

**Should there be a Marine
Recreational Fishing
License in Rhode Island?**

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Abstract:

This paper addresses the question of whether or not there should be a marine recreational fishing license in Rhode Island. For many years there has been a freshwater recreational fishing license and in many other states there are saltwater licenses. However, Rhode Island, along with the other New England states, has only recently started to discuss licensing as a possible means of collecting better data and raising revenue in order to better manage saltwater fish stocks. The Rhode Island Coastal Institute played a key role in this process by facilitating a series of open “subcommittee” meetings to discuss the licensing issue, as mandated by the state legislature. I attended these meetings and conducted a survey to find out more about what people were fishing for, why and how they perceived the license. The survey results showed an even split between people who wanted the license and people who did not want it. In the end however the Coastal Institute subcommittee voted unanimously against any sort of license, even a free one. This is good because the license needs to be thought through more thoroughly if it is going to do a good job at helping to manage the fishery. At this point the type of license that is realistically being discussed might not do much besides raise money for DEM, and even that might not be enough money to improve management. Overall the license needs to be reconsidered and the goals of such a program need to be re-assessed. I recommend looking at other possible management techniques along with continuing to work with the license.

Key Words: Recreational fishing, overexploitation, subsistence fishing, RISSA (Rhode Island Saltwater Anglers Association), DEM(Department of Environmental Management –Fish and Wildlife Division), Coastal Institute (URI Bay campus), Stripers (Striped Bass)

Introduction:

My question: “Should There be a Marine Recreational Fishing License in Rhode Island?” asks a question that many people in the state have been trying to figure out. The reason that a license is being considered in the first place is because of the decline of many important recreational fish species such as Bluefish and Tautog which have both decline over 50% in the last 10 to 20 years (MRFSS 1999). The Department of environmental Management is looking for new possibilities to help them better manage the fishery. Licensing is one of the most common and most realistic measures. First of all, I will take you through the history of fishery management at the state and federal

levels (briefly). Next I will show the reader that there is a definite problem: overexploitation. From there I will discuss the conflicting views, some legal issues, why DEM wants a license, a few problems with licensing and licensing in other states. Then I will discuss my own survey and give recommendations to finish off.

Background:

Federal and State Fishing History

The 1990-1991 National Marine Fisheries (NMFS) study of the National Marine Recreational Fisheries noted that marine recreational fishermen had the ability to have an “impact” on the fish stocks. The study meant ‘negative impact’ since it is clear it was referring to overexploitation as the main problem. Unfortunately this is contradictory to the main goal of the Federal Magnuson-Stevens Fishery Conservation and Management Act (USC Law 94-265 as amended 1996). This Act states, “All U.S. waters will be capable of sustaining healthy fish populations....” Also at the Federal level is the Sustainable Fisheries Act, which says certain stocks have declined to the point where their survival is threatened, and these stocks deserve long-term protection (USC 1996). This applies to the state of Rhode Island because it must have laws and regulations from the coast out to three nautical miles that “agree” with those on the regional and Federal levels, especially when it comes to fish that don’t observe political boundaries (New England Management Council 2002). The Rhode Island Department of Environmental Management, Fisheries Division (RI DEM or DEM) states that the long-term goal within the state is to work towards sustainable fisheries both economically and biologically. The Coastal Institute of Rhode Island, located at the University of Rhode Island Bay Campus,

also wants to look at the key economic, social and community issues that come up when working towards sustainability, and advise RI DEM and legislators to aid in the policy making process (RIGL H 6544, 2001).

Rhode Island, with jurisdiction from the shores of the sea out to three miles, has no licensing plan for the recreational fisheries (except for those who fish for lobster, operate charter boat businesses and/or fish in freshwater) (DEM licensing: subcommittee meeting, 2002). A licensing plan is viewed as a possible mechanism to create a sustainable fishery (Phase II 2001). (Phase II is the continuation of the Phase I Coastal Institute process. The main point was to make sure that the commercial fishermen did not face another year of moratorium. There were main meetings and then there were subcommittee meetings, one of which was encouraged by DEM was the recreational fishermen since they are sometimes overlooked during commercial fishing crisis'.) In fact it is not possible for such a plan to be put into place until 2003 (H6544, 2001). This is because the legislation passed (H6544) in 2001 assumed that a recreational license would not be ready to be implemented before April 2003. This bill does not stop DEM from submitting draft legislation before that. The date of 2003 was most likely intended so that there could be meetings and discussion of the license prior to implementation (Boyd 2002). DEM plans to be prepared to face this issue. With the help of Jim Boyd at the Coastal Institute and the DEM support staff these agencies have the ability to hear many voices on the issue before 2003. Most of this discussion occurs in the Recreational Subcommittee, which is a part of the Phase II process that the Coastal Institute mediates.

Phase II is the continuation of Phase I meetings that were started to address commercial licensing. Both phases were run by the Coastal Institute, which acted as a

“neutral space” for the participants. The main point was to work with the commercial fishermen and get legislation drafted that would be put in place in 2002 to end the license moratorium. In Phase II there were also subcommittee meetings, one of which was specifically devoted to discussing a recreational license.

Although there is no licensing program in place now DEM has regulated the fishermen with season, size and bag limits. DEM has all of this updated information, including the minimum size, the season one can fish and the possession limit. These are available through their website, through phone, at the DEM enforcement division or at many bait and tackle shops. Although these limits are in place, it is hard to regulate exactly what is caught (Subcommittee December 13). DEM would need a much larger enforcement staff to really know what’s being caught legally. Enforcement is a major concern with the recreational fishermen and commercial fishermen alike (Subcommittee December 13).

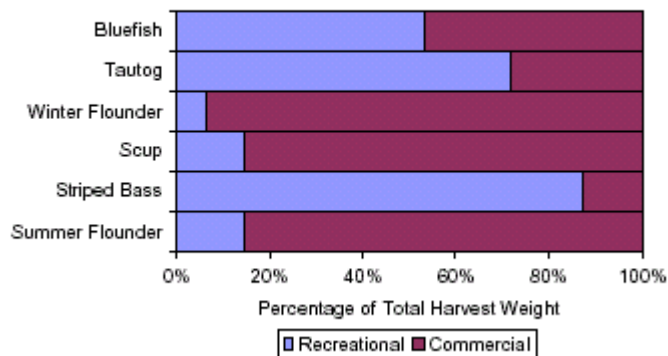
Recreational Overexploitation

Historically, RI DEM has concentrated much of its efforts on the commercial sector of the fishery. One reason for this is simply that commercial fishermen have a large impact on fish stocks and on the local and regional economy. They are also easier to monitor since they are on large boats and someone watches what they land in harbor (Lynch 2002). However, in the Fish and Wildlife Report on the Status of Marine Fisheries there is evidence that in 1999, 24% of the total pounds of fish landed in New England were landed by recreational fishermen (Valliere, 2001). And if the six key species for recreational fishermen are considered (Striped bass, Bluefish, Summer flounder, Scup, Tautog and Winter flounder) the recreational sector landed closer to 28%

of the total. In the cases of Striped Bass, Tautog and Bluefish the recreational fishermen caught more than the commercial fleet.

Figure 1-1

Figure 11. Recreational vs. Commercial fishing in Rhode Island: total landings (1989 - 1999)



(Valliere 2001) Data is from The National Marine Recreational Fishing Statistical Survey (MRFSS).

The MRFSS paints a clear picture that these key recreational fish species are in a state of decline. For example, recreationally harvested Bluefish have declined in population numbers about 67% since 1989. There are a lot of influences on the fish in the ocean, but none so great and so controllable as overfishing.

Figures 1-2 and 1-3: Comparison of commercial and recreational landings in Rhode Island for two recreationally important species (Valliere 2001).

Figure 1-2

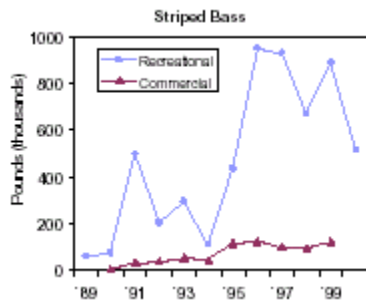
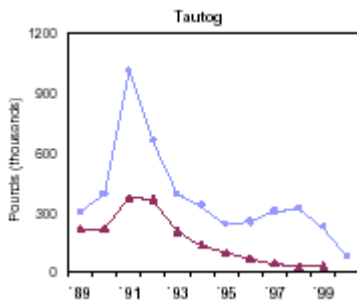


Figure 1-3



(Appendix 7 for specific data from MRFSS and Valliere 2001)

In 2000 Striped Bass was fished five times more than it was in 1989. There are a few different reasons why this is the case. It is important to note that there were heavy restoration efforts by the DEM with very strict catch limits, sometimes complete moratorium(Lynch 2002). Since these efforts the fish have steadily but slowly come back in population size, although not as plentiful as they once were (Johnson 2002). Striped Bass is one of the most popular species to fish currently. Charter boat owners said that it is because they are a fun fish to catch (good fighters), good to eat and you

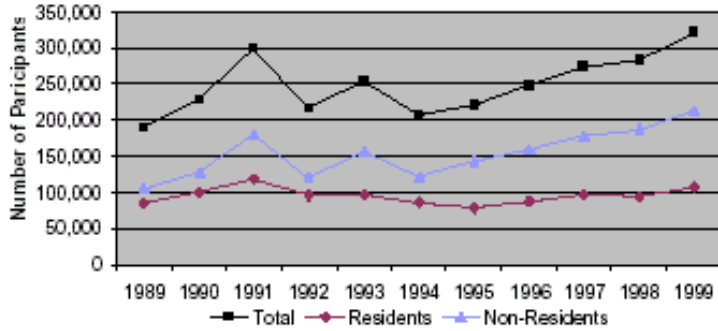
don't have to go really far out to sea to actually catch them. They are a species that used to be much more rare than they are today. Stripers have gained popularity among anglers over the last few years (Johnson 2002). On the other hand, the commercial catch has only slightly increased between 1989 and 2000. In 2000 the commercial fleet landed about 100,000 pounds of fish while the recreational group landed about 500,000 pounds. Recreational fishermen obviously dominate the striped bass fishery.

