I. Introduction

A. Purpose

This document describes the guidelines and procedures for the national surveillance program for classical swine fever (CSF) as of February 2007. The goal of the program is to enhance surveillance for the rapid detection of CSF virus introduced into U.S. swine. Samples will be collected in the 26 high risk States, which are AZ, AR, CA, FL, GA, HI, IL, IN, IA, KS, KY, MN, MO, NE, NJ, NM, NY, NC, OH, OK, PA, SD, TN, TX, WA, and WI plus the territory of Puerto Rico.

The purpose of this document is to clarify:

- The objective of the overall surveillance program
- When to refer a highly suspicious CSF animal to the Area Veterinarian in Charge (AVIC) for a possible foreign animal disease (FAD) investigation
- When and how to sample targeted high risk swine
- What information to record about the specimen
- How to ship the specimen
- Where to ship the specimen
- Communication protocols

B. CSF Description

CSF is a highly contagious viral septicemia affecting only swine. Also known as hog cholera, it has been eradicated from many developed nations with extensive swine production; but is still endemic in much of the world. Outbreaks in countries free of CSF can have a severe impact on producers due to high swine mortality, the curtailment on exportation of swine and pork products, and from costs incurred to control and eradicate the disease.

1. **Etiologic Agent**. The etiological agent of CSF is a small enveloped RNA virus of the family Flaviviridae and genus Pestivirus, which also includes the bovine viral diarrhea (BVD) virus and border disease virus. CSF virus is stable in cool, moist, protein-rich environments such as pork and pork products and can survive in cured or smoked pork for up to188 days and over 4 years in frozen pork.

2. **Clinical Signs**. The clinical manifestation of CSF depends primarily on the viral strain, as field strains vary widely in their virulence. Host characteristics also play a role, particularly the age of the host (more severe disease in young pigs), immune status, nutritional condition, and breed. Generally, CSF manifests either as an acute, chronic, or late-onset infection of swine.

   Acute infection is the more 'classical' presentation of CSF and is usually seen in piglets 12 weeks old or less. Pathological lesions are most commonly found in tonsil, lymph nodes, spleen, and kidneys, and reflect those of a septicemic disorder with multiple hemorrhages of various sizes. Infarcts of the spleen are considered pathognomonic for CSF when present. Antibodies become detectable 2-3 weeks

post-infection, with a practical minimum of 18 days. Several domestic disease conditions produce a similar clinical picture.

Chronic infection consists of three phases and is always fatal; though animals may survive 2-3 months before dying. Antibodies may only be detectable temporarily during the first month of infection but then disappear and can not be detected.

"Late onset" infection occurs when pregnant swine are infected with CSF virus. Infections prior to day 50 of gestation result in abortions, stillbirths, mummies, or birth of deformed piglets. The clinical signs in sows are usually mild, nonspecific, and not indicative of CSF.

For sows infected after day 50-70 of gestation, piglets will be born persistently viremic (similar to BVD viral infection in calves) and may be clinically normal for months or may exhibit congenital tremors from birth. Eventually, at 2-11 months of age, pigs will begin to waste and become unthrifty. Persistently infected pigs shed virus constantly until they die.

3. Epidemiology. The most frequent method of transmitting CSF virus is the movement of infected pigs that appear normal. Other important sources include infected feral swine and contaminated pork and pork products. CSF virus can be shed in any bodily secretion including semen. The most frequent route of infection is oronasal. Important mechanical vectors for introduction of virus into a herd include transport vehicles and people.

The rate of transmission between swine within a breeding herd is slower than the transmission rate between weaned pigs. Therefore, CSF may be present in populations of breeding stock for quite some time before it is noticed. An infected herd will be detected sooner if the infection starts in the nursery or finisher section than when the infection starts among the breeding stock.

In experimentally infected swine the incubation period averages 7-10 days (range of 3-15 days). Under field conditions, the incubation period is approximately 2-4 weeks. The expected morbidity rates are 33-45 percent of pigs at risk. Between 15-30 percent of cases can be expected to die.

4. Economic Impact. The economic impact of CSF can arise from excessive mortality, infertility, and other deleterious health effects at the herd level. A severe economic consequence of an incursion of CSF into the United States is the immediate halt to exports. The U.S. pork industry currently exports more than 14 percent of its annual production with a value of more than $1.9 billion. The United States is the world's second largest exporter of pork.

A significant impact is the cost of disease control and eradication. U.S. costs for CSF eradication totaled more than $140 million in 1978. This would be more than $540 million in 1999 dollars. The direct cost of the Netherlands control program for CSF in 1983-85 was $93 million compared to the 1997-98 Netherlands outbreak in which costs associated with the slaughter of infected and exposed swine, production

prohibitions, welfare slaughter, movement restrictions, and effects on allied industries exceeded $2 billion.

