



Influenza Plans, Strategies for Discussing Avian Influenza and Health Guidelines

Paul Slota

USGS National Wildlife Health Center

U.S. Department of the Interior
U.S. Geological Survey

National Strategy for Pandemic Influenza

PandemicFlu.gov

Get Informed. Be Prepared.

The official U.S. government Web site for information on pandemic flu and avian influenza. Information is organized by topic on the left sidebar.

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Federal Planning & Response Activities

The *National Strategy for Pandemic Influenza*, issued by President Bush November 1, 2005, guides our nation's preparedness and response to an influenza pandemic, with the intent of (1) stopping, slowing or otherwise limiting the spread of a pandemic to the United States; (2) limiting the domestic spread of a pandemic, and mitigating disease, suffering and death; and (3) sustaining infrastructure and mitigating impact to the economy and the functioning of society. The *Strategy* charges the U.S. Department of Health & Human Services with leading the federal pandemic preparedness.

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Meetings & Conferences

State Summits

- ◆ Jan. 13 Providence, RI
- ◆ Jan. 13 Atlanta, GA
- ◆ Jan. 20 Lexington, KY

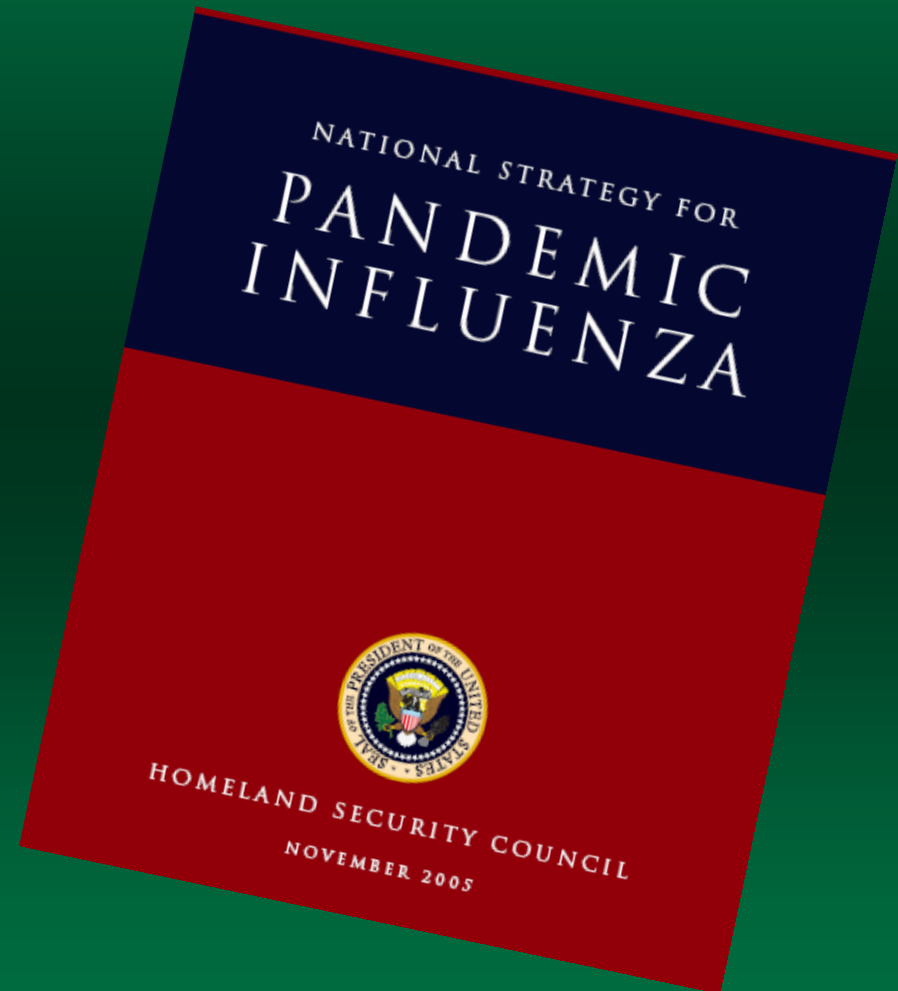
Resources

- ◆ [Planning Checklists](#)
- ◆ [Planning Tools](#)
- ◆ [Risk Communication](#)

National Strategy for Pandemic Influenza

- National Strategy for Pandemic Influenza
- An Influenza Pandemic may require activation of the National Response Plan (NRP)

