

**United States Department of Agriculture
Animal and Plant Health Inspection Service**

**Record of Decision for Final Environmental Impact Statement
Feral Swine Damage Management: A National Approach**

This Record of Decision (ROD) has been developed by the U.S. Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS) in compliance with the requirements of the National Environmental Policy Act (NEPA) of 1969, as amended, the Council on Environmental Quality's (CEQ) regulations implementing NEPA, as amended, and the USDA and APHIS NEPA implementing procedures.

This ROD documents USDA APHIS' decision for its Final Environmental Impact Statement (FEIS), "Feral Swine Damage Management: A National Approach." APHIS' decision is to select Alternative 2, the preferred alternative, to implement a nationally coordinated, integrated feral swine damage management (FSDM) program, in cooperation with other agencies at the international, federal, state, territorial, Native American tribal, and local levels, and the cooperation of private management interest.

This ROD (a) states APHIS' decision, (b) identifies the alternatives and issues considered in reaching the decision and specifies the environmentally preferable alternative, (c) identifies and discusses the factors APHIS balanced in making its decision; and (d) states whether all practicable means to minimize environmental harm from implementation of the selected alternative have been adopted (40 CFR 1505.2).

BACKGROUND

Feral swine are a harmful and destructive invasive species that inflict significant damage to property, agriculture (crops and livestock), native species, ecosystems, and historic and other cultural resources. They also pose a threat to the health of wildlife, domestic animals, and humans. The APHIS Wildlife Services (APHIS-WS) program works with federal, state, territorial and local agencies; tribes; organizations; and private individuals to address specific localized feral swine damage problems. These actions have, to some extent, been successful in responding to localized damage, but the size and range of the national feral swine population and associated damage is increasing. The national feral swine population is currently estimated to exceed more than 6 million animals.

Due to the growing threats from feral swine, Congress has appropriated funds and directed APHIS to implement a national program to manage feral swine damage (Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriations Act of 2014, Public Law No. 113-76 2014). The decision to be made based on the FEIS is how best to implement the congressional direction. The decision is programmatic in nature, and will serve as the guide for allocation of APHIS resources and for working with cooperators to meet FSDM program objectives.

**Feral Swine Damage Management – A National Approach
Record of Decision**

ENVIRONMENTAL IMPACT STATEMENT

On May 13, 2013, APHIS published a Notice of Intent (NOI) to prepare an environmental impact statement, and a Notice of Scoping (NOS) in the Federal Register (78 FR 27937–27939). A public meeting with webcast was held in Riverdale, Maryland on May 23, 2013. Additional public notification and outreach was provided through notices sent via the APHIS stakeholder registry; APHIS web sites on feral swine and the EIS; a notice on the APHIS-WS NEPA web page; a notice on the federal e-rulemaking portal Regulations.gov; and outreach to cooperating and participating agencies, and all federally recognized tribes. Tuskegee University and other 1890 Land-grant Universities helped with outreach to minority and low income communities.

On December 19, 2014, the U.S. Environmental Protection Agency (EPA) published in the Federal Register (75 FR 75800), a notice of the availability of the draft EIS (DEIS). The official comment period on the DEIS ended on February 2, 2015. Additional public notification and outreach was provided similar to the NOI/NOS with the addition of a press release. APHIS received 45 comments on the DEIS including reviews by the EPA and the U.S. Department of the Interior (DOI). The EPA reviewed the DEIS in accordance with their responsibilities under Section 102(2)(C) of the NEPA and Section 309 of the Clean Air Act. The EPA rated the DEIS as LO indicating they had a lack of objection. The DOI did not have any comments on the DEIS.

On June 12, 2015, EPA issued a Federal Register notice announcing the final FEIS (80 FR 33519). APHIS issued notices and distributed the FEIS with additional outreach similar to the DEIS. The FEIS includes responses to all comments submitted on the draft EIS. No additional comments were received on the FEIS.

DECISION

APHIS' decision is to select Alternative 2, the preferred alternative in the FEIS, to implement a nationally coordinated, integrated (FSDM) program. This decision is based on a thorough review of the alternatives set forth in the FEIS, their ability to meet established objectives, and their environmental consequences. APHIS will serve as the lead federal agency in a cooperative effort with other agency partners, states, territories tribes, organizations, and local entities that share a common interest in reducing or eliminating problems caused by feral swine.

