

## **PROJECT REPORT**

**Project Title:** Wildlife Services in California: economic assessments of selected benefits and costs

**Research Agency:** National Wildlife Research Center

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**Budget:** \$148,089

### **Background:**

The U. S. Department of Agriculture's Wildlife Services (WS) Program started in 1931. The 1931 Animal Damage Control Act mandated the agency to control wildlife for the benefit of protecting agricultural resources, forestry products, and public health and safety. More recently, the 1988 Rural Development Agriculture, and Related Agencies Appropriated Act expanded this function to include the control of nuisance animals and birds, plus wildlife sources of disease.

In 2000, California ranked second in its funding of cooperative state WS activities to reduce wildlife damage. A Report by the Government Accounting Office reported that WS funds for California that year were comprised of \$1.4 million federal funds and \$3.4 million in cooperating funds. In 2003, California announced an expected \$25-30 billion budget deficit which led to an approximate \$1 million reduction of state contributions to support WS activities. This dramatic 30% loss in funds will impact many livestock protection and public health and safety efforts.

### **Objectives:**

This 2-year study will quantify selected benefits and costs of the WS Program in California and will describe economic impacts of the reduced budget. There are 3 objectives:

1. To describe WS Program benefits and costs in California, plus identify unique demographic situations in the state that impact WS activities.
2. To compare benefits and costs of livestock protection afforded by WS Program activities versus a predation-compensation program recently begun in Marin County.
3. To prepare scenarios and to project future impacts and costs of selected livestock protection and public health and safety activities from reduced funding of the WS Program in the state.

### **Summary:**

In 2003 VPCRAC funded a comprehensive economic assessment of Wildlife Services (WS) operations in California. That year, WS had cooperative agreements/MOUs with 40 of the state's 58 counties, with El Dorado, Siskiyou, Sonoma, Sierra, Plumas and Placer counties involving special arrangements. This report consists of 38 county assessments, including one joint

assessment for Sierra and Plumas counties. Economic impacts of WS operations to reduce wildlife damage or threats to agriculture, public health and safety, property and natural resources were quantified. The assessment involved multiple economic techniques and was specific to the wildlife damage management activities performed in each county.

In 2004, the cumulative cooperative share costs paid by the 39 counties included in the report was \$1,968,328. The mean share paid by these counties was \$51,798, with minimum and maximum shares of \$5,446 and \$128,633.

Annual estimated replacement costs for WS operations for Year 1 and Year 2 of the analysis (approximately equivalent to fiscal years 2003 and 2004) totaled \$6,605,234 and \$8,602,590 for the combined counties, respectively. These costs involved cumulative replacement totals for projected agriculture, health and human safety, natural resource, and property operations. Mean replacement costs for WS operations in the cooperating counties in Year 1 and Year 2 were \$173,822 and \$226,373, respectively. Given that the counties paid an average \$51,798 share to WS in 2003, the counties would have incurred averaged net increased expenses of \$122,024 and \$174,575 for similar services offered by commercial wildlife damage management companies.

The economic impact analyses for planning results included 3 levels of potential economic loss in the livestock sector (e.g., Levels 1, 2, and 3). These vary based upon different levels of predation for sheep and cattle, that would hypothetically occur in the absence of WS. Also, damage to health and human safety, natural resources and property reported by wildlife damage specialists would likely increase in the absence of WS. We provided 3 levels of increase (e.g., 25%, 50%, and 100%) to capture likely wildlife damage costs should WS be discontinued. When combined, results yielded cumulative totals of \$5,758,612, \$8,041,762 and \$10,625,890 in prevented damage benefits of WS to the counties. Mean county projected benefits in prevented damage were \$151,542, \$211,625, and \$279,628, respectively. Additionally, the analyses projected that a total of 256 (Level 1), 355 (Level 2), and 456 (Level 3) jobs would be lost in the 39 counties if WS cooperative agreements were dropped.

In conclusion, although some services provided by WS can be "replaced" by other programs, these may not provide the same level of wildlife damage mitigation. To compute the total benefits of WS, replacement cost and increased damage estimates must be combined. The total benefits of WS in California as a complete program ranged from \$12,363,852 to \$19,228,476. The costs of the WS operations can be determined by adding the cooperative shares of all counties, which total \$1,968,328. The net benefits to the WS state aggregate, due to county funding for WS, ranged from \$10,395,524 to \$17,260,148.

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