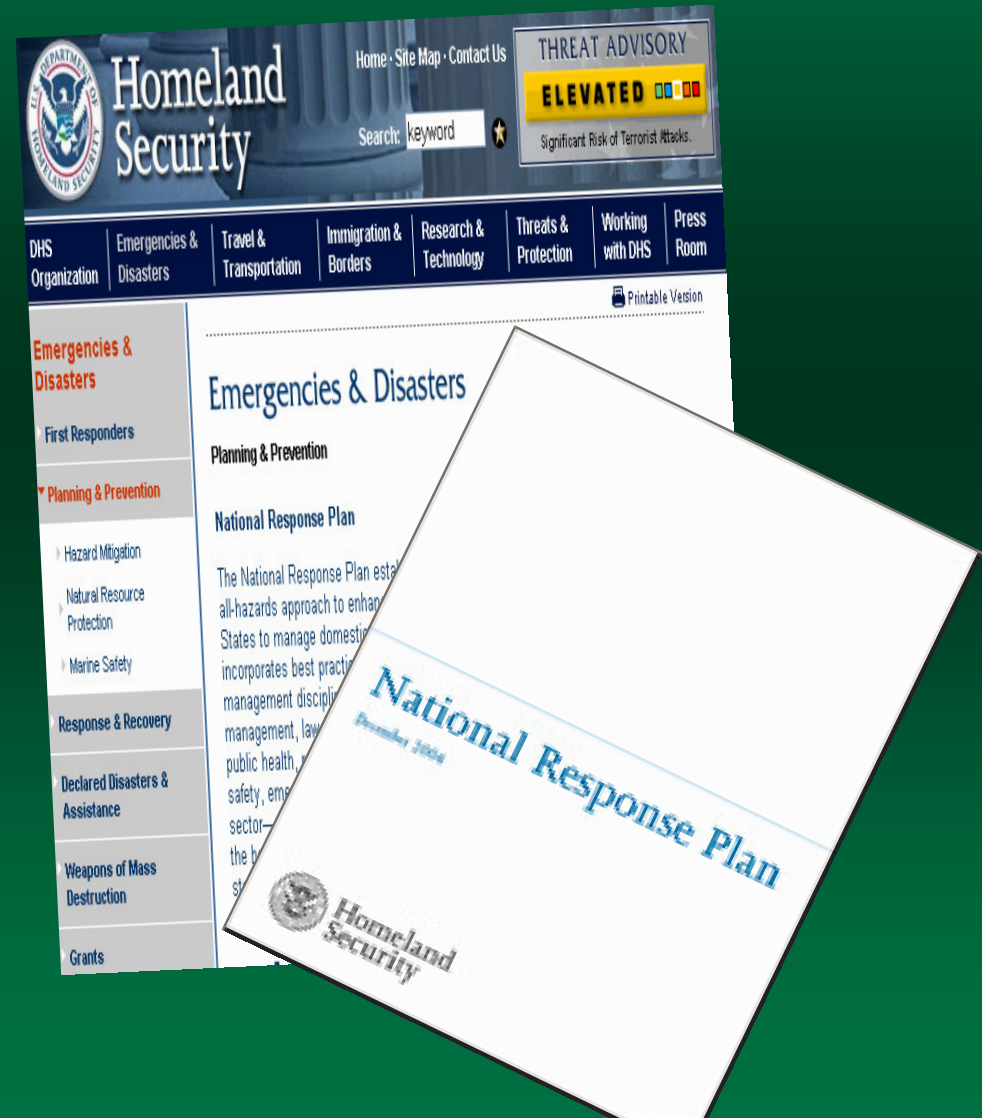
<http://www.pandemicflu.gov/>



The National Response Plan

- The National Response Plan is designed to reduce America's vulnerability to terrorism, major disasters, and other emergencies....
- Emergencies and Disasters

http://www.dhs.gov/dhspublic/theme_home2.jsp



The National Response Plan

Principal NRP Organizational Elements

This section discusses the major organizational elements in the structure for Federal NRP coordination diagrammed in Figures 3 through 5. Included in the discussion are special teams and other associated components, to include White House-level entities.

Homeland Security Council/National Security Council

As stated in HSPD-5, the Assistant to the President for Homeland Security and the Assistant to the President for National Security Affairs are responsible for interagency policy coordination regarding domestic and international incident management, respectively, directed by the President. Following an initial assessment by the Secretary of Homeland Security, interagency policy issues and courses of action

...and complexity of the threat or

Emergency Support Function #11 – Agriculture and Natural Resources Annex

ESF Coordinator:

Department of Agriculture

Primary Agencies:

Department of Agriculture
Department of the Interior

Support Agencies:

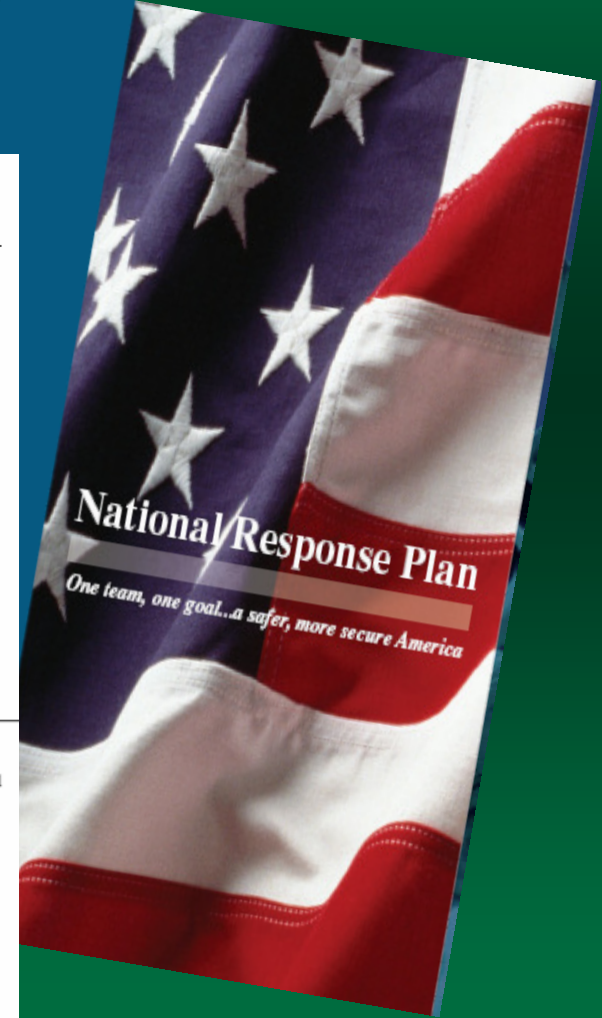
Department of Agriculture
Department of Commerce
Department of Defense
Department of Energy
Department of Health and Human Services
Department of Homeland Security
Department of the Interior
Department of Justice
Department of State
Department of Labor
Department of Transportation
Environmental Protection Agency
General Services Administration
U.S. Postal Service
American Red Cross

