PART 62—[AMENDED]

■ 1. The authority citation for part 62 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq.*

Subpart VV—Virginia

■ 2. Section 62.11610 is amended by adding paragraph (d) to read as follows:

§ 62.11610 Identification of plan.

* * * * *

(d) On June 20, 2005, the Commonwealth of Virginia submitted changes to its 111(d) Plan. The changes consist of amendments to 9 VAC 5, Chapter 40, Part II, Article 13, Sections 5–40–1660, 5–40–1670 (definitions of Agreement (removed), Cross recovery furnace (revised), Neutral sulfite semichemical pulping operation (added), New design recovery furnace (added), Pulp and paper mill (added), Semichemical pulping process (added), Straight kraft recovery furnace (revised), Total reduced sulfur (revised)), 5–40–1690, 5–40–1750, 5–40–1770B. and C., 5–40–1780D., and 5–40–1810. The State effective date is April 1, 1999.

[FR Doc. E7–20597 Filed 10–17–07; 8:45 am]

BILLING CODE 6560–50–P

DEPARTMENT OF TRANSPORTATION

Federal Railroad Administration

49 CFR Part 222

[Docket No. FRA–2007–27285, Notice No. 2]

RIN 2130–AB86

Use of Locomotive Horns at Highway-Rail Grade Crossings; Technical Amendments to Appendix D

AGENCY: Federal Railroad Administration (FRA), Department of Transportation (DOT).

ACTION: Direct final rule; confirmation of effective date.

SUMMARY: On August 9, 2007, FRA published a direct final rule in the **Federal Register** which made technical amendments to Appendix D of 49 CFR Part 222. As reflected in DOT Docket No. FRA–2007–27285, FRA did not receive any comments or requests for an oral hearing on the direct final rule. Therefore, FRA is issuing this document to confirm that the direct final rule took effect on October 9, 2007, the date specified in the rule.

DATES: The direct final rule published at 72 FR 44790, August 9, 2007, is confirmed effective October 9, 2007.

FOR FURTHER INFORMATION CONTACT: Ronald Ries, Office of Safety, Mail Stop 25, FRA, 1120 Vermont Avenue, NW., Washington, DC 20590 (telephone: (202) 493–6299); or Kathryn Shelton, Office of Chief Counsel, Mail Stop 10, FRA, 1120 Vermont Avenue, NW., Washington, DC 20590 (telephone: (202) 493–6038).

SUPPLEMENTARY INFORMATION: Pursuant to FRA's direct final rulemaking procedures set forth at 49 CFR 211.33, FRA is issuing this document to inform the public that it has not received any comments or requests for an oral hearing on the direct final rule that was published in the **Federal Register** on August 9, 2007 (72 FR 44790). The direct final rule made technical amendments to Appendix D of 49 CFR Part 222 to update information contained in the appendix and inform the public of the most recent value of the Nationwide Significant Risk Threshold. As no comments or requests for an oral hearing were received by FRA, this document informs the public that the effective date of the direct final rule remains as October 9, 2007, the date specified in the rule.

Privacy Act

Anyone is able to search the electronic form of all comments received into any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.). You may review DOT's complete Privacy Act Statement in the **Federal Register** published on April 11, 2000 (65 FR 19477–78) or you may visit *http://DocketsInfo.dot.gov*.

Issued in Washington, DC, on October 15, 2007.

Grady C. Cothen, Jr.,

Deputy Associate Administrator for Safety Standards and Program Development.

[FR Doc. E7–20605 Filed 10–17–07; 8:45 am]

BILLING CODE 4910–06–P

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 16

RIN 1018–AG70

Injurious Wildlife Species; Black Carp (Mylopharyngodon piceus)

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: The U.S. Fish and Wildlife Service (Service or we) adds all forms of live black carp (*Mylopharyngodon piceus*), gametes, viable eggs, and hybrids to the list of injurious fish under the Lacey Act. By this action, the Service prohibits the importation into or transportation between the continental United States, the District of Columbia, Hawaii, the Commonwealth of Puerto Rico, or any territory or possession of the United States of live black carp, gametes, viable eggs, and hybrids. The best available information indicates that this action is necessary to protect the interests of wildlife and wildlife resources from the purposeful or accidental introduction and subsequent establishment of black carp in the ecosystems of the United States. Live black carp, gametes, viable eggs, and hybrids can be imported only by permit for scientific, medical, educational, or zoological purposes, or without a permit by Federal agencies solely for their own use. Interstate transportation of live black carp, gametes, viable eggs, and hybrids currently held within the United States will be allowed only by permit. Interstate transportation permits may be issued for scientific, medical, educational, or zoological purposes.

DATES: This rule is effective for all forms of live black carp on November 19, 2007.

FOR FURTHER INFORMATION CONTACT: Kari Duncan, Chief, Branch of Invasive Species, Division of Environmental Quality, at (703) 358–2464 or *kari_duncan@fws.gov.*

SUPPLEMENTARY INFORMATION:

Background

In February 2000, the U.S. Fish and Wildlife Service (Service or we) received a petition from the Mississippi Interstate Cooperative Resources Association (MICRA) to list the black carp (*Mylopharyngodon piceus*) under the injurious wildlife provision of the Lacey Act (18 U.S.C. 42). The petition was based upon concerns about the potential impacts of black carp on native freshwater mussels and snails in the Mississippi River basin. In October 2002, the Service received a petition signed by 25 members of Congress representing the Great Lakes region to add black, bighead, and silver carp to the list of injurious wildlife under the Lacey Act. A follow-up letter identified seven additional Legislators who supported the petition.

Summary of Previous Actions

On June 2, 2000, we published in the **Federal Register** (65 FR 35314) an advance notice of proposed rulemaking (ANPR) to seek comments on whether or not we should propose to list black carp

as injurious under the Lacey Act. The comment period on the ANPR was open for 60 days, until August 1, 2000. During that comment period, we received 124 comments. We considered those comments in our development of a proposed rule to add all forms of live black carp to the list of injurious fishes under the Lacey Act, which we published in the **Federal Register** on July 30, 2002 (67 FR 49280). We opened the public comment period on the proposed rule for 60 days, until September 30, 2002. We received 82 comments on the proposed rule. On June 4, 2003, in an effort to gather more economic and ecological information on our proposed action, we reopened the public comment period on the proposed rule for an additional 30 days, until August 4, 2003 (68 FR 33431). We received 21 comments during the reopened comment period. On August 30, 2005, we published in the **Federal Register** (70 FR 51326) a document announcing the availability of the draft environmental assessment and draft economic analysis, including the initial regulatory flexibility analysis, for the proposed rule, and seeking public comments on those draft documents and on listing only the diploid (fertile) form of black carp. The public comment period for this August 30, 2005, document was originally 60 days, ending October 31, 2005; however on October 27, 2005, we published a document (70 FR 61933) extending the comment period by an additional 45 days, until December 16, 2005. During the 105-day comment period, we received 89 comments. Therefore, in total, the Service received 316 comments during the four public comment periods.

We reviewed all comments we received for substantive issues and information regarding the injurious nature of black carp. Many States and conservation organizations support listing diploid and triploid black carp. Aquaculture industry groups and fish production facility owners do not support listing triploid black carp, but most are amenable to listing diploid black carp. We have grouped similar comments into issues; we present these issues and our responses below.

Comments Received on the Proposed Rule

Many comments provided specific black carp scientific and economic data pertaining to use and alternatives to use, distribution, impacts, spread, level of risk of introduction, diploid and triploid fish, certification of triploid fish, and the potential effects of an injurious listing. We appreciate the information and data provided and have considered it in preparing our final determination to add live black carp, gametes, viable eggs, and hybrids to the list of injurious fishes under the Lacey Act.

Issue: Many respondents expressed concern about the potential negative impacts of black carp to mussels, the cultured pearl industry, snails, and water quality; declines in trust resources (imperiled mussels, birds, turtles, and fish) if black carp are introduced and the cascading impacts to tourism and recreation in local economies; costs to control black carp; and costs to eradicate (and mitigate impacts of) black carp from U.S. waters once introduced.

Response: The Service agrees with the respondents' comments on these issues. The biological characteristics of black carp and their potential to be injurious to the U.S. wildlife and wildlife resources are the bases for our decision to add live black carp to the list of injurious fishes under the Lacey Act. The likelihood or feasibility of eradication from natural waters due to a lack of tools, regardless of cost, was considered in our evaluation and is part of the basis for this final rule. Since eradication is highly unlikely, mitigation for impacts would be extremely difficult.

Issue: Many respondents expressed concern about the establishment of black carp in new areas through adjacent waterways, and about the ability of facilities to contain triploid or diploid black carp within their ponds due to the challenges of preventing release due to filter clogs, during levee problems, and during floods. These respondents felt that black carp would inevitably escape into U.S. waters.

Response: Based on the Service's finding, the ability and effectiveness of measures to prevent escape or establishment are low, and this issue is part of the basis for this final rule.

Issue: Several respondents stated that the ecological impacts of black carp are difficult to predict.

Response: The Lacey Act directs the Service to look at the injury or potential injury caused by a species when we are making a listing determination. Once we have determined that a species meets the standard of injuriousness under the Act, we must take the appropriate action to add it to the list of injurious wildlife. While the specific impacts of black carp (locations or species) are difficult to predict, black carp have had negative impacts on mollusk populations in similar habitats in other countries. Such impacts to mollusks are highly likely to occur in the United States. In addition, there are potential negative impacts to other species, such as fish, turtles, and nutrient cycles, if algae mats develop in the absence of filter-feeding mollusks.

Issue: Several respondents noted that the efficiency of black carp in controlling snails in culture ponds foreshadows the probable efficiency of black carp in eating mollusks in the wild.

Response: We agree; black carp are prolific eaters and are highly specialized to eat mollusks. Where mollusks are available, black carp will feed almost exclusively on them, and in similar quantities, whether the carp are diploid or triploid fish.

Issue: One respondent stated that it makes little difference what a species might do after it escapes and becomes entrenched in the wild if there is little or no threat that it will escape in the first place; with no threat, there is no need for rule.

Response: The Service disagrees with this comment. The impacts caused by an introduced species vary based on the life history of the introduced species, the level of infestation, and the impacts it causes on native wildlife and wildlife resources.

Furthermore, it may take many years to realize the full impacts of the introduction of aquatic species on wildlife and wildlife resources. We believe that preventing the introduction and spread of nonnative species is more cost-effective than trying to control an established invader. The recent captures of diploid and triploid black carp from the wild, perhaps dating back 10 years, confirm that black carp are escaping or being released into the environment. Additionally, there are numerous examples from other countries where black carp have become established in habitats similar to those found in the United States.

Issue: A few respondents stated that there is no evidence of impacts to native mussels and snails because there are no black carp in the wild. Additionally, several commenters noted that black carp have been in the United States for 30 years and haven't been found in the wild.

Response: While black carp were first imported in the 1980s, they weren't widely used and transported until the late 1990s. The first black carp found in the wild was in 2003; several more have been captured from natural waters of the United States since then. The potential risks of harm to native mollusks from black carp have been presented in peer-reviewed scientific research. This research, combined with the presence of black carp captured in natural waters of the United States, provides evidence sufficient to demonstrate that black carp

will escape into the wild and injure native mussels and snails.

Issue: Several commenters stated that black carp impacts are strictly dependent on the number of fish present and that a few triploids would not have a considerable impact on native snails and mussels; hundreds of thousands would, but that would happen only if fertile diploid black carp would establish breeding populations.

