

**FINAL REGULATORY FLEXIBILITY ANALYSIS FOR LISTING
CONSTRUCTOR SNAKE SPECIES AS INJURIOUS UNDER THE LACEY ACT**

[Burmese (or Indian) Python (*Python molurus*), Northern African Python (*Python sebae*), Southern African Python (*Python natalensis*), and Yellow Anaconda (*Eunectes notaeus*)]

U.S. FISH AND WILDLIFE SERVICE

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Regulatory Flexibility Analysis for Listing Constrictor Snakes as Injurious Under the Lacey Act

Background

The Regulatory Flexibility Act of 1980 (Public Law 96-354) requires agencies to evaluate the potential effects of their proposed and final rules on small businesses, small organizations, and small governmental jurisdictions.

Section 603 of the Act requires agencies to prepare and make available for public comment a final regulatory flexibility analysis (FRFA) describing the impact of final rules on small entities. Section 603(b) of the Act specifies the content of a FRFA. Each FRFA must contain:

- A succinct statement of the need for, and objectives of, the final rule.
- A summary of the significant issues raised by the public comments in response to the IRFA, a summary of the assessment of the agency of such issues, and a statement of any changes made in the proposed rule as a result of such comments.
- A description of and an estimate of the number of small entities to which the rule will apply or an explanation of why no such estimate is available.
- A description of the projected reporting, record keeping, and other compliance requirements of the rule, including an estimate of the classes of small entities which will be the subject to the requirement and the type of professional skills necessary for preparation of the report or record.
- A description of the steps the agency has taken to minimize the significant adverse economic impact on small entities consistent with the stated objectives of applicable statutes, including a statement of the factual, policy, and legal reasons for selecting the alternative adopted in the final rule and why each of the other significant alternatives to the rule considered by the agency was rejected.

1. A succinct statement of the need for, and objectives of, the final rule.

The U.S. Fish and Wildlife Service is amending 50 CFR 16.13 to list four constrictor snake species [Burmese (or Indian) Python (*Python molurus*), Northern African Python (*Python sebae*), Southern African Python (*Python natalensis*), and Yellow Anaconda (*Eunectes notaeus*)] as injurious species, while continuing to consider the status of the Reticulated Python (*Broghammerus reticulatus* or *Python reticulatus*) and Boa Constrictor (*Boa constrictor*), DeSchauensee's Anaconda (*Eunectes deschauenseei*), Green Anaconda (*Eunectes murinus*), and Beni Anaconda (*Eunectes beniensis*). This listing will prohibit the importation into the United States and interstate transport within the United States of any live animal, gamete, viable egg, or hybrid of these four constrictor snakes. The best available information indicates that this action is necessary to protect the interests of wildlife and wildlife resources from the adverse effects that may result from the purposeful or accidental introduction and subsequent establishment of large constrictor snake populations in the ecosystems of the United States.

The regulations contained in 50 CFR part 16 implement the Lacey Act (18 U.S.C. § 42) as amended. Under the terms of the law, the Secretary of the Interior is authorized to prescribe by

regulation those wild mammals, wild birds, fish, mollusks, crustaceans, amphibians, reptiles, and the offspring or eggs of any of the aforementioned, that are injurious to human beings, to the interests of agriculture, horticulture, or forestry, or to the wildlife or wildlife resources of the United States. The lists of injurious wildlife species can be found at 50 CFR 16.11-15.

By adding four species of large constrictor snakes to the list of injurious wildlife, their importation into or transportation between States, the District of Columbia, the Commonwealth of Puerto Rico, or any territory or possession of the United States by any means whatsoever is prohibited, except by permit for zoological, educational, medical, or scientific purposes (in accordance with permit regulations at 50 CFR 16.22), or by Federal agencies without a permit solely for their own use. Federal agencies that wish to import these four species for their own use must file a written declaration with the District Director of Customs and the U.S. Fish and Wildlife Service Inspector at the port of entry. None of these four species, progeny thereof, or viable eggs or gametes imported or transported under permit may be sold, donated, traded, loaned, or transferred to any other person or institution unless such person or institution has a permit issued by the U.S. Fish and Wildlife Service. The interstate transportation of any of the four species or viable eggs currently held in the United States for any purpose is prohibited without a permit. Any regulation pertaining to the possession or use of the four large constrictor snake species within States continues to be the responsibility of each State.

The Lacey Act makes no provision for regulatory exemptions or alternative standards that will reduce the impact of a listing action on small entities. As explained in greater detail below, many of the entities currently breeding or selling these four snake species are small businesses; to allow them to continue to engage in interstate commerce while prohibiting large entities from doing so will, from a practical standpoint, eliminate the benefits of listing the species as Injurious.

2. A summary of the significant issues raised by the public comments in response to the IRFA, a summary of the assessment of the agency of such issues, and a statement of any changes made in the proposed rule as a result of such comments.

There were six significant comments that affected the economic analysis section for the regulatory flexibility analysis. The changes we made to the economic analysis are summarized below.

