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USDA/APHIS/Wildlife Services Procedures Manual for Avian Influenza Surveillance



Photo courtesy of Marc Gray



Photo courtesy of Randy Mickley

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I. Introduction

A. Purpose

This document describes the surveillance guidelines and procedures for Wildlife Services employees and their State/Tribal Cooperators within the framework of the National Early Detection System for Highly Pathogenic Avian Influenza in Wild Migratory Birds. The goal of the system is to provide early warning for potentially catastrophic mortality events due to highly pathogenic avian influenza (HPAI) in North American wild birds and to minimize the potential for human and poultry exposures. Surveillance samples will be collected in at least 36 U.S. states. The purpose of this document is to specify:

- Capture equipment and sampling kits
- Sampling strategies
- Protocols used for each sampling technique
- Safety and personal protective equipment (PPE)
- Shipping wild bird samples to the National Animal Health Laboratory Network
- Data entry, management and recovery

B. Highly Pathogenic Avian Influenza H5N1 Virus Description

Avian influenza (AI) is a type A influenza virus that is naturally found in certain species of waterfowl and shorebirds. However, the recent origin of a HPAI H5N1 in Asia and its subsequent spread has raised concerns regarding the potential impact on wild birds, domestic poultry, and human health in the United States. The virus could enter the U.S. via several routes, including illegal movement of domestic or wild birds, contaminated products, infected travelers, bioterrorism, and migrations of infected wild birds. This plan focuses primarily on the early detection of a potential introduction of highly pathogenic avian influenza into the United States by migratory birds.

C. Surveillance Plan Overview

The complete U.S. Interagency Strategic Plan is available at:

http://www.usda.gov/documents/wildbirdstrategicplanpdf_seg0.pdf.

- Questions regarding the U.S. Interagency Strategic Plan should be directed to Dr. Tom DeLiberto (Thomas.J.Deliberto@aphis.usda.gov or (970) 266-6088) or Seth Swafford (Seth.Swafford@aphis.usda.gov or (970) 266-6071).

D. Reminders for BY2010

The following changes were made to the procedures for collecting samples for HPAI surveillance in biological year 2010 (BY2010). These changes will remain in effect until April 1, 2011 and are described in more detail in further sections of the manual.

- Environmental sampling was eliminated in 2009 and will not take place in BY2010.
- All states are asked to continue to focus on investigating morbidity/mortality events in BY2010.
- Level 3 states should continue to send all morbidity/ mortality samples to a NAHLN lab in a level 1 or level 2 state, unless the number of moribund or dead

- birds exceeds 500. In these cases, samples should be sent directly to the National Veterinary Services Laboratories in Ames, IA.
- Collectors will be required to request an authentication account to login to the VSL website.

II. Detailed Sampling Procedures

A. Sampling Strategies

- **Investigation of Morbidity/Mortality Events:**
Investigation of morbidity/mortality events is the most important strategy for early detection of HPAI in wild birds. Early detection of HPAI will most likely occur by sampling mortality events in birds with little or no natural immunity to HPAI subtypes. Investigations related to morbidity/mortality events should be conducted regardless of the time of year, type of species involved, number of species involved, or the number of samples already collected in the state.

A morbidity/mortality event is classified as any bird that is found sick or dead. This may involve only one bird or several hundred birds. Paired cloacal and tracheal swabs should be submitted for each dead bird that is sampled under this strategy. Each swab should be placed in a **different** vial of media.

In the case of significant morbidity/mortality events (≥ 500 birds involved), please contact Seth Swafford (Seth.Swafford@aphis.usda.gov or (970) 266-6071) for consultation to ensure the appropriate testing is performed.

For morbidity/mortality events of ≥ 500 birds, choose one or two representative carcasses of each species and send to the National Wildlife Health Center (NWHC) in Madison, Wisconsin unless you prefer to send the samples to an in-state laboratory. To prevent duplicate testing, **swabs should not be collected for HPAI surveillance testing from carcasses that are sent to NWHC**. Shipping costs for sending the carcasses are the responsibility of the shipper. Contact Krysten Schuler (western states) (kschuler@usgs.gov, 608-270-2447), LeAnn White (central states) (clwhite@usgs.gov, 608-270-2491) or Anne Ballmann (eastern states) (aballmann@usgs.gov, 608-270-2445) at NWHC prior to shipping to ensure that the samples are appropriate for necropsy. Submit the specimen history form (Appendix A) via fax or email along with the tracking number when the samples are shipped.

NOTE: Investigation of morbidity/mortality events is the only collection strategy in which the condition of the bird (live, sick or dead) is a required data field when entering the data into the online database.

Although level 3 states will not be funded to collect samples from apparently healthy wild birds, WS employees and state wildlife agencies in level 3 states are encouraged to investigate morbidity/mortality events and collect samples when deemed appropriate. These samples will need to be sent to an approved NAHLN laboratory (Appendix G) and follow appropriate communication protocols (page 12, #3).

- **Live Wild Birds:**

This strategy incorporates sampling of live-captured, apparently healthy wild birds to detect the presence of HPAI virus. Birds are captured using a variety of methods, sampled, and released on site (Appendix B). One oropharyngeal and one cloacal swab should be collected from each bird and placed in the **same** cryovial of media (see section II C).

NOTE: Although condition of the bird is not a required data field when entering samples collected via the live wild bird method, condition should be entered under the following circumstances: wild birds that die during capture should still be marked as “live wild birds” but the condition should be marked as “dead.” For example, the collection strategy for a wild bird that dies during extraction from a mist net would be labeled as live wild bird and the condition would be dead.

- **Hunter Harvested Birds:**

Hunter check stations, hunting clubs, and guide services provide excellent opportunities to conduct surveillance for HPAI in hunter harvested birds. If it is possible to determine the location where the hunter harvested the bird (intersection of a road, etc.) based on the hunter’s description, then the GPS points and actual county can be recorded post-sample collection by referencing a software program such as Google Earth, ArcView, Precision Mapping or any other software program that will allow you to pinpoint the location where the samples were collected. Remember that the **GPS points must be recorded in decimal degrees using datum WGS-84.**

It is also acceptable to record the GPS coordinates of the check station rather than the exact location that the bird was harvested if more accurate information on collection site is not available. If the GPS point is collected at the check station then the county written on the datasheet must match the county of the check station. **Do not record GPS points for the approximate location where the bird was harvested and list the check station county (if they are different).**

Samples collected at a goose or duck processor may also be submitted under this collection strategy. However, carcasses must be fresh, not frozen, and the location must be narrowed down to a 10 kilometer radius of the site where the bird was harvested. Collectors who choose to use this collection strategy should ask hunters to point out the approximate location where each bird was harvested on a map. GPS points and county can be recorded post sample collection by referencing software programs described above. **The processing plant may not be used as the location for the samples.** If it is not possible to acquire more accurate information on where the birds were collected then samples should not be collected.

Using two different swabs, collect one oropharyngeal and one cloacal swab from each bird and place in the **same** vial of media (see section II C). Samples should be collected within 24 hours of death. If wild birds are kept cool or refrigerated (not frozen), and out of direct sunlight, samples may be collected \leq 48 hours after death. These samples should be shipped to the NAHLN lab as soon as possible;

but in case of holidays or weekends, samples may be held up to 72 hours after collection if kept refrigerated. These steps allow for Friday and weekend sampling of birds and should only be implemented when necessary. **The best case scenario remains collecting and shipping samples to the NAHLN lab within 24 hours of the bird being harvested to ensure the goal of early detection.**

Wild birds that are harvested at an airport, an aquaculture facility or as part of an operational assignment should not be labeled under this collection strategy. They are part of the **agency harvested** category.

- **Agency Harvested Birds:**

This surveillance strategy refers to opportunities that Wildlife Services personnel and state wildlife agencies have to sample birds that are being lethally removed as part of an operational assignment, damage management or research project. Wild birds taken under this strategy fall under federal and state permits and are not taken for sport or recreational purposes. Wild birds that are translocated and released by the agency should be classified as live wild birds. One cloacal and one oropharyngeal swab should be collected from these birds and combined in the **same** vial of media. **Only those species that are listed on the state species or respective flyway list for HPAI surveillance should be sampled.**

- **Sentinel Species:**

Flocks of wild birds may serve as sentinels. For example, resident ducks and geese at urban parks, non-migratory swans, and other similar examples may serve as sentinels if the birds can be repeatedly sampled. Oropharyngeal and cloacal swabs should be collected on a regular basis from the sentinel flocks and combined in the **same** vial. Combined samples (oropharyngeal/cloacal) may be collected as long as the flock remains healthy. If the flock becomes sick or a mortality event occurs, then paired samples (cloacal and tracheal) should be collected and placed in **two different** vials. If sentinel flocks are to be sampled, please contact Seth Swafford (Seth.Swafford@aphis.usda.gov or (970) 266-6071) or a local wildlife disease biologist for assistance (Appendix C).

B. Aging Birds

- **General Guidelines**

1. Do not guess age. Inexperienced sample collectors should use the undetermined category if there is any doubt about the age of the bird. Wild birds are categorized as either hatch year, after hatch year or undetermined. A wild bird that is sampled after January 1st and before the nesting season for that species, is in at least the second calendar year of its life and by definition is an after hatch year bird regardless of when it hatched in the previous year. A hatch year bird is defined as a bird in the first calendar year of its life.

- **Online References**

1. <http://www.npwrc.usgs.gov/resource/birds/duckplum/index.htm>
2. <http://www.birdpop.org/danflyer.htm>

C. Personal Safety Guidelines and Equipment

(Adapted from USGS, National Wildlife Health Center Guidelines:

http://www.nwhc.usgs.gov/publications/wildlife_health_bulletins/WHB_05_03.jsp)

- **Recommendations for field biologists handling apparently healthy wild birds in areas where HPAI H5N1 is not suspected:**
 1. Work in well-ventilated areas if working indoors. When working outdoors, work upwind of wild birds to the extent practical, to decrease the risk of inhaling aerosols such as dust, feathers or dander.
 2. Wear rubber or disposable latex gloves and protective eye wear or a face shield while handling wild birds.
 3. Wash hands thoroughly with soap and water (or with alcohol-based hand products if soap and water are not available).
 4. Thoroughly clean equipment and surfaces that come in contact with wild birds. These should be cleaned with a 10% bleach solution or the alcohol-based hand sanitizer.
 5. Do not eat, drink, or smoke while handling birds.

- **Recommendations for field biologists handling sick or dead birds associated with a mortality event:**
 1. Follow the recommendations above and at a minimum wear protective clothing including coveralls, rubber boots, latex or rubber gloves that can be disinfected or discarded.
 2. Minimize exposure to mucosal membranes (eyes, nose, and mouth) by wearing protective eyewear (goggles) and a particulate respirator – NIOSH N95 respirator/mask or better is recommended.
 3. Decontaminate work areas with 10% bleach solution and properly dispose of potentially infectious material including carcasses.
 4. Do not eat, drink, or smoke while handling animals or until hands have been washed or sanitized with alcohol based hand sanitizer.
 5. Wash hands thoroughly with soap and water (or with alcohol-based hand products if soap and water are unavailable).

- **Recommendations for field biologists working with wild birds in areas (if) where HPAI H5N1 has been detected:**
 1. Follow the recommendations above and the basic guidelines for infection control, including how to put on and use, remove, disinfect, or dispose of personal protective equipment and clothing.
 2. Wash hands frequently and disinfect exposed surfaces and field equipment between work sites.
 3. Do not eat, drink, or smoke while handling birds or until hands have been washed or sanitized.
 4. Wear coveralls, gloves, shoe covers, or boots that can be disinfected or discarded, a respirator (preferably a NIOSH N95 respirator/mask) and protective eyewear (goggles).

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5. Monitor your health for clinical signs of influenza infection during and for one week after your last exposure to potentially HPAI virus-infected or exposed birds.
6. Contact your healthcare provider if you develop fever, flu-like symptoms or conjunctivitis (eye inflammation). Inform them prior to arrival that you have potentially been exposed to HPAI.

- **Safety and Personal Protective Equipment (PPE)**

1. Gloves – latex, nitrile, or rubber
2. Goggles or eye protection

- **Disinfectants**

1. Lysol Disinfectant Spray
2. 10% solution of household bleach (use within 30 days)
3. 30% ethanol solution
4. Detergent

- **Disposal of gloves and sample-related waste**

1. Gloves, swab handles, and miscellaneous paper from sampling may be combined into a ziploc bag.
2. Use a spray bottle with 10% bleach solution to disinfect waste or add 20 mL to a one gallon ziploc bag with the waste. Seal the bag and spray outside of bag with 10% bleach solution.
3. Shake bag to mix the bleach solution and waste.
4. Throw away with regular trash.

