





Table 1. Results of wild pig damage and harvest data for the 40 counties responding to the survey.

County	Resource Damaged	Dollar Value	Complaints	Permits <sup>1</sup> 1995-1996	Hunter Harvest <sup>2</sup> 1995-1996
Alameda	hay/forage/ponds	11,500	increasing	1-4	493-308
Alpine <sup>3</sup>					
Amador	lawns	100	same	0-0	0-38
Butte	lawn/range/drainage	500	same	1-0	0-269
Calaveras	lawn/range/ponds	10,500	increasing	0-0	0-0
Colusa	orchards/vineyards/ponds	50,000	increasing	0-0	526-154
Contra Costa	lawn/range/pond/irrigation	130,000	increasing	2-4	66-38
Del Norte <sup>3</sup>					
El Dorado					0-77
Fresno	livestock/hay/tree/irrigation	62,720	increasing	2-3	658-539
Glenn	livestock/crops/ponds	9,500	increasing	0-0	66-616
Humboldt <sup>3</sup>				1-1	99-38
Imperial <sup>3</sup>					
Kern	crops/pasture/ponds/irrigation	14,000	increasing	0-0	99-423
Kings	pasture/ponds	2,600	same	0-0	296-539
Los Angeles <sup>3</sup>				4-1	33-0
Madera	pasture	2,000		0-1	132-154
Mendocino	fruit/pasture/ponds/drainage	66,500	increasing	2-3	1,742-1,501
Merced	nuts/irrigation	8,500	increasing	0-0	559-3,155
Modoc <sup>3</sup>					
Mono <sup>3</sup>					
Monterey <sup>3</sup>				7-20	4,537-2,501
Napa	hay/pasture/irrigation	6,500	increasing	4-2	395-77
Nevada	lawns/pasture/drainage	1,705	increasing	2-1	0-269
Orange <sup>3</sup>					
Placer	pasture/lawns/ponds	10,100	same	0-0	0-0
Plumas <sup>3</sup>					
Riverside	lawn/sod/ponds	2,000	increasing	0-2	66-154
Sacramento <sup>3</sup>					
San Benito	crops/calves/irrigation	858,700	increasing	10-21	1,381-1,963
San Luis Obispo	fruit/crops/irrigation	62,200	increasing	15-12	1,677-1,809
San Mateo	fruit/crops/irrigation	50,500	increasing	2-0	0-38
Santa Barbara	fruit/crops	0	increasing	1-2	888-2,501
Santa Cruz	crops/road/pond/drainage	253,200	increasing	50-30	395-308
Sierra <sup>3</sup>					0-30
Siskiyou	livestock/hay/ponds	1,400	same	0-2	0-38
Solano	fruit/pasture/ponds	4,500	increasing	3-7	197-77
Sonoma	livestock/pasture/irrigation	79,000	increasing	3-3	2,301-1,231
Stanislaus	lawn/pasture/irrigation	6,250	same	0-0	888-462
Sutter	livestock/nuts/ponds/irrigation	19,000	increasing	5-4	0-77
Tehama	pasture/nut/pond/drainage	7,500	same	9-2	132-885
Tuolumne	livestock/lawn/drainage	700	increasing	0-0	33-38
Yuba	rangeland/pasture/drainage	250	same	0-0	0-0
Total		1,731,290			

<sup>1</sup>CDFG Depredation Permit Reports.

<sup>2</sup>CDFG Hunter Take Survey 1995 to 1996.

<sup>3</sup>Counties responded no damage.

East Bay Regional Park District (Park). The Park is a public agency that maintains open space in several counties around the San Francisco Bay. The Park District has had a wild pig management program in place since 1993 in seven parks. The overpopulation of wild pigs has caused extensive damage to natural resources which has direct negative impacts on the area's endangered species. Wild pigs in the parks have caused a human health and safety concern with several incidents of wild pigs charging district employees and, on one occasion, charging a group of school children. Damage caused to turf and irrigation systems is approximately \$10,000 annually. The Park District has 300 ponds and estimates a cost of approximately \$2,500 to \$5,000/pond to exclude wild pigs. The Park District spends in excess of \$60,000 a year to reduce wild pig damage within the seven parks.