The outcome of the rule is that four constrictor snake species [Burmese Python (*Python molurus*), Northern African Python (*Python sebae*), Southern African Python (*Python natalensis*), and Yellow Anaconda (*Eunectes notaeus*)] are injurious to the wildlife and wildlife resources of the United States. We will continue to consider the status of the Reticulated Python (*Broghammerus reticulatus* or *Python reticulatus*), Boa Constrictor (*Boa constrictor*), DeSchaunsee's Anaconda (*Eunectes deschauenseei*), Green Anaconda (*Eunectes murinus*), and Beni Anaconda (*Eunectes beniensis*) for listing as injurious.

Comment 1: The Service ignored information submitted by industry participants and trade associations in response to its 2008 Notice of Inquiry. In addition, the Service misused the information it was provided by respondents to the notice.

Response: We used industry responses to the 2008 Notice of Inquiry as a primary source of information for the economic analysis. Trade association data were the only source for most of the sales and price information in the economic analysis, and these associations are cited repeatedly in the report. We sought clarification of the data provided by a trade association with a representative of the association and the consultant who prepared the submission (Reaser 2009). We received additional information from the conversations that we applied to the draft economic analysis.

Many industry commenters provided anecdotal information about their situation or made quantitative assertions. While they were informative, we cannot extrapolate anecdotal data about individual and businesses to describe the industry as a whole. However, in the final economic analysis, we used some anecdotal information from the public comments to better depict potential impacts.

Comment 2: The Service employs baseless assumptions to estimate the information it lacks.

Response: Using informed assumptions for reasonable ranges to fill data gaps is a well-recognized economic technique. By applying a range of prices and quantities, the economic analysis derives the approximate scale of retail sales from the partial information available. Our analysis is transparent and the assumptions can be easily replaced with more reliable information when it becomes available. We received additional information, such as interstate sales from Florida, during the last public comment period. This information was used to revise the draft economic analysis to more accurately depict the impact to industry. Industry profiles were not submitted during public comment and we could not find them available publicly. Therefore, we still made some assumptions by necessity in the economic analysis.

Comment 3: The economic analysis ignores wholesalers, transporters, and vendors of food and ancillary equipment.

Response: The economic analysis includes an input-output analysis that accounts for all of the industries that contribute to delivering the product to the consumer. We included wholesalers and equipment used in the production of snakes for sale in the input-output analysis based on retail sales. We obtained shipping cost information on individual sales after the publication of the draft economic analysis. We used this information to revise the economic analysis.

Comment 4: The Service also ignores pricing premiums for snakes, particularly for color morphs, dwarfs, etc.

Response: We found that the aggregate information available and provided by the trade associations was insufficient to segment the market for different classes of snakes for the draft economic analysis. From public comments, we learned that “pricing premiums reach up to 60 times the price of a ‘normal’ snake,” (PIJAC, page 4; 2010). This suggests that there are at least two market segments for a species – one for ‘normal’ snakes and one for high-end collectible snakes. Therefore, we used this additional pricing information that more accurately depicts pricing premiums in the revised economic analysis.

Comment 5: The Initial Regulatory Flexibility Analysis (IRFA) underestimates the economic impact on small entities.

Response: The RFA was revised to incorporate new information acquired since the proposed rule was published. For the final Regulatory Flexibility Analysis, we expected to receive more economic information on small entities from the industry because USARK had engaged a survey in March 2010 (USARK 2010), and because Georgetown Economic Services, Inc. submitted a public comment on August 2, 2010, stating that their firm had been commissioned by USARK to develop a profile of the U.S. reptile industry, “including a description of the size, scope, and flow of the reptile trade across the United States.” We received an e-mail from USARK on January 14, 2011, stating that survey results would be available in about 30 days. As of March 3, 2011, the survey results were not available. We are not required to conduct an industry survey. We compiled the best currently available economic data on the large constrictor snake industry to estimate potential impacts that are expected as a consequence of this rule.

Comment 6: The IRFA does not discuss significant alternatives.

Response: 6. The IRFA describes the alternatives on page 5:

“6. Description of any significant alternatives to the proposed rule

A draft environmental assessment has been prepared under NEPA and is available for review at www.regulations.gov. The environmental assessment analyzes three alternatives to the proposed rule: (1) no action, (2) the listing of seven species as injurious wildlife, and (3) the listing of five species as injurious wildlife. None of these alternatives would be significant.”

The draft environmental assessment was prepared under NEPA and has been available for review at www.regulations.gov since March 12, 2010 (Docket No. FWS-R9-FHC-2008-0015). In addition, the draft environmental assessment included the following alternatives in section 6.2) Alternatives Not Considered For Detailed Analysis (the **bolded** answers are from the draft environmental assessment, and the normal text answers are from the final environmental assessment:

“6.2.1) Federal Permitting System such as a Private Hobbyist Permit System Instead of Adding the Nine Large Constrictor Snakes

This alternative was dismissed from further consideration because this alternative is not within the authorities of the injurious wildlife provisions of the Lacey Act or the Service.

