only a few reaches of the creek supported the generally herbaceous mayfly larvae. Omnivorous coroxid beetles were also noted. Pulmonate snails, invertebrates that are moderately tolerant of pollution, tend to dominate the benthic biomass. Larvae and emergent adult insects are particularly important food sources for young steelhead trout.

In the tidal areas of the watershed, the species are typical of those found throughout San Francisco Bay. The two dominant benthic species found in Corte Madera Creek tidal areas are the gem clam (*Gemma gemma*) and the amphipod *Ampelisca abdita*. Other species found there were the clam *Chone gracilis*, the Asian clam (*Potamocorbula amurensis*), Sipunculid worms, and the small mussel (*Musculus senhousia*). Another important invertebrate found within tidal areas is crangon shrimp (*Crangon franciscorum*) that were collected in otter trawl tows (Chamberlain *et al.* 1991 cited in RWQCB undated). The shrimp are reported to be most abundant in the outer portion of the creek. In addition to crangon shrimp, other common invertebrates are crabs (spider, mud, Oregon, cancer, and Dungeness), nudibranchs, and cnidarians.

Fish

The fish species found in Corte Madera Creek and its tributaries reflect the range of conditions from euryhaline to completely freshwater. Table 1 lists fish species observed in Corte Madera Creek watershed.

Fish Observed in Freshwater Streams

Leidy (1984; cited in RWQCB undated) reported that 13 fish species have been collected from Corte Madera Creek watershed streams. Stream surveys conducted by the California Department of Fish and Game from 1960 through 1980 showed five dominant species present in the creek (sucker, roach, stickleback, sculpin, and steelhead) with occasional sightings of coho salmon (*Oncorhynchus kisutch*). The RWQCB staff conducted field surveys during the summer of 1992 using both visual observation and seine nets and found five dominant species present. The three most frequently observed species were the California roach (*Hesperoleucus symmetricus*), Sacramento sucker (*Catostomus occidentalis*), and three-spined stickleback (*Gasterosteus aculeatus*). Since these surveys were conducted during a long drought period and during the summer, RWQCB staff did not expect to find many salmonids; however, they collected 11 steelhead trout (*Oncorhynchus mykiss*) and observed many others. All steelhead were observed or trapped in deep, shaded pools under overhangs, log debris, and bridges.

In 1999 A.A. Rich conducted electrofishing in Cascade, Corte Madera, San Anselmo, Sleepy Hollow and Ross creeks and captured steelhead/rainbow trout, three-spine stickleback, California roach, sculpin species, and Sacramento sucker. In San Anselmo Creek steelhead/rainbow trout were the most abundant species of the five that were collected. Only steelhead/rainbow trout were collected in Cascade and Ross creeks. Roach, stickleback and

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Table 1: Fish Reported in Corte Madera Creek Watershed and Estuary

