

Supporting Statement
Case-Control Study on Highly Pathogenic Avian Influenza in Turkeys 2022
OMB Control Number 0579-XXXX

Part A

A. Justification

1. Explain the circumstances that make the collection of information necessary. Identify any legal or administrative requirements that necessitate the collection of information.

The Animal and Plant Health Inspection Service (APHIS) is requesting approval for information collection for a case control study on highly pathogenic avian influenza (HPAI) in commercial turkey flocks, hereafter referred to as the Study.

In 2015, the United States experienced an outbreak of HPAI that has been described as the worst animal health event in U.S. history, requiring over \$950,000,000 in federal expenditures and a loss of nearly 50 million birds. Since that time, Federal, State, and industry groups have promoted biosecurity and preparedness efforts and engaged in research that has guided prevention work to minimize future outbreaks.

The 2022 HPAI outbreak is the largest and most costly outbreak since the 2015 outbreak and is one of the largest and most costly HPAI outbreaks in US history, indicating the need to continue to collect data on transmission risk, biosecurity best practices, and priority areas for investment in biosecurity measures that mitigate risk. Nearly \$800 million in federal expenditures has been authorized, and over 45 million birds have been lost to infection or depopulation in 2022. Commercial turkey farms comprise the highest percentage of affected commercial farms in the 2022 outbreak; over 70% of all affected commercial farms are turkey farms.

Wild birds can carry HPAI, and evidence suggests that the predominance of infections in 2022 were due to independent introductions of virus onto farms from wild birds. As the fall season of wild bird migration has arrived and the risk of a resurgence of new infections increases, it is critical to identify risk factors to mitigate future outbreaks. After the fall wild bird migration, cases of HPAI in commercial turkeys tend to increase beginning in January through February. For example, in the 2014-2015 U.S. HPAI outbreak, the first HPAI case in a commercial poultry farm was in January of 2015. In the current outbreak, the first case was in February of 2022. During outbreaks, we see the highest number of HPAI cases in commercial turkeys from March through May, during the spring bird migration.

This industry-requested study will generate information needed to determine risk factors for infection with this environmentally hardy foreign animal disease pathogen. Current information on risk factors is critical for science-based updates to prevention and control recommendations. These recommendations are necessary because vaccination for this pathogen is not feasible due to negative international trade implications. While a study focused on table egg layers is

underway, risk factors can vary by industry segment, because different segments of the industry have vastly different practices and movements. Major differences include species of bird, average flock size on a farm, type of housing for the birds, manure management methods, and bird movement practices. The respective questionnaires address these differences as they relate to HPAI transmission and risk for the two species. In addition, the turkey industry has requested this study. Specifically, a group of turkey veterinarians in Minnesota requested the study. These veterinarians are consultants for both large and small turkey farms. The turkey industry is highly integrated, meaning that most farms work with a turkey company. Some of these farms are owned by the turkey companies, and others work with them under a contract arrangement. Almost 90% of the farms that will be invited to participate in the Turkey Study are associated with a turkey company. The results from the Study will benefit all farms, regardless of size. Therefore, a turkey study is also needed.

APHIS will solicit study participation from affected and unaffected producers collected from the Emergency Management Response System (EMRS). APHIS and NASS will collect data via phone surveys with commercial turkey producers. This survey is voluntary.

This data collection supports the following study objectives:

- Identify risk factors for the development of HPAI and biosecurity challenges
- Refine biosecurity recommendations to prevent HPAI in commercial turkey flocks
- Determine the economic costs of biosecurity and HPAI prevention investments in turkey flocks

Collection and dissemination of animal health data and information is mandated by 7 U.S.C. § 391, the Animal Industry Act of 1884, which established the precursor of the APHIS, Veterinary Services, the Bureau of Animal Industry. Legal requirements for examining and reporting on animal disease control methods were further mandated by 7 U.S.C. § 8308 of the Animal Health Protection Act, “Detection, Control, and Eradication of Diseases and Pests,” May 13, 2002. This collection of turkey flock data is consistent with the APHIS mission of protecting and improving American agriculture’s productivity and competitiveness.

As an ongoing disease threat with significant economic impacts to affected producers, updated information on the sources, impacts, and spread of this disease is critical for informing prevention and response efforts, including biosecurity measures. The epidemiology of highly pathogenic avian influenza in turkeys is complex, and vaccines are not an option due to negative trade impacts, making biosecurity measures one of the only prevention measures available to producers.

