

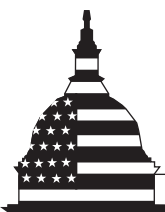
GAO

Report to the Committee on Homeland
Security and Governmental Affairs,
U.S. Senate

November 2010

LIVE ANIMAL IMPORTS

Agencies Need Better Collaboration to Reduce the Risk of Animal-Related Diseases



G A O

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Highlights of [GAO-11-9](#), a report to the Committee on Homeland Security and Governmental Affairs, U.S. Senate

Why GAO Did This Study

The United States legally imported more than 1 billion live animals from 2005 through 2008. With increased trade and travel, zoonotic diseases (transmitted between animals and humans) and animal diseases can emerge anywhere and spread rapidly. The importation of live animals is governed by five principal statutes and implemented by four agencies.

GAO was asked to examine, among other things, (1) potential gaps in the statutory and regulatory framework governing live animal imports, if any, that may allow the introduction and spread of zoonotic and animal diseases and (2) the extent to which the agencies collaborate to meet their responsibilities, and face barriers, if any, to collaboration. GAO reviewed statutes, met with agency officials, visited ports of entry, and surveyed experts on animal imports.

What GAO Recommends

GAO recommends that the Secretaries of Agriculture, Health and Human Services, Homeland Security, and the Interior develop a strategy to address barriers to agency collaboration that may allow potentially risky imported animals into the United States and jointly determine data needs to effectively oversee imported animals. In commenting on a draft of this report, the Departments of Agriculture, Interior and Homeland Security generally agreed with GAO's findings and recommendations. The Department of Health and Human Services provided technical comments only.

View [GAO-11-9](#) or key components. For more information, contact Lisa Shames at (202) 512-3841 or shamesl@gao.gov.

November 2010

LIVE ANIMAL IMPORTS

Agencies Need Better Collaboration to Reduce the Risk of Animal-Related Diseases

What GAO Found

The statutory and regulatory framework for live animal imports has gaps that could allow the introduction of diseases into the United States, according to the experts GAO surveyed, discussions with agency officials, and scientific studies. Specifically,

- The Department of Health and Human Services' Centers for Disease Control and Prevention (CDC) has regulations to prevent the importation of live animals that may pose a previously identified disease risk to humans for some diseases, but gaps in its regulations may allow animals presenting other zoonotic disease risks to enter the United States. CDC has solicited comments in advance of a rulemaking to better prevent the importation of animals that pose zoonotic disease risks.
- The Department of the Interior's Fish and Wildlife Service (FWS) has regulations to prevent imports of nonnative live animals that could become invasive. However, it has not generally emphasized preventing the introduction of disease through importation. FWS is taking some initial steps to address disease risks. For example, in January 2010, the department directed FWS to review statutory authorities and regulations to address existing problems concerning nonnative live animals and recommend tools to better prevent the introduction of new threats.

In contrast, the U.S. Department of Agriculture's Animal and Plant Health Inspection Service (APHIS) has regulations to prevent importing live animals it finds may pose a disease risk to agricultural animals. In 2008, APHIS issued a long-term strategy that would broaden its oversight of live animal imports.

APHIS, the Department of Homeland Security's Customs and Border Protection (CBP), CDC, and FWS have collaborated to meet their responsibilities related to live animal imports by taking actions in five areas—strategic planning, joint strategies, written procedures, leveraging resources, and sharing data. However, experts GAO surveyed and agency officials GAO interviewed identified barriers to further collaboration on live animal imports, such as different program priorities and unclear roles and responsibilities, which are inherent when multiple agencies have related responsibilities. For example, experts noted that because each of the agencies is focused on a different aspect of live animal imports, no single entity has comprehensive responsibility for the zoonotic and animal disease risks posed by live animal imports. Experts also reported the need for an entity to help the agencies overcome these barriers to collaboration. Furthermore, the agencies have largely incompatible data systems, and a completion date for CBP's planned data system, which would provide the agencies with full operational access to information on incoming shipments of live animals, has not been established. In addition, APHIS, CBP, CDC, and FWS have yet to jointly determine which data elements on live animal imports are needed in this system for them to effectively oversee these imports, according to CBP officials. As a result, it is unclear whether the data elements in the completed system will meet interagency needs.

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Abbreviations

ACE	Automated Commercial Environment
APHIS	Animal and Plant Health Inspection Service
Bd	<i>Batrachochytrium dendrobatidis</i>
CBP	Customs and Border Protection
CDC	Centers for Disease Control and Prevention
DHS	Department of Homeland Security
FWS	Fish and Wildlife Service
ITDS	International Trade Data System
MOU	memorandum of understanding
SARS	severe acute respiratory syndrome
USDA	U.S. Department of Agriculture

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G A O

Accountability * Integrity * Reliability

United States Government Accountability Office
Washington, DC 20548

November 8, 2010

The Honorable Joseph I. Lieberman
Chairman
The Honorable Susan M. Collins
Ranking Member
Committee on Homeland Security
and Governmental Affairs
United States Senate

The United States is the world's leading import market for live animals: From 2005 through 2008 more than 1 billion live animals were legally imported into the United States for agriculture, clinical research, education and exhibition, the aquarium and pet industries, and other uses. However, these imports have the potential to transmit zoonotic diseases— infectious diseases that can be transmitted between animals and humans and can cause a substantial number of deaths. Furthermore, zoonotic diseases have represented about 75 percent of newly emerging infectious diseases in recent years. Because of growing international trade and travel, these zoonotic diseases can emerge anywhere and spread rapidly around the globe, as demonstrated by the 2003 outbreak of severe acute respiratory syndrome (SARS), a viral respiratory illness that caused pneumonia in most patients and was responsible for over 700 deaths in East Asia and 43 deaths in Canada. Over the past few years, another zoonotic disease, a highly pathogenic strain of avian influenza, killed millions of wild and domestic birds worldwide and infected over 400 people, more than half of whom died. The spread of zoonotic diseases, as well as other diseases affecting only animals, can take a major economic toll on many industries. For example, the highly pathogenic avian influenza in East Asia cost the affected economies an estimated \$10 billion. In the United States, an outbreak of exotic Newcastle disease—a contagious and fatal viral disease affecting birds—resulted in the destruction of over 4.5 million birds in 2002 and 2003 at a cost of more than \$395 million in lost trade.

The laws governing the importation of live animals include five statutes that are implemented by four agencies. Specifically,

- *Animal Health Protection Act.* The U.S. Department of Agriculture's (USDA) Animal and Plant Health Inspection Service (APHIS) may prohibit imports of particular animals to prevent the introduction of any pest or

disease affecting agricultural animals, such as cattle, horses, poultry, and swine.

- *Lacey Act*. The Department of the Interior’s Fish and Wildlife Service (FWS) administers the prohibition against the import of animals that have been individually listed in the statute or prescribed in FWS regulation to be “injurious to human beings, to the interests of agriculture, horticulture, forestry, or to wildlife or the wildlife resources of the United States.”
- *The Endangered Species Act of 1973*. FWS administers the prohibition against the import of animals that have been listed as threatened or endangered species and implements other international agreements related to these species.
- *Public Health Service Act*. The Department of Health and Human Services’ Centers for Disease Control and Prevention (CDC) issues regulations to prevent the introduction, transmission, and spread of communicable diseases, including zoonotic diseases.
- *Tariff Act of 1930*. The Department of Homeland Security’s (DHS) Customs and Border Protection (CBP) is responsible for inspecting imports for compliance with United States law and assisting all federal agencies in enforcing their regulations—including regulations for live animal imports—at ports of entry.

As we have previously reported, when responsibilities cut across more than one federal agency—as they do for the regulation of live animal imports to prevent the introduction and spread of diseases—it is important for agencies to work collaboratively.¹ Taking into account the nation’s long-range fiscal challenges, we noted that the federal government must identify ways to deliver results more efficiently and in a way that is consistent with its multiple demands and limited resources. We also identified key practices that can help enhance and sustain federal agencies’ collaboration. In addition, we have previously reported on the need to collaborate on animal disease issues. For example, we reported in 2007 on the steps that USDA took to prepare for highly pathogenic avian influenza in poultry and recommended that USDA and DHS clarify their

¹GAO, *Results-Oriented Government: Practices That Can Help Enhance and Sustain Collaboration among Federal Agencies*, [GAO-06-15](#) (Washington, D.C.: Oct. 21, 2005).

roles during emergency responses to a disease outbreak.² Both USDA and DHS officials told us that they have taken preliminary steps to clarify and better define their coordination roles. For example, the two agencies meet on a regular basis to discuss such coordination.

In this context, you asked us to examine (1) potential gaps in the statutory and regulatory framework governing live animal imports, if any, that may allow the introduction and spread of zoonotic and animal diseases; (2) the extent to which APHIS, CBP, CDC, and FWS collaborate to meet their responsibilities and face barriers, if any, to collaboration; and (3) the performance information that the responsible agencies have reported on live animal imports.

To identify potential gaps in the statutory and regulatory framework, we reviewed relevant statutes, the agencies' implementing regulations, and other agency documents. We also reviewed APHIS and FWS data on the number, type, and exporting country of all imported animals regulated by these two agencies for fiscal years 2005 through 2009. For the APHIS and FWS data, we analyzed documentation related to the data, and worked with agency officials to identify data problems, and determined the data were sufficiently reliable for the purposes of providing background to this report. To obtain information on potential gaps in the statutory and regulatory framework as well as agencies' processes for overseeing live animal imports, we interviewed officials at agency headquarters and ports of entry—airports in Atlanta, Baltimore, Los Angeles, New York, and Washington, D.C., and the land border crossings with Mexico at Otay Mesa and San Ysidro, California. At these ports, we focused our review on the legal importation of live animals and not on agencies' actions to prevent animal smuggling. We also reviewed scientific studies on zoonotic and animal diseases, including studies by the National Academies of Sciences.

To examine the extent to which the four agencies collaborate to meet their responsibilities and face barriers, if any, to collaboration, we reviewed each agency's strategic plans, policies, and protocols; reviewed documentation on the allocation of staff resources; and interviewed headquarters officials. We also examined the degree to which the agencies' collaborative efforts reflected the key practices we had identified that can help enhance and sustain collaboration among federal agencies.

²GAO, *Avian Influenza: USDA Has Taken Important Steps to Prepare for Outbreaks, but Better Planning Could Improve Response*, [GAO-07-652](#) (Washington, D.C.: June 11, 2007).

To address the first two objectives, we also conducted a two-round survey to identify potential gaps in the current statutory and regulatory framework, how well responsible agencies collaborate to meet their responsibilities, and potential barriers to collaboration. The first round of the survey was conducted from January through February 2010, and the second round was conducted from April through May 2010. We identified knowledgeable experts who had primary employment responsibilities related to or dependent on live animal imports, authored peer-reviewed papers, presented at professional conferences, provided testimony on the subject matter to Congress, or were recognized by their peers as experts on live animal imports. To ensure a cross section of different sectors, we selected experts from federal and state government, academia, nongovernmental organizations, and industry to obtain a broad spectrum of opinions. For the first round, we sent surveys that consisted of open-ended questions (questions that solicit additional information) to our initial list of 39 experts, and we received responses from 33, resulting in a response rate of about 85 percent. On the basis of recommendations provided by those responding in our first round and other experts, we expanded our list of experts to 64 for the survey's second round, which consisted of closed-ended questions (questions with a set of answers to choose from). Of these 64 experts, we received responses from 56, resulting in a response rate of about 88 percent for the second round.

To examine the performance information the responsible agencies have reported on live animal imports in their planning and reporting documents, we reviewed strategic plans, operational plans, mission statements, and annual performance plans and reports from APHIS, CBP, CDC, and FWS. A more detailed discussion of our scope and methodology is presented in appendix I.

We conducted this performance audit from August 2009 through October 2010, in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

APHIS, CBP, CDC, and FWS share responsibility for preventing the importation of live animals that may introduce and spread zoonotic and animal diseases.³ APHIS, CDC, and FWS have developed regulations that provide specific requirements and restrictions on the importation of animals. In some cases, more than one agency may regulate a given animal. For example, CDC regulates dogs for their risk of spreading rabies to humans, and APHIS regulates dogs from countries with screwworm, a parasite that can cause great damage to domestic livestock and other warm-blooded animals, for their risk of spreading this parasite to agricultural animals. Information on each agency's responsibilities and oversight activities follows and is presented in greater detail in appendix II.

Agencies That Are Responsible for Live Animal Imports

While CBP is responsible for overseeing all imports and assists other agencies in enforcing their import regulations, APHIS, CDC, and FWS have specific statutory and regulatory responsibilities for protecting human, domesticated animal, and wildlife health from risks posed by live animal imports.

APHIS. APHIS restricts the importation of live animals that it has determined may pose a disease risk to agricultural animals, such as cattle, horses, poultry, sheep, and swine. APHIS requires that many of the animals it regulates be visually inspected at the port of entry and generally requires the animals be accompanied by health certificates signed by a licensed veterinarian in the country of export and import permits. APHIS determines the level of inspection for animals on the basis of their associated disease risk, for both the type of animal and country of export. As a result of this determination, APHIS may restrict imports of certain animals from certain countries or require that animals undergo quarantine and disease testing. APHIS veterinarians inspect live animal imports at 15 land ports along the border with Mexico, 20 land ports along the border with Canada, and 30 airports across the continental United States, and in Alaska, Hawaii, and Puerto Rico. In addition, APHIS maintains animal quarantine facilities in southern California, southern Florida, and New York state and oversees private quarantine facilities for birds and horses in

³Other federal agencies also have specific responsibilities. For example, under the Marine Mammal Protection Act, the Department of Commerce's National Marine Fisheries Service administers prohibitions on the importation of certain marine mammals.

southern California. At these quarantine facilities, imported animals are held until test results for various diseases are received.

CBP. CBP assists other federal agencies in enforcing their import regulations, has the primary authority to inspect imports, and seeks to interdict shipments of contraband and the illegal importation of live animals and other products while facilitating the flow of legal travel and trade. According to CBP officials, when a live animal shipment arrives at a port of entry, CBP holds and refers the shipment to the responsible agency or agencies. CBP holds the import until an agency representative is available to release it. After the responsible regulating agency has released the import, CBP clears the import for entry into the United States. CBP staff are present at more than 300 land, air, and sea ports of entry and are trained in the procedures to follow when live animals are presented for customs clearance.

CDC. CDC restricts the importation of live animals that it has determined pose a risk to public health. CDC's restrictions on these imports vary by type of animal and can include banning certain imports, requiring permits, requiring vaccination certificates, and requiring quarantine. CDC staff are not present at all ports of entry to routinely inspect live animal imports. According to CDC officials, CDC relies on APHIS, CBP, and FWS staff to enforce its regulations at ports of entry. When the agencies' staff have questions about enforcing CDC's regulations, they are to contact CDC quarantine public health officers, who are often located at a CDC quarantine station that is at or near the port of entry. CDC has 20 quarantine stations in the continental United States, Alaska, Hawaii, and Puerto Rico.

FWS. FWS restricts the importation of certain wildlife. Specifically, FWS restricts the importation of injurious wildlife and threatened or endangered species and related species for which international trade is regulated under international agreements. Injurious wildlife includes animals that are individually listed in the Lacey Act or prescribed in FWS regulations to be injurious to human beings; to the interests of agriculture, horticulture, or forestry; or to wildlife or the wildlife resources of the United States. FWS seeks to prevent the introduction of invasive species as injurious wildlife under the Lacey Act. Invasive species are alien (or nonnative) species whose introduction does, or is likely to, cause

economic or environmental harm or harm to human health.⁴ At ports of entry, FWS wildlife inspectors review the required import documents and, for some live animal shipments, perform visual inspections. If FWS determines that the animals are prohibited from importation based on FWS regulations, for example, are injurious to wildlife or threatened or endangered species, it rejects the import unless it has an FWS permit, which may be issued under certain conditions, such as educational purposes. FWS has about 120 wildlife inspectors who handle shipments at 49 ports of entry nationwide, including 7 land ports along the Mexican border, 24 land ports along the Canadian border, and 18 designated ports for air, ocean, rail, and truck across the continental United States and in Alaska and Hawaii.

Number, Type, and Purpose of Live Animals Imports

APHIS and FWS data systems provide information on the number of and purpose for live animal imports, as well as on the country from which the import has been shipped into the United States in recent years.⁵ According to the APHIS data system, about 32 million live animals—mostly agricultural or aquacultural—were imported under APHIS regulation in fiscal year 2008, the most recent year for which verified data were available. They included cattle, fish, poultry, and swine. According to the FWS data system, about 177 million live animals—all wildlife—were imported under FWS regulation in fiscal year 2009. About 157 million of these imports were fish. Other types of animals imported under FWS regulation included amphibians, birds, corals, crustaceans, insects, mammals, mollusks, and reptiles. More information about the number and type of live animal imports is in appendix III.

⁴Invasive species may prey upon, displace, or otherwise harm native species. Some invasive species also alter ecosystem processes, transport disease, interfere with crop production, or cause disease in animals or humans.

⁵According to APHIS and FWS officials, the two data systems may overlap because the agencies regulate some of the same species, such as birds and certain fish. As such, the total number of imported animals is not the sum of each agency's total number of reported animals.