APHIS also reviewed the available FSDM methods for their environmental impacts and suitability for inclusion in a national FSDM program. Based on analysis in the FEIS and review of public comments, I have determined that the technical assistance, research and development, surveillance, ground and aerial shooting, tracking with dogs, live capture systems, exclusion, frightening devices, and immobilization and euthanasia drugs discussed in Chapter 2 Sections E2 through E9 are suitable for implementation by APHIS as part of the national FSDM program. If the U.S. Environmental Protection Agency approves them for use in feral swine, nonlethal chemical repellents and use of the injectable reproductive control agent GonaCon™ could be included in FSDM programs. At this time insufficient data is available on other reproductive control agents/formulations or toxicants to consider them for use in the FSDM program. These methods will not be included in the program without additional review in accordance with the NEPA, CEQ regulations, and USDA and APHIS NEPA implementing procedures. APHIS

Feral Swine Damage Management – A National Approach
Record of Decision

programs at the state, territory and local level may choose to implement all or a subset of the methods approved for use depending on local environmental reviews and use of the APHIS-WS Decision Model (FEIS Chapter 2 Section C).

Additional Management Actions

APHIS-WS' National Wildlife Research Center (NWRC) functions as the research arm of APHIS-WS and is involved with evaluating and developing FSDM methods. As appropriate, and in compliance with NEPA, NWRC will evaluate new feral swine damage management methods and techniques that are developed, or proposed for use by APHIS-WS, in subsequent environmental reviews in accordance with the CEQ, USDA and APHIS' NEPA implementing regulations and procedures.

APHIS-WS has been implementing operational FSDM under the current program (Alternative 1) under local NEPA decisions that were issued prior to the development of the FEIS. Local NEPA decisions on FSDM will be evaluated for consistency with decisions made in this ROD.

Additional state, territorial or local level NEPA analyses and decisions will be developed as needed to address local issues and needs, and to ensure consistency with APHIS policies in accordance with the CEQ, USDA and APHIS' NEPA implementing regulations and procedures. Because the decision made herein invokes a funding allocation mechanism for the national program, I have determined that local NEPA decisions on FSDM are and will be considered to be stand-alone decisions, and need not be tiered to this ROD and FEIS. Local decisions may operate with or without national funding participation and are largely focused on operations within a state, territory or local area. Existing local NEPA decisions will be complete as long as they fully evaluate the local actions, effects and analysis and are consistent with applicable policies and operational procedures evaluated in the FEIS.

ALTERNATIVES

APHIS examined five alternatives in detail in the FEIS (1) no action, or no change from the current APHIS FSDM program, (2) integrated FSDM program (the preferred alternative), (3) baseline FSDM program, (4) national FSDM and strategic local projects program and (5) federal FSDM grant program. In addition, a number of alternatives were considered but rejected from detailed analysis because they were not reasonable and did not meet program objectives. Alternatives 2-5 meet the congressional direction to implement a national FSDM program.

Alternative 1 – Current APHIS FSDM Program (No Action Alternative)

Alternative 1 is the no action (no change or status quo) alternative which is the current APHIS FSDM program. Under this alternative, APHIS FSDM actions would continue as they have prior to the appropriation of additional funds by Congress. Congress has acknowledged that feral swine are a harmful and destructive species, and that a national federal response to feral swine damage is warranted. Consequently, Alternative 1 cannot be selected for implementation unless Congress determines that a national FSDM program is no longer a priority. Alternative 1 provides a baseline for comparison with the action alternatives.

Feral Swine Damage Management – A National Approach Record of Decision

Under the current program, APHIS-WS state programs provide technical assistance (advice, training, loan of equipment), and, when appropriate and funding is available, operational assistance with lethal and nonlethal FSDM methods. An integrated wildlife damage management (IWDM) approach is used which incorporates the use or recommendation of a range of nonlethal and lethal techniques, singly or in combination, to meet the needs of each cooperator. APHIS-WS personnel opportunistically collect biological samples from some feral swine killed during operational control activities and from other sources (e.g., hunter-killed animals) for disease monitoring. Research, modeling and risk assessment projects are conducted on an array of issues related to feral swine, but are limited by available funding. Most APHIS outreach and education efforts are conducted by personnel at the state and territory level. Work with Canada and Mexico on FSDM has been primarily limited to interactions between individual APHIS-WS State programs and their Canadian or Mexican counterparts.

Alternative 2 – Integrated FSDM Program (Preferred Alternative)

This alternative is the preferred alternative in the FEIS. It is an integrated feral swine damage management program wherein APHIS would serve as the lead agency in a nationally coordinated cooperative effort with other agency partners, tribes, organizations, and local entities. In states, territories and tribal lands where management authorities have a goal to eliminate feral swine, (generally in areas with low or moderate feral swine populations), APHIS would form partnerships to meet the local governments' management objectives and reduce the size and range of the U.S. feral swine population. In states, territories and tribal lands where management authorities have chosen to seek balance the desire for feral swine for cultural or recreational purposes (usually areas with large or well established feral swine populations) with the need to minimize feral swine damage, APHIS would form partnerships to meet locally determined management objectives. These objectives may include reducing statewide populations or eliminating swine from specific locations. Key program components of Alternative 2 are threefold.