Response: Given that the black carps' diet consists primarily of mollusks, we find that non-breeding black carp are highly likely to have negative impacts on native mussels and snails, particularly in local areas. Triploid black carp, which can live 15 or more years, could have a considerable impact on local mollusk populations, as they feed almost exclusively on these types of organisms, including those designated as threatened and endangered species under the Endangered Species Act, and they would compete with native fish for food. Even a few introduced black carp could impact mollusk populations in local areas, as they have been shown to be effective at eating nearly all of the mollusks where they have been stocked.

Issue: Many respondents expressed concern that listing triploid and diploid black carp could result in unintended adverse environmental impacts. Restricting interstate transport of triploid black carp will create an incentive for States without farmers skilled in triploid technologies to produce, sell, and distribute greater numbers of fertile diploid black carp for use within States without a triploid supply, which would increase the chance of release of reproducing adults. Because producing diploids is easier, a final rule prohibiting importation and interstate transport of triploid and diploid black carp could result in greater numbers of fertile black carp being distributed in the United States.

Response: The Service acknowledges that by adding triploid and diploid black carp to the list of injurious wildlife, thereby prohibiting their importation and interstate transport, the risk of more diploids being utilized exists. However, the States regulate the fish allowed to be used in facilities within their State boundaries and could assess the acceptable level of environmental and economic risks of diploid carp in their permitting processes. Several States that currently import triploid black carp from Arkansas do possess diploids and could potentially produce triploids or diploids for use within State boundaries. We believe that prohibiting interstate transportation and importation of black carp by listing black carp as injurious under the Lacey Act is our best means of limiting the range expansion of that species.

Issue: Similarly, a few respondents expressed concerns regarding the potential for increased use of diploid black carp in Mississippi. They stated that by prohibiting interstate transportation of triploid and diploid black carp, catfish farmers in Mississippi would be forced to stock diploid black carp. Some Mississippi farmers possess diploid broodstock but have never spawned triploid black carp and may be unable for technical reasons to produce enough triploids for use by farmers in Mississippi.

Response: The Service shares this concern, and we hope that States will implement alternative control methods. In addition to the 5 years that have elapsed since our publication of the proposed rule, the effective date of the final rule is delayed 30 days after the date of its publication in the **Federal Register**, a delay which will assist industry and States in preparing for the effects resulting from the implementation of the final rule. Having found that black carp are injurious to the wildlife and wildlife resources of the United States, the Service has received no facts that would justify delaying the effective date of the final rule beyond the 30 days provided by law.

Issue: Some commenters expressed concern about being held responsible under the Lacey Act if black carp were inadvertently transported across state lines.

Response: Once the final rule is effective, any interstate transport without a valid permit of live black carp across state lines is a violation of the Lacey Act. The Service recognizes that there are situations where a person or company may inadvertently transport black carp across state lines, such as when transporting juvenile grass carp, which can be difficult to distinguish from juvenile black carp, or when transporting catfish to processing plants. The Service would welcome the opportunity to work with those affected by this rule to help develop best management practices and Hazard Analysis and Critical Control Point (HACCP) plans that may be implemented as a means of preventing the inadvertent transport of live black carp. The Service focuses its resources on investigating and prosecuting those who act without taking steps to comply with the law.

In addition, this rule prohibits the transportation of live black carp, gametes, and viable eggs. Transportation of dead black carp across state lines would not be a violation of law.

Issue: Several commenters relayed their concern about statements regarding parasite transmission from black carp and stated that there is no evidence that black carp are likely to infect other species with exotic diseases, serve as intermediate hosts, or otherwise transfer parasite diseases more so than any other fish species already present in natural systems. Parasites are irrelevant because not a single new disease organism has been linked to black carp imported in the last 25 years. A listing based on potential parasites does not make sense, because there is no disease inspection for any fish. In addition, black carp are more likely to reduce disease incidence in other fish species by controlling snails that may spread disease.

Response: While no new pathogen introductions are known to be attributed to black carp in the United States, Spring Viremia of Carp virus was recently discovered in the United States from other carps; if infected, black carp introduced to the wild could spread this virus. New importations of black carp for use as diploid broodstock could introduce new pathogens, but this is unlikely, as black carp are not currently imported. While it is possible that black carp may reduce disease incidence in other fish species by controlling snails that may spread disease, this possibility is extremely remote and unlikely outside of the context of aquaculture facilities because of the low probability of black carp locating and consuming a sufficient amount of disease-carrying snails in open waters to prevent the spread of disease to other fish species.

Issue: One commenter stated that the Service has no evidence that black carp serve as hosts for any parasite that infects humans, and that black carp would help break the parasite cycle if any existed. In addition, the commenter stated that black carp have been used to successfully control the snail host for *Schistosoma* problem in humans.

Response: Because black carp feed heavily on mollusks, the species serves as a reservoir host to many mollusk parasites, but black carp likely remains immune from the effects of the parasites and diseases. In certain parts of China, black carp have served as host to the Chinese liver fluke (*Clonorchis sinensis*), which causes Clonorchiasis, one of the most severe food-borne parasitic diseases of humans in China. Black carp have been reportedly used to successfully control snail hosts for *Schistosoma* in humans, which is a tropical and subtropical snail-borne disease that is most prevalent in sub-

Saharan Africa as well as the Middle East, South America, Southeastern Asia, southern China, and the Caribbean. According to the World Health Organization and the U.S. Centers for Disease Control, this disease does not occur in the United States, although a U.S. citizen may contract the disease while traveling.

Issue: Several respondents asked if black carp would enter the upper reaches of tributaries where threatened and endangered mussels exist since they ''inhabit lakes and lower reaches of large, fast moving rivers'' (67 FR 49280).

Response: Black carp have the ability to populate many different habitat types where there is a viable food source, including the upper and middle reaches of rivers, lakes, and reservoirs. Many species of mollusks inhabit lakes and lower reaches of rivers, in addition to upper tributaries, so those species are at risk if black carp are introduced.

Issue: Based on our statement that native fish would have to compete with black carp for food, one commenter asked why native fish species are not currently wiping out native mussels.

Response: Black carp will eat mollusks if they are available, as black carp are highly adapted to eat primarily mussels and snails. Many native molluscivore fish do not feed as exclusively on mussels and snails as black carp. Black carp are generally known as feeding specialists with respect to mollusks, but there is a risk to other potential prey species if mollusks become limited. Black carp may switch, as they do in Asia, to eating crayfishes and other crustaceans, many of which are already imperiled in U.S. waters. Black carp have a larger gape width than most native molluscivores and pose a greater threat to a wide variety of native mussels and snails. There are no known native fish with black carp's combination of size, morphology, and diet. Consequently, black carp could put a whole new suite of species not currently subject to fish predation at considerable risk and thus change ecosystem function by altering the existing food web.

The 1993 Office of Technology Assessment review of the impacts of non-native species introductions concluded that such introductions ''have had profound environmental consequences, exacting a significant toll on U.S. ecosystems.'' There is perhaps no clearer indication of the disruption of ecosystem function than the endangerment or extinction of one of its component species. Published reviews of the factors cited in native fish species extinctions and endangerment found that non-native fish introductions were second only to habitat alteration. More recent publications suggest that in some waters non-native fish introductions may in fact be an even stronger driver of extinction and population decline than habitat alteration.

Issue: One respondent noted that the discussion of population abundance of native freshwater mussels must address the allowed commercial harvest of mussels over the years.

Response: States regulate their commercial harvests of freshwater mussels to promote sustainable mussel populations. For example, a State may restrict the size or the species of mussels that are harvested to ensure a viable breeding population in a given bed. When predation of mussels from black carp is discussed, we assume that freshwater mussel populations are regulated by States for sustainable commercial harvest, where allowed.

Issue: One commenter asked what it would cost the Service to control black carp if they invaded rivers with endangered mollusks because the Endangered Species Act would mandate actions to prevent extinction.

Response: The Service has not developed an estimate for what it would cost to control black carp in rivers. Currently, there are no effective methods available to control black carp in river systems, without considerable damage to other species and drinking water. We believe that control would be very costly in terms of the negative impacts of control methods to non-target species, as well as the costs of the methods. Recovery plans that are developed for threatened and endangered species include actions that restore species and their habitats to viable levels, analyze and reduce or remove threats to those species, and ensure that those species do not decline in status. If control of black carp was identified as a means to recover a species, we would work with partners to develop and implement control methods, if possible.

Issue: Many respondents stated that there is no control method comparable to the effectiveness of black carp in controlling parasites. Only black carp and shoreline treatments of lime and/or copper sulfate/citric acid are effective.

Response: We acknowledge that, by themselves, black carp may be more cost effective than any other single control method. Research has shown that copper sulfate and hydrated lime are 90 percent or more effective in controlling snails in ponds. In addition, several native fish species or their hybrids are still being evaluated as alternatives to black carp, and some have been shown to be moderately effective at controlling snails, although not as effective as black carp alone. Researchers have noted that a combination of biological and chemical controls may be most effective, as there are instances (high vegetation, for example) where black carp cannot completely control snails.

Issue: One commenter noted that copper sulfate has not been very effective at controlling snails in hybrid striped bass ponds.

Response: We appreciate all data provided.

Issue: Several respondents stated that the Food and Drug Administration has not approved any chemicals that can reduce snail populations to the point that snail-borne diseases are no longer a serious threat to fish ponds. Because no one has been able to find a native fish to replace black carp, black carp are the only means of protection against these parasites.

Response: The Service disagrees with this statement. There are several effective chemical treatments to reduce snails in fish ponds; within certain water quality parameters, copper sulfate and hydrated lime have been shown to be more than 90 percent effective in killing snail populations. Bayluscide®-M 70% WP is a chemical treatment (EPA Reg. No. 75394–1) that can be used to eliminate snails from ponds after a severe infestation when the pond production is a total loss, in order to restock catfish. Several fish species have been shown to consume snails, though not as effectively as black carp, including redear sunfish and hybrid redear sunfish. We believe that a combination of biological and chemical methods may be more effective at snail control than any one treatment approach.

Issue: One commenter stated that the State-run fish production facilities of Iowa, Kansas, Missouri, Montana, Nebraska, North Dakota, and South Dakota—which use prophylactic procedures, such as periodic pond draining—have not reported any problems with parasites.

Response: We appreciate all information provided.

Issue: Several respondents asked us to consider the take of protected birds infected with adult flukes, or to provide funding for the costs associated to rid flukes from these birds with a vaccine if black carp are listed as injurious, since the American white pelican and perhaps a few other bird species are a host for the fluke and spread it to open waters through defecations.

Response: Although American white pelicans and most other native bird species are protected by the Migratory Bird Treaty Act (16 U.S.C. 703–712), our

Regional Migratory Bird Permit Offices do, in some cases, issue depredation permits to individuals experiencing economic losses caused by fish-eating birds at aquaculture facilities. However, it is not our policy to issue depredation permits for the take of migratory birds to reduce the occurrence of parasites. To learn more about migratory bird permits, go to: *http://www.fws.gov/policy/724fw2.html.* It is not the Service's mission to provide funds for commercial enterprises to reduce the occurrence of parasites.

Issue: Several respondents noted that the catfish industry needs black carp to control *Bolbophorus*, not to control the yellow grub.

Response: We recognize that there was confusion regarding the identity of the parasite causing problems in channel catfish, hybrid striped bass, and some baitfish ponds at the time we published the proposed rule (July 30, 2002, 67 FR 19280). *Bolbophorus damnificus* is listed later in this document as the primary parasite impacting catfish farms for which these farms may or do utilize black carp, although yellow grub (*Clinostomum marginatum*) has also impacted catfish facilities. Black carp are used to control yellow grub in hybrid striped bass and baitfish farms.

