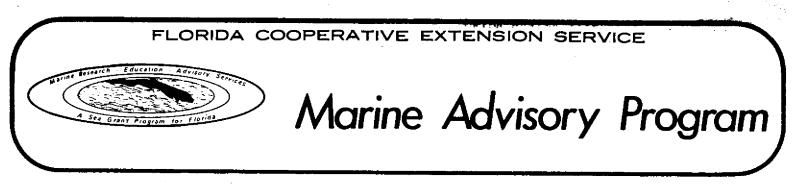
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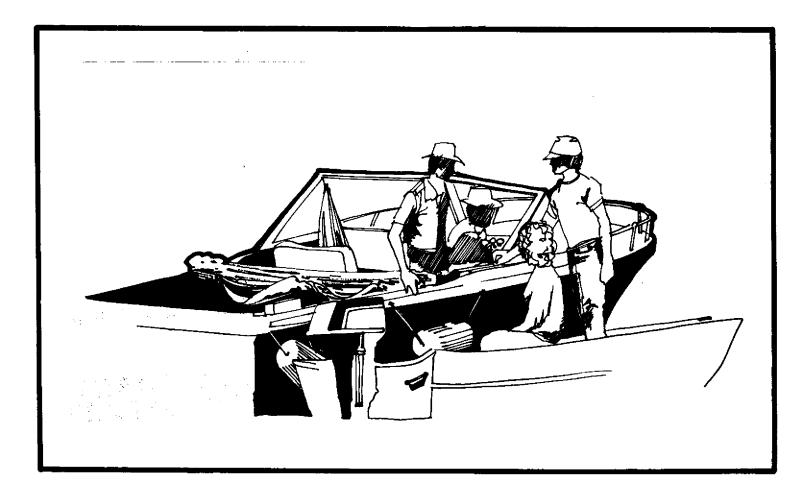
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Regulatory Management Programs for Florida Marine Fishermen

Frederick J. Prochaska and James R. Baarda

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REGULATORY MANAGEMENT PROGRAMS FOR FLORIDA MARINE FISHERMEN

Frederick J. Prochaska and James R. Baarda 1/

INTRODUCTION

The management of a fishery differs considerably from the management of a farm or a business firm. Generally, within a given production (fishing) season a fisherman can manage his own operation for the greatest economic benefit to himself and/or his fishing firm. In addition, he no doubt also considers maintaining the fishery for future production or fishing seasons, however, because of a lack of private property rights in the fishery resource he cannot, acting alone, manage the fishery resource over the long-run. The lack of private property rights results in the "common, property" ownership by the citizens of the state. Consequently, management of fisheries fails largely to governmental bodies that can make laws controlling the use of fishery resources.

The purpose of this report is to describe the fishery management programs currently administered by the State of Florida to fishermen, marine extension agents and others concerned with marine commercial fishing. 2/ The first section will briefly summarize the institutional framework for the establishment and administration of Florida's fisheries management programs. The remaining sections summarize current regulatory management programs. There is a separate section for lobsters, shrimp, and oysters because of the extent of the management programs to which ezch of these species is subject. All other species are combined in one section. The final section is concerned with specific laws which only affect fishermen in specific locations.

This bulletin represents a summary only, and should not be relied on to provide specific answers to individual problems. For advice on specific fishery regulations the best sources are the Florida Department of Natural Resources and its Division of Marine Resources and Marine Patrol. These sources can provide advice on using Florida's many marine resources while obeying the laws intended to protect those resources for all the people of Florida.

1/ Dr. Prochaska is Assistant Professor of Food and Resource Economics. Mr. Baarda is Research Assistant in the Food and Resource Economics Department.

2/ A considerably more detailed report on Florida's total fishery management program may be found in a forthcoming Florida Agricultural Experiment Station Bulletin, by the same authors, entitled "Florida's Fisheries Management Programs; Their Development, Administration and Current Status." The laws on which this report is based may be found in Chapter 370 of the Florida Statutes; "Salt Water Fisheries and Conservation."

