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THE MASSACHUSETTS LOBSTER FISHERY: MODEL LEGISLATION AND MANAGEMENT PLANS

By
Susan B. Peterson
James M. Friedman

February 1977
TECHNICAL REPORT
Prepared with funds from the Pew Memorial Trust and by the Department of Commerce, HOAA Offise of Sea Gront under Grant \#04-6-158-44106, and the Institution's lamine Policy and Ocean Monagement Program.


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Susan B. Peterson James M. Friedman

# WOODS HOLE OCEANOGRAPHIC INSTITUTION <br> Woods Hole, Massachusetts 02543 

## December 1976

## TECHNICAL REPORT

Prepared with funds from the Pew Memorial Trust and by the Department of Commerce, NOAA Office of Sea Grant under Grant \#04-6-258-44206, and the Institution's Marine Policy and Ocean Management Program.

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## Preface

In March of 1976 the Massachusetts Lobstermen's Association (MLA) requested help in the preparation of limited effort legislation. During the previous year the General Court of Massachusetts had directed that the Director of Marine Fisheries should not issue more than 1300 licenses annually for the coastal lobster fishery, a ruling included in an amendment to Chapter 130 of the General Laws. Section 2 of the amendment further directed that the Division of Marine Fisheries develop a system for issuing permits and limiting the amount of gear used in coastal lobstering by 8 December 1976. In December 1976 the Division of Marine Fisheries requested a one-year continuation of the moratorium. The MLA members felt that they had a special interest in the state's action, and thus wanted as much help as possible in preparing legislation affecting their livelihood. While we agreed with MLA that they needed advice on managing the coastal lobster fishery, we could not provide them with information tailored specifically to their needs. Rather, we agreed to prepare model legislation with a number of management alternatives directed at conserving the lobster on behalf of all citizens of Massachusetts. This research was supported by the Department of Commerce, NOAA Office of Sea Grant, \#04-6-158-44016, by the Pew Memorial Trust, and
by the Marine Policy and Ocean Management program of the Woods Hole Oceanographic Institution. We are grateful to Conrad Meyer III of Trinity College, Hartford, Connecticut, and Warren Sass of W.H.O.I. for their help in handling the data, to Bob and Melody Barlow of MLA for help in preparing and mailing interview forms, and to all of the Massachusetts lobstermen who responded to our questions - both on paper and in person.

James M. Friedman<br>Susan Blackmore Peterson<br>December 1976

## PART I

## INTRODUCTION

Since 1968 fishing for lobster has greatly increased in the coastal waters of Massachusetts, but the catch has not. From 1968 to 1973 (the last year for which we have statistics) the number of lobster traps increased from 141,072 to 169,749, an increase of more than twenty percent. Despite the considerable increase of traps, the catch in 1973 of $3,680,554$ pounds represented only two-tenths of one percent more than the 1968 figure of $3,673,014$ pounds. On the basis of interviews with lobstermen and state fishery officials, we are fairly certain that when the statistics for the last three years are compiled they will not reveal a substantial improvement in the lobster fishery.

In short, there are not enough lobsters in the coastal waters of Massachusetts to support the number of traps that are currently being fished. The individual lobsterman is well aware of this - the return on his investment for gear has continued to decline. As overfishing has increased the profit for the lobstermen has decreased.

Lower profits are not the only effect of overfishing. Biological problems result as well. The dynamics of the lobster population are complex, and there are large gaps in our knowledge. However, on the basis of the scientific data that has been collected, biologists believe that about $90 \%$ of
the lobsters in the coastal fishery are caught during the year they reach the current minimum carapace size of 3 3/16 inches. This catch figure of $90 \%$ suggests that lobstermen may be risking the extinction of lobster populations in certain areas. By increasing the minimum carapace size to $31 / 2$ inches, the state could ensure that all lobsters have reached sexual maturity and have had the opportunity to reproduce.

Changing the minimum size from 3 3/16 to $31 / 2$ inches will probably cause some financial problems for the lobstermen during the first year. The lobster catch will be smaller than that of the previous year because fewer lobsters will be available. However, it seemed reasonable to us to get through the difficult transition quickly rather than to draw it out over a number of years through gradual increases in minimum size. An added advantage is that all gear could then be readjusted at one time. More serious problems may arise for those non-Massachusetts lobster fishermen who wish to sell their lobster in the Commonwealth's markets. Although not prohibited from catching smaller lobster by this change in law, they could in fact sell only those lobster which meet Massachusetts minimum size requirements. Thus opposition to this change may not come from Massachusetts lobstermen interested in maintaining a healthy fishery, but from Massachusetts buyers who want to maintain their volume of business and from lobstermen coming from outside the state, from Canada in particular.

To remedy the problems caused by overfishing we propose model legisiation which would authorize the Massachusetts Division of Marine Fisheries to adopt management regulations for the lobster fishery.

Two types of model legislation are proposed. The first model statute grants to the Director of Marine Fisheries broad authority to regulate the lobster fishery. The statute itself contains no management plan. Discretion is placed in the Director. The rationale behind such a statute is to provide administrative flexibility in the management of the fishery. Given the complex dynamics of the lobster fishery, it can reasonably be argued that a specific management plan should not be chiseled in statutory bedrock. The fishery changes from year to year, statutes usually do not.

A second type of statute, which we propose, would be more specific and thus limit the Director's discretion. Such a statute would mandate a particular management plan. However, this legislation would still allow the Director enough flexibility to "fill in the blanks" on such issues as gear limitations, so that some ability to deal with changes in the fishery would be retained.

Certainly any regulation of the lobster fishery will require social judgments as well as economic and biological judgments. In the end the management plan will determine who fishes and who doesn't. Thus a prime justification for the second type of statute is that such a basic judgment should be
made in the legislature, not by administrative fiat.
What follows in this report is (l) a presentation and discussion of several management plans, (2) a general statute which would place broad discretion in the Director of Marine Fisheries to adopt a management plan, and (3) specific statutes which authorize those management plans previously discussed.

The lobstermen of Massachusetts have traditionally been a tough, independent, and respected group of fishermen. The value of this fishery to Massachusetts is surely greater than any financial statistic would suggest. The fishery is one of few remaining examples of small-scale, non-corporate, individual enterprise. If there were enough lobsters, no one would suggest government regulation of this fishery. However, given the economic plight of the fishery caused by overfishing, and given the potential for the destruction of the lobster population, which is a public resource, some form of government regulation now seems necessary, if for no other reason than to guarantee the continued existence of a lobster fishery in Massachusetts.

Although all of the management plans discussed here limit entry to the lobster fishery, only the two-tiered management plan with Class $A, B, C$ \& D licenses approaches the complexity of most limited entry plans. Few limited entry plans have been put into practice, ${ }^{1}$ and the Canadian attempt to manage its

[^0]lobster fishery most closely resembles what may happen in Massachusetts. ${ }^{2}$ Complex social legislation may fail either the population of lobster or lobstermen may be harmed. Most of the literature on limited entry deals with the theory, or the practice under a very different political structure, such as in South Africa. Thus we have suggested management plans with built-in flexibility to react to economic or biological changes.

2 DeWolf, A. Gordon 1974. The Lobster Fishery of the Maritime Provinces: Economic Effects of Legislation. Ottawa: Bulletin (\#187) of the Fisheries Research Board of Canada.

Plan I

## Two-Tiered Lobstering License System

I. Two categories of commercial lobstering license
A. Class A commercial licenses - for fishermen who catch more than 4000 lbs./yr.

1. Eligibility in year 1

Applicant must have caught a minimum of 4000 lbs. of lobster in any one of 3 preceding years.
2. Eligibility in all succeeding years

Applicant must have held a part-time commercial license for at least one year, and he must demonstrate to the Director that he is capable of catching more than 4000 lbs./yr.
3. Renewal

A full-time commercial license shall be renewed annually to all license holders who have caught more than 4000 lbs . in the preceding year. Hardship cases may be considered by the Director.
B. Class B commercial license - for fishermen who catch more than 1000 lbs. but less than 4000 lbs./yr.

1. Eligibility in year 1

Applicants for a part-time license must have caught a minimum of 1000 lbs . of lobster per year, averaged over the previous 3 years.
2. Eligibility in all succeeding years Applicant must demonstrate ability to catch lobster to the satisfaction of the Director.
3. Renewal

A part-time commercial license shall be renewed annually to all license holders who have caught at least 1000 lbs . in the previous year. Hardship cases may be considered by the Director.
II. Limitations on the number of commercial lobstering licenses
A. Year 1

All applicants who qualify under the provisions of Part I will be issued commercial lobstering licenses
B. All succeeding years

All applicants for renewal of commercial lobstering licenses who meet the qualifications under Sections IA3 and IB3 shall be issued licenses. New licenses shall be issued at the discretion of the Director, taking into account biological data and catch statistics. (The Director must publish a list of priorities for determining recipients of new licenses).
III. Transfer of licenses

Commercial lobstering licenses are not transferable.
IV. Limits on the number of traps each license holder may fish
A. A full-time commercial lobstering license holder would be allowed to fish a maximum of 400 traps in Year 1 , with annual reductions in the number of traps until a reasonable number (to be determined by the Director) is reached.
B. A part-time commercial lobstering license holder may fish a maximum of 100 traps in Year 1 , with annual reductions in the number of traps until a reasonable number (to be determined by the Director) is reached.
V. Trap tags

After January 1 of each year, each commercial lobstering license holder shall mark his traps with tags provided by DMF. The cost of each tag shall be not less than $\$ .10$. Any trap intended to catch lobster which does not have a current tag will be confiscated. Any fisherman found using untagged gear or gear with expired tags shall be punished according to provisions in law. Replacement tags will be available from DMF.

Part III
Two-Tiered Lobstering License System

1. General Rationale

The two-tiered licensing system is based upon the following assumptions.

