

**DECISION  
AND  
FINDING OF NO SIGNIFICANT IMPACT  
FOR  
REDUCING PIGEON, STARLING, AND SPARROW DAMAGE  
THROUGH AN  
INTEGRATED WILDLIFE DAMAGE MANAGEMENT PROGRAM  
IN THE STATE OF LOUISIANA**

The U.S. Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Wildlife Services (WS) program responds to requests for assistance from individuals, organizations and agencies experiencing damage caused by wildlife. Ordinarily, according to APHIS procedures implementing the National Environmental Policy Act (NEPA), individual wildlife damage management actions may be categorically excluded (7 CFR 372.5(c), 60 Fed. Reg. 6000-6003, 1995). To evaluate and determine if any potentially significant impacts to the human environment from WS' planned and proposed program to manage bird damage in Louisiana would occur, an environmental assessment (EA) was prepared. The EA documents the need for bird damage management in Louisiana and assesses potential impacts of various alternatives for responding to damage problems. The EA analyzes the potential environmental and social effects for resolving rock dove (feral pigeons), European starling, and house sparrow damage related to the protection of resources, and human health and safety on private and public lands throughout the state. WS' proposed action is to implement an Integrated Wildlife Damage Management (IWDM) program on public and private lands in Louisiana. Comments from the public involvement process were reviewed for substantive issues and alternatives which were considered in developing this decision.

WS is the Federal program authorized by law to reduce damage caused by wildlife (Act of March 2, 1931 (46 Stat. 1468; 7 U.S.C. 426-426b) as amended, and the Act of December 22, 1987 (101 Stat. 1329-331, 7 U.S.C. 426c). Wildlife damage management is the alleviation of damage or other problems caused by or related to the presence of wildlife. Wildlife damage management is recognized as an integral part of wildlife management (The Wildlife Society 1992). WS' uses an IWDM approach, commonly known as Integrated Pest Management (WS Directive 2.105) in which a combination of methods may be used or recommended to reduce damage. WS' wildlife damage management is not based on punishing offending animals but as one means of reducing damage and is used as part of the WS' Decision Model (Slate et al. 1992, USDA 1997, WS Directive 2.201). Resource management agencies, organizations, associations, groups, and individuals have requested WS to conduct bird damage management to protect property, resources, and human health and safety in Louisiana. All WS' wildlife damage management activities are in compliance with relevant laws, regulations, policies, orders and procedures, including the Endangered Species Act of 1973.

The EA was prepared to: 1) facilitate planning and interagency coordination, 2) streamline program management, and 3) clearly communicate to the public the analysis of cumulative impacts. The EA ensures WS' actions complied with NEPA, with the Council on Environmental Quality (40 CFR 1500), and with APHIS' NEPA implementing regulations (7 CFR 372). All bird damage management activities are conducted consistent with: 1) the Endangered Species

Act of 1973, 2) Executive Order (EO) 12898<sup>1</sup>, EO 13045<sup>2</sup>, EO 13112<sup>3</sup>, and EO 13186<sup>4</sup>, 3) the Federal Insecticide, Fungicide, and Rodenticide Act, and 4) Federal, State and local laws, regulations and policies.

### Public Involvement

The pre-decisional EA was prepared and released to the public for a 30-day comment period by a legal notice in *The Advocate* on February 1, 2007. A copy of the pre-decisional EA was also mailed directly to agencies, organizations, and individuals with probable interest in the proposed program. One comment document was received from the public after review of the pre-decisional EA. Comments were analyzed to identify substantial new issues, alternatives, or to re-direct the program. Comments received did not identify additional issues outside those already analyzed in the EA. Comments received and WS' responses can be found in Appendix A. Public comments are maintained in the administrative file located at the Wildlife Services State Office in Port Allen, LA.

### Major Issues

The EA describes the alternatives considered and evaluated using the identified issues. The following issues were identified as important to the scope of the analysis (40 CFR 1508.25).

- Effects on target bird species
- Effects on other wildlife species, including T&E species
- Effects on public health and safety
- Impacts to stakeholders, including aesthetics
- Humaneness and Animal Welfare Concerns of Methods Used

### Affected Environment

The proposed action could be conducted on private, federal, state, tribal, parish, and municipal lands in Louisiana to protect agricultural and natural resources, property, bridges, and public health and safety. Areas of the proposed action could include, but are not necessarily limited to areas in and around buildings and parks, bridges, industrial sites, urban/suburban woodlots, feedlots or at any other sites where birds may roost, loaf, or nest. Damage management activities could be conducted at agricultural fields, vineyards, orchards, farmyards, dairies, ranches, livestock operations, grain mills, and grain handling areas (e.g., railroad yards) where birds

<sup>1</sup> Executive Order 12898 promotes the fair treatment of people of all races, income levels and cultures with respect to the development, implementation and enforcement of environmental laws, regulations and policies.

<sup>2</sup> Executive Order 13045 ensures the protection of children from environmental health and safety risks since children may suffer disproportionately from those risks.

