

# South Carolina Aquaculture Permitting Guide

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2021  
Revision

  
**Sea Grant**  
S.C. SEA GRANT CONSORTIUM

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While the aquaculture "seascape" has changed in the past few decades, much of the regulatory environment and permitting processes from the original version still apply today. Research and early drafts were completed by Natalie Maier, a graduate student with the University of South Carolina School of Law.

The mariculture portions of this guide were primarily reviewed by the inter-agency permitting committee of Ben Dyar, Angel Curry Brown, and Henry Davega (S.C. Department of Natural Resources), Tracy Sanders (U.S. Army Corp of Engineers), and Blair Williams (S.C. Department of Environmental Services). Freshwater sections were reviewed primarily by Byron Amick (S.C. Department of Environmental Services), Leo Rose, and Nicole Kish (S.C. Department of Natural Resources).

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# How to Use this Guide

This guide is organized into two parts: mariculture and freshwater permitting. In determining which category is most applicable to a particular operation, location is a greater determinant than water type. Operations located in the Critical Area (shown in Figure 1) are described in the mariculture section of this guide, while Non-Critical Area operations should follow the freshwater sections.

Within each of the two parts are two sections: one section provides an overview of the permitting process accompanied by an infographic that applicants can “walk through” to understand the steps in becoming fully compliant to begin an aquaculture operation. The second section describes each permit and license in greater detail and provides contact information.

It should be noted that although the infographics show a logical sequence for obtaining the required permits, there is no formal chronological procedure. In most cases, all permit applications can be simultaneously filed. However, there are times when certain permits or certifications must be obtained before other permits will be issued. It is therefore recommended that the prospective aquaculturist contact the designated lead agency to avoid unnecessary time delays.

Incomplete information can lead to misinformed decisions and may affect success in obtaining permits. The prospective aquaculturist may want to undertake a literature review of the proposed activity.

Concurrent with the literature review, contact should be made with the agencies listed here for further guidance and information regarding the operation. This will be of help as several permit applications require the submission of an aquaculture operational plan.

## Forward

There are many different attributes that make South Carolina an advantageous geography for aquaculture production. Inland, 609,000 anglers participate in some form of freshwater fishing in South Carolina, driving the demand for hatchery production and private pond aquaculture. Along the coast, 2,876 miles of tidal shoreline and 350,000 acres of salt marsh ecosystem are fertile environments suited for optimal growing conditions for a wide range of aquaculture products. Past efforts of manipulating the marshes for crop cultivation and game habitat have created ponds and impoundments that have potential utilization as aquaculture grow-out sites. Rapid growth of the tourism and second-home industries in Charleston and Beaufort counties create high demand for fresh, local seafood, while inland metropolitan areas from Atlanta to Greenville to Charlotte represent unsaturated markets with an increasing demand for seafood as well.

Meanwhile, business and regulatory aspects of the aquaculture industry are being improved in the state as research and development of commercial aquaculture is supported. Clemson University’s Fisheries

and Aquatic Center for Excellence promotes research for fisheries populations in the upstate, while the S.C. Department of Natural Resources (SCDNR) operates six fish hatcheries. Six universities host coastal research facilities with marine science programs, and the James M. Waddell, Jr., Mariculture Research and Development Center, a state facility designed to develop and demonstrate commercial-scale mariculture technologies, continues to advance our state of knowledge of cultivation methods.

The Food and Agricultural Organization (FAO) of the United Nations projects that fish consumption in the U.S. will increase by 34% from 2010 to 2030, to a per capita consumption of about 58 pounds per year. Over the same time period, wild capture fisheries will see a net decrease in production<sup>1</sup>. This gap is expected to be filled by aquaculture production, although most farmed fish and seafood is currently imported. Commercial-scale aquaculture in the U.S. still lags relative to other regions (the U.S. ranks 16th in global production, and Asian countries are responsible for 89% of total supply)<sup>2</sup>. Closing this supply and demand gap will require increased participation and investments from the private sector, which in turn can be attributed in part by state and federal regulatory agencies' impact on entry into the aquaculture sector.

The regulatory process for aquaculture has for decades been a major constraint for the industry, which is not surprising given its complexity and multi-dimensionality. This guide, which was originally developed by the S.C. Sea Grant Consortium in 1984, has been revised to reflect the current policy environment, and is meant to assist prospective aquaculturists as they navigate the complex regulatory system.

## The Practice of Aquaculture in South Carolina

Aquaculture is the cultivation of aquatic plants or animals under artificial or natural conditions. In South Carolina, aquaculturists primarily grow food fish and sport fish, although some farms exclusively grow bait fish and ornamental fish. A subset of aquaculture – mariculture – is the cultivation of aquatic plants and animals in marine or brackish waters. Mariculture production in the state includes hardshell clams, oysters, horseshoe crabs, and soft-shell blue crabs, while freshwater aquaculture includes largemouth and smallmouth bass, crappie, sunfish, tilapia, and koi. Common methods of aquaculture in S.C. include recirculating aquaculture systems (RAS), flow-through raceways, grow-out in ponds and tidal impoundments, and off-bottom and on-bottom mariculture.

Aquaculture may require the use of natural resources considered part of the public domain. Local, state, and federal regulatory agencies seek to allocate these natural resource needs through a permitting

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<sup>1</sup> FISH TO 2030: Prospects for Fisheries and Aquaculture. World Bank Report Number 83177-GLB; accessed from <http://www.fao.org/3/i3640e/i3640e.pdf> on Sept. 23, 2020.

<sup>2</sup> NOAA Fisheries Global Aquaculture; accessed from <https://www.fisheries.noaa.gov/national/aquaculture/global-aquaculture> on Sept. 23, 2020.

system. By incorporating both agency and public comment in the permitting process, the interests of both the aquaculturist and the general public can be protected. A variety of natural resources may be required for each operation. These factors combine to make the permitting process complex and time-consuming for the prospective aquaculturist. In most cases, several regulatory agencies are involved and a number of permits, licenses, and certifications are required. Therefore, extensive planning is recommended prior to initiating the application processes.

The purpose of this guide is to inform aquaculturists of the required permits and processes to obtain permits related to aquaculture start-up, rather than summarize aquaculture regulations. The intention is to assist prospective aquaculturists to navigate the challenges of sustainable aquaculture participation by providing an easy-to-follow permitting guide. This guide provides the prospective aquaculturist with an overview of information sources and government agencies associated with aquaculture permitting. Information for this guide was derived from numerous public officials and private aquaculturists through an inter-agency committee on aquaculture permitting. Members of the committee and review team represent the S.C. Department of Natural Resources (SCDNR) Office of Fisheries Management, SCDNR Freshwater Fisheries and Wildlife, U.S. Army Corps of Engineers-Charleston District (USACE), S.C. Department of Environmental Services (SCDES) Bureau of Water (BOW) and Office of Ocean and Coastal Resource Management (BCM), and Clemson University.

