

U.S. Farm-Raised Catfish Environmental Sustainability Certification Program

Catfish Farmers of America Quality Manual and Operating Procedures



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List of Abbreviations

Abbreviation	Definition
AB	Accreditation Body
ASQC	American Society for Quality Control
Catfish Sustainability Program	U.S. Farm-Raised Catfish Environmental Sustainability Certification Program
CB	Certification Body
CFA	Catfish Farmers of America
CFR	Code of Federal Regulations
CIP	Continuous Improvement Point
GAA-BAP	Global Aquaculture Alliance-Best Aquaculture Practices
QMS	Quality Management System
RAB	Registrar Accreditation Board of the American Society for Quality Control
U.S.	United States of America
USDA	United States Department of Agriculture
USDA-FSIS	United States Department of Agriculture-Food Safety and Inspection Service
USDA-PVP	United States Department of Agriculture-Process Verified Program
USDA-QAD	United States Department of Agriculture-Quality Assessment Division

INTRODUCTION

General Information

The U.S. Farm-Raised Catfish Environmental Sustainability Certification Program, also referred to as the U.S. Catfish Sustainability Program, is a program developed and managed by the Catfish Farmers of America (CFA).

CFA Standard Name: U.S. Farm-Raised Catfish Environmental Sustainability Certification Program (U.S. Catfish Sustainability Program)

CFA Standard: U.S. Farm-Raised Catfish Environmental Sustainability Certification Standard

Founding Date: 2022

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Mission of the U.S. Farm-Raised Catfish Environmental Sustainability Certification Program (U.S. Catfish Sustainability Program)

The U.S. Farm-Raised Catfish Environmental Sustainability Certification Program (Catfish Sustainability Program) was developed by the Catfish Farmers of America to provide clear and auditable definitions of management practices that reduce environmental impacts from catfish production while improving husbandry practices and health of the catfish raised. The program provides clear definitions for responsible environmental stewardship for catfish producers who choose to further reduce environmental impacts, improve management practices, and provide greater accountability to their buyers and the public.

The program requires that individual farms participate in the quality management system (QMS) for environmental sustainability, which is third-party audited for compliance. The Process Verified Points included in the U.S. Catfish Sustainability Program are those for which no regulations or QMS criteria are currently in place. These process verified points conform to Items 6.3.b (“production and/or handling practice that provides specific information to consumers to enable them to make informed decisions on the products that they buy”) and 6.3.e (“characteristic, practice, or requirement that is specifically requested by a customer or consumer”) of the USDA-Quality Assessment Division (QAD) 1001 Procedure of the USDA Process Verified Procedure (USDA-QAD-1000, 2023).

Objectives

1. To provide greater accountability of the environmental sustainability of U.S. Farm-Raised Catfish to buyers and the public.
2. To develop and encourage participation by U.S. catfish processors, farmers, hatcheries, and feed mills in a quality management system for environmental sustainability.
3. To provide clear definitions for those aspects of environmental sustainability not covered and enforced by U.S. law.

4. To provide the rigor of 3rd-party verification of environmentally responsible practices through the rigor of professional U.S. Department of Agriculture (USDA) auditors for scrutiny of farm, hatchery, and feed mill practices.
5. To provide clear information to consumers through the use of the USDA shield¹ that is widely trusted among U.S. consumers who are increasingly confused by the hundreds of eco-labels in the marketplace.
6. To make available the U.S. Catfish Sustainability Program to all applicants who process and grow channel (*Ictalurus punctatus*) and hybrid (♀ *Ictalurus punctatus* x ♂ *Ictalurus furcatus*) in the U.S. regardless of size, scale, management, business structure, or number of farm sites.

Scope

The scope of the U.S. Catfish Sustainability Program is the U.S. farmed catfish industry that includes U.S. processing plants, farms, and hatcheries that grow, process, and sell channel (*Ictalurus punctatus*) and hybrid (♀ *Ictalurus punctatus* x ♂ *Ictalurus furcatus*) catfish and the feed mills that supply feed to farms and hatcheries. The seafood ingredient to be certified is U.S.-farmed catfish. The U.S. Sustainability Program is applicable only to U.S. farmed catfish. Use of the certification logo requires that all (100%) certified product be U.S. farmed catfish. All production systems used to raise channel and hybrid catfish in the U.S. are included in the scope.

The U.S. Catfish Sustainability Program is a voluntary program of the Catfish Farmers of America that does not, and cannot, require all U.S. catfish companies to participate. CFA is a trade association for which membership is voluntary and does not control or influence access to markets.

Geographic scope. The geographic scope of the standard is U.S. catfish farms, hatcheries, feed mills, and processing plants. The U.S. Catfish Sustainability Program is open to all U.S. catfish industry applicants located within the U.S. regardless of size, scale, or business structure through membership in the Catfish Farmers of America. The majority of U.S. catfish businesses are located in the four-state area of Mississippi, Alabama, Arkansas, and Louisiana (USDA-NASS, 2024; Hegde et al., 2022).

Summary Description of the CFA Standard

The U.S. catfish industry is committed to producing the highest-quality products in an environmentally responsible manner. U.S. farmed catfish has been a Best Choice in terms of environmental sustainability by Seafood Watch for a long time. However, the more than 500 eco-labels in the marketplace have created confusion among U.S. consumers. We have chosen to welcome the rigor of 3rd-party USDA auditors onto our farms, hatcheries, feed mills, and processing plants for additional scrutiny of our practices. In addition, research has continued to show that U.S. consumers trust the USDA label more than other labels. At the end of the day, consumer choices are the driving force in sustaining our vital ecosystems across the planet.

¹ Use of the USDA Shield must be approved by USDA-PVP prior to its use. As U.S. government property, use of the USDA Shield without permission is illegal and subject to criminal penalties.

History of Development

The efforts by the Catfish Farmers of America (CFA) to identify a rigorous and applicable environmental sustainability certification program that provides the desired accountability to buyers and end consumers began 16 years ago, in 2009 (Figure 1). Following discussions internally and with retailers, CFA initiated discussions with the Global Aquaculture Advocate (now the Global Seafood Alliance) Best Aquaculture Practices (GAA-BAP) program in late 2015. A committee of catfish growout and hatchery producers, processors, and feed mill representatives was formed and a series of meetings held with GAA-BAP staff and consultants from late 2015 into early 2017. However, it became clear that the GAA-BAP standards were developed primarily for aquaculture businesses in other countries, and evidence began to mount of continued negative environmental effects in other countries despite certification. Additional concerns emerged related to potential conflicts of interest stemming from board members representing companies that were certified and that farms and other audited businesses paid auditors directly for travel and other fees. As a result, CFA began to search for a more rigorous and credible 3rd-party certification program that inherently avoided such conflicts of interest. A survey of U.S. catfish processors conducted in 2019 showed substantial interest in a 3rd-party audited environmental sustainability program.

CFA became aware of the USDA-Processed Verified Program (USDA-PVP) in early 2021 and initiated an effort to assess whether it would provide the rigorous, 3rd-party verification of environmental sustainability that it sought. Efforts included a series of meetings with USDA officials and CFA members to develop the standard for the U.S. Farm-Raised Catfish Environmental Sustainability Certification Program. The standard underwent four reviews by USDA with final approval for inclusion of the U.S. Sustainability Standard in the USDA-PVP Program in May, 2022.

The first approval of a company to participate in the U.S. Catfish Sustainability Program was announced in June, 2024. The approval was granted based on successful outcomes of a desk audit that was followed by a series of on-site audits of the processor, farms, hatcheries, and feed mills that participate in that processor's supply chain.

Size and Diversity of the U.S. Catfish Sustainability Program

The U.S. Catfish Sustainability Program focuses on the U.S. catfish industry which is, by far, the largest sector of U.S. aquaculture. According to the 2022 USDA Census of Agriculture (USDA-NASS, 2024), there were 646 farms raising catfish in the U.S., with sales of \$428.75 million. U.S. catfish sales increased by 6% from the value reported in the 2017 USDA Census of Agriculture. The U.S. Catfish Sustainability program was structured so that processing companies would manage the required quality management system (QMS). This structure was chosen because the rigor of the management and oversight required by USDA auditors would preclude participation of smaller farms that often do not have sufficient personnel to manage such a program. Management of the QMS by processors provides a mechanism for all scales of farms and supply chain partners to participate and also provides a foundation for continuous improvement. Approval by USDA for inclusion in the PVP program includes audited approval of the supply chain partners that are integrated into the overall QMS of each processor. The

required audits by USDA, both desk top and on-site audits, include supply chain partners, but it is the responsibility of the processing company to ensure that all required training, procedures, record-keeping, and document control are fulfilled. The first processor to be approved by the program, Consolidated Catfish Company LLC, is one of the larger catfish processing companies and purchases much of their catfish from farms of varying sizes across several states.

Catfish Farmers of America (Scheme Owner)

Mission

Catfish Farmers of America (CFA) is a non-profit trade association that was formed in 1968. It is an association of U.S. farm-raised catfish producers, suppliers, processors, and marketers. The purpose is to develop, stimulate and encourage harmony, goodwill and understanding among catfish farmers and to promote the general welfare of the U.S. catfish industry.

Membership & member categories

The membership of the Catfish Farmers of America consists of those actively producing farm-raised catfish commercially and supply chain partners who provide supplies and services to catfish farmers, including processing, financing, transportation, merchandising, marketing, and advertising of farm-raised catfish and those involved in educational research, regulatory, or consulting work for members.

Specific membership categories are: Regular, Sustaining, Associate, and Academic/Technical Members. Regular members are individual and corporate producers actively producing farm-raised catfish. The Sustaining Membership category includes processors and feed mill representatives of companies actively processing and manufacturing feed for catfish farmers. Businesses and individuals that supply inputs and financial services to the catfish farming industry join as Associate Members, and individuals from academia, research, regulatory, and technical consulting entities join as Academic/Technical Members.

Organizational structure

The Catfish Farmers of America is governed by its Board of Directors (Figure 2). Directors must be actively farming catfish in the U.S. for commercial purposes, maintain current status of dues payments, and participate in the feed mill checkoff program. Directors are not compensated for their service. Twenty-four of the 29 Directors are elected by state associations affiliated with the Catfish Farmers of America with the number of director slots per state determined by each state's proportion of the total paid acreage of catfish farms. The remaining five slots are elected by residents of states in regional time zones who may not otherwise be eligible to vote. Directors are elected at their state association meetings or at the annual meeting of the Catfish Farmers of America and serve until new directors are elected, up to a maximum of nine years.

Key personnel positions and roles

The Catfish Farmers of America Board of Directors employs an Executive Vice President to carry out the charges of the Board. The Executive Vice President oversees the office and staff of the organization, plans and organizes the annual meeting, and develops and leads initiatives as specified by the Board.

The leadership of the Board consists of the members of the Executive Committee that includes the Chairman of the Board (the immediate past president), the President, Vice-President, Secretary, Treasurer, and four additional Board members. All members of the Executive Committee are elected from among the membership of the Board. The Chairman presides over all meetings of the Board, with the President assuming responsibilities in the absence of the Chairman. The President presides over meetings of the Executive Committee and performs additional duties as specified by the Board. The Vice-President chairs the Membership Committee and succeeds to the Presidency if the President is absent or disabled. The Secretary maintains records of all meetings of the association and of the Board and supervises books and record-keeping generally, including a general membership roster. The Treasurer maintains financial records and provides oversight and reporting of receipts, disbursements, and other financial transactions.

Decisions are made through votes of Board members. A series of committees appointed by the Board are charged with various matters of interest to the Board. Committees include: Membership, Catfish Journal Publication, Annual Convention, Industrial Relations, State Associations & Affiliates, Research, and State & Federal Legislation/Regulations.

PROCEDURES OF THE U.S. FARM-RAISED CATFISH ENVIRONMENTAL SUSTAINABILITY CERTIFICATION PROGRAM (U.S. CATFISH SUSTAINABILITY PROGRAM)

Fee structure

The Catfish Farmers of America does not charge a fee for participation in the Catfish Sustainability Program. The only fees paid are those to the Certification Body (USDA-Processed Verified Program/USDA-PVP) to cover the expenses of the audits and the administration of the 3rd-party auditing services. The fees are set by the USDA-PVP Program. The USDA-PVP fees are paid by the processing companies, not individual farmers, hatcheries, or feed mills.

Stakeholders

The stakeholders of the U.S. Catfish Sustainability program are the members of the Catfish Farmers of America. Membership includes those actively farming catfish on a commercial scale in the U.S. along with supply chain partners. The categories of stakeholders include processors, feed manufacturers, those operating hatcheries that provide fry and fingerlings to growout farms, and others who provide financial, marketing, regulatory, and research/education assistance to the U.S. catfish industry.

For businesses that include all sites as a single business cost center, the multiple sites are considered as one site when establishing which entities are audited each year whereas companies

that have separate business cost centers for multiple sites are considered as separate sites for auditing purposes. For a processing company with more than one processing site, the site that houses the individual responsible for administering the Catfish Sustainability Program will be the one visited, but the audit records must include those of the various other sites. All farms that supply fish to any of the processing sites are included in the pool from which random samples of farms are drawn to be audited each year. Similarly, all feed mills and hatcheries that supply feed and fingerlings to growout farm suppliers to any of the processing sites of the company will be included in the overall pool from which a sample will be audited in any given year.

Given that the stakeholders of the U.S. Catfish Sustainability Program are U.S. businesses, the language of the Standard is English, the national language of the U.S.

Organization of the U.S. Farm-Raised Catfish Environmental Sustainability Certification Program (U.S. Catfish Sustainability Program)

Figure 3 presents an overview of the organization of the U.S. Catfish Sustainability Program. The Owner of the Standard (the Scheme) is the Catfish Farmers of America, who manages the review and revision of the standard and provides oversight for it through its Standards Committee. The Standard reflects the sustainability objectives of the Catfish Farmers of America.

The U.S. has one of the most stringent and rigorous sets of environmental laws, rules, and active enforcement to effectively address environmental issues (Abate et al., 2016). The U.S. Catfish Sustainability Standard acknowledges existing laws, rules, and active enforcement agencies and personnel, and focuses on those aspects of environmental sustainability that are not covered by U.S. laws, regulation, and enforcement.

The Certification Body is the USDA-Processed Verified Program. The USDA-PVP is a governmental program authorized in the Code of Federal Regulations (CFR) Title 7, Part 62. USDA-PVP only accepts inclusion of standards that undergo review and approval through the review process of the USDA-PVP program (QAD 1115, 2019). The USDA-PVP program has full-time professionally trained auditors (USDA-QAD 1205, 2019; USDA-QAD1250, 2019) on staff who conduct the desk and annual on-site audits of catfish processors, growout farms, hatcheries, and feed mills. The audits conducted verify compliance or non-conformance of the participating catfish processors and their supply chain partners against the Standard. As a U.S. federal government agency, USDA cannot audit regulations implemented and enforced by other federal agencies.

The Accreditation Body is the USDA-Quality Assessment Division (QAD). The USDA-QAD is a government entity that operates under ISO 19011 guidelines for quality and/or environmental management systems auditing and provides oversight of the USDA-PVP and other Quality Systems Verification Programs.

Standards Committee of the Catfish Farmers of America

Purpose

CFA has formed a Standards Committee to provide oversight to the U.S. Farm-Raised Catfish Sustainability Standard. The specific charges of the Committee are to: 1) provide a mechanism for representation of the major types of stakeholders for the program; 2) ensure that the requirements are clear, specific, objective, and verifiable; 3) ensure that requirements do not favor any particular technology or service provider; and 4) proper attribution is made to original sources and relevant laws.

Composition and representation

The CFA Standards Committee includes representation of U.S. catfish growout and hatchery farms, and U.S. catfish processors. Research and/or Extension professionals familiar with U.S. catfish farming are also included on the Standards Committee. The Standards Committee includes representation from multiple states.

Decision-making

The Standards Committee meets annually either in person or virtually. The standing agenda includes review of the annual report on the program and discussion of the Standard. Any comments received from stakeholders or the public are further discussed. Roberts Rules of Order are followed in all committee meetings. Decisional agenda items require a motion and second by committee members, followed by discussion and a vote. A majority vote is required for approval of motions.

The decision-making process ensures that those stakeholders who are affected directly by the standard have the opportunity to participate in the decision-making process through representation. While decision-making is limited to members of CFA, the membership criteria indicate that all those actively involved in U.S. catfish production and affiliated supply chain partners, along with research, Extension, and technical consultants actively involved in the U.S. catfish industry are eligible for membership. Membership categories and criteria are specified in the CFA Bylaws and all sizes of business and demographic categories of business ownership are eligible.

The Quality Manual and Operating Procedures describes the process used to document decisions made on the content of the standard and issues notices to its stakeholders of all decisions made with regard to the content of the Standard and the rationale for those decisions.

Standard-setting process

Initial Development. The Catfish Farmers of America began the search to develop a robust and rigorous U.S. Catfish Sustainability Program in 2009. Discussion began with the committees and membership of CFA, and the Executive Vice-President was charged with seeking a framework for the program. Following initial meetings with producers, processors, and their customers, the potential to develop an effective program with GAA-BAP was explored. Meetings were held with the consultant brought on by CFA and representatives of the GAA-BAP program beginning in late 2015. By early 2017, it became apparent that the GAA-BAP program's primary focus was

on environmental issues of farms in other countries that were not relevant to U.S. catfish farms because of different management systems. A second challenge was that catfish farms in the U.S. operate under one of the world's most rigorous environmental regulatory systems that is accompanied by strong enforcement mechanisms and staff (Abate et al., 2016). When evidence mounted of continued negative environmental effects in other countries despite certification, CFA began to search for a more rigorous and credible 3rd-party certification program. A standard that would contribute to on-going improvement in environmental sustainability for the U.S. needs to account for the regulatory system to which U.S. producers must comply with to stay in business.

