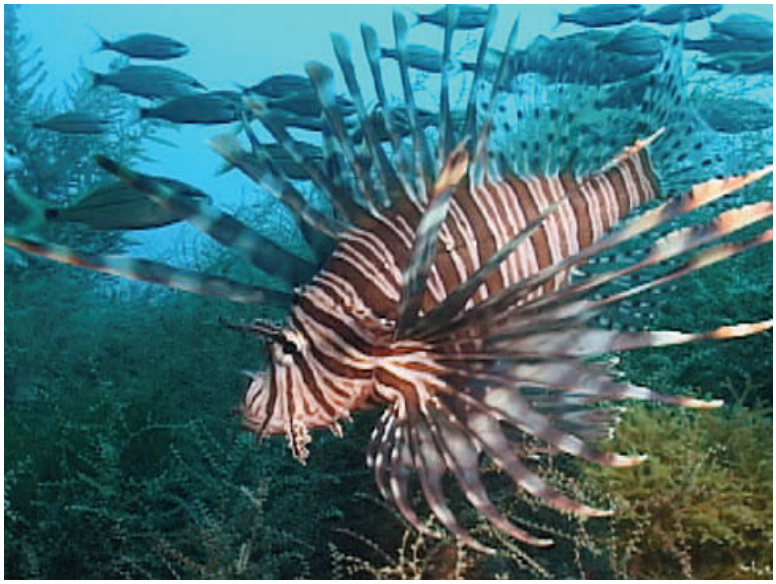
Nonnative Wildlife Invasion Prevention Act



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Nonnative Wildlife Invasion Prevention Act

Master of Public Administration in Environmental Science and Policy
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Final Report

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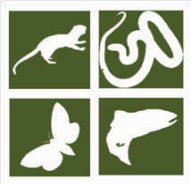
Executive Summary

For the last two decades, there has been a substantial increase in the importation of nonnative wildlife species into the United States—roughly doubling in volume since 1991. This increase has been fueled by the growing demand for rare animal species as pets in conjunction with reduced barriers to international trade and travel that allow importers to deal directly with individual purchasers in the United States. For example, between 2000 and 2004, more than 2,200 nonnative animal species were intentionally transported into the country. The majority of these species would not pose a significant problem if they remained in their owners' possession and control. However, some that escape or are deliberately released establish self-sustaining populations and become invasive, compromising biodiversity and ecosystem functions and causing harm to human health and native wildlife—sometimes contributing to the endangerment or extinction of native species. Although difficult to quantify, the economic consequences of this "biological pollution" are high: costs due to damages and control measures have been estimated at $120 billion annually.

In the face of the evidence of past damage attributable to nonnative species and the predictions of increasing damage in the future, a strong regulatory solution is needed to prevent their continued spread throughout the country. The existing patchwork of federal and state laws that are potentially applicable to nonnative wildlife has proved to be inadequate to the task. These laws are wholly reactive in that they address the harm caused by an invasive species only after the harm has already occurred.

The Nonnative Wildlife Invasion Prevention Act (the Act) represents a clear shift from a reactive to a proactive policy in dealing with the rising tide of nonnative animal imports into the United States. In particular, the Act prevents the intentional introduction and establishment of nonnative animal species in the United States that are likely to cause environmental or economic harm. This goal is achieved through a rigorous risk assessment conducted by the U.S. Fish and Wildlife Service (FWS) that considers a number of factors based on the characteristics of invasive species. Significantly, all nonnative species that have not been assessed are subject to the Act's prohibitions—essentially creating a "guilty until proven innocent" mechanism.

The Act's precautionary approach, combined with the large number of species traded and the lack of scientific knowledge about many of them, presents a number of challenges to the Act's implementation. Many stakeholders, in particular the exotic pet industry, have voiced concern about the potential impact to trade, because those involved in the pet trade will not be able to import or sell a nonnative species until it has been assessed and approved. This process is subject to delay, especially in the first three years of the program, when it is expected that a large number of applications will be received by the FWS. Furthermore, the extensive scientific data required to assess each species will take a significant amount of time; in many cases, the data are insufficient or completely lacking. Finally, once species are assessed and banned from importation, the success of the Act will depend on strict enforcement and willingness to comply by the public.



The recommended program design for implementing the Act attempts not only to carry out the Act's explicit mandates but also to address its challenges. To begin, a new Invasive Wildlife Office, housed in the Fish and Wildlife Service (FWS), should be created to oversee the risk assessment process and ensure coordination among all agencies involved in invasive species management. Under this central office, it is recommended that four departments be organized. The Enforcement team, already charged with inspecting wildlife shipments at ports, will be enhanced by the addition of staff and an upgraded system for tracking shipments. Data Collection, whose primary function is to gather the data necessary to conduct the risk assessments, will administer a grants program to states, other federal agencies, and independent contractors in order to expedite the process. This program will be the most costly, both in time and in dollars. The Risk Assessment department should be staffed with biologists, who will review the completed applications and recommend approval or non-approval for import. Lastly, an Education and Partnerships program should be created to promote awareness of invasive species and the potential consequences of releasing exotic pets into the wild.

Despite the challenges associated with implementing the Act, it represents an innovative and necessary solution to the deepening crisis of biological invasions in the United States. The damages to native wildlife, habitats, agriculture, and watersheds caused by established nonnative species are difficult if not impossible to reverse, and the economic costs of controlling, containing, and eradicating their presence are mounting at an exponential rate. Proactive legislation is needed in order to limit the introduction of additional destructive pests. As the costs associated with invasive species are likely to continue to rise unless preventive measures are taken, an increase in spending on preventing invasions should result in a decrease in control expenditures and ecological damages in the future.

Introduction

Nonnative invasive species pose a significant threat to the economy, native ecosystems, and human health. In the words of E. O. Wilson, "the two great destroyers of biodiversity are, first, habitat destruction and, second, invasion by exotic species" (Wilson 1997). Plant and animal invasive species, which can be considered a form of biological pollution, are responsible for an estimated $120 billion annually in environmental and economic losses in the United States alone. This number includes control costs, damages to industries such as agriculture and timber, loss of biodiversity, and harm to human health (Pimentel et al. 2005).

Consider the following examples of the economic and health costs of invasive species:

- To control the gypsy moth (*Lymantria dispar*), intentionally introduced to produce silk in the 1880s, the U.S. Forest Service spends approximately $11 million per year (Campbell and Shlarbaum 1994 in Pimentel et al. 2005). This number does not include damages to forests or the timber industry.

- The European green crab (*Carcinus maenas*) is believed to significantly impact the clam, oyster, and mussel industries, particularly on the West Coast, with a potential economic damage of $44 million per year (USGAO 2002).

- Three Asian Carp species currently threaten the Great Lakes ecosystem. To prevent their spread to Lake Michigan, the Department of the Interior and Department of Defense allocated $2 million in 2007 to maintain and operate a barrier to Lake Michigan, as well as to research and test other possible preventive measures (NISC 2007).

- Feral and domesticated dogs bite an estimated 4.7 million people very year, costing approximately $165 million in medical costs, according to the Centers for Disease Control (Colburn 1999 and Quinlan and Sacks in Pimentel et al. 2005).

- The common pigeon (*Columba livia*) is a vector for more than fifty diseases (Pimentel et al. 2005); the costs associated with these diseases have not been quantified.

These are but a small sample of the enormous economic costs of invasive species. Biodiversity loss and other threats to native ecosystems, while more difficult to quantify, are no less significant. Nonnative invasive species are estimated to have contributed to the imperilment of 39 percent of endangered or threatened animal species and 57 percent of endangered plant species (Wilcove et al. 1998). Some native habitats, such as islands, are particularly vulnerable. On the island of Guam, the brown tree snake has caused the local extinction of ten native forest birds and has threatened or extirpated all fifteen native lizard species (Rodda et al. 1997). These effects are irreversible.

For more than a century, attempts by U.S. policymakers to prevent the establishment of invasive species have been largely unsuccessful. The Lacey Act of 1900 was the first legislation to address specifically the threat of invasive species. As originally drafted, the Lacey Act was intended to be far more restrictive than it has been in practice; it banned parties from importing any exotic animals or birds without first obtaining permits from the United States Department of Agriculture (Fowler et al. 2007). However, as it has been implemented, importation of exotic species has been restricted only after they are shown to be harmful in the United States. After 109 years and numerous amendments, the Lacey Act prohibits the importation of a mere 26 wildlife taxa (Fowler et al. 2007). Too often, barring further import of a species once it has already entered the country does little to limit the losses incurred as a result of its initial introduction. Eradication of self-sustaining populations of invasive species is costly and sometimes impossible, mostly due to a lack of technology that can selectively target invasive species. Therefore, in most cases, invasive species must be identified early, while their populations are still small and localized (Lodge et al. 2006). Yet, the urgency of early detection is complicated by the fact that the effort needed to detect invasions is inversely proportional to the species' population size. In other words, the smaller the population, the more difficult it is to detect an invasion (Barry 2004 in Lodge et al. 2006).

The Nonnative Wildlife Invasion Prevention Act addresses a critical policy gap by limiting the importation of all nonnative species until they are deemed unlikely to become invasive. To accomplish this goal, the Fish and Wildlife Service, under the authority of the Secretary of the Interior, will conduct risk assessments for all species entering the country through trade or other intentional means. The risk assessment leads to the determination of whether species are approved for importation: species that are deemed unlikely to invade are placed on an approved list, while species that are likely to invade are placed on an unapproved list. The Act therefore operates under the precautionary principle by preventing the importation of nonnative species that are likely to become invasive. At the same time, because the vast majority of imported species are unlikely to become invasive, the Act allows for continued trade. This is an important consideration for gaining the support of key stakeholders, such as the pet industry.

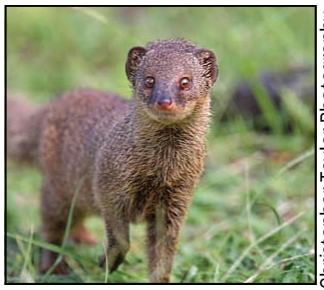
Stakeholder Considerations

While the Act is not intended to impede trade unnecessarily, the potential negative consequences of the Act's strict, proactive mechanism to stakeholders should not be discounted. Stakeholders that will be impacted by the Act include agriculturalists, aquaculturists, the exotic pet industry, the biocontrol industry, land and wildlife managers, and conservationists.

