

# Vermont Agency of Agriculture, Food & Markets

## LPAI Response Plan



### I. JUSTIFICATION

- (A) Avian influenza (AI) is a disease of increasing worldwide importance with growing implications as a human disease threat.
- (B) The potential for low pathogenic (LP) varieties of AI to mutate to highly pathogenic (HP) strains; affecting domestic poultry is significant.
- (C) Additional driving forces for a national H5/H7 avian influenza control plan consist Of;
  - 1. Consideration by the World Organization for Animal Health (OIE) to re-define avian influenza to include not just highly pathogenic, but all H5/H7 viruses including low pathogenic strains; and
  - 2. Influence of international markets on the economic viability of our Nation's poultry industry. It is in the best interests of government, human health, and the poultry industry to prevent and control all H5/H7 avian influenza virus infections.
- (D) H5/H7 avian influenza is a disease reportable to the State Veterinarian's office by all licensed or otherwise legally practicing veterinarians in the State and all laboratories.
- (E) Under a nationally-sanctioned plan, USDA-APHIS would be involved at the invitation of the State Veterinarian in the cost and control efforts of an outbreak. This Voluntary Cooperative State-Federal Program to control and eradicate H5/H7 avian influenza infections of commercial poultry is state-based and coordinated. The plan will provide for stakeholder input and participation, establishment of passive and active surveillance programs, and planning for a coordinated, pre-planned response in the event of an AI outbreak in the state. The goal is to provide a level of assurance to poultry producers and trading partners and an adequate level of surveillance and response preparedness for government.

## **II. AVIAN INFLUENZA ADVISORY COMMITTEE**

The formation of a state advisory committee has been requested by industry in order to bring all stakeholders such as Vermont Agency of Agriculture, Food & Markets (VAAF), USDA-APHIS, Vermont Department of Health, and various producer groups together to provide plan input. The formation of this committee is the first essential element to development of a state AI response plan. It is agreed that the AI Advisory Committee in Vermont will be comprised of the following participants:

- (1) State Veterinarian – or representative
- (2) USDA-APHIS Area Veterinarian in Charge (AVIC) or representative
- (3) Vermont Department of Health representative
- (4) Vermont Agriculture Laboratory representative
- (5) University of Vermont Cooperative Extension
- (6) NPIP Contact representative
- (7) Vermont Egg Producer’s representative and/or consultant
- (8) Turkey and broiler industry representative
- (9) Game bird representative (pheasant, chukar, quail, etc.)
- (10) Vermont Fancy Poultry Association/Pigeon Breeders representative
- (11) Vermont Department of Fish and Wildlife representative
- (12) Department of Environmental Conservation representative

## **III. MONITORING PLAN**

- (A) The State will maintain “U. S. H5/H7 Avian Influenza Monitored State” status under the National Poultry Improvement Plan (NPIP) program for avian influenza (see Appendix #1). In furtherance of that requirement the following surveillance activities will be implemented:
- (B) The AI Advisory Committee will institute an ongoing avian influenza Awareness program for all accredited veterinarians and poultry producers in the state and will organize exercises in the training and preparation of personal (bio-security, use of PPE, proper disinfection and containment).
- (D) It should be further understood that:

- (1) No liability shall accrue to the VTAAFV for damages, losses, or injuries incidental to or arising by virtue of participation in this plan.
- (2) The flock owner has the responsibility to adopt and implement the bio-security Measures set forth elsewhere in this agreement. (Appendix #4)
- (3) The flock owner has the responsibility of maintaining records of flock morbidity, mortality, and production and shall make such records available for review by the VTAAFV as requested.

(E) Testing

(1) ***Monitoring***

- (a) Real-time reverse transcriptase polymerase chain reaction (RRT-PCR and serologic testing) can be used as screening tests for monitoring purposes. Routine screening for type A avian influenza virus in poultry will be performed using RRT-PCR. Serologic screening for type A avian influenza virus in poultry will be performed using either agar gel immunodiffusion (AGID) or enzyme-linked immunosorbent assay (ELISA). The AGID test is to be performed according to the “National Poultry Improvement Plan and Auxiliary Provisions” §147.91; ELISA test is performed using only federally licensed kits and following the manufacturer’s instructions.
- (b) A premise or flock will be considered suspect positive if serologic testing reveals antigenic exposure to Type A influenza virus.
- (c) A premise or flock will be considered positive only when live influenza virus is isolated or its presence detected by polymerase chain reaction (RRT-PCR) testing.
- (d) Positive test results of any type will be reported immediately to the State Veterinarian, at this time the State Veterinarian will notify APHIS through the AVIC. In the case of a positive serologic test, the State Veterinarian may issue a Quarantine and prescribe certain bio-security measures to be implemented until virus identification is completed and/or assessment of the clinical symptoms exhibited by the flock is made.