Issue: One commenter noted that there is a new host for *Bolbophorus*, a yet unidentified snail (perhaps *Drepanotrema* sp.) that was discovered in July 2003 in Arkansas catfish ponds and is not affected by copper sulfate.

Response: We acknowledge there may be other snail vectors for *Bolbophorus*. We have no information on this new snail or its potential impacts.

Issue: Several commenters noted that a snail, the red-rimmed melania (*Melanoides tuberculata*), has been found in at least 14 States and is a host for *Centrocestus formosanus.* Red-rimmed melania has an operculum that keeps chemicals from penetrating and killing it. Only black carp eat the red-rimmed melania; redear sunfish and freshwater drum will not eat this snail. Bayluscide would work, but cannot be used on farms that produce food fish.

Response: We understand that there are other trematode parasites that are of concern to commercial aquaculture production. The Service is also concerned about the impacts of those parasites on native species. However, the focus of this evaluation was on the injuriousness or potential injuriousness of all forms of black carp on the wildlife and wildlife resources of the United States.

Issue: Several respondents noted that, in addition to pelicans, there are other bird hosts of the snail trematodes.

Response: Research to date indicates that the American white pelican (*Pelecanus erythrorhynchos*) is the final host of *Bolbophorus damnificus,* while yellow grub is carried by the Great blue heron (*Ardea herodias*).

Issue: One respondent noted that hybrid striped bass farms are particularly dependent on black carp for control of the yellow grub (*Clinostomum complanatum*), which kills fingerlings and reduces adult marketability; that approximately 80 percent of fingerlings are protected from yellow grub by black carp; and that prior to importation of black carp in the early 1990s, it was common for a farm to lose as much as 50 percent of fingerlings to yellow grub.

Response: We note that *C. marginatum* is now the recognized species for yellow grub. Yellow grub impacts hybrid striped bass, and black carp may be the most effective single option to control the grub; however, other combinations of methods may be more effective than black carp.

Issue: Several respondents stated that the proposed rule ignores or is in direct opposition to the 1996 and 2001 U.S. Geological Survey (USGS) ''Risk Assessment on Black Carp'' that the Service helped prepare. The Service was asked to withdraw the proposed rule and instead implement the seven recommendations set forth in the 1996 and 2001 risk assessments.

Response: The purpose of creating the Aquatic Nuisance Species Task Force (ANSTF) Working Group, which drafted the 1996 ''Risk Assessment on Black Carp,'' was to evaluate the generic risk process methodology that was being developed for the ANSTF and to provide insights needed to adjust or correct the generic methodology. USGS led this Working Group. None of the black carp risk assessments were initiated or developed as injurious wildlife evaluation documents. The Service conducts its own evaluation to determine if a species meets the definition of injuriousness, and we used information that was relevant to the black carp injurious wildlife evaluation from the 1996 and 2001 USGS biological synopses and risk assessments and other sources. Because our authority allows us to regulate the importation and interstate transportation of listed injurious wildlife species, the Service did not request or endorse the development of the management recommendations for a regulatory process. The Service has contributed to implementing several of the management options identified in the 1996 and 2001 reports, and the options provided in all of the reports were considered in the rulemaking process. We also note that due to increased trematode infestations, the use of black carp has increased since the 1996 and 2001 recommendations were developed.

The eight recommendations from the Black Carp Working Group that were provided in addition to the 1996 risk assessment are listed below, with our responses. Note that at the time of the 1996 Working Group, black carp were in limited use for only yellow grub (*Clinostomum* sp.) infestations.

(1) All 100-percent black carp (exclusive of brood stock) must be certified triploids.

Service comment: We have not been provided documentation that each State requires the use of certified triploids in culture ponds.

(2) Brood stock must be restricted to and maintained in aquaculture facilities where the probability of escape or flooding is essentially zero.

Service comment: We leave intrastate regulation of brood stock to the States. Interstate transport of black carp is prohibited under the Lacey Act.

(3) Develop a mechanism for verifying the location and distribution of all live black carp (diploids and triploids).

Service comment: To our knowledge, States that allow the use of black carp are not tracking the locations of black carp stockings, nor are they aware of the exact number of black carp stocked at any given time. This would be a time-consuming and difficult task to develop and maintain, and the Service does not believe that tracking black carp stocking is an effective way to protect the wildlife and wildlife resources of the United States from black carp.

(4) Research to date suggests that black carp may not be particularly efficient in controlling snail populations in U.S. aquaculture facilities. Further use of black carp, experimental or otherwise, for testing their effectiveness in the control of disease-carrying snails, such as the yellow grub (*Clinostomum* sp.), must be restricted to triploid individuals.

Service comment: A great amount of new and revised data has been generated since the 1996 and 2001 biological synopses and risk assessments were conducted. Black carp have been found to be effective in controlling snails and are the preferred snail control in many catfish, hybrid striped bass, and other facilities. Some States restrict black carp use to triploids, while others permit diploids and triploids.

(5) Release of triploid black carp into any streams, lakes, or reservoirs should

be prohibited until there is additional research demonstrating that any such introduction will be beneficial (i.e., effective in controlling zebra mussels and Asian clams) and will not cause significant harm to native mussel and snail populations.

Service comment: States have the authority to regulate releases of black carp. We do not believe that triploid (or diploid) black carp should ever be stocked in open waters. In its 2005 biological synopsis and risk assessment on black carp, USGS updated the potential impacts of black carp and indicated that both the diploid and triploid forms would be expected to consume large quantities of mollusks.

(6) Black carp as a pathway for disease should be further investigated. Until this is done, no additional stocks of black carp should be brought into the country unless additional precautions are taken (water changes, only healthy fish that have been inspected by a veterinarian, etc.).

Service comment: The Service is concerned about the pathogens that may be introduced through black carp importations or spread. We are not aware of any recent importations of black carp into the United States. The U.S. Department of Agriculture (USDA), Animal and Plant Health Inspection Service, recently published an interim rule restricting importations of certain species that may carry Spring Viraemia of Carp virus, but USDA did not include import restrictions on black carp.

(7) Produce an identification guide to distinguish black carp from native and other nonindigenous fishes to reduce any risk of misidentification. For example, if black carp do become more common in U.S. aquaculture, there is a risk that the species would be unintentionally introduced as ''grass carp'' to some areas.

Service comment: We provided funding to the U.S. Geological Survey (USGS) to produce an identification guide; this guide was completed by USGS and distributed by the Service and USGS in 2005.

(8) Establish a quality assurance and education program for the above recommendations.

Service comment: We believe that educational programs, best management practices, and quality assurance programs should be developed by those entities that use black carp to ensure adherence to the recommendations identified in the risk assessments.

Issue: One commenter asked which recommendations from the 1996 final report are being implemented by various States.

Response: The Service does not have information from all 50 States as to which recommendations identified in the 1996 risk assessment are being implemented.

Issue: Several respondents stated that the proposed rule should have discussed the risks of diploid and triploid black carp independently. Risks to mussels are substantially different, and regulation should distinguish between the actions and risks of diploids versus triploids.

Response: We analyzed the environmental impact of these two alternatives in the environmental assessment and determined that there are unacceptable risks to native wildlife and wildlife resources from both diploid and triploid black carp. While the introduction of diploid black carp to U.S. waters would likely have greater impacts in perpetuity on native mollusks, long-lived triploid black carp can also have substantial impacts, particularly in local areas where they could decimate mollusk populations. Where mollusks are available, black carp will feed almost exclusively on them, and in similar quantities, whether they are diploid or triploid fish.

Issue: Several respondents stated that the proposed rule overestimates the risk of black carp escape and establishment.

Response: We considered the risks of triploid and diploid black carp separately in the environmental assessment, but we did not see the need to discuss them separately in the rule. Black carp, whether diploid or triploid, have the potential to feed on large quantities of freshwater mussels and snails before they die of old age. We do not believe the risk of black carp escape and establishment was overestimated, particularly in light of ongoing captures of black carp from natural waters of the United States.

Issue: One commenter noted that the use of the term ''established'' implies a breeding population of black carp and that the risk assessment (1996) states that ''assuming that there are no escapes * * * [it is] unlikely that a breeding population of black carp would become established in open U.S. waters.''

Response: The 1996 risk assessment does state that ''Assuming that there are no escapes of diploid individuals from breeding stocks (and no unauthorized shipments and subsequent releases or stockings of diploids), it is unlikely that a breeding population of black carp would become established in open U.S. waters.'' However, the updated 2005 Nico *et al.* biological synopsis and risk assessment also states that ''black carp, whether introduced individuals or a reproducing population, could pose a serious threat to many of the remaining populations of endangered and threatened mollusks,'' and ''because of their size and feeding habits, black carp have the potential to impact individual species of mollusks, hastening the decline of imperiled species.'' Furthermore, the 2005 document states that ''there are now confirmed records of black carp in the wild and the increased frequency of captures, particularly of diploid individuals, suggest that a wild population may already be established in the Mississippi River basin.''

Due to the black carps' longevity, size, and feeding habits, we believe that the introduction of individuals or populations of black carp in the United States is highly likely to hasten the decline of mollusk species.

Issue: One commenter stated that only triploid black carp are currently used for snail control in the United States and that these sterile fish are only allowed in Arkansas, Mississippi, and Missouri; about 30–50,000 black carp are utilized in any given year.

Response: We appreciate all data provided. We do note that North Carolina imports triploid black carp as well. If black carp are used at all, we hope that all States require the stocking of only certified triploid black carp; however, the Service has not been provided documentation from each State to that effect.

Issue: Several commenters stated that there is no case where the use of triploids has prevented the eventual escape and proliferation of exotic fishes.

Response: For this decision, we did not conduct a thorough evaluation of the effectiveness of triploidy in other fishes. Our analysis focused on the injuriousness or potential injuriousness of all forms of black carp.

Issue: Several respondents stated that juvenile black carp that have not yet reached an age to be ploidy evaluated have likely escaped from fish ponds. Consequently, diploid, as well as triploid, black carp have likely escaped into the wild.

Response: The Service acknowledges this possibility and also recognizes that industry has several safety measures in place to try to minimize escapes from ponds.

Issue: Several commenters stated that is incorrect to state or imply that the triploid grass carp program is a failure, because grass carp are found in natural waters due to a history of early introductions and intentional stockings of diploids and triploids.

Response: We do not view our Triploid Grass Carp Inspection and Certification Program as a failure.

Presence of diploid and triploid grass carp in the United States is a combination of widespread intentional introductions for weed control and establishment of feral populations due to unintentional introduction or escape. Grass carp were widely distributed throughout the United States during the 1970s prior to the establishment of our Triploid Grass Carp Inspection and Certification Program, and stockings continue. Feral grass carp were reported from open river systems during the 1970s. It was not until 1983 that a private fish hatchery in Arkansas produced the first triploid grass carp on a commercially viable scale. In 1985, the Service established a triploid grass carp ploidy inspection program to aid States that wished to receive only triploid grass carp. The triploid certification program for grass carp is completely voluntary, and the purpose of the program is to assure State agencies that no diploids will be shipped to these States within the confidence limits (95 percent confidence protocol) of the program. Juvenile black carp look very similar to juvenile grass carp, and there is high likelihood of misidentification of the two species. In addition, black carp could establish and thrive in the United States in habitats similar to those utilized by grass carp.

Issue: A number of commenters stated that the current methods of producing triploid fish do not ensure all fish are triploid; there is a range of effectiveness of induction procedures.