The exotic pet industry in particular has voiced concern about the Act's potential impact on trade. With a "guilty until proven innocent" approach, companies and individuals involved in the pet trade will not be able to import or sell a nonnative species until it has been assessed and approved—a process that may take significant time. This problem will only be compounded by the current lack of federal government resources and personnel to conduct the anticipated large volume of risk assessments. The pet industry, including pet stores and kennels, has organized many citizen groups against the Act. Among their concerns is that the ban of nonnative species would literally shut down industries that rely on the importation of exotic species (PIJAC 2008).

The implementation of the Act will have an impact on the biological control (biocontrol) of pests, which involves the intentional introduction of a species, often nonnative, into a habitat, in an attempt to eradicate or decrease the abundance of a pest. The pest species is itself often nonnative. Proponents of biocontrol generally view nonnative species introduction for biocontrol purposes as restoring balance—by providing a predator for a pest—and as more environmentally friendly than chemical pesticides (Hoddle 2004). Opponents view the introduction of nonnative species as a potential threat to native wildlife, given that nonnative predators could become invasive and prey on nontarget organisms (Louda and Stiling 2004). While certain nonnative species could have economic and environmental benefits as biocontrol agents, the risk remains that these species will become invasive. The implementation of this Act will add administrative steps to the import of nonnative biocontrol agents. For those species deemed to be a significant invasion risk, it would prevent introduction, limiting the use of some types of pest control.

Case Study No.1
Small Indian Mongoose
(*Herpestes javanicus*)


Christopher Taylor Photography

The Small Indian Mongoose, designated as one of the International Union for Conservation of Nature's "World's 100 Worst Invasive Alien Species" (Yamadai and Sugimura 2004), was imported in the late 1800s from India to Puerto Rico, Hawai'i, and the U.S. Virgin Islands to control rat infestations on plantations (Simberloff et al. 2000). This biocontrol strategy was not widely successful, given that some of the target rat species are not particularly susceptible to predation by the mongoose (Pimentel et al. 2000).

In its native territory, the Small Indian Mongoose shares the same range with the Indian Grey Mongoose (*H. edwardsii*) and has overlapping ranges with other species with whom it must compete for prey (Simberloff et al. 2000). Also in its native range, the Small Indian Mongoose was preyed upon by a number of animals, including jackals, bears, and martins. In Hawai'i, Puerto Rico, and the U.S. Virgin Islands, its only significant predators are feral cats and dogs, leaving it less vulnerable to predation.

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The Science Behind the Act

To make informed and fair decisions for listing species as approved or unapproved, scientists at the FWS will require in-depth knowledge of the complexities of biological invasions. For a nonnative species to become invasive, it generally progresses through four stages: transport, establishment, spread, and impact (Figure 1). Without human influence, nonnative species often die during transport from their native habitat to the introduced habitat. One estimate suggests that only approximately 10 percent survive at each stage of the process (Williamson and Fitter 1996; Williamson 1999); other researchers found a 50 percent success rate (Jeschke and Strayer 2005). Wildlife that is intentionally imported is likely to have high survival through the transport and establishment phase, thereby increasing substantially the number of nonnative species entering the United States (Williamson and Fitter 1996; Moyle and Michael 2006).

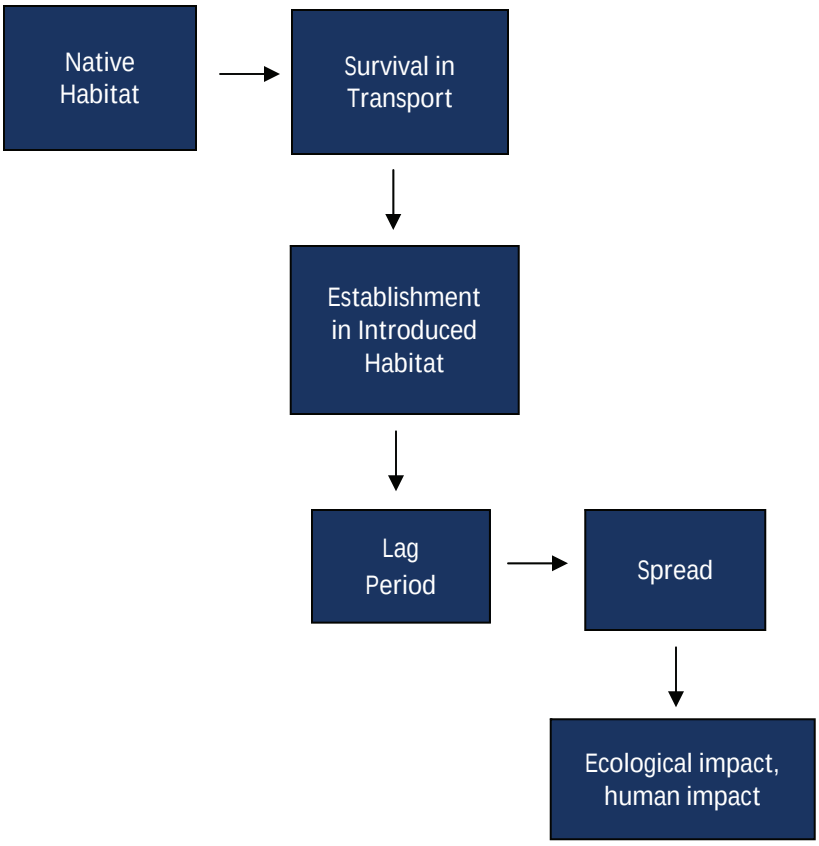

Figure 1: The invasion process begins with transportation of the species from its native habitat and ends with impact on the new habitat (adapted from Sakai et al. 2001).

(Case Study No. 1, continued)

Furthermore, the Small Indian Mongoose is versatile both in terms of habitats it can occupy and the food it consumes. In tropical climates, it can survive in virtually all habitats other than urban areas and forest, where food supplies are limited (Pimentel 1955). In Hawai'i, for example, mongooses eat a wide variety of animals and plants, such as crab, fish, insects, birds, and fruit.

These characteristics strengthen the ability of the Small Indian Mongoose to establish in nonnative environments (Simberloff et al. 2000). Significantly, many wildlife species native to the islands have evolved without developing defense mechanisms against predation, due to the absence of predators prior to the introduction of the mongoose (Yamadai and Sugimura 2004).

For these reasons, the Small Indian Mongoose was able to successfully expand its population in Hawai'i, Puerto Rico, and the U.S. Virgin Islands. Overall, the mongoose has thrived as a successful invader, causing numerous native wildlife extinctions, depredating poultry, and serving as a vector for diseases such as rabies and leptospirosis (Hays 2007).

Once a nonnative species arrives in the new habitat, successful establishment is dependent upon whether the overall number of incoming individuals is sufficient to found a viable breeding population (Kolar and Lodge 2001; Sakai et al. 2001). After introduction, a lag period generally follows before the species begins to spread; this amount of time can be anywhere from four years to a decade or more (OTA 1993). Even after successful establishment and spread, a nonnative species is not considered invasive unless it causes economic or ecological harm (Cox and Moore 2005). The Act also includes harm to human health in its definition of *invasive*.

The factors that play a role in whether an introduced species will establish and become invasive can be divided into two categories: the characteristics of the species themselves and the conditions of the environment to which they are introduced. Successful invaders generally have certain characteristics, such as:

(1) early sexual maturity;
(2) the ability to reproduce frequently and produce many offspring during each reproductive cycle;
(3) the ability to increase populations in diverse environments;
(4) high dispersal ability;
(5) a history of successful invasion elsewhere;
(6) the ability to readily adapt to new environments (Holway and Suarez 1999; Sakai et al. 2001).

Habitat conditions that are particularly conducive to invasion by nonnative species include:

(1) areas of frequent or intense disturbance (often anthropogenic in nature);
(2) lack of native competition or predators;
(3) presence of naive or vulnerable native prey;
(4) climatic conditions similar to the invader's native habitat;
(5) abundant resources (Sakai et al. 2001).

Based on these characteristics, scientists have developed (and are continuing to improve) quantitative, analytic, and systematic methods of predicting which species are likely to become invasive (Parker and Reichard 1998 in Williamson 1999). Conversely, these predictive models can also fail. For example, the zebra mussel (*Dreissena polymorpha*), which is native to Eastern Europe, is relatively innocuous in Western Europe but has caused immense damages in North America (Williamson 1999). This example counters the widely supported prediction that previous invasion success is one of the best predictors of invasion risk in a new habitat.

Case Study No.2
Nutria
(*Myocastor coypus*)

Peleg

Nutria are semi-aquatic rodents that were first intentionally introduced in 1899 to North America from South America for their fur. When nutria farming largely collapsed in the 1940s, some ranchers released their nutria or failed to recapture those that escaped (Evans 1970). State and federal agencies and individuals also transported nutria into many states for the purpose of controlling undesirable vegetation and enhancing trapping opportunities (Nutria Workshop 2002).

Nutria live in swamps and marshes and along the shores of rivers and lakes. They feed on many terrestrial and aquatic green plants and occasionally consume grains (Whitaker 1988). Their feeding habits are extremely destructive to marsh vegetation, because their foraging activity destroys vegetative root mat. This practice loosens a plant's hold on the soil, which then becomes more vulnerable to erosion, and can transform a productive wetland into a barren mudflat (Nutria Workshop 2002).

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These characteristics of invasive species and habitat conditions inform the risk assessment process under the Act. While there is significant diversity in opinion among the scientific community over which models are best suited to predict future invasions, the criteria established by the Act generally conform to a consensus of understanding of invasion biology. The Act does not provide guidance for which models and methods to use when carrying out the risk assessment; instead, the FWS will use the best science available for evaluating whether a species is likely to invade.

(Case Study No. 2, continued)

The destructive foraging habits of the nutria have been compounded by their rapid population expansion. Nutria reach sexual maturity at about four to six months of age and reproduce throughout the year, typically having two to three litters annually (Brown 1975; Willner et al. 1979). They also have an aggressive nature and will displace native animals such as beavers and muskrats. Threatened by few predators (other than humans), nutria have experienced a population boom in certain areas of the country. For example, on a 10,000-acre parcel of land in Dorchester County, Maryland, the nutria population was estimated to have expanded from less than 150 in 1968 to between 35,000 and 50,000 in 2002 (Nutria Workshop 2002).