(e)

Laboratories

1. Vermont Agricultural Laboratory  
103 So. Main Street  
Waterbury, VT 05676  
Phone- 802-244-4510  
FAX 802-241-3008
2. Connecticut Veterinary Medical Diagnostic Laboratory  
University of Connecticut  
61 North Eagleville Road  
Storrs, CT 06269-3203

(2) *Passive Surveillance*

- (a) All laboratories (UConn and VT Ag lab) that perform diagnostic procedures on avian species (private, State-Federal Cooperative, public health, and university laboratories) will examine all submitted cases of severe, a typical, or otherwise unexplained respiratory disease, gastrointestinal disease, neurologic disease, egg production drops, and high mortality, for avian influenza by both a USDA-approved serologic test and a USDA-approved influenza virus detection test. Positive tests will be reported immediately.

(3) *Active Surveillance*

- (a) VTAAFM in conjunction with USDA, APHIS, VS, Vermont Agriculture Laboratory (VAL), and commercial producer organizations will implement a commercial poultry surveillance program.
- (b) Active surveillance will include RRT-PCR on tracheal/cloacal swabs or serologic samples.
- (c) Number of sampling units required (i.e., flocks to be monitored) will depend on geographic location and other relevant circumstances, such as proximity to wild waterfowl, cross-traffic potential, etc. When LPAI is in Vermont or neighboring States the frequency and number of test will be determined by the State veterinarian.

- (d) Vermont slaughterhouses and Federal slaughterhouses in Vermont have inspectors trained by the USDA to recognize Avian Influenza on ante mortem and post mortem inspection. All commercial birds under inspection are seen.

#### **IV. RESPONSE PLAN**

The State Veterinarian and the USDA, APHIS, VS Area Veterinarian in Charge (AVIC) will administer an Initial Containment and Control Plan developed in conjunction with the Advisory Committee. The Secretary of Agriculture may request the Governor to declare a state of emergency once state resources have been exhausted or are found inadequate. USDA-APHIS-VS will be invited to establish a Joint Incident Command Center to implement the deployment of necessary state and federal resources to respond to the emergency outbreak.

##### **(A) Criteria for declaring a premise suspect-positive for AI**

- (1) Epidemiologic link with an AI suspect flock or premise. An epidemiologic link is considered to be established if one or more of the following occur(s):
  - (a) Poultry operations employing workers who reside in the same household as person(s) associated with a confirmed AI outbreak elsewhere.
  - (b) All farms within the same organization that the AI outbreak occurs particularly if there is sharing of equipment and/or personnel, or if close geographic ties exist.
  - (c) Poultry farms, companies, or personnel using common facilities or equipment, such as breaker plant, feed mill, egg flats, trucking company, vaccination crews, or other equipment.
- (2) Flock/bird with no clinical signs, no lesions compatible with AI, and no epidemiologic link but AI-positive by one of the following tests:
  - (a) AGID
  - (b) ELISA<sub>3</sub>
  - (c) RRT-PCR

##### **(B) Criteria for declaring a premise positive for HP/LP AI during a confirmed AI outbreak:**

- (1) *Flocks/birds showing clinical signs of respiratory disease, sudden unexplained drop in egg production, or lesions consistent with AI (i.e., edema of the head, comb, or wattles; subcutaneous hemorrhage of feet or shanks; hemorrhage/necrosis of comb, wattles, trachea, heart, and/or gut) should be considered suspicious for AI until confirmed or ruled out by appropriate diagnostic tests.*

2 Additional protocol may be written

3 Because of the possibility of false positives using ELISA, all ELISA-positive sera shall be re-tested using AGID.

- (2) *Premises inside surveillance zones are considered positive if birds exhibit clinical signs and/or gross lesions consistent with low or highly pathogenic avian influenza virus plus one of the following laboratory tests.*

- (a) Isolation and identification of AIV
- (b) Positive RRT-PCR with H5 or H7 AIV specific primer/probe set
- (c) Presence of H5 or H7 AIV subtype-specific serum antibodies

- (3) *Premises inside surveillance zones without clinical signs and/or gross lesions, must meet two of the following conditions to be declared positive.*

- (a) Directigen-positive (cannot be only criterion to designate a premise as positive even with an epidemiologic link)
- (b) Isolation and identification of H5 or H7 subtypes of AIV
- (c) Positive RRT-PCR with H5 or H7 AIV specific primer/probe set
- (d) Presence of H5 or H7 AIV subtype-specific serum antibodies
- (e) Epidemiologic link. An epidemiologic link is considered to be established if one or more of the following occur(s):
- (f) Poultry operations employing workers who reside in the same household as person(s) associated with a confirmed AI outbreak elsewhere.
  - (ii) All farms within the same organization that the AI outbreak occurs – particularly if there is sharing of equipment and/or personnel, or if close geographic ties exist.

- (iii) Poultry farms, companies, or personnel using common facilities or equipment, such as breaker plant, feed mill, egg flats, trucking company, vaccination crews, or other equipment.

**(C) Initial response plan for an AI-positive flock or premise**

Flock plan. A written flock management agreement developed by APHIS and the State Agency with input from the flock owner and other affected parties. A flock plan sets out the steps to be taken to eradicate H5/H7 LPAI from a positive flock, or to prevent introduction of H5/H7 LPAI into another flock. A flock plan shall include, but is not necessarily limited to, poultry and poultry product movement and geographically appropriate infected and control/monitoring zones. Control measures in the flock plan should include detailed plans for safe handling of conveyances, containers, and other associated materials that could serve as fomites; disposal of flocks; cleaning and disinfection; downtime; and repopulation.