2. Indicate how, by whom, and for what purpose the information is to be used. Except for a new collection, indicate the actual use the agency has made of the information received from the current collection.

The data collected, analyzed, and interpreted will be disseminated to a wide variety of stakeholders. Producers and stakeholders in industry can utilize the study findings to update flock and barn biosecurity practices to reduce the risk from avian influenza. Producer groups, academicians and extension specialists, state and federal animal health officials, and veterinarians will use summary estimates of disease and associated operation characteristics to improve health management, disease prevention measures, disease response measures, and information outreach efforts. State and Federal officials responsible for regulatory veterinary medicine will use estimates reflecting disease and disease prevention to gain a more complete picture of animal health as a basis for program planning and funding. Research scientists will also use summary point estimates to design their research efforts. Veterinary and agricultural students in universities will use the reports for training in health management and other agriculturally based careers.

APHIS will use the data collected from the study to address the following goals:

- Identify risk factors for the development of HPAI and biosecurity challenges
- Refine biosecurity recommendations to prevent HPAI in turkey flocks
- Determine the economic costs of biosecurity and HPAI prevention investments in turkey flocks

Commercial Turkey Case Control Survey; 7 U.S.C. 8308; (State Gov't, Private)

A survey that participating turkey producers will complete by phone with an enumerator from APHIS Veterinary Services (VS), State collaborators, or the National Agricultural Statistics Service (NASS). Enumerators will collect the data on a paper survey during the phone interview. NASS will return an electronic dataset and scanned pdf questionnaires to the APHIS study team. Survey data will be stored and maintained on secure a USDA network.

The potential respondent universe for the Highly Pathogenic Avian Influenza Virus (HPAI) Turkey Case Control study are all commercial turkey operations located in states where positive commercial turkey premises have been detected on the date when data collection begins, as listed in the APHIS Emergency Response Management System (EMRS). All commercial turkey producers affected by HPAI in 2022 will be contacted and asked to participate in the survey. To date, 173 farms have been infected in 14 states, and given the trends in case counts, we estimate the number of infected case farms to be approximately 194 in 16 states when data collection begins. The maximum number of survey participants is 1,164 (194 case premises + 970 control premises). However, due to resource constraints and reliability of contact information, it is expected that 150 case farms will be selected for contact, of which 113, or 75%, of those are expected to complete the survey and we expect about 113 matching controls to complete the survey. All participating producers will receive the same questionnaire.

Contact information for case and control farms will be obtained from the USDA-APHIS VS EMRS, and, if needed, from shared company records, or by information provided by the State agricultural flock data base. CLEAR software from Thomson Reuters® will be used to ensure the most up-to-date contact information is included in the sampling frame.

3. Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g. permitting electronic submission of responses, and the basis for the decision for adopting this means of collection. Also describe any consideration of using information technology to reduce burden.

The survey will be administered by telephone call. This mode of data collection was selected because APHIS is collaborating with a USDA-NASS call center to administer the survey. For the 2022 APHIS study on HPAI in table egg layers, APHIS used in-person surveys by APHIS personnel (veterinary medical officers and animal health technicians). APHIS could not use APHIS data collectors for the Turkey Study because of high personnel resource demands for the ongoing HPAI outbreak and the much larger sample size for the Turkey Study.

4. Describe efforts to identify duplication. Show specifically why any similar information already available cannot be used or modified for use for the purpose(s) described in item 2 above.

APHIS staff performed literature searches for existing data relevant to the Study. In 2015, the University of Minnesota conducted a turkey case control study on HPAI risk factors in Minnesota and Wisconsin. The results of the Minnesota study were considered in designing the current study. The 2022 HPAI outbreak differs substantially from the 2014-2015 outbreak, in that lateral spread between farms was the predominant mechanism of disease spread in 2015, while point introductions into individual farms from wild bird virus have been the predominant mechanism of spread in 2022. Because of the substantial differences between these two outbreaks and larger geographical scope of this study, updated information is needed on transmission risk and biosecurity best practices.