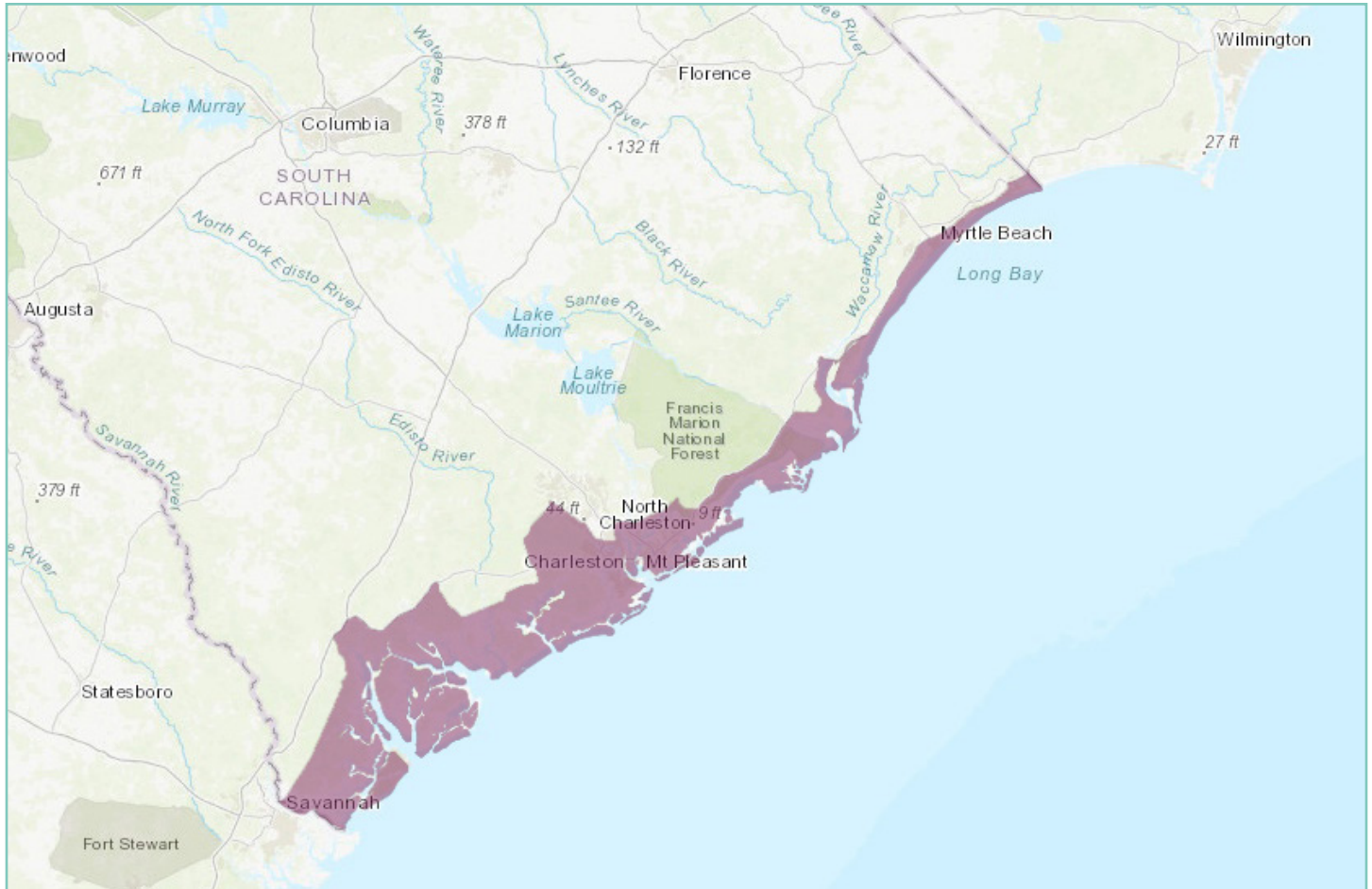
With increasing interest in aquaculture, advancements in technology and changes in operational procedure will occur. Changes in state permitting structure also will occur. It is strongly suggested that the prospective aquaculturist contact the relevant permitting agencies for pre-application meetings. Permitting officials can provide sound advice and assistance about site selection, species selection, and required permits, licenses, and certifications. Pre-application meetings can clarify the permitting process and reduce the amount of time spent in obtaining prerequisite permits.

## Part 1: Mariculture Permitting

### Section 1: Permitting for Mariculture Operations in the Critical Area

- Oysters in floating cages
- Oysters or clams in bottom cages or mesh bags
- Oysters or clams in brackish ponds or wetland impoundments
- Shrimp, crabs, or finfish in brackish ponds or wetland impoundments
- Shellfish larvae in a hatchery
- Shellfish nurseries
- Marine finfish in near-shore net pens

Figure 1. Map of the Critical Area



*The Critical Area (shaded) is defined as coastal waters, tidelands, beaches, and beach/dune system. Any person wishing to alter a critical area must receive a permit from SCDES.*

Culturing aquatic organisms in areas of tidal influence – or in Critical Areas – receives special consideration from the Office of Ocean and Coastal Resource Management (BCM) within the S.C. Department of Environmental Services (SCDES), as well as the U.S. Army Corps of Engineers (USACE) under authority of Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act. As defined under the South Carolina Coastal Management Act of 1977, Critical Areas include the coastal waters, tidelands, beaches, and the beach/dune system seaward of the Critical Area boundary line. In these areas, a permit is required for any activity where an alteration is proposed.

Mariculture is practiced within the state’s highly productive wetland/estuarine areas, primarily at small to medium scales, and volume in South Carolina is generally low relative to production along the East Coast. Traditionally, leasing shellfish grounds to commercial interests and private individuals for harvesting oysters and replanting shell has occurred and is considered a form of mariculture. More recently, floating

cage grow-out of single-shell oysters has seen increased participation and production. Applicants should note that the use of floating cages has historically received some pushback from the public. Coordination with adjacent property owners and the public will occur during the permitting process. The use of coastal impoundments for crawfish, shrimp, crabs, and finfish historically have had various levels of production; these uses fall under Critical Area consideration, as well as the purview of USACE.

Scheduling a meeting with the S.C. Department of Natural Resources (SCDNR) Office of Fisheries Management is the first stop for prospective aquaculturists in this process.

## Primary Permitting Agency

### **SCDNR Office of Fisheries Management**

217 Fort Johnson Road  
Charleston, S.C. 29412  
Phone: 843-953-0126

## Technical Assistance

### **S.C. Sea Grant Consortium**

287 Meeting Street  
Charleston, S.C. 29401  
Phone: 843-953-2078



**The time from submitting an application to receiving a permit has a wide range historically, but applicants should anticipate 9-15 months for the entirety of the process. Public comment periods are common causes for delays.**