1. Improved baseline operational capacity to respond to local needs for FSDM, including improved infrastructure (e.g., personnel, equipment) and increased cost-share opportunities with partner agencies, tribes and others.
2. National projects including strategic allocation of resources to reduce the range and size of the national feral swine population, increased research, modeling and risk analysis, national outreach and education program, and national coordination with Canada and Mexico.
3. Strategic projects at the local level to address specific vulnerable areas.

Alternative 3 – Baseline FSDM Program

Alternative 3 is the baseline FSDM program wherein APHIS would implement a nationally coordinated response that improves the baseline operational capacity of APHIS-WS state programs that assist partner agencies and others in states, territories, and tribal lands with feral swine. This alternative directs the most resources to operational management efforts. National projects and strategic local projects, as described for Alternative 2, are not included. Allocations would be based on the size of the feral swine population in each state and territory. Increased capacity of APHIS-WS state programs to respond to local needs for assistance would allow for

Feral Swine Damage Management – A National Approach
Record of Decision

expanded FSDM including population management in states and territories, education, outreach, disease monitoring and other activities that may meet national objectives.

Alternative 4 – National FSDM and Strategic Local Projects Program

This alternative is the national FSDM and strategic local projects program. Alternative 4 would place emphasis on national projects and strategic local projects, as described for Alternative 2. Strategic allocation of resources under this alternative would result in no additional FSDM funding for some APHIS-WS state programs that are serving low priority states and territories with feral swine until management objectives are achieved in high priority areas. APHIS-WS programs in low priority states and territories could continue to assist cooperators as currently occurs under Alternative 1.

Alternative 5 – Federal FSDM Grant Program

Alternative 5 is the federal FSDM grant program. Under this alternative, APHIS would distribute national APHIS FSDM program funding to states, territories, tribes, organizations representing native peoples, and research institutions. APHIS would not conduct any operational FSDM, research, or other FSDM activities. The national APHIS FSDM program manager would administer the federal FSDM grant program to achieve the key project components described for Alternative 2. The grants process would require more resources to administer than Alternative 2; consequently, less overall funding would be available for all aspects of FSDM.

Alternatives That Were Considered but Dismissed from Detailed Analysis

Several alternatives were dismissed from detailed analysis because they did not meet all of the criteria for alternatives development. These were the exclusive use of private industry, volunteers, and private hunting; no APHIS involvement in FSDM; eradication of feral swine from all areas where they occur; exclusive use of non-lethal methods to address feral swine problems; exclusive use of lethal methods to address feral swine problems; and an alternative that provided grant money to states, tribes and territories for FSDM while also providing supplemental assistance available from APHIS.

ENVIRONMENTALLY PREFERABLE ALTERNATIVE

CEQ regulations implementing NEPA (40 CFR 1505.2(b)) require that the record of decision (ROD) specify the alternative(s) which were considered to be environmentally preferable. CEQ defined the environmentally preferable alternative as the alternative that will promote the national environmental policy as expressed in NEPA, Section 101. This would ordinarily mean the alternative that causes the least damage to the biological and physical environment, while still meeting the need for action. CEQ also considered that the environmentally preferred alternative would best protect, preserve, and enhance historic, cultural, and natural resources (46 Fed. Reg. 18026).

The national program goal defined in the FEIS is to reduce feral swine damage to affected resources including historic, cultural, and natural resources. Resolving and preventing future feral

Feral Swine Damage Management – A National Approach
Record of Decision

swine damages would help to protect, preserve and enhance these resources. Thus, we not only considered the environmental consequences of the specific actions within the alternatives, but we also evaluated the ability of the alternatives to meet this national goal. Alternative 2, the preferred alternative, is the environmentally preferred alternative because it has the lowest adverse effect on the environment while also providing the greatest potential to benefit historic, cultural and natural resources that are or may be harmed or threatened by feral swine. The selection of the environmentally preferable alternative for the nationally coordinated FSDM program is in keeping with ongoing USDA efforts to promote environmental quality through technically, economically, and logically feasible alternatives to fulfill regulatory mandates.

RATIONALE FOR DECISION

APHIS' mission is "to protect the health and value of American agriculture and natural resources". Congress has acknowledged that feral swine are a harmful and destructive species, and that a federal response to feral swine damage is warranted (Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriations Act of 2014, Public Law No. 113-76 2014). Within APHIS, the APHIS-WS program has the primary operational component to establish and implement such a program. The mission of APHIS-WS is to provide federal leadership and expertise to resolve wildlife conflicts to allow people and wildlife to coexist. APHIS-WS' statutory authorities for implementing FSDM, in cooperation with other entities, are the Act of March 2, 1931, as amended (46 Stat. 1468; 7 U.S.C. 426-426b), and the Act of December 22, 1987 (101 Stat. 1329-331; 7 U.S.C. 426c). Executive Order 13112 directs federal agencies to use their programs and authorities to prevent the spread or to control populations of invasive species that cause economic or environmental harm, or harm to human health. Feral swine are a non-native invasive species known to cause damage to natural, agricultural, cultural and economic resources and pose risks to human and animal health. The preferred alternative is the alternative which the agency believes would best fulfill its statutory mission and responsibilities, giving consideration to economic, environmental, technical, and other factors.