Scientific Name	Common Name	Native * Species?	Habitats	Source of Observation
<i>Alosa sapidissima</i>	American shad	no	TIDAL	4
<i>Atherinops affinis</i>	topsmelt	yes	TIDAL	3
<i>Archoplites interruptus</i>	Sacramento perch	yes	FW/TIDAL	3, 5
<i>Carcharias taurus</i>	sand shark	?	TIDAL	3
<i>Catostomas occidentalis</i>	Sacramento sucker	yes	FW	1, 3
<i>Citharichthys stigmaeus</i>	speckled sanddab	yes	TIDAL	3
<i>Clupea harengus</i>	Pacific herring	yes	TIDAL	4
<i>Cottus asper</i>	prickly sculpin	yes	FW/TIDAL	1, 4(?), 5
<i>Cottus gulosus</i>	riffle sculpin	yes	FW	1, 3, 4(?), 5
<i>Cymatogaster aggregata</i>	shiner perch	yes	TIDAL	3
<i>Cyprinus carpio</i>	carp	no	FW/TIDAL	6
<i>Dorosma petenense</i>	threadfin shad	no	TIDAL	4
<i>Engraulis mordax</i>	northern anchovy	yes	TIDAL	3, 4
<i>Eucyclogobius newberryi</i>	tidewater goby	yes	TIDAL	1
<i>Gambusia affinis</i>	mosquitofish	no	FW/TIDAL	1
<i>Gasterosteus aculeatus</i>	threespine stickleback	yes	FW	1, 3, 5
<i>Gillichthys mirabilis</i>	longjaw mudsucker	yes	TIDAL	1, 3
<i>Hesperoleucus symmetricus</i>	California roach	yes	FW	1, 3, 5
<i>Hippoglossus stenolepis</i>	Pacific halibut	yes	TIDAL	4
<i>Hippoglossina stomata</i>	bigmouth sole	no	TIDAL	2, 4
<i>Hysterocarpus traski</i>	tule perch	yes	FW	1
<i>Lepidogobius lepidus</i>	bay goby	yes	TIDAL	3
<i>Leptocottus armatus</i>	Pacific staghorn sculpin	yes	TIDAL	1, 3
<i>Lucania parva</i>	rainwater killifish	yes		1
<i>Morone saxatilis</i>	striped bass	no	TIDAL	3, 4
<i>Onchorhynchus mykiss</i>	steelhead/rainbow trout	yes	FW/TIDAL	1, 3, 5, 6
<i>Onchorhynchus tshawytscha</i>	Chinook salmon	yes	FW/TIDAL	3, 6
<i>Osmerus sp.</i>	smelt		TIDAL	4
<i>Paralichthys californicus</i>	California halibut	yes	TIDAL	4
<i>Platichthys stellatus</i>	starry flounder	yes	TIDAL	3, 4
<i>Pomoxis nigromaculatus</i>	black crappie	no	FW/TIDAL	3
<i>Porichthys notatus</i>	plainfin midshipman	yes	TIDAL	3
<i>Ptychocheilus grandis</i>	Sacramento squawfish	yes	FW/TIDAL	1
<i>Salmo trutta</i>	brown trout	no	FW	3
<i>Syngnathus leptorhynchus</i>	bay pipefish	yes	TIDAL	3, 4
<i>Tridentiger bifasciatus</i>	Shimofuri goby	no	TIDAL	4

Fish not identified to genus or species:

rays	TIDAL	3
skates	TIDAL	3

* Information on distribution taken from these two websites.
<http://elib.cs.berkeley.edu/kopec/tr9/html/species-scientific-name-list.html>
<http://www.fishbase.org/Nomenclature/NominalSpeciesList.cfm?family=Paralichthyidae>

References:

- 1 Leidy, R. 1984. Distribution and Ecology of Stream Fishes in the San Francisco Bay Drainage. *Hilgardia* 52 (8). October.
- 2 Chamberlain, Cohen, Fiorillo, Fountain, McDonough, Smith, ed. Josselyn. 1991. Ecology of Corte Madera Creek: A Class Project. Romberg Tiburon Center, San Francisco State University. December 1991.
- 3 Regional Water Quality Control Board. 1992. Corte Madera Watershed Resource Evaluation and Information Report. Prepared by Jill Marshall, Craig Denisoff, and Dale Hopkins, Staff to the Regional Water Quality Control Board San Francisco Bay Region, Oakland, California. 38 pp.
- 4 Friends & MCDPW 1998: Observations made by in 1998 Richard Slusher (Friends) and Liz Lewis (Marin County DPW) as fish were removed from an area being dewatered for dredging of the stilling basin downstream of the concrete flood control channel.
- 5 A.A. Rich. 2000. Fishery Resource Conditions of Corte Madera Creek Watershed, Marin County California. Prepared for Friends of Corte Madera Creek Watershed. November 2000.
- 6 Miscellaneous observations by or reported to Friends of Corte Madera Creek Watershed in 2003 and 2004.

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sucker were the predominant species in Corte Madera Creek; trout and roach were the most prevalent species in San Anselmo Creek; and stickleback and roach were the most prevalent species in Sleepy Hollow Creek (Rich 2000).