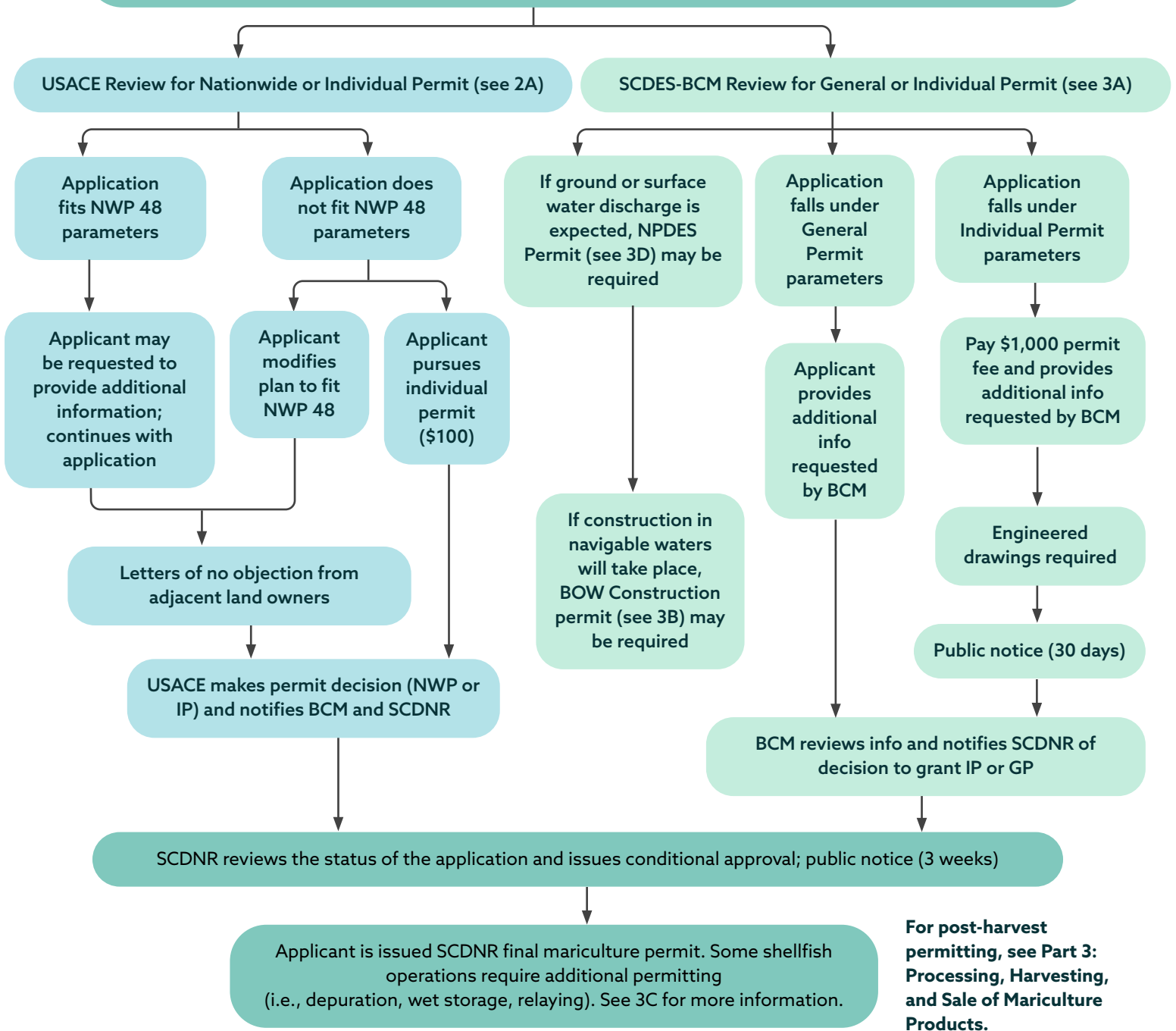
# Permit Structure Infographic: Coastal Mariculture

The information within this infographic describes a generic scenario of a simplified mariculture application. The nuances of each unique application can sometimes cause delays or deviation from the permitting process described below.

Step 1: Call the SCDNR (843-953-9841) to undergo a screening review (see 1A). Pay \$25 for joint application fee.

Step 2: Committee will review for eligibility, suitability, and conflicts, and will issue decision on intent to proceed.

Step 3: Attend joint pre-application meeting, which will be attended by SCDNR, SCDES-BCM, and USACE.



## Section 2: Description of Mariculture Permits

### 1A: Shellfish Mariculture Permit (SCDNR)

#### Primary Contact

##### **SCDNR Marine Resources Division**

217 Fort Johnson Road

Charleston, S.C. 29412

Phone: 843-953-0150

Aquaculturists intending to grow shellfish in bags or cages (whether on-bottom or off-bottom) will be required to abide by SCDNR's commercial shellfish harvesting regulations. Commercial purposes include buying or selling fish, taking or attempting to take fish in order to make an income, using commercial equipment, and otherwise being engaged in the fisheries industry with the purpose of making money. All licenses for shellfish equipment expire the June 30th that follows when the license was obtained by the applicant. Applicants need to present identification and a social security or alien identification number. Proof of South Carolina residency is determined by showing an unexpired South Carolina driver's license.

**The Joint Shellfish Mariculture Application for South Carolina requires the following information to be supplied by the applicant regarding the proposed activity:**

- Application for mariculture permit
  - ◇ Project description
  - ◇ Project location description
  - ◇ Operations plan
  - ◇ Applicant qualifications
  - ◇ Description of project impact



**Currently, there are no specific permits for culturing finfish, invertebrates, seaweed, coastal plants, or other aquatic organisms other than shellfish within the critical area. The SCDNR Marine Resources Division will work with individuals wishing to pursue mariculture of organisms other than shellfish on a case-by-case basis. Key criteria to culture aquatic organisms in the critical area include the organism's status as being indigenous, established, or invasive.**

- Proof of residency
- Information for companies (if applicable)
- Vicinity map with permit area clearly marked
- Sketch (closeup) of permit area and gear layout with latitude and longitude coordinates for each corner of the project area
- Sketch of growing units showing height above bottom and depth at different tides
- Memorandum of Understanding, if applicable
- Check for \$25 non-refundable application fee

### **Saltwater Commercial License**

- Resident Fee: \$25
- Non-Resident Fee: \$300

**Below are helpful documents that can be obtained from the SCDNR Marine Resources Division at no cost to the permit applicant:**

- Commercial Vessel Decal
- Mariculture Decal
- State Ground Harvest Maps
  - ◇ [State Shellfish Grounds List](#)
  - ◇ [Harvest Maps](#)
  - ◇ [Mariculture Siting Map](#)

Harvest tags are needed if molluscan shellfish are commercially harvested. Additionally, SCDES harvester training must be completed by the applicant before SCDNR issues any licenses. The training is to inform applicants about health concerns resulting from shellfish production.

To sell the shellfish, the applicant must have a Wholesale Seafood Dealers License or sell to a licensed dealer. There is no commercial harvest limit for shellfish.

## 2A: Section 10 and Section 404 Permits (USACE)

### Primary Permitting Agency

#### U.S. Army Corps of Engineers - Charleston District

69A Hagood Avenue

Charleston, S.C. 29412

Phone: 843-329-8044

[USACE Charleston District Website](#)



**For shellfish permitting, USACE requires that you notify owners of adjacent property, including marshlands, and attempt to obtain a letter of no objection. If you have received such letters, please include them with your application.**

Installation of structures and/or the discharge of fill material into Navigable Waters of the U.S., which include tidal waters, will require authorization from the USACE under Section 10 of the Rivers and Harbors Act and/or Section 404 of the Clean Water Act.

A Nationwide Permit (NWP) or an Individual Permit (IP) could be used to authorize mariculture projects. Nationwide Permits from USACE authorize activities that only have “minimal individual and cumulative adverse environmental effects.” Nationwide Permits authorize activities like commercial shellfish aquaculture activities. These permits are valid for five years, and then are reissued or changed. Nationwide Permit checklists are available to help you determine if your project is tied to one of the seventeen Nationwide Permits. Individual Permits will require more tailored attention to your specific project and plans.