Tautog is another species that has historically been more impacted recreationally than commercially. This was a species that was not considered good to eat until recently. "Nobody really cared for them until the mid-1980's when they started to be fished more," says Tim Lynch of RI DEM. The market for them grew, more people tried them and liked them and that's when the boom took place, where lots of people were fishing for them (Lynch 2002). This species is not as prevalent as it used to be (between 1991 and 2000 there was a 91% decline in recreational landings and an 83% decline in commercial landings), and in 2000 commercial fishermen were almost catching nothing and recreational only about 100,000 pounds down from a strong year in 1991 of about 900,000 pounds (Figure 1-3). The numbers indicate that Recreational fishing does indeed have a large local impact on fish stocks in Rhode Island.

Over time there has been an increase in the number of saltwater recreational fishermen. This is important to note because if the recreational fishermen are already taking a substantial amount of fish, (depending on the species) and there are more and more anglers this will add up to the problem of overexploitation.

Figure 1-4

Figure 9a. Saltwater Recreational Anglers in Rhode Island

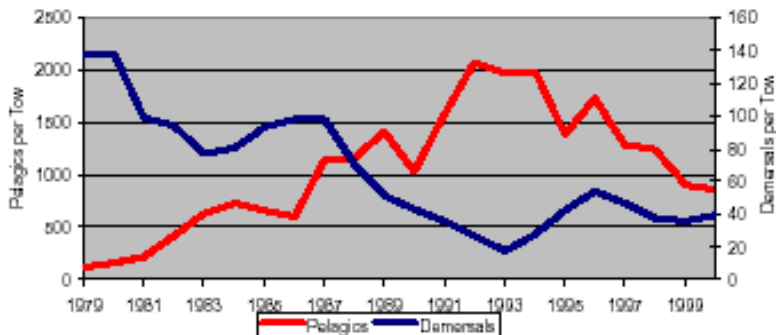


(Valliere 2000)

DEM's intensive trawl data (conducted since 1979) show that in Narragansett Bay there was an obvious decline in both pelagic (mid-water migratory species like Scup) and demersal (bottom dwellers, groundfish like Summer and Winter Flounder) fish species from 1979 to 2000 (Valliere 2001).

Figure 1-5

Figure 6. Trends In the Demersal Fish and Pelagic Fish/Squid Complexes In Narragansett Bay and RI Coastal Waters from the RIDFW Trawl Survey



(Valliere 2001)

This graph shows a 71% decline in demersal fish in Narragansett Bay from 1979 to 1999.

Combined this data cumulates to produce a troubling situation for Rhode Island's fin fish stocks. This data clearly sets up the argument that some species are being overexploited (NMFS). The bottom line is that certain species in Rhode Island waters are being over fished, not just by the commercial fishermen but by recreational anglers as well.

Conflicting Views

There are some who argue that these data are not correct or are misleading. There are many fishermen who question the accuracy of the data collected by The National Marine Recreational Statistical Survey, which is where the bulk of DEM's data comes from (Phase II 2001).

Recently there have been some papers that boast of the wonderful state of the fisheries in Rhode Island. For example, in a report that came from the New England Fishery Management Council, there is evidence that *some* stocks are recovering. This report states that in 2000 the biomass of 11 major groundfish species has increased about two and a half times the levels in 1994. It also states that RI has seen a 53% increase in the number of fish landed between 1994 and 1999(Recovering Stocks 2001). However, these data are deceptive because many groundfish, like cod, are protected by strict regulations, like cod, that have allowed their populations to survive (Kurlansky 1997). Also landing more fish does not always mean there *are* more fish to be caught. It might have more to do with the technology and machinery available to catch fish. The New

England Fishery Management Council uses similar data to DEM, some of it comes from the MRFSS, but they are not taking into account the *whole* picture.

In another source, The Fisherman's Call newspaper, there was an article about the comeback of scup in Narragansett Bay (Orchard July 2001). In a later edition of this newspaper there is an article about Flounder decreasing in the Bay and how this is due mainly to an increase in winter temperatures probably not because of overexploitation (Orchard September 2001).

DEM argues that the evidence they use is much more accurate, and scientifically and statistically proven by the MRFSS (Orchard September 2001). DEM is often the agency that has to remind people to look at the whole picture instead of a small piece. They say that the Scup that were in the Bay were actually a baby boom from a stock that still is recovering (Fishermen's Call July 2001).

Are the data accurate?

These arguments could go back and forth for a long time. The point is that there are not enough clear data to give quality evidence that is completely capable of generating a consensus between the users and the regulators. Marine ecosystems are extremely hard to study, for obvious reasons; therefore, there is a lot left unknown. Even the more studied terrestrial ecosystems are so complex that we do not understand them completely. There needs to be more research done before any of this information can be considered conclusive (Lynch 2002).

The data from the Fisheries Statistics gathered by the MRFSS are what I have based my conclusions on. It is considered the most accurate data available at this time and it shows a decline in many key recreational fish stocks in Narragansett Bay. In fact

after the year 2000 there was only about a 5% standard error range, which is extremely accurate (Subcommittee meeting 1-23-02). DEM thinks it might be useful to collect their own data to supplement the MRFSS data and to better enable them to use more accurate data (Subcommittee January 2002).

Fish for the Future (A Tragedy of The Commons)

Rhode Island Sea Grant, an organization that works with the oceans, takes the same perspective, as do some fishermen and many environmental and state agencies such as US FWS. The common goal as stated earlier is to make sure that all the finfish and shellfish species are around in future years. The government has to look out for all people who may want to fish in the future. They have to make sure that people have that ability. The problem lies in the age-old example that Garrett Hardin is famous for, *A Tragedy of the Commons* (Hardin 1968). The fisheries are a perfect example of the tragedy. There is a common pool resource, which the Rhode Island Constitution says people shall freely enjoy (RI Constitution Article I: section 17). “The people shall continue to enjoy and freely exercise all the rights of fishery and privileges of the shore, to which they have been heretofore entitled under the charter and usages of this state, including but not limited to fishing from the shore” (Article I: section 17).

Some people choose to fish for a living, while others choose to recreationally fish for some private benefit. As rational individuals, these people know that the more they fish the more benefits they personally will reap from the system. The costs of taking fish out of the system are divided among all the fishermen equally. So if fisherman A takes 5 fish and fisherman B takes 30 fish; fisherman B is getting a greater benefit. On the other hand fisherman A is still facing the fact that there are 35 fewer fish that now live in

the ocean. Thirty of those are fish that fisherman A will never be able to catch. He loses benefits because of fisherman B. A rational individual would realize that they need to increase their own fishing effort to get a better benefit or they might argue for more controls over Fisherman B.

The result is that whenever the fishermen can catch more fish they will. There is at times a race-like atmosphere to catch as many fish as possible, knowing that the other guy might get them first. This is much more obvious in commercial fisheries, but there is no doubt that it also occurs in the recreational sector. There is also competition between recreational and commercial sectors. Garrett Hardin has proposed five possible solutions to this problem of fisheries management:

1. Business as usual (nothing is done)
2. Appeal to conscience
3. Legislative temperance (government regulation)
4. Communal control
5. Privatization (ES 141 notes 2001)

Most of these will not really work well with the recreational fisheries. The Stakeholders all agree that business as usual is not the solution; there must at the very least be discussion about how to better manage the fishery.

There is already “appeal to conscience” going on. There are some messages that tell fishermen to throw back their fish or only keep a few. One of the largest angler clubs in the state encourages people to practice effective catch and release. At Rhode Island Salt Water Anglers Association banquets they pass out free circle hooks, which are designed for catch and release. There is also a short piece handed out to new members on

how important catch and release is. This particular association also has a Tag and Release Committee, which encourages anglers to tag the fish they catch for the American Littoral Society (Medeiros 2002). Sea Grant and the Environmental Protection Agency (EPA) also have teamed up to make this a more widely known issue, although they haven't done anything in Rhode Island recently, they still target many people that might fish in Rhode Island (Sea Grant website). Tagging is only a good idea, however, if the tagging data is useful to scientists, otherwise there is no benefit and if tagging is done wrong, perhaps extra fish mortalities (Lynch 2002).

Privatization would not work at this point in time because of the Constitutional issues. It would be unlikely that it could happen in this country. Communal Control and government regulation are the best options. However, a community deciding who "belongs" is so complicated and controversial that it is probably best left to the governmental agencies like DEM to regulate and maintain the fishery.

According to a few different sources there is no way that this state is ready to limit access to the recreational fisheries (Allen and Erkan 2001). George McDonald, an Attorney At Law, says, "There can be no limitation of entrants into the recreational fisheries, except for a limitation on the individuals harvest" (McDonald 2001). He seems to be arguing that there is a public trust interest and we cannot only license some of the stakeholders. In other words, McDonald claims along with many fishermen that the government cannot limit entry by using a license and fee. However, when I talked to many fishermen I asked them if they held a freshwater license and a majority of them did. If the RI constitution accepts a freshwater license as constitutional, how can it deny a saltwater license? In other words this is not the strongest argument.

Legal Issues

There are many more legal issues that come up when discussing licensing a common pool or open access resource. There is some important terminology that needs to be addressed when dealing with the law involved.

Definitions:

1. Constitutional right: “A right guaranteed to the citizens by the constitution and so guaranteed as to prevent legislative interference therewith” (McDonald 2001).
2. License: “A permission granted by competent authority to engage in a business or occupation or in an activity otherwise unlawful. A document, plate or tag evidencing a license granted” (McDonald 2001). This is a permission that can be taken away by the competent authority. It is very different than a property right that can be passed down.