C. Surveillance Plan Overview

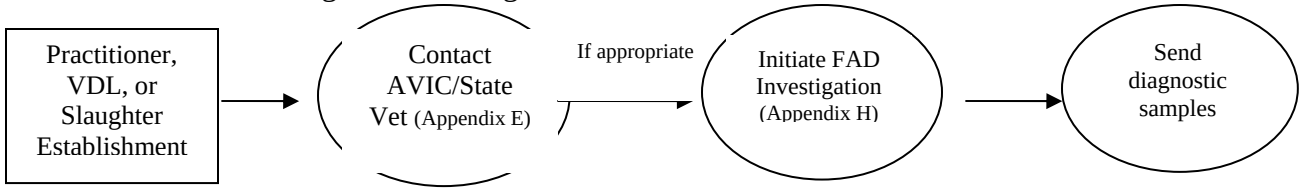
The Animal and Plant Health Inspection Service (APHIS), in cooperation with the National Animal Health Laboratory Network (NAHLN), began implementation, in March 2006, of an enhanced national CSF surveillance plan to detect more rapidly any introduction of CSF virus into U.S. swine. The goal is to test targeted swine populations in high risk States. The swine populations targeted for surveillance include: 1) swine highly suspicious for CSF; 2) sick pigs submitted to a veterinary diagnostic laboratory (VDL); 3) pigs condemned at slaughter by the Food Safety and Inspection Service (FSIS); 4) feral swine; and 5) swine in high risk herds, e.g. waste-feeding operations.

Generally, sick pigs should have tonsil specimens submitted to a CSF-approved NAHLN laboratory for detection of CSF antigen via the real-time reverse transcription Polymerase Chain Reaction (rRT-PCR) and healthy swine should be bled and tested at the Foreign Animal Disease Diagnostic Laboratory (FADDL) for CSF antibody. Pigs submitted to a diagnostic lab or condemned at slaughter are considered 'sick' while feral swine are not. Also, any swine sampled from high risk herds that are not clinically ill would also be considered healthy. The CSF surveillance program targets sick swine in order to rapidly detect CSF introduction into the United States since animals are rRT-PCR positive soon after infection but antibodies do not develop for 2-3 weeks after infection.

For questions about the CSF Surveillance Plan, contact Eric Bush (970-494-7260 or Eric.J.Bush@aphis.usda.gov).

1. Swine Highly Suspicious for CSF

Clinically ill swine that are part of a herd showing symptoms consistent with CSF and having known risk factors are to be considered highly suspicious for CSF. Therefore, they are to be handled in an urgent manner via the foreign animal disease (FAD) reporting system. Swine fit this category if the clinical signs of CSF are observed as described in the case definition (Appendix A). The majority of these observations are made on the farm but may also be made at diagnostic laboratories or slaughter establishments. **All swine that fit this category should be referred to the AVIC/State Veterinarian in the State** (Appendix C). The AVIC or their designee will determine if a full FAD investigation is warranted and assign a Foreign Animal Disease Diagnostician (FADD) to collect appropriate specimens. **Note**: **The procedures for collecting a specimen as part of an FAD investigation are different from the regular surveillance sampling procedures.** See Appendix G for a copy of Veterinary Services (VS) Memorandum 580.4 that provides the guidance for conducting FAD investigations.



