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**FISHING IN THE PARKS: A PROTOTYPE RESEARCH-BASED OUTREACH  
PROGRAM IN FISHERIES AND AQUATIC ECOSYSTEMS**

**By**

**Jeffery D. Rupert**

**A THESIS**

**Submitted to  
Michigan State University  
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for the degree of**

**MASTER OF SCIENCE**

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## **ABSTRACT**

### **FISHING IN THE PARKS: A PROTOTYPE RESEARCH-BASED OUTREACH PROGRAM IN FISHERIES AND AQUATIC ECOSYSTEMS**

**By**

**Jeffery D. Rupert**

**In 1995, a new research-based fisheries outreach program called “Fishing in the Parks” began as a university-agency-organization collaboration. The focus of this research project was to understand outreach program participants and to assess whether this program was effective in recruiting anglers. At the completion of each program in 1995 and 1996, surveys were administered to a total of 2,374 adult and youth participants; a 77% corrected response rate was achieved. The program attracted the targeted audience of families with young children who never fish or fish very little. Most adults (79%) attended with their own child, and most had never fished before or fished very little. Most adults were very satisfied with the program, 92% intended to fish again, and 75% either had or intended to purchase a fishing license after the program. Most youth participants were satisfied with the program, 99% intended to fish again, and 83% intended to buy equipment after the program. Carefully targeted research-based outreach programs allow fisheries agencies to provide opportunities to non-traditional clientele in an effort increase public involvement with and stewardship of aquatic resources.**

## **DEDICATION**

**This work is dedicated to my loving father, Don A. Rupert and in memory of my two grandfathers, Albert H. Rupert and Leslie O. Clemmons for taking me fishing during my childhood. Without an early exposure to fishing from these individuals, I would never have become interested in fisheries related research. I look forward to many more years of fishing with my father at our family farm in South Carolina.**

## **GENERAL ACKNOWLEDGMENTS**

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**I wish to express my appreciation to the many individuals who helped in the planning and execution of this research. I am particularly grateful to my committee chairperson, Dr. Shari L. Dann for her constant support, encouragement and mentorship. I also wish to sincerely thank my other committee members, Dr. William W. Taylor and Dr. Kirk L. Heinze, for providing many helpful comments and opportunities throughout the course of this project.**

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**Additionally, I would like to acknowledge the “Fishing in the Parks” program partners: Michigan Department of Natural Resources Fisheries and Parks & Recreation**

**Divisions, Michigan United Conservation Clubs, Michigan State University Department of Fisheries and Wildlife, and the American Sportfishing Association.**

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## **CHAPTER 1 INTRODUCTION**

### **Statement of the Problem**

The Michigan Department of Natural Resources (MDNR) Fisheries Division has invested time, staff, and money into informational efforts such as brochures and Free Fishing Days. Through these efforts, division staff hope to attract individuals into fishing, and therefore expand the agency's base of supportive clientele. Unfortunately, many of these programs attract mainly existing clients. Additionally, many angling promotion materials, programs, and activities of agencies and industry have been targeted at those already involved in fishing, thus missing a large segment of potential supportive clientele, such as non-angling families, non-traditional anglers, and novice anglers (ASA 1997).

These efforts represent undifferentiated marketing due to the agency's attempt to meet the needs of all; in the process, these efforts may fail to meet the specific needs of new or non-anglers. Undifferentiated marketing is not occurring by design but rather by default, because little or no information has been collected regarding target markets served, or responses by target markets/program audiences to agency materials, programs, or activities. Furthermore, these efforts and programs have not utilized marketing approaches to segmenting, splitting clientele into meaningful groups, and targeting, selecting one of the segmented groups as an appropriate audience for these programs.

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Substantial literature exists on social marketing, which may be defined as “the use of marketing to advance a social cause, idea or behavior (Kotler 1982:490).” However, public resource agencies have not used this knowledge effectively to increase their efficiency in recruiting and retaining satisfied as well as supportive clientele through target marketing. Incorporating social marketing into MDNR Fisheries outreach efforts will allow for the determination of new angler and novice angler wants and needs, in order that the division can create programs and services to meet those demands and increase the division’s clientele base.

Fisheries managers have an obligation to provide for the broadest possible benefits from the use of public trust resources, to foster public understanding of fisheries management, and to contribute to cultivating public stewardship of resources (MDNR 1994, Dann 1993). Therefore, there is a great need to identify audiences and target market fisheries opportunities to non-traditional clientele in an effort to increase public involvement with and the stewardship of aquatic resources. In the broadest sense, non-traditional audiences can be defined as those who have never fished or who fish very little. In addition, other non-traditional clientele include minorities, handicappers, single mothers, and urban residents, all of whom have specific needs that should be identified so measures can be taken to involve these segments of society in aquatic stewardship. Several recent publications address important demographic changes occurring in the U.S. population and the possible impacts these changes will have on fisheries management (Ditton 1995, Dwyer 1994, Murdock et al. 1992, Schramm and Edwards 1994, U.S. Bureau of the Census 1992).

To reach some of these new audiences, the MDNR Fisheries Division has supported and collaborated with other organizations to develop a new research-based outreach program called "Fishing in the Parks." A great need exists to understand outreach program participants and to assess if these programs are effective in recruiting participants as supportive clients of the MDNR Fisheries Division. Currently, over 90% of the MDNR Fisheries Division's annual budget is generated by the sale of fishing licenses and the Federal matching funds from excise taxes on fishing related equipment (MDNR 1997). Thus, the agency has a vested interest in ensuring that public participation in angling is sustained (e.g., through programs which encourage participation of novices interested in fishing) thus maintaining revenue bases for management. Collecting information from these entry level program participants allows the division to have greater knowledge about a larger, more informed, and active constituency for fisheries management.

### **Description of the Program**

"Fishing in the Parks" is a research-based outreach program in fisheries and aquatic ecosystems intended to attract non-angling families with young children and novice anglers. The specific goal of this program is to enhance participants' fishing skills in the hope that they will become more active anglers and committed customers of the MDNR Fisheries Division. The objectives of the program were to teach the basics of fishing in accessible locations which allow for repeat experiences during the summers of 1995 and 1996. These programs were held in selected underutilized Michigan State Parks within close proximity to urban areas. Sponsors of the "Fishing in the Parks" program

included the Michigan Department of Natural Resources (MDNR) Fisheries and Parks & Recreation Divisions, in partnership with the Department of Fisheries and Wildlife at Michigan State University, Michigan United Conservation Clubs, and the American Sportfishing Association. Additionally, local volunteers were recruited through the program partners to assist as instructors for the programs.

### **Overarching Research/Evaluation Questions**

There are two main goals of the research portion of this project: (1) to develop and evaluate an innovative research-based outreach model; and (2) to evaluate the effectiveness of the Fishing in the Parks program in order to make recommendations to improve the program.

### **Specific Research/Evaluation Objectives**

Objective 1: To describe participants attracted to the Fishing in the Parks programs.

Objective 2: To evaluate marketing efforts for the program.

Objective 3: To assess participant reactions to the program immediately post-program.

Objective 4: To assess participants' intentions to participate in fishing in the future.

Objective 5: To collect participant re-contact information and develop a database compatible with the MDNR's retail sales licensing system.

In an effort to disseminate the results of this research in a timely fashion, I have written each chapter of this thesis as a journal article. The second chapter contains information about marketing concepts that resource managers will find useful while

developing future outreach programs. Chapter three focuses specifically on the “Fishing in the Parks” program and associated research questions. The fourth chapter discusses how the new computerized, point-of-sale licensing system can be used as a marketing tool, a means of program evaluation, and for future human dimensions research. Each article, contains information concerning future implications and recommendations for fisheries managers.

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## **CHAPTER 2**

### **BLENDING MARKETING STRATEGIES WITH RESOURCE MANAGEMENT**

#### **Introduction**

The call for incorporating marketing strategies into resource management is not new. According to Schick et al. (1976), to broaden income sources, agencies need to offer innovative programs guided by modern marketing principles. The realization that marketing tools could be adapted for use in government and social institutions occurred in the late 1970's (Kotler 1982, Crompton and Lamb 1986). However, the avoidance of marketing techniques is primarily due to the perception that the public service sector is markedly different from private business and, therefore, would not be suitable for a marketing program (Kotler 1982). Many fisheries and wildlife managers believe that marketing does not have and should not have anything to do with resource management. This belief arises from several major related beliefs: 1) the belief that agencies should not spend public monies on marketing, 2) the belief that "marketing" has connotations such as selling, manipulation, and coercion, and 3) the belief that resource managers shouldn't have to market management ideas to their publics, because managers know what is best for the resource.

In the past 20 years, many fisheries colleagues have called for the incorporation of marketing strategies into the resource management process (Ditton 1995, Duda et al. 1989, Haney and Field 1984, Pajak 1994, Scheffer 1976, Schick, 1976, and Thorne et al.

1992). Yet as a profession, fisheries management has been slow to recognize the value of incorporating marketing strategies, and, therefore, implementation has been limited at best. Schick (1976) warned that implementation requires capital investment, with probably little immediate return, but that marketing should be considered for the potential long-term rewards to the agency. If the long-term rewards for the profession are positive, why has blending marketing strategies into resource management been proceeding at a snail's pace? Quite frankly, the resistance to incorporate marketing strategies, albeit resource managers readily talk about them, has been due to the steady funding base from hunting and angling licenses and excise taxes. However, even though Scheffer (1976) predicted declines in license sales in proportion to population growth, managers have continued to focus on the production of fish and wildlife game animals and have not used marketing concepts to expand the products, programs, and services offered.

### **Why Blending Marketing with Resource Management is Necessary**

The early focus in natural resource management took a resource based perspective founded on white, Eurocentric values and traditions (Gray 1993). Today the U.S. population growth rate is slowing, and population characteristics are changing: the population as a whole is aging; minority populations are increasing; traditional, married-couple family households are decreasing; and single-parent female-headed households are increasing (Murdock 1992). Demographers and fisheries trend researchers suggest that the rate of increase in the angler population will decline, while the demand for services from the elderly will increase, although this segment is exempt from license fees in many states (Murdock 1992). In addition, older age and minority groups are likely to enjoy

greater political power in the future; this will require managers to investigate new sources of program funding.

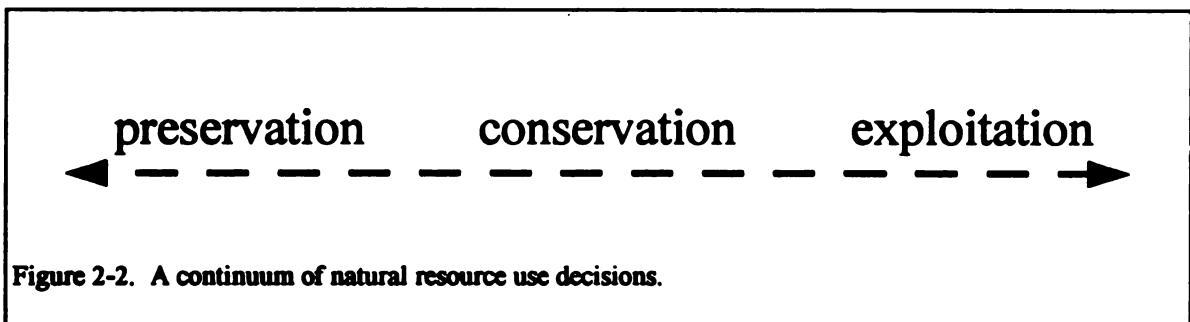
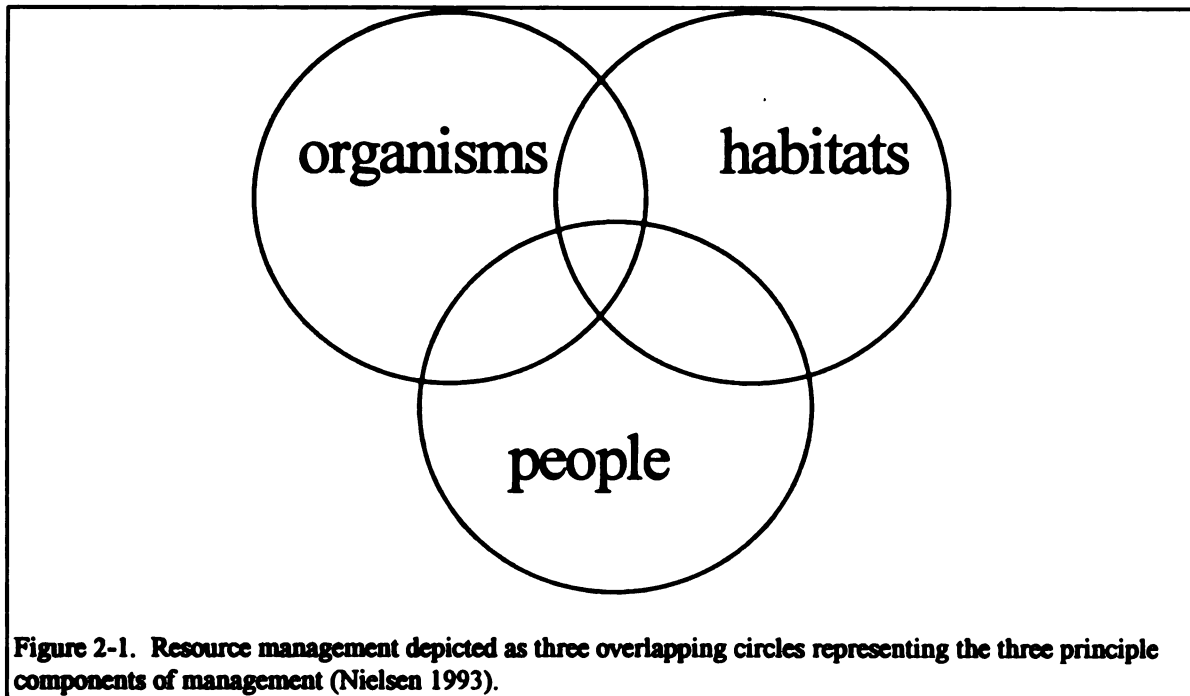
In addition, the U.S. is no longer a rural society; 77% of the U.S. population lives in urban areas (U.S. Bureau of the Census 1992). Recently, 70% of anglers reported that they reside in urban areas and all indications are for even more anglers to reside in urban areas in the future (USFWS 1993). Furthermore, a survey indicated that adult Americans engaged in nonconsumptive, outdoor-related recreation outnumbered anglers and hunters two to one, thus indicating a change in recreational values among stakeholders (USFWS 1993). Clearly, the human element, for which resources are managed, is changing rapidly, and natural resource management agencies are slow to change with them. If this trend continues, resource agencies will likely find themselves without their traditional funding sources and without sufficient state-allocated general funds to operate. In other words, agencies are faced with extinction (no funding) if managers fail to adapt with the ever changing-environment (the needs and wants of their current and potential customers).

### **Additional Rationale for Blending Marketing Strategies with Resource Management**

Blending marketing strategies with resource management has been difficult and slow. However, both marketers and resource managers use very similar vocabulary in their respective work. For example, both frequently use terms such as: life cycle, assessment, environment, adaptation, competition, extinction, survival, viable, efficiency, constraints, orientation, and many others that are extremely familiar to biologists and resource managers. Biologists and managers are constantly seeking new and improved techniques and methods to assist with research and the tasks of population management.

Therefore, marketing concepts should be viewed as additional techniques/methods for the biologists' and managers' tool boxes which will assist in the management of the human dimensions of fisheries.

In order to discuss blending marketing strategies with resource management, basic concepts must be reviewed to illustrate where marketing will mix appropriately with resource management. Resource management is defined as the manipulation of organisms, habitats, and their human users to produce sustained and ever increasing benefits for people (Nielsen 1993). This definition is often illustrated as three overlapping circles to represent the interplay between the three principle components of management: organisms, habitats, and people (Figure 2-1). Furthermore, decisions concerning the use of natural resources occur along a continuum from preservation through conservation to exploitation (Figure 2-2) (Hardin 1968). If, as Nielsen suggests, resource managers are expected to manipulate organisms, habitats, and their human users to produce sustained and ever increasing benefits for people, then conservation management goals and strategies must be implemented with the involvement and support of an ever increasing number of stakeholders. On one extreme, resource managers have stakeholders willing to exploit resources for short-term gains (Figure 2-2). In fact, Hardin (1968) argues that in a world of finite resources with an ever increasing human population, collective resources are subject to competitive exploitation and resource degradation, with consequent welfare losses for resource users. On the other extreme, different stakeholders may express the desire to preserve areas by not allowing any human access or management treatments to be conducted.



Therefore, the resource will not produce sustained and ever increasing benefits for people. In the past, lobbying efforts and pressure from extremist stakeholders was much less frequent, and resource managers could manipulate natural systems without involving multiple stakeholder groups. All indications today suggest that managers will continue to have a growing number of stakeholders requiring to be involved in management decisions. In order to continue managing resources optimally, marketing research and strategies must be blended into the human dimensions components of comprehensive resource management plans as well as agency strategic plans. Marketing offers managers new tools

to assist them in effectively incorporating an increasing number of stakeholders now and into the next century.

### **What is Marketing?**

**Marketing is**

**“the analysis, planning, implementation, and control of carefully formulated programs designed to bring about voluntary exchanges of values with target markets for the purpose of achieving organizational objectives. It relies heavily on designing the organization’s offering in terms of the target markets’ needs and desires, and on using effective pricing, communication, and distribution to inform, motivate, and service the markets (Kotler 1982:6).”**

More recently, scholars and practitioners have observed that marketing has shifted from a product and service orientation to now focusing on and emphasizing customers, and providing products and services to try to satisfy their needs (Vaitilingam 1993, Bell 1994). Marketing has also been defined more specifically in the resource management context as

**“the deliberate and orderly process of understanding fish and wildlife publics in order to provide them with quality fish and wildlife experiences within the constraints of resource protection, and to foster positive fish and wildlife attitudes and behaviors toward the resource (Duda 1990:1).”**

Duda’s definition illustrates the need for resource managers to understand fish and wildlife publics. Recently, resource managers and biologists have offered many educational and promotional programs to encourage non-traditional resource users to participate in outdoor recreation. However, the problem with the evaluation of these programs is that program staff typically only count the number of participants and fail to implement any more in-depth evaluation of the program (Thomas and White 1995, Burroughs and Reef

1996). Evaluative research and re-contact information collected at these programs could serve as a means of understanding fish and wildlife publics by providing managers with demographic data, psychographic data, information about level of fishing involvement, distance traveled, willingness to pay for fisheries resource opportunities, and numerous amounts of other valuable information about these users. The re-contact information (e.g., names, addresses, phone numbers and birth dates) would be entered into a database and used for future research projects, for direct mailings concerning other programs, and even to track each person's participation in related programs sponsored by the agency.

Resource managers should collect this information as frequently as they collect population estimates about the fish and wildlife managed in their jurisdictions. Since people are one of the three main components of resource management, managers should be as knowledgeable about the human component as they are about populations and habitat components, or the components will not be integrated properly into management decision making. Additionally, knowledge about stakeholders is useful in developing communication campaigns and marketing plans for the agency's stakeholders. For example, many states have offered introductory fishing programs that have reached thousands of people. However, without any further evaluation it is unknown if those programs attracted people who already knew how to fish, whether they enjoyed the program, or whether the program should be improved or discontinued. In addition, when participant names, addresses and phone numbers are not collected, these clientele cannot be asked to provide management-related input at a later date. Without this "baseline" information, resource managers cannot provide quality programs that resource users will attend and support.

## **Marketing Concepts for Resource Managers**

Many marketing concepts show considerable promise for resource managers and include such topics as segmentation, targeting, strategic planning, situation analysis, competitive positioning, and marketing mix. Although all of these topics are of value to natural resource management a full discussion of each subject is well beyond the scope of this paper. For example, many sources of information are readily available which will assist in the development of strategic plans for agencies (see Bryson 1988, Dolan 1991, Foxall 1981, Schnaars 1991, and Wilson et al. 1992).