Residential subdivisions/golf course. Four residential subdivisions and one golf course sustained approximately \$64,000 per year for wild pigs rooting turf and ornamental plants. A total of 31 residential properties have suffered wild pig damage to their landscape.

#### San Benito County

Wild pigs have caused \$858,700 in damages to walnuts, vineyards, grains, golf course turf, predation to calves, and transferring diseases to livestock. Diseases transmitted to domestic animals in 1996 cost between \$10,000 to \$15,000. Wild pigs caused \$20,000 damage to native plants and property on the 16,000 acre (6,400 ha) Pinnacles National Monument. The cost to fence the national monument was priced at \$600,000. Vineyards in the Park sustained approximately \$35,000 in damages from wild pigs. The cost to replace and repair irrigation systems within the county was \$14,500. The CDFG issued 10 and 21 depredation permits in 1995 and 1996, respectively. Hunter surveys recorded 1,381 and 1,963 wild pigs taken in 1995 and 1996, respectively.

#### San Mateo County

Wild pigs caused \$635,000 in damage to kiwi, artichokes, cut flowers, and peas in San Mateo County. There are 13 threatened and endangered plant species in this county. The CDFG issued two depredation permits in 1995 and none in 1996. Hunters removed zero wild pigs in 1995 and 38 in 1996.

#### Santa Cruz County

A total of \$252,200 in damages was reported. Artichokes and leaf lettuce combined for a total of \$161,000 in damages. Rooting of pasture and rangeland totaled 962 acres (390 ha) with a damage value of \$13,000, while pumpkins, sweet corn, and oat hay totaled \$7,200. Road and trail maintenance cost \$5,000 and fence improvements cost \$6,000. The Office of the Agricultural Commissioner in Santa Cruz County states that the above figures are minimal compared to the true economic and environmental impact that the wild pigs are having on the county. There is 1,000 miles (1,600 km) of permanent stream in the county of which over 500 miles (800 km) have experienced some type of damage such as wallowing, repeated stream crossings, and rooting up of aquatic vegetation, which is detrimental to stream

and water quality. It is estimated that over two percent (2%) of the county's wetlands, 20 miles (32 km) of riparian habitat, and 2,200 acres (880 ha) of forest land have sustained damage which has also impacted the water supply to ranchers, small farmers, and homeowners. Property owners in the Santa Cruz Mountains who get their water supplied to them by spring, must fence around the springs or face a deficiency in their domestic and irrigation water. There are 10 plant species listed on the threatened and endangered species list. According to CDFG there were 50 depredation permits issued in 1995 and 30 permits issued in 1996. The hunter survey indicated that 395 and 308 wild pigs were harvested in 1995 and 1996, respectively.

#### San Luis Obispo County

San Luis Obispo County reported \$62,200 in damages caused by wild pigs to orchards and property. Wild pigs caused damage to avocados, citrus, row crops, oriental fruits, and vegetables throughout the county. Wild pigs not only cause damage by eating the fruit in the orchards, they also cause damage by tussing (debarking) trees and damaging drip-line irrigation systems. Nets installed in feijoa orchards to catch falling fruit are damaged by pigs searching for the ripening crop. One orchardist reported wild pigs were causing the spread of Phytophthora Root Rot, a fungal disease in the soil. Wild pigs rooting and disturbing feeder roots reportedly spread this fungal disease throughout the orchard.

#### CONCLUSION

Since the 1960s, wild pigs have expanded their range from 15 counties to presently over 45 counties. This expansion has increased the number of complaints received about wild pig damage. Damage has also expanded to a wider variety of resources affecting both rural and urban areas. This survey represents a small percentage of the actual damage occurring in the state. There is a need for a more long-term indepth reporting process to track wild pig damage. Until such a system is in place the overall significance of the problem will never be fully documented.

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