Process for Initiating FAD Investigation

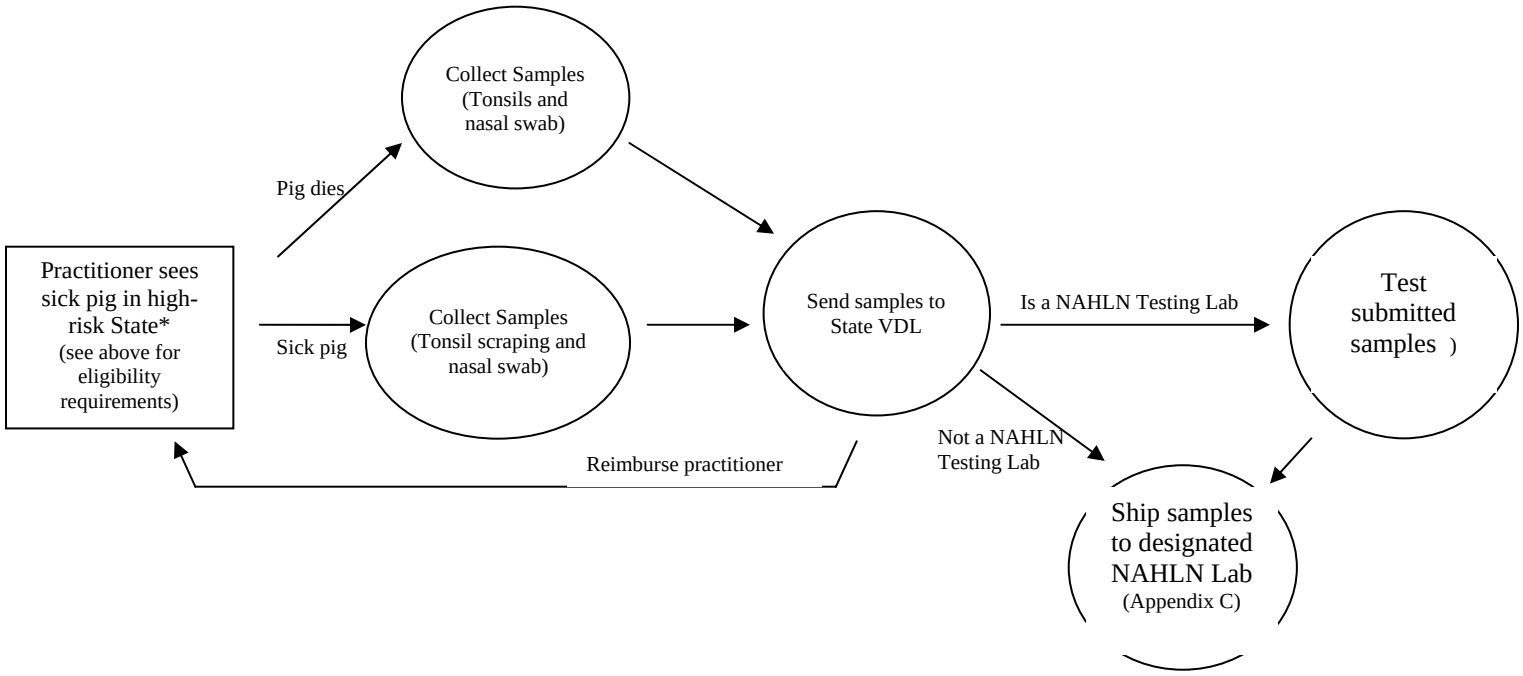
2. Sick Pigs Submitted to a Veterinary Diagnostic Laboratory (VDL)

Any swine accession received by a diagnostic laboratory in a high risk State* (except Iowa and Minnesota) is eligible for testing at a CSF-approved NAHLN laboratory.

Because of the volume of swine accessions at the Iowa and Minnesota VDLs, eligible specimens from these two laboratories are limited to those cases with any of the following features:

- Dramatic acute septicemias
- Abortions, particularly with congenital deformities
- Dermatitis or Nephritis (Porcine Dermatitis and Nephropathy Syndrome is ruled out)
- Undiagnosed central nervous system cases (especially congenital tremors & nonsuppurative encephalitis)
- Other undefined cases that the pathologist wishes to submit

Questions regarding submitting specimens from eligible VDL accessions can be directed to the designated NAHLN laboratory or the appropriate APHIS-VS Regional Epidemiologist: Mark Schoenbaum (Western region, 970-494-7314 or Mark.A.Schoenbaum@aphis.usda.gov) or Donald Rush (Eastern region, 919-855-7230 or Donald.M.Rush@aphis.usda.gov).



*High Risk States are: AZ, AR, CA, FL, GA, HI, IL, IN, IA, KS, KY, MN, MO, NE, NJ, NM, NY, NC, OH, OK, PA, SD, TN, TX, WA,WI (plus PR)

Protocol for CSF Sampling in Diagnostic Laboratories

3. Pigs Condemned at Slaughter by FSIS

Pigs eligible for sampling are those condemned for erysipelas or septicemia. Specimens will be obtained from swine slaughtered at establishments in high risk States (29 plants that slaughter over 500,000 market swine a year plus an additional 10 plants). The selected slaughter establishments cover over 96 percent of market swine slaughtered in high risk States and over 91 percent of all U.S. slaughter.

Questions regarding submitting specimens to a VDL can be directed to the appropriate APHIS-VS Regional Epidemiologist: Mark Schoenbaum (Western region, 970-494-7314 or Mark.A.Schoenbaum@aphis.usda.gov) or Donald Rush (Eastern region, 919-855-7230 or Donald.M.Rush@aphis.usda.gov).

4. Feral Swine

Free-roaming feral swine in States where Wildlife Services (WS) biologists conduct feral swine damage management will be sampled periodically. These States include AL, AR, AZ, CA, CO, FL, GA, HI, IA, IL, IN, KS, MI, MO, NC, NE, NM, OH, OK, OR, PA, SC, TN, TX, WI, and PR. Feral swine in high risk areas are preferred; specifically those located near swine operations, landfills, international airports, coastal areas, or U.S. borders. When possible, fresh serum should be collected and submitted to FADDL. Otherwise, nasal swabs in designated media or tonsil specimens should be shipped to a CSF-approved NAHLN laboratory.

Questions regarding sampling from feral swine can be directed to Seth Swafford (301-734-3570 or Seth.Swafford@aphis.usda.gov).

* Serum samples are not currently being tested for CSF at NAHLN labs. Serum samples should be shipped to FADDL.