In 1999 A.A. Rich conducted electrofishing in Cascade, Corte Madera, San Anselmo, Sleepy Hollow and Ross creeks and captured rainbow/steelhead trout, threespine stickleback, California roach, sculpin species, and Sacramento sucker. Compared to the other four fish species, trout were the most numerous in San Anselmo Creek; only trout were collected in Cascade and Ross creeks. Roach, stickleback and sucker were the predominant species in Corte Madera Creek; trout and roach were the most prevalent species in San Anselmo Creek; and stickleback and roach were the most prevalent species in Sleepy Hollow Creek (Rich 2000).

A spawning pair of Chinook salmon was observed by Michael Cronin just below Saunders Avenue in ____ 2003. Friends of Corte Madera Creek members have observed steelhead both above and below the fish ladder at the upstream end of the concrete channel in Ross and in San Anselmo in January and March 2004. A single large steelhead was reported from Tamalpais Creek in early April 2004.

Fish Observed in Tidal Areas

Primary species found in the tidal reaches of the watershed include: bay goby, speckled sanddab, northern anchovy, striped bass, staghorn sculpin, plainfin midshipman, shiner surfperch, bay pipefish, and longjaw mudsucker. In 1991, Chamberlain *et al.* netted a bigmouth sole (*Hippoglossina stomata*) in the tidal area of Corte Madera Creek, the first such documentation of this fish in San Francisco Bay. (Prior to the find, the northern-most range of this species was believed to be Monterey Bay.) Rays, skates, and sand sharks may also be found at the mouth of the creek. A leopard shark was seen in the concrete channel below College Avenue in March 2004. Carp, which are seen in large numbers periodically, have been sited numerous times in the concrete channel in spring 2004.

Amphibians and Reptiles

The California newt (*Taricha torosa*), Pacific giant salamander (*Dicamptodon ensatus*), arboreal salamander (*Aneides lugubris*), California slender salamander (*Batrachoseps attenuatus*), yellow-eyed salamander (*Ensatina eschscholtzi xanthoptica*), and Pacific treefrog (*Hyla regilla*) have been observed in the watershed (Andrew Goldman, personal observation). Numerous unidentified toads and frogs are also known from the watershed. The watershed is within the range of both the California red-legged frog (*Rana aurora draytonii*) and the foothill yellow-legged frog (*Rana boylei*) and these species may occur in the watershed.

Northwestern pond turtles (*Emys marmorata pallida*) occupy Phoenix Lake. Lizards seen in the watershed include the western fence lizard (*Sceloporus occidentalis*) and alligator lizards (*Gerrhontus* spp.). Numerous snakes are found in the watershed, including common king snake (*Lampropeltis getulus*), ringneck snake (*Diadophis punctatus*), gopher snake (*Pitiophis melanoleucus*), sharp-tailed snake (*Contia tenuis*), various garter snakes (*Thamnophis* spp.), and western rattlesnake (*Crotalus viridis*).

Birds

Resident birds of the watershed include California quail, scrub jay, California jay, Anna's hummingbird, house finch, northern mockingbird, red-winged blackbird, Brewer's blackbird, American robin, mourning dove, and band-tailed pigeon. Migratory birds are represented by cedar waxwings and various warblers. Insectivorous birds specifically attracted to riparian corridors include Wilson's and yellow warblers, Bewick's and house wrens, downy woodpeckers, flickers, vireos, and gnatcatchers. Seed-eaters in this environment include goldfinches, song sparrows, black-headed grosbeaks, towhees, Bullock's and hooded orioles, and lazuli buntings. Northern spotted owls are resident in Cascade Canyon in Fairfax.

The following species were observed incidentally during riparian vegetation studies in San Anselmo during 1996: spotted towhee (*Pipilo maculatus*), green heron, red-shouldered hawk, Nuttall's woodpecker, crow, black phoebe, western tanager, snowy egret, common merganser, belted kingfisher, bushtit, Pacific slope flycatcher, and chestnut-backed chickadee. Green herons have also been observed in the watershed.