While the exact number of these large constrictor snakes that are held as pets or by hobbyists is unknown, there is strong evidence that they number in the hundreds of thousands. An alternative that relies on pet ownership permits would require an intricate and diverse system that would include importers, brokers, pet retail stores, and pet owners across the United States. In addition, the permitting system would need to be very responsive to activities that could occur on a daily basis, such as sales of animals at pet stores or death of pets. To adequately address the constantly changing situation and ensure that additional constrictors are not released into the wild, the Service would need to establish permitting offices across the United States that are constantly staffed. In addition, the cost of monitoring and enforcing the permitting system would require an increase in law enforcement officials. This would require a much greater level of resources than the Service currently has available. This type of permitting system would rely heavily on voluntary compliance to control the potential spread of these injurious species since it would be virtually impossible to monitor all transactions or interstate

movement of specimens. An alternative that relies on monitoring and control once the snakes are brought into the country is not practical or feasible from an enforcement or economic standpoint for the Service to implement. According to both of our economic and environmental analyses, the best way to address harm from invasive species is to prevent their introduction. In turn, the most effective way to prevent introductions is to close pathways through which non-native species enter the U.S. (Environmental Law Institute 2010). In addition, this alternative is not within the authorities of the injurious wildlife provisions of the Lacey Act (18 U.S.C. § 42, as amended).

6.2.2) State Legislative Initiatives such as a State Permitting Program Instead of Adding the Nine Large Constrictor Snakes

This alternative was dismissed from further consideration because this alternative is not within the authorities of the injurious wildlife provisions of the Lacey Act or Service.”

This alternative was dismissed from further consideration because this alternative is not practical or feasible from a technical standpoint. Few States address all pathways and, because invasive species reproduce, spread, and are often moved by people, each State is hindered or helped by the quality of neighboring States’ laws. As a result, State and local efforts depend on effective interstate collaboration. Despite amendments to State laws and regulations, States continue to apply different approaches to listing and prohibitions, making cooperative enforcement and management from State to State difficult (Environmental Law Institute 2010). The Service cannot rely on a State permitting program that is inconsistent and piecemeal nationally to protect native wildlife resources; and is not within the authorities of the injurious wildlife provisions of the Lacey Act (18 U.S.C. § 42, as amended).

Another alternative that would have a significant economic effect—allowing interstate transport while prohibiting importation—is not within our jurisdiction, because we would be violating World Trade Organization agreements to treat foreign industries the same as domestic industries.

Management of feral snake populations is a much broader topic that the Service is vigorously pursuing but that is not within the purview of this rulemaking. For example, we are working with pet industry representatives to provide education and awareness of responsible pet ownership, such as the “Habitattitude” program. In addition, the Department of the Interior signed a Memorandum of Understanding with the Pet Industry Joint Advisory Council on June 16, 2009 (before the proposed rule was written), to “create public awareness about the threat of invasive species and to promote responsible pet ownership practices to prevent the accidental release of invasive species by pet owners”. This MOU directly shows that the Service has been working with the pet industry to find ways to preclude the need for listing species as injurious that are part of the pet trade (although not limited to these four species of constrictor snakes). Therefore, the alternatives considered in the environmental assessment are the only relevant choices.

3. A description of and an estimate of the number of small entities to which the rule will apply or an explanation of why no such estimate is available.

The Initial Regulatory Flexibility Analysis included a description of importers and breeders as entities that may be impacted by the rule. We expanded the Final Regulatory Flexibility Analysis to include impacts to wholesalers, retailers, hobbyists, and exhibitors as well.

Entities impacted by the listing include: (1) companies importing live snakes of the listed species; (2) companies with interstate sales of live snakes of the listed species (breeders, wholesalers, retailers, hobbyists, and exhibitors or trade shows); (3) entities selling reptile-related products and services (pet stores, veterinarians, and shipping companies); and (4) research organizations, zoos, and educational operations. While many entities may focus solely on a particular function (breeder, wholesaler, retailer, etc.), many others combine several functions. For example, a particular firm may import snakes, breed them, sell progeny over-the-counter or over the internet to consumers and provide support services. Therefore, it is possible to double count the number of businesses impacted. Furthermore, determining the primary function of the businesses and, thus, determining the industry classifications and size standards for these businesses are complex. For more information pertaining to the retail value of imported and U.S. bred constrictor snakes, please refer to the Final Economic Analysis.

As a result of the final rule, impacts to the large constrictor snake industry will occur due to: (1) the elimination of imported snakes listed as injurious, and (2) elimination of interstate transport (both commercial and personal) of snakes listed as injurious. The size of the impacts also are dependent upon whether or not consumers would substitute the purchase of an animal that is not listed, which would thereby reduce economic impacts.

In addition to the impacts discussed below for each group, businesses will face the risk of fines or prison if caught importing or transporting the four listed snake species across State lines. The penalty for a Lacey Act violation under the injurious wildlife provisions is not more than six months in prison and not more than a \$5,000 fine for an individual and not more than a \$10,000 fine for an organization.

The large constrictor snake industry is not large enough to have major data collections and reporting requirements such as is required of the agricultural crop industry or the car manufacturing industry. Since the large constrictor snake market is below the commerce data threshold, only limited amounts of data are available. Import data are available from the Service's Division of Law Enforcement and Division of Management Authority. While a number of individuals and businesses stated that the size of the U.S. bred large constrictor snake industry is unknown, a few comments provided estimates of overall data. On the whole, this information provides a general overview of the large constrictor snake market, including the number of snakes sold, a range of the retail value, an estimate of the number of businesses, and interstate sales. Information on business profiles to determine the percent of revenues affected by the rule are currently unavailable. We have considered all relevant information by conducting literature searches, internet searches, contacting the public, contacting academic experts in the economics of invasive species, and using public comments to approximate the impacts to the industry. Using the data available, we use reasonable assumptions to approximate the potential impact of the rule.