Response: We have received comments from many people agreeing that current induction methods do not produce 100 percent triploid lots of fish; the ranges provided to the Service were from 60 percent to near 95 percent.

Issue: Several commenters noted that there is no evidence in the literature that triploid black carp are reverting to diploids and that the reproductive potential of triploid black carp is essentially zero.

Response: The peer-reviewed studies that have been conducted for triploidy in grass carp have not been done on black carp. We recognize that grass carp and black carp are similar animals, but we cannot assume the applicability of grass carp studies for black carp. To date, functional sterility has not been confirmed in triploid black carp. While the reproductive potential of triploid black carp was evaluated, the focus of our injurious wildlife evaluation was on the injuriousness or potential injuriousness of all forms of black carp on wildlife and wildlife resources of the United States.

Issue: One respondent stated that the proposed rule was written to mislead readers concerning the situation facing fish farmers, because it doesn't include available information on current uses of black carp and the need for this fish.

Response: The Service did not write the proposed rule to mislead readers; we used the most accurate information that was available when we wrote the proposed rule. The Service has also provided four opportunities for public comment in an effort to gain the best available scientific and economic information. In this final rule, we have used additional and new information provided during the last 4 years, since the proposed rule was published.

Issue: One respondent noted that black carp have been in the United States for 30 years and are not a popular food fish. If there was potential to raise them for food, farmers would have begun raising them by now. Further, if States are restricted to triploids, raising black carp as food fish would be even less likely due to the cost of raising triploid fish.

Response: We appreciate the information provided and note that if we were not listing black carp as injurious wildlife, anyone could raise black carp for any purpose, if regulations allow it. The Service received information that canned black carp were preferred over tuna in blind taste tests.

Issue: Numerous industry respondents asked the Service to consider listing only diploid black carp, not triploid black carp.

Response: We considered the alternative of listing only diploid black carp and specifically asked for comment and data on this alternative in the August 30, 2005, to December 16, 2005, public comment period (70 FR 51326). Our decision to list diploid and triploid black carp as injurious wildlife under the Lacey Act is based solely on the biological characteristics of the fishes and the need to protect our native wildlife and wildlife resources. We have substantial scientific data that describes the harm that black carp cause when introduced outside of their native range and are likely to cause if populations are introduced in U.S. waters.

Issue: Many respondents expressed concern about enforcement challenges for distinguishing triploids and incidental transport of black carp in other fish shipments, because it is difficult to distinguish them from juvenile grass carp.

Response: Because diploid and triploid black carp look identical, we agree it would be difficult for law enforcement to distinguish between the two. At various life stages, black carp could be mistaken for grass carp and moved to new waters. We considered this concern in our evaluation.

Issue: Many respondents expressed concern about introductions of black carp to new waters from contamination of baitfish or bait buckets.

Response: The Service is also concerned about black carp being moved to new areas through bait bucket transfers. We considered this concern in our evaluation.

Issue: Several commenters noted that the proposed rule will not result in the destruction of existing broodstock, and reproductively viable black carp will continue to be held within the borders of Arkansas and Mississippi, where they will continue to be spawned for aquaculture use within each respective State's borders. The proposed rule will in no way impact intrastate movement of black carp.

Response: The Service agrees with these comments. An injurious wildlife listing prohibits importation and interstate transport of a species. Any regulation pertaining to the possession or use of black carp within States continues to be the responsibility of each State. Each State has the right to determine if the fish remain legal within that State's borders. Assuming black carp are legal in a given State, owners retain the right to possess the fish and to use them in any legal way according to State laws.

Issue: Several commenters stated that the proposed rule was in error when stating that testing individual fish to verify triploidy is not economically feasible. Testing individual fish is the industry standard for grass carp.

Response: The Service acknowledges that under the current program protocols, producers test every fish for ploidy status prior to certification sampling. However, the Service protocol for certifying triploid grass carp is to test a subsample (120 of 1,500 or more fish) of the entire lot of fish, not to test every fish, unless specifically requested and reimbursed by a recipient or the producer. We do not feel the proposed rule was in error when it stated that ''testing each fish would be cost-prohibitive.'' Costs would increase if each fish were individually tested for certification. Some respondents indicated that due to increased costs, they would buy less expensive diploids rather than paying more for certified triploids. Given the increased cost of testing each fish, chemical control methods might be more cost effective.

Issue: Several respondents stated that the ''Industry'' is willing to pay for certification of triploid black carp so that no Federal cost would be associated.

Response: While the Service is pleased to hear some industry members would be willing to pay for certification of triploid black carp, we do not have the authority to require certification of triploid black carp. We sincerely hope all users of black carp are currently paying producers to obtain certified triploid black carp, regardless of a requirement from a Federal agency.

Issue: Several commenters stated that all States that allow the use of black carp (Arkansas, Florida, Louisiana, Mississippi, Missouri, North Carolina, Oklahoma, and Texas) require triploid certification.

Response: The Service has not been provided data from each State showing that they require triploid certification in order for a use permit to be issued. As previously mentioned, we evaluated the alternative of not adding triploid black carp to the list of injurious wildlife, but the data indicated that both triploid and diploid black carp are injurious or potentially injurious to the wildlife and wildlife resources of the United States.

Issue: A number of commenters asked the Service to reinstate the triploid black carp certification program. Concerns over potential environmental impacts could be ameliorated by a mandated sterile triploid black carp program. In addition, the Service was asked to allow reputable hatcheries to maintain diploid carp, but to restrict sale of black carp to triploids with quality control, inspection, and third-party certification.

Response: During the period that the Service inspected black carp for ploidy status (1993–1999), there was voluntary participation by fish farmers in the certification; not every farm participated and bought the more expensive triploids. Those inspections were discontinued after the Service was petitioned to list black carp as injurious under the Lacey Act, and we do not intend to re-initiate black carp triploid certifications. The effectiveness of any triploid certification program is dependent upon effective inspection, certification, and enforcement programs that prevent the intentional or unintentional shipment of diploid individuals as triploids. To date, functional sterility has not been confirmed in triploid black carp. We have not been provided documentation by each State that allows use of black carp showing that State requires testing and certification of every black carp as triploid. The process could be required by States prior to permitting the use of black carp.

The triploid certification program for grass carp is completely voluntary, and the purpose of the program is to assure States that, within the limits of the program, no diploids will be shipped to their States. Based on scientific investigations published in peer-reviewed literature, triploid grass carp are functionally sterile. However, the triploid induction process is less than 100-percent effective, resulting in diploid and triploid grass carp that must be correctly identified and separated.

Issue: Several commenters asked the Service to conduct an environmental assessment.

Response: The Service conducted an environmental assessment on the impact to the environment of three alternatives to listing black carp as an injurious species. The final environmental assessment and the ''finding of no significant impact'' (FONSI) can be obtained at *http://www.fws.gov/contaminants/Issues/InvasiveSpecies.cfm.*

Issue: On August 29, 2007, the Service received a ''request for correction'' under the Information Quality Act (IQA). As provided for in OMB's government-wide Information Quality Guidelines, we have elected to use the existing, parallel process to reply (i.e., we are responding to the substance of the request in this response to comments).

Response: The primary concerns raised in the IQA request and the information proposed for correction had already been provided to the Service during the three comment periods associated with the proposed rule, the draft economic analysis, the initial regulatory flexibility analysis, and the draft environmental assessment. Thus this information had already been considered, and in many cases incorporated, during preparation of our final listing determination, final economic analysis, Final Regulatory Flexibility Analysis, and final environmental assessment. The key issues raised included economic impacts associated with trematode range expansion; economic impacts to the hybrid striped bass industry; our estimates of black carp use; distributional impacts; black carp consumption rates; and average catfish price per pound. The final economic analysis addresses the potential trematode range expansion with the impacts of a 20 percent annual increase for 10 years. The economic impacts of restricting black carp use in the hybrid striped bass industry are analyzed with a wide range of potential acres affected due to the uncertainty of the amount of use of black carp in striped bass production. The Service reviewed the range of estimates of acreage using black carp to control trematodes and settled on the most reliable source for the final economic analysis. Black carp consumption of 3–4 pounds of mollusks per day was supported by research findings and therefore was used in the final economic analysis. The long-term average price per pound of catfish of 70 cents per pound was used for the final economic analysis. After all information received during the public comment periods was incorporated into the final economic analysis, the total economic effect for catfish ranged from $30.5 to $37.7 million dollars for a 10-year present value. The few additional details raised in the request that had not been raised explicitly within the context of public comment did not suggest the need for additional changes to our analysis.

Peer Review

We asked three scientists who have knowledge of fisheries biology or invasive species to provide peer review of the proposed rule (67 FR 49280, July 30, 2002). The three peer reviewers had a few technical comments, which we incorporated into this final rule. All three peer reviewers concluded that the data and analyses we used in the proposed rule were appropriate and the conclusions we drew were logical and reasonable.

Description of the Final Rule

The regulations contained in 50 CFR part 16 implement the Lacey Act (18 U.S.C. 42), as amended. Under the terms of the injurious wildlife provisions of the Lacey Act, the Secretary of the Interior is authorized to prohibit the importation and interstate transportation of species designated by the Secretary as injurious. Injurious wildlife are those species, offspring, and eggs that are injurious to wildlife and wildlife resources, to human beings, and to the interests of forestry, horticulture, or agriculture of the United States. Wild mammals, wild birds, fish, mollusks, crustaceans, amphibians, and reptiles are the only organisms that can be added to the injurious wildlife list. The lists of injurious wildlife are at 50 CFR 16.11–16.15.

By adding all forms of live black carp, gametes, viable eggs, and hybrids 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 who wish to import live black carp, gametes, viable eggs, and hybrids 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. The interstate transportation of any live black carp, gametes, viable eggs, and hybrids currently held in the United States for any purpose is prohibited without a permit. No live black carp, gametes, viable eggs, or hybrids 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. Any regulation pertaining to the possession or use of live black carp, gametes, viable eggs, and hybrids within States continues to be the responsibility of each State.

Biology and Natural History

Black carp, a Cyprinid species also known as snail carp, black amur, or Chinese roach, is a freshwater fish that inhabits lakes and primarily lower reaches of large, fast-moving rivers and associated backwaters, including canals and reservoirs. Black carp can often exceed 1 meter (m) in length and weigh, on average, 15 kg (33 pounds). They reportedly can reach 1.5 m (5 feet) or more total length and weigh 70 kg (150 pounds) or more. In certain culture situations, black carp exhibit their most rapid increase in body length during ages 1 and 2 years, and their most rapid rate increase in body weight during ages 3 and 4 years. Fish stocked at lengths of around 13–15 cm have attained weights of nearly 4 kg after only 1 year. Individuals of the species are known to live to at least 15 years of age.

Black carp coloration varies from black to dark brown to greenish black on top and yellow to whitish on the underside. Pharyngeal (throat) teeth typically form a single row of 4 or 5 large molar-shaped teeth on each of their two arches. The size, number, and shape of the teeth change with age. Black carp adults and larger juveniles superficially appear very similar to grass carp (*Ctenopharyngodon idella*). Adult black carp may be distinguished from grass carp externally by the color and the more cylindrical form of the body, and internally by the pharyngeal teeth. Small juvenile black carp are more difficult to distinguish from young grass carp.

Native Range

The species inhabits most major drainages of eastern Asia from about 22° N to about 51° N latitude. The natural range of black carp includes much of the eastern half of China, parts of far eastern Russia, and possibly northern Vietnam. Published records of black carp from Taiwan and Japan likely represent introductions.