A survey was conducted of processors in 2019 to assess needs of U.S. catfish processors with respect to a sustainability program. Results showed that there was clear need and substantial interest in alternatives to existing certification programs. The CFA Executive Vice President became aware of the USDA-PVP program in early 2021 that was based on professionally trained auditors and was backed by the integrity, policies, and procedures of the U.S. federal government. The consultant was asked to work with USDA-PVP personnel to explore the potential to develop a U.S. Catfish Sustainability Program within the structure of the USDA-PVP. The consultant subsequently worked with CFA members to develop and submit a first draft of the Standard in late 2021. Following four reviews within USDA, formal approval to include the U.S. Farm-Raised Catfish Environmental Sustainability Program in the USDA-PVP program was received in May, 2022.

Following the approval in 2022, followup meetings were held with industry, USDA, and CFA to provide background information and details on the application process, but especially the Quality Management System required by USDA-PVP. The Quality Management System is the foundation of the USDA-PVP program. It is an intensive management system that requires processing companies and supply chain partners to adhere to rigorous management and oversight provisions.

The first U.S. catfish company was approved for participation in the USDA-PVP program in June, 2024, following a desk audit and on-site audits of the processing company, farms, hatcheries, and feed mills.

The effort to develop a sustainability standard for U.S. farmed catfish involved many consultations with USDA-PVP personnel, catfish farmers, feed mills, and processors, with constant communications among those groups, the consultant, and the CFA Executive Vice President.

Going forward. The initial development of this one-of-a-kind program involved many individuals. The Catfish Sustainability Program was the outcome of many years of catfish business stakeholders asking CFA to develop a sustainability program. Stakeholders have been engaged throughout the various efforts to develop a program that acknowledged and did not conflict in any way with the regulatory laws and enforcement systems in place in the U.S. at local, state, and federal levels. Nearly all U.S. catfish processors have been involved to some degree with the program development, although some more so than others. In several cases, multiple employees of various processors and farms have been engaged through committee

service, participating in virtual meetings, in correspondence with the consultant working on the U.S. Catfish Sustainability Program, through their service on the CFA Board of Directors, and attendance at the CFA annual conventions. On average, in any given year, approximately 10 U.S. catfish processors (that process the majority of catfish processed in the U.S.) have had on average 19 employees participate in at least one meeting each year, eight U.S. catfish farmers per year, five hatchery farmers a year, and two feed mill representatives have participated in various meetings specific to the U.S. Catfish Sustainability Program. In addition, reports on the development of the U.S. Catfish Sustainability Program have been presented at every CFA Board meeting, many Executive Committee meetings, and at meetings of The Catfish Institute Board of Directors each year since 2016. Presentations on the Sustainability Program have been made at annual conventions of the Catfish Farmers of Arkansas (approximately 75 attendees), at the triennial Research Symposium of the Catfish Farmers of America (several hundred attendees), and at the Catfish Farmer Leadership Conferences (approximately 20 attendees each year). In the interim between the various board and other meetings, there have been numerous email and telephone communications that have provided input and feedback into the development of the U.S. Catfish Sustainability Program. In 2023, USDA-PVP officials organized a virtual meeting during which they reviewed the application processes and requirements of the auditing program and included opportunities for questions and answers and for stakeholders to provide input to USDA. All catfish processors in the Mississippi/Alabama/Arkansas/Louisiana region participated in the call.

Given that the first company has passed the audits and has been enrolled in the program, a formal Standards Committee has been formed within CFA. The CFA Standards Committee includes representatives of the major segments of the U.S. catfish industry, with producers, processors, hatcheries, and technical experts (research and Extension specialists with experience in the U.S. catfish industry). Reports are provided to the CFA Standards Committee on the progress of the program, and a link to submit questions and comments is provided at <https://uscatfish.com/sustainability>.

The Committee's charge is to oversee the U.S. Catfish Sustainability Program. The Committee meets formally once a year. Key responsibilities include review of the annual management review and the annual report, make decisions on modifications or revisions to the Standard and to the Quality Manual and Operating Procedures, and oversee the 5-year review. In addition, as the U.S. Catfish Sustainability Program expands, the Standards Committee, in cooperation with USDA-PVP personnel, will schedule virtual trainings for auditors on revisions of the Standard and for those companies seeking to apply for the program.

Participation and consultation

The Standards Committee issues notices to its stakeholders of all decisions made with regard to the content of the standard and the rationale for those decisions through email correspondence, annual reports to the CFA Board, and to the CFA membership at its annual membership meeting. When approved by the CFA Standards Committee and the USDA-PVP, the Standard is posted online at <https://uscatfish.com/sustainability>. In the event of changes to the program, including revision of the standard, all stakeholders are not only notified, but those participating directly in

the U.S. Catfish Sustainability Program are notified that they will have 1 year to come into compliance with the revised standard.

Public comment

The website (<https://uscatfish.com/sustainability>) includes a link that is available throughout the year for individuals to send comments or suggested improvements to the Catfish PVP Standard. Responses to comments received are included with responses in the Annual Reports of the program. All public comments are logged, along with responses and summarized in the Annual Report, as part of the overall document control procedures. Comments received and responses are included in the Annual Management Review section of the Annual Report. The Annual Reports are made available to the public on the website.

At the outset of the process to revise the Standard, CFA will post information on the web about how to contribute to the process, including a link through which comments can be submitted on the proposed scope, objectives, and justification of the need for the standard, the steps involved, timeline, and the decision-making procedures set forth above. Opportunities to contribute will be clearly identified by the Standards Committee. A summary of the process will be easily available for the public online, and the members of the Standards Committee will be posted online.

The Standards Committee includes not only stakeholders (growout and hatchery farmers, processors, suppliers of inputs and services, including financial institutions), but also independent technical experts.

The revised Standard is released for a 60-day comment period. The announcement will encourage stakeholders to take advantage of the opportunity to review the draft of the revised Standard and submit comments to the email address posted with it. An email notification will be sent out to all stakeholders at the start of the 60-day public comment period to encourage participation. A second round of 30 additional days for comments will follow. All comments received will be recorded on the Public Comment and Response Log and summarized in the Annual Report. In doing so, confidentiality of those who submitted comments will be maintained. All stakeholders will be contacted repeatedly via email notices and announcements made at the annual meeting of the Catfish Farmers of America. At the same time, the Standard will be submitted for review by the USDA-PVP Program experts to ensure that the process points to be verified are verifiable, repeatable, auditable, feasible, and factual as required by USDA-QAD 1000 (USDA-QAD, 2023).

Complaints

The Standards Committee maintains a file of complaints or disputes with regard to the U.S. Catfish Sustainability Program in the CFA Home Office. Each complaint filed is first reviewed by the Chair of the Standards Committee for the U.S. Catfish Sustainability Program, who then notifies the members of the Standards Committee, with a recommendation as to whether the complaint is a short-term issue that requires attention by the Standards Committee, or if it is a longer-term issue that is best discussed by a full meeting of the Standards Committee. If resolved by the Chair, the complainant and the Standards Committee are notified of the action taken and

the outcome. If the complaint is short term but requires attention of the Standards Committee, then a meeting is convened by the Standards Committee to select the most appropriate plan of action. If a long-term issue, the complaint is added to the agenda of the next regularly scheduled meeting of the Standards Committee.

Assessment of feasibility and auditability

In the U.S. Catfish Sustainability Program, the assessment of feasibility and auditability was made by experts of the USDA-PVP program. The USDA-PVP program requires that standards be “verifiable, repeatable, auditable, feasible, and factual” (USDA-QAD, 2023) for approval for inclusion.

Review period, process, and revision

The Standards Committee of the Catfish Farmers of America will conduct a formal review of the U.S. Catfish Sustainability Program every 5 years. Given the official start of the program in June, 2024, with approval of the first catfish processor, the first 5-year review is scheduled for 2029. The process that will be used to further develop and revise the Standard is illustrated in Figure 4.

The review process will include the following steps:

1. The Chair of the Standards Committee will develop a preliminary draft of a revised Standard based on a review of annual reports that include public comments and complaints received over time as well as suggestions received following notification to stakeholders that a review is being initiated. Suggestions for improvement will also be requested from USDA-PVP. Relevant scientific information will further be reviewed by the Chair and referenced in the draft revised Standard. The Chair will further assess the scope, objectives, justification for the need for the program, its principles and terms of reference, and the decision-making processes used in developing the preliminary draft. The preliminary draft of the Standard will be accompanied by a revised Quality Manual and Operating Procedures document.
2. The review will include opportunities for public comment. This will include notification of all program stakeholders (CFA members regardless of business size or location) to provide information and contact information on how to contribute comments and participate in the review. A 60-day comment period will be announced in The Catfish Journal and on the web, along with a second-round, 30-day, opportunity to submit comments.
3. All information received, including public comments and responses, will be incorporated into the annual report that includes recommendations for any revisions to the standard. The report will explain and reference appropriate documents and public comments received to justify recommendations for revisions. A synopsis of the revisions will be provided to those who submitted comments.
4. The report will be presented by the Chair to the Standards Committee. Any further revisions from the Standards Committee will then be incorporated and the Committee

Draft will be made available for a 60-day public comment period followed by a second, 30-day comment period.

5. The draft that results from any further revisions following public comment will be submitted to the Executive Committee and then to the CFA Board for CFA approval.
6. The CFA-approved draft will be submitted for review and approval by USDA. Once approved by USDA, the revision is dated and all program stakeholders are notified through email correspondence and an article in The Catfish Journal, including the 1-year transition period to come into compliance.

Oversight

The U.S. Catfish Sustainability Program is designed with multiple layers of oversight. As described above, the Chair of the Standards Committee submits recommendations on revisions to the Standard as well as revisions to the Quality Manual and Operating Procedures to the Standards Committee for review and reporting to the CFA Executive Vice President, then to the CFA Executive Committee, and on to the full CFA Board of Directors for approval.

In the U.S. Catfish Sustainability Program, there is an additional layer of oversight by USDA-PVP that ensures that the process points of the Standard are verifiable, repeatable, auditable, feasible, and factual. The membership structure and representation on the CFA Board of Directors also ensures representation across the major U.S. catfish-producing states, across various supply chain levels of the U.S. catfish industry, and is inclusive of all production scales and systems of U.S. catfish. Non-conformances are defined explicitly in the USDA-QAD 1000 Procedure (USDA-QAD 1000, 2023).

Section 11 of the QAD 1000 Procedure, “Quality Systems Verification Programs General Policies and Procedures”, covers audit findings and the audit report. Audit findings along with any non-conformances identified, continuous improvement points, and recommendations are discussed with the applicant when the on-site audit has been completed. Non-conformances are defined as either major or minor, with a major non-conformance one that compromises the integrity of the program or the product, such as the absence of or complete breakdown of a program requirement. Follow-up audits are required for major non-conformances to ensure and verify that corrective actions have been taken. A minor non-conformance does not compromise the integrity of the program or product, and consists of isolated incidences of non-conformance. Minor non-conformances are expected to be addressed in a timely manner to avoid being upgraded to a major non-conformance. Continuous improvement points are observations of opportunities for improvement. Continuous improvement over time is expected and continuous improvement points can become non-conformances over time if not addressed.

USDA-PVP Programs operate under ethical conduct standards that explicitly include conflicts of interest as per USDA-QAD 1220, 5CFR Part 2635, and 5 CFR Part 8301 for USDA employees.

Document Control

CFA maintains control of documents on the program that includes a log of complaints and responses (Complaint Log and Response Form) as well as a list of all public comments with

responses (Public Comment Log and Response Form). The online form for comments includes a section for requesting program records.

The CFA Home Office maintains the records and controls the documents of the Catfish Sustainability Program. These include:

- Quality Manual and Operating Procedures of the U.S. Catfish Sustainability Program.
- Complaint Log and Response Form
- Public Comment Log and Response Form
- List of communications with stakeholders, including those contacted.
- Drafts, final versions, and revisions of the Standard
- Online requests for additional information on the program

Each document is numbered in a format that identifies the type of document and the date when approved by the Standards Committee. For all documents other than the Standard, the documents used are effective as of the date approved by the Standards Committee. For the Standard, the date is not added until the Standard is approved following review by USDA; the date of USDA approval is the effective date.

Certification Body (USDA Process Verified Program)

Independence of the Certification Body (USDA Process Verified Program) and the U.S. Catfish Sustainability Program

The Certification Body (CB) for the U.S. Catfish Sustainability Program is the USDA Processed Verified Program (USDA-PVP). This is the only Certification Body approved for the CFA program. The choice of Certification Body for this program was made because the USDA-PVP is a U.S. federal agency program that is entirely independent and separated from trade associations such as the Catfish Farmers of America. This high degree of separation between CFA and the federal government USDA-PVP program makes it independent of CFA, thereby infusing a high degree of integrity and rigor into the auditing program selected for the CFA scheme. Since USDA-PVP is a federal government agency program, CFA has no influence over the auditors or the auditing program.

For CFA to access the USDA-PVP auditing program, CFA was required to apply to USDA-PVP to request that their scheme be audited by USDA-PVP. The draft standard went through four separate reviews and revisions (See timeline of approval; Figure 1). The review of the draft standard by USDA-PVP was based on its assessment as to whether the claims made were verifiable, repeatable, auditable, feasible, and factual, as required for participation in the PVP program (USDA-QAD 1000, 2023).

Once the Standard was approved, catfish processing companies were then able to apply to USDA-PVP to request inclusion into their auditing program. It is the USDA-PVP that makes the determination as to whether processing companies can claim to be certified under the U.S. Catfish Sustainability Program. That determination depends entirely and exclusively on the

outcome of the USDA-PVP audits. USDA-PVP auditors are professional, trained auditors who are totally independent of CFA.

In the U.S. Catfish Sustainability Program, it is the USDA-PVP auditors, not CFA, who identify non-conformances, specify corrective action, and verify that the required corrective actions have been completed satisfactorily. Reliance on the professionally trained USDA-PVP auditors for these critical elements of the program adds distance between CFA and its certifying body that reduces the potential for conflicts of interest and enhances the rigor and integrity of the U.S. Catfish Sustainability Program.

Description of the Certification Body (USDA Process Verified Program)

The Process Verified Program (PVP) is a governmental program authorized in the Code of Federal Regulations (CFR) Title 7, Part 62. The USDA-PVP program only accepts inclusion of standards that undergo review and approval through the review process of the PVP program (QAD 1115 Procedure). The USDA-PVP program has full-time professionally trained auditors (QAD 1205; 1250) on staff who conduct the desk and annual on-site audits of catfish processors, growout farms, hatcheries, and feed mills. The audits conducted verify compliance or non-conformance of the participating catfish processors and their supply chain partners against the Standard. The USDA-PVP program operates under the international ISO 19011 guidelines for quality and/or environmental management systems auditing.

Guidance for interpretation of the standard

The report developed by the USDA-PVP auditors following each annual on-site audit includes all audit findings and includes specification of any non-conformances (major and minor), continuous improvement points, and recommendations, as per the QAD 1000 procedure. All findings are discussed with the entity being audited at the conclusion of the on-site audit.

Non-conformances are classified as either major or minor. A major non-conformance is the absence of a requirement of the standard or a complete breakdown of the required quality management system. A minor non-conformance is a finding that does not compromise the integrity of the program and generally consists of isolated incidences. If not corrected or addressed in a timely fashion, a minor non-conformance can be upgraded to a major non-conformance.

Continuous improvement points (CIPs) are developed from observations of specific areas for which opportunities for improvement have been identified by the auditors. CIPs are not non-conformances, but if not corrected or addressed in the spirit of continuous improvement, can become non-conformances.

Non-compliance is determined by careful review of the business's Quality Management System Manual and examination of the USDA-PVP records. The records of the USDA-PVP program must demonstrate that the Quality Management System is being adhered to. If there is no evidence in the records of adherence to specific Quality Management System provisions, the result is a decision of non-conformance. If there are only a few isolated incidences of records not

providing evidence of adherence to the Quality Management System, the result is a decision of minor non-conformance. The corrective actions specified in the audit report are specific to the non-conformances identified and explicitly explain the steps that must be taken to correct those non-conformances.

Internal assessments and methodologies used within the U.S. Catfish Sustainability Program

The Standards Committee is responsible for oversight of the U.S. Catfish Sustainability Program, including internal assessments. The CFA internal assessment consists primarily of its annual report to the CFA Board of Directors. The annual report includes: the number of businesses approved by USDA-PVP to participate in the program, the number of desk audits of new applicants to USDA-PVP, the number of on-site audits disaggregated between initial and annual renewal audits, list of non-conformances identified disaggregated into major and minor categories, the continuous improvement points identified by auditors, and the recommendations made. Auditor training workshops are also included in the report. The Standards Committee reviews the report and makes recommendations as to the need to consider modifications or revisions in the future.

The Standards Committee is also the conduit for input from stakeholders to USDA-PVP during the certification process. The Standards Committee has mechanisms in place to receive input and responses from stakeholders and communicates that input to the USDA-PVP Program Manager. If the need arises, the Standards Committee will convene a virtual conference call of stakeholder representatives with USDA-PVP program staff.

The methodology to assess compliance with the standard is established by the USDA-PVP program, not CFA, in accord with the independence and separation of CFA from USDA-PVP. The only certification body used for the PVP program is the USDA-PVP auditing system because of the clear, consistent methodology and training of its professional auditors. Thus, there is no possibility of inconsistency between or among certification bodies.

Program suspensions

Failure to address any program requirement, audit finding of major non-conformance, provide corrective actions in the timeframe specified by the auditors, persistent failure to abide by the USDA-QAD policies and procedures, or failure to pay required fees will result in suspension of the program for that company. Details are available in Section 15, “Program Suspension”, of the QAD 1000 Procedure (USDA-QAD 1000, 2023). The USDA-PVP program staff will notify the CFA Standards Committee of any program suspensions.