<sup>3</sup> Executive Order 13112 states that each Federal agency whose actions may affect the status of invasive species shall, to the extent practicable and permitted by law; 1) reduce invasion of exotic species and the associated damages, 2) monitor invasive species populations, provide for restoration of native species and habitats, 3) conduct research on invasive species and develop technologies to prevent introduction, and 4) provide for environmentally sound control, promote public education on invasive species.

<sup>4</sup> Executive Order 13186 directs federal agencies to protect migratory birds and strengthen migratory bird conservation by identifying and implementing strategies that promote conservation and minimize the take of migratory birds through enhanced collaboration between WS and the USFWS, in coordination with state, tribal, and local governments. A National-level MOU between the USFWS and WS is being developed to facilitate the implementation of Executive Order 13186.

destroy crops, feed on spilled grains, or contaminate food products for human or livestock consumption. Additionally, the area of the proposed action could include airports and surrounding property where birds represent a threat to aviation safety.

### **Alternatives That Were Fully Evaluated**

The following four alternatives were developed to respond to the issues. Three additional alternatives were considered but not analyzed in detail. A detailed discussion of the effects of the Alternatives on the issues is described in the EA; below is a summary of the Alternatives.

#### **Alternative 1. Technical Assistance Only**

This alternative would not allow for WS to conduct direct operational BDM in Louisiana. WS would only provide technical assistance through the dissemination of leaflets, presentations, demonstrations, and technical recommendations to manage bird damage when requested. Producers, property owners, agency personnel, or others could still conduct BDM using any legal lethal or non-lethal method available for use. The use of chemicals by others would be limited to the use of repellents, Starlicide, and Avitrol. Starlicide and Avitrol are restricted-use pesticide that can only be used by applicators certified by the state. DRC-1339 and alpha-chloralose are only available for use by WS' employees.

#### **Alternative 2. Integrated Bird Damage Management Program (Proposed Action/No Action)**

WS proposes to continue the current bird damage management program that responds to pigeon, European starling, and house sparrow damage requests in Louisiana. An IWDM approach would be implemented to reduce damage activities to property, agricultural resources, livestock, and public health and safety. Damage management would be conducted on public and private property in Louisiana when the resource owner (property owner) or manager requests assistance. An IWDM strategy would be recommended and used, encompassing the use of practical and effective methods of preventing or reducing damage while minimizing harmful effects of damage management measures on humans, target and non-target species, and the environment. Under this action, WS could provide technical assistance and direct operational damage management, including non-lethal and lethal management methods by applying the WS' Decision Model (Slate et al. 1992). When appropriate, physical exclusion, habitat modification, or harassment would be recommended and utilized to reduce damage. In other situations, birds would be removed as humanely as possible using: shooting, trapping, egg addling/destruction, nest destruction, and registered pesticides. In determining the damage management strategy, preference would be given to practical and effective non-lethal methods. However, non-lethal methods may not always be applied as a first response to each damage problem. The most appropriate response could often be a combination of non-lethal and lethal methods, or could include instances where application of lethal methods alone would be the most appropriate strategy. Bird damage management activities would be conducted in Louisiana, when requested and funded, on private or public property, including airport facilities and adjacent or nearby properties, after an *Agreement for Control* or other comparable document has been completed. All management activities would comply with appropriate Federal, State, and Local laws.

### **Alternative 3. Non-lethal Bird Damage Management Only by WS**

This alternative would require WS to use non-lethal methods only to resolve bird damage problems. Requests for information regarding lethal management approaches would be referred to the Louisiana Department of Wildlife and Fisheries (LDWF), USFWS, USDA Agricultural Extension Service offices, local animal control agencies, or private businesses or organizations. Individuals might choose to implement WS' non-lethal recommendations, implement lethal methods legally available to private individuals, or use other methods not recommended by WS. Individuals experiencing bird damage could contract for WS' direct control services, use contractual services of private businesses, or take no action. Persons receiving WS' non-lethal technical and direct control assistance could still resort to lethal methods that were available to them. Currently, DRC-1339 and alpha-chloralose are only available for use by WS' employees. Repellents could still be used along with Avitrol and Starlicide, which are restricted-use pesticides.

### **Alternative 4. No Federal WS Bird Damage Management**

This alternative would eliminate federal involvement in BDM in Louisiana. WS would not provide direct operational or technical assistance and requesters of WS' assistance would have to conduct their own BDM without WS' input. Requests for information would be referred to LDWF, USFWS, USDA Agricultural Extension Service offices, local animal control agencies, or private businesses or organizations. Individuals might choose to conduct BDM themselves, use contractual services of private businesses, or take no action. DRC-1339 and alpha-chloralose are only available for use by WS' employees. Therefore, use of these chemicals by private individuals would be illegal. The only chemicals available for use under this alternative would be repellents, Avitrol, and Starlicide.

