

Selected advance questions from American Society of Mammalogists in preparation for forum with APHIS officials on Wildlife Services (WS):

1) What proportion of WS's direct expenditures on wildlife damage management of native mammals (leaving aside R&D) goes to non-lethal control vs. lethal control?

The financial system is an Agency level system that meets the financial reporting and tracking needs of multiple programs within APHIS, WS' parent agency. The financial systems have never been configured specifically for WS and, therefore, the system does not record expenditure data based on any of WS methods or as defined by any of WS operational program terminology.

The operational database is a program level (WS) system that meets the individual reporting and tracking requirements of WS but it does not capture financial data. The operational database is designed to monitor operational activities, but it is not designed to track expenses or time associated with specific activities or resources. For information on WS expenditures by resource category, please refer to the WS website at http://aphis.usda.gov/wildlife_damage/prog_data/prog_data_report.shtml.

2) What percentage of WS's collaborator funding comes from private individuals and corporations?

WS receives, in general, a little more than 50% of its funding from cooperative funding sources; specific information can be found within WS' Program Data Reports on its website. The financial system does not track funding by cooperator type (private individuals and corporations, etc.) but rather the funding source; simplistically, Federally-appropriated or non-Federally appropriated. The funding provided by the collaborators being either private individuals or corporations would be categorized by the system in the same manner. In general, approximately 25-33% of the cooperative funding is from Federal partners or approximately 67-75% from non-Federal cooperators.

2a) What percentage comes specifically from private ranchers, and corporations or non-profit organizations representing ranching interests?

WS publishes Resource reports to its website annually. This breaks down overall cooperative funding into major resource areas (Agriculture, Natural Resources, Property, Human Health and Safety). In general, approximately 33% of overall cooperative funding is for protecting agriculture and of the 33%, approximately, 71% is for livestock protection.

3) What proportion of lethal control of native mammals (by animals killed and by dollars spent) is conducted primarily for the benefit (and/or at the request) of ranchers grazing stock owned by publicly traded corporations (e.g. on the NYSE)?

WS does not categorize requests for assistance based on public versus private corporations.

4) How many individual ranchers (and corporations) received WS lethal predator control last year in response to confirmed depredations?

4a) How many of these ranchers had Federal grazing permits?

WS provided predator control to protect livestock on approximately 10,545 ranches in the 17 Western States in Fiscal Year 2011. 1,424 (13.5%) of those ranches also had some type of Federal grazing allotment. WS does not gather data distinguishing which ranches are corporations.

5) Does WS conduct any cost-benefit analysis before implementing lethal control that calculates the economic value of wildlife killed for depredating as well as the economic value of livestock depredated?

Using the best information available at the time, the APHIS-WS EIS (USDA 1997, revised) concluded that benefits, in terms of avoided sheep and lamb losses plus price benefits to consumers are 2.4 times the cost of providing USDA-APHIS-WS predation damage management services for sheep protection in the 16 Western States.

Schwiff and Merrill (2004) reported 5.4 percent increases in numbers of calves brought to market when coyotes were removed by aerial hunting.

Bodenchuk et al. (2001) reported predation management benefit-cost ratios of 3:1 up to 27:1 for agricultural resource protection, and 2:1 to 22:1 benefit-cost ratios for predation management for wildlife.

Wagner and Conover (1999) found that the percentage of lambs lost to coyote predation was reduced from 2.8 percent to less than one percent on grazing allotments in which coyotes were removed 3-6 months ahead of summer sheep grazing.