Audits, frequency, and sampling methodology

The USDA-PVP Program requires an initial on-site audit (following a desk audit) by the USDA-PVP, then annual audits unless non-conformances are uncovered that would trigger more frequent audits. USDA-PVP Procedure, Section 7, specifies the Audit Frequency and details. GU 5186 CCA (USDA-QAD, 2019), QAD General Requirements for QAD Auditors, USDA-Quality Assessment Division specifies that audits be scheduled two weeks in advance (to ensure that the

individual in charge of the program is available). Audits are typically scheduled within a window of 15 to 30 days. All participating businesses are subject to unannounced audits as per Section 20.2 of the QAD 1000 Procedure (USDA-QAD 1000, 2023). The length of time for the audit depends upon the complexity of the business (i.e., the number of farms, hatcheries, feed mills included in the processor's supply chain) and the distance between these entities. Most on-site audits take from 4 to 6 hours to check everything that is required to be checked, but audits of greater numbers of sites located at greater distances require more time. USDA-PVP auditors spend the time necessary to thoroughly review performance.

The initial onsite audit occurs after a new program applicant receives a satisfactory desk audit. A surveillance audit, also conducted onsite, is conducted within 6 months of the initial on-site audit. The onsite annual renewal audit is conducted for all program participants. If an audit reveals a major non-conformance or if there are numerous minor non-conformances, more frequent audits may be conducted at the participant's expense. Auditors reserve the right to conduct unannounced audits if there is suspicion of wrongdoing, such as falsified records, mis-branded product, or other misdeeds. Unannounced audits, if necessary, are conducted according to specifications of Section 20.2 of the QAD 1000 Procedure.

All participating catfish processing companies, and random samples of feed mills, hatcheries that supply feed and fingerlings, and growout farmers that supply fish to that processing company, are included in all on-site audits.

On-site audits are conducted according to requirements and procedures specified in ISO 19011:2018 (formerly 19011:2011) Section 6: "Conducting an audit." The U.S. Catfish Sustainability Program does not allow for non-certified products. All products handled by the catfish processors approved in the program must meet the standards of the U.S. Catfish Sustainability Program.

Multi-site certification

Multi-site catfish businesses are eligible for participation in the U.S. Catfish Sustainability Program. For businesses that include all sites as a single business cost center, the multiple sites are considered as one site when establishing which entities are audited each year whereas companies that have separate business cost centers for multiple sites are considered as separate sites for auditing purposes. For a processing company with more than one processing site, the site that houses the individual responsible for administering the Catfish Sustainability Program will be the one visited, but the audit records must include those of the various other sites. The annual internal audit that processors are required to conduct as per the company's required Quality Management Manual includes assessment of other processing sites. All farms that supply fish to any of the processing sites are included in the pool to potentially be audited each year. Similarly, all feed mills and hatcheries that supply feed and fingerlings to growout farm suppliers to any of the processing sites of the company will be included in the overall pool from which a random sample will be audited in any given year.

Quality control and consistency of audit reports

The USDA-PVP program uses standardized reporting formats for all audits of the CFA PVP program. The professional auditors hired in the USDA-PVP program undergo multi-year training

in reporting practices and formats as defined in USDA-QAD 1255 documents. The USDA-PVP is the only Certification Body used in the CFA PVP program; thus, there is no opportunity for inconsistencies among or between certification bodies in the U.S. Catfish Sustainability Program. The performance evaluation program in place for USDA-PVP auditors provides the oversight of consistency among auditors.

The majority of U.S. catfish farmers, those eligible for participation in the Catfish Sustainability Program, are located in the 4-state area served by the same USDA-PVP auditors. Making use of the same auditors across all participating businesses further reduces the risk of introduction of inconsistencies in auditing practices and reporting.

USDA-QAD rules, similar to all notices proposed and final rules promulgated by federal agencies, undergo public comment periods through the Federal Register with a CFR designation. Examples of current proposed rules open for public comment are available at: <https://www.federalregister.gov/>.

Auditor qualifications, training, continuous professional development

Auditors used in the U.S. Catfish Sustainability Program must be those hired by the USDA-PVP program according to the qualifications and competence criteria as specified in the USDA-QAD 1205 and 1250 Procedures (USDA-QAD 1205; 1250, 2019), USDA Processed Verified Program Auditor Qualifications, and Auditor, Technical Expert, and Program Review Committee Member. These documents are publicly available (<https://www.ams.usda.gov/services/auditing/process-verified-programs>). The independence of the auditors that conduct the audits of the catfish businesses in the U.S. Catfish Sustainability Program provides the rigor and integrity of the program. The 2-year training program includes an “auditor-in-training” phase that provides for a cadre of professional auditors. The USDA-QAD requires continuous professional development of auditors, including not only the USDA-QAD training but also the RAB-accredited ISO 9001:2000 Lead Auditor Training, and that auditors maintain American Society for Quality Control’s Certified Quality Auditor credentials as specified in USDA-QAD 1205, available at <https://www.ams.usda.gov/services/auditing/process-verified-programs>).

Required qualifications of auditors in the USDA-PVP program include two phases of qualification. The fundamental requirements that must be met include: personal attributes of importance in the performance of auditing responsibilities (ethical, open-minded, diplomatic, observant, perceptive, versatile, tenacious, decisive, self-reliant, acts with fortitude, open to improvement, culturally sensitive, and collaborative), high school diploma or equivalent plus 3 years of post-high school education or experience in an agricultural-related field (farm experience, commodity grading, agricultural marketing, food processing laboratory testing, quality assurance, process control application, process or systems auditing, ISO standards application), effective oral and writing communication skills, have successfully completed an approved course for ISO 19011:2018 Section 4 Principles of Auditing and Section 6 Conducting an Audit, and have successfully completed the training for the program as defined by USDA-QAD (USDA-QAD 1250 Procedure, 2019).

Upon successful completion of the phase-one training elements, the individual may move to the second phase of training, as an “Auditor-in-training.” To become qualified as an auditor, the auditor-in-training must complete the following requirements: demonstrate the ability to manage and coordinate audits and/or assessment, successfully complete an RAB-accredited ISO 9000:2000 Lead Auditor Training Course, participate in a minimum of three complete audits or assessments under the supervision of an evaluator (a “complete audit” consists of one which evaluates the entire program or system), and have a Form 1255A auditor evaluation form rating of at least “Marginally successful”, and be recommended by the evaluator as an Auditor.

Continuous professional development is required for each auditor and includes maintaining their credentials as a Certified Quality Auditor by the American Society for Quality Control. In addition, each auditor must participate in five complete audits or auditing for a combined total of 10 days and earning at least 1 acceptable annual evaluation (USDA-QAD 1205, 2019).

Traceability

Traceability is required for the U.S. Catfish Sustainability Program. The application process for each entity that applies for inclusion to the USDA-PVP program includes the requirement that each entity develop a specific set of procedures for traceability and Chain of Custody. The USDA-PVP program details these requirements in the USDA-QAD 1000 Procedure (USDA-QAD 1000, 2023). The audits performed by the USDA-PVP auditors verify, through the annual on-site audits, that the participant has adhered to the procedures as outlined in their required Quality Management System Manual.

In addition, the U.S. catfish industry, including all businesses within the scope of the U.S. Catfish Sustainability Program, by law, must conform to the requirements of the USDA-Food Safety and Inspection Service (USDA-FSIS) requirements that include explicit and detailed requirements for traceability of all products produced in U.S. catfish processing facilities as part of the mandatory Recall Plan (USDA-FSIS 2015; 2017). The traceability records to be maintained by every U.S. catfish processing company are those necessary for a recall of unsafe product. These are delineated in the Recall Plan required for all U.S. catfish processors. The same records required for meat and poultry products are required for U.S. catfish products. The records required include invoices, bills of sale, shipping documents from each transaction in which product is purchased, sold, shipped, received, or handled. These include production records that include ingredients used, production logs, supplier lot identification, finished product lot and subplot identification, and any test results with raw materials or finished product, and distribution records that include names and addresses of consignees, shipment method, date of shipment, and the amount of product shipped to each consignee. Not only are U.S. catfish processing facilities required to maintain detailed records on traceability, USDA-FSIS requires that a USDA-FSIS inspector be present at all times that the processing facility is processing catfish.

The Quality Management System Manual required for acceptance in the USDA-PVP Program requires specification of a Traceability Procedure in Section 9.5, along with required documentation and control of traceability documents. As a required component of the Quality Management System that underpins the USDA-PVP program, each audit conducted explicitly

verifies adequate chain of custody performance and identification of any breaches of the chain of custody, including at least one mass balance assessment. Any breach of the chain of custody must be reported promptly to the USDA-PVP Program Manager. Appropriate corrective actions will be included in records maintained for appropriate followup. Records must be retained for at least one year for refrigerated product and at least two years for shelf-stable products, consistent with requirements of the USDA Food Safety and Inspection Service.

The U.S. Catfish Sustainability Program does not allow for non-certified products. All products handled by the catfish processors approved in the program must meet the standards of the Catfish Sustainability Program.

Transparency

The U.S. Catfish Sustainability Program is designed to provide greater accountability to program stakeholders, buyers, and the public. The USDA-PVP posts summary audit reports by company after certification has been granted (excluding commercially sensitive material information) that include the name and address of the company, contact information, the program scope and location(s), the audit Certificate Number, the date of issue, and the original approval date on the following website:

(<https://www.ams.usda.gov/sites/default/files/media/Official%20ListingPVP.pdf>). Approval indicates that there are no non-conformances. The mechanism to apply for the program is also described on the USDA-PVP website (<https://www.ams.usda.gov/services/auditing/process-verified-programs>).

Comments received by USDA-PVP are provided to the Chair of the Standards Committee to include in the Public Comment Log and Response Form or the Complaint Log and Response Form. Summaries are provided in the annual reports submitted to the CFA Standards Committee and are considered when reviewing and revising the Standard. Summaries of responses and specific revisions made to the Standard or to the Quality Manual and Operating Procedures document are included in the preamble to each revision of the Standard.

Fee Structure

The USDA-PVP Program is a user-fee program. The fees for service are the responsibility of the applicant requesting service. The USDA-PVP fees are paid by the processing companies, not individual farmers, hatcheries, or feed mills.

Fees are charged according to the approved hourly rate published on the AMS website at <https://www.ams.usda.gov/services/grading/fees>. Fees include: a) audit preparation time required to review the approved program documentation and records from previous audits, and to prepare checklists; b) time spent to conduct the audit itself, including reporting results of the audit, and the corrective action audit, if corrective actions were identified; c) travel time and expenses to and from the assigned auditor's official duty location and the audit sites. When traveling to provide services to multiple applicants, charges will be prorated among applicants; d) time spent reviewing promotional materials that use the USDA-PVP shield on labels, packaging, and other marketing materials; and e) other expenses related to services provided to U.S. Catfish Sustainability Program participants.

Document Control

The USDA-PVP Program has explicit and detailed requirements related to the Control of Documents. The application process for each entity that applies for inclusion in the USDA-PVP program includes the requirement that each entity develop a specific set of procedures related to document control. The USDA-PVP program details these requirements in the USDA-QAD 1000 Procedure (USDA-QAD 1000, 2023). These requirements include specification of where reports are maintained and filed, the annual internal audit required, and policies and procedures for document retention. The audits performed by the USDA-PVP auditors verify, through the annual on-site audits, that the participant has adhered to the procedures as outlined in their required Quality Management System Manual.

Accreditation Body (USDA – Quality Assessment Division)

Independence of the Accreditation Body (USDA-Quality Assessment Division) and the U.S. Catfish Sustainability Program

The Accreditation Body for the U.S. Farm-Raised Catfish Environmental Sustainability Certification Program is the USDA-Quality Assessment Division (USDA-QAD) of the U.S. federal government. The USDA-QAD was established by US law to ensure the rigor and integrity of auditing services provided by the US government, and, hence, operates under federal government rules and procedures. Thus, the role of the QAD in the Catfish Sustainability Program is to monitor and assess the competence of PVP as the 3rd-party certifier of the U.S. Catfish Sustainability Program.

The USDA-QAD is the only Accreditation Body used in the U.S. Catfish Sustainability Program because it is subject to the many federal laws, policies, and procedures that apply to the many layers of oversight within the USDA and beyond USDA by the Office of the Inspector General (that also provides protection for whistle-blowers), the Executive Branch of U.S. government (Presidential level), and additional scrutiny and oversight by the U.S. Congress (House and Senate Committees) as part of the checks and balances built into the U.S. federal government through its founding constitution. Thus, the Accreditation Body for the U.S. Catfish Sustainability Program is the USDA-QAD, but the oversight does not end with the USDA-QAD. The USDA-PVP (CB) and the USDA-QAD (AB) are assessed, evaluated, and scrutinized on an on-going basis up through divisions, services, departments, and inspectors general of the U.S. federal government.

The CFA, as an industry trade association, has no influence over the policies and procedures used by a federal entity, such as the USDA-QAD. The policies and procedures of the USDA-QAD are established and implemented based on the oversight and approval of higher levels within the U.S. federal government and adhere to provisions of U.S. federal laws and rules. Thus, the USDA-QAD is totally independent from the CFA and other industry groups and associations. CFA established the process points to be verified that were subsequently determined to be “verifiable, repeatable, auditable, feasible, and factual” as required by USDA-QAD (USDA-QAD, 2023).

Description of the Accreditation Body (USDA-Quality Assessment Division)

The USDA-QAD establishes and codifies the guidance and operating procedures of the various PVP and other auditing service programs at the federal level (USDA-QAD 1000, 2023). The USDA-QAD requires that the USDA-PVP programs (Certification Body for the Catfish Sustainability Program) adhere to the policies and procedures by the USDA-QAD.

The methodologies for the USDA-PVP established by the USDA-QAD are formal, approved, codified policies and procedures that must be followed, thus establishing a consistent methodology for auditing assessment of compliance for the U.S. Catfish Sustainability Program.

Audits, frequency, consistency, and sampling methodology

The minimum audit duration is one year. For those businesses with no non-conformances, an annual renewal audit is required. The USDA-QAD 1000 Procedure, “Quality Systems Verification Programs General Policies and Procedures” Section 20, “Surveillance”, specifies that an annual, on-site audit is required for the Catfish Sustainability Program (USDA-QAD 1000, 2023).

The USDA-QAD establishes the necessary education, technical knowledge, and experience of the auditors based on the official, U.S. government documents for ISO/IEC 17065 and the Quality Systems Verification Programs.

The CFA U.S. Catfish Sustainability Program requires an initial on-site audit (following a desk audit) by the USDA-PVP, then annual audits unless non-conformances are uncovered that would trigger more frequent audits. USDA- PVP Procedure, Section 7, specifies Audit Frequency and details.

The initial onsite audit occurs after a new program applicant receives a satisfactory desk audit. A surveillance audit, also conducted onsite, is conducted within 6 months of the initial on-site audit. The onsite annual renewal audit is conducted for all program participants. If an audit reveals a major non-conformance or if there are numerous minor non-conformances, more frequent audits may be conducted at the participant’s expense.

All participating catfish processing companies, a random sample of feed mills and hatcheries that supply feed and fingerlings, respectively, to growout farm suppliers of the processor, and a random sample of growout farmers are included in all on-site audits.

The methodology to assess compliance with the standard is established by the USDA-QAD (Accreditation Body) that specifies requirements for compliance of the USDA-PVP program (USDA-QAD 1000, 2023). CFA is entirely independent of the USDA-QAD and USDA-PVP programs that are programs of the U.S. federal government. The only certification body used for the PVP program is the USDA-PVP auditing system because of the clear, consistent methodology and training of its professional auditors specified and required by the USDA-QAD. This rigid structure based on U.S. federal laws, rules, policies, and procedures ensures that consistent practices are followed.

Similarly, training and calibration of auditors is done by the professional auditors of the USDA-PVP, as per USDA-QAD 1205 and USDA-QAD 1250 so that audits are done in a consistent manner among auditors.

The USDA-PVP program uses standardized reporting formats for all audits of the CFA PVP program. The professional auditors hired in the USDA-PVP program undergo multi-year training in reporting practices and formats as defined in USDA-QAD 1255 documents. The USDA-PVP is the only Certification Body used in the CFA PVP program; thus, there is no opportunity for inconsistencies among or between certification bodies in the U.S. Catfish Sustainability Program. The performance evaluation program in place for USDA-PVP auditors provides the oversight of consistency among auditors.

The majority of U.S. catfish farmers, those eligible for participation in the U.S. Catfish Sustainability Program, are located in the 4-state area served by the same USDA-PVP auditors. Making use of the same auditors across all participating businesses further reduces the risk of introduction of inconsistencies in auditing practices and reporting.

Auditor qualifications, training, and continuous professional development

The competency standards of the professional auditors of the USDA-PVP program are defined by the USDA-QAD (USDA-QAD 1205; 1250, 2019), not CFA, based on professional standards that include the Certified Quality Auditor credentials of the American Society for Quality Control. In addition, the USDA-QAD requires continuous professional development of auditors, including not only the USDA-QAD training but also the RAB-accredited ISO 9001:2000 Lead Auditor Training, and maintain the American Society for Quality Control's Certified Quality Auditor credentials as in USDA-QAD 1205, available at <https://www.ams.usda.gov/services/auditing/process-verified-programs>).

Required qualifications of auditors in the USDA-PVP program include two phases of qualification. The fundamental requirements that must be met first include: personal attributes of importance in the performance of auditing responsibilities (ethical, open-minded, diplomatic, observant, perceptive, versatile, tenacious, decisive, self-reliant, acts with fortitude, open to improvement, culturally sensitive, and collaborative), high school diploma or equivalent plus 3 years of post-high school education or experience in an agricultural related field (farm experience, commodity grading, agricultural marketing, food processing laboratory testing, quality assurance, process control application, process or systems auditing, ISO standards application), effective oral and writing communication skills, have successfully completed an approved course for ISO 19011:2018 Section 4 Principles of Auditing and Section 6 Conducting an Audit, and have successfully completed the training for the program as defined by USDA-QAD (USDA-QAD 1250, 2019).