Market segmentation is a useful tool for managers especially in light of the many new stakeholder groups such as landowners, nonconsumptive users, and special interest groups which are making demands on natural resource agencies. Segmentation identifies recreationists into meaningful groups which might merit separate products and/or marketing mixes, defined here as the mix of programs, facilities, products, and services. Market segmentation requires identifying the different bases for segmenting the market, developing profiles of the resulting market segments, and developing measures of each segment's participation in the program (Kotler 1982). In many cases, staff of resource agencies believe that they cannot segment because a public agency must serve all citizens without discrimination. Segmentation is not a tool for discriminating, but rather a method of separating out groups with similar needs, desires, or interests so that the agency can better identify those needs and fill them if possible. Clearly, resource agencies cannot serve every market and be all things to all people (Kotler 1982), although many an agency has tried this approach and has failed. The main purpose of market segmentation is to define the variables which uniquely describe various groups and to classify individuals into

these groups (Crompton and Lamb 1986). Markets can be segmented based on demographics, psychographics, behaviors, attitudes, and so on (Kotler 1982). For example, one of fisheries management's markets consists of recreational anglers. This market could be segmented based on individuals' participation levels in fishing (e.g., advanced / high, intermediate / moderate, and novice / low). After identifying segments, the next step is to target these groups with an appropriate program or service.

Target marketing is equally useful for resource managers and is the act of selecting one or more of the market segments and developing a positioning statement and marketing mix strategy for each (Kotler 1982). Target marketing is most helpful in assisting managers to identify market opportunities and develop more attractive products, programs, and services. The advantages of targeting as opposed to mass marketing, (i.e. attempting to attract everyone) are not always so obvious. Public agency managers often feel that high program participation rates are always best, and that targeting will exclude publics. Targeting does exclude (or may dissatisfy) those groups for whom the program or service was not intended. For example, if the agency mass markets a fishing education program to all citizens of the state, expert anglers will be disappointed in the program when they find that it consisted of introductory rigging, baiting, and casting skills instruction. On the other hand, beginning anglers will be disappointed as well, because if experienced anglers are present, novices may feel that they did not receive enough individualized instruction and may feel intimidated by the knowledge level of the other more advanced participants. In this case the agency would have been better off targeting people with little or no fishing experience. Then the program would be aligned with the

participants' expectations, and learners would be satisfied with the program and leave with a positive image of the agency and its staff.

Competitive positioning is defined as the art of developing and communicating meaningful differences between one's offer and those of competitors serving the same target market (Kotler 1982). Most states have one centralized natural resource agency which usually does not compete with any other agency for resource users. Thus, "competitive" positioning initially seems unnecessary for resource managers. While it may be true that agencies rarely compete with each other for target markets, agencies are competing with the other ways their target markets can choose to recreate. For example, a family could choose to go fishing at a state park or choose to go to the mall for a movie instead. By developing a competitive positioning strategy, agency managers can attract targeted audiences to their facilities and programs. Positioning strategies go well beyond catchy slogans and advertising. These strategies involve developing a marketing mix to attract the targeted audience.

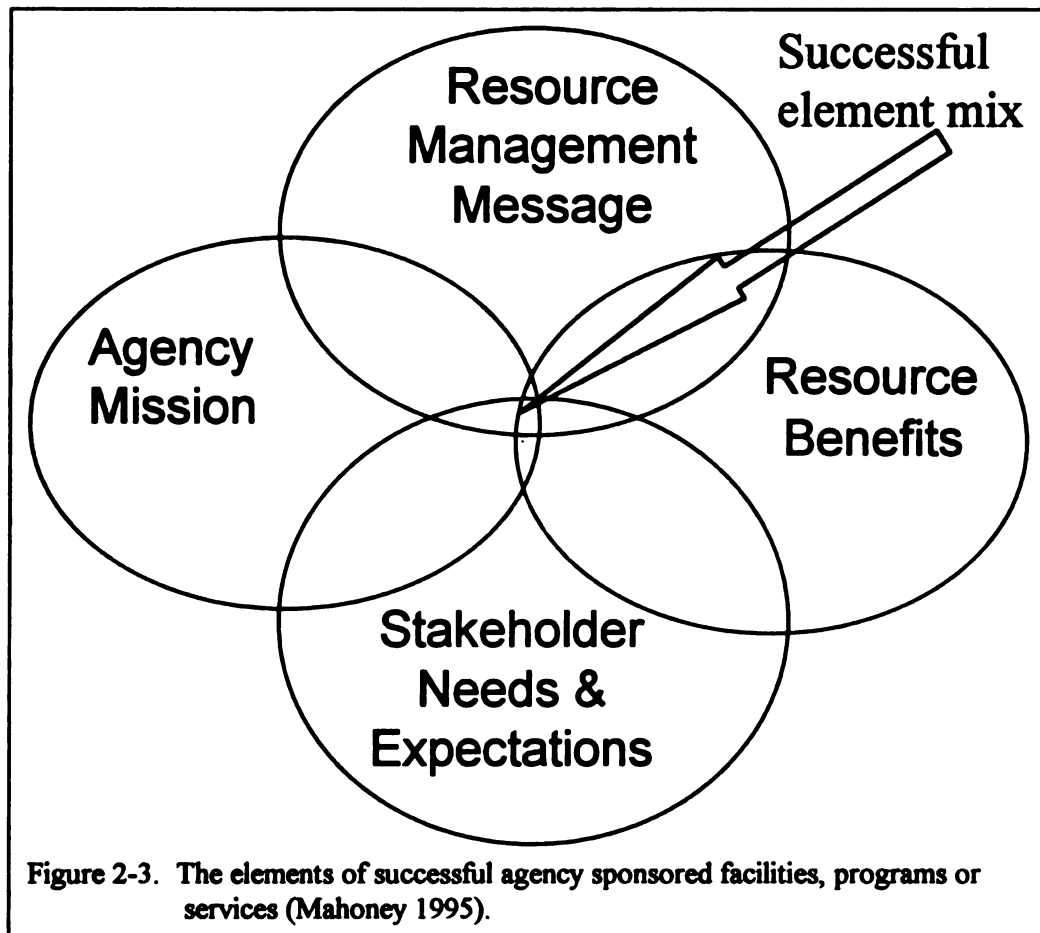
The classic view of a marketing mix involved blending the controllable marketing variables known and the "four Ps": product, price, place, and promotion (Kotler 1982). While many other variables can be added to the marketing mix, products, programs, facilities, services, and promotion seem to serve resource managers more appropriately than the four Ps. In most cases, "price" (e.g., entrance fees, license prices) are established by the state's legislature. Therefore, resource managers can control other marketing variables (e.g., products, programs, facilities, services, and promotion) to attract targeted audiences. In fisheries outreach terms the marketing mix variables are described as follows: products refer to quality fishing areas where participants have a good chance of

catching fish; programs can range from special one day fishing events to seasonal activities like weekly fishing programs; facilities include fishing piers, rest rooms, and adequate parking; services include environmental education/interpretation, maintenance, visitor safety, law enforcement, etc.; and promotion ranges from word of mouth to comprehensive communication campaigns.

### **Making Marketing Work**

The development of a marketing culture in an agency is dependent on leadership from the top and the education and training of staff. Successful implementation should be both top-down and bottom-up, and founded on comprehension and commitment rather than sanctions (Dolan 1991). The agency's staff must be informed, trained and involved for real progress to occur. Managers must be part of the process of empowering staff to allow change in the organization's culture, values, and beliefs (Vaitilingam 1993). For successful implementation of marketing principles and practices, resource managers need to: 1) recognize the need for taking a customer-based marketing approach to developing future facilities, products, programs, and services, 2) make the necessary investments to train and encourage staff (incentives) to support a marketing approach, 3) look for and remove barriers to implementation, 4) evaluate at least a sample of all programs (at a minimum collect enough information to allow for participant re-contact at a later date), 5) utilize the expertise of individuals both internal and external to the agency, and 6) consult with and build partnerships to assist the agency in achieving and implementing a marketing approach (Bell 1994, Dolan 1991, Crompton and Lamb 1986, Kotler 1982). Before implementing new facilities, products, programs, or services, managers should verify that

the resource will benefit, stakeholder needs and expectations are met, and that a resource management message is communicated that is consistent with the agency mission (Figure 2-3).



## **Conclusion**

The importance of implementing a customer-based marketing approach cannot be overstated. Resource managers need to implement and actively utilize the tools of marketing in order to: build partnerships; improve agency image; effectively develop positive relationships with publics such as the media, legislators, activists, volunteers, traditional users, and non-traditional users; align facilities, programs, products, and services; and be responsive and adaptive to stakeholders as their needs and wants change. Specific theories and practices in marketing, such as segmenting, targeting, and positioning, have proven useful in the for-profit business arena and are easy-to-adapt to the natural resource management environment. Blending marketing strategies with resource management allows managers to focus on specific goals for the human dimensions of fisheries management, thus assisting in the allocation of the use of public trust resources.

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### **CHAPTER 3**

## **FISHING IN THE PARKS: A RESEARCH-BASED OUTREACH PROGRAM**

### **Introduction**

The “Fishing in the Parks” outreach program began in 1994 to teach families with young children the basics of fishing in accessible locations which allow for repeat experiences. These programs were held in selected underutilized Michigan State Parks within close proximity to urban areas during the summers of 1995 and 1996. Sponsors of the “Fishing in the Parks” program included the Michigan Department of Natural Resources (MDNR) Fisheries and Parks & Recreation Divisions, in partnership with the Department of Fisheries and Wildlife at Michigan State University, Michigan United Conservation Clubs, and the American Sportfishing Association.

The term “outreach” is relatively new to the field of resource management and has quickly become a popular “buzz word” among fisheries professionals. The term outreach is commonly used to refer to programs that: teach people rules and regulations, offer classes or clinics, provide recreational opportunities, and give the general population a chance to experience and become involved in the multitude of outdoor related activities (Burroughs and Reeff 1996). Land-grant universities tend to take a different, research-based approach and define outreach as the process of generating, transmitting, applying and preserving knowledge for the benefit of external audiences in ways consistent with the organization’s overall mission (MSU, 1992). A recent discussion has emerged at the

Federal level concerning differences between outreach and education projects. Currently, the Federal Aid outreach program definition implies that projects should be designed to communicate information to allow publics to make informed decisions regarding Federal Aid programs (i.e. those funded through the Sportfish Restoration Act) (Federal Aid Outreach Team, 1996). In contrast, an aquatic education project is designed to teach people about fisheries, aquatic habitats, and responsible angling as required by Section 8(c) of the Sport Fish Restoration Act (Federal Aid, 1996). For the purposes of the Fishing in the Parks program, outreach is defined from a state agency and land grant university perspective as initiating two-way information flow by providing and targeting research-based educational services and or programs for stakeholders, including non-traditional audiences, in accessible locations that extend beyond the agency's current or usual limits.

The importance for fisheries managers to provide effective outreach programming that target today's nonanglers can not be overstated. Americans have become increasingly concerned about governmental leadership and more knowledgeable and active in governmental decision making regarding resources (MDNR Fisheries Div. 1994). Yet several trends of concern to fisheries managers may affect the future stewardship of aquatic resources. These trends are: 1) increasing urbanization, 2) increasing numbers of single parent households, predominantly headed by females (Ditton 1995 and Murdock et al. 1992), 3) declining avidity and participation in fishing and hunting (ASA 1997, Matthews 1996, and SFI 1991), and 4) an increasing number of choices for ways youth can spend their leisure time. While some of these activities such as sports, scouting, and 4-H are positive, many choices can be detrimental.

Fisheries managers have an obligation to provide for the broadest possible benefits from the use of public trust resources, to foster public understanding of fisheries management, and to contribute to cultivating public stewardship of resources (Fisheries Div. 1994, Dann 1993). Therefore, there is a great need to identify audiences and target market fisheries opportunities to non-traditional clientele in an effort to increase public involvement with and the stewardship of aquatic resources. In the broadest sense, non-traditional audiences can be defined as those who have never fished or who fish very little. In addition, other non-traditional clientele include minorities, handicappers, single mothers, and urban residents, all of whom have specific needs that should be identified so measures can be taken to involve these segments of society in aquatic stewardship. Several recent publications address the changes occurring in the U.S. population and the possible impacts these changes will have on fisheries management (Ditton 1995, Dwyer 1994, Murdock et al. 1992, Schramm and Edwards 1994, U.S. Bureau of the Census 1992).

In an attempt to increase participation in recreational fishing, agencies have invested time and money to create outreach and aquatic education programs. Many of these programs have not taken a marketing approach and have lacked an evaluation component. There exists a great need to understand the clientele who attend these fishing outreach programs, in order to assess whether the selected targeted audiences are being attracted and to determine whether the programs are meeting the participants' expectations and needs. Additionally, evaluative research allows the sponsoring agency to improve the program's quality and increase programming efficiency.

One of the major challenges facing fisheries agencies is the lack of an integrated research-based outreach approach to educational programming which is easy to use as

well as effective. In the past fisheries managers have relied on older family members to recruit younger generations into fishing within family contexts. Recently, managers have used the “build it and they will come” philosophy of outreach programming, where access sites are constructed but not marketed or a fishing program is offered and publicized mainly by announcements in the outdoor section of the local paper. Unfortunately, the readership of the outdoor section tends to be composed of those already exposed to fishing. Furthermore, these programs have been evaluated by counting the number of participants and dividing by the amount of money spent on the program (Thomas and White 1995, Burroughs and Reeve 1996). This method does not constitute effective program evaluation, because it does not allow for participant feedback about the program, or establish whether targeted audiences were attracted, or whether specific outcomes were achieved.

The goals of this paper are: 1) to present a research-based outreach model, 2) to present how this model was used to develop a research-based outreach program in fisheries and aquatic resources, and 3) to present the results of evaluative research conducted concerning the outreach programs. The specific evaluation/research objectives were: a) to describe participants attracted to the Fishing in the Parks programs, b) to evaluate marketing and publicity efforts, c) to assess participant reactions to the program immediately post program, and d) to assess participants’ immediate post-program intentions to participate in fishing in the future.

## **Research-Outreach Model Development**

Resource management agencies have already begun to develop comprehensive research-outreach approaches to programming. In 1993, the New York State Division of Fish and Wildlife implemented a model to change public attitudes and behavior associated with fish and wildlife resources. This model was considered a “stewardship” model, because it included a central role for the public and took a marketing approach instead of a selling approach to foster public involvement (Barnhart et al. 1993). Furthermore, this customer-based model was designed to assist agencies in meeting public demands consistent with long-term fish and wildlife resource stewardship.

Another model included a blueprint that operated as a template for effective communication and included the following steps: (1) evaluation by reviewing the surroundings, setting goals and objectives, identifying target audiences, developing strategies, organizing tasks, selecting media formats and channels; (2) preparing the materials; (3) understanding evaluation and steps for performing effective evaluation; and (4) conducting the evaluation techniques (Beech and Drake 1992). This “blueprint” can be applied to a variety of outreach issues and programs. However, neither of the above models fit exactly with the Fishing in the Parks program objectives.

The first goal of the Fishing in the Parks project was to develop a more comprehensive research-based outreach model (Figure 3-1). The elements of an effective outreach program model must be research-based. The research base is the foundation of the program model, where knowledge is applied in developing an outreach program based on previous research and where knowledge is generated from evaluative research on feedback from the outreach program. Operating within the research-base context are four

elements in which knowledge must be applied in an appropriate mix to develop an effective outreach program. The first element of an effective outreach program is its alignment with and support of the agency's or division's mission. For example, the mission of the MDNR Fisheries Divisions is

“to protect and enhance the public trust in populations and habitat of fishes and other forms of aquatic life, and promote optimum use of these resources for the benefit of the people of Michigan. In particular the division seeks to foster and contribute to public stewardship of natural resources.” (MDNR 1994:6).

The Fishing in the Parks outreach program is aligned with and supportive of the overall mission; the program goals are to foster use of fisheries resources, presumably leading to increased stewardship or at least an ongoing, continued relationship with the resource and the agency through fishing.

A second element of the model must be an effective resource management message aligned with the agency's conservation and stewardship mission. For example, an effective fishing related outreach program should inform participants about why fishing rules are necessary to ensure sustainable use of the resource over time. This information may help to encourage voluntary compliance to fishing regulations in the future. A third model element is that the resource must ultimately benefit. In other words, the program participants should become better stewards and advocates for the resource through participating in the program. For example, fishing program participants should be informed that funds generated by the sale of fishing licenses and excise taxes on fishing equipment are used specifically for fisheries management. Finally, the fourth model element is that stakeholder needs and expectations must be met. For example, if the fisheries division sponsors non-targeted “fishing clinics,” both novice and advanced

anglers may participate in the program. The advanced angler would not be satisfied because the program was for beginners, and the beginner may feel intimidated by how much the other participants know.

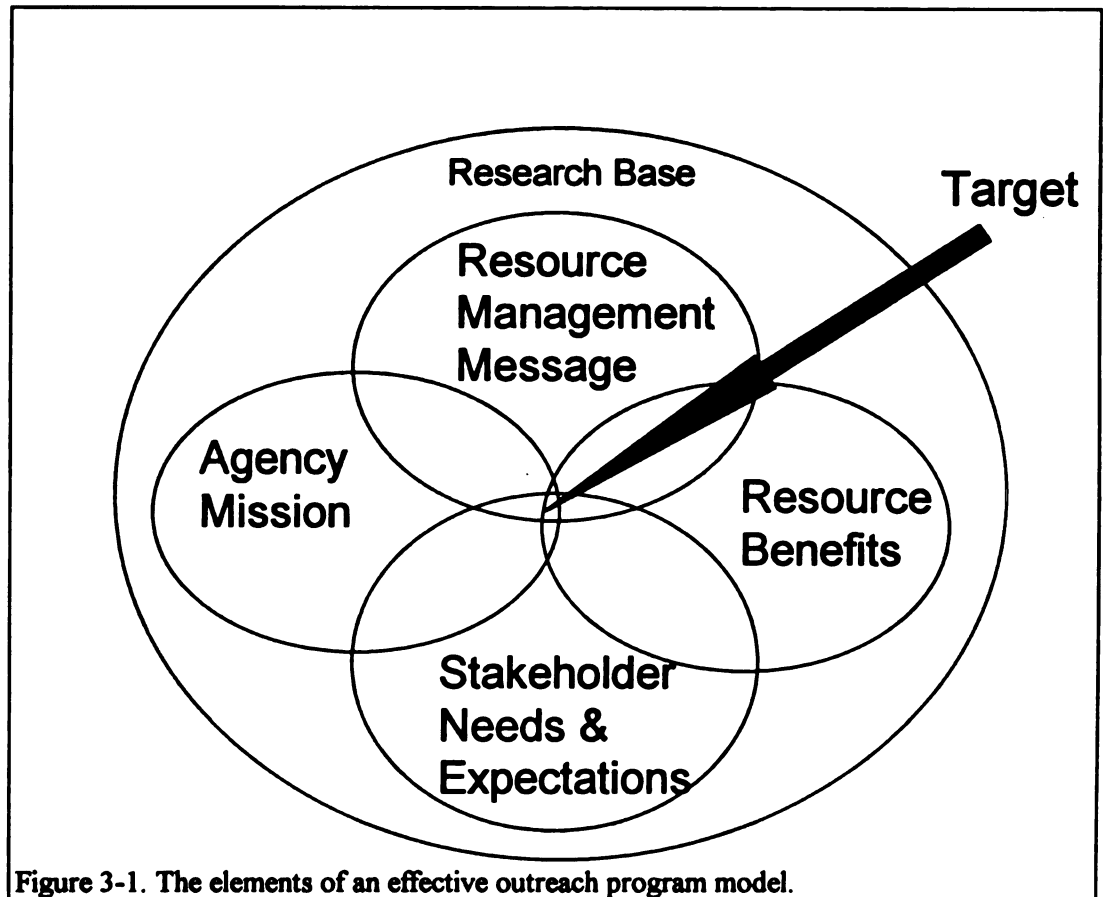


Figure 3-1. The elements of an effective outreach program model.