The Proposed Solution

The Act establishes criteria for assessing the risk of nonnative species, an aggressive timeline in which preliminary approved and unapproved lists will be published, and a self-funding mechanism for implementing the Act based on fees and fines. While these mandates provide the basic skeleton for creating a comprehensive plan to prevent future invasions, they present significant challenges to implementation.

The risk assessment guidelines require the FWS to consider a number of factors, including (1) identification of the organism to the species level and its native range; (2) whether the species was introduced into ecosystems similar to the United States and whether its introduction was injurious to the native ecosystem; (3) whether conditions in the United States are suitable for the establishment and dispersal of the species; (4) the likelihood that the species will establish in the United States, or cause harm to native wildlife, endangered species, or native ecosystems; and (6) the likelihood that pathogenic or parasitic species may accompany the imported species. Under a strict interpretation of the Act, the burden of collecting and providing this data lies with the applicant, while the task of reviewing applications and making a final listing decision rests with the FWS. The Act does not specify which departments or staff within the FWS will be responsible for performing risk assessments. Furthermore, while the Act allows for the possibility that sufficient data may not be available for placing a species on the approved or unapproved list, the Act does not specify what should be done in these cases.

It is important to note that all nonnative species default to the unapproved list until an application has been submitted and a listing decision is made. While this guilty-until-proven-innocent approach is strict, the Act allows for a number of exemptions. First, all animals owned prior to passage of the Act may be kept, although they may not be sold, bred, transported across state lines, or released. Second, a number of domesticated animals, including popular pets such as dogs, cats, and goldfish, as well as a number of farm animals, are explicitly exempted from the mandates of the Act. Third, nonnative species that are already widespread in the United States are also exempted. Given that it is virtually impossible to eradicate these species, there will be no "practical utility" in prohibiting their import. Finally, the FWS may issue permits to zoos, aquariums, research laboratories, and similar facilities used for academic purposes, with the same limitations defined above for animals owned prior to passage of the Act.

For nonexempt, nonnative species—which represent a vast majority of species currently traded internationally—the Act establishes strict deadlines by which applications must be reviewed and species placed on the approved or unapproved list. Assuming that the Act is passed at the beginning of 2010, the following table outlines the timeline as it is mandated in the Act.

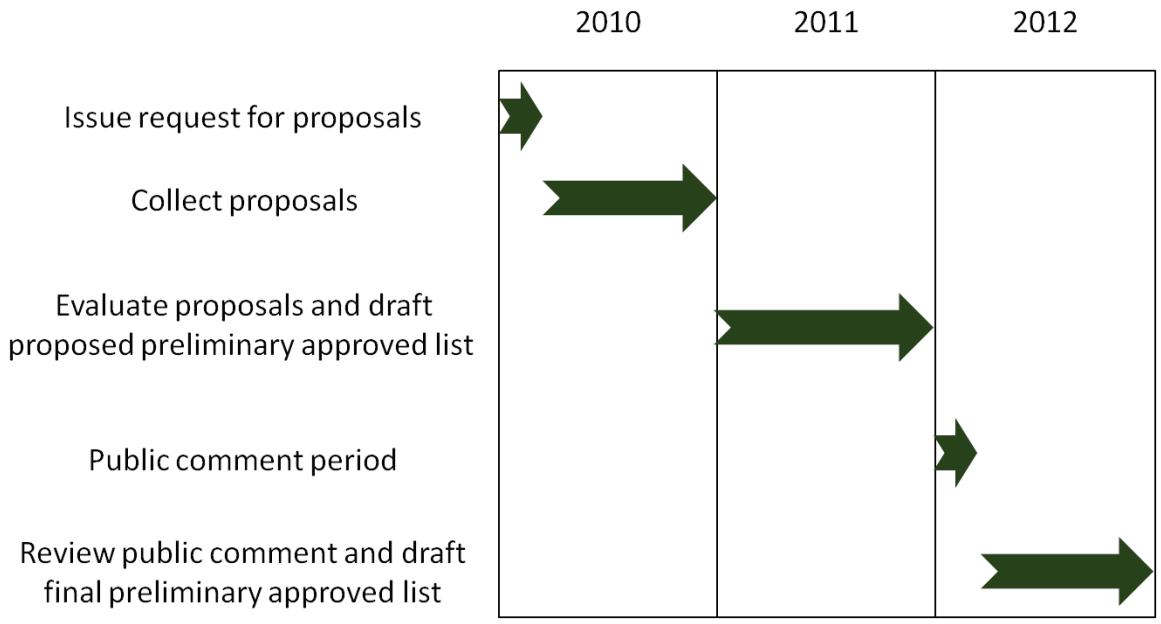


Figure 2: The Act defines a number of mandated deadlines, culminating in the publication of a preliminary approved list.

To fund the new mandates, the Act creates the Nonnative Wildlife Invasion Prevention Fund, which will be generated from fees and fines associated with the Act. All applications will be accompanied by a fee, the amount of which is not specified by the Act, and violations of the Act will result in the imposition of civil and criminal penalties listed in the Lacey Act Amendments of 1981. A misdemeanor violation incurs a fine of up to $100,000 for individuals and $200,000 for organizations. Felony violations incur a maximum fine of up to $250,000 for individuals and $500,000 for organizations. However, the fees will not be assessed and the fines not imposed until after the creation of the final preliminary approved list—a full three years after the Act is passed. This presents a significant challenge, as a vast amount of research will be required to conduct risk assessments for every species application.

Program Design

The program design presented here attempts to address the challenges introduced above, as well as to fill gaps in the legislation that are crucial for successfully preventing future invasions. It also seeks to accommodate, to some extent, the concerns of stakeholders, such as the pet industry and the FWS itself. The program design set forth below begins with the establishment of an Invasive Wildlife Office (IWO) for coordinating all activities necessary for implementing the Act, followed by four key program components designed to take on the tasks of enforcement, data collection, risk assessment, and education and partnership.

Invasive Wildlife Office

The first task required to implement the Act will be the creation of the IWO. In the current structure of the FWS, eleven managers work at the assistant director level of the FWS, and while some are involved in invasive species functions, none have sole responsibility for invasive species management (Appendix A). For example, the Assistant Director for Fisheries and Habitat Conservation is responsible for coordinating a national-level Aquatic Invasive Species Program. The Chief of Law Enforcement has overall managerial responsibility for wildlife inspectors and special agents. Lack of a single focal point necessitates the hiring of a new Assistant Director for Invasive Species Management. This position will have overall responsibility for implementation of the Act. The assistant director will also manage the IWO and ensure coordination of resources at both the national and regional levels. Administrative employees in the IWO—the assistant director, an assistant, and four human resources staff—will be responsible for hiring the additional staff needed for each of the four program components, as well as creating standard operating procedures.

Program I: Enforcement

Although not specified in the Act, improving enforcement of wildlife shipping regulations will be a crucial component of the success of the Act. The FWS is responsible for inspecting imports and exports of wildlife shipments within the United States. In 2007, FWS inspectors processed more than 187,000 wildlife shipments with a declared value of more than $2.8 billion (USFWS 2008). The majority of these shipments pass through eighteen designated ports located along national borders, coastlines, and in major cities. The use of designated ports is intended to consolidate shipments and increase efficiency of processing.

Currently, the designated ports are staffed by 122 wildlife inspectors, as well as special agents, who work together to enforce wildlife regulations, including preventing injurious species from entering the United States. To import live wildlife, an interested party must submit a declaration form to the appropriate port. Inspectors then review this form for missing or suspicious information. If a declaration does not identify the wildlife to the species level, includes contents of a questionable nature, or is being sent to or from a past violator, the shipment could be identified as suspicious, and seized or detained. Inspectors may then decide to partially or fully inspect a shipment. If the shipment is found to be in violation of a regulation, it may be seized or returned to the exporter; however, this rarely happens (Osborne 2009). Although current wildlife regulations require these shipments to be identified to the species level, from 2000 to 2006 only 13.6 percent of shipments were properly labeled (Smith et al. 2009). Owing to the limited

number of inspectors at each designated port at present, inspection of all wildlife shipments—which totaled over 100,000 in 2006—is impossible (Smith et al. 2009).

To effectively implement the Act, a more rigorous screening process will be required at all points of entry, necessitating a larger number of FWS inspectors and special agents. Eighteen of each will be hired to enforce invasive species regulations. It is expected that in the larger ports, one additional inspector and special agent will not be sufficient to deal with the volume of wildlife shipments. In this event, there is potential for greater reliance on contractors. Additional staff can be hired in future years if a need is determined. Many states have offices that already house biologists, inspectors, and law enforcement officers. For this reason, it may be possible in many cases for the FWS to pay for a portion of these state employees' salaries in return for a percentage of their time, splitting their duties between state and federal activities. Many of the people hired under this program will be used for both inspection and enforcement. One foreseeable challenge to this strategy is the extent to which state employees can balance existing work with new duties.

In addition to an increase in personnel, the current database system used by port inspectors, called eDecs, will be expanded to include more information and renamed "iDecs" (Invasive Species Declaration). This system will provide species-specific barcodes for wildlife shipments. Inspectors will use hand-held scanners to check barcoded shipments against the approved species database and conduct random spot-checks to ensure that the label matches the box contents. Together with the increase in inspection staff, the iDecs system will promote proper labeling of shipments and maintain a record of species importation at the points of entry, thereby increasing the effectiveness of the restrictions imposed by the Act.

ENFORCEMENT
Program Highlights

GOAL:
Prevent the entry of unapproved or unlisted species and apprehend violators and increase properly labeled shipments to 90% by 2012.

STAFFING:
18 Port Inspectors (one per designated port)
18 Special Agents (one per designated port)
18 Biologists (one per designated port)

IMPLEMENTATION:
Invasive Species Declaration (iDecs) catalogue

KEY DEADLINES:
Hire new enforcement staff by the third quarter of year one of the Act.

BUDGET:
$2.3 million

Program II: Data Collection

Perhaps the greatest challenge to implementation will be the vast amount of scientific research required to inform risk assessments for all submitted applications within the thirty-six month deadline following passage of the Act. With its current resources, the FWS itself will likely be unable to complete this daunting task. As Gary Frazer, the FWS Assistant Director for Fisheries and Habitat Conservation, testified before Congress, the time needed to evaluate the risks of an exotic species depends on the availability of data (Frazer 2009). Under the Lacey Act, the average application processing time is 3.6 years (Fowler et al. 2007). Clearly, a more streamlined approach to data collection is needed (Frazer 2009).