Due to limited data, the number of small businesses in the large constrictor snake industry is extrapolated by the North American Industry Classification System (NAICS) code. The U.S. Small Business Administration defines a “small business” as one with annual revenue that meets or is below the established size standard, which is \$750,000 for “All Other Animal Production” businesses (NAICS 112990) and \$6.0 million for “Pet and Pet Supplies Stores” businesses (NAICS 453910). The U.S. Census Bureau does not publish detailed data for NAICS 112990. The highest level of detail is the two-digit code for “Forestry, Fishing, Hunting, and Agriculture Support” (NAICS 11). The most recent data for NAICS 11 shows that about 85 percent of establishments qualify as small businesses (less than 10 employees) (U.S. Census Bureau 2007). The most recent data for “Pet and Pet Supplies Stores” (NAICS 453910) shows that about 62 percent of establishments qualify as small businesses (less than 10 employees) (U.S. Census Bureau 2007).

Overall Impacts

This section presents overall impacts of the rule. These impacts are analyzed on a more detailed level in the latter sections. For more information regarding the overall impacts of the rule, please refer to the Final Economic Analysis.

Tables 1, 2, and 3 provide a summary of the overall potential economic impacts of the rule. Economic output is used here as a broad indicator of the overall impacts on the constrictor snake industry. Table 1 shows both the annual range of impacts in economic output from baseline conditions and the initial employment impacts of the rule (note: job losses would occur once during the first year of implementing a given alternative but would not occur thereafter. For example, after the initial job losses occur, there would not be an additional 95 to 193 jobs lost in the second year, nor the third year. However, job income would be lost over succeeding years when compared with baseline conditions.

Table 1. Decrease in Constrictor Snake Industry Economic Output and Related Employment

Total Annual Decrease in Economic Output (Millions of Dollars)	Decrease in Employment (Number of Jobs)
\$10.7 - \$21.8	95 - 193

Table 2 shows the annual decrease in constrictor snake industry economic impacts as shown by retail value, economic output, job income and local, state and federal tax revenue (note: the impact categories cannot be added together since this will double-count the impacts. As noted above, economic output includes the direct effects of the loss of retail value. Both job income and tax revenue are derived from total economic output (aggregate sales). For example, labor costs are paid out of total sales revenue for a company as are taxes. To add taxes and job income to output would double-count economic impacts.

Retail value and economic output are explained above. **Jobs** and **job income** include direct, indirect and induced effects in a manner similar to economic output. Employment includes both full and part-time jobs, with a job defined as one person working for at least part of the calendar

year, whether one day or the entire year. **Tax revenues**¹ are shown for business taxes, income taxes, and a variety of taxes at the local, state and national level. Like output, employment and income, tax impacts include direct, indirect and induced tax effects of constrictor snake related expenditures.

Table 2. Annual Decrease in Constrictor Snake Industry Economic Impacts (Dollars in Millions)

Retail value	Economic Output	Job Income	Tax Revenue
\$3.7 - \$7.6	\$10.7 - \$21.8	\$3.8 - \$7.8	\$1.4 - \$3.1

Table 3 shows an annual estimate of the impacts associated with a reduction of shipping expenditures associated with a decline in constrictor snake sales.

Table 3. Annual Impacts on Shipping Expenditures (Dollars in Millions)

Shipping Expenditures	Economic Output	Employment	Employment Income
\$0.7 – \$1.3	\$1.6 – \$3.3	12 – 25	\$0.5 – \$1.1

Entities Importing Large Constrictor Snakes

Because constrictor snakes are not native to the United States, constrictor snakes were originally imported. In fact, various species of constrictor snakes have been imported into the United States for the last 50 years (PIJAC 2008, 2010). Over the last 12 years, nearly 2 million live constrictor snakes of 12 species were imported into the United States. *Python regius* (ball python), which is not listed as injurious, comprised a significant percentage (78) of these imports. Large constrictor snakes are mainly imported to be sold as pets.

The draft economic analysis and final economic analysis both used the 3-year time frame (2006-2008 for the draft report and 2008-2010 for the final report, each period being the most recent three years of data) as the baseline for imports. The FRFA was changed to the 3-year baseline to be consistent with the economic analysis. The 3-year time frame from 2008-2010 better characterizes the snake industry than the previously used 10-year time frame. Large constrictor snake imports and the number of businesses have declined during this period. While the FRFA shows a smaller number of businesses are impacted with the 3-year time frame, the lost revenue per individual businesses is larger than the impacts in the IRFA because we used revised, higher retail prices. As a result of this change, potential impacts to individual businesses are actually larger than impacts in the IRFA.

From 2008 to 2010, 112 businesses imported an annual average of 104,473 live constrictor snakes of 12 species (U.S. Fish and Wildlife Service 2012). Twenty-two of these businesses (20 percent) imported an annual average of 2,941 snakes that are listed in the final rule.

¹ The overall tax rate is about 13.7 percent of economic output and includes direct, indirect and induced tax effects nationwide. The tax rate is calculated within the economic modeling software used to estimate economic impacts.