Ability to Meet Management Objectives

A series of management objectives were established to guide APHIS in developing alternatives that would meet the overall goal of reducing feral swine damage in the U.S. The objectives are summarized as follows.

1. Expand feral swine management programs nationwide to stabilize and eventually reduce the national feral swine population and associated threats to agriculture, natural resources, property, animal health, and human health.
2. Further develop cooperative partnerships with other pertinent federal, state, territorial, tribal, and local agencies, and private organizations working to reduce impacts of feral swine.
3. Expand feral swine disease monitoring to protect agriculture and human health.
4. Develop and improve tools and methods to manage feral swine populations, predictive models to assess feral swine population expansion and economic impacts, and risk analyses for feral swine impacts to agriculture, animal health, and human health.

Feral Swine Damage Management – A National Approach
Record of Decision

5. Develop outreach materials and activities to educate the public about feral swine damage and related activities to prevent or reduce damage.
6. Coordinate with Canada and Mexico to establish a collaborative plan to address the feral swine threat along the common borders.

Chapter 4 of the FEIS compares the ability and extent of each alternative to meet the program objectives. The objectives analysis is distinct from the analysis of environmental consequences of the alternatives. By evaluating the ability of the alternatives to meet the overall goal and objectives, we were able to compare the results to the environmental consequences of the alternatives on the human environment to help make an informed decision that would best meet the competing needs for limited resources for feral swine damage management.

Typically, APHIS-WS considers the effects on a target species population as an environmental consequence. However, in this case, feral swine population reduction was part of one of the objectives so review of the effects of the alternatives on the feral swine population was included in the objectives analysis. Unlike native wildlife species, feral swine are not a natural part of healthy North American ecosystems, and most states are actively seeking to eliminate the feral swine population in their areas. Considering reduction of the national feral swine population as a program objective is also consistent with Executive Order 13112 - Invasive Species that directs Federal agencies to use their programs and authorities to prevent the spread or to control populations of invasive species that cause economic or environmental harm, or harm to human health.

One of the immediate challenges of any of the alternatives that could be selected is that APHIS must work with partner agencies and others under local feral swine regulations and management plans/goals. Some states, territories, and tribes actively manage and promote feral swine hunting, others do not prohibit activities that may lead to the spread of feral swine, while others have already developed regulations and guidelines that will promote the elimination of feral swine. Regardless of state, territorial, tribal and other local rules and plans, the actions of individuals in spreading feral swine has been cited as the primary reason for the increase and expansion of feral swine populations into new areas. For these reasons, cooperation, collaboration and enhanced communication with other nations, other federal agencies, with state, territorial, tribal, and other local governments, and with other organizations and individuals are just as critical to success as are operational and supporting programs to target the removal of feral swine.

All of the alternatives except for Alternative 1, the current program, met all six objectives, but there were differences in the degree to which the alternatives were expected to meet each objective. Alternative 1 has met some of the objectives as they involve localized damage management programs, but the need to reduce feral swine damage has increased along with the range and size of the national feral swine population. Alternative 1 also does not respond to the Congressional direction to establish a nationally coordinated program. Accordingly, Alternative 1 was eliminated from consideration as the preferred alternative because it failed to meet program objectives.

Alternative 2 provides the most optimal balance of meeting all of the objectives. APHIS believes Alternative 2 will be the most successful of the alternatives in achieving the overall program goal

Feral Swine Damage Management – A National Approach
Record of Decision

of reducing feral swine damage. By integrating the allocation of resources in the three-pronged approach (baseline, national and strategic local projects), feral swine damage will be reduced by implementing strategies that best achieve long and short term program efficacy and efficiencies.

Alternative 3 would have best met the need for short term, local damage reduction because it would provide the greatest opportunity for local cost sharing with APHIS-WS state programs and increase baseline APHIS-WS capacity to respond. However, the lack of strategic allocation of resources to reduce the range and size of the national feral swine population makes this alternative less effective in long-term national feral swine population reduction. When compared with the other action alternatives, Alternative 3 is also inferior in its ability to develop improved FSDM methods and models to improve efficiencies including research and outreach and education. Alternative 3 would have been similar to the current program in its ability to develop local partnerships. Disease sampling could increase under this alternative, but sampling patterns would not be based on the risk modeling that would be enhanced under Alternatives 2 and 4.

