FINDING OF NO SIGNIFICANT IMPACT
AND
DECISION
FOR
ENVIRONMENTAL ASSESSMENT
ORAL VACCINATION
TO CONTROL SPECIFIC RABIES VIRUS VARIANTS
IN
RACCOONS, GRAY FOXES, AND COYOTES
IN THE UNITED STATES

The U.S. Department of Agriculture (USDA), Animal and Plant Health Inspection Service, Wildlife Services (APHIS-WS) program has completed an environmental assessment (EA) that analyses the potential environmental effects of a proposal to continue and expand the involvement of the APHIS-WS program in oral rabies vaccination (ORV) programs in a number of states. The states where APHIS-WS involvement would be continued or expanded include New York, Ohio, Texas, Vermont and West Virginia. A small portion of northwestern New Hampshire and the western counties in Pennsylvania that border Ohio could also be included in these control efforts. In addition, APHIS-WS may cooperate in smaller scale ORV projects in the states of Florida, Massachusetts, Maryland, New Jersey, Virginia, and Alabama as part of the proposed action. The programs' primary goals are to stop the spread of specific raccoon (eastern states), gray fox (Texas) and coyote (Texas) rabies variants or "strains" of the rabies virus. The EA analyzed the proposed action and a number of alternatives with respect to a number of environmental and other issues raised by involved cooperating agencies and the public.

Based on the analysis in the EA, I have determined that there will not be a significant impact, individually or cumulatively, on the quality of the human environment as a result of the proposed action. Several changes to the EA were made as a result of public or interagency comments. The EA is now available in its final form.

Public Involvement

Issues related to the proposed action were identified through involvement and planning/scoping meetings with state health departments, other state and local agencies, academic institutions, the Ontario Ministry of Natural Resources, and the CDC. Additional efforts to determine further issues that the public might have with this action were made through a Federal Register Notice soliciting public input (66 FR 13696-13700, March 7, 2001) and by a second Federal Register Notice making the EA available to the public for review and comment prior to an agency decision (66 FR 27489, May 17, 2001). A letter inviting comments and, subsequently, the EA were sent to potentially affected or interested American Indian Tribes to assure their opportunity to be involved in the EA process. Comments received were reviewed to identify any substantive new issues or alternatives not already identified for analysis. Three comment letters were received in response to the March 7, 2001 Federal Register Notice, and one was received in response to the May 17, 2001 FR Notice. All comment letters were supportive of the proposal to use ORV to address wildlife rabies problems. Although most of the concerns raised were already addressed in the EA, several of the comments indicated areas that warranted additional clarification or treatment. These are:

1. The EA is intentionally vague about where the ORV baits would be distributed. . . we . . . request the final EA include more specific information on how bait zones will be determined.

The issue raised here concerns the adequacy of the site-specificity of the analysis in the EA. This is addressed in section 1.10.3 in the EA which explains that more specific locations cannot be identified because the specific locales where rabies outbreaks will occur cannot be predicted. The EA further states that the analysis of the substantive environmental issues that pertain to ORV use and monitoring/surveillance activities, and, if necessary, localized target species population reduction should apply wherever these activities might occur in the states identified herein.

2. Use of aerial hunting to collect coyotes for ORV program monitoring in Texas presents a human safety hazard.

APHIS-WS acknowledges that aerial hunting is inherently risky and that the program has experienced a number of aircraft accidents. Although there have been several fatalities and injuries to program personnel in such accidents, no

members of the public have ever been harmed by the program's aerial hunting activities. Therefore, the experience of the program is that there is little or no safety hazard to the public from these activities. APHIS-WS has undertaken steps to further minimize the occurrence of aircraft accidents and to improve the safety of personnel involved in aerial hunting activities.

3. Carcasses [of coyotes killed in aerial hunting] are rarely recovered, making sample collection by aerial gunning impractical.