1. There are not enough lobsters in Massachusetts' coastal waters to support the current number of commercial traps.
2. To conserve the lobster and to preserve the lobster fishery, Massachusetts must restrict fishing effort by limiting commercial lobstering licenses, and the number of traps per 1icense.
3. In managing the lobster fishery, Massachusetts might reasonably conclude that a management scheme should provide for a certain number of full-time commercial lobstermen. A full-time commercial lobstering license (Class A license) would thus be issued to certain lobstermen based upon criteria and standards set up by the Division.
4. In determining who will receive Class A lobstering licenses, Massachusetts could take into account which lobstermen have made the more substantial investments of time, money, and effort, and which lobstermen fish efficiently.
5. Massachusetts could also issue part-time commercial lobstering licenses (Class B) so that all commercial lobstermen who work on a part-time basis would not be disenfranchised. However, the total number of traps allowed for these licenses would be significantly less than for the full-time licenses.
6. In determining who would receive Class B licenses,

Massachusetts could take into account the same criteria used for determining Class A licenses, although, obviously, the standards would differ for each license. Examples of the criteria the state might use are; numbers of years involved in the lobster fishery, amount of income earned from lobster fishing, amount of income earned from all kinds of fishing.
2. Advantages and Disadvantages of the Two-Tiered Licensing System

The effectiveness of the two-tiered licensing plan will depend upon the specific qualifications for the $A$ and $B$ commercial licenses as determined by the Director of Marine Fisheries, the number of $A$ and $B$ licenses issued, and the number of traps allowed per license. Class $C$ and D licenses would also be issued, but these classes are not covered under the legislative mandate which was concerned with commercial fishery only. A Class $C$, or student license, allots 25 traps during the summer months, while a Class $D$ family license allots 10 traps for year-round fishery. These classes would not be eliminated under any management plan, although the number of traps/license may be reduced.

In view of the lack of compiled statistics for catch for the last three years we used the basis of prior statistics and interviews with individuals in the Division of Marine Fisheries and with fisheries biologists to estimate that there are approximately 180,000 to 200,000 traps in the Massachusetts coastal lobster fishery. These traps represent a drastic overinvestment.

One fisheries biologist who has reviewed a variety of studies told us that he feels current catch levels could be maintained with a 75 reduction in the number of traps.

Given the level of over-fishing, we believe one rational management plan would be as follows. To qualify for an A license a lobsterman must have averaged at least 4000 pounds catch over the last three years (we assume the Director could set up a hardship board for special cases, for example where a full-timer was out sick for a season). We believe the 4000 -pound minimum represents a broad and generous definition of a full-time lobsterman. We estimate that approximately 400 of the current 1300 commercial license holders would thus qualify for an $A$ license.

In the first year of the plan an A license holder would be entitled to fish 400 traps. This figure would be reduced by $10 \%$ per year until the Director makes a finding that the fishery is operating at an efficient level.

To qualify for a $B$ license under the two-tiered plan a lobsterman must have averaged at least 1000 pounds catch over the past three years. Approximately 300 of the current 1300 commercial license holders would qualify for a $B$ license (not counting, of course, the 400 men who already have A licenses). The B license would entitle the lobsterman to fish 100 traps in the first year, this figure to be reduced by $10 \%$ per year until the Director finds that the fishery is operating at an efficient level.

At first glance these reductions in gear may seem draconian
to some lobstermen. However, as a $75 \%$ cut in gear alone would probably not result in a smaller catch, the effect of this plan on the commercial license holders will be to reduce cost, not catch.

The important advantage of this two-tiered licensing system is the recognition that among the current commercial license holders there are two kinds of lobstermen - those who rely on lobstering as their livelihood, and those who use a commercial license simply to supplement another source of income. The A and B license plan distinguishes between them and makes both a full-time commercial fishery and a parttime commercial fishery possible. Of course, a disadvantage of the scheme is that a substantial number of individuals who currently hold commercial licenses will be unable to qualify for either an $A$ or $B$ license. We believe that approximately 600 of the current $1350+$ commercial license holders catch less than 1000 pounds per year and thus would lose their commercial 1icenses.

The justification for a state policy which would exclude individuals who catch less than 1000 pounds of lobster per year from the commercial fishery is based on two facts: First, there are not enough lobsters to support current levels of fishing so someone must be cut back. Second, in determining who will be allowed to fish commercially the state may wish to encourage those individuals who make a serious commitment of time and effort to the fishery. The state may rationally conclude that
part-timers who catch less than a thousand pounds are depressing the fishery as a whole by making it impossible for those fishermen who make larger investments of time and effort to function. To encourage a viable fishery, the state may exclude those part-timers.

We are not suggesting that this is the only rational way in which to structure the lobster fishery. The state could also conclude as a matter of policy that the continued existence of a full-time fishery is not important. Thus traps could be limited to 50 per person. We are not suggesting that it would be wise to follow such a policy. Our point is that any management plan will structure the fishery in one way or another. It is within the constitutional power of a state to structure the fishery. When there are not enough lobsters to go around, structuring of the industry is unavoidable.

The two-tiered licensing system does not guarantee that over-fishing of the lobster population will disappear. Should the state conclude that the lobster population is endangered, other regulations may prove necessary. (So far we have concentrated upon danger to the lobsterman rather than to the lobster.) The model statute presented in this report contains a provision which requires an increase in the minimum carapace size from 3 3/16" to $31 / 2^{\prime \prime}$ by 1980. This change in minimum size may allow mature lobsters an extra spawning season. If this proves true, pressure on the lobster population would be reduced through a law which has nothing to do with licensing procedures
directly.
The two-tiered system would of course result in substantial administrative responsibilities for the Division of Marine Fisheries. We have described the initial qualifications to obtain $A$ and $B$ commercial licenses. However, once the system is functioning, the Director would have to establish fair and orderly guidelines to determine who gets licenses when they become available. Under this system the license of a retiring lobsterman would revert to the state. The lobsterman could not sell his license nor would licenses be transferable. We believe licenses must be non-transferable to prevent the development of a black market in lobster licenses and to prevent the value of the licenses from fluctuating. The standards and criteria developed by the Division, not the financial ability to pay, should determine eligibility for a license.

In addition to the administrative problems involved in setting up a fair licensing system, there is the problem of enforcement once the system is operating. The heart of the twotiered management plan is the limitation upon the number of traps. We spoke and corresponded with a large number of the lobstermen who strongly emphasized the importance of enforcing this limitation. Most lobstermen realize they would be better off if the total number of traps could be reduced because they could catch the same amount of lobster hauling fewer traps. Their fear is that some fishermen will cheat and take advantage
if enforcement is lacking, One way to regulate the number of traps being fished by each lobsterman is to issue a fixed number of trap tags per license. The fishermen would be responsible for the tagging of their traps and the replacement of lost tags, while the enforcement officers would assume that untagged traps on a trawl were illegal. Fishing untagged traps could be punished by a fine, temporary suspension of lobstering license or a permanent loss of license. Although there is some problem with the accidental loss of tags or tagged traps, several states (Maryland is a good example) have found that enforcement officers familiar with their territory know which fishermen are fishing legally and applying for legitimate replacement tags, and who are exaggerating losses in order to fish more than the maximum allowable number of traps. Thus the number of enforcement officers and their knowledge of the territory is important to any management system.

We believe that the number of people involved in enforcement of fisheries regulations must be increased if the lobstermen are to have faith in any management proposal. The costs of increased enforcement may be partially defrayed through license fees and trap tag fees raised in the fishery itself.

This would mean that all monies raised through a management plan would be dedicated to the marine fisheries fund. We endorse the idea of dedicated funds because we believe it is of particular importance that the lobstermen be convinced of the
state's commitment to provide better enforcement in exchange for higher licensing costs to the fishermen. We do not propose a specific enforcement plan here. We are aware that several plans are being debated within the state agencies.

As a final point we note that the Commonwealth of Massachusetts does have the constitutional authority to use its police power to conserve a natural resource such as lobsters and to regulate an industry such as the lobster fishery. Any management plan will meet with less than total acceptance. The wisdom of any plan will be open to question. However, the authority of the Commonwealth to manage the coastal lobster fishery is clear, provided that the regulation is neither arbitrary nor capricious.

## Plan II

## Single Class of Conmercial Lobstering License

I. The license
A. Eligibility in year one

The applicant must have caught an average of more than $\qquad$ lbs. of lobster during the past 3 years in Massachusetts waters, and more than $\qquad$ \% of his income should have been from lobstering.
B. Eligibility in all succeeding years The Director of the Division of Marine Fisheries shall establish a list or rank ordering of all applicants for a commercial lobstering license based on date and time of application. The applicant at the top of the list is granted the first available license and so forth.
C. Renewal

A commercial lobstering license shall be renewed annually to all license holders who caught more than lbs. in the previous year, and whose income from lobstering was more than $\qquad$ \% of total income.
II. Limitations on the number of licenses.
A. Year one

All eligible under Section IA will be issued commercial lobstering licenses.
B. All succeeding years

All eligible under Section IC will be issued commercial lobstering licenses. New licenses will be issued or previously held licenses retired at the discretion of the Director.
III. Limitation on number of traps

A commercial lobstering license holder would be allowed to fish no more than 400 traps in year 1 , no more than 350 traps in year 2, no more than 300 traps in year 3, no more than 250 traps in year 4. The number of traps a licensee may fish in year 5 and all succeeding years shall be determined by the Director.

Plan II

Single Class of Commercial Lobstering License

Under this lobster management system there would be a single class commercial lobstering license, and eligibility for that license would be determined by the Division of Marine Fisheries. Percent of income earned and/or pounds of lobster caught in the previous year might be the most important factors in determining eligibility. This system would be based upon the assumption that men who earn the major part of their income from lobstering should be provided the opportunity to fish before those who only supplement their incomes from lobstering. If this plan were adopted by the Division, it would mean that men who had a greater investment in time and money in the fishery would be rewarded with the right to fish. Many full-time lobstermen argue that this plan makes sense because they are more conservation oriented, more likely to abide by regulations that ensure a future in the lobster business, than the part-time fishermen who have alternative sources of income.

There are several advantages to this system. Enforcement would be easier than under Plan l because all license holders would be subject to the same regulations: limitations on traps, number of trap tags issued, and gear marking. General administration would also be easier because all applicants would have to meet the same standards for eligibility. The disadvantages of this plan are that a large number of
current lobster license holders would be ineligible for new licenses if the pounds requirement were over 4000 lbs. and the percentage of income requirement were over $80 \%$. In our first data sample in Appendix A (from the interview form sent to MLA members), 53\% of the respondents earned more than $80 \%$ of their income from lobstering. If that population reflects the general case, then about 715 lobstermen would be eligible for licenses under this system. With 400 traps/license allowed in the first year, then as many as 286,000 traps could be fished $=$ hardly a reduction from current fishing levels. Thus this system could eliminate $600+$ fishermen, while not reducing the pressure on the resource. For this system to be successful, the percentage of income earned, pounds landed the previous year, and limitations on the number of traps fished would all have to be carefully determined. License transferability, trap tagging and enforcement issues discussed in the two-tiered licensing system also apply to this system. In theory the plan would generate a group of professional, full-time lobstermen which could gradually expand as the resource stabilized under proper management. In fact, serious difficulties may arise if the Division has to collect information on percentage of income earned from commercial lobster fishing. Two of these problems are the definition of income and the intrusion of greater government interference into the lives of the lobstermen.