Another potential difficulty will be enabling individual applicants, such as exotic pet import companies, to have access to qualified biologists or the required funds necessary to invest in research. Although the proactive approach embodied in the Act mirrors that found in FDA drug approval, a significant difference is the capacity for the applicants to profit from a monopoly on the product they are seeking to get approved. Pharmaceutical companies earn enough in revenues to support large research facilities and numbers of staff scientists to assist them in proving the safety of a particular drug. Wildlife importers simply do not have the resources necessary for conducting their own research on invasive species, nor would applicant-funded research lead to patents or exclusive economic benefits.

Thus, it is recommended that the bulk of data collection be conducted by federal and state agencies already involved in invasive species research, as well as by independent scientific consultants. To support some of the financial costs of the data collection, a competitive grants program will be established for interested parties or agencies solicited by the FWS to assist in data collection. As the most time-consuming and intensive program under the Act, data collection will likely receive the most funding. The grants program should also be implemented quickly so that sufficient data will be available for compiling the preliminary approved and unapproved lists, set to be published by the end of 2011.

DATA COLLECTION
Program Highlights

GOAL:
Enable 75% of applicants to have sufficient data for evaluation.

STAFFING:
8 Contract Officers (one per regional office)
8 Grants Managers (one per regional office)

IMPLEMENTATION:
Data collection performed by applicants, states, or federal agencies. Establishment of a grants program to fund states and private applicants.

KEY DEADLINE:
Issue grants by the fourth quarter of 2010.

BUDGET:
$50.3 million

The data collection program will require modest increases in staffing. These additional personnel will include one contracting officer per region, who will review contract bids and award, manage, and obligate funds to contract support staff. Further, eight regional grants managers will be hired through the IWO to review and award grant funding. Both of these positions will require only half-time commitments.

Program III: Risk Assessment

The centerpiece of the regulatory mechanism created by the Act is the listing of species based on the results of the risk assessment, which is mandated to be performed by the FWS. The Act's list generation process represents a "white list" approach to the regulation of nonnative wildlife, which places the burden on the regulated community to prove that a particular species will not cause harm before it is included on the white list of unregulated species. By contrast, the Lacey Act employs a "black list" approach, in which the federal government has the burden of proving that a species is "injurious" prior to placement on the black list of regulated species (Wade 1995).

While the Act explicitly designates two options for listing—approved (white list) or unapproved (black list)—there is no directive for what action to take if sufficient data is unavailable for a species. A third option is therefore recommended: the creation of a provisionally approved, or gray, list (Smith et al. 2009). Gray-listed nonnative species that have already been imported into the United States could be provisionally approved after an expedited investigation of their likelihood to become established and cause harm. Species that have been provisionally approved will be subject to certain restrictions (Smith et al. 2009). Such restrictions might include limitations on the numbers imported, restrictions on the regions to which they can be transported within the United States, and reasonable restrictions on commercial trade and breeding. A monitoring system will be established to track the distribution of provisionally approved listed species throughout the nation. This provisional approval system would be implemented using a mandatory self-reporting system that limits the resources that must be expended by the FWS.

The implementation of a provisional approval process may serve to reduce the economic burden placed on the regulated community, since a strict white list approach would require an interim ban on a species for which there is insufficient information to make a listing determination. It was this argument by the politically powerful pet industry, as well as by scientific researchers and zoos, that assisted in defeating an attempt in 1973 by the Secretary of the Interior to pass regulations requiring a white list approach under the Lacey Act (Wade 1995). By mitigating the burden on the regulated community, this option should also undercut criticism of the Act and promote the successful achievement of its goals.

RISK ASSESSMENT
Program Highlights

GOAL:
75% of assessment decisions made within 90 days of application.

STAFFING:
1 Risk Assessment Coordinator
1 Records Manager
1 Database Manager
5 Records and Data Management Staff
1 Web Manager
5 Biologists

IMPLEMENTATION:
Performed by the FWS. Addition of species to the Approved, Unapproved, or Provisionally Approved Lists.

KEY DEADLINE:
Publish the draft lists by the fourth quarter of year two of the Act.

BUDGET:
$3.1 million

Program staff in this area will consist of a risk assessment coordinator and biologists to review completed applications. Because the actual assessments may not be accomplished until applications have been prepared and submitted to FWS, the coordinator and biologists will not be hired until the first quarter of 2011.

To track the listing process, the FWS will create a database linked to the iDecs system. The framework for the database should be built simultaneously with the creation of the grants program so that the database is running by the time the IWO begins to make listing decisions. Therefore, a web manager will be hired in the second quarter of 2010 and outside contractors

retained to perform some of the database-building work. A records manager and additional staff will be hired at the same time as the biologists, in 2011, to ensure that they are trained in time to begin entering the data needed to support listing decisions.

Program IV: Education and Partnership

The Education and Partnership component of the program design seeks to advance public understanding of the threats and costs of invasive species. By doing so, this program will encourage adherence to the prohibitions of the Act and stem the tide of increasing invasions. In drawing attention to the environmental and ecological damage caused by nonnative invasions, FWS could prevent intentional releases, which represent a common pathway for the introduction of invasive species (Wade 1995).

The IWO, in coordination with other agencies involved in invasive species prevention, may undertake a number of national and regional initiatives in its educational campaign. Regional agents may visit pet shows and pet stores to increase awareness regarding the illegal abandonment and release of animals. An "Illegal Trade and Release" poster may be created and required for display at pet stores, much in the way choking victim posters are required in restaurants. Applicable literature will be stocked at pet stores to be distributed to customers purchasing exotic pets. The IWO may also include on its website information for pet owners about the potential environmental and economic effects of improper pet release, as well as the responsible alternatives (Hardin et al. 2008).

EDUCATION and PARTNERSHIP
Program Highlights

GOAL:
Increase public awareness of invasive species.

STAFFING:
1 Coordinator for Education and Partnership
16 Education and Partnership staff (2 per region)

IMPLEMENTATION:
Distribute educational materials to pet retailers and attend regional conferences.

KEY DEADLINE:
Begin poster campaign by the fourth quarter of year one of the Act.

BUDGET:
$0.8 million

To facilitate education programs regarding invasive species, sixteen education and partnership agents will be hired around the country, two for each region of the FWS. These agents will be responsible for integrating national policies and objectives into the activities of state and local groups committed to the prevention of harmful invasive species.

Budget Analysis

The collection of noncompliance fines, application fees, and import permits will not begin until after year three of the Act. Even after year three, however, it is unlikely that these revenues will be sufficient to cover the full budget. Federal appropriations will therefore be required to fund the administrative and program costs of the Act. These appropriations will likely be higher during the first three years, as the program becomes established and extensive data collection is required to support the initial round of risk assessments. Appropriations for the initial year of the Act will total approximately $57 million, with a full $50 million allocated to the competitive grants program. The remaining $7 million will be allocated to the IWO for administrative and program costs (see Appendix C for the budget).

To place these appropriations in a broader perspective, annual expenditures across all federal agencies involved in invasive species prevention, control, research, and education increased from approximately $500 million in 1999 to over $1.2 billion in 2007 (Figure 3). Prior to the signing of the executive order that established the National Invasive Species Council in 1999, records of federal spending on invasive species are harder to compile.

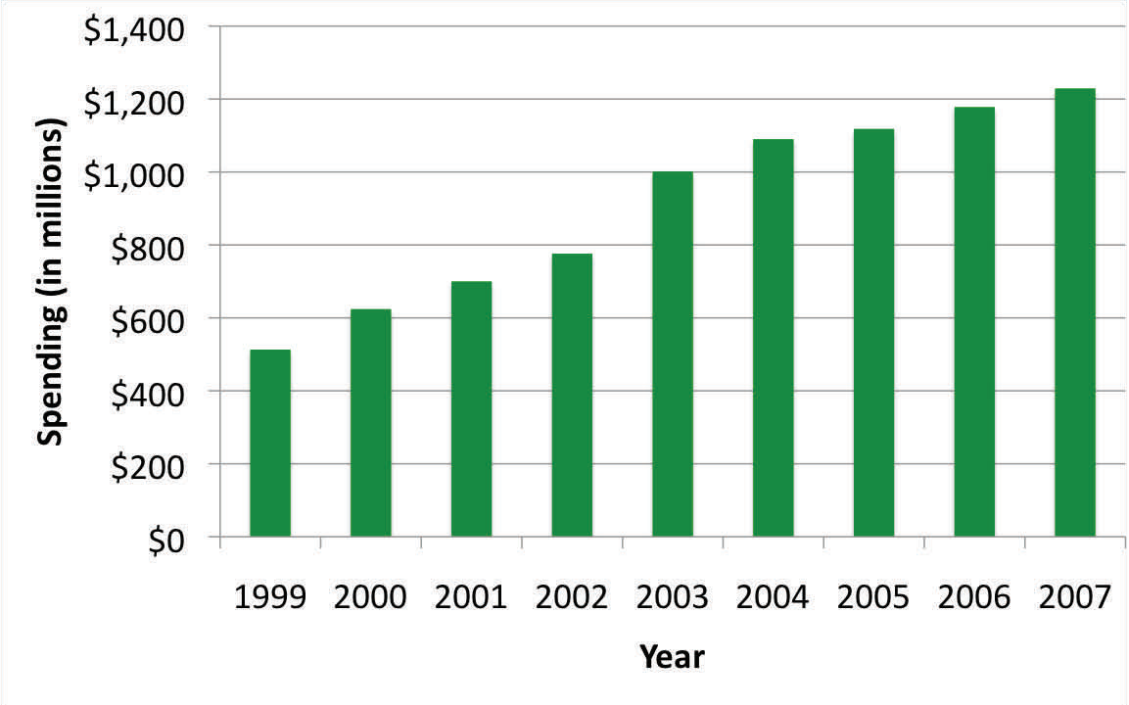


Figure 3: Federal spending on invasive species has increased substantially since 1999. Adapted from USGAO 2000, USGAO 2002, and NISC 2007.

The National Invasive Species Council (NISC) further broke down 2007 spending on invasive species by the following categories: prevention, early detection and rapid response, control, research, restoration, education, and international coordination (NISC 2007). The following chart shows the relative costs of these efforts.