### **Alternative Considered but not Analyzed in Detail**

The alternatives analyzed but not in detail are summarized from the EA below:

#### **Lethal Bird Damage Management Only By WS**

Under this alternative, WS would not conduct any non-lethal control of birds for BDM purposes in the State, but would only conduct lethal BDM. This alternative was eliminated from further analysis because some bird damage problems can be resolved effectively through non-lethal means. Additionally, lethal methods may not always be available for use due to safety concerns or local ordinances prohibiting the use of some lethal methods, such as the discharge of firearms. For example, a number of damage problems involving undesirable birds entering into buildings can be resolved by installing barriers or repairing of structural damage to the buildings, thus excluding the birds. Further, damage situations such as large flocks of birds on/near airport runways could not be removed immediately by lethal means, while scaring them away through various harassment devices might resolve the threat to passenger safety immediately.

### **Compensation for Bird Damage Losses**

The compensation alternative would require the establishment of a system to reimburse persons impacted by bird damage. This alternative was eliminated from further analysis because no federal or state laws currently exist to authorize such action. Under such an alternative, WS would not provide any direct control or technical assistance. Aside from lack of legal authority, analysis of this alternative in the ADC Final EIS indicated that the concept has many drawbacks (USDA 1997).

Compensation requires large expenditures of money, even when compensation is less than full market value when the cost of labor to investigate and validate all damage claims is included. Not all damage situations can be conclusively verified, such as irrefutably attributing disease outbreaks to the presence of birds, even though the birds are a likely cause. There would be little incentive for resource owners or managers to limit damage through tolerance or by implementing damage management methodologies. Compensation would not be practical for reducing threats to human health and safety.

### **Use of Bird-proof Feeders in Lieu of Lethal Control at Dairies and Cattle Feeding Facilities**

Bird-proof cattle feeders are often a proposed alternative provided by the public and organizations with an interest in wildlife damage management as a method for excluding birds at dairies and cattle feeding facilities. Designs proposed either do not effectively exclude birds from entering the trough or interfere with the delivery of feed to the trough which increases feed waste (Twedt and Glahn 1982).

Exclusion methods to prevent birds from feeding on and contaminating feed at livestock operations are usually the least cost-effective solution (Twedt and Glahn 1982, Feare 1984). Despite the limitations of the bird-proof feeder system proposed by some members of the public and organizations, similar types of systems could be recommended by WS under the proposed program should any become available that are effective, practical, and economically feasible for producers to implement.

### **Monitoring**

The Louisiana WS' program will annually review BDM activities in Louisiana to ensure WS' actions are within the scope of analyses provided in the EA. Those annual monitoring reports will document WS' annual activities along with discuss any new information that becomes available since the completion of the EA and the last monitoring report. If WS' activities, as identified in the annual monitoring reports, are outside the scope of the analyses in the EA or if new issues are identified from available information, further analyses would occur and to the degree as identified by those processes.

### **Decision Rationale**

The analyses in the EA demonstrates that Alternative 2 (Proposed Action/No Action Alternative): 1) best addresses the issues identified in the EA, 2) provides safeguards for public

health and safety, 3) provides WS the best opportunity to reduce damage while providing low impacts on non-target species, 4) balances the economic effects to resources protected, and 5) allows WS to meet its obligations to government agencies or other entities.

The rationale for this decision is based on several considerations. This decision takes into account public comments, social/political and economic concerns, public health and safety and the best available science. The foremost considerations are that: 1) bird damage management will only be conducted by WS at the request of landowners/managers, 2) management actions are consistent with applicable laws, regulations, policies and orders, and 3) no adverse impacts to the environment were identified in the analysis. As a part of this Decision, the Louisiana WS' program will continue to provide effective and practical technical assistance and direct management techniques that reduce damage.

### **Finding of No Significant Impact**

Based on the analyses provided in the EA, there are no indications that WS' bird damage management activities in Louisiana will have a significant impact, individually or cumulatively, on the quality of the human environment as a result of the proposed action. I agree with this conclusion and therefore, find that an Environmental Impact Statement should not be prepared. This determination is based on the following factors:

1. Bird damage management as conducted by WS in Louisiana is not regional or national in scope.
2. The proposed action would pose minimal risk to public health and safety. Risks to the public from WS' methods were determined to be low in a formal risk assessment (USDA 1997, Appendix P).
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. Built-in mitigation measures that are part of WS' standard operating procedures and adherence to laws and regulations will further ensure that WS' activities do not harm the environment.
4. The effects on the quality of the human environment are not highly controversial. Although there is some opposition to wildlife damage management, this action is not highly controversial in terms of size, nature, or effect.
5. Based on the analysis documented in the EA and the accompanying administrative file, the effects of the proposed damage management program 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.

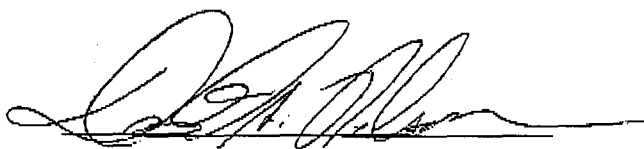
7. No significant cumulative effects were identified through this assessment. The EA discussed cumulative effects of WS' bird damage management on target and non-target species populations and concluded that such impacts were not significant for this or other anticipated actions to be implemented or planned within Louisiana.
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. WS has determined that the proposed program would not adversely affect any Federal or Louisiana State listed threatened or endangered species. This determination is based upon concurrence from the USFWS and the LDWF that the program will not likely adversely affect any threatened or endangered species in Louisiana.
10. The proposed action would be in compliance with all federal, state, and local laws.