APHIS is also performing a 2022 HPAI study on table egg layers. Findings from the table egg layer study are not yet available and are expected no earlier than December of 2022. A separate study is needed in turkeys because risk factors can vary by industry segment and species of bird (chickens vs. turkeys). Different segments of the industry have vastly different practices and movements. For example, table egg layer barns typically house a higher number of birds, house birds in cages, and are fully enclosed barns with mechanical ventilation systems (large fans). In contrast, turkey barns often house a smaller number of birds, do not house birds in cages, and sometimes have open-sided barns with natural ventilation (curtains that can open to the outdoors). Previous studies indicate the need to further investigate varying risk factors for different farm types. Therefore, the information from the 2022 table egg layer study is unlikely to be applicable to the turkey industry. Additionally, the Turkey Study will collect information on economics which is not part of the table egg layers study.

Available data were reviewed and compiled from all known sources. Sources reviewed include a wide variety of research publications. APHIS staff consulted employees from federal agencies, industry representatives, and academicians to identify areas of potential duplication. Based on this effort, APHIS is convinced that no other entity/source is collecting and analyzing this type of nationally representative information regarding highly pathogenic avian influenza impacts to the U.S. turkey industry with publicly available results.

5. If the collection of information impacts small businesses or other small entities, describe the methods used to minimize burden.

NASS data on how many turkey operations are small entities is not explicitly available. We used NASS data on sales categories and inventory for turkey farms collected every 5 years in the NASS Census of Agriculture (last collected in 2017) as a baseline for assessing impacts to small businesses ([NASS 2017 Census of Agriculture](#)). The Small Business Administration's Federal Government standards outlined in the North American Industry Classification Systems Codes defines a small agricultural business as having annual business receipts of \$750,000 or less.

The NASS 2017 Census of Agriculture indicates that the average inventory on turkey farms with sales between \$500,000 and \$999,999 was 14,447 turkeys in the 14 states that have been identified as having an HPAI-infected commercial turkey farm (CA, IN, IA, KS, KY, MI, MN, MO, NC, ND, PA, SD, UT, WI). Based on inventory data available in EMRS, we anticipate that approximately 10% of our study population may be small entities.

APHIS is minimizing burden by prefilling questionnaires with data already provided by case operations, reaching out to the minimum number of operations to meet needs of at least 1 control per case operation, and only asking questions relevant to the objectives of the study. The Study is designed to collect data from selected producers who are willing to participate and thus not burden producers who feel they do not have the time to participate, which will minimize potential impacts on business operations. Industry and producer input into the survey has been solicited to ensure that information collected is relevant, timely, and of appropriate complexity. Response to any portion of the Study is voluntary.

6. Describe the consequence to federal program or policy activities if the collection is not conducted or is conducted less frequently, as well as any technical or legal obstacles to reducing burden.

The rapid spread of HPAI in commercial turkey flocks has resulted in significant economic losses for producers. Without information on the most likely routes of disease introduction, flock managers are unable to implement updated science-informed approaches to preventing infection and/or spread. Because infection results in depopulation of affected flocks and widespread trade restrictions, the lack of rapid prevention and control measures will have significant economic impacts to the commercial turkey industry.

7. Explain any special circumstances that require the collection to be conducted in a manner inconsistent with the general information collection guidelines in 5 CFR 1320.5

- **requiring respondents to report information to the agency more often than quarterly;**
- **requiring respondents to prepare a written response to a collection of information in fewer than 30 days after receipt of it;**

The survey will take place in fewer than 30 days after first contact; however, a prepared written response is not required of respondents.

- **requiring respondents to submit more than an original and two copies of any document;**
- **requiring respondents to retain records, other than health, medical, government contract, grant-in-aid, or tax records for more than 3 years;**
- **in connection with a statistical survey, that is not designed to produce valid and reliable results that can be generalized to the universe of study;**
- **requiring the use of a statistical data classification that has not been reviewed and approved by OMB;**
- **that includes a pledge of confidentiality that is not supported by authority established in statute or regulation, that is not supported by disclosure and data security policies that are consistent with the pledge, or which unnecessarily impedes sharing of data with other agencies for compatible confidential use; or**
- **requiring respondents to submit proprietary trade secret, or other confidential information unless the agency can demonstrate that it has instituted procedures to protect the information's confidentiality to the extent permitted by law.**

No other special circumstances exist that would require this collection to be conducted in a manner inconsistent with the general information collection guidelines in 5 CFR 1320.5.

8. Describe efforts to consult with persons outside the agency to obtain their views on the availability of data, frequency of collection, the clarity of instructions and recordkeeping, disclosure, or reporting form, and on the data elements to be recorded, disclosed, or reported. If applicable, provide a copy and identify the date and page number of publication in the Federal Register of the agency's notice, soliciting comments on the information collection prior to submission to OMB.