### **Research Basis for the Fishing In The Parks Program**

The research base for the development of Fishing in the Parks, an innovative research-based outreach program in fisheries and aquatic ecosystems, has been firmly established by a study of licensed anglers in Michigan. This research found that childhood and teen involvement in fishing was significantly related to current fishing involvement (Dann 1993). Furthermore, licensed anglers with the highest levels of current fishing

involvement reported having: 1) family fishing backgrounds, 2) participation in fishing-related institutional events (clinics, camp, school, or youth organizations), 3) direct hands-on contact with fishes during early fishing activities, and 4) greater levels of satisfaction with their earliest fishing experience (Dann 1993). These findings support the suggestion that fisheries outreach programs be developed that target young families, teens, urban audiences, and females (Dann 1993). These recommendations are further supported by the MDNR Fisheries Division's Strategic Plan (1994:41).

**"Fishing participation will only grow in the long term if the rate of recruitment exceeds the rate of dropout. Growth will likely not come from the ranks of the highly active and experienced groups of anglers who are probably fishing at their maximum level. Growth will come from urban areas, the less affluent, women and children. Opportunities must be created and programs must be designed to make fishing easily available to these groups."**

At the same time, as a starting point for the development of this innovative outreach program, we reviewed marketing literature for pertinent research-based insights. Chapter 2 discusses marketing in more detail. However, a few main points are needed here for clarification. Marketing is the deliberate and orderly process of understanding fish and wildlife publics to provide them with quality experiences to foster positive attitudes and behaviors toward the resource (Duda 1990). Targeting and segmenting are probably the most useful marketing tools for fisheries managers and outreach coordinators (e.g., aquatic educators and public affairs staff). Segmentation is used to identify then classify stakeholders into meaningful groups which merit separate programs based on individuals' differing needs. For the "Fishing in the Parks" program the initial segment included those who have never fished or fish very little. Targeting is selecting one or more of those segments and providing them with appropriate programs or services (Kotler

1982). Families with young children were selected as the initial target based on Dann's (1993) research. Both segmentation and targeting are critical to achieving participant satisfaction by attracting the right audience and meeting their needs and expectations. Additionally, targeting and segmenting are useful tools for developing program partners and recruiting volunteers.

### Fishing in the Parks Program Design

In the fall of 1994, a group of representatives from various program partners were brought together to create the Fishing in the Parks steering committee. This committee undertook the task of designing and implementing a fishing outreach program during the summer of 1995. Since the committee members represented the different sponsoring organizations, these individuals contributed diversity to the group based on their varying expertise, backgrounds, and perspectives. This diversity of knowledge proved useful in making Fishing in the parks a reality.

During the summer of 1995, MDNR Fisheries Division hired two fishing instructors to travel to different Michigan State Parks each weekday evening. Throughout each week, the instructors visited ten different parks. Two other instructors and one coordinator were hired to travel to eight State Parks to host weekend fishing workshops. Additionally, the coordinator recruited volunteers from the local communities to assist the instructors with the programs. The steering committee reviewed a variety of materials in order to select a fishing curriculum to be used in the Fishing in the Parks programs. Although several curricula (e.g., "Hooked On Fishing--Not On Drugs" and "Pathways to Fishing") were identified, the steering committee decided to develop a training manual

from these and other existing materials for the program's instructors to use in designing lesson plans specifically for the Fishing in the Parks programs (see Appendix G).

Between 1995 and 1996, the steering committee used the evaluative research to make significant program modifications. Program evaluation information from 1995 indicated that sponsoring fishing programs each night of the week in two different locations in lower Michigan was confusing to program participants and difficult for the media to communicate. The steering committee used this information to justify using Adventure Rangers, already stationed in selected State Parks, to teach the program in 1996. The Adventure Rangers also eliminated the need to hire separate instructors and eliminated the travel costs of Fisheries Division instructors. In both 1995 and 1996 the weekday programs were held at: Muskegon State Park, Ionia State Park, Yankee Springs Recreation Area, Fort Custer Recreation Area, Pontiac Lake Recreation Area, and Island Lake Recreation Area. In 1996, Maybury State Park, Seven Lakes State Park, and Proud Lake Recreation Area were replaced with Metamora-Hadley Recreation Area, Walter J. Hayes State Park, and Sterling State Park. These park changes were necessary either because the park did not have an Adventure Ranger or the fishing facilities were deemed inadequate for the program (based on feedback from 1995 staff and participants. The data and instructor feedback suggested the weekend programs were generally not effective or efficient at attracting the targeted audience of families with young children. For example, instructors reported that weekend programs attracted mainly youth without their parents (Appendix H). Therefore, the committee eliminated weekend programs for 1996. During both years the fishing instructors/adventure rangers taught each participant basic fishing knots, rigging, casting, baiting, basic fish identification, and additional skills. Every

participant in the program actually fished with an instructor present to answer questions and to assist.

In an effort to eliminate confusion about the program night, in 1996 Tuesday nights were selected to standardize media messages (e.g., Fishing in the Parks will be held every Tuesday night at 6:30 p.m. at these 10 state parks...). Additionally, selected parks were traditionally underutilized on Tuesday evenings. By offering Fishing in the Parks then, this allowed the program to be aligned more directly with the Parks and Recreation Division's mission of promoting the use of the State Parks.

For the 1995 programs, traditional mediated interactions such as news releases were used to promote the program. The evaluation information indicated a need for a more strategic communications campaign to be developed and implemented by the spring of 1996. The campaign was developed by: consulting with extension communication specialists, nonanglers, and students, and by consensus building among program partners on the steering committee (Appendix F). The message selected for 1996 and beyond was "Fishing is family fun that lasts a lifetime." Additionally, the 1995 program name, "Take a Friend Fishing" was changed to "Fishing in the Parks" starting in 1996. The new title was thought to better promote the missions of the MDNR Fisheries and Parks & Recreation Divisions.

### **Fishing in the Parks Evaluation Research Design**

At the beginning of each "Fishing in the Parks" program each adult participant was asked to complete a registration form in order to participate. Using this form, program staff collected the names, addresses, phone numbers, and birth year of each individual

attending. The adults registered the youth in attendance with them and signed a statement that provided consent for the youth attending the program to participate in the evaluative research conducted at the program's conclusion (see Appendices A and B).

During both years of the program, researchers from Michigan State University Department of Fisheries and Wildlife administered questionnaires to participants. Immediately following the completion of the program, each adult participant (age 18 years and older) was requested to voluntarily complete an "adult" questionnaire. Youth (ages 5 through 17 years old) were also given the opportunity to voluntarily complete a "youth" survey.

The youth survey was substantially shorter, easier to read than the adult survey, and did not contain questions that would be redundant in light of the information collected from the adult survey. Both youth and adult evaluative instruments were developed using pre-existing questionnaires (Dann 1993, Gigliotti 1989, Wong-Leonard 1992, and Fridgen et al. 1986). The surveys were piloted during the first four weeks of the 1995 program. Pilot data were then analyzed to determine if any of the items or instructions in the questionnaires needed clarification. In the adult survey, there were a few questions that were reworded, and some minor formatting/layout adjustments made instructions more clear and reduced the number of pages in the survey.

The youth survey required substantial changes after piloting. The pilot youth survey (see Appendix C) was written with a Flesch-Kincaide readability grade level of 6.5. After the first four weeks, results indicated the average youth participant was going to enter the fifth grade in the following fall. Additionally, the pilot indicated that many of the questions were redundant with the adult survey. After rewording and deleting several

questions in the youth survey (see Appendix D), the Flesch-Kincaide readability grade level was lowered to 3.6.

This evaluative research and re-contact information collected on the registration form was considered an integral part of the program by the steering committee. As a research-based outreach program, this information allows for a two way communication flow between the agency and its clients. Participants provide feedback for the steering committee to use in evaluation and for program improvements. Additionally, participants can be contacted in the future for longitudinal studies, and their fishing activity can be tracked over time by using the state's computerized licensing system. The intent of collecting this information is to be one of the first fishing related outreach programs to document the extent of its contribution to developing long-term anglers and aquatic stewards.

The data collected from surveys conducted during 1995 and 1996 were analyzed using the Statistical Package for the Social Sciences version 6.11 (SPSS, Inc. 1994). Data entry accuracy was determined by re-entering 14% of the surveys. In the adult surveys, nine errors in 4,343 total keystrokes resulted in a 0.002 error rate. In the youth surveys, two errors in 3,168 keystrokes resulted in a 0.0006 error rate. Since the probability of transcription error from the original document was well below the usual, expected error rate of 2-4% (Karweit and Meyers 1983), it was determined unnecessary to re-key all the surveys. Summary statistics, chi-square, and t-tests were used to compare 1995 and 1996 results and were performed on the same SPSS software. The data were tested for significant differences between 1995 and 1996 using chi-square and t-tests (see Appendix I). The results of this analysis indicated relatively few significant differences and justified

pooling the 1995 and 1996 data. The pooled data and significant differences are reported in the “Fishing in the Parks Results and Discussion Section.” Additionally, a participant database was developed from the information on the registration forms using Microsoft Access 3.0 (Microsoft, Corp. 1994) (see Chapter 4).

### **Fishing in the Parks Results and Discussion**

#### **Programming Effort and Evaluation Survey Response Rates**

The programming effort included a total of 106 programs in 1995 and 81 programs in 1996 (Table 3-1).

**Table 3-1. Fishing In The Parks programming effort in 1995 and 1996.**

| <b>Year</b>   | <b>Potential<br/>programming<br/>effort</b> | <b>Cancelled due to<br/>rain</b> | <b>Total<br/>programming<br/>effort</b> |
|---------------|---------------------------------------------|----------------------------------|-----------------------------------------|
| <b>1995</b>   | 112                                         | 6                                | 106                                     |
| <b>1996</b>   | 90                                          | 9                                | 81                                      |
| <b>Totals</b> | 202                                         | 15                               | 187                                     |

During the two years, 852 adults and 1,522 youth participated in Fishing in the Parks (Table 3-2). Overall, these participation rates were satisfactory given that on the average, a program had approximately 12 to 13 participants. This group size allows for optimal instructor/participant interaction which may positively influence participant satisfaction with the program. When comparing the number of participants between 1995 and 1996, it is important to note that during 1996 there were 25 fewer programs and 94 more participants, thus indicating an increase in programming efficiency due to changes made after evaluation conducted in 1995.

The adult and youth response rates for 1995 and 1996 are presented in Table 3-2. The adult response rate produced 326 useable cases in 1995 and 296 useable cases in 1996. In 1995, there were 29 adult and 48 youth who attended more than one program for a 7% repeat participation rate. In 1996, 35 adults and 58 youth attended more than one program yielding repeat rates of 8% for adults and 7% for youth. Repeat participants during the same year did not complete a second survey. The adult response rates were corrected for repeat participants resulting in 326 usable cases in 1995 and 296 cases in 1996. Youth response rates were corrected for repeat participants and those under five years of age (participants under 5 years of age were considered too young to take the youth survey) resulting in 348 useable cases in 1995 and 481 usable cases in 1996.

Table 3-2. Fishing In The Parks participation and response rates for 1995 and 1996.

| <b>Year</b>  | <b># Adult participants</b> | <b># Youth participants</b> | <b>Total # participants</b> | <b>% of Adult responding</b> | <b>% of Youth responding</b> |
|--------------|-----------------------------|-----------------------------|-----------------------------|------------------------------|------------------------------|
| <b>1995</b>  | 423                         | 716                         | 1139                        | 83                           | 63                           |
| <b>1996</b>  | 429                         | 806                         | 1235                        | 82                           | 82                           |
| <b>Total</b> | 852                         | 1522                        | 2374                        |                              |                              |

The youth response rate was significantly higher in 1996 than in 1995. One reason for the low youth response (63%) in 1995 may have been that youth tended to wander off during the weekend programs. Another reason may be that in 1995, researchers asked adults to assist their youth in completing the youth survey after adults had already spent 10 or more minutes filling out an adult questionnaire. In 1996, MSU staff interviewed youth toward the end of the program, while the parents were completing their own adult questionnaires. This procedure allowed the youth to have additional fishing time and probably contributed to the increased response rate of 82%. The overall response rates were quite satisfactory. Non-response occurred randomly; non-respondents tended to be people who needed to leave early, were late to dinner at camp, or moved on to another event happening in the park.

#### Description of Participants Attracted to Fishing in the Parks

One of the research objectives was to describe program participants and to determine if targeted segments were attracted to the program. Both youth and adults were asked about previous fishing behavior to assess their level of involvement in fishing (Table 3-3).

**Table 3-3. 1995 and 1996 youth and adult previous fishing experience and indicators of levels of involvement of those who indicated that they had fished before.**

| <b>Fishing Activity Indicator</b>                   | <b>Youth</b>   | <b>Adult</b>   |
|-----------------------------------------------------|----------------|----------------|
| <b>Fished before</b>                                | <b>89%</b>     | <b>86%</b>     |
| <b>Membership in a fishing related organization</b> | <b>na</b>      | <b>3%</b>      |
| <b>Of those who fished before:</b>                  |                |                |
| Had a current fishing license                       | na             | 43%            |
| Purchased a license 5 of the past 5 years           | na             | 24%            |
| Purchased a license 3 or 4 of the past 5 years      | na             | 14%            |
| Purchased a license 1 or 2 of the past 5 years      | na             | 26%            |
| Had not purchased a license in the past 5 years     | na             | 36%            |
| <br>Fished 5 of the last 5 years                    | <br>29%        | <br>33%        |
| Fished 3 or 4 of the last 5 years                   | 27%            | 17%            |
| Fished 1 or 2 of the last 5 years                   | 39%            | 28%            |
| Had not fished in the past 5 years                  | 5%             | 22%            |
| <br>Days fished last summer                         | <br>median = 5 | <br>median = 3 |
| Days fished last fall                               | median = 0     | median = 0     |
| Days fished last winter                             | median = 0     | median = 0     |
| Days fished this spring                             | median = 0     | median = 0     |

Although 89 percent of youth and 86% of adults reported they had fished in the past, other questionnaire items indicate that many of these participants had very low fishing activity rates (see Appendix E). The median days fished for youth in the past year was 5 days of summer fishing and none during the rest of the year. Adult survey results revealed a median of 3 days of fishing during the summer and a median of zero during the rest of the year. Additionally, 39% of the youth indicated they fished only once or twice in the past five years, and 36% of adults indicated they had not purchased a license in the past five years. Results also indicated that 3% of all adults participating in the program belonged to a fishing related organization. These results indicate the targeted “never fished” and “novice” audiences were being attracted to the program.

The program was also targeted to attract families with young children. Adults participating in the program were asked who they attended the program with to assess whether the family target was being attracted (Table 3-4). The data indicate that 79% of adult participants attended the program with their own child and 25% attended with their spouse.

When adults were questioned about their household composition, 75% of participants indicated they lived in a household consisting of two adults and child(ren). Fifteen percent were adults who did not live with children and 9% indicated living alone with a child(ren). One segment that seems to be underrepresented is the single parent group, because only 9% of adults indicated living alone with children.

Table 3-4. Adult responses regarding who they accompanied to the program, in 1995 and 1996.

| <b>I am attending this program with:</b> | <b>Percent of adults<sup>1</sup></b> |
|------------------------------------------|--------------------------------------|
| With my own child                        | 79%                                  |
| With someone who has never fished before | 35%                                  |
| With my spouse                           | 25%                                  |
| With other children                      | 18%                                  |
| With my grandchild                       | 9%                                   |
| With another adult                       | 9%                                   |
| Alone                                    | 3%                                   |
| Other                                    | 5%                                   |
| With a teenage friend                    | <1%                                  |

<sup>1</sup> Percent will not sum to 100% because of multiple responses.

General demographic information also allowed assessment of what types of participants were attracted. During the two years, youth had a pooled mean age of 9.5 years old and indicated they would be entering the fifth grade in the fall. The vast majority, 90%, of youth were residents of Michigan, and 58% of the youth were male. The Fishing in the Parks program did not attract an ethnically diverse audience (Table 3-5). The lack of diversity may be a result of suburban and rural locations of most of the State Parks.

**Table 3-5. Program participants' reported ethnicity (1995 and 1996 pooled data).**

|                   | Participant responses in percent |              |                 |              |                    |              |
|-------------------|----------------------------------|--------------|-----------------|--------------|--------------------|--------------|
| <b>Are you...</b> | <b>White</b>                     | <b>Black</b> | <b>Hispanic</b> | <b>Asian</b> | <b>Multiracial</b> | <b>Other</b> |
| Youth             | 92%                              | 4%           | 2%              | <1%          | <1%                | <1%          |
| Adults            | 94%                              | 3%           | 2%              | <1%          | <1%                | <1%          |

Additional demographic information collected from adults indicated that 84% were currently married, 44% lived in urban areas, 93% were residents of Michigan, 2 years of college was the median education level, 42 was the mean age, and 53% of adults were male. When adults were asked about their household income, most program participants reported middle and upper middle class incomes (Table 3-6).

**Table 3-6. Reported household income of adult participants (1995 and 1996 pooled data).**

| <b>Annual household income before taxes</b> | <b>Percent of adults responding</b> |
|---------------------------------------------|-------------------------------------|
| Less than \$10,000                          | 2%                                  |
| \$10,000 to \$19,999                        | 4%                                  |
| \$20,000 to \$29,999                        | 9%                                  |
| \$30,000 to \$39,999                        | 12%                                 |
| \$40,000 to \$49,999                        | 25%                                 |
| \$50,000 to \$59,999                        | 14%                                 |
| \$60,000 to \$69,999                        | 28%                                 |
| \$70,000 to \$79,999                        | 2%                                  |
| \$80,000 to \$89,999                        | 1%                                  |
| \$90,000 to \$99,999                        | 1%                                  |
| \$100,000 and above                         | 3%                                  |
| Chose not to answer                         | 21%                                 |

Adult participants were asked about their Michigan State Park usage. While 90 percent indicated they had visited a Michigan State park in the past, 29% indicated it was their first visit to that particular park. Additionally, 41% indicated they visited specifically to attend the Fishing in the Parks program. There were significantly more campers (64%) participating in the program during 1996 than expected based on the 44% camping rate of 1995 (Chi-sq.=24.23, 1df,  $p<.001$ ). This increase in camper participation may have been caused by having the park's Adventure Ranger as the instructor. The Rangers indicated they advertised the programs more aggressively in the campgrounds in 1996 than in 1995.

#### Evaluation of Marketing and Publicity Efforts

When adults were asked how they first heard about the "Fishing in the Parks" program, participants reporting they first heard through park contacts (e.g., posters or rangers) significantly increased from 55% in 1995 to 70% in 1996. This increase may be

due to the more active role of the Adventure Rangers by having them instruct and therefore take ownership of the program in their park in 1996. Additionally, in 1996 programs were not offered at Maybury State Park, which is a day-use only Park. Participants reporting they first heard through printed mediated interactions (e.g., newspaper and magazine articles) also increased significantly in 1996. In 1995 5% of adults reported they first heard from printed mediated interactions, while 19% of adults reported hearing through printed mediated interactions in 1996. This increase may be attributed to the coordinated communications campaign which included increased press releases, increased articles in magazines, and the uniform print media message. In 1996, there was a significant decrease in the proportions of participants hearing of the program through other mediated interactions (e.g., word of mouth, TV, and radio). In 1995, 40% of adults reported they first heard from other mediated interactions, while 11% of adults reported hearing through other mediated interactions in 1996. These significant changes between park contacts, print media, and other mediated interactions ( $\text{Chi-sq.} = 71.09, 2\text{df}, p < .001$ ) seem to indicate the communications campaign was more effective in reaching target markets during 1996.

#### Assessment of Participant Reactions Immediately Post-Program

Another research question was to assess whether the program met the needs and expectations of the program participants. Overall, 52% of adult participants indicated they expected to catch fish, and 69% actually caught fish. Additionally, 76% of youth participants indicated they expected to catch fish, and 78% actually caught fish. Thus both groups' expectations for catching fish were met or exceeded. To better assess if

needs and expectations were met, adults and youth were asked, in slightly different ways, to what extent they were satisfied with selected objectives of the program (Tables 3-7 and 3-8).