5. Swine from Waste-Feeding Operations

Sampling of waste fed swine is a new objective from the CSF Surveillance Plan that is being initiated this year. The production sites and swine are routinely inspected by State or Federal field personnel in States that allow waste-feeding of swine. A written plan for systematically testing all licensed garbage feeders in the State over a period of 1-3 years should be developed to enable effective and complete surveillance. Serum specimens should be sent to FADDL using the CSF surveillance waste-fed swine submission form.

Waste-feeding States in the CSF Surveillance Program are: AR, CA, FL, HI, NC, NM, OK, TX, and PR.

II. Detailed Tonsil, Tonsil Scraping, and Nasal Swab Sampling Procedures

A. Tools Needed

- For removing tonsils:
  - Knife and scissors
  - Forceps
  - Screw-top plastic tubes
- For tonsil scraping:
  - Sterile long-handled spoon
  - Speculum
  - Dacron swab
  - Sample tube containing 3.0 ml of Dulbecco's Modified Eagle's Medium (DMEM) with antibiotics
- For nasal swab:
  - Dacron swab
  - Sample tube containing3.0 ml of DMEM with antibiotics
- Fine point permanent marker
- Ball-point pen
- Pan or bucket for disinfecting instruments and rinsing gloved hands
- Bleach (disinfectant)
- Paper towels
- Trash bags
- Supply of CSF mailers (including frozen cold packs)

B. Steps in Collecting Specimens

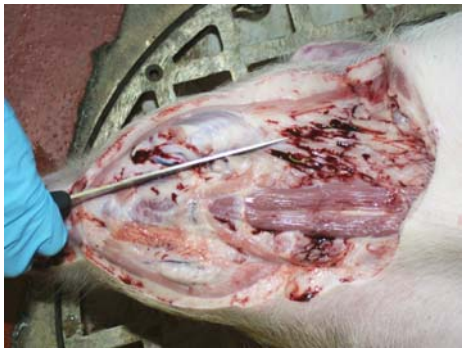
The objective would be to collect samples for virus isolation or other antigen based assay systems. The tonsils, a tonsil scraping or a nasal swab should be taken for surveillance testing.

Removing Tonsils (dead pigs)

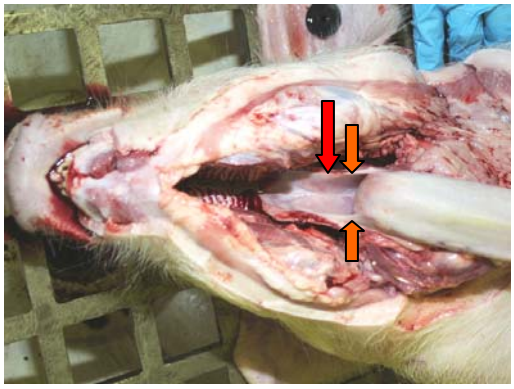
1. Lay the pig in dorsal recumbency.

2. Beginning near the chin, use a knife to reflect the skin caudally to expose underlying tissues in the intermandibular and proximal cervical regions.

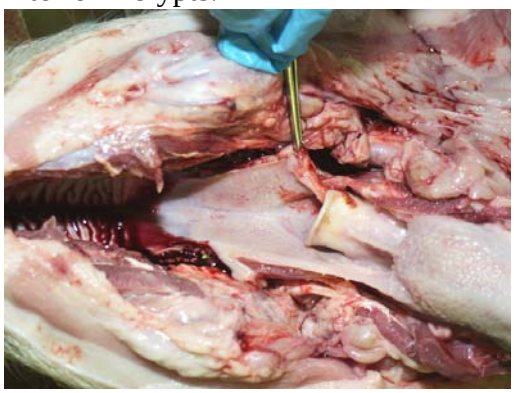
3. Incise soft tissue along the medial aspect of each mandible. Extend proximally to the mandibular symphysis on each side in order to free the attachments of the tongue.



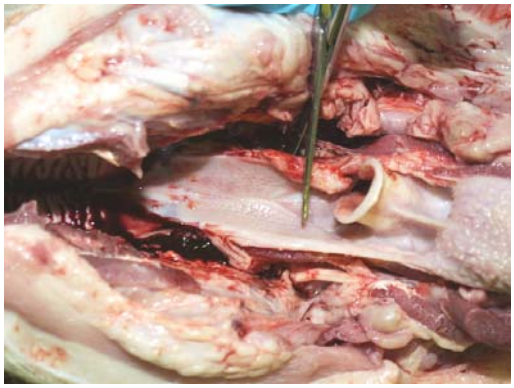
4. After freeing up the proximal attachments of the tongue, reflect the tip of the tongue caudally to expose the hard and soft palate. The palatine tonsil, a flat bi-lobed structure with a prominent medial septum, is located caudal to the soft palate (red arrow). Cut the lateral attachments that restrict further retraction of the tongue (orange arrows).