- (1) *Positive AI test (PCR or serology) without increased mortality or other clinical signs*
  - (a) The flock or farm will be placed under Quarantine and strict **bio-security measures** will be met. (Appendix 4)
  - (b) All commercial poultry flock owners will be informed of the status of the **Quarantine**.
  - (c) If RRT-PCR is positive for either H5 or H7, swabs will be immediately forwarded to the National Veterinary Services Laboratories (NVSL) for subtyping. NVSL will carry out virus isolation for characterization and pathogenicity testing. Initial subtype results should be obtained within 24 to 48 hours. Pathogenicity of the isolate is normally determined within 5 to 20 days.
- (2) *Positive AI test (PCR or serology) accompanied by significant unexplained on-farm mortality or other clinical signs*
  - (a) The flock or farm will be quarantined and strict bio-security measures will be met. (**appendix #4**)
  - (b) A quarantine zone around the affected premises will be imposed, and other company-owned or other related flocks will be assessed for risk based on levels of bio-security in place at the time of the outbreak.

- (c) Pooled (up to five birds per tube) pharyngeal and cloacal swabs will be collected according to Table 1 and submitted to VAL for RT-PCR testing if flock positive on serology.
- (d) Tissues (lung, spleen, brains, and/or intestines) from individual dead birds will be sent to VAL. Positive tissues will be forwarded to NVSL for virus isolation, characterization, and pathogenicity testing. All testing and collection of samples will be performed on-site using appropriate bio-security precautions.

**(D) Response following definitive diagnosis of AI (subtype-dependent)**

**(1) *LPAI subtype H5 or H7***

- (a) The flock or farm will be quarantined and strict bio-security measures will be met. (Appendix 4)
- (b) Following consultation with USDA and industry parties involved, an infected flock may be depopulated. This depopulation may take place as much as two to four weeks after the initial outbreak in order to reduce the amount of virus spread by infected virus-shedding birds. If there is depopulation then costs would be covered by USDA indemnity Resources for affected poultry flocks in accordance with 9CFR part 56.3 and part 56.4 or up to 100% of eligible costs under 9CFR part 56.3(b) in accordance with APHIS approval of this response and containment plan.
- (c) Spent laying hen, turkey breeder, or turkey meat flocks found to be Serologically positive to LPAI H5/H7 but without the ability to infect sentinel birds or evidence of virus shedding may be moved to approved slaughter. Sequential depopulation by slaughter may occur once viral testing and sentinel birds indicate the flock to be without active infection for a period of at least three weeks.
  - (i) If birds are going to approved slaughter there will be no indemnity.
  - (d) Limited and controlled vaccination of commercial laying hen, turkey breeder, or turkey meat flocks may be used as a method of eradicating the disease, provided that adequate bio-security is in place with approval of the state veterinarian and according to provisions for APHIS approval (Appendix 5).
  - (i) Cost of vaccination will be covered by the producer(s) implementing the vaccination program.

- (e) Surveillance of all flocks or farms surrounding an infected flock as per section V.A. of this document will be undertaken, and any other company-owned or other epidemiologically related flocks located outside the surveillance zone will also be monitored. Surveillance will be by use of RRT-PCR for H5 or H7 AI.
- (i) Cost of testing other company-owned or related flocks will be covered by the producer(s); epidemiologically unrelated surrounding flocks will be tested at state/federal expense.
- (f) Serologic surveillance will continue weekly until the infected flock has been free of active infection for at least 30 days or until all surrounding and epidemiologically linked flocks or farms have been sufficiently tested and found free of active infection for a period of at least 30 days.
- (g) Flock or farm will be tested according to Table 1, taking into consideration special stipulations.
- (h) Pooled (up to five birds/tube) pharyngeal and cloacal swabs will be submitted to VAL for RRT-PCR testing. All testing and collection of samples will be performed on-site using appropriate bio-security precautions.

**Table 1.** Number of birds sampled for serology, PCR, and/or virus isolation on each premise.

No. birds on premise Minimum number of birds to be sampled \*

15 or less.....	Sample all
16 to 49.....	15
50 or greater.....	30

\*Assuming a 95% or greater sensitivity and 99% specificity for the diagnostic testing system used, sampling the indicated number of birds will result in a 95% certainty that at least one positive bird will be detected if at least a 25% prevalence of HPAI virus shedding exists among birds on the premises at the time of sample collection

(2) *Highly Pathogenic Avian Influenza (HPAI)*

- (a) The flock or farm will be quarantined and strict bio-security measures will be met.
- (b) HPAI is an emergency animal disease and therefore infected flock(s) will be depopulated.
- (c) Appraisal of the flock is to occur prior to depopulation.