Upon completion of the approved phase-one training elements, the individual may move to the second phase of training, as an "Auditor-in-training." To become qualified as an auditor, the auditor-in-training must complete the following requirements: demonstrate the ability to manage and coordinate audits and/or assessment, successfully complete an RAB-accredited ISO 9000:2000 Lead Auditor Training Course, participate in a minimum of three complete audits or assessments under the supervision of an evaluator (a "complete audit" consists of one which

evaluates the entire program or system), and have Form 1255A auditor evaluation form rating of at least “Marginally successful” and be recommended by the evaluator as an Auditor.

Continuous professional development is required for each auditor and includes maintaining their credentials as a Certified Quality Auditor by the American Society for Quality Control. In addition, each auditor must participate in five complete audits or auditing for a combined total of 10 days and earning at least 1 acceptable annual evaluation (USDA-QAD 1205, 2019). In addition, each auditor must participate in five complete audits or auditing for a combined total of 10 days and earning at least 1 acceptable annual evaluation (USDA-QAD 1205, 2019).

On-site audits are conducted according to requirements and procedures specified in ISO 19011:2018 (formerly 19011:2011) Section 6: “Conducting an audit.” The length of each audit varies with the complexity of each facility being audited. In addition, the U.S. Catfish Sustainability Program requires audits not just of the processing facility, but also of the growout farms that supply catfish to the processor, the hatchery farms that supply fingerlings to growout farms, and the feed mills that supply feed to growout and hatchery farms. Companies that purchase catfish from other states and farms located at greater distances from the processing facility will incur greater fees from the increased time and travel expense of the auditors. Thus, there is no minimum audit duration that might result in discriminatory un-necessary fees for smaller-scale facilities for which the audit may not be as time-consuming as for a much larger and more complex facility.

Program suspension

Failure to address any program requirement, audit finding of major non-conformance, provide corrective actions in the timeframe specified by the auditors, or persistent failure to abide by the USDA-QAD policies and procedures, or failure to pay required fees will result in suspension of the program. Details are available in Section 15, Program Suspension, of the QAD 1000 Procedure (USDA-QAD 1000, 2023).

Multi-site certification

The Quality Manual and Operating Procedures of the U.S. Catfish Sustainability Program specifies that multi-site catfish businesses are eligible for participation in the U.S. Catfish Sustainability Program. For businesses that include all sites as a single business cost center, the multiple sites are considered as one site when establishing which entities are audited each year. For a processing company with more than one processing site, the site that houses the individual responsible for administering the U.S. Catfish Sustainability Program will be the one visited, but the audit records must include those of the various other sites. All farms that supply fish to any of the processing sites are included in the pool to potentially be audited each year. Similarly, all feed mills and hatcheries that supply feed and fingerlings to growout farm suppliers to any of the processing sites of the company will be included in the overall pool from which a random sample will be audited in any one year.

Public input and notifications

The program is available to all members of the Catfish Farmers of America who receive all communications from the association with their membership. Such communications include The Catfish Journal and email messages and notifications from the CFA office to the membership. Reports to the membership are also made at the annual Business Meeting of the Catfish Farmers of America in addition to reports provided to the Board of Directors of CFA. The Board includes representatives of the state-affiliated associations that further amplify communications through their newsletters and email correspondence network for their specific state. In the event of changes to the program, including revision of standards, all stakeholders are not only notified, but those participating directly in the Catfish Sustainability Program are notified that they will have 1 year to come into compliance with the revised standard.

Comments received by USDA-QAD are provided to the Chair of the Standards Committee to include in the Public Comment Log and Response Form or the Complaint Log and Response Form. Summaries are provided in the annual reports submitted to the CFA Standards Committee and are considered when reviewing and revising the Standard. Summaries of responses and specific revisions made to the Standard or to the Quality Manual and Operating Procedures document are included in the preamble to each revision of the Standard.

Traceability

The Quality Management System Manual required for acceptance in the USDA-PVP Program requires specification of a Traceability Procedure in Section 9.5, along with required documentation and control of traceability documents. As a required component of the Quality Management System that underpins the USDA-PVP program, each audit conducted explicitly verifies adequate chain of custody performance and includes notification of a breach of the chain of custody when identified. The audit includes at least one mass balance assessment. Records must be retained for at least one year for refrigerated product and at least two years for shelf-stable products, consistent with requirements of the USDA Food Safety and Inspection Service.

The U.S. Catfish Sustainability Program requires that at least 95% of the product sold under the U.S. Farm-Raised Catfish Environmental Sustainability Certification Program be of certified origin.

Transparency

The USDA-PVP (Certification Body) for the U.S. Catfish Sustainability Program must approve any revisions of the standard. The USDA-QAD will be informed of revisions to the Standard. Since participants in the USDA-PVP Program have up to 1 year from the date of approval to come into compliance with changes in the standard, the USDA-PVP program similarly will have up to 1 year to train auditors with respect to the revisions. Since the scope of the USDA-PVP Program is the U.S. and acknowledges and accounts for the regulatory laws and enforcement structures related to environmental sustainability, the Certification Body (USDA-PVP) and the Accreditation Body (USDA-QAD) are restricted to federal governmental agencies that are well versed in U.S. laws and rules.

As a federal agency, the majority of the funding for the USDA-QAD that serves as the Accreditation Body is public funding from the U.S. government. No private funding is used to support the Accreditation Body for the U.S. Catfish Sustainability Program. The Certification Body, the USDA-PVP, is a fee-for service program with the fee structure delineated under the section on the role of the USDA-PVP as the Certification Body. The USDA-PVP fees are paid by the processing companies, not individual farmers, hatcheries, or feed mills.

The USDA-QAD (Accreditation Body) discloses information on its website of its structure and policy and procedures manuals as part of its transparency related to the oversight provided to the USDA-PVP Program. Detailed policies and procedures are available to the public on the USDA-QAD website that are available to the public at <https://www.ams.usda.gov/services/auditing>. A key to the oversight provided is the Program Review Committee that functions based on the policies delineated in QAD 1115 Procedure for the ISO/IEC 17065 and Quality Systems Verification Programs.

The U.S. Catfish Sustainability Program is designed to provide greater accountability to the program stakeholders, buyers, and the public. Companies approved by USDA-PVP for participation in the program are listed on the USDA-PVP website (<https://www.ams.usda.gov/sites/default/files/media/Official%20ListingPVP.pdf>).

Performance review

The USDA-QAD specifies the requirements for the USDA-PVP Program (Certification Body) through a series of formal policy and procedures documents (USDA-QAD 1000, 2023). The USDA-QAD guidance includes a Program Review Committee that has final authority over ISO/IEC 17065 and Process Verified Programs (Figure 4: Chain of command above the USDA-QAD).

Corrective action audits

The USDA-PVP (Certification Body) requires a followup on-site audit if non-conformances are identified and corrective actions specified. Such a follow-up on-site audit would occur well before the annual renewal audit. Specifically, Section 12 of QAD 1000 Policies and Procedures states that, “Applicants must address all non-conformances and respond to all requests for corrective actions and corrections, as applicable, within the time frame specified in the audit report. Written corrective action responses must be submitted in hard copy or electronic form that identify the cause(s) of the non-conformance, determine the necessary corrective action, and implement the corrective actions. If the non-conformance resulted in the use or delivery of non-conforming product, the applicant must identify the non-conforming product and make correction appropriate to the non-conformance.”

USDA-PVP auditors then perform a corrective action audit according to the policies and procedures specified in Section 13 of QAD 1000 Policies and Procedures to determine whether the responses by the catfish company were sufficient to have addressed the non-conformance. If not sufficient, additional action is required.

USDA-QAD has a formal, written Appeals Process (Section 25 of QAD 1000 Procedure; USDA-QAD 1000, 2023) in the event that the catfish business disagrees with either an initial audit finding or a finding from a correction action audit.

Monitoring & evaluation system

The Monitoring and Evaluation System used by the Catfish Farmers of America for the U.S. Catfish Sustainability Program includes a set of performance indicators that are tabulated annually as part of an Annual Management Review of the Catfish Sustainability Program by the CFA Standards Committee. Results are summarized in the Annual Report presented to the CFA Board of Directors each year. The process points specified in the Standard are the measures of compliance with the objectives of the Standard. The performance indicators used to evaluate the effectiveness of the Catfish Sustainability Program focus on the number of businesses that have been approved to participate in the program, the numbers of businesses found to be in compliance, and the number of non-conformances identified in the audits.

Notification of management changes by CFA to USDA-PVP (Certification Body) and USDA-QAD (Accreditation Body) and stakeholders

Changes in management of the U.S. Catfish Sustainability Program are communicated promptly (within 30 days) to all stakeholders (processors participating in the CFA PVP for further notification of their supply chain partners), to the Certification Body (USDA-PVP), and to the Accreditation Body (USDA-QAD).

Performance indicators

The performance indicators used as the basis for monitoring and evaluation by CFA of the CFA-PVP program are listed in Table 1. Tracking the number of businesses approved by USDA-PVP to participate in the program will demonstrate utilization of the program by stakeholders. Tracking the number of desk audits of new applicants to USDA-PVP and surveillance (6-month) audits will provide verification for the listings of participation on the USDA-PVP website with the required approval process. Tracking the numbers of annual renewal audits will verify that the auditing process of businesses continuing in the business is being performed as specified. It is important for the Standards Committee to be informed of non-conformances identified in the audits, both major and minor, to identify whether training programs or other assistance is necessary to stakeholders participating in the program. The tracking of continuous improvement points and recommendations from the audits will provide a useful basis for decisions made on whether revisions are needed to the Standard and what types of revisions might be needed in the future. Continuous improvement points and recommendations from the audits will be compared with the objectives of the Standard to ensure that criteria contribute to the defined objectives of the program.

The U.S. Catfish Sustainability Program embeds compliance with local, state, and federal regulations within the standard. Moreover, the oversight of the U.S. Catfish Sustainability Program by the CFA Board of Directors through its Standards Committee, ensures that local conditions are considered. This is because the Standards Committee includes stakeholders that represent various states and supply chain partner categories and the CFA Board includes explicit

representation from the states where the majority of U.S. catfish farming businesses are located as well as representatives of multiple supply chain levels.

Annual management review

The U.S. Catfish Sustainability Program Standards Committee conducts an annual management review, based on the performance indicators listed above and in Tables 1 and 2. The scheme performance is measured by the number of businesses (processors, growout farms, hatcheries, and feed mills) that actively participate and are audited each year, along with the numbers of major and minor non-conformances. These indicators primarily assess the performance of the U.S. Catfish Sustainability Program. The Certification Body (USDA-PVP) undergoes continuous review of its management as dictated by federal policies. Similarly, the Accreditation Body (USDA-QAD), also a federal government entity, is reviewed on an on-going, continuing basis as dictated by federal policies and procedures. Results of the annual management review are summarized in the annual report submitted to the CFA Board of Directors.

Annual report to the CFA Board of Directors

The Standards Committee prepares an annual report on the U.S. Catfish Sustainability Program that is submitted to the Executive Vice President, to the Executive Committee, and then to the CFA Board of Directors. The annual report includes a brief description of the development of the program, recent activities, outcomes, and impacts.

A summary of the annual management review of the U.S. Catfish Sustainability Program is included in the annual report. The overall performance of the U.S. Catfish Sustainability Program is summarized in the performance indicators listed in Table 1 that include the number of businesses approved by USDA-PVP to participate in the program, the number of desk audits of new applicants to USDA-PVP, and the number of on-site audits disaggregated between initial and annual audits. The performance analysis includes lists of non-conformances identified by auditors. The non-conformances are disaggregated into the categories of major and minor non-conformances. Any continuous improvement points identified by auditors, and recommendations made by auditors are also listed in Table 2. Auditor training workshops conducted are included in the annual report. Any comments submitted by stakeholders or others as part of a public comment period or at other times are summarized in the annual management review. The report includes any recommendations from the Standards Committee that may need to be considered for future modifications or revisions of the Standard and to the program. The report is made available to parties that have submitted comments.

Transparency

The U.S. Catfish Sustainability Program is designed to provide greater accountability to the program stakeholders, buyers, and the public. Companies approved by USDA-PVP for participation in the program are listed on the USDA-PVP website (<https://www.ams.usda.gov/sites/default/files/media/Official%20ListingPVP.pdf>). The mechanism to apply for the program is described on the USDA-PVP website (<https://www.ams.usda.gov/services/auditing/process-verified-programs>). Given the geographic

scope of the U.S. Catfish Sustainability Program to the U.S., all materials are provided in English, the national language of the U.S.

The program is available to all members of the Catfish Farmers of America who receive communications from the association as part of their membership. Such communications include The Catfish Journal and email messages and notifications from the CFA office to the membership. Reports to the membership are also made at the annual Business Meeting of the Catfish Farmers of America in addition to reports provided to the Board of Directors of CFA. The Board includes representatives of the state-affiliated associations that further amplify communications through their newsletters and email correspondence network for their specific state. In the event of changes to the program, including revision of standards, all stakeholders are not only notified, but those participating directly in the Catfish Sustainability Program are notified that they will have 1 year to come into compliance with the revised standard.

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Tables

Table 1. Performance Indicators for the Catfish PVP Program reported in each annual report.

Performance indicator	Number
Number of businesses approved by USDA-PVP to participate in the program	
Processors (no.)	
Farms (no.)	
Feed mills (no.)	
Hatcheries (no.)	
Number of desk audits, new applicants to USDA-PVP, in last year (no.)	
Number of on-site audits	
Initial audits (no.)	
Surveillance audit (no.)	
Renewal annual audits (no.)	

Table 2. Non-conformances, continuous improvement points identified, and recommendations made by auditors reported in annual report.

Non-conformances		Continuous improvement points	Recommendations made
Major	Minor		

Figures

Figure 1. Timeline of development of the U.S. Farm-Raised Catfish Environmental Sustainability Program

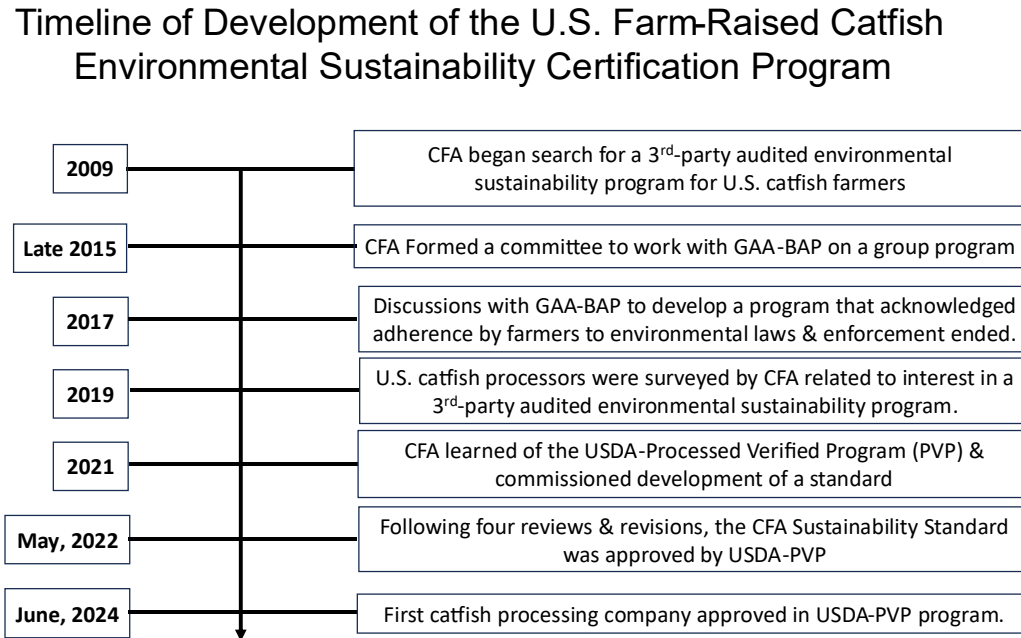


Figure 2. Organizational Chart of the Catfish Farmers of America

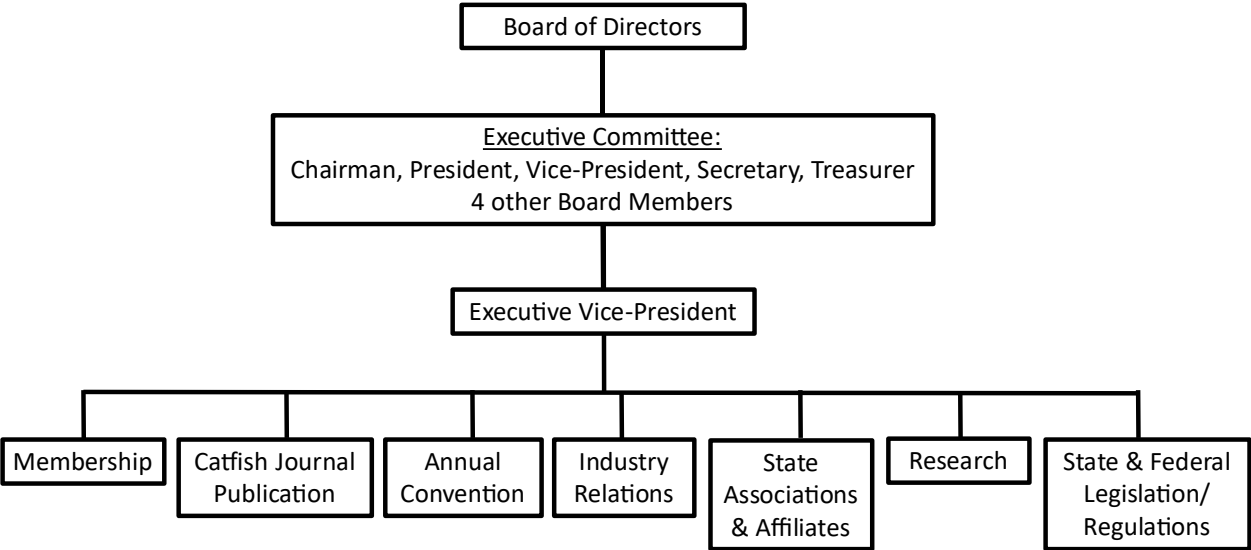


Figure 3. Organization of the U.S. Farm-Raised Catfish Environmental Sustainability Certification Program (U.S. Catfish Sustainability Program)