Interagency Collaboration

In 2000, we reported that agencies face a range of barriers when they attempt to collaborate with other agencies.⁶ With these barriers in place, federal agencies carry out programs in a fragmented, uncoordinated way, resulting in a patchwork of programs that can waste scarce funds, confuse and frustrate program customers, and limit the overall effectiveness of the federal effort. Subsequently, in 2005, we identified key practices that can help enhance and sustain collaboration among federal agencies.⁷ Among the practices we identified were (1) defining and articulating a common outcome; (2) defining and agreeing on roles and responsibilities; (3) establishing mutually reinforcing or joint strategies; (4) identifying and addressing needs by leveraging resources; and (5) establishing compatible policies, procedures, and other means to operate across agency boundaries. In our 2005 report, we stated that while we generally believe that the application of as many of these practices as possible increases the likelihood of effective collaboration, we also recognize that there is a wide range of situations and circumstances in which agencies work together.

The One Health Initiative Discusses Collaboration to Address Zoonotic and Animal Diseases

Recognizing that zoonotic and animal diseases are interconnected, several organizations—including the American Medical Association, the American Veterinary Medical Association, and CDC—have taken steps to support the One Health concept, which is a worldwide strategy for expanding interdisciplinary collaboration and communications in all aspects of health care for humans and animals. In 2007, the American Veterinary Medical Association established the One Health Initiative Task Force to study the feasibility of a campaign to facilitate collaboration and cooperation among health science professions, academic institutions, governmental agencies, and industries to help, among other things, assess, treat, and prevent cross-species disease transmission. In 2008, the task force framed the issue, stating that the convergence of people, animals, and the environment has created a new dynamic in which the health of each group is inextricably interconnected.⁸ Examples of recent diseases causing animal, human, environmental, or economic harm are described in appendix IV.

⁶GAO, *Managing for Results: Barriers to Interagency Coordination*, GAO/GGD-00-106 (Washington, D.C.: Mar. 29, 2000).

⁷GAO-06-15.

⁸American Veterinary Medical Association, *One Health: A New Professional Imperative* (2008).

The National Invasive Species Council Focuses on Collaboration among Federal Agencies

In 1999, an executive order established the National Invasive Species Council, cochaired by the Secretaries of Agriculture, Commerce, and the Interior.⁹ Its members are the Secretaries and Administrators of 13 federal departments and agencies. The council was charged with providing national leadership; seeing that the federal invasive species activities are coordinated, complementary, cost-efficient, and effective; and encouraging planning and action at local, tribal, state, and regional levels. The range of invasive species issues that the council is attempting to address includes live animal imports that may bring diseases into the United States. The executive order also required the Secretary of the Interior to establish the Invasive Species Advisory Committee, a group of 30 nonfederal stakeholders from diverse constituencies (representing state, tribal, local, and private concerns) around the nation, to advise the council on invasive species issues. In 2008, the council issued its most recent management plan for invasive species, the *2008-2012 National Invasive Species Management Plan*. The management plan lists goals and performance elements that identify the federal agency with the lead or participant role. It includes tasks pertaining to pathogens or diseases. For example, one of the tasks is to develop a process for identifying high-priority invasive plants, animals, and plant or animal pathogens for agencies' actions. The council is currently preparing a progress report on the implementation of the 2008-through-2012 plan, with an expected completion date of October 2010.

Recent Studies Have Discussed the Regulation of Live Animal Imports

Studies by the National Academies of Sciences and others have found significant deficiencies in the regulation of live animal imports that may allow the introduction and spread of emerging zoonotic and animal diseases. For example,

- A 2005 National Academies of Sciences report referred to a “patchwork of federal policies and agencies with limited or ill-defined jurisdiction” for the importation of wildlife, “a significant gap in preventing and rapidly detecting emergent diseases,” and “a lack of coordinated federal oversight” over disease issues associated with these animals.¹⁰ It found that wildlife are imported daily with little or no health monitoring, increasing the

⁹Exec. Order No. 13,112, 64 Fed. Reg. 6183(Feb. 3, 1999).

¹⁰National Research Council of the National Academies, Committee on Assessing the Nation's Framework for Addressing Animal Diseases, *Animal Health at the Crossroads: Preventing, Detecting, and Diagnosing Animal Diseases* (Washington, D.C.: 2005).

likelihood that zoonotic or animal diseases will enter the United States. The report also noted that the animal health infrastructure “does not have formal and comprehensive-based science and risk analysis systems for anticipating potential challenges to animal health; ranking their likelihood of occurring and likely severity; evaluating alternative prevention, detection, and diagnostic systems; and using this information to make appropriate policy decisions.”

- A 2007 study by the Defenders of Wildlife, a nonprofit organization that supports wildlife conservation, concluded that no law mandates a comprehensive assessment of the potential risk from the importation of a given nonnative species to human and animal health.¹¹
- In the November 2009 issue of CDC’s journal, *Emerging Infectious Diseases*, scientists reported on their study of mammal imports and concluded that these imports provide numerous opportunities for zoonotic pathogens to enter the United States. The study recommended increased surveillance of imported animals that pose an increased risk of harboring zoonotic pathogens.¹²

Gaps in the Statutory and Regulatory Framework for Some Live Animal Imports May Contribute to Disease Risks, according to Experts and Agency Officials

The statutory and regulatory framework governing live animal imports has gaps that could allow the introduction and spread of zoonotic diseases and diseases affecting wildlife, according to the experts we surveyed, our discussions with agency officials, and scientific studies on zoonotic and animal diseases. In particular, while APHIS has regulations in place to protect agricultural animals from the risk of diseases in live animal imports, CDC does not fully use its statutory authority to prevent the importation of live animals that may pose a risk of zoonotic diseases, and FWS generally does not restrict the entry of imported wildlife that may pose disease risks.

¹¹Defenders of Wildlife, *Broken Screens: The Regulation of Live Animal Imports in the United States* (Washington, D.C.: 2007).

¹²B. I. Pavlin, L. M. Schloegel, and P. Daszak, “Risk of Importing Zoonotic Diseases through Wildlife Trade, United States,” *Emerging Infectious Diseases*, vol. 15, no. 11 (November 2009).

APHIS Has Regulations to Protect U.S. Agriculture from Live Animal Imports That Could Carry Disease

APHIS has regulations to prevent the importation of live animals that it has determined could pose a disease risk to agricultural animals. For example, APHIS requires that commercial birds, such as those imported for resale, breeding, or public display from countries other than Canada be quarantined until found free of evidence of communicable diseases of poultry. In addition, APHIS restricts the importation of certain animals from certain countries, such as cattle from countries where foot-and-mouth disease—a highly contagious viral disease of cloven-hoofed animals such as cattle, swine, and sheep—has been detected.

USDA's Office of Inspector General has performed several audits of APHIS's live animal import processes in recent years. For example, an August 2010 audit report identified weaknesses in the procedures APHIS used to handle animals destined for a quarantine facility, beginning with the precautions it took when receiving the animals into the country and continuing to the conditions at the quarantine facilities.¹³ According to the report, APHIS officials did not identify these weaknesses because they did not exercise sufficient oversight to ensure import and quarantine requirements were met. Instead, they relied on the experience and expertise of port staff and import center officials. In addition, a 2008 audit report on APHIS's controls over live animal imports indicated that APHIS relies on health certificates from the exporting country to certify the animal's health condition, age, and other import requirements.¹⁴ However, the report stated, APHIS does not have adequate processes to determine whether individual problems detected represent a larger systemic noncompliance that needs to be addressed by agency inspection personnel or the exporting country. The Inspector General recommended that APHIS establish an automated system of records to document and track problems with live imported animals and report these problems to key stakeholders. According to the Inspector General, APHIS planned to implement this recommendation and to have officials analyze data from the system each month and communicate with stakeholders regarding corrective actions. According to agency officials, APHIS began using this system—the Veterinary Services Process Streamlining System—in June 2010.

¹³U.S. Department of Agriculture, Office of Inspector General, *Audit Report: USDA's Controls Over Animal Import Centers*, Report No. 33601-11-Ch (Washington, D.C.: August 2010).

¹⁴U.S. Department of Agriculture, Office of Inspector General, Midwest Region, *Audit Report: USDA's Controls Over the Importation and Movement of Live Animals*, Report No. 50601-0012-Ch (Washington, D.C.: March 2008).

We found that the agency has screening processes in place for the imported animals it regulates that generally do not exist for other imported animals regulated by other agencies. For example, as table 1 shows, for cattle from Canada or Mexico, APHIS is to assess whether key diseases are present in the prospective exporting country, require a health certificate from a veterinarian in the exporting country, and visually inspect the cattle. In addition, for cattle not from Canada, Mexico, Central America, or the West Indies, APHIS requires that the cattle be quarantined to determine that they are free from disease. As the table shows, CDC and FWS do not generally have similar processes for the animals they regulate. (See app. V for additional types of imported animals and federal agency disease risk screening requirements.)

Table 1: Overview of Federal Agencies' Disease Risk Screening for Selected Types of Imported Animals

Type of imported animal	Regulating agency ^a	Disease testing at quarantine facility	Assessment by U.S. agency of disease presence in exporting country	Health certificate from exporting country	Visual inspection at U.S. ports of entry for disease
Cattle from Canada or Mexico ^b	APHIS	^c	APHIS	APHIS	APHIS
Commercial birds not from Canada	APHIS FWS	APHIS	APHIS	APHIS	APHIS
Rodents from Africa	CDC FWS	^c	CDC ^d	^c	FWS ^e
Rodents not from Africa	FWS	^c	^c	^c	^c
Amphibians	FWS	^c	^c	^c	^c

Source: APHIS, CDC, and FWS regulations and guidance and discussions with agency officials.

Note: FWS does not screen shipments of live animals for disease risk, with the exception of imported salmon. FWS requires that all carriers transporting wild mammals and birds to the United States have a certificate of veterinary medical inspection signed by a veterinarian.

^aCBP does not develop regulations for how to import an animal, so it is not included in the list of regulating agencies.

^bCattle from Mexico are tested for tuberculosis and brucellosis and checked for ticks prior to entry into the United States.

^cAPHIS, FWS, and CDC do not perform this screening process for this imported animal.

^dIn 2003, CDC restricted the importation of rodents from Africa based on concerns about monkeypox.

^eFWS inspects shipments of rodents from Africa to assess if the rodents are in compliance with CDC regulations.

Although APHIS does not regulate the importation of all live animals, most of the experts responding to our survey supported a broader role for APHIS. (See apps. VI and VII for more details on these experts and their responses to the survey.) Specifically,

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- Fifty-three of the 55 experts responding to our survey question about APHIS's statutory and regulatory framework indicated that changes are needed to prevent the importation of zoonotic and animal diseases.
 - Forty-eight of the 54 experts responding to a question in our survey strongly or somewhat supported giving APHIS the authority to consider the disease risk from wildlife as part of its existing risk assessment process.

In 2008, APHIS took a step toward broadening its oversight of live animal imports and becoming more responsive to emerging disease threats. It issued a long-term strategy—known as VS2015—that identifies key changes APHIS states are essential for the organization in 2015, including (1) an expanded veterinary health mission and (2) an increased focus on disease prevention, preparedness, detection, and early response activities.¹⁵ Specifically,

Expanded veterinary health mission. Consistent with the One Health concept, APHIS would expand its mission to address not only disease issues that affect agricultural animals but also those associated with zoonotic and wildlife diseases. According to the long-term strategy, APHIS plans to

- provide national leadership on the animal health component associated with public health,
- work with wildlife entities to address health issues that affect production agriculture and wildlife health, and
- lend its veterinary assets (e.g., laboratory networks, stockpiles, and response corps) and provide leadership in areas within its expertise (e.g., epidemiology, surveillance, planning, risk analysis, and modeling) when public health issues arise involving nonnative and wildlife species.

Increased focus on disease prevention, preparedness, detection, and early response activities. APHIS's goal is to reduce the frequency of disease outbreaks that affect animals by emphasizing prevention and preparedness. According to the long-term strategy, APHIS plans to

¹⁵U.S. Department of Agriculture, Animal and Plant Health Inspection Service, *VS2015: A Strategic Look at the Future of APHIS' Veterinary Services*, (October 2008).

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- design and direct comprehensive national animal health surveillance systems capable of finding foreign, emerging, and known diseases, and of supporting international reporting and trade verification requirements;
 - investigate potential emerging animal health threats and apply decision criteria to determine appropriate early responses;
 - when needed, extend its prevention and early response efforts to address animal health issues occurring outside of the United States, including identifying, prioritizing, planning, and directing APHIS-funded animal health surveillance and disease control or eradication programs carried out overseas; and
 - assist other countries as they develop their animal health capacities and provide leadership in the development of global animal health standards and methods.

In support of VS2015, APHIS formed an internal work team that, according to agency officials, is working on more comprehensive training of APHIS staff; better use of technology for collaboration, communication, and data tracking; and the engagement of industry as a more active partner.

CDC Has Regulations for Some Live Animal Imports but Does Not Prevent the Importation of Many Animals That May Pose a Risk of Zoonotic Diseases

CDC has regulations to prevent the importation of certain live animals that may pose a previously identified disease risk to humans for some diseases, such as rabies, but, according to agency officials, CDC's regulations are limited to specific species and regions and do not comprehensively prevent the importation of animals that are known to present a high risk of zoonotic diseases. That is, CDC restricts imports of some animals to prevent the introduction of specific diseases: nonhuman primates, to prevent the spread of tuberculosis, among other things; bats, to prevent the introduction of a variety of infectious pathogens, including *Ebola* virus; rodents from Africa, to prevent monkeypox; dogs and cats, to prevent zoonotic diseases in general and rabies in dogs; and certain turtles, to prevent *Salmonella*. In 2004, CDC banned the importation of birds from specified countries based on the threat that imports from such countries increased the risk that highly pathogenic avian influenza may be introduced into the United States. In 2009, CDC rescinded this ban. According to CDC's notice rescinding the ban, APHIS's import restrictions on birds and poultry adequately address risks to human health, and CDC will work closely with APHIS to monitor the international situation regarding highly pathogenic avian influenza.

Even though CDC has these restrictions, imported animals that present a zoonotic risk could enter into the United States. For example,

- While CDC generally requires proof of current rabies vaccination and the confinement of most dogs for up to 30 days after vaccination, it has received reports of large-volume shipments of puppies intended for immediate resale. According to agency officials, these animals often appear younger than the age on their accompanying documents, that is, they are too young to receive an effective rabies vaccination, and their vaccination status is questionable. In addition, according to agency officials, if CDC finds at ports of entry that a dog was not vaccinated for rabies, the agency allows it to enter, if the owner agrees to keep the dog confined until it can be properly vaccinated and then confined for an additional 30 days following vaccination to prevent the potential spread of rabies. However, state and local agencies that are to monitor confinement frequently lack resources to do so, according to CDC officials.
- CDC's regulations do not require rabies vaccinations for cats, which are highly susceptible to certain strains of rabies virus and can also transmit the infection to humans.

In addition, experts responding to our survey told us that CDC generally reacts only when a zoonotic disease problem arises. For example, since the 1970s it has been well known that monkeypox, a zoonotic disease, was endemic to Africa. However, according CDC officials, CDC did not have a process to conduct a risk assessment on the potential movement of monkeypox to the United States. Furthermore, they said, if such a risk assessment process had been in place, CDC might have restricted the importation of certain animals from Africa. After a 2003 outbreak of monkeypox in the United States, which sickened over 70 people, CDC restricted the importation of African rodents and other animals that may carry the monkeypox virus. However, CDC still allows the importation of rodents from countries outside of Africa, and these imported rodents are not subject to examination to determine whether they may be carrying zoonotic disease. Furthermore, according to experts responding to our survey and CDC officials, the importation of many other wildlife species is allowed with little or no screening for zoonotic disease risks. For example, mice, rats, and gerbils are not screened for zoonotic diseases, but the animal family that includes these animals has been found to harbor 21 zoonotic diseases.

CDC's regulation of live animal imports does not sufficiently protect against zoonotic disease risks, according to the experts responding to our

survey and scientific studies. According to 50 of the 55 experts responding to our survey question about CDC's statutory and regulatory framework, changes are needed. For example, 40 of the 51 experts responding to a question in our survey strongly or somewhat supported giving CDC the authority to use pre-import screening, such as a process that assesses disease risk by species and country and determines allowable imports on the basis of that assessment. CDC is considering other regulatory mechanisms that would allow CDC to suspend the entry of animal imports into the United States from designated foreign countries for public health reasons. Decisions to suspend animal imports from designated foreign countries would be based on the existence of a communicable disease in that country and the likelihood that allowing such imports would increase the likelihood of introducing disease into the United States. While these regulatory mechanisms are not specifically "pre-import screening," these mechanisms may serve the same purpose.

The CDC officials we interviewed acknowledged gaps in the agency's regulation of live animal imports for zoonotic diseases. To address this problem, in 2007, CDC issued an advance notice of proposed rulemaking on live animal imports to take steps to better prevent the introduction of zoonotic disease into the United States. The questions raised in the advance notice of proposed rulemaking include whether CDC should (1) establish a regulation that maintains a list of species or categories of high-risk animals for which importation is restricted (e.g., either prohibited from entry or subject to certain requirements), (2) apply these potential restrictions to broad taxonomic groupings (e.g., all rodents) or individual species, (3) issue these potential restrictions on a limited geographical basis (i.e., certain countries or regions) or more broadly, and (4) make rabies vaccination a requirement for entry into the United States for all dogs and cats. CDC is currently analyzing the comments that it received, revising the proposed language, and conducting economic analyses. CDC expects to publish a notice of proposed rulemaking in 2011.