There are constitutional issues that have stopped almost all the northeast states from licensing their recreational fishermen. As stated earlier, under the Rhode Island Constitution people can continue to enjoy and freely exercise their rights to the fishery. This is stated clearly in Article I: section 17 of the Rhode Island Constitution. It says, “The people shall continue to enjoy and freely exercise all the rights of the fishery, and the privileges of the shore...” that were granted to them under the original colonial charter (RI Constitution, Article I: section 17). This dates back as to 1663 when all British

subjects were granted by King Charles II the common right to fish in salt waters anywhere in their colonies and neighboring British colonies (Nixon 2001). Article 1: sect. 17 of the Rhode Island Constitution provides that fishermen have a continued right to fish, even today in 2002; but not a continued right to “kill” fish.

This constitutional right has been challenged. In the Supreme Court case *Payne and Butler v. Providence Gas Company*, 31 R.I. 295 (1910) the question was asked what right exactly does the public have when it comes to fisheries. “By common law all persons have a common and general right of fishing in the sea, and in all other navigable or tidal waters; and no individual can maintain exclusive privilege to any part of such waters unless he has acquired it by grant or prescription” (McDonald 2001).

Professor D. Nixon wrote an article about the Supreme Court’s opinion on Article I: section 17 (Nixon 2001). One of the most interesting items that came out of this opinion was about the commercial fishermen’s right to the resource. The Court found that commercial fishermen don’t have any special rights to the fishery above those granted to the general public. Neither do recreational fishermen. “The constitution gives the benefit of the fishery to *all* the people in equal measure” (McDonald 2001). The management of the fisheries needs to address the best interests of the Rhode Island citizens, not just the fishermen.

The problem in managing the fishery for everyone partly lies with the way most people think about the fishery. It is hard to think about managing a fishery for non-fishermen and for people in inland Rhode Island, who have never seen a wild saltwater fish species. It does not help the situation that the bill, “Rhode Island Fisheries Management and Modernization Act of 2001” H6544, enacted in 2001 only takes

fishermen into consideration when designing management techniques. It states the need to look at the “full reasonable range of options for improving fisheries management in Rhode Island” (20-3.1-7). But it goes on to identify a range of “fishing interests” that are important in this process. It never states that the fishery will be managed for the state of Rhode Island and all the citizens. This seems to be a point of confusion for those involved. It is extremely important to consider the fishermen since they are the main user group; however, they are not the only stakeholders. It is unconstitutional to ignore the rest of the citizens of this state just because they don’t go fishing.

That is one reason why McDonald, an Attorney at Law in Cranston, R.I., says that he believes along with some other fishermen having a license fee for recreational fishermen is unconstitutional. “A constitutional right may be registered but not licensed” (McDonald 2001). He suggests that the fishermen are registered without a fee and then their boats, gear and equipment are licensed. Fishermen are scared of this because once registered, it is much easier to start tacking on a fee (subcommittee 3-13-02).

Raising revenue for DEM

However, one of the major goals of the envisioned licensing system is to raise revenue for the Division of Marine Fisheries in DEM (subcommittee meetings 2001). This creates a problem. Traditionally, financing the state government is the responsibility of the state legislature (MacDonald 2001). But if they do not have enough general funds to cover the most basic Fish and Wildlife functions, then DEM may need to turn elsewhere. At this point DEM really cannot get any more money from the federal government (subcommittee December 2001). Mark Gibson (RI DEM) said in a subcommittee meeting that the best way to get more money is to raise the money through

licenses. Not only will this raise money it will also encourage the federal government to match funds and give more donations (subcommittee meeting 11-28-01). More taxes are also not the solution, says DEM. Fishermen don't really want them and they are also at their highest possible level, so they cannot be increased (subcommittee 11-23-01).

Goals of a License

So, what exactly *are* the goals of a licensing system? The Subcommittee at the Coastal Institute was able to put a very comprehensive list of goals together (Appendix 4). This list covers the main goals that Rhode Island DEM thinks are appropriate as well. According to NOAA National Marine Fisheries Service, "The objective is to sustain the resource while minimizing the hardship new regulations can cause" (NMFS 2001).

There are many other goals that might be met through a saltwater recreational licensing program, but first Rhode Island stakeholders have to accept it. It has become clear (in all of the subcommittee meetings) that in reality there are only two main goals of licensing.

1) Collect data-most importantly how many fishermen there are. 2) Raise revenue that the DEM needs to support programs that they believe would enrich the recreational fishery.

The goals of a licensing program are going to be one of the most important aspects to discuss in the near future. The specific details of the licensing program will be the deciding factor in whether or not the fishermen support the license. See appendix 5 for two possible license models and some of the pros and cons. In a poll done by the Saltwater Anglers Association they found that 49% of participants thought there should be a license with safeguards. Out of all the respondents 30% said "no way" to having a license. This poll was done before the Coastal Institute process even started (RISAA 2001).

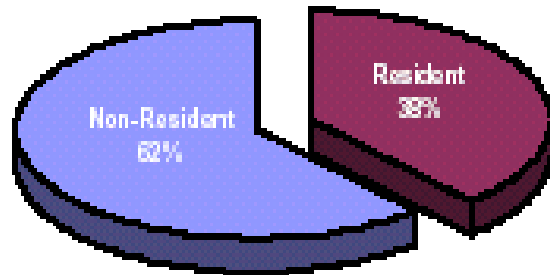
Economic Arguments

There are many economic arguments at stake as well. There are about 300,000 marine recreational fishermen who come to fish in RI (many of these people are from out of state) according to the Marine Recreational Fisheries Statistical Survey (MRFSS online). Rhode Island depends on saltwater anglers for a large part of the state economy. Tourism is one of Rhode Island's largest industries. In the process of harvesting 3.8 million pounds of fish in 2000 (Valliere 2001), recreational fishermen spent around \$100 million dollars on fishing related activities (Valliere 2001). These diverse activities may include spending money on lodging, tackle, bait, gas, boats, maintenance and dockage (Valliere 2001). Non-resident fishermen spend a lot of this money in the state when they come here to fish.

Many of the anglers in Rhode Island are from other states. Following is the breakdown of in-state versus out-of-state fishermen that DEM has included in their report of the fisheries (Valliere 2001).

Figure 1-6

Figure 9b. Percentage of Resident and Non-resident Saltwater Recreational Anglers in Rhode Island (average number for 1989-1999)



There are three primary methods for finding the value of fishing in this state. These methods include the “travel cost method”, “contingent valuation” and “opportunity cost” of time (Costanza, 1991). The travel cost method basically says that the further you will travel and the more money you spend traveling the more you value the resource in question (Costanza, 1991). A way to figure this out would be to find out how much people are willing to pay specifically for travel costs the Rhode Island coast from their home town. This, however, does not take into consideration how well known Rhode Island is to the rest of the world. If nobody knows how good the fishing is in Rhode Island than they will not travel long distances to come here.

Contingent valuation is another method that could be used along with the travel cost method. This is a way of finding out the amount of money people are “willing to pay” to protect something. The easiest way to find out people’s feelings is by designing a good survey (Goodstein, 1995). It seems to me that the problem with this is that people with different income will have different perceptions and some people might not answer questions accurately (in terms of what they could actually pay).

There are also the Opportunity cost and the Replacement cost valuing systems. The former is the forgone value of the next best alternative that isn't chosen (Costanza, 1991). Replacement cost is the cost of replacing a damaged area (Costanza, 1991). If the fisheries could be replaced somehow, where would it be? This is harder when dealing with the ocean than with land.

Although there have been many biological concerns raised, economic concerns are at the heart of this problem. RI DEM made a draft guide of their goals and principles for the commercial fisheries (Goals and Principles 2001). They include a range of biological, socio-economic and data collection goals. Many of them carry over into the recreational fishery as well. In their opinion the economic goals are just as important as any other goals. The main point they make with these principles is that any legislative action should take into account the economic welfare of all individuals and the state as a whole (Goals and Principles 2001). However, the DEM Division of Fish and Wildlife really needs to raise revenue because of their budget situation (Subcommittee meetings 2001-2002).

Many fishermen are very worried that if a license that costs money was put into place it would be just enough to discourage many of these participants, especially those who come from out of state and it would therefore hurt the economy (Subcommittee December 13, 2001, January 23 & March 13, 2002). Others in the same meeting said that a small fee would not stop these tourists from coming to Rhode Island to fish. One of the members of the subcommittee, Michael J Bucko, has voiced his opinion that there would be a loss of 30% of all the recreational fishermen, even with a small license fee (Bucko 2002). In a paper he produced for the subcommittee he cited estimates from Florida,

South Carolina and Maryland that showed about a 20% decrease in fishing about the time licenses in those states were implemented (Bucko, 2002). There is no way to be certain that this was the cause of the drop, but it is likely (Bucko, 2002). The point that Bucko and many other fishermen made clear was that if we start charging people in Rhode Island any sort of license fee then (since Rhode Island is a small state surrounded by two larger coastal states) fishermen will go to Massachusetts and Connecticut.

Willingness to pay

This comes back to the importance of “valuing” the fishery. Contingent valuation was one of the methods used to find out individuals’ “willingness to pay” for the resource. A study was done in North Carolina to find out fishermen’s willingness to pay for a recreational marine license (Whitehead, 2000). It concluded that although there was relatively low “support” for a license (just like Rhode Island), there was a clear willingness to buy a \$15 annual license as long as the money would go back to increasing the quality of the recreational fishery (Whitehead, 2000). (The hang-up with this has been proving that the money will go directly into a restricted account. And once it’s in the account whether it will stay there.) Eighty-four percent of all anglers surveyed in North Carolina said they would purchase either a yearlong or a weeklong license (Whitehead, 2000).

