APPENDIX D: WILDLIFE AND LIVESTOCK CENSUS DATA

Wildlife Type	Reported Population Density Ranges (animals/mi^2)	iAverage Density (animals/mi^2)	Estimate Population Density by Landuse (#/per acre)	Landuse (for use in FC Loading spreadsheet tool)	Habitat Requirements (from DFG and other sources)
Deer[A]	4.4 to 7.8	6.1	0.010	Forest, Pasture/Grassland	Prime habitat: Entire **watershed** excluding urban, cropland
Feral pig[B]	1.3 to 2.1	1.7	0.003	Forest, Pasture/Grassland	Prime habitat: **Entire watershed,** excluding urban, cropland
Coyote[C]	0.75 to 0.91	0.83	0.001	Forest, Pasture/Grassland	Prime habitat: **Entire watershed** excluding urban, cropland
Raccoon[B]	6 to 52	29 Using **5.13** per sq mi (see habitat spreadsheet)	0.008	Cropland, Forest, Pasture/Grassland/Urban	Prime habitat wetland, riparian, forest. Closely associated with permanent water. (Virginia TMDL used habitat and population estimate based on 0.5 mile buffer around streams. Those are perennial streams; prime habitat. Racoon need permanent water source. Home range for males is about 0.8 mi sq. For females its about 0.4 sq. miles. Since most streams are ephemeral in the Salinas watershed, and do not provide prime habitat as perennial streams would; accordingly use Virginia's half-mile buffer estimate (correlates with home range) but use low end population density of 6 per sq. mile.
Opossum[D]	5.8 to 26.2	16 Using **4.96** per sq mi (see habitat spreadsheet)	0.008	Cropland, Forest, Pasture/Grassland/Urban	Prime habitat wetland, riparian, forest. Closely associated with permanent water. (see raccoon)
Skunk[E]	6.2 to 37	21.6 Using **5.30** per sq mi (see habitat spreadsheet)	0.008	Cropland, Forest, Pasture/Grassland/Urban	Prime habitat wetland, riparian, forest. Closely associated with permanent water. (see raccoon)
Turkey[F]	7 to 9.6	8.3	0.013	Forest, Pasture/Grassland	Entire watershed excluding urban and cropland, grassland (trees/shrubs required for roosting habitat)

Wildlife Type	Reported Population Density Ranges (animals/mi^2)	iAverage Density (animals/mi^2)	Estimate Population Density by Landuse (#/per acre)	Landuse (for use in FC Loading spreadsheet tool)	Habitat Requirements (from DFG and other sources)
Pheasant[G]	-	23.5	0.037	Forest, Pasture, Cropland	Entire watershed excluding urban
Duck[H]	-	5.5	0.009	Cropland, Pasture, Urban	Cropland, Pasteur, Wetland, Urban. Upland forest and shrubland not counted, as its not prime habitat. used statewide duck population estimate to interpret gross average watershed population density. Also, should assume the density number (no. per sq mile) is significantly higher in the Salinas Lagoon and Estuary as its on the pacific flyway and has several hundred acres of wildlife and waterfowl protected refuge. Ducks also "much more numerous" in winter, according to DFG.

Animals Requiring Close Proximity to Surface Water Habitat (<0.5 mi per Calif. DFG)