6) What is a ballpark approximation of the average percentage of total annual mortality of a free-range cattle herd in the northern Rocky Mountains that is due to depredation by native predators? WR

We are not aware of a specific compilation of free range cattle herd death loss statistics for the northern Rocky Mountains. However, the 2010 NASS report on cattle and calf death losses shows the following statistics for Idaho, Montana, and Wyoming:

Cattle Death Losses for Northern Rocky Mountain States:						
	All Causes		Predators		Non-Predators	
	cattle	calves	cattle	calves	cattle	calves
Idaho	42,000	51,000	1,900	4,200	40,100	46,800
Montana	23,000	57,000	1,000	4,200	22,000	52,800
Wyoming	11,000	30,000	400	3,500	10,600	26,500
TOTAL	76,000	138,000	3,300	11,900	72,700	126,100
% of All Deaths			4.3%	8.6%	95.7%	91.4%

7) Is it WS's policy that ranchers grazing domestic stock "free range" have a "right" to expect zero percent loss to predators? If not zero, what percentage loss does WS deem is an acceptable cost of ranching within the range of native large predators (below which there would be no expenditures by WS on lethal control)?

WS does not have a policy related to any level of acceptable costs of ranching. WS does not limit services or method selection based on an associated economic assessment of the cooperator requesting assistance or an associated acceptable cost of ranching.

WS does have a policy directive on "Selecting Wildlife Damage Management Methods"; WS Directive 2.101, which outlines that WS personnel may provide services via technical assistance, direct control assistance, or both. Technical assistance and direct control assistance encompass the use of nonlethal and lethal management methods. In some situations such as livestock protection, the number of nonlethal methods available to the professional wildlife damage specialist for use in direct-control assistance is currently limited. Most of these nonlethal methods focus on management of the affected resource and not on control of the offending animal. In these instances, WS involvement in using nonlethal methods may be limited to technical assistance recommendations which are more appropriately applied by the resource owner. These methods may include the use of livestock guarding animals, the electronic guard or other noise making device, predator-proof fencing, fladry, shed lambing, herding, and night penning. However, to continue providing Federal leadership in managing problems caused by wildlife, WS supports and promotes scientific research to develop and improve Wildlife Damage Management (WDM) methods and to provide science-based information for WDM.

This is further supported by a 2001 GAO report which recognized that nonlethal control methods may be most appropriately implemented by the livestock producers themselves, and that WS must use lethal methods in situations where nonlethal controls are ineffective, impractical, or unavailable. Additionally, the report addresses the issue that although average losses to predators may be small compared to losses from other causes, the damages are not evenly distributed over time or area and it was noted that a small proportion of producers may absorb high losses, and that these losses can have serious economic impacts. As the scope of wildlife damage management activities continues to expand, WS' National Wildlife Research Center has been developing new techniques to measure the effectiveness of wildlife damage management activities and determine the related benefits and costs. This applied research will benefit the operational aspects of the WS program, but will not limit support to the cooperator requesting assistance.

WS also has policy directives on "The WS Integrated Wildlife Damage Management Program," WS Directive 2.105, which encompasses the integration and application of all approved methods of prevention and management to reduce wildlife damage. "WS Decision Model," WS Directive 2.201, which is a thought process for evaluating and responding to wildlife damage problems, and is similar in approach to the decision making process used within other professions. WS professionals evaluate the appropriateness of strategies, and methods are evaluated for their availability (i.e., legal and administrative) and suitability based on biological, economic, environmental and social considerations.

8) Does land ownership affect WS's decision to use lethal control--i.e., is lethal control more/less likely to be used if depredation occurs on public land (vs. private)? Can you cite statistics?

Individual, specific agreements with cooperators list the methods that WS may use to address depredation events, and a Decision Model helps formulate a plan of action. There are often additional considerations that come into play when working on public lands (e.g., avoiding key recreation areas and seasons of peak use – like hunting season). There is not a priority decision about using or not using lethal methods relative to public vs. private land. Annual work plan meetings occur between WS and Federal land management agencies to identify methods used and areas/seasons of special concern.

9) Does WS conduct lethal predator control in federal wilderness areas by aerial gunning? By other means? If yes, for what reasons?