Plan III
The Trap Fee Plan

## I. Licenses

Lobstering licenses shall be issued to whomever applies and shall be renewed annually.
II. Number of licenses

There are no limitations on the number of licenses.
III. Traps

There is no limitation on the number of traps. (Upper limit to prevent corporate take-over of the fishery may be established).
IV. Tags

After January 1 of each year, each comercial lobstering license holder shall mark his traps with tags provided by DMF. The cost of each tag shall be not less than $\$ 0.10$. Any trap intended to catch lobster which does not have a current tag will be confiscated. Any fisherman found using untagged gear or gear with expired tags shall be punished according to provisions in law. Replacement tags will be available from DMF. V. Trap Fee

Each licensee shall pay a fee for each trap he fishes with the exception that lobstermen fishing before year 1 will have $1 / 8$ of the number of traps fished in 1976 free in perpetuity.

The amount of the fee may vary annually; it is set at the discretion of the Director.

## The Trap-fee Plan*

Perhaps the most pervasive fear of the lobstermen whom we have surveyed is that fisheries management is likely to result in an unwieldy state bureaucracy, an unworkable plan, and more government interference in their lives. Thus even those lobstermen who recognize the need for some kind of management are usually dismayed when a specific plan is proposed.

The virtue of the trap-fee plan is that it avoids many of the administrative problems posed by the other management plans. Under the trap-fee plan a lobstering license shall be issued to anyone who applies. The state shall make no qualifications for a commercial license (with perhaps the exceptions of age and residence). There will be no limit on catch or gear under the trap-fee plan. Instead the state shall levy a fee on each trap. The purpose of this fee will be (1) to discourage the inefficient use of traps, and (2) to recover a rent on a public resource from those who make use of the resource. The amount of the tax would be determined annually by the Director of the Division of Marine Fisheries. The fee could be raised if over-fishing continued or lowered if the fishery were in need of stimulation.

[^1]The advantages of the trap-fee plan are substantial. The state would not by regulation disenfranchise any lobstermen as is required under the previous two plans that we considered. The state would thereby avoid the whole problem of deciding who qualifies for commercial licenses and who does not. Nor would the state find it necessary to set a particular gear limitation. In short, several of the key administrative problems are avoided. In addition the plan encourages efficient lobstermen while discouraging inefficient use of gear. The public receives a return upon the exploitation of the lobsters through the trap fee. Finally, the fee may be used to control over-fishing.

The plan does have several basic disadvantages. There is no trap fee currently. There is no rent charged for the resource at the present time. Thus many lobstermen are likely to view the plan as an attempt to make them pay for "what is theirs". To tell lobstermen that they do not have an inherent right to catch lobsters, that lobsters are a public resource, may be a politically impossible task.

Also the plan, being based upon the idea of rewarding efficiency, may seem impersonal or harsh to those presently fishing. One way of softening the trap fee plan would be to allow current commercial lobstermen to have $1 / 8$ or some other fraction of their current traps free. In other words, a grandfather clause tax-break given to current license holders would
provide some recognition of existing investments. Finally the trap fee plan might allow a highly capitalized individual or corporation to force out smaller competitors. We believe this result would be so undesirable that we recommend that the state act decisively to prevent such an occurrence. Should the fishery begin to be dominated by large concerns, an upper limit on the number of traps per license would then be justified.

Plan IV
Efficiency Plan
I. Eligibility for a commercial lobstering license
A. In year one

All applicants who had a commercial lobstering license during the year before these regulations came into effect shall be issued a commercial lobstering license for the first year of this program.
B. In all succeeding years

The Director of the Division of Marine Fisheries shall establish a list or rank ordering of all applicants for a commercial lobstering license based on date and time of application.
C. Renewal

A commercial lobstering license shall be renewed annually to all license holders whose catch of lobster per trap fished is greater than _lbs. during year one; the minimum lb ./trap requirement shall increase at the rate of ___ until the level of _lbs./trap is reached.
II. Limitations on the number of licenses
A. Year one

All eligible under Section TA shall be issued commercial lobstering licenses.
B. All succeeding years

All eligible under Section IC will be issued commercial lobstering licenses. New licenses will be issued or previously held licenses retired at the discretion of the Director, taking into account biological data and catch statistics.
III. Trap tags

After January 1 of each year, each commercial lobstering license holder shall mark his traps with tags provided by DMF. The cost of each tag shall be not less than $\$ .10$. Any trap intended to catch lobster which does not have a current tag will be confiscated. Any fisherman found using untagged gear or gear with expired tags shall be punished according to provisions in the law. Replacement tags will be available from DMF.
IV. Transfer of licenses

Commercial lobstering licenses shall be non-transferable.

## Plan IV

## Efficiency Plan

This plan was originally proposed by individuals within the Massachusetts Division of Marine Fisheries. The essence of the plan is that the administrator would issue commercial lobstering licenses on an annual basis. Licenses would be renewable. However, to qualify for a renewal a lobsterman must have fished at or above a minimum efficiency level that has been determined by the Director. This efficiency requirement would probably be expressed in pounds caught per trap and determined on an annual basis. The efficiency requirement would discourage fishermen from fishing more traps than necessary to catch available lobsters.

In the first year of the plan's operation, licenses would be granted to current license holders. As licenses became available through retirement or failure to meet the efficiency requirement, the Director would have the authority to determine the number of new licenses to be issued. The available licenses would then be issued on a first-come, first-served basis, thus opening the public resource to everyone on an equal basis.

The advantage of the efficiency plan is that, like the trapfee plan, it eliminates an a priori administrative decision which would disenfranchise a particular group of fishermen. Also, the Director would not find it necessary to establish gear restrictions. A disadvantage of the plan is that the Director would have
to establish a minimum efficiency that was somehow rationally geared to the conservation of the lobster stock and to the well-being of the fishery. However, such precision in determining the relation of catch and gear statistics to the dynamics of the lobster population and to the proper level of employment in the lobster fishery may be difficult to achieve. In addition, the use of the efficiency requirement does not eliminate the necessity for making value judgments about the structure of the lobster fishery. Perhaps special provisions should be made for an individual who has devoted most of his life to lobstering, but who is now in his seventies and has fallen below the minimum efficiency requirement. Perhaps not. It cannot be argued that the efficiency plan eliminates the necessity of facing such questions.

PART II
INTRODUCTION: STATUTES

What follows are five statutes. The first statute grants broad discretion to the Director of Marine Fisheries so that he may choose a management scheme for the lobster fishery. While certain procedural requirements are placed upon the Director by this statute, the Director would have great flexibility in managing the lobster fishery.

Each of the four remaining statutes would authorize the Director to adopt a specific management plan (i.e. the four plans we have presented: two-tiered plan, single-class plan, trap-fee plan, efficiency plan). The legislature would choose one of these four plans, which the Director would then administer. The justification for these statutes is the hypothesis that fundamental decisions concerning the structure of lobster fishery should be made by the legislature, not at the administrative level.

The first statute, the general statute, incorporates various provisions from the existing law which deal with such peripheral problems as gear-marking and the taking of female lobsters. The four other statutes contain only provisions dealing with the management plans. This does not mean other provisions will not be required; our purpose here was to present the proposed plans in statutory language.

STATUTE \#1
LOBSTER MANAGEMENT ENABLING ACT

|  |  | Source |  |  |
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| Section 201 | Licensing | 130 | MGLA | 38 |
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Section 101 Powers of the Director to Administer the Coastal Fishery

The Director shall have the authority to adopt, amend, or repeal rules or regulations to (I) promote and manage the lobster fishery, (2) conserve and protect lobster, (3) properly administer the lobster fishery.

The Director's authority shall include, but not be limited to, the power to (l) define commercial and family lobster licenses, (2) determine qualifications for comercial and family lobstering licenses, and (3) adopt regulations and charge fees to promote rational management of the lobster fishery.

Nothing in this section shall be construed to abrogate authority granted to the Director in Chapter 130 section 17 and 17A.

Section 201 Lobster Licenses

A person shall not fish for or take lobstexs in coastal waters or lands of the Commonwealth without a lobstering license issued by the Division of Marine Fisheries.

The Division of Marine Fisheries may issue commercial lobstering licenses and family lobstering licenses. A commercial lobstering license authorizes the holder to fish for, take and land lobsters for commercial purposes. A commercial lobstering license shall be issued to an individual but it may be endorsed by the director for use on fishing vessels, in which case it shall cover all persons on board such vessel. The holder of a non-commercial lobstering license shall carry on his person or post on his vessel the lobstering license while engaged in fishing.

Section 301 Hearing Requirements

The Director shall hold a public hearing and provide an opportunity for public comment prior to establishing any gear limitation, licensing requirement, or determination of the number of licenses to be issued in a given year.

A family license authorizes the holder to fish for, take and land lobsters for home consumption, but not for any commercial purpose. No person holding a commercial lobstering license need hold a family license. All lobstering licenses may be renewed annually by the director.

Section 401 Minimum Size of Lobsters

After January 1, 1980, no lobsters which measure: less than three and one-half inches in length from the rear of the eye socket along a line parallel to the center line of the body shell to the rear end of the body shell shall be taken in the coastal waters or lands of Massachusetts.

Section 501 Penalties

The Director may suspend or revoke the lobstering license of any person who violates a rule or regulation of the Director enacted under Section 1. Nothing in this section shall be a limitation upon penalties authorized in Chapter 130 section 17.

Section 601 Reporting of Lobsters Taken and Purchased

On January 15, April 15, July 15, October 15 of each year a commercial lobster license holder shall report to the Division of Marine Fisheries the number of lobsters he has taken during the preceding three months.

On January 15, April 15, July 15, October 15 of each year a primary buyer of lobsters caught in Massachusetts waters shall report to the Division of Marine Fisheries the number of pounds of lobsters purchased during the preceding three months. Such reports shall be filed on forms supplied by the Director. Such reports shall not be made available by the Director to any state or federal agency for the purpose of assessing income tax liability.