### Decision

I have carefully reviewed the EA prepared for this proposal and the input from the public involvement process. I find the proposed program to be environmentally acceptable, addressing the issues and needs while balancing the environmental concerns of management agencies, landowners, advocacy groups, and the public. The analyses in the EA adequately addresses the identified issues which reasonably confirm that no significant impact, individually or cumulatively, to wildlife populations or the quality of the human environment are likely to occur from the proposed action, nor does the proposed action constitute a major Federal action. Therefore, the analysis in the EA remains valid and does not warrant the completion of an Environmental Impact Statement.

Based on the EA, the issues identified are best addressed by selecting Alternative 2 – Integrated Bird Damage Management Program (Proposed Action/No Action) and applying the associated mitigation measures discussed in Chapter 3 of the EA. Alternative 2 successfully addresses (1) bird damage management using a combination of the most effective methods and does not adversely impact the environment, property, and/or non-target species, including T/E species (2) it offers the greatest chance at maximizing effectiveness and benefits to resource owners and managers while minimizing cumulative impacts on the quality of the human environment that might result from the program's effect on target and non-target species populations; (3) it presents the greatest chance of maximizing net benefits while minimizing adverse impacts to public health and safety; and (4) it offers a balanced approach to the issues of humaneness and aesthetics when all facets of these issues are considered. Further analysis would be triggered if changes occur that broaden the scope of bird damage management activities, that affect the natural or human environment, or from the issuance of new environmental regulations. Therefore, it is my decision to implement the proposed action (Alternative 2) as described in the EA.

Copies of the EA are available upon request from the Louisiana Wildlife Services Office, P.O.  
Box 589, Port Allen, LA 70767.

A handwritten signature in dark ink, appearing to read 'David Nelson', written over a horizontal line.

David Nelson, Acting Regional Director  
APHIS-WS Eastern Region

4/5/2007

Date



## APPENDIX A

### RESPONSE TO COMMENTS ON THE ENVIRONMENTAL ASSESSMENT: REDUCING PIGEON, STARLING, AND SPARROW DAMAGE THROUGH AN INTEGRATED WILDLIFE DAMAGE MANAGEMENT PROGRAM IN THE STATE OF LOUISIANA

#### Comment 1. Inappropriately limiting analysis related to effected environment

WS provides assistance to cooperators requesting service to manage a wildlife damage problem. Outside of a few methods that are only available to WS personnel that are discussed in the EA, all non-lethal and lethal methods discussed in the EA are available to private individuals for use to manage house sparrow, rock dove, and European starling damage in Louisiana. All WS' activities are conducted under a service agreement with the requesting cooperator to conduct activities to manage wildlife damage. Under the service agreement, WS is restricted to those methods that are agreed upon by the requester. The requesting cooperator is consciously selecting the methods to be used to manage wildlife damage under the agreement with WS. Therefore, the cooperator is making the decision on what methods are used based on recommendations by WS. Thus, cooperators interested in lethal methods offered by WS would likely employ those lethal methods that are available to them to resolve their bird damage problem in the absence of WS' involvement.

WS is not attempting to disclaim responsibilities for decisions made by WS. WS is simply stating that in situations where individuals that are experiencing wildlife damage and request WS to use lethal methods are likely to use lethal methods in the absence of WS' involvement. Therefore, WS' involvement would not change the *environmental status quo* when the individual experiencing wildlife damage has already made the conscious decision that the use of lethal methods would likely resolve their wildlife damage problem. Without WS' involvement, the use of lethal methods would still be available to individuals interested in the use of such methods.

Certain aspects of the human environment may actually benefit more from WS' involvement. If a cooperator believes WS has greater expertise to selectively remove a target species than a non-WS entity, WS management activities may have less of an impact on target and non-target species than if the non-federal entity conducted the action alone. Thus, in those situations, WS' involvement may actually have a *beneficial* effect on the human environment when compared to the *environmental status quo* in the absence of such involvement.

#### Comment 2. Broad Scope of the EA

The scope of the EA is discussed in section 1.8.4 and section 2.3.3 of the EA. WS has the discretion to determine the geographic scope of their NEPA analyses (*Kleppe v Sierra Club*, 427 U.S. 390, 414 (1976), CEQ 1508.25) and WS has determined that the scope of this EA is appropriate (Section 1.8.4 in the EA). Ordinarily, according to APHIS procedures implementing the National Environmental Policy Act (NEPA), individual wildlife damage management actions

may be categorically excluded (7 CFR 372.5(c), 60 Fed. Reg. 6000-6003, 1995). The intent of preparing the EA was to determine if the proposed action would potentially have significant cumulative impacts on the environment that would warrant the preparation of an Environmental Impact Statement or a finding of no significant impact. The EA addresses impacts for the entire State to analyze cumulative impacts to provide a better analysis than multiple EAs covering smaller zones.