The USACE will determine which type of permit the proposed mariculture project may qualify for during the pre-application phase or after submittal of a permit application. [The USACE-Charleston District's website](#) has helpful links and documents. The USACE-Charleston District should be contacted directly with questions about the permitting process.

## 3A: General or Individual Permit for Critical Area and Coastal Zone Consistency (SCDES Bureau of Coastal Management)

### Primary Permitting Agency

#### SCDES-BCM

1362 McMillian Avenue, Unit #400

North Charleston, S.C. 29405

Phone: 843-953-0200

[Critical Area Permitting Website](#)

SCDES has direct permitting authority over the state's critical areas within the eight coastal counties, which includes coastal waters, tidelands, beaches, and beach/dune system. Statute 48-39-10 is the state law that gives the SCDES Office of Ocean and Coastal Resource Management (BCM) regulatory authority over the critical areas.

There are two different types of SCDES-BCM permits which could apply to mariculture permitting: General Permit (GP) and Individual Permit (IP). General Permits have been developed by SCDES-BCM. These permits authorize activities and projects that have minimal adverse environmental impacts to aquatic resources. Projects that do not qualify for General Permits are considered for Individual Permits. These require specialized attention and review due to the very unique characteristics of the proposed project.

[SCDES's critical area permitting website](#) provides a thorough outline of the necessary steps for those applying for a permit application.

#### **The following information must be provided by the applicant:**

- An administrative application fee, with checks made payable to SCDES-BCM
  - ◊ The fee is based on the category of the project; the project can either be a "minor activity" or a "major activity"
  - ◊ The appropriate fee needs to be paid before SCDES processes any applications
  - ◊ Depending on the type of project, the fee ranges from \$25-\$1000
- Affidavit of ownership or control
  - ◊ Needs to be completed, signed, and notarized. The following must be included:
    - » Legal description or copy of the property's plat, and
    - » A certified copy of the deed, lease, easement, or other instrument that allows the applicant to claim title, or

» Permission from the land's owner to complete the activity

- The submitted drawings must be made, stamped, and signed by an individual licensed in South Carolina from one of the following professional groups:
  - ◊ Registered land surveyors
  - ◊ Registered professional engineers
  - ◊ Registered landscape architects
- A map showing the location of the proposed activity

Another requirement for an individual Critical Area permit (15 days for minor activities and 30 days for major activities) is that the project application is put on public notice. This means that for a set period of time, members of the public and other agencies are allowed to comment on the project. Directions for submitting a Critical Area permit application are posted on the [ePermitting website](#), where an applicant can submit the required documentation (a username and profile must be created first).

## 3B: Construction Permit for Navigable Waters (SCDES Bureau of Water)

### Primary Permitting Agency

#### SCDES - Bureau of Water

Division of Water Quality

2600 Bull Street

Columbia, S.C. 29201

Phone: 803-898-0369

[Navigable Waters Website](#)

**The [Construction Permit for Navigable Waters](#) is needed for activities like construction, dredging, filling, or other alterations in a navigable waterway that meets the following certifications:**

- Below the mean high water line for tidal waters
- Below the ordinary high mark line for non-tidal waters

In certain situations, this permit is not required because staff members in charge of other SCDES permits collaborate with the Construction in Navigable Waters Permit staff members to make sure the project follows all relevant requirements.

**Projects that have or need a different SCDES permit or certification, listed below, do not need the Construction in Navigable Waters Permit:**

- Critical Area Permit and associated Coastal Zone Consistency Certification

- 401 Water Quality Certifications
- Water Supply Permits
- National Pollutant Discharge Elimination System Permits
- Wastewater Construction Permits
- Mining Permits

However, it is important to note that a Construction in Navigable Waters Permit may be required for the project, even if an Army Corps of Engineers Permit is not required.

The [permitting process](#) for the Construction in Navigable Waters Permit starts with the applicant filling out the [application form](#), which is located on SCDES's website. Next, the applicant submits the form to SCDES, where staff members review the application and decide how to best distribute it for the public notice requirements. After SCDES distributes the public notice, the applicant is sent a bill for its fee of \$50, \$100, or \$500, and a copy of the public notice. SCDES will continue to review the application until the 15- or 30-day comment period ends, it receives payment from the applicant, there is an affidavit of public notice, and the agency receives all information requested from the applicant. SCDES waits to see if it gets any objections from South Carolina state agencies, and if that happens, then the applicant can communicate with that agency in order to resolve any conflicts. Then, SCDES staff performs an assessment of impacts and mails Notice of the Proposed Decision to the applicant, adjacent property owners, commenters, and agencies. There is a 15-day wait period for any appeals. Finally, if there are no appeals, the final permit is mailed to the applicant.

**Below is information that will be needed to complete your permit application:**

- The address of the applicant or organization applying for the permit
- The address where the proposed activity will occur
- A precise description of your proposed activity, including measurements
  - ◊ Drawings must be completed according to permit specifications
- Whether or not you are applying for a general permit
  - ◊ See [http://www.scdes.gov/environment/docs/nw\\_permitGen.pdf](http://www.scdes.gov/environment/docs/nw_permitGen.pdf)
  - ◊ General permits include the following:
    - » Permit for installation of utility lines
    - » Permit for construction, installation, repairs, etc. of docks, boat lifts, and boat sheds
    - » Permit for activities that are under the discretion of the Army Corps of Engineers
- Names and mailing addresses of the adjacent property owners to the proposed site of the activity

- Affidavit of ownership or control of relevant property
  - ◊ Must be completed and notarized
- Affidavit of publication describing the proposed activity in the county newspaper
- Whether or not part of the activity has been started or completed
- Whether or not a different agency previously denied an application for this activity

Fees, which are decided by the discretion of the agency, must be paid before SCDES issues the permit. If the activity involves commerce, industry, or operations for production, distribution, or sale of goods or services, then there is a \$500 fee. If the work is not for commercial purposes, then the fee is \$50.

### 3C: Relevant Shellfish Permits (SCDES Bureau of Water)

#### Primary Contacts

**S.C. Department of Health and Environmental Control**

**EQC Bureau of Water (Myrtle Beach Field Office: 843-238-4387)**

**EQC Bureau of Water (Columbia Central Office: 803-898-4267)**

**Shellfish Closure Updates: 1-800-285-1618**

Prospective aquaculturists interested in growing oysters or clams must follow requirements set forth by SCDES's Shellfish Sanitation Program.

**There are two goals of this program:**

1. Shellfish and the area that they are harvested in meet environmental quality standards. These are the standards set forth by federal guidelines and state regulations.
2. Promote the water quality restoration of South Carolina waters that are used for shellfish harvesting.

#### General Application Requirements

- Applications need to be on forms provided from the Department. To get these forms, contact SCDES-Environmental Quality Control, Bureau of Water, 2600 Bull Street, Columbia, S.C. 29201.
- Construction permits are required before construction, expansion, or modification of any depuration, land-based aquaculture, or land-based wet storage facility. Valid construction permits need to be obtained before operating permits can be obtained.
- Construction permit applications, aquaculture, and wet storage operating permit applications should include a written operations plan, which provides information about the construction, site plan, and activity.