Agency	Responsibilities
Department of the Interior	<ul style="list-style-type: none"> Provides scientific/technical advice, information, and assistance to help prevent or minimize injury to natural and cultural resources and historic properties such as public lands; units of the National Park System; national wildlife refuges and fish hatcheries; Alaska Native allotments and townsites; wildlife and associated habitat, including threatened and endangered species and migratory birds; and national monuments. Provides scientific expertise and assistance in mapping, biological resources, geology, and hydrology; earthquakes and other natural hazards; minerals; and identification of hazards. Provides expertise in and information on offshore drilling and production practices and facilities and offshore minerals; maintains computer models for oil spill trajectory analysis and calculation of pipeline oil discharge volumes; funds and makes available information from response research; and for spills involving Outer Continental Shelf facilities, assists in source identification, oversees spill abatement, and approves resumption of

National Response Plan

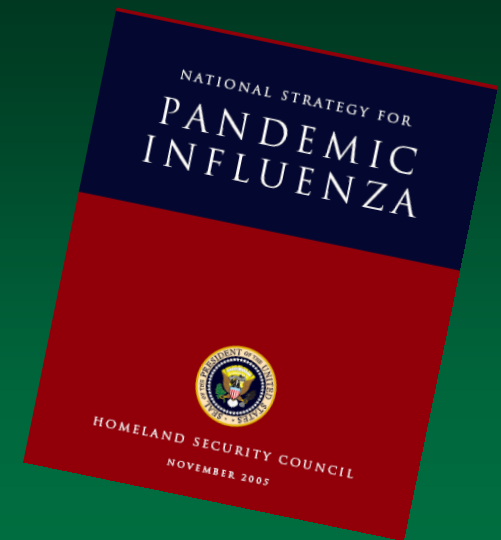
Signatory Partners

Department of Agriculture
Department of Commerce
Department of Defense



National Strategy for Pandemic Influenza

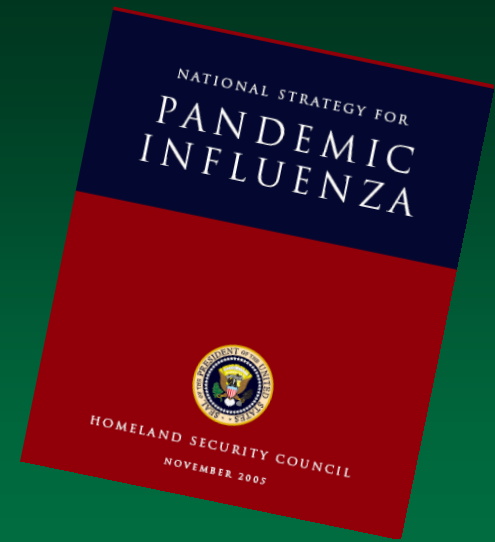
- Stopping, slowing or limiting the spread TO the United States;
- Limiting the spread inside the United States and mitigating disease, suffering and death;
- Sustaining infrastructure and mitigating impacts to Society and the economy.



National Strategy for Pandemic Influenza

Pillars of the *Strategy for Pandemic Influenza*

- **Preparedness and Communication**
- **Surveillance and Detection**
- **Response and Containment**



National Strategy for Pandemic Influenza

Preparedness and Communication

PandemicFlu.gov
Get Informed. Be Prepared.

The official U.S. government Web site for information on pandemic flu and avian influenza.

What Can Be Done Now

Federal Government | **State & Local Governments** | **Individuals & Families** | **Businesses**

Federal Planning & Response Activities

The *National Strategy for Pandemic Influenza*, November 1, 2005, guides our nation's prepare influenza pandemic, with the intent of (1) stop the spread of a pandemic to the United States, (2) reduce the impact of a pandemic, and (3) mitigate the impact to the economy and infrastructure and mitigating impact to the environment. The *strategy* charges the U.S. Department of Health and Human Services with leading the federal pandemic preparedness and response efforts.

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Bird & Animal Issues

- [Animal Health](#)
- [Protecting Birds & Other Animals](#)
- [Protecting Workers](#)
- [Surveillance](#)

Animal Health

- [Questions and Answers: Avian Influenza](#) (U.S. Department of Agriculture)
- [Avian Influenza \(PDF\) \(409KB\)](#) (U.S. Geological Survey)

[top of page](#)

Protecting Workers

- [Interim Guidance for Protection of Persons Involved in U.S. Avian Influenza Outbreak Disease Control and Eradication Activities](#) (Centers for Disease Control and Prevention)
- [Avian Influenza: Protecting Poultry Workers at Risk](#) (Occupational Safety and Health Administration)