**Comment 3. Necessary information and analysis lacking, inappropriately vague**

WS' methods and standard operating procedures are discussed in sections 3.2, 3.4, and section 4.2 of the EA and are discussed in further detail in Appendix B of the EA. Specific examples of WS' activities in Louisiana are provided in section 3.2.2.1 of the EA. The EA is also tiered to WS' programmatic Final Environmental Impact Statement (FEIS) (See section 1.2.1). WS' FEIS discusses procedures and methods that are available for use by WS to manage bird damage (USDA 1997, revised). To comply with CEQ regulations, agencies are encouraged to tier their EAs to previously prepared EISs and to incorporate material by reference in order to reduce the volume of NEPA documents (40 CFR 1502.20, 40 CFR 1502.21). The EA is also tiered to WS' FEIS to comply with CEQ regulations to reduce bulk and excessive paperwork (Eccleston 1995).

As described in Section 3.2.3 of the EA, WS uses a decision model based on a publication by Slate et al. (1992) which involves evaluating each request for assistance, taking action and evaluating and monitoring results of the actions taken. The published article provides more detail on the processes used in the WS' Decision Model. WS' FEIS (USDA 1997, revised), to which the EA is tiered, provides more detail and examples of how the model is used. WS' personnel use the WS' Decision Model to develop the most appropriate strategy to reduce damage and detrimental environmental effects from damage management actions (Section 3.2.3 in the EA).

House sparrows, rock doves (feral pigeons) and European starlings are considered invasive species in the United States. House sparrows, pigeons, and starlings are afforded no protection under the Migratory Bird Treaty Act, as amended by the Migratory Bird Treaty Reform Act of 2004. Executive Order 13112 states "that each Federal agency whose actions may affect the status of invasive species shall, to the extent practicable and permitted by law; 1) reduce invasion of exotic species and the associated damages, 2) monitor invasive species populations, provide for restoration of native species and habitats, 3) conduct research on invasive species and develop technologies to prevent introduction, and 4) provide for environmentally sound control, promote public education on invasive species."

The effectiveness of any damage management program could be defined in terms of losses or risks potentially reduced or prevented, how accurately practitioners diagnose the problem and the species responsible for the damage, and then how actions are implemented to correct or mitigate risks or damages. To do this the agencies must be able to complete management actions expeditiously to minimize harm to non-target animals and the environment, while at the same time, using methods as humanely as possible within the limitations of current technology, funding and workforce. The most effective approach to resolving any damage problem is to use an adaptive integrated approach which may call for the use of several management methods

simultaneously or sequentially (USDA 19975, Courchamp et al. 2003) and this was analyzed in the EA (See Section 3.1, 3.2). The purpose behind integrated pest management is to implement management methods in the most effective manner while minimizing the potentially harmful effects on humans, target and non-target species, and the environment. The cost of management may sometimes be secondary because of overriding environmental, legal, human health and safety, animal welfare, or other concerns. Under the proposed action, the analysis showed that the methods proposed for use are the most practical and effective way to resolve damage problems. Efficacy is based on the types of methods employed, the application of the method, restrictions on the use of the method(s), the skill of the personnel using the method and, for WS' personnel, the guidance provided by WS' Directives and policies.

The goal of the WS' program is to reduce damage, risks, and conflicts with animals as requested and not to necessarily reduce/eliminate populations. WS recognizes that localized population reduction could be short-term and that new individuals may immigrate, be released at the site, or be born to animals remaining at the site (Courchamp et al. 2003). The ability of an animal population to sustain a certain level of removal and to eventually return to pre-management levels, however, does not mean individual management actions are unsuccessful, but that periodic management may be necessary. Even though a reduction in local populations may not last, timed properly, the management result can last long enough for the protected resources (e.g., eggs, small mammals, birds, etc.) to reach a size or level of maturity where they are at less risk. To say that a management strategy is ineffective because it may have to be repeated is analogous to saying that lawn mowing is ineffective in making the grass short because it must be repeated.

#### **Comment 4. Need for Action Not Demonstrated**

WS addresses the need for action to protect human health and safety, agriculture, property, and natural resources in section 1.3 in the EA. Information more specific to damage in Louisiana can be found in section 1.5 of the EA. The absence of specific records of damage occurring in Louisiana does not mean damage does not occur in Louisiana or will not occur. House sparrows, pigeons, and starlings can cause damage and/or conflicts wherever they occur. The examples provided in the EA indicate the extent to which damage can occur and demonstrates that those species addressed in the EA are capable of causing damage across a broad range of resources along with posing direct threats to human health and safety from aircraft strikes and through human exposure to fecal droppings.