The Whitehead study also found that fishing club anglers were more willing to pay than those not in a club. This makes sense because these are usually the more dedicated anglers who will never give up fishing. It is possible that these anglers are also

the more wealthy participants, since they are already willing to pay a club entry fee in some instances. When a club takes a position on a debate like this, it often sways its members to the same opinion, no matter what they thought originally. The club members trust that the club has done its research and is making the best decision in terms of its members. This happens all the time in many different settings and to some extent it happened when RISAA announced its position on the debate over a license (RISAA March 8, 2002). RISAA is a club that was represented on the subcommittee board by Steve Medeiros along with others in the club and had done its share of research and been very involved. Through my own observations, however, I found that after the announcement had been made that this very large anglers association was against the license and as a result swayed the entire subcommittee from being split down the middle about the license to an almost unanimous consensus that the license should not be implemented. The problem I see with this situation is that the learning process ended here for many people, especially those who were less involved with the recreational license process in the first place. This is one reason why it will be important to continue having information about licensing available.

Even with the data that was collected in North Carolina, a license still did not pass there. People were worried that a \$15 fee would greatly discourage fishing in their state. Rhode Island fishermen are worried about the same thing (Subcommittee meetings). In North Carolina the suggested annual fee has since been proposed as \$7.50 per year, but has yet to pass into law (Whitehead, 2000).

A different example of willingness to pay goes back to a 1980 hunting study from *Environment* magazine. It found that in Wisconsin when hunters were asked

how much costs would have to increase before they would stop hunting, they said (on average) \$25 per day. This is referred to as “surplus benefits.” These are benefits that hunters and fishermen don’t pay for now but feel they could and would pay to continue their sport.

Rhode Island is famous for being the Ocean State. Many people vacation here in the summer and many of these people fish. These fishermen are willing to pay a lot of money to enjoy this sport. Fifty percent of the anglers surveyed by MRFSS said that someone in their household owned a boat used for saltwater fishing. These same anglers were asked about the amount of money they spent associated with fishing. In the northeast anglers spend an AVERAGE of \$61.00 on boat fees, \$58.00 per night for lodging and \$22.00 for travel expenses (MRFSS 2001). This does not address buying food, eating out and other leisure time activities. If all of these individuals bring this much money into Rhode Island it really adds up. In 1999 about 62 % of the fishermen were non-resident (See Figure 1-6), which means they were bringing a lot of money into the state (Valliere, 2001).

Can the money raised be protected?

At this point we will ignore willingness to pay and the constitutional issues of the license, and assume a fee *will* be charged. Where does the money go? As I mentioned, DEM would benefit greatly if there was a licensing program because all of the money would go directly to them (“Although there is no guarantee,” reminds Lynch). Once they have the money it is possible to put it into a restricted receipt account to make sure that no other state agencies could use it. However, in the past there have been problems with the government taking away money that was raised in a similar fashion (Subcommittee

meetings 2001- 2002). License fees can be protected by certain laws (Gibson, 2001). These laws can cover fishing licenses, as they already protect hunting and freshwater license fees. DEM believes that if the wording in these three laws was made stronger then the General Assembly would have no access to the money raised (Subcommittee, November 2001).

Fishermen believe very strongly that this money needs to go back into making the recreational fisheries better. It would pay for new access sites, better ramps and piers, the Jamestown bridge to be made into an artificial reef and a fishing pier, parking areas, handicap facilities, outreach and sporting programs and many other projects. The DEM has created a “wish list” of all the things that they would like to spend the money on (Subcommittee November 2001) (Appendix 8). If the fishermen can be convinced that this money will go into their own account, many of them will support a license. Unfortunately, fishermen are worried that the saltwater license might bring in so much money that even a restricted account could not always keep the money from being used in General Assembly crunch time. On March 13, 2002 it was confirmed that the General Assembly could take money out of the account if absolutely necessary. This occurred at a subcommittee meeting where there was a legal aid answering questions (Subcommittee meeting March 13, 2002).

Captive Agency

Raising this revenue may put DEM in a position where they are a “captive agency.” They will be dependent on the licenses that are bought by fishermen. Once they start generating this money it is almost certain that the general assembly will take away the \$200,000 (which is alright as long as the licenses are bring in the projected

amount of money) they give DEM now; leaving DEM stranded with income coming solely from the licenses (Subcommittee, November 2001). This leaves DEM with conflicting interests of raising money and of managing the fishery.

A perfect example of this comes from the Canadian government and their management of the national forests. There is a large percentage of “crown land” that the government allows big logging companies to use. In return those companies pay the government a certain amount of money for each tree that they cut down. The Natural Resources Department gets almost 100% of their funds in this manner. If they cut back the amount that these companies could log, they would have to start cutting federal and province wide programs. They have an incentive to get the logging companies to cut down *more* trees so that they can expand. On the other hand, they also want to protect what old growth forests and intact ecosystems there are in Canada, as do many of the people. There is a clear conflict of interests (Stern, 2000).

If DEM at some point decides that there needs to be a cap on fishermen because of overexploitation, they will be stuck with the problem of having to cut back their budget or possibly increase license fees. This could also give them an incentive to encourage more and more people to fish, which conflicts with a lot of their own data that shows there need to be cut-backs in the fish being caught.

Licensing in other states

The problem at hand is a very complex one, with many conflicting interests (Appendix 6). It may seem thus far that only Rhode Island has this problem, since this is the area of focus. However, most of the coastal states are dealing with licensing. In fact many states have already come up with licensing programs. Twelve of the 21 coastal

states have a license for recreational saltwater fishing (Valliere, 2001). And others are working on it, for example, North Carolina.

The license program in Texas has been noted as a possible model for Rhode Island (Subcommittee, November 2001). This is a relatively new license, started in the 1990's. The money that is raised from the license goes directly into a protected account, which has been untouched thus far. Additional funding for Fish and Wildlife comes from corporations that are willing to match certain amounts of money. Texas FWS receives no money from the General Assembly. A variety of Fish and Wildlife Service programs are conducted with the money and the general recreational community supports the license (Subcommittee November 2001). Another option is the South Carolina example that many fishermen are fond of. They like it because it is a small fee that would be less likely to encourage anglers to go to other states to fish. It is \$5.50 for anyone who fishes (Subcommittee December 2001).

Rhode Island DEM has looked at many different approaches and they are trying to narrow it down. During the meetings at the Coastal Institute fishermen have been voicing both the positive and negative aspects of a licensing program. Through the discussions it has become apparent that many other states have models of licensing that just don't fit with Rhode Island. The issue at stake is Rhode Island's own problem, and although it is good to accept guidance from those states that already have a licensing program, it is necessary to think about this as an individual and unique problem.

Subsistence Fishing

One issue that is not as discussed in other states is subsistence fishing. Subsistence fishing is an issue that is rarely discussed directly. However it might be an

important social component of a management plan for recreational fishing. First, a definition of subsistence fishing:

Subsistence fishing is fishing which is neither recreational or commercial. The participant uses the fish to supplement his/her diet and the family diet. It is often practiced by cultural minorities such as Hmong, Vietnamese, Portuguese, Spanish, Cambodian, and others. Urban populations that are poor are the most likely to be subsistence fishermen. Also, those who have just immigrated here are very likely to fish for food (Dudley, 2002).

Unfortunately, these populations of people are very difficult to study and work with. The best way to find out about their fishing practices is to observe them, but no one right now documents what they are doing. It is also difficult to study small communities like this. Many of them do not speak English (Dudley, 2002). The main problem is getting subsistence fishermen accurate, useful information that they can use. There are health issues and laws that fishermen must know about.

The question is whether there is a justice issue if the state asks subsistence fishermen to pay for a license. They *are* fishing to supplement their diets, not for fun. Christine Dudley brings up the fact that this problem never came up with freshwater licenses. However, there are *most likely* more saltwater subsistence fishermen than freshwater (there are more urban areas on the coast), so it's not really the same situation (Dudley 2002).

In certain cases people can be exempt from the license, but it probably would not work in the case of marine subsistence fishermen (Dudley, 2002). First of all, it is hard to argue that one must eat fish. If a person is so poor that they cannot afford to buy food,

there are social programs designed to help them (Dudley, 2002). That just leaves the argument that many people fish because of a cultural tradition.

The other problem is how other fishermen would perceive this. Fishermen feel that if they pay for a license they want to get benefits, but they might not want others to get the same benefits. And the last component is the issue of qualification. How does and individual get the right not to buy a license (Dudley, 2002). Will there be a certain level of poverty that qualifies an individual or will people have to apply?

This population seems to be getting neglected in this process. Subsistence fishermen, many speak no English, certainly must have little knowledge of the Coastal Institute licensing process that is going on right now. They do have very different views other than the traditional New England angler. I think there is a gap here that could really be looked at in future research.

Knowing more about the fishermen will give us more information in order to manage the stocks better. In 1980 an interesting article came out in Environment magazine about the role that hunters play in managing species. It argued that when more social scientific information (characteristics, behavior, etc.) was available, it was easier to manage wildlife for human use. It points to humans as predators and most people agree that to manage a species of prey, one must study the predators as well. In many cases hunters help preserve the prey in order to hunt them in the future. Most people do not consider fishing to be hunting, but they are so similar some of the conclusions about hunting can apply to fishing.

For example, when there is a shortage in one species, hunters will usually turn to something else. This happens all the time when a species of fish is threatened and the government makes stricter regulations.

Hunting and fishing are also both usually learned social behaviors. “Fathers act as gatekeepers, teaching hunting to their sons” (Heberlein, 1980). Many fishermen learned to fish when they were kids and go on to teach their children or grandchildren. Fishing is both a social event and also a time to be close to nature (Appendix 3). When there are more fish to be caught there will also be more fishermen.

But in some ways fishing is different than hunting. For example, a fisherman does not always have to kill his prey. He can practice catch and release methods. Also, “Mammals and birds may elicit more empathy on the part of the human predator than a cold blooded fish” (Heberlein, 1987). It is also a bit easier to enter into fishing than hunting. There are two times as many fishermen as hunters. There are also more women who fish than hunt (although still not a large percentage). To find out more about the population of recreational fishermen in Rhode Island I designed and implemented a survey that helped me collect information about them.