- (d) Surveillance will be the same as that used for LPAI H5/H7
- (3) *LPAI other subtypes*
  - (a) Strict bio-security measures will be maintained throughout the life of the flock.
  - (b) Control measures to be taken are to be presented in writing by poultry producers to state officials.
  - (c) Surveillance shall be carried out in adjacent or epidemiologically linked flocks until the infection has been shown to no longer be active. This testing shall be in the form of serology, virus isolation, RT-PCR and/or sentinel birds
  - (i) Cost of testing will be covered by the producer(s).
  - (ii) The producer should be able to take samples, when under the direction of an accredited veterinarian.

## **V. QUARANTINE MEASURES**

Quarantine authority resides with the Secretary of Agriculture; Quarantines on all movement of poultry within, into, and out of one or more of the designated Containment Regions will be imposed by the Secretary upon confirmation of the isolation of live AI virus. Quarantines restrictions will be enforced by Agency of Agriculture, Food & Markets personnel and local Law Enforcement Officers.

### **(A) Establishment of surveillance zones**

- (1) Three distinct zones, with varying intensities of surveillance will be established:
  - (a) *Affected Zone* included the area within 5 miles (8 km) of the index flock;
  - (b) *Surveillance Zone* including the area between 5 and 10 miles (8 and 16 km) of the index flock;
  - (c) *Buffer Zone* including the area between 10 and 30 miles (16 and 50 km) of the index flock if geographically possible.
- (2) Particular attention to surveillance efforts is to be given to company-owned, other epidemiologically related flocks, common breaker plants, feed mills, vaccination crews, movement of other equipment and personnel, recently purchased breeder stock, or recent

participation in exhibition shows or swap meets. These potential epidemiologic links shall be rigorously assessed for risk based on levels of bio-security in place at the time of the outbreak.

(3) *Affected Zone*

(a) The Affected Zone includes the area within 5 miles (8 km) of the index flock. The target population to include in surveillance will be all commercial and non commercial poultry operations.

(b) ***Commercial poultry operations*** (defined as any marketing of poultry or poultry products)

(i) Commercial poultry operations will conduct active serologic surveillance as required by this document.

(ii) Cloacal and tracheal swabs will be collected from poultry in each house, building, or flock located on the operation. Sick and freshly dead birds are targeted for sampling.

(iii) The total number of birds that will be sampled in each unit is presented in (Table #1). Serologic surveillance shall continue weekly for a minimum of 30 days after the last active case of influenza is depopulated, processed, or no longer shedding virus.

(iv) Swab samples will be collected weekly for a minimum of 30 days after the last active case of influenza is depopulated, processed, or no longer shedding virus.

(c) ***Non-commercial poultry operations***

(i) An inventory of at-risk non-commercial operations will be developed by VAAFM and USDA/APHIS/VS of the affected zone. At-risk operations are defined as those with poultry, waterfowl, pigeons, or ratites.

(ii) All at-risk non-commercial operations will have swab samples collected for RRT-PCR testing and/or virus isolation. Both cloacal and tracheal samples will be collected from gallinaceous birds and ratites; only cloacal samples will be collected from waterfowl.

(iii) The total number of birds that will be sampled in each unit is presented in (Table #1). Serologic surveillance shall continue weekly for a minimum of 30 days after the last active case of influenza is depopulated, processed, or no longer shedding virus.

- (iv) Swab samples for RRT-PCR testing and/or virus isolation shall be collected weekly for a minimum of 30 days after the last active case of influenza is depopulated, processed, or no longer shedding virus.

**(4) *Surveillance Zone***

- (a) The surveillance zone includes the area between 5 and 10 miles (8 and 16 km) of the index flock. The target population to include in surveillance includes all commercial and non-commercial poultry operations. Surveillance is also to include, when considered appropriate, any commercial or non-commercial flocks with epidemiologic links to the index flock that might be located outside of the official surveillance and quarantine zones. Surveillance efforts in this zone will be conducted simultaneously with those in the affected zone.

**(b) *Commercial poultry operations***

- (i) Testing procedures for commercial poultry operations in the surveillance zone will be identical to those applied in the affected zone.
- (ii) Cloacal and tracheal swabs samples for RRT-PCR testing and/or virus isolation will be collected from all commercial operations at the initiation of this surveillance plan and again 21 days following initial sampling. The total number of birds to be sampled on each operation is presented in (Table #1).

**(c) *Non-commercial poultry operations***

- (i) Testing procedures for non-commercial poultry operations in the surveillance zone will be identical to those applied in the affected zone.
- (ii) Cloacal and tracheal swabs samples for RRT-PCR testing and/or virus isolation will be collected from each non-commercial operation at the initiation of this surveillance plan and again 21 days following initial sampling. The total number of birds to be sampled on each operation is presented in (Table #1).

**(5) *Buffer Zone***

- (a) The buffer zone includes the area between 10 and 30 miles (16 and 50 km) from the index flock if geographically possible. Surveillance is also to include, when considered appropriate, any commercial or non-commercial flocks with epidemiologic links to the index flock that might be located outside of the official buffer, surveillance, and affected zones.

(b) An inventory of commercial and non-commercial poultry operations will be developed by VAAFMM and USDA/APHIS/VS in conjunction with the Advisory Committee. All at-risk non-commercial poultry operations within 0.3 miles (0.5 km) of commercial poultry operations will be identified, and tracheal or cloacal swab samples collected once for RRT-PCR. The total number of birds to be sampled on each operation is presented in (Table #1).