Table 3-7. Youth satisfaction with selected objectives of the program (1995 and 1996 pooled data).

| Did this program help you...          | Percent of youth responding |     |         |     |
|---------------------------------------|-----------------------------|-----|---------|-----|
|                                       | Not important to me         | Yes | Sort-of | No  |
| To learn new fishing skills           | 2%                          | 78% | 16%     | 4%  |
| To fish on my own                     | 3%                          | 66% | 19%     | 12% |
| To learn about fish                   | 3%                          | 57% | 25%     | 15% |
| To get better at my fishing skills    | 2%                          | 77% | 16%     | 5%  |
| To be better able to use my equipment | 3%                          | 78% | 13%     | 6%  |
| To meet new people                    | 4%                          | 64% | 18%     | 13% |
| To become more interested in fishing  | 2%                          | 73% | 17%     | 7%  |
| To enjoy time outdoors                | 1%                          | 85% | 10%     | 4%  |

Table 3-8. Adult satisfaction with selected objectives of the program (1995 and 1996 pooled data).

| To what extent are you satisfied that this program helped you... | Percent of adults responding      |                           |                      |                        |
|------------------------------------------------------------------|-----------------------------------|---------------------------|----------------------|------------------------|
|                                                                  | Not an important reason to attend | Dissatisfied <sup>1</sup> | Neutral <sup>1</sup> | Satisfied <sup>1</sup> |
| To learn new fishing skills                                      | 8%                                | 3%                        | 11%                  | 78%                    |
| To fish by myself                                                | 12%                               | 3%                        | 18%                  | 67%                    |
| To learn about fish                                              | 10%                               | 5%                        | 28%                  | 57%                    |
| To get better at my fishing skills                               | 9%                                | 3%                        | 18%                  | 70%                    |
| To be better able to use my equipment                            | 9%                                | 3%                        | 17%                  | 71%                    |
| To be with family                                                | 5%                                | 2%                        | 10%                  | 83%                    |
| To be with friends                                               | 16%                               | 2%                        | 22%                  | 60%                    |
| To meet new people                                               | 17%                               | 3%                        | 27%                  | 53%                    |
| To become more interested in fishing                             | 12%                               | 2%                        | 17%                  | 69%                    |
| To enjoy time outdoors                                           | 4%                                | 3%                        | 7%                   | 86%                    |

<sup>1</sup> Satisfaction was measured using a 5 point Likert type scale where 1 = very dissatisfied, 2 = dissatisfied, 3 = neutral, 4 = Satisfied, and 5 = very satisfied.

The surveys indicate this program may be beneficial in providing the basic skills and meeting important expectations needed to increase participation in fishing. Seventy eight percent of both adult and youth participants were satisfied with their new fishing skills. Additionally, 71% of adults and 78% of youth reported they felt better able to use their equipment, and 67% of adults and 66% of youth were satisfied that they could fish on their own at the end of the program.

#### Assessment of Participant Intentions to Participate in Fishing

One of the purposes of this research was to determine to what extent an ongoing relationship was started between the agency and stakeholders. Both youth and adults were asked, in slightly different ways, about their fishing-related intentions after participating in the program (Tables 3-9 and 3-10).

Table 3-9. Youth intentions after completing the program, (1995 and 1996 pooled data).

| After this program will you...      | Percent of youth responding |       |     |
|-------------------------------------|-----------------------------|-------|-----|
|                                     | Yes                         | Maybe | No  |
| Go fishing again?                   | 87%                         | 12%   | 1%  |
| Buy your own fishing rod or tackle? | 49%                         | 34%   | 17% |
| Go to another fishing program?      | 49%                         | 42%   | 9%  |

Table 3-10. Adult intentions after completing the program, (1995 and 1996 pooled data).

| In the next year do you intend to... | Percent of adults responding |          |       |     |           |
|--------------------------------------|------------------------------|----------|-------|-----|-----------|
|                                      | Definitely                   | Probably | Maybe | No  | Undecided |
| Go fishing again?                    | 60%                          | 20%      | 12%   | 6%  | 2%        |
| Purchase equipment?                  | 33%                          | 29%      | 21%   | 15% | 2%        |
| Attend another clinic?               | 24%                          | 25%      | 33%   | 13% | 5%        |

The results indicate that participants have intentions to become more committed to fishing. Thirty seven percent of 1996 adult participants had a license, and an additional 38% indicating that they would definitely, probably, or might purchase a license after participating in Fishing in the Parks. These results suggest that up to 75% of adults already have or intend to buy a license after attending the program. Fifty nine percent of adults and 87% of youth indicated they will definitely fish again, and an additional 34% of adults and 12% of youth indicated they probably or might fish again. These results indicate that 92% of adults and 99% of youth intend to fish again after completing the program. This high level of intention to fish again indicates the program is effective in preparing and motivating individuals to continue fishing. These high intention rates are encouraging to fisheries managers, considering that angling participation may be related in some way to aquatic stewardship (Dann 1993).

#### Programming Efficiency and Overall Participant Satisfaction

By utilizing the Adventure Rangers as program instructors for 1996, the cost of the program was significantly reduced in 1996. In 1995, fishing instructor salary, travel, and miscellaneous supplies (e.g., mainly bait) cost \$26,800, or \$23.53 per program participant. In 1996, program costs were significantly reduced to \$5,000, or \$4.05 per participant. These totals do not include evaluative research costs or in-kind support from the program's partners such as photocopying, mailings, or salary support for the steering committee members.

One overarching question is: did participant ratings of overall program quality decrease by increasing programming efficiency between 1995 and 1996 by using

**Adventure Rangers as instructors?** The data indicate that adult participant program quality ratings differed significantly ( $t=2.42$ ,  $df=537$ ,  $p=.016$ ) between the two years; increasing from a mean of 4.3 in 1995 to a mean of 4.5 in 1996 on a 5 point Likert type scale (where 5 = excellent) (Table 3-11). The youth data indicate a significant decrease in overall program quality ratings between 1995 and 1996. Youth program quality ratings were measured on a scale of poor = 1, good = 3, and excellent = 5. Youth mean ratings were 4.6 in 1995 and decreased to 4.2 in 1996. There are several possible reasons for this decrease in ratings by the youth participants. First, it is possible the youth perceived that program quality actually did decrease. However, this is unlikely in light of the adult program participant data. This significant difference in youths' program ratings could be due to non-response bias from youth surveys conducted in 1995. The youth response rate in 1995 was 63%; possibly, the youth who chose to participate in the survey were the ones who thought the program was excellent. Another factor may have been caused by the difference in youth data collection between 1995 and 1996. In 1995, parents were asked to assist their youth in completing the survey. Because the youth response rate was low in 1995, research assistants for 1996 were asked to interview youth toward the end of the program while the parents were completing adult questionnaires. This procedure increased the youth response rate to 82% and may have eliminated parent biases because interviewers read the questions and marked the answer the youth provided. In 1995, parents may have coached their youth by saying, "don't you think the program was better than just good?"

**Table 3-11. Overall program quality rating for adults and youth on a scale of 1 = poor to 5 = excellent.**

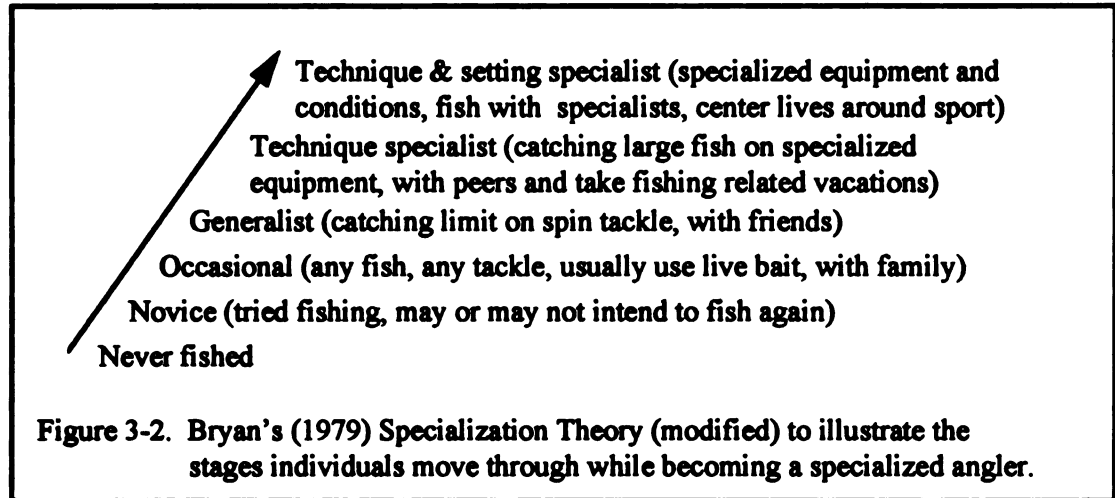
| <b>Overall quality</b> | <b>1995<br/>mean (s.d.)</b> | <b>1996<br/>mean (s.d.)</b> | <b>t-value</b> | <b>d.f.</b> | <b>p</b>        |
|------------------------|-----------------------------|-----------------------------|----------------|-------------|-----------------|
| <b>Adult</b>           | <b>4.3 (0.74)</b>           | <b>4.5 (0.72)</b>           | <b>2.42</b>    | <b>537</b>  | <b>.016</b>     |
| <b>Youth</b>           | <b>4.5 (0.83)</b>           | <b>4.2 (1.02)</b>           | <b>6.80</b>    | <b>753</b>  | <b>&lt;.001</b> |

### **Discussion and Implications for Fisheries Management**

The Fishing in the Parks program was designed using an innovative outreach programming model that began with a sound research base. Additionally, the program was developed to target an appropriate mix of the four operational components of the model by: 1) aligning with the agency's mission, 2) communicating a resource management message, 3) ultimately benefiting the resource, and 4) meeting stakeholder needs and expectations to effectively extend knowledge. The evaluative research allowed for organizational learning, program improvement, and increased programming efficiency, and the re-contact information is being used to initiate two-way communication flow with newly recruited fisheries clientele. Two other elements were important to the success of Fishing in the Parks. First, taking a marketing approach to segment audiences, and targeting a specific audience for this program may have influenced the high overall program satisfaction levels among participants. Second, the development of a sound communication campaign was effective in establishing a clear program message that attracted the targeted audience to the program, and assisted in recruiting volunteers for the program.

### Setting Objectives for Retaining New/Novice Anglers

After a fisheries agency has provided clientele with an initial exposure to fishing at an outreach program, future objectives should be to retain those new anglers as committed customers. Agency staff may consult research from several sources for clues about retaining new/novice anglers and encouraging angler commitment (Bryan 1979, Dann 1993, Ditton et al. 1992). One angler specialization theory states that anglers tend to specialize over time and illustrates the stages through which most individuals progress while becoming an angler (Bryan 1979). Bryan suggests four stages. For further clarification, two additional early stages have been added, “never fished” and “novice,” stages in which a person has tried fishing and may or may not intend to fish again (Figure 3-2). Bryan’s stages begin with the “occasional stage” where fishing is a family activity for catching any fish, using any tackle, and usually using live bait. The “generalist” takes pride in catching his/her limit, uses spinning tackle, and fishes with friends. The “technique specialist” concentrates on catching large fish, uses specialized equipment, fishes with peers, and takes fishing related vacations. The final stage is the “technique and setting specialist,” because he/she uses specialized equipment in specific conditions (e.g., coldwater streams), fishes with fellow specialists, and focuses his/her recreation (and maybe even their lives) around the sport of fishing.



Results from “Fishing in the Parks” indicate the program is successful at providing participants with a hands-on fishing experience and enough fishing skills to allow them to move from the “never fished” or “novice” stages to the “occasional” stage in which they can express intentions to continue fishing. Additionally, the stages suggested by Bryan provide a solid link between the fisheries research base and potential segmentation and target marketing opportunities for other fishing outreach efforts. The stages could be used to establish marketing objectives (e.g., to move program participants from the novice fishing stage to the occasional stage), and previous Fishing in the Parks program participants could be targeted for existing angling opportunities such as Free Fishing Days. These additional exposures to fishing opportunities allow participants to start developing a lifetime relationship with fisheries resources and their related management agencies.

### Research Limitations

This research has provided very good baseline information that describes the participants attracted to the Fishing in the Parks program, their reactions to the program,

and their intentions to participate in fishing in the future. However, the results only show the participants' intentions to fish again. Whether the participants actually fish again after the program and at what level should be the focus of future research.

Fishing in the Parks program staff provided training and support for several urban fishing programs in 1996. However, the surveys from the Fishing in the Parks research project were not administered at any of the urban fishing programs. Currently, the majority of urban fishing programs were coordinated with local summer programs, and youth were bussed to fishing sites under the supervision of camp counselors. The fishing trip was a onetime event for the summer and youth received a preliminary exposure to fishing. Most of the urban programs did not use a standard lesson plan and had a much higher participant-to-instructor ratio than Fishing in the Parks. As a general observation, urban fishing programs need to have standardized lesson plans for consistency between programs, and to keep instructors from having to create their own when it would be more efficient to use those from the Fishing in the Parks program. The urban programs also require additional instructors or volunteers to provide more individual fishing instruction and to handle on-the-spot equipment repairs. Additionally, urban fishing programs using the Fishing in the Parks model should strive to provide opportunities for repeat participation in fishing within a family context.

### Recommendations

The results from the Fishing in the Parks evaluative research support recommending the continuation, development, and expansion of the Fishing in the Parks program. The program was very well received by participants who were highly satisfied

with their experience and indicated high levels of intentions to: fish again, purchase licenses, and buy equipment. Additionally, by utilizing the Adventure Rangers as the primary instructors the overall cost per participant was significantly reduced in 1996. Therefore, the cost of adding additional State Parks to the program is minimal if the park employs an Adventure Ranger and has adequate fishing opportunities. The research results justify the following recommendations for the program: 1) maintain the communication campaign message to continue attracting the targeted audience; 2) encourage Adventure Rangers to make local media contacts by providing them with press releases, tip sheets, and radio spots; 3) provide more training to Adventure Rangers about fish identification, biology, and habitat; each ranger should be given a fish identification poster to use during the programs; 4) train the Adventure Rangers in a few Project Wet activities to use with children less than five years old, or those who have difficulty with the knot tying; and 5) at a minimum, continue to collect program participant re-contact information (e.g., name, address, phone number, and birth date).

There are several reasons that justify collecting participant re-contact information. First, the Michigan Department of Natural Resources recently invested in the development of a computerized retail sales system for hunting and fishing licenses. This retail sales system is a database that stores information about each license purchaser such as their name, address, date of birth, drivers license number, date of purchase, etc. This system is capable of being used as a tool for strategic database marketing for the MDNR. Currently, the system can be used to track an individual's license purchasing preferences (e.g., daily, annual, with or without a trout stamp, purchase location, etc.) over a period of years. This information is very useful for tracking angler retention and license purchasing

patterns. However, individuals who purchase fishing licenses tend to be already committed to angling.

By adding the outreach program participant re-contact information to this database, fisheries managers will be able to track the recruitment rate of these new potential customers. Second, the re-contact information can be used to directly inform these outreach participants of additional fishing experiences (such as Free Fishing Days), or for promoting new initiatives like the young angler license. Third, the re-contact information provides a name and address pool that can be used in longitudinal research projects to assess the effectiveness of Fishing in the Parks or other outreach initiatives. Fisheries biologists frequently use mark and recapture as a technique to monitor fisheries populations. In this case the re-contact information serves as the “mark” or tag, and participants are “recaptured” when their re-contact information is matched in the license sales data in years following their program participation. Lastly, the names and addresses of the Fishing in the Parks participants can be used by other MDNR divisions to promote their outreach efforts (such as the Becoming an Outdoors Woman (BOW) program). Conversely, the re-contact information from the BOW program could be used to inform these participants about Fishing in the Parks.

Using registration re-contact information to track program participants over time may prove challenging especially in light of the average age of youth participants. In many cases, seven to ten years will pass before the youth age cohorts will begin to be identified as adult license holders. In Michigan, the new voluntary youth angler license may allow for youth tracking to begin several years earlier. Additionally, it is extremely difficult to track youth over time. This is especially true if the youth does not have a drivers license

which by law, must have an up-to-date address to be valid (Chapter 4). However, fisheries managers should not be discouraged by this long-term challenge. The collection of re-contact information is easily justified by the other short-term uses already discussed.

The Fishing in the Parks Program should be re-evaluated every three to five years, as long as the major program elements and target audiences are not changed. This evaluation provides important feedback about the program and allows fisheries managers the opportunity to become more familiar with the program participants and the division's potential new customers. Like other fisheries management strategies, outreach efforts are expensive to develop and maintain. Therefore, these outreach programs need to be evaluated carefully and often to determine how the new recruits and the program are progressing.

While collecting the data for this research project, on many occasions participants' fears and negativistic attitudes toward aquatic resources (i.e. "I'm not touching that fish, it's yucky!") seemed to be eliminated through hands-on contact and the efforts of instructors and volunteers. Additional research should determine if the Fishing in the Parks program is an effective effort to allow participants to: 1) establish longer-term involvement in fishing, 2) eliminate misconceptions about basic ecology principles, 3) eliminate negative attitudes toward aquatic resources, and 4) encourage long-term involvement in fishing and aquatic stewardship. This information could be determined through the use of pre and post testing or longitudinal research designs.

Initial observations indicate that teaching Fishing in the Parks has positive effects on the Adventure Rangers and other program staff. Many of the 1996 Adventure Rangers assigned to State Parks pre-selected for Fishing in the Parks, indicated that their

knowledge about and experience with fishing were very limited. However, at the conclusion of the summer, many of the Adventure Rangers reported that Fishing in the Parks was their most popular and favorite program. Additionally, other rangers reported making substantial investments while purchasing their own specialized fishing equipment. In the case of several 1996 Adventure Rangers, the program recruited new clientele from an unexpected source. Future research should evaluate what impacts teaching the program has on the Adventure Rangers' interest in fish, fishing, and aquatic ecosystems. This qualitative assessment could be accomplished by collecting journals, conducting interviews, or pre and post surveys, and by having the Adventure Rangers compare the Fishing in the Parks Program to other natural resource programs.

Outcomes from this project suggest that the Fisheries Division should develop and market programs specifically for teens. Only 10% of all youth participating in the Fishing in the Parks program were teens (ages 13 to 18 years). Current research tells us that today's most committed anglers reported that some type of significant experience during the teen years occurred to deepen their involvement in fishing (Dann 1993). The next logical question is: what can fisheries managers do to provide teens with a significant experience so they continue to become anglers? One suggestion is to build additional partnerships with teen organizations (e.g., scouting, 4-H, church youth groups) to allow teens to have peer group fishing experiences and outings. As another suggestion for extending the Fishing in the Parks program, is that partners could sponsor an event at a Becoming an Outdoors Woman Program. This program allows women to have a hands-on experience with different outdoor recreational activities. Given the increasing number of single-parent households headed by women and the evidence that they were not

reached by Fishing in the Parks, the Becoming an Outdoors Woman Program provides an additional opportunity to reach women and potentially their children.

The Fishing in the Parks survey results indicate that the initial target of families with young children was attracted to the program. However, to state that ethnic diversity was greatly lacking in the Fishing in the Parks program is an understatement. All indications are that during the next 25 to 30 years minority groups such as African Americans and Hispanics will continue to be the fastest growing segments in the U.S., totaling over 30% of the U.S. population by 2025 (Waddington 1995). If fisheries managers intend to target minorities in an effort to increase angler diversity, a needs assessment should be completed to determine if fishing outreach programs, like Fishing in the Parks, would be desired by these underrepresented segments. The results from Fishing in the Parks clearly indicate that this program does not attract these segments to the State Parks. The needs assessment will allow fisheries managers to determine if new programs need to be developed or if new locations such as metro and urban parks would be sufficient. Additionally, the assessment will help determine the appropriate target (e.g., families, youth groups, schools).