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Surveillance

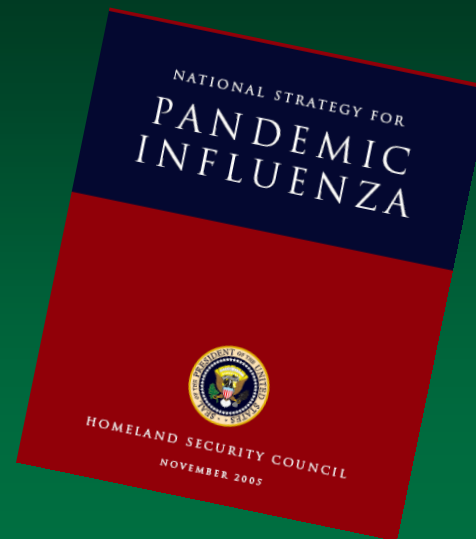
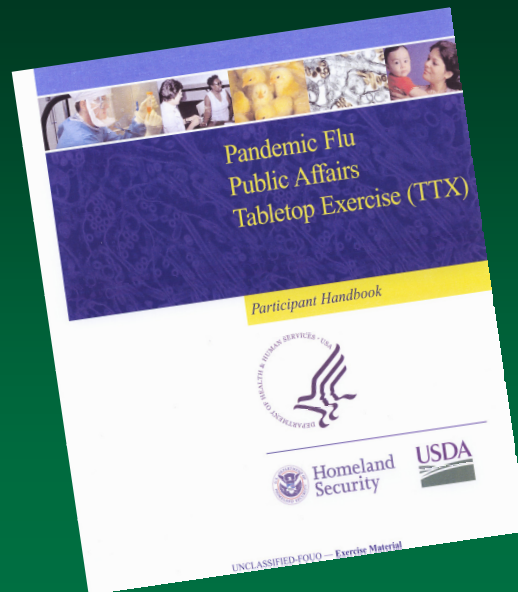
- [Avian Influenza](#) (USGS National Wildlife Health Center)
- [The WHO Animal Influenza Network](#) (World Health Organization)



National Strategy for Pandemic Influenza

Preparedness and Communication

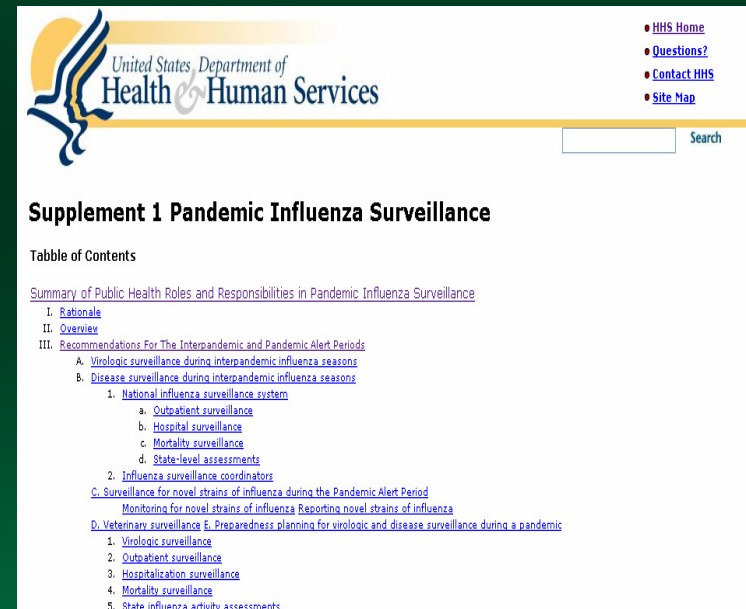
- Federal Agency Public Affairs Groups hold Pandemic Flu Exercises
- Department Heads hold Pandemic Flu Exercises at White House
- USDA/DOI/FDA media event on Avian Influenza



National Strategy for Pandemic Influenza

Surveillance and Detection

- *Ensuring Rapid Reporting of Outbreaks*
- Expand our domestic livestock and wildlife surveillance activities to ensure early warning of the spread of an outbreak to our shores.



United States Department of Health & Human Services

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Supplement 1 Pandemic Influenza Surveillance

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National Strategy for Pandemic Influenza

Surveillance and Detection

FINAL DRAFT

12/30/05

An Early Detection System for Asian H5N1 Highly Pathogenic Avian Influenza in Wild Migratory Birds

U.S. Interagency Strategic Plan

Introduction

Avian influenza (AI) is a type A influenza virus that is naturally found in certain species of waterfowl and shorebirds. However, the occurrence of highly pathogenic avian influenza (HPAI) subtype Asian H5N1 has raised concern regarding the potential impact on wild birds, domestic poultry, and human health should it be introduced into the United States (U.S.). Numerous potential routes for introduction of the virus into the U.S. exist including illegal movement of domestic or wild birds, contaminated products, via an infected traveler, as a bioterrorism event, and the migration of infected wild birds. This plan focuses primarily on the detection of a potential introduction of Asian H5N1 virus by migratory birds.

Avian influenza viruses are classified on the basis of two proteins, hemagglutinin (H) and neuraminidase (N), found on the surface of the virus. Specific viral subtypes have one of 16 different H proteins and one of 9 different N proteins, resulting in 144 possible combinations or subtypes based on this classification scheme. Within each subtype, there are numerous combinations of genetic sequences that determine the pathogenicity of the subtype to an infected host.

Wild birds, in particular certain species of waterfowl and shorebirds, are considered to be the natural reservoirs for all 144 subtypes. These subtypes are adapted to survive in these wild species and usually cause little or no disease. However, gradual genetic drift (i.e., mutation) can occur and a particular subtype can become adapted to infect other species of wild birds and

National Strategy for Pandemic Influenza

Response and Containment

- Provide guidance to all levels of government on the range of options for infection-control and containment.....
- Provide guidance for states, localities and industry on **best practices to prevent the spread of avian influenza in commercial, domestic and wild birds, and other animals.**

Influenza Communication Strategies

- Information Products
- Talking Points can be very helpful
- Frequently Asked Questions
- Influenza is a Very Dynamic Disease
- WEB Materials
- Handling Guidelines

Influenza Communication Strategies

Information Products

What Hunters Should Know About Avian Influenza

As of August 2005, Highly Pathogenic H5N1 avian influenza has not been found in North America—there are no records of positive tests in wild or domestic birds, and no known human cases of illness.