- **Web Sites:**

Please refer to the following web sites for additional guidelines for proper personal protection techniques:

1. http://www.nwhc.usgs.gov/publications/wildlife_health_bulletins/WHB_05_03.jsp
2. <http://www.cdc.gov/flu/avian/professional/protect-guid.htm>
3. http://www.aphis.usda.gov/library/directives/pdf/APHIS6800_1.pdf

D. Procedures for Collecting and Shipping Samples from Wild Birds

(See Appendix D for a complete list of sampling supplies)

- **Cloacal Swabs**

1. Unwrap a Dacron swab from the stem-end of the packaging. (Use a small or large swab depending on size of the bird) (Small swabs for shorebirds are provided upon request; contact Kerri Pedersen (Kerri.Pedersen@aphis.usda.gov or (970) 266-6272) or Brandon Schmit (Brandon.B.Schmit@aphis.usda.gov or (970) 266-6079).
2. Remove swab and insert the tip of the swab into the cloaca of the bird.
3. Gently rotate the swab inside the cloaca taking care to insert the swab just far enough to completely



cover the tip of the swab.

4. Open a vial containing prepared brain heart infusion (BHI) media.
5. Insert the swab into the media.
6. Raise the swab about 1 inch from the bottom of the vial. While holding the vial in one hand, leverage the shaft of the swab against the lip of the vial, and break the swab handle at the lip of the vial. The remaining portion of the polyester tip will slide to the bottom of the vial, allowing room for the cap to fit over the vial. Secure the cap to the vial and discard the remaining portion of the handle of the polyester swab.
7. Label the vial using one of the barcodes provided in the sampling kit. Place the barcode lengthwise along the tube so that the lab can read the barcode using a barcode scanner.
8. Indicate the species (Appendix E), date, and all other information requested on the datasheet (Appendix F).
9. Place the vial into a cooler containing blue ice for storage in the field. Upon returning from the field, store the samples in a refrigerator until they are shipped to the laboratory. Samples should be shipped to the laboratory within 24 hours of collection. Do not save samples to send in one shipment. This may mean that separate shipments are sent on Monday, Tuesday, Wednesday and Thursday. Samples collected on Friday or over the weekend should be refrigerated and then shipped first thing Monday morning. It is important to ship samples as soon as possible because the laboratory will have the best chance of detecting virus before the sample degrades or becomes overgrown with bacteria.



• Oropharyngeal Swabs (added with cloacal swabs in same vial)

1. Gently pinch both sides of the head of the bird near the base of its bill or beak. This will cause the bird to open its mouth and expose its oral cavity.
2. Insert the new swab into the oral cavity while gently rotating the swab in an up and down motion.
3. Open the vial containing the cloacal swab from the same bird.
4. Insert the swab into the media already containing the cloacal swab.
5. Raise the swab about 1 inch from the bottom of the vial. While holding the vial in one hand, leverage the shaft of the swab against the lip of the vial, placing the thumb of the second hand just above the lip of the vial, and snap the shaft at the leverage point. The remaining portion of the polyester tip will slide to the bottom of the vial, allowing room for the cap to fit over the vial. Secure the cap to the vial and discard the remaining portion of the handle of the polyester swab.
6. The vial should already have been labeled with a barcode when the cloacal swab was collected. Do not affix another barcode to the same tube. If the vial has not yet been labeled, place the barcode lengthwise along the vial so that the lab can read the barcode using a barcode scanner.



7. Indicate the species (Appendix E), date, and all other information requested on the datasheet (Appendix F). Do not repeat this step if the information was recorded when the cloacal sample was collected. Simply select oral + cloacal as the sample type.
8. Place the vial into a cooler containing blue ice for storage in the field. Upon returning from the field, store the samples in a refrigerator until they are shipped to the laboratory. Samples should be shipped to the laboratory within 24 hours of collection. Do not save samples to send in one shipment. This may mean that separate shipments are sent on Monday, Tuesday, Wednesday and Thursday. Samples collected on Friday or over the weekend should be refrigerated and then shipped first thing Monday morning. It is important to ship samples as soon as possible because the laboratory will have the best chance of detecting the virus before the sample degrades or becomes overgrown with bacteria.

- **Tracheal Swabs (morbidity/mortality events only)**

1. Ensure a clear understanding and an ability to differentiate between tracheal and oropharyngeal openings.
2. Pinch both sides of the head of the bird near the base of its bill or beak. This will cause the bird to open its mouth and expose its oral cavity.
3. In most waterfowl, you can open the trachea by pushing upwards on the neck just below the lower bill.
4. Insert the swab into the trachea while swirling the swab in an up and down motion.
5. Open a vial containing prepared BHI media.
6. Insert the swab into the media.
7. Raise the swab about 1 inch from the bottom of the vial. While holding the vial in one hand, leverage the shaft of the swab against the lip of the vial, placing the thumb of the second hand just above the lip of the vial, and snap the shaft at the leverage point. The remaining portion of the polyester tip will slide to the bottom of the vial, allowing room for the cap to fit over the vial. Secure the cap to the vial and discard the remaining portion of the handle of the polyester swab.
8. Label the vial using one of the barcodes provided in the sampling kit. Place the barcode lengthwise along the vial so that the lab can read the barcode using a barcode scanner. If condensation forms on the outside of the vial, dry the vial by wiping with a paper towel and place the barcode over the white labeling portion of the vial. If the label does not stick securely, place tape around the vial and the label.
9. Indicate the species (Appendix E), date, and all other information requested on the datasheet (Appendix F).
10. Place the vial into a cooler containing blue ice for storage in the field. Upon returning from the field, store the samples in a refrigerator until they are



shipped to the laboratory. Samples **should** be shipped to the laboratory within 24 hours of collection. Do not save samples to send in one shipment. This may mean that separate shipments are sent on Monday, Tuesday, Wednesday and Thursday. Samples collected on Friday or over the weekend should be refrigerated and then shipped first thing Monday morning. It is important to ship samples as soon as possible because the laboratory will have the best chance of detecting the virus before the sample degrades or becomes contaminated with bacteria.

- **Data Sheets**

- **Instructions for Wildlife Avian Influenza Surveillance Data Sheets**

1. Record collector information in the upper left hand corner of the data sheet. List one collector name even if multiple collectors are present.
2. Record the laboratory name where the samples are submitted. Please include city and state of the laboratory.
3. In the purchase order box include the last 6 digits of the purchase order # (different for each laboratory and changes each fiscal year).
4. Record the date samples were collected. Samples collected on the same date (regardless of species) may be recorded on one data sheet but samples collected on different dates should be listed on different data sheets.
5. Circle the collection strategy used to collect the samples. Detailed information regarding the classification of each of these strategies is outlined in section II. A. If you use more than one collection strategy then you should create another referral number.
6. One referral number should be assigned per location per day. The referral number should consist of the state abbreviation followed by the collector's initials and the date (ex. COBS061608). If multiple collectors are at one site on the same day, only one referral number should be assigned to the shipment. A different referral number should be used for samples collected at multiple sites on the same day by the same collector. For example, if I collect samples at two locations, the referral for the first location would be COKP020808A and the referral for the second location would be COKP020808B.
7. Use species codes to record the 3 most abundant species at the site. These may differ from the birds captured or sampled at the site. One or more of these fields may be left blank if < 3 bird species are observed at the site.
8. Collection site is defined as the refuge, lake, or name used to refer to the area where the samples are collected.
9. Record the county and state where the samples were collected.
10. Record GPS location. The GPS unit **must** be set in the WGS 84 datum and in decimal degrees before recording the location (ddd.ddddd). For hunter check stations, coordinates may be taken at the check station where the birds are sampled unless more accurate information can be obtained from the hunter.
11. Place one of the barcodes on the vial or sample vial and a corresponding barcode on the data sheet. Once a barcode has been used it cannot be used again. Extra barcodes should be discarded.
12. Multiple species may be listed per page. Use the 4 letter species code corresponding with the species sampled so that each sample can be appropriately identified (Appendix E).

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13. Circle one each in the categories of sex and age class.
14. Circle the type of sample that is collected from the wild birds. Circle oral + cloacal for combined oropharyngeal and cloacal swabs.
15. Record any additional information such as band number in the comments section. In the case of a morbidity/mortality event or sentinels in which multiple samples are collected from one bird, a subject ID should be assigned to the bird so that the samples can be distinguished as originating from the individual. The subject ID can be any identifier you choose as long as it is unique between subjects.
16. For morbidity/mortality events, sentinel birds or any unusual circumstances where the condition is not evident by the collection strategy, please indicate the condition (healthy, sick, or dead) of the bird in the comments section. For other collection strategies it will be understood that the condition or fate of the bird will be dead for hunter-harvested and agency-harvested wild birds, and released and healthy for birds marked as live wild birds unless otherwise indicated in the comments section.
17. At the bottom of the data sheet record the date the samples are shipped to the lab and the total number of samples that are included in the referral. Record the name and phone number of the person who actually sends the samples to the lab (this may be different from the person collecting the samples). If the submitter is the same as the collector check the box indicating they are the same.

18. Make a copy of the form and include it in the box with the samples when they are sent to the laboratory. Use a black marker to completely cross out the GPS coordinates and collection site before submitting to the lab. This step is

USDA Wildlife Avian Influenza Surveillance Data Sheet		APIS	Page 1 of 1
Collector: John Doe	Testing Laboratory: CSU Diagnostic Lab	Please charge to purchase order #:	
Agency: USDA-Wildlife Services	City: Fort Collins State: CO	AG-6395-P-08 -0145	
Phone number: (970) 266-6000	Referral # CO ID 01 11 08	3 most abundant species on site	County Weld State CO
	GPS location (in WGS 84 and decimal degrees):	Collection Site:	
N [redacted] W [redacted]			
Date collected: 1/11/08	Collection Strategy (circle one):		
	Live bird Hunter Harvest Agency Harvest Sentinel Morbidity Environmental		

necessary for the datasheet to double as a lab submission form. Original data sheets should be kept at the collecting agency office. Fax a copy of the data sheet including GPS points and collection site to Brandon Schmit or Kerri Pedersen at (970) 266-6215 or send via overnight mail to Brandon Schmit or Kerri Pedersen at the Wildlife Services, National Wildlife Disease Program, 4101 LaPorte Avenue, Fort Collins, CO 80521.

19. Notify the laboratory of the number of samples to be shipped and confirm prior to sending the samples that the lab can complete the testing within 48 hours. All wild bird samples should be sent to a NAHLN lab (Appendix G). If the lab is unable to meet the 48 hour deadline, call another NAHLN lab and confirm that they will be able to process the samples in 48 hours. After identifying the alternate NAHLN lab, Wildlife Services employees must notify the Wildlife Services State Director in the state where the samples are being shipped so that the samples can be credited to the appropriate account. Wildlife Services employees will need to communicate across state lines on these issues to ensure proper accounting and billing. State wildlife agencies should contact their local Wildlife Services State Director to notify them that samples have been sent to a different lab. The Wildlife Services State Director and/or Wildlife Disease Biologist will be responsible for verifying the accuracy of receipts generated by State Wildlife Agency samples.

- **Proper Labeling of Samples**

1. Label each vial using one of the barcodes provided in the sampling kit.
2. Barcodes should be used as follows:
 - Place 1 label on each vial or sample tube – be sure to place bar code **lengthwise** along the vial.
 - Place 1 label on the datasheet
 - There are 2 extra barcodes that should be destroyed if not used (**Barcodes cannot be used more than once**).
3. Place the samples in a cooler and/or on cold packs or refrigerate immediately. **Do not freeze samples.**



- **Storage of Transport Media**

A cooler containing vials with BHI media for cloacal, oropharyngeal, and tracheal swabs will be shipped separately from the sample kits. The cooler that the transport media is shipped in should be returned to NVSL using the enclosed prepaid shipping label. This shipping cooler is not to be used for shipping samples to the NAHLN lab. NVSL ships the media frozen. If the media thaws in transit, place the vials in the refrigerator (4°C) and use them before any other vials. Refrigerated media should be viable for one year. However, any media that appears to have changed color or clarity should be discarded. If refrigeration is not possible, or if the media received from NVSL is still frozen, the vials should be stored in a freezer.