We do not know whether companies importing the snakes will predominately breed snakes or whether they are for pet stores that directly sell the snakes. By extrapolating the size distribution from the U.S. Census Bureau employment data for NAICS 11 and NAICS 453910, we calculate that approximately 69 to 95 companies (62 to 85 percent) qualify as small businesses (Table 4). Of these, 14 to 19 companies or individuals (20 percent) imported live constrictor snakes that are being listed as injurious (U.S. Fish and Wildlife Service 2012).

Table 4. Estimated Number of Large Constrictor Snake Importers Affected by Listing Four Species

	Number of Large Constrictor Snake Importers	Number of Small Importers	Number of Affected Importers	Number of Affected Small Importers
3-Year Average (2008-2010)	112	69 to 95	22	14 to 19

Source: U.S. Fish and Wildlife Service 2011; U.S. Census Bureau 2007

We employ two scenarios in the Final Economic Analysis to estimate the impact of the final rule. Scenario A uses import and U.S.-bred snake data to estimate constrictor snake sales. This approach assumes that all or some portion of annual imports are sold and that all or some portion of the number of constrictor snakes bred in the U.S. annually are sold. The number of snakes actually sold consists of a percentage of imports (not all), a portion of U.S.-bred snakes (not all), and a portion of snakes that were neither imported nor bred that year, but were carry-overs from previous years (either imported or bred). Since the percentage of sales from carry-overs is not known, assuming that all imports and all U.S.-bred snakes are sold, makes up for, at least, to a certain extent, not explicitly estimating carry-over sales. Scenario B uses information from USARK (2010) on high-end sales and their value (new information obtained through the public comment process). For more information pertaining to the two scenarios, please refer to the Final Economic Analysis.

In the Initial Regulatory Flexibility Analysis, we estimated the average annual retail value for the species that were included in the proposed rule. For the Final Regulatory Flexibility Analysis, we have expanded the analysis to show that some retail value for imported large constrictor snakes may continue.

Table 5 shows the average gross revenue for imported large constrictor snakes ranges from \$30.7 million to \$63.0 million (Scenario A and Scenario B, respectively). The annual value of imported live constrictor snakes that are listed as injurious ranges from \$865,000 (Scenario A) to \$1.8 million (Scenario B). All import sales from live constrictor snakes listed in the final rule will be eliminated. *Python molurus* imports will be impacted the most because they comprise 97 percent of annual imports of the listed species.

Impacts to importers as a whole will represent a 3 percent reduction in gross revenue. If impacts are distributed evenly among importers, then average annual revenue losses per business would

be \$39,000 to \$81,000. However, individual businesses may face a range of impacts from closure to minimal revenue decrease. The number of import businesses that may close is uncertain. Impacts to individual businesses are dependent upon: (1) whether these businesses sell other snakes and reptiles as well, (2) if the listed snakes are more profitable than non-listed snakes or other aspects of the business, or (3) if consumers would substitute the purchase of other snakes that are not listed.

Table 5. Estimated Annual Impact on Large Constrictor Snake Import Sales

	Average Annual Retail Value of Imported Large Constrictor Snakes	Average Annual Retail Value of Listed Snakes	Percentage of Imported Retail Value Lost Due to Listing	Average Annual Losses per Business
Scenario A	\$30.7 million	\$865,000	4%	\$39,000
Scenario B	\$63.0 million	\$1.8 million	4%	\$81,000

Entities Breeding and Selling Large Constrictor Snakes

Entities that breed and sell large constrictor snakes include distributors, retailers, breeders/hobbyists, and exhibitors/trade shows. These entities will potentially be affected in two ways: (1) by eliminating interstate sales, entities will only be able to buy or sell constrictor snakes of the four species offered within their respective State; and (2) persons moving will not be able to transport their snake(s) across state lines. The impacted entities are described in detail below.

Distributors: Distributors include firms and individuals that sell snakes to other businesses, either in lieu of or in addition to selling to consumers. PIJAC (2008, 2010) estimates there are 50 distributors of large constrictor snakes.

Retailers: Snake sales by retailers may include over-the-counter sales such as pet stores, internet-based sales and mail-order firms. PIJAC (2008, 2010) estimates the number of U.S. retail firms selling large constrictor snakes at 5,100.

Hobbyist and Commercial Breeders: A number of pet snake owners also breed their snakes. Some owners may do so strictly for their own enjoyment with no intent to sell the snakes, while others may intend to sell in limited quantities to other pet owners or breeders. Commercial breeders run businesses that sell snakes to wholesalers, retailers, other breeders, zoos, research organizations and other entities. PIJAC (2008, 2010) estimates that there are between 2,000 and 5,000 hobbyists in the U.S. and between 2,500 and 5,000 individuals and businesses that breed large constrictor snakes.

Exhibitors: A number of individuals and firms attend reptile shows and exhibits nationwide. PIJAC (2008, 2010) estimates that about 25 individuals and hobbyists contribute to or organize 350 to 400 shows annually.

Table 6 summarizes the number of businesses that sell or breed large constrictor snakes. We determined the number of small businesses by extrapolating from NAICS 11 and NAICS 453910. The total number of businesses, both large and small, that sell or breed the listed four species is unknown. Overall, the four listed species represent 16 to 22 percent of all U.S. bred large constrictor snake sales (Table 7). Because we do not know exactly how many businesses sell the listed species, we extrapolated the percentage of sales to determine the number of affected businesses. Thus, we assume that 16 to 22 percent of businesses sell or breed the listed snake species that are listed under the final rule.