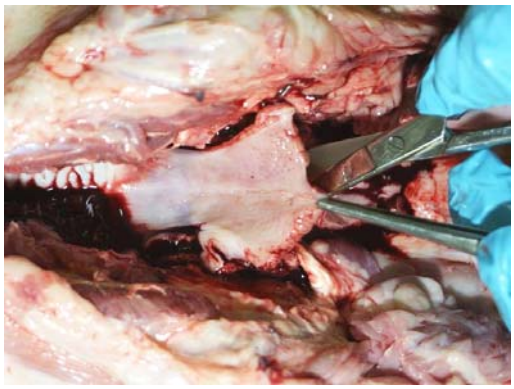
5. Reflect the tongue further to expose the tonsil and epiglottis. Note the dimpled appearance of the flattened tonsil, due to invaginations of the epithelium to form crypts.



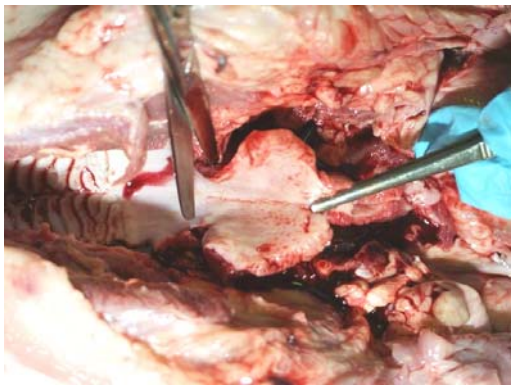
6. Use scissors to separate the tonsil from laryngeal structures caudal to it.



7. Grasp the caudal aspect of the tonsil with forceps and use scissors to cut the deep attachments of the tonsil.



8. Cut the proximal attachments of the tonsil to the soft palate. The tonsil is now freely excised and can be removed.



9. Place tonsils in sample tube.

Tonsil Scraping (sick pigs)

1. Prop the mouth open using a speculum and place the bowl of the sterile spoon past the hard palette down into the upper throat. A long-handled spoon facilitates collection in market age or larger swine with longer palettes. The tonsil is just past the hard palette and is recognized by the pitted appearance of its surface.

2. Gently scrape the bowl of the spoon over the surface of the tonsils in a back-to-front motion several times. This will cause the tonsil to exude a mucosal excretion from the crypts.

3. On the third or fourth pass over the tonsil, the bowl of the spoon will collect a significant amount of sample, sometimes as much as 1-2 ml. **Do not scrape too hard, as drawing blood is not desired.**

4. Remove the spoon from the mouth, taking care to avoid dragging the spoonful of sample across the hard palate.

5. Remove the sample from the spoon using a Dacron swab and place in the sample tube containing 3.0 ml of DMEM with antibiotics.

Nasal Swab (sick and dead pigs)

1. The pig should be properly restrained with the head positioned upward to allow easy access to the nasal cavity. Anesthesia is not needed.

2. Insert a sterile Dacron swab into the nasal cavity and gently swab the surface of the nasal mucosa with a circular and back and forth motion to cover as much as possible of the nasal mucosal surface. Avoid touching the skin as you enter the nasal cavity.

3. The swab will collect nasal mucosal secretions and surface epithelium. It is important not to scrape too hard, as drawing blood is not desired.

4. Remove the Dacron swab from one nostril and repeat the same procedure in the other nostril.

5. Place the Dacron swab with sample in a tube containing 3.0 ml of DMEM medium. Stir the nasal swab into the medium so that the sample is washed out from the swab into the medium.

Proper Labeling of Samples

- Label each tube with a smear/waterproof pen. Include on each label:
  - Sample number,
  - Type of specimen in tube (tonsil or scraping, nasal swab),
  - Barcode identification label
    - Bar codes are printed in sets of 4 individual labels. Each sample should receive a different bar code, even if several samples are collected from the same animal.
    - Bar codes should be used as follows:
      - One label on each sample tube – be sure to place bar-code **lengthwise** along the tube.
      - One label on the submission form
      - Any labels that are not used should be destroyed

- Place the samples in a cooler and/or on cold packs. **Do not freeze specimens**.
- Properly dispose of non-submitted tissues and/or carcass.

Questions regarding sampling techniques can be directed to the program managers at APHIS-VS-National Center for Animal Health Programs, David Pyburn (515-284-4122 or David.G.Pyburn@aphis.usda.gov) or John Korslund (301-734-5914 or John.A.Korslund@aphis.usda.gov), or to FADDL (631-323-3256).