The urban fishing programs need to have common goals, objectives, and target audiences. These common features across the urban fishing programs may help to increase programming efficiency and make future evaluation efforts comparable. One suggestion to increase efficiency could be to offer Fishing in the Parks instructor training to urban parks staff. This combined training effort would provide common instruction methods and lesson plans for all MDNR supported fishing outreach initiatives. Additionally, urban program research methods should be developed to evaluate these

programs. At a minimum, re-contact information should be collected at all programs for the continued development of a clientele database and for future research to assess participants' follow through on their stated future fishing intentions.

In conclusion, the findings of this research-based outreach program (Fishing in the Parks) provide strong support for the recommendation that the Michigan Department of Natural Resources and other agencies should utilize marketing approaches and incorporate a strong research base to develop and execute new outreach programs in the future. Additionally, all programs should include an evaluation component that is capable of adding information to the outreach program's research base. At a minimum, re-contact information should be collected and added to the clientele database. Future outreach programs should continue to specifically target segments of society underrepresented in fisheries clientele groups in an effort to increase angler diversity.

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**Parks and Recreation Division; Denise Mogos, MDNR Communications; Starre Journey, MDNR Fisheries Division; Todd Grischke, Michigan United Conservation Clubs; Dr. Shari L. Dann, Jeffery Rupert, and Mary Jamieson, Michigan State University Department of Fisheries and Wildlife; the five 1995 Fishing Instructors; the ten 1996 Adventure Rangers; and the 13 Research Aides from Michigan State University Department of Fisheries and Wildlife.**

**On a personal note, I would like to acknowledge the following for their scholarship support: American Fisheries Society, Skinner Memorial Award Committee; West Michigan Chapter of Trout Unlimited; Safari Club International, Michigan Involvement Committee; and Michigan State University Department of Fisheries and Wildlife. I would also like to recognize the faithful dedication of Heidi Prather and Kim Harke, undergraduate research assistants.**

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## **CHAPTER 4**

### **MANAGING OUTREACH PROGRAM PARTICIPANT INFORMATION USING COMPUTER LICENSING RETAIL SALES SYSTEMS**

#### **Background**

As a method of collecting information about fisheries populations, agency managers allocate staff, equipment and funding to conscientiously collect and record data about fish communities (Ney 1993). After analysis, this information is used to make fisheries management decisions. Today, resource management decisions require the incorporation of social science methods to collect information about human populations for whom resources are managed (Weithman 1993). Just as fish population data are stored and managed for decision making, so too, should human dimensions information be collected and managed.

Recently, the Michigan Department of Natural Resources (DNR) and several other states began the process of automating the sale of fishing and hunting licenses and permits. Michigan DNR's "Automated Retail Sales System" became operational in March of 1995. The business and marketing literature refer to this type of system as a "marketing information system."

"A marketing information system is a continuing and interacting structure of people, equipment, and procedures designed to gather, sort, analyze, evaluate and distribute pertinent, timely, and accurate information for use by decision makers to improve their marketing planning, execution, and control (Kotler 1982:151)."

Currently, the trend in marketing is to use these marketing information systems (i.e. clientele databases) as strategic marketing tools to establish and nurture customer relationships through niche marketing. In the past, marketers used more mass marketing approaches with one-size-fits-all type approaches. Niche marketing allows database information to be used to focus resources on the customer as an individual (Jackson and Wong 1994). For example, the fisheries division could use retail sales system to segment its customers based on the frequency and types of fishing licenses purchased (e.g., daily, annual, with or without a trout stamp), agency staff could then tailor specific messages for these segments to initiate ongoing communications with anglers.

While the technical jargon may seem discouraging at first, most adults are to some extent familiar with the functions of marketing information systems. For example, quick change oil services make use of these systems. The first time one of these service centers changes a customer's oil, an attendant collects information about the type of vehicle, the vehicle's mileage, and the license plate number. While this information is important for the attendant to install the correct type of filter, the most critical information collected for the manager is the owner's re-contact information (e.g., name, address, phone number). After compiling this information in a database, the manager can use the data to administer questionnaires about the quality of their service, to send reminder notices, and to make customers aware of special discounts or other offers. Additionally, the system is used to track the customer's consistency of visits, so that coupons or other incentives can be directly offered if the customer has not returned to have an oil change within a certain period of time.

A full discussion about marketing information systems and automated retail sales systems for fishing and hunting licenses is well beyond the scope of this paper. The goal of this paper is to share how these types of systems can be used in conjunction with agency outreach programming efforts and to make recommendations as to the type of information program staff should collect.

## **Methods**

During the summer of 1995, a program called “Fishing in the Parks” was implemented in Michigan to teach families with young children the basics of fishing in accessible locations which allow for repeat fishing experiences. At the beginning of each “Fishing in the Parks” program, every attending adult was asked to complete a registration form in order to participate. The purpose of the registration forms was to collect information to allow the tracking and re-contact of program participants in order to test the effectiveness of this outreach program over a longer period of time. Additionally, the re-contact data can be used to develop an ongoing two-way communication flow between fisheries managers and their clientele, thus meeting needs and expectations while involving more publics in longer-term, sound resource management.

Using the registration form, program staff collected the names, addresses, phone numbers, and birth years of each individual attending. The adults registered the youth in attendance with them, and adults provided the youth’s name, address if different, and birth year. Additionally, adults signed a statement that provided consent for the youth attending the program to participate in the evaluative research conducted at the program’s conclusion (see Chapter 3).

To compile and manage the information collected from the registration forms, a participant database was developed using Microsoft Access 7.0 (Microsoft, Corp. 1994). This software package was selected because of its compatibility with Michigan's Retail Sales System.

Once the data were compiled, a query allowed us to compare the program participant database to the retail sales system database to determine to what extent adults who participated in Fishing in the Parks subsequently purchased or already had a fishing license (a query is a computer command that allows questions about data stored in a database to be answered by the retrieval of the appropriate data [Microsoft Corp. 1996]). This initial query on the Fishing in the Parks and license data served as a pilot test for the feasibility of using this customer database as part of a larger information system.

## **Results**

During the first comparison between the participant database and the retail sales system, the system was queried for 850 adults names, birth years, and zip codes. Out of the 850, a total of 248 participant names matched the retail sales system 1995 and 1996 fishing license database. Although comparisons could be made by sorting by name, address, and birth year, popular names in the Fishing in the Parks database (e.g., Floyd Brown, John Finn, Mark Jones) often had more than one match with the Retail Sales System (i.e. several Floyd Browns born in 1950 would be identified as a match between the two databases). The initial query indicated 80 name and birth year matches. In these instances the address had to be verified by the person conducting the query to confirm which one of the name matches actually attended the program. Before any conclusive

results are presented, more trial queries and data verification processes are needed.

However, the preliminary results indicate that comparing information between multiple databases is highly feasible, and will be very useful in making management decisions about future outreach programming.

### **Recommendations**

While collecting outreach program participants' names, addresses, phone numbers and birth years may seem like enough information to be able to easily compare participants to the licensing database, our results indicate the comparison would be easier if drivers' license numbers or social security numbers were used. However, what is the feasibility of collecting this type of information, especially from youth participants, at non-formal outreach programs? Data collected at the Fishing in the Parks programs indicated that youth participants (ages 5 to 18 years) had a mean age of 9.5 years and would be entering the fifth grade in the fall. At these ages, none of the youth would have a driver's license, and the majority are unlikely to know their social security number or have it in their possession. Furthermore, adults are likely to be unable or even reluctant to release this type of information about themselves or about the youth accompanying them to the program. As an alternative, the complete month, day, and year of birth could be collected in addition participants' name, address, and phone number. Having the complete birth date will allow for a greater probability of accurately matching individuals during queries.

In addition to using this information to track participants over time and checking to see if licenses were purchased by participants, the database can be used as a strategic marketing tool. As in the oil change service example, fisheries managers may use this

information: for selecting random samples of participants for future research projects, for direct mailings about other new or existing programs, and to share names and addresses with the agency's other divisions for their outreach efforts. Additionally, program participant databases may be a useful tool in recruiting volunteers to assist with future outreach programming efforts. For example, participants who attend one outreach program several times or over a number of years, could be invited to serve as volunteer instructors.

As additional states invest in and operationalize computerized license sales systems, there is strong justification for these same states to collect re-contact information at their outreach programs. The additional cost of collecting this information and entering it into a database may be minimal when compared to the benefits of being able to track outreach participants' longer-term fishing behaviors and license purchases. Furthermore, these databases will allow fisheries managers to take marketing approaches in future projects. For example, the Fishing in the Parks participant database has already been used to target market Michigan's new volunteer youth angler license. By using these databases as information management systems, agencies will be able to use the latest technologies to assist in the human dimensions of fisheries management.

### **Acknowledgments**

This publication is a result of work funded by the Michigan Department of Natural Resources, Fisheries Division, Dingell-Johnson Project #230658. The "Fishing in the Parks" program partners included Michigan Department of Natural Resources Fisheries and Parks & Recreation Divisions, Michigan United Conservation Clubs, Michigan State

University Department of Fisheries and Wildlife, and the American Sportfishing Association.

Additionally, I would like to acknowledge Christine Larson and Douglas Jester of the Michigan Department of Natural Resources Fisheries Division for their assistance with Retail Sales System. Christine was very helpful in running the queries comparing the Fishing in the Parks participants database to the fishing license database. Doug's insights were helpful in determining what information we needed to collect from participants.

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## **APPENDICES**

## APPENDIX A

MICHIGAN STATE  
UNIVERSITY

June 12, 1995

TO: Jeffery Rupert  
4A Natural Resources Bldg.

RE: IRB#: 95-302  
 TITLE: FISHING IN THE PARKS: A PROTOTYPE  
 RESEARCH-BASED OUTREACH PROGRAM IN FISHERIES AND  
 AQUATIC ECOSYSTEMS  
 REVISION REQUESTED: N/A  
 CATEGORY: 1-C  
 APPROVAL DATE: 06/12/95

The University Committee on Research Involving Human Subjects' (UCRIHS) review of this project is complete. I am pleased to advise that the rights and welfare of the human subjects appear to be adequately protected and methods to obtain informed consent are appropriate. Therefore, the UCRIHS approved this project and any revisions listed above.

**RENEWAL:** UCRIHS approval is valid for one calendar year, beginning with the approval date shown above. Investigators planning to continue a project beyond one year must use the green renewal form (enclosed with the original approval letter or when a project is renewed) to seek updated certification. There is a maximum of four such expedited renewals possible. Investigators wishing to continue a project beyond that time need to submit it again for complete review.

**REVISIONS:** UCRIHS must review any changes in procedures involving human subjects, prior to initiation of the change. If this is done at the time of renewal, please use the green renewal form. To revise an approved protocol at any other time during the year, send your written request to the UCRIHS Chair, requesting revised approval and referencing the project's IRB # and title. Include in your request a description of the change and any revised instruments, consent forms or advertisements that are applicable.

OFFICE OF  
RESEARCH  
AND  
GRADUATE  
STUDIES

University Committee on  
Research Involving  
Human Subjects  
(UCRIHS)

Michigan State University  
232 Administration Building  
East Lansing, Michigan  
48824-1046

517/355-2180  
FAX 517/432-1171

**PROBLEMS/  
CHANGES:**

Should either of the following arise during the course of the work, investigators must notify UCRIHS promptly: (1) problems (unexpected side effects, complaints, etc.) involving human subjects or (2) changes in the research environment or new information indicating greater risk to the human subjects than existed when the protocol was previously reviewed and approved.

If we can be of any future help, please do not hesitate to contact us at (517)355-2180 or FAX (517)432-1171.

Sincerely,

*David E. Wright*  
 David E. Wright, Ph.D.  
 UCRIHS Chair

DEW:kaa/lcp

cc: Shari L. Dann

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## APPENDIX A

**MICHIGAN STATE  
UNIVERSITY**

July 21, 1995

TO: Jeffery Rupert  
4A Natural Resources Bldg.

RE: IRB#: 95-302  
TITLE: FISHING IN THE PARKS: A PROTOTYPE  
RESEARCH-BASED OUTREACH PROGRAM IN FISHERIES AND  
AQUATIC ECOSYSTEMS  
REVISION REQUESTED: 07/10/95  
CATEGORY: 1-C  
APPROVAL DATE: 06/12/95

The University Committee on Research Involving Human Subjects (UCRIHS) review of this project is complete. I am pleased to advise that the rights and welfare of the human subjects appear to be adequately protected and methods to obtain informed consent are appropriate. Therefore, the UCRIHS approved this project and any revisions listed above.

**RENEWAL:** UCRIHS approval is valid for one calendar year, beginning with the approval date shown above. Investigators planning to continue a project beyond one year must use the green renewal form (enclosed with the original approval letter or when a project is renewed) to seek updated certification. There is a maximum of four such expedited renewals possible. Investigators wishing to continue a project beyond that time need to submit it again for complete review.

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University Committee on  
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Michigan State University  
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East Lansing, Michigan  
48824-1046

517/355-2180  
FAX 517/432-1171

Sincerely,

David E. Wright, Ph.D.  
UCRIHS Chair

DEW:kaa/lcp

cc: Shari L. Dann

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## APPENDIX A

**MICHIGAN STATE  
UNIVERSITY**

June 10, 1996

TO: Jeffery Rupert  
4A Natural Resources Bldg.

RE: IRB#: 95-302  
TITLE: FISHING IN THE PARKS: A PROTOTYPE  
RESEARCH-BASED OUTREACH PROGRAM IN FISHERIES AND  
AQUATIC ECOSYSTEMS  
REVISION REQUESTED: 05/31/96  
CATEGORY: 1-C  
APPROVAL DATE: 06/07/96

The University Committee on Research Involving Human Subjects' (UCRIHS) review of this project is complete. I am pleased to advise that the rights and welfare of the human subjects appear to be adequately protected and methods to obtain informed consent are appropriate. Therefore, the UCRIHS approved this project and any revisions listed above.

**RENEWAL:** UCRIHS approval is valid for one calendar year, beginning with the approval date shown above. Investigators planning to continue a project beyond one year must use the green renewal form (enclosed with the original approval letter or when a project is renewed) to seek updated certification. There is a maximum of four such expedited renewals possible. Investigators wishing to continue a project beyond that time need to submit it again for complete review.

**REVISIONS:** UCRIHS must review any changes in procedures involving human subjects, prior to initiation of the change. If this is done at the time of renewal, please use the green renewal form. To revise an approved protocol at any other time during the year, send your written request to the UCRIHS Chair, requesting revised approval and referencing the project's IRB # and title. Include in your request a description of the change and any revised instruments, consent forms or advertisements that are applicable.



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CHANGES:**

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University Committee on  
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48824-1046

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Sincerely,

David E. Wright, Ph.D.  
UCRIHS Chair

DEW:bed

cc: Shari L. Dann

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## APPENDIX A

### MICHIGAN STATE UNIVERSITY

ALL-UNIVERSITY COMMITTEE ON ANIMAL USE AND CARE  
C BUILDING • CLINICAL CENTER  
TELEPHONE (517) 353-5064

EAST LANSING • MICHIGAN • 48824-1313

#### MEMORANDUM

TO: Dr. Shari L. Dann  
Jeffery D. Rupert  
Fisheries and Wildlife  
13 Natural Resources



FROM: Dr. Steven J. Bursian, Chairperson  
All University Committee on Animal Use and Care

DATE: June 6, 1996

RE: "Fishing in the Parks"

It is the opinion of the All University Committee on Animal Use and Care that an animal use form is not required for this activity. Thank you for your inquiry.

SJB/cjf

**APPENDIX B****TAKE A FRIEND FISHING PROGRAM  
REGISTRATION FORM**

Please complete the information below. By completing this form, you will be registered for this free program, and we'll know how to contact you to let you know about similar fishing and outdoor programs in the future.

**ADULT REGISTRATION**

Name: \_\_\_\_\_ Year of Birth: 19\_\_\_\_

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

County of your residence: \_\_\_\_\_ Home Phone: (    ) \_\_\_\_\_

Is this the first time you have attended a Take a Friend Fishing Program in 1995? YES NO

**YOUTH REGISTRATION**

If you are in attendance with any minors under 18 years of age (as a parent(s), legal guardian, or adult accompanying a youth) please sign below indicating consent for these minors' participation.

The minors listed below are assenting to participate in the Take a Friend Fishing program and its evaluation surveys, and I am providing my consent for them to participate.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Please complete the information below for anyone under age 18 attending this program with you. If the youth's address information is NOT different from yours, just complete the name block and year of birth for each youth.

Name: \_\_\_\_\_ Year of Birth: 19\_\_\_\_

Complete Address (if different): \_\_\_\_\_

Home Phone: (    ) \_\_\_\_\_

Name: \_\_\_\_\_ Year of Birth: 19\_\_\_\_

Complete Address (if different): \_\_\_\_\_

Home Phone: (    ) \_\_\_\_\_

(additional blocks on the back)



## APPENDIX C

6. Please estimate the total number of days you spent fishing during the period of the fishing season listed below. (Any part of a day counts as a whole day. If you did not fish in that period, please write "0" in the blank for that period.)

I FISHED ABOUT \_\_\_\_\_ DAYS TOTAL DURING LAST SUMMER 1994 (June 1, 1994 to August 31, 1994).

I FISHED ABOUT \_\_\_\_\_ DAYS TOTAL DURING LAST FALL 1994 (September 1 to November 30, 1994).

I FISHED ABOUT \_\_\_\_\_ DAYS TOTAL DURING LAST WINTER 1994-1995 (December 1, 1994 to March 31, 1995).

I FISHED ABOUT \_\_\_\_\_ DAYS TOTAL THIS SPRING 1995 (April 1, 1995 to May 31, 1995).

7. For you how important is fishing compared with all other recreational activities you pursue? (Please check only ONE answer.)
- \_\_\_\_\_ MY MOST IMPORTANT RECREATION ACTIVITY
- \_\_\_\_\_ MORE IMPORTANT THAN MOST OTHER RECREATION ACTIVITIES
- \_\_\_\_\_ IMPORTANT, BUT MANY OTHER ACTIVITIES ARE MORE IMPORTANT
- \_\_\_\_\_ SOMEWHAT IMPORTANT, BUT MOST OTHER ACTIVITIES ARE MORE IMPORTANT
- \_\_\_\_\_ ONLY SLIGHTLY IMPORTANT TO ME
- \_\_\_\_\_ IT IS NOT IMPORTANT TO ME

8. Do you agree or disagree with the following sentences? (Please circle one number for each statement listed below.)

| SENTENCE                                   | Agree | Neutral | Disagree | Not important to me |
|--------------------------------------------|-------|---------|----------|---------------------|
| I usually watch fishing or outdoor shows   | 1     | 2       | 3        | 4                   |
| I often talk with my friends about fishing | 1     | 2       | 3        | 4                   |
| I frequently read about fishing            | 1     | 2       | 3        | 4                   |
| I ask for or buy my own fishing equipment  | 1     | 2       | 3        | 4                   |

Please continue on the next page.

## APPENDIX C

The questions below ask about what you think after this program.

9. Please rate this clinic or workshop and your instructors on the following scale: poor, fair, good, very good, excellent). (Circle one number for instructors, and one number for the program.)

|                         | Poor<br>⊗ | Fair | Good | Very<br>Good | Excellent<br>☺ |
|-------------------------|-----------|------|------|--------------|----------------|
| The instructors were    | 1         | 2    | 3    | 4            | 5              |
| Overall the program was | 1         | 2    | 3    | 4            | 5              |

10. Did you expect to catch fish during the program? YES NO
11. Did you or anyone you were with catch fish during the program? YES NO
12. Did you or anyone you were with keep the fish you caught? YES NO
13. To what extent were you satisfied that this program helped you in each of the following areas? (Please circle one number for each area.)

| TO WHAT EXTENT ARE YOU<br>SATISFIED THAT THIS<br>WORKSHOP HELPED YOU..... | Not important<br>to me | Satisfied<br>☺ | Neutral<br>☹ | Dissatisfied<br>⊗ |
|---------------------------------------------------------------------------|------------------------|----------------|--------------|-------------------|
| To experience fishing                                                     | NI                     | 1              | 2            | 3                 |
| To learn fishing skills                                                   | NI                     | 1              | 2            | 3                 |
| To gain confidence in fishing                                             | NI                     | 1              | 2            | 3                 |
| To learn about fish                                                       | NI                     | 1              | 2            | 3                 |
| To improve fishing skills                                                 | NI                     | 1              | 2            | 3                 |
| To be better able to use my<br>equipment                                  | NI                     | 1              | 2            | 3                 |
| To be with family                                                         | NI                     | 1              | 2            | 3                 |
| To be with friends                                                        | NI                     | 1              | 2            | 3                 |
| To meet new people                                                        | NI                     | 1              | 2            | 3                 |
| To become interested in fishing                                           | NI                     | 1              | 2            | 3                 |
| To enjoy time outdoors                                                    | NI                     | 1              | 2            | 3                 |

Please continue on the back of this page.