Table 6. Estimated Number of Large Constrictor Snake Sellers/Breeders Affected by Listing Four Snake Species

	Number of Businesses*	Number of Small Businesses (62% to 85%)	Number of Affected Businesses (16% to 22%)	Number of Affected Small Businesses (62% to 85%)
Distributors	50	31 to 43	8 to 11	5 to 9
Retailers	5,100	3,162 to 4,335	833 to 1,136	516 to 966
Hobbyists	2,000 to 5,000	1,240 to 4,250	327 to 1,114	202 to 947
Breeders	2,500 to 5,000	1,550 to 4,250	408 to 1,114	253 to 947
Exhibitors	25	16 to 21	4 to 6	3 to 5
Total	9,675 to 15,175	5,999 to 12,899	1,580 to 3,381	979 to 2,874

Source: PIJAC 2008, 2010.

Under the final rule, the interstate transport of four constrictor snakes will be discontinued. Thus, any revenue earned from this portion of business will be eliminated. Nationwide data pertaining to interstate sales are unavailable. However, according to the Florida Fish and Wildlife Conservation Commission, 85 percent of Florida’s large constrictor snake sales are sold out of State (2010). Whether the trend in Florida represents the nationwide trend is unknown. We used this estimate to extrapolate nationwide because it is the only available information. Thus, we present these impacts as a conservative estimate.

Table 7 summarizes the overall and average impacts to U.S. bred large constrictor snake sales. The average annual retail value for all U.S. bred large constrictor snakes is \$15.0 million to \$30.7 million (Scenario A and Scenario B, respectively). The average annual retail value of the snakes that will be listed under the final rule is \$2.9 million to \$8.0 million. Only sales from the interstate transport of the listed snakes will be discontinued. Thus, the annual value of U.S.-bred live constrictor snakes sales that will be eliminated (85 percent) is \$2.4 million (Scenario A) to \$6.8 million (Scenario B). Impacts to this group of businesses as a whole will represent a 16 to 22 percent reduction in retail value.

If the revenue losses are distributed across the industry evenly, average annual revenue losses per business (retail value of listed snakes that are sold out-of-State / number of affected businesses) will be \$700 to \$4,300. However, individual businesses that breed or sell snakes listed as

injurious will face a range of impacts from minimal revenue decrease to closure. The breeding of large constrictor snakes is very specialized. For example, all revenue from Surinamboas.com is derived from the sale of boa constrictors (Duhon 2010), a newly listed species. As a result of this rule, the company may close if a large percentage of the sales are out-of-state. The total number of small businesses that may close is uncertain. Impacts to individual businesses are dependent upon: (1) whether these businesses sell other snakes and reptiles as well, (2) if the listed snakes are more profitable than non-listed snakes or other aspects of the business, or (3) if consumers would substitute the purchase of other snakes that are not listed as Injurious. There are no marketing data that estimate how consumer preference may change due to the listing thus changing the types of snakes that businesses sell. This analysis does not account for this type of substitution effect, thereby overestimating overall industry impacts to breeding and selling large constrictor snakes domestically.

Table 7. Estimated Annual Impact on U.S. Bred Listed Snake Sales

	Average Annual Retail Value of U.S. Bred Large Constrictor Snakes	Average Annual Retail Value of Listed Snakes	Retail Value of Listed Snakes that are sold out of State (85%)	Percentage of U.S. Bred Retail Value Lost Due to Listing	Average Annual Losses per Business (1,580 to 3,381 affected businesses)
Scenario A	\$15.0 million	\$2.9 million	\$2.4 million	16%	\$700 to \$1,600
Scenario B	\$30.7 million	\$8.0 million	\$6.9 million	22%	\$2,000 to \$4,300

Entities Providing Support Services for Large Constrictor Snakes

In addition to snake sales, ancillary and support services comprise part of the snake industry. Four major categories include: (1) food suppliers (such as for frozen or live rats and mice), (2) equipment suppliers (such as for cages, containers, lights, and other non-food items), (3) veterinary care and other health-related items, and (4) shipping companies. In general, most of these types of companies provide services to other industries besides the large constrictor snake market.

Food and Equipment Suppliers

Food and equipment suppliers generally provide products and services to the greater reptile industry. The U.S. Small Business Administration noted that during its roundtable, one particular company, Zoo Med Labs, would experience substantial losses due to the final rule (SBA 2010). Zoo Med Labs, which provides reptile-support services, states that the final rule will reduce sales by \$5.157 million (30 to 40 percent) (SBA 2010, Bagnall 2010). While Zoo Med Labs does not qualify as a small business because it earns over \$6.0 million for “Pet and Pet Supplies Stores” (NAICS 453910), it does potentially represent the types of losses that food and equipment suppliers may face as a result of the final rule. The number of businesses that supply food and equipment to the large constrictor snake market is unreported.

