B. Collections of Information Employing Statistical Methods

1. Describe the potential respondent universe and any sampling or other respondent selection methods to be used.

Most investigations of outbreaks or emergencies require information from persons who may be affected by, or have animals affected by, the condition in question. Investigators may, on occasion, need to collect exposure data from adjacent farm operators. The respondent universe for this study includes all commercial poultry operations that test positive for highly pathogenic avian influenza and noninfected commercial poultry operations in the vicinity.

Veterinary Services is currently responding to the highly pathogenic avian influenza disease outbreak in the United States. The disease control protocol is to draw a 3 kilometer "infected" zone circle around the infected operation and a 7 kilometer "surveillance" zone circle around the "infected" zone. Birds on the infected operation are depopulated and surveillance and testing activities are performed on operations within the infected and control zones. Two noninfected control operations with negative test results will be identified by surveillance personnel for each infected operation. Controls will be selected based on the following criteria (ordered by importance) - disease status (negative), poultry type (matched to infected operation poultry type), and proximity to infected operation (closest). Control operations selected to participate will be asked to complete a questionnaire during regular surveillance testing visits. Participation is voluntary and at the discretion of the operation.

2. Describe the procedures for the collection of information including:
> **Methodology for sample selection:**

All premises that test positive for highly pathogenic avian influenza will be asked to participate in the investigation by completing a questionnaire. The 2 closest non-infected premises will be asked to participate as controls.

> ⍰ **Estimation procedures:**
>> Simple descriptive statistics will be generated. An example would be percent of operations that use foot baths; or the percent of operations in close proximity to a body of water.

> ⍰ **Degree of accuracy needed:**
>> ⍰ This is a case control investigation and is limited by number of available cases, budget, and personnel. Extrapolation to a larger population will not be done.

> **Unusual problems requiring specialized sampling procedures and data collection cycles:**
>> ⍰ No specialized sampling procedures or data collection cycles are anticipated.

3. Describe methods to maximize response rates and to deal with issues of non-responses:

> **Study Design:**
⍰ The investigation minimizes collection of data to that which is absolutely necessary.

USDA/APHIS/VS is working closely with multiple Federal and State agencies to design and implement this epidemiologic investigation.

Contacting Respondents:
Respondents will be contacted directly by the data collector to participate in this investigation.

Data Collection Steps:
 The data collector will contact the operation and set up a time to complete a questionnaire.
 The data collector will arrive at the premises at the agreed upon time and administer the questionnaire.
 Completed questionnaires will be mailed to NAHMS for data entry and analysis.

 Data Analysis Steps:
 No adjustment for non-response will be used in this study. Individual responses from the case series operations will be tallied in a summary form.

4. Describe any tests of procedures or methods to be undertaken.
Pilot tests of procedures for emergency outbreak investigations are rare because of the lack of time available before an investigation proceeds. The questionnaire has been reviewed by a variety of experts including veterinarians and epidemiologists.

5. Provide the name and telephone number of individuals consulted on statistical aspects of the design and the name of the agency unit, contractor(s), grantee(s), or other person(s) who will actually collect and /or analyze the information for the agency.

The statistical aspects of the design were coordinated by Dr. Bruce Wagner, Statistician and Center Director, USDA: APHIS, Veterinary Services, CEAH, Fort Collins, CO, 970-494-7256; and Dr. Kathe Bjork, Veterinary Medical Officer/Biostatistician, USDA: APHIS, Veterinary Services, CEAH, Fort Collins, CO, 970-494-7288.

The contact person for data collection is:
- Dr. John Clifford, Deputy Administrator, USDA: APHIS, Veterinary Services, Washington, DC 202-447-6835.

Analysis of the data will be accomplished by NAHMS veterinarians, epidemiologists, and statisticians under the direction of:
- Dr. Bruce Wagner, National Animal Health Monitoring System, USDA: APHIS, VS, CEAH, 2150 Centre Avenue, Building B MS2E7, Fort Collins, CO 80526-8117 970-494-7256.

Information may be collected by State, Federal, or local officials. All investigations are supervised by experienced epidemiologists with expert statistical resources available.