Alternative 4 would have had the highest likelihood of meeting long-term national project priorities, including reducing the range and size of the national feral swine population, research on new methods, development of risk and efficacy models to prioritize funds, the development of international partnerships, and implementation of strategic local projects. Alternative 4 would have provided more support to meet the immediate (short-term) needs for localized feral swine damage management for high priority states, i.e. those states with emerging or low populations of feral swine, than Alternative 1 (the current program), but would not increase baseline assistance to low priority states until objectives in high priority states were achieved. It would have provided local support where strategic projects to address key vulnerable areas were identified by the national program. States with moderate to high feral swine populations were likely to be lower priority in terms of actions to reduce the range and size of the national feral swine population, but they are also the areas experiencing the most feral swine damage. Leaving these states without at least some increase in baseline federal FSDM assistance is unacceptable and may result in missed opportunities to contain or stabilize feral swine populations and damage at the state or territory level.

Alternative 5, the federal grant program, would have met most of the objectives to some degree, but not to the extent of the other action alternatives. The reason for the reduced efficacy is that in implementing a grant program which adheres to the same policies and regulations for environmental protection as apply to APHIS, national FSDM resources would be needed for a new administrative framework for grant management, oversight, and quality control involving an array of grant recipients. This alternative would eliminate the resources that are available for APHIS program delivery under the other action alternatives and would not take advantage of the existing APHIS framework that includes infrastructure for management and oversight of personnel, trained and knowledgeable FSDM specialist and support programs, existing research facilities and APHIS scientists, and established program policies for environmental compliance management. Most of these efficiencies would be foregone under a grant program. Finally, while national priorities would be used to select grant recipients, some objectives, such as improving partnerships with Canada and Mexico, might not be pursued to the same degree as Alternatives 2 and 4.

Feral Swine Damage Management – A National Approach
Record of Decision

Based on the information summarized above, Alternative 2 was identified as providing the best balance in terms of meeting all the program objectives. Alternatives 3 and 4 each provided some superior abilities to meet some of the objectives, compared with Alternative 2, but they did not achieve the best balance for achieving all of the objectives including meeting short and long term needs to address damage and reduce the range and size of the national feral swine population. Alternative 5 was similar to Alternative 2 in the ability to meet most management objectives but would have fewer resources available to meet objectives because of increased administrative costs. Alternative 5 would also not provide national-level coordination of some FSDM activities.

Environmental Consequences

The FEIS contains evaluation of potential environmental consequences, or effects of FSDM. . In comparing the alternatives for their effects on the human environment, we studied the effects on the biological and physical environment (i.e., threatened and endangered species and critical habitats, non-target animals, soils and water, odor/air quality, and climate change); we determined effects on the sociocultural environment (hunting, aesthetic values, recreational disturbance, human health and safety, cultural resources; tribal values, traditional cultures and ceremonial values, and humaneness and ethical perspectives); and we examined the economic effects of the alternatives. The sections below are a summary of the analysis in the FEIS.

Effects on Non-target and Threatened and Endangered Species

Methods available for FSDM are similar for all alternatives, as are protective measures built into the alternatives through SOPs. Therefore, risks to non-target species, including threatened and endangered species, generally differ in the distribution and extent of operational FSDM conducted for each alternatives. The selected alternative (Alternative 2) may disturb or result in the mortality of a limited number of individual non-target animals, but it would not adversely affect any of their populations. While the anticipated level of mortality is low and overall negative effects on non-target animals are considered to be similarly low, FSDM is also likely to provide short and long-term benefits to non-target species because feral swine damage to natural resources will be reduced. Alternatives 2-5 were found to have greater risks and benefits to non-target species over the current program (Alternative 1) because of the increase in FSDM. Alternative 4 was anticipated to have a similar long-term, although more unevenly distributed short-term effect on non-target species compared with Alternative 2. Alternative 3 would have slightly increased negative effects and quicker short-term beneficial effects on non-target animals, due to the highest immediate increase in operational FSDM, but it would be slower or less likely to achieve long-term beneficial impacts from reducing the national feral swine population. Except for the current program (Alternative 1), Alternative 5 would have had the lowest risks and benefits to non-target species because overall levels of FSDM would have been lower. Endangered Species Act consultations have been completed, as appropriate, for APHIS-WS program activities and these would be updated or expanded as needed to address expanded local programs associated with implementing Alternative 2, and where there are new species listings that may be affected by FSDM, or where there are other consultation triggers. None of the Alternatives were expected to result in jeopardy to any federally listed threatened or endangered species.