INSTITUTIONAL FRAMEWORK FOR MANAGING FLORIDA'S FISHERIES

The making of laws to regulate Florida's fishery resources is by legislation, the extent of state powers to do so is jurisdiction and the actual implementation of the legislation is through interpretation and enforcement is its administration. These aspects of the total management picture are discussed in this section.

The single source of law most important in the management of Florida's fisheries is the Florida Legislature. Under the constitution the legislature can enact two types of laws governing fisheries. The first type, general laws, apply to the whole state with some important exceptions, and are the primary subject of this bulletin. The second type, special laws, enacted by the state legislature applies to specified counties in the state. These special laws are very numerous. In the final section of this paper a cross tabulation of special laws by counties is presented.

Before considering Florida's jurisdiction over fishery resources it should be mentioned that there are four sources of law other than state legislation which may affect Florida fisheries. These are international, federal, municipal and county. International agreements and federal legislation have little or no affect on fisheries of importance in Florida (with perhaps the exception of the lobster). With respect to municipal and county law, the state, with few exceptions, has exclusive powers for managing and controlling marine fisheries.

The extent of the state's powers, jurisdiction, is limited to three geographical miles on Florida's east coast. Because of historical developments in the post-Civil War era and under a ruling of the United States Supreme Court in 1960, Florida's jurisdiction on the Gulf of Mexico is nine • nautical miles. It should be mentioned that exact jurisdiction in Florida is not settled and presents some fine points of law. In general the state's jurisdiction includes the powers to make laws regulating persons, property, and activity.in the territorial waters of the state. These powers are generally limited to natural resources within the territorial limits but may extend beyond the limit when necessary to protect the resources within Florida, for example, lobsters moving in and out of Florida's waters. Jurisdiction may also extend to a person who is a state citizen even when beyond state territory.

The regulatory marine fisheries management programs enacted by the state legislature of Florida are administered by the Division of Marine Resources, a division within the Department of Natural Resources. The duties of the division are specified by the legislature. The specified goal which the division is directed to achieve is the production of the maximum sustainable yield of marine fishery resources consistent with the preservation and protection of the breeding stock. To achieve this goal the specific duties outlined to the division by the legislature are: preservation, management, and protection of marine, crustacean, and anadromous fishery resources; regulation of the operations of all marine fishermen and vessels; issuing

licenses for fishing and processing; development of statistics concerning Florida's fishery resources; and conducting scientific, economic, and other studies and research, and contracting for the studies and research.

The division is authorized by the legislature to make rules and regulations to assist in performing its duties of carrying out the fisheries legislation. These have the force of law and penalties are prescribed for their violation. Rules and regulations are filed with the secretary of state of Florida and are published in newspapers and fisheries publications to inform the public of their existence and content.

The enforcement of commercial fishing laws, rules and regulations rests with the Division of Marine Resources through its enforcement arm, the Marine Patrol. Officers of the Marine Patrol are constituted police officers with powers to enforce all laws of the state, though the bulk of their activities is enforcement of fisheries and boating laws. There is full cooperation between the Marine Patrol and other law enforcement agencies of the state.

Before the regulatory management programs are discussed it is important to note that the Division of Marine Resources administers additional fishery management programs. The division engages in various nonenforcement type activities to achieve the goals of yield maximization. Florida has one of the largest research programs of any state, aimed at providing biological knowledge about fisheries resources. Managerial programs are structured about these biological facts, and are designed to insure wise exploitation of marine resources.

The demand for Florida seafood products is stimulated through public education. The division carries on a promotional program designed to make marine resources a more important part of Florida's economy, and to insure continued increases in the demand for seafood products. On the supply side, and in addition to biological research which increases supply through improved management, the division engages directly in improving resources. An outstanding example is the large program for improvement of public oyster beds by application of necessary cultch. The following sections of this paper emphasize regulatory management, but the importance of positive activities on the part of governmental bodies must not be overlooked.