The Marin Audubon Society lists the following bird species as being present in the lower portion of the watershed: swallows (cliff, violet-green, barn, and rough-winged), raptors (American kestrel, white-tailed kites, red-tailed hawk, short-eared owl, burrowing owl), egrets (great and snowy), herons (great blue and black-crowned night),

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diving ducks (western grebes, loons, mergansers), and shorebirds (northern phalaropes, least sandpipers, western sandpipers, marbled godwit, long-billed curlew, avocets, willets, and killdeer). The California clapper rail is also found at Creekside Park in Kentfield and at the Corte Madera Ecological Reserve, south of the Larkspur Ferry Terminal.

Mammals

Squirrels represent the most common diurnal mammal species in the watershed. Other rodents include Norway rats, wood rats, and deer mice. Deer, raccoons, rabbits, opossums, skunks, and vagrant shrews are also present. The trees, and associated understory along the creeks provide food, shelter, and excellent travel corridors for mammals.

Mountain lions, bobcats, gray fox, and other wildlife are found in the upper part of the watershed. There are likely to be several bats resident in the watershed, but additional information is needed on them.

In the tidal areas, the black-tailed hare, meadow mouse, Beechey ground squirrel, California vole, muskrats, and salt marsh harvest mouse have been observed. Domestic animals are common in the watershed.

Listed and Other Special Status Fish and Wildlife in the Watershed

The watershed is either known to provide habitat or may provide habitat for the special status species in Table 2. They include all species listed as threatened or endangered by the USFWS or by the State of California; all candidates for listing; California species of special concern; and federal species of concern. The species discussed below are those which have been observed in the watershed.

Fish

Oncorhynchus kisutch Coho salmon

Coho salmon live in cool to cold streams along the Pacific Coast, from Alaska to Monterey Bay, California. They spawn in these streams, the young migrate to sea where they live for a number of years, then migrate to the streams where they hatched for spawning. After spawning, adults die. Coho salmon were last observed in Corte Madera Creek in 1982 (CDFG 2004).

Oncorhynchus mykiss Steelhead / rainbow trout

This species is native to the Pacific Coast, where it lives in cold streams and lakes. Populations of this species that migrate to the ocean are called steelhead; those that remain in fresh water are known as rainbow trout. This species can survive spawning and return to the ocean, unlike coho salmon. A small population of steelhead is present in Corte Madera Creek.

Amphibians

Rana aurora draytonii California red-legged frog

The California red-legged frog is a pond-dwelling species of the Coast Ranges and west side of the Sierra Nevada. Its habitat is permanent ponds and streams that have emergent vegetation to provide cover for eggs masses and larvae. In the winter, these frogs take shelter in adjacent upland habitats. California red-legged frogs are known from the Little Carson area and may be found in the Corte Madera Creek watershed.

Reptiles

Emys marmorata marmorata Northwestern pond turtle

The western pond turtle occurs from the Pacific Northwest through the Central Valley, southern Coast Ranges, and northern Baja California. Marin County is in the range of the northwestern pond turtle. Pond turtles inhabit ponds, marshes, streams, and ditches that typically have a rocky or muddy substrate and support emergent vegetation (Stebbins 1985). These turtles are found in Phoenix Lake.

Table 2: Preliminary list of special status fish and wildlife species in Corte Madera Creek watershed