**APPENDIX C**

14. After this program, will you ...

Go fishing again?

☐ YES, DEFINITELY  
☐ PROBABLY  
☐ MAYBE  
☐ NO  
☐ UNDECIDED

Buy your own fishing equipment?

☐ YES, DEFINITELY  
☐ PROBABLY  
☐ MAYBE  
☐ NO  
☐ UNDECIDED

Go to another clinic or workshop?

☐ YES, DEFINITELY  
☐ PROBABLY  
☐ MAYBE  
☐ NO  
☐ UNDECIDED

The following general information is being asked for evaluation purposes only.

For the questions below, check or fill in the appropriate blank.

15. Are you: ☐ FEMALE ☐ MALE

16. Are you: ☐ WHITE ☐ BLACK ☐ HISPANIC ☐ ASIAN  
☐ AMERICAN INDIAN ☐ OTHER \_\_\_\_\_

17. In what year were you born? 19\_\_\_\_\_

18. In what type of an area do you currently reside? (Please check only one.)

☐ RURAL - FARM  
☐ RURAL - NONFARM - AREA OF LESS THAN 2,500 PEOPLE  
☐ SMALL TOWN - AREA OF 2,500 TO 50,000 PEOPLE  
☐ URBANIZED AREA (CITY OR SUBURBAN AREA OF GREATER THAN 50,000 PEOPLE)

19. In what MICHIGAN county do you currently reside? \_\_\_\_\_

19a. If you are not a resident of Michigan, in what state do you currently reside? \_\_\_\_\_

20. Please circle the number that represents the highest grade level you have completed.

Elementary High School  
 1 2 3 4 5 6 7 8 9 10 11 12

**THANK YOU VERY MUCH FOR COMPLETING THIS SURVEY.** We appreciate your willingness to provide this information. Results of this survey will be provided to the Michigan Department of Natural Resources Fisheries Division to assist in improving this program.

# TAKE A FRIEND FISHING PROGRAM



A SURVEY BY:  
MICHIGAN STATE UNIVERSITY  
DEPARTMENT OF FISHERIES AND WILDLIFE  
EAST LANSING, MICHIGAN

**Please continue on the back of this page.**

**APPENDIX C**

7. Please estimate the total number of days you spent fishing during each of the period of the fishing season listed below. (Any part of a day counts as a whole day. If you did not fish in that period, please write "0" in the blank for that period.)

I FISHED ABOUT \_\_\_\_\_ DAYS TOTAL DURING LAST SUMMER 1994 (June 1, 1994 to August 31, 1994).

I FISHED ABOUT \_\_\_\_\_ DAYS TOTAL DURING LAST FALL 1994 (September 1 to November 30, 1994).

I FISHED ABOUT \_\_\_\_\_ DAYS TOTAL DURING LAST WINTER 1994-1995 (December 1, 1994 to March 31, 1995).

I FISHED ABOUT \_\_\_\_\_ DAYS TOTAL THIS SPRING 1995 (April 1, 1995 to May 31, 1995).

8. For you how important is fishing compared with all other recreational activities you pursue? (Please check only one answer.)

Importance of fishing compared with other recreation

\_\_\_\_\_ MY MOST IMPORTANT RECREATION ACTIVITY

\_\_\_\_\_ MORE IMPORTANT THAN MOST OTHER RECREATION ACTIVITIES

\_\_\_\_\_ IMPORTANT, BUT MANY OTHER ACTIVITIES ARE MORE IMPORTANT

\_\_\_\_\_ SOMEWHAT IMPORTANT, BUT MOST OTHER ACTIVITIES ARE MORE IMPORTANT

\_\_\_\_\_ ONLY SLIGHTLY IMPORTANT TO ME

\_\_\_\_\_ IT IS NOT IMPORTANT TO ME

Please continue on the next page.

**APPENDIX C**

9. To what extent do you agree or disagree that the following statements describe your involvement in fishing? (Please circle one number for each statement listed below.)

| STATEMENT                                                                                                                                  | Strongly agree | Agree | Neutral | Disagree | Strongly Disagree |
|--------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------|---------|----------|-------------------|
| I frequently watch fishing or outdoor shows on television                                                                                  | 1              | 2     | 3       | 4        | 5                 |
| I frequently visit stores to view new equipment related to my interest in fishing                                                          | 1              | 2     | 3       | 4        | 5                 |
| I frequently read about fishing                                                                                                            | 1              | 2     | 3       | 4        | 5                 |
| Fishing says a lot about who I am                                                                                                          | 1              | 2     | 3       | 4        | 5                 |
| I often talk to my friends about fishing                                                                                                   | 1              | 2     | 3       | 4        | 5                 |
| I spend a great deal of money on fishing                                                                                                   | 1              | 2     | 3       | 4        | 5                 |
| I find that a lot of my life is organized around fishing                                                                                   | 1              | 2     | 3       | 4        | 5                 |
| My enjoyment of fishing has influenced my selection of where I live                                                                        | 1              | 2     | 3       | 4        | 5                 |
| I maintain a membership in an organization directly related to fisheries or fisheries management (E.G., MUCC, Trout Unlimited, Bass ETC.). | 1              | 2     | 3       | 4        | 5                 |
| My enjoyment of fishing has influenced my choice of vacation destinations                                                                  | 1              | 2     | 3       | 4        | 5                 |
| I own a recreational property primarily so that I can be close to fishing                                                                  | 1              | 2     | 3       | 4        | 5                 |

The following questions ask about those with whom you are attending this program.

10. Are you attending this program with someone who has never fished before? YES NO

11. I am attending this program: (check all that apply)

☐ alone  
☐ with my spouse  
☐ with my own child  
☐ with my grandchild  
☐ with other children  
☐ with a teenage friend  
☐ with another adult  
☐ other: \_\_\_\_\_

12. Please check the ONE phrase that best describes your household composition.

☐ 1 adult, no children  
☐ 1 adult, with child/children How many? \_\_\_\_\_ What age(s)? \_\_\_\_\_  
☐ 2 adults, no children  
☐ 2 adults, with child/children How many? \_\_\_\_\_ What age(s)? \_\_\_\_\_  
☐ 3 adults or more, no children  
☐ 3 adults or more, with child/children How many? \_\_\_\_\_ What age(s)? \_\_\_\_\_

Please continue on the back of this page.

## APPENDIX C

|                                                                         |
|-------------------------------------------------------------------------|
| The following questions ask about your use of the Michigan State Parks. |
|-------------------------------------------------------------------------|

13. Did you visit this State Park specifically to attend the Take a Friend Fishing Clinic or Workshop? YES NO
14. Is this your first visit to THIS Michigan State Park? YES NO
15. Have you visited ANY other Michigan State Parks before?  
 \_\_\_\_\_ YES (Please go on to the next question.)  
 \_\_\_\_\_ NO (Please skip to question 19.)
16. How many years have you been visiting Michigan State Parks? \_\_\_\_\_ YEARS
17. Approximately how many days did you visit Michigan State Parks in 1994?  
 \_\_\_\_\_ DAYS
18. If you did not visit Michigan State Parks in 1994, when was the last year you did visit? 19\_\_\_\_.
19. Did you purchase a DAILY State Park permit? YES NO
20. Did you purchase an ANNUAL State Park permit? YES NO
21. Are you Camping in this State Park during this visit? YES NO
22. How did you FIRST hear of this Take a Friend Fishing clinic or workshop?  
 (Please check only ONE response.)
- \_\_\_\_\_ DISCOVERED THE PROGRAM AT THE PARK (FLYER OR POSTER)  
 \_\_\_\_\_ INFORMED BY PARK STAFF  
 \_\_\_\_\_ RECOMMENDATION OF A FRIEND  
 \_\_\_\_\_ RECOMMENDATION OF AN ADULT FAMILY MEMBER  
 \_\_\_\_\_ RECOMMENDATION OF A YOUNG PERSON  
 \_\_\_\_\_ LOCAL SOURCES (e.g. gas stations or tackle shop)  
 \_\_\_\_\_ FROM A PROMOTIONAL FLYER  
 \_\_\_\_\_ FROM THE 1995 MICHIGAN STATE PARKS SCHEDULE OF EVENTS  
 \_\_\_\_\_ THROUGH RADIO  
 \_\_\_\_\_ THROUGH TELEVISION  
 \_\_\_\_\_ THROUGH NEWSPAPER  
 \_\_\_\_\_ THROUGH A MAGAZINE  
 \_\_\_\_\_ THROUGH MEMBERSHIP IN AN ORGANIZATION (MUCC, 4-H, SCOUTS)  
 \_\_\_\_\_ THROUGH A SCHOOL  
 \_\_\_\_\_ OTHER \_\_\_\_\_
23. Did you hear about this program in any other ways? YES NO  
 If yes, please write in any additional ways you heard about the program: \_\_\_\_\_

\_\_\_\_\_

Please continue on the next page.

**APPENDIX C**

The questions below ask about your reactions to the program you just attended.

24. Please rate each aspect of this clinic or workshop on the following scale: poor, fair, good, very good, excellent).

| ASPECT OF THE PROGRAM                                                    | Poor | Fair | Good | Very Good | Excellent |
|--------------------------------------------------------------------------|------|------|------|-----------|-----------|
| Program content as described in the materials you saw prior to attending | 1    | 2    | 3    | 4         | 5         |
| Coverage of the subject matter                                           | 1    | 2    | 3    | 4         | 5         |
| Pace of the program                                                      | 1    | 2    | 3    | 4         | 5         |
| Attitudes of instructors                                                 | 1    | 2    | 3    | 4         | 5         |
| Quality of instructors                                                   | 1    | 2    | 3    | 4         | 5         |
| Quality of instruction                                                   | 1    | 2    | 3    | 4         | 5         |
| Quality of other services                                                | 1    | 2    | 3    | 4         | 5         |
| Overall quality of the program                                           | 1    | 2    | 3    | 4         | 5         |

25. Did you expect to catch fish during the program? YES NO
26. Did you or anyone in your party catch fish during the program? YES NO
27. Did you or anyone in your party keep the fish you caught? YES NO
28. To what extent were you satisfied that this program helped you in each of the following areas? (Please circle one number for each area.)

| TO WHAT EXTENT ARE YOU SATISFIED THAT THIS WORKSHOP HELPED YOU..... | Not an important reason for attending | Very Dissatisfied | Dissatisfied | Neutral | Satisfied | Very Satisfied |
|---------------------------------------------------------------------|---------------------------------------|-------------------|--------------|---------|-----------|----------------|
| To experience fishing                                               | NI                                    | 1                 | 2            | 3       | 4         | 5              |
| To learn fishing skills                                             | NI                                    | 1                 | 2            | 3       | 4         | 5              |
| To gain confidence in fishing                                       | NI                                    | 1                 | 2            | 3       | 4         | 5              |
| To learn about fish                                                 | NI                                    | 1                 | 2            | 3       | 4         | 5              |
| To improve fishing skills                                           | NI                                    | 1                 | 2            | 3       | 4         | 5              |
| To be better able to use my equipment                               | NI                                    | 1                 | 2            | 3       | 4         | 5              |
| To be with family                                                   | NI                                    | 1                 | 2            | 3       | 4         | 5              |
| To be with friends                                                  | NI                                    | 1                 | 2            | 3       | 4         | 5              |
| To meet new people                                                  | NI                                    | 1                 | 2            | 3       | 4         | 5              |
| To become interested in fishing                                     | NI                                    | 1                 | 2            | 3       | 4         | 5              |
| To enjoy time outdoors                                              | NI                                    | 1                 | 2            | 3       | 4         | 5              |

Please continue on the back of this page.

**APPENDIX C**

The following questions ask about your intentions after this program.

29. In the license year 1995 through 1996 (from April 1995 through March 1996) do you intend to:

Purchase a fishing license?

☐ YES, DEFINITELY  
☐ PROBABLY  
☐ MAYBE  
☐ NO  
☐ UNDECIDED  
☐ ALREADY HAVE A LICENSE

Go fishing again?

☐ YES, DEFINITELY  
☐ PROBABLY  
☐ MAYBE  
☐ NO  
☐ UNDECIDED

Attend another clinic or workshop?

☐ YES, DEFINITELY  
☐ PROBABLY  
☐ MAYBE  
☐ NO  
☐ UNDECIDED

Purchase fishing equipment?

☐ YES, DEFINITELY  
☐ PROBABLY  
☐ MAYBE  
☐ NO  
☐ UNDECIDED

The following general information is being asked for statistical purposes only.

For the questions below, check or fill in the appropriate blank.

30. Are you: ☐ FEMALE ☐ MALE
31. Are you: ☐ SINGLE ☐ MARRIED ☐ DIVORCED/WIDOWED
32. Are you: ☐ WHITE ☐ BLACK ☐ HISPANIC ☐ ASIAN  
☐ AMERICAN INDIAN ☐ OTHER \_\_\_\_\_
33. In what year were you born? 19 \_\_\_\_\_
34. In what type of an area do you currently reside? (Please check only one.)  
☐ RURAL - FARM  
☐ RURAL - NONFARM - AREA OF LESS THAN 2,500 PEOPLE  
☐ SMALL TOWN - AREA OF 2,500 TO 50,000 PEOPLE  
☐ URBANIZED AREA (CITY OR SUBURBAN AREA OF GREATER THAN 50,000 PEOPLE)
35. In what MICHIGAN county do you currently reside? \_\_\_\_\_
- 35a. If you are not a resident of Michigan, in what state do you currently reside? \_\_\_\_\_
36. Please circle the number that represents the highest grade level you have completed.
- |                 |             |             |                   |
|-----------------|-------------|-------------|-------------------|
| Elementary      | High School | College     | Graduate Level    |
| 1 2 3 4 5 6 7 8 | 9 10 11 12  | 13 14 15 16 | 17 18 19 20 21 22 |

Please continue on the next page.

**APPENDIX C**

37. In 1994, what was your TOTAL HOUSEHOLD INCOME (before taxes) from employment and all other sources?

|                                              |                                              |
|----------------------------------------------|----------------------------------------------|
| <input type="checkbox"/> Less than \$10,000  |                                              |
| <input type="checkbox"/> \$10,000 - \$19,999 | <input type="checkbox"/> \$40,000 - \$49,999 |
| <input type="checkbox"/> \$20,000 - \$29,999 | <input type="checkbox"/> \$50,000 - \$59,999 |
| <input type="checkbox"/> \$30,000 - \$39,999 | <input type="checkbox"/> \$60,000 and above  |

We would appreciate any additional comments or suggestions about what should be added to this program:

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We would appreciate any additional comments or suggestions about what should be deleted from this program:

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**THANK YOU VERY MUCH FOR COMPLETING THIS SURVEY.** We appreciate your willingness to provide this information. Results of this survey will be provided to the Michigan Department of Natural Resources Fisheries Division to assist in improving this program.

**Please go to the back of this page.**

**APPENDIX D**

7. For you how important is fishing compared with all other recreational activities? Examples of other recreational activities are sports like baseball, or other things you do on your free-time. (Check only ONE answer.)

FISHING IS...

- \_\_\_\_\_ MY MOST IMPORTANT RECREATION ACTIVITY  
 \_\_\_\_\_ MORE IMPORTANT THAN MOST OTHER RECREATION ACTIVITIES  
 \_\_\_\_\_ IMPORTANT, BUT MANY OTHER ACTIVITIES ARE MORE IMPORTANT  
 \_\_\_\_\_ SOMEWHAT IMPORTANT, BUT MOST OTHER ACTIVITIES ARE MORE IMPORTANT  
 \_\_\_\_\_ ONLY SLIGHTLY IMPORTANT TO ME  
 \_\_\_\_\_ IT IS NOT IMPORTANT TO ME

8. For each sentence, decide if you think that sentence describes you.  
 (Circle one number for each sentence)

| SENTENCE                                   | YES<br>this sentence<br>describes me | MAYBE<br>this sentence<br>describes me | NO<br>this sentence<br>does not<br>describe me |
|--------------------------------------------|--------------------------------------|----------------------------------------|------------------------------------------------|
| I usually watch fishing or outdoor shows   | 1                                    | 2                                      | 3                                              |
| I often talk with my friends about fishing | 1                                    | 2                                      | 3                                              |
| I frequently read about fishing            | 1                                    | 2                                      | 3                                              |
| I ask for or buy my own fishing equipment  | 1                                    | 2                                      | 3                                              |

9. What do you think about this program and your instructors?

|                         | Poor | Good | Excellent |
|-------------------------|------|------|-----------|
| The instructors were... | ☹    | ☺    | ☺         |
| This program was...     | ☹    | ☺    | ☺         |

10. Did you expect to catch fish during the program? YES NO
11. Did you or anyone you were with catch fish during the program? YES NO
12. Did you or anyone you were with keep the fish you caught? YES NO
13. Please circle one number for each line.

| DID THIS PROGRAM HELP YOU.....        | Not important<br>to me | YES<br>☺ | SORT-OF<br>☹ | NO<br>☹ |
|---------------------------------------|------------------------|----------|--------------|---------|
| To learn new fishing skills           | NI                     | 1        | 2            | 3       |
| To fish by myself                     | NI                     | 1        | 2            | 3       |
| To learn about fish                   | NI                     | 1        | 2            | 3       |
| To get better at my fishing skills    | NI                     | 1        | 2            | 3       |
| To be better able to use my equipment | NI                     | 1        | 2            | 3       |
| To meet new people                    | NI                     | 1        | 2            | 3       |
| To become more interested in fishing  | NI                     | 1        | 2            | 3       |
| To enjoy time outdoors                | NI                     | 1        | 2            | 3       |

**APPENDIX D**

14. After this program, will you ...

Go fishing again?

\_\_\_ YES

\_\_\_ MAYBE

\_\_\_ NO

Buy your own fishing rod or tackle?

\_\_\_ YES

\_\_\_ MAYBE

\_\_\_ NO

Go to another fishing program?

\_\_\_ YES

\_\_\_ MAYBE

\_\_\_ NO

15. Are you: \_\_\_ FEMALE \_\_\_ MALE

16. Are you: \_\_\_ WHITE \_\_\_ BLACK \_\_\_ HISPANIC \_\_\_ ASIAN  
\_\_\_ AMERICAN INDIAN OTHER \_\_\_\_\_

17. How old are you? \_\_\_\_\_ years old

18. Do you live in MICHIGAN? YES NO



19. I DON'T live in Michigan. I live in \_\_\_\_\_

20. What grade will you be going into starting this fall? \_\_\_\_\_ grade

THANK YOU VERY MUCH FOR DOING THIS SURVEY.

# TAKE A FRIEND FISHING PROGRAM



A SURVEY BY:  
MICHIGAN STATE UNIVERSITY  
DEPARTMENT OF FISHERIES AND WILDLIFE  
EAST LANSING, MICHIGAN

**APPENDIX D**

Dear Participant in the 1995 Take a Friend Fishing program:

Thank you for participating in the Take a Friend Fishing daily clinic or weekend workshop. The Michigan Department of Natural Resources (Fisheries Division and Parks and Recreation Division) and Michigan State University's Department of Fisheries and Wildlife are collecting information about this new program. This survey will allow you to give us important feedback. The results will allow us to improve this program and increase your enjoyment of fish and fishing in Michigan.