REGULATORY MANAGEMENT PROGRAMS

The majority of Florida's fisheries legislation is concerned with managing three of her shellfish; shrimp, lobsters and oysters. These three species together account for approximately 60 percent of the total value of landings in Florida. Shrimp and lobsters are the two most important species landed in the state. The relative importance is undoubtedly part of the reason for the management emphasis placed on these fisheries, but in addition, certain unique characteristics of these fisheries make management programs particulatly successful. These characteristics will be discussed in the following sections along with specific Florida management programs. In addition to these, several other species of fish and shellfish are subject to management programs, although compared to shrimp, lobsters, and oysters, they receive less emphasis.

Shrimp

Currently there are four types of regulatory programs in effect for managing Florida's shrimping industry. These are permits, size limitations, closed areas and time restrictions. The state's purpose of the combination of regulations is to encourage the production of the maximum sustainable yield of shrimp consistant with the preservation and protection of the breeding stock.

Permits

Three types of permits are required for enforcement and control purposes. The first is a landing permit which is required for all shrimp products landed in Florida regardless of where caught. In addition, when shrimping in Florida waters a fishing permit is required. There are two types of fishing permits; a live bait permit and a commercial (nonbait) permit. Either permit may be obtained from the Division of Marine Re-Fee for either permit is presently \$50. These permits must resources. main on board the shrimping vessel at all times and are at all times subject to inspection. The permits are subject to suspension or revocation with a violation of the regulations pertaining to shrimp fishing or when it is apparent that revocation is required in the best interests of saltwater conservation. The latter decision is determined by the Department of Natural Resources after taking into consideration the recommendations of the various marine laboratories as well as those of interested and experienced groups and private citizens.

Size Limitations and Closed Areas

The second and perhaps most important category of shrimp regulation is concerned with protecting the immature shrimp. Size limitations and closed areas are two specific types of regulation in effect presently to insure shrimp are not harvested before they reach an optimum size.

Presently small shrimp are defined in Florida by law to be those requiring more than 47 with heads or 70 without heads to make a pound. Possession of more than 5% undersized in a cargo is considered a violation of the size limitation law. When a vessel is inspected, the law requires random samples to be taken from the cargo at least five different places with each sample consisting of at least five pounds. The average count of the samples is measured and considered the count for the entire cargo.

Size limitations would seem to be the best type of regulation to protect the smaller shrimp. Fishermen often use "try nets" to sample population sizes in order to avoid small shrimp. In spite of this effort small shrimp are sometimes taken in the trawl net and are crushed. Throwing back the dead small shrimp to meet size requirements does nothing to protect the undersized population. For this reason the closing of areas for shrimping is also employed as a management practice.

Two areas in Florida's waters are restricted to allow only live bait shrimping. One of these is a part of Santa Rosa Sound, in which live bait shrimp fishing is allowed by permit, and the other is an area known as the Tortugas shrimp beds in the vicinity of the Island of Dry Tortugas in the

Florida Keys, where live bait shrimping is permitted when conservation principles indicate no harm would result from such activities. There are special laws limiting shrimp fishing in Biscayne Bay.

The procedures for closing or opening an area to shrimp fishing are described by law, with particular reference to the counties along the Atlantic Coast from the Georgia line to and including Brevard County. A pattern of 10 or more "stations" or locations in the shrimping grounds along the coast were established in 1967. At each station reasonably frequent series of samples are taken consisting of at least 10 samples within a week, and the size of the shrimp taken in the samples is measured. If the sampling indicates that the shrimp in a particular area are undersized, that area is closed to shrimp fishing (except for live bait purposes), the closure to be accompanied by newspaper announcements and public posting of notice. When these areas are sampled and the shrimp found to be of sufficient size, the area is again opened to shrimp fishing and public notice given.