Racoon/Opossum/Skunk

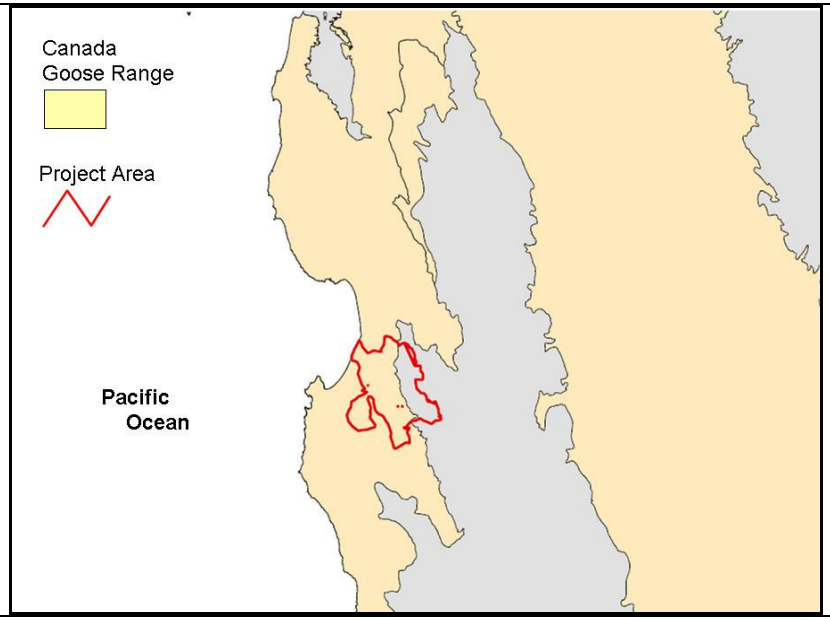
Habitat based on Stream and Lake Miles (350.21 sq miles in Project Area)

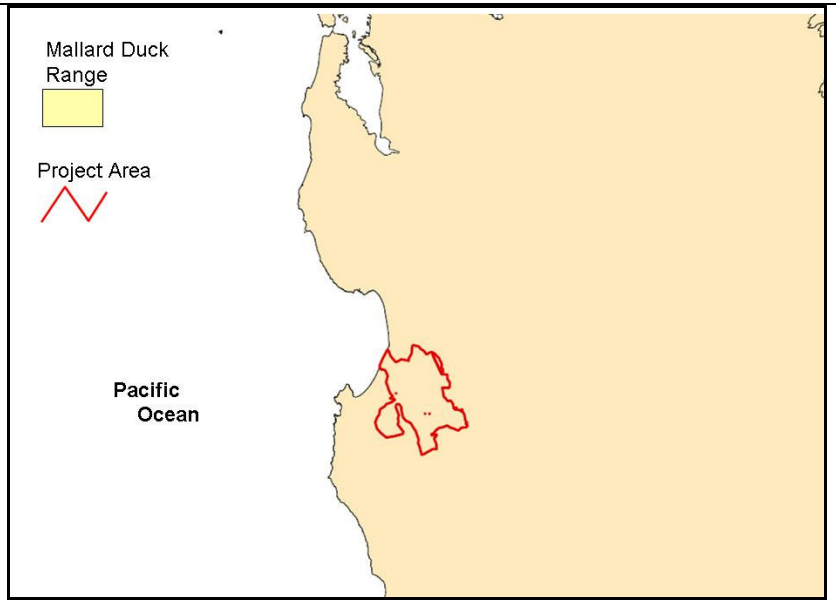
350.21

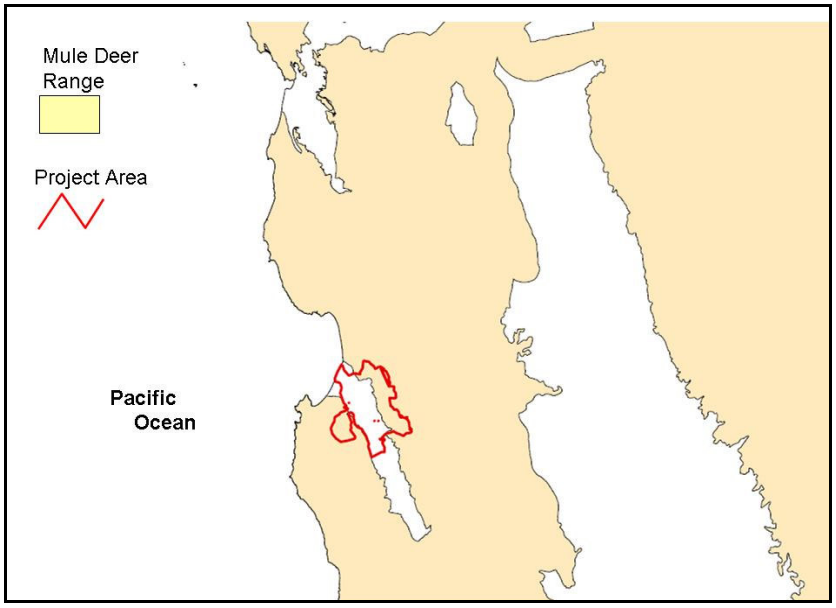
	Total Animals based on Suitable Habitat		
	Raccoon	**Opossum**	**Skunk**
	2101	**2031**	**2171**
Animals Per Sq Mi	**5.13**	**4.96**	**5.30**
Animals Per Acre	**0.008**	**0.008**	**0.008**