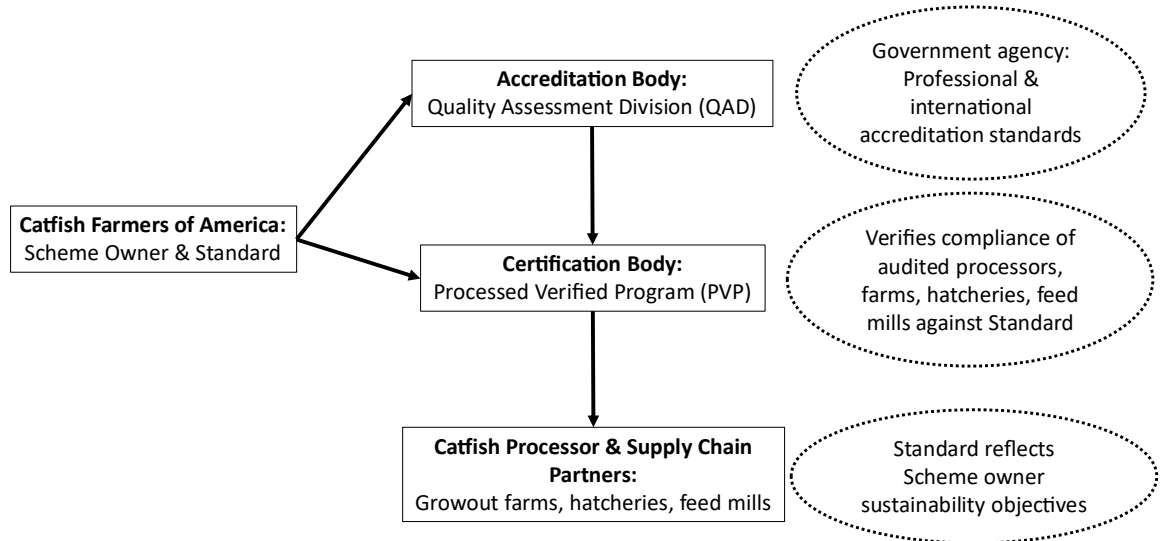
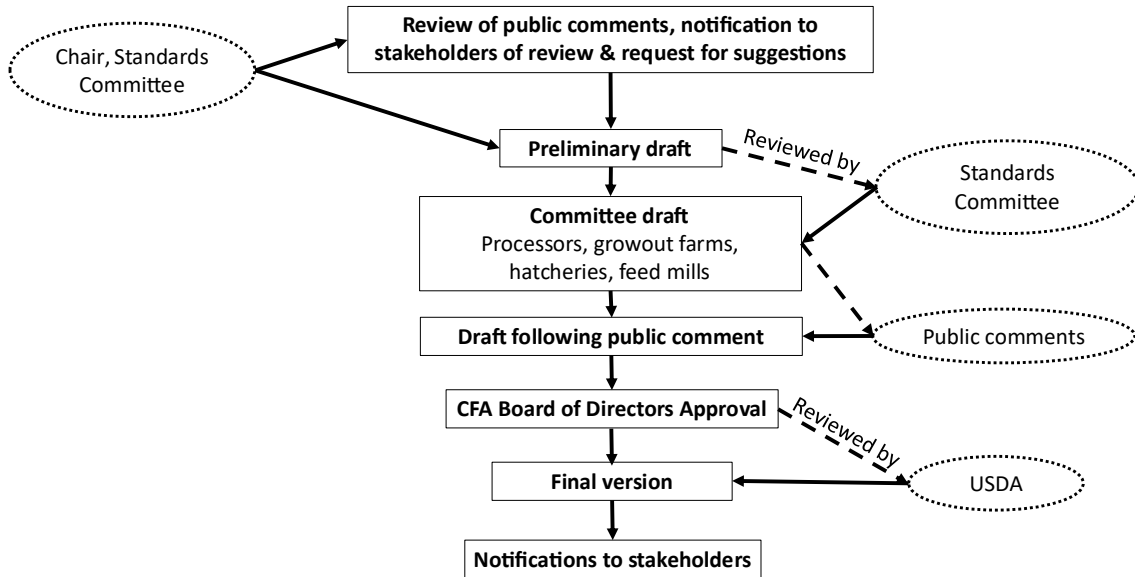


Figure 4. Standard-setting process for development and revision of the U.S. Farm-Raised Catfish Environmental Sustainability Certification Program Standard



Appendices

- A. Standard: U.S. Farm-Raised Catfish Environmental Sustainability Certification Program
- B. Templates for document control
 - a. Outline of Annual Report
 - b. Complaint Log and Response form
 - c. Public Comment Log and Response Form
 - d. Request for Additional Information on U.S. Catfish Sustainability Program
- C. Additional resources

APPENDIX A

U.S. Farm-Raised Catfish Environmental
Sustainability Certification Program
Standard



Document Title	U.S. Farm-Raised Catfish Environmental Sustainability Certification Program Standard
Revision Number	Version 3.2
CFA Technical Committee Approval Date	June 11, 2025

U.S. Farm-Raised Catfish Environmental Sustainability Certification Program

Catfish Farmers of America Standard for U.S. Catfish Production

Part A: Overview

Responsible environmental management of farms has become increasingly important to consumers, farmers, and the general public. The U.S. Farm-Raised Catfish Environmental Sustainability Standard for U.S. Catfish Production provides clear definitions for responsible environmental stewardship for catfish producers who choose to further reduce environmental impacts, improve management practices, and provide greater accountability to their buyers and the public.

The U.S. catfish industry is committed to producing the highest-quality products in an environmentally responsible manner. However, there is no existing quality management system for environmental sustainability for U.S. catfish farms. In the United States, some components of environmental sustainability as related to catfish farming are regulated, but others are not. Yet customers of catfish farms and processors increasingly are asking for verification that U.S. catfish is raised in an environmentally sustainable manner.

The U.S. Farm-Raised Catfish Environmental Sustainability Certification Program has resulted in the development of a quality management system for U.S. catfish production that is being specifically requested by customers and that will convey specific information to consumers regarding the environmental sustainability of U.S. catfish.

The United States has a complex and comprehensive set of laws, rules and regulations that require compliance of businesses to achieve the environmental, social, and health quality of life desired by Americans (Engle & Stone, 2013; Engle, 2007). The U.S. regulatory framework, combined with comprehensive monitoring and enforcement systems, has resulted in clear improvements to environmental quality, worker health and safety, and a safer food supply across the country. Walsh (2023) compared U.S. federal laws (without consideration of the many relevant state statutes, regulations, and rules) with international guidelines (FAO, 2011) and found that they were well aligned.

The U.S. has one of the most stringent environmental regulatory framework and enforcement systems in the world, with only Japan and Norway being rated as more stringent than the U.S. (Abate et al. 2016). U.S. catfish farming and processing businesses are regulated by this complex set of regulations, as are other economic sectors. The following summarizes the key laws and rules that govern U.S. catfish farming as related to environmental quality, social responsibility, animal health and welfare, and food safety.

The U.S. regulatory system is complex. As a federal republic of 50 sovereign states, the U.S. regulatory system begins with laws passed by U.S. Congress. States have the right to pass and enforce additional laws, regulations, and rules that meet or exceed federal requirements. The laws themselves are only the first step in the U.S. regulatory system. Once a law is passed, the

agency with the relevant jurisdictional authority is charged with development of the specific regulations, rules, and compliance requirements. Once rules are adopted by an agency, the associated permit writers and inspectors are charged with developing the permitting specifications and implementing the monitoring and inspection programs that assure compliance.

This standard acknowledges and summarizes U.S. laws and regulations and the enforcement structure that provides assurance that U.S. catfish farmers conform to the provisions of those laws related to environmental quality, food safety, social responsibility, aquatic animal health, drug and chemical use, feed use, and energy use (Tables 1 to 10). Lists of Required Documents for participants in the US Catfish Sustainability Program are included in the Appendix.

A.1 Scope

Conformance to the provisions described below certifies the production and processing of U.S. catfish.

A.2 Definition of Terms

Catfish. All fish of the family Ictaluridae, 9 CFR 541.7(d)(2).

Fingerling. A size category including young fish, larger than a fry but not an adult (definition from USDA NASS, 2024).

Broodstock. These are fish or other stock kept for reproduction, including males. Female broodfish produce the fertilized eggs which go to hatcheries (definition from USDA NASS, 2024).

Foodsize. A size category including grown aquaculture products ready for market, also known as market size (definition from USDA NASS, 2024).

Fry. A size category including very young post-larval fish (definition from USDA NASS, 2024).

Ponds. The most common type of water facility for raising fish. Most ponds are man-made and fish usually have access to the entire pond (definition from USDA NASS, 2024).

Processors. Companies that convert live fish to a product ready to cook, such as fish fillets. Usually, the purchasing plant has no ties to the producer. However, in some cases, the plant may be a cooperative that is jointly owned by the producer and other producers. Also included in this category are the sales of aquaculture products by vertically integrated operations through their own processing and marketing operations (definition from USDA NASS, 2024).

Static, closed production system. Static production systems are those for which there is no continuous flow through of water and discharge from the production unit. In static ponds, the water is maintained with only infrequent additions or discharges (USEPA 2004a, b, c, d; 2006; 2020a,b).

Stockers. A size category including young aquaculture species that are large enough to be placed in the final grow out to foodsize (definition from USDA NASS, 2024).

Part B: US Laws, Rules, and Regulation of Environmental Sustainability

B.1 Aquatic Animal Health Laws and Regulation (Table 1)

The U.S. farmed catfish industry relies on university-based licensed veterinarians and American Fisheries Society (AFS) Certified Aquatic Animal Health Inspectors and Fish Pathologists for fish health assistance that includes farm visits, United States Department of Agriculture Animal and Plant Health Inspection Service (USDA-APHIS) certified laboratory diagnostic support, and training through seminars on best practices. Licensed veterinarians are required to maintain veterinarian-client-patient relationships with the farmers they serve. Recent research (Khoo et al., 2023; Kelly, 2023; Kumar et al., 2024) shows widespread use by catfish farmers of university diagnostic services (11,583 disease diagnostic reports from 2012 to 2022). Aquatic animal health specialists were found to be closely integrated with overall farming operations, leading to early detections of disease outbreaks. Active diagnostic laboratories that support U.S. catfish farmers included those of Mississippi State University (Stoneville, Mississippi) and Auburn University (Greensboro, Alabama).

In the U.S. catfish industry, there is only one available and effective vaccine for catfish, that for the disease *Edwardsiella piscicida*. Once this feed-based, oral vaccine became available, it was adopted widely across the US catfish industry, with 83% of all fingerling production hatcheries vaccinating their fingerlings in 2022 (Hegde et al., 2022). No other vaccines are available for use by U.S. catfish farmers.

U.S. pond production of catfish has been rated by the Monterrey Bay Seafood Watch program as “Green” on Criterion 7, “Disease” for many years (Seafood Watch, 2022). The report states:

“Data show that there has been a “sharp decrease in the percentage of foodfish operations with losses to disease over time, indicating improved management such as biosecurity, adoption of the one vaccine available and effective for US catfish.... Fingerling operations also were found to have decreased losses to disease.”

The Seafood Watch report further states that:

“There is no historical record of disease transfer from cultured U.S. channel catfish to wild fish populations. Data from the U.S. Fish & Wildlife Service National Wild Fish Health Survey Database suggest that on-farm pathogens and/or parasites that may be transmitted to receiving waters are not amplified beyond those found at natural or background levels.”

USDA-APHIS Veterinary Services (VS) Aquatic Animal Health Program upholds the mission “(t)o protect and improve the health of U.S. farm raised aquatic animals in order to produce safe wholesome seafood, healthy recreational and display/ornamental animals, as well as protect the nation’s aquatic animal natural resources” (Hartman 2018). USDA-APHIS provides agricultural producers with a broad range of cooperative programs for protecting the health of animals and plants. The Veterinary Services unit “protects and improves the health, quality, and marketability

of our nation's animals, animal products and veterinary biologics by preventing, controlling and/or eliminating animal diseases, and monitoring and promoting animal health and productivity.” The Animal Health Protection Act authorizes U.S. cooperation with states and foreign governments, and as such, the US is a member of the Office International des Epizooties (OIE), an intergovernmental organization responsible for improving animal health. The licensed veterinarians and AFS Fish Health Inspectors who provide fish health care are required to report these diseases listed by the World Organisation for Animal Health (WOAH) as well as those listed by the USDA APHIS National Animal Health Reporting System (NAHRS). Federal (USFWS) and state laws also specify invasive species of concern to state natural resources and include requirements for notification. Relevant policies include: Animal Health Protection Act, Veterinary Feed Directive, Animal Welfare Act, and the International Standards of the World Organisation of Animal Health, Food and Drug Administration (FDA) guidance on Safety of Animal Feed Maintained and Fed On-farm, and sanitation requirements for feed manufacturing to prevent animal food from becoming adulterated.

Civil and criminal penalties are levied against those companies and individuals who do not abide by these laws.

Table 1. Aquatic Animal Health Management

Description	URL/Reference
Department of Health and Human Services (HHS)	
<i>Food and Drug Administration (FDA)</i>	
Animal Drug Availability Act	https://www.fda.gov/animal-veterinary/guidance-regulations/animal-drug-availability-act-1996
Authority of US FDA-CVM as related to animal drug use, including antibiotics	https://www.fda.gov/about-fda/center-veterinary-medicine/cvm-offices
FDA List of Approved Aquaculture Drugs	https://www.fda.gov/animal-veterinary/aquaculture/approved-aquaculture-drugs
USFDA Veterinary Feed Directive Regulation Questions and Answers	FDA-CVM GFI #120. https://www.fda.gov/media/70173/download
3 rd Edition Quick Reference Guide to Approved for Use in Aquaculture. 2020	U.S. Fish & Wildlife Service's Aquatic Animal Drug Approval Partnership Program, American Fisheries Society's Fish Culture and Fish Health Sections, Association of Fish & Wildlife Agencies Fisheries, and Water Resources Policy Committee's Drug Approval Working Group
Veterinary Feed Directive Final Rule and Next Steps. Fact sheet	https://www.fda.gov/animal-veterinary/development-approval-process/fact-sheet-veterinary-feed-directive-final-rule-and-next-steps
US FDA Guidance for Industry: Seafood HACCP and the FDA Food Safety Modernization Act	https://www.fda.gov/regulatory-information/search-fda-guidance-documents/guidance-industry-seafood-haccp-and-fda-food-safety-modernization-act
US FDA authority related to required approval of a drug to be administered to a food animal	https://www.fda.gov/about-fda/what-we-do
The Food Safety Modernization Act of 2011	https://www.fda.gov/food/food-safety-modernization-act-fsma/full-text-food-safety-modernization-act-fsma
U.S. Department of Agriculture (USDA)	
<i>Animal Plant and Health Inspection Service (APHIS)</i>	

Animal Health Protection Act, U.S.C. Title 7 Agriculture: Chapter 109 Animal Health Protection	https://uscode.house.gov/view.xhtml?path=/prelim@title7/chapter109&edition=prelim
USDA-APHIS National Veterinary Accreditation Program Guide – WOAHP and International Standards	https://www.aphis.usda.gov/nvap/reference-guide/emergency-management/woah
USDA-APHIS and USFWS are required by federal law to maintain lists of reportable diseases that include but are not limited to WOAHP-listed reportable diseases	https://www.aphis.usda.gov/livestock-poultry-disease/surveillance/reportable-diseases
USDA-APHIS Publications, Forms, and Guidance Documents	https://www.aphis.usda.gov/aphis/ourfocus/animalselfcare/SA_Publications/CT_Publications_And_Guidance_Documents
USDA-APHIS on Area Veterinarians in Charge: management system for animal disease in US.	https://www.aphis.usda.gov/nvap/area-vet
USDA-APHIS restricts importation, interstate movement, detection, control, and eradication of diseases and pests, animal disease prevention and management	https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/program-overview
Talmadge-Aiken Act (7U.S.C.1633) provides authority for federal agencies to enter cooperative agreements with state agencies that administer and enforce state laws and regulations related to controlling or eradicating plant and animal pests and diseases	https://uscode.house.gov/view.xhtml?req=granuleid:USC-prelim-title7-section1633&num=0&edition=prelim

B.2 Drug and Chemical Use Laws and Regulation (Table 2)

The Seafood Watch-US Channel Catfish (2022) report includes a “Green” rating on Criterion 4 (Chemical Use) and states that:

“Overall, chemical use in U.S. catfish aquaculture results in minimal environmental impacts. This finding is based on the use and limits approved by the EPA, the infrequent use due to few disease outbreaks and a high economic cost of chemical treatment, and the long residence time and microbial activity that provide both time and opportunity for dissipation of the chemical before discharge (Boyd and Hargreaves 2004). Chemical use is highly restricted and strongly regulated in U.S. aquaculture. Regulation is based on thorough risk analysis, including data on residues, fate, and toxicity to target and non-target species. Survey data indicate that high-risk chemicals (i.e., antibiotics) are used infrequently across the industry, particularly in foodfish ponds, which account for the majority of the production cycle and industry acreage. In addition, it appears that chemical usage is declining based on a lower percentage of total operations using chemicals and an overall reduction in number of farms, but robust data to verify this are lacking. The impact of chemical treatments during a production cycle is mediated by high water volumes and low discharge rates (i.e., the production system does not intentionally discharge water over multiple production cycles), but as stated, fully up-to-date and detailed data on the volume of chemicals used are not available. Catfish production ponds typically discharge water once every 6 to 10 years, and medicated feeds are not normally applied during winter months when overflow effluents are most likely to occur, thereby minimizing the risk of discharging active chemicals and/or their by-products. Therefore, the environmental impacts of chemical use in channel catfish aquaculture are minimal.”