QUICK FACTS: Avian influenza is common in wild bird populations, but usually affects small numbers of birds and generally does not cause obvious clinical signs of infection. The virus is largely spread through nasal and oral discharges, and fecal droppings. Few bird viruses are able to infect humans, but influenza viruses are able to adapt and change over time. In 1997, a variety of H5N1 virus in Hong Kong was able to spread directly from birds to humans.

H5N1 is very contagious among birds and is deadly to poultry, such as chickens and domestic ducks. Since 2003, a virulent strain of H5N1—a Highly Pathogenic Avian Influenza (HPAI)—emerged and spread across Southeast Asia in domestic poultry. Although large numbers of poultry were destroyed to stop the virus, it spread in Asia during 2005, and by late July outbreaks were reported in Siberia and Kazakhstan.

Most H5N1 infections in humans resulted from close contact with infected poultry or contaminated surfaces. These viruses do not move easily to humans, and there are no known cases of human infection from wild birds. Since December 2003, 112 human cases of H5N1 and 57 deaths have been reported from four countries in Southeast Asia.

SURVEILLANCE FOR H5N1 IN ALASKA BIRDS

Because H5N1 has spread into northern Asia, the US Fish and Wildlife Service (USFWS), US Geological Survey (USGS), Alaska Department of Fish & Game (ADF&G), and public health agencies have formed a partnership to conduct surveillance for the occurrence of H5N1 in wild birds in Alaska. This work is in conjunction with ongoing research on avian influenza by the University of Alaska. During summer of 2005, several thousand waterfowl and shorebirds were tested for avian influenza in Alaska, and more extensive monitoring is planned for 2006. Field sampling efforts will be integrated with surveillance programs throughout the U.S. and Canada.

TO REPORT DEAD BIRDS
If you find a group of dead birds,

Prospects of H5N1 in North America
There are increasing reports that H5N1 is infecting and causing death in wild birds in Asia. Including some migratory species. These events and the spread of the H5N1 virus to new regions in Asia have created concerns that H5N1 could be carried to North America by migratory birds. To date, there is little evidence that migratory birds have been a major cause of the spread of H5N1 and it is not clear what role they could play on a larger scale.

Some migratory birds, particularly waterfowl and shorebirds, move between Alaska and Asia. Some species breed in North America and cross the Bering Strait to molt during summer or to winter along the Asian coast. Other species breed in Russia and migrate to wintering grounds in North America. It is still not clear whether these migrants will acquire the H5N1 virus or if persistent H5N1 is in wild bird populations, or whether migratory birds become long distance carriers. At present, the probability of H5N1 getting to Alaska is unknown.

Susceptibility of Other Animals to Avian Influenza
Although influenza strains are common in many groups of birds, infection and impacts to other animal groups is not complete. Feral swine and cats can be infected with H5N1 and other avian influenza viruses. H5N1 can infect pigs and cats (wild and domestic). H5N1 has been transmitted from wild birds to humans. However, even apparently healthy wild birds can be infected with other avian influenza viruses.

Safe Preparation and Cooking of Game Animals
There are no known cases where H5N1 has been transmitted from wild birds to humans. However, even apparently healthy wild birds can be infected with other avian influenza viruses.

USGS
science for a changing world

Wildlife Health Bulletin 05-03

To: Natural Resource/Conservation Managers
From: Leslie Dierauf, Director, USGS National Wildlife Health Center
Title: Interim Guidelines for the Protection of Persons Handling Wild Birds With Reference to Highly Pathogenic Avian Influenza H5N1
Date: August 29, 2005

These Guidelines have been developed in consultation with the Centers for Disease Control and Prevention. They are advisory in nature and intended to provide guidance for field biologists and others working with or handling wild birds with specific reference to highly pathogenic avian influenza. The guidance reflects information available as of August 2005 and may be updated as more information becomes available.

Highly Pathogenic Avian Influenza H5N1
To date, Highly Pathogenic Avian Influenza A H5N1 has not been detected in humans, poultry or wild birds in North America and no data suggest that H5N1 should be suspected of being in North America or in wild birds migrating from Asia to North America this fall (2005).

Avian influenza, or bird flu, is a virus typically found in wild birds, especially waterfowl and shorebirds. The virus is shed in fecal droppings, saliva and nasal discharges. Since 2003, a particularly virulent strain of this virus has emerged in Asia—the highly pathogenic avian influenza (HPAI) H5N1 virus. The HPAI H5N1 virus probably originated from domestic poultry in that region and is of concern because: 1) it poses a threat to domestic poultry, especially chickens; and 2) it has caused illness in 112 persons, including the deaths of at least 57 people as of August 2005. Most human cases are thought to have become infected with the virus through direct handling of infected poultry, consumption of uncooked poultry products, or contact with virus.