(c) Commercial poultry operations will comply with all other requirements.

**(B) Movement and bio-security**

(a) Movement controls will be implemented relating to live birds, dead birds, eggs, egg flats, litter, trucks, equipment, workers, etc., within the affected zone. These orders will remain in place until surveillance is completed.

(b) No avian species may be moved out of or into the quarantined area.

(c) No poultry products or supplies, *excluding properly washed and sanitized and/or monitored for AI: table eggs, egg products, or processed poultry products in properly sanitized containers and vehicles*, may be moved off the affected premises or out of the quarantine area. Eggs going to breaker must be transported in disposable non returnable flats.

(d) Trucks or vehicles entering the affected premises must be thoroughly disinfected prior to entering and leaving the affected premises.

(e) If testing within the affected, surveillance, or buffer zone detects any additional positive flocks or farms, the quarantine zone will be extended accordingly.

(f) Only permitted movements will be allowed until surveillance is completed within all three zones.

(g) Industry and regulatory officials may discuss specific details in the event of an outbreak.

**(C) Depopulation and disposal**

(a) Small populations will be euthanized humanely and disposed by incineration, composting or burial on premise or in an appropriate landfill. Experience dictates that large numbers of birds can overwhelm incinerators and private arrangements for burial or composting. Larger populations will be disposed by burial at an acceptable landfill with attention to transportation routes and disinfection of transport vehicles.

- (b) If depopulation is chosen as the preferred method of dealing with an H/LPAI outbreak, the following methods may be used for disposal of the birds.
  - (i) In-house or approved on site composting may be used for disposal of birds and is the desired method when practical. (Appendix #2)
  - (ii) Birds that are not able to be composted may be disposed of in an approved landfill in compliance with the Environmental Protection Agency requirements. Vehicles transporting carcasses to the landfill (and upon returning) must be covered and sealed to prevent escape of liquid and airborne material, such as blood, feathers, and dander. (See Appendix # 3 for landfill locations, capacity, and availability.)

(c)

***Controlled marketing.*** (1) At the discretion of the Vermont Agency of Agriculture and APHIS, poultry that infected with or exposed to H5/H7 LPAI may be allowed to move for controlled marketing in accordance with the initial State response and containment plan described in § 56.10 and in accordance with the following requirements: (i) Poultry infected with or exposed to H5/H7 LPAI must not be transported to a market for controlled marketing until 21 days after the acute phase of the infection has concluded, as determined by the Vermont Agency of Agriculture in accordance with the initial State response and containment plan described in § 56.10; and (ii) Within 7 days prior to slaughter, each flock to be moved for controlled marketing must be tested for H5/H7 LPAI using a test approved by the Vermont Agency of Agriculture and found to be free of the virus. (2) Poultry moved for controlled marketing will not be eligible for indemnity under § 56.3.

**(D) Euthanasia**

- (a) Only American Veterinary Medical Association (AVMA) approved methods of euthanasia shall be employed.
- (b) CO<sub>2</sub> gas, cervical dislocation and (fire retardant foam for floor birds) will be the primary methods of euthanasia.

**(E) Premises decontamination and disinfection**

- (a) Manure and all organic material shall be completely removed from infected buildings. If taken to an approved off-site location, it must be transported in a covered and leak-proof container.

- (b) The sides of the building shall be scraped to remove all residual organic material that might harbor virus.
- (c) Manure shall be buried or composted on the premises or double bagged and taken to a designated landfill or incinerator according to an approved transportation plan, and taken to an approved off-site location in a covered and leak-proof container.
- (d) After cleaning, the physical facility and equipment shall be appropriately cleaned and disinfected with Virkon S® or other approved disinfectants.
- (e) Rodent and fly control measures will be intensified if necessary.
- (f) Poultry repopulation of the infected premises shall not occur until the disease is deemed to be eradicated by state and federal animal health officials plus two weeks.

Sentinel birds may be required prior to repopulation.

**(F) Bio-security practices**

- (1) Ongoing bio-security practices are to be followed before and after outbreaks according to (Appendix #4).

**(G) Trace back/ trace forward**

State personnel with assistance from the USDA Avian Influenza epidemiologists will conduct rapid trace back and trace forward investigations of all infected and potential contact (exposed) flocks to identify the origin of disease and identify all infected and exposed flocks. Tracing will include all movements to and from premises under investigation, including movement of susceptible and non-susceptible animals, products, equipment, vehicles, and people. The actual index premises will be identified if possible

**VI. PUBLIC RELATIONS RESPONSE/COMMUNICATION**

VAAFM and USDA/APHIS/VS will strive to inform the partners of the situation via a contact list including the AI Advisory Committee, Accredited Veterinarians, appropriate industry members.