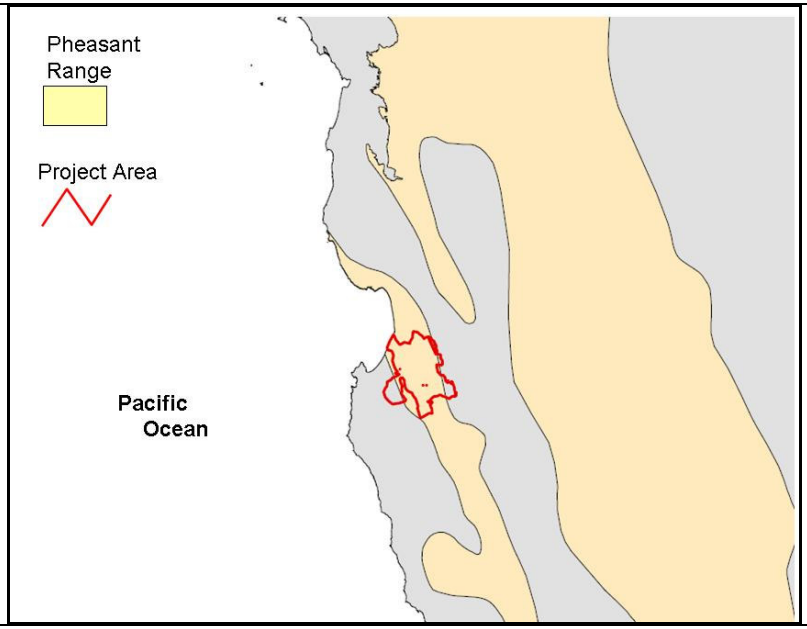
Livestock Population Densities by Landuse – Monterey County