Habitat Use

Black carp typically inhabit the middle and bottom parts of the water column. Because of their large size, adults face few, if any, predators, though their drifting eggs and larvae are consumed by small fishes.

Reproduction and Growth

Black carp usually reach sexual maturity from 6 to 11 years of age, but can mature as young as 3 years of age. Males usually mature a year earlier than females. They reproduce annually in riverine environments. Pond-reared black carp can be induced to spawn two to three times a year. In their natural range, spawning occurs in late spring and summer, with water temperatures ranging from 20–30 °C and rising water levels. They spawn upstream in rivers and their eggs drift downstream. The eggs are carried by currents into floodplain lakes, smaller streams, and channels with little to no current. Female black carp produce 1–3 million eggs each year, depending on body size. Growth rates are dependent on food quantity and quality; black carp can weigh as much as 5 kg in 3 years. Black carp grow slowly if mollusks are not included in their diet.

Diet and Feeding Habits

Black carp feed on zooplankton and fingerlings when young. Larger juveniles and adult black carp are bottom feeders that almost exclusively eat mollusks (mussels and snails) when available, but can eat insects, shrimp, commercial fish feeds and macrophytes (aquatic plants). As adults, powerful teeth permit the black carp to crush the thick shells of large mollusks. Although black carp reportedly have small mouths for their size, they attain sizes and gape (mouth) widths much larger than most native mollusk-eating fish. Gape width increases with body length. Reports indicate that the fish can usually handle any food item that it can get into its mouth. Rates of consumption are varied in the literature, but a 4-year-old black carp was shown to eat, on average, 3 to 4 pounds of zebra mussels per day in pond culture.

History of Introduction and Use in the United States

Black carp originally entered the United States in 1973 as a ''contaminant'' in imported grass carp or other Chinese carp stocks. Black carp appear very similar to grass carp, specifically in terms of body size and shape, position and size of fins, and position and size of the eyes. Juveniles, in particular, are difficult to distinguish from young grass carp. The second introduction of black carp into the United States occurred in the early 1980s in Southeast fish production ponds for biological control of yellow grub (*Clinostomum marginatum*), a trematode parasite, and as a potential food fish. Black carp have become more commonly used and transported since the first importations, particularly in the late 1990s.

The predominant use of black carp in the United States is for biological control of snails that are intermediate hosts in the life cycle of several parasites, which affect cultured channel catfish (*Ictalurus punctatus*), hybrid striped bass (*Morone saxatilis* crossed with *M. chrysops*), and some baitfish (fathead minnow (*Pimephales promelas*), for example). Yellow grub is a parasite that infects fish, and can cause economic losses to baitfish and hybrid striped bass farmers. The life cycle of the grub involves snails and fishes as intermediate hosts and fish-eating birds as final hosts. A second trematode parasite, *Bolbophorus damnificus* (previously reported to be *B. confusus*), has also appeared in snails in channel catfish culture ponds, primarily in 1999, but does not infect hybrid striped bass. Fathead minnows have been shown to carry *B. damnificus* and another *Bolbophorus* species, named ''type 2''; this second species appears to infect hybrid striped bass. Mild active trematode infections reduce production by reducing feed consumption and increasing susceptibility to other bacterial infections or diseases. Fully developed metacercariae (parasite stage) does not appear to compromise the growth performance and health status of fish. Deleterious effects of *B. damnificus* are associated with the penetration of the parasite and the initial stages of encystment. Research has shown that once infected fish are removed from the source of the infection, chronic *B. damnificus* infections do not affect the growth potential of channel catfish or increase their susceptibility to Enteric Septicemia of Catfish (ESC).

Black carp have been or are currently being maintained in research and fish production facilities in at least Arkansas, Florida, Iowa, Louisiana, Mississippi, Missouri, North Carolina, Oklahoma, and Texas. According to data reported to the U.S. Geological Survey, as of 2005, black carp have been caught

from natural waters in Missouri, Illinois, Louisiana, and Arkansas.

As early as 1994, black carp fingerlings were delivered with catfish into the State of Missouri. In 2000, black carp were identified in a dealer's bait fish load. At least 300–400 were delivered in one week alone, which were distributed to and sold by bait stores throughout the State. Hundreds of young black carp were also accidentally included in shipments of live baitfish sent from Arkansas to bait dealers in Missouri as early as 1994.

There is a report of approximately 30 black carp escaping into open waters of the United States in the Osage River (Missouri River drainage) in April 1994, though this report is disputed by the facility owner. The first black carp reported captured from the wild was in March 2003 from Horseshoe Lake, Illinois. Analysis indicated that the fish was a 4-year-old triploid, and thus could not have escaped in 1994. A 9-year old black carp was captured in lower Red River, Louisiana, in April 2004 by a commercial fisher; testing of eye fluid indicated the fish was likely diploid. A 7-year-old black carp was captured in the lower Red River, Louisiana, in May 2004; this fish was also likely diploid. In June 2004, one black carp was collected in the Mississippi River near Lock and Dam 24 in Clarksville, Missouri; ploidy testing of this specimen was not possible. Another black carp was also collected from the main channel of the Mississippi River in Louisiana, near Simmesport in July 2004. The commercial fisher who captured the specimen sold it as a grass carp. In August 2004, a diploid black carp was collected from the Atchafalaya River at Simmesport, Louisiana. On April 5, 2005, a black carp was found in the White River, just north of DeVall's Bluff, Arkansas; the fish was sold before ploidy could be tested. The source of the introduction of these wild-caught fish is unknown.

These records include only self-reported documentations of black carp found in the wild; other escapes and captures in the wild may have occurred but have not been reported. Recent reports indicate that commercial fishers working in the Atchafalaya River basin have been catching 8 to 15 black carp per year, of unknown ploidy, since the early 1990s. It is not known whether black carp are reproducing in the wild; it is difficult to capture small, juvenile fish, especially when numbers are low as they would be for a new introduction. However, the continued captures of adult black carp in Louisiana and in other parts of the Mississippi River basin suggest that the species is reproducing and may be established.

Diploid and Triploid Black Carp

Black carp can either be triploids (presumed sterile) or diploids (capable of reproduction). Triploid fish are created by adding an additional chromosome set (3 total) to induce sterility. Triploidy is one management tool to prevent reproduction and control populations in stocked fish. Externally, triploid fish are indistinguishable from diploid fish. Fish farmers have been successful in inducing triploidy in both black carp and grass carp. Triploids can be distinguished from diploids by testing the red blood cells.

Fish ploidy (the number of sets of chromosomes in a cell or an organism) is most commonly tested during aquaculture production with a particle size analyzer (i.e., Coulter Counter® with channelyzer), which usually tests the red blood cell volume to determine if a fish is triploid or diploid. This method provides a rapid, relatively easy determination of ploidy. However, the size of blood cells differs naturally and there may be overlap between the size of diploid and triploid blood cells. Ploidy can also be tested using flow cytometry, one of the techniques having the greatest accuracy, which measures the amount of DNA in a blood or tissue cell. This method is more expensive and sample preparation takes longer.

Alternatives to Black Carp

In addition to black carp, snail populations in fish production ponds may be controlled by hydrated lime, copper sulfate, weed control, Bayluscide®-M 70% WP, crayfish, and potentially some native fish species. However, chemical treatment for snails can be limited in some areas, because chemical agents can be detrimental to fish or can have decreased effectiveness due to wind, temperature conditions, water chemistry, and pond size. Clearing of aquatic plants has been found to be effective in reducing snail numbers, but is time consuming in large-scale operations. Bayluscide-M 70% WP can be used as a molluscicide in aquaculture ponds, but fish from treated ponds cannot be harvested for 12 months. Also, Bayluscide®-M 70% WP is toxic to fingerlings and cannot be used near other sensitive fish species, such as paddlefish.

Black carp are used as a biological control because they eat infected snails in ponds but are not susceptible to the trematode. Controlling the trematodes by using black carp is preferable to other methods available for aquaculture producers. Other fishes that are indigenous to the United States, including the redear sunfish, redear hybrids, the pumpkinseed sunfish, and the freshwater drum, hold potential to be used for snail control in aquaculture ponds.

Potential Range in the United States

Where food is available, the black carp's range (survival and/or reproduction) in the United States would likely include most of the major tributaries of the large river systems, including the lower and upper Mississippi, Tennessee, White and Red in Arkansas, Sacramento/San Joaquin, Columbia, Snake, South Atlantic Gulf, and Great Lakes.

Factors That Contribute to Injuriousness

Introduction and Spread

The likelihood of release or escape of black carp is high. Diploid and triploid black carp have been found in the wild. Currently, the predominant use of black carp in the United States is for biological control of snails that are intermediate hosts in the life cycle of a trematode that affects fish being farmed for human consumption (channel catfish) or to be stocked in waters (hybrid striped bass), and that use has increased since the late 1990s. To a lesser extent, black carp are used to control snails in baitfish production ponds. Ninety-five percent of the catfish farms in production are located in the southeastern United States. The most likely source of introduction of black carp is through human movement. Much of the Mississippi River delta region is at moderate to high risk of natural disaster, including tornados, floods, and hurricanes. A natural disaster in the Southeast region is likely to result in the release of black carp from fish farms through flooding. An additional, though lower, risk of release associated with fish farming includes the movement of live black carp from farm ponds to natural waterways via predatory birds and mammals. Black carp are farm-raised in aquaculture facilities throughout Asia and Eastern Europe for human consumption. If black carp become popular for human consumption in the United States and are farmed on a larger scale, the associated risks of release would be similar to those described above. However, the risks would be of greater magnitude, as the black carp would be stocked at aquaculture facilities at a higher rate than they are currently stocked for biological control purposes.

If black carp were introduced into the wild, they would likely survive or

become established with or without reproduction. Moreover, black carp would likely spread throughout the large rivers of the United States, because no known limiting factors would preclude them from becoming established in U.S. waters. The black carp, a native of most Pacific drainages in eastern Asia, inhabits large river and lake habitats at the same latitudes as the United States and feeds on aquatic snails and mussels that are similar to those locally abundant in many of our rivers.

At various life stages, black carp could be mistaken for grass carp and moved to new waters through misidentification. They also could be moved to new areas through baitfish sales or bait bucket transfers.

Hybrids

Under artificial conditions, black carp have been crossed, with limited success, with grass carp, silver carp, bighead carp, common carp, and black bream (*Megalobrama terminalis*), but natural hybridization with other Asian carps has not been documented. Researchers have reported that offspring resulting from female black carp × male grass carp had pharyngeal teeth resembling those of black carp, but the pharyngeal teeth formula of hybrids was found to be highly variable. Teeth of hybrid individuals from the female grass carp × male black carp cross differed significantly from those of both parents. In these fish, the teeth were broad like that of black carp, but there was a small hook in the crown. Because of the variation, researchers could not predict what the type of feeding behavior and diet the hybrids would have in nature. Feeding habits of hybrids might be similar to those of pure black carp, thus eating primarily mollusks, or they might be closer to those of pure grass carp, consuming primarily aquatic vegetation, but the outcome of hybridization is unpredictable.