Influenza Communication Strategies

Information Products

The collage features two primary web pages:

- Arkansas Game & Fish Commission:** A green sidebar with navigation links: Home, Site Map, License Info, Rules & Regs, Services, Quick Links, and a Search Website box.
- Kansas Department of Wildlife & Parks:** A page titled "Avian Influenza" with a navigation menu (KDWP Info, State Parks, Hunting, Fishing, Boating, Other Services, License/Permit Sales) and a search bar. The main content includes:
 - AVIAN FLU NOT DETECTED IN NORTH AMERICA** (Updated: 11/8/05)
 - Should hunters take any precautions?** Hunters should follow basic precautions handling wild birds/wildlife.
 - What is the Alaska State and Federal Fish and Wildlife agencies doing about Avian Influenza?** They are part of an interagency working group of scientists, public health officials, policy makers, who are developing a plan for early detection of highly pathogenic influenza (HPAI) into North American birds. Participating agencies include the Departments of the Interior, Health and Human Services, and Agriculture, the Association of Fish and Wildlife Agencies, and the Alaska Department of Fish and Game. The health and safety of our field crews and the hunting public is paramount. A guidance being developed that provides advisory recommendations for handling wild birds will be continually updated as new information becomes available.
 - News Section:** Hot Topics!, Weekly News, Web News (January 2006, December 2005, November 2005), Video News, Recent Updates, Hot Topics Archive.
 - Locations and Jobs:** Links for various regional offices and employment opportunities.
 - References:** H5N1 Avian Influenza Bibliography (USGS) - 2005/07/28; Referenced Reports of Highly Pathogenic Avian Influenza H5N1 in Wildlife and Domestic Animals (USGS) - 2005/07/00; Spread of Avian Influenza Viruses Among Birds (CDC) - 10/14/2005; The Avian Influenza H5N1 Threat (USGS) - 2005/08/00; Update on Avian Influenza in Wildlife (USGS Wildlife Health Bulletin #05-02) - 2005/07/28; What Hunters Should Know About Avian Influenza (Alaska Department of Fish and Game) - 09/30/2005.

Influenza Communication Strategies

- Information Products



Influenza Communication Strategies

- Information Products
- Talking Points can be very helpful

Avian Influenza Public Affairs Communications Plan for the Department of the Interior

Goals:

- Through a DOI Avian Influenza Leadership Team and a DOI Avian Influenza Communications Team provide information to help decision-makers and wildlife resource managers to rapidly respond to the Highly Pathogenic Avian Influenza H5N1, a wildlife disease that threatens bird populations and could ultimately affect the U.S. economy, public health, national security.
- Safeguard public health and personal health and well-being of DOI employees, as well as users of DOI Federal Trust lands.
- Safeguard DOI wildlife trust resources by taking appropriate action including monitoring and surveillance for H5N1 in wild birds.
- Maintain agency mission critical functions per the Continuity of Operations plan (COOP)
- Communicate messages on DOI activities and decisions related to wildlife resources, DOI H5N1 research and monitoring, and public employee welfare related to H5N1.
- Rapidly coordinate and communicate information on H5N1 at its bureaus through a DOI Avian Influenza Leadership Team Avian Influenza Communications Team.

USGS Avian Influenza Talking Points

- The Department of the Interior is responsible for managing wildlife, including migratory birds, under various laws and treaties, and for ensuring public health on more than 500 million acres of land that it manages across the country.
- To carry out these responsibilities, the Department and its partners are investigating highly pathogenic avian influenza (HPAI) in migratory birds and making plans to protect the health of its employees and the 450 million people that visit Department-managed lands each year.
- There are no reported cases of people becoming infected from migratory birds.
- The three Interior organizations with efforts related to HPAI.
 - The U.S. Geological Survey is the scientific arm of the Department and has a long history of responding to wildlife disease emergencies and conducting wildlife disease investigations. It is also supporting international HPAI research efforts by contributing information and world-class expertise about migratory birds and movements.
 - The U.S. Fish and Wildlife Service is the federal wildlife management agency that administers the National Wildlife Refuge System, with many of its 545 refuges providing



Avian Influenza Talking Points

- The Asian strain of avian influenza H5N1 has not been detected in North America.
- It is likely that it will eventually be detected in N.A.
- There are a number of ways that the virus could get to North America.
- Wild migratory birds are one possible pathway that the Departments of Agriculture and Interior are working together to address.

Avian Influenza Talking Points

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Avian Influenza Talking Points

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- The Survey has a long history of responding to wildlife disease emergencies and conducting wildlife disease investigations.
- The Survey is also supporting international HPAI research efforts by contributing information and world-class expertise about migratory birds and bird movements.

Avian Influenza Talking Points

The U.S. Fish and Wildlife Service is the federal wildlife management agency within the Department.

- The Fish and Wildlife Service administers the National Wildlife Refuge System, with many of its 545 refuges providing critical nesting, migration, and wintering habitat for waterfowl and other migratory birds.
- The Fish and Wildlife Service also carries out permitting and enforcement responsibilities under federal laws governing trade in wildlife species and products, and works with USDA/APHIS to regulate the importation of wild birds for the pet trade, research, and other purposes.

Avian Influenza Talking Points

The National Park Service.