Time Regulations

The final type of regulation used to manage Florida's shrimping industry is regulating the time shrimping is permitted. Night trawling in the waters of any Florida county on the Atlantic Coast (down to and including Brevard County) is prohibited except in the months of June, July and August. This regulation was desired by shrimp fishermen in the area because it was their belief that preventing night fishing increased their catch during the day. Two species of shrimp are nocturnal, that is, they are active at night and are best caught by night fishing. These are the brown and pink shrimp. Those caught in the day are the white shrimp, caught in the Northeast Florida beds. The months of June, July and August are active brown shrimp months in this area, which is the reason the prohibition does not apply in these months. The result is that white shrimp are caught in these beds in the day from late August to December, the brown shrimp season is from June to August 31, and January through May is the "off" season for this area of the Atlantic Coast.

<u>Oysters</u>

The more traditional methods of management found in other fisheries, such as restrictions on gear, the establishment of closed seasons, and minimum size controls, are present in the oyster industry. However, the oyster industry is subject to a method of management quite unique from those pertaining to most marine animals. Because of the nonmobile nature of adult oysters, leasing is employed as a means of management. Each of Florida's management programs for oysters is discussed briefly in this section.

The Oyster Lease

An oyster lease is a reservation of ocean floor by a private individual which permits him to use it to grow oysters, and prevents anyone else from interfering with the oyster-growing and harvesting operations. No person will be granted a lease which includes more than 100 square yards of a natural reef (a natural occurring area of ocean floor on which oysters grow in quantities large enough to attract the general public to take oysters).

Once the area desired is found, an application is made to the Division of Marine Resources for a lease to the bed. The application requires a reasonably definite description of the location and amount of land covered. The application is also a request that the area be surveyed, if it has not been surveyed previously, and a map be made of the area covered. The estimated cost of a survey is to be submitted with the application since the survey expense rests on the applicant.

In the case where two applicants desire the same area of ocean floor to lease, the first to file is given the lease. A similar conflict is that between the person filing for the lease and certain "riparian" owners, owners of bordering land that by previous law have some rights to the underwater surface. If such riparian owners exist, they must be given notice of the application. The riparian owners have the right to decide to lease and develop the bed themselves to the exclusion of the applicant. If they do not wish to do so, however, the lease may be granted to the applicant.

One of the first requirements placed on the new leaseholder is that of marking off his oyster bed. The bed is marked off by the use of ranges, monuments, stakes, bouys, etc., as is necessary to assure that the location and limits of the leased land can be easily and accurately found as well as patrolled. The marking must conform to the standards described by law for safety in navigation. The division can specify in the lease itself the types, shape, depth, size and height of the markers and corner posts used. All of the markers, etc., must be kept in good condition at all times, and failure to do so may subject the leaseholder to a fine.

After the lease has become effective, the leaseholder has two additional . obligations that he must meet to keep the lease. One of these is the annual payment of rent and the other is the development of the leased area into a producing oyster bed.

For the first 10 years of the lease, the annual rent is \$5 per acre or fraction of an acre, payable by January 1 each year. At the end of the tenyear period, the rent is increased to an amount that depends on the assessed value of the area as an oyster-producing bed. The value of the lease is assessed by the Division of Marine Resources. If the rent is not paid, the Division may cancel the lease, seize the oysters and improvements on the bed, and open the area to new applicants by bid.

The second requirement for maintaining a lease is the development of the bed. Within one year after the lease begins, the leaseholder must begin cultivation of the bed which includes the addition of at least two hundred barrels of oyster shell or its equivalent in cultch to each acre of the bed. A minimum of at least one fourth of the bed must be under cultivation by the end of the first year, and each year thereafter an additional one fourth must be cultivated until the whole area is under cultivation. Again, if these cultivation practices are not met, the division can revoke the lease and return the area to public domain. However, planting operations may be suspended temporarily under certain conditions that make effective cultivation impossible. An oyster bed lease is inheritable and transferable and can be mortgaged and pledged. It is also subject to seizure and sale for debts. Before the lease is transferred the written permission of the Division. of Marine Resources must be obtained, and a payment of a \$50 transfer fee must be made. However, there is a restriction that a lease cannot be sold or bartered until it has been in existence and under cultivation for at least two years.