Methods:

In order to better understand this complex situation, I designed a survey that was intended to find out more about the fishermen and what some of their thoughts were on the licensing issue (Appendix 1). It was also to collect basic social information about the fishermen. As I stated earlier, it is important to know a lot about the “predator” or the fishermen to manage the fishery (Heberlein, 1987). I wanted to find out the opinions of

the people were not comfortable speaking at the subcommittee meetings. I reviewed the MRFSS survey and designed my survey to be similar in some ways (some of the questions were essentially the same). However, I asked additional questions, re-worded some.

Once my survey had been completed and corrected, it was sent out to three people in the fishing community, who are also academics, to get comments and make appropriate changes. This was my “pilot” or trial survey.

After incorporating the comments, I distributed the survey to everyone at the December 13, 2001 subcommittee meeting, but as I mentioned I also wanted to get it out to people who couldn’t attend the subcommittee meetings. I had the help of Steve Medeiros of RISAA and a Striped Bass anglers club president to distribute the survey to their members. There were many respondents who used e-mail to respond, so I know that the survey was successful in getting out to new people besides those already attending the coastal institute meetings.

There was one survey that was created for everyone (all fishermen including charter boat owners, bait and tackle shop owners, regulator and the average fisherman). In my survey there was no way to tell these groups apart. It was a confidential survey, I never looked at the names and I did not separate the surveys in any way. I entered all the answers into an excel spreadsheet that I designed beforehand (Appendix 2). Once in the spreadsheet I was able to manipulate the data. I made lots of graphs and then narrowed them down to the ones I thought were most useful in addressing my particular questions.

Results and Discussion:

To start I would like to address the most straightforward result, but also one of the most important results. It shows how complicated this issue really is. In Figure 1-7 there is a perfectly even split between the fishermen who are in favor of the license and those who are against it. This is extremely interesting to look at after the events at the subcommittee meeting on March 13, 2002 when there was a unanimous vote against the license with all the board members.

Figure 1-7

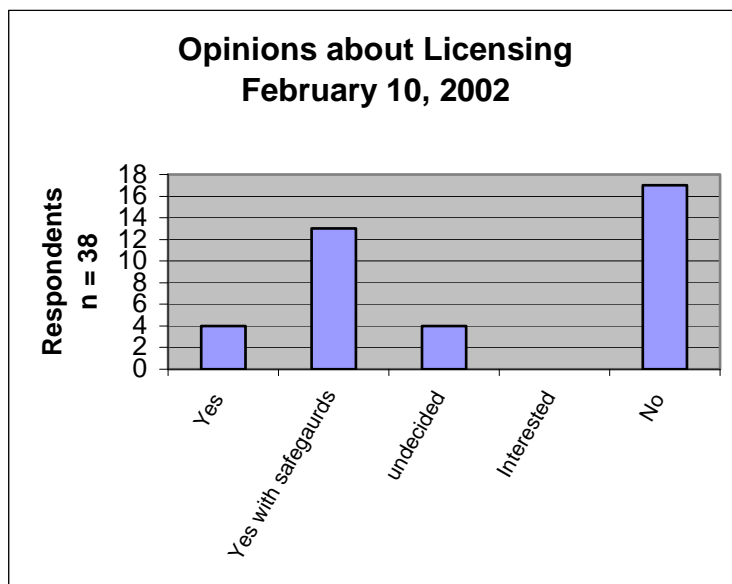


Figure 1-7 shows the breakdown of people who were basically for the license and those who were against it between the dates of December 19, 2001 and February 10, 2002.

The next important result has to do with fishing behavior: What fishermen were able to catch (Figure 1-8) and what they wanted to keep (Figure 1-9).

Figure 1-8

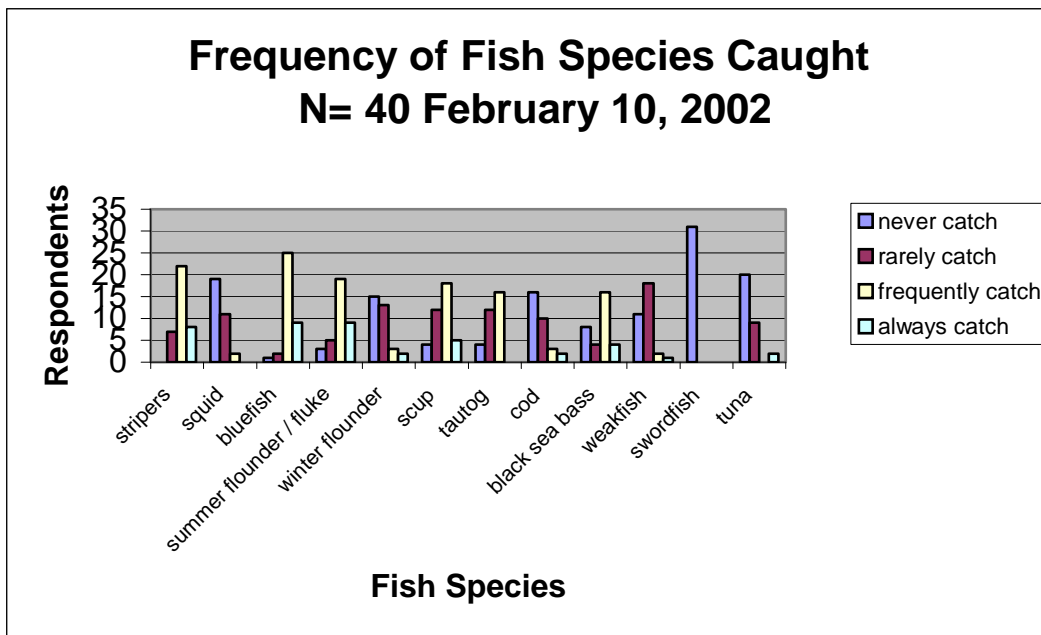


Figure 1-8: (95% Responded) shows how often fishermen caught different types of fish. The key was coded in order to get the degree to which the fish were caught: never, rarely, frequently, always. N= 40 does not mean that each bar graph will have that many respondents. In some cases not everyone answered every question.

Figure 1-9

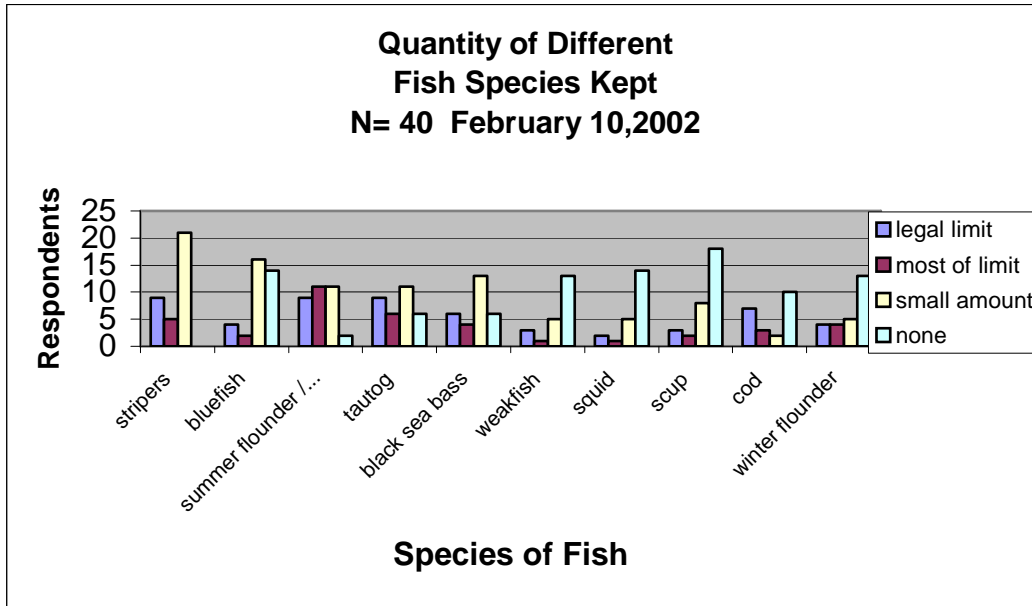


Figure 1-9 (95% responded) shows what amount of each species fishermen choose to keep.

This also helped identify the species that are sports fish. What is a sports fish? A sports fish is a fish that is fun to catch for most people and is readily available. The charter boat owners said that the best sports fish is one that they can promise the fishermen will be able to catch on any given day. They shouldn't be *easy* to catch, however. People also like to catch fish that are relatively big. Part of the fun is the struggle, that's what makes it a sport. The fish are also around during the peak fishing season in late spring to early fall (Johnson, 2002). Another charter boat owner mentions the fact that many popular sports fish today are fish that were very rare a few years ago, like the Stripers. (Donilon 2002).

Sports Fish

Why is it interesting to know specifically about sports fish? As recreational fishermen continue to increase in numbers and continue to fish, they will have the *largest*

impact on sports fish species. These are the species that need to be managed along with recreational fishermen.

The best example of a sports fish right now is the Striped Bass or Striper. It is considered the most popular sports fish by the charter boat owners and other fishermen (Subcommittee meetings, 2001-2002). I designated it as a sports fish by looking at my survey results. When a fish was caught frequently (Figure 1-8) but *not* kept frequently (Figure 1-9) it can be figured that people are fishing mostly for sport. They are not interested in always keeping the fish, even if they catch them often. Twenty-one fishermen out of thirty-five total (about 60%) kept only a “small amount of the legal limit”(Figure 9). However, Stripers were “frequently caught” by 57% of the fishermen. Fishermen were having fun catching Stripers, but they didn’t really feel the need to keep them. Other fish species that had similar results were Bluefish, Summer Flounder and Tautog. They all fit the profile of being good sports fish.

Above are the main results that I found to be most interesting. However all of the results from my survey could be useful, so I have summarized them and they can be found in Appendix 3.