On the contrary, when aerial hunting is used to collect specimens for disease program monitoring and surveillance, virtually all carcasses of animals shot are retrieved. Under appropriate conditions of terrain and vegetative cover, the method is highly effective in obtaining required samples of coyotes in a short period of time.

4. There [should] never be a need to euthanize animals to avoid the chance that they would be hunted, killed, and consumed while having active drugs in their systems. The drugs being considered have short half-lives (none more than 3 hours) and there is no need for an extended withdrawal time.

The concern here is related to the potential for drugs used in capture and handling to cause adverse health effects in humans that hunt and eat the species involved which was an issue addressed but not in detail in section 2.2.1 of the EA. The commenter claimed that the drugs have short half-lives and that, therefore, no extended withdrawal times would be needed before humans could consume animals administered such drugs. As stated in the EA, the Animal Medicinal Drug Use Clarification Act of 1994 (AMDUCA) requires that APHIS-WS use such drugs under the authority and direction of state veterinary authorities who are responsible for establishing withdrawal times. Local decisions to euthanize collected animals will be based on the guidance and direction of such veterinary authorities. The need to euthanize collected and drugged raccoons to avoid concerns about health effects from human consumption is expected to be infrequent and an insignificant part of the program. The potential for significant adverse effects on raccoon populations was addressed in the EA which concluded the potential was low.

6. Privately harvested raccoons, gray foxes, and coyotes should be used as specimens for monitoring purposes instead of killing additional animals for such purposes.

This comment suggested an alternative in which privately harvested animal specimens are used for ORV monitoring instead of capturing or killing animals by government personnel. One major problem with this suggestion is related to seasonal needs for monitoring and seasonal restrictions on private hunting and trapping. Hunting/trapping seasons are generally in the fall and winter which is three or more months after spring/summer ORV baiting periods. Rabies antibodies are generally not detectable in animals that consume ORV baits until about three weeks after consumption and detectability falls off rapidly after about 12 weeks. Thus, It is critical to effective evaluation of the success of ORV baiting programs to collect animal specimens between 3 and 12 weeks following bait distribution. There are generally no legal hunting/trapping seasons during the period that samples are needed for monitoring of spring or early summer ORV programs. Also, the amount of private hunting/trapping of the species needed in the areas from which specimens are needed is often very low, particularly in Texas where private coyote and gray fox harvest is low due to low fur prices. Another consideration is that experienced and trained personnel are required to collect blood samples from live or fresh-killed animals to provide adequate samples for detection of antibodies. To obtain samples from animals taken by private trappers or hunters would require experienced personnel to accompany them in the field. Personnel costs would thus be similar to or greater than the cost of obtaining samples of animals collected by government personnel. For all of these reasons, private hunting/trapping cannot be relied upon to provide adequate samples within the time frames noted in most if not all situations.

7. Trapping and shooting coyotes for testing purposes is unnecessary. In Texas, thousands of coyotes are killed every year by WS for "predator control" . . . when WS kills a coyote in an ORV bait zone for predator control, the carcass should be submitted for testing.

This comment suggested an alternative in which coyote specimens for ORV monitoring purposes can be obtained by using those taken for predator damage management in Texas. WS uses specimens taken during predator damage management activities for ORV program monitoring whenever practical. However, similar to the problems identified in response to the comment in no. 6 above, in many situations, the areas and time of year in which predator damage management actions are needed do not coincide with the areas and times in which animal specimens are needed for ORV program monitoring. Therefore, additional activities to collect specimens will generally be needed.

8. There is no scientific basis behind the claim that an animal taken in a leg-hold trap or snare (methods that might be used to collect some of the coyote or gray fox specimens for ORV monitoring in Texas) would suffer less than if it died by rabies.

The issue raised here is humaneness of capture methods which was analyzed in detail in the EA. WS acknowledges that the statement concerning the relative suffering of animals caught in traps or snares compared to dying of rabies is speculative because WS is unaware of any scientific data to support it. However, WS believes the conclusion is reasonable and that some members of the public could be expected to agree based on the known symptoms of rabies and the time generally required to cause death (see section 4.2.9 of the EA for additional explanation).