- Depuration processor applications need to include a scheduled depuration process. An operations plan and manual should be provided.
- These permits cannot be transferred to others.
- People can only obtain a certificate or permit if they comply with the regulation requirements.

**There are several shellfish activities that [require a permit](#), which are listed below. Fees are not required for these permits:**

- Relaying Permit
  - ◇ Relaying operations are first approved by the SCDNR, and then are permitted by SCDES. Shellfish need to be from approved areas for marketing. Permitting applications must state if the shellfish are being relayed for direct marketing or SCDNR planting credit purposes.
  - ◇ To be relayed from South Carolina to another state, there needs to be approval from SCDES and the state agency receiving the shellstock. Federal agencies such as the Food and Drug Administration are informed of the interstate relaying.
- Wet Storage Facility Operating Permit
  - ◇ Operators can hold harvested shellstock in approved shellfish growing waters or land-based ponds or tanks. These land-based ponds or tanks need to have effective control measures that keep the shellfish fresh and uncontaminated. Shellstock must be properly identified during the wet storage processors.
  - ◇ There are two specific types of wet storage facility operating permits:
    - » Near-shore shellfish growing waters
    - » Land-based wet storage facility
  - ◇ Information needs to be submitted for SCDES Review and Approval, formatted in a written operational plan. These permits are only given in conjunction with a Certified Shipper Certificate. The plan should detail the scope and extent of the activity, including the location, type of construction, and species of the shellfish that are stored. Information in the plan should include:
    - » The purpose of the wet storage activity (holding, conditioning, or increasing the salt content of the shellstock)
    - » Any species-specific physiological factor that impacts design criteria
    - » Location of near-shore storage structures
    - » Details of the design that address the following minimum standards:
      - Allow the free flow of water to the shellfish

- Be constructed of non-toxic materials
- Be constructed to protect shellfish from conditions that compromise their survival and quality
- Depuration Harvest Permit
  - ◊ Certification as a depuration processor needs to include a scheduled depuration process. This includes an operation plan and manual.
  - ◊ Depuration processors also comply with the dealer requirements of National Shellfish Sanitation Program Guide for the Control of Molluscan Shellfish Model Ordinance's Depuration Chapter (pg. 31).
- Aquaculture Facility Construction Permit
  - ◊ Based upon criteria described in the operational plan
    - » A written operational plan that includes:
      - A description of design and activities of the aquaculture facility
      - The specific site and boundaries where the shellfish culture areas will be conducted
      - The types and locations of any structures used in the aquaculture facility
- Aquaculture Facility Operating Permit
  - ◊ Operating Permit requirements differ based on whether the facility is a land-based aquaculture facility or an open-water aquaculture facility

To open a land-based aquaculture facility, operators need an Aquaculture Facility Construction Permit, an Aquaculture Operating Permit, and Certification as a processor (unless SCDES is told that harvested shellfish are delivered to a Shucker-Packer, Repacker, Shellstock Shipper, or Depuration Processor in South Carolina).

To open an open-water aquaculture facility, operators need an Aquaculture Operating Permit and Certification as a processor (unless SCDES is told that harvested shellfish are delivered to a Shucker-Packer, Repacker, Shellstock Shipper, or Depuration Processor in South Carolina).

Unless permits and certifications say otherwise, they expire each year on June 30.

### 3D: National Pollutant Discharge Elimination System (NPDES) Permit (SCDES)

## Bureau of Water)

### Primary Contacts

#### Water Facilities Permitting Division

#### S.C. Department of Environmental Services - Bureau of Water

Domestic: 803-898-4228

Industrial: 803-898-3964

NPDES permits are required if a person or company has point-source discharges to the surface waters. A point-source discharge is one that is “discernible, confined, and discrete.” The two different types of NPDES permits are Individual Permits and General Permits. Activities that can be covered under General Permits are not as concerning as those that need to be permitted under Individual Permits.

When the permit applications are received, division staff members screen the permitting information provided to determine if they can issue a General Permit. Application for coverage under a General Permit is a simpler process, with a Notice of Intent to be covered by a General Permit. Thus, when applying for a General Permit, look for forms on the SCDES permit form website labeled “Notice of Intent.” If a General Permit is appropriate, the applicants are notified in writing of their acceptance. If it is not appropriate, the applicants are considered for an Individual Permit.

#### **For a General Permit to be issued for a specific area, the sources must meet these requirements:**

- Involve the same or “substantially similar” types of operations
- Discharge the same types of wastes or engage in the same types of sludge use or disposal
- Require the same effluent limitations, operating conditions, or standards for sewage sludge or disposal
- Require the same or similar monitoring
- Are more appropriately contained under a General Permit

#### **Listed below are the Consolidated Permit Application Forms that need to be completed for the Individual permitting process:**

- Consolidated Permits Program - Application Form 1 - General Information (EPA)
  - ◊ General information about the applicant and facility
  - ◊ Must be submitted with the NPDES permit application
- Discharges to Surface Water (NPDES Permits)
  - ◊ Concentrated Animal Feeding Operations and Aquatic Animal Production Facilities

- Antidegradation Supplement for NPDES Permit Application
  - ◊ Required when the application is for a new or growing discharge
- Location Supplement for NPDES and ND Permit Application
- Mixing Zone Supplement

**Process for applying for a NPDES permit:**

1. The permit application is submitted to SCDES
2. The permit is developed and finalized with participation of SCDES and the applicant. For major projects, the Environmental Protection Agency may become involved.
3. Public Notice on the permit for 30 days
  - a. If no comments are received from the public, then the division staff make the decision regarding the permit
  - b. If comments are received, then the division staff prepare responses to the comments
4. If required, there is a Public Hearing
  - c. These are required if there is sufficient public interest or significant issues
  - d. The division staff responds to comments made at the hearing
4. The staff makes the decision about issuing the permit
  - e. The permit decision is final, unless it is appealed by the applicant

While there are no fees for permit applications, there are annual operating fees associated with each permit. For new permits, the operating fee needs to be paid before the division will issue the permit. Annual fees are issued on July 1 of each year for permit holders, and are collected in the fall. The fees are listed in a [fee schedule](#). For general permits, there is a flat fee of \$100.