Section 701 Taking or Selling Female Lobsters Bearing Eggs

Whoever takes, sells or has in possession any female lobster bearing eggs shall be punished by a fine of not less than $\$ 50$ or more than $\$ 100$ for every such lobster or by imprisonment for not less than 1 nor more than 3 months. Whoever has in possession any female lobster from which he knows eggs have been removed by any means, other than natural hatching, shall be punished by a fine of not less than $\$ 50$ nor more then $\$ 100$ for every such lobster or by imprisonment for not less than one nor more than three months. Any holder of a lobstering license who has in his possession female lobsters from which eggs have been removed by any means other than natural hatching, shall be punished by a fine of not less than $\$ 50$ nor more than $\$ 100$ for every such lobster or by imprisonment for not less than one nor more than three months.

A person who takes any such lobster and immediately returns it alive to the waters from which it was taken shall not be subject to such penalty. This section shall not apply to lobsters spawning in fish cars or pounds if they are immediately liberated alive in the coastal waters, nor to the taking, sale or possession of lobsters as provided in Section Eight.

Section $801 \frac{\text { Plants for Propagation of Lobsters: Establishment }}{\text { and Maintenance; Appropriations }}$

The director shall, to the extent of appropriation or appropriations therefore, establish and maintain a plant or plants for the propagation of lobsters by rearing them from the time of hatching to the bottom crawling stages. Lobsters from which the eggs are to be obtained for such hatching and rearing shall be taken and disposed of in accordance with 140 M.G.L.A. 43. The Director, in his budget estimates, filed pursuant to section three of chapter twenty-nine, shall include a statement of appropriation or appropriations recommended by him for the purpose of carrying this section into effect.

Section 901 Conditions for Taking or Possession of Egg Bearing Lobster; Rearing and Liberating of Young; Disposition of Lobsters by Director

Between March first and October thirty-first, both dates inclusive, in any year, the director may authorize the taking or possession of egg-bearing lobsters by any person licensed under Section two to catch or take lobsters and edible crabs, upon the condition that such egg-bearing lobsters shall be taken, held or delivered in accordance with the instructions of the Director to a plant for the propagation of lobsters established and maintained for rearing them from the time of hatching to the bottom crawling stages or for such other disposition as the Director may deem for the best interests of the Commonwealth. If the eggs from the lobsters so obtained shall be hatched the young therefrom shall be reared to the bottom crawling stages. Lobsters from which eggs have been so hatched, and the young lobsters so reared, shall be liberated, as nearly as possible, in the areas from which such egg-bearing lobsters were obtained and in the same proportion. Nothing in this section shall be so construed as to prevent the Director from otherwise disposing of lobsters from which eggs have been so removed, or young lobsters so reared, when in the opinion of the Director by so doing depleted or non-productive areas may be benefited.
STATUTE ..... \#2
TWO-TIER LICENSING PLAN
Section 101 Commercial Lobstering Licenses
Section 201 Issuing of Licenses, Non-Transferability
Section 301Qualifications for Commercial Lobstering Licenses:First Year
Section 401 Qualifications for Commercial Lobstering Licenses
Section 501 Trap Tags
Section 601 Director's Authority to Make Regulations
Section 701 Hearing Requirements
Section 801 Suspension and Revocation of CommercialLobstering Licenses

Section 101 Commercial Lobstering Licenses

There are hereby established a Class A commercial lobstering license and a Class $B$ commercial lobstering license. A Class A license shall entitle the holder to fish up to 400 lobster traps during the first year that this chapter is in effect. A class B license shall entitle the holder to fish up to 100 lobster traps during the first year that this chapter is in effect.

Section 201 Issuing of Licenses, Non-Transferable

Commercial lobstering licenses shall be issued by the Director in January of each year. Licenses shall be good for one year. Licenses are not transferable.

## Section 301. Qualifications for Comercial Lobstering Licenses: First Year

The Director shall issue a Class A commercial lobstering license for the first year that this chapter is in effect to any applicant who is a resident of Massachusetts and has landed an average of 4000 pounds or more of lobster over the preceding three years. The Director shall issue a Class B commercial lobstering permit to any applicant who is a resident of Massachusetts and has landed at least 1000 pounds of lobster per year during the preceding three years. The Director may charge a license fee of up to $\qquad$ for a commercial lobstering license.

The Director may establish a fair and orderly procedure to act upon hardship applications.

Section 401 Qualifications for Commercial Lobstering Licenses

At the end of the first year that this chapter is in effect, and annually thereafter, the Director shall determine the number of commercial lobstering licenses to be issued for the next year. The Director shall have the authority to change the trap requirements for Class $A$ and Class $B$ licenses in order to conserve the lobster resource and promote the lobster fishery. However, no license holder shall be denied the right to renew his license provided that the holder has met the minimum catch requirements in the preceding year and has not been found to have violated any lobster management law or regulation. The Director may establish fair and orderly procedures to act upon hardship applications.

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Section 401 (con't)
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When commercial lobstering licenses are to be issued the Director must establish and publish notice of requirements for such licenses. In establishing requirements for commercial lobstering licenses the Director shall consider (1) the experience of the applicant in the lobster fishery (2) the experience of the applicant in maritime activities (3) the need for new people in the lobster fishery.

Section 501 Trap Tags

All commercial lobstering license holders shall mark their traps with a tag provided to them for a fee by the Director. The Director shall determine the fee; however the fee shall not be less than $\$ .10$ per tag.

Section 601 Director's Authority to Make Regulations

The Director is authorized to adopt any regulation necessary to promote the lobster fishery and conserve the lobster resource consistent with this chapter.

Section 701 Hearing Requirements

Any time the Director intends to alter the trap limit for commercial lobstering license he shall hold a public hearing and provide an opportunity for public comment. Any time the Director: intends to substantially alter the number of commercial lobstering licenses he shall hold a public hearing and provide an opportunity for public comment.

Section 801 Suspension and Revocation of Commercial Lobstering Licenses

No person shall catch or attempt to catch lobster in the coastal waters or lands of the Commonwealth of Massachusetts without a valid lobstering license and without properly tagged traps.

The Director may suspend or revoke the license of any person who violates this section or any other regulation made by the Director under Section 601, provided that any person accused of such violation be granted a fair hearing prior to the imposition of any sanction, Nothing in this section shall limit the liabilities of the violator under other sections of the General Laws of Massachusetts.
StATUTE ..... \#
SINGLE CLASS LICENSING PLANSection 101 Commercial Lobstering Licenses - first yearSection 201 Renewal
Section 301 New Commercial Lobstering Licenses
Section 401 Restrictions Upon the Number of Traps
Section 501 Hearing Requirement

## STATUTE \#3

## SINGLE CLASS LICENSING PLAN

## Section 101 Commercial Lobstering Licenses - first year

Each year the Director shall issue or renew commercial lobstering licenses. During the first year that this chapter is in effect the Director shall issue a license to any applicant who has caught an average of pounds or more of lobster per year over the past three years and has earned at least $\%$ of his personal income from lobstering. A commercial lobstering license shall be good for one year. A commercial lobstering license is not transferable.

Section 201 Renewal

The Director shall renew a commercial lobstering license for one year, provided that the license holder has met a minimum catch requirement determined by the Director. Ther Director shall establish a minimum catch requirement on an annual basis.

## Section 301 New Commercial Lobstering Licenses

The Director shall have the authority to annually determine the number, if any, of new commercial lobstering licenses to be issued each year. The Director shall issue a commercial lobstering license to any applicant who is eighteen years old or older and a resident of Massachusetts. Licenses shall be issued upon a firstcome, first-served basis.

Section 401 Restrictions Upon the Number of Traps

A commercial lobstering license holder shall be allowed to fish a maximum of 400 traps during the first year this chapter is in effect, a maximum of 350 traps during the second year this chapter is in effect, a maximum of 300 traps during the third year this chapter is in effect, and a maximum of 250 traps during the fourth year this chapter is in effect. Thereafter the Director shall determine on an annual basis the maximum number of traps to be fished by a license holder.

Section 501 Hearing Requirement
Prior to determining the number of commercial lobstering licenses to be issued on an annual basis, a minimum catch requirement, or a limitation on gear, the Director shall hold a public hearing and provide an opportunity for public comment.

## STATUTE \#4

## TRAP - FEE PLAN

Section 101 Commercial Lobstering Licenses

Section 201 Trap-tags, Fee for Trap-tags

Section 301 Fee not Required for Certain Trap-tags

Section 401 Director's Authority to make Regulations

Section 501 Suspension and Revocation of Commercial Lobstering Licenses

STATUTE \#4
TRAP - FEE PLAN

Section 101 Commercial Lobstering Licenses

In January of each year the Director shall issue a commercial lobstering license to any applicant who is eighteen years old or older and a resident of Massachusetts. The license shall entitle the holder to fish for lobster in the coastal lands and waters of Massachusetts for commercial purposes.

A commercial lobstering license shall be valid for one year from the date of issue. The holder may then apply for renewal. Commercial lobstering licenses are not transferable.

Section 201 Trap-tags, Fee Trap-tags

A commercial lobstering license holder shall mark each of his traps with a tag provided to him for a fee by the Director. A trap-tag shall be valid for one year from the date of issue. The Director shall annually determine the fee for a trap tag. The Director shall determine the fee with regard for the conservation of the lobster resource and for the well-being and efficiency of the lobster fishery. The Director shall provide replacements for lost tags.

Prior to setting or altering the trap-tag fee the Director shall hold a public hearing on the question of the fee and provide an opportunity for public comment.

Section 301 Fee not Required for Certain Trap-tags

Commercial lobstermen who fished in 197_ shall not be required to pay for tags in future years for the number of traps equal to 1/8th the number each fished in 197 . The Director shall determine how many traps each fisherman fished in 197 -

Section 401 Director's Authority to make Regulations

The Director shall have the authority to make any regulation necessary to conserve the lobster stocks or promote the lobster fishery consistent with this chapter.

## Section 501 Suspension and Revocation of Commercial Lobstering Licenses

No person shall catch or attempt to catch lobster in the coastal waters or lands of Massachusetts without a valid lobstering license and without properly tagged traps.

The Director may suspend or revoke the license of any person who violates this section or any other regulation made by the Director under Section 401 , provided that any person accused of such violation be granted a fair hearing prior to the imposition of any sanction. Nothing in this section shall limit the liabilities of the violator under any other section of the General Laws of Massachusetts.