The illegal use of pesticides to kill or harm wildlife has occurred when individuals feel compelled to address damage situations caused by wildlife where the level of assistance to resolve the damage has been perceived to be insufficient. In the absence of WS' assistance or if WS was constrained to the use of certain methodologies which may be less effective in resolving damage or where habituation to methods used occurs quickly, "frustrated" individuals may resort to the use of illegal pesticides to solve their wildlife damage situation due to their perception that the level of assistance needed to resolve their damage situation is insufficient. Currently, WS uses an integrated damage management approach that incorporates several methodologies

that increases effectiveness and decreases the likelihood of habituation. In the absence of WS' assistance, the number of individuals that may become "frustrated" and resort to the illegal or misuse of pesticides will likely increase due to the lack of assistance to manage their individual wildlife damage situation.

Birds play an important role in the transmission of zoonotic diseases to where humans may come into contact with fecal droppings of birds. Rock doves, house sparrows, and European starlings have been suspected in the transmission of 29 different diseases to humans (Davis et al. 1971, Stickley and Weeks 1985, and Weber 1979).

The absence of records of disease occurrence in Louisiana does not mean absence of risk but may only mean lack of reliable research in this area. Few studies are available on the occurrence and transmission of zoonotic diseases in wild birds. Study of this issue is complicated by the fact that some disease-causing agents associated with birds (e.g., *Salmonella*), may also be contracted from other sources. WS' works with cooperators on a case-by-case basis to assess the nature and magnitude the wildlife conflict including providing information on the limitations about what we know regarding health risks associated with large flocks and roosts of birds. It is the choice of the individual cooperator to tolerate the potential health risks or to seek to reduce those risks.

The goal of agricultural and human health programs is to prevent diseases/illness from occurring. Similarly agricultural biosecurity programs are designed to prevent diseases from occurring in the first place and in the instance that a disease outbreak occurs or a Foreign Animal Disease is detected, to prevent the spread of the disease. The presence of large numbers of wild birds that can and do move among multiple farms can be a risk to these biosecurity efforts (Clark and McLean 2003).

The EA and papers like Clark and McLean (2003) which reviews pathogens of agricultural and human health interest in blackbirds and Hubálek (2004) which lists pathogenic organisms in migratory birds provide an indication of the range of potential disease risks associated with wild birds. For most of these diseases, the risk of transmission from birds to humans is likely very low. The primary two human health issues related to the target species of this EA are *Salmonella* and Histoplasmosis.

Histoplasmosis is a fungal disease that affects the lungs which is caused by the organism *Histoplasma capsulatum*. The accumulated feces at bird roosts have long been known to be associated with the occurrence of the illness. In most instances of health risks associated with bird roosts, the roost has been in place for a period of years. The disease is generally contracted when the soil/feces below the roost is disturbed by wind on dry soil or human activity. Long term residents of areas near roosts often test positive for *Histoplasma* exposure. Viable *H. capsulatum* remains in the soil and can be contracted by humans' years after the roost is abandoned (Clark and McLean 2003). As with many diseases, infants, young, the elderly and those with compromised immune systems are at the greatest risk of severe illness.

Salmonellosis is a well documented human and animal pathogen. In humans, this organism most often results in "food poisoning" characterized by acute intestinal pain and diarrhea. Several types of the *Salmonella* bacteria are carried by wild birds with varying degrees of impact on

humans and livestock. Friend (1999) reported relative rates of detection of *Salmonella* spp. in free ranging birds. *Salmonella* spp. isolates were frequent in songbirds, common in doves and pigeons, occasional in starlings, blackbirds and cowbirds, and infrequent in crows.

#### **Comment 5. Effectiveness of Proposed Action**

An analysis of cost-effectiveness in many bird damage management situations is difficult or impossible to determine because the value of benefits may not be readily calculable and personal perspectives differ about damage. For example, the potential benefit of eliminating pigeons from nesting in industrial buildings or starlings from a livestock facility could reduce incidences of illness among unknown numbers of building users or livestock. Since some bird-borne diseases are potentially fatal, or severely debilitating, the value of the benefit may be high. However, no studies of disease problems with and without bird damage management have been conducted, and, therefore, the number of cases prevented because of bird damage management are not possible to estimate. These questions and relationships are outside the scope of this EA and are more appropriate as research projects. We have used the best information available to prepare the analysis in the EA (40 CFR 1502.22). Also, it is rarely possible to conclusively prove that birds are responsible for individual disease cases or outbreaks. In addition, there are no studies available to assess the potential damage with and without bird damage management at airports. When a problem is identified at an airport and WS is requested to assist in reducing bird/aircraft strike risks, WS responds. Whether a damaging or fatal bird/aircraft strike would have occurred is speculative, however airport managers, the FAA and WS err on the side of reducing risks and potential bird strike damage.

Another example of the difficulty inherent in determining the cost-effectiveness of BDM is the management of some wildlife species to protect other wildlife species, such as T/E species. Civil values have been assigned for many common species of wildlife and can be used to calculate their value. However, in the case of T/E species, their value has been judged "incalculable" (Tennessee Valley Authority vs. Hill, US Supreme Court 1978), making it more difficult to specifically quantify the economic benefit to restore or protect T/E species

In regards to the effectiveness of methods used, Avery (2002) also cited studies where lethal damage management did reduce losses to crops (Elliott 1964, Larsen and Mott 1970, Palmer 1970, Plesser et al. 1983, Tahon 1980, Glahn et al. 2000 as cited in Avery 2002) and posed little danger to non-target species (Glahn et al. 2000). Avery (2002) also stated that it seems reasonable that local, short-term crop protection can be achieved through reduction in depredating bird populations, however, quantification of the relationship between the numbers of birds killed and the associated reduction in crop damage is lacking.