# Part 2: Freshwater Aquaculture Permitting

## Section 1: Freshwater Aquaculture Permitting (Non-Critical Areas)

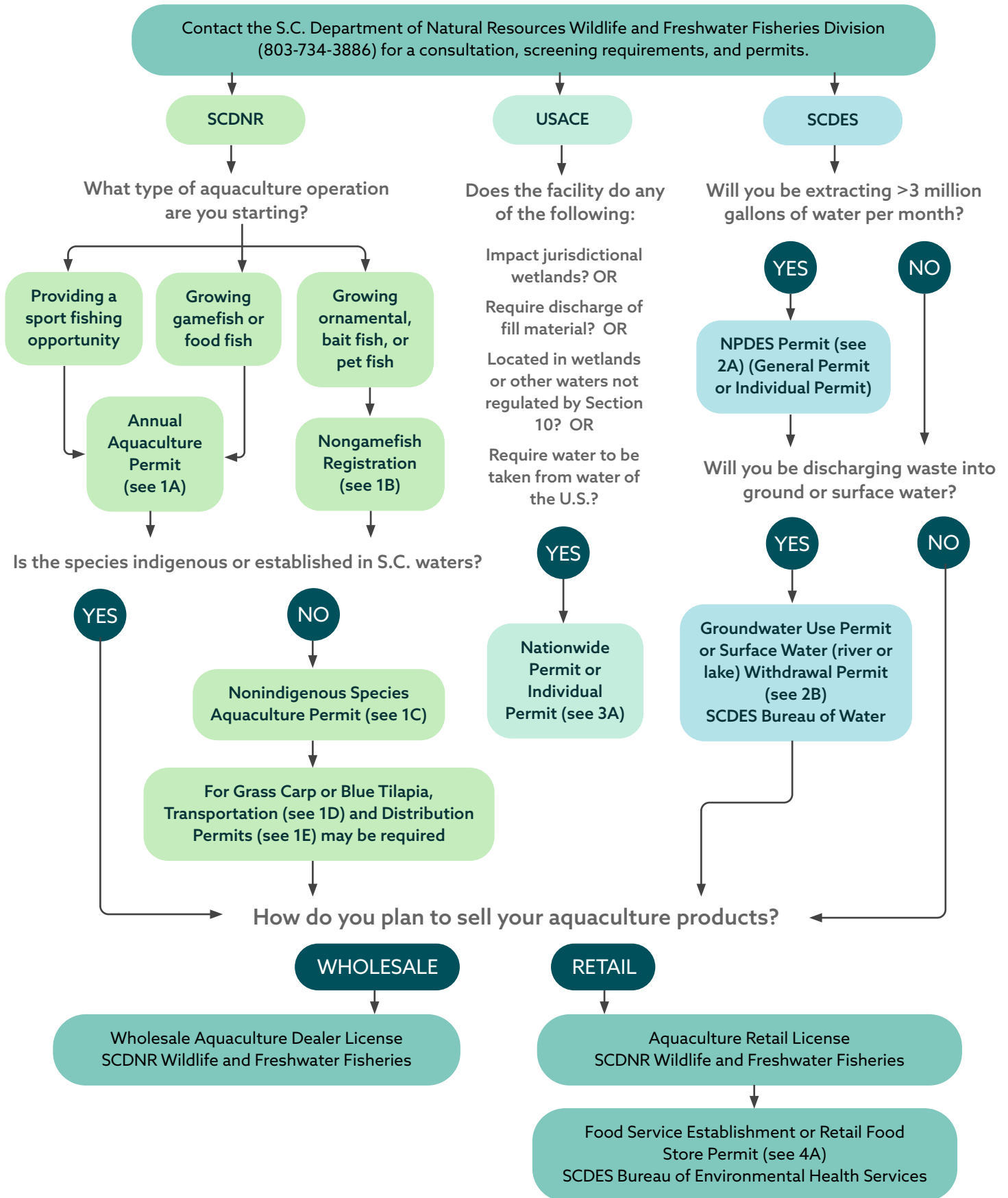
- Catfish, tilapia, bass, sunfish, or other finfish in private ponds
- Catfish, tilapia, bass, sunfish, or other finfish in recirculating systems
- Ornamental fish in private ponds or recirculating systems
- Ornamental fish in private ponds
- Bait fish in private ponds or recirculating systems
- Larvae or juveniles of any species in a hatchery or nursery form using recirculating systems

Non-critical areas of the state extend from the Critical Area boundary line inland. This area contains four major river basins – the Pee Dee, Santee-Cooper, Ashley-Combahee-Edisto, and Savannah; total river streamflow, which varies geographically, seasonally, and yearly, averages 33 billion gallons per day. In addition to its flowing waters, South Carolina has about 596,000 acres of large inland lakes and thousands of small, privately-owned farm ponds.

Freshwater and tank-reared aquaculture occurs in over half of South Carolina counties, although primarily at small scales. Largemouth and smallmouth bass, crappie, sunfish, tilapia, and koi are examples of common inland species being cultivated. Bait fish species have become the object of several aquaculture efforts and, along with other species of fresh- and brackish-water finfish, have high potential for development in the state.

The primary considerations to approving of non-critical area aquaculture permits relate to the species intended to grow, as well as freshwater flow and discharge. SCDNR's Wildlife and Freshwater Fisheries Division coordinates aquaculture applications and will communicate with SCDES as necessary.

# Permit Structure Infographic: Freshwater Aquaculture



## Section 2: Description of Freshwater Aquaculture Permits (Non-Critical Areas)

### 1A: Annual Aquaculture Permit (SCDNR Wildlife and Freshwater Fisheries)

#### Primary Permitting Agency

##### **SCDNR Wildlife and Freshwater Fisheries**

1000 Assembly Street

Columbia, S.C. 29201

Phone: 803-734-3886

Email: [aquaculturepermitting@dnr.sc.gov](mailto:aquaculturepermitting@dnr.sc.gov)

#### Technical Assistance

##### **Clemson University Extension**

509 Westinghouse Road

Pendleton, S.C. 29670

Phone: 864-650-7114

The S.C. Department of Natural Resources has regulatory authority for permitting and licensing pertaining to aquaculture and aquaculture businesses. The first step is acquiring an aquaculture permit. The cost of an aquaculture permit is \$100 at issue, and \$25 each subsequent year that the permit is continued.

#### **The following activities require an aquaculture permit from SCDNR:**

- Engaging in commercial aquaculture
- Wholesale or retail of a live aquaculture product
- Engaging in aquaculture of an aquatic species not indigenous to South Carolina
- Engaging in aquaculture solely for the purposes of stocking
- Engaging in aquaculture of hybrid striped bass
- Engaging or possessing an aquatic species to provide sport fishing for a fee
- Selling in excess of \$2,500 worth of an aquatic species harvested from a private pond (unless selling to a permitted resident aquaculturist)
- Importing an aquatic species for use as aquaculture brood stock
- Importing an aquatic species for stocking private waters

## **Key considerations on the decision to grant an aquaculture permit include:**

- Species to be cultured
- Protection of ecosystems from detrimental species
- Protection of critical habitat
- Protection of water resources
- Protection of plant and wildlife genetic integrity
- Disease potential and protection of plant and wildlife health
- Protection of natural resources from illegal harvesting and commercialization
- Protection of natural resources from nuisance species
- Security and welfare of the aquaculture industry of South Carolina

An aquaculture permit is not required to engage in aquaculture of nongame fish, as long as the species cultured is indigenous or already established in South Carolina waters. However, to engage in commercial aquaculture of nongame fish, a person must register the aquaculture facility with SCDNR annually and provide pertinent updates related to aquaculture regulations. Additionally, an aquaculture permit is not required for wholesale or retail of (1) nongame, indigenous species aquacultured in South Carolina for use as bait or (2) organisms legally sold in the pet or ornamental trade.

## **1B: Nongame Fish Registration**

If there is interest in growing fish or aquatic organisms that are not game fish (i.e., bait, ornamental, or pet fish), the applicant will be required to register the operation with SCDNR.

## **1C: Nonindigenous Species Aquaculture Permit (SCDNR Wildlife and Freshwater Fisheries)**

Contact SCDNR Wildlife and Freshwater Fisheries Division to discuss the process of determining indigenous status.