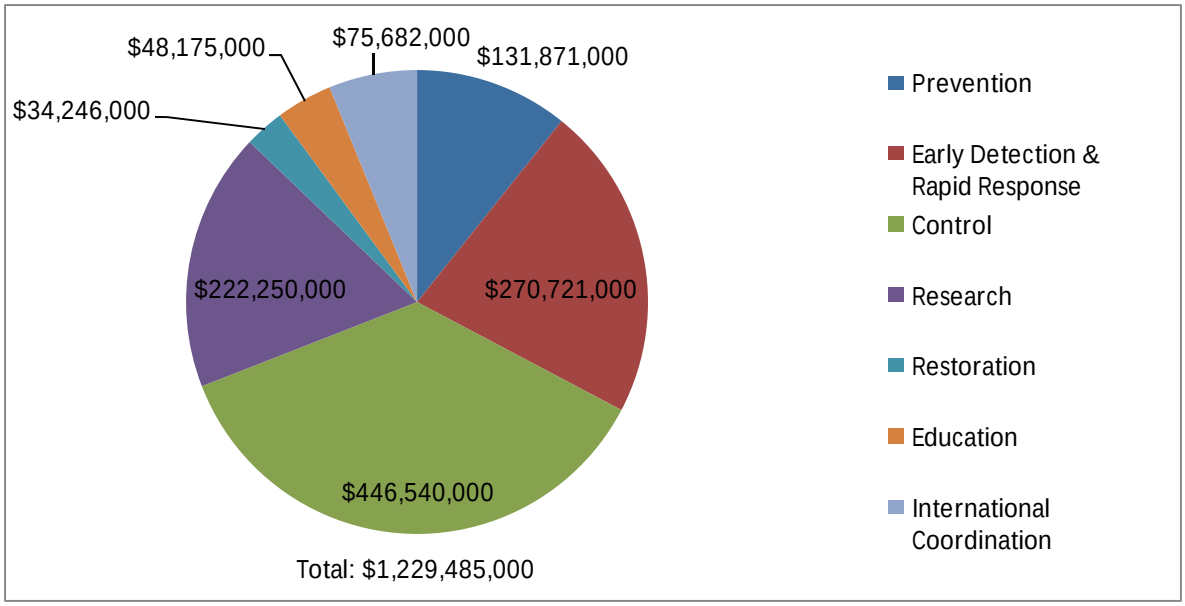


Figure 4: The breakdown of 2007 federal spending on invasive species illustrates the emphasis on control efforts in current invasion management. Adapted from NISC 2007.

By contrast, the total appropriations required by the Act in the first year, $56.5 million, equal less than half of the 2007 total prevention budget and less than an eighth of the 2007 total control budget. The adage "an ounce of prevention is worth a pound of cure" more than justifies this relatively modest allocation. Provided that each of the four program components under the Act is fully implemented, a slight increase in spending to prevent potentially invasive species from entering the United States will reduce the increasing rate of control costs in the future.

Measuring Success

Implementation Measures

To track success during implementation of the Act, performance management will be used to monitor each of the four programs.

Enforcement

The benchmark of a successfully implemented inspection program will be an increase in properly labeled shipments from 13.6 percent to 90 percent of the total number of shipments after the first two years of the program. It is expected that improved enforcement will encourage importers to comply with labeling requirements. Additionally, the number of monthly violations identified and spot checks completed should be compared with the total number of monthly shipments as a measure of the effectiveness of the inspection program in terms of its operational components. Tracking iDecs usage in terms of access frequency and barcode scans measures the degree to which personnel are using these resources in the inspection process.

The above measurements will be collected and organized into a database by staff working for the Chief of Law Enforcement. They may be assisted in this task by a self-reporting requirement at the inspector and special agent level and by automated data collection (e.g. electronic tracking of barcode scans and database access).

Data Collection

The primary goal of the data collection program will be for 75 percent of applications to have sufficient data to make a listing decision. Another important measure of data collection will be the degree to which the grants program is efficient in collecting the required data, with the goal that 95 percent of listing decisions will be based on data provided by states or applicants.

The source(s) (e.g., state agency, grant recipient) of data for each species under consideration will be logged by the database system as the data is entered. This will allow the Database Manager to generate monthly reports indicating the quantity of data generated by each source for a particular species. The FWS biologist assigned to oversee the data collection process for a particular species will be responsible for assessing the quality of the data generated from each source. The Database Manager's report concerning the quantity of data collected (on a species basis) from each source will be combined with the FWS biologists' reports regarding the quality of that data by the Coordinator of Risk Assessments and sent to the Assistant Director of Invasive Species Management. Comparisons

Case Study No. 3
Rhinocyllus conicus

Whitney Cranshaw, Colorado State University

The introduction of *Rhinocyllus conicus* (a weevil) is a prime example of the biocontrol controversy. *R. conicus* was introduced in the 1960s to Canada and Virginia to control the nodding thistle, *Carduus nutans*, a non-indigenous weed (Simberloff and Stiling, 1996). Prior to the introduction, the weed dominated and outcompeted native grasses in new habitats (Harris 1993). While *R. conicus* successfully destroyed the seeds of the weed, it also fed on several native thistles, three of which were listed under the Endangered Species Act (Simberloff and Stiling 1996).

between initial, pre-grant program, and post-grant program data flows will be conducted by the IWO for the first two years of the program.

Risk Assessment

To ensure that species are assessed quickly, the IWO should set a goal to make 75 percent of listing decisions within 90 days of receiving a complete application. It is assumed that the longer a species is being reviewed, the more resources, in the form of staff time and other risk assessment expenses, will be unavailable for additional risk assessments. The FWS biologists responsible for risk assessments will fill out a monthly survey or standardized questionnaire detailing information concerning the risk assessment(s) they conducted or are conducting that month.

Education and Partnership

Monitoring the effectiveness of the education and partnership program will be accomplished mostly through informal means. For example, the education and partnership agents will visit retailers to ensure that posters and literature are available and prominently displayed. Finally, traffic to the educational section of the IWO's website will be monitored. A monthly report from each of the agents will be compiled and submitted to the Coordinator for Education and Partnership to encourage information sharing and to target regions that may require increased efforts.

SCIENTIFIC MEASURES

The ultimate indicator of success of the Act will be a decline in both the number of newly established invasive species and the avoidance of damage that would have resulted from invasions by those species. This seemingly straightforward metric is complicated by a number of factors. First, and perhaps most significant, an unknown period of time will elapse before effective measurement can even begin; this is because of the lag time between when a species is introduced and when it becomes invasive. Second, the territory covered is large, and each region will require monitoring. Third, given that the Act deals only with intentionally introduced nonnative species, it is probable that invasions will still occur in the United States. Counting the number of new invasive species will be complicated because considerable effort may be required to determine the origin of some species vis a vis intentional or unintentional import. It may be difficult to distinguish between newly introduced nonnative animals and the progeny of nonnative animals that were already present in the United States.

A second measure of success is the magnitude of economic or health costs that are spared by restricting the introduction of a particular species. For example, extensive studies have been done on the economic damages of nonnative fish in the United States. As of 2006, 138 nonnative fish species were found in the United States. Control costs and economic damages are approximately $1 to $5.7 billion annually (Lovell et al. 2006). While economic damages due to already established species will not be affected by the passage of the Act, we should see a decline in economic damages and costs to human health from new invasions.

A third metric for measuring the success of the Act is the magnitude of loss of ecosystem function and biodiversity as a result of invasive species. Historically, data on the damages of nonnative species has been skewed toward direct market effects and control costs paid by the government (OTA 1993). One measure of biodiversity loss commonly used is the number of endangered or threatened species in a region. As of 1991, the listing of 41 indigenous species as endangered or threatened was considered to be a direct result of impacts from nonnative species. The focus on endangered species, however, tends to underestimate the environmental harm of nonnative species, because they create harm in a variety of ways (OTA 1993). Nonetheless, a decline in the rate of species newly endangered or threatened as a result of nonnative species invasions would be a clear indicator of success of the Act.

Conclusion

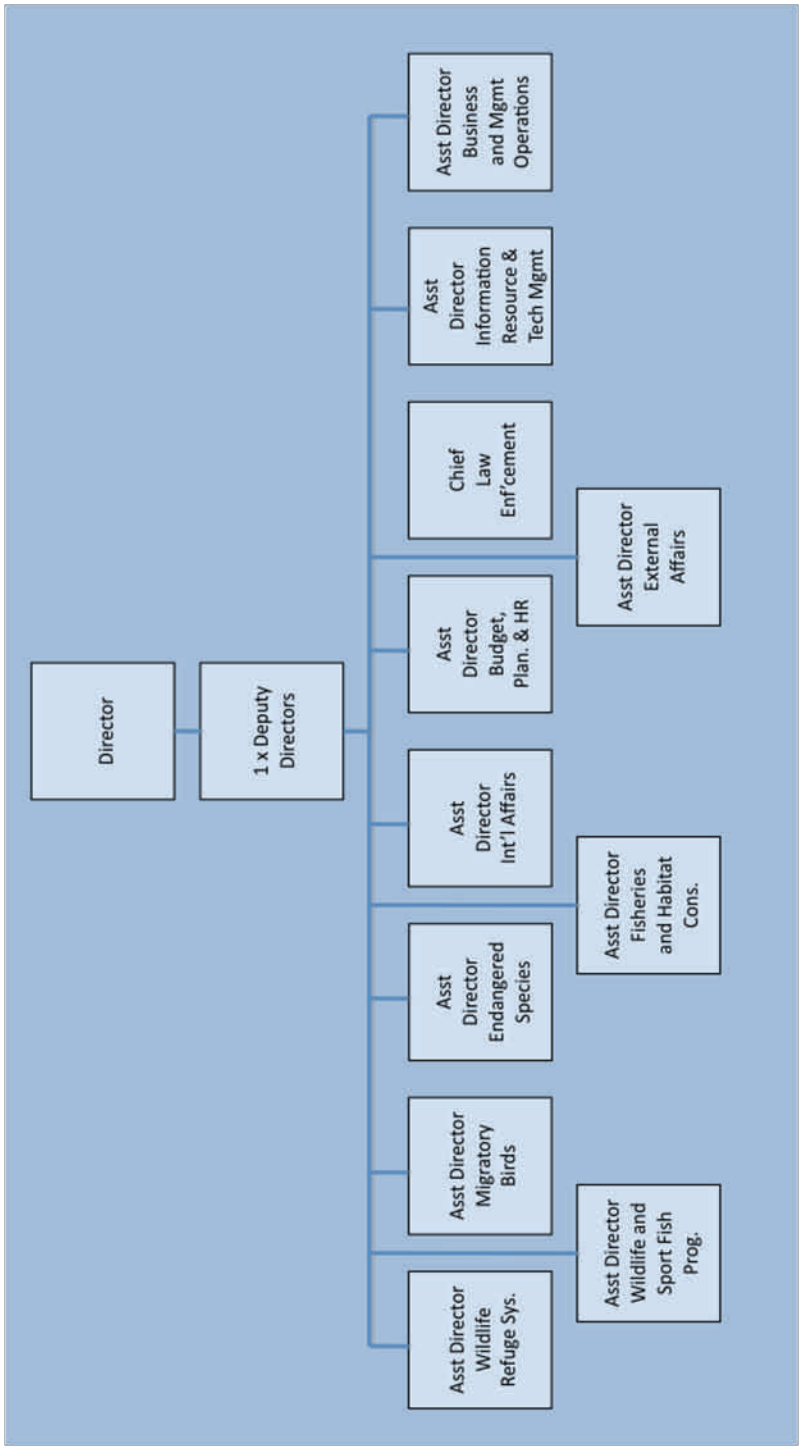
The United States is home to a rich diversity of native flora and fauna that combine to create complex ecosystems. These natural resources provide both direct economic benefits and ecosystem services such as climate regulation, flood control, and pollution remediation that are less quantifiable but immensely valuable. The invasion of nonnative species poses a significant threat to native biodiversity, ecosystem functions, the economy, and human health. However, legislation currently in place to manage invasive wildlife is inadequate in addressing these threats. The Nonnative Wildlife Invasion Prevention Act presents an innovative, proactive solution that prevents the introduction and establishment of nonnative species that have the potential to cause harm.