Although FWS Has Regulations for Injurious Wildlife, It Does Not Restrict the Entry of Imported Wildlife That May Pose Disease Risks

Under the authority of the Lacey Act, FWS has implemented regulations to restrict imports of various types of nonnative live animals that have been identified as injurious wildlife because, for example, they could become invasive.¹⁶ However, FWS's regulations allow other types of wildlife to enter the United States with little assessment of the disease risk or health status of the animal, despite the possible presence of diseases in animals that are not endemic to the United States. For example, FWS does not restrict the importation of live amphibians or assess their risk for the presence of disease, creating a risk that the Bd fungus (*Batrachochytrium dendrobatidis*)—which causes a highly contagious disease that is potentially fatal to amphibians—will continue to enter and spread. The Department of the Interior has been petitioned by the Defenders of Wildlife to ban imports of live amphibians unless they are free of the Bd pathogen. As of September 2010, the department planned to gather information from the public before deciding whether to develop a regulation in response to this petition. Furthermore, the Lacey Act's process to ban the importation of injurious wildlife often requires too much time for the process to be effective, according to FWS officials and experts responding to our survey. On average, it takes about 4 years for FWS to identify a species or group of species as injurious wildlife. During this time, the animals in question continue to be imported into the United States.

In addition, according to FWS officials, FWS inspectors visually inspect some live wildlife imports, which may include observation for signs of disease, but they are not veterinarians, and they do not have expertise in detecting diseased animals. Furthermore, experts responding to our survey said that visual inspections have limited effectiveness in detecting diseased animals. They noted that it is often difficult to distinguish between a healthy, uninfected animal and an apparently healthy but infected animal, and even healthy animals can carry pathogens that could harm other species or humans but not harm the host.

In written comments to our survey, some experts reported that the Lacey Act should be amended to better prevent the importation of live animals that pose disease risks, while other experts said FWS should use its current authority to improve its regulations in this area. According to 52 of the 55 experts responding to our survey question about FWS's statutory

¹⁶FWS clarified the number of species listed as injurious under the Lacey Act as at least 231 species, including 100 species of walking catfish, 60 species of flying fox or fruit bats, 28 species of snakehead fish, and 19 species of mongoose.

and regulatory framework, changes are needed. Of the 53 experts who responded to our survey questions about specific potential changes, 44 strongly or somewhat supported giving FWS the authority to use pre-import screening, and 43 strongly or somewhat supported having FWS expedite the process for classifying species as injurious wildlife.

The Department of the Interior has taken preliminary steps that may address gaps in FWS's regulation of live animal imports. In addition to reviewing the petition to restrict amphibian imports, in January 2010, the Secretary of the Interior directed FWS to comprehensively review statutory authorities and regulations to address existing invasive species problems and to recommend potential tools to more effectively prevent the introduction of new invasive threats. According to Department of the Interior testimony provided at a March 2010 hearing on invasive species, FWS is reviewing several proposals to create a more proactive and comprehensive approach to preventing the spread of invasive species, including streamlining the evaluation process, examining gaps that the Lacey Act's injurious wildlife provisions leave in the listing process, revising its risk assessment process, and supporting improved regulatory and educational approaches.¹⁷

Agencies Have Collaborated to Meet Their Responsibilities, but Experts and Agency Officials Identified Barriers to Further Collaboration

APHIS, CBP, CDC, and FWS have collaborated to meet their responsibilities by taking actions in five areas—strategic planning, joint strategies, written procedures, leveraging resources, and sharing data—but experts responding to our survey and agency officials we interviewed identified barriers to further collaboration on live animal imports. As we have previously reported, agencies encounter a range of barriers when they attempt to collaborate with other agencies.¹⁸ Experts also identified the need for an entity to help the agencies overcome these barriers.

¹⁷On March 23, 2010, the House Committee on Natural Resources' Subcommittee on National Parks, Forests and Public Lands and Subcommittee on Insular Affairs, Oceans and Wildlife held a joint hearing, "How to Manage Large Constrictor Snakes And Other Invasive Species."

¹⁸[GAO/GGD-00-106](#).

Although Agencies Have Collaborated to Meet Common Goals, They Face Barriers to Additional Collaboration

Strategic planning. APHIS, CBP, CDC, and FWS have engaged in strategic planning that recognizes the need for joint efforts to reduce the risks of zoonotic and animal diseases from live animal imports. Specifically, according to APHIS's 2007-through-2012 strategic plan, it is working with CBP to reduce pest and disease threats at the borders. The strategic plan also states that the agency's risk assessment protocols must recognize the growing importance of zoonotic diseases and the need to work with public health agencies to reduce the risk of these diseases. Within APHIS, the program office of Veterinary Services' strategic plan—VS2015—states that Veterinary Services intends to meet future animal health challenges, such as emerging zoonotic and animal diseases, by 2015. According to this plan, Veterinary Services will expand its mission to include public health concerns connected to any type of animal. In addition, the plan states that Veterinary Services will work with wildlife entities to address health issues that affect the health of both agricultural animals and wildlife. Such collaboration would involve working with CDC and FWS. According to CBP's strategic plan for 2009 through 2014, CBP is actively pursuing new relationships with CDC to enhance CBP's response to public health threats. CDC officials told us that it has identified a strategic goal to enhance CDC's ability to prevent, detect, and respond to zoonotic diseases associated with the importation of live animals.¹⁹ Furthermore, according to FWS's law enforcement strategic plan for 2006 through 2010, increased coordination will be required with agencies (such as CDC and APHIS) that are responsible for addressing linkages between wildlife trade and the cross-border spread of zoonotic and animal diseases.

As we have previously reported, federal agencies can use their strategic and annual performance plans as tools to drive collaboration with other agencies and partners and establish complementary goals and strategies for achieving results.²⁰ While the agencies' strategic planning addresses some concerns about the disease risk from live imported animals, it does not specify how they will collaborate to address the risk of disease from live animal imports. Such specificity is difficult, according to several experts responding to our survey, in part because the agencies' program priorities are based on different missions, constituencies, and priorities. In particular, experts responding to our survey noted that because each of the agencies is focused on a different aspect of live animal imports, no

¹⁹The Department of Health and Human Services is currently reviewing public comments on its strategic plan.

²⁰[GAO-06-15](#).

single entity has comprehensive responsibility for the zoonotic and animal diseases risks posed by live animal imports. As one expert noted, the principal barrier to collaboration is agencies' "failure to take a broader view of the entire importation process," focusing instead on only those components of the process each agency controls under its statutory authority. As we have previously reported, when agencies do not have a compelling rationale, such as legislation, directives, or their perceptions of the benefits from collaboration, it is difficult to overcome differences in missions and priorities and to define and articulate a common outcome that is consistent with their respective agency missions.²¹ However, as the One Health concept recognizes, human and animal diseases are interconnected. In this regard, the federal agencies that are responsible for live animal imports appear to have a common goal—preventing the introduction and spread of zoonotic and animal diseases from live animal imports.

Joint strategies to reduce disease risk from imported live animals.

Several of the agencies we reviewed participated in joint strategies to directly or indirectly address risks posed by imported live animals. For example,

- APHIS, FWS, and the Department of Commerce's National Oceanic and Atmospheric Administration jointly developed the *National Aquatic Animal Health Plan* in 2008.²² Under this plan, the agencies are to prepare coordinated research and development strategies and budget recommendations to provide a framework for how the three agencies should develop programs for diseases that affect the health of aquatic animals, including finfish, crustaceans, and mollusks.²³ Activities addressed in the plan include (1) defining pathogens of national concern; (2) preventing, controlling, and managing pathogens or the diseases caused by those pathogens; (3) describing and implementing surveillance programs; and (4) describing strategies for continued outreach and awareness regarding national aquatic animal health strategies and the

²¹GAO-06-15.

²²National Aquatic Animal Health Task Force, *National Aquatic Animal Health Plan* (August 2008).

²³This plan was developed by a task force commissioned by the Joint Subcommittee on Aquaculture, which was authorized by the National Aquaculture Act of 1980. Its mission is to increase the overall effectiveness and productivity of federal aquaculture research, transfer, and assistance programs.

plan. As of July 2010, an advisory committee was being formed and a surveillance network had been established for viral hemorrhagic septicemia, a deadly infectious fish disease that affects 28 susceptible species of fresh and saltwater fish and is a growing threat in the Great Lakes region. While this plan is not fully launched, experts responding to our survey commented that the effort has strengthened collaboration among international, federal, and state partners. According to the Department of the Interior, this plan is a model for federal cooperation with regard to movement of aquatic animal diseases, and it will be broadened to include amphibians and reptiles in the future.

- The National Invasive Species Council's *2008-2012 National Invasive Species Management Plan*, which is the council's primary coordination tool for the prevention and control of invasive species, includes an objective to expand the coordination of invasive species programs and expenditures to leverage resources. It also directs the relevant agencies to update the budget for federal agencies' expenditures concerning invasive species. The council expects to report on the plan's progress in October 2010. APHIS, CBP, and FWS have participated in the council since its inception, while CDC has recently rejoined the group.
- The Aquatic Nuisance Species Task Force—an intergovernmental organization composed of 13 federal agencies, including FWS, APHIS, and the Department of Commerce's National Oceanic and Atmospheric Administration—is working to prevent and control aquatic nuisance species.²⁴ The task force was established by the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990.²⁵ In 2007, the task force developed a strategic plan for 2007 through 2012 that includes an objective for analyzing and evaluating rapid response plans, including plans for foreign animal disease events, to see how they could apply to reported introductions of invasive species. In addition, the task force and the National Invasive Species Council have identified various pathways by which pathogens can be introduced into the country. These pathways include container water in which aquatic animals are transported. According to FWS officials, this container water can contain pathogens

²⁴According to the task force, aquatic nuisance species are aquatic and terrestrial organisms, introduced into new habitats throughout the United States and other areas of the world, that produce harmful impacts on aquatic natural resources in these ecosystems and on the human use of these resources.

²⁵Pub .L. No. 101-646 104 Stat. 2761.

and, in some instances, importers may not disinfect the water before disposing of it.

- In 2009, APHIS, CBP, CDC, and several southern California animal agencies formed a task force to address issues with the importation of puppies, such as reducing and eliminating the illegal smuggling and selling of dogs that are underage, in poor health, or do not have the required health certifications.

These strategies are positive steps toward furthering the common goal of preventing disease risk from live animal imports. As we have previously reported, collaborating agencies need to establish strategies that work in concert with those of their partners or are joint in nature.²⁶ Such strategies help in aligning the partner agencies' activities, core processes, and resources to accomplish the common outcome. In addition, all 56 experts responding to our survey indicated that it is very or moderately important for the federal agencies to collaborate to develop a coordinated national strategy to better align activities, processes, and resources.

According to the experts responding to our survey, the agencies develop joint strategies to respond quickly to emergencies as they arise, but the agencies tend to develop joint strategies in reaction to an identified problem, rather than in anticipation of it. For example, one expert noted that the outbreak of monkeypox in 2003 spread to prairie dogs and subsequently to humans. The expert, as well as CDC officials, commented that although this outbreak was addressed promptly, it might have been avoided if officials had considered the risk of this disease and taken appropriate actions before an outbreak occurred.

Several studies and CDC officials also cited the need for a formal joint strategy to prevent the introduction of zoonotic and animal diseases, such as a comprehensive risk assessment system, and for responding to health risks, such as having plans and resources for early detection and response. Experts also commented that the development of such a system should focus on how live animal imports affect the health of humans, agricultural animals, and wildlife. Moreover, the 2005 National Academies of Sciences report noted that the animal health infrastructure does not have formal and comprehensive science-based risk analysis systems for anticipating potential challenges to animal health. In addition, experts responding to

²⁶ [GAO-06-15](#).

our survey commented that a comprehensive risk assessment system should be established on the basis of an analysis of imported animals to assess the threat that these animals pose. The experts stated that the components of this risk assessment system might include an analysis of the species' exporting country, diseases of concern, typical packaging and delivery times, and methods of shipment of concern, among other things. Suggested uses of the risk assessment include targeting passengers and cargo most likely to be carrying prohibited animals, and making decisions based on this information. According to experts responding to our survey, agencies could use this information to determine whether the importation of particular species from certain countries should be banned and which animals require pre-import screening, including the increased use of disease testing and quarantine at the ports of entry. For example, such risk assessment could be similar to APHIS's process, which assesses the disease risk within defined regions on a consistent and scientific basis and evaluates the animal health status of countries or regions requesting approval to import live animals into the United States.

Written procedures for ports of entry. The four agencies have written procedures to follow when working with other federal agencies at ports of entry. In particular, three of the agencies—APHIS, CBP, and FWS—signed a memorandum of understanding (MOU) on forfeiture that lays out the specific roles and responsibilities each has for seizing, quarantining, and disposing of birds that are brought into the United States in violation of laws or regulations. In addition, APHIS and CBP signed an MOU that outlines the agencies' roles for entry and inspection of the imported animals that APHIS regulates. Two of the four agencies—APHIS and CBP—also have other types of written procedures, while CDC is developing guidance, according to CDC officials. Specifically,

- APHIS has guidance that outlines the procedures and responsibilities that its division of Veterinary Services is to follow with CBP in handling legally and illegally imported pet and performing birds arriving as passenger baggage, from when the birds arrive at the port of entry until they are released to enter into the United States or refused entry. For example, the guidance specifies which birds are eligible for entry and which agency is responsible for (1) transferring birds to a quarantine station and (2) obtaining supplies for handling the birds.
- CBP has a standard operating procedure that informs its staff at ports of entry of procedures to follow in handling shipments of APHIS-regulated live fish. Specifically, if the species has been approved by APHIS for import, CBP staff are to allow it to proceed; if the species has not already

been approved, then the staff are to hold the shipment for Veterinary Services; if the species is not regulated by APHIS, CBP is to hold the shipment for USDA's Agricultural Marketing Service, which administers programs that facilitate the marketing of U.S. agricultural products.

- CBP and APHIS have written guidance for coordinating their processing of live animals arriving at Canadian land border ports of entry.
- CBP and APHIS have written procedures for the importation of livestock at four Mexican land border ports of entry and certain cattle at all Mexican land border ports of entry.
- CBP has written procedures to help its port staff make appropriate referrals to other agencies.
- According to CDC officials, the agency is developing internal standard operating procedures to distribute to its staff at ports of entry on CDC-regulated animals. The officials said the first such guidance will be on how to handle imported turtles, although the officials did not know when this guidance would be issued.

While the agencies have developed some written procedures, officials told us that they do not have written procedures for all animal imports. In the absence of written procedures, agencies collaborate informally at ports of entry on how to handle incoming shipments. Specifically, according to FWS headquarters officials we spoke with, FWS and CDC port officials regularly coordinate on physical inspections of live animals they both regulate, such as nonhuman primates, turtles and tortoises, and bats. For example, according to CBP officials, when turtles are imported into the United States, CBP usually contacts FWS inspectors. According to FWS officials, if the type of turtle being imported is not banned, FWS may contact CDC or APHIS for inspection or further action if it believes there is potential for another type of violation, such as undersized turtles that pose a risk for *Salmonella* (CDC) or turtles with ticks that may have Heartwater infection (APHIS), a potentially fatal disease to cattle. In addition, officials at ports of entry from CBP and APHIS told us that they usually have access to an official from another agency to speak with if questions arise about a shipment. For example, CBP officials at several ports told us they contact APHIS, CDC, and FWS officials informally through e-mails, telephone calls, and in person in order to verify that procedures are being followed for live animal imports they regulate. Finally, some experts responding to our survey noted that officials at some ports have cultivated effective collaborative relationships.

However, we have previously reported that by using informal coordination mechanisms, agencies may rely on relationships with individual officials to ensure effective collaboration and that these informal relationships could end once personnel move to their next assignments.²⁷ Without written procedures, agencies' roles and responsibilities are not clearly defined. We reported that agencies can strengthen their commitment to work collaboratively by articulating their roles and responsibilities in formal documents to facilitate decision making. Such formal documents can include MOUs, interagency guidance, or interagency planning documents, signed by senior officials in the respective agencies. These documents can clarify which agencies will be responsible for particular activities, and how they will organize their joint and individual efforts.

Experts responding to our survey generally agreed that uncertainty about agencies' roles and responsibilities for imported animals is a barrier, particularly for species that are (1) not regulated for disease risk by any agency or (2) regulated by more than one agency. For example, several of the experts noted that federal regulations do not address the risk to human and animal health posed by the importation of most nonnative wild animals, such as non-African rodents, and that where regulations do allow for the import of nonnative wild animals, no disease assessment is made. In addition, the agencies do not have written procedures for all species that are regulated by more than one agency, such as reptiles. For example, APHIS and FWS do not have a written procedure to coordinate their shared responsibilities for regulating reptiles—which are a source of *Salmonella* infection in humans and also carry disease-causing parasites.

Leveraging resources. APHIS, CBP, CDC, and FWS have taken steps to leverage resources—staff and funding—to enhance their ability to address disease risks associated with live animal imports. For example,

- APHIS has provided CDC headquarters with a liaison to represent USDA's interests on a broad range of topics, including live animal imports, and shares information with CDC on zoonotic diseases. CDC officials stated that they are currently exploring the possibility of establishing a DHS liaison.

²⁷GAO, *National Security: Key Challenges and Solutions to Strengthen Interagency Collaboration*, [GAO-10-822T](#) (Washington, D.C.: June 9, 2010).

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- APHIS, FWS, the U.S. Coast Guard, and the Department of Commerce’s National Oceanic and Atmospheric Administration worked together to launch two national campaigns designed to help the public understand its role in preventing the introduction and spread of zoonotic and animal diseases. The first campaign, called “Stop Aquatic Hitchhikers,” is directed toward the public who engage in aquatic activities to, among other things, prevent the spread of invasive species, zoonotic diseases, and animal pathogens. The second campaign, “Habitattitude,” is directed toward, among others, pet owners to promote environmentally friendly behaviors, such as not releasing nonnative pets into the environment.