U.S. laws regulate and enforce the use of chemicals and drugs in aquaculture. The restrictions on chemical and drug use include stringent and lengthy approval processes for chemicals and drugs, resulting in very few drugs or chemicals approved for use in aquaculture. Those that have been approved are regulated and enforced with potential for both criminal and civil penalties imposed on those companies and individuals who do not abide by these laws. U.S. federal agencies with authority over drug and chemical use in aquaculture include the FDA, USDA-APHIS, and the U.S. Environmental Protection Agency.

U.S. law strictly regulates the use of antimicrobial agents in livestock production, including catfish and prohibits the use of antimicrobials listed by the World Health Organization (WHO) as highly and critically important to human health. U.S. laws include restrictions on other antimicrobials in addition to those listed by WHO, WOA, and NAHRS.

The laws specify that antimicrobial agents can be used only if prescribed by a licensed veterinarian following diagnosis of a specific disease. Antibiotics (even those few approved for use in catfish) have not been available over the counter in the U.S. since January 1, 2017, when all approved antibiotics were classified as Veterinary Feed Directive drugs. Therefore, there is no option to legally purchase antimicrobial agents unless a veterinarian maintains the required veterinary/patient/client relationship and writes a prescription (based on diagnostic testing results) for each specific farm for an approved drug. U.S. laws prohibit prophylactic use of antimicrobials; use of antibiotics as a growth promotor is also strictly prohibited and highly controlled.

FDA regulates the manufacture, distribution and use of animal drugs and ensures that drugs used in food-producing animals, including fish, are safe and effective and that foods derived from treated animals are free from potentially harmful drug residues. FDA has jurisdiction over all new animal drugs through the Federal Food, Drug, and Cosmetic Act as amended in 1968 and through the FDA Center for Veterinary Medicine (CVM) that regulates the manufacture and distribution of food additives and drugs to be fed to animals (including fish) and further regulates animal feed products. FDA further provides guidance on the safety of animal feed maintained and fed on the farm along with sanitation requirements for feed manufacturing. Animal feed manufacturing, distribution, and use of animal drugs is regulated by the FDA to ensure that drugs used in fish production are safe and effective and that foodfish are free from potentially harmful drug residues.

Very few antimicrobials have been approved for use in U.S. aquaculture generally, with even fewer approved for use in catfish farming. None of the antimicrobials approved in the U.S. for catfish farming are prohibited by WOAHH.

The role of USDA-APHIS is to test veterinary biologic products made by domestic manufacturers and inspect production facilities, methods, and records. U.S. manufacturing facilities of veterinary biologics are licensed, and import permits are required for veterinary biologics produced in other countries. U.S. law requires diagnoses by licensed veterinarians or fish health professionals who have established a veterinarian/patient/client relationship with the farmer to have access to medications for their fish (through a Veterinary Feed Directive), through the Food Safety Modernization Act (FSMA). FSMA is enforced by USDA-APHIS through its jurisdiction over veterinary services. As a result, US catfish farmers rely on their fish health professional for fish health management recommendations, as part of the overall required veterinarian/patient/client relationship. Decisions on quarantine and other aquatic animal health issues are made based on recommendations from their veterinarian or fish health professional. When the farm's fish health professional is not a licensed veterinarian, the diagnostic report is provided to a licensed veterinarian who writes the prescription to provide to the feed mill for medicated feed authorization.

As authorized by the Clean Water Act, EPA administers the National Pollutant Discharge Elimination System (NPDES) which prohibits the discharge of pollutants, including regulated products, such as drugs and other chemicals, into waters of the United States. USEPA works with its federal, state, and tribal regulatory partners to ensure compliance with pesticide laws and regulations to protect human health and the environment. EPA regulations are enforced by state-specific agencies, often designated as a Department of Environmental Quality or a similar title. Each state's Department of Environmental Quality regulatory program sets pollution limits, determines compliance requirements, and enforces environmental laws and regulations. Individual states may impose more stringent regulations, but not less rigorous ones.

USEPA authority extends further to the registration and licensing of pesticides to protect human health and the environment. With respect to aquaculture, USEPA has jurisdiction over disinfectants, sanitizers, and aquatic treatments used solely for the control of algae, bacterial slime, or pest control (excluding pathogens in or on fish).

In the U.S., civil and criminal penalties are levied against those companies and individuals who do not abide by these laws. Civil and criminal penalties are levied against those veterinarians, feed manufacturers, and manufacturers of veterinary biologic companies and individuals who do not abide by these laws and are a strong deterrent to abuse. The relevant statute [CFR 9-I-161.7] states, "... anyone who performs accredited veterinarian duties that he or she is not authorized to perform will be subject to such criminal and civil penalties."

Table 2. Drug and Chemical Use

Description	URL/Reference
Department of Health and Human Services (HHS)	
<i>Food and Drug Administration (FDA)</i>	
Authority of US FDA-CVM as related to animal drug use, including antibiotics	https://www.fda.gov/about-fda/center-veterinary-medicine/cvm-offices
Veterinary Feed Directive Final Rule and Next Steps. Fact sheet	https://www.fda.gov/animal-veterinary/development-approval-process/fact-sheet-veterinary-feed-directive-final-rule-and-next-steps
The Food Safety Modernization Act of 2011	https://www.fda.gov/food/food-safety-modernization-act-fsma/full-text-food-safety-modernization-act-fsma
Authority of US FDA-CVM as related to animal drug use, including antibiotics	https://www.fda.gov/about-fda/center-veterinary-medicine/cvm-offices
Federal Food, Drug, and Cosmetic Act (FD&C Act). U.S. Food and Drug Administration	https://www.fda.gov/regulatory-information/laws-enforced-fda/federal-food-drug-and-cosmetic-act-fdc-act ; https://www.fda.gov/food/seafood-guidance-documents-regulatory-information/fish-and-fishery-products-hazards-and-controls ; https://www.fda.gov/food/guidance-regulation-food-and-dietary-supplements/registration-food-facilities-and-other-submissions
US Environmental Protection Agency (EPA)	
Toxic Substances Regulatory and Guidance Information	https://www.epa.gov/regulatory-information-topic/regulatory-and-guidance-information-topic-toxic-substances
Spill Prevention, Control, and Countermeasure (SPCC) for Agriculture	https://www.epa.gov/oil-spillsprevention-and-preparedness-regulations/spill-prevention-controland-countermeasure-spcc
Chemical Handling Laws and Regulations that Apply to Your Agricultural Operation by Farm Activity	www.epa.gov/agriculture/laws-and-regulations-apply-your-agricultural-operation-farm-activity#ChemicalHandling
Laws and Regulations that Apply to Your Agricultural Operation by Farm Activity	https://www.epa.gov/agriculture/laws-and-regulations-apply-your-agricultural-operation-farm-activity

Water Regulatory and Guidance Information	https://www.epa.gov/regulatory-information-topic/regulatory-and-guidance-information-topic-water
Pesticide Regulatory and Guidance Information	https://www.epa.gov/regulatory-information-topic/regulatory-and-guidance-information-topic-pesticides
National Environmental Protection Act (NEPA)	https://www.epa.gov/nepa/what-national-environmental-policy-act
US Department of Interior	
<i>US Fish & Wildlife Service</i>	
Critical Habitat under the Endangered Species Act	https://www.fws.gov/southeast/endangered-species-act/critical-habitat/ ; https://www.federalregister.gov/documents/2022/07/21/2022-15495/endangered-and-threatened-wildlife-and-plants-regulations-for-designating-critical-habitat ; and https://www.fws.gov/southeast/endangered-species-act/critical-habitat/

B.3 Energy Use on U.S. Catfish Farms

The close ties of US catfish farmers with university research and extension has resulted in rapid adoption of production technologies that use resources, including energy, more efficiently. The engagement among research, extension specialists, and farmers industrywide has resulted in improved efficiencies that are likely to continue as research continues to identify ways to improve efficiency of energy and other resources. In a study on resource use efficiencies, in the US catfish industry, Kumar et al. (2023) reported that, “Study results support recent findings that underlying economic sustainability was the key driver of progressive adoption of productivity-enhancing technologies in the U.S. catfish industry”.

Engle et al. (2021) showed that US catfish production in open ponds utilizes energy more efficiently than fish production in more intensive systems such as recirculating aquaculture systems (RAS). Hegde et al. (2022) and Kumar et al. (2023) showed that rapid adoption by U.S. catfish farmers of more intensive pond production methods increased production per unit of land and used energy, water, and other resources more efficiently than prior management practices.

B.4 Feed Use Laws and Regulation (Table 3)

Less than 1% of the feed fed to U.S. catfish is from fishmeal/fish oil. The small amount of fishmeal that is used in US catfish production is fed primarily to catfish fry (less than 2 inches in length). “Fry starter feeds are only used in hatcheries and are estimated to account for less than 0.1% of annual feed fed (pers. comm., Menghe Li, Mississippi State University 2017)” (Page 34, Seafood Watch-US Channel Catfish, 2020). A small amount of oil is sprayed on the pellets as a top coating to maintain pellet integrity and reduce waste from what are called “fines,” or dust, that dissolve into the water without being consumed by the fish.

Menhaden used for fishmeal is caught from US coastal waters, primarily the Gulf of Mexico that is MSC-certified with oversight from the Gulf States Marine Fisheries Commission (MSC; Accesswire, 2024). “The most commonly available fish meal in the United States is menhaden meal, which contains 62% protein of excellent quality and 9% oil, a rich source of essential fatty acids and energy. It is also an excellent source of phosphorus and other minerals. However, fish meal is expensive, and the supply is limited. It is not used in catfish foodfish feeds, but catfish fry feeds used in the hatchery and some fingerling feeds contain fish meal.” (Li & Robinson, 2021).

U.S. law enforces regulation of illegal, unreported, and unregulated (I.I.U.) fishing, through the Illegal, Unreported and Unregulated Fishing Enforcement Act of 2013 (159 Congressional Record 69) that enhanced existing authority of NOAA and the U.S. Coast Guard to regulate IUU fishing.

Soybean meal, the major ingredient in U.S. catfish feeds has been shown to have decreased its global warming potential from 2015 to 2024 by 19% per kg of U.S. soybeans; 6% per kg U.S. soybean meal, 22% per kg U.S. crude soy oil and 8% per kg U.S. refined soy oil.

No U.S. catfish feed mills use raw fish in their diet formulations nor do they use catfish meal in their feeds. Catfish offal from U.S. catfish processing plants is sold to a rendering company that sells catfish meal primarily to hog producers as feed for piglets with some additional sales of catfish meal for pet foods.

Table 3. Feed Use

Description	URL/Reference
US Department of Commerce (DOC)	
<i>National Oceanic and Atmospheric Administration (NOAA)</i>	
The Illegal, Unreported, and Unregulated Fishing Enforcement Act of 2013. 159 Congressional Record 69 gives NOAA and other federal and state agencies are given the authority to enforce those laws, including enforcement through vessel forfeiture and civil and criminal penalties	https://www.govinfo.gov/app/details/CRECB-2013-pt1/CRECB-2013-pt1-Pg69
US Department of Homeland Security	
<i>US Coast Guard</i>	
The Illegal, Unreported, and Unregulated Fishing Enforcement Act of 2013. 159 Congressional Record 69 directs the Coast Guard to enforce specified laws to address illegal, unreported, or unregulated (IUU) fishing	https://www.govinfo.gov/app/details/CRECB-2013-pt1/CRECB-2013-pt1-Pg69

B.5 Environmental Quality Laws and Regulation (Tables 4, 5, 6, 7, 8)

B.5.1 Effluents (Table 4)

U.S. catfish are raised in ponds with long hydraulic retention times such that water is retained without discharge from draining for 10 or more years (Engle et al., 2021). U.S. catfish production in ponds was scored “Green” on both Criteria 1 (“Data Quality and Availability”) and 2 (“Effluents”) by Seafood Watch (2022). The Seafood Watch report states:

1) “Effluent regulatory control is stringent and enforcement is strict. Data regarding effluent discharge are available through the literature and provide information regarding typical ponds under various environmental conditions (rain, drought, etc.). The impact of effluent discharges from catfish ponds is well studied and understood; comprehensive regional-scale studies specific to watersheds where catfish farming occurs in the U.S. have been completed, and state regulatory agencies monitor and report public water quality as well as identify causes of impairment”; and 2) “Due to the overall low volume of effluent and relatively minor contribution to cumulative impact in the receiving waterbody, catfish farming does not result in significant effluent related environmental impacts. Any contribution to cumulative impact is well regulated and managed to be reduced to an ecologically safe level. Data show no evidence that effluent discharges cause or contribute to cumulative environmental impacts, beyond the well-regulated and enforced ecologically acceptable impacts set by federal and state-level assessments.”

Relevant federal laws that authorize the U.S. Environmental Protection Agency (EPA), the U.S. Army Corps of Engineers (USACE), and the U.S. Coast Guard to establish and enforce effluent guidelines and national standards for wastewater discharges to surface waters, including discharges from concentrated aquatic animal production (CAAP), or aquaculture, facilities, include the National Environmental Protection Act, the Clean Water Act, and the Rivers and Harbors Act. The state departments of Environmental Quality (or other, similar name) set pollution limits, determine compliance, and enforce environmental laws and regulations for their respective state. States are authorized to set more, but not less stringent limits than the federal standards and guidelines.

Civil and criminal penalties are levied against those companies and individuals who do not abide by these laws.

B.5.2 Chemical Use on Farms (Table 4)

The U.S. EPA regulates and enforces regulations related to use of chemicals on farms through the Federal Insecticide, Fungicide, and Rodenticide Act. U.S. catfish pond production is rated Green on Criterion 4, Chemical Use by Seafood Watch (2024). The report states:

“Data regarding chemical use are well documented, published by the USDA National Animal Health Monitoring System (NAHMS) in 2010. Chemicals legal for use in the U.S. go through a scientifically rigorous authorization by the FDA, which assesses the environmental and human health impact of the expected use and discharge of chemicals; these are publicly available and fairly comprehensive. Impacts of chemical discharges are also fairly well understood and documented in the literature.”

Civil and criminal penalties are levied against those companies and individuals who do not abide by these laws.

B.5.3 Pesticide Use (Table 4)

The EPA works with its federal, state, and tribal regulatory partners to assure compliance with pesticide laws and regulations to protect human health and the environment. State natural resource agencies protect wildlife and natural resources through their authorization and jurisdiction over resources within state boundaries.

Civil and criminal penalties are levied against those companies and individuals who do not abide by these laws.

B.5.4 Predator Control (Table 5)

It is not legal in the U.S. to pursue, hunt, capture, kill, attempt to take, capture, or kill any migratory bird, including endangered species. Thus, lethal predator control techniques are not allowed on endangered species and are only allowed for other migratory birds if a permit is approved. Predator control on US farms is regulated by the US Fish and Wildlife Service (USFWS) and USDA-APHIS, through its Wildlife Services (WS) Program.

The USFWS enforces the Endangered Species Act (together with the National Oceanic and Atmospheric Administration, NOAA), and provides migratory bird protection through permitting by the USDA-APHIS-WS (USDA-APHIS-Wildlife Services, 2020). The Endangered Species Act expressly prohibits the “take,” or kill, of an endangered species. Relevant policy includes the Endangered Species Act, the Migratory Bird Treaty Act, the Fish and Wildlife Coordination Act, and the Illegal, Unreported, and Unregulated Fishing Enforcement Act of 2013.

The Seafood Watch-US Channel Catfish rating on Predator Control (Criterion 9X) is “Green” because nonlethal predator deterrents are used extensively. Lethal control is restricted to the double-crested cormorant, that has exhibited rapid population growth. In addition, catfish ponds provide considerable habitat to reptiles, amphibians, and mammals that would otherwise not exist under previous agricultural land.

Civil and criminal penalties are levied against those companies and individuals who do not abide by the laws and restrict their take to those species approved by permit. Enforcement is under the authority of the Lacey Act through USFWS wildlife officers. Laws are actively enforced by USFWS and state wildlife officers in each state. U.S. wildlife officers undergo the same training and have the same authority as law enforcement officers. Under The Endangered Species Act of 1973, take of a single individual of an endangered species is a criminal misdemeanor with penalties of up to 1 year imprisonment and fines pursuant to a maximum of \$50,000. Under the Migratory Bird Treaty Act of 1918 (MBTA), misdemeanor offenses have fines up to a maximum of \$5,000 and or imprisonment for not more than six months for individuals, or \$10,000 for an organization. Felony offenses have fines up to a maximum of \$250,000 and/or imprisonment for not more than two years for an individual or \$100,000 for an organization.

B.5.5 Habitat (Table 6)

Seafood Watch (2022) rated United States Channel Catfish – Ponds as “Green” on Criterion 3, Habitat. The report states:

“Catfish ponds are sited in moderate-value habitats that were historically altered (more than 15 years ago) by activities such as agriculture, yet represent a small fraction of disturbance overall in the ecosystems they are sited in; in addition, catfish ponds provide critical habitat to a variety of taxa that would otherwise be lost as cropland, which ponds have replaced. As such, catfish ponds are said to maintain ecosystem functionality with moderate impacts. There are limited considerations of cumulative habitat impacts. Enforcement of these regulations is highly effective and active at the area-based scale, and the permitting, licensing, and enforcement history is transparent and accessible.”