IMPORTANT: Samples should be stored in a deep chest freezer because regular frost-free freezers undergo repeated freeze/thaw cycles that may spoil the media. Frozen media should be thawed prior to use and once thawed, should not be refrozen.

- ❖ To request additional HPAI surveillance sample media contact Brandon Schmit at (970) 266-6079 or Brandon.B.Schmit@aphis.usda.gov or Kerri Pedersen (970-266-6272 or Kerri.Pedersen@aphis.usda.gov).

- **Sample Kit Supplies**

Sample kit supplies and media will be sent from NVSL. Requests for additional supplies and media should be directed to Kerri Pedersen (Kerri.Pedersen@aphis.usda.gov or 970-266-6272) or Brandon Schmit (Brandon.B.Schmit@aphis.usda.gov or 970-266-6079).

- **Proper Communication When Submitting Samples**

It is essential to have secure and reliable communication among the individuals responsible for sample collection and designated



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NAHLN laboratories.

1. Record all relevant information on the Wildlife Avian Influenza Surveillance Data Sheet (Appendix F).
 - Make a copy of the original (remove the GPS coordinates and collection site using a black marker) to include with the samples when shipping to the lab.
NOTE: If the data is entered online before samples are submitted to the lab, a packing slip can be printed to include with the samples.
 - The submitter should keep the original datasheet on file.
 - Fax a copy of the original datasheet that **includes** GPS points and collection site within 24 hours of collection to Kerri Pedersen or Brandon Schmit at (970) 266-6215.
 2. Call the lab to confirm that they will be able to test the samples within 48 hours prior to shipping.
 3. If samples are sent to an out of state laboratory, Wildlife Services employees must notify the Wildlife Services State Director or Wildlife Disease Biologist in the state where the samples are being shipped so that the samples can be credited to the appropriate account (Appendix H). Wildlife Services employees will need to communicate across state lines on these issues to ensure proper accounting and billing. State wildlife agencies must contact their local Wildlife Services office to notify them that samples have been sent to a different lab. Wildlife Services will be responsible for verifying the accuracy of receipts generated by State Wildlife Agency samples. Notification may be via a phone call including the number of samples sent in the shipment, date shipped to laboratory, and name and agency of person shipping samples to the laboratory or a faxed copy of the packing slip available through VSLS after the samples have been entered electronically.
- **Shipping Wild Bird Samples**
 1. When shipping ≤ 20 samples the vials or sample tubes may be wrapped individually in paper towels with bubble wrap and placed in a ziploc bag. However, shipments of more than 20 samples should be shipped to the lab in the 40 section boxes provided in the sample kits. Labs will use these boxes to consolidate samples and ship them to Fort Collins, Colorado for archiving.



2. Place labeled sample tubes into the clear bio-hazard bag (STP #741) with absorbent and seal.



Procedure Manual for Avian Influenza Surveillance

- Place this bag into white bio-hazard bag (STP #740) and seal.



- Place the white bag into the shipping box.
- Place frozen ice packs both below and on top of the bag.



- Place a copy of the completed **Wildlife Avian Influenza Surveillance Data Sheet** with GPS coordinates and collection site marked out with a black marker between styrofoam cooler and cardboard box. Do not place datasheets inside styrofoam cooler.



- Seal box with packing tape.
- Address the box to the NAHLN laboratory where the samples will be sent. (See Appendix G for a list of NAHLN laboratories).
- Use the **Exempt Animal Specimens** sticker provided in the sample kit to cover up the UN3373 label that is pre-labeled on the box. If you are reusing a box or if you do not have a sticker, mark out the UN3373 code with a black marker or cover it with a white piece of paper. Do not attach the UN3373 label because the samples are **not** classified as dangerous goods.



- Once the box is labeled as an exempt animal specimen, check the box on the FedEx airbill that the shipment does **not** contain dangerous goods.
- Ship by overnight delivery with a carrier that provides overnight delivery service.
- Samples must be shipped Monday, Tuesday, Wednesday or Thursday of each week unless different arrangements are made with the laboratory.**

7. Call the laboratory to ensure that they can test the samples within 48 hours of receiving the samples.

- **Hand Delivery of Samples to Laboratory**

Agencies with the opportunity to hand deliver samples to the lab should:

1. Confirm with the NAHLN lab that hand deliveries are acceptable.
2. Submit samples with ice packs.
3. Include a *copy* of the **Wildlife Avian Influenza Surveillance Data Sheet** with the GPS coordinates and collection site marked out with a black marker.
4. Call the lab prior to arrival to confirm that the samples will be processed within 48 hours of submission.

- **Identification of a NAHLN Laboratory**

Ship specimens via the overnight contract delivery service to a NAHLN laboratory (Appendix G). **Call the laboratory before sending samples so that they know a shipment is coming and to make sure that they can test the samples within 48 hours.** Notify the NAHLN laboratory (Appendix G) of incoming samples via fax, telephone, or e-mail. The information to be communicated includes:

- The overnight delivery service tracking number
- The state where the samples were collected
- The unique referral number of the submission
- The number of samples

If the NAHLN lab is unable to process the samples call another NAHLN lab and confirm that they will be able to test the samples in 48 hours.

- **Reporting Results**

All results from the laboratory should be sent to Dr. Thomas DeLiberto by fax to (970) 266-6215 or by email to WSlabresults@aphis.usda.gov. Results will not be sent to the submitter. Submitters may view single referral results by logging onto the Veterinary Services Laboratory Submission (VSLS) system for a comprehensive set of results. It is also possible to download all data and results for your state by using the Wildlife Services Spreadsheet Report (see III. C.)

- **Billing**

1. Purchase orders have been set up with each lab to pay for rRT-PCR conducted on samples submitted by Wildlife Services and State Wildlife Agencies participating in the National Early Detection System. This purchase order number corresponds with fiscal year and therefore will change on October 1st of each year. The purchase order numbers for fiscal year 2010 can be found in Appendix G. Collecting agencies will receive updated numbers via email once they have been established for the next fiscal year.
2. Labs have been asked to submit monthly invoices to the Wildlife Services state office where the purchase order is set up. During times of the year when large volumes of samples are being received, invoices may be submitted more frequently. The Wildlife Services State Director and/or Wildlife Disease Biologist is responsible for verifying the bill. Once the charges have been verified the invoice should be forwarded to Mary Kimball

- (nwdpbilling@aphis.usda.gov or (fax) 215-885-3632) at Wildlife Services National Wildlife Disease Program. The lab will be reimbursed by the Wildlife Services National Wildlife Disease Program for testing the samples.
3. NAHLN labs will be reimbursed \$40 per individual vial regardless of the number of tests performed. For example, if a lab conducts a matrix test on a sample and it is test positive, the lab should then run H5 and H7 assays on the sample, and bill USDA-Wildlife Services \$40. If the matrix screen is test negative no further testing is required and the charge is still \$40. If a lab tests samples classified as a morbidity/mortality event then the charge will be \$40 for each sample (\$40 per tracheal and \$40 per cloacal). The \$40 charge is not per bird.

III. Data Management

A. Overview

- **Background**

The National Early Detection System for Highly Pathogenic Avian Influenza in Wild Migratory Birds stipulates that all surveillance data be reported to a national database. This database is housed at the National Biological Information Infrastructure's Wildlife Disease Information Node in what is called the HPAI Early Detection Data System (HEDDS). It serves as a resource to keep the public and policy makers informed about Wildlife Services' and its cooperator's HPAI surveillance efforts within the United States.

B. Data Entry

- **Web site access**

All data will be entered into the USDA APHIS VSLS system. The following URL should be used for entering data and running reports:

<https://cowebapps.aphis.usda.gov/vslabsub/login.do>. Data reports and results entered into the system can be generated via the VSLS system.

- **Usernames and Passwords**

At some point in the 2010 biological year, all users that access the VSLS system to enter in data will be required to use an eauthentication account.

Wildlife Services employees with an existing eauthentication account (used to access GovTrip or AgLearn) will be able to login using your existing eauthentication information. You will be prompted once you login to VSLS system to synchronize your eauthentication and VSLS account information. After the accounts have been synchronized, you should be able to enter in with your eauthentication information.

Wildlife Services employees with no pre-existing eauthentication account will need to email ATAC (atac@aphis.usda.gov) or call 1-877-944-8457 to request an account. Once requested it may take 2-3 days to be granted access.

State wildlife agency employees will need to access the following website and register for a level 1 account

(<https://eauth.sc.egov.usda.gov/eAuth/selfRegistration/selfRegLevel1Step1.jsp>).

An email will be sent to the email account provided which you will need to activate your account by confirming registration via the email. Once the level 1 account has been confirmed you will need to visit an approved USDA office in your state to upgrade your access to level 2

(<http://offices.sc.egov.usda.gov/locator/app>). Offices are available in every county of each state. Closer offices may be available in neighboring counties. Once the nearest office has been located, **call ahead to verify the hours and that someone will be available**. Bring a government ID (driver's license (name and address must match information on the account)) to the office and tell them that you need to upgrade your eauthentication account from level 1 to level 2. Once this process is complete you should be able to login to the regular VSLS website (<https://cowebapps.aphis.usda.gov/vslabsub/login.do>).

For collectors who do not have a VSLS account complete the eauthentication process above then email Kerri Pedersen (Kerri.Pedersen@aphis.usda.gov), Brandon Schmit (Brandon.B.Schmit@aphis.usda.gov) or Mark Lutman (Mark.W.Lutman@aphis.usda.gov) with your name, agency, address and phone number.

- **Data and Responsibilities**

Each Wildlife Services office and cooperating state wildlife agency is responsible for entering all field collection data into the VSLS system. All data should be entered within 24 hours of submission to the NAHLN laboratory so that results can be entered in a timely manner. Each lab will send all test results to Dr. Tom DeLiberto at Wildlife Services National Wildlife Disease Program in Fort Collins, Colorado via fax (970-266-6215) or email (wslabresults@aphis.usda.gov). Results will then be entered online by Wildlife Services staff.

Labs that choose to enter their own results via the VSLS system are encouraged, but not required, to do so. Many laboratories will begin entering results electronically via the HL7 messaging. It is important to enter in data as quickly as possible to the online submission because results can not be sent to the system until the data has been entered.

- **Data Corrections and Editing**

Data can be edited by the person who entered it for up to 7 days after the results have been entered online. The data entry person will be notified via email when there are 7 days left to verify the data and make any corrections.

Periodically throughout the year, GPS coordinates will be cross-checked by the National Wildlife Disease Program with the county that is listed in the system. Any corrections will be sent back to the Wildlife Disease Biologist in each state. Any questions regarding GPS corrections should be directed to Mark Lutman (970-266-6077 or Mark.W.Lutman@aphis.usda.gov).

- **Helpful Hints**

Barcode scanners are recommended for data entry. Barcode scanners facilitate data entry and ensure that barcodes are entered correctly. The following barcode scanners are compatible with the online system:

1. USB Port Barcode Scanner

Symbol Laser LS 2208 - ≈ \$135

For more info:

<http://www.symbol.com/ls2208>
www.123barcode.com



2. Cordless Barcode Scanner

Intermec SF51 Cordless Scanner

www.Keenzo.com

3. Other Barcode Scanners

Other barcode scanner information is available at:

http://www.consumerschoicepos.com/cordless_barcode_scanner.html

NOTE: Prior to entering data with a barcode scanner, ensure that the caps lock is off. If the caps lock is on, the first digit of the barcode will appear in lower case. Also, if you are scanning the barcode using a copy rather than an original please double check that the scanned number matches the number on the datasheet. If the copy is difficult to read the barcode scanner may not be able to read it correctly.

- ❖ See Appendix I for detailed instructions on entering data into the online system. Instructions can also be found online by clicking on the help tab at the top of the screen after logging into the VSLs submission page (<https://cowebapps.aphis.usda.gov/vslabsub/login.do>).

C. Data Mapping and Reporting

- **Veterinary Services Laboratory Submission System (VSLs)**

All data should be entered into the VSLs system at

(<https://cowebapps.aphis.usda.gov/vslabsub/login.do>). Once data has been entered in online, it is possible to run a report to recover all of the information which can be imported into Excel. Use the following procedures to access all of the reports:

1. Login to the VSLs system.
2. Select “Generate Reports” under action items on the main screen.
3. Select “National Avian Health Program”
4. Choose from one of the five following reports:
 - **Wildlife Services Custom Report**
This report allows the user to specify the columns to include in the report as well as the option to include a group header and/or a column to sort by. The barcode will be included with the other selected columns.
 - **Wildlife Services Sample Details Report**

This report lists details for samples given a collection date range. The user may specify species, test type, and result.