Potential Effects on Native Species

At all life stages, black carp will compete with native species for food. The fish can grow to lengths greater than 1 meter and could weigh from 30 to 150 pounds, depending upon age and food availability. Within their native range, black carp feed on species that are similar to our native mollusk species. Black carp are also known to eat freshwater shrimp, crawfish, and insects. Daily intake of food could be as high as 20 percent of body weight. Based on their feeding habits, black carp, if introduced or established, are highly likely to have a considerable impact on native mussel and snail populations. Entire beds of mussels may be very vulnerable to heavy predation by black carp. Mollusks are a food source for a variety of native animals, including fishes (redear sunfish, pumpkinseed sunfish, freshwater drum, snail bullhead, copper redhorse, river redhorse, robust redhorse, and several catfish and sucker species); river and lake turtles (sawbacks (*Graptemys* spp.) and musk turtles (*Sternotherus* spp.), including several that are Federally listed as endangered or threatened (*G. flavimaculata, G. oculifera* and *S. depressus*); birds (Everglades snail kite, scaup, limpkin, and canvasback); and mammals (raccoons, otters, and muskrats). Reduced mollusk abundance would result in reduced availability of food for those animals, and thus decrease biodiversity.

Although black carp reportedly have small mouths for their body size, they attain sizes much larger than most native mollusk-eating fish. There are no known native fish with the same combination of size, morphology, and diet. Consequently, black carp could put a whole new suite of species not currently subject to fish predation at substantial risk and thus considerably change ecosystem function by altering the existing food web.

Habitat Degradation

Although their potential to cause habitat destruction is low, black carp would likely impact stream communities where snails play an important role as grazers of attached algae and mussels act as filters for phytoplankton. Reduction of snail and mussel populations in those ecosystems would likely facilitate production of algae mats that may upset the natural balance of wildlife habitats.

Potential Pathogens

Black carp host many parasites and flukes, as well as bacterial and viral diseases that are likely to infect sport, food, or fish species on the Federal List of Endangered and Threatened Wildlife. They may also be immune, or serve as intermediate hosts, to the many parasites that use mollusks as intermediate hosts (some of which are harmful to humans). Black carp that are already in the United States pose little to no risk for introducing new pathogens, but any new imports could carry new pathogens. Black carp have been used to successfully control snail hosts for *Schistosoma* in humans, which according to the World Health Organization and the U.S. Centers for Disease Control does not occur in the United States, though a U.S. citizen may contract the disease while traveling.

Potential Impacts to Threatened and Endangered Wildlife

The likelihood and magnitude of effects of black carp on threatened and endangered species is high. As molluscivores, black carp have the potential to negatively affect threatened and endangered mollusks, fish, turtles, and waterfowl that rely on mollusks as a food source. Locally, introduced black carp, whether diploid or triploid, could severely deplete mollusk populations and further imperil the 106 mussels and snails designated as threatened or endangered under the Endangered Species Act (ESA). The United States, particularly the Southeast, has one of the world's most diverse aquatic mollusk faunas. Currently, about 300 taxa of freshwater mussels are recognized nationwide, and nearly 67 percent of this fauna are vulnerable to extinction or already extinct. Seventy species of the 297 mussels native to the United States are designated as endangered or threatened species under the ESA, and many other species have declined in abundance and distribution. Our nation's freshwater snail diversity is about 600 species, or about 15 percent, of the world's diversity of this faunal group. Nearly 10 percent of all freshwater snails are extinct, and 25 freshwater snails are designated as threatened or endangered under the ESA in the United States. The rate of imperilment of snails exceeds every other major animal group in North America, even freshwater mussels, due to dam construction, other habitat alterations, and pollution.

Based on their food habits, habitat preferences, and longevity, black carp could become established with or without reproduction in the habitat supporting most of the federally protected freshwater mussels and about one-third of the federally protected freshwater snails. Black carp are likely to also further threaten numerous other potential candidates for Federal protection. The establishment of black carp populations, with or without reproduction, particularly in the Mississippi drainages, has the potential to reduce mollusk populations to levels that would necessitate protection under the ESA for additional mollusks and other animals that depend on mollusks for food. Since many freshwater mollusks require a fish as an intermediate host for reproduction, the mussels that require native fishes to reproduce are likely to rapidly decline if their fish hosts are affected by black carp.

Even a few introduced black carp could impact mollusk populations in

local areas, as they have been shown to be effective at eating nearly all of the mollusks where they have been stocked. Freshwater mollusks play an important ecological role in maintaining the health of aquatic ecosystems.

To date, freshwater mollusks in the United States have not experienced the introduction of a nonindigenous invasive species in the form of a direct predator. Presence of diploid or triploid black carp could pose a serious threat to many of the remaining populations of endangered and threatened mollusks. Many species of native mollusk-eating fishes do not feed as exclusively on mussels and snails as black carp. Black carp are feeding specialists, but there is a risk that if mollusks become limited, black carp may switch to eating crayfishes and other crustaceans, many of which are imperiled. Black carp have a larger gape width than most native mollusk-eating fishes and pose a greater threat to native mussels and snails. The introduction of individuals or large populations of black carp in the Mississippi River could hasten the decline of mollusk species in the Mississippi River basin due to the black carp's longevity, size, and feeding habits. Entire beds of mussels may be very vulnerable to heavy predation by black carp.

Since some States allow diploid use of black carp, a reproducing population could become established in U.S. waters, thereby imperiling recovery of native freshwater mollusks that are designated as threatened or endangered species under the ESA and potentially degrading habitat for native fishes. Several States and the U.S. Fish and Wildlife Service are currently implementing programs to recover imperiled mollusk populations.

Other

The introduction or establishment of black carp may have negative impacts on humans primarily from the loss of native aquatic mollusk biodiversity and abundance. Freshwater mollusks play an important ecological role in maintaining the health of aquatic ecosystems. These losses would affect the aesthetic, recreational, and economic values currently provided by native mollusks and healthy ecosystems. Educational values would also be diminished through the loss of biodiversity and ecosystem health. Black carp also have the potential to negatively affect the cultured pearl industry through predation on commercial mussel species.

Factors That Reduce or Remove Injuriousness

Potential Introduction and Spread

Structural measures designed to prevent the escape or establishment of black carp in U.S. waters have proven to be ineffective, as black carp have been found in the wild. Most protective measures available to prevent escape of black carp from aquaculture facilities are expensive to install and maintain. Even with protective measures in place, it is unlikely these measures would eliminate risks of accidental escape from facilities; those facilities that are located in floodplains and susceptible to natural storm events are particularly vulnerable.

Detection and Response

Since widespread surveys of U.S. waterways are not conducted to establish species'' presence, barring a sporadic capture, it is unlikely that the existence of black carp would be discovered until the numbers were high enough to impact wildlife and wildlife resources. A delay in discovery would limit the ability and effectiveness to rapidly respond to the introduction and prevent establishment. It is highly unlikely that black carp could be eradicated from U.S. waterways, should they be introduced, unless they are found in unconnected waterbodies.

Potential Control

The ability to eradicate or control black carp populations depends on where they are found. If established in large lakes or river systems, eradication or control of black carp would be highly unlikely, and they would likely become permanent members of the fish community. No effective and feasible tools are currently available to manage black carp or other nonindigenous fish species, should they be introduced into river systems. Chemical piscicides are the best available option to reduce fish numbers, but their use on a largescale is prohibitively expensive, can cause mortality to non-target fish and aquatic species, is usually not accepted by the public, and requires repeated treatments. Chemicals rarely kill every fish, and not all life stages are equally susceptible to chemicals. Additionally, some areas cannot be effectively treated due the size of the area, the distribution of the target species, and the effects on the non-target species, for example.

Mollusk recovery programs require habitat restoration and removal of threats to the continued survival of the species. Re-establishment of extirpated mussel and snail populations, if biologically possible, is labor and cost intensive and would depend on eradication of black carp within the habitat of the mussels and snails.

Recovery of Disturbed Sites

Since effective measures to eradicate, manage, or control the spread of black carp once they are established with or without reproduction are not currently available, the ability to rehabilitate or recover ecosystems disturbed by the species is low. Significant risks associated with black carp escape relate to endangerment and local extinction of native mussels and snails. Re-establishment of extirpated mussel and snail populations, if biologically possible, is labor and cost intensive and would depend on prior eradication of black carp within the habitat.

Potential Pathogens

There is little to no risk of new pathogens being spread by black carp, unless new fish are imported. Controlling the spread of pathogens once black carp have been introduced in the wild is impracticable as each infected fish would need to be captured to prevent spread. It would be highly unlikely that each infected fish could be captured. Further, the pathogen may have already been passed on to other fish species by the time the infected black carp have been discovered.

Potential Ecological Benefits for Introduction

There is little, if any, ecological benefit from the introduction of black carp into open waters of the United States. While there are benefits to farmed fish from black carp introduction into aquaculture facilities, we have determined there are no ecological benefits to black carp introduction into natural waters of the United States. The introduction of black carp in open waters might provide a potential ecological benefit to native wildlife and wildlife resources if black carp could selectively consume non-native invasive mollusks, such as zebra mussels, without consuming native mollusks. However, there is no scientific evidence to support the notion that black carp would selectively prey on non-native invasive mollusks in open waters, and little evidence that they are capable of feeding on aggregate zebra mussels. The introduction of black carp in open waters might theoretically provide a potential ecological benefit to native wildlife by consuming snails that spread disease to other fish species, a function that black carp perform in aquaculture facilities such as fish ponds. However, outside of the context of aquaculture, the possibility of black

carp locating and consuming a sufficient amount of disease-carrying snails to prevent the spread disease to other fish species is too remote and unlikely to be identified as a benefit.

Risk of Use of Triploid Black Carp

We have received conflicting information on the effectiveness of triploidy induction techniques for black carp; some indicate effectiveness as high as 85–98 percent, while others experienced induction resulting in approximately 60 percent triploid fish lots. In general, and primarily for other fish species, the literature indicates that triploidy induction techniques usually do not produce 100 percent triploid fish.

As previously mentioned, fish ploidy (the number of sets of chromosomes in a cell or an organism) is most commonly tested during aquaculture production with a particle size analyzer (*i.e.*, Coulter Counter® with channelyzer), which usually tests the red blood cell volume to determine if it a fish is triploid or diploid. Ploidy can also be tested using flow cytometry, which measures the amount of DNA in a blood or tissue cell. This method is more expensive and sample preparation takes longer. As in all analytical techniques, rigid protocols must be observed to ensure that one can distinguish between triploid and diploid fish. If cell volume overlaps between diploid and triploid fish, then there may be an inherent error in the methodology. While testing red blood cell volume has been shown to be effective in verifying ploidy status in other fish (90 to 93.8 percent for saugeyes), it has not been shown to be 100 percent effective for black carp.

Research conducted at the USGS' Columbia Environmental Research Center demonstrated that the aquaculture industry standard for determining ploidy (i.e., the Coulter Counter® method) classified 1,000 black carp as triploid, but 2 of them were found to be diploid using flow cytometry. Followup sampling produced similar results and additional research is ongoing.

A small percentage of triploid fish produce functional sperm, but if spawning occurred, it is reported as highly unlikely that viable embryos would be produced (0.17 percent for grass carp). Other research, however, has shown that young have been produced. Extensive research has been conducted on triploid production of grass carp; that same level of research has not been conducted to validate that the grass carp methodology can be transferred to black carp.

While triploidy may impede breeding of black carp in the natural environment, non-breeding populations are still likely to have substantial negative impacts. Triploid black carp, which can live to be 15 or more years, can compete with native fish for food and locally prey on mollusks and fingerlings, including those designated as threatened and endangered species under the ESA.

While triploid black carp may not be able to reproduce, allowing black carp in commerce still presents problems. First, in order to have black carp for sale, someone must have reproducing pairs of the fish, which means that reproductively active fish could escape. Second, not all States require the use of certified triploids, so reproductively active fish could be found in otherwise triploid lots of fish. Finally, black carp will feed on native mollusks regardless of their reproductive capabilities. Black carp, whether diploid or triploid, have the potential to feed on large quantities of freshwater mussels and snails and have negative impacts on local native snail and mussel populations before they die of old age.