Gear Restrictions

Several restrictions regulate the kinds of equipment that can be used in harvesting oysters. These depend on whether the harvesting is being done from a natural reef owned by the state, or from privately leased ground.

On natural state reefs the oysters must be picked by hand tongs in areas where the general depth of the water is less than 12 feet, or unless in the opinion of the division, the area, regardless of depth, is too open and exposed to be properly fished with hand tongs. When harvesting on state reefs is not limited to hand tongs, either because of depth or exposure, the use of scrapers or dredges is permitted. However, these can be used only if a license for their use is issued by the division, with onellicense being required for each vessel using a dredge or scraper. An annual police fee of \$25 is charged for the license, and the applicant for a license must give a \$3,000 bond to guarantee that the equipment will not be illegally used.

The holders of leases may use any equipment they desire on their own oyster beds, such as scrapers and dredges. However, a permit to do so is required and a \$3,000 bond must be posted to assure that the equipment will not be illegally used outside of the lease area. When the equipment is used exclusively on private grounds and not on the natural reefs there is no charge for the equipment permit.

Size Regulations

All oysters taken from Florida waters must be culled to remove small oysters. When the oysters are taken from the natural, publicly owned beds, all oysters that measure less than three inches across at their largest dimension must be returned by scattering them broadcast. When the oysters are taken from privately controlled beds, the oysters less than three inches across at their largest dimension can be either returned to the private beds or scattered broadcast over natural beds. Certain exceptions apply if the oysters are attached too closely to permit proper separations, and to oysters used for seeding purposes.

Closed Seasons

Between June 1 and September 1 the taking of oysters for sale from natural reefs is prohibited. This closed season does not apply to privately leased beds, but anyone possessing oysters during this period must prove that they were taken from private beds or from outside Florida waters. There are certain exceptions to this closed season in the case of oysters taken for bedding purposes, discussed below.

Seed Oysters

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Exceptions to the culling requirements for oysters and to the closed season allow seed oysters to be taken to cultivate private lease bottoms for oyster production. The **Bivision** of Marine Resources regulates the taking of oysters to be used for seeding privately leased beds. Certain specified areas may be designated **So**r gathering seed oysters, and the amount taken is regulated. Seed oysters may be taken at any time during the year. Application for obtaining seed oysters is made to the division. The division may assign an area and time for taking oysters and may supervise the operation.

Lobster

To achieve the maximum sustained yield of lobsters several types of regulations have been placed on the industry. During the nearly 40 years prior to 1965 management was mainly concerned with the protection of the lobster population through controls on minimum size and fishing seasons. These regulations are still of importance in the total management program. Gear regulations were emphasized in the 1965 legislation. Perhaps more important in the 1965 legislation was the emphasis on the need for effective policing policies through the use of marking by permit number, and gear and boat identification for surveillance.

Lobster Fishing Permits

A permit is obtained from the state upon the application by the owner of the gear used to catch lobsters. The present cost of the permit is \$50. It is unlawful for any person or boat to have more than 24 lobsters without a permit, except for possession by a licensed seafood dealer. The permit number is used to mark boats and gear as described later, and the permit is to be carried at all times on the fishing boat. A permit can be suspended or permanently revoked upon the arrest and conviction of a permit holder for violation of any of the lobster fishing laws.

Gear Restrictions

Florida's lobster management program includes two types of gear regulations. One of these is a requirement for makking the traps, buoys and boats with the permit number and a color coding. The other gear regulation places limits on the physical construction of lobster traps.