By focusing on the challenges associated with implementing the Act, this program design elaborates on the Act's mandates to create a comprehensive plan for preventing invasive species from entering the United States and its territories. While data collection and risk assessment represent the core of the program, these efforts will do little to prevent invasive species introductions without more stringent enforcement measures and greater public awareness of the problem. Thus, the program design focuses not only on comprehensive data collection through the grants program and efficient risk assessments completed by the FWS, but also on expanding inspection staff at the ports, improving existing tools for evaluating and tracking invasive species, and establishing an education campaign to raise public awareness. Coordinated by the newly created Invasive Wildlife Office, these efforts will be carried out at both the national and regional levels.

The enormity of the task of evaluating exotic species prior to importation cannot be denied. However, the budget for the recommended program design is only a small fraction of the total costs currently associated with invasive species, including spending by both federal and state governments for management and control, as well as costs to the economy, native ecosystems, and biodiversity. Furthermore, by spending money now on preventing invasions, historically increasing control costs—and damages to the environment—should begin to decline in the future. The vast amount of research that will be spurred by the Act will also become a national asset, contributing to the knowledge of agriculturalists, biologists, and scientists in general. Most importantly, the Act provides land and wildlife managers with a powerful tool with which to defend our nation's natural resources and protect human health from nonnative invasive species.

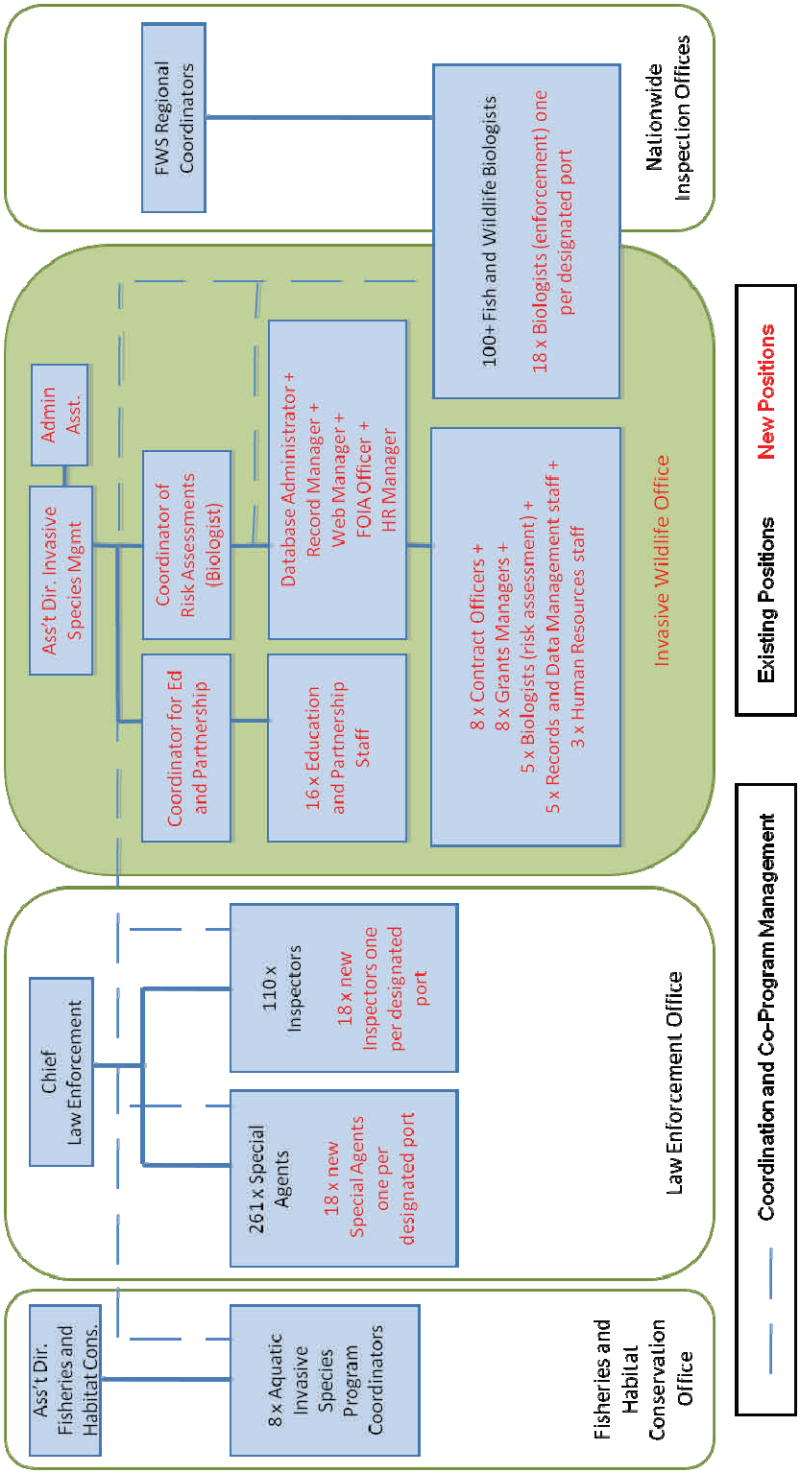
Appendix A

Current Fish and Wildlife Senior Management Organogram



Appendix B

Invasive Wildlife Office Management Chart



Appendix C

Line-item Budget, Fiscal Year 2010

Personnel Services		
Salaries		$3,889,000
	Total Personnel Services	**$3,889,000**
IWO Administration		**$353,000**
Other Direct Costs		
Database Development		$2,000,000
Office Supplies		$16,000
Travel		$50,000
	Total Other Direct Costs	**$2,066,000**
Grants Program		
State Grants Program		$25,000,000
Open Grants Program		$25,000,000
	Total Grants Program	**$50,000,000**
	Total Expenditures	**$56,308,000**
Act Generated Revenues		
Fines		$0
Fees		$0
Permits		$0
Federal Appropriations		
NWIPA Administration		$6,308,000
State Grants Program		$25,000,000
Private Grants Program		$25,000,000
	Total Revenue	**$56,308,000**

First-year budget

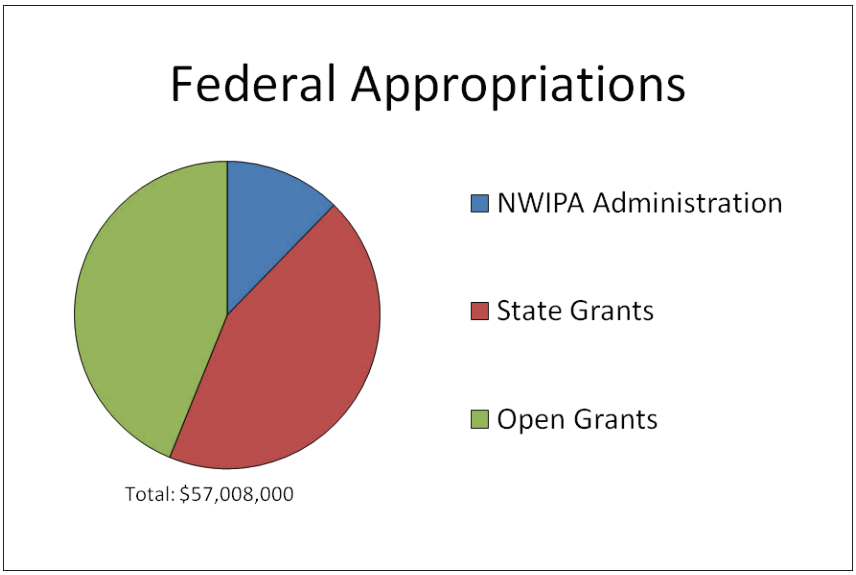


Figure C.1: During the first year, the majority of the total federal appropriations required will go toward the grants program.

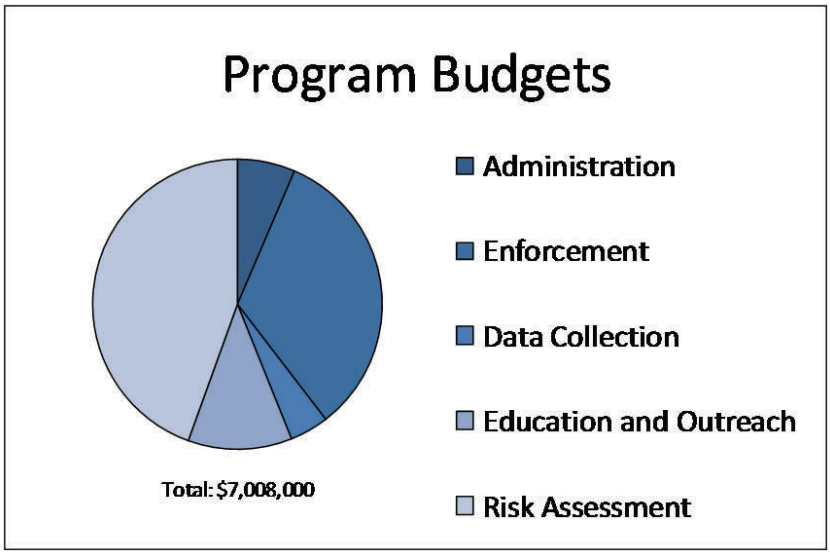


Figure C.2: Of the program budgets, the Risk Assessment and Data Collection require the most funding.