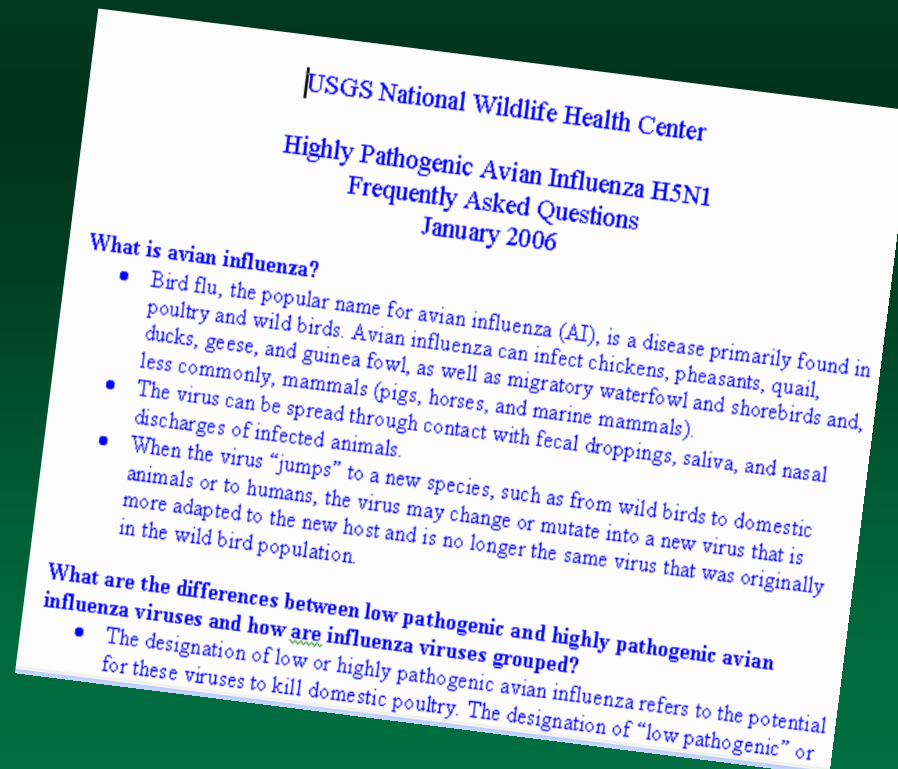
- With 384 areas in the National Park System, the National Park Service has a key role in protecting the health of its visitors. The National Park Service hosts 32 commissioned officers of the U.S. Public Health Service to meet this important responsibility.

Avian Influenza Talking Points

- **FWS and USGS, in conjunction with State of Alaska biologists, have been strategically sampling migratory birds for H5N1 in the Pacific Flyway for several months.**
- **USGS, FWS, and USDA/APHIS, along with state partners, are implementing a more extensive surveillance and detection program in 2006 to provide early warning to the agriculture, public health, and wildlife communities should migratory birds be found to carry the virus.**

Influenza Communication Strategies

- Information Products
- Talking Points can be very helpful
- Frequently Asked Questions



Are Wild Birds Transferring the Virus ?

The role of migratory birds in the transfer of the Asian H5N1 strain is not clear.

- Wild birds have been suggested, but not confirmed to be the source of new outbreaks.
- The pattern and timing of several outbreaks have not coincided with bird movements or routes.
- There are reports of wild bird mortality that do coincide with outbreaks of HPAI H5N1 in poultry.
- It is not known if wild birds were the source of the virus or acquired the virus from poultry.

How Could a Pathogenic Strain of Avian (or Human) Influenza Get to North America?

- Bird migration is one possible route of introduction of HPAI H5N1 into North America.
- Illegal smuggling of birds and poultry products, travel by infected people or people traveling with virus-contaminated articles are more direct means of introducing the new pathogenic strains into the United States.
- Airways, Highways, Waterways & Flyways

Can People Catch H5N1 From Wild Birds?

- There are *no* documented cases of H5N1 human disease from contact with wild birds.
- The only documented cases of transmission to humans are from poultry.
- At the present time, close contact with infected poultry has been the primary way that people have become infected.

Influenza Communication Strategies

- Information Products
- Talking Points can be very helpful
- Frequently Asked Questions
- Influenza is a Very Dynamic Disease

Influenza Viruses are Very Dynamic

They change rapidly and are confusing

- There are 144 theoretical combinations of the different Hs and Ns that make up the subtypes;
- Subtypes of highly pathogenic H5N1 avian influenza virus may have multiple strains;
- Subtypes may be more or less pathogenic to domestic poultry, wild birds, and humans.

Low Pathogenic and Highly Pathogenic

- Highly pathogenic avian influenza refers to the potential to kill domestic poultry;
- With rare exceptions, the thousands of flu isolates found in wild birds have been low pathogenic;
- In poultry, low pathogenic strains can mutate into highly pathogenic strains;
- Highly pathogenic avian influenza viruses in poultry are usually H5 or H7 subtypes of Type A influenza.

Avian, Pandemic, and Seasonal Flu

Avian Flu

- Avian Flu is caused by avian influenza viruses, which occur naturally among birds.
- To date <200 people known to be infected and <100 have died from the Asian strain of H5N1.
- So far the virus has not acquired the ability to easily spread from person to person.
- Once an avian influenza strain acquires the ability to easily spread from person to person **it has become a human influenza virus**.

Avian, Pandemic, and Seasonal Flu

Pandemic Flu

- **Pandemic Flu is defined as a virus that causes a global outbreak, or pandemic, of serious illness that spreads easily from person to person. Currently there is no pandemic flu.**
- **An influenza pandemic is a global outbreak of disease that occurs when a new influenza A virus appears or “emerges” in the human population, worldwide.**

Avian, Pandemic, and Seasonal Flu



Seasonal Flu

- Seasonal Flu is a contagious respiratory illness caused by influenza viruses.
- Every year in the United States, on average:
 - 5% to 20% of the population gets the flu;
 - more than 200,000 people are hospitalized from flu complications;
 - about 36,000 people die from flu.

Influenza Communication Strategies

- Information Products
- Talking Points can be very helpful
- Frequently Asked Questions
- Influenza is a Very Dynamic Disease
- **WEB Materials**

WEB Materials



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NWHC Mission:



The mission of the National Wildlife Health Center is to serve the nation and its natural resources by providing sound science and technical support, and to disseminate information to promote science-based decisions affecting wildlife and ecosystem health. The NWHC provides information, technical assistance, research, education, and leadership on national and international wildlife health issues.