Scientific Name	Common Name	Fed.	Status State	Other
Fish				
<i>Oncorhynchus kisutch</i>	coho salmon	T	E	
<i>Oncorhynchus mykiss</i>	steelhead trout	T		
Amphibians				
<i>Rana aurora draytonii</i>	California red-legged frog	T	SSC	
<i>Rana boylei</i>	foothill yellow-legged frog	SPOC	SSC	
Reptiles				
<i>Emys marmorata marmorata</i>	northwestern pond turtle	SPOC	SSC	
<i>Phrynosoma coronatum frontale</i>	coast horned lizard	SPOC	SSC	
Birds				
<i>Accipiter cooperi</i> (nesting)	Cooper's hawks		SSC	
<i>Accipiter striatus</i> (nesting)	sharp-shinned hawk		SSC	
<i>Amphispiza belli belli</i>	Bell's sage sparrow	SPOC	SSC	
<i>Ardea alba</i> (rookery)	great egret			CDF Sens
<i>Ardea herodias</i> (rookery)	great blue heron			CDF Sens
<i>Asio flammeus</i> (nesting)	short-eared owl		SSC	
<i>Asio otus</i> (nesting)	long-eared owl		SSC	
<i>Circus cyaneus</i> (nesting)	northern harrier		SSC	
<i>Elanus leucurus</i> (nesting)	white-tailed kite			
<i>Eremophila alpestris actia</i>	California horned lark		SSC	
<i>Falco columbarius</i> (wintering)	merlin	SPOC	SSC	
<i>Lanius ludovicianus</i> (nesting)	loggerhead shrike		SSC	
<i>Larus californicus</i> (nesting)	California gull		SSC	
<i>Laterallus jamaicensis coturniculus</i>	California black rail	SPOC	T	
<i>Numenius americanus</i> (nesting)	long-billed curlew	SPOC	SSC	
<i>Pandion haliaetus</i> (nesting)	osprey		SSC	
<i>Pelecanus erythrorhynchos</i> (nesting colony)	American white pelican		SSC	
<i>Phalacrocorax auritus</i> (rookery)	double-crested cormorant		SSC	
<i>Progne subis</i> (nesting)	purple martin		SSC	
<i>Rallus longirostris obsoletus</i>	California clapper rail	E	E	
<i>Speotyto cunicularia</i>	burrowing owl	SPOC	SSC	
<i>Strix occidentalis cuarina</i>	northern spotted owl	T		CDF Sens
Mammals				
<i>Reithrodontomys raviventris</i>	Salt marsh harvest mouse	E	E	

Status:

Federal: E = endangered; SPOC = species of concern; T = threatened.

State: E = endangered; SSC = species of special concern; T = threatened.

Other: CDF Sens = California Department of Forestry sensitive species.

Notes: Species are listed in alphabetical order by scientific name, within taxonomic groups.

Birds

Accipiter cooperi (nesting) Cooper's hawks

Cooper's hawk is a woodland species and also seen around urban areas. It is known as a predator of birds, but it also feeds on small mammals. The Cooper's hawk builds its nest in high trees and lays two to five eggs. Cooper's hawks were observed at Corte Madera Marsh, Phoenix Lake, Larkspur in December 2003 (Marin Audubon Society 2004).

Accipiter striatus (nesting) sharp-shinned hawk

This species formerly bred in small numbers throughout much of northern California and in very small numbers in all the mountain ranges of southern California as far south as San Diego Co. As of 1978, Remsen reported that the breeding population appeared greatly reduced from former levels, but data are lacking. Only a few individuals are

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reported during the summer months, and almost all of these are from northern California. Sharp-shinned hawks were observed in Fairfax and Larkspur in December 2003 (Marin Audubon Society 2004).

Ardea alba Great egret

The great egret is a striking large white bird, a resident of the Central Valley of California, coastal Mexico, and the Gulf States, and breeding throughout much of the Great Plains. The great egret is a wading bird, foraging for snakes, frogs, and invertebrates in shallow water. Egrets nest colonially, similar to herons, in trees or shrubs near water (Cogswell 1977). Great egrets were observed at Corte Madera Marsh, Phoenix Lake, Larkspur in December 2003 (Marin Audubon Society 2004).

Ardea herodias Great blue heron

The great blue heron is a widespread species, a common resident along the entire Pacific Coast of central to southern North America. The great blue heron hunts in shallow water by wading slowly, then catching small reptiles, amphibians, and invertebrates. The critical habitat feature is the rookery, which is used by large numbers of individuals for many years. Great blue herons were observed at Corte Madera Marsh, Phoenix Lake, Larkspur in December 2003 (Marin Audubon Society 2004).