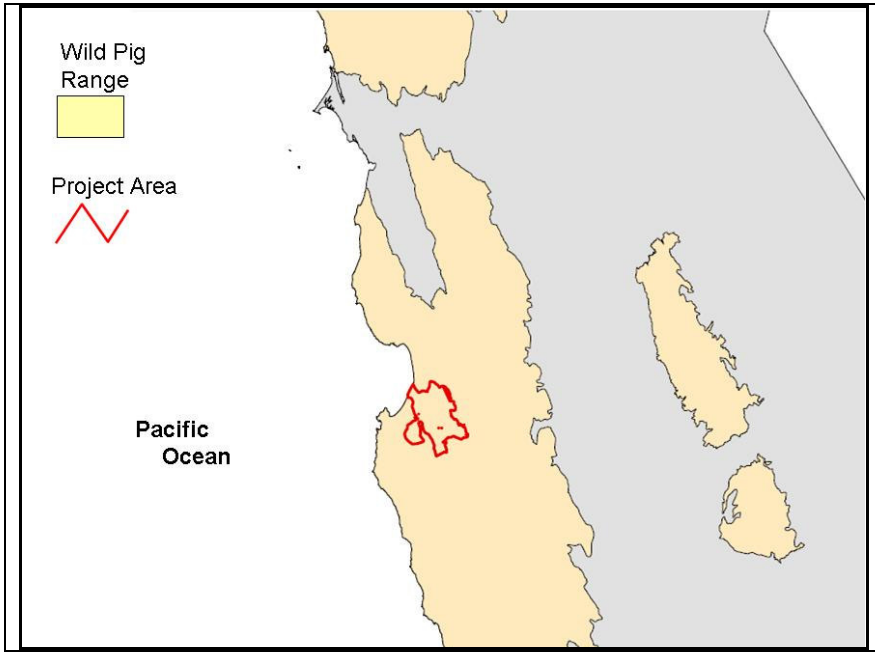
Animal Type	Population in County	Source	Assumptions to derive Watershed level population estimates	Amount of Habitable Land in County (rangeland, or rangeland plus farm land)- acres, from Mont Co. Ag Landuse Report 2006	Estimate Population Density by Landuse (#/per acre)	Population based on Census Housing Data 2000	Population in Watershed	Landuse (for use in FC Loading spreadsheet tool)
Cattle	97140	County Ag Commissioner	Assume cattle evenly distributed through rangeland in County	1065577	0.0912		6796	Pasture (grassland and shrubland)
Horse*	8299	US Census Bureau (via AVMA)	US Census (via AVMA) data. Number of households that own horses, times number of horses per house, time number of housing units in watershed (2000 census Castrovile, Salinas, Toro, and Gonzales CCDs)	178789	0.0196	3504	3104	All ag land uses: crop, pasteur
Sheep	2200	Mont County Ag Commission	Assume sheep evenly distributed through all ag land in County	1301719	0.0017		268	Cropland, Pasture
Chicken (broilers)	365	USDA 2002 Ag Census	Assume poultry evenly distributed through all ag land in County	1301719	0.0003		48	Cropland, Pasture
Chicken(Layers)	7968	USDA 2002 Ag Census		1301719	0.0061		969	
Hogs	1600		Assume hogs evenly distributed through all ag land in County	1301719	0.0012		195	Cropland, Pasture
Turkey	32	USDA Ag Census		1301719	0.0000			

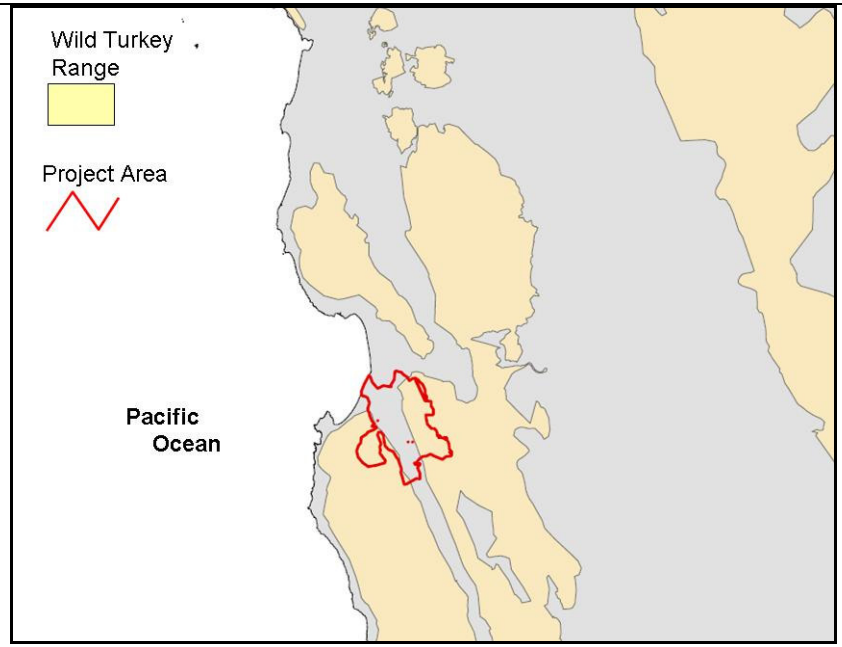

Canada
Goose Range
Project Area
Pacific
Ocean


Mallard Duck
Range
Project Area
Pacific
Ocean


Mule Deer
Range
Project Area
Pacific
Ocean


Pheasant
Range
Project Area
Pacific
Ocean


Wild Pig
Range
Project Area
Pacific
Ocean


Wild Turkey
Range
Project Area
Pacific
Ocean

California Wildlife Habitat Relationships System
California Department of Fish and Game
California Interagency Wildlife Task Group