Conclusion

In summary, the Service finds all forms of live black carp, including gametes, viable eggs and hybrids, to be injurious to the interests of wildlife and wildlife resources of the United States because:

- Triploid and diploid black carp have escaped or been released into the wild;
- Black carp are highly likely to survive in U.S. waterways;
- Black carp are likely to spread because there are no known limiting factors;
- Black carp are highly likely to compete with native species, including threatened and endangered species, for food;
- Black carp are highly likely to feed on native mollusks, which is likely to negatively affect mollusks, as well as the native fish, turtles, and birds that rely on mollusks as a food source;
- It will be highly unlikely to prevent, eradicate, manage, or control the spread of black carp;
- It will be highly unlikely that ecosystems disturbed by the species would be rehabilitated or recovered;
- Non-breeding populations of black carp are likely to have substantial negative impacts on native snail and mussel populations, and
- There are no potential ecological benefits for U.S. waters from the introduction of black carp.

Required Determinations

Paperwork Reduction Act (44 U.S.C. 3501 et seq.)

This rule contains potential information collection activity for FWS Form 3–200–42, Import/Acquisition/Transport of Injurious Wildlife. Completion of this form would be necessary to apply for a permit to import, or transport across State lines, any live black carp, gametes, viable eggs, or hybrids for scientific, medical, educational, or zoological purposes. The Service already has approval from the Office of Management and Budget (OMB) to collect information for this special use permit under OMB control number 1018–0093. This approval has been submitted to OMB for renewal. We may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

Regulatory Planning and Review

(a) In accordance with the criteria in Executive Order 12866, OMB has designated this rule as a significant regulatory action. The following analysis presents summary impacts associated with the final rule. For the detailed economic analysis, refer to *http://www.fws.gov/contaminants/ANS/ANSInjurious.cfm* or contact the person listed under **FOR FURTHER INFORMATION CONTACT**.

Black carp are not marketed as a foodfish, nor are they exported by U.S. farmers. However, they are used by the aquaculture industry to control trematodes in fish ponds. Because numbers of domestic black carp broodstock are adequate, the aquaculture industry does not currently import black carp from sources outside the United States and most likely will not resume imports.

Costs Incurred

The implementation of this final rule will affect the importation and interstate transport of live black carp, gametes, viable eggs, and hybrids. Costs will increase for those businesses that can no longer use black carp to control snail populations. For aquaculture facilities in States with no in-State source of live black carp, they will no longer be able to import black carp to manage snail populations. If farmers cannot use black carp, they will use the most cost-efficient treatment that is suitable to their pond conditions (i.e., chemical control, native species as biological control, or a combination). Affected businesses are limited to those that (1) use black carp, (2) are located in a State

that permits the use of black carp and does not produce black carp, and (3) produce black carp and ship black carp across State lines. States that do not allow the possession of any black carp include Alabama, Illinois, Indiana, Montana, New York, Ohio, and Tennessee. Businesses located in these States will not be affected. Furthermore, because black carp are produced within Arkansas, businesses located in that State will not incur additional costs, unless businesses inadvertently transport black carp across State lines and incur Lacey Act penalties.

To quantify the costs of listing diploid and triploid black carp as injurious wildlife on the aquaculture industry, the impacts on net revenue were estimated. Net revenue is the difference between the amount that farmers receive for their product and the costs incurred to produce that product. Impacts were quantified for the catfish and hybrid striped bass industries. Due to the lack of available data, the potential impacts to the baitfish industry were not estimated.

As noted by Tucker et al. (2004), ''economic losses resulting from infectious diseases are difficult to quantify because record keeping varies among farmers and many diseases go unreported.'' Estimating the potential impacts associated with adding black carp to the list of injurious species required a number of assumptions for the catfish, hybrid striped bass, and baitfish industries due to the uncertainties related to trematode outbreaks and the use of black carp to control those outbreaks. To account for these uncertainties, the economic analysis explored a variety of potential scenarios that may occur. The scenario with the maximum potential impact for each industry is presented below.

For the catfish industry, a number of assumptions were necessary. Assuming that (1) 4.1 percent of catfish farms use black carp, (2) demand for black carp will continue to increase 20 percent annually for the foreseeable future, (3) Arkansas continues producing triploid black carp, and (4) Alabama continues to prohibit black carp, then the estimated annualized lost net revenues will range between $22,061 and $454,201. Discounted at 3 percent, the 10-year present value impact will range between $483,000 and $9.9 million. Discounted at 7 percent, the 10-year present value impact will range between $391,000 and $8.0 million.

For the hybrid striped bass industry, the number of farms using black carp is unknown. Therefore, estimates were developed for three potential scenarios, including 10 percent, 26 percent, and 50 percent of hybrid striped bass farms using black carp. Due to limited data availability, the hybrid striped bass analysis assumes all States will be affected. Therefore, the impacts may be overestimated. Assuming (1) demand for black carp will increase 20 percent annually for the foreseeable future, and (2) 50 percent of hybrid striped bass farms use black carp, estimated annualized lost net revenues will be approximately $1.9 million. To calculate the present value for a 10-year time period, the social discount rates of 3 percent and 7 percent are applied per OMB guidance. Discounted at 3 percent, the 10-year present value impact to hybrid striped bass farms will be approximately $15.8 million. Discounted at 7 percent, the 10-year present value impact to hybrid striped bass farms will be approximately $12.9 million.

In addition to any increased losses associated with trematode outbreaks, farmers inadvertently shipping live black carp across State lines could face penalties for Lacey Act violations. The penalty for a Lacey Act violation is not more than 6 months in prison and a fine of not more than $5,000 for an individual and not more than $10,000 for an organization. The number of farmers that may inadvertently ship live black carp across State lines is unknown.

Businesses that produce black carp for sale across State lines will lose revenue from a smaller black carp market because they will no longer be able to ship across State lines. The potential impact is dependent on a variety of factors including the size of the market across State lines, the potential for businesses to increase production of black carp, and the potential for businesses to increase production of other species. Assuming the incidence of trematode outbreaks will increase at a rate of 20 percent per year, the impact to businesses producing black carp depends on whether they would have the capacity to increase black carp production. If businesses have the capacity to increase black carp production, then they would lose any potential increase in future revenue related to an increase in future demand for black carp. However, when the market for black carp is reduced due to this rule, businesses may also choose to increase production of other species. Thus, the response to a smaller black carp market is unknown, and the impacts to these businesses are uncertain.

Benefits Accrued

While not entirely eliminating black carp as a threat to wildlife and wildlife resources, this final rule will reduce the pathways and chances for black carp being unintentionally introduced into river systems and tributaries. This analysis does not estimate the decreased probability of unintentional introduction, or the decreased probability of a black carp population becoming established. The quantified benefits of this rule focus on the replacement costs of freshwater mussels, as they may be impacted the most from black carp predation. While other mollusks would be at risk, specific damages for them will not be modeled due to a lack of relevant data. It is important to note that calculating the replacement costs for mussels does not fully value their benefits to the ecosystem, use values, and non-use values. It simply attempts to show the lost value of the mussels through their estimated replacement costs. Ecosystem benefits are not quantified.

The replacement costs outlined by the American Fisheries Society are composed of production costs, restocking costs, and administration costs. Table 1 shows the avoided replacement costs to native mussel populations if only one triploid black carp is prevented from unintentional introduction.

TABLE 1.—10-YEAR BENEFITS IF ONE BLACK CARP ESCAPEMENT IS PREVENTED

	Low estimate	Moderate estimate	High estimate
Nominal value	$279,000	$325,000	$372,000
7 percent discount rate (present value)	210,000	245,000	280,000
3 percent discount rate (present value)	245,000	286,000	327,000

Summary Impacts

The table below summarizes the costs and benefits that are detailed in the above sections. These impacts are shown as 10-year impacts, discounted at 7 percent and 3 percent.

TABLE 2.—SUMMARY OF ECONOMIC IMPACTS

	10-year present value impacts	
	7 percent discount	3 percent discount
Costs:		
Catfish Industry	$391,000–$8.0 million	$483,000–$9.9 million.
Hybrid Striped Bass Industry	$12.9 million	$15.8 million.
Baitfish Industry	Unknown	Unknown.
Benefits (per each escape prevented)		
Freshwater Mussels	$210,000–$280,000	$245,000–$327,000.

(b) This rule will not create inconsistencies with other Federal agencies' actions. This rule pertains only to regulations promulgated by the U.S. Fish and Wildlife Service under the Lacey Act. No other agencies are involved in these regulations.

(c) This rule will not materially affect entitlements, grants, user fees, loan programs, or the rights and obligations of their recipients. This rule does not affect entitlement programs. This rule is aimed at regulating the importation and movement of nonindigenous species that have the potential to cause significant economic and other impacts on natural resources that are the trust responsibility of the Federal government.

(d) OMB has determined that this rule raises novel legal or policy issues.

Regulatory Flexibility Act

Under the Regulatory Flexibility Act (as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996), whenever a Federal agency is required to publish a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effect of the rule on small entities (i.e., small businesses, small organizations, and small government jurisdictions) (5 U.S.C. 601 *et seq.*). However, no regulatory flexibility analysis is required if the head of an agency certifies that the rule would not have a significant economic impact on a substantial number of small entities. Thus, for a regulatory flexibility analysis to be required, impacts must exceed a threshold for ''significant impact'' and a threshold for a ''substantial number of small entities.'' See 5 U.S.C. 605(b). A regulatory flexibility analysis was prepared to accompany this rule. Please refer to *http://www.fws.gov/contaminants/ANS/ANSInjurious.cfm* for the document. Our responses to comments we received on the initial regulatory flexibility analysis are included in the final regulatory flexibility analysis.

Channel catfish, hybrid striped bass, and baitfish producers that use black carp will be affected by this rule. Only some businesses in certain states will be affected by this rulemaking. Affected businesses are limited to those that (1) use black carp, and (2) are located in a State that permits the use of black carp and does not produce black carp. States that do not allow the possession of any black carp include Alabama, Illinois, Indiana, Montana, New York, Ohio, and Tennessee. Businesses located in these States will not be affected. Furthermore, businesses located in Arkansas will not incur additional snail-control costs because black carp are produced within the State. Businesses located in Arkansas or other States producing black carp for sale in States that do not produce black carp may experience reduced revenues because black carp will be prohibited from sale in interstate commerce. An evaluation of these reduced revenues was not performed because businesses located in these States did not provide information relevant to such an evaluation. Farmers inadvertently shipping live black carp across State lines could face penalties for Lacey Act violations. The penalty for a Lacey Act violation is not more than 6 months in prison and a fine of not more than $5,000 for an individual and not more than $10,000 for an organization.

It is beyond the scope of this analysis to determine the likelihood of a business inadvertently shipping black carp.

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 ''Finfish Farming and Fish Hatcheries'' businesses (NAICS 112511). The most recent data detailing business revenue for aquaculture farms comes from the 1998 Census of Aquaculture. The Census determined that approximately 89 percent of catfish farms, 97 percent of baitfish farms, and 91 percent of hybrid striped bass farms had sales of less than $750,000 annually. These percentages are extrapolated to the year 2006 to determine the number of small businesses affected by this rule.

For the catfish industry, the number of affected small businesses will increase from 28 farms in 2007, to 146 farms in 2016. This impact represents between 3 percent and 14 percent of catfish farms nationwide. Depending on the severity of the trematode infestation, individual farms may lose between $700 to $14,400 in annual net revenue. Depending on the severity of the infestation, there is potential that some catfish farms may close if they cannot use black carp to control losses. Catfish farms with severe infestations may not be able to cover the costs of production. Though unverified, according to public comments received, a few farms have closed due to severe trematode infestations. The number of farms that may close as a result of listing black carp is uncertain.