III. Submitting Specimens to a NAHLN Laboratory

A. Packing and Shipping the Specimens

1. Packaging material (supplied by NVSL)

a. CSF Sample Collection Kits (for tonsil tissue submissions)

- Conical tubes, 50 ml (for tonsils)
- Sterile Dacron swabs
- Approved shipping box (TC-34)
- Ice packs (2)
- Absorbent material
- 40-section box (2)
- Secondary container (STP-740 and STP-741)
- Bar codes
- UN/Diagnostic Specimens label

b. CSF Media Kits (for tonsil scraping and nasal swab submissions)

- Conical tubes, 15 ml, with 3.0 ml DMEM (20/box)
- 40-section box (2)

2. Packaging and shipping

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

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

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

- Place completed U.S. Department of Agriculture (USDA) CSF Surveillance Submission Form on top of inner Styrofoam lid.

- Seal box
- Place address shipping label on the box (supplied by local Federal veterinarian), addressed to designated laboratory conducting CSF testing for this collection site.
- Place the other required shipping labels on the box.

- Ship by overnight delivery with the Federal contract service.
- **If shipping on a Friday, be sure to mark/label box for Saturday delivery.**

NVSL supplies a certified shipping box and all supplies needed for shipping as CSF kits. To request additional CSF kits, fax a request to: **515-663-7378**. If you need further assistance with shipping, you may contact the shipping department at:

National Veterinary Services Laboratories
1800 Dayton Avenue
Ames, IA 50010
Ph: (515) 663-7530
Fax: (515) 663-7378

B. Designated NAHLN Laboratory

Ship specimens via the overnight contract delivery service only to the designated NAHLN laboratory. See Appendix D to identify the designated NAHLN laboratory which is determined by the sampling site.

C. Proper communication of submitting specimens

It is essential to have secure and reliable communication among the individuals responsible for sample collection at collection locations, establishments' management, and NVSL or designated laboratories.

The submitter must:

- Accurately record all relevant information on the USDA CSF Surveillance Submission Form (Appendix D). Enter this information via the web-based forms unless such electronic entry is impossible. Print a copy of the completed CSF Surveillance Submission Form.

- Prepare three copies of the completed CSF Surveillance Submission Form:
  1. One to accompany the samples shipped to the designated laboratory;
  2. One to be kept on-file by the submitter; and
  3. One to be sent to and kept on-file at the VS Area Office.

- Notify the appropriate laboratory (Appendix D) of incoming samples via facsimile, telephone, e-mail, or any other approved electronic method. The information to be communicated includes:
  - The overnight contract delivery service tracking number;
  - The collection site name and address;
  - The unique Referral Number of the submission, and
  - The number of samples.

- Verify, via the overnight contract delivery service tracking system that the submission has been delivered to the designated laboratory. If the sample does not arrive as expected, the sample submitter should work with the delivery service to determine the location and delivery status of the sample.

Questions regarding submitting specimens to the designated NAHLN laboratory can be directed to the NAHLN coordinator, Barbara Martin (515-663-7731 or barbara.m.martin@aphis.usda.gov) or NAHLN associate coordinator, Heidi Schleicher (515-663-7981 or heidi.a.schleicher@aphis.usda.gov)

IV. Submitting Serum Specimens to FADDL

Disposable blood collection supplies can be obtained from the VS Area Office for CSF sample collection. All blood samples collected should be centrifuged to separate the serum off for submission to FADDL. Serum is then packaged and sent with a submission form to FADDL at the following address:

USDA/APHIS/VS/NVSL FADDL
40550 Route 25
Orient, NY 11957

Recommended Supplies/Equipment for Blood Collection and Serum Submission

- Cooler
- Ice packs
- 18 gauge x 1.5 inch or longer luer lock needles
- 10 ml syringes with luer lock tips
- 10 ml red or red/grey topped vacutainers
- CSF Surveillance Program Specimen Barcode Labels
  - For WS available from Brandon Schmit
  - For VS available from NVSL
- Falcon tubes/cryovials
- Falcon tube shipping container (enough space for 20 – 40 tubes)
- Ziploc freezer bags to use as primary and secondary shipping containers
- Paper towels – absorbent material to place between primary and secondary shipping containers
- Centrifuge
- GPS Unit
- Personal protective equipment – gloves and eye protection at a minimum
- CSF, WS, or Waste-fed Swine Submission forms

If possible, please provide 2.0 ml of clear, non-hemolyzed, separated serum per animal.

V. Discretion of Diagnostician

When testing at FADDL or a NAHLN lab within this surveillance program, if the diagnostician decides that a sample cannot be traced back to the originating location based on the information on the submission form, then that sample will not be tested and it will be discarded. If the submission form contains errors or omissions but the diagnostician determines that the original location of the sample can be traced based upon the information on the submission form, then the sample will be tested as part of this surveillance program. If any questions arise about this issue, diagnosticians should contact the USDA NAHLN Staff office.