# STATUTE \#5 <br> <br> EFFICIENCY PLAN 

 <br> <br> EFFICIENCY PLAN}

Section 101 Licensing of Commercial Lobstermen for the First Year

Section 201 Collection of Catch Data

Section 301 Establishment of Efficiency Requirements

Section 401 Licensing of Commercial Lobstermen

# Section 101 Licensing of Commercial Lobstermen for the First Year 

In January, 197 the Director shall issue a commercial lobstering license to any applicant who has held a connercial lobstering license during the preceding year.

Commercial lobstering licenses shall be valid for one year from the date of issue. A holder may apply to the Director annually for renewal of the license. Commercial lobstering licenses are not transferable.

Section 201 Collection of Catch Data

The Director shall establish by regulation an accurate and orderly means of determining the number of traps fished by each lobsterman each year and the amount of lobster caught by each lobsterman each year.

Section 301 Establishment of Efficiency Reguirement

One year after the initial granting of commercial labstering licenses under this chapter and annually thereafter, the Director shall review the data concerning catch and use of traps and establish a minimum efficiency requirement for renewal of commercial lobstering licenses. This requirement shall be expressed in pounds per trap. The Director shall not renew the commercial lobstering license of an applicant whose catch per trap for the past year falls below the minimum efficiency requirement. The Director shall consider the conservation of the lobster resource and the promotion and development of the lobster fishery. The Director may annually determine the minimum efficiency requirement for the coming year so as to provide fishermen with notice.

Prior to determining or altering the minimum efficiency requirement the Director shall hold a public hearing on the question and provide the opportunity for public comment.

## Section 401 Licensing of Commercial Lobstermen

One year after the initial granting of commercial lobstering licenses under this chapter, and annually thereafter, the Director shall determine how many licenses, if any, to grant in addition to renewals for the coming year. When commercial lobstering licenses are available, the Director shall grant licenses to any resident of Massachusetts, eighteen years old or older, on a first-come-firstserved basis.

## Section 401 (con't)

Prior to determining the number of commercial lobstering licenses to be issued in a given year, the Director shall hold a public hearing on the question and provide the opportunity for public comment.

Part III

## The Massachusetts Lobstermen

In late spring of 1976 the Massachusetts Lobstermen's Association distributed an interview form (prepared with some suggestions from Peterson and Friedman) to their membership of about 1000, asking for opinions on issues that were raised frequently during the past several years. The same interview form asked the lobstermen to give information about themselves, their involvement in the lobster fishery, in other fisheries, and in other occupations. There were 274 forms returned; however, many individuals did not answer all the questions. The general information about the lobstermen is useful as background material, but it should not be used to generalize about all commercial license holders in Massachusetts. This sample is biased because the respondents are all members of MLA, but the fact that about one-sixth of the commercial lobster license holders' opinions are accumulated here should not be ignored. The results of these interviews are accumulated in Appendix $A$, and the following discussion is based upon that information.

The MLA members who responded were of all ages: about onequarter were under 30 , one-quarter over 50 , and half of them were between $30-50$ years of age. Two-thirds of the lobstermen were from Area $1+3$, N.H. border to Saugus, and the South Shore area from Weymouth to Plymouth. Perhaps if more of the

Boston Harbor lobstermen had responded, to the question on number of traps fished would have had different results. As it was, only about $10 \%$ of the men said that they fished more than 500 traps, with 438 of them fishing 200 400 traps, and $36 \%$ of the men fishing fewer than 200 traps. Most of the men who responded were experienced fishermen: $30 \%$ of them had fished for more than 20 years, and $25 \%$ of the men fished more than 10 months per year. Only about 10\% of them fished fewer than 6 months of the year. We asked for an approximation of the value of their boats and gear. Fifty percent of the men valued their investment between $\$ 5000$ and $\$ 20,000,15 \%$ valued their boats and gear at less than $\$ 5,000$ and $35 \%$ valued their boats and gear at more than $\$ 20,000$. Many of the more expensive boats are used for several different comercial fisheries - ground fishing, long line fishing, as well as for sport fishing. Several men also indicated that they had occasionally chartered their boats.

Although more than $50 \%$ of the men who responded indicated that over $80 \%$ of their income came from commercial lobster fishing, and 65\% of them made more than $80 \%$ of their income from all kinds of commercial fishing, many of the men supplemented their fishing with seasonal or part-time shore-side jobs. While many fishermen had to supplement their incomes with shoreside jobs, there were a number of men with full-time jobs on
shore who supplemented their salaries with fishing for lobster. Full-time lobstermen argue that the part-timers ought to be removed from the fishery because it is their fishing which has decreased the number of lobster available to the full-timers, forcing them to seek some shore-side work to supplement their incomes. The arguments for and against a professional group of full-time fishermen are numerous. Some of these were discussed in the previous sections.

This group of lobstermen expresses very strong feelings about the number of commercial lobstering licenses which should be ävailable. Sixty-three per cent of them felt there should be 1000 to 1300 licenses, and $27 \%$ thought there ought to be less than 1000 commercial licenses. Two-hundred nineteen out of two-hundred seventy two of the men (80\%) felt the number of traps fished by each man ought to be limited, and $65 \%$ of two-hundred sixteen men felt that 200-400 traps/license would be a fair number.

Most of the men thought that the current $\$ 100 /$ year license was the best choice. We also asked if they would be willing to pay a fee based upon the number of traps fished. Only 41 men responded to this question.

In the newsletter which accompanied the interview form, several management systems used in other fisheries were described. The lobstermen were opposed to all of these systems. In letters or notes written on the form, several of them stated that a complicated form of management was certain to be inequitable and costly. Some of them felt the suggested systems would do nothing to decrease the pressure on the lobster while putting a lot of pressure on the lobstermen.

In July 1976, the MLA prepared a second interview farm, using some of our suggestions. This second form was based upon several management systems and many management problems which were expressed during public hearings held by the Division of Marine Fisheries. This interview form was sent to all commercial lobster license holders (as of mid-July 1976) in Massachusetts. Because MLA handled the preparation and distribution of the forms, this sample may also be biased in favor of MLA members. In any case, the results of the 331 returned forms are in Appendix B, and the following discussion is based upon those results.

The two-tiered lobstering license system described in pages 7-17 was vigorously discussed at the hearings held by DMF in June, July and August. Thus we thought it important to solicit opinions from current lobster license holders. The minimum pounds caught, averaged over 3 years, which would establish the Class A requirement got a wide range of responses. Ten percent of the respondents either did not like the idea or did not answer the question. Almost $25 \%$ of the men felt that a 3 -year average of less than $3000 \mathrm{lbs} . / \mathrm{Yr}$ should be required, $27 \%$ felt more than 5000 lbs./yr should be the minimum, and $11 \%$ felt $4000 \mathrm{lbs} . / \mathrm{yr}$ would be a good average to qualify for a Class A license. We would interpret this as lack of any kind of agreement on the level of fishing necessary for a full-time commercial license.

This same lack of agreenent exists for the Class $B$ or parttime license system. Forty-five percent of the men voted for 1000 lbs or less, while $48 \%$ favored $1500 \mathrm{lbs} . / \mathrm{yr}$ or more to qualify for a Class B license.

Part of the management plan suggests that an upper level be placed on the number of traps each license holder can fish, and that the number of traps be reduced by $10 \%$ each year until Division of Marine Fisheries determines that a reasonable number has been reached. Forty percent of the men agreed with this system of trap reduction while $47 \%$ were opposed. Twelve percent of the men felt indifferent about this plan.

Another plan was to reduce the number of traps per license holder from 400 to 300 traps in 5 years. Forty-three percent of the men thought this might be a reasonable solution while $50 \%$ disagreed, and only 78 felt indifferent. Thus both methods to reduce the number of traps were essentially unacceptable. Surprisingly, the third method we inquired about was disliked the most. We asked how the lobstermen would feel about a "grandfather" clause which would allow the current licensees to maintain their present number of traps with a rapid reduction to the number fished by all other Class A holders. Fifty-three percent disagreed while $36 \%$ agreed and $10 \%$ felt indifferent.

Trap reduction schemes for a Class B license got a variety of responses, but $43 \%$ did not like the plan at all. Table 20 summarizes their responses.

If an $A-B$ class system were accepted, one enforcement tool would be differential marking of the lobster buoys. However, $59 \%$ of the men did not like this idea, and $41 \%$ did.

We also asked what the commercial lobster license holders felt about the number of traps available under a student license. Ten percent thought the number of traps (currently 25) should be lower, $18 \%$ of the men thought the number should be bigger and $62 \%$
thought the number should stay the same,
We asked for suggestions on the number of traps available to a family license holder. The average of all suggestions was 8 traps, with most people suggesting 5 or 10 traps (see Table 22 ). We also asked about a bag limit on non-commercial lobster catches. Over $1 / 3$ of the men thought that was a poor way to manage recreational fishing. Forty percent of the others suggested a bag limit of 1 - 5 lobsters/day.

We asked quite a few questions about recreational fishing, because the commercial fishermen responded so forcibly to all discussions of recreational fishing. Seventy-four percent of the men felt there should be a season on recreational fishing, while $24 \%$ felt that no season should be established. For those who agreed with the concept of a season, $49 \%$ said the season should be from 1 January to 15 September, $48 \%$ disagreed with that time period.

We asked several questions about trap fees. One question asked if lobstermen would be willing to pay a trap fee if the money went for better enforcement. Many men added the comment that when the annual license fee went to $\$ 100$ they were supposed to get better enforcement and did not - so why pay a trap fee? Forty-seven percent of the men were willing to pay a trap fee if and only if it went for enforcement. Responses to arount of fee per trap follow:

36\% favored a fee from 25-50 ¢/trap; 10\% favored 50-75\%; 7\%-favored .75-\$1.00/trap.

One of the problems frequently stated by lobstermen was the lack of sanctions against those men who fish illegally.

We asked how they felt about a system where the state could suspend a license before a court hearing, and $75 \%$ of the men felt this system would be a good deterrent to illegal fishing.

Any lobster management system demands adequate data on the lobster catch. We asked about three ways in which this data could be made available to the Division of Marine Fisheries. Eleven percent of the men disagreed with all proposed lobster sale certifications. Fifty-seven percent of the men felt the current system of an annual catch report was a good way to collect data. Twentyeight percent of the men said that carbon copies of the sale transactions with the dealers could be sent to the state to supply the data. Only $4 \%$ of the men thought a monthly report was adequate.