- (A) All inquiries by public media about serologic findings, outbreaks, or other questions dealing with actual or suspected cases of AI infection in Vermont are to be directed to the Agency public relations office.
- (B) Information released to the public should be timely and include the following general information:

1. Nature and extent of the emergency.
  2. Impacted or potentially affected areas of the state.
  3. Human health implications or lack thereof.
  4. Activities being carried out by government officials and industry leaders to respond to the outbreak or mitigate its effects.
- (C) The use of radio and television may include prepared announcements, interviews, question and answer sessions, live footage, and so forth depending on the circumstances.
- (D) Information released may also include newspaper inserts or supplements which provide detailed information the public could use, and information about the steps being taken by the state and industry to protect them.

## Appendix #1

Avian influenza surveillance under the NPIP is conducted at different levels. The NPIP awards an “Avian Influenza Clean” status to flocks that satisfy the requirements for avian influenza.

| NPIP Requirements for “Avian Influenza Clean” status

**U.S. Avian Influenza Clean Egg-(<75,000 birds are exempt) and Meat-Type chicken**  
 –Primary. A minimum of 30 birds would have to have been tested negative for antibodies to avian influenza when the flock is more than 4 months of age to qualify. After qualification, a sample of at least 30 birds from the flock would have to be tested negative at intervals of 90 days to retain the classification.

**U.S. Avian Influenza Clean Egg-and Meat-Type chicken**  
 –Multiplier. A minimum of 30 birds would have to have been tested negative for antibodies to avian influenza when the flock is more than 4 months of age to qualify. After qualification, a sample of at least 30 birds from the flock would have to be tested negative at intervals of 180 days to retain the classification.

Additionally, NPIP also grants an H5/H7 Avian Influenza Clean classification for turkey breeding flocks.

## Appendix #2

### PROCEDURE FOR IN-HOUSE COMPOSTING

**DEAD OR EUTHANIZED BIRDS** infected with AIV may be composted in the following manner:

1. Twelve inches of litter, straw, shavings or other organic material should be used as a base. An eight to ten inch layer of bird carcasses is piled on top of this and sprayed with enough water to saturate the feathers. Six inches of organic material is placed on top of this. Successive layers may be piled on each other to the height of six feet. The width of the windrow should be approximately twelve feet.
2. The house is heated to 100°F for three days.
3. Windrow temperatures are monitored and should reach 135°F to 145°F within one week.
4. The windrow is turned at two weeks and the house is heated again for three days.
5. Windrow temperatures continue to be monitored.
6. Compost may be removed after one month.

### **Appendix #3**

#### LANDFILL LOCATIONS AND AVAILABILITY IN THE STATE OF VERMONT

County	Landfill name	Physical Address	Potential capacity (tons/day)	Contact person Phone
<b>Washington</b>	<b>Moretown LandFill</b>	<b>187 Palisades Pk, Moretown, VT 05660</b>	<b>600 ton</b>	<b>Tom Badowski 802-244-1100 Ext 226</b>
<b>Orleans</b>	<b>NY Waste Svc of VT dba: Waste USA</b>	<b>21LandFill Lane, Coventry, VT</b>	<b>2500 ton</b>	<b>Lenny Wing 802-334-8300 c-802-793-3141</b>

### **Appendix #4**

Bio-security is a critical component of a poultry company's poultry health program. Following strict biosecurity guidelines can reduce the chances that diseases such as avian influenza will come into contact with commercial poultry operations.  
(Compiled by the Virginia Poultry Federation)

#### **Biosecurity Program for the Poultry Industry**

## **1. SERVICE TECHS AND BREEDER SERVICING CREW**

- a. Park a minimum of 100' from first poultry house you approach when possible, unless onboard or hand disinfectant sprayers are used.
- b. Keep vehicle windows closed on farms.
- c. Service Technicians must put on clean coveralls, hairnets and boots (rubber or disposable) prior to entering poultry houses.
- d. Clean and disinfect all equipment before entering houses.
- e. Use hand sanitizer or disposable gloves before entering and when exiting houses
- f. Clean & disinfect vehicles inside daily, outside weekly

## **2 FEED MILL**

- a. Wash trucks to remove mud and debris to the extent needed to allow effective operation of disinfectant sprayers.
- b. Clean and disinfect the cabs on feed trucks daily. Spray the floors and pedals with approved disinfectant.

## **3 HATCHERY**

- a. All drivers are to wear boots (rubber or disposable). Egg, chick and poult trucks are to be cleaned and disinfected inside and outside daily. Spray insecticide inside trucks as needed to eliminate the transporting of flies from farm to farm.
- b. Egg racks and trays must be washed and disinfected before leaving hatchery.
- c. Wash chick/poult boxes and delivery carts daily.
- d. Hatchery waste trucks going to rendering need to be cleaned and disinfected before returning. Load should be hauled at the end of the day. Sweep out the cab and spray pedals and floorboard with an approved disinfect. Spray insecticide as needed.
- e. Eggs brought to hatcheries should be from source flocks participating in NPIP or other disease monitoring programs. See paragraph above.
- f. **LIVE HAUL (Single Age)**
  - a. All equipment is to be cleaned and disinfected daily.
- g. **LIVE HAUL (Multi Age)**

- a. All equipment is to be cleaned and disinfected between farms.