- **Wildlife Services Sample Summary**

This report is very useful when you want a quick summary of the number of samples that you have collected during a certain time period. Data can be broken down by agency, county, sampling strategy, and species.
- **Wildlife Services Spreadsheet Report**

This report allows you to do a complete export of all of the data that you have entered into the online system without having to re-enter it into an excel format.

 1. Open Excel and create an empty document. Be sure the cell you currently have selected is the upper-left most cell (A1). If you want the data to appear elsewhere, select the cell where you wish to begin.
 2. Click on the **Data** menu and choose **Import External Data** and then **Import Data....** a window will appear
 3. Select **All Files** in the **Files of Type** drop-down menu, and then browse to the location where you saved the pipe delimited file. Open the file by clicking the **Open** button.
 4. A **Text Import Wizard** window will appear. Make sure the **Delimited** radio button is selected. At this time, note the **Start import at row** option, which will allow you to select which row you wish to begin at. Click the **Next** button to continue.
 5. When the **Text Import Wizard - Step 2 of 3** window appears, in the **Delimiters** area, uncheck the **tab** option if it is already selected. Check the **Other** option and enter the pipe character | next to the **Other** text box. On most modern keyboards, the | character is located between the enter key and the backspace key. You'll have to hold shift and press the key to get a | character. Change the **Text Qualifier** option to **{none}**. Click the **next** button.
 6. The **Text Import Wizard - Step 3 of 3** window will appear. Nothing is required here, but this window will allow you to customize the format of each column. You may do so by selecting the column and adjusting the data format. When you are done, click the **Finish** button.
 7. Depending on the size of the file, the import could take some time!
 8. As of Microsoft Excel 2003, the maximum number of *rows* allowed in a single *sheet* is 65,536. If you have more than this many rows, you will have to open the file using a different program to trim the lines off. You can then open the file in another sheet with the rest of the records.
- **Wildlife Services Test Result Summary**

This report summarizes the number of samples by state and other criteria according to user input. Input dates are based on the date the sample was collected. The user may select a specific test type and test result.

Appendix A: NWHC Specimen History Form and Shipping Instructions



National Wildlife Health Center
6006 Schroeder Road
Madison, WI 53711
Phone: 608.270.2400
FAX: 608.270.2415



SPECIMEN HISTORY FORM

For mortality events please e-mail a USGS Field Investigation Team member before shipping

Western States: Krysten Schuler kschuler@usgs.gov, 608-270-2447

Central States: LeAnn White clwhite@usgs.gov, 608-270-2491

Eastern States: Anne Ballmann aballmann@usgs.gov, 608-270-2445

For single animal cases **Nationwide:** Jennifer Bradsby jbradsby@usgs.gov, 608-270-2443

Submitter's name:

Telephone:

Address:

E-mail:

Collector's Name:

Affiliation:

Telephone:

E-mail:

Date collected:

Method of animal collection: Found Dead, Died in Hand, Euthanized

Method of euthanization:

Species:

Number Submitted: Condition: Chilled, Frozen, Preserved Tissues

Specific die-off location (refuge unit, pond, address, intersection, park, etc):

State: County: Nearest City:

Latitude/longitude (Decimal degree in WGS 84): Zone:

Disease onset date: (Best estimate) Disease end date: (best estimate)

Species affected: (The diversity of species affected may provide clues to the disease involved.)

Age/sex: (Any pattern noticed that is related to age and sex?)

Known dead: (Actual number counted)

Known sick:

Estimated dead:

Estimated sick:

(Consider removal by scavengers or other means, density of vegetation, etc.)

Clinical signs: (Any unusual behavior and physical appearance.)

Population at risk: (Number of animals in the area that could be exposed to the disease.)

Population movement: (Recent changes in number of animals on area and their source or destination, if known.)

Problem area description: (Land use, habitat types, and other distinctive features.)

Environmental factors: (Record conditions such as storms, precipitation, temperature changes, or other changes that may contribute to stress.)

Comments: (Additional information/observations of value such as past occurrences of disease in area, photographs and videos are great additions.)

Appendix A: NWHC Specimen History Form and Shipping Instructions

USGS – National Wildlife Health Center

INSTRUCTIONS FOR COLLECTION AND SHIPMENT OF AVIAN AND MAMMALIAN CARCASSES

Contact your USGS Field Investigation Team (FIT) member first!

Eastern states – Dr. Anne Ballmann aballmann@usgs.gov 608-270-2445

Central states - Dr. LeAnn White clwhite@usgs.gov 608-270-2491

Western states – Dr. Krysten Schuler kschuler@usgs.gov 608-270-2447

Single animal cases, Nationwide: Jennifer Bradsby jbradsby@usgs.gov, 608-270-2447

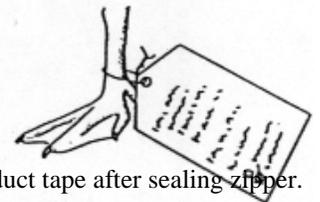
Emergency Contact Number 608-270-2400



The following instructions should be used for collecting and shipping wildlife carcasses, carcass parts, and samples extracted from animals to the National Wildlife Health Center (NWHC) to insure adequate and well preserved specimens.

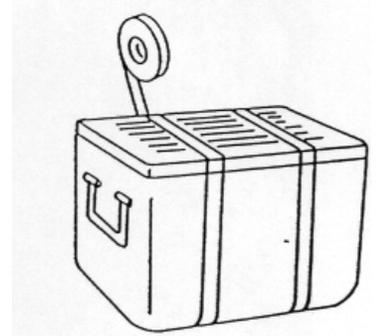
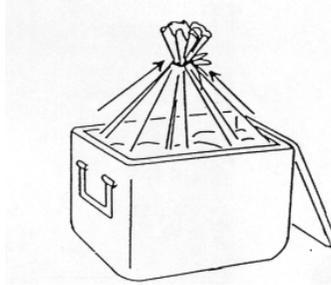
Freezing/thawing impedes isolation of some pathogens and damages tissues. NWHC prefers unfrozen specimens if they can be sent within 24-36 hours of collection or death. We will provide guidance on freezing samples on a case-by-case basis. As a general guideline: if you cannot call or ship within 24-36 hours, freeze the animal(s).

- Contact FIT to get shipping approval and discuss shipping arrangements. Typically, ship specimens by 1-day (overnight) service, Monday through Wednesday, to guarantee arrival at NWHC before the weekend. If specimens are fresh and need to be shipped on Thursday or Friday, special arrangements can be made.
- Email/fax history and tracking number to FIT. Packages will not be opened if history does not arrive first!
- Use rubber, vinyl, or nitrile gloves when picking up sick or dead animals. If you do not have gloves, insert your hand into a plastic bag.
- More than one disease may be affecting the population simultaneously. When possible, collect both sick and dead animals. Note behavior of sick animals before euthanizing.
- Collect specimens that are representative of all species affected and geographic areas.
- Collect the freshest dead specimens. Decomposed or scavenged carcasses are usually of limited diagnostic value. If you plan to collect animals in the field, take along a cooler containing ice to immediately chill carcasses.
- Contact NWHC for assistance when collecting samples from animals that are too large to ship.
- Collect animals under the assumption that an infectious disease or toxin is involved and other animals may be at risk. Protect yourself as some diseases and toxins are hazardous to humans.
- Immediately attach a leg tag to each animal with the following information in pencil or waterproof ink:
 - Date collected
 - Location (specific site, town, county, state)
 - Collector (name/address/phone)
 - Species
 - Found dead or euthanized
 - Your reference #
- Place each animal in a plastic bag, close, and seal the bag. Cover zipper bag closure with strapping or duct tape after sealing zipper. Twist non-zipper bags closed, fold over on itself, and secure with package strapping or duct tape.
- Place 1st bag inside a 2nd bag, close and seal. More than one individually bagged animal can be placed in the 2nd bag. This prevents cross-contamination of individual specimens and leaking shipping containers.
- Tag the outside of 2nd bag and number of animals and type, date collected, location, and name of collector. Reminder order: TAG, BAG, BAG, TAG.
- Use a hard-sided cooler in good condition for shipment. Close the drain plug of cooler and tape over inside. Line cooler with a thick bag (1 mil thickness, 3rd layer of bags).



Appendix A: NWHC Specimen History Form and Shipping Instructions

- Place absorbent material in the 3rd plastic bag to absorb any liquids that might leak during shipping.
See appendix for examples of bags and absorbent materials.
- Pack the individually bagged animal(s) that are contained within the 2nd sealed bag into the 3rd bag with enough FROZEN BLUE ICE PACKS or similar coolant to keep carcasses cold. Use enough coolant to keep samples chilled if there is a delay in delivery.
 - Blue ice (unfrozen) can be obtained at hardware, sporting goods, or grocery stores.
 - Wet ice can be used if frozen in a sealed plastic container (i.e., soda or water bottle).
 - DO NOT USE DRY ICE.
- Seal the 3rd bag with methods described for 1st bag.
- Place the completed specimen history and return shipping label in a ziplock bag and tape to the inside lid of the cooler (if you want the cooler returned). NWHC CANNOT PAY FOR SHIPPING.
- Using packing or duct tape, tape the cooler shut around the lid and at each end using a continuous wrap around the cooler.
- Attach the shipping document (airbill) with the DOT information below to the outside of each cooler in a resealable pouch:
Address:
**National Wildlife Health Center
Necropsy Loading Dock
6006 Schroeder Road
Madison, WI 53711**
Emergency Contact:
**NWHC FIT emergency
608-270-2400**
Supplementary Labels:
Keep Cold
- Mark the cooler with the appropriate information:
(See Pg. 3 for printable marking labels)
 - Carcasses of animals that died of unknown causes:
BIOLOGICAL SUBSTANCE, CATEGORY B and UN 3373.
 - Blood and tissue samples from apparently healthy animals (hunter-killed, live captured):
EXEMPT ANIMAL SPECIMENS.
 - Blood and tissue samples from dead or sick animals:
BIOLOGICAL SUBSTANCE, CATEGORY B and UN 3373.
- Note the tracking number in case packages are delayed.
- These instructions cover federal shipping regulations for commercial carriers.



Appendix:

Example of bags available at large supermarkets (list not all inclusive):

Inner and second layer bags:

Hefty Big Bag – 22 gal
Hefty Freezer – 1 gal
Hefty Jumbo – 2.5 gal

Ziplock Freezer – 1 gallon
Ziplock Big Bag – 20 gallon
Glad Freezer – 1 qt, 2 qt, 1 gal

Third layer for cooler liner:

Hefty Cinch Sak (1.1 mil) – 33 and 39 gal
Hefty Lawn and Leaf (1.1 mil) – 33 and 39 gal
House brand large trash (1.1 mil) – 30 gal

Glad Force Flex (1.05 mil) – 25 gal
Hefty Ultra Flex (1.3 mil) – 30 gal
House Lawn - Leaf (1.2 mil) – 39 gal

Absorbent material:

Super absorbent packet or pads for water
Paper towels
Do not use packing peanuts or shredded paper.