While the agencies have worked together to leverage their resources, they do not separate the amount of funding and level of staff for live animal imports from other agency activities.²⁸ As a result, they may not be able to determine whether their funding and staff are sufficient, and the extent to which they could be leveraged in a collaborative effort. Furthermore, the four agencies vary significantly in the extent to which they have resources for regulating live animal imports, according to agency officials and experts responding to our survey. For example, APHIS has staff who perform services—such as review of information provided by foreign governments—to support assessments of the risk of live animal imports into the United States. In addition, APHIS has quarantine facilities that inspect and test imports for diseases prior to an animal being released into the United States. In contrast, FWS does not have similar resources for assessing risk and has no quarantine facilities. The experts responding to our survey also noted that resource constraints, such as limited facilities and staff, make it difficult for the four agencies to devote enough time to collaboration when they face time constraints in completing daily tasks. The experts responding to our survey noted that under these conditions it is challenging for the agencies to collaborate.

As we have previously reported, collaborating agencies should identify the human, information technology, physical, and financial resources needed to initiate or sustain their collaborative effort.²⁹ By assessing their relative

²⁸According to the Department of the Interior, such an evaluation has occurred at the direction of the Secretary of the Interior. FWS was directed to comprehensively review its statutory authorities, regulations, and processes under the injurious wildlife provisions of the Lacey Act, and recommendations are moving presently through the FWS and department approval processes.

²⁹[GAO-06-15](#).

strengths and limitations, collaborating agencies can look for opportunities to obtain additional benefits that would not be available if they were working separately. Forty-nine of the 54 experts who responded to a survey question about leveraging resources strongly or somewhat supported leveraging APHIS resources to assist FWS in preventing the importation of animal diseases, and 48 indicated that APHIS resources should be leveraged to assist CDC in preventing the importation of zoonotic diseases. In addition, according to APHIS officials we spoke with, APHIS has expertise that could assist FWS and CDC in assessing disease risks in other countries. Furthermore, 50 of 56 experts responding to our survey reported that it is very or moderately important for federal agencies to collaborate to develop a plan to maximize existing resources.

Data sharing. As we have reported, agencies can facilitate collaboration by coordinating data information systems for carrying out shared objectives.³⁰ According to CBP officials, the agency is developing the International Trade Data System (ITDS) within the Automated Commercial Environment (ACE) system. ACE will serve as a Web-based portal for exchanging trade information among federal agencies that share the responsibility for facilitating international trade.³¹ Currently, APHIS and FWS can access data, such as importer data and other related information, but cannot enter information into the system. In its *2009 Report to Congress on the International Trade Data System*, CBP stated that agencies participating in ITDS, including APHIS, CDC, and FWS, have formed working groups to ensure, among other things, that data elements are identified and specified to the detail necessary in shipment information. For example, according to agency officials, a working group of agencies that use data on or oversee imported eggs was formed. While agencies do not yet have access to an integrated data system, agency officials and experts responding to our survey identified efforts to share data. For example, FWS has shared its data with CDC to identify possible health risks from imports of nonnative wildlife. In addition, according to APHIS officials, the agency is beginning to implement terminology in its

³⁰[GAO-06-15](#).

³¹Section 405 of the Security and Accountability for Every Port Act of 2006 (SAFE Port Act), Pub. L. No. 109-347, 120 Stat. 1884, requires the Secretary of the Treasury to oversee the establishment of a comprehensive information system, and requires a report to be submitted to the Committee on Finance, United States Senate, and Committee on Ways and Means, House of Representatives, each fiscal year. The most recent report was submitted in September 2009.

trade database that is consistent with CBP's so that the agencies can share information about incoming shipments.

According to CBP officials, APHIS, CDC, FWS and other agencies will ultimately be able to enter and retrieve information using the ACE system. However, CBP officials do not have a target date for when APHIS, CBP, CDC, and FWS would have full operational access to ACE, and they stated that a unified data system has been a goal since 1995; ITDS has been ongoing since 2006. In addition, while the agencies participating in ITDS have formed workgroups for some types of trade data, APHIS, CBP, CDC, and FWS have yet to jointly determine which data elements are needed for them to effectively oversee live animal imports, according to CBP officials. As a result, it is unclear whether the data in the completed system will meet interagency needs.

Until ITDS is completed, the agencies responsible for live animal imports continue to collect and rely on data that are not easily shared. Experts responding to our survey pointed out that the agencies have not linked their data systems so that they can share information on live animal shipments, as well as track violations. In particular, APHIS and FWS maintain separate databases that contain information on shipments of animals that they regulate, and CBP maintains a database on all imports, including live animals. However, the three databases do not interface, so that agencies regulating the same shipment of live animals can have access to the same information at the same time.

Experts Responding to Our Survey Identified the Need for an Entity to Help the Agencies Overcome Barriers to Collaboration

The experts responding to our survey, including federal and state agency officials, also generally pointed to the need for some formal entity to help overcome barriers to achieving their common interest in preventing the importation of animals that may be carrying zoonotic or animal diseases. For example, one expert observed that such an entity could help the agencies identify gaps and inconsistencies in the overall regulation of live animal imports for zoonotic and animal diseases and enable the agencies to collaborate regularly, and 53 of 56 experts responding to our survey reported that it was very or moderately important for the agencies to collaborate to identify gaps in regulations related to live animal imports. We asked the experts about the extent to which they would support the creation of a workgroup to help the federal agencies collaborate in preventing the importation of animals that may be carrying zoonotic and animal diseases. Most of the experts responding to this question—52 of 55—strongly or somewhat supported the creation of such a workgroup. (See app. VII for the experts' detailed responses.)

APHIS, CDC, and FWS Have Reported Some Information on Their Performance on Live Animal Imports

APHIS and FWS routinely report information on their performance to oversee the importation of live animals, and CDC has reported performance information for one species. CBP does not report any performance information on live animal imports. As we have previously reported, agencies can use performance information to make decisions oriented toward improving results.³² In that same report, we stated that federal managers can use performance information to identify performance problems and look for solutions, develop approaches that improve results, and make other important management decisions, including those that affect future strategies, planning and budgeting, identifying priorities, and allocating resources.

APHIS. APHIS has reported performance information on live animal imports that aligns with the goals it established in its strategic plan for its Veterinary Services program office.³³ Specifically, APHIS measured progress on its performance goal of protecting the United States from the occurrence of adverse animal health events. For example, APHIS reported that in fiscal year 2009 it conducted risk assessments on the animal health status of at least 14 foreign countries that have been denied access to U.S. import markets. In fiscal year 2009, APHIS conducted risk analyses in the European Union for the presence of exotic Newcastle disease, highly pathogenic avian influenza, and classical swine fever—a highly contagious virus that can cause high mortality rates in swine populations. Additionally, APHIS reported that in fiscal year 2009 it did not have any disease outbreaks associated with imports of animals from foreign regions that APHIS has reviewed for animal health status.

CBP. CBP has not reported any performance information on live animal imports. As we previously noted, however, it has agencywide and field operations strategic plans that recognize the agency's role in preventing the importation of zoonotic and animal diseases.³⁴

CDC. In general, CDC has not developed comprehensive performance information on live animal imports. However, CDC has reported on mortality rates for one live animal import—nonhuman primates. In its 2008

³²GAO, *Managing for Results: Enhancing Agency Use of Performance Information for Management Decision Making*, GAO-05-927 (Washington, D.C.: September 2005).

³³APHIS, *Veterinary Services Strategic Plan, FY06-FY11*.

³⁴CBP, *Strategic Plan FY2009-2014* (Washington, D.C.: July 2009) and CBP, *Field Operations Strategic Plan FY2007-2011* (Washington, D.C.: September 2006).

annual performance report, CDC reported that this mortality rate was less than 1 percent for fiscal years 2005, 2006, 2007, and 2008, down from about 20 percent before 1989. CDC attributed this improvement to its instituting facility inspections and new infection control requirements. In that same report, CDC reported on its performance goal of maintaining low mortality in nonhuman primates imported to the United States for science, exhibition, and educational purposes to, for example, reduce the potential exposure of humans to zoonotic diseases, such as Ebola and tuberculosis.³⁵

FWS. FWS reported performance information dealing with live wildlife imports in its 2008 operational plan. In this plan, FWS reported on the number of injurious wildlife interdicted at international ports of entry and land borders (270), number of shipments that contained injurious wildlife (54), the number of wildlife shipments physically inspected (31,000), and the number of interdicted wildlife shipments (4,000). This information supports FWS's performance goal of preventing the unlawful import, export, and interstate commerce of foreign fish, wildlife, and plants in its law enforcement strategic plan for 2006 through 2010.³⁶

Conclusions

With the growth in emerging zoonotic diseases, as well as the risk of other animal diseases in an increasing global marketplace, federal agencies play an increasingly important role in preventing the introduction of these diseases into the United States. However, as we found, gaps in the statutory and regulatory framework across federal agencies increase the risk that some live animal imports will carry diseases into the United States, as was the case for African rodents carrying monkeypox in 2003. Of the three agencies responsible for regulating live animal imports for disease risks—APHIS, CDC, and FWS—only APHIS comprehensively assesses an animal's disease risk or health status, and APHIS has issued a strategy for expanding its role in overseeing nonagricultural animals. In contrast, CDC and FWS have gaps in their oversight of disease risks from live animal imports. CDC's regulations direct its focus to particular species or diseases, and the agency does not have a process for identifying risks from some emerging diseases that could be imported in live animals. FWS generally does not restrict the entry of imported wildlife that may pose disease risks and does not generally assess the disease risk or health

³⁵CDC, *FY2008 Centers for Disease Control and Prevention Annual Performance Report*.

³⁶FWS, *Office of Law Enforcement Strategic Plan 2006- 2010* (December 2005).

status of these animals. Experts responding to our survey indicated that changes are needed in FWS's statutory authority, its regulations, or both. Recognizing such issues, APHIS, CDC, and FWS have separately proposed additional actions to better protect against disease risks from live imported animals, including actions that may involve pre-import screening.

The four agencies we reviewed have collaborated to meet their responsibilities to some extent. They have recognized the need to work together in their strategic planning, formulated some joint strategies, developed some written procedures for collaboration, leveraged resources in some situations, and shared some data on live animal imports. However, experts responding to our survey and agency officials identified barriers to further collaboration in each of these areas. These barriers—such as different program priorities and unclear roles and responsibilities—are inherent when multiple agencies have related responsibilities. Furthermore, the agencies have largely incompatible data systems, and it appears that some time will pass before these issues are resolved or ACE is able to offer a conduit for data sharing among APHIS, CBP, CDC, and FWS. Because the agencies have not determined which data they will need, it is also unclear whether the data elements in the latest version of ACE will meet interagency needs. While these barriers pose a challenge, the agencies still have a common interest in preventing the introduction of diseases from live animal imports. Recognizing this common interest, the experts responding to our survey, including federal and state officials, reported that increased collaboration through some type of formal entity, such as a workgroup, is needed to help overcome these barriers. Furthermore, the experts and the National Academies of Sciences noted that the absence of a risk assessment system for comprehensively addressing disease risks from live animal imports could result in zoonotic and animal diseases entering the United States.

Recommendations for Executive Action

To better prevent the importation of live animals carrying zoonotic and animal diseases and improve the responsible agencies' collaboration, we recommend that the Secretaries of Agriculture, Health and Human Services, Homeland Security, and the Interior take the following two actions:

- Develop and implement, in coordination with the relevant federal agencies, a strategy for their collaboration in preventing the importation of animals that may be carrying zoonotic and animal diseases into the United States. This strategy should help the agencies

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- Identify and resolve differing program priorities so that the agencies can work collaboratively to ensure that live animal imports posing a risk of zoonotic and animal diseases do not enter the United States. Such efforts could include collaborative methods for prevention, such as a comprehensive risk assessment system for live animal imports.
 - Lay out individual agency roles and responsibilities for all live animal imports, including how a collaborative effort will be led.
 - Identify resources dedicated to live animal imports and leverage these resources to the extent possible to support the agencies' efforts.
 - Examine ways to systematically share data on shipments of live animal imports that are regulated by more than one agency until ACE is able to offer data-sharing capabilities to each agency.
 - Explore the need for any additional legislative or executive authority to develop and implement this strategy such as the authority to establish a coordinating entity (e.g., an interagency workgroup).
 - Jointly determine, in collaboration with CBP, the data elements that APHIS, CDC, and FWS will need ACE to contain, so that the agencies can effectively oversee all live animal imports.

Agency Comments and Our Evaluation

We provided a draft of this report to USDA, the Department of Health and Human Services, DHS, and the Department of the Interior for their review and comment. In their written comments, USDA, DHS, and the Department of the Interior generally agreed with our findings and recommendations. The Department of Health and Human Services only provided technical comments, which we included as appropriate.

USDA agreed with our recommendations and commented that it appreciates our emphasis on increasing the level of collaboration among federal agencies. USDA also commented that it believes a key component to successfully leveraging the agencies' strengths lies in finding new ways to approach these opportunities and that it therefore supports the formation of an interdepartmental steering committee for the oversight of animal imports as soon as possible. USDA also stated that in collaboration with the committee and other departments, it would seek to determine the need for creating additional authority, clarify the scope of existing authority, and implement current authority more efficiently through expanded memorandums of agreements or other interdepartmental cooperative

measures. Furthermore, USDA stated that it would report to us on the components of a successful strategy for addressing our recommendations. USDA's written comments are presented in appendix VIII.

DHS also agreed with our recommendations and stated that it would work with the other departments to gauge interest in development of a joint strategic implementation plan. In addition, DHS described its existing collaborative efforts with APHIS, CDC, and FWS, with respect to live animal import processes and agencies' data needs. DHS's written comments are presented in appendix IX, and we incorporated DHS's technical comments as appropriate.

The Department of the Interior agreed with our findings and recommendations. In addition, the department provided the following comments:

- While GAO asked experts whether a workgroup should be created to help federal agencies collaborate, GAO did not consider whether an existing body could perform this function. The use of an existing interagency body to serve as a coordinating entity to help federal agencies prevent the importation of animals that may be carrying zoonotic and animal diseases was not mentioned in experts' responses to the first round of our survey, which was the basis for asking this question. Placing a coordinating entity for live animal imports within an existing interagency body may help avoid duplication of effort. If the agencies determine that it is appropriate to place the coordinating entity for live animal imports within an existing interagency body, this response would be consistent with our recommendation.
- The report does not refer to possible confusion that may be caused by multiple agencies having related authorities, and the report could have provided more information on agency outreach to the public. However, as the department noted, the issue of public outreach was not a central question of our review.
- The report should emphasize the National Aquatic Animal Health Plan as a model for federal cooperation with regard to movement of aquatic animal diseases. We believe the report recognizes this plan, stating that it is an example of federal agencies' joint strategies to reduce disease risks from live animal imports, and provided more information on the plan's relevant efforts.

The Department of the Interior's written comments and our responses are presented in appendix X.

We are sending copies of this report to the appropriate congressional committees; the Secretaries of Agriculture, Health and Human Services, Homeland Security, and the Interior; the Director, Office of Management and Budget; and other interested parties. The report is also available at no charge on GAO's Web site at <http://www.gao.gov>.

If you or your staff have any questions about this report, please contact me at (202) 512-3841 or shamesl@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. Key contributors to this report are listed in appendix XI.



Lisa Shames
Director, Natural Resources
and Environment

Appendix I: Objectives, Scope, and Methodology

This report examines the (1) potential gaps in the statutory and regulatory framework governing live animal imports, if any, that may allow the introduction and spread of zoonotic and animal diseases; (2) extent to which the U.S. Department of Agriculture's Animal and Plant Health Inspection Service (APHIS), Department of Homeland Security's Customs and Border Protection (CBP), Department of Health and Human Services' Centers for Disease Control and Prevention, (CDC), and Department of the Interior's Fish and Wildlife Service (FWS) collaborate to meet their responsibilities and face barriers, if any, to collaboration; and (3) the performance information that the responsible agencies have reported on live animal imports.

To identify potential gaps in the statutory and regulatory framework, we reviewed relevant statutes, including the Animal Health Protection Act, the Public Health Service Act, the Lacey Act, and the Endangered Species Act of 1973; the agencies' implementing regulations; and agency documents on the procedures employed to regulate the importation of live animals from APHIS, CBP, CDC, and FWS. We interviewed officials from these agencies at agency headquarters and ports of entry. Using information from interviews of agency officials and agency documents, we compared the level of inspection and review used by each of the agencies to regulate the importation of various types of animals, including mammals, birds, fish, and reptiles. In addition, we reviewed scientific studies on zoonotic and animal diseases, including studies by the National Academies of Sciences.

We also reviewed APHIS and FWS data on the number, type, and exporting country of all imported animals regulated by these two agencies that entered the United States for fiscal years 2005 through 2009. For the APHIS and FWS data, we analyzed documentation related to the data and worked with agency officials to identify any potential data problems and determined that the data were sufficiently reliable for the purposes of providing background information in this report. We analyzed the APHIS and FWS data to determine the number of animals imported each fiscal year, the countries from which animals are most frequently imported, and the purposes for which animals are most frequently imported.

To examine the extent to which the agencies collaborate to meet their responsibilities and face barriers, if any, to collaboration, we reviewed strategic plans, memorandums of understanding, standard operating practices, and other policies and protocols from each of the four agencies. We also reviewed joint strategies developed by interagency working groups, such as the National Invasive Species Council's management plan and the National Aquatic Animal Health Plan. We interviewed agency

headquarters officials and agency officials at ports of entry, including airports in Atlanta, Georgia; Baltimore, Maryland; Los Angeles, California; New York, New York; and Washington, D.C.; and the Otay Mesa, California, and San Ysidro, California, land border crossings between California and Mexico, on ongoing and planned efforts for coordination. We obtained documentation on the allocation of staff resources. Finally, we assessed the agencies' collaboration efforts according to practices we identified that can help enhance and sustain collaboration among federal agencies.