2007 CSF Surveillance Activities by State:

NOTE: All States (high risk and low risk) that have a NAHLN laboratory approved to perform the rRT-PCR CSF test **are expected to test their own VDL submission samples.** For 2007, only one NAHLN laboratory that is not currently approved to perform CSF testing is asked to collect swine samples and ship them to a testing NAHLN laboratory. This single instance is for the Missouri NAHLN lab to collect samples and ship them to the Washington NAHLN for testing. (See table in Appendix B, page 23). Sampling of garbage fed swine is a new objective from the CSF Surveillance Plan that we are initiating this year. To enable effective and complete surveillance, a plan should be developed for systematically testing all licensed garbage feeders in the State over a period of years. The following summary applies to slaughter, feral swine, garbage-fed, and additional sampling targets.

Eastern Regional Office

Alabama

- Wildlife Services will collect serum samples from 10 (target number) feral swine and submit serum to FADDL.

Florida

- Target condemns based on past history = 20 slaughter samples from Mary's Ranch in Miami. All slaughter tissue samples go to the Florida NAHLN.
- Target slaughter serum samples = 1800 to be collected at Nettles Sausage (300) in Lake City; collected at La Casa Sierra (750) in Lakes; and collected at Mary's Ranch (750) in Miami. All serum samples are to be shipped to and tested at FADDL in Plum Island, New York.
- Target garbage fed swine serum samples = 205 samples (41 sites and 5 pigs tested at each site). All serum samples are to be shipped to and tested at FADDL in Plum Island, New York.
- Wildlife Services will collect serum samples from 240 (target number) feral swine and submit serum to FADDL.

Georgia

- Wildlife Services will collect serum samples from 50 (target number) feral swine and submit serum to FADDL.

Illinois

- Target condemns based on past history = 321 slaughter samples from Excel in Beardstown (259) and from Farmland (62) in Monmouth. All samples are shipped to the Kentucky NAHLN.
- Wildlife Services will collect serum samples from 20 (target number) feral swine and submit serum to FADDL.

Indiana

- Target condemns based on past history = 791 slaughter samples from IBP (535) in Logansport and from Indiana Pack (256) in Delphi. All samples are shipped to the New York NAHLN.
- Wildlife Services will collect serum samples from 20 (target number) feral swine and submit serum to FADDL.

Kentucky

- Target condemns based on past history =69 slaughter samples from Swift in Louisville (VS animal health technician [AHT] in plant). All samples are shipped to the New Jersey NAHLN.

Michigan

- Wildlife Services will collect serum samples from 10 (target number) feral swine and submit serum to FADDL.

Minnesota

- Target condemns based on past history = 1010 slaughter samples from Swift (72) in Worthington and from Quality Pork (938) in Austin. All samples are shipped to the Washington NAHLN.

N. Carolina

- Target condemns based on past history = 745 slaughter samples from Smithfield (644) in Tar Heel (VS AHT in plant) and from Premium Standard Farms (101) in Clinton. Premium Standard Farm samples are to be shipped to the Ohio NAHLN for testing and the Smithfield samples go to the North Carolina NAHLN.
- Target garbage fed swine serum samples = 130 samples (26 sites and 5 pigs tested at each site). All serum samples are to be shipped to and tested at FADDL in Plum Island, New York.
- Wildlife Services will collect serum samples from 75 (target number) feral swine and submit serum to FADDL.

Ohio

- Target condemns based on past history = 246 slaughter samples from Routh Pack (246) in Sandusky. All samples are shipped to the Ohio NAHLN for testing.
- Wildlife Services will collect serum samples from 30 (target number) feral swine and submit serum to FADDL.

Pennsylvania

- Target condemns based on past history = 726 slaughter samples from Leidy's (144) in Souderton and from Hatfield (200) and from USA Pork Packers (382) in Hazelton. Leidy's samples will be shipped to and tested at the New Jersey NAHLN. Hatfield and USA Pork Packers samples will be shipped to and tested at the Pennsylvania NAHLN.

- Wildlife Services will collect serum samples from 30 (target number) feral swine and submit serum to FADDL.

Puerto Rico

- Target garbage fed swine serum samples = 3062 samples (612 sites and 5 pigs tested at each site). All serum samples are to be shipped to and tested at FADDL in Plum Island, New York.
- Wildlife Services will collect serum samples from 30 (target number) feral swine and submit serum to FADDL.

South Carolina

- Wildlife Services will collect serum samples from 75 (target number) feral swine and submit serum to FADDL.

Tennessee

- Wildlife Services will collect serum samples from 30 (target number) feral swine and submit serum to FADDL.

Wisconsin

- Wildlife Services will collect serum samples from 30 (target number) feral swine and submit serum to FADDL.

Western Region Office

Arizona

- Wildlife Services will collect serum samples from 40 (target number) feral swine and submit serum to FADDL.

Arkansas

- Target garbage fed swine serum samples = 190 samples (38 sites and 5 pigs tested at each site). All serum samples are to be shipped to and tested at FADDL in Plum Island, New York.
- Wildlife Services will collect serum samples from 10 (target number) feral swine and submit serum to FADDL.