WILD PIG *Sus scrofa*
Family: SUIDAE Order: ARTIODACTYLA Class: MAMMALIA
M176

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DISTRIBUTION, ABUNDANCE, AND SEASONALITY

Feral and introduced, permanent resident at low to middle elevations at scattered locations in cismontane California. Common, and increasing in numbers, in local areas. Occur in riparian areas, oak woodlands, annual grasslands, mature conifer and hardwood forests with moderate to high-canopy closure, and in chaparral and other brush areas. Mast crops, especially acorns, important. Adjacent agricultural lands enhance habitat. Barrett (1977) estimated that more than 30,000 wild pigs occur in California, making them the second most important big game species.

SPECIFIC HABITAT REQUIREMENTS

Feeding: Omnivorous. In Tehama Co., acorns were the most important food. Also ate wild oats and other green grasses, forbs, berries, roots, bulbs, insects, and carrion (Barrett 1978). Forage on ground surface, root beneath ground surface, and forage up to about 0.6 m (2 ft) above ground. Locate food by scent. Will root under logs, rocks, other surface cover, and litter.

Cover: Require dense brush, or rock crevices and caves, for escape and resting cover and shade.

Reproduction: Dense brush areas, or rock crevices and caves, are required for farrowing. Farrowing sites may be dug in earth and lined with vegetation.

Water: Need drinking water at least every 2 days when feeding on dry forage. Mean consumption is 4.1 to 4.5 kg (9-10 lbs) water per day in domestic pigs weighing 68 kg (150 lbs). Water consumption varies with age, ambient temperature and humidity, and moisture content of food.

Pattern: Frequent a mixture of dense brush and forest for cover and reproduction, and oak forests and open, herbaceous areas for foraging.

SPECIES LIFE HISTORY

Activity Patterns: Active yearlong. Mostly crepuscular and nocturnal, some diurnal activity. More nocturnal in hot weather, more diurnal in cold weather.

Seasonal Movements/Migration: Non-migratory, but move seasonally to follow food and water sources.

Home Range: In Tehama Co., home ranges averaged about 52 km² (20 mi²) for males, and about 13 km² (5 mi²) for females. Densities of 5-8 wild pigs per km² (14-20 per mi²) reported in Tehama Co.; 0.5-0.8 per km² (1.3-2.1 per mi²) in Monterey Co.; and 29-39 per km²

(75-100 per mi²) in the southeastern U.S. (Pine and Gerdes 1973, Barrett 1978, Wood and Barrett 1979).

Territory: Little information available, but apparently not territorial (Pine and Gerdes 1973). In Tehama Co., Barrett (1978) reported that most groups consisted of a sow and 1-3 generations of offspring. Boars usually were solitary, or in small male groups, except to breed or to feed on a clumped food resource.

Reproduction: Breeding is promiscuous. Estrus occurs every 21 days once females reach sexual maturity, at about 6 mo. Boars display and fight in the presence of estrous sows. After a gestation of about 120 days, an average litter of 5-6 piglets (range = 1-10, or more) is born (Barrett 1978). Young are weaned at 3-4 mo, and females produce 1-2 litters/yr (Barrett 1978).

Niche: Increased reproduction in years of large acorn crop, or other food abundance. Reproductive rate can be increased significantly by access to irrigated pastures and other crops. May be a rangeland and agricultural pest in some areas. Black bears may prey on wild pigs in Humboldt Co. A major adverse impact on native wildlife is competition for mast crop, particularly for acorns in oak woodlands of California. In years of acorn shortage, when competition is most likely to occur, may compete with wild turkeys, mule deer, squirrels, black bears, and other species. Destruction of native vegetation and nests of ground-nesting birds also may be a serious problem (Barrett 1978, Wood and Barret 1979). In Tehama Co., an average adult boar weighed about 80 kg (176 lbs), and an average adult sow weighed about 75 kg (165 lbs) (Barrett 1978).

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