Veterinary Services

The U.S. Small Business Administration established size standard for veterinarian services is \$7.0 million (Veterinary Services NAICS 54194). The most recent data for NAICS 54194 shows that about 88 percent of establishments qualify as small businesses (less than 10 employees) (U.S. Census Bureau 2007). The number of veterinary businesses that provide services for large constrictor snakes is unreported, although the Small Business Administration states that only a handful of veterinarians have the expertise to treat large constrictor snakes (SBA 2010). These entities may be adversely affected because pet owners will no longer be able to transport their snakes across State lines for treatment.

Shipping Companies

The decline in constrictor snake sales will affect shipping expenditures. Since shipping expenditures are usually the responsibility of the buyer, these impacts are estimated separately from impacts to the constrictor snake industry (shipping costs are not usually included in the sales price). Since shipping costs are not based on a per snake basis but typically by weight, putting shipping costs on a per snake basis is problematic. However, in compiling price data via the Internet, a majority of the shipping costs for a purchase were in the range of \$35 - \$50 per shipment. Consequently, for a conservative estimate of shipping costs, the \$50 figure is used to estimate shipping costs and impacts. The decline in shipping expenditures is estimated to range between \$0.7 and \$1.3 million.

The U.S. Small Business Administration established size standard for shipping companies is \$7.0 million (Postal Service NAICS 491110). The U.S. Census Bureau does not publish detailed data for NAICS 491110. The highest level of detail is the two-digit code for "Transportation and Warehousing" (NAICS 48-49). The most recent data for NAICS 48-49 shows that about 72 percent of establishments qualify as small businesses (less than 10 employees) (U.S. Census Bureau 2007). In general, the types of businesses that ship live animals are large businesses such as FedEx and Delta Airlines. The number of businesses that provide shipping services for live snakes is unreported. Thus, we do not know the impact to individual businesses.

Research organizations, zoos, and educational operations

Businesses with zoological, educational, medical, or scientific purposes are exempt by permit under the Lacey Act (in accordance with permit regulations at 50 CFR 16.22). If these entities choose to import or transport across State lines, then they can apply for a permit. One permit can cover multiple individuals and species in a shipment. However, each separate shipment requires a permit. For travelling educational programs, only one permit will be required for a set period for specific animals. The educational operation will not need a new permit each time they travel. (They will need to amend their permit, however, if they were to add new animals or remove others from the permit). Provided that the travelling educational operation can meet the issuance criteria, permits can be issued. Permit costs are either \$25 (transportation permits) or \$100 (acquisition and import permits.) The length of time it takes for an applicant to complete a permit application averages about 1 hour. In general, permit applications are processed within 60 to 90 days.

4. Description of the projected reporting, record keeping, and other compliance requirements of the rule, including an estimate of the classes of small entities which will be the subject to the requirement and the type of professional skills necessary for preparation of the report or record.

The final rule will prohibit the importation and interstate transport of four species of live constrictor snakes, hybrids, and viable eggs. No reporting, record keeping, or other compliance requirements are necessary to comply with the regulation, unless a permit is requested for the exceptions (scientific, educational, medical, or zoological purposes). The types of small entities that will be affected include researchers, zoos, and educational operations. The permit application is OMB No. 1018-0093, and no professional skills are required to prepare the application. We are not aware of any Beni anacondas, DeSchauensee's anacondas, or Southern African pythons that have been imported since 1999, so they are not likely bred in the United States, unless they were imported under another name.

5. A description of the steps the agency has taken to minimize the significant adverse economic impact on small entities consistent with the stated objectives of applicable statutes, including a statement of the factual, policy, and legal reasons for selecting the alternative adopted in the final rule and why each of the other significant alternatives to the rule considered by the agency was rejected.

The U.S. Fish and Wildlife Service is publishing a final rule to add four large constrictor snakes to the list of injurious wildlife under the Lacey Act (18 U.S.C. 42 as amended; Lacey Act). Four alternatives were developed for consideration in the Final Environmental Assessment. These alternatives included: Alternative 1 (Baseline); Alternative 2A – Add nine large constrictor snake species to the list of injurious wildlife (Preferred Alternative); Alternative 2B – Add four large constrictor snake species to the list of injurious wildlife (not list the reticulated python, boa constrictor, DeSchauensee's anaconda, green anaconda, and Beni anaconda at this time but maintain consideration for listing); Alternative 3 – Add seven large constrictor snake species to the list of injurious wildlife (not list Beni and DeSchauensee's anacondas); and Alternative 4 – Add five large constrictor snake species to the list of injurious wildlife. For more information pertaining to the alternatives analyzed, please refer to the Final Environmental Assessment. The alternatives are summarized below.

Alternative 1 (Baseline) – The risk assessment conducted by the U.S. Geological Survey (Reed and Rodda 2009) resulted in finding that Organism Risk Potentials of the nine large constrictor species are high or medium. The species are a risk for establishing self-sustaining populations in vulnerable ecosystems. Not listing the nine constrictor snake species as injurious will allow the continued importation and interstate transport of these species, which carries with it unacceptable risks to select ecosystems and the species that rely on them.