The following people were consulted during planning and development of the Study:

- Dr. Jada Thompson, Assistant Professor, Agricultural Economics and Agribusiness, University of Arkansas, 216 Agriculture Building, Fayetteville, AR, 72701

Dr. Thompson was consulted on the value of the study and the general approach, including development of the economic questions in the survey tool, as well as the potential for economic analysis utilizing data collected.

- Dr. David Halvorson, Avian Health Specialist, Professor Emeritus, University of Minnesota, 144 Veterinary Science Building, 1971 Commonwealth Avenue, Saint Paul, MN 55108

Dr. Halvorson was a collaborator in development of the draft survey tool.

- Dr. Shauna Voss, Senior Veterinarian, Minnesota Board of Animal Health, Minnesota Poultry Testing Laboratory, P.O. Box 126, Business Hwy 71 NE, Wilmar, MN 56201

Dr. Voss was a collaborator in development of the draft survey tool.

This is an emergency information collection request (ICR) and a Federal Register notice for public comment has not been published. APHIS does not anticipate renewing this request.

9. Explain any decision to provide any payment or gift to respondents, other than remuneration of contractors or grantees.

APHIS will provide no direct payments or gifts to respondents. The information collected will be valuable to inform best management practices to prevent disease occurrence and understand the burden of disease.

10. Describe any assurance of confidentiality provided to respondents and the basis for the assurance in statute, regulation, or agency policy.

The Study will be collected under the Confidential Information Protection and Statistical Efficiency Act (CIPSEA). All forms, data, and reports will refer to the respondent by a numeric code. Geographic location will be merged with survey data to incorporate weather and migratory bird flight patterns in relation to the locations of the farms included in the study to allow analysis of those variables. Personally identifiable information such as business name, producer name, phone number, address, or email address will not be stored with survey data. All completed paper survey forms received will be stored securely in a limited access records room.

NASS has statutory protection that allows them to keep on-farm data (such as producer name and address information) confidential. Several U.S. Codes apply to data collected by NASS:

- Title 7, Section 2276 - Confidentiality of Information.
- Title 18, Section 1902 - Disclosure of Crop Information and Speculation Thereon.

- Title 18, Section 1905 - Disclosure of Confidential Information Generally.

NAHMS has statutory protection that allows for the protection of respondent data through the Confidential Information Protection and Statistical Efficiency Act (CIPSEA):

- Title V of E-Government Act of 2002, Public Law 107-347, Section 513. Fines and Penalties.
- Title V of E-Government Act of 2002, Public Law 107-347, Section 512. Limitations on Use and Disclosure of Data and Information.

Every NASS and APHIS employee or other individual that may handle a survey, or data coming from a completed survey, is required to sign a form governing certification and restrictions on use of unpublished data. Furthermore, once data are published, individuals are limited to the use of aggregate data files. Access to individual data files is restricted to maintain respondent confidentiality. Only summary estimates based upon the inference population will be reported.

This confidentiality model is different than that used for the APHIS 2022 HPAI Table Egg Layers Study because NASS was not involved in the APHIS 2022 HPAI table egg layers study. Because NASS is involved with the APHIS 2022 Turkey Study, the confidentiality model used is based on that which APHIS typically uses when working with NASS for national studies. Under this model, NASS collects the data using CIPSEA-trained data collectors and then delivers the data to APHIS for data analysis and reporting.

11. Provide additional justification for any questions of a sensitive nature, such as sexual behavior and attitudes, religious beliefs, and other matters that are commonly considered private. This justification should include the reasons why the agency considers the questions necessary, the specific uses to be made of the information, the explanation to be given to persons from whom the information is requested, and any steps to be taken to obtain their consent.

There are no questions of a sensitive nature used in this collection activity.

12. Provide estimates of the hour burden of the collection of information.

- **Indicate the number of respondents, frequency of response, annual hour burden, and an explanation of how the burden was estimated. If this request for approval covers more than one form, provide separate hour burden estimates for each form, and aggregate the hour burdens in Item 13 of OMB Form 83-I.**

A total of 364 annual burden hours are needed to complete the Study over the collection period for this information collection.