There were many similarities in the two populations sampled by these interviews. The ages of the men were similarly distributed, although slightly fewer men from the 41-50 age bracket responded to the second set of questions than to the first. Geographical distributions were also almost identical. The difference between these samples is that many more men who fish less than 6 months/year and fewer than 100 traps responded to the second set of questions. There may be a number of reasons, but the ones that come to mind are that (1) the first form went to MLA members, men who have shown a high degree of professional involvement by joining the association, and (2) the second form reached a large number of people who would be disenfranchised by the $A, B, C, D$, plan suggested at the public hearings held by the Division of Marine Fisheries and described here as Plan 1.

More out of curiosity than in an attempt to prove a point, we looked at the distribution of the number of traps fished by the age of the lobstermen and by the area in which the men fished. Neither Table 36 nor 37 tells us anything about the lobstermen that we didn't already know. In general older and younger fishermen fish fewer traps than midale-aged fishermen, and consistently higher numbers of traps are fished in Area 2 from Revere to Quincy than in the other areas.

Appendix $B$ contains the tables (Table 15-27) generated from the second interview questions.

## Appendix A

Results of Interview Form Sent to MLA Members in Spring, 1976 (A copy of the questionnaire is at the end of Appendix A)

## Table 1

Number of comercial lobstering licenses the State should grant

| \% | Responses |  |
| :---: | :---: | :---: |
| $4 \%$ | 10 | More than 1300 licenses |
| 63\% | 172 | 1000 to 1300 licenses |
| 27\% | 75 | less than 1000 licenses |
| $6 \%$ | 17 | unlimited number of licenses |
| $T=$ | 274 |  |

55. 

Table 2

Table 3 Number of Traps Per License

| No. of traps |  | 0-100 | $\begin{aligned} & 101- \\ & 200 \end{aligned}$ | $\begin{aligned} & 201- \\ & 300 \end{aligned}$ | $\begin{aligned} & 301- \\ & 400 \end{aligned}$ | $\begin{aligned} & 401- \\ & 500 \end{aligned}$ | $\begin{aligned} & 501- \\ & 600 \end{aligned}$ | $\begin{aligned} & 601- \\ & 700 \end{aligned}$ | $\begin{aligned} & 701- \\ & 800 \end{aligned}$ | 7800 | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lowest No. of traps | \# | 99 | 43 | 36 | 17 | 3 | 3 | 0 | 1 | 1 | 203 |
| per license | \% | . 49 | . 21 | . 18 | . 08 | . 01 | . 01 |  | . 01 | . 01 | 100\% |
| Highest No. of traps | \# | 0 | 7 | 48 | 76 | 42 | 38 | 5 | 8 | 16 | 240 |
| per license | 8 | 0 | . 03 | . 20 | . 32 | . 18 | . 16 | . 02 | . 03 | . 06 | 100\% |
| A fair No. of traps | \# | 2 | 15 | 59 | 82 | 29 | 22 | 3 | 0 | 4 | 216 |
| per license | 8 | . 01 | . 07 | . 27 | . 38 | .13 | . 10 | . 01 | 0 | . 02 | 100\% |

Table 4

## Cost of commercial lobstering licenses

| 8 | Responses |  |
| :---: | :---: | :---: |
| .84\% | 213 | \$ 100/yr |
| . 06 | 15 | \$ 500/Yr |
| . 01 | 3 | \$1000/yr |
| . 07 | 17 | \$0.50/yr |
| . 02 | 6 | \$100-500/yr |
| T + | 254 |  |

Table 5
Cost per 100 traps

No. of responses
$\$ 0-50 \quad 17$
$\$ 51-100 \quad 22$
\$101-150 0
$\$ 151-200 \quad 1$
\$ 300
1

41 Total

Table 6

## Allocations and Quotas

|  | In favor | Opposed | Total |
| :---: | :---: | :---: | :---: |
| Annual catch quotas | 23 (98) | 246 (91\%) | 269 |
| Stock certificates | 31 (13\%) | 209 (87\%) | 240 |
| Wisconsin system | 66 (27\%) | 182 (738) | 248 |
|  |  |  |  |
| Indication of support for one or more of the management systems listed below |  |  |  |
| Supported |  |  |  |
| 234 Limit | Limitation on the number of licenses |  |  |
| 209 Limit | Limitation on the number of traps |  |  |
| 58 The " | The "Wisconsin" system ${ }^{\text {a }}$ |  |  |
| 39 By rais | By raising the price of a commercial license |  |  |
| 27 Issua | Issuance of stock certificates ${ }^{\text {b }}$. |  |  |
| 15 State | quota sys |  |  |

a) The "Wisconsin" plan has proved very successful in the Great Lakes. It is rather simple, but effective. They simply said that in order to get a commercial license next year, you must prove that you have $\$ 5,000$ invested in the fishery (gear, etc.) and that you take $\$ 5,000$ out of the fishery (gross). The next year, in order to renew your license, you must prove $\$ 10,000$ in and $\$ 10,000$ out, and the third year it goes to $\$ 15,000$ in and $\$ 15,000$ out. This reduced the pressure on the fishery, reduced the numbers of fishermen to only the serious, full-time harvesters, and allowed the stocks to rebuild themselves to the point where they are now accepting new fishermen into the fishery. It was so successful that ohio is initiating the plan this year for their fishermen.
b) Allocation of Fishing Rights Through Stock Certificates:

A stock certificate program is similar to a licensing program. The basic difference between this and a license scheme is that the stock certificate gives ownership of a portion of the resource to the holder of the certificate and grants him the right to utilize any portion of that resource in any way he wishes. (A license program only establishes a right to operate in the fishery). Under this system the holder recognizes that he can harvest a maximum of " $X$ " amount and is thus encouraged to do this in the most efficient way possible. The license system encourages the operator to maximize his harvest with little regard for the effect his activity has on overcapitalization and inefficiency both by firms and in the industry as a whole.
c) Annual Catch Quotas: (During the past 25 years, Massachusetts has averaged an annual catch of close to 4 million pounds of lobster). Annual catch quotas could be set each year. This means that once the total quota is reached, all lobstermen would have to stop fishing for the rest of the year. Another way to set quotas would be by the month or a quarter basis.

Table 8

## Age of lobstermen

| Age | 30 | $31-40$ | $41-50$ | $51-60$ | 61 |  |
| :--- | :--- | :--- | :---: | :---: | :--- | :--- |
| Individuals | 70 | 67 | 77 | 40 | 22 | Total 276 |
| Percentage | $25 \%$ | $24 \%$ | $28 \%$ | $14 \%$ | $09 \%$ |  |

Table 9
Area distribution

| NH to <br> Saugus | Revere- <br> Quincy | Weymouth- <br> Plymouth | Wareham- <br> R.I. | Bourne- <br> Ptown |  |
| :---: | :---: | :---: | :---: | :--- | :--- |
| 1 | 2 | 3 | 4 | 5 |  |
| 98 | 29 | 85 | 37 | 25 Total 274 |  |
| $36 \%$ | $11 \%$ | $31 \%$ | $14 \%$ | $09 \%$ |  |

Table 10
Number of years as a commercial lobsterman

| Years as a <br> Com. lob. | 2 | $3-5$ | $6-10$ | $10-20$ | 20 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Individuals | 24 | 52 | 71 | 45 | 84 |
| Percentage | $09 \%$ | $19 \%$ | $26 \%$ | $16 \%$ | $30 \%$ |

Table 11

Number of traps

| No. of traps | 20 | $21-$ | $51-$ | $101-$ | $201-$ | $301-$ | $401-$ | 500 |
| :--- | :---: | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| fished |  |  |  |  |  |  |  |  |

Table 12
Number of months fished/year
No. of months fished/yr.

2-5
6-9
10-12
Individuals
31
175
67
Total 273
Percentage
11\%
$64 \%$
25\%
Table 13 Value of Boat and Gear

| Approx. value of boat and gear | \$2000 | \$2001- | \$5001- | \$10,001- | \$20,000 | \$30,000 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 5000 | 10,000 | 20,000 | 30,000 |  |  |
| Individuals | 7 | 35 | 59 | 76 | 48 | 44 | Total 269 |
| Percentage | . 03 | . 13 | . 22 | . 28 | . 18 | . 16 |  |

Table 14 Distribution of Sources of Income

| Percent of income | 0-20\% | 21-40\% | 41-60\% | 61-80\% | 81-100\% |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| from lobstering |  |  |  |  |  |  |  |
| Individuals | 33 | 28 | 28 | 34 | 139 | Total | 262 |
| Percentage | .13 | . 11 | . 11 | . 13 | . 53 |  |  |
| from the sea |  |  |  |  |  |  |  |
| Individuals | 26 | 25 | 17 | 25 | 171 | Total | 264 |
| Percentage | .10 | . 09 | . 06 | . 09 | .65 |  |  |
| from a seasonal shore-side job |  |  |  |  |  |  |  |
| Individuals | 242 | 9 | 4 | 8 | 1 | Total | 264 |
| Percentage | . 42 | . 03 | . 01 | . 03 | . 01 |  |  |
| from a year-round shore-side job |  |  |  |  |  |  |  |
| Individuals | 209 | 7 | 17 | 14 | 16 | Total | 263 |
| Percentage | . 80 | . 03 | . 06 | . 05 | . 06 |  |  |

## Other fisheries in which some of these lobstermen participate:

Species sought No. of Individuals
Eels ..... 2
Mussels ..... 1
Sea worms ..... 1
Ground fish ..... 5
Tuna ..... 5
Bass ..... 4
Bluefish ..... 1
cod ..... 12
Swordfish ..... 3
Quahogs and clams ..... 13
Finfish ..... 4
Crabs ..... 2
Scallops ..... 7
Sportfish ..... 3
Gear types used other than traps:
Gi11 nets ..... 29
Long-lines ..... 22
Trawls ..... 12

## LIMITED ENTRY AND EFFORT QUESTIONNAIRE

Spring, 1976 Sent to MLA Membership

It is imperative that you take a few minutes to fill out this questionnaire and return it, this month, in the self-addressed, postage free envelope. As a commercial lobster fisherman, it is your right and your obligation to provide input into the management scheme in order to ensure a viable future fishery for all.