Circus cyaneus (nesting) northern harrier

Northern harriers are found in many areas including open fields, meadows and marshes, except during mating season where they are found in marsh-like areas. In summer months it ranges from Alaska to the northern U.S. In winter months the distribution shifts southward, occupying an area from the southern states of the U.S. to Central America, where the largest winter concentrations occur (Limas 2001). Northern harriers were observed at Corte Madera Marsh in December 2003 (Marin Audubon Society 2004).

Elanus leucurus White-tailed kite

The white-tailed kite has a disjunct distribution, occurring as a resident along the Gulf Coast in Texas and Mexico and in the valley and coastal regions of central and southern California. White-tailed kites are found in open country such as grasslands, marshes, where they hover while foraging for rodents and insects. White-tailed kites were observed at Corte Madera Marsh in December 2003 (Marin Audubon Society 2004).

Falco columbarius (wintering) merlin

This small, fast falcon is found in open areas, like marshlands and grasslands, and open woods (Sibley 2000). They may nest in coniferous woodlands (Grover 1999). One merlin was observed at Phoenix Lake in December 2003 (Marin Audubon Society 2004).

Larus californicus (nesting) California gull

California gulls live in areas that contain lakes, marshes, and along the seacoast. They also reside on offshore islands, near rivers, agricultural land, and garbage dumps. When breeding, they often construct their nests near shrubs by bodies of water (Sherman 2002). California gulls were observed at Phoenix Lake, Fairfax, and Larkspur in December 2003 (Marin Audubon Society 2004).

Numenius americanus Long-billed curlew

The long-billed curlew is migratory, breeding in southwestern Canada and in the United States east of the Cascades, including northeastern California, through the western Great Plains. It winters from the Central Valley of California to southern Arizona, southeastern New Mexico, and the Texas panhandle south. The long-billed curlew is found in grasslands, meadows and pastures, and also may be found on tidflats, beaches and salt marshes in winter. Although long-billed curlews may be seen on fallow agricultural fields, conversion of natural lands to agriculture greatly diminishes the available forage for these wintering birds. The most highly preferred habitats have been natural marshes and grasslands, irrigated pastures, and alfalfa fields. Long-billed curlews were observed at Corte Madera Marsh in December 2003 (Marin Audubon Society 2004).

Phalacrocorax auritus (rookery) Double-crested cormorant

The double-crested cormorant historically bred on coastal California cliffs and offshore islands, and large interior marshes in the Central Valley, northeastern California, and the Salton Sea. The double-crested cormorant feeds on fish and medium-sized crustaceans. It occurs regularly in freshwater habitats, nesting on colonies on cliffs, trees, or occasionally power lines (Cogswell 1977). During the Christmas Bird Count for 2003, double-crested cormorants were observed at Corte Madera Marsh, Phoenix Lake, and Larkspur (Marin Audubon Society 2004).

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Rallus longirostris obsoletus California clapper rail

The California clapper rail is a small marsh bird that feeds on a variety of invertebrates, including mollusks and crustaceans. It is a year-round resident of Corte Madera Ecological Reserve and Muzzi Marsh, both located at the mouth of Corte Madera Creek (CDFG 1992). According to informal reports from the Marin Audubon Society, this species is also found at Creekside Park in Kentfield. During the Christmas Bird Count for 2003, 11 California clapper rails were observed at Corte Madera Marsh (Marin Audubon Society 2004). Although over 90% of the population of this bird is found in the southern part of San Francisco Bay, the watershed provides important habitat for this species.

Speotyto cunicularia Burrowing owl

Burrowing owls inhabit open grasslands and shrublands in the Central Valley, coastal regions, and deserts of California. They live and breed in burrows created by badgers and ground squirrels. Burrowing owls occur in open ground and forage on small rodents and larger insects. They require burrows dug by fossorial mammals; the burrowing owls take over when the burrows are abandoned by the original resident.