A detailed burden estimate has been included on the enclosed APHIS Form 71. We will use the same questionnaire for both case farms and control farms. The estimated hours per response in the APHIS Form 71 is calculated by whether the farm is a case or control and

whether that farm completes the questionnaire or is a nonrespondent. We estimate that a complete survey will take approximately 1.25 hours (75 minutes) and a nonrespondent will have a burden of about 0.083 hours (5 minutes). NASS enumerators are trained on making appointments with potential respondents, using call logs and varied calling times, and allowing the completion of surveys over one or more blocks of time if a respondent needs to pause the interview and return at a later time. NASS will make appointments with respondents and will be able to complete surveys in more than one time block if needed for the convenience of respondents to minimize burden on respondents. Also, we estimate a 75% response rate in cases and a 20% response rate in controls. It is expected that 150 case farms will be selected for contact, of which 113, or 75%, of those are expected to complete the survey and we expect about 113 matching controls to complete the survey (of 751 controls selected). The lower response rate in controls is because we expect some farms will be out of business or will have no turkey inventory during the timeframe of interest for the study. Some farms did not restock with birds during the outbreak to avoid becoming infected, so some control farms may be empty during our timeframe of interest. We also include the potential help of 20 State employees assisting with up to 20 complete interviews.

- **Provide estimates of annualized cost to respondents for the hour burdens for collections of information, identifying and using the correct wage rate categories.**

The total annualized cost to respondents is \$18,133 for farm managers and \$1,179 for State veterinarians/veterinary technicians, for a total of \$19,312.

This was computed by multiplying the estimated average hourly wage (\$37.71 for farm managers and \$29.09 for the average of the wages for veterinarians and veterinary technicians) by the total number of burden hours (339 for farm managers and 25 for veterinarians/veterinary technicians), and then multiplying the product by the fringe multiplier (1.4184 for farm managers and 1.6207 for veterinarians/veterinary technicians) to capture benefit costs.

The average hourly rate used to calculate the estimate is \$37.71 for farmer managers and \$29.09 for the average of the wages for veterinarians and veterinary technicians (BLS USDL-22-0556 obtained from the U.S. DOL Bureau of Labor Statistics website at http://www.bls.gov/current/oes_stru.htm).

According to DOL BLS news release USDL-22-1892, employee benefits for private industry workers account for 29.5 percent of employee costs, and wages account for the remaining 70.5 percent. For State and local government employees, employee benefits account for 38.3 percent of employee costs, and wages account for the remaining 61.7 percent. Total costs can be calculated as a function of wages using a multiplier of 1.4184 for private industry workers and a multiplier of 1.6207 for State and local government employees.

13. Provide estimates of the total annual cost burden to respondents or recordkeepers resulting from the collection of information (do not include the cost of any hour burden in items 12 and 14). The cost estimates should be split into two components: (a) a total capital and start-up cost component annualized over its expected useful life; and (b) a total operation and maintenance and purchase of services component.

There are no capital/startup costs or ongoing operations and maintenance costs for respondents or record keepers associated with this information collection. Questions in this study may reference operation records, but APHIS does not require producers to maintain or provide these records to answer questions.

14. Provide estimates of annualized cost the Federal government. Provide a description of the method used to estimate cost and any other expense that would not have been incurred without this collection of information.

The estimated cost for the Federal Government is \$196,425 (see APHIS Form 79).

15. Explain the reasons for any program changes or adjustments reported in items 13 or 14 of the OMB Form 83-1.

This is a new information collection request.

16. For collections of information whose results are planned to be published, outline plans for tabulation and publication.

APHIS and partners will summarize information from this survey immediately following the data collection and validation phases. APHIS or NASS employees will enter data into electronic databases and perform statistical calculations such as descriptive statistics including frequency distributions, prevalence, and odds ratios. Standard errors and point estimates will be published for aggregated statistical measures.

To disseminate findings and recommendations, APHIS and partners will provide study results in aggregate to the industry at national conferences and published in a scientific or trade journal. Study results will be shared at industry and other national meetings and published in a scientific or trade journal to disseminate findings. We estimate initial study results will be shared by March of 2023.

17. If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons that display would be inappropriate.

The OMB approval expiration date will be displayed on the survey, displayed in a presurvey letter, and read over the phone.

18. Explain each exception to the certification statement identified in the “certification for paperwork reduction act.”

APHIS is able to certify compliance with all provisions in the Paperwork Reduction Act.