To help address the first two objectives, we conducted a two-round survey to identify (1) potential gaps in the current statutory and regulatory framework that may allow for the introduction of and spread of zoonotic and animal diseases, (2) how well the responsible federal agencies work together to meet their responsibilities, and (3) potential barriers to collaboration. The process we followed is based on GAO guidance for identifying experts for panels or other work requiring expertise in a specific area. We identified potential experts on disease risk posed by live animal imports who had primary employment responsibilities related to or dependent on live animal imports, authored peer-reviewed papers, presented at professional conferences, provided testimony on the subject matter to Congress, or were recognized by their peers as experts on live animal imports. We then selected experts from federal and state government, academia, nongovernmental organizations, and industry to obtain a broad spectrum of views. We conducted pretests with several survey recipients prior to distributing both surveys. The goals of the pretests were to ensure that (1) the questions were clear and unambiguous and (2) terminology was used correctly. The first round of the survey consisted of five open-ended questions (questions that solicit additional information) in which experts provided their opinions on gaps in the current statutory and regulatory framework, how well the responsible federal agencies work together to meet their responsibilities, and potential barriers to collaboration. In the first round, we received responses from 33 out of the 39 experts contacted, resulting in a response rate of about 85 percent.

We performed a content analysis of the responses to the open-ended questions in order to compile a list of gaps in the statutory and regulatory framework, corrective actions to address those gaps, the effectiveness of federal agencies' collaboration, and barriers to federal agencies' collaboration mentioned by the experts. We used this list to construct the second round of survey questions. These were primarily closed-ended (questions with a set of answers to choose from). We expanded our second round of the survey to include additional experts recommended by

those responding to our first round and other experts. Of the 64 experts we contacted, 56 provided responses, resulting in a response rate of about 88 percent in the second round.

The first round of the survey was conducted from January through February 2010, and the second round was conducted from April through May 2010. To the extent possible, we followed up with experts to clarify their responses. The questions and aggregated responses are presented in appendix VII. Responses to the survey express only the views of the experts.

To examine what performance information the responsible agencies report on live animal imports in their planning and reporting documents, we reviewed strategic plans, operational plans, mission statements, and annual performance plans and reports from APHIS, CBP, CDC, and FWS. Review of these documents allowed us to determine the extent to which these agencies set out performance goals, established measures to assess performance toward achieving those goals, and reported on the effectiveness of their efforts for activities directly involving live animal imports. We analyzed the extent to which each of the four agencies used performance objectives and measures and reports on the effectiveness of these activities for live animal imports.

We conducted this performance audit from August 2009 through October 2010, in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Appendix II: Agencies' Processes for Overseeing Live Animal Imports

This appendix describes the processes that the U.S. Department of Agriculture's Animal and Plant Health Inspection Service, Department of Homeland Security's Customs and Border Protection, Department of Health and Human Services' Centers for Disease Control and Prevention, and Department of the Interior's Fish and Wildlife Service use for processing live animal imports for entry into the United States.

APHIS

APHIS restricts the importation of live animals that it has determined may pose a disease risk to agricultural animals, such as cattle, horses, poultry, sheep, and swine. APHIS has developed import processes that depend on the level of risk associated with either the type of animal or country of export. APHIS has a memorandum of agreement with CBP whereby CBP refers live animal shipments to APHIS port veterinarians for inspection. APHIS port veterinarians visually inspect all applicable live animal shipments and review the import documentation, which may include a declaration of importation, vaccination records, and health certificates from a licensed veterinarian in the country of export. APHIS requires that most imported animals that it regulates be accompanied by a health certificate. A licensed veterinarian in the country of export inspects the animals and then signs the health certificate certifying the health status of the animals and whether U.S. requirements are met. The most common type of certification states that the animals to be imported were inspected and determined to be free of communicable disease.

If the animals do not pass inspection, the animals are either quarantined and then reinspected or are refused entry. For example, if cattle from Mexico fail a visual inspection for tick-free status, they are dipped and quarantined for 10 to 14 days and then presented for a second inspection. If ticks are found during the second inspection, the cattle will be rejected, branded as rejected, and sent back to Mexico. For those animals that require quarantine, such as horses, importers are required to reserve space at either an APHIS-managed animal import center or an APHIS-approved private quarantine facility. During the quarantine, the animal undergoes disease testing. Animals that test positive for a regulated disease are refused entry into the United States.

APHIS has established processes for specific animals and exporting countries. For example, for imports from Canada and Mexico, APHIS has established streamlined processes, such as eliminating requirements for permits or quarantine for some animals. Additionally, commercial birds—birds that are imported for resale, breeding, or public display—entering the United States through a land border from Canada are not required to

have a permit or undergo quarantine, as long as they are accompanied by a veterinary health certificate from a Canadian government veterinarian. Commercial birds not imported from Canada are required to be quarantined and tested for avian influenza. In some instances, APHIS restricts the importation of animals based on risk. For example, APHIS restricts the import of commercial birds from countries with highly pathogenic avian influenza and cattle from countries with foot-and-mouth disease. An example of species-specific regulation can be found with imports of fish susceptible to Spring viremia of carp; such species include the common carp and goldfish. APHIS checks that these imports have the required documents, visually checks the shipments to ensure that they are not leaking or emitting an atypical odor, and assesses the animals' disease status if the shipment is chosen for inspection.

APHIS relies on a manual process to account for and track the movement of the live animal imports from CBP to APHIS inspection at the border and to their final destination. According to agency officials, APHIS is developing an automated data system, the Veterinary Services Process Streamlining System, which is expected to replace the existing manual, paper-oriented process and will track live animal imports, exports, interstate movement of animals, and veterinary accreditation. According to APHIS officials, the new system became operational in June 2010 and will be able to track live animal imports in calendar year 2011.

CBP

CBP assists APHIS, CDC, and FWS in enforcing their import regulations, has the primary authority to inspect imports, and seeks to interdict shipments of contraband and the illegal importation of live animals and other products while facilitating the flow of legal trade and travel. If there is a problem with a particular shipment, CBP will levy the appropriate fines and penalties.

CBP requires importers to file entry documents that describe the merchandise, quantity, value, and exporting country, among other things, and a Harmonized Tariff Schedule classification, which is a schedule of tariffs associated with individual products. All entry documents must be filed before the imported goods are allowed to be released into U.S. commerce. For faster release, importers or their brokers may provide CBP with pre-arrival notification of an incoming shipment by submitting information on the shipment locally or electronically submitting information on the shipment to either CBP's legacy computer system, the Automated Commercial System, or the Automated Commercial Environment, the agency's replacement system. CBP screens the incoming

information through its information systems to verify if the shipment meets the criteria or requires further examination or inspection. According to agency officials, if CBP then determines that further inspection is needed by APHIS, FWS, or CDC, CBP will hold the shipment, provide minimal custodial care, and contact the relevant agency. According to agency officials, CBP holds the shipment until an agency representative of the other government agency is available to inspect and release it. According to agency officials, if an agency representative is unavailable, then CBP denies entry of the shipment.

CDC

CDC restricts the importation of live animals that it has determined pose a risk to public health and bans the importation of certain animals. All live animal imports on which CDC has placed import restrictions are to be visually examined by the inspecting personnel to ensure that the animal has no obvious signs of infectious diseases. Dogs and cats that show signs of infectious diseases are to be examined, tested, or treated by a licensed veterinarian at the owner's expense. According to agency officials, other CDC-regulated animals that show signs of infectious diseases, such as nonhuman primates, are inspected at an import facility. For many of the animal imports restricted by CDC, the agency requires a permit for importation. Imports that are restricted to these purposes and require a permit include African rodents, civets, live bats,¹ and shipments of more than six turtles with a shell length of less than 4 inches. For nonhuman primates only, CDC requires that persons or facilities importing such animals be registered with CDC. If the shipment has the required documents, it is released to a registered importer. Nonhuman primates are quarantined for 31 days after entry on the importer's premises. No permit is required for the importation of dogs and cats. Generally dogs greater than 3 months of age from countries where rabies is present must have a valid certificate of vaccination against rabies signed by a licensed veterinarian showing that the dog was vaccinated greater than or equal to 30 days prior to import. If the dog is more than 3 months old and does not have a vaccination certificate, the dog may be admitted if the owner agrees to confine the dog until vaccination, vaccinate the dog within 4 days upon arrival at the ports of entry, and then confine the dog for an additional 30 days following vaccination. If the dog is more than 3 months old and has a

¹Imported live bats do not have a specific regulation. However, CDC regulates bats as a vector for infectious diseases. CDC defines a vector as an animal that conveys or is capable of conveying infectious agents from a person or animal to another person or animal.

certificate showing a vaccination done less than 30 days prior to arrival, the dog may be admitted if the owner signs an agreement to confine the dog for the balance of 30 days. If the dog is less than 3 months old, the dog may be admitted if the owner signs an agreement to confine the dog until it is 3 months old, and then have it vaccinated and confined for an additional 30 days. Confinement is defined as restricting the animal to a building or other enclosure, in isolation from other animals and people, except for contact necessary for its care. If the dog is allowed out of the enclosure, the owner must muzzle the dog and use a leash. After agreeing to these conditions, the dog is released and the agreement is forwarded to a CDC quarantine station. The rabies vaccination requirement does not apply to dogs that have been exclusively in a rabies-free area for at least 6 months immediately preceding arrival or since birth. Cats are only required to pass visual inspection.

FWS

FWS has restrictions on the importation of certain wildlife. Specifically, FWS restricts the importation of injurious wildlife and threatened or endangered species and related species for which international trade is regulated under international agreements. According to agency officials, FWS inspectors work with public health officials and other federal inspectors at ports of entry to enforce wildlife regulations and ensure the safety and legality of wild animal imports. According to agency officials, FWS inspectors coordinate with the other agencies to ensure that the requirements for animals that are jointly regulated by FWS and APHIS and/or CDC have been met, such as APHIS prohibitions on hedgehogs that can transmit foot-and-mouth disease or CDC inspection requirements for small turtles. Importers of wildlife shipments generally must provide FWS with a 48-hour notice of the shipment's arrival. Commercial importers of wildlife must be licensed by FWS.

According to agency officials, the following processes occur at the port of entry. The shipment is declared at the port of entry, and FWS reviews the accuracy and consistency of the required documents, which depend on species and can include declaration forms, permits, import/export licenses, invoices, and packing lists. Following documentation review, FWS inspectors then decide if a physical inspection is required. Common reasons for inspecting shipments include the type of live animal, exporting country, importer history, intelligence on the shipment, outcome of documentation review, or random selection. If the shipment fails a physical inspection, FWS either seizes the animals with the violations and releases the remainder of the shipment or seizes the entire shipment, based on the type of animal or violation. If the shipment passes physical

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inspection and has the required documentation, then FWS clears the shipment. If the shipment is not selected for physical inspection and the required documentation is present, then FWS clears the shipment.

Appendix III: Data on the Number of Live Animals Imported in Recent Years

APHIS and FWS provide information on the number of live animal imports, the purpose of the animal import, and the country from which the import has been shipped for recent years. APHIS's Import Tracking System records the number of APHIS-regulated animals imported by fiscal year. FWS's Law Enforcement Management Information System records the number of FWS-regulated animals imported by fiscal year. The APHIS and FWS data systems may overlap because both agencies regulate some of the same species, such as certain fish and birds. CDC does not maintain a database on live animal imports.

APHIS

Table 2 shows the number of APHIS-regulated animals imported for fiscal years 2005 through 2008.

Table 2: Number of Live Animal Imports Regulated by APHIS, Fiscal Years 2005 through 2008

Type of animal	Fiscal year			
	2005	2006	2007	2008
Swine	8,114,546	8,638,151	9,511,180	10,374,424
Fish	0 ^a	0 ^a	7,754,013	7,537,149
Koi carp	0 ^a	0 ^a	3,370,220	4,211,454
Poultry	10,412,974	9,396,557	6,312,181	3,769,190
Goldfish	0 ^a	0 ^a	2,086,047	3,540,739
Cattle	1,506,998	2,374,679	2,291,255	2,494,891
Bison	906	12,025	19,307	27,586
Horses	43,553	37,426	30,202	26,301
Ornamental fish	0 ^a	0 ^a	498,456	7,254
Other ^b	3,225	7,132	4,215	1,949
Unknown ^c	70,496	20,686	10,426	1,852
Total	20,152,698	20,486,656	31,887,502	31,992,789

Source: APHIS Import Tracking System.

Note: At the time of our review, fiscal year 2008 was the last year for which verified data were available.

^aAs discussed below, the agency began regulating the import of fish in 2006.

^bOther animals include sheep, goats, elk, deer, moose, caribou, reindeer, llamas, alpacas, pet birds, zoological animals, camels, exotics, and reptiles.

^cAccording to APHIS, data in this category could not be identified or verified at the species level.

Prior to fiscal year 2007—when APHIS began recording large numbers of fish imports—APHIS recorded that imports of live swine, poultry, and cattle were about 99 percent of its regulated live animal imports. About 94

Appendix III: Data on the Number of Live Animals Imported in Recent Years

percent of these imports came from Canada, with the remainder generally coming from Mexico. These animals were primarily imported for slaughter plants or farms. By fiscal year 2008, imports of fish represented about half of the total number of APHIS live animal imports, with the largest suppliers of these animals, including China, Malaysia, Hong Kong, the United Kingdom, Thailand, and Singapore, primarily importing these fish for commercial purposes. According to agency officials, APHIS reported large numbers of fish beginning in fiscal year 2007 because of a new regulation on the import of fish, which previously were not required to have APHIS permits and thus were not counted by APHIS. In August 2006, APHIS issued regulations requiring importers of species of fish that are susceptible to Spring viremia of carp, a contagious, fatal viral disease, to obtain an APHIS permit prior to importation into the United States.

FWS

Table 3 shows the number of FWS-regulated live wildlife imported from 2005 through 2009. FWS officials attributed the decline of live animal imports in fiscal year 2009 in part to the recession, as well as the increase in FWS user fees, which included new handling fees.

Table 3: Number of Live Animal Imports Regulated by FWS, Fiscal Years 2005 through 2009

Type of animal ^a	Fiscal year				
	2005	2006	2007	2008	2009
Crustaceans	11,021,121	12,457,692	12,649,912	10,097,441	9,232,677
Amphibians	5,360,493	5,050,831	4,594,679	4,164,832	3,575,934
Mollusks	1,013,423	1,145,732	1,438,519	1,950,384	1,444,248
Insects	1,037,268	971,078	1,105,246	1,714,148	1,208,392
Reptiles	1,591,606	1,440,749	1,469,399	1,187,679	946,243
Corals	711,747	699,348	980,559	840,657	768,931
Mammals	78,488	115,910	237,767	591,322	289,843
Spiders	215,289	241,627	224,872	203,170	175,505
Worms	1,810,855	839,689	322,656	119,268	162,412
Birds	299,983	225,244	246,710	240,250	159,795
Echinoderms (e.g., starfish, sea urchin)	29,553	48,156	22,626	40,111	133,924
Miscellaneous ^b	2,818,367	2,695,776	2,087,462	2,097,805	1,649,071
Unknown ^c	900	246	116	42	145
Subtotal	25,989,093	25,932,078	25,380,523	23,247,109	19,747,120
Fish	205,539,504	227,125,679	200,289,950	181,531,235	157,377,941
Total	231,528,597	253,057,757	225,670,473	204,778,344	177,125,061

Source: FWS's Law Enforcement Management Information System.

**Appendix III: Data on the Number of Live
Animals Imported in Recent Years**

Note: This table does not include data for imported animals that were recorded by weight rather than number. FWS recorded some shipments that were not individually counted in fiscal years 2005 through 2009, and those shipments that were measured by weight included the following species: fish, crustaceans, echinoderms, mollusks, miscellaneous, amphibians, insects, annelids, corals, mammals, arachnids, and reptiles.

^aAnimals are grouped by animal class. Animal classes are scientific groupings of animals based on common characteristics.

^bAccording to FWS, the agency uses this category for grouping multiple species together or when all that is known is the class.

^cThis category represents imports of multiple nonprotected species.

In fiscal year 2009, wildlife imports came from a variety of countries and were primarily imported for commercial purposes. For example, Singapore and Thailand were the leading exporters for fish, Haiti and Taiwan for crustaceans, amphibians from Taiwan, mollusks from Indonesia and the Philippines, insects from Costa Rica, reptiles from Vietnam, corals from Indonesia, mammals from Canada and the Netherlands, birds from Senegal, spiders from Ghana, and worms from Canada and France.

Although mammals represent a small percentage of FWS-recorded imports of live wildlife excluding imports of fish—ranging from 0.3 percent in 2005 to 2.5 percent in 2008—they are commonly associated with the spread of zoonotic diseases. The following describes FWS-regulated imported mammals and their associated disease risks, according to FWS data for fiscal year 2009:

- Bovines, including bison and water buffalo, with 201,561 imported primarily from Canada for commercial purposes. The animal family that includes bovines has been found to harbor 15 zoonotic diseases, including Ebola and Rift Valley fever.
- Mice, rats, and gerbils, with 141,060 imported primarily from the Netherlands for commercial purposes. The animal family that includes these animals has been found to harbor 21 zoonotic diseases.
- Old world monkeys, with 24,106 imported primarily from China for biomedical research. The animal family that includes these animals has been found to harbor 13 zoonotic diseases, including yellow fever and Marburg disease.
- Chinchillas, with 4,302 imported primarily from Canada and the Netherlands for commercial purposes. The animal family that includes chinchillas has been found to harbor 2 zoonotic diseases: rabies and monkeypox.