**h. DEAD BIRD DISPOSAL**

- a. Composting must be managed properly to ensure carcasses are covered to prevent exposure to wild animals and to maintain adequate temperatures for composting.
- b. When on-farm incineration is used, carcasses must be protected from exposure to wild animals.
- c. Farms should not share disposal facilities. Rendering can be used for daily mortality if approved by company management. Growers that use rendering must clean and disinfect vehicles prior to returning to their farm, and vehicles transporting carcasses should not travel from farm to farm to pick up daily mortality for delivery to the rendering plant.

**i. GROWERS, FARM MANAGERS, AND HIRED HELP**

- a. Biosecurity/Disease Control Area signs will be posted at farm entrance.
- b. Growers should keep out visitors and not visit other poultry facilities.
- c. Minimize the number of vehicles entering the farm.
- d. Be sure that visitor guidelines are followed when a service call is needed.
- e. Do not allow pets, livestock or wild animals to enter poultry houses.
- f. Keep wild birds out of poultry houses.
- g. Practice effective rodent and insect control.
- h. Keep workrooms clean.
- i. No birds of any kind will be visited or kept by the Grower or hired help or Company personnel.
- j. Sharing equipment between Growers is not recommended. In the event that equipment must be shared, effective cleaning and disinfecting must take place between uses.
- k. Growers should wear clean protective clothing or clothing dedicated to the farm prior to entering poultry houses.

- l. Notify a company representative if you observe others not following good biosecurity.

**j. GENERAL**

- a. Poultry company personnel and growers must avoid any contact with live bird markets and noncommercial poultry.
- b. Poultry companies will comply with applicable disease surveillance protocols.
- c. Poultry companies will hold annual training on biosecurity program for service technicians, hatchery personnel, feed mill personnel, live-haul personnel, and growers, or will train on a continuous basis.
- d. If there is an outbreak of a highly contagious disease refer to the prevention and rapid response plan and individual company policies for increased biosecurity measures.

**Poultry Farm Biosecurity Measures for Visitors**

All poultry farms are biosecure areas and all traffic must be kept to a minimum. If any business can be conducted over the phone, please do so. If a visit **MUST** be made to a farm, coordinate it with the grower and/or the appropriate poultry company contact listed below and follow the steps below at all times.

- All vehicles entering a poultry farm must stop at the farm entrance and fill out the visitor log in the mailbox (for farms that have boxes). Please include your name, date, time, company association, reason for visit, and farms visited previously on that day.
- ALL vehicles must thoroughly disinfect their tires and floor mats before entering and before leaving a poultry farm. The acceptable disinfectants are the following: Virkon-S, DCR, and Phenols. Remember, surfaces must be adequately cleaned in order for disinfectants to work.
- Personnel driving or riding in a vehicle that goes on the farm must have protective boots. Either rubber or plastic boots must be put on before getting out of the vehicle. These boots must be worn the whole time on the farm, and be discarded or cleaned onsite before re-entering your vehicle.
- Vehicle windows should be rolled up at all times while on the poultry farm in order to prevent flies from getting into the vehicle.
- Entry into the poultry houses is strictly forbidden unless pre-authorized by the grower or the poultry company.

- Anyone who enters poultry houses must wear clean coveralls, hairnets, and boots and use the disinfect stations provided at the door.
- When exiting the farm, disposable boots should be put in a receptacle provided at the farm. Then spray shoes with disinfectant before entering your vehicle. Hands, rubber boots, and any tools used on the farm must be washed and disinfected.
- Vendor vehicles must be kept clean at all times.

### **Company Quarantine Requirements in the event of an outbreak of H5/H7 LPAI**

(Taken from Prevention and Rapid Response for Low Path Avian Influenza (H5/H7) in Virginia)

1. Eliminate all service and other visits to that farm except dedicated service technician
2. Service technician cannot visit a farm that is not under quarantine for 48 hours after leaving quarantined premise
3. Specifically restrict movement of grower and family individuals and employees to essential visits only
4. Notify vendors of quarantined premise and cease nonessential visits
5. Establish Cleaning & Disinfection station at entrance to farm and C & D all vehicles entering and leaving premise
6. Feed deliveries
  - a. Make delivery last stop
  - b. Driver must not enter poultry house
  - c. Driver must wear plastic boots unless climbing feed tanks
  - d. Driver must use hand sanitizer before leaving farm
  - e. Driver must bathe and launder clothing after leaving farm
  - f. Truck must be thoroughly cleaned and disinfected after leaving farm
7. All dead birds should be disposed of on the farm in a biosecure manner
8. Properly sanitized eggs may be removed from a premise with LPAI without significant elevations in mortality. These eggs shall not be processed with eggs from other farms. Appropriate biosecurity measures shall be taken when moving the eggs off of the farm.

### **Appendix# 5 Vaccination for Flocks infected with LPAI**

In instances where depopulation is not a viable option due to the fact that the producer or local economy will be so negatively affected and unable to recover, or because the VTAAFM and USDA are unable to compensate for the depopulation of millions of birds,

vaccination may be used for the purposes of eradicating infection with LPAI. Vaccination can provide a barrier of immune birds to assist in area containment and protection of particularly valuable or genetically important populations of birds.