Cellulose wadding
Cotton batting or cotton balls



BIOLOGICAL SUBSTANCES, CATEGORY B

**EXEMPT ANIMAL
SPECIMENS**

Appendix B: Bird Capture Equipment

- **Mist nets**

1. Avinet, Inc., P. O. Box 1103, Dryden, NY 13053-1103, (888) 284-6387, Email: orders@avinet.com Web site: www.avinet.com
 - 38 mm mesh-polyester (sparrows to jays and small shorebirds)
 - 38 mm Mesh – canopy nets
 - 60 mm Mesh– (small to medium shorebirds, robin-sized birds)
 - 100 mm Mesh – (small hawks-medium shorebirds)
 - 127 mm Mesh (Hawks, ducks)
2. HotFoot America, P.O. Box 1339, Sausalito, CA, 94966
Phone: 415-789-5135, 800-533-8421
Fax: 415-789-0564
Email: techdata@hotfoot.com
Web site: www.hotfoot.com

- **Net poles**

1. Avinet (see above for contact information)

- **Net bags**

1. Avinet (see above for contact information)

- **Q Net: (waterfowl, pigeons, shorebirds, raptors, vultures)**

1. Fuhrman Diversified, 2912 Bayport, Seabrook, TX 77586-1501, (281) 474-1388, Contact RC Carver, Email: fdi@flash.net

- **Walk-in decoy traps: small birds (i.e. sparrows, pigeons, cardinals or starling size birds)**

1. Bird-B-Gone, Inc., Mission Viejo, CA, (800) 392-6915 www.birdbgone.com
2. Fly-Bye Bird Control Products, 13609 NE 126th Pl., #150, Kirkland, WA 98034, 800-820-1980, 425-820-8496, Email: nobirds@flybye.com
Web site: www.flybye.com

- **Snare traps: raptors, eagles, kites, vultures, sparrows**

1. Brad Wood, PO Box 874, Rainer, Washington 98576, (800) 446-5080
www.northwoodsalconry.com

- **Padded leg holds traps: cranes, pelicans, cormorants, storks**

1. Oneida Victor Inc., PO Box 32398, Euclid, OH 44132, (216) 761-9010
www.nwtrappers.com

- **Nest traps: gulls or ground nesting birds**

1. Spike Construction, 16347 Stoneledge Dr., Parker, CO 80134, (303) 941-4202, Contact: Jim Spykstra.

Appendix B: Bird Capture Equipment

- **Cannon nets**

1. Coda Enterprises, 1038 E. Norwood, Mesa, AZ 85203, (480) 964-0155, Fax: (480) 461-1574, www.codaenterprises.com
2. Nichols Net and Twine, 1-800-878-6387, www.nicholsnetandtwine.com; 2200 highway 111, Granite City, Illinois 62040, Email: nicholsnt@yahoo.com

Appendix C: National Wildlife Disease Program Contact Info

COORDINATOR'S OFFICE - *DISEASE HOTLINE 877-303-6363*

WILDLIFE DISEASE COORDINATOR

Tom DeLiberto
USDA/APHIS/WS
4101 LaPorte Ave.
Fort Collins, CO 80521
Office (970) 266-6088 • Fax (970) 266-6089
Thomas.J.DeLiberto@aphis.usda.gov

ASST. WILDLIFE DISEASE COORDINATOR

Tom Gidlewski
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4101 LaPorte Ave.
Fort Collins, CO 80521
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Thomas.Gidlewski@aphis.usda.gov

ASST. WILDLIFE DISEASE COORDINATOR

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Fort Collins, CO 80521
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Seth.Swafford@aphis.usda.gov

ASST. WILDLIFE DISEASE COORDINATOR

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WILDLIFE DISEASE BIOLOGIST

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USDA/APHIS/WS

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WILDLIFE DISEASE BIOLOGIST

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BUDGET ANALYST

Vacant
USDA/APHIS/WS
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Fort Collins, CO 80521
Office (970) 266-6008 • Fax (970) 266-6218

BUDGET ANALYST/TECH

Mary Kimball
USDA/APHIS/WS
422 Vernon Rd, Jenkintown PA 19046
Cell (970) 980-1546
Fax (215) 885-3632
Mary.L.Kimball@aphis.usda.gov

ADMIN. SUPPORT ASST.

Amelia Lavelle
USDA/APHIS/WS
4101 LaPorte Ave.
Fort Collins, CO 80521
Office (970) 266-6011
Fax (970) 266-6089
Amelia.C.Lavelle@aphis.usda.gov

ADMIN. SUPPORT ASST.

Erika Kampe
4101 LaPorte Ave.
Fort Collins, CO 80521
Office (970) 266-5702 • Fax (970) 266-6089
Erika.R.Kampe@aphis.usda.gov

Appendix C: National Wildlife Disease Program Contact Info

WESTERN REGION

ALASKA

David Sinnett
USDA/APHIS/WS
9001 Frontage Rd., Suite A
Palmer, AK 99645
Office (907) 745-0871
David.R.Sinnett@aphis.usda.gov

ARIZONA

William Sparklin
USDA/APHIS/WS
8836 N. 23rd Ave., Suite 2
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Appendix D: Sampling Supplies

- **Sampling kit from NVSL** (includes supplies for 40 samples)
 1. Vials with transport media
 2. Dacron swabs – large (small swabs available upon request)
 3. Sample tube containing 3.0 mL of Brain Heart Infusion (BHI) media (40 included)
 4. Barcodes – 40 sets of 4 barcodes (1 for datasheet, 1 for sample tube, 2 extras)
 5. Shipping box (supplies will be shipped within this container)
 6. 40 section box (Additional boxes can be purchased from Crown Shipping in Des Moines, IA, (515) 282-1544, Part No. USDA 40 cell box with 40 cell tall dividers. An order of 200 costs about \$0.68 per box).
 7. Secondary container (STP #740 and STP #741)
 8. Absorbent material to include between vials and secondary containment vessel.
 9. Blue ice frozen cold packs (2)
 10. Exempt Animal specimens label to cover UN3373 diagnostic specimens label

- **10 - 20 sample shipping cooler** (should be purchased by collecting agency for use when shipping < 20 samples). All supplies listed below can be purchased from SAFTPAK (www.saftpak.com).
 1. Cooler (STP #309 or equivalent shipper)
 2. Secondary containment bag for shipping diagnostic specimens (STP #710)
 3. Blue ice frozen cold packs

- **Miscellaneous supplies**
 1. Datasheets
 2. Ball-point pens
 3. Scissors
 4. Alcohol swabs
 5. Paper towels
 6. Trash bags
 7. GPS units (set to WGS 84 datum and decimal degrees format)
 8. Hand sanitizer
 9. Bird identification guides
 10. Species code list
 11. Laptop with mapping software or area maps
 12. Sample data sheet
 13. Tape



Appendix E: Species Codes

COMMON NAME	ALPHA CODE	COMMON NAME	ALPHA CODE	COMMON NAME	ALPHA CODE
American Black Duck	ABDU	Emperor Goose	EMGO	Pacific Golden Plover	PAGP
Aleutian Cackling/Canada Goose	ACGO	Eurasian Green-winged Teal	EGWT	Pectoral Sandpiper	PESA
American Coot	AMCO	Eurasian Wigeon	EUWI	Purple Sandpiper	PUSA
American Crow	AMCR	European Starling	EUST	Red Knot	REKN
American Green-winged Teal	AGWT	Fish Crow	FICR	Red Phalarope	REPH
American Pipit	AMPI	Fork-tailed Storm Petrel	FTSP	Red-Breasted Merganser	RBME
American Wigeon	AMWI	Franklin's Gull	FRGU	Redhead	REDH
Artic Tern	ARTE	Gadwall	GADW	Red-legged Kittiwake	RLKI
Atlantic Brant	ATBR	Glaucous Gull	GLGU	Red-necked Grebe	RNGR
Atlantic Puffin	ATPU	Glaucous-winged Gull	GWGU	Red-necked Phalarope	RNPH
Baird's Sandpiper	BASA	Gray-Cheeked Thrush	GCTH	Ring-billed Gull	RBGU
Barrow's Goldeneye	BAGO	Great Black-backed Gull	GBBG	Ringed Turtle Dove	RITD
Black Brant	BLBR	Great Blue Heron	GBHE	Ring-necked Duck	RNDU
Black Guillemot	BLGU	Greater Scaup	GRSC	Rock Pigeon	ROPI
Black Scoter	BLSC	Greater Snow Goose	GSGO	Rock Sandpiper	ROSA
Black Skimmer	BLSK	Greater White-fronted Goose	GWFG	Ross's Goose	ROGO
Black Bellied Plover	BBPL	Greater Yellowlegs	GRYE	Royal Tern	ROYT
Black-Crowned Night Heron	BCNH	Harlequin Duck	HARD	Ruddy Duck	RUDU
Black-legged Kittiwake	BLKI	Herring Gull	HERG	Ruddy Turnstone	RUTU
Black-Necked Stilt	BNST	Hooded Merganser	HOME	Sanderling	SAND
Blue-winged Teal	BWTE	Horned Grebe	HOGR	Sandhill Crane	SACR
Bonaparte's Gull	BOGU	Killdeer	KILL	Semipalmated Sandpiper	SESA
Brown Pelican	BRPE	King Eider	KIEI	Sharp-tailed Sandpiper	SHAS
Buff-Breasted Sandpiper	BBSA	Laughing Gull	LAGU	Short-billed Dowitcher	SBDO
Bufflehead	BUFF	Least Auklet	LEAU	Snow Bunting	SNBU
Cackling Goose	CACG	Least Sandpiper	LESA	Solitary Sandpiper	SOSA
Canada Goose	CAGO	Lesser Scaup	LESC	Spotted Sandpiper	SPSA
Canvasback	CANV	Lesser Snow Goose	LSGO	Stilt Sandpiper	STSA
Cedar Waxwing	CEDW	Lesser White-fronted Goose	LWFG	Surf Scoter	SUSC
Cinnamon Teal	CITE	Lesser Yellowlegs	LEYE	Swainson's Thrush	SWTH
Common Eider	COEI	Long-Billed Dowitcher	LBDO	Thayer's Gull	THGU
Common Goldeneye	COGO	Long-tailed Duck	LTDU	Trumpeter Swan	TRUS
Common Loon	COLO	Mallard	MALL	Tundra Swan	TUSW
Common Merganser	COME	Mew Gull	MEGU	Wedge-tailed Shearwater	WTSH
Common Moorhen	COMO	Mottled Duck	MODU	Western Sandpiper	WESA
Common Raven	CORA	Mourning Dove	MODO	Whimbrel	WHIM
Common Snipe	COSN	Muscovy Duck	MUDU	White-winged Scoter	WWSC
Common Tern	COTE	Mute Swan	MUSW	Whooper Swan	WHOS
Domestic Duck	DODU	Northern Fulmar	NOFU	Willet	WILL
Domestic Goose	DOGO	Northern Gannet	NOGA	Wilson's Phalarope	WIPH
Double-crested Cormorant	DCCO	Northern Pintail	NOPI	Wood Duck	WODU
Dunlin	DUNL	Northern Shoveler	NSHO		

*For a complete list of species refer to the USGS Bird Banding Laboratory at Patuxent Wildlife Research Center (<http://www.pwrc.usgs.gov/bbl/manual/aspeclst.htm#P>)

Appendix F: Sample Avian Influenza Surveillance Data Sheet

 Wildlife Avian Influenza Surveillance Data Sheet 		Page of	
Collector: Clark Kent Agency: USDA-Wildlife Services Phone number: (111) 222-3333		Testing Laboratory: Kansas Veterinary Diag. Lab City: Manhattan State: KS	
Referral # <u>KSCK02 05 09</u> <small>State, initials, month, day, year</small>		3 most abundant species on site <u>CAGO / MALL /</u>	
GPS location (In WGS 84 and decimal degrees): N <u>37.90637</u> W <u>-96.80017</u>		Collection Site: <u>EL DORADO STATE PARK</u>	
Date collected: <u>2/5/09</u>		Collection Strategy (circle one): Live bird Hunter Harvest Agency Harvest Sentinel <u>Morbidity/Mortality</u>	

Sample Bar Code	Bird Species Code	Sex:	Age Class	Sample Type:	Comments:
1-  A00653856	MALL	1. Male 2. Female 3. Unknown	1. Hatch Year 2. After Hatch Year 3. Undetermined	1. Cloacal 2. Tracheal 3. Oral + Cloacal	(Subject ID, band #, condition, etc) <u>KS-101</u>
1-  A00653855	MALL	1. Male 2. Female 3. Unknown	1. Hatch Year 2. After Hatch Year 3. Undetermined	1. Cloacal 2. Tracheal 3. Oral + Cloacal	(Subject ID, band #, condition, etc) <u>KS-101</u>
1-  A00653854	CAGO	1. Male 2. Female 3. Unknown	1. Hatch Year 2. After Hatch Year 3. Undetermined	1. Cloacal 2. Tracheal 3. Oral + Cloacal	(Subject ID, band #, condition, etc) <u>KS-102</u>
1-  A00653853	CAGO	1. Male 2. Female 3. Unknown	1. Hatch Year 2. After Hatch Year 3. Undetermined	1. Cloacal 2. Tracheal 3. Oral + Cloacal	(Subject ID, band #, condition, etc) <u>KS-102</u>
Sample Bar Code	Bird Species Code	Sex:	Age Class	Sample Type:	Comments:
		1. Male 2. Female 3. Unknown	1. Hatch Year 2. After Hatch Year 3. Undetermined	1. Cloacal 2. Tracheal 3. Oral + Cloacal	(Subject ID, band #, condition, etc)

Date Samples Shipped to Testing Lab: 2 / 5 / 09 # of samples in referral: 4

Check here if collector info is same as submitter

Name of Submitter: _____ Phone # of submitter _____

Please send all results to Dr. Thomas DeLiberto by email (WSlabresults@aphis.usda.gov) or by fax to (970) 266-6215. Call NVSL immediately at (515) 663-7551 with all positive H5/H7 rRT-PCR results. Results may also be entered in directly to the lab submission website: <https://cowebapps.aphis.usda.gov/vslabsub/login.do>.