Feral Swine Damage Management – A National Approach
Record of Decision

WS' use of lead may pose risks to the environment, including non-target species that may ingest lead during feeding activities. We expect that federal funding associated with Alternatives 2-5 would make it possible for the APHIS-WS program to use only lead-free ammunition for aerial operations, within the constraints of availability. Approximately half the feral swine taken by APHIS-WS are taken through aerial hunting and most carcasses are left in the field, so this switch would reduce the potential for WS to have adverse effects on non-target species. APHIS-WS will continue working to reduce its use of lead ammunition for ground shooting within the constraints of availability, safety, efficacy, and cost. This will also help to minimize the environmental risks associated with use of lead ammunition. In addition, APHIS does not and will not use lead ammunition where prohibited by law or where land managers and landowners request lead-free ammunition.

Effects on Soils, Water, and Air Quality

Most FSDM methods pose little risk to soil, vegetation, and water quality when conducted according to program policies. Carcass disposal is not expected to have a substantive impact on odor or air quality because APHIS-WS will dispose of carcasses in compliance with all applicable state and local laws and will coordinate with landowners/managers. Direct and indirect damages from feral swine on soil, vegetation and water quality will be reduced in project areas and beyond. Because of the low level of risks to soil, vegetation and water quality, there is little difference among the alternatives in impacts to these resources

Effects on Recreation

The FEIS evaluated impacts on several aspects of recreation. Under Alternative 2, where swine hunting is allowed but elimination is established as the state, territory or tribal management goal, hunting opportunities are likely to be reduced directly through reductions in swine densities and indirectly as animals become wary of control actions. Feral swine hunting opportunities would be influenced primarily by state, territory and tribal regulations, enforcement, and management objectives. Where feral swine are managed as a game animal, hunting opportunities are not likely to be adversely affected. Alternative 1 (the current program) has had little adverse impact on feral swine hunting opportunities; in fact, opportunities have increased in some areas concurrent with the expansion of the national feral swine population. Potential reductions in feral swine hunting opportunities would be greatest in the short-term for Alternative 3 because this alternative allocates the most resources to operational FSDM. Impacts of Alternative 4 would be similar to Alternative 2 but less evenly distributed because baseline funding for operational FSDM would not initially be available to low priority states. Effects of Alternative 5 on recreation would be intermediate to alternatives 1 and 2.

Hunting for other game animals and wildlife watching opportunities are not likely to be adversely affected and may benefit from FSDM in situations where feral swine are adversely affecting native species. Capacity of each of the alternatives for beneficial impacts would be directly related to the ability of the alternative to achieve management objectives as discussed above. While there are some individuals who place intrinsic value on feral swine, overall, the aesthetic value of the natural environment would be enhanced. Finally, disturbances to recreationists from FSDM

Feral Swine Damage Management – A National Approach Record of Decision

program activities would be minimal for all alternatives because of coordination efforts with landowners/managers to select times, locations, and methods to minimize risk of adverse impacts.

Climate Change Impacts

For all alternatives, cumulative CO₂-equivalent greenhouse gas emissions levels for the operational component of APHIS FSDM program and other APHIS-WS programs would be below the CEQ suggested reference point of 25,000 MT/year threshold set by CEQ for a detailed review and mitigation in a proposed action. Alternatives 1, 2, and 4 were anticipated to have similar emission levels, while Alternative 3 would have had slightly higher levels due to increased operational FSDM. Alternative 5 would have lower greenhouse gas emissions than Alternative 2 (the selected alternative) due to higher administrative needs and associated reductions in resources to operational FSDM. Additionally, FSDM is expected to have a beneficial impact in situations where feral swine are adversely impacting ecosystems already stressed from climate change. Capacity of each of the alternatives for beneficial impacts would be directly related to the ability of the alternative to achieve management objectives as discussed above.

Effects on Human Health and Safety

No disproportionate adverse risks on children or minority and low-income populations were identified for any alternative. Human health and safety risks from FSDM are low for many reasons including safety policies, training and certification, coordination and agreements with landowners and land managers, adherence to regulations and other program standard operating procedures (SOPs), and timing and location of the use of methods to minimize public exposure. All SOPs and other provisions for the protection of human health and safety from risks associated with implementing FSDM activities would be identical among the alternatives, so there is little variation among alternatives in this issue. FSDM is likely to benefit the public by reducing the potential for zoonotic disease transmission, swine-vehicle accidents, and risks from aggressive swine. Capacity of each of the alternatives for beneficial impacts would be directly related to the ability of the alternative to achieve management objectives as discussed above. Feral swine would not be donated to food charities due to legal, logistical and human health challenges unless inspection and safety requirements of the Food Security Act could be met.

Sociocultural Effects

The analysis of the effects of FSDM on sociocultural resources, including cultural/historic resources, tribal and ceremonial values, and concerns about humaneness and ethics, showed there could be both beneficial and detrimental effects. Feral swine may impact sociocultural resources negatively through destruction or degradation of cultural sites, while feral swine themselves are sometime seen to have intrinsic cultural value. APHIS-WS considered both the beneficial and adverse effects of FSDM, as proposed under each alternative.