Permit numbers (in figures at least three inches high) must be placed permanently on each trap or other device used to catch lobsters, as well as on the buoy used to mark the traps. The permit number is also to be permanently displayed on the boat so as to be easily identified. In addition, traps, buoys, and boats must be color coded.

Only specific types of gear may be legally used to catch lobsters. Wood slat traps can be used, provided that their dimensions do not exceed $3 \times 2 \times 2$ feet or the equivalent in cubic feet. The law requires that the constructed traps be of wood slats. The wood slat traps can be protected on the sides by reinforcement with 16 gauge, one inch poultry wire, though the bottom and top cannot be so reinforced. Partial wire reinforcing is

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allowed to protect the trap from the "ravages of turtles." Ice cans, drums and other similar devices are permitted provided that the devises are not equipped with grains, spears, grapbs, hooks or similar items.

Any gear used to capture lobsters must be marked by a buoy. Up to 20 traps can be attached to a trotline, and the line is marked at each end by the attachment of a flag buoy. Buoys used must be of sufficient strength and buoyancy to remain continuously afloat or a timed released device may be used. Any device not conforming to the specifications listed, or not carrying a valid permit number, may be seized and destroyed by enforcement officials. It is unlawful to interfere with anyone's traps or markers without the owner's permission. The present closed season for lobster is between March 31 and August 1. Traps may be placed in the water and baited 10 days prior to the open season and must be removed within five days after the closing of the season, though no lobsters can be taken during the closed season.

Condition of Lobsters

Three types of restrictions on the condition of lobster caught in Florida exist at present. These deal with minimum size, separation of head and tail, and egg-bearing females.

The minimum size allowed is a three inch carapace or a 5 1/2 inch tail, though the tail measurement cannot be applied unless the tail is disconnected from the front part (carapace) of the lobster for measurement purposes. If head and tail are separated under permit, the tail must have a minimum length of 6 inches. If a lobster is undersized it can be returned to the sea unharmed.

Fishermen are prohibited from catching egg-bearing female lobsters, and those found in traps are to be returned alive to the ocean. Stripping eggs from them is also prohibited.

A special permit is required if the separation of head and tail is to be done before landing the lobster. A permit for such separation may be granted if the operation is so far from land that it is not practical to keep the lobsters alive until landing them.

Other Fisheries

The fisheries considered to this point are those subject to extensive legislation. There are a number of other fisheries which are regulated by less extensive provisions, and there are laws which apply to all fisheries. In this subsection the restrictions on fisheries that are individually mentioned in the statutes are outlined, then the regulations of a nonspecific nature are summarized.

Stone Crab

Commercial fishing for stone crab is regulated by season, sex, size, and equipment. Closed season is between May 15 and October 15; minimum size is a 2 3/4 inch forearm (measured by a straight line from the elbow to the tip of the lower immobile finger); and no females may be caught.

A permit is required for stone crab fishing, with one permit issued per boat. The permit number is to be permanently displayed on the traps used. Traps are to have an entrance of no more than 4 inches wide and 6 1/2 inches long, and are to be marked by a buoy.

Blue Crab

A permit is required for blue crab fishing. The traps must have a 2 inch square opening near the bottom of one of the sides and must be attached to a buoy. The buoy as well as the boat used to gather the traps must be color coded for identification from the air. The gear must be marked with the permit number. These regulations do not apply to an individual with fewer than five traps.

Shad

A closed season is imposed on taking shad, from sunup November 15 until sundown March 15. Each week the commercial fishing period is closed for 72 consecutive hours, to be determined by the department. Restrictions are also placed on net mesh size and use of nets.