Your participation in this survey is voluntary and you may choose not to participate at all or discontinue your participation at anytime. You indicate your voluntary agreement to participate by completing and returning this questionnaire. Your name and address will be kept strictly confidential and will not appear in the report of survey results or be associated in any way with your responses. Program registration records will be maintained by the MDNR Fisheries Division, whereas survey results will be compiled at Michigan State University.

This survey will take about 10 minutes to complete and should be turned in to a Fisheries Division Instructor or Adventure Ranger. If you forget to turn the survey in, please mail it to us at the address below. **Your participation is greatly appreciated!** If you have any further questions or concerns about this study please contact either one of us.

Sincerely,



Jeffery Rupert  
Research Assistant  
Dept. of Fisheries and Wildlife  
Michigan State University  
13 Natural Resources Bldg.  
East Lansing, MI 48824  
(517) 353-0308



Dr. Shari L. Dann  
Assistant Professor  
Fisheries and Wildlife  
Michigan State University  
13 Natural Resources Bldg.  
East Lansing, MI 48824  
(517) 353-0675

The following questions are asked in a variety of ways. Some of the questions will require you to circle the most appropriate response, others will require checking, and where appropriate you should fill in the blank.

1. I am attending a: DAILY or WEEKEND PROGRAM
2. Is this your **FIRST** Take a Friend Fishing program in 1995? YES NO  
↓  
2a. If no, how many other clinics or workshops have you attended? \_\_\_\_.
3. Have you ever attended any other fishing clinics, derbies, or other events? YES NO  
↓  
3a. If yes, were these activities held during Free Fishing Days (typically the second weekend in June)? YES NO

4. Do you belong to any fishing organizations? \_\_\_\_ YES \_\_\_\_ NO  
4a. If yes, please list: \_\_\_\_\_

5. Have you ever fished before? \_\_\_\_ YES (Please continue with the next question.)  
\_\_\_\_ NO (Skip to question 8 on the back of this page→)

6. The following questions ask how often you purchase a Michigan Resident Annual Fishing License or any one of the following Michigan Licenses: Sportsperson's License, Daily Fishing License, or Senior Resident Annual Fishing License.

6a. Do you currently have any of the fishing licenses listed above? YES NO

6b. Please check the number of years that you have purchased any of the above fishing licenses during the last 5 year period:  
\_\_\_\_ 0 YEARS \_\_\_\_ 1 or 2 YEARS \_\_\_\_ 3 or 4 YEARS \_\_\_\_ 5 YEARS

6c. Please check the number of years that you have gone fishing at least once a year during the past 5 years:  
0 YEARS 1 or 2 YEARS 3 or 4 YEARS 5 YEARS

**Please continue on the back of this page.**

**APPENDIX D**

7. Please estimate the total number of days you spent fishing during each of the period of the fishing season listed below. (Any part of a day counts as a whole day. If you did not fish in that period, please write "0" in the blank for that period.)

I FISHED ABOUT \_\_\_\_\_ DAYS TOTAL DURING LAST SUMMER 1994 (June 1, 1994 to August 31, 1994).

I FISHED ABOUT \_\_\_\_\_ DAYS TOTAL DURING LAST FALL 1994 (September 1 to November 30, 1994).

I FISHED ABOUT \_\_\_\_\_ DAYS TOTAL DURING LAST WINTER 1994-95 (December 1, 1994 to March 31, 1995).

I FISHED ABOUT \_\_\_\_\_ DAYS TOTAL DURING THIS SPRING 1995 (April 1, 1995 to May 31, 1995).

8. For you how important is fishing compared with all other recreational activities you pursue? (Please check only one answer.)

Importance of fishing compared with other recreation

- \_\_\_\_\_ MY MOST IMPORTANT RECREATION ACTIVITY  
 \_\_\_\_\_ MORE IMPORTANT THAN MOST OTHER RECREATION ACTIVITIES  
 \_\_\_\_\_ IMPORTANT, BUT MANY OTHER ACTIVITIES ARE MORE IMPORTANT  
 \_\_\_\_\_ SOMEWHAT IMPORTANT, BUT MOST OTHER ACTIVITIES ARE MORE IMPORTANT  
 \_\_\_\_\_ ONLY SLIGHTLY IMPORTANT TO ME  
 \_\_\_\_\_ IT IS NOT IMPORTANT TO ME

9. To what extent do you agree or disagree that the following statements describe your involvement in fishing? (Please circle one number for each statement listed below.)

| STATEMENT                                                                                                                                  | Strongly agree | Agree | Neutral | Disagree | Strongly Disagree |
|--------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------|---------|----------|-------------------|
| I frequently watch fishing or outdoor shows on television                                                                                  | 1              | 2     | 3       | 4        | 5                 |
| I frequently visit stores to view new equipment related to my interest in fishing                                                          | 1              | 2     | 3       | 4        | 5                 |
| I frequently read about fishing                                                                                                            | 1              | 2     | 3       | 4        | 5                 |
| Fishing says a lot about who I am                                                                                                          | 1              | 2     | 3       | 4        | 5                 |
| I often talk to my friends about fishing                                                                                                   | 1              | 2     | 3       | 4        | 5                 |
| I spend a great deal of money on fishing                                                                                                   | 1              | 2     | 3       | 4        | 5                 |
| I find that a lot of my life is organized around fishing                                                                                   | 1              | 2     | 3       | 4        | 5                 |
| My enjoyment of fishing has influenced my selection of where I live                                                                        | 1              | 2     | 3       | 4        | 5                 |
| I maintain a membership in an organization directly related to fisheries or fisheries management (E.G., MUCC, Trout Unlimited, Bass ETC.). | 1              | 2     | 3       | 4        | 5                 |
| My enjoyment of fishing has influenced my choice of vacation destinations                                                                  | 1              | 2     | 3       | 4        | 5                 |
| I own a recreational property primarily so that I can be close to fishing                                                                  | 1              | 2     | 3       | 4        | 5                 |

**APPENDIX D**

The following questions ask about those with whom you are attending this program.

10. Are you attending this program with someone who has never fished before? YES NO

11. I am attending this program: (check all that apply)

- ☐ alone
- ☐ with my spouse
- ☐ with my own child
- ☐ with my grandchild
- ☐ with other children
- ☐ with a teenage friend
- ☐ with another adult
- ☐ other: \_\_\_\_\_

12. Please check the **ONE** phrase that best describes your household composition.

- ☐ 1 adult, no children
- ☐ 1 adult, with child/children    How many? \_\_\_\_\_ What age(s)? \_\_\_\_\_
- ☐ 2 adults, no children
- ☐ 2 adults, with child/children    How many? \_\_\_\_\_ What age(s)? \_\_\_\_\_
- ☐ 3 adults or more, no children
- ☐ 3 adults or more, with child/children    How many? \_\_\_\_\_ What age(s)? \_\_\_\_\_

The following questions ask about your use of the Michigan State Parks.

13. Did you visit this State Park specifically to attend the Take a Friend Fishing Clinic or Workshop? YES NO

14. Is this your first visit to **THIS** Michigan State Park? YES NO

15. Have you visited **ANY** other Michigan State Parks before?

- ☐ YES (Please go on to the next question.)
- ☐ NO (Please skip to question 19.)

16. How many years have you been visiting Michigan State Parks? \_\_\_\_\_ YEARS

17. Approximately how many days did you visit Michigan State Parks in 1994?  
\_\_\_\_\_ DAYS

18. If you did not visit Michigan State Parks in 1994, when was the last year you did visit? 19\_\_\_\_.

19. Did you purchase a DAILY State Park permit? YES NO

20. Did you purchase an ANNUAL State Park permit? YES NO

21. Are you Camping in this State Park during this visit? YES NO

**Please continue on the back of this page.**

**APPENDIX D**

22. How did you **FIRST** hear of this Take a Friend Fishing clinic or workshop?  
(Please check only **ONE** response.)

☐ DISCOVERED THE PROGRAM AT THE PARK (FLYER OR POSTER)  
☐ INFORMED BY PARK STAFF  
☐ RECOMMENDATION OF A FRIEND  
☐ RECOMMENDATION OF AN ADULT FAMILY MEMBER  
☐ RECOMMENDATION OF A YOUNG PERSON  
☐ LOCAL SOURCES (e.g. gas stations or tackle shop)  
☐ FROM A PROMOTIONAL FLYER  
☐ FROM THE 1995 MICHIGAN STATE PARKS SCHEDULE OF EVENTS  
☐ THROUGH RADIO  
☐ THROUGH TELEVISION  
☐ THROUGH NEWSPAPER  
☐ THROUGH A MAGAZINE  
☐ THROUGH MEMBERSHIP IN AN ORGANIZATION (MUCC, 4-H, SCOUTS)  
☐ THROUGH A SCHOOL  
☐ OTHER \_\_\_\_\_

23. Did you hear about this program in any other ways? YES NO  
If yes, please write in any additional ways you heard about the program: \_\_\_\_\_

The questions below ask about your reactions to the program you just attended.

24. Please rate each aspect of this clinic or workshop on the following scale: poor, fair, good, very good, excellent).

| ASPECT OF THE PROGRAM                                                    | Poor | Fair | Good | Very Good | Excellent |
|--------------------------------------------------------------------------|------|------|------|-----------|-----------|
| Program content as described in the materials you saw prior to attending | 1    | 2    | 3    | 4         | 5         |
| Coverage of the subject matter                                           | 1    | 2    | 3    | 4         | 5         |
| Pace of the program                                                      | 1    | 2    | 3    | 4         | 5         |
| Attitudes of instructors                                                 | 1    | 2    | 3    | 4         | 5         |
| Quality of instructors                                                   | 1    | 2    | 3    | 4         | 5         |
| Quality of instruction                                                   | 1    | 2    | 3    | 4         | 5         |
| Quality of other services                                                | 1    | 2    | 3    | 4         | 5         |
| Overall quality of the program                                           | 1    | 2    | 3    | 4         | 5         |

25. Did you expect to catch fish during the program? YES NO
26. Did you or anyone in your party catch fish during the program? YES NO
27. Did you or anyone in your party keep the fish you caught? YES NO

**Please continue on the next page.**

**APPENDIX D**

28. To what extent were you satisfied that this program helped you in each of the following areas? (Please circle one number for each area.)

| TO WHAT EXTENT ARE YOU SATISFIED THAT THIS PROGRAM HELPED YOU..... | Not an important reason for attending | Very Dissatisfied | Dissatisfied | Neutral | Satisfied | Very Satisfied |
|--------------------------------------------------------------------|---------------------------------------|-------------------|--------------|---------|-----------|----------------|
| To learn new fishing skills                                        | NI                                    | 1                 | 2            | 3       | 4         | 5              |
| To fish by myself                                                  | NI                                    | 1                 | 2            | 3       | 4         | 5              |
| To learn about fish                                                | NI                                    | 1                 | 2            | 3       | 4         | 5              |
| To get better at my fishing skills                                 | NI                                    | 1                 | 2            | 3       | 4         | 5              |
| To be better able to use my equipment                              | NI                                    | 1                 | 2            | 3       | 4         | 5              |
| To be with family                                                  | NI                                    | 1                 | 2            | 3       | 4         | 5              |
| To be with friends                                                 | NI                                    | 1                 | 2            | 3       | 4         | 5              |
| To meet new people                                                 | NI                                    | 1                 | 2            | 3       | 4         | 5              |
| To become more interested in fishing                               | NI                                    | 1                 | 2            | 3       | 4         | 5              |
| To enjoy time outdoors                                             | NI                                    | 1                 | 2            | 3       | 4         | 5              |

The following questions ask about your intentions after this program.

29. In the license year 1995 through 1996 (from April 1995 through March 1996) do you intend to:

Purchase a fishing license?

☐ YES, DEFINITELY  
☐ PROBABLY  
☐ MAYBE  
☐ NO  
☐ UNDECIDED  
☐ ALREADY HAVE A LICENSE

Go fishing again?

☐ YES, DEFINITELY  
☐ PROBABLY  
☐ MAYBE  
☐ NO  
☐ UNDECIDED

Attend another clinic or workshop?

☐ YES, DEFINITELY  
☐ PROBABLY  
☐ MAYBE  
☐ NO  
☐ UNDECIDED

Purchase fishing equipment?

☐ YES, DEFINITELY  
☐ PROBABLY  
☐ MAYBE  
☐ NO  
☐ UNDECIDED

The following general information is being asked for statistical purposes only.

For the questions below, check or fill in the appropriate blank.

30. Are you: ☐ FEMALE ☐ MALE

31. Are you: ☐ SINGLE ☐ MARRIED ☐ DIVORCED/WIDOWED

32. Are you: ☐ WHITE ☐ BLACK ☐ HISPANIC ☐ ASIAN  
☐ AMERICAN INDIAN ☐ OTHER \_\_\_\_\_

Please continue on the back of this page.

**APPENDIX D**

33. In what year were you born? 19 \_\_\_\_\_
34. In what type of an area do you currently reside? (Please check only one.)  
 \_\_\_\_\_ RURAL - FARM  
 \_\_\_\_\_ RURAL - NONFARM - AREA OF LESS THAN 2,500 PEOPLE  
 \_\_\_\_\_ SMALL TOWN - AREA OF 2,500 TO 50,000 PEOPLE  
 \_\_\_\_\_ URBANIZED AREA (CITY OR SUBURBAN AREA OF GREATER THAN 50,000 PEOPLE)
35. In what **MICHIGAN** county do you currently reside? \_\_\_\_\_
- 35a. If you are not a resident of Michigan, in what state do you currently reside? \_\_\_\_\_
36. Please circle the number that represents the highest grade level you have completed.
- | Elementary      | High School | College     | Graduate Level    |
|-----------------|-------------|-------------|-------------------|
| 1 2 3 4 5 6 7 8 | 9 10 11 12  | 13 14 15 16 | 17 18 19 20 21 22 |
37. In 1994, what was your **TOTAL HOUSEHOLD INCOME** (before taxes) from employment and all other sources?
- |                           |                           |                           |
|---------------------------|---------------------------|---------------------------|
| _____ Less than \$10,000  | _____ \$40,000 - \$49,999 | _____ \$80,000 - \$89,999 |
| _____ \$10,000 - \$19,999 | _____ \$50,000 - \$59,999 | _____ \$90,000 - \$99,999 |
| _____ \$20,000 - \$29,999 | _____ \$60,000 - \$69,999 | _____ \$100,000 and above |
| _____ \$30,000 - \$39,999 | _____ \$70,000 - \$79,999 |                           |

We would appreciate any additional comments or suggestions about what should be added to this program:

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We would appreciate any additional comments or suggestions about what should be deleted from this program:

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**THANK YOU VERY MUCH FOR COMPLETING THIS SURVEY.** We appreciate your willingness to provide this information. Results of this survey will be provided to the Michigan Department of Natural Resources Fisheries Division to assist in improving this program.

**APPENDIX E**

**Take A Friend Fishing Survey  
For Youths Attending the Program  
FINAL RESULTS FOR SUMMER 1995 348 CASES**

Instructions to parent, guardian, or adult accompanying youth to this program: At the completion of the program, please take about 10 minutes to complete this survey. If the youth with you are between the ages of 12 - 17, you may allow them to complete this survey on their own. If they are between the ages of 5 - 11, please help by reading this survey to them and assisting them in answering the questions. When you are finished, hand this survey to a Fisheries Division Instructor or Adventure Ranger.

Please circle, check, or fill in the blanks.

1. Is this your **FIRST** Take a Friend Fishing program in 1995? YES 92% NO 8%  

↓

2. How many others have you been to? \_\_1\_\_
  
3. Have you ever attended fishing derbies, or other fishing events? YES 18% NO 82%  

↓

Were these events during Free Fishing Days (the second weekend in June)? YES 27% NO 61% Don't Know 13%
  
4. Have you ever fished before? \_\_90%\_ YES (Please go to the next question)  
\_\_10%\_ NO (Skip to question 7 on the back of this page)
  
5. Check the number of years that you have gone fishing at least once a year in the past 5 years:  
\_\_4%\_ 0 YEARS \_\_35%\_ 1 or 2 YEARS \_\_28%\_ 3 or 4 YEARS \_\_33%\_ 5 YEARS
  
6. How many days did you go fishing last year? Please write in the total number of days you went fishing during each time listed below. Count any part of a day as a whole day. If you did not fish, please write a "0" in the blank for that time.  
**NOTE: MEDIAN DAYS FISHED ARE PROVIDED**  
I FISHED ABOUT \_\_5\_\_ DAYS TOTAL DURING LAST SUMMER 1994 (June 1, 1994 to August 31, 1994).  
I FISHED ABOUT \_\_0\_\_ DAYS TOTAL DURING LAST FALL 1994 (September 1 to November 30, 1994).  
I FISHED ABOUT \_\_0\_\_ DAYS TOTAL DURING LAST WINTER 1994-95 (December 1, 1994 to March 31, 1995).  
I FISHED ABOUT \_\_1\_\_ DAYS TOTAL DURING THIS SPRING 1995 (April 1, 1995 to May 31, 1995).

**APPENDIX E**

7. For you how important is fishing compared with all other recreational activities? Examples of other recreational activities are sports like baseball, or other things you do on your free-time. (Check only **ONE** answer.)  
**FISHING IS...**  
 \_11%\_ MY **MOST** IMPORTANT RECREATION ACTIVITY  
 \_20%\_ MORE IMPORTANT THAN **MOST** OTHER RECREATION ACTIVITIES  
 \_30%\_ IMPORTANT, BUT **MANY** OTHER ACTIVITIES ARE **MORE** IMPORTANT  
 \_21%\_ **SOMEWHAT** IMPORTANT, BUT **MOST** OTHER ACTIVITIES ARE MORE IMPORTANT  
 \_14%\_ ONLY SLIGHTLY IMPORTANT TO ME  
 \_4%\_ IT IS **NOT** IMPORTANT TO ME
8. For each sentence, decide if you think that sentence describes you.  
 (Circle one number for each sentence)

| SENTENCE                                   | YES<br>this sentence<br>describes me | MAYBE<br>this sentence<br>describes me | NO<br>this sentence<br>does not<br>describe me |
|--------------------------------------------|--------------------------------------|----------------------------------------|------------------------------------------------|
| I usually watch fishing or outdoor shows   | 37%                                  | 21%                                    | 42%                                            |
| I often talk with my friends about fishing | 26%                                  | 21%                                    | 53%                                            |
| I frequently read about fishing            | 19%                                  | 27%                                    | 55%                                            |
| I ask for or buy my own fishing equipment  | 55%                                  | 16%                                    | 29%                                            |

9. What do you think about this program and your instructors?

|                         | Poor | Good | Excellent |
|-------------------------|------|------|-----------|
| The instructors were... | 1%   | 17%  | 82%       |
| This program was...     | 1%   | 17%  | 82%       |

10. Did you expect to catch fish during the program? YES 73% NO 27%
11. Did you or anyone you were with catch fish during the program? YES 81% NO 19%
12. Did you or anyone you were with keep the fish you caught? YES 9% NO 91%
13. Please circle one number for each line.

| DID THIS PROGRAM HELP YOU.....        | Not important to<br>me | YES<br>☺ | SORT-OF<br>☹ | NO<br>☹ |
|---------------------------------------|------------------------|----------|--------------|---------|
| To learn new fishing skills           | 3%                     | 79%      | 14%          | 3%      |
| To fish by myself                     | 5%                     | 68%      | 18%          | 9%      |
| To learn about fish                   | 6%                     | 61%      | 21%          | 12%     |
| To get better at my fishing skills    | 4%                     | 78%      | 13%          | 5%      |
| To be better able to use my equipment | 5%                     | 78%      | 13%          | 4%      |
| To meet new people                    | 9%                     | 60%      | 21%          | 11%     |
| To become more interested in fishing  | 4%                     | 70%      | 18%          | 8%      |
| To enjoy time outdoors                | 2%                     | 84%      | 10%          | 4%      |

**APPENDIX E**

14. After this program, will you ...

Go fishing again?

\_86%\_ YES

\_14%\_ MAYBE

\_<1%\_ NO

Buy your own fishing rod or tackle?

\_44%\_ YES

\_41%\_ MAYBE

\_15%\_ NO

Go to another fishing program?