Major Issues

Based on considerable experience by cooperating agencies and APHIS-WS in addressing concerns expressed by the public in past ORV programs, the following issues were identified for consideration in detail in the EA:

- Potential for adverse effects on people that become exposed to the vaccine or the baits.
- Potential for adverse effects on target wildlife species populations.
- Potential for adverse effects on nontarget wildlife species, including threatened or endangered species.
- Potential for adverse effects on pet dogs or other domestic animals that might consume the baits.
- Potential for the recombined V-RG virus to "revert to virulence" and result in a virus that could cause disease in humans or animals.
- Potential for the V-RG virus to recombine with other viruses in the wild to form new viruses that could cause disease in humans or animals.
- Potential for aerially dropped baits to strike and injure people or domestic animals.
- Cost of the program in comparison to perceived benefits.
- Humaneness of methods used to collect wild animal specimens critical for timely program evaluation or to reduce local populations of target species under state contingency plans.

In addition to the identified major issues considered in detail, five other issues were considered but not in detail with rationale and further analysis.

Alternatives Analyzed in Detail

Four potential alternatives were developed to address the issues identified above. Three additional alternatives were considered but not analyzed in detail. A detailed discussion of the anticipated effects of the alternatives on each issue considered in detail is described in Chapter 4 of the EA. The following summary provides a brief description of each alternative and its anticipated impacts.

Alternative 1. Proposed action (this is the preferred alternative). This alternative would involve the continued or expanded use of federal funds by APHIS-WS to purchase V-RG oral vaccine baits and to participate in their distribution under the authorities of the appropriate state agencies in selected areas of the several states listed in section 1.2 of the EA to stop or prevent raccoon, gray fox, and coyote rabies, and to assist with monitoring and surveillance efforts by capturing and releasing or killing target species for purposes of obtaining biological samples. APHIS-WS assistance could also include participation in implementing state contingency plans that involve target species population reduction or concentrated ORV baiting in localized areas if rabies outbreaks occur beyond the designated ORV vaccination barriers to stop such outbreaks from spreading.

Alternative 2. No action. This would involve no involvement by APHIS-WS in rabies prevention or control in the states identified in section 1.2. The "No Action" alternative is a procedural NEPA requirement

(40 CFR 1502), is a viable and reasonable alternative that could be selected, and serves as a basis for comparison with the other alternatives. The states could still conduct ORV programs without APHIS-WS assistance.

Alternative 3. Live-capture-vaccinate-release programs. This alternative would involve the live capture of species being targeted (e.g., raccoon, gray fox, coyotes) followed by administration of rabies vaccines by injection and release back into the wild.

Alternative 4. Provide funds to purchase and distribute ORV baits without animal specimen collections or lethal removal of animals under contingency plans. Under this alternative, APHIS-WS would provide resources for and assistance in ORV bait distribution only and would not engage in or provide funds for the collection of wild animal specimens by APHIS-WS for monitoring and project evaluation purposes or for implementation of localized lethal removal actions under state contingency plans. The states could still conduct these activities without APHIS-WS assistance.

Alternatives Considered but Not Analyzed in Detail

Three alternatives were considered but not in detail and are described as follows with rationale:

Depopulation of target species. This alternative would result in the lethal removal of raccoons (in the eastern states listed) and gray foxes and coyotes (in Texas) throughout the zones where outbreaks of the targeted strains of rabies are occurring or are expected to occur. The goal would be to achieve elimination of the rabies strains by severely suppressing populations of the target animal species over broad areas so that the specific strains of rabies could not be transmitted to susceptible members of the same species. This alternative was not considered in detail because it would be impractical to obtain approval from the many hundreds of thousands of landowners on whose properties the lethal control methods would have to be conducted, because of the cost and effort that would be involved, and because it would also undoubtedly be opposed by most members of the public as well.