Fish Size

Many of Florida's fisheries are controlled only by size. The following is a list of minimum (or maximum) size measurements specified by statute:

Bluefish of less length than 10 inches from tip of nose to rear center edge of tail;

Pompano of less length than 9 1/2 inches from tip of mose to rear center edge of tail;

Fluke or flounder of less than 11 inches from tip of nose to rear center edge of tail;

Mackerel and saltwater speckled trout or spotted weakfish of less than 12 inches from tip of nose to rear center edge of tail:

Redfish of less length than 12 inches from tip of nose to rear center edge of tail;

Snook of less length than 18 inches from tip of nose to rear center edge of tail;

Striped bass and bone fish of less length than 15 inches from tip of nose to rear center edge of tail, with exceptions of cultured striped bass;

Black mullet of less length than 12 inches from tip of nose to rear center edge of tail; except in waters located west of the Aucilla River to the Alabama line where the limit is 9 inches and from the Aucilla River to the Citrus - Herando County line where the limit is 10 inches;

Permit fish of 20 inches or greater from tip of nose to center edge of tail must be released.

Excluded Fisheries

An extreme type of fisheries management that exists in Florida is the complete exclusion of a fishery from commercial exploitation. There are at least four kinds of fish that cannot be used commercially but are open to use by sport fishermen. These include tarpon, closed to commercial use in 1937; sailfish, closed in 1955; snook, closed in 1957; and striped bass, closed in 1963. Some kinds of marine life are protected from all commercial fishing interferences, for example, porpoise and manatee.

Gear and Equipment

There are several restrictions in Florida on the use of types of equipment not related to any particular fishery. The most frequent relates to nets and their use. Other restrictions prohibit the use of firearms or explosives to catch fish, and chemicals can be used only by special permit. Spearfishing is restricted in many areas.

The use or possession of a purse seine is prohibited except for taking tuna or menhaden. Nets, seines, caches, wires or other devices cannot be placed so as to prevent the free passage of fish in any river, creek, canal, pass, bayou or other waterway. This includes placing the device singularly, in rotation, one behind another, or in any other way which hinders the free passage of the fish.

Mariculture

A different type of regulatory management is that provided for by the Mariculture Bill of 1969. This law, the first of its kind in the United States, allows a portion of the ocean to be set aside by a private producer to be used for growing fish for commercial purposes.

The area of ocean to be set aside is reserved by a lease. Authority to grant a lease such as this rests in the board of trustees of the Internal Improvement Fund, provided that lease will not be granted if a majority of the county commission of the county of the proposed lease object.

Lease application is made to the board of trustees and includes a description of the area and the use to which it will be put. Public notice of the intended lease is given to allow for objections.

The lease itself may provide for a fixed rental, or for a fixed fee plus some royalty based on productivity, marketability and value of the produce. A bond is required to insure performance of the contract obligations, and the lease holder must pay for the cost of survey. The size of the lease is restricted to the area within the capacity of the lease holder to develop under the terms of the contract. It is the duty of the leaseholder to make the lease boundaries as required by the board of trustees.

Steps are taken to prevent unnecessary interference with the right of the public to use Florida's waterways. Leases may be granted only when not contrary to the public interest, when proper notice to the public has been given, when riparian owners have received specified notice, and when the terms of the lease provide for the use of the area for traditional purposes to the greatest extent possible, for example, swimming, navigation and fishing.

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SPECIAL MANAGEMENT PROGRAMS

There is a type of legislation in Florida whereby special laws apply only to the county or counties specified in the law itself. Laws of this kind that apply to saltwater fishing are numerous and are not included in the codified statutes, though they are important for fishermen in every coastal county.

To give some notice of the regulations that exist in the various counties, the following table indicates the types of regulations that apply in the coastal counties through special legislation. A complete collection of these laws is combined in the Department of Natural Resources booklets on Florida saltwater fisheries laws.

SUMMARY

The majority of Florida's fisheries management programs concerns three fisheries: shrimp, lobsters and oysters. The management programs vary depending on the specific purposes of the program and the biological characteristics of the species regulated.