Appendix IV: Examples of Recent U.S. Animal Disease Outbreaks Causing Animal, Human, and Environmental or Economic Harm

Infectious agent	United States outbreaks	Mode of transmission	Animal and human harm	Environmental or economic harm
Bovine spongiform encephalopathy (mad cow disease)	Three cases of bovine spongiform encephalopathy in cattle have been identified from 2003 through 2006, one of which was caused by an imported cow.	Transmitted to cattle through contaminated feed containing, for example, the spinal cord or brain matter of infected cattle. Transmitted to humans through eating the contaminated meat of infected cattle.	Bovine spongiform encephalopathy is transmitted to humans causing a variant form of Creutzfeldt-Jakob disease. From 2003 through 2007, three fatal variant Creutzfeldt-Jakob cases occurred in two United Kingdom citizens and one Saudi Arabian citizen who were residing in the United States. They were likely exposed to bovine spongiform encephalopathy in their native countries.	An estimated \$11 billion in losses in U.S. exports resulted from bovine spongiform encephalopathy-related restrictions in the United States.
Chytridiomycosis	May have been introduced through a shipment to northern California in the late 1950s or early 1960s. Has been linked with serious declines almost everywhere that amphibians are present, including North America.	Caused by an aquatic fungal pathogen, <i>Batrachochytrium dendrobatidis</i> (Bd). Bd appears to be spreading through the international amphibian trade, the international pet trade, the bait trade, and inadvertently in produce.	Bd is an emerging infectious disease of amphibians, especially frogs.	Bd is responsible for a large disease-caused loss of biodiversity.
Exotic Newcastle disease	An outbreak of the disease occurred in the western United States from September 2002 through September 2003.	Transmitted by infected birds, contaminated people, and contaminated equipment to other birds.	The 2002-through-2003 outbreak resulted in nearly 4.5 million birds destroyed. Humans can be infected with Newcastle virus and infection generally causes conjunctivitis (i.e., pink eye). Most often, those affected are workers in the poultry industry or laboratory technicians who handle the virus.	As a result of the 2002-through-2003 outbreak, over 50 countries imposed some form of trade restriction against United States poultry exports. The outbreak caused an estimated \$395 million loss in direct and indirect trade. Federal dollars allocated to the eradication effort are estimated at \$138.9 million.

Appendix IV: Examples of Recent U.S. Animal Disease Outbreaks Causing Animal, Human, and Environmental or Economic Harm

Infectious agent	United States outbreaks	Mode of transmission	Animal and human harm	Environmental or economic harm
Highly pathogenic avian influenza	<p>In February 2004, an outbreak of highly pathogenic avian influenza was detected and reported in a flock of 7,000 chickens in south-central Texas. This was the first outbreak of highly pathogenic avian influenza in 20 years.</p> <p>Note: Some strains of highly pathogenic avian influenza do not have the same implication for human health. The highly pathogenic avian influenza strain in the Texas outbreak only affects poultry, not humans.</p>	Transmitted by infected birds.	<p>By mid-2005 in southeast Asia, more than 140 million birds had died or been destroyed.</p> <p>Despite control measures, the disease continues to spread, resulting in animal and human fatalities (more than half of the human cases have been fatal). Many in the scientific community are concerned about a global pandemic of human avian influenza.</p>	By mid-2005 in southeast Asia, losses to the poultry industry were estimated to be in excess of \$10 billion.
Viral hemorrhagic septicemia	<p>First outbreak occurred in 1988 and affected marine fish in the Pacific Northwest. Outbreaks of a more virulent strain of viral hemorrhagic septicemia began occurring in United States waters of the Great Lakes in 2006.</p>	<p>Transmission is by infected fish, tissues from infected fish, and water that has contained infected fish.</p> <p>Ballast water is considered the most likely original vector.</p>	<p>Viral hemorrhagic septicemia is known to cause fish mortality, particularly for rainbow trout, turbot, and herring, in short periods of time.</p> <p>APHIS currently lists 28 susceptible species.</p>	<p>Although large numbers of fish loss have been reported, long-term economic losses are unclear.</p> <p>To meet federal and state regulations, aquaculture facilities incur additional testing expenses to ensure their fish are healthy.</p>
West Nile virus	Emerged in 1999 and has been found throughout the continental United States.	Transmitted by mosquitoes and can cause encephalitis in humans.	West Nile virus in the United States has infected 29,766 people, resulting in 1,166 fatalities from 1999 through August 10, 2010.	The estimated economic impact of the disease in the United States from 1999 through 2007 was \$400 million.

Source: GAO analysis of literature.

Note: CDC estimates that for every case of zoonotic disease reported to CDC, there are likely hundreds to thousands more cases that go unreported. For CDC to become aware of a zoonotic disease, the following must occur: (1) The infected person has to have contact with an animal and know that it was imported; (2) the person has to become ill enough to go to a doctor and remember to tell the doctor that he was exposed to a certain animal; (3) the doctor has to request a lab test, and if a cause of disease is found, the doctor has to know if it is a reportable disease in his state; (4) the state has to report the findings to CDC in a timely manner so that an investigation can be done to determine the source of the infection.

Appendix V: Overview of Federal Agencies' Disease Risk Screening for Selected Types of Imported Animals

Type of imported animal	Regulating agency ^a	Disease testing at quarantine facility	Assessment by U.S. agency of disease presence in exporting country	Health certificate from exporting country	Visual inspection at U.S. port of entry for disease
Cattle from Canada or Mexico ^b	APHIS	^c	APHIS	APHIS	APHIS
Cattle not from Canada or Mexico	APHIS	APHIS	APHIS	APHIS	APHIS ^d
Canadian horses	APHIS	^c	APHIS	APHIS	APHIS
Horses not from Canada	APHIS	APHIS	APHIS	APHIS	APHIS
Domesticated dogs	APHIS CDC	APHIS ^e	APHIS CDC	APHIS ^f CDC ^g	APHIS ^e CDC
Commercial birds not from Canada	APHIS FWS	APHIS	APHIS	APHIS	APHIS
Commercial birds from Canada	APHIS FWS	^c	APHIS	APHIS	APHIS
Turtles	APHIS ^h CDC ⁱ FWS	^c	^c	^c	FWS ⁱ
Reptiles, not including turtles	FWS	^c	^c	^c	^c
Rodents from Africa	CDC FWS	^c	CDC ^k	^c	FWS ⁱ
Rodents not from Africa	FWS	^c	^c	^c	^c
Amphibians	FWS	^c	^c	^c	^c

Source: APHIS, CDC, and FWS regulations and guidance and discussions with agency officials.

Note: FWS does not screen shipments of live animals for disease risk, with the exception of imported salmon. FWS requires that all carriers transporting wild mammals and birds to the United States have a certificate of veterinary medical inspection signed by a veterinarian.

^aCBP does not develop regulations for how to import an animal, so it is not included in the list of regulating agencies.

^bFeeder cattle from Mexico, which are cattle imported for the purpose of feeding for a period of time prior to slaughter, are tested for tuberculosis and brucellosis and checked for ticks prior to entry into the United States. Breeding cattle are tested for tuberculosis and brucellosis and checked for ticks.

^cAPHIS, FWS, and CDC do not perform this type of screening for this imported animal.

^dCattle are visually inspected at the quarantine facility.

^eAPHIS requires that dogs imported to handle livestock must be inspected and quarantined at the ports of entry and tested for tapeworm.

^fAPHIS requires that dogs imported from countries where screwworm is thought to exist have a health certificate from a veterinarian from the exporting country stating that the dog is free from screwworm.

**Appendix V: Overview of Federal Agencies’
Disease Risk Screening for Selected Types of
Imported Animals**

⁹CDC generally requires certification of rabies vaccination for dogs imported from countries identified by CDC as places where rabies is present.

⁸APHIS does not have any regulations in place to assess the disease risk of turtle imports. APHIS prohibits the importation of the following types of turtles: leopard tortoise, African spurred tortoise, and Bell’s hingeback tortoise.

⁷CDC does not have any regulations in place to assess the disease risk of turtle imports. CDC restricts the import of turtles with a carapace shell length of 4 inches or less to less than 7; it requires a permit for a shipment of more than six turtles that will be used for science, exhibition, or education.

⁶FWS does not screen all shipments of turtles for disease risk. It requires 48-hour notification of the shipment and shipment declaration forms, which provide a description of the animals in the shipment. FWS visually inspects some live animal shipments (e.g., 18 percent in fiscal year 2008). The purpose of the inspection is to determine whether the animals are on the Lacey Act’s list of prohibited injurious animals or are prohibited from entry based on the Endangered Species Act of 1973 and international agreements to regulate threatened or endangered species, such as the Convention on International Trade in Endangered Species of Wild Fauna and Flora—as well as to assess whether the turtles are in compliance with APHIS and CDC regulations.

⁵In 2003, CDC restricted the importation of rodents from Africa.

⁴FWS inspects shipments of rodents from Africa to assess whether the rodents are in compliance with CDC regulations.

Appendix VI: Experts Responding to Our Survey on Live Animal Imports

This appendix provides the affiliations of federal and state government, academics, nongovernmental, and industry experts who completed one or both rounds of a two-round survey from January 2010 to May 2010 to identify potential gaps in the current statutory and regulatory framework, how well the responsible federal agencies work together to meet their responsibilities, and appropriate corrective actions.

- Biological Scientist, Centers for Epidemiology and Animal Health, Veterinary Services, U.S. Animal and Plant Health Inspection Service
- Senior Advisor for Science and Policy, U.S. Department of Homeland Security
- State Public Health Veterinarian and Assistant State Epidemiologist, Infectious Disease Epidemiology, Office of Public Health, Louisiana Department of Health and Hospitals
- Director, Veterinary Regulatory Support, Plant Protection and Quarantine, U.S. Animal and Plant Health Inspection Service
- Veterinary Medical Officer, Western Region Import and Export Coordinator, Veterinary Services, U.S. Animal and Plant Health Inspection Service
- Professor, Department of Veterinary Pathology, College of Veterinary Medicine, University of Georgia
- Policy Director, Global Invasive Species Programme
- Director, Science Center, Natural Resources Defense Council
- Virginia M. Ullman Professor, Arizona State University
- Executive Vice President and General Director for Living Institutions, Wildlife Conservation Society
- Director of Regulatory Affairs, Taylor Shellfish Company, Inc.
- Veterinary Medical Officer, National Wildlife Health Center, U.S. Geological Survey
- National Director, Veterinary Medicine, PETCO Animal Supplies, Inc.

- Senior Veterinarian, Los Angeles County Department of Public Health, Veterinary Public Health and Rabies Control Program
- Associate Vice President, Conservation Medicine, Wildlife Trust
- Professor and Director, Southeastern Cooperative Wildlife Disease Study, University of Georgia
- Chief, Division of Management Authority, International Affairs Program, U.S. Fish and Wildlife Service
- Special Agent in Charge, Office of Law Enforcement, U.S. Fish and Wildlife Service
- Professor of Epidemiology, Department of Pathobiological Sciences, School of Veterinary Medicine, University of Wisconsin-Madison
- Branch Chief, Convention on International Trade in Endangered Species Operations, Division of Management Authority, U.S. Fish and Wildlife Service
- Executive Director, Global Initiative for Food Systems Leadership and Professor, School of Public Health and College of Veterinary Medicine, University of Minnesota
- Director, National Center for Import and Export, Veterinary Services, U.S. Animal and Plant Health Inspection Service
- Director of International Conservation, Defenders of Wildlife
- Senior Wildlife Veterinarian and Supervisor, California Department of Fish and Game
- Fish and Wildlife Biologist, Branch of Aquatic Invasive Species, U.S. Fish and Wildlife Service
- Wildlife Health Specialist, Arizona Game and Fish Department
- Professor of International Health and of Medicine, Boston University
- Public Health Veterinarian, National Association of State Public Health Veterinarians

- Associate Professor of Biology, and Director, Program in Sustainable Development and Conservation Biology, Department of Biology, University of Maryland
- Branch Chief, Quarantine and Border Health Services Branch, U.S. Centers for Disease Control and Prevention
- Chief, Branch of Aquatic Invasive Species, U.S. Fish and Wildlife Service
- Professor, School for Global Animal Health, Executive Director, Washington Animal Disease Diagnostic Laboratory, Director, Animal Health Research Center, Washington State University College of Veterinary Medicine
- Professor of Pathology, Western University of Health Sciences College of Veterinary Medicine
- Vice President of Veterinary Services, Chicago Zoological Society
- Branch Chief, Agriculture Production, Office of Health Affairs, U.S. Department of Homeland Security
- Assistant Director, Live Animal Imports, National Center for Import and Export, U.S. Animal and Plant Health Inspection Service
- Chairman, Health and Regulatory Committee, American Horse Council
- Amphibian and Reptile Coordinator, Association of Fish and Wildlife Agencies
- Research Branch Chief, Arizona Game and Fish Department
- Wildlife Veterinary Specialist, Wildlife Disease Laboratory, Michigan Department of Natural Resources and Environment
- Vice President, Government Affairs, Association of Zoos and Aquariums
- Executive Director, Association of American Veterinary Medical Colleges
- Epidemiologist, (formerly) Johns Hopkins Bloomberg School of Public Health, Johns Hopkins University
- Operations Specialist, Delta Air Lines, Inc.

- Manager, Live Animals and Perishables, Special Cargo Standards, International Air Transport Association
- Coordinator, Wildlife Management Division, Arizona Game and Fish Department
- Postdoctoral Research Fellow, Center for Forest Sustainability, School of Forestry and Wildlife Sciences, Department of Biological Sciences, Auburn University
- General Manager, Koppert Biological Systems, Inc.
- Supervisor, Wildlife Health Section, Wildlife Disease Laboratory, Michigan Department of Natural Resources
- Eastern Region Import Export Coordinator, Veterinary Services, U.S. Animal and Plant Health Inspection Service
- Assistant Director Zoonotic, Influenza and Vector Borne Disease Unit, Bureau of Communicable Disease, New York City Department of Health and Mental Hygiene
- Assistant Research Professor, Ecology and Evolutionary Biology, Brown University
- Assistant Director for Field Programs, Global Health Program, Wildlife Conservation Society
- Outreach Coordinator, Fisheries and Habitat Conservation, Branch of Invasive Species, U.S. Fish and Wildlife Service
- State Public Health Veterinarian and Section Manager, Zoonoses and Special Projects Section, Michigan Department of Community Health
- Acting Director Agriculture Policy and Planning, Agriculture Programs and Trade Liaison, Office of Field Operations, U. S. Customs and Border Protection
- Vice President, Conservation and Science, Lincoln Park Zoo
- Director, Planning, Finance, and Strategy Staff, Veterinary Services, U.S. Animal and Plant Health Inspection Service

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- Corporate Vice President, Veterinary and Professional Services, Charles River Laboratories, Inc.
 - Public Health Veterinarian, Zoonotic and Vector-borne Disease Program, Office of Environmental Health and Safety, Washington State Department of Health

Appendix VII: GAO Survey Questions and Responses

Expert Survey: Live Animal Imports into the United States and the Spread of Animal and Zoonotic Diseases

We conducted a two-round survey to identify (1) potential gaps in the current statutory and regulatory framework that may allow for the introduction of and spread of zoonotic and animal diseases, (2) how well the responsible federal agencies work together to meet their responsibilities, and (3) potential barriers to collaboration. We identified potential experts on disease risk posed by live animal imports who had primary employment responsibilities related to or dependent on live animal imports, authored peer-reviewed papers, presented at professional conferences, provided testimony on the subject matter to Congress, or were recognized by their peers as experts on live animal imports. We then selected experts from federal and state government, academia, nongovernmental organizations, and industry to obtain a broad spectrum of views. The first round of the survey consisted of five open-ended questions (questions that solicit additional information) in which experts provided their opinions on gaps in the current statutory and regulatory framework, how well the responsible federal agencies work together to meet their responsibilities, and potential barriers to collaboration. In the first round, we received responses from 33 out of the 39 experts contacted, resulting in a response rate of about 85 percent. We performed a content analysis of the responses to the open-ended questions in order to compile a list of gaps in the statutory and regulatory framework, corrective actions to address those gaps, the effectiveness of federal agencies' collaboration, and barriers to federal agencies' collaboration mentioned by the experts. We used this list to construct the second round of survey questions. These were primarily closed-ended (questions with a set of answers to choose from). We expanded our second round of the survey to include additional experts recommended by those responding to our first round and other experts. Of the 64 experts we contacted, 56 provided responses, resulting in a response rate of about 88 percent in the second round. The first round of the survey was conducted from January through February 2010, and the second round was conducted from April through May 2010. While this appendix displays only the quantitative, closed-ended responses, we also relied on the responses to the qualitative, open-ended questions to inform our findings in this report. The views expressed by the experts responding to our surveys do not necessarily represent the views of GAO.

Round One Questions

1. What weaknesses or gaps, if any, do you feel exist in the statutory and regulatory framework governing live animal imports with respect to preventing the introduction of zoonotic and animal diseases?
2. What corrective actions should be taken to address these weaknesses or gaps?

-
3. Federal agencies responsible for live animal imports include Animal and Plant Health Inspection Service (APHIS), Centers for Disease Control and Prevention (CDC), Customs and Border Protection (CBP), and Fish and Wildlife Service (FWS). How effectively (or not) do the federal agencies collaborate to meet their responsibilities?
 4. What barriers exist for collaboration among federal agencies?
 5. During our site visits with regulatory authorities, we heard about their goal to facilitate efficient cargo and passenger import processing while preventing prohibited animals and animal products to be imported into the United States. What is the best way to ensure that statutes and regulations prevent importation of zoonotic and animal diseases without impeding commerce and passenger travel?
 6. If you consulted with others within your agency, firm, or organization when answering the questions, how many others did you consult?