- If the aim is to establish a ring of vaccinated flocks, then the outer edge of the ring should be put in place first, in case the virus had already spread further than expected. The vaccination ring should extend 10 km or more from the infected premises or area according to the evaluated risks of propagation (illegal movements of animals or their products, high density of poultry population, low bio-security level in farms).
- If the aim is to protect valuable flocks, then these should be vaccinated first.
- Vaccinating flocks from the perimeter to the center of a zone allows vaccination teams to move from low risk to high-risk flocks, as they normally should.
- Vaccination crew movement and sanitation must be strictly controlled to preclude the movement of disease with the crew.
- Where vaccine is used to establish a buffer of immune birds and the birds or premises do not become infected, the birds may be slaughtered and permitted to move to slaughter under controlled arrangements after following withdrawal time of the vaccine.
- Vaccinated birds must be kept in quarantine and a protocol established for detecting shedding of LPAI at which time they would be managed as an infected flock as described in the Plan.

The USDA grants the authorization for use of vaccine as a method for eradication of LPAI. Vaccination approval may be given for use in specified flocks under strict control of the Secretary of Agriculture and USDA - APHIS. Any AI vaccination program would require a Memorandum of Understanding (MOU) between theian, the poultry producer concerned, and USDA – APHIS VS. The agreement would include adherence to an approved flock AI eradication plan, monthly reports and an agreement to depopulate and dispose of spent hens. The MOU will include the following requirements:

1. Accurate records of all commercial vaccine purchased and used.
2. Confirmation that vaccine use is strictly limited to the specific, approved flock(s).
3. Confirmation that the accepted vaccination protocol is being followed.
4. Access to all production and mortality records.

5. A flock plan.
6. A compliance agreement for each farm regarding use of the H5/H7 inactivated vaccine.
7. GPS coordinates for each production premises.
8. Vaccine records showing that only vaccinated pullets are being used under an “all-in/all-out” house system on the affected premises.

**The authorization for vaccination may be withdrawn if:**

1. There is evidence that the isolate has mutated into a HPAI.
2. There is failure to follow the vaccination protocol.
3. It is apparent after 6 months of vaccination that the vaccine is failing to eradicate the infection.
4. The virus spreads to a new premise.
5. Trade bans are placed on the United States.

Enhanced bio-security measures will be developed when the decision has been made to use vaccination in a flock on an infected premise.

**Purchase and Administration of the Vaccine:**

Vaccine will be purchased privately and will be permitted and used by the Vermont Agency of Agriculture. The Federal and State role in the vaccination process will be limited to oversight and monitoring. It is the responsibility of the private entity to administer the vaccine. Authorized personnel need to record the vaccines used, the protocols applied, the zones vaccinated, the dates of vaccination and the persons responsible for vaccination.

Vaccines will be administered by the appropriate route. Pullets should receive two injections, unless less than 90% of the flock is immunized two weeks following vaccination. If that is the case, then an additional vaccination will be performed. Previously infected layers, now recovered, should receive one injection.

**Replacement Pullet Procedures:**

Birds should be vaccinated a minimum of two weeks prior to moving to positive premises, so that there has been adequate time for antibody response.

A cohort of 75 replacement pullets will remain unvaccinated for AI to be placed as sentinels within the house. These birds will be tested negative for AI by RRT-PCR and

individually banded at the time of placement onto the infected farm. Upon movement to the laying house, these unvaccinated sentinels will be randomly placed in 15 cleaned and disinfected plastic or metal cages throughout the laying house or commingled with cohorts in floor systems. Every two weeks, 30 of the sentinels will be sampled. The samples will be tested by RRT-PCR by the VTAAFMDL. Authorized agents of the VTAAFMDL will collect these samples. Positive RRT-PCR results will be sent to NVSL for virus isolation. If the sentinels are positive for virus, the program will be terminated and the farm will be depopulated. Negative premises will continue to be monitored by serum or egg yolk antibody testing on a regular basis.

The flock owner will monitor the flock health and mortality daily. Any increases in bird morbidity or mortality will be reported to the VTAAFMDL, which will perform additional diagnostic testing.

Incoming pullets will continue to be vaccinated until the original infected flocks have been removed.

#### **Manure Management:**

Movement controls to take manure off farm must be consistent and will be enforced by VTAAFMDL in consultation with VTAEP. Definitive bio-security procedures must be established that will not contribute to the spread of the disease. Monitoring of daily bird mortality by swabbing or by dead bird pick up on a weekly basis for three to four weeks must be implemented to establish whether manure is safe for movement and disposal.

#### **Goals and Timeframes:**

The following steps should also be taken:

- Vaccinated spent hens may be required to be depopulated, rather than marketed, after completing their production cycle;
- Review placement schedules and arrange for early push-outs. New placements indicate that a new group of replacement pullets will be of appropriate age for vaccination (13-15 weeks) every 3-4 weeks. Sequential house-by-house depopulation to eradicate the H5/H7 virus, with “all-in all-out” movements, on the index farm should be completed in 15 months;
- After three months, the VTAAFMDL and the USDA will review testing results and reevaluate the frequency of testing, making adjustments if necessary; after six months of negative sentinel results, the need to continue with vaccination will be reviewed.