The decision to use lethal versus nonlethal methods must be evaluated on a case-by-case basis. In almost every situation, when WS receives a request for assistance, some kind of wildlife damage is occurring. If livestock is being routinely killed, our responsibility is to first stop the damage. If the farmer or rancher is using some kind of nonlethal control and predation is still occurring, then lethal control is implemented to stop the damage. If nonlethal methods are not being used, recommendations are provided including livestock guarding animals; improved husbandry practices; etc. It is important to note that despite \$199 M spent on nonlethal methods by cattle producers during 2010, Cattle producers still suffered almost \$100 M because of predation.

WS wildlife damage management (WDM) work in wilderness has occurred to a minor extent in 6 States in recent years. Limited aerial shooting of depredating predators -- mostly coyotes but also an identified depredating wolf or wolf pack -- has occurred in 3 States. PDM in wilderness to protect natural resources from excessive predation has been conducted to a limited extent as requested and funded by the State wildlife agency.

In several States, WS could conduct aerial shooting on a case-by-case basis within designated wilderness to remove depredating coyotes or, at the request of the U.S. Fish and Wildlife Service or the State wildlife agency, to remove depredating wolves. Most of the limited coyote removals have been by use of ground-based techniques, primarily calling/shooting. Depredating cougars or black bears are also removed on occasion. In the majority of such situations, the depredating predators are pursued from adjacent non-wilderness lands across a boundary into the wilderness area. Any WS work in wilderness is coordinated with the responsible land management agency (FS or BLM).

10) Mammalogists working in the field on wild mammals must certify that they have complied with ethical Animal Care and Use (ACU) guidelines approved by the American Society of Mammalogists; most of us also have to have our field and laboratory procedures involving wild mammals approved by Institutional ACU committees, following protocols established by USDA. Is there a published set of guidelines on ethical treatment of wild

animal subjects that WS follows, and by what process does WS ensure that all of its field agents follow these guidelines?

- Management and operational programs are exempt from Animal Welfare Act compliance. Those programs rely on BMPs or other adaptive management practices, including AVMA guidelines on euthanasia.
- WS policy requires the use of smooth, offset or rounded jaws when using foothold traps, and further requires the use of pan tension devices to prevent the capture of smaller, nontarget animals. In addition, breakaway snares, which allow a deer or other large animal to break free of the snare if accidentally captured, are also used.
- Federal field and laboratory research is also exempt from AWA other than the agency head must comply with the spirit of the AWA and have a process to do so
- NWRC maintains an integrated project management system in compliance with OMB circulars which includes peer review, QA/QC (which includes regulatory compliance review and implementation, IACUC)
- When operational programs collaborate on research the studies are led by the collaborating institution that is AWA compliant
- NWRC as a member of APHIS, however, complies with all AWA standards and its system is currently being looked at by USFWS as a model for Federal agencies.

11) How much money did USDA-APHIS spend in FY2010 and FY2011 responding to FOIA requests in involving WS operations? What decision-making process is followed in deciding the relative effort for each of the many invasives?

As the majority of requesting parties and organizations of WS information are exempt by law from Agency fees associated with processing FOIA requests, information regarding the amount of money spent responding to FOIA requests involving WS operations is unavailable. APHIS manages all FOIA requests at the agency level. APHIS employees who process and respond to agency FOIA requests are paid from overall Agency level support funding (Agency overhead assessed on all funding sources).

Another way to look at this is the number of overall requests received by the agency and the number of WS related FOIS requests:

For 2010 – APHIS received 708 requests of which WS had 61 (8.6%)

For 2011 – APHIS received 884 requests of which WS had 96 (10.8%)

12) How much in dollars (and what proportion of the total expenditures on lethal control) has WS spent in recent years on eradicating invasive exotic vertebrates? What decision-making process does WS follow to prioritize time and expenditures on various invasive species?

As previously mentioned, WS does not track expenditures relative to lethal versus nonlethal. Presently, WS is involved in 3 specific invasive species control projects:

- brown tree snakes in Guam - \$4.3 million
- Giant Gambian Pouched rats in Florida - \$5,488

- nutria in Maryland -\$1.2 million

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