“Regulatory control of habitat conversion is moderate and enforcement is strict. The areas where catfish farming primarily occurs in the U.S. have completed habitat assessments and these are available in the literature. Data regarding site locations and their history is available through the USDA Natural Resources Conservation Service (USDA-NRCS) and USACE mapping. Data on the impact of habitat loss specifically due to catfish farm construction are limited, though this is due to the “secondary” conversion nature of their construction (catfish ponds are almost exclusively sited in retired cropland, created up to 200 years ago). “

USFWS is authorized to protect wildlife, habitat, and biodiversity and regulates critical habitat under the Endangered Species Act (U.S. Fish and Wildlife Service, 2020). Incentive programs have been created to conserve wildlife habitat and biodiversity with the USDA-NRCS that include the: Environmental Quality Incentives, Voluntary Public Access and Habitat, Regional Conservation Partnership, Agricultural Management Assistance, Conservation Innovation Grants, Wetland Mitigation Banking, Conservation Stewardship, Conservation Reserve, Agricultural Conservation Easement, Healthy Forests Reserve, Wetland Reserve Easement, Wetland Reserve Enhancement, and the Agricultural Land Easements programs.

Civil and criminal penalties are levied against those companies and individuals who do not abide by these laws.

B.5.6 Wetland Regulation (Table 6)

The USDA-NRCS and USACE enforce wetland regulations and permitting. USDA-NRCS is responsible for the certification of wetlands determination, manages the Wetland Mitigation Banking Program and incentive programs that include conservation of wetland areas such as the Wetland Reserve Easement and Wetland Reserve Enhancement Partnership programs. Relevant policy includes the Clean Water Act (jurisdiction and wetlands).

Civil and criminal penalties are levied against those companies and individuals who do not abide by these laws.

B.5.7 Source of Seed (Table 7)

State agencies regulate the management of wild fish and prohibit capture of wild fry and/or fingerlings (seed). Seafood Watch scores U.S. Farmed Catfish “Green” for Criterion 8X, “Source of Stock.”

Civil and criminal penalties are levied against those companies and individuals who do not abide by these laws.

B.5.8 Non-native Species

U.S. catfish are raised in eco-regions where the species is native, under similar climatic conditions to those of wild channel catfish, using farming practices that have evolved through extensive research into catfish farming methods. There is a robust scientific literature and extension materials on appropriate and suitable farming conditions for U.S. catfish (Tucker & Hargreaves, 2004) as well as water quality conditions (Boyd, 1990) that later surveys (Kumar et al., 2020; Hegde et al., 2022) show have been adopted on U.S. commercial catfish farms.

USFWS regulates the importation and transport of species, including offspring and eggs, determined to be injurious to the health and welfare of humans, the interests of agriculture, horticulture or forestry, and the welfare and survival of U.S. wildlife resources. USFWS regulation of non-native species is authorized through the National Invasive Species Act, the Non-indigenous Aquatic Nuisance Prevention and Control Act, and the Lacey Act. USFWS also regulates inter-state movement of fish and wildlife. Management authority for resources within the boundaries of each state lies with each state's fish and game agency, but state agencies can request assistance from USFWS that has authority to impose more serious penalties.

Civil and criminal penalties are levied against those companies and individuals who do not abide by these laws.

B.5.9 Disease Transfer from Farms to Wild

The Seafood Watch report on US channel catfish raised in ponds (2022) rates U.S. catfish as "Green" on Criterion 7 (Disease). The report states:

"Review of data from the USFWS National Wild Fish Health Survey Database revealed no historical record of disease transfer from cultured channel catfish to wild fish populations. Management practices have resulted in moderately successful mitigation of disease occurrence and losses in the industry. The ponds used to produce catfish are static and do not intentionally discharge water over multiple production cycles, reducing the risk of transfer of disease to wild populations. Data from the USFWS National Wild Fish Health Survey Database suggest that on-farm pathogens and/or parasites that may be transmitted to receiving waters do not amplify those found at natural or background levels."

B.5.10 Proper Storage and Management of Farm Supplies (Table 8)

The U.S. EPA laws also promulgate and enforce regulations through specific guidelines related to proper storage and management of farm supplies, including fuel, pesticides, other farm supplies and wastes, and provides guidance for doing so. The EPA works with its federal, state, and tribal regulatory partners to ensure compliance with pesticide laws and regulations to protect human health and the environment. These partners include each state Department of Environmental Quality (specific names of departments vary state by state) for regulation of storage of fuel/oil and solid waste disposal, and state departments of Agriculture that regulate agricultural chemicals and their storage.

Civil and criminal penalties are levied against those companies and individuals who do not abide by these laws.

B.5.11 Waste Management (Table 8)

Waste management on farms is regulated by the US Environmental Protection Agency through specific guidelines for proper management of farm wastes. Enforcement is largely through state partners. These partners include each state Department of Environmental Quality (specific names of departments vary state by state) for regulation of storage of fuel/oil and solid waste disposal, and state departments of Agriculture that regulate agricultural chemicals and their storage.

Civil and criminal penalties are levied against those companies and individuals who do not abide by these laws.

Table 4. Environmental Quality: Water, Effluents, Chemical Use on Farms, and Pesticide Use

Description	URL/Reference
US Environmental Protection Agency (EPA)	
National Environmental Protection Act (NEPA)	https://www.epa.gov/nepa/what-national-environmental-policy-act
<i>Water</i>	
Water Regulatory and Guidance Information	https://www.epa.gov/regulatory-information-topic/regulatory-and-guidance-information-topic-water
<i>Effluents</i>	
USEPA Effluent Limitation Guidelines and New Source Performance Standards for the Concentrated Aquatic Animal Production Point Source Category: Final Rule. 2004b. Federal Register 69(162) Part II. United States Environmental Protection Agency, Washington, D.C.	http://epa.gov/guide/aquaculture ; https://www.federalregister.gov/documents/2004/08/23/04-15530/effluent-limitations-guidelines-and-new-source-performance-standards-for-the-concentrated-aquatic
<i>Chemical Use on Farms</i>	
Laws and Regulations that Apply to Your Agricultural Operation by Farm Activity	https://www.epa.gov/agriculture/laws-and-regulations-apply-your-agricultural-operation-farm-activity
Chemical Handling Laws and Regulations that Apply to Your Agricultural Operation by Farm Activity	www.epa.gov/agriculture/laws-and-regulations-apply-your-agricultural-operation-farm-activity#ChemicalHandling
Pesticide Regulatory and Guidance Information	https://www.epa.gov/regulatory-information-topic/regulatory-and-guidance-information-topic-pesticides
Toxic Substances Regulatory and Guidance Information	https://www.epa.gov/regulatory-information-topic/regulatory-and-guidance-information-topic-toxic-substances
Spill Prevention, Control, and Countermeasure (SPCC) for Agriculture	https://www.epa.gov/oil-spills-prevention-and-preparedness-regulations/spill-prevention-control-and-countermeasure-spcc

Table 5. Predator Control

Description	URL/Reference
US Department of Interior	
<i>US Fish & Wildlife Service</i>	
U.S. Fish & Wildlife Service (USFWS). 2020	U.S. Criminal Code, Title 18, ESA 19973, MBTA 1918
Predator Control under the Endangered Species Act	https://www.fws.gov/law/endangered-species-act
US Department of Agriculture	
<i>Animal Plant and Health Inspection Service (APHIS)</i>	
USDA-APHIS-Wildlife Services has inspectors in each state that verify that each farm continues to implement non-lethal control measures	Control of Predation and Wild Animals (7 U.S.C. 8351-8354)
Wildlife Services. 2020. Migratory Bird Depredation Permit Process	www.aphis.usda.gov/aphis/ourfocus/wildlifedamage/operational-activities/ct_federal_permit_process

Table 6. Habitat and Wetlands

Description	URL/Reference
US Environmental Protection Agency (EPA)	
National Environmental Protection Act (NEPA)	https://www.epa.gov/nepa/what-national-environmental-policy-act
US Department of Defense	
<i>US Army Corps of Engineers</i>	
Wetlands Jurisdiction; permits for structures, Code of Federal Register Title 33	https://www.nae.usace.army.mil/Missions/Regulatory/Jurisdiction-and-Wetlands/
US Department of Agriculture	
<i>Natural Resources Conservation Service (NRCS)</i>	
Certified Wetlands Determination	https://www.nrcs.usda.gov/resources/guides-and-instructions/certified-wetlands-determination
Environmental Quality Incentives Program	https://www.nrcs.usda.gov/programs-initiatives/eqip-environmental-quality-incentives
Voluntary Public Access and Habitat Incentive Program	https://www.nrcs.usda.gov/programs-initiatives/vpa-hip-voluntary-public-access-and-habitat-incentive-program
Regional Conservation Partnership Program	https://www.nrcs.usda.gov/programs-initiatives/rcpp-regional-conservation-partnership-program
Agricultural Management Assistance Program	https://www.nrcs.usda.gov/programs-initiatives/ama-agricultural-management-assistance
Conservation Innovation Grants	https://www.nrcs.usda.gov/programs-initiatives/cig-conservation-innovation-grants
Wetland Mitigation Banking Program	https://www.nrcs.usda.gov/programs-initiatives/wmpb-wetland-mitigation-banking-program
Conservation Stewardship Program	https://www.nrcs.usda.gov/programs-initiatives/csp-conservation-stewardship-program
Conservation Reserve Program.	https://www.nrcs.usda.gov/programs-initiatives/crp-conservation-reserve-program
Agricultural Conservation Easement Program	https://www.nrcs.usda.gov/programs-initiatives/acep-agricultural-conservation-easement-program

Healthy Forests Reserve Program	https://www.nrcs.usda.gov/programs-initiatives/hfrp-healthy-forests-reserve-program
Wetland Reserve Easement Program	https://www.nrcs.usda.gov/programs-initiatives/wre-wetland-reserve-easements
Wetland Reserve Enhancement Partnerships	https://www.nrcs.usda.gov/programs-initiatives/wrep-wetland-reserve-enhancement-partnership
Agricultural Land Easements	https://www.nrcs.usda.gov/programs-initiatives/ale-agricultural-land-easements
Critical Habitat under the Endangered Species Act	https://www.fws.gov/southeast/endangered-species-act/critical-habitat/ ; https://www.federalregister.gov/documents/2022/07/21/2022-15495/endangered-and-threatened-wildlife-and-plants-regulations-for-designating-critical-habitat ; and https://www.fws.gov/southeast/endangered-species-act/critical-habitat/
Critical Habitat under the Endangered Species Act	https://www.fws.gov/southeast/endangered-species-act/critical-habitat/ ; https://www.federalregister.gov/documents/2022/07/21/2022-15495/endangered-and-threatened-wildlife-and-plants-regulations-for-designating-critical-habitat ; and https://www.fws.gov/southeast/endangered-species-act/critical-habitat/

Table 7. Source of Seed

Description	URL/Reference
Department of Health and Human Services (HHS)	Department of Health and Human Services (HHS)
<i>Food and Drug Administration (FDA)</i>	<i>Food and Drug Administration (FDA)</i>
The Food Safety Modernization Act of 2011	https://www.fns.usda.gov/f2s/what-is-the-food-safety-modernization-act ; https://www.fda.gov/regulatory-information/search-fda-guidance-documents/guidance-industry-seafood-haccp-and-fda-food-safety-modernization-act ; full text at: https://www.fda.gov/food/food-safety-modernization-act-fsma/full-text-food-safety-modernization-act-fsma
FDA-CVM GFI #120 Veterinary Feed Directive Regulation Questions and Answers	https://www.fda.gov/media/70173/download

Table 8. Proper Storage and Management of Farm Supplies and Waste Management

Description	URL/Reference
US Environmental Protection Agency (EPA)	
National Environmental Protection Act (NEPA)	https://www.epa.gov/nepa/what-national-environmental-policy-act
<i>Proper Storage and Management of Farm Supplies</i>	
Laws and Regulations that Apply to Your Agricultural Operation by Farm Activity	https://www.epa.gov/agriculture/laws-and-regulations-apply-your-agricultural-operation-farm-activity
Chemical Handling Laws and Regulations that Apply to Your Agricultural Operation by Farm Activity	www.epa.gov/agriculture/laws-and-regulations-applyyour-agricultural-operation-farm-activity#ChemicalHandling
Pesticide Regulatory and Guidance Information	https://www.epa.gov/regulatory-information-topic/regulatory-and-guidance-information-topic-pesticides
Toxic Substances Regulatory and Guidance Information	https://www.epa.gov/regulatory-information-topic/regulatory-and-guidance-information-topic-toxic-substances
Spill Prevention, Control, and Countermeasure (SPCC) for Agriculture	https://www.epa.gov/oil-spillsprevention-and-preparedness-regulations/spill-prevention-controland-countermeasure-spcc
Water Regulatory and Guidance Information	https://www.epa.gov/regulatory-information-topic/regulatory-and-guidance-information-topic-water
US Department of Defense	
<i>US Army Corps of Engineers</i>	
Wetlands Jurisdiction; permits for structures, Code of Federal Register Title 33	https://www.nae.usace.army.mil/Missions/Regulatory/Jurisdiction-and-Wetlands/
US Department of Defense	
Department of Health and Human Services (HHS)	
<i>Food and Drug Administration (FDA)</i>	
FDA guidance on Safety of Animal Feed Maintained and Fed On-Farm	https://www.fda.gov/media/91080/download
Sanitation requirements for feed manufacturing to prevent animal food from becoming adulterated. Code of Federal Register Title 21 that specifies sanitation	https://www.ecfr.gov/current/title-21/chapter-I/subchapter-E/part-507

B.6 Food Safety (Table 9)

Public health in the U.S. is regulated generally through the Public Health Service Act that is the legal authority of the U.S. Department of Health and Human Services (HHS) for responding to public health emergencies. The HHS Secretary leads all Federal public health and medical responses to public health emergencies. State Departments of Health also inspect fish processing establishments, including the products' condition, equipment, manufacturing process, hygienic practices, sanitation, and labeling of products.

In the U.S., the FDA operates a mandatory safety program for all fish and fishery products under the provisions of the Federal Food, Drug and Cosmetic (FD&C) Act and related regulations. While safety of most seafood products is under FDA's jurisdiction, the safety of U.S. farmed catfish is under the jurisdiction of the USDA Food Safety and Inspection Service (USDA-FSIS) along with other farmed sources of protein (i.e., beef, poultry, pork) through the Federal Meat Inspection Act (FMIA). USDA-FSIS requires the continuous presence of federal inspectors at all times that catfish processing plants are in operation. Relevant regulatory authorities include the FDA, USDA-APHIS, EPA, CVM, and USDA-FSIS.

USDA-FSIS protects the public's health by ensuring that meat, poultry, and egg products are safe, wholesome, and properly labeled. USDA-FSIS authorizes provisions of the Federal Meat Inspection Act of 1906. Inspection of farm-raised fish of the Siluriformes order (that includes the species of catfish farmed in the U.S. and elsewhere in the world) was moved from FDA to the more rigorous testing and inspection program of USDA-FSIS in 2016. Relevant policy includes: Veterinary Feed Directive Final Rule (2015), FDA List of Approved Drugs, Federal Food, Drug, and Cosmetic Act (FD&C Act).

The catfish raised on US farms have not been genetically modified and are exclusively non-GMO, not Genetically Modified Organisms (Tucker and Hargreaves, 2004).

Civil and criminal penalties are levied against those companies and individuals who do not abide by these laws.

Table 9. Food Safety

Description	URL/Reference
Department of Health and Human Services (HHS)	Department of Health and Human Services (HHS)
<i>Food and Drug Administration (FDA)</i>	<i>Food and Drug Administration (FDA)</i>
The Food Safety Modernization Act of 2011	https://www.fns.usda.gov/f2s/what-is-the-food-safety-modernization-act ; https://www.fda.gov/regulatory-information/search-fda-guidance-documents/guidance-industry-seafood-haccp-and-fda-food-safety-modernization-act ; full text at: https://www.fda.gov/food/food-safety-modernization-act-fsma/full-text-food-safety-modernization-act-fsma
FDA-CVM GFI #120 Veterinary Feed Directive Regulation Questions and Answers	https://www.fda.gov/media/70173/download
Federal Food, Drug, and Cosmetic Act (FD&C Act). U.S. Food and Drug Administration	https://www.fda.gov/regulatory-information/laws-enforced-fda/federal-food-drug-and-cosmetic-act-fdc-act ; https://www.fda.gov/food/seafood-guidance-documents-regulatory-information/fish-and-fishery-products-hazards-and-controls ; https://www.fda.gov/food/guidance-regulation-food-and-dietary-supplements/registration-food-facilities-and-other-submissions
Public Health Service Act	https://www.govinfo.gov/content/pkg/COMPS-8773/pdf/COMPS-8773.pdf
US Department of Agriculture	
<i>Food Safety Inspection Service (USDA-FSIS)</i>	
Food Safety Inspection Service. U.S. Department of Agriculture protects the public's health by ensuring that meat, poultry and egg products are safe, wholesome and properly labeled	https://www.fsis.usda.gov/about-fsis
Federal Meat Inspection Act	https://www.fsis.usda.gov/policy/food-safety-acts/federal-meat-inspection-act , Section 18

<i>Animal Plant and Health Inspection Service (APHIS)</i>	
Talmadge-Aiken Act (7U.S.C.1633) provides authority for federal agencies to enter cooperative agreements with state agencies that administer and enforce state laws and regulations related to controlling or eradicating plant and animal pests and diseases	https://uscode.house.gov/view.xhtml?req=granuleid:USC-prelim-title7-section1633&num=0&edition=prelim
US Environmental Protection Agency (EPA)	
Safe Drinking Water Act	https://www.epa.gov/sdwa

B.7 Social Responsibility (Table 10)

The Occupational Safety and Health Administration (OSHA), the U.S. Department of Labor (DOL), and state partners enforce the Occupational Safety and Health Act of 1970, the Fair Labor Standards Act of 1928, and the Worker Protection Standard. EPA enforces the Agricultural Worker Protection Standard of 1992 to reduce pesticide poisonings and injuries among agricultural workers and pesticide handlers. The U.S. Equal Employment Opportunity Commission (USEEOC) enforces federal laws that make it illegal to discriminate against a job applicant or an employee because of the person's race, color, religion, sex, national origin, age, disability, or genetic information. State Departments of Labor administer and enforce laws related to minimum wage, overtime, student learners, child labor, disabled workers, equal pay, and collecting unpaid wages for employees. The U.S. Immigration and Customs Enforcement (ICE) Agency enforces immigration and guest worker laws.