Please note that you are not asked to sign this questionnaire and you will, in no way, be held liable for any statements made. Please be honest so that we will have valid statistics.
A. Licenses for commercial lobster fishing

Should the State grant:

1. More than 1300 lobster licenses?
2. 1000 to 1300 lobster licenses?
3. Less than 1000 lobster licenses?
4. An unlimited number of lobster licenses?
B. Traps for commercial lobster fishing. (Remember that to set a number too high would mean that some lobstermen would feel that they have to increase their inventory in order to "keep up" and to set it too low could mean no fisherman could earn his living primarily by lobstering.)
5. Should there be a trap limit?
6. What is the lowest number of traps that should be allowed per license?
7. What is the highest number of traps that should be allowed per license?
8. What is a fair number of traps that should be allowed per lobster license?
C. Commercial lobster license fees.

Should the license fees be:

1. $\$ 100$ per year
2. $\$ 500$ per year
3. $\$ 1000$ per year
4. Other (specify)
5. So much per 100 traps (specify)
D. Quotas or Allocations.
6. Should an annual catch quota be set?
yes $\qquad$ no $\qquad$ (Explained on Page 3)

What would be a reasonable quota?
2. Should there be allocation of fishing rights through stock certificates? yes $\qquad$ no $\qquad$ (Explained on Page 3)
3. Should we consider "Wisconsin" system? yes $\qquad$ no $\qquad$ (Explained in Newsletter)
E. Percent of earned income:

1. What percent of yours is from lobster fishing? $\qquad$ 8
2. What percent of yours comes from the sea? $\qquad$ 8
3. What percent of yours comes from another "seasonal" job? $\qquad$
4. What percent of yours comes from another "year round" job?
$\qquad$
F. How many years have you been a commercial lobsterman? $\qquad$ years
G. How old are you?
$\qquad$ years
H. What AREA do you fish in?

AREA
AREA $1=\mathrm{N} . \mathrm{H}$. border to Saugus
AREA $2=$ Revere to Quincy
AREA 3 = Weymouth to Plymouth
AREA $4=$ Wareham to R.I. border (incl. Islands)
AREA 5 = Bourne to Provincetown
I. How many traps do you fish? $\qquad$ traps
J. How many months do you fish? $\qquad$ months
K. What is approximate value of your boat and gear?
$\$$ $\qquad$
L. In what other fisheries do you participate?
M. What ways would you like to see the lobster fishery managed?

1. Through limitation of the number of licenses?
2. Through limitation of the number of traps?
3. By raising the price of a commercial license?
4. Through a state-wide quota system?
5. Through stock certificates?
6. Through application of "Wisconsin" system?
7. Combination of the above (example \#\& \#\& \#)
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$

## Appendix B

Results of Interview Form sent to all commercial lobster license holders in the Commonwealth of Massachusetts:

Table 15

The average minimum yearly take averaged over three years of lobstering to qualify for a Class A license (full-time commercial).

| Percent | No. of Responses | Poundage |
| :---: | :---: | :---: |
| 25\% | 79 | Less than 3000 lbs |
| 20\% | 64 | 3000 lbs |
| 11\% | 36 | 4000 lbs |
| 12\% | 39 | 5000 lbs |
| 278 | 87 | more than 5000 lbs |
| 4 | 14 | Disagreed with plan |
|  | 319 |  |

Table 16

The average minimum yearly take averaged over three years of lobstering to qualify for a Class B license (part-time commercial)


70
68
39
112
19
308

Poundage.
Less than 500 lbs
1000 Ibs
1500 lbs
2000 lbs
Disagreed with plan

Table 17
10\% annual reduction in the number of traps until a reasonable number is reached

| Percent | No. of Responses | Opinion |  |
| :---: | :---: | :--- | :--- |
|  |  | 129 | Agreed |
| $40 \%$ | 154 | Disagreed |  |
| 48\% |  | 39 | Felt indifferent |

Table 18
Reduction from 400 trap limit to 300 trap limit in 5 years

| Percent |  | No. of Responses |
| :---: | :---: | :--- |
| $42 \%$ | 133 | Opinion |
| $51 \%$ | 159 | Agreed |
| $7 \%$ |  | 22 |

## Table 19

Grandfather clause to allow present licensees to fish current number of traps with rapid reduction after year 1 to level of other license holders.

| Percent | No. of Responses |  | Opinion |
| :---: | :---: | :--- | :--- |
|  |  | 112 | Agreed |
| $53 \%$ | 164 | Disagreed |  |
| $11 \%$ |  | 32 | Felt indifferent |
|  |  | 308 |  |

Table 20
Methods for reducing the number of traps fished by Class B license holders from 100 traps

Percent
21\%
13\% 42

20\%

44\%
2\%

No. of Responses
67

63

137
5

Opinion
Reduce \# by $20 \%$ annually
Reduce to 50 traps over 5 years

Reduce to 75 traps over 5 years

None of the above Disagreed with entire plan

314
Total
.

## Table 21

The number of traps allowed a student license

| Percent | No. of Responses | Opinion |
| :--- | :--- | :--- |
| $18 \%$ | 58 | Lower |
| $62 \%$ | 194 | The same |
| $18 \%$ | 56 | Higher |
| $2 \%$ |  | 5 |
|  |  | 313 |

Table 22

The number of traps allowed per recreational license

| Percent | No. of Responses | Opinion on No. of traps |
| :---: | :---: | :---: |
| 15\% | 50 | No traps |
| 35\% | 116 | 1-5 traps |
| 42\% | 138 | 6-10 traps |
| 6\% | 20 | 11-15 traps |
| 2\% | 7 | 16 and over traps |
|  | 331 |  |

## Table 23

The number of lobsters allowed/day/recreational
licenses should be:

| Percent | No. of Responses |  |
| :---: | :---: | :--- |
|  | Opinion on $\#$ of lobsters |  |
| $9 \%$ | 29 | no lobster |
| $40 \%$ | 131 | $1-5$ lobsters |
| $17 \%$ | 56 | $6-10$ lobsters |
| - | 1 | $11-15$ lobsters |
| $10 \%$ | 2 | 16 and over lobster |
| $33 \%$ | Total | 331 |

Table 24

Should there be a season on recreational licenses?

| Percent | No. of Responses | Opinion |
| :---: | :---: | :---: |
| $74 \%$ | 232 | yes |
| 25\% | 77 | no |
| $1 \%$ | 4 | Disagreed with suggestion |
|  | 313 |  |

Table 25

If there is a season, should it be from January 1 to September 15?

| Percent | No. of Responses | Opinion |
| :---: | :---: | :--- |
|  | N9\% | 113 |

Table 26

Should there be a trap fee for better enforcement?

| Percent | No. of Responses | Opinion |
| :---: | :---: | :--- |
| $47 \%$ | 151 | yes |
| $50 \%$ | 159 | no |
| $3 \%$ | 9 | Disagreed with plan |
|  |  | -319 |



Table 28
Should the state administrative agency be allowed to suspend a commercial lobstering license before a court hearing?

| Pexcent | No. of Responses | Opinion |
| :---: | :---: | :---: |
| 75\% | 238 | yes |
| $24 \%$ | 75 | no |
| 1\% | 3 | Disagreed with plan |



Table 30

Should lobstermen be required to certify sales through:

| Percent | No. of Responses | Opinion |
| :---: | :---: | :---: |
| 57\% | 163 | Annual catch reports |
| 48 | 13 | Monthly catch reports |
| 28\% | 80 | Carbon of saies transaction |
| 118 | 32 | Disagreed with plan |
|  | 288 |  |

Table 31

Age of lobstermen

| Age | 30 | $31-40$ | $41-51$ | $51-60$ | 61 |  |
| :--- | :--- | :---: | :---: | :---: | :---: | :--- |
| Individuals | 93 | 80 | 70 | 54 | 26 | Total 323 |
| Percentage | $29 \%$ | $25 \%$ | $22 \%$ | $17 \%$ | $8 \%$ |  |

Table 32
Area fished

|  | NH to <br> Saugus | Revere- <br> Quincy | Weymouth- <br> Plymouth | Wareham- <br> R.I. | Boume- <br> Ptown |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Area fished | 1 | 2 | 3 | 4 | 5 |
| Individuals | 112 | 29 | 103 | 42 | 35 Total 321 |
| Percentage | $35 \%$ | $9 \%$ | $32 \%$ | $13 \%$ | $11 \%$ |

Table 33
Number of years as a commercial lobsterman

| Years | 1 | $1-5$ | $6-10$ | $11-15$ | $16-20$ | $21-25$ | 26 |
| :--- | :---: | :---: | :--- | :--- | :--- | :--- | :--- |
| Individuals | 11 | 106 | 67 | 40 | 30 | 18 | 59 Total $\frac{18}{331}$ |
| Percentage | $3 \%$ | $32 \%$ | $20 \%$ | $12 \%$ | $9 \%$ | $5 \%$ | $18 \%$ |

Table 34
No. of traps

| No. of traps <br> fished | 20 | $21-60$ | $61-100$ | $101-200$ | $201-300$ | $301-400$ | $401-500$ | 500 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Individuals | 10 | 38 | 53 | 66 | 53 | 52 | 22 | 24 |
| Percentage | $4 \%$ | $12 \%$ | $16 \%$ | $21 \%$ | $17 \%$ | $16 \%$ | $7 \%$ | $7 \%$ |

Table 35

No. of months fished/year
No. of months

fished/yr. |  | $1-3$ | $4-6$ | $7-9$ | $10-12$ |
| :--- | :--- | :--- | :--- | :--- |

| Individuals | 11 | 73 | 134 | 99 | Total 317 |
| :--- | :---: | :---: | :---: | :---: | ---: |
| Percentage | $3 \%$ | $23 \%$ | $42 \%$ | $31 \%$ |  |