Spotlight



Avian Influenza

The global spread of H5N1 increases the likelihood that it will eventually be detected in North America. There are

a number of pathways through which the virus could be brought to this continent; introduction by wild migratory birds is one



Chronic Wasting Disease

Chronic wasting disease (CWD) is a disease of the nervous system in deer and elk that results in distinctive brain lesions. It continues to be a major issue for

Hot Topics

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nbi Wildlife Disease Information Node

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Avian Influenza: Websites

Overview | Fact Sheet | Websites | News | Publications | Research | Maps

[Alaska INBRE \(IDeA Network of Biomedical Research Excellence\) - Avian Influenza](#)
Alaska INBRE
A network of Alaskan university laboratories and other campus resources providing information about statewide efforts to sample and monitor for avian influenza.
[Maps](#), [Issue Overview](#), [News](#), [Methods](#)
Keywords: [Alaska](#) [Biological sampling](#) [Birds](#) [Flyways](#) [Migration](#) [Sampling design](#)

[USGS National Wildlife Health Center \(NWHC\) - Avian influenza](#)
National Wildlife Health Center (U.S.)
A collection of resources on avian influenza compiled by the National Wildlife Health Center (NWHC). These resources include a bibliography,

WEB Materials

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A one-stop resource to wildlife health information **wdin**

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Avian Influenza: Publications

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USGS
National Wildlife Health Center

This bibliography of avian influenza publications was compiled through the cooperative effort of the [USGS National Wildlife Health Center](#) and the Wildlife Disease Information Node

Search Publications:

[What Hunters Should Know About Avian Influenza](#)
A two-page fact sheet containing frequently asked questions about avian influenza and helpful information to hunters. [Alaska, Dept. of Fish and Game.](#)
Keywords: [Avian Influenza](#) [Bird](#) [Food safety](#) [Hunting](#) [Mammals](#) [Prevention & control](#) [State/Provincial Government](#) [Surveillance \(monitoring\)](#) [Viral Virus](#)

WEB Materials



U.S. Fish & Wildlife Service

Division of Migratory Bird Management



Avian Influenza in Wild Birds—Sources of Information

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Prepared October 31, 2005
Last Revised November 14, 2005

The purpose of this document is to bring together in one location some of the more informative Web sites having information specific to avian influenza in wild birds. Avian influenzas of many different strains have long been known to occur naturally in wild birds, particularly waterfowl and shorebirds. These viruses normally circulate in wild bird populations, but rarely cause mortality. Long a focus of concern by the poultry industry as a source of influenza infections in domestic stock, the influenza strains that infect wild birds was not known to infect humans until recently. Since 1997, the highly pathogenic H5N1 avian influenza virus has emerged as a source of mortality in wild birds, domestic poultry, and humans in southeast Asia. The precise roles played by migratory birds in the spread of H5N1 and its transmittal to domestic poultry and humans remain uncertain and continue to be debated by experts.

If you reference only one of the links below, we suggest that you make it the National Wildlife Health Center's [Avian Influenza Home Page](#), which we consider to be the premier online source for information on avian influenza in wild birds.

To make navigation of this site easier, links to avian influenza in wild birds are organized in six categories:

[Information from Agencies of the U.S. Government](#)
[Information from State Wildlife Agencies](#)

WEB Materials

Zoom

AI Wild Bird Surveillance



David Swayne, David Suarez, Erica Spackman, Mary Pantin-Jackwood
Southeast Poultry Research Laboratory
USDA/ARS, Athens, GA

Influenza Communication Strategies

- Information Products
- Talking Points can be very helpful
- Frequently Asked Questions
- Influenza is a Very Dynamic Disease
- WEB Materials
- **Handling Guidelines**

Handling Guidelines

General Recommendations

- Thoroughly washing hands with soap and water (or with alcohol-based hand products if the hands are not visibly soiled) is a very effective method for inactivating influenza viruses, including HPAI.
- These viruses are also inactivated with many common disinfectants such as detergents, 10% household bleach, alcohol or other commercial disinfectants.
- The virus is more difficult to inactivate in organic material such as feces or soil.

Handling Guidelines

Recommendations: Apparently healthy wild birds

- To the extent practical, decrease the risk of inhaling aerosols such as dust, feathers, or dander.
- When possible, wear rubber or latex gloves and protective eyewear.
- Wash hands often as described above, and disinfect work surfaces and equipment between sites.
- Do not eat, drink, or smoke while handling animals.

Handling Guidelines

Recommendations: Sick or dead birds

- Wear protective clothing: coveralls, rubber boots, latex or rubber gloves.
- Minimize exposure to mucosal membranes by wearing protective eyewear (goggles) and a protective mask (N95 NIOSH approved mask is recommended)
- Decontaminate work areas and properly dispose of potentially infectious material including carcasses.
- Do not eat, drink, or smoke while handling animals.

Handling Guidelines

Recommendations: Where H5N1 has been detected, particularly during disease control operations

- Consult with a state or federal wildlife or public health agency about the basic guidelines for infection control, including how to put on and use, remove, disinfect or dispose of personal protective equipment and clothing.
- Wash hands frequently and disinfect exposed surfaces and field equipment.
- Wear coveralls, gloves, or boots that can be disinfected or discarded, a respirator and protective eyewear.

Handling Guidelines

Recommendations: Where H5N1 has been detected particularly during disease control operations

- Consult a health care provider and follow the latest CDC/WHO guidelines for prophylactic medications and precautions.
- Monitor your health for clinical signs of influenza infection during and for one week after exposure.
- 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.