CEQ does not require a formal, monetized cost-benefit analysis to comply with NEPA (40 CFR 1508.14) and consideration of this issue is not essential to making a reasoned choice among the alternatives being considered. USDA (1997, Revised, Appendix L) states:

*"Cost effectiveness is not, nor should it be, the primary goal of the APHIS WS program. Additional constraints, such as the environmental protection, land management goals, and others, are considered whenever a request for assistance is received. These constraints increase*

*the cost of the program while not necessarily increasing its effectiveness, yet they are a vital part of the APHIS WS Program."*

WS is aware of concerns that federal bird damage management should not be allowed until economic losses become unacceptable. However, this type of policy would be inappropriate to apply to public health and safety situations. In addition, even though some losses can be expected and tolerated by agriculture producers and property owners, WS has the legal responsibility and direction to respond to requests for bird damage management, and it is program policy to aid each requester to minimize losses. Furthermore, in a ruling for Southern Utah Wilderness Alliance, et al. vs. Hugh Thompson, Forest Supervisor for the Dixie NF, et al., the court denied plaintiffs' motion for preliminary injunction. In part the court found that it was only necessary to show that damage from wildlife is threatened, to establish a need for wildlife damage management (U.S. District Court of Utah 1993).

#### **Comment 6. Field Use of Most Up-to-date Methods**

WS uses trained, professional employees to conduct bird damage management programs in Louisiana and continues to train employees on newly developed and available techniques. The NWRC functions as the research arm of WS by providing scientific information and development of methods for wildlife damage management that are effective and environmentally responsible. NWRC scientists work closely with WS state programs, wildlife managers, researchers, and others to develop and evaluate wildlife damage management techniques.

The analysis in the EA is based on the best information and methods available, or that are being developed but not yet available. As mentioned numerous times, WS uses an integrated approach and the WS' Decision Model to develop management strategies that alleviate damage in the most cost effective manner possible while minimizing the potentially harmful risks to humans, pets, non-target species and individuals. Chapter 2 and Appendix B of the EA discuss products that are currently available as well as products that may be considered should they become available at a future time (e.g., methyl anthranilate, anthraquinone for species other than geese).

#### **Comment 7. Missing Alternative**

WS' proposed alternative, Adaptive Integrated Bird Damage Management, as outlined in the EA is similar to a non-lethal before lethal alternative because WS encourages and considers the use of non-lethal methods before lethal methods (WS Directive 2.101). Adding a non-lethal before lethal alternative and the associated analysis would not add additional information to the analysis for the public or decision maker. WS recognizes that the most effective approach to resolving wildlife damage is to use an integrated approach which may call for the use of several damage management methods (non-lethal and/or lethal) simultaneously or sequentially. If the requester is already using non-lethal methods or if the birds have habituated to scare tactics, repellents or loud noises, etc., WS would not consider continuing to implement those techniques because they have not proven effective. When evaluating methods for a damage situation, WS recognizes that some methods may be more or less effective, or applicable.

**Comment 8. Humaneness**

WS continues to evaluate existing and new methods for animal welfare and humaneness concerns. WS' mission is to reduce bird damage, not bird populations and spends thousands of dollars each year to develop and bring to the field newly developed and more species specific and humane methods. While it is regrettable that wild animals die to alleviate damage in some situations, WS believes that if an animal death must occur, then it should occur with a minimum amount of distress and pain, in as short a period of time as practical, and with compassion. WS is trying to achieve a "balance" between the needs of people, recognizing that people are part of the environment, and animals while keeping issues like protection of the environment, economics, and humaneness in perspective. WS recognizes that animal welfare organizations are concerned that some methods used to manage wildlife damage may expose animals to pain and suffering. However, WS also recognizes another side to this issue, as perceived by traveling publics, airport managers, the livestock industry and others. WS believes that humaneness of an action or management plan must not only consider the effects of the action on the wildlife but also on the people or other species that may be or are affected by the wildlife. Ideally, such protection would be achieved through non-lethal means, but when non-lethal means are not practical or effective, lethal means may be the only way to accomplish such protection.

**Comment 9. DRC-1339**

A detailed discussion of DRC-1339 can be found in Appendix B of the EA. Toxicity data for DRC-1339 spans nearly 35 years of research and field use. The appropriateness of study designs used to determine acute toxicity to pesticides has many views (Lipnick et al. 1995). The use of small sample sizes was the preferred method of screening for toxicity beginning as early as 1948 (Dixon and Mood 1948). In 1982, the U.S. Environmental Protection Agency (EPA) established standardized methods for testing for acute toxicity that favored larger sample sizes (EPA 1982). More recently, regulatory agencies have again begun to debate the appropriate level of sample sizes in determining acute toxicity based on a growing public concern for the number of animals used for scientific purposes.