Table 36 Number of traps fished by age of lobsterman

| Age | No. | 0 | $\begin{aligned} & 1- \\ & 100 \end{aligned}$ | $\begin{aligned} & 101- \\ & 200 \end{aligned}$ | $\begin{aligned} & 201- \\ & 300 \end{aligned}$ | $\begin{aligned} & 301- \\ & 400 \end{aligned}$ | $\begin{aligned} & 401- \\ & 500 \end{aligned}$ | $\begin{aligned} & 501- \\ & 600 \end{aligned}$ | $\begin{aligned} & 601- \\ & 700 \end{aligned}$ | $\begin{aligned} & 701- \\ & 800 \end{aligned}$ | $\begin{aligned} & 801- \\ & 900 \end{aligned}$ | $901+$ | TOTALS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 20 | No. | 1 | 12 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 16 |
|  | Row \% | 6\% | 75\% | 13\% | 0\% | 6\% | 0\% | $0 \%$ | O\% | $0 \%$ | 0 \% | 0\% | 100\% |
| $\begin{aligned} & 21- \\ & 30 \end{aligned}$ | No. | 0 | 23 | 17 | 14 | 15 | 3 | 3 | 0 | 1 | 0 | 0 | 76 |
|  | Row \% | 0\% | 30\% | 22\% | 18\% | 20\% | $4 \%$ | $4 \%$ | $0 \%$ | 1\% | 0\% | 0\% | 99\% |
| $\begin{aligned} & 31- \\ & 40 \end{aligned}$ | No. | 1 | 22 | 17 | 11 | 13 | 7 | 3 | 1 | 2 | 1 | 1 | 79 |
|  | Row \% | 18 | 28\% | 22\% | 14\% | 16\% | 9\% | $4 \%$ | 1\% | $3 \%$ | 18 | 1\% | 100\% |
| $\begin{aligned} & 41- \\ & 50 \end{aligned}$ | No. | 0 | 17 | 17 | 13 | 11 | 8 | 3 | 0 | 1 | 0 | 0 | 70 |
|  | Row \% | $0 \%$ | 24\% | 24\% | 19\% | 16\% | 11\% | 5\% | $0 \%$ | 1\% | 0\% | 0\% | 100\% |
| $\begin{aligned} & 51- \\ & 60 \end{aligned}$ | No. | 1 | 20 | 6 | 8 | 8 | 3 | 4 | 1 | 1 | 1 | 1 | 54 |
|  | Row \% | 2 \% | 37\% | 11\% | 15\% | 15\% | 6\% | 7\% | 2\% | 2\% | 2\% | 2\% | 101\% |
| 761 | No. | 0 | 7 | 5 | 7 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 24 |
|  | Row \% | 0\% | $29 \%$ | 21\% | 29\% | 17\% | 4\% | 0\% | $0 \%$ | $0 \%$ | 0\% | 0\% | 100\% |

Table 37 Number of traps fished by area

| NO. of traps | fished | 0 | $\begin{array}{r} 1- \\ 100 \end{array}$ | $\begin{aligned} & 101- \\ & 200 \end{aligned}$ | $\begin{aligned} & 201- \\ & 300 \end{aligned}$ | $\begin{aligned} & 301- \\ & 400 \end{aligned}$ | $\begin{aligned} & 401- \\ & 500 \end{aligned}$ | $\begin{aligned} & 501- \\ & 600 \end{aligned}$ | $\begin{aligned} & 601- \\ & 700 \end{aligned}$ | $\begin{aligned} & 701- \\ & 800 \end{aligned}$ | $\begin{aligned} & 801- \\ & 900 \end{aligned}$ | $901+$ | TOTALS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| NH border to Saugus | Indiv. | 0 | 40 | 24 | 19 | 18 | 6 | 4 | 0 | 0 | 0 | 0 | 111 |
|  | Row \% | 08 | 36 号 | 22\% | 17\% | 16\% | 5웅 | $4 \%$ | $0 \%$ | 0\% | $0 \%$ | 0\% | 100\% |
| Revere to Quincy | Indiv. | 0 | 7 | 4 | 2 | 3 | 3 | 3 | 0 | 3 | 2 | 1 | 28 |
|  | ROW \% | $0 \%$ | 258 | 14 \% | 78 | 4\% | 118 | 118 | $0 \%$ | 118 | $7 \%$ | 3\% | 100\% |
| $\begin{gathered} \text { Weymouth } \\ \text { to } \end{gathered}$ | Indiv. | 2 | 26 | 25 | 21 | 16 | 7 | 4 | 0 | 0 | 0 | 0 | 101 |
| Plymouth | Row \% | 2\% | 26\% | 25\% | 21\% | 16\% | 78 | 48 | 0 O | $0 \%$ | $0 \%$ | $0 \%$ | 1018 |
| Wareham to RI border | Indiv. | 0 | 15 | 8 | 7 | 7 | 3 | 0 | 1 | 0 | 0 | 0 | 41 |
|  | Row \% | $0 \%$ | 38 | 20\% | 178 | $17 \%$ | $7 \%$ | $0 \%$ | 2\% | 0\% | 0 옹 | 0\% | 100\% |
| Bourne to Ptown | Indiv. | 1 | 12 | 4 | 3 | 8 | 2 | 1 | 1 | 2 | 0 | 1 | 35 |
|  | Row \% | $3 \%$ | $34 \%$ | 1198 | 9\% | $23 \%$ | $6 \%$ | 38 | 3 \% | 69 | 0 \% | $3 \%$ | 1018 |

August 1976
It is imperative that you take a few minutes to fill out this questionnaire and return it, this month, in the self-addressed, postage free envelope. As a commercial lobster fisherman, it is your right and your obligation to provide input into the management scheme in order to ensure a viable future fishery for all. Please note that you are not asked to sign this questionnaire and you will, in no way, be held liable for any statements made. Please be honest so that we will have valid statistics. Some of the questions in this questionnaire (those concerning Class $C$ and D licenses) are not specific to the legislation but your responses will assist in the development of more comprehensive management of the resource. The proposed establishment of Class A and B licenses is in response to a provision of Chapter 484 of the Acts of 1975 which requires the Division of Marine Fisheries to report to the Legislature on a system of limiting the number of lobster permits and the amount of gear that can be used in the coastal fishery.

A new four level system has been suggested for licensing in the Lobster industry: Class A licenses for commercial lobstermen, Class B licenses for commercial lobstermen who take more than 1,000 lbs of lobsters per year but less than a Class B License holder, a Class C student commercial license, and a Class $D$ recreational license. (Class C and D licenses are already in existence).

1. Over a 3-year period, the average MINIMUM yearly take of lobsters suitable to qualify for a Class A license should be:
(a) less than $3,000 \mathrm{lbs}$ (b) $3,000 \mathrm{lbs}$ (c) $4,000 \mathrm{lbs}$ (d) 5,000 lbs (e) greater than $5,000 \mathrm{lbs}$.
2. Over a 3-year period, the average MINIMUM yearly take of lobsters suitable to qualify for a Class $B$ license should be less than that for a Class A license but greater than:
(a) 500 lbs
(b) 1,000 lbs
(c) $1,500 \mathrm{lbs}$
(d) 2,000 1 bs

3-A As part of the four level licensing system it has been suggested that upper trap limits be reduced by $10 \%$ annually until reasonable amounts of gear are reached based on total allowable catch from the resource.
(a) agree with this plan (b) disagree with this plan (c) feel in-

3-B A second plan suggests that an initial limit of 400 traps be set for Class A license holders that would be reduced to 300 traps over 5 years at a rate of 20 traps per year.
(a) agree with this plan (b) disagree with this plan (c) feel indifferent

3-C a third plan suggests a "grandfather" clause which would permit current license holders to fish their present number of pots (based on their catch reports) the first year and reduce them at a faster rate over several years until they are down to the numbers being fished by all other class $A$ holders
(a) agree with this plan (b) disagree with this plan (c) feel indifferent
4. In a similar fashion it has been suggested that an initial limit of 100 traps be set for Class $B$ license holders that would (1) be reduced by lo\% annually until a reasonable amount of gear is reached (2) be reduced to 50 traps over a 5 -year period at a rate of 10 traps per year, or (3) be reduced to 75 traps over a 5 -year period at a rate of 5 traps per year. Do you:
(a) agree plan 1 (b) agree plan 2 (c) agree plan 3 (d) agree with none
5. At present, student seasonal license holders (Class C as proposed above) are permitted 25 traps from June 15 th to September l5th. In future this should:
(a) be lower (perhaps 10) (b) stay the same (c) be raised (perhaps 50)
6. Holders of recreational licenses should be permitted to set how many traps?
$\begin{array}{llll}\text { (a) } 5 & \text { (b) } 10 & \text { (c) } 15 & \text { (d) other (specify) }\end{array}$
7. For non-commercial lobstermen who hold recreational lobster licenses, daily take of legal-sized lobsters should be restricted to:
$\begin{array}{lllll}\text { (a) } 3 & \text { (b) } 5 & \text { (c) } 7 & \text { (d) } 10 & \text { (e) other (specify) }\end{array}$
8-A Should there be a season on the recreational license? (a)yes (b) no
8-B If "yes" to 8-A, should season be January l-September 15? (a)yes (b)r
9-A Would you be willing to pay a small per-trap licensing fee ( 25 ¢ $\boldsymbol{f}-\$ 1$ ) if the proceeds of this fee were absolutely and positively to be used for better law enforcement at the local level through the establishment of a position of lobster constable in each port, similar to the positions of shellfish constable and harbor master?
(a) yes (b) no

9-B What is the maximum amount you would be willing to pay provided this money would be used for better local law enforcement?
$\begin{array}{lll}\text { (a) } 25-50 ¢ & \text { (b) } 50 ¢-75 ¢ & \text { (c) } 75 ¢-\$ 1.00\end{array}$
10. Should the State Administrative Agency be permitted to suspend the licenses of lobstermen for breaking the law, subject to a subsequent court hearing if demanded by the offender, in order to reduce overcrowding in the courts and to create a penalty
with more impact than a fine?
(a) yes (b) no
11. In order to simplify law enforcement procedures, it has been suggested that the upper end of all buoys be marked with a color to identify the class of license (i.e. red for Class A, yellow for Class $B$, blue for Class $C$, white for Class D) Do you: (a) agree (b) disagree
12. Should lobstermen be required to certify sales through (a) annual catch reports (b) monthly catch reports (c) carbon copies of transaction slips from the dealers --- in order to determine permit category.
13. How old are you? 13-A How many months do you fish?
14. How many years have you been a commercial lobsterman? $\qquad$
15. How many traps do you fish presently?
16. What AREA do you fish? AREA 1 - N.H. border to Saugus; AREA $2=$ Revere to Quincy; AREA $3=$ Weymouth to Plymouth; AREA 4 = Wareham to R.I. border (including Islands); AREA $5=$ Bourne to Provincetown


[^0]:    I Alaska legislated a limited entry plan in 1973, and the State of Washington has a limited entry plan for the salmon fishery.

[^1]:    *This plan was developed by Conrad Meyer, an economics student at Trinity College in Hartford, Connecticut. Mr. Meyer provided valuable assistance to us during the summer of 1976.