Strix occidentalis caurina Northern spotted owl

The spotted owl is a medium-sized owl with dark eyes, dark-to-chestnut brown coloring, with whitish spots on the head and neck and white mottling on the abdomen and breast. The adult female is typically larger than the male. Spotted owls use a wider array of forest types for foraging, including more open and fragmented habitat. Habitat that meets the spotted owl's need for nesting and roosting also provides foraging habitat. However, some habitat that supports foraging may be inadequate for nesting and roosting. In the southern, lower-elevation portions of the owl's range, the species often forages along the edges of dense forests and in more open forests, preying on the dusky-footed woodrat (*Neotoma fuscipes*). Spotted owls are known to nest in Cascade Canyon, Fairfax.

Mammals

Reithrodontomys raviventris Salt marsh harvest mouse

The salt marsh harvest mouse is endemic to the salt marshes of Suisun, San Pablo, central, and south San Francisco bays. It inhabits both tidal and nontidal marshes (CDFG 1992). This mouse was observed at the Corte Madera Ecological Reserve in 1975 (USFWS 1984 cited in ESA 1987).

References Cited

CDFG 1992

California Department of Fish and Game. 1992. *1991 Annual Report on the Status of California State Listed Threatened and Endangered Animals and Plants*. Published by the Resources Agency, Department of Fish and Game, Sacramento, California. 193 pp.

Chamberlain *et al.* 1991

Chamberlain, Cohen, Fiorello, Fountain, McDonough, Smith. 1991. *Ecology of Corte Madera Creek: A Class Project*, edited by Josselyn. Romberg Tiburon Center, San Francisco State University. December 1991.

Cogswell 1977

Cogswell, H.L. 1977. *Water Birds of California*. University of California Press, Berkeley, 399 pp.

ESA 1987

Environmental Science Associates, Inc. 1987. *Creekside Draft Supplemental Environmental Impact Report*, prepared for City of Larkspur, September 1, 1987.

Grove 1999

Grove, G. 1999. *Falco columbarius* (On-line), Animal Diversity Web. Accessed May 07, 2004 at http://animaldiversity.ummz.umich.edu/site/accounts/information/Falco_columbarius.html.

Howell 1970

Howell, John Tomas. 1970. *Marin Flora: Manual of the flowering plants and ferns of Marin County, California*. Second edition with supplement. University of California Press, Berkeley, California. 366 pp.

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Limas 2001

Limas, B. 2001. *Circus cyaneus* (On-line), Animal Diversity Web. Accessed May 07, 2004 at http://animaldiversity.ummz.umich.edu/site/accounts/information/Circus_cyaneus.html.

Marin Audubon Society 2004

Marin Audubon Society. 2004. Available at <http://www.marinaudubon.org/2003xmas.htm>

RWQCB 1995

Regional Water Quality Control Board. 1995. Water Quality Control Plan for the San Francisco Bay Basin (Region 2).

RWQCB undated

Regional Water Quality Control Board. Undated. Corte Madera Watershed Resource Evaluation and Information Report. Prepared by Jill Marshall, Craig Denisoff, and Dale Hopkins, Staff to the California Regional Water Quality Control Board San Francisco Bay Region, Oakland, California. 38 pp.

Salzman 1996

Salzman, Barbara. 1996. Memo to Sandra Goldman, dated 10/19/96.

Sherman 2002

Sherman, E. 2002. *Larus californicus* (On-line), Animal Diversity Web. Accessed May 07, 2004 at http://animaldiversity.ummz.umich.edu/site/accounts/information/Larus_californicus.html.

Skinner and Pavlik 1994

Skinner, Mark W. and Bruce Pavlik. 1994. *Inventory of rare and endangered vascular plants of California*. California Native Plant Society, Special Publication No. 1, Fifth Edition. Sacramento, California. 336 pp.

Shuford and Timossi 1989

Shuford, W. David and Irene C. Timossi. 1989. *Plant Communities of Marin County*. California Native Plant Society. Sacramento, California. 32 pp.

Smith 1997

Smith, Doreen. 1997. Information supplied to Charles Kennard by Doreen Smith California Native Plant Society rare plant expert for Marin County, January 1997.

USFWS 1984

U.S. Fish and Wildlife Service. 1984. *Salt Marsh Harvest Mouse and Clapper Rail Recovery Plan*. USFWS, Portland, Oregon.