## **1D: Transportation Permit (SCDNR Wildlife and Freshwater Fisheries)**

Haulers or distributors bringing grass carp into the state must first request a Transportation Permit from SCDNR, which authorizes the hauler to bring grass carp directly to the facility for sterility testing. Once sterility has been verified, SCDNR issues a Distribution Permit to the vendor, which allows the vendor to issue nonindigenous species fish possession permits on behalf of the division.

## 1E: Distribution Permit (SCDNR Wildlife and Freshwater Fisheries)

Haulers or distributors bringing grass carp into the state must first request a Transportation Permit from SCDNR, which authorizes the hauler to bring grass carp directly to the facility for sterility testing. Once sterility has been verified, SCDNR issues a Distribution Permit to the vendor, which allows the vendor to issue nonindigenous species fish possession permits on behalf of the division.

### Primary Permitting Agency

#### **SCDNR Wildlife and Freshwater Fisheries**

1000 Assembly Street

Columbia, S.C. 29201

Phone: 803-734-3886

Email: [aquaculturepermitting@dnr.sc.gov](mailto:aquaculturepermitting@dnr.sc.gov)

Culturing aquatic organisms that are nonindigenous to the state require a separate permit – a nonindigenous species aquaculture permit. This application will be reviewed by SCDNR with considerations similar to those above. The two most common nonindigenous species to culture in South Carolina are grass carp and blue tilapia.

Nonsterile grass carp are illegal to import, possess, or sell in South Carolina. SCDNR issues permits for the stocking of triploid (sterile) grass carp in private waters for aquatic weed control. Haulers or distributors bringing grass carp into the state must first request a Transportation Permit from SCDNR, which authorizes the hauler to bring grass carp directly to the facility for sterility testing. Once sterility has been verified, SCDNR issues a Distribution Permit to the vendor, which allows the vendor to issue nonindigenous species fish possession permits on behalf of the division.

Blue tilapia are often stocked for algae control. Before stocking any nonindigenous species, permittees must make a reasonable attempt to ensure that permitted fish do not escape their stocking location, and as tropical fish, tilapia typically do not survive average winter temperatures in South Carolina. Aquaculture vendors who sell triploid grass carp or tilapia must report the number of fish sold and stocking location to SCDNR.

If someone is interested in only selling (not growing) aquacultured organisms wholesale, he/she does not need an aquaculture permit, but instead is required to obtain a wholesale aquaculture license. Wholesale aquaculture licenses cost \$100 at issue, and \$25 each subsequent year.

## 2A: NPDES Permit (SCDES Bureau of Water)

NPDES permits are required if a person or company has point-source discharges to the surface waters. A point-source discharge is one that is “discernible, confined, and discrete.” The two different types of NPDES permits are Individual Permits and General Permits. Activities that can be covered under General Permits are not as concerning as those that need to be permitted under Individual Permits.

When the permit applications are received, division staff members screen the permitting information provided to determine if they can issue a General Permit. Application for coverage under a General Permit is a simpler process, with a Notice of Intent to be covered by a General Permit. Thus, when applying for a General Permit, look for forms on the SCDES permit form website labeled “Notice of Intent.” If a General Permit is appropriate, the applicants are notified in writing of their acceptance. If it is not appropriate, the applicants are considered for an Individual Permit.

**For a General Permit to be issued for a specific area, the sources must meet these requirements:**

- Involve the same or “substantially similar” types of operations
- Discharge the same types of wastes or engage in the same types of sludge use or disposal
- Require the same effluent limitations, operating conditions, or standards for sewage sludge or disposal
- Require the same or similar monitoring
- Are more appropriately contained under a General Permit

**Listed below are the Consolidated Permit Application Forms that need to be completed for the individual permitting process:**

- Consolidated Permits Program- Application Form 1- General Information (EPA)
  - ◊ General information about the applicant and facility
  - ◊ Must be submitted with the NPDES permit application
- Discharges to Surface Water (NPDES Permits)
  - ◊ Concentrated Animal Feeding Operations and Aquatic Animal Production Facilities
- Antidegradation Supplement for NPDES Permit Application
  - ◊ Required when the application is for a new or growing discharge
- Location Supplement for NPDES and ND Permit Application
- Mixing Zone Supplement

## Process for applying for a NPDES permit:

- The permit application is submitted to SCDES
- The permit is developed and finalized with participation of SCDES and the applicant. For major projects, the Environmental Protection Agency may become involved
- Public Notice on the permit for 30 days
  - ◊ If no comments are received from the public, then the division staff make the decision regarding the permit
  - ◊ If comments are received, then the division staff prepare responses to the comments
- If required, there is a Public Hearing
  - ◊ These are required if there is sufficient public interest or significant issues
  - ◊ The division staff responds to comments made at the hearing
- The staff makes the decision about issuing the permit
  - ◊ The permit decision is final, unless it is appealed by the applicant.

While there are no fees for permit applications, there are annual operating fees associated with each permit. For new permits, the operating fee needs to be paid before the division will issue the permit. Annual fees are issued on July 1 of each year for permit holders, and are collected in the fall. The fees are listed in a [fee schedule](#). For General Permits, there is a flat fee of \$100.

## 2B: Groundwater Use or Surface Water Withdrawal Permit (SCDES Bureau of Water)

### Primary Permitting Agency

#### SCDES Bureau of Water

2600 Bull Street

Columbia, S.C. 29201

Phone: (803) 898-4300

[SCDES Bureau of Water Website](#)

If extracting large amounts of surface water, you may need a groundwater use permit or a surface water (river or lake) withdrawal permit or registration. SCDES has a permitting program or registration program for groundwater use (from a well) depending on the county in which the well is located. If the withdrawal will be from a river or lake, a permit or a registration is needed (registrations are for agricultural activities).

**For more information, visit:**

- [SCDES's groundwater website](#)
- [SCDES's website on river and lake withdrawals](#)

### **3A: Section 404 Nationwide Permits and Individual Permits (USACE)**

The discharge of dredged or fill material into wetlands and waters of the United States that are considered jurisdictional and regulated by Section 404 of the Clean Water Act may require authorization from the USACE. Nationwide Permits or Individual Permits may be used to authorize the construction of a freshwater aquaculture facility that will impact wetlands or waters of the United States. Additionally, freshwater aquaculture facilities requiring intake from a water of the United States may require authorization from the USACE. [The USACE Charleston District's website](#) has helpful links and documents. The USACE-Charleston District should be contacted directly with questions about the permitting process.

# Part 3: Harvesting, Processing, and Sale of Mariculture Products

The success of any aquaculture operation ultimately depends upon effective and timely harvesting and marketing of the crop. Growth of aquaculture in South Carolina will be linked directly to the availability of markets for the cultivated products. Of the \$4,007,000 in aquaculture sales in South Carolina in 2018, \$3,207,000 were species cultured for consumption (as opposed to bait, sport, or ornamental)<sup>3</sup>. Many seafood products, including shellfish, which make up an increasing proportion of cultured species in South Carolina, require special handling requirements due to the relatively high abundance of naturally occurring pathogenic bacteria.