Appendix D

111th CONGRESS
1st Session
H. R. 669

To prevent the introduction and establishment of nonnative wildlife species that negatively impact the economy, environment, or other animal species' or human health, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES
January 26, 2009

Ms. BORDALLO (for herself, Mr. GEORGE MILLER of California, Mr. ABERCROMBIE, Mr. HASTINGS of Florida, Mr. KIND, Mr. MCGOVERN, Mrs. NAPOLITANO, Mr. GRIJALVA, Mr. KLEIN of Florida, and Mr. KILDEE) introduced the following bill; which was referred to the Committee on Natural Resources

---

A BILL

To prevent the introduction and establishment of nonnative wildlife species that negatively impact the economy, environment, or other animal species' or human health, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the `Nonnative Wildlife Invasion Prevention Act'.

SEC. 2. PURPOSE.

The purpose of this Act is to establish a risk assessment process to prevent the introduction into, and establishment in, the United States of nonnative wildlife species that will cause or are likely to cause economic or environmental harm or harm to other animal species' health or human health.

SEC. 3. RISK ASSESSMENT PROCESS FOR IMPORTATION OF NONNATIVE WILDLIFE SPECIES.

(a) In General- The Secretary of the Interior, acting through the United States Fish and Wildlife Service, shall promulgate regulations that establish a process for assessing the risk of all nonnative wildlife species proposed for importation into the United States, other than nonnative wildlife species that are included in the list of approved species issued under section 4.

(b) Factors To Be Considered- The regulations promulgated under subsection (a) shall include consideration of--

(1) the identity of the organism to the species level, including to the extent possible specific information on its subspecies and genetic identity;

(2) the native range of the species;

(3) whether the species has established or spread, or caused harm to the economy, the environment, or other animal species or human health in ecosystems in or

ecosystems that are similar to those in the United States;
(4) the likelihood that environmental conditions suitable for the establishment or spread of the species exist in the United States;
(5) the likelihood of establishment of the species in the United States;
(6) the likelihood of spread of the species in the United States;
(7) the likelihood that the species would harm wildlife resources in the United States;
(8) the likelihood that the species would harm native species that are rare or native species that have been listed as threatened species or endangered species in the United States under the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.);
(9) the likelihood that the species would harm habitats or ecosystems in the United States;
(10) the likelihood that pathogenic species or parasitic species may accompany the species proposed for importation; and
(11) other factors important to assessing the risks associated with the species, consistent with the purpose under section 2.

(c) Notice- In promulgating the regulations under subsection (a), the Secretary shall provide notice to States, Indian tribes, other stakeholders concerned with environmental, humane, public health, economic, trade, and other relevant issues, the Aquatic Nuisance Species Task Force, the National Invasive Species Council, the Department of Agriculture, and the Centers for Disease Control and Prevention.

(d) Transparency- The Secretary shall ensure that the risk assessment process established by the regulations under subsection (a) is based on sound science and is consistent with sections 4 and 5.

(e) Deadlines- The Secretary shall--

(1) publish in the Federal Register proposed regulations under subsection (a) and a proposed preliminary list of approved species under section 4(b), by not later than 2 years after the date of the enactment of this Act;
(2) publish in the Federal Register final regulations under subsection (a), a final preliminary list of approved species under section 4(b), and a notice of the prohibitions under this Act, by not later than 30 days before the date on which the Secretary begins assessing risk under the regulations; and
(3) begin assessing risk with respect to nonnative wildlife species under the final regulations promulgated under subsection (a), and publish notice thereof, by not later than 37 months after the date of the enactment of this Act.

(f) Animals Owned Lawfully Prior to Prohibition of Importation- This Act and regulations issued under this Act shall not interfere with the ability of any person to possess an individual animal of any species if such individual animal was legally owned by the person before the risk assessment is begun pursuant to subsection (e)(3), even if such species is later prohibited from being imported under the regulations issued under this Act.

SEC. 4. LIST OF APPROVED SPECIES.

(a) Requirement To Issue List of Approved Species-

(1) IN GENERAL- Not later than 36 months after the date of enactment of this Act, the Secretary shall publish in the Federal Register a list of nonnative wildlife species approved for importation into the United States.

(2) EXCLUSION OF CERTAIN SPECIES- The Secretary shall not include in the list--

(A) any species included in the list of prohibited species under section 5; or

(B) any species, the importation of which is prohibited by any other Federal law or regulation of the United States due to the likelihood of causing harm to the economy, the environment, or other animal species or human health.

(3) REVISION- The Secretary may revise the list issued under this section based on available scientific and commercial information.

(b) Preliminary List-

(1) IN GENERAL- The Secretary shall include in the preliminary list under this section nonnative wildlife species that the Secretary finds, consistent with the factors described in section 3(b) and based on scientific and commercial information that is provided in a proposal under paragraph (2) or otherwise available to the Secretary--

(A) are not harmful to the United States' economy, the environment, or other animal species' or human health; or

(B) may be harmful to the United States' economy, the environment, or other animal species' or human health, but already are so widespread in the United States that it is clear to the Secretary that any import prohibitions or restrictions would have no practical utility for the United States.

(2) PROPOSALS FOR INCLUSION IN PRELIMINARY LIST- The Secretary--

(A) shall, by not later than 60 days after the date of enactment of this Act, publish in the Federal Register, and make available on a publically available Federal Internet site, a request for submission, by any interested persons (including persons that import or that intend to import nonnative wildlife species), of proposals of nonnative wildlife species to be included in the preliminary list under this subsection and supporting documentation for such proposals;

(B) shall accept such proposals for 10 months after the date the Secretary publishes the request for submissions; and

(C) may propose a nonnative wildlife species for inclusion in the preliminary list.

(3) PUBLIC NOTICE AND COMMENT- Before issuing the final preliminary list of approved species under this subsection, the Secretary shall--

(A) publish in the Federal Register and make available on a publicly available Federal Internet site, the proposed preliminary list; and

(B) provide for, a period of not less than 60 days, an opportunity to submit public comments on the proposed preliminary list.

(4) PUBLICATION OF LIST- The Secretary shall publish in the Federal Register and make available on a publicly available Federal Internet site, the final preliminary list under this subsection.

(c) Proposal for Inclusion on the Approved List-

(1) SUBMISSION OF PROPOSALS-

(A) IN GENERAL- After publication of the final preliminary list under subsection (b)--

(i) any interested person may submit to the Secretary in accordance with subparagraph (B) a proposal to include a nonnative wildlife species in the approved list under this section (including a request to import such a species that is not in the list published under this section and section 5, respectively); and

(ii) upon receipt of a complete proposal under clause (i), the Secretary shall publish notice of the proposal in the Federal Register and provide an opportunity for 30 days of public comment on the proposal.

(B) INFORMATION REQUIRED- Any proposal under this paragraph must include sufficient scientific and commercial information to allow the Secretary to evaluate whether the proposed nonnative wildlife species is likely to cause economic or environmental harm or harm to other animal species' or human health.

(2) DETERMINATION- Based on scientific and commercial information provided in a proposal under paragraph (1) or otherwise available to the Secretary, the Secretary shall make one of the following determinations regarding such a proposal in a reasonable period of time and in accordance with the regulations issued under section 3:

(A) The nonnative wildlife species is approved for importation, and is added to the list of approved species under this section.

(B) The nonnative wildlife species is not approved for importation, unless permitted under section 7.

(C) The Secretary has insufficient scientific and commercial information to make a determination under subparagraph (A) or (B).

(3) TREATMENT OF UNAPPROVED SPECIES- If the Secretary makes a determination under paragraph (2)(B) that a nonnative wildlife species is not approved for importation, the Secretary shall include the nonnative wildlife species in the list of unapproved species under section 5.

(4) NOTICE OF DETERMINATION- The Secretary shall publish in the Federal Register notice of the determination made under paragraph (2) and make available on a publicly available Federal Internet site or through other appropriate means, the basis for the determination.

SEC. 5. LIST OF UNAPPROVED SPECIES.

(a) Requirement To Issue List of Unapproved Species-

(1) IN GENERAL- The Secretary shall publish in the Federal Register a list of nonnative wildlife species that are prohibited from importation into the United States except as provided in section 7.

(2) INCLUDED SPECIES- The list under this subsection shall include--

(A) those species listed as injurious wildlife under section 42 of title 18, United States Code, or under regulations under that section, as of the date of enactment of this Act; and

(B) any other species the Secretary determines under section 4(c)(2)(B) is not approved for importation.

(b) Proposal for Inclusion on the List of Unapproved Species-

(1) PROPOSAL-

(A) IN GENERAL- Any person may submit to the Secretary a proposal to add to the list under this section any nonnative wildlife species.

(B) INFORMATION REQUIRED- Any proposal under this subsection must include sufficient scientific and commercial information to allow the Secretary to evaluate whether the proposed nonnative wildlife species is likely to cause economic or environmental harm or harm to other animal species' or human health.

(2) NOTICE- The Secretary shall publish notice of a complete proposal in the Federal Register and provide an opportunity for 30 days of public comment on the proposal.

(3) DETERMINATION- Based on scientific and commercial information provided in a proposal under paragraph (1) or otherwise available to the Secretary, the Secretary shall make one of the following determinations regarding such a proposal in a reasonable period of time and in accordance with regulations issued under section 3:

(A) The nonnative wildlife species is not approved for importation except as provided in section 7, and is added to the list of unapproved species under this section.

(B) The nonnative wildlife species is approved for importation.

(C) The Secretary has insufficient scientific and commercial information to make a determination under subparagraph (A) or (B).

(4) TREATMENT OF APPROVED SPECIES- If the Secretary makes a determination under paragraph (3)(B) that a nonnative wildlife species is approved for importation, the Secretary shall include the nonnative wildlife species in the list of approved species under section 4.