Population Control Through Birth Control. Under this alternative, APHIS-WS would provide funds or operational assistance to implement one or more methods to control populations of the target species by reducing reproduction. Such methods could involve live capture and surgical sterilization, the use of chemical reproductive inhibitors placed out in baits or delivery devices, or the application of *immunocontraception* strategies (i.e., vaccines that can cause infertility in treated animals). This alternative was not considered in detail because of the extreme expense and difficulty involved, the greater effectiveness of vaccination alternatives, and because no contraceptive agents are currently registered for use.

Employ other types of ORV instead of the genetically engineered V-RG vaccine. Under this alternative, APHIS-WS would provide funds to purchase and use "modified-live-virus" (i.e., "attenuated" or weakened strains that have been shown to have little chance of causing rabies in treated animals) or perhaps "killed-virus" (i.e., "inactivated" virus) oral vaccines instead of the V-RG vaccine in ORV baits. This alternative was not considered in detail because some of the vaccines involved can sometimes cause rabies (e.g., "live" virus vaccines), others would be cost-prohibitive to produce in ORV form (e.g., "killed" virus vaccines), and none are currently licensed or approved for any such use in the U.S.

Finding of No Significant Impact

The analysis in the EA indicates that there will not be a significant impact, individually or cumulatively, on the quality of the human environment as a result of implementing the proposed action. I agree with this conclusion and therefore find that an EIS need not be prepared. This determination is based on the following factors:

1. The effects of ORV program activities to be conducted by APHIS-WS will be confined to localized areas and are not regional or national in scope.

2. The proposed action would pose minimal risk to public health and safety. No injuries to any member of the public are known to have resulted from ORV programs and adverse health effects from vaccinia associated with ORV have been minimal with no significant long-term effects expected. Positive health benefits to the public would occur through decreased risk of exposure to rabid animals.

3. There are no unique characteristics such as park lands, prime farm lands, wetlands, wild and scenic areas, or ecologically critical areas that would be significantly affected.

4. The effects on the quality of the human environment are not highly controversial. Although there is some opposition to certain methods used to collect animal specimens for monitoring purposes, their use under the proposed action is not highly controversial in terms of size, nature, or effect.

5. Based on the analysis documented in the EA, the effects of the proposed involvement by APHIS-WS in ORV programs on the human environment would not be significant. The effects of the proposed activities are not highly uncertain and do not involve unique or unknown risks.

6. The proposed action would not establish a precedent for any future action with significant effects.

7. No significant cumulative effects on the quality of the human environment were identified through this assessment.

8. The proposed activities would not affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places, nor would they likely cause any loss or destruction of significant scientific, cultural, or historical resources.

9. An evaluation of the proposed action and its effects on T&E species determined that no significant adverse effects would occur to such species, nor would their be any impact on critical habitat for any listed species.

10. The proposed action would be in compliance with all Federal, State, and local laws imposed for the protection of the environment.

Decision

I have carefully reviewed the EA and the input resulting from the public involvement process. I believe the issues and objectives identified in the EA would be best addressed through implementation of Alternative 1 (the Proposed Action). Alternative 1 is therefore selected because it offers the greatest flexibility in achieving effectiveness while minimizing cumulative adverse impacts on the quality of the human environment with respect to the issues raised for consideration in this process. The APHIS-WS program will implement the proposed action as described in the EA and in compliance with all applicable mitigation measures listed as components of standard operating procedures in Chapter 3 of the EA.

For additional information regarding this decision, please contact Dennis Slate, Rabies Program Coordinator, Wildlife Services, APHIS, 59 Chenell Drive, Suite 7, Concord, NH 03301-8548; phone (603) 223-6832.

/s/ William Clay
William Clay, Deputy Administrator
APHIS-WS

7/30/01
Date