There are a few more items that I would like to discuss out of this summary. It seems like everyone complains about government intervention. Many people want less government interaction. So it was interesting to find that there was wide support for regulations in the fishery. Seventy-nine percent of the respondents said they were *not* against government regulation. And 70% said regulations are needed since populations of fish are in trouble (Appendix 3). The way that many fishermen discuss regulatory agencies it does seem unusual that they are so accepting of the government as a source of

help. It may be because many of the fishermen have seen fish stocks plummet and then with government intervention some stocks have started to return. A good example is the Striped Bass fishery. Captain Charlie Donilon remembered a time when Stripers were almost gone, but in the last fifteen years he as witnesses a comeback with th help of strict regulations. Now he can catch stripers on every fishing trip he goes on. He says that this proves that governments can successfully manage fish stocks (Donilon 2002)

Another interesting result was from the “conservation measures” question (Appendix 3). Fishermen supported conservation measures that are already in place now in Rhode Island. The fishermen were against ideas that were relatively new. For example, in the case of marine protected areas about 70% of all fishermen were against them. But 94% of the fishermen supported the more familiar minimum size limit already in place. It might just be a matter of introducing new management techniques and educating fishermen before they will support any new ideas. I believe that this is a sign that the license will be the most popular management tool in the near future, after the numerous Coastal Institute meetings educated many people.

A point of discussion that is not directly linked to my survey and results is the idea of freshwater licenses. Why is it so much harder to convince people that there should be a saltwater license? One reason is the Justinian code which preceded the Rhode Island constitution and the public trust doctrine. It said that the shores of the sea and the navigable waters, including the oceans were open to all mankind. Most people don't think back to this phrase, however there is a strong feeling in Rhode Island that this is a resource that nobody should have to pay to use. One might think that once licensed for freshwater fishing, fishermen wouldn't really mind getting licensed for saltwater, but

that is not the case. A few of the fishermen who attended the subcommittee meetings said they did have a freshwater license, but they were strongly opposed to a saltwater license.

One last point before I move on is that this survey showed me what a diversity of opinions there are about this issue. Nobody agrees completely and I was dealing with all fishermen, although some of them worked within a regulatory agency. To clarify some of the opinions that different stakeholders have, I created a simple chart, which can be seen in Appendix 6. It just simplifies the many complexities and goes with the most common opinion of each group of stakeholders. I tried to articulate some of the differences between the groups that I have heard throughout this process. It was an afterthought on my part to clarify the stakeholders. I also included a simple flow diagram of the groups involved.

Sources of Possible Error/Changes in survey

There are a few sources of possible error throughout this process. First of all there is the human error component. I may not have read something correctly or I may have double counted something by mistake. Also there is a confusion factor involved. The respondent may have misunderstood the question because of confusing wording, or for another reason. This could cause some answers to be unreliable, however overall the results should still stand.

In another survey situation like this, I would have made different survey for the different types of participants in the fishery. I was just thinking in terms of the average angler when I designed this, but I think I would have more versatile data had I made a few different surveys geared toward each user group (e.g. one for regulators, one for bait

and tackle shops, one for charter boat owners). The downfall was that I couldn't compare these groups very well in the end. It would be useful to know the demographics of each participant. I decided to interview a few charter boat owners, regulators and bait and tackle shop owners to make up for the fact that their data was just mixed in with everything else.

I also would have changed some of the questions a bit. Even after doing a pilot and changing some questions I still ended up with a few questions that were not particularly relevant or useful. For example the question about by-catch was interesting, but not very important for this survey. It simply told me that a little less than half the respondents witnessed it and the rest had not. I also would add some questions that I think were missing from my survey. For example, I would ask a few more specific questions about different types of licensing regimes. I also would have asked something about freshwater licensing. I realized after the fact that it would be interesting to know of those who were strongly against a saltwater license, how many already own a freshwater license. I realized this and sent out an e-mail asking people to respond and 11 people did respond and 8 of them own freshwater licenses as well. But this was not an adequate sample size to really conclude anything.

The one other thing I would try to do would be to get this survey distributed to some of the subsistence fishermen, perhaps in different languages as well. Along with this idea, I would also distribute a similar survey that would poll the non-fishermen in Rhode Island to see what they might think about a license. This would aid in getting a better idea of what *all* people felt.

Recommendations:

I have a similar conclusion that many of the fishermen at the subcommittee meetings had: it is not a good idea to establish a marine recreational fishing license at this point in time. However, I think my conclusion is based on very different reasons than most of the fishermen. I will start by saying that there does not seem to be enough solid evidence proving that the license is the right management option. I think that it could possibly create more harmful results than beneficial results.

Unless the public trust doctrine is ignored, the fishermen are not the only people to take into consideration when managing the fishery. It is very easy to forget this. Through this process I have constantly had to remind myself that I need to consider all citizen of Rhode Island. It wasn't that hard for me because I do not fish, at least not yet, but I care a lot about the fish in Narragansett Bay, and to lose or harm any of the species would disturb me. However, my opinion is not usually taken into account when managing fisheries. There were many comments at the subcommittee meetings that made it clear to me that if there was a license, fishermen would feel entitled to the resource. This is not a good position for Rhode Island to be in, it will only increase the difficulty and conflict of interests in managing fish stocks.

Another problem with the license is actually the revenue raising capabilities. This is one of DEM's goals and it makes sense because of their lack of finances for important programs right now. However, it seems much more dangerous to create a situation where there will no doubt be a "captive agency." This should be avoided at all costs. As I discussed earlier, this situation has been part of the devastation of Canadian forests. It is a bad idea to put DEM in this position. I don't have a solution for the lack of money that

DEM has, but I think it would be a good idea at this point in time to use the fishermen's momentum and try to get them to help raise money and lobby their representatives. At the last subcommittee meeting many people were very enthusiastic about helping DEM raise money in other ways and I think now is the right time to harness this enthusiasm and start some programs or events that can carry into the future and continue to raise money.

The other issue I have is that the MRFSS has pretty accurate data. I think it would be great to compliment their data with data that DEM collects on its own, but I do not think it is necessary. If DEM really wants to complement the MRFSS data with their own, than I would suggest a type of "stamp" that has been used in the past, like a duck stamp. This would be akin to a free license that allows the agency to count the participants and collect data on them. The only way this would work right now would be if the fishermen could be promised that this stamp would not turn into a at least in the near future license and have the fee increase. If fishermen could be convinced it was safe, I believe a lot of them would support this idea for improved data collection. However, I will re-iterate that through my research I found that the MRFSS is doing a great job at collecting accurate data. Also some of the fishermen seem to be under the impression that if DEM can only collect their own data, this will be "better" data and better data equals higher bag limits. DEM has mentioned at a few separate subcommittee meetings that they always err on the conservative side when they don't have much information. So if they could collect more information then they would be able to increase the bag limits. One fishermen brought up the idea that perhaps it could backfire and that more data would mean smaller bag limits (Subcommittee December 13, 2001).

It is unclear which way the data might swing, but the point is the data could go either way.

Other smaller problems with the license have to do with how the specific plan is designed. I really cannot comment on this now since there is no plan, but see Appendix 4 for a few options and the pros and cons. The purpose of a restricted account, which has also been brought into question, still seems a bit unsteady to me. It will probably be protected, but there is a chance that it won't be. However, this is as good as it gets, there is no other way to protect money in a state agency, so I must conclude that a restricted account would have to do the job.

I have a few recommendations to make as well. First of all I do not think that Rhode Island should continue to work alone at this issue. The other New England states are also trying to face the issue of whether or not to license. It would be great if Rhode Island could work with Massachusetts, Connecticut and Maine to come up with a regional set of goals for licensing and management. One of the problems with the license was the possible loss of fishermen to other states that did not require a license. It would be great to see a team of researchers communicate and work together so that it would not be such a narrow, state-by-state approach.

I also would like to make a recommendation based on the survey that I conducted. I mentioned this earlier, but it would be very interesting to adjust the survey in certain ways and then hand it out to target audiences. I would include the regulators, bait and tackle shop owners, charter boat owners, the general public and subsistence fishermen. That would require getting someone to translate the survey and find community groups that could help distribute it. The above point builds into the next point I'd like to make:

non-fishermen need to have a say in how we manage the fisheries. I have discussed this already and do not think it is necessary to elaborate. The fishery is a “common” resource.

The other important component is studying other management options. It seems that licensing is the main management practice of other states and that’s why Rhode Island is taking it as the best option. Perhaps, it is the best option, but it would be interesting to compare it to some other management practices such as marine protected areas, temporary closures, or a fish “stamp” of some sort.

A few fishermen suggested that they want the Coastal Institute process to continue. I would also like to see that happen. And perhaps it can be a bit more open to the community as a whole and not just the fishing community.

The last point I want to make is that we should take a step back and assess the Coastal Institute process. I think it was successful in many aspects. It educated me along with many others. It got lots of fishermen involved and was facilitated very well. But on the other hand it didn’t really include many people with different standpoints. The usefulness of a discussion group is limited when everyone is from a similar background with similar ideas and goals. I also think that it is not realistic to think that fishermen will willingly regulate themselves. There are very few examples of where a user group has successfully regulated themselves. It is a difficult situation. So to think that fishermen are an exception is not a great idea. I am not suggesting that this be a top-down control system, but I think that managing the fishery at this point cannot be successfully done by the fishermen alone, because there are too many different incentives working on each individual.

As one can see there are many complexities to this issue and over time they must be sorted out. I think the key will be not to let this issue drop off. Licensing should not be overlooked. It will take consistent effort and study by everyone involved. It is a gradual process and will take time and patience.

Appendix 1 Recreational Fishing Survey

This survey was produced by Jenna Richardson a student at Brown University for her Senior Project. It is geared to address fishermen’s feelings about licensing and get responses from the quieter fishermen and those who do not attend the Phase II Coastal Institute Recreational Subcommittee meetings. Some questions are based on those from the National Marine Recreational Fishery Statistical Survey.

The survey is voluntary and confidential; you can answer any questions you’d like, although if you have time please complete the whole survey. This is an anonymous survey so please don’t include your name. It will take about 10 minutes to complete.

- I’d like to ask you some questions about the types of saltwater fish you primarily catch. Please indicate the fish you have caught over the past year. Put a check in the space provided FOR EACH SPECIES.