(5) NOTICE OF DETERMINATION- The Secretary shall publish in the Federal Register notice of the determination made under paragraph (3) and make available on a publicly available Federal Internet site or through other appropriate means the basis for the determination.

(c) Revision- The Secretary may revise the list issued under this section based on any scientific and commercial information available to the Secretary.

(d) Emergency Authority and Temporary Prohibition-

(1) IN GENERAL- If the Secretary determines that an emergency exists because a nonnative wildlife species poses an imminent threat of harm to the United States economy, the environment, or human or animal species' health, the Secretary may temporarily include the nonnative wildlife species in the list of unapproved species under this section and, as appropriate, remove the species from the list of approved species under section 4.

(2) NOTICE OF TEMPORARY LISTING- The Secretary shall publish in the Federal Register notice of each temporary listing under this subsection and make available on a publicly available Federal Internet site or through other appropriate means the basis for the temporary listing.

(3) DETERMINATION- Within 180 days after temporarily including a nonnative wildlife species in the unapproved species list under this section, the Secretary shall make a final determination under subsection (b)(3) regarding the species, publish in the Federal Register notice of the final determination, and make available on a publicly available Federal Internet site or through other appropriate means the basis for the final determination.

(4) LIMITATION ON PROCEDURES- The procedures under section 4(c)(1)(A)(ii), subsection (b)(2) of this section, and section 553 of title 5, United States Code, shall not apply to determinations under this subsection.

SEC. 6. PROHIBITIONS AND PENALTIES.

(a) Prohibitions- Except as provided in this section or in section 7, it is unlawful for any person subject to the jurisdiction of the United States to--

(1) import into or export from the United States any nonnative wildlife species that is not included in the list of approved species issued under section 4;

(2) transport between any State by any means whatsoever any nonnative wildlife species that is not included in the list of approved species issued under section 4;

(3) violate any term or condition of a permit issued under section 7;

(4) possess (except as provided in section 3(f)), sell or offer to sell, purchase or offer to purchase, or barter for or offer to barter for, any nonnative wildlife species that is prohibited from being imported under paragraph (1);

(5) release into the wild any nonnative wildlife species that is prohibited from being imported under paragraph (1); or

(6) breed any nonnative wildlife species that is prohibited from being imported under paragraph (1), or provide any such species to another person for breeding purposes.

(b) Penalties and Enforcement- Any person who violates subsection (a) shall be subject to the civil penalties and criminal penalties described in section 4 of the Lacey Act Amendments of 1981 (16 U.S.C. 3373). Sections 4(b), 4(e), 5, and 6 of that Act shall apply to such a violation in the same manner as they apply to a violation of that Act.

(c) Limitation on Application-

(1) IN GENERAL- The prohibitions in subsection (a) shall not apply to--

(A) any action by Federal, State, tribal, or local law enforcement personnel

to enforce this section; and

(B) any action by Federal or State officials to prevent the introduction or establishment of nonnative wildlife species.

(2) IMPORTATION AND TRANSPORTATION BY FEDERAL AGENCIES - Nothing in this Act shall restrict the import or transportation between any States of nonnative wildlife species by a Federal agency for its own use, if the nonnative wildlife species remains in the possession of a Federal agency.

(d) Effective Date- This section shall take effect upon the publication of notice under section 3(e)(3).

SEC. 7. PERMITS.

(a) In General- The Secretary may issue a permit authorizing importation otherwise prohibited under section 6(a)(1), for scientific research, medical, accredited zoological or aquarium display purposes, or for educational purposes that are specifically reviewed, approved, and verified by the Secretary, if the Secretary finds that there has been a proper showing by the permittee of responsibility for the specimen and continued protection of the public interest and health with respect to the specimen.

(b) Terms and Conditions- The Secretary may include in a permit under subsection (a) terms and conditions to minimize the risk of introduction or establishment of the nonnative wildlife species in the United States.

SEC. 8. FEES.

(a) Fee for Proposal To Include Species in List-

(1) IN GENERAL- The Secretary shall establish in the regulations under section 3, and collect, a fee from any person that after publication of the final preliminary list under section 4(b) submits to the Secretary--

(A) a proposal under section 4(c) to include a nonnative wildlife species to the list of approved species under section 4; or

(B) a proposal under section 5(b) to include a nonnative wildlife species to the list of unapproved species under section 5.

(2) PURPOSE- The fee shall be to recover costs of assessing risk of nonnative wildlife species under the regulations issued under section 3.

(b) Nonnative Wildlife Invasion Prevention Fund-

(1) ESTABLISHMENT- There is established in the Treasury a separate account, which shall be known as the Nonnative Wildlife Invasion Prevention Fund.

(2) CONTENTS- There shall be deposited into the account all amounts received by the United States as fees under this section or as fines for violations of this Act and its implementing regulations.

(3) USE- Amounts in the account shall be available to the Secretary, subject to the availability of appropriations, for the purposes of implementing this Act.

SEC. 9. TREATMENT OF NONNATIVE WILDLIFE SPECIES AS NONMAILABLE MATTER.

Nonnative wildlife species included in the list of approved species issued under section 4 shall be considered and treated as nonmailable matter under section 3015 of title 39, United States Code.

SEC. 10. RELATIONSHIP TO STATE LAW.

(a) In General- Nothing in this Act preempts or otherwise affects the application of any State law that establishes stricter requirements for importation, transportation, possession, sale, purchase, release, or breeding of, or bartering for, any nonnative wildlife species.

(b) Limitation on Application of Prohibitions and Penalties To Prevent Release- The Secretary may limit the application of any provision of section 6 to facilitate implementation of any State program that encourages voluntary surrender to a State of nonnative wildlife species, if the Secretary determines that such limitation will prevent release of such species.

SEC. 11. REQUIREMENT TO ISSUE REGULATIONS.

The Secretary shall prescribe such regulations as are necessary and appropriate to carry out the purposes of this Act.

SEC. 12. RELATIONSHIP TO OTHER FEDERAL LAWS.

Except as provided in section 13, nothing in this Act shall be construed--

(1) as repealing, superseding, or modifying any provision of the Public Health Service Act (42 U.S.C. 201 et seq.) or the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 301 et seq.); or

(2) as authorizing any action with respect to the importation of any plant pest as defined in the Federal Plant Pest Act (7 U.S.C. 150aa et seq.), insofar as such importation is subject to regulation under that Act.

SEC. 13. REDESIGNATION OF INVASIVE SPECIES COUNCIL AS NATIONAL INVASIVE SPECIES COUNCIL.

(a) Redesignation- The Invasive Species Council established by Executive Order 13112 on February 8, 1999 (64 Fed. Reg. 6183) is redesignated as the National Invasive Species Council.

(b) References- Any reference in a law, map, regulation, document, paper, or other record of the United States to the council referred to in subsection (a) is deemed to be a reference to the National Invasive Species Council.

SEC. 14. DEFINITIONS.

For the purposes of this Act:

(1) AQUATIC NUISANCE SPECIES TASK FORCE- The term `Aquatic Nuisance Species Task Force' means the Aquatic Nuisance Species Task Force estab-

lished under section 1201 of the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990 (16 U.S.C. 4702).

(2) IMPORT- The term `import' means to land on, bring into, or introduce into, or attempt to land on, bring into, or introduce into, any place subject to the jurisdiction of the Government of the United States, whether or not such landing, bringing into, or introduction constitutes an importation within the meaning of the customs laws of the Government of the United States.

(3) NATIONAL INVASIVE SPECIES COUNCIL- The term `National Invasive Species Council' means the National Invasive Species Council established by Executive Order 13112 on February 8, 1999 (64 Fed. Reg. 6183), as redesignated by section 13.

(4) NATIVE SPECIES- The term `native species' means a species that historically occurred or currently occurs in the United States, other than as a result of an intentional or unintentional introduction by humans.

(5) NONNATIVE WILDLIFE SPECIES- The term `nonnative wildlife species'--

(A) except as provided in subparagraph (C), means any live species or subspecies of animal that is not a native species or subspecies, whether or not born or raised in captivity;

(B) except as provided in subparagraph (C), includes--

(i) any such live, wild species or subspecies of mammal, bird, fish, reptile, amphibian, insect, mollusk, crustacean, arthropod, coelenterate, or other invertebrate, and

(ii) any viable egg, sperm, gamete, or other reproductive material or offspring thereof;

(C) does not include any species that is--

(i) specifically defined or regulated as a plant pest or approved for biological control purposes under the Plant Protection Act (7 U.S.C. 7701 et seq.); or

(ii) defined or regulated as a threat to livestock or poultry under the Animal Health Protection Act (7 U.S.C. 8301 et seq.); and

(D) does not include any cat (Felis catus), cattle or oxen (Bos taurus), chicken (Gallus gallus domesticus), dog (Canis lupus familiaris), donkey or ass (Equus asinus), domesticated members of the family Anatidae (geese), duck (domesticated Anas spp.), goat (Capra aegagrus hircus), goldfish (Carassius auratus auratus), horse (Equus caballus), llama (Lama glama), mule or hinny (Equus caballus x E. asinus), pig or hog (Sus scrofa domestica), domesticated varieties of rabbit (Oryctolagus cuniculus), or sheep (Ovis aries), or any other species or variety of species that is determined by the Secretary to be common and clearly domesticated.

(6) PERSON- The term `person' means--

(A) an individual, corporation, partnership, trust, association, or any other private entity;

(B) any officer, employee, agent, department, or instrumentality of the

Federal Government, or of any State, municipality, or political subdivision of a State, or of any foreign government; and

(C) any other entity subject to the jurisdiction of the Government of the United States.

(7) SECRETARY- The term `Secretary' means the Secretary of the Interior.

(8) STATE- The term `State' includes the District of Columbia, American Samoa, Guam, the Commonwealth of the Northern Mariana Islands, the Commonwealth of Puerto Rico, and the Virgin Islands, and any other territory or possession of the United States.

(9) UNITED STATES- The term `United States' means the several States of the United States, the District of Columbia, American Samoa, Guam, the Commonwealth of the Northern Mariana Islands, the Commonwealth of Puerto Rico, the Virgin Islands, any possession of the United States, and any waters, including the territorial sea and the Exclusive Economic Zone, within the jurisdiction or sovereignty of the Government of the United States.

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