The nationwide use of black carp in hybrid striped bass farms is unknown. The only information available is that 26 percent of North Carolina hybrid striped bass producers use black carp to control snails. To account for this uncertainty, the hybrid striped bass analysis presented a range of potentially affected acreage: 10 percent, 26 percent, and 50 percent. An assumption that 50 percent of hybrid striped bass farms use black carp results in 163 small hybrid striped bass farms being impacted. In the short run (2007 to 2011), the annual impact will be about $5,857 per farm. In the long run (2012 to 2016), the annual

impact will be about $16,279 per farm. The estimated net revenue impacts are presented in nominal dollars. Depending on the severity of the infestation, there is potential that some hybrid striped bass farms may go out of business. The number of hybrid striped bass farms that may close is uncertain.

Adequate data for the baitfish industry were not available to estimate the impact of listing black carp. The number of baitfish farms that use black carp for biological control and the impacts of trematode infestations are unknown, so impacts on small baitfish businesses cannot be estimated. Depending on the severity of the infestation, there is potential that some baitfish farms may go out of business. The number of baitfish farms that may close is uncertain.

Our responses to comments we received on the draft economic analysis are attached to the final economic analysis. Please refer to *http://www.fws.gov/contaminants/ANS/ANSInjurious.cfm* for the final economic analysis.

Small Business Regulatory Enforcement Fairness Act

This rule is not a major rule under 5 U.S.C. 804(2), the Small Business Regulatory Enforcement Fairness Act. This rule:

(a) Does not have an annual effect on the economy of $100 million or more. The 10-year present value of net revenue losses to the catfish and hybrid striped bass industries are estimated to range between $3.0 million and $21.0 million discounted at 7 percent and between $3.6 million and $25.8 million discounted at 3 percent. Due to the limit of detailed data for the hybrid striped bass industry, this analysis did not account for farms in Arkansas and Alabama not being impacted, which would cause our estimate to be inflated. Furthermore, data for the baitfish industry were unavailable so the potential impacts were not quantified, and that estimate may be underestimated. In addition to the losses associated with trematode outbreaks, farmers inadvertently shipping live black carp across State lines could face penalties for Lacey Act violations. The penalty for a Lacey Act violation is not more than 6 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.

(b) Will not cause a major increase in costs or prices for consumers; individual industries; Federal, State, or local government agencies; or geographic regions. If farmers cannot use black carp, they will use the most cost-efficient treatment that is suitable to their pond conditions. Depending on pond or tank conditions, it is assumed that operators will choose to treat their ponds with hydrated lime, redear sunfish, or copper sulfate. It is unknown which treatment operators will choose. Costs will increase for those businesses that can no longer use black carp to control snail populations. There is potential that some businesses may go out of business. The number of farms that may close is uncertain. There will most likely not be a major increase for consumers in the cost of catfish. The increase for consumers in costs of hybrid striped bass and baitfish is unknown.

(c) Does not have significant adverse effects on competition, employment, investment, productivity, innovation, or the ability of U.S.-based enterprises to compete with foreign-based enterprises. Farmers without an in-State source of triploid black carp will no longer have the option to use black carp to manage snail populations. The use of chemicals or other snail-eating fish, or some combination of chemical and biological control, will still be available to farmers to help mitigate losses, depending on pond conditions.

Unfunded Mandates Reform Act

In accordance with the Unfunded Mandates Reform Act (2 U.S.C. 1501 *et seq.*), this rule does not impose an unfunded mandate on State, local, or tribal governments or the private sector of more than $100 million per year. The rule would not prohibit intrastate transport or any use of black carp within State boundaries. Any regulations concerning the use of black carp within an individual State is the responsibility of that State. The rule does not have a significant or unique effect on State, local, or tribal governments or the private sector. A statement containing the information required by the Unfunded Mandates Reform Act is not required.

Takings

In accordance with Executive Order 12630, the rule does not have significant takings implications. A takings implication assessment is not required. This rule would not impose significant requirements or limitations on private property use.

Federalism

In accordance with Executive Order 13132, the rule does not have significant Federalism effects. A Federalism assessment is not required. This rule would not have substantial direct effects on States, on the relationship between the Federal government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 13132, we determine that this rule does not have sufficient Federalism implications to warrant the preparation of a Federalism Assessment.

Civil Justice Reform

In accordance with Executive Order 12988, the Office of the Solicitor has determined that the rule does not unduly burden the judicial system and that it meets the requirements of sections 3(a) and 3(b)(2) of the Executive Order. The rule has been reviewed to eliminate drafting errors and ambiguity, was written to minimize litigation, provides a clear legal standard for affected conduct rather than a general standard, and promotes simplification and burden reduction.

National Environmental Policy Act

We have prepared an Environmental Assessment (EA) in conjunction with this rulemaking, and have determined that this rulemaking is not a major Federal action significantly affecting the quality of the human environment within the meaning of section 102(2)(C) of the National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. 4321 *et seq.*). Responses to comments received on the draft EA are attached to the final EA. For a copy of the EA, contact the individual identified above in the section **FOR FURTHER INFORMATION CONTACT**, or access the document at *http://www.fws.gov/contaminants/ANS/ANSInjurious.cfm.*

This action is being taken to protect the natural resources of the United States. Adding diploid and triploid black carp to the list of injurious wildlife is intended to prevent this species' further introduction and establishment in the natural waters of the United States by prohibiting their importation and interstate transport, and thereby protect wildlife and wildlife resources of the United States.

Government-to-Government Relationship With Tribes

In accordance with the President's memorandum of April 29, 1994, ''Government-to-Government Relations with Native American Tribal Governments'' (59 FR 22951), Executive Order 13175, and 512 DM 2, we have evaluated potential effects on Federally recognized Indian tribes and have determined that there are no potential effects. This rule involves the importation and interstate movement of all forms of live black carp, gametes,

eggs, and hybrids. We are unaware of trade in this species by Tribes.

Effects on Energy

On May 18, 2001, the President issued Executive Order 13211 on regulations that significantly affect energy supply, distribution, and use. Executive Order 13211 requires agencies to prepare Statements of Energy Effects when undertaking certain actions. This rule is not expected to affect energy supplies, distribution, and use. Therefore, this action is a not a significant energy action, and no Statement of Energy Effects is required.

References Cited

A complete list of references used in this rulemaking is available upon request from the Branch of Invasive Species (see the **FOR FURTHER INFORMATION CONTACT** section).

List of Subjects in 50 CFR Part 16

Fish, Imports, Reporting and recordkeeping requirements, Transportation, Wildlife.

■ For the reasons discussed in the preamble, the U.S. Fish and Wildlife Service amends part 16, subchapter B of Chapter I, Title 40 of the Code of Federal Regulations as set forth below.

PART 16—[AMENDED]

■ 1. The authority citation for part 16 continues to read as follows:

Authority: 18 U.S.C. 42.

■ 2. Amend § 16.13 as follows:

■ a. By removing the word ''and'' at the end of paragraph (a)(2)(iv)(BB);

■ b. By removing the period at the end of paragraph (a)(2)(v) and adding in its place ''; and''; and

■ c. By adding a new paragraph (a)(2)(vi) to read as set forth below.

§ 16.13 Importation of live or dead fish, mollusks, and crustaceans, or their eggs.

(a) * * *

(2) * * *

(vi) Any live fish, gametes, viable eggs, or hybrids of the species black carp, *Mylopharyngodon piceus.*

* * * * *

Dated: October 12, 2007.

David M. Verhey,

Acting Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 07–5141 Filed 10–17–07; 8:45 am]

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 229

[Docket No. 071011590–7591–01]

RIN 0648–XD38

Taking of Marine Mammals Incidental to Commercial Fishing Operations; Atlantic Large Whale Take Reduction Plan

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Temporary rule.

SUMMARY: The Assistant Administrator for Fisheries (AA), NOAA, announces temporary restrictions consistent with the requirements of the Atlantic Large Whale Take Reduction Plan's (ALWTRP) implementing regulations. These regulations apply to lobster trap/pot and anchored gillnet fishermen in an area totaling approximately 841 nm^2 (2,885 km^2), southeast of Machias, Maine, for 15 days. The purpose of this action is to provide protection to an aggregation of northern right whales (right whales).

DATES: Effective beginning at 0001 hours October 20, 2007, through 2400 hours November 3, 2007.

ADDRESSES: Copies of the proposed and final Dynamic Area Management (DAM) rules, Environmental Assessments (EAs), Atlantic Large Whale Take Reduction Team (ALWTRT) meeting summaries, and progress reports on implementation of the ALWTRP may also be obtained by writing Diane Borggaard, NMFS/Northeast Region, One Blackburn Drive, Gloucester, MA 01930.

FOR FURTHER INFORMATION CONTACT: Diane Borggaard, NMFS/Northeast Region, 978–281–9300 x6503; or Kristy Long, NMFS, Office of Protected Resources, 301–713–2322.

SUPPLEMENTARY INFORMATION:

Electronic Access

Several of the background documents for the ALWTRP and the take reduction planning process can be downloaded from the ALWTRP Web site at *http://www.nero.noaa.gov/whaletrp/.*

Background

The ALWTRP was developed pursuant to section 118 of the Marine Mammal Protection Act (MMPA) to reduce the incidental mortality and serious injury of three endangered species of whales (right, fin, and humpback) due to incidental interaction with commercial fishing activities. In addition, the measures identified in the ALWTRP would provide conservation benefits to a fourth species (minke), which are neither listed as endangered nor threatened under the Endangered Species Act (ESA). The ALWTRP, implemented through regulations codified at 50 CFR 229.32, relies on a combination of fishing gear modifications and time/area closures to reduce the risk of whales becoming entangled in commercial fishing gear (and potentially suffering serious injury or mortality as a result).

On January 9, 2002, NMFS published the final rule to implement the ALWTRP's DAM program (67 FR 1133). On August 26, 2003, NMFS amended the regulations by publishing a final rule, which specifically identified gear modifications that may be allowed in a DAM zone (68 FR 51195). The DAM program provides specific authority for NMFS to restrict temporarily on an expedited basis the use of lobster trap/pot and anchored gillnet fishing gear in areas north of 40° N. lat. to protect right whales. Under the DAM program, NMFS may: (1) Require the removal of all lobster trap/pot and anchored gillnet fishing gear for a 15-day period; (2) allow lobster trap/pot and anchored gillnet fishing within a DAM zone with gear modifications determined by NMFS to sufficiently reduce the risk of entanglement; and/or (3) issue an alert to fishermen requesting the voluntary removal of all lobster trap/pot and anchored gillnet gear for a 15-day period and asking fishermen not to set any additional gear in the DAM zone during the 15-day period.

A DAM zone is triggered when NMFS receives a reliable report from a qualified individual of three or more right whales sighted within an area (75 nm^2 (139 km^2)) such that right whale density is equal to or greater than 0.04 right whales per nm^2 (1.85 km^2). A qualified individual is an individual ascertained by NMFS to be reasonably able, through training or experience, to identify a right whale. Such individuals include, but are not limited to, NMFS staff, U.S. Coast Guard and Navy personnel trained in whale identification, scientific research survey personnel, whale watch operators and naturalists, and mariners trained in whale species identification through disentanglement training or some other training program deemed adequate by NMFS. A reliable report would be a credible right whale sighting.