Cultural Resources

The selected alternative, Alternative 2, delivers FSDM only where requested by landowners and land managers, including tribes. Historic and other cultural resources are

Feral Swine Damage Management – A National Approach
Record of Decision

not likely to be adversely affected because of coordination with landowners and land managers, generally minimal level of ground disturbance, and consultations with tribes and State Historic Preservation Offices, as appropriate. Alternative 2 represents a slight increase in potential adverse effects on cultural resources over the current program, Alternative 1, due to more extensive FSDM activity. However, Alternative 2 also provides an increased potential for beneficial effects/protection of cultural resources through increased application of FSDM. Low adverse effects, similar to Alternative 2 are expected with Alternative 4, while Alternative 3 was anticipated to have slightly higher adverse effects due to increased operational FSDM. Alternative 5 would likely reduce the amount of FSDM being conducted. Grant recipients would be expected to follow applicable SOPs for minimizing adverse effects on cultural resources, thus, the effects were expected to be lower than all alternatives except for Alternative 1.

Tribal and Traditional Cultures and Ceremonial Values

APHIS has offered consultation to all federally recognized tribes at both the local and national levels, and would continue to promote partnerships with tribes and other native peoples. Additional federal resources associated with Alternative 2 would increase program availability to assist tribes with FSDM, including for the benefit of protecting cultural resources. Other cultural resource managers besides tribes could also be assisted with FSDM to protect historic and other cultural resources. Expanded removals in Hawaii and other areas where feral swine have important traditional uses would not affect users who follow local laws because existing SOPs preserve hunting opportunities on public lands. However, feral swine hunting opportunities in Hawaii and other areas where feral swine have important traditional uses could be affected on some private lands depending on the desires and values of the individual landowner/manager and local laws and regulations.

Alternative 1 provided benefits similar to Alternative 2, but Alternative 2 provides more resources to assist tribes with FSDM. Alternatives 3 and 4 would be similar to Alternative 2, however the availability of FSDM resources available to assist tribes would vary under these alternatives. Alternative 3 would distribute FSDM resources through APHIS based on feral swine populations size, whereas Alternative 4 would distribute resources through APHIS based on state/territory priority level. As a result, in some cases, there would be a delay in APHIS' ability to deliver FSDM to tribes based on location. Effects on traditional cultures that use feral swine for traditional or ceremonial purposes would not vary widely among the alternatives because feral swine would continue to be available in managed public hunting areas. Alternative 5 would have allowed tribal governments and Native Hawaiian organizations to apply for grants to protect their own resources, reducing APHIS' direct effects on tribal, traditional and ceremonial values.

Ethics and Humaneness

The FEIS showed that the selected alternative, Alternative 2, is both ethical and humane, although perception of the humaneness of FSDM methods varies, depending on individual philosophies and experiences. Expanded research, outreach/education, and technical

Feral Swine Damage Management – A National Approach
Record of Decision

assistance that will occur with this alternative could improve the selectivity and humaneness of FSDM methods and in the long term, reduce the overall need for FSDM. The alternatives that enable advances in research and education (Alternatives 2 and 4) were anticipated to be more humane and ethical than those that focused more on operation FSDM. Alternative 3 was considered to be more ethical than Alternative 1 due to increased capacity to conduct FSDM, but still does not have the emphasis on outreach and research. Alternative 5 was anticipated to be similar to Alternative 2, but considered less desirable, primarily due to lower efficiencies.

Economic Impacts

Under the selected alternative, Alternative 2, FSDM program activities are likely to provide long term beneficial economic effects from increased efficiencies of FSDM through reduced feral swine damages. Low-income landowners and communities would receive increased FSDM benefits over the current program. Businesses that supply FSDM equipment and supplies would initially benefit from increased sales, but long term program success would reduce purchases over time. Feral swine hunting businesses, private pest control operators, and people who use feral swine for food could be negatively affected in the long term except where feral swine are managed as a game animal. Legal fenced hunting preserves could benefit from reduced opportunities to hunt free-ranging swine.

Economic impacts, both beneficial and detrimental, under other alternatives are based largely on the ability of those alternatives to meet the goals and objectives associated with reducing the national feral swine population and associated damage. Under the current program, Alternative 1, it is unlikely that there would be adverse economic impacts on hunting preserves, hunting business, or private pest control operations based on the current program's inability to substantially reduce the national feral swine populations. Alternative 3, the baseline FSDM program, would initially see larger economic impacts due to increased FSDM activities; however, the alternative's anticipated inability to contain and reduce the national feral swine population in the long term would lessen those impacts overtime. Alternative 4 is anticipated to rapidly reduce the national feral swine population, which could result in more immediate economic impacts, depending on the industry or individual affected. These effects may not be sustained under that alternative because resources and efforts would be concentrated in high priority states and only moved to low states priority (those with the largest populations) after goals are met in high priority states (those with low or new populations). Alternative 5 is anticipated to prolong the occurrence of feral swine damage and therefore increase the associated economic impacts.