Comments _____

FOR LAB USE ONLY

Revision 1-21-09

Appendix G: Shipping Addresses and Contact Information of NAHLN Laboratories

State	Laboratory Name	Shipping Address	Telephone	BPA Task Order
AK	State of Alaska Department of Environmental Conservation	5251 Hinkle Rd. Anchorage, AK 99507	(907) 375-8299 or 8231	AG-6395-K-10-0053
AR	Arkansas Livestock & Poultry Commission Lab	1 Natural Resources Dr. Little Rock AR 72205	(501) 907-2430	AG-6395-K-10-0024
CA	California Animal Health & Food Safety Lab	UC Davis West Health Science Dr. Davis, CA 95616	(530) 752-7578	AG-6395-K-10-0017
CT	Connecticut Veterinary Medical Diagnostic Laboratory	61 NE Eagleville Rd. Unit 3089 University of Connecticut Storrs, CT 06269-3089	(860) 486-3738	AG-6395-K-10-0001
DE	Charles C. Allen Laboratory Avian Biosciences Center	University of Delaware 601 Sincock Lane Newark, DE 19717	(302) 831-2524	AG-6395-K-10-0032
FL	Kissimmee Diagnostic Laboratory	2700 N. John Young Parkway Kissimmee, FL 34741	(321) 697-1400	AG-6395-K-10-0003
GA	Athens Veterinary Diagnostic Laboratory	501 D.W. Brooks Dr. Athens, GA 30602	(706) 542-5568	AG-6395-K-10-0051
HI	State Laboratories Division	Rebecca Sciulli or Dr. Chris Whelen 2725 Waimano Home Rd Pearl City, HI 96782	(808) 453-5993 (808) 453-6652	AG-6395-K-10-0028
IA	Iowa State University	Veterinary Diagnostic Laboratory 1600 S. 16 th Street Ames, IA 50011-1250	(515) 294-1950	AG-6395-K-10-0004
IL	Illinois Department of Agriculture Galesburg Animal Disease Laboratory	2100 S. Lake Storey Rd. Galesburg, IL 61401	(309) 344-2451	AG-6395-K-10-0005
KS	Kansas State Veterinary Diagnostic Lab	1800 Dennison Ave D-117 Manhattan, KS 66506-5601	(785) 532-5650	AG-6395-K-10-0018
LA	Louisiana Vet Med Diagnostic Laboratory	1909 Skip Bertman Dr. Rm 1519 Baton Rouge, LA 70803	(225) 578-9777	AG-6395-K-10-0025
MD	Maryland Dept. of Ag & Animal Health Lab Unit 3	27722 Nanticoke Rd Salsbury, MD 21801	(410) 543-6610	AG-6395-K-10-0007
MI	Diagnostic Center for Population and Animal Health	Attention: Dr. Roger Maes 4125 Beaumont Rd. Lansing, MI 48910	(517) 353-1683	AG-6395-K-10-0006
MN	Minnesota Veterinary Diagnostic Laboratory	1333 Gortner Ave St Paul, MN 55108	(612) 625-8787	AG-6395-K-10-0008
MO	University of Missouri	VMDL 1600 E. Rollins Columbia, MO 65211	(573) 882-6811	AG-6395-K-10-0009
MS	Mississippi Vet Research & Diagnostic Laboratory	3137 Hwy 468 West Pearl, MS 39208	(601) 420-4700	AG-6395-K-10-0010
MT	Montana Veterinary Diagnostic Laboratory	South 19 th and Lincoln Bozeman, MT 59718	(406) 994-4885	AG-6395-K-10-0002
NC	Rollins Animal Disease Diagnostic Lab	2101 Blue Ridge Rd Raleigh, NC 27607	(919) 733-3986	AG-6395-K-10-0026
ND	North Dakota State University Department of Veterinary Diagnostic Services	174 Van Es Hall Fargo, ND 58105-5406	(701) 231-8307	AG-6395-K-10-0027
NE	Veterinary Diagnostic Center University of Nebraska	151 VDC Fair Street & East Campus Loop Lincoln, NE 68583-0907	(402) 472-1434	AG-6395-K-10-0019

Appendix G: Shipping Addresses and Contact Information of NAHLN Laboratories

NJ	New Jersey Department of Ag. Division of Animal Health	Health & Ag Building Room 201 John Fitch Plaza Trenton, NJ 08625	(609) 984-2293	AG-6395-K-10-0011
NM	New Mexico Department of Agriculture	Veterinary Diagnostic Services 700 Camino de Salud NE Albuquerque, NM 87106	(505) 841-2576	AG-6395-K-10-0029
NV	Nevada Animal Disease Laboratory	350 Capitol Hill Rd. Reno, NV 89502	(775) 688-1182 ext. 231	AG-6395-K-10-0054
NY	Cornell Diagnostic Lab	Upper Town Rd Ithaca, NY 14853	(607) 253-3900	AG-6395-K-10-0012
OH	Ohio Department of Agriculture	Animal Disease Diag. Lab Bldg 6 8995 East Main Street Reynoldsburg, OH 43068	(614) 728-6220	AG-6395-K-10-0013
OK	Oklahoma Animal Disease Diagnostic Laboratory	Farm at Ridge Road Stillwater, OK 74078	(405) 744-6623	AG-6395-K-10-0020
OR	Oregon State Veterinary Diagnostic Lab	Magruder Hall, Rm. 134 30 th & Washington Way Corvallis, OR 97331	(541) 737-3261	AG-6395-K-10-0030
SC	Clemson Veterinary Diagnostic Center	500 Clemson Rd. Columbia, SC 29224-2406	(803) 788-2260	AG-6395-K-10-0014
SD	Animal Disease Research & Diagnostic Lab	Box 2175, North Campus Dr. Brookings, SD 57007	(605) 688-5171	AG-6395-K-10-0021
TX	Texas Vet Medical Diagnostic Laboratory	1 Sippel Rd. College Station, TX 77843	(979) 845-9000	AG-6395-K-10-0231
UT	Utah Veterinary Diagnostic Laboratory	950 East 1400 North Logan, UT 84341	(435) 797-1895	AG-6395-K-10-0022
VA	Virginia Dept of Agriculture and Animal Health Lab	261 Mount Clinton Pike Harrisonburg, VA 22802	(540) 209-9130	AG-6395-K-10-0015
WA	Washington Animal Disease Diagnostic Laboratory	Bustad Hall Rm. 155-N Pullman, WA 99164-7034	(509) 335-9696	AG-6395-K-10-0023
WI	Wisconsin Veterinary Diagnostic Laboratory	445 Easterday Lane Madison, WI 53706	(608) 262-5432	AG-6395-K-10-0016

Appendix H: Instructions for Sending Samples to an Out of State Lab

1. Samples should be sent to the NAHLN lab assigned to each state.
2. If, and only if, the NAHLN lab cannot process the samples within 48 hours of submission a different lab should be selected.
3. Communication between Wildlife Services State Offices and Cooperating State Agencies is imperative when samples are shipped to a different laboratory to ensure proper billing.
4. Contact the Wildlife Services Office in the state where the samples will be submitted.
5. The WS Office will provide the purchase order number for the lab submission form. The same purchase order number that is used for submitting samples to your assigned lab **cannot** be used.
6. Notifying the WS Office in the state where the lab is located is also important because the invoice will be sent to the WS Office in the state where the lab is located.
7. If the WS Office is unavailable or if you have additional questions, please contact Kerri Pedersen at (970) 266-6272 or Brandon Schmit at (970) 266-6079.

Office	Director	Phone	Fax
Eastern Regional Office	Charlie Brown	(919) 855-7200	(919) 855-7215
Alabama, Virgin Islands	Frank Boyd	(334) 844-5670	(334) 844-5321
Arkansas	Thurman Booth	(501) 835-2318	(501) 835-2350
Florida	VACANT	(352) 377-5556	(352) 377-5559
Georgia	Steve Smith	(706) 546-5637	(706) 316-9248
Illinois	Scott Beckerman	(217) 241-6700	(217) 241-6702
Indiana	Judy Loven	(765) 494-6229	(765) 494-9475
Louisiana	Dwight LeBlanc	(225) 389-0229	(225) 389-0228
Maine	John Forbes	(207) 622-8263	(207) 622-5760
Maryland, Delaware, D.C.	Kevin Sullivan	(410) 349-8055	(410) 349-8258
Massachusetts, Connecticut, Rhode Island	Monte Chandler	(413) 253-2403	(413) 253-7577
Michigan	Peter Butchko	(517) 336-1928	(517) 336-1934
Minnesota	Gary Nohrenberg	(651) 224-6027	(651) 224-4271
Mississippi	Kris Godwin	(662) 325-3014	(662) 325-3690
Missouri, Iowa	Ed Hartin	(573) 449-3033	(573) 449-4382
New Hampshire, Vermont	Parker Hall	(603) 223-6832	(603) 229-1951
New Jersey	Wendy Anderson	(908) 735-5654	(908) 735-0821
New York	Martin Lowney	(518) 477-4837	(518) 477-4899
North Carolina	Jon Heisterberg	(919) 786-4480	(919) 786-4159
Ohio	Andy Montoney	(614) 861-6087	(614) 861-9018
Pennsylvania	Harris Glass	(717) 236-9451	(717) 236-9454
South Carolina	Noel Myers	(803) 786-9455	(803) 786-9472
Tennessee, Kentucky	Brett Dunlap	(615) 736-5506	(615) 736-2768
Virginia	Scott Barras	(804) 739-7739	(804) 739-7738
West Virginia	Chris Croson	(304) 636-1785	(304) 636-5397
Wisconsin	Jason Suckow	(608) 837-2727	(608) 837-6754

Appendix H: Instructions for Sending Samples to an Out of State Lab

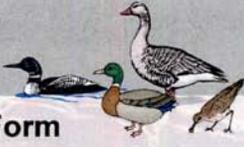
Western Regional Office	Jeffrey Green	(970) 494-7443	(970) 494-7455
Arizona	David Bergman	(602) 870-2081	(602) 870-2951
California	Craig Coolahan	(916) 979-2675	(916) 979-2680
Colorado	Mike Yeary	(303) 236-5810	(303) 236-5821
Hawaii, Pacific Islands	Mike Pitzler	(808) 861-8575	(808) 861-8570
Idaho	Mark Collinge	(208) 378-5077	(208) 378-5349
Kansas	Tom Halstead	(785) 537-6855	(785) 537-6862
Montana	John Steuber	(406) 657-6464	(406) 657-6110
Nebraska	Tim Veenendaal	(402) 434-2340	(402) 434-2330
Nevada	Mark Jensen	(775) 851-4848	(775) 851-4828
New Mexico	Alan May	(505) 346-2640	(505) 346-2627
North Dakota	Phil Mastrangelo	(701) 250-4405	(701) 250-4408
Oklahoma	Kevin Grant	(405) 521-4039	(405) 525-5951
Oregon	Dave Williams	(503) 326-2346	(503) 326-2367
South Dakota	Kirk Gustad acting	(970) 494-7452	
Texas	Mike Bodenchuk	(210) 472-5451	(210) 472-5446
Utah	Mike Linnell	(801) 975-3315	(801) 975-3320
Washington, Alaska	Roger Woodruff	(360) 753-9884	(360) 753-9466
Wyoming	Rod Krischke	(307) 261-5336	(307) 261-5996

Appendix I: Creating a Lab Submission



Wildlife Avian Program

Lab Submission (LS) Data Entry using Web Form



- **Help Desk Phone #** (877) 944-8457
- **URL** <https://cowebapps.aphis.usda.gov/vslabsub>
- **Assumptions** You know how to navigate in the web form, and have a login & password to the VS Lab Submission application.
- **Required fields** You must enter information into the fields next to red-colored text with asterisk (*).
- **Pop-up Blockers** To perform all tasks in application, it is recommended that you temporarily turn off pop-up blocker in web browser.

Action Items

[Create Lab Submission](#)
[Review Lab Submissions](#)
[Enter Lab Results](#)
[Release Submissions](#)

This job aid provides field descriptions & process flows for action items listed above. User permissions allow access.