Never Rarely Frequently Always
 Catch Catch Catch Catch

Striped Bass				
Squid				
Bluefish				
Summer Flounder/ Fluke				
Winter Flounder				
Scup				
Tautog				
Cod				

Black Sea Bass				
Weakfish				
Swordfish				
Tuna				
Other: please name				

2. Do you have a favorite local saltwater fish to eat?

3. During the past two months, how many days have you been saltwater fishing in:
 - ___ Pier, bridge, or jetty
 - ___ Beach or bank
 - ___ A boat owned by you, a friend, or family member
 - ___ A charter, party, or head boat
 - ___ Other: please explain

4. Estimate the number of days you fish per month
 - a. In the winter (November – March):
 - b. In the summer (May – September):

5. Now I'd like to ask you a few questions about fish that you keep or release. Place a check in the space for EACH SPECIES that you keep. Do not mark any space if it DOES NOT APPLY. **I KEEP...**

More than Legal Most of Small amount None
 Legal limit Limit Legal limit of legal limit of the fish

Striped Bass					
Squid					
Bluefish					
Summer Flounder					
Winter Flounder					
Scup					
Tautog					
Cod					
Black Sea					

Bass					
Weakfish					
Other: please name					

6. Do you ever sell any of the fish that you catch recreationally?

Yes

No

7. People sometimes choose to release fish they could have legally kept for many reasons. Why would you choose to release some fish. Please indicate the extent to which you agree or disagree by placing a check in the given space **for each reason**. If you are undecided or it does not apply please do not check any box.

You release some fish you could have kept because...

Agree Somewhat Agree Somewhat Disagree Disagree

They are females during spawning season				
You don't eat that kind of fish.				
Some legally sized fish are too small to keep for you				
You have already caught what you plan to eat				
Your conservation ethics				
You enjoy the sport of catching and				

releasing fish				
Other: please explain				

8. Do you use different techniques when you want to catch different fish?

- Yes
 No

9. Have you observed much by-catch (fish and other sea organisms that are caught by mistake when trying to catch other fish)?

- Yes
 No

10. Please indicate the extent to which you support or oppose the following conservation measure by placing a check in the given space **for each conservation measure**.

I Support...

Support Somewhat Support Somewhat Oppose Oppose Undecided

Limits on the MINIMUM SIZE of fish you can keep					
Limits on the MAXIMUM SIZE of fish you can keep					
Limits on the NUMBER of fish you can keep					
Limits on the TIMES OF YEAR when you can keep the fish					
Limits on the AREAS you can catch fish					
Slot limit: keeping fish within a certain length range					
Limiting types of bait and gear					
A harvest moratorium/ closure for a species with a low population					

11. People do not always support recreational fishing regulations for a variety of reasons. Indicate whether you agree or disagree by placing a check in the given space **for each reason**.

Agree Somewhat Agree Somewhat Disagree Disagree Undecided

Against government regulation of					
Regulations are too confusing					

Regulations are not needed because Populations of fish are not in trouble					
Commercial fishing takes too many Fish					
Recreational fishing doesn't really impact fish populations					
Catch and release can conserve Stocks without additional regulations					
I fish to supplement diet					
Regulations that force me to release Fish cause mortality anyway- especially deeply hooked fish					

12. Would you support a licensing program of some sort?

- Yes
- Yes with safeguards
- Undecided
- Interested
- No

13. If the license cost an X amount of money, where would you want this revenue to go?
CIRCLE all your choices:

- a. Repair and build new boat ramps
- b. Create and maintain jetties and old bridges
- c. Create more accessible boat docks
- d. Hire people to enforce fishing regulations
- e. Help create and maintain good fishing habitat- including watching out for pollution from land
- f. Create Marine Protected areas
- g. Subsidies/incentives to use low emission, high efficiency boats
- h. Other- please add any other areas you'd like to see license revenue spent:

14. Which amount of money do you think is most appropriate to pay for an instate license per year?

- Free
- \$5-10
- \$10-15
- \$15-20
- \$20-25
- \$25-\$40
- \$40-60
- Greater than \$40

15. Do you think there should be day licenses for tourists?
 Yes
 No
16. Have you met anyone who fished for food strictly “subsistence fishermen”?
 Yes
 No
17. What are your main reasons for fishing? CIRCLE all that apply.
- I NEED to eat fish as part of my diet
 - I LIKE to eat fish as part of my diet
 - For aesthetic pleasure- Both fish and the ocean-scape are beautiful
 - It is good exercise
 - To be out in nature and contemplate
 - Other: please explain

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Appendix 2

Excel Data from Survey

Results from my survey in an excel spreadsheet.

Question 1	never	Rarely	frequently	always
stripers	0	7	22	8
squid	19	11	2	0
bluefish	1	2	25	9
summer flounder / fluke	3	5	19	9
winter flounder	15	13	3	2
scup	4	12	18	5
tautog	4	12	16	
cod	16	10	3	2
black sea bass	8	4	16	4
weakfish	11	18	2	1
swordfish	31	0	0	0
tuna	20	9	0	2

Question 5	legal	most	small	none
Stripers	9	5	21	0

Bluefish	4	2	16	14
summer flounder / fluke	9	11	11	2
Tautog	9	6	11	6
black sea bass	6	4	13	6
Weakfish	3	1	5	13
Squid	2	1	5	14
Scup	3	2	8	18
Cod	7	3	2	10
winter flounder	4	4	5	13
See Question 7	agree	kind of agree	kind of disagree	disagree
Females	16	6	2	5
bad tasting	24	5	0	4
Too small	14	9	3	5
got enough	27	5	0	0
Ethics	27	7	1	0
like to release	23	8	2	1

Q. 10	support	kind of support	kind of disagree	oppose	undecided
Minimum	32	0	1	1	1
Maximum	10	5	8	8	4
Number	33	2	0	0	0
time o year	18	7	4	6	0
Areas	6	4	7	16	2
Length	13	5	5	9	3
tackle type	7	7	4	14	3
pop limiting	27	3	3	1	1

Q. 11	agree	kind of agree	kind of disagree	disagree	undecided
against gov	1	5	8	15	2
Confusing	1	9	7	17	0
Unnecessary	0	0	2	32	0
com exc	14	12	6	2	1
no impact	2	7	12	13	1
cat/rel works	2	8	10	14	1
for food	4	8	7	16	0
die anyway	8	13	8	4	0

question # :	6	8	9	15	16
Yes	1	36	15	20	13
No	36	1	20	19	21

Q.12	Participants	
Yes	4	Yes
Yes with safeguards	13	No
Undecided	4	
Interested	0	
No	17	

Appendix 3

Narrative Summary of Survey Results

Summary of Results from Survey. Forty respondents total .

SPORT FISH

By looking at the quantity of fish that were kept, I was able to see which fish were more likely strictly “sport fish” since it was more likely that less of the sport fish would be kept. People who are mainly fishing for sport are less likely to actually take home the fish. I found that Striped Bass appeared to be the number one sport fish. Also Bluefish and Black Sea Bass seemed to be sport fish.

LICENSE FEE

For most fishermen that took my survey, it was free or nothing! The majority of other respondents hovered around \$5 as a decent license fee. In other words very little money. Consider that the RI freshwater fishing license is \$9.50 per year sold at many convenience stores, bait and tackle shops and department stores.

CONSERVATION OF FISH

Most of the respondents said that they conserved fish because of their “conservation ethics” and because they had already caught what they wanted to eat and they didn’t keep more than that. The next most common response was that there were certain kinds of fish they never kept since they never ate them.

SUPPORT OF REGULATIONS

Most people said that they supported regulations because they felt that fish were in trouble. Most people also said they didn't mind government intervention and that regulations were NOT too confusing.

YES / NO QUESTIONS

Most interestingly the respondents were split more or less down the middle about whether there should be day licenses or not. Everyone but one person (not the same person) said they used different techniques when fishing for different species and that they never sold the fish they caught. A small margin more than half said that they witnessed by-catch.

CONSERVATION MEASURES

Almost everyone supported limits on the minimum size of fish caught and the limits on the number of fish you can catch, which makes sense since these are regulations in place right now. Fishermen also strongly supported limits on the times of year you could fish certain species and a harvest moratorium for species with very low populations. (All of these techniques have been used in RI and I think this is a reason why it is easier to accept them.)

LICENSE

Three say YES; 13 say yes w/safeguards; 4 were undecided; 17 said no way.

REVENUE USES

28 people (70%) wanted to see the money from a possible license go towards hiring people to enforce regulations. 26 said they wanted to create and maintain good fishing habitat- including watching out for pollution. 24 said they'd like to see old bridges and jetties maintained for fishing. On the low side 13 people wanted to see marine protected areas created and only 6 cared about having incentives to get cleaner running, more efficient boats.

REASONS TO FISH

The majority of people (35) said they enjoyed it for aesthetic pleasure- being in the beautiful ocean with magnificent fish. They enjoyed nature and the social and family bonds that were created through fishing.

Appendix 4 Goals from Phase I Coastal Institute Meetings

Most of these goals came out of Phase I meetings, where individuals at the meetings were able to voice their opinions. Therefore, a lot of the goals are geared towards the commercial fishing industry. Mentioned below are goals that apply to the recreational fishermen:

- Optimize access to fishing spots
- Collect current data on the numbers of fishermen
- Collect data on the fishing effort and harvest
- Collect fees that can go towards enforcement and management of the recreational fishery. This includes the so-called “wish list” that DEM created.

- Support regional management efforts
- Facilitate education and distribution of information to user groups
- Maintain the stewardship relationship between the fishermen and “their” resource
- Integration with other environmental initiatives in the bay

Appendix 5

Positives and Negatives Licensing

Positives and Negatives of a few different licensing designs.

Opinions that were expressed at the subcommittee meetings.

DESCRIPTION 1:

NO LICENSE

PROS:

- Keep the traditional open access fishery that New England is used to. The license “barrier” to fishing would discourage young people from entering the fishery.
- If the license raised revenue the RI legislature can not be trusted not to figure out a way to get at this money.
- Doesn’t discriminate against people that may be subsistence fishermen and have a hard time paying for the license.
- Saves a lot of energy that DEM would have to expend on administrative processes and enforcement.