Your Background

7. Please briefly describe your expertise. Include professional credentials, membership and roles in professional associations, titles of publications, congressional testimonies, primary employment responsibilities related to or dependent on live animal imports, etc.

Round Two Questions and Responses

Section 1: Participant Status

1. What is your full name?
2. What is your title?
3. What is the name of your organization?
4. What is your telephone number?
5. What is your e-mail address?
6. Did you complete a survey in round 1 or are you a new participant in Round 2?
 - I completed a survey in Round #1 – Skip to question #8

- I am a new participant in Round #2 – Continue to question #7

7. What is your background or expertise related to live animal imports?

Section 2: Animal and Plant Health Inspection Service (APHIS)

8. Based on your knowledge of APHIS's statutory and regulatory framework, do you believe changes ARE or ARE NOT needed to prevent the importation of zoonotic and animals diseases?

Response	Number of responses
Changes are needed	53
Changes are not needed SKIP TO QUESTION #10	2
No response	1

9. How much, if at all, do you support or oppose the following potential changes for APHIS to prevent the importation of zoonotic and animal diseases?

Potential change	Strongly support	Somewhat support	Neither support nor oppose	Somewhat oppose	Strongly oppose	Don't know	No response
A-APHIS resources should be leveraged with FWS to prevent importation of animal diseases.	39	10	0	1	2	2	2
B-APHIS resources should be leveraged with CDC to prevent importation of zoonotic diseases.	37	11	2	0	2	2	2
C-APHIS should have the authority to consider wildlife disease risk as part of its existing risk assessment process. ^a	36	13	3	1	0	2	2

^aOne expert provided two responses, "Strongly support" and "Somewhat support" for question 9C.

Section 3: Centers for Disease Control and Prevention (CDC)

10. Based on your knowledge of CDC’s statutory and regulatory framework, do you believe changes ARE or ARE NOT needed to prevent the importation of zoonotic diseases?

Response	Number of responses
Changes are needed	50
Changes are not needed SKIP TO QUESTION #12	5
No response	1

11. How much, if at all, do you support or oppose the following potential changes for CDC to prevent the importation of zoonotic diseases?

Potential change	Strongly support	Somewhat support	Neither support nor oppose	Somewhat oppose	Strongly oppose	Don’t know	No response
A-CDC should have the authority to use pre-import screening to mitigate the risk of live animal imports	31	9	4	4	2	1	5
B-CDC should quarantine high-risk animals to allow assessment of the animals’ health	25	12	5	6	3	0	5

Section 4: Fish and Wildlife Service (FWS)

12. Based on your knowledge of FWS’s statutory and regulatory framework, do you believe changes ARE or ARE NOT needed to prevent the importation of zoonotic and animal diseases?

Response	Number of responses
Changes are needed	52
Changes are not needed SKIP TO QUESTION #14	3
No response	1

13. How much, if at all, do you support or oppose the following potential changes for FWS to prevent this importation of zoonotic and animal diseases?

Potential change	Strongly support	Somewhat support	Neither support nor oppose	Somewhat oppose	Strongly oppose	Don't know	No response
A-FWS should have the authority to use pre-import screening to mitigate the risk of live animal imports	38	6	3	4	0	2	3
B-FWS should have the authority to quarantine live wildlife after import	32	10	3	7	0	1	3
C-FWS should classify species that may be carrying infectious agents as injurious wildlife	25	12	3	9	2	2	3
D-FWS should expedite the process for classifying species as injurious wildlife	31	12	2	3	0	5	3

Section 5: Interagency Collaboration

14. Based on your knowledge of the current statutory and regulatory framework, do you believe a centralized agency should be created to regulate all live animal imports?

Response	Number of responses
Yes, a centralized agency should be created	27
No, a centralized agency should not be created SKIP TO QUESTION #16	29
No response	0

15. Within which of the following should a centralized agency be placed?

Response	Number of responses
Animal and Plant Health Inspection Service (APHIS)	17
Customs and Border Protection (CBP)	0
Centers for Disease Control and Prevention (CDC)	2
Fish and Wildlife Service (FWS)	1
A new agency created to regulate live animal imports	8
No response	28

Appendix VII: GAO Survey Questions and Responses

16. How much, if at all, do you support or oppose the creation of a workgroup to help federal agencies collaborate in preventing the importation of zoonotic and animal diseases?

Response	Number of responses
Strongly support	44
Somewhat support	8
Neither support nor oppose	3
Somewhat oppose	0
Strongly oppose	0
Don't know	0
No response	1

17. How important, if at all, is representation from the following entities on such a workgroup?

Entity	Very important	Moderately important	Somewhat important	Slightly important	Not at all important	Don't know	No response
A-Academia	18	20	13	3	2	0	0
B-APHIS	52	4	0	0	0	0	0
C-Aquaculture	22	15	12	7	0	0	0
D-Aquariums	13	16	19	6	1	1	0
E-CDC	49	5	1	0	0	1	0
F-CBP	39	6	8	1	1	1	0
G-FWS	52	4	0	0	0	0	0
H-International Air Transport Association	16	16	15	7	0	2	0
I-International Civil Aviation Organization	6	17	14	9	3	7	0
J-Livestock industry	21	15	12	7	1	0	0
K-National Oceanic and Atmospheric Administration	20	12	11	7	3	3	0
L-Nonprofit organizations	8	11	18	13	3	3	0
M-Organizations that use imported live animals for research	21	11	18	4	1	1	0
N-Pet industry	24	14	9	8	0	1	0
O-Port authorities	25	19	7	2	2	1	0

Appendix VII: GAO Survey Questions and Responses

Entity	Very important	Moderately important	Somewhat important	Slightly important	Not at all important	Don't know	No response
P-Poultry industry	18	17	9	10	1	1	0
Q-State agricultural agencies	27	19	6	2	2	0	0
R-State public health agencies	25	16	10	2	2	1	0
S-State wildlife agencies	27	18	6	2	2	1	0
T-U.S. Geological Survey	22	11	13	3	4	3	0
U-World Organisation for Animal Health	25	17	5	3	5	1	0
V-World Health Organization	15	24	8	3	5	1	0
W-Zoos	18	19	11	7	0	1	0

18. What other entities, if any, should be included on such a workgroup?

Answers included American College of Laboratory Animal Medicine; American Medical Association; American Veterinary Medical Association; Association of Fish and Wildlife Agencies; Council of State and Territorial Epidemiologists; county departments of public health; Defenders of Wildlife; Food and Agriculture Organization of the United Nations; International Union for the Conservation of Nature; National Association of State Public Health Veterinarians; National Institutes of Health; National Science Foundation; Pet Industry Joint Advisory Council; U.S. Agency for International Development; U.S. Coast Guard, U. S. Department of Health and Human Services Office of Global Health Affairs; U.S. Department of State; The Wildlife Society; Wildlife Disease Association; Wildlife Trust.

Appendix VII: GAO Survey Questions and Responses

19. How important, if at all, are the following activities for a workgroup to help federal agencies collaborate in preventing the importation of zoonotic and animal diseases?

Activity	Very important	Moderately important	Somewhat important	Slightly important	Not at all important	Don't know	No response
A-Define the mission and scope of work related to live animal imports for relevant federal agencies	44	6	2	2	2	0	0
B-Identify gaps in regulations related to live animal imports among relevant federal agencies	50	3	1	1	1	0	0
C-Identify overlaps in regulations related to live animal imports among relevant federal agencies	41	10	3	0	1	1	0
D-Recommend new legislation to prevent the importation of zoonotic and animal diseases	27	16	8	4	0	1	0
E-Develop a coordinated national strategy to better align activities, processes, and resources	52	4	0	0	0	0	0
F-Develop a risk assessment framework to identify animals, diseases, and countries for appropriate action	41	12	2	0	0	1	0
G-Develop a research plan to help relevant federal agencies in assessing disease risks	21	23	8	2	1	1	0
H-Examine methods to maximize inspection resources such as reducing the number of ports of entry	32	17	4	2	1	0	0
I-Examine challenges for relevant federal agencies associated with state regulations	27	18	8	3	0	0	0

Appendix VII: GAO Survey Questions and Responses

Activity	Very important	Moderately important	Somewhat important	Slightly important	Not at all important	Don't know	No response
J-Facilitate training for ports of entry staff	26	19	4	6	1	0	0
K-Develop a plan to leverage existing resources among relevant federal agencies (e.g., sharing quarantine facilities, training field staff, etc.)	40	10	4	2	0	0	0
L-Designate resources to be shared among relevant federal agencies for disease outbreaks	28	20	6	0	2	0	0
M-Develop a plan to ensure that data on all live animal imports is available to relevant federal agencies	39	12	4	0	1	0	0
N-Establish an agreement between relevant federal agencies and international aviation associations to enhance cooperation	20	19	14	2	1	0	0
O-Develop a process for relevant federal agencies to confer with each other when entering into agreements with international	26	13	13	1	1	2	0
P-Develop a plan for relevant federal agencies to collaborate in meeting the obligations of the World Health Organization's International Health Regulations	20	16	15	1	1	3	0
Q-Develop a plan for relevant federal agencies to coordinate counter measures against live animal smuggling	37	10	6	2	0	1	0

Appendix VII: GAO Survey Questions and Responses

Activity	Very important	Moderately important	Somewhat important	Slightly important	Not at all important	Don't know	No response
R-Develop a plan for identifying and implementing existing Memoranda of Understandings among relevant federal agencies	23	23	6	3	0	1	0
S-Develop public outreach and education programs for those likely to come in contact with imported animals to prevent contracting or spreading diseases	26	14	8	7	0	1	0

20. Based upon your knowledge of interagency collaboration at ports of entry, do you believe communications among the agencies are adequate?

Response	Number of responses
Adequate	3
Inadequate	53
No response	0

Appendix VII: GAO Survey Questions and Responses

21. How important, if at all, are the following activities to improve interagency communications?

Activity	Very important	Moderately important	Somewhat important	Slightly important	Not at all important	Don't know	No response
A-Convene regular risk management meetings	25	14	10	4	1	2	0
B-Integrate outside stakeholders into relevant risk management activities	21	24	4	5	0	2	0
C-Designate a process, including interagency communication, for CBP to hold animals at the port until necessary inspections can be completed by appropriate federal agencies	27	14	8	3	3	1	0
D-Establish compatible data systems containing information for managing, processing, and analyzing imports among relevant federal agencies	41	10	4	1	0	0	0

22. Based upon your knowledge of interagency collaboration at ports of entry, do you believe training among the agencies is adequate or inadequate?

Response	Number of responses
Adequate	8
Inadequate	46
No response	2

Appendix VII: GAO Survey Questions and Responses

23. How important, if at all, are the following activities to improve interagency training?

Activity	Very important	Moderately important	Somewhat important	Slightly important	Not at all important	Don't know	No response
A-Improve cross-training on other federal agencies' regulations	35	9	6	4	0	2	0
B-Improve cross-training on state, regional, and local regulations	27	11	10	4	3	1	0
C-Improve training on zoonotic and animal disease risks	35	11	8	0	1	1	0
D-Improve training on recognition of zoonotic and animal diseases	38	12	2	1	2	1	0
E-Improve training on animal identification	29	15	8	1	1	2	0
F-Create liaison positions among the federal agencies to coordinate training opportunities	23	17	4	7	2	3	0

Appendix VII: GAO Survey Questions and Responses

Section 6: Enforcement of Regulations

24 How important, if at all, are the following enforcement actions to prevent the importation of zoonotic and animal diseases?

Activity	Very important	Moderately important	Somewhat important	Slightly important	Not at all important	Don't know	No response
A-Provide additional FWS port inspectors	31	12	5	3	1	4	0
B-Increase importer user fees to be specifically designated for enforcement activities	34	4	5	2	6	5	0
C-Identify methods to ensure that animals from banned countries are not routed through another country prior to importation	41	8	1	3	2	1	0
D-Increase penalties for live animal smuggling violations	40	8	3	3	0	2	0
E-Enforce penalties for live animal smuggling violations	42	10	0	1	0	3	0

Section 7: Agency Data Used for Live Animal Imports

25. How important, if at all, is making the following data accessible on the Web?

Data	Very important	Moderately important	Somewhat important	Slightly important	Not at all important	Don't know	No response
A-FWS's Law Enforcement Management Information System	14	18	5	5	2	12	0
B-APHIS's Import Tracking System data	15	16	6	5	3	11	0

Section 8: Other Comments

26. What comments, if any, do you have about the issues discussed in this survey?

27. What other live animal import concerns, if any, do you have that we have not discussed?

Note: We used the responses to questions 26 and 27 to inform our findings in this report.

Appendix VIII: Comments from the U.S. Department of Agriculture



United States Department of Agriculture

Office of the Secretary
Washington, D.C. 20250

OCT 21 2010

Ms. Lisa Shames, Director
Natural Resources and Environment
United States Government Accountability Office
441 G Street, NW
Washington, DC 20548

Dear Ms. Shames:

The United States Department of Agriculture (USDA) appreciates the opportunity to comment on the GAO draft report, "Live Animal Imports: Agencies Need Better Collaboration to Reduce the Risk of Animal-Related Diseases" (11-09). While the report contains individual Recommendations for the Secretary of Agriculture, we have globally addressed these Recommendations.

First and foremost, USDA agrees with these recommendations. USDA is deeply committed to the protection of American agriculture, as well as to the protection of farmed animal health and welfare, and to maintaining an effective strategy to prevent, contain or eradicate outbreaks of animal diseases. USDA appreciates GAO's emphasis on increasing the level of collaboration among federal agencies with differing types of oversights for animal importations.

As the GAO audit pointed out, USDA, as well as some other federal agencies, currently has limited statutory authorities regarding the importation of animal commodities that are capable of introducing or otherwise acting as vectors for important diseases of animals and/or humans. Moreover, USDA (and many other government entities) is working to find ways to effectively and efficiently carry out our mission priorities in light of constrained funding. Such enforcement considerations would also necessarily apply to any further authorities that may be sought or realized by a Department. USDA believes that a key component to successfully leveraging the different Departments' strengths, while minimizing the individual limitations of each Department, lies in finding new ways to approach these opportunities.

USDA, therefore, would support the formation of an inter-departmental Steering Committee for the oversight of animal importations, whose co-chairs, representing USDA, Departments of Health and Human Services, Homeland Security, and the Interior, would report the Committee's findings and progress directly to their respective

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Ms. Lisa Shames

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Secretaries. An USDA nominee for this Committee could be determined by November 1, 2010. If the notion of forming such a Committee received support from other government entities, USDA would support convening the Committee as soon as possible. Prior to the first meeting, USDA would provide input for specific agenda items and would work with other entities to create an agenda that focused on the issues of collaboration and focused oversight as highlighted in the GAO audit.

USDA would also work with the other Departments to create a Committee charter with a clear mission statement, Committee goals and objectives, and progress milestones for increasing the effectiveness of animal importation oversights – all of which would be directly responsive to GAO’s recommendations.

USDA believes that among other things, such a Committee could examine and discuss the specific statutory authorities currently supporting the processes in USDA and other Departments by which animals are imported to the United States, with the specific goal of identifying areas of overlapping, concurrent, or non-existent jurisdictions. In collaboration with the Committee and other Departments, USDA would also seek to determine the need for creating additional authority; clarify the scope of existing authority; and implement current authority more efficiently through expanded Memoranda of Agreements or other inter-departmental cooperative measures.

As these factors are discussed and refined, the need for streamlining or re-directing existing resources, or to acquire additional resource allocations, would become clearer. With that added clarity, USDA would then formulate a list of action steps which we would submit in a report to GAO. This report from USDA would outline the components of a successful strategy for addressing GAO’s recommendations in a timely manner. Once the avenues of increased collaboration have been identified, USDA would also communicate these strategies with its stakeholders for additional inputs.

Sincerely,



Edward Avalos
Under Secretary
Marketing and Regulatory Programs

Appendix IX: Comments from the Department of Homeland Security

U.S. Department of Homeland Security
Washington, DC 20528



Homeland Security

Ms. Lisa Shames
Director, Natural Resources and Environment
U.S. Government Accountability Office
441 G Street, NW
Washington, DC 20548

Dear Ms. Shames:

Subject: Draft Report GAO-11-09, *Live Animal Imports: Agencies Need Better Collaboration to Reduce the Risk of Animal-Related Diseases* (Job Code 361116)

The Department of Homeland Security (DHS) appreciates the opportunity to review and comment on the draft report referenced above. We agree with the intent of the two recommendations.

Recommendation 1: Develop and implement, in coordination with the relevant federal agencies, a strategy for their collaboration in preventing the importation of animals that may be carrying zoonotic and animal diseases from entering the United States. This strategy should help the agencies

- Identify and resolve differing program priorities so that the agencies can work collaboratively to ensure that live animal imports posing a risk of zoonotic and animal diseases do not enter the United States. Such efforts could include collaborative methods for prevention, such as a comprehensive risk assessment system for live animal imports;
- Lay out individual agency roles and responsibilities for all live animal imports, including how a collaborative effort will be led;
- Identify resources dedicated to live animal imports and leverage these resources to the extent possible to support the agencies' efforts;
- Examine ways to systematically share data on shipments of live animal imports that are regulated by more than one agency until ITDS is fully operational; and
- Explore the need for any additional legislative or executive authority to develop and implement this strategy such as the authority to establish a coordinating entity (e.g., an interagency workgroup).

