COMPLETED PROJECT REPORT

Project Title: Wildlife damage management in Fresno and Kings counties, California: economic assessments of select benefits and costs

Research Agency: National Wildlife Research Center

Principal Investigator: S. A. Shwiff, K. N. Kirkpatrick, and R. T. Sterner

Budget: $20,000

Background:

In 2003 VPCRAC funded a 2-year benefit-cost analysis of USDA Wildlife Services efforts in 38 counties with California. Of the remaining 20 counties in California, a number operate independently to provide wildlife damage management services to residents. Subsequent to the 2003 study, Agriculture Commissioners from 4 counties expressed interest in having a detailed benefit-cost analysis performed for their own wildlife damage management programs. However, only Kings and Fresno counties participated in the study.

Objectives:

1. To describe each county's wildlife management program benefits and costs in California, plus identify unique demographic situations in each county.
2. To compare benefits and costs of livestock protection afforded by each program's activities versus an indemnification and improvement compensation program implemented in Marin County.
3. To develop scenarios of projected benefits and cost associated with selected public health and safety and property protection activities (e.g., lion complaints, urban coyote complaints) were these discontinued by each county.
4. To perform economic analyses (e.g., impact analysis for planning model) that quantify losses to the local economy and increases in wildlife damage to agriculture, health and human safety, and property, were identified wildlife damage management activities to experience reduced, intermittent, or no funding.

Summary:

The current benefit-cost analyses for animal damage control (ADC) activities in Fresno and Kings counties demonstrate that multiple returns on invested program dollars were provided for each county. ADC was afforded to protect agriculture, human health and safety, and natural resources and property.

For Fresno County to employ replacement programs for all of the resource protection activities

provided by ADC, it would cost $339,441 to $437,999. Given that Fresno County pays $177,675 to fund its program, net annual increased expenses of $161,766 to $260,324 would be needed to attain similar benefits afforded by the current program.

For Kings County to employ replacement programs for all of the resource protection activities provided by ADC, it would cost $48,979 to $63,858. Given that Kings County pays $11,376 to fund its program, net annual increased expenses of $37,603 to $52,482 would be needed to attain similar benefits afforded by the current program.

The existing ADC programs in both counties achieve certain economies of scale that individual replacement programs do not. This is a result of efficiency gains inherent in ADC operations. Because these ADC programs are county-run programs, a broad spectrum of available county resources and technology can be used to mitigate wildlife damage problems. We contend that because alternative programs would not have these efficiency gains, then higher rates of predation and resulting damages would likely occur. For example, in Fresno County in year 1 it would be possible to have replacement programs in place with an associated total cost of $339,441 and also to have increases in damages and loss to the economy of $619,780, for a grand total of $959,221. This total minus the $177,675 program operations costs could be viewed as a net benefit of $781,546 to the county as a result of funding the ADC program. In Kings County in year 1 it would be possible to have replacement programs in place with an associated total cost of $48,979 and also to have increases in damages and loss to the economy of $59,098, for a grand total of $108,077. This total minus the $11,376 program operations costs could be viewed as a net benefit of $96,701 to the county as a result of funding the ADC program.

Final Update:

09/27/06