Based on the information summarized above, Alternative 2 was identified as providing the best balance in terms of potential benefits to environmental resources, while having only minor and short term adverse effects on most of the environmental resources studied. The exception is that adverse long term effects were found to be likely in some situations where people use feral swine for hunting, food or in associated businesses. However adverse effects in these situations will be limited because feral swine will not be eliminated where states and territories have a goal to maintain them for harvest or recreational purposes. These are likely to be the same states and territories where feral swine are well established and where these beneficial uses of feral swine are most likely to occur. Program SOPs, which would have been included in any selected alternative,

Feral Swine Damage Management – A National Approach
Record of Decision

minimize or eliminate most potential adverse effects, so none of the alternatives would have had adverse and long term environmental consequences on any other aspect of the human environment. Environmental benefits and risk of adverse effects were found to be largely correlated with the efficacy in meeting program objectives, most notably the objective to expand feral swine management programs nationwide to stabilize and eventually reduce the national feral swine population.

SUMMARY

APHIS is selecting Alternative 2, which is not only balanced in its ability to meet the program goal and objectives (meeting the need for action to reduce feral swine damage to agriculture and other resources), it will also benefit the environment by reducing feral swine damage to natural and cultural resources, and will have a low risk of adverse environmental effects. The comprehensive approach to FSDM selected under Alternative 2 integrates proven, effective methods with increased capacity for research, education and outreach efforts to any entity that requests assistance, including federal, territorial, state and tribal entities, and providing one-on-one assistance to individuals in need. The selected alternative also provides increased coordination with feral swine management issues with Canada and Mexico. The nationally coordinated aspects of the program provide guidance on allocating resources most effectively on a national scale, instead of managing the national problem only at the local level. The selected alternative gives APHIS-WS the oversight and flexibility to effectively manage and monitor feral swine populations, damage, and diseases in partnership with federal, state, tribal, local, and territorial management agencies, and in accordance with feral swine management goals of partner agencies. The strategy provides flexibility for APHIS-WS to adapt or alter management techniques to best suit new challenges associated with the expanding range and adapting abilities of feral swine to meet the goals and objectives outlined in the EIS.

MEASURES TO AVOID OR MINIMIZE ENVIRONMENTAL HARM

APHIS policy directives and other SOPs govern the use of damage management tools and other agency actions and procedures. Some key protective measures include APHIS-WS compliance with applicable federal, state and local laws that are in place for environmental protection, coordination and agreements that are developed with all land managers or land owners before any direct control FSDM actions can be implemented, and strict policies on safety, training, certification, and use of FSDM methods. These policies and procedures are incorporated into the selected action and no additional mitigation was deemed to be necessary to minimize environmental risks. The selected alternative, Alternative 2, incorporates all applicable SOPs identified in the FEIS. These and other policies are described in the FEIS (FEIS Chapter 2 Section G), and in APHIS-WS Directives which are available at http://www.aphis.usda.gov/wildlife_damage/.

Most adverse effects would be low in any particular location where FSDM activities would occur, but the extent of the impacts would increase over current levels in accordance with the increase in overall FSDM activities. The effects were not considered to be significant individually or cumulatively (FEIS Chapter 4 Section H).

Feral Swine Damage Management – A National Approach
Record of Decision

CONCLUSION

I find that Alternative 2 best meets the goal to reduce feral swine damage in the U.S. and territories in a manner that is environmentally sound and with the highest degree of probability of success of managing damage and threats associated with feral swine. APHIS-WS managers and wildlife specialists are well-trained and capable of reducing potential adverse environmental effects from program implementation. Partner agencies, including federal, state, territorial, tribal and local governments have indicated their desire to work with APHIS in a nationally coordinated response to manage feral swine damage to protect agriculture, natural and cultural resources, human and animal health, and other resources that are threatened by feral swine.

Implementation of Alternative 2 will include use of all APHIS-WS SOPs established in the FEIS to minimize environmental and public safety risks. In addition, as discussed in the FEIS, Alternative 2 will be implemented in accordance with all applicable federal, state, territorial, tribal and local laws and regulations for the protection of the environment, and local regulations that are in place for feral swine management. In conclusion, I find Alternative 2 provides the course of action that on balance, best serves the public interest. This Record of Decision is APHIS' final action under the NEPA process.

This Record of Decision was prepared in accordance with (1) NEPA, (2) CEQ regulations for implementing the procedural provisions of NEPA (40 C.F.R. parts 1500-1508), (3) USDA regulations implementing NEPA (7 C.F.R. part 1), and (4) NEPA Implementing Procedures (7 C.F.R. part 372).

Done in Riverdale, MD, this 14th day of July 2015.



William H. Clay
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