Response: The Department concurs with the intent of GAO's recommendation and we will work with the pertinent organizations within the Departments of Agriculture, Health and Human Services, and Interior to gauge interest in developing a joint strategic implementation plan to address preventing the importation of animals that may be carrying zoonotic and animal diseases from entering the United States.

Of note, currently the U.S. Customs and Border Protection, Office of Field Operations (OFO), Agriculture Programs and Trade Liaison (APTL) collaborates continuously with the U.S. Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS) to facilitate live animal imports. Procedures outlined in USDA's APHIS *Animal Product Manual* in Chapter 2, "Procedures" and Chapter 3 "Live Animal and Related Materials" for Customs and Border Protection Officers (CBPOs) and Customs and Border Protection Agriculture Specialists (CBPASs) to make appropriate agency referrals. These procedures include referral information (Chapter 2) and tables (Chapter 3) to guide CBPASs and CBPOs to the appropriate regulating agency for the clearance of dogs, cats, laboratory mammals, amphibians, reptiles, fish, monkeys, and other nonhuman primates. The referring agencies listed are the Fish and Wildlife Service (FWS), or the Center for Disease Control and Prevention (CDC). Also, CBPASs and CBPOs refer horses, cattle, sheep, goats, swine, and pet birds directly to the APHIS-Veterinary Service (VS) for clearance.

Section 421 (e) of the Homeland Security Act of 2002 (the Act), transferred to the U.S. Department of Homeland Security (DHS) functions of APHIS relating to agricultural import and entry inspections. Article 2 of the Memorandum of Agreement between the DHS and USDA outlines the extent of CBP's role with live animal imports. Article 2 (f) states "Referring all live animals, embryos, semen, and other viable animal products to USDA" and to "Notify APHIS-VS when live animals are present." Additionally CBP, OFO has national bird handling standard operating procedures (SOPs). CBP's bird handling SOPs provide information to the ports of entry (POEs) and includes, as applicable, the CBP Offices of Border Patrol and Air and Marine, and list responsibilities for CBP and APHIS. CBP and APHIS have SOPs along the Southern Border to facilitate the inspection of feeder cattle. CBP and APHIS have guidance for coordinating APHIS-VS and CBP processing of live animal importations arriving from Canada at land border POEs.

Although CBPASs and CBPOs at POEs refer all live animal imports to the appropriate regulating agency, they are not solely dedicated to this particular function. CBPOs and CBPASs facilitate all cargo and commodities for the trade industry into the United States. POEs maintain quarantine rooms, personal protective equipment, cages, and other quarantine materials for all birds encountered from all countries including when the country of origin of the bird is unknown. Seized pet birds are held by CBP and turned over to APHIS-VS.

Recommendation 2: Jointly determine, in collaboration with CBP, the data that APHIS, CDC, and FWS will need ITDS to contain, so that agencies can effectively oversee all live animal imports.

Response: CBP concurs with this recommendation and already has work in progress to fulfill it. The draft report correctly details the creation of the International Trade Data System (ITDS) to streamline data requirements across all agencies. The CBP, Office of International Trade has been working in conjunction with the Animal Plant Health Inspection Service (APHIS), Center for Disease Control (CDC), and Fish and Wildlife Service (FWS) to address data needs for each of these agencies. The CBP, Office of International Trade has already established a mechanism

where it collaborates with other government agencies on efforts aimed at addressing their data needs within the Automated Commercial Environment (ACE). The process includes the assignment of an ACE liaison to participating government agencies in order to address their data needs. The data elements are then evaluated, streamlined, and included in the ITDS Standard Data Set (SDS), which serves as a common data dictionary for all government agencies participating in the ACE pilot. CBP, APHIS, FWS, and CDC are all active members within ITDS and have initiated the first steps of data sharing within ACE. The concept of operations plan for the APHIS has already been approved by CBP. The FWS have submitted their concept of operations plan, which is still under legal review by both agencies. Both APHIS and the FWS have had their data needs mapped to the ITDS SDS. The CDC has not yet submitted their concept of operations to CBP. However, CBP has begun preliminary discussions with the CDC involving the integration of their data needs into the SDS.

Sincerely,



Jerald E. Levine
Director
Departmental GAO-OIG Liaison Office

Appendix X: Comments from the Department of the Interior

Note: GAO comments supplementing those in the report text appear at the end of this appendix.



United States Department of the Interior
OFFICE OF THE SECRETARY
Washington, DC 20240



Ms. Lisa Shames
Director, Natural Resources and Environment
U.S. Government Accountability Office
441 G Street, N.W.
Washington, D.C. 20548

Dear Ms. Shames:

Thank you for providing the Department of the Interior the opportunity to review and comment on the draft Government Accountability Office Report entitled *LIVE ANIMAL IMPORTS: Agencies Need Better Collaboration to Reduce the Risk of Animal-Related Diseases* (GAO-11-09).

The enclosure contains some general and specific comments. The Department concurs with the major findings and recommendations included in the report.

If you have any questions, or need additional information, contact Kathy Garrity, Fish and Wildlife Service, at (703) 358-2551.

Sincerely,

Thomas L. Strickland
Assistant Secretary for Fish and Wildlife and Parks

Enclosure

Enclosure

**Department of the Interior
Comments on the GAO draft report on
Live Animal Imports: Agencies Need Better Collaboration to Reduce the Risk of
Animal-Related Diseases (GAO 11-09)**

General comments

See comment 1.

No reference has been made in the report to the possible confusion that may be caused by multiple agencies having related authorities. Does the public know where to find data/information on imports and restrictions? Although it was not a central question GAO was asked to review, outreach could have been reviewed / analyzed a little more, since it could play an important role in reducing risks of animal-related diseases.

See comment 2.

Also, no reference is made to any efforts to prevent the introduction of diseases in container water. We recommend adding "Federal, state, and NGO partners should initiate discussions to address potential disease threats posed by container water (e.g. water used to transport ornamental fish or other aquatics)."

See comment 3.

The report should emphasize the National Aquatic Animal Health Plan (NAAHP) as a model for Federal cooperation with regard to movement of aquatic animal diseases. In the future, the NAAHP will be broadened to include amphibians and reptiles.

Specific comments

See comment 4.

"Highlights" Page, 2nd bullet: re: FWS regulation of invasive species. The reference to review of a petition on amphibians fails to explain why this is relevant (i.e., because it is a petition to restrict imports of amphibians (*that carry chytrid fungus.*) Also, this is a reaction to a petition and really does not demonstrate how FWS is being proactive in applying its authority.

See comment 5.

"Highlights" Page: "In contrast, the U.S. Department of Agriculture's..." implies an equality of effort by agencies to prevent the movement of diseases in the live animal import trade, but also implies equality between the three agencies with regard to authority. In reality, USDA-APHIS' authority is much broader than that of the USFWS; therefore, equality cannot be inferred. We recommend the following wording: "USDA's authority is much broader than that of the USFWS with regard to movement of aquatic pathogens, and is focused on agricultural species. The USFWS' authority is focused on native aquatic species in the wild. All agencies should work within their authorities and collaborate to better prevent the movement of aquatic pathogens."

See comment 6.

Page 3, 1st sentence: "More than 1 billion live animals were legally imported into the United States for agriculture, clinical research, education and exhibition, and the

See comment 7.

aquarium and pet industries." Suggest adding "and other uses" - There are other possible uses that do not need to be mentioned but should at least be acknowledged (e.g., furs).

Page 4, 2nd bullet: "The Department of the Interior's Fish and Wildlife Service (FWS) administers the prohibition against the import of live animals..." FWS also has the authority to list dead organisms as injurious wildlife, and has done so specifically in the case of salmonids to mitigate the risk of disease transmission, the key element of the GAO report. This omission occurs elsewhere in the report and should be corrected (pages 9 and 20).

See comment 8.

Page 8: We recognize that CBP provides assistance to FWS in enforcing import regulations; however, we believe the responsibilities described are overstated. When a live animal import arrives at a port of entry, CBP does not hold and refer the import to FWS. FWS is routinely notified by the importer/exporter and/or the airline.

See comment 9.

Page 10, 1st full paragraph: "According to the FWS data system, about 177 million live animals – nearly all wildlife – were imported under FWS regulation in fiscal year 2009". The use of the word "nearly" is inaccurate. The FWS regulates all wildlife.

See comment 10.

Page 13, 4th line: it should say "comprehensive science-based" not "comprehensive-based science"?

See comment 11.

Page 21, 2nd line: Bd pathogen (*Batrachochytrium dendrobatidis*) does not cause a fungus, it is a fungus.

See comment 12.

Page 22, middle of 1st paragraph: "FWS is reviewing several proposals to...preventing the spread of invasive species, including:...developing a risk assessment process with scientifically credible procedures; and supporting regulatory and educational approaches." The statement assumes our current procedures are not scientifically valid. Please revise to state: "FWS is reviewing several proposals to...preventing the spread of invasive species, including:...revising its risk assessment process; and supporting improved regulatory and educational approaches."

See comments 13
and 14.

Page 22, 2nd paragraph: "Experts also identified the need for an entity to help the agencies overcome these barriers." The report seems to suggest a new entity is needed to help improve coordination, yet we already have the National Invasive Species Council and Aquatic Nuisance Species Task Force. No mention is made of either of these bodies, or why they could not effectively serve this role. (Also appears on page 32)

See comment 8.

Page 22: Although Agencies Have Collaborated to Meet Common Goals, They Face Barriers to Additional Collaboration – This section states that CBP usually contacts FWS Inspectors to determine whether a particular type of turtle is banned in statute or regulation. This is inaccurate and not a function of CBP. FWS is usually notified by the importer/exporter or the airline.

See comment 15.

Page 24: GAO notes that the principal barrier to collaboration is agencies' failure to take a broader view of the entire importation process. Likewise, GAO statement ".....focusing instead on only those components of the process each agency controls." is not quite accurate, as agency focus is legislatively dictated by authorizations (see comment "Highlights Page" above). We suggest that GAO consider asking agencies to redouble collaborative efforts within their authorities to prevent import and movement of aquatic pathogens.

See comment 16.

Page 30, 1st full paragraph: "While the agencies have worked together...they may not be able to determine whether their funding and staff are sufficient..." This evaluation has occurred as part of the mandate from the Secretary of the Interior for FWS to comprehensively review its statutory authorities, regulations, and processes under the injurious wildlife provisions of the Lacey Act. Recommendations are moving presently through the FWS and DOI approval processes.

See comment 14.

Page 32, last paragraph: GAO asked experts whether a workgroup should be created to help federal agencies collaborate. However, there is no consideration of whether there may be an existing group that could perform this function. Use of an existing body could facilitate collaboration and efficiency by avoiding unnecessary proliferation of groups. The National Invasive Species Council (NISC) was established by Executive Order 13112 (EO) to improve coordination and collaboration among federal agencies and with experts and stakeholders on invasive species issues, including the risk of animal related diseases being introduced by invasive species. The Department of Homeland Security and the Department of Health and Human Services are members of NISC; while the Department of the Interior and the Department of Agriculture are co-chairs of NISC. The EO also established the Invasive Species Advisory Committee (ISAC) which includes nonfederal experts and stakeholders from across the nation. ISAC and NISC may establish subcommittees, workgroups or task teams to consider specific issues; and this has occurred to address a number of issues. The report should state that, in addition to the option of creating a new workgroup, there may be an existing group whose scope could be expanded to play this role.

See comment 17.

Page 55, Appendix V Note at the bottom of the table: indicates that FWS only screens shipments of live animals for disease risk for salmon and CITES listed species only. This is inaccurate. Our regulations also require the trade to provide health certificates for all mammals and birds that are wildlife.

The following are GAO's comments on the Department of the Interior's letter.

GAO Comments

1. In the report, we state that federal agencies face a range of barriers when they attempt to collaborate with other agencies and that these barriers can confuse and frustrate program customers. In addition, as the Department of the Interior notes, this issue was not part of our objectives.
2. Our report does not attempt to describe all of the pathways by which live animal imports could introduce diseases into the United States. However, we modified the report to include a reference to container water in which aquatic animals are transported as a potential pathway.
3. In the report, we state that the National Aquatic Animal Health Plan is an example of federal agencies' joint strategies to reduce disease risks from live animal imports. We have added language to provide more information on this plan's relevant efforts.
4. We revised the report to reflect this comment by deleting from the highlights page the reference to FWS's review of a petition on amphibians.
5. We added language to the highlights page to clarify that FWS was directed to review statutory authorities and regulations to address existing problems associated with nonnative live animals.
6. We added language to the report to clarify that imported live animals are used for additional purposes.
7. We modified language in the report to clarify that FWS' authority to list organisms as injurious wildlife is not limited to live animals.
8. We modified the report to attribute a description of CBP's processes to CBP officials only.
9. We modified the report to clarify that FWS regulates all wildlife.
10. We did not change the language because it is a quote from the cited National Academies of Sciences report that we attributed.
11. We modified the report to clarify that the Bd pathogen is a fungus.

12. We modified the report to clarify that FWS is revising its risk assessment procedures.
13. The National Invasive Species Council's activities to help federal agencies collaborate are described in the report. We added information on the Invasive Species Advisory Committee, which works closely with the National Invasive Species Council. In addition, we added information on the Aquatic Nuisance Species Task Force.
14. The use of an existing interagency body to serve as a coordinating entity to help federal agencies prevent the importation of animals that may be carrying zoonotic and animal diseases was not mentioned in experts' responses to the first round of our survey, which was the basis for our second round of survey questions. Placing a coordinating entity for live animal imports within an existing interagency body may help in avoiding duplication of effort. We recommended the development and implementation of a strategy to help the agencies explore the need for any additional legislative or executive authority to develop and implement this strategy, such as the authority to establish a coordinating entity (e.g., an interagency workgroup). If the agencies determine that it is appropriate to place the coordinating entity for live animal imports within an existing interagency body, this response would be consistent with our recommendation.
15. We modified the report to clarify that agencies focus on only those components of the process each agency controls under its statutory authority. As noted in the report, in January 2010, the Secretary of the Interior directed FWS to comprehensively review statutory authorities and regulations.
16. We modified the report to add that an evaluation of the amount of FWS's funding and level of staff for live animal imports has occurred.
17. We modified the report to clarify that FWS requires that all carriers transporting wild mammals and birds to the United States have a certificate of veterinary medical inspection signed by a veterinarian.

Appendix XI: GAO Contact and Staff Acknowledgments

GAO Contact

Lisa Shames, (202) 512-3841 or shamesl@gao.gov

Staff Acknowledgments

In addition to the individual named above, Thomas M. Cook, Assistant Director; Kevin S. Bray; Gary T. Brown; Elizabeth Curda; Mary Denigan-Macauley; Elizabeth Dunn; Jeanette Jacobs; Mitchell Karpman; Diane G. LoFaro; Terry Richardson; Cynthia Saunders; Carol Herrnstadt Shulman; Kathryn A. Smith; Kiki Theodoropoulos; and Megan M. Taylor made key contributions to this report.

Related GAO Products

National Security: Key Challenges and Solutions to Strengthen Interagency Collaboration. [GAO-10-822T](#). Washington, D.C.: June 9, 2010.

Language Access: Selected Agencies Can Improve Services to Limited English Proficient Persons. [GAO-10-91](#). Washington, D.C.: April 26, 2010.

Biosurveillance: Developing a Collaboration Strategy Is Essential to Fostering Interagency Data and Resource Sharing. [GAO-10-171](#). Washington, D.C.: December 18, 2009.

Food Safety: Agencies Need to Address Gaps in Enforcement and Collaboration to Enhance Safety of Imported Food. [GAO-09-873](#). Washington, D.C.: September 15, 2009.

Seafood Fraud: FDA Program Changes and Better Collaboration among Key Federal Agencies Could Improve Detection and Prevention. [GAO-09-258](#). Washington, D.C.: February 19, 2009.

Veterinarian Workforce: Actions Are Needed to Ensure Sufficient Capacity for Protecting Public and Animal Health. [GAO-09-178](#). Washington, D.C.: February 4, 2009.

Natural Resource Management: Opportunities Exist to Enhance Federal Participation in Collaborative Efforts to Reduce Conflicts and Improve Natural Resource Conditions. [GAO-08-262](#). Washington, D.C.: February 12, 2008.

National Animal Identification System: USDA Needs to Resolve Several Key Implementation Issues to Achieve Rapid and Effective Disease Traceback. [GAO-07-592](#). Washington, D.C.: July 6, 2007.

Avian Influenza: USDA Has Taken Important Steps to Prepare for Outbreaks, but Better Planning Could Improve Response. [GAO-07-652](#). Washington, D.C.: June 11, 2007.

Homeland Security: Management and Coordination Problems Increase the Vulnerability of U.S. Agriculture to Foreign Pests and Disease. [GAO-06-644](#). Washington, D.C.: May 19, 2006.

Results-Oriented Government: Practices That Can Help Enhance and Sustain Collaboration among Federal Agencies. [GAO-06-15](#). Washington, D.C.: October 21, 2005.

Related GAO Products

Managing for Results: Barriers to Interagency Coordination. [GAO/GGD-00-106](#). Washington, D.C.: March 29, 2000.

Agency Performance Plans: Examples of Practices That Can Improve Usefulness to Decisionmakers. [GAO/GGD/AIMD-99-69](#). Washington, D.C.: February 26, 1999.

Agencies' Annual Performance Plans Under the Results Act: An Assessment Guide to Facilitate Congressional Decisionmaking. [GAO/GGD/AIMD-10.1.18](#). Washington, D.C.: February 1998.

Wildlife Protection: Fish and Wildlife Service's Inspection Program Needs Strengthening. [GAO/RCED-95-8](#). Washington, D.C.: December 29, 1994.

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