These buttons [Home](#) | [Logout](#) | [Help](#) appear in the top-right corner on each lab submission form.

- **Home** takes you to the Welcome/Home screen.
- **Logout** takes you completely out of the VS Lab Submission module.
- **Help** provides links to relevant documents.
- **USE** , **NOT** in application.

Section #1 - Create Lab Submission

If you start to create a Lab Submission (LS) record, and do not complete it, an incomplete copy is accessible from the Welcome/Home screen. Click on the Referral # to open it. Another way to access it is through the Review Lab Submissions Action Item on the Welcome/Home screen.

1 SUBMISSION INFORMATION

- **Program** - National Avian Health Program
- **Operation Type** - Wildlife Avian
- **Referral #** - Number that uniquely IDs a lab submission (LS). Manually enter, using this format: State abbreviation, your initials, the date, letter to differentiate multiple submissions in a day. Example: COSRV06212006A.
- **Collection Date** - Date sample was taken from subject. Default is current date. To change date:
 - Select date from calendar at end of field, or
 - Remove date and type T for today, or T-1 for yesterday, etc. then press tab or click outside the field, or
 - Manually enter the date using this format: mm/dd/yyyy.
- **Submission Status** - Default is *Incomplete* until the record is completed.

Click, to continue.

2 COLLECTION INFORMATION Hide Display

- **Biologist Agency** - Agency/service with which biologist is associated.
- **First/Last Name** - Name of wildlife biologist collecting the sample. Can click in field & use to see if name is already in database. If so, the Collector Info & Testing Lab Info fields will auto-fill when name is selected.
- **Address/City/State/Zip** - Address of wildlife biologist's residence.
- **Testing Laboratory** - Name of lab that initially tests samples. Call ahead to notify lab that samples have been sent.
- **GPS Location: N** - GPS latitude (decimal degrees) of location where bird was collected; used for mapping and tracking purposes. Use WGS 84. Click on for more info.
- **GPS Location: W** - GPS longitude (decimal degrees) of location where bird was collected; used for mapping and tracking purposes. Use WGS 84. Automatically saves as a negative number. Click on for more info.
- **Collection Site** - A familiar name of the location where bird was collected. (i.e. Rolland Moore Park, Roosevelt N.F.)
- **County/State** - County & state in which bird was collected.
- **3 Most Abundant Species on Site** - Select first, second, and third most noticed species on site where bird was collected. Use menus. If you select *Other species*, enter species name in *Comments* box.

3 NEW SUBJECT INFORMATION

- **Subject (Animal) ID** - Characters or numbers used to ID a subject/bird. Can use barcode number.
- **Bird Species** - Type of bird from which sample was collected. Select from menu. The alpha code is listed after species name (i.e. CAGO for Canada Goose).
- **Band #** - ID number on band (If band is available on bird).

• **Collection Strategy** - Strategy of the sampling event.

- Live Wild Bird (released) - Take sample from bird; set it free.
- Dead wild bird - Take sample from bird; dispose of bird.
- Hunter killed wild bird - Take sample from bird; return bird to hunter.
- Morbidity/Mortality Event - Take sample from sick bird; dispose of bird.
- Sentinel Species - Take sample from monitored bird; set it free.

• **Sex** - Gender of bird (male, female, unknown).

• **Condition** - Applies to Morbidity/Mortality Event and Sentinel Species only. Select from menu, Healthy, Morbid/Sick, or Dead.

• **Age Class** - Bird's stage of life. Choices are: Hatch Year Nestling, Hatch Year Local, Hatch Year, After Hatch Year, and Undetermined.

Note: Multiple subjects are allowed in the same LS record/accession; however, they must all be from the same GPS location.

• **Sample Bar Code** - Unique bar code that identifies a specific sample collected from a bird. Each sample must be identified by its own bar code.

• **Sample Type** - Type of sample collected from bird. Select Cloacal or Tracheal swab, or Carcass. Click on to remove a sample record.

Note: You can only enter one sample per subject unless Collection Strategy of Morbidity/Mortality Event or Sentinel Species is selected; then multiple, but not duplicate, samples are allowed.

Click, to add other samples.

Click, to save the current subject record, and add another one. All of the fields retain information from the last record, except the Subject ID and Sample Bar Code fields become blank (ready for you to input unique info). You can also change any information.

The message "The subject was successfully saved!" is displayed to let you know your data was saved.

Click, if you do not want to save the new subject record. You will then go directly to Review Submission.

Click, to save the current subject record, and go to Review Submission screen.

Click, to delete the entire LS record.

Note: The [Review Submission](#) screen displays:

- [Submission Information](#) (can edit Referral # & Collection Date)
- [Collection Information](#) (can edit)
- [Completed Subjects List](#) (can edit)
- [Shipping Information](#) (can edit)

Appendix I: Creating a Lab Submission

Create Lab Submission (continued)	Review Lab Submission (continued)										
<p>4 COMPLETED SUBJECTS LIST</p> <p>After you add the first subject record, a Completed Subjects List is generated at bottom of form. All subsequent subject records are added to the list. You can select a record by clicking in the round radio button next to it. You then have the following options:</p> <p>Edit Click, to modify existing information in a subject record.</p> <p>Copy Click, to copy info from selected subject record into a new subject record. This is useful when info is similar. You must always add the unique info (Subject ID and Sample Bar Code).</p> <p>Delete Click, to delete a subject record.</p> <p>Note: On the Review Submission page, an Add Subject button is available instead of the Copy button. After you complete the submission, click on View Subject to view a subject record.</p> <p>5 SHIPPING INFORMATION</p> <ul style="list-style-type: none"> Submitter Last/First Name – Name of person sending samples. Date Samples Shipped to Testing Lab – Defaults to current date; change if incorrect. Refer to Submission Info for date entry options. Number of Samples Shipped – Auto-filled field. <p>Complete Submission Click, to submit the entire LS record.</p> <p>The message "The accession was successfully completed!" is displayed to let you know that the LS record was successfully submitted.</p> <p>Delete This Submission Click, to delete the entire LS record.</p> <p>Back Click, to go to the Welcome/Home screen.</p> <p>Generate Packing Slip This button is available AFTER you click on Complete Submission. It allows you to view & print a packing slip. Once printed, the packing slip should be placed in shipping container with samples.</p> <p>Lab Submission Packing Slip Information</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>• Program name</td> <td>• Total # of Specimens</td> </tr> <tr> <td>• Lab name</td> <td>• Collected By name & address</td> </tr> <tr> <td>• Submitted By name</td> <td>• Remarks</td> </tr> <tr> <td>• Referral #</td> <td>• Specimens List with sample barcodes, species, and sample types.</td> </tr> <tr> <td>• Collection Date</td> <td></td> </tr> </table>	• Program name	• Total # of Specimens	• Lab name	• Collected By name & address	• Submitted By name	• Remarks	• Referral #	• Specimens List with sample barcodes, species, and sample types.	• Collection Date		<ul style="list-style-type: none"> Collection Date Between - Default is blank. If you want to enter criteria, you can select dates from calendars at end of fields, or manually enter dates using mm/dd/yyyy format. You can search by start date, end date, or both. Collection State - Can select a state by using the drop-down menu to select the state code (ex. CA for California). Collected By (Last, First) - Can enter name of person who collected sample. Follow the instructions in the help message for text field data-entry. Collection Site Name - Can enter name of collection site if you know it. Follow the instructions in the help message for text field data-entry. <p>Search Click, to see list of LS records that meet search criteria.</p> <p>Reset Search Criteria Click, to remove your search criteria and display the defaults; you can now add new search criteria.</p> <p>Cancel Click, to stop the search & go to Welcome/Home screen.</p> <p>2 SEARCH RESULTS</p> <p>After you click on the Search button, a list of LS records that meet your criteria is displayed. If you do not see the submission you are looking for, check to see if there is a View Next button at top-right corner of list. This indicates there are more submissions in the list. Click on it to see the continued list. You will now notice that a View Previous button is also available to help you navigate back and forth between pages of the list.</p> <p>You can change the sort direction of the list. Double-click in a column header (Referral#, Collection Date or State, Submission Status, Date Submitted) and click on arrow.</p> <ul style="list-style-type: none"> Records are currently sorted in ascending order (lower to higher). Records are currently sorted in descending order (higher to lower). <p>Once you find the desired LS record:</p> <ul style="list-style-type: none"> Select the record by clicking in the round radio-button directly to the left of it. Click on the appropriate button, depending on what you want to accomplish. <ul style="list-style-type: none"> Review Submission Click, to display the LS record. Cancel Click, to exit the search environment and return to the Main Menu. <p>If you clicked on Review Submission: Other buttons become available depending on submission status.</p> <ul style="list-style-type: none"> Submitted to Lab status <ul style="list-style-type: none"> View Subject Click, to view the record. Back Click, to go to Search Criteria/Results screen. Generate Packing Slip Click, to display/print LS Packing Slip. Incomplete status <ul style="list-style-type: none"> Edit Click, to edit Collection Information Edit Delete Add Subject Click on one of these buttons to edit, delete, or add a subject to the Completed Subjects List. Click on one of these buttons to complete the LS record, delete the LS record, or go back to Search Criteria/ Results Screen. <ul style="list-style-type: none"> Complete Submission Delete This Submission Back Results Approved <ul style="list-style-type: none"> View Subject Click, to view the record. Generate Packing Slip Click, to display/print LS Packing Slip. View Lab Results Click, to view sample barcodes, sample types, testing lab, tests performed, and test results. Back Click, to go to the Search Criteria/Results screen.
• Program name	• Total # of Specimens										
• Lab name	• Collected By name & address										
• Submitted By name	• Remarks										
• Referral #	• Specimens List with sample barcodes, species, and sample types.										
• Collection Date											
Section #2 – Review Lab Submission											
<p>1 SEARCH CRITERIA</p> <p>Click on ? in Search Criteria heading to see detailed instructions for entering search criteria. Basically, the Program field and Operation Type field are the ONLY mandatory fields. Adding criteria in other fields is optional. The instructions address criteria in menu fields, text fields, and date fields.</p> <ul style="list-style-type: none"> Program - Select National Avian Health Program from menu. Operation Type - Select Wildlife Avian from menu. Referral # - Default is wildcard %. Follow the instructions in the help message for text field data-entry if you want to enter criteria. Specimen Bar Code - Default is wildcard %. Follow the instructions in the help message for text field data-entry if you want to enter criteria. Submission Status - Can select a value from the menu. <ul style="list-style-type: none"> Incomplete: A lab submission record is in process; it has not yet been submitted. Note: A list of Incomplete Lab Submissions is also displayed on the Welcome/Home page. You can select one of the incomplete submissions from that list also and view/edit it. Submitted to Lab: A lab submission record has been submitted, and physical samples have been sent to a lab. Results Approved: A lab submission record has been submitted, physical samples have been sent to a lab, and the lab has tested the sample and added test results. 											

Appendix I: Creating a Lab Submission



Wildlife Avian Program

Lab Submission (LS) Data Entry using Web Form



Section #3 - Enter Lab Results (NAHLN Lab)

1 SEARCH FOR & SELECT RECORD
Use search & select techniques described in Section #2. Only records in Submitted to Lab status can be edited to enter lab results. Select appropriate record. To display the Enter Lab Results form, click on .

2 SUBMISSION INFORMATION

- Program – National Avian Health Program
- Operation Type – Wildlife Avian
- Referral # - Refer to Section #1 for definition.
- Collection Date - Refer to Section #1 for definition.

3 LAB INFORMATION

- Laboratory Name – Name of the National Avian Health Laboratory Network (NAHLN) lab that initially received the specimens to test. Auto-filled based on name of lab entered in Create Lab Submission step.
- Conditions to test for – Auto-filled with Avian Influenza.
- Total # of Specimens – Auto-filled with information entered in Create Lab Submission step.
- Date Specimens Received – Date testing laboratory received specimens. Select appropriate date from calendar

4 LABORATORY TEST RESULTS
Note: If numerous specimens were tested, it may be helpful to cross-check the packing slip with the specimens tested list to ensure all specimen test information was entered.

- Enter test results for - Select Pooled or Individual Specimens.