California:

- Target condemns based on past history = 469 slaughter samples from Clougherty Packing in Vernon. All samples will be shipped to and tested at the California NAHLN.
- Target garbage fed swine serum samples = 40 samples (8 sites and 5 pigs tested at each site). All serum samples are to be shipped to and tested at FADDL in Plum Island, New York.
- Wildlife Services will collect serum samples from 240 (target number) feral swine and submit serum to FADDL.

Colorado

- Wildlife Services will collect serum samples from 15 (target number) feral swine and submit serum to FADDL.

Hawaii

- Target condemns based on past history = 58 slaughter samples from Farmers Livestock Co-op in Ewa Beach. All samples will be shipped to and tested at the California NAHLN.
- Target garbage fed swine serum samples = 480 samples (96 sites and 5 pigs tested at each site). All serum samples are to be shipped to and tested at FADDL in Plum Island, New York.
- Wildlife Services will collect serum samples from 100 (target number) feral swine and submit serum to FADDL.

Iowa

- Target condemns based on past history = 5051 slaughter samples from IBP (547) in Storm Lake and from Pine Ridge Farms (Iowa Pack) (16) in Des Moines and from Farmland (135) in Denison and from John Morrell (317) in Sioux City and from Excel (290) in Ottumwa and from Swift (907) in Marshalltown and from IBP (399) in Columbus Junction and from IBP (1146) in Perry and from IBP (1294) in Waterloo.
- IBP Storm Lake samples are to be shipped to and tested at the Florida NAHLN. IA Pack and Farmland Denison samples are to be shipped to and tested at New Jersey NAHLN. John Morrell Sioux City samples are to be shipped to and tested at Tennessee NAHLN. Excel Ottumwa samples are to be shipped to and tested at New Mexico NAHLN. Swift Marshalltown samples are to be shipped to and tested at Kansas NAHLN. IBP Columbus Junction samples are to be shipped to and tested at Texas NAHLN. IBP Perry samples are to be shipped to and tested at Colorado NAHLN. IBP Waterloo samples are to be shipped to and tested at Louisiana NAHLN. (All of the above listed IA plants have Market Swine Surveillance AHTs in place except for IA Pack which is visited daily by IA Federal AHT collecting pseudorabies virus samples)
- Wildlife Services will collect serum samples from 10 (target number) feral swine and submit serum to FADDL.

Kansas

- Wildlife Services will collect serum samples from 30 (target number) feral swine and submit serum to FADDL.

Missouri

- Target condemns based on past history = 210 slaughter samples from Premium Standard Farms in Milan. All samples are to be shipped to and tested at the Texas NAHLN.
- Wildlife Services will collect serum samples from 120 (target number) feral swine and submit serum to FADDL.

- Missouri Veterinary Diagnostic Laboratory will collect 1000 swab or tonsil samples and submit to the Washington NAHLN for testing.

Nebraska

- Target condemns based on past history = 242 slaughter samples from IBP (140) in Madison (MSS AHT in place already) and from Farmland (94) in Crete and from Hormel (8). All samples are to be shipped to and tested at the Arizona NAHLN.
- Wildlife Services will collect serum samples from 10 (target number) feral swine and submit serum to FADDL.

New Mexico

- Target garbage fed swine serum samples = 40 samples (8 sites and 5 pigs tested at each site). All serum samples are to be shipped to and tested at FADDL in Plum Island, New York.
- Wildlife Services will collect serum samples from 50 (target number) feral swine and submit serum to FADDL.

Oklahoma

- Target condemns based on past history = 658 slaughter samples from Seaboard in Guymon. All samples are to be shipped to and tested at the Oklahoma NAHLN.
- Target garbage fed swine serum samples = 75 samples (15 sites and 5 pigs tested at each site). All serum samples are to be shipped to and tested at FADDL in Plum Island, New York.
- Wildlife Services will collect serum samples from 120 (target number) feral swine and submit serum to FADDL.

Oregon

- Wildlife Services will collect serum samples from 30 (target number) feral swine and submit serum to FADDL.

South Dakota

- Target condemns based on past history = 460 slaughter samples from John Morrell in Sioux Falls. All samples are shipped to and tested at the Georgia (Tifton) NAHLN.

Texas

- Target condemns based on past history = 180 slaughter samples from Owens Country Sausage (60) in Richardson and from Union Slaughter House (60) in Del Rio and from J&J Packing (60) in Brookshire. All samples are shipped to and tested at the Texas NAHLN.
- Target transitional swine serum samples = 3400 to be collected at Cabrito Market (140) in Mission and the remaining serum samples should be collected at border slaughter plants and other transitional pig collection points. All serum samples are to be shipped to and tested at FADDL in Plum Island, New York.

- Target garbage fed swine serum samples = 825 samples (165 sites and 5 pigs tested at each site). All serum samples are to be shipped to and tested at FADDL in Plum Island, New York.
- Wildlife Services will collect serum samples from 300 (target number) feral swine and submit serum to FADDL.