Factors other than climate may limit a species' distribution, including the existence of predators, diseases, and other local factors (such as major terrain barriers), which may not be present when a species is released in a new area. Therefore, the areas at risk of invasion often span a climate range greater than the climate match. Regarding the necessity for a nationwide listing (which regulates only importation and interstate transport), we believe implementation of the injurious

wildlife provisions reflects the shared State-Federal governance of invasive species challenges facing the United States as originally intended by Congress. Creating geographical restriction or exemption (or both) under the Lacey Act would make enforcement of the regulations by the Federal Government, in cooperation with the affected States, virtually impossible. Neither the Federal Government nor affected State Governments have the personnel or other resources to basically shut their borders, through the establishment of border check points, to the movement of these species. Likewise, State and local Governments do not have the mechanism to establish internal control point at airports and harbors to control movement of these species by air or boat. We believe federally regulating movements of these nine species of constrictors into the United States and between States and territories is a necessary and important step in limiting their effects.

Please also see our response to Comment 6 above regarding a Federal permitting system.

Alternative 2A - Add nine large constrictor snake species to the list of injurious wildlife (the Burmese Python, Reticulated Python, Northern African Python, Southern African Python, Boa Constrictor, Yellow Anaconda, DeSchauensee's Anaconda, Green Anaconda, and Beni Anaconda) – This is the preferred alternative. By prohibiting the importation and interstate transportation of all nine large constrictor snakes, Alternative 2 will do the most to protect wildlife and wildlife resources from negative impacts due to large constrictor snake introductions. None of the nine species of constrictor snakes is native to the United States. All are injurious. Therefore, preventing the introduction into the United States or spread of an already introduced wildlife species into a U.S. ecosystem where it has not previously occurred cannot have a significant harmful effect on the environment. This alternative (listing all nine species as injurious) will most reduce the risk of establishment of the nine large constrictor snakes in the wild. It will minimize the likelihood that the species already present will spread beyond their current locations into other natural areas of the United States and insular territories. These nine large constrictor snakes have been imported or could be imported into the United States. All but two species (possibly three, but identification of one is unconfirmed) have escaped or been released into natural and developed areas, are likely to survive and become established, are likely to spread if introduced, and are likely to prey on native wildlife species and compete with native species for food. Therefore, it will be difficult to prevent, eradicate, manage, or control the spread of large constrictor snakes, and it will be difficult to rehabilitate or recover ecosystems disturbed by these species. Furthermore, because of the predatory behavior of the nine species, the negative effects to threatened and endangered species could be permanent. This alternative will provide the greatest opportunity to prevent the importation of species not yet established in the United States.

The risk assessment conducted by USGS (Reed and Rodda 2009) concluded that the organism risk potential, which is calculated based on the probability and consequences of establishment, was “high” for five species (Burmese python, Northern African python, Southern African python, boa constrictor, and yellow anaconda, and “medium” for four species (Reticulated python, DeSchauensee's anaconda, green anaconda, and Beni anaconda. None of the nine species was determined to be a low risk. The Service has determined that listing high and medium risk species as injurious is necessary to protect our trust resources under the Lacey Act.

Alternative 2B – Add four constrictor snake species to the list of injurious wildlife (the Burmese python, Northern African Python, Southern African Python, and Yellow Anaconda).

This alternative was added to accommodate the review of the final rule by the Office of Management and Budget. Alternative 2A is not being rejected and the five other species in 2A remain under consideration.

Alternative 3 – Add seven large constrictor snake species to the list of injurious wildlife (the Burmese python, reticulated python, Northern African python, Southern African python, boa constrictor, yellow anaconda, and green anaconda) – Listing only these seven large constrictor snake species as injurious was considered, but not proposed for action. This is because listing five snakes that were rated as “High” risk and two snakes that were rated as “Medium” risk in the USGS risk assessment (Reed and Rodda 2009) as injurious would allow the importation and interstate transport of two other large constrictor snakes rated as “Medium” risk. Therefore, fauna in ecosystems of the United States would still likely be at risk from large constrictor snake introductions and would still likely have extensive negative impacts locally on native wildlife populations through predation. Listing only seven of the nine large constrictor snakes as injurious may result in the continued risk of introduction of two other snakes into States or insular territories where they are not currently traded or owned. Interstate transport of large constrictor snakes may still occur with the potential for accidental or intentional introduction even in States or insular territories that do not permit their use.

Alternative 4 – Add five large constrictor snake species to the list of injurious wildlife (the Burmese python, Northern African python, Southern African python, boa constrictor, and yellow anaconda) – Listing only five large constrictor snake species as injurious was considered, but not proposed for action. This is because listing only the five snakes that were rated as “High” risk in the USGS risk assessment (Reed and Rodda 2009) as injurious would allow the continued importation and interstate transport of four other large constrictor snakes rated as “Medium” risk. Therefore, fauna in ecosystems of the United States will still likely be at risk from large constrictor snake introductions, although those States where the large constrictor snakes are currently present already face this risk. While listing the five snakes that rated as “High” risk may impede breeding of large constrictor snakes in the natural environment, the other “Medium” risk snakes are still likely to have extensive negative impacts locally on native wildlife populations through predation. Listing only five of the nine large constrictor snakes as injurious may result in the continued risk of introduction of four other snakes of medium risk into States or insular territories where they are not currently traded or owned. Interstate transport of large constrictor snakes may still occur with the potential for accidental or intentional introduction even in States or insular territories that do not permit their use.

Potential economic impacts for each alternative are available in the Final Economic Analysis.

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