	<ul style="list-style-type: none"> Must be same type Must be from same species Can only be included in one pool Maximum number of specimens in a pool = 5 Tested as a single specimen If test result is Inconclusive or Positive, two other types of tests must be run on specimen (AIV H5 & H7 RRT-PCR).
Pooled Specimens	<ul style="list-style-type: none"> Tested alone (not with other specimens) Can retest specimen that's been tested in a pool
Individual Specimen	

- Pool # - Enter a number to identify a pool.
- Pooled Specimens – When you select Pooled Specimens, a list of specimens, associated barcodes, and species alpha codes are displayed in this field. Select specimens for a pool using one of the following methods.
 - To select specimens that are next to each other on the list - Click on first specimen you want in the pool; press **Shift** key; click on last specimen you want in the pool.
 - To select specimens that are not next to each other on the list - Click on a specimen you want in the pool; press **Ctrl** key; click on other specimens.
- Individual Specimens – Select specimen tested from menu.

Note: Specimens are selected when they are highlighted. Proceed to the Test Performed section.

- Test Type – Select test that lab used to test specimens. Default is AIV Matrix RRT-PCR. Other tests must be run if initial test result of a pool is Positive. To enter other test results, click on .
- Test Result – Determination from test.
 - Negative – Specimen is free of AI virus H5 or H7.
 - Inconclusive – Results were not clear. Specimen must be referred to the NVSL Laboratory for further testing.
 - Positive – Specimen is thought to be infected with AI virus. Specimen must be referred to the NVSL Laboratory for confirmatory testing.
 - Not Tested – Specimen was not tested.
- Date Tested – Date specimens were tested. Select appropriate date from calendar next to field.

Click, to remove all test information for a specific specimen.

Click, to save Test Type, Result & Date for specimen.

Click, to delete Test Result and Date Tested (Test Type remains).

5 SPECIMENS TESTED LIST
As you save lab results for each specimen, a list is automatically generated at the bottom of the screen. Refer to the example below.
Note: An N/A in the Pool # column indicates the specimen was tested individually.

Pool #	Specimens	Test Type	Test Results	Date Tested
<input type="radio"/> N/A	A20036594	AIV Matrix RRT-PCR	Positive	09/13/2006
		AIV H5 RRT-PCR	Positive	09/13/2006
		AIV H7 RRT-PCR	Positive	09/13/2006
<input type="radio"/> N/A	A20036595	AIV Matrix RRT-PCR	Inconclusive	09/13/2006
<input type="radio"/> TR001	A20036589 A20036590 A20036591	AIV Matrix RRT-PCR	Negative	09/13/2006
<input type="radio"/> TR002	A20036593 A20036595	AIV Matrix RRT-PCR	Negative	09/13/2006

There are three buttons located at the bottom of the list.

- Edit** button allows you to modify a specimen record by clicking in round radio button in specimen row, then clicking on Edit.
- Delete** button enables you to delete a specimen record by clicking in round radio button in specimen row, then clicking on Delete.
- Refer Specimen** button provides the connectivity to refer specimen records to another lab for testing.

6 REFER SPECIMENS
Click on Refer Specimens button to begin the process of referring specimens to another lab.

- Submitting Laboratory – Name of lab that initially received the specimens and is sending them to another lab for test. Auto-filled based on lab name entered in Create Lab Submission step.
- Refer to Laboratory – Name of lab that will be receiving specimens for test. If default lab is not correct, select lab from menu.

Click, to select lab that is displayed in field.

Click, if you want to select a different lab.

- Select specimens from the Original Specimens list. If you select a pool or individual specimen before clicking on the Refer Specimens button, it will already be selected in the Referral Information section. If you did not, you can select any or all specimens from the Original Specimens . . . list.

Click to select all

Original Specimens Submitted to Colorado St Univ Vet Diag Lab		
<input type="checkbox"/>	Specimen Bar Code	Specimen Type
<input type="checkbox"/>	A20036589	Tracheal Swab
<input type="checkbox"/>	A20036590	Tracheal Swab
<input type="checkbox"/>	A20036591	Tracheal Swab
<input checked="" type="checkbox"/>	A20036592	Cloacal Swab

- The selected specimens are automatically transferred to the Specimens to Refer to . . . list.

Specimens to Refer to National Vet Services Lab		
Specimen Bar Code	Specimen Type	Referred Date
A20036592	Cloacal Swab	09/13/2006

AI05-LWJ-03.14.07

USDA-APHIS-Veterinary Services

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Creating a Lab Submission: Page I3

Appendix I: Creating a Lab Submission

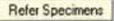
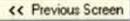
Section #3 - Enter Lab Results (cont.)

- Referral Date** – Auto-filled with current date. If incorrect, select another date from the calendar  next to field.
- Referral Reason** – Select from menu  the reason you are referring the specimens to another lab.

Test Confirmation	• If test results were inconclusive or positive, you must refer the specimen to NVSL for confirmatory testing.
Over Capacity	• If laboratory cannot accept more work due to existing heavy workload, specimens can be referred to another National Avian Health Laboratory Network (NAHLN) lab which is the preferred process, or to NVSL if absolutely necessary.
Redirected	• If, for reasons other than capacity, laboratory cannot accept the specimens for test, specimens can be referred to another NAHLN lab which is the preferred process, or to NVSL if absolutely necessary.

- Remarks** – Add additional information that will be useful for the laboratory receiving the specimens.

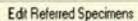
The following two buttons are available.

- Refer Specimens** button – Click, to refer specimens to the selected lab. This triggers the current date to auto-fill the Referred Date field in the Specimens to Refer to... table. The message "Specimens Referred Successfully" is displayed to let you know the transmission was successful.
- Previous Screen** button – Click, to return to the Enter Lab Results screen. If you referred specimens to another lab, a Referred Specimen List is now present at the bottom of the screen.

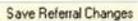
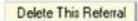
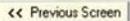
7 REFERRED SPECIMEN LIST

Click on arrow to display/hide associated information. Specimen barcodes of referred specimens are listed under each *referred to* laboratory name.

 Click, to change the following: refer to lab, specimens to refer, referral date, referral reason, or referral remarks.

 Click, to delete the referral.

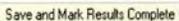
If you clicked on Edit Referred Specimens, you now have the following buttons available.

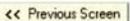
  

Save Referral Changes button – Click, to save the changes you entered. The message "Specimens Referred Successfully" is displayed to let you know the changes were successfully transmitted. Changes can be made in this way until the receiving lab enters and saves test results for a specimen. At this point, that particular specimen can no longer be referred to another lab.

- Delete This Referral** button – Click, to delete the referral.
- Previous Screen** button – Click, to return to the Enter Lab Results screen.

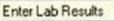
8 COMPLETE TESTING FOR YOUR LAB

 Click, if you are done entering, modifying, and referring test information. After clicking on the button, you can no longer perform these tasks. The following message is displayed "You have successfully completed testing for your lab".

 Click on this button to return to the Lab Submission Search screen.

Section #4 – Enter Lab Results (NVSL)

1 SEARCH FOR & SELECT RECORD

Use search & select techniques described in Section #2. Only records in *Submitted to Lab* status can be edited to enter lab results. Select appropriate record. To display the Enter Lab Results form, click on 

2 SUBMISSION INFORMATION

- Program** – National Avian Health Program
- Operation Type** – Wildlife Avian
- Referral #** - Refer to Section #1 for definition.
- Collection Date** - Refer to Section #1 for definition.

3 LAB INFORMATION

- Laboratory Name** – NVSL or name of a NAHLN lab that received the referral specimens to test. Field is auto-filled with name of lab selected in Section #3.
- Conditions to test for** – Auto-filled with Avian Influenza.
- Total # of Specimens** – Auto-filled with information entered in Create Lab Submission step.
- Date Specimens Received** – Date laboratory received referred specimens. Select appropriate date from calendar  next to field.

4 SPECIMEN LIST

Select **Specimen Type to View** from menu  if default of *View All* is not desired.

Click in check box if all of the test results are the same. 

Copy test results from the first specimen to the other specimens? 

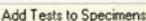
- Specimen Bar Code** – This column is auto-filled and lists all of the specimens that were referred for test.
- Specimen Type** – This column is also auto-filled and lists the specimen type associated with the specimen bar code.
- Test Type** – Select from menu  type of test that was performed on the specimen. Choices include: AIV Matrix RRT-PCR, Virus Isolation, AIV H5 RRT-PCR, AIV H7 RRT-PCR, IVPI, and Subtyping.
- Test Result** – Select from menu  determination of test. Choices are as follows:

Test Type	Test Result Options
AIV Matrix RRT-PCR	Inconclusive, Negative, Not Tested, or Positive
Virus Isolation	Inconclusive, Negative, Not Tested, or Positive
AIVH5 RRT-PCR	Inconclusive, Negative, Not Tested, or Positive
AIVH7 RRT-PCR	Inconclusive, Negative, Not Tested, or Positive
IVPI	Low Path AI or High Path AI
Subtyping	H5N1 thru H5N9 and H7N1 thru H7N9

- Date Tested** – Date specimens were tested. Select appropriate date from calendar  next to field.
- Test Status** – Stage of test (Pending or Completed).

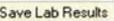
You can perform the following tasks on individual or all specimen records.

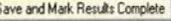
To select all (and de-select all) specimen records, click in the check box  next to the Specimen Bar Code heading. To select individual records, click in check box to the left of specimen record.

 Click, if you performed additional tests on a specimen. You will be prompted to enter the number of extra tests you performed; then click on Add Tests. More fields are provided for data input.

 See Section #3, Step 6 for referral process steps.

 Click, to erase ALL specimen information.

 Click, to save results of specimen tests.

 Refer to Section #3, step 8 for functionality of this button.

Appendix I: Creating a Lab Submission

 <h2 style="text-align: center;">Wildlife Avian Program</h2>  <h3 style="text-align: center;">Lab Submission (LS) Data Entry using Web Form</h3>	
Section #5 – Release Submission	
<p>1 SUBMISSIONS WAITING FOR APPROVAL LIST</p> <ul style="list-style-type: none">Select a submission by clicking on referral number. <p>2 RELEASE SUBMISSION FORM</p> <p>The Release Submission form is almost entirely for review. All fields are auto-filled with information previously entered, except for the Test Interpretation section. The Result field in this section must be filled in by the approver.</p> <ul style="list-style-type: none">Submission Information<ul style="list-style-type: none">Program - National Avian Health ProgramReferral # - Refer to Section #1 for definition.Operation Type - Wildlife AvianCollection Date - Refer to Section #1 for definition.Submission Status - Awaiting ApprovalCollection Information<ul style="list-style-type: none">Wildlife Services Information – Biologist's name, address, and associated agency.Testing Laboratory Information – Name of testing laboratory.Collection Site Information – GPS location, county & state in which collection occurred, collection site name, and collection date.3 Most Abundant Species on Site - First, second, and third most noticed species on site where bird was collected.Comments - If <i>Other species</i>, was selected as one of the most abundant species on site, the species name appears in the <i>Comments</i> box. Additional comments entered are also displayed.Subject (Animal) Information<ul style="list-style-type: none">Subject (Animal) ID - Characters or numbers used to ID a subject/bird. Can use barcode number.Species - Type of bird from which sample was collected. Select from menu. The alpha code is listed (i.e. CAGO for Canada Goose).# Pos, # Inc – The number of positive and inclusive test results for a subject.Collection Strategy - Strategy of the sampling event.<ul style="list-style-type: none">Live Wild Bird (released) – Take sample from bird; set it free.Dead wild bird – Take sample from bird; dispose of bird.Hunter killed wild bird – Take sample from bird; return bird to hunter.Morbidity/Mortality Event – Take sample from sick bird; dispose of bird.Sentinel Species – Take sample from monitored bird; set it free.Condition - Applies to Morbidity/Mortality Event and Sentinel Species only.Sex - Gender of bird (male, female, unknown).Age Class - Bird's stage of life: Hatch Year Nestling, Hatch Year Local, Hatch Year, After Hatch Year, and Undetermined.Specimen Bar Code - Unique bar code that identifies a specific sample collected from a bird. Each sample must be identified by its own bar code.Specimen Type - Type of sample collected from bird: Cloacal or Tracheal swab, or Carcass.Testing Lab – A history of all laboratories that performed testing on the specimen.Test performed – List of all tests that were performed on subject.Test Result – List of results for all of the tests that were performed on subject.	<ul style="list-style-type: none">Test Interpretation<p>After the approver reviews the information on the Release Submission form, a final test result must be selected and communicated.</p><ul style="list-style-type: none">Result – Select Positive or Negative from the menu <input type="checkbox"/> <p style="text-align: center;"><input type="button" value="Release Submission"/> Click, to release the LS record.</p> <p style="text-align: center;"><input type="button" value="Back"/> Click, to go back to the Submissions Waiting for Approval list.</p>