To facilitate regulation of shrimping, permits of several kinds are required; a landing permit is required for landing shrimp in Florida, regardless of where caught. Permits are also required for shrimping in Florida waters; a live bait production permit is required for those catching shrimp for live bait purposes, and a non-bait commercial permit is required to fish for shrimp for purposes of human consumption.

Immature shrimp are protected by two types of regulations; size limitations and closed areas. Shrimp are defined to be undersized if more than 47 with heads or 70 without heads are required to make a pound. Several areas are opened or closed depending on the maturity of shrimp in each area.

Oyster management programs include restrictions on the kind of gear that can be used to gather oysters. On public beds harvesting is restricted to use of hand tongs in most cases. A minimum size of three inches is placed on harvested oysters, and a closed season prohibits oyster harvest from public beds between June 1 and September 1. Leasing is allowed under which a portion of the ocean floor is leased from the state. On this leased area the leaseholder can plan his operations to achieve the greatest utilization of the resource, and he is free to use gear otherwise restricted, and he may harvest at all times of the year.

A permit is required for lobster fishing in Florida, and a closed season prohibits any lobster fishing from March 31 to August 1. Gear specifications limit the kind of trap that can be used and require a numbering and marking system for traps and boats to facilitate enforcement of fishing laws. A minimum size limit is in effect. A special permit is required if the lobster fishing operation involves separation of head and tail of the lobster before landing.

In addition to the fairly extensive regulatory systems for shrimp, oyster and lobster, other fisheries are also managed by the state. This is done by closed season, size regulation and gear specifications, and involves stone crab, shad, bluefish, pompano, fluke or flounder, mackerel, permit, redfish, snook, striped bass and mullet. Some fish cannot be caught for commercial purposes, including tarpon, sailfish, snook and striped bass. There are various restrictions on gear, the most important being those regulating net use.

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•	Wet restrictions mesh, size, type	Gear restrictions other than net	Minimum fish size one or more types of fish	Closed or restricted areasone or more types of fish	Restricted season one or more types of fish	Muckerel	Pompano	Grouper	Blue crab	Lobster	Oyster	Trout	Shrimp	Mullet
County	· · · -	00			<u>n, ö q</u>	¥	£	0	<u>д</u>	<u>د</u>	0			
Bay	x		x	x					•			x	x	ί χ
Brevard	X	. X		x				•			x		x	x
Brovard	X.	x x		~						x				
Charlotte Citrus	x	x	x	x x				~		·				
Clay	x	*	^	x	*			x	X					x
Collier	x.	x		x	X				•				X	
Dade	x	x		x			x			· .			x	x
Dixie	-	x.		x		-	•						^	^
Duval	x	-	x	~	x					x			x	x
Escambia	· X		x	x	x			•	•	.			x	-
Flagler	x	x	X	. X						•			x	x
Franklin	x	X	· X	x	x					•	x		x	
Gadsden	•		-											x
Gulf	x		x	x	x						x		x	
Hernando	x	x		x					•					
Hillsborough	x			x	•									
Indian River	x			x	x						x			
Lafayette -	· X			x										
Lee	x	x		x										
Levy	X	x		x	X,							x		
Manatee	x	X		x	x									
Hartin	x	x	X.	x					-					x
Monroe	x	x		x	• .	_ X				x			x	
Nassau	X												x	x
Okaloosa	x	x	×	x				2			•		X	X
Palm Beach	· _	X	x	x					•					X
Pasco	X	X		x						•	•		X	
Pinellas .	X	x		×.										
Putnam ' St. Johns	x x		-						•				<u>`</u> *	x
St. Lucie	X X	X	. X	X							x	. X	X	X
Santa Rosa	X	X		x x										
Sarasota	x	x		x									x	
Taylor	x	x		x								x		X
Volusia	x	x	x	x					-		—			
Wakulla	x	-	x	x	x				x		X		X	x
Walton	x		x		~						X		x	
Washington	x		x	x									x	
				~									X	

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