Civil and criminal penalties are levied against those companies and individuals who do not abide by these laws.

Table 10. Social Responsibility

Description	URL/Reference
US Department of Labor	
Wages and the Fair Labor Standards Act	https://www.dol.gov/agencies/whd/flsa
<i>Occupational Safety and Health Administration (OSHA)</i>	
OSHA authority	https://www.osha.gov/laws-regs/oshact/completeoshact
U.S. Equal Employment Opportunity Commission (USEEOC)	
Laws and guidance	https://www.eeoc.gov/laws-guidance
U.S. Department of Agriculture	
<i>Animal and Plant Health Inspection Service</i>	
Animal Welfare Act authorizes USDA-APHIS to provide leadership for determining standards of humane care and treatment of animals	https://www.nal.usda.gov/animal-health-and-welfare/animal-welfare-act
<u>U.S. Environmental Protection Agency (USEPA)</u>	
Agricultural Worker Protection Standard	https://www.epa.gov/pesticide-worker-safety/agricultural-worker-protection-standard-wps
<u>U.S. Health and Human Services (USHHS). 2023</u>	
HHS Legal Authorities Related to Disasters and Emergencies	https://www.phe.gov/Preparedness/planning/authority/Pages/default.aspx

The Standard requires that participating businesses develop a quality management system for environmental sustainability. The Process Verified Points included in the U.S. Farm-Raised Catfish Environmental Sustainability Certification Program are those for which no regulations are currently in place for U.S. catfish farming. The process verified points conform to Items 6.3.b (“production and/or handling practice that provides specific information to consumers to enable them to make informed decisions on the products that they buy”) and 6.3.e (“characteristic, practice, or requirement that is specifically requested by a customer or consumer”) of the QAD 1001 Procedure of the USDA Process Verified Procedure.

Specific process points related to environmental sustainability that are not regulated by U.S. laws include:

1. Fishmeal and fish oil conservation
2. Protection of wild fish stocks by using only domesticated, farm-raised fry and fingerlings.

C.1 Catfish Processor Process Verified Points

C.1.1 Fishmeal and fish oil conservation

Processors will require that farmers provide copies of the signed statement from feed mill(s) specifying the percent of wild fishmeal and fish oil used in the feeds for the past year prior to purchase of fish.

C.1.2 Use of fry or fingerlings from the wild

Processors will require that farmers provide copies of signed statements from vendors who supply fry and fingerlings to growout farms that the fish sold were raised on farms and not captured from the wild.

C.2 Catfish Farm Standard Process Verified Points

C.2.1 Fishmeal and fish oil conservation

C.2.1.1 Background. Excessive use of fishmeal and fish oil in fish feeds can contribute to over-fishing, often of marine forage fish that contribute to marine food chains.

C.2.1.2 Standard. The feed fed contains less than 5% wild fish meal and fish oil.

C.2.1.3 Compliance. The farm will obtain annually a signed statement from the feed mill(s) that specifies the percent of wild fish meal and fish oil used in the feeds for the past year.

C.2.1.4 Relevant information. Global overview on the use of fish meal and fish oil in industrially compounded aquafeeds: Trends and future prospects (Tacon and Metian. 2008); Composition and formulation of channel catfish feeds (Robinson and Li 2012).

C.2.2 Use of fry or fingerlings from the wild

C.2.2.1 Background. Use of wild fry, or fingerlings that can result in depletion of natural populations of wild fish.

C.2.2.2 Standard. All fish used for growout on the farm were obtained from domestic stocks raised on farms and hatcheries. All fry and fingerlings grown have been raised on farm or on a hatchery that supplies the farm with fingerlings for stocking.

C.2.2.3 For compliance. A letter will be provided by the vendor certifying the origin of fry or fingerlings from the vendor. The certification letter will be updated each year as part of the quality management system.

C.2.2.4 Relevant information. Sadovy de Mitcheson, Y and M. Liu. 2008. Environmental and biodiversity impacts of capture-based aquaculture. In A. Lovatelli and P.F. Holthus (eds). Capture-based aquaculture. Global overview. *FAO Fisheries Technical Paper*. No. 508. Rome, FAO. pp. 5–39.

Part D. Requirements for Participation in the U.S. Farm-Raised Catfish Environmental Sustainability Certification Program

D.1 Quality Management System

Participation in the program requires the development and maintenance of a Quality Management System. The company applying for participation in the USDA-AMS-PVP U.S. Farm-Raised Catfish Environmental Sustainability Certification Program must develop a Manual that describes and establishes the details of the Quality Management System. The Manual developed will be based on the QAD 1001 Procedure of the USDA Process Verified Program.

The Quality Management System Manual will specify the supply chain partners involved in the program and will include the agreements signed for participation in the USDA-AMS-PVP U.S. Farm-Raised Catfish Environmental Sustainability Certification Management System.

D.2 Agreements Among Supply Chain Partners

Application for participation in the USDA-AMS-PVP U.S. Farm-Raised Catfish Environmental Sustainability Certification Program will include agreements established between the applicant and their supply chain partners. Agreements to be signed will include:

1. Modification of purchasing agreements with farms to include:
 - a. Commitment to comply with the Standards of the U.S. Farm-Raised Catfish Environmental Sustainability Certification Program.
 - b. Agreement to be audited by USDA-AMS.
2. Signed agreement (Attachment A to this Standard) with all hatcheries that supply fish to participating farmers that specifies:

- a. Commitment to comply with the Standards of the U.S. Farm-Raised Catfish Environmental Sustainability Certification Program.
 - b. Agreement to be audited by USDA-AMS.
- 3. Signed agreement (Attachment B to this Standard) with all feed mills that supply feed to participating farmers that specifies:
 - a. Commitment to comply with the Standards of the U.S. Farm-Raised Catfish Environmental Sustainability Certification Program.
 - b. Agreement to be audited by USDA-AMS.

Table 11. U.S. Farm-Raised Catfish Environmental Sustainability Process Verified Points – Summary

Process Verified Points	Standard	Compliance record-keeping
<i>Catfish Processor</i>		
1. Fishmeal and fish oil conservation	The feed fed contains less than 5% wild fish meal and fish oil.	Processors maintains copies provided by farmers of the signed statement from feed mill(s) specifying the percent of wild fishmeal and fish oil used in the feeds for the past year prior to purchase of fish.
2. Use of fry or fingerlings from the wild	All fish used for growout on the farm are from captive, domestic stocks raised on farms and hatcheries.	Processor maintains copies provided by farmers of the signed statements from fry and fingerling suppliers of the origin of the fish sold.
<i>Catfish Farm</i>		
1. Fishmeal and fish oil conservation	The feed fed contains less than 5% wild fish meal and fish oil.	The farm will obtain annually a signed statement from the feed mill(s) that specifies the percent of wild fish meal and fish oil used in the feeds for the past year.
2. Use of fry or fingerlings from the wild	All fish used for growout on the farm are from domestic stocks raised on farms and hatcheries. All fry and fingerlings grown have been raised on farm or on a hatchery that supplies the farm with fingerlings for stocking.	A letter will be provided by the vendor certifying the origin of fry or fingerlings from the vendor. The certification letter will be updated each year as part of the quality management system.

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Agreement A

Agreement with Hatcheries for Participation in the USDA-AMS-PVP U.S. Farm-Raised Catfish Environmental Sustainability Certification Program

THIS AGREEMENT (the “Agreement”) made and entered into this _____ day of _____, _____ (“the Execution Date”).

BETWEEN: _____ (“Hatchery”) and

BACKGROUND:

- A. The partners wish to associate themselves for purposes of participating in the USDA-AMS-PVP U.S. Farm-Raised Catfish Environmental Sustainability Certification Program.
- B. This agreement sets out the terms and conditions of participation in the USDA-AMS-PVP U.S. Farm-Raised Catfish Environmental Sustainability Certification Program

TERMS AND CONDITIONS:

A. Hatchery agrees to take necessary steps to conform to the standards of the USDA-AMS-PVP U.S. Farm-Raised Catfish Environmental Sustainability Certification Program, including:

- 1. Provide a signed statement annually to each farm participating in the USDA-AMS-PVP U.S. Farm-Raised Catfish Environmental Sustainability Certification Program specifying that the fingerlings/fry sold farms participating in the USDA-AMS-PVP U.S. Farm-Raised Catfish Environmental Sustainability Certification Program were farm-raised and not caught from the wild.

B. Hatchery agrees to be audited by the USDA-AMS for purposes of the U.S. Farm-Raised Catfish Environmental Sustainability Certification Program.

IN WITNESS WHEREOF, the parties have duly affixed their signatures under hand and seal this _____ day of _____.

Title

Date

Title

Date

Printed name: _____

Agreement B
Agreement with Hatcheries for Participation in the USDA-AMS-PVP U.S.
Farm-Raised Catfish Environmental Sustainability Certification Program

THIS AGREEMENT (the “Agreement”) made and entered into this _____ day of _____, _____ (“the Execution Date”).

BETWEEN: _____ (“Feed Mill”) and

BACKGROUND:

- A. The signatories wish to associate themselves for purposes of participating in the USDA-AMS-PVP U.S. Farm-Raised Catfish Environmental Sustainability Certification Program.
- B. This agreement sets out the terms and conditions of participation in the USDA-AMS-PVP U.S. Farm-Raised Catfish Environmental Sustainability Certification Program

TERMS AND CONDITIONS:

- A. Feed Mill agrees to take necessary steps to conform to the standards of the USDA-AMS-PVP U.S. Farm-Raised Catfish Environmental Sustainability Certification Program, including:
 - 1. Provide a signed statement annually to each farm participating in the USDA-AMS-PVP U.S. Farm-Raised Catfish Environmental Sustainability Certification Program specifying the percent of wild fishmeal and fish oil used in the feeds for the past year prior to purchase of fish.
- B. Feed mill agrees to be audited by the USDA-AMS for purposes of the U.S. Farm-Raised Catfish Environmental Sustainability Certification Program.

IN WITNESS WHEREOF, the parties have duly affixed their signatures under hand and seal this _____ day of _____.

Title _____	Title _____
Date _____	Date _____
Printed name: _____	_____

Appendix to Standard: List of Required Documents

List of Required Documents – Growout Farms

Aquatic Animal Health

- Aquatic Animal Health Management Plan with dates of review and revision, and includes biosecurity measures (including a list of likely diseases), record of response protocols to disease outbreaks and containment measures (including those of any invasive diseases), a procedure for handling mortalities that safeguards against the human health risk from puncture wounds and bacterial infections from handling dead catfish, twice a year visual inspection of overflow drain pipes from pond facilities to minimize the risk of escapes, and appropriate personnel training
- Record of visits with fish health professional (to farm and farmer to fish health laboratory), notifications of disease outbreaks maintained either by farm or the relevant diagnostic laboratory
- Disease testing reports, diagnosis, prescriptions, treatment regime prescribed
- Record of application of medicated feed or other therapeutant
- Receipts of medicated feed purchased
- Auditor will do visual inspection of office, chemical storage area to ensure no prohibited antimicrobials in use
- Records of water quality monitoring (i.e., dissolved oxygen, chloride levels to prevent brown blood disease, alkalinity, etc.). Records can include inspection of automated dissolved oxygen monitoring systems and receipts of relevant maintenance services, records from on-farm testing, and/or water quality testing reports from diagnostic laboratories
- Record, or farm log of attendance by farmers and staff at Extension and other workshops, seminars, meetings, including the annual training conducted by the processor that manages the Quality Management System
- Record of mortalities, reason for mortalities, and handling of mortalities in accord with the procedure specified in the Aquatic Animal Health Management Plan

Chemical Use

- Record of use, rationale, and application methods of all chemicals, including disinfectants, herbicides, anaesthetics
- Record of inspection of storage of chemicals, fuel, and feed to verify safety
- Record of inspection of waste management system and disposal methods used for non-biological waste disposal
- Receipts from waste management services, including recovery of waste oil or other materials or equipment for recycling or removal from premises

Energy use

- Annual documentation of energy use through records of electric and fuel bills for comparison across years

Production records

- Yield (lb of fish sold/acre in growout production)
- FCR (lb of feed purchased/lb of fish sold)
- Record of seed purchases, including date, vaccination status, health status
- Receipt from source (s) of fry and fingerlings
- Broodstock management plan, where applicable

Predator control records

- Report to USFWS (that includes species) on take of avian predators (only for farms that engage in lethal take)

Examples of business records that can be used to demonstrate compliance with laws

- Business registration/license with appropriate authorities
- Deed to property or rental agreement
- Tax forms, federal, state, local
- Hatchery records show proof of conformance with stocking regulations, that fish stocked have not been harvested from the wild
- USFWS permit for avian predator control
- Well permits or well registration, as required by state law
- Prescriptions for medicated feed from veterinarians
- Pesticide Applicator License
- MSDS (Material Safety Data Sheets) data sheets on each chemical stored on farm
- Records of insurance

Annual letter from hatchery specifies:

- That all fry and fingerlings purchased were raised on the hatchery farm and not harvested from the wild
- Whether fry or fingerlings purchased have been vaccinated

Annual letter from feed mill specifies:

- Percent of fishmeal and percent of fishoil used in catfish growout feed for the year
- That fishmeal and fishoil is not from endangered species
- That fishmeal and fishoil is not from illegal, unreported, and unregulated fishing (I.U.U.)
- That feed mill has a written policy of its commitment to source feed ingredients from responsibly managed sources and to seek continued improvement

List of Required Documents – Hatcheries

Aquatic Animal Health

- Aquatic Animal Health Management Plan with dates of review and revision, and includes biosecurity measures (including a list of likely diseases), record of response protocols to disease outbreaks and containment measures (including those of any invasive diseases), and a procedure for handling mortalities that safeguards against the human health risk from puncture wounds and bacterial infections from handling dead catfish, twice a year visual inspection of overflow drain pipes from pond facilities to minimize the risk of escapes, and appropriate personnel training.
- Record of visits with fish health professional (to farm and farmer to fish health laboratory), and notifications of disease outbreaks. Records include a log maintained either by farm or the relevant fish health laboratory.
- Disease testing reports, diagnosis, prescriptions, treatment regime prescribed.
- Record of application of medicated feed.
- Receipts of medicated feed purchased.
- Auditor will do visual inspection of office, chemical storage area to ensure no prohibited antimicrobials in use.
- Records of water quality monitoring (i.e., dissolved oxygen, chloride levels to prevent brown blood disease, alkalinity, etc.). Records can include inspection of automated dissolved oxygen monitoring systems and receipts of relevant maintenance services, records from on-farm testing, and/or water quality testing reports from diagnostic laboratories.
- Record, or farm log of attendance by farmers and staff at Extension and other workshops, seminars, meetings, including the annual training conducted by the processor that manages the Quality Management System.
- Record of mortalities and reason for mortalities, and handling of mortalities in accord with the procedure specified in the Aquatic Animal Health Management Plan.

Chemical Use

- Record of use and application methods of all chemicals, including disinfectants, herbicides, anaesthetics.
- Record of inspection of storage of chemicals, fuel, and feed to verify safety
- Receipts from waste management services, including recovery of waste oil or other materials or equipment for recycling or removal from premises.

Energy use

- Annual documentation of energy use through records of electric and fuel bills for comparison across years.

Production records

- Yield from fingerling ponds
- FCR
- Record of any purchases of fry or fingerlings, including date, vaccination status, health status

- Record of harvest during which screen on drain is checked as harvest net is moved around drainpipe to prevent escapes.
- Broodstock management plan

Predator control records

- Report to USFWS (that includes species) on take of avian predators (only for farms that engage in lethal take)

Business records that can be used to demonstrate compliance with laws

Business registration/license with appropriate authorities

- Deed to property or rental agreement
- Tax forms, federal, state, local
- Hatchery records show proof of conformance with stocking regulations, that fish stocked have not been harvested from the wild.
- USFWS permit for avian predator control
- Well permits or well registration, as required by state law
- Prescriptions for medicated feed from veterinarians
- Pesticide Applicator License
- MSDS (Material Safety Data Sheets) on each chemical stored on farm
- Records of insurance

Hatchery-specific Records

- Record of invoices from vaccine provider
- Records of application of vaccine
- Invoices of fry and fingerling sales to farms

List of Required Documents – Feed mills

- Receipts from purchases of fishmeal & fishoil, specifying species and fishery
- Written policy statement that specifies that ingredients are sourced from responsibly managed sources.
- Documentation that terrestrial feed ingredients sourced do not have significant environmental impacts. Have copy of: Sustainable solutions. 2024. Life cycle assessment of US soybeans, soybean meal, and soy oil. https://www.nopa.org/wp-content/uploads/2024/02/2024-US-Soy-LCA-Study_PEER-REVIEW-FINAL.pdf
- Copy of prescriptions for therapeutants from veterinarian for medicated feed

APPENDIX B

TEMPLATES FOR DOCUMENT CONTROL

CFA Sustainability-1. Outline of Annual Report. 10/17/2024

- Activities
- Outcomes
- Impacts
- Annual Management Review
 - Overall performance in [year]
 - USDA-PVP audits and auditors
 - Stakeholder comments for future version s of the Standard
 - Notification to stakeholders
 - Comments received from stakeholders, responses, changes to Standard
 - Annual Auditor Training Workshop (attach copy of training program agenda)
- Transparency
- Document Control

Table 1. Performance indicators for the U.S. Catfish Sustainability Program of the Standard
Table 2. Non-conformances continuous improvement points identified, and recommendations

CFA Sustainability -2. Complaint Log and Response Form. 10/17/2024[illegible]

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CFA Sustainability – 4. Request for Additional Information on Catfish Sustainability Program. 10/17/2024

[illegible]

APPENDIX C

Additional Resources

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