Based on these concerns, the Ecological Committee on FIFRA Risk Assessment (ECOFRAM) was established by EPA to provide guidance on ecological risk assessment methods (EPA 1999). The committee report recommended to the EPA that only one definitive LD<sub>50</sub> be used in toxicity screening either on the mallard or northern bobwhite and recommended further testing be conducted using the up-and-down method (EPA 1999). Many of the screening methods used for DRC-1339 prior to the establishment of EPA guidelines in 1982 used the up-and-down method of screening (Eisemann et al. 2002).

A review of the literature shows that LD<sub>50</sub> research using smaller sample sizes conducted prior to EPA established guidelines are good indicators of LD<sub>50</sub> derived from more rigorous designs (Bruce 1985, Bruce 1987, Lipnick et al. 1995). Therefore, acute and chronic toxicity data gathered prior to EPA guidance remain valid and to ignore the data would be inappropriate and wasteful of animal life (Eisemann et al. 2002).

## APPENDIX B

### Literature Cited:

Avery, M. L. 2002. Behavioral and ecological considerations for managing bird damage to cultivated fruit. Pp. 467-744 in D.J. Levey, W.R. Silva, and M. Galetti, eds. *Seed Dispersal and Frugivory: Ecology and Conservation*, Oxford Press.

Clark, L. and R. G. McLean. 2003. A review of pathogens of agricultural and human health interest found in blackbirds. Pages 103-108 In G. M. Linz, ed., *Management of North American blackbirds. Proceedings of a special symposium of the Wildlife Society 9th Annual Conference*. Bismarck, North Dakota, September 27, 2002.

Courchamp, F., R. Woodroffe, and G. Roemer. 2003. Removing protected populations to save endangered species. *Science* 302:1532.

Davis, J.W., R.C. Anderson, L. Karstad, and D.O. Trainer. 1971. *Infectious and Parasitic Diseases of Wild Birds*. Iowa State University Press, Ames, Iowa.

Dixon, W. J. and A. M. Mood. 1948. A method for obtaining and analyzing sensitive data. *Journal of the American Statistical Association* 43:109-126.

Eccleston, C. 1995. Determining when an analysis contains sufficient detail to provide adequate NEPA coverage. *Federal Facilities Environmental Journal*, Summer pp. 37-50.

Environmental Protection Agency (EPA). 1982. Avian single-dose oral LD<sub>50</sub> test, Guideline 71-1. Pages 33-37 in *Pesticide assessment guidelines, subdivision E, hazard evaluation wildlife and aquatic organisms*. U. S. Environmental Protection Agency PB83-153908, Washington D. C..

Environmental Protection Agency (EPA). 1999. ECOFRAM terrestrial draft report. Ecological Committee on FIFRA Risk Assessment Methods. U. S. Environmental Protection Agency, Washington, D. C. <http://www.epa.gov/oppefed1/ecorisk/terreport.pdf>

Feare, C. 1984. *The Starling*. Oxford University Press. Oxford New York.

Friend, M. 1999. Salmonellosis. Pages 99-109 In M. Friend and J. C. Franson, tech. eds., *Field manual of wildlife diseases*. United States Department of the Interior, Geological Survey, Biological Resources Division, Information and Technology Report 1999-001.

Hubalek, Z. 2004. An annotated checklist of pathogenic microorganisms associated with migratory birds. *Journal of Wildlife Diseases* 40:639-659.

Lipnick, R., J. A. Cotrouvo, R. N. Hill, R. D. Bruce, D. A. Stitzel, A. P. Walker, I. Chu, M. Goddard, L. Segal, J. A. Springer, and R. C. Meyers. 1995. Comparison of the Up-and-Down, conventional LD<sub>50</sub>, and Fixed-Dose Acute Toxicity procedure. *Food Chemistry and Toxicology* 33:223-331.



Slate, D. A., R. Owens, G. Connolly, and G. Simmons. 1992. Decision making for wildlife damage management. *Trans. North Am. Wildl. Nat. Res. Conf.* 57:51-62.

Stickley, A.R. and R.J. Weeks. 1985. Histoplasmosis and its impact on blackbird/starling roost management. *Proc. East. Wildl. Damage Control. Conf.* 2:163-171.

The Wildlife Society. 1992. Conservation policies of The Wildlife Society: A stand on issues important to wildlife conservation. The Wildlife Society, Bethesda, Md. 24pp.

Twedt, D.J., and J.F. Glahn. 1982. Reducing starling depredations at livestock feeding operations through changes in management practices. *Proc. Vertebr. Pest Conf.* 10:159-163.

United States Department of Agriculture (USDA). 1997 (revised). Animal Damage Control Program, Final Environmental Impact Statement – Revised October 1997. USDA, APHIS, Wildlife Services Operational Support Staff, 4700 River Road, Unit 87, Riverdale, MD 20737.

Weber, W.J. 1979. Health Hazards from Pigeons, European starlings, and English Sparrows. Thompson Publ. Fresno, Calif. 138 p.