- Licenses would be hard to enforce since RI borders two non-licensed states- plus there would have to be a lot more enforcement for it to work. This is a very different situation than freshwater, where the boundaries are more definitive.
- RI will **not** lose business from tourism (if there was a license people might fish more in Connecticut and Massachusetts instead, which would hurt the RI economy).
- We have already paid taxes- shouldn't that be enough?
- Allows people to go outside **spontaneously** and participate in one of the few FREE recreational activities that remains. Having no license will encourage people to go out and just do it- that's part of the fun- instead of having to plan ahead and fill out paper work etc.

CONS:

- Right now we have no way to closely monitor the Recreational fisheries. This is a bad position to be in with all the declines in fish species in the recent years.
- A license is a tool that can be used to collect accurate data on the number of participants and data on fisheries harvest and effort.
- Having no license is being behind the times- most other states in this country have some sort of license- nobody is complaining in those states.
- A license will happen sooner or later so we might as well do it now.
- It would be really nice to collect revenue so that DEM can improve boat ramps and other fishing related things (see their wish list for specifics).

DESCRIPTION 2:

\$5.50 per year license for residents, non-residents and day-users. License goes with your boat and you (in other words the license covers you and anyone who is fishing off your boat- even if they don't have a license of their own). This was discussed in the subcommittee meeting. It is the regime that Georgia uses.

PROS:

- According to the MRFSS data there are about 300,000 recreational fishermen in RI (many come from other states). If all of them bought licenses that would amount to about \$1,650,000. That is a lot of money that the under-funded Fish and Wildlife division of DEM could really use.
- If DEM as income from these licenses they will hold more weight in communities and govt. in terms of getting things done for the user-groups.
- Money could be partially allocated to enforcement to make sure that catch limits are being observed.
- Licenses could be sold in a variety of places to make it as easy as possible to get one.

CONS:

- There is the problem of creating a captive agency, like what happened in British Columbia with the Canadian govt. and the logging industry. If the government needs there to be fishermen in order to run their basic programs there is a problem. This could create an incentive for DEM to encourage more fishermen to buy licenses and fish, even if they know the stocks are in trouble. This could create a very large problem in managing the fisheries appropriately.

- This example brings up the problem of collecting information on the number of participants. If a license is for the boat and not for each individual fishing than there is no way of getting an accurate count of the fishermen and effort.
- Even with a restricted account there might be a way for the legislature, if need be, to take some of the money away for other purposes or at least cut the DEM budget considerably.
- There is a possibility for an impact on tourism. Many people think that people will no be as likely to fish in RI because of the fee.
- Perhaps this figure of money is not quite right- it should be either higher or lower.
- Many fishermen say they already pay taxes, why should they pay for this PUBLIC resource.
- Doesn't address subsistence fishermen.
- Will this fee slowly keep rising over time until you basically end up with a limited entry fishery?

Other Suggestions that have come up through my research:

- Having the license be a RI park pass as well, so the fishermen really *feel* like they are getting something out of it and not just paying a fee.
- Create an advisory group that would go along with the licensing. These people would keep an eye on the money and the items that need to be accomplished.

Appendix 6

Involved Stakeholders

This is a chart that summarizes the conflicting interests of the different involved stakeholders (Subcommittee meetings).

Stakeholder/Group	Interest
Regulators (DEM)	They want to make sure that the fish are around far into the future- striving for sustainability. They also are worried about raising enough money to run important coastal programs. They want to know how many fishermen there are.
Fishermen (the average sports fisherman)	Want to be able to fish wherever and whenever- there's something to be said for the spontaneity of the sport; but they also have an interest in keeping the fish around so that people can enjoy them in the future. Do not want to dish out more money for a common resource. Also have an interest in encouraging more people to fish, getting the word out on how much fun their sport is. (This is from the subcommittee discussions)
Environmental groups like Sierra Club	Mostly worried about the resource itself and protecting the ecosystems within Narragansett Bay, all species included.
Commercial Fishermen	Want to downsize recreational fishing since they are the main competition, especially with the more popular recreational fish species.
Bait and Tackle shop owners	Want to make sure the recreational fishing industry continues to grow so that their business can continue to grow as well. Do not want to have to distribute a cumbersome and complex license, but would do it if it was very simple.
Charter Boat owners	Want to encourage people to fish so they can also expand their business. They also do not want to pay an additional license fee than the \$25 every other year that they already pay to be part of the Charter Boat Association. They don't want any more

	closures of the fishery because that is bad for business. It would be better to just have stricter catch limits than closures.
Subsistence Fishermen	I would imagine (since I haven't actually talked to any subsistence fishermen) that this group would just want to make sure that they could fish where it was convenient for them and to be able to take what they needed for nourishment. In some cases they might be against the license because of financial issues.

Appendix 7

Comparison of Pounds of Fish Landed by Recreational and Commercial Fishermen (MRFSS data from Valliere),

Table 6a.

Saltwater Recreational Fishing in Rhode Island

Year	Summer	Striped	Scup	Winter	Tautog	Bluefish	Total
	Flounder	Bass		Flounder			
Pounds Harvested (Thousands)							
1989	166.5	59.4	750.9	284.3	296.9	2,865.6	4,423.5
1990	91.2	73.4	517.6	244.9	389.6	1,380.0	2,696.7
1991	132.3	496.7	1,072.2	142.0	1,007.5	1,689.0	4,539.8
1992	120.6	203.1	529.3	10.2	656.7	1,234.7	2,754.6
1993	219.8	292.4	467.6	14.9	389.7	954.2	2,338.6
1994	262.7	109.8	439.0	40.1	328.7	442.1	1,622.4
1995	216.8	436.1	421.8	26.9	237.1	508.7	1,847.4
1996	562.4	951.0	563.8	81.4	248.8	505.9	2,913.4
1997	419.4	927.9	183.6	80.8	301.1	817.7	2,730.5
1998	785.8	671.9	167.4	57.6	316.3	931.1	2,930.1
1999	830.0	886.7	392.0	107.3	223.7	837.8	3,277.6
TOTAL	3,807.5	5,048.9	5,505.2	1,090.5	4,396.3	12,166.9	32,074.6

Table 6b.

Saltwater Commercial Fishing in Rhode Island

Year	Summer	Striped	Scup	Winter	Tautog	Bluefish	Total
	Flounder	Bass		Flounder			
Pounds Harvested (Thousands)							
1989	3,082.9		3,090.8	2,401.2	214.8	1,211.7	10,001.4
1990	1,408.4	4.0	3,938.3	1,774.5	211.1	1,184.8	8,521.0
1991	1,672.6	31.3	6,397.3	1,832.0	371.6	1,490.7	11,795.4
1992	2,531.5	36.8	5,900.2	1,852.7	359.7	1,550.1	12,231.0
1993	1,975.9	52.4	2,937.3	1,267.8	201.6	1,195.2	7,630.3
1994	2,649.1	44.6	3,330.7	941.1	130.7	901.9	7,998.1
1995	2,325.4	113.6	2,294.9	1,016.0	95.0	772.4	6,617.3
1996	1,766.5	122.9	1,700.0	1,116.5	64.9	642.0	5,412.6
1997	1,565.9	96.5	1,089.0	1,236.6	39.6	596.5	4,624.1
1998	1,716.5	94.7	794.8	1,236.9	20.3	570.7	4,433.9
1999	1,636.5	120.2	1,280.5	1,157.4	26.1	570.3	4,791.0
TOTAL	22,331.0	716.9	32,753.8	15,833.6	1,735.5	10,686.3	84,056.2

Appendix 8

Elements of a RI Recreational Fishing Program (DEM)

- Fishing Access and Launch Facilities
 - Trash removal and maintenance of high use facilities
 - Increase parking at existing ramps/accesses
 - Jamestown Bridge fishing pier
 - Construction of new boat ramps and associated tie-up docks
 - Improve conditions/function at existing ramps including addition of tie-up docks
 - Construction of handicapped accessible fishing piers
 - More focused staff involvement in DOT projects where potential for enhancement of recreational opportunities exists
 - Toilet/portable toilet facility expansion
 - Open more access for shore-based fishermen
 - License should serve as a permit to access state owned marine fishing, boating, fishing and parking areas for fishing or boating purposes.

- Education, Information, and Outreach Programs
 - Seminars on recreational fishing
 - Sportfishing tournaments (tag and release)
 - Gamefish awards programs
 - Online and phone recording fishing reports with timely updates
 - Licenses made available at vendors and online Staff attendance of fishing club meetings
 - Abstracts and regulatory updates available on time and online
 - Clear, accurate signs at boat ramps and fishing areas (multi-language)
 - Publications for recreational community detailing results from long-term surveys (trawl, juvenile, coastal pond, MRFSS trends etc.)

- Additional research necessary to restore winter flounder stocks
 - Educational programs for kids
- Enforcement
 - Better enforcement of issues important to the recreational community
 - More frequent patrols in high-use recreational areas
- Volunteer Programs
 - Cooperative surveys and logbook programs
 - Stewardship programs for accesses
 - On line catch reporting
- Research, Monitoring and Management
 - Estimates of recreational catch and effort through combined survey and logbook methods
 - Biological sampling of recreational harvest
 - Research on release mortality rate and tagging studies
 - RIDFW trawl survey in Narragansett Bay and RI coastal waters
 - RIDFW beach seine surveys in Narragansett Bay and coastal salt ponds
 - RIDFW gillnet survey in Narragansett Bay
 - RIDFW ichthyoplankton monitoring in Narragansett Bay
 - Inventory and monitoring of essential fish habitat; development of artificial reefs
 - RIDFW Participation in management process (RIDEM, RIMFC, ASMFC, Regional Councils)
- Funding Opportunities

- Pursuing grants for Program enhancement
- Partnerships with UR Graduate School of Oceanography and URI Coastal Institute

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