Many producers have recognized a need for diverse marketing strategies, which then require diverse methods of harvesting, storage and handling, processing, sales, and shipping of products. Understanding the permitting and regulations associated with each of these steps may help an aquaculturist decide what points in the supply chain are feasible for the business to be involved in.

## Primary Permitting Agency

### SCDES

Bureau of Environmental Health Services  
Division of Food Protection and Lead Risk Assessment  
2600 Bull Street  
Columbia, S.C. 29201  
Phone: 803-898-3432

## Technical Assistance

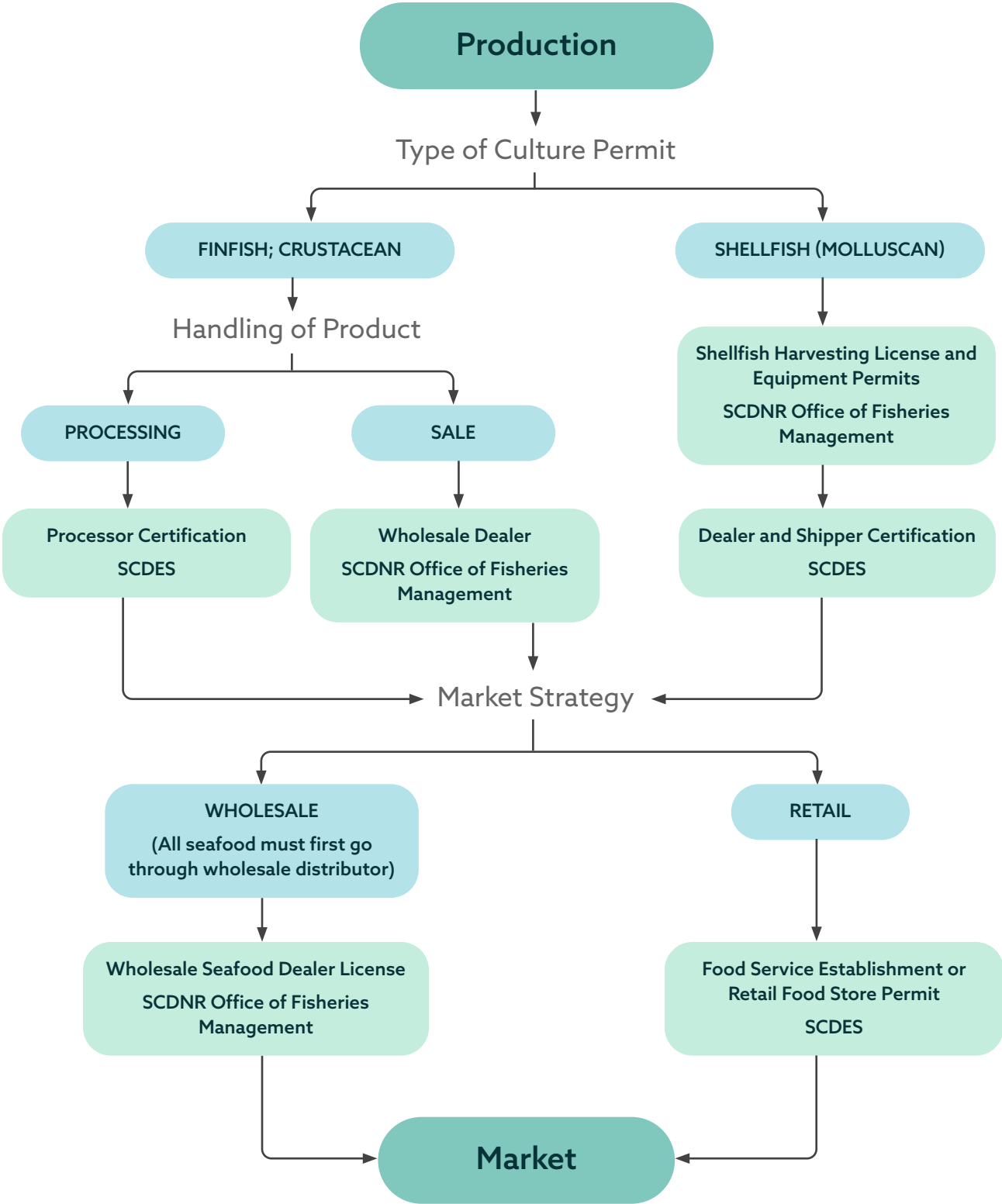
### S.C. Department of Agriculture

1200 Senate Street  
Columbia, S.C. 29201  
Phone: 803-734-2210

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<sup>3</sup> USDA 2018 Census of Aquaculture, Volume 3, Special Studies Part 2. Accessed from [https://www.nass.usda.gov/Publications/AgCensus/2017/Online\\_Resources/Aquaculture/Aqua.pdf](https://www.nass.usda.gov/Publications/AgCensus/2017/Online_Resources/Aquaculture/Aqua.pdf) on Sept. 29, 2020

# Permit Structure Infographic: Harvesting, Processing, and Sale of Mariculture Products



# Appendix 1: List and Contact Information for Permitting Agencies

## Primary Permitting Agency

### **SCDNR Marine Resources Division**

217 Fort Johnson Road  
Charleston, S.C. 29412  
Phone: 843-953-0150

### **SCDES-BCM**

1362 McMillian Avenue, Unit #400  
North Charleston, S.C. 29405  
Phone: 843-953-0200

[Critical Area Permitting Website](#)

### **SCDES**

Bureau of Environmental Health Services  
Division of Food Protection and Lead Risk  
Assessment  
2600 Bull Street  
Columbia, S.C. 29201  
Phone: 803-898-3432

### **U.S. Army Corps of Engineers - Charleston District**

69A Hagood Avenue  
Charleston, S.C. 29412  
Phone: 843-329-8044

[USACE Charleston District Website](#)

### **SCDES Bureau of Water**

2600 Bull Street  
Columbia, S.C. 29201  
Phone: 803-898-4300

[SCDES Bureau of Water Website](#)

### **SCDNR Wildlife and Freshwater Fisheries**

1000 Assembly Street  
Columbia, S.C. 29201  
Phone: 803-734-3886

Email: [aquaculturepermitting@dnr.sc.gov](mailto:aquaculturepermitting@dnr.sc.gov)

## Technical Assistance

### **Clemson University Extension**

509 Westinghouse Road  
Pendleton, S.C. 29670  
Phone: 864-650-7114

### **S.C. Department of Agriculture**

1200 Senate Street  
Columbia, S.C. 29201  
Phone: 803-734-2210

### **S.C. Sea Grant Consortium**

287 Meeting Street  
Charleston, S.C. 29401  
Phone: 843-953-2078

# Acronyms

BCM – Bureau of Coastal Management (department of SCDES)

BOW – Bureau of Water (department of SCDES)

EPA – Environmental Protection Agency

EQC – Environmental Quality Control (department of SCDES)

FAO – Food and Agriculture Organization, United Nations

IP – Individual Permit (issued by USACE)

NPDES – National Pollutant Discharge Elimination System

NWP – Nationwide Permit (issued by USACE)

RAS – Recirculating Aquaculture System

SCDES – South Carolina Department of Environmental Services

SCDNR – South Carolina Department of Natural Resources

SCSGC – South Carolina Sea Grant Consortium

USACE – United States Army Corps of Engineers