\_36%\_ YES

\_53%\_ MAYBE

\_11%\_ NO

15. Are you: \_37%\_ FEMALE \_63%\_ MALE

16. Are you: \_90%\_ WHITE \_7%\_ BLACK \_2%\_ HISPANIC \_1%\_ ASIAN  
\_0%\_ AMERICAN INDIAN OTHER \_<1%\_

17. How old are you? \_\_\_\_\_ years old **MEAN = 10 MEDIAN = 10**

18. Do you live in **MICHIGAN**? YES **95%** NO **5%**



19. I DON'T live in Michigan. I live in \_\_\_\_\_

20. What grade will you be going into starting this fall? \_\_ **MEAN = 5 MEDIAN = 5** \_\_ grade

THANK YOU VERY MUCH FOR DOING THIS SURVEY.

**APPENDIX E**

**Take A Friend Fishing Survey  
For Adults Attending the Program**

**FINAL RESULTS FOR THE SUMMER OF 1995 326 CASES**

At the completion of the program, please take about 10 minutes to complete this survey and hand it to a Fisheries Division Instructor or Adventure Ranger.

The following questions are asked in a variety of ways. Some of the questions will require you to circle the most appropriate response, others will require checking, and where appropriate you should fill in the blank.

1. I am attending a: DAILY 86% or WEEKEND PROGRAM 14%
2. Is this your FIRST Take a Friend Fishing program in 1995? YES 97% NO 3%  
↓  
2a. If no, how many other clinics or workshops have you attended? 1
3. Have you ever attended any other fishing derbies, or other events? YES 10% NO 90%  
↓  
3a. If yes, were these activities held during Free Fishing Days (typically the second weekend in June)? YES 38% NO 62%

|                                                                  |
|------------------------------------------------------------------|
| The following questions ask about your involvement with fishing. |
|------------------------------------------------------------------|

4. Do you belong to any fishing organizations? 4% YES 96% NO  
4a. If yes, please list: \_\_\_\_\_
5. Have you ever fished before? 87% YES (Please continue with the next question.)  
13% NO (Skip to question 8 on the back of this page→)
6. The following questions ask how often you purchase a Michigan Resident Annual Fishing License or any one of the following Michigan Licenses: Sportsperson's License, Daily Fishing License, or Senior Resident Annual Fishing License.
  - 6a. Do you currently have any of the fishing licenses listed above? YES 42% NO 58%
  - 6b. Please check the number of years that you have purchased any of the above fishing licenses during the last 5 year period:  
  
35% 0 YEARS 26% 1 or 2 YEARS 13% 3 or 4 YEARS 26% 5 YRS
  - 6c. Please check the number of years that you have gone fishing at least once a year during the past 5 years:  
  
22% 0 YEARS 27% 1 or 2 YEARS 15% 3 or 4 YEARS 36% 5 YRS

Please continue on the back of this page.

## APPENDIX E

7. Please estimate the total number of days you spent fishing during each of the period of the fishing season listed below. (Any part of a day counts as a whole day. If you did not fish in that period, please write "0" in the blank for that period.)

NOTE: RESULTS ARE MEDIAN DAYS FISHED.

I FISHED ABOUT 3 DAYS TOTAL DURING LAST SUMMER 1994 (June 1, 1994 to August 31, 1994).

I FISHED ABOUT 0 DAYS TOTAL DURING LAST FALL 1994 (September 1 to November 30, 1994).

I FISHED ABOUT 0 DAYS TOTAL DURING LAST WINTER 1994-95 (December 1, 1994 to March 31, 1995).

I FISHED ABOUT 0 DAYS TOTAL DURING THIS SPRING 1995 (April 1, 1995 to May 31, 1995).

8. For you how important is fishing compared with all other recreational activities you pursue? (Please check only one answer.)

Importance of fishing compared with other recreation

6% MY MOST IMPORTANT RECREATION ACTIVITY

11% MORE IMPORTANT THAN MOST OTHER RECREATION ACTIVITIES

24% IMPORTANT, BUT MANY OTHER ACTIVITIES ARE MORE IMPORTANT

18% SOMEWHAT IMPORTANT, BUT MOST OTHER ACTIVITIES ARE MORE IMPORTANT

25% ONLY SLIGHTLY IMPORTANT TO ME

16% IT IS NOT IMPORTANT TO ME

9. To what extent do you agree or disagree that the following statements describe your involvement in fishing? (Please circle one number for each statement listed below.)

| STATEMENT                                                                                                                                 | Strongly agree | Agree | Neutral | Disagree | Strongly Disagree |
|-------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------|---------|----------|-------------------|
| I frequently watch fishing or outdoor shows on television                                                                                 | 12%            | 23%   | 28%     | 14%      | 23%               |
| I frequently visit stores to view new equipment related to my interest in fishing                                                         | 8%             | 16%   | 26%     | 23%      | 28%               |
| I frequently read about fishing                                                                                                           | 7%             | 12%   | 27%     | 28%      | 26%               |
| Fishing says a lot about who I am                                                                                                         | 5%             | 10%   | 29%     | 24%      | 32%               |
| I often talk to my friends about fishing                                                                                                  | 8%             | 22%   | 21%     | 24%      | 25%               |
| I spend a great deal of money on fishing                                                                                                  | 5%             | 8%    | 21%     | 31%      | 36%               |
| I find that a lot of my life is organized around fishing                                                                                  | 3%             | 4%    | 19%     | 31%      | 43%               |
| My enjoyment of fishing has influenced my selection of where I live                                                                       | 2%             | 9%    | 18%     | 31%      | 40%               |
| I maintain a membership in an organization directly related to fisheries or fisheries management (E.G., MUCC, Trout Unlimited, Bass ETC.) | 4%             | 2%    | 15%     | 25%      | 54%               |
| My enjoyment of fishing has influenced my choice of vacation destinations                                                                 | 7%             | 19%   | 20%     | 22%      | 32%               |
| I own a recreational property primarily so that I can be close to fishing                                                                 | 2%             | 4%    | 17%     | 24%      | 52%               |

**APPENDIX E**

The following questions ask about those with whom you are attending this program.

10. Are you attending this program with someone who has never fished before? YES 35% NO 65%

11. I am attending this program: (check all that apply)

- 2% alone
- 25% with my spouse
- 78% with my own child
- 9% with my grandchild
- 18% with other children
- <1% with a teenage friend
- 10% with another adult
- 6% other: \_\_\_\_\_

12. Please check the ONE phrase that best describes your household composition.

- 4% 1 adult, no children
- 8% 1 adult, with child/children    How many? \_\_\_\_\_ What age(s)? \_\_\_\_\_
- 11% 2 adults, no children
- 74% 2 adults, with child/children    How many? \_\_\_\_\_ What age(s)? \_\_\_\_\_
- <1% 3 adults or more, no children
- 2% 3 adults or more, with child/children    How many? \_\_\_\_\_ What age(s)? \_\_\_\_\_

The following questions ask about your use of the Michigan State Parks.

13. Did you visit this State Park specifically to attend the Take a Friend Fishing Clinic or Workshop? YES 44% NO 56%

14. Is this your first visit to THIS Michigan State Park? YES 31% NO 69%

15. Have you visited ANY other Michigan State Parks before?

- 90% YES (Please go on to the next question.)
- 10% NO (Please skip to question 19.)

MEAN = 20    MEDIAN = 20

16. How many years have you been visiting Michigan State Parks? 20 YEARS

17. Approximately how many days did you visit Michigan State Parks in 1994?

AVG = 12    MEDIAN = 10 DAYS

18. If you did not visit Michigan State Parks in 1994, when was the last year you did visit? 19\_\_\_\_. MEAN = 87 MEDIAN = 89

19. Did you purchase a DAILY State Park permit? YES 30% NO 70%

20. Did you purchase an ANNUAL State Park permit? YES 78% NO 22%

21. Are you Camping in this State Park during this visit? YES 44% NO 56%

Please continue on the back of this page.

## APPENDIX E

22. How did you **FIRST** hear of this Take a Friend Fishing clinic or workshop?  
(Please check only ONE response.)

\_38%\_ DISCOVERED THE PROGRAM AT THE PARK (FLYER OR POSTER)  
 \_13%\_ INFORMED BY PARK STAFF  
 \_5%\_ RECOMMENDATION OF A FRIEND  
 \_2%\_ RECOMMENDATION OF AN ADULT FAMILY MEMBER  
 \_<1%\_ RECOMMENDATION OF A YOUNG PERSON  
 \_<1%\_ LOCAL SOURCES (e.g. gas stations or tackle shop)  
 \_2%\_ FROM A PROMOTIONAL FLYER  
 \_1%\_ FROM THE 1995 MICHIGAN STATE PARKS SCHEDULE OF EVENTS  
 \_4%\_ THROUGH RADIO  
 \_0%\_ THROUGH TELEVISION  
 \_28%\_ THROUGH NEWSPAPER  
 \_<1%\_ THROUGH A MAGAZINE  
 \_<1%\_ THROUGH MEMBERSHIP IN AN ORGANIZATION (MUCC, 4-H, SCOUTS)  
 \_<1%\_ THROUGH A SCHOOL  
 \_4%\_ OTHER \_\_\_\_\_

23. Did you hear about this program in any other ways? YES 14% NO 86%  
If yes, please write in any additional ways you heard about the program: \_\_\_\_\_

The questions below ask about your reactions to the program you just attended.

24. Please rate each aspect of this clinic or workshop on the following scale: poor, fair, good, very good, excellent).

| ASPECT OF THE PROGRAM                                                    | Poor | Fair | Good | Very Good | Excellent |
|--------------------------------------------------------------------------|------|------|------|-----------|-----------|
| Program content as described in the materials you saw prior to attending | 1%   | 6%   | 31%  | 36%       | 26%       |
| Coverage of the subject matter                                           | 0%   | 3%   | 26%  | 40%       | 31%       |
| Pace of the program                                                      | 0%   | 4%   | 25%  | 36%       | 36%       |
| Attitudes of instructors                                                 | 0%   | 0%   | 8%   | 27%       | 65%       |
| Quality of instructors                                                   | 0%   | <1%  | 12%  | 29%       | 59%       |
| Quality of instruction                                                   | 0%   | 1%   | 14%  | 32%       | 53%       |
| Quality of other services                                                | 0%   | 2%   | 20%  | 37%       | 42%       |
| Overall quality of the program                                           | 0%   | <1%  | 14%  | 38%       | 48%       |

25. Did you expect to catch fish during the program? YES 52% NO 48%
26. Did you or anyone in your party catch fish during the program? YES 68% NO 32%
27. Did you or anyone in your party keep the fish you caught? YES 4% NO 96%

Please continue on the next page.

## APPENDIX E

28. To what extent were you satisfied that this program helped you in each of the following areas? (Please circle one number for each area.)

| TO WHAT EXTENT ARE YOU SATISFIED THAT THIS PROGRAM HELPED YOU..... | Not an important reason for attending | Very Dissatisfied | Dissatisfied | Neutral | Satisfied | Very Satisfied |
|--------------------------------------------------------------------|---------------------------------------|-------------------|--------------|---------|-----------|----------------|
| To learn new fishing skills                                        | 7%                                    | 3%                | 1%           | 8%      | 49%       | 32%            |
| To fish by myself                                                  | 12%                                   | 2%                | 1%           | 18%     | 42%       | 26%            |
| To learn about fish                                                | 9%                                    | 3%                | 3%           | 26%     | 40%       | 19%            |
| To get better at my fishing skills                                 | 9%                                    | 3%                | 2%           | 14%     | 44%       | 28%            |
| To be better able to use my equipment                              | 9%                                    | 3%                | 1%           | 17%     | 43%       | 27%            |
| To be with family                                                  | 6%                                    | 3%                | <1%          | 8%      | 41%       | 42%            |
| To be with friends                                                 | 15%                                   | 2%                | <1%          | 19%     | 36%       | 27%            |
| To meet new people                                                 | 17%                                   | 2%                | 1%           | 22%     | 38%       | 20%            |
| To become more interested in fishing                               | 13%                                   | 2%                | 18%          | 40%     | 27%       | 13%            |
| To enjoy time outdoors                                             | 5%                                    | 3%                | 0%           | 8%      | 38%       | 47%            |

The following questions ask about your intentions after this program.

29. In the license year 1995 through 1996 (from April 1995 through March 1996) do you intend to:

Purchase a fishing license?  
 \_32%\_ YES, DEFINITELY  
 \_14%\_ PROBABLY  
 \_15%\_ MAYBE  
 \_18%\_ NO  
 \_4%\_ UNDECIDED  
 \_17%\_ ALREADY HAVE A LICENSE

Go fishing again?  
 \_61%\_ YES, DEFINITELY  
 \_18%\_ PROBABLY  
 \_13%\_ MAYBE  
 \_5%\_ NO  
 \_2%\_ UNDECIDED

Attend another clinic or workshop?  
 \_25%\_ YES, DEFINITELY  
 \_25%\_ PROBABLY  
 \_32%\_ MAYBE  
 \_13%\_ NO  
 \_6%\_ UNDECIDED

Purchase fishing equipment?  
 \_34%\_ YES, DEFINITELY  
 \_30%\_ PROBABLY  
 \_19%\_ MAYBE  
 \_14%\_ NO  
 \_2%\_ UNDECIDED

The following general information is being asked for statistical purposes only.

For the questions below, check or fill in the appropriate blank.

30. Are you: \_43%\_ FEMALE \_57%\_ MALE
31. Are you: \_9%\_ SINGLE \_85%\_ MARRIED \_6%\_ DIVORCED/WIDOWED
32. Are you: \_94%\_ WHITE \_5%\_ BLACK \_1%\_ HISPANIC \_<1%\_ ASIAN  
 \_0%\_ AMERICAN INDIAN OTHER \_0%\_

**APPENDIX E**

33. In what year were you born? 19\_\_ **MEDIAN YEAR=55**\_\_ **AGE=40**
34. In what type of an area do you currently reside? (Please check only one.)  
 \_\_11%\_\_ **RURAL - FARM**  
 \_\_12%\_\_ **RURAL - NONFARM - AREA OF LESS THAN 2,500 PEOPLE**  
 \_\_29%\_\_ **SMALL TOWN - AREA OF 2,500 TO 50,000 PEOPLE**  
 \_\_49%\_\_ **URBANIZED AREA (CITY OR SUBURBAN AREA OF GREATER THAN 50,000 PEOPLE)**

35. In what **MICHIGAN** county do you currently reside? \_\_\_\_\_

35a. If you are not a resident of Michigan, in what state do you currently reside? \_\_\_\_\_

**95% RESIDENTS OF MICHIGAN**

36. Please circle the number that represents the highest grade level you have completed.
- |                 |             |             |                   |
|-----------------|-------------|-------------|-------------------|
| Elementary      | High School | College     | Graduate Level    |
| 1 2 3 4 5 6 7 8 | 9 10 11 12  | 13 14 15 16 | 17 18 19 20 21 22 |
- MEDIAN EDUCATION = 15**

37. In 1994, what was your **TOTAL HOUSEHOLD INCOME** (before taxes) from employment and all other sources?

|                             |                             |                            |
|-----------------------------|-----------------------------|----------------------------|
| __2%__ Less than \$10,000   | __25%__ \$40,000 - \$49,999 | __1%__ \$80,000 - \$89,999 |
| __4%__ \$10,000 - \$19,999  | __14%__ \$50,000 - \$59,999 | __1%__ \$90,000 - \$99,999 |
| __9%__ \$20,000 - \$29,999  | __28%__ \$60,000 - \$69,999 | __3%__ \$100,000 and above |
| __12%__ \$30,000 - \$39,999 | __2%__ \$70,000 - \$79,999  |                            |

We would appreciate any additional comments or suggestions about what should be added to this program:

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We would appreciate any additional comments or suggestions about what should be deleted from this program:

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**THANK YOU VERY MUCH FOR COMPLETING THIS SURVEY.** We appreciate your willingness to provide this information. Results of this survey will be provided to the Michigan Department of Natural Resources Fisheries Division to assist in improving this program.

**APPENDIX E****1995 ADULT SURVEY OPEN ENDED TALLY**

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**4. Fishing organizations list:**

BASS (2)

BASS magazines only (2)

Dawn River Walleye Club

American Fisheries Society

4-H

Steelheaders - Flint River Valley

Bass Masters

In Fisherman

UMCC

**11. Attending program with other:**

Nephew (3)

Son-in-law

Grandmother

With a residence camp group

A group of teenage campers - evening activity

UMCC

Youth volunteer

Church group

Parent

Sister

**22. How did you FIRST hear of this Take a Friend Fishing clinic or workshop? other:**

Saw it taking place (2)

Church

My daughter

**23. Did you hear about this program in any other ways? If yes, write in any additional ways you heard about the program.**

Park help (6)

Newspaper (2)

DNR (4)

A friend

State

Kalamazoo Gazette

Clinic personnel walking through camp

State Park Sleepy Hollow Jr. Bass Club

Husband is a ranger

Saw flyer at ranger station

Michigan Magazine

Flyer at Wixom Library

DNR magazine

MUCC magazine

1995 State Park Schedule

Bulletin board at Warren Dunes

Adventure Program flyer

**Instructions to parent, guardian, or adult accompanying youth to this program:** At the completion of the program, please take about 5 minutes to complete this survey. If the youth with you are between the ages of 12 - 17, you may allow them to complete this survey on their own. If they are between the ages of 5 - 11, please help by reading this survey to them and assisting them in answering the questions. When you are finished, hand this survey to a Michigan State University Research Aide or an Adventure Ranger.



7. For each sentence, decide if you think that sentence describes you.  
(Circle ONE number for each sentence)

| SENTENCE                                   | YES                        | MAYBE                      | NO                                 |
|--------------------------------------------|----------------------------|----------------------------|------------------------------------|
|                                            | this sentence describes me | this sentence describes me | this sentence does not describe me |
| Fishing is important to me                 | 58%                        | 32%                        | 10%                                |
| I usually watch fishing or outdoor shows   | 37%                        | 21%                        | 41%                                |
| I often talk with my friends about fishing | 26%                        | 22%                        | 52%                                |
| I frequently read about fishing            | 23%                        | 20%                        | 57%                                |
| I ask for or buy my own fishing equipment  | 54%                        | 15%                        | 31%                                |

**APPENDIX E**

8. What do you think about this program and your instructors?

|                         | Poor | Good | Excellent |
|-------------------------|------|------|-----------|
| The instructors were... | <1%  | 34%  | 65%       |
| This program was...     | 1%   | 40%  | 60%       |

9. Did you expect to catch fish during the program? 77%\_YES 23%\_NO

10. Did you or anyone you were with catch fish during the program? 76%\_YES 24%\_NO

11. Did you or anyone you were with keep the fish you caught? 9%\_YES 91%\_NO

12. Please circle ONE number for each line.

| DID THIS PROGRAM HELP YOU.....        | Not important to me | YES<br>☺ | SORT-OF<br>☹ | NO<br>☹ |
|---------------------------------------|---------------------|----------|--------------|---------|
| To learn new fishing skills           | 1%                  | 77%      | 18%          | 5%      |
| To fish on my own                     | 1%                  | 64%      | 21%          | 14%     |
| To learn about fish                   | 1%                  | 54%      | 28%          | 17%     |
| To get better at my fishing skills    | 1%                  | 76%      | 18%          | 5%      |
| To be better able to use my equipment | 2%                  | 78%      | 13%          | 7%      |
| To meet new people                    | 2%                  | 68%      | 17%          | 14%     |
| To become more interested in fishing  | 1%                  | 76%      | 17%          | 1%      |
| To enjoy time outdoors                | <1%                 | 86%      | 10%          | 4%      |

13. After this program, will you ...

Go fishing again?

\_88%\_ YES

\_10%\_ MAYBE

\_1%\_ NO

Buy your own fishing rod or tackle?

\_52%\_ YES

\_29%\_ MAYBE

\_19%\_ NO

Go to another fishing program?

\_59%\_ YES

\_33%\_ MAYBE

\_8%\_ NO

14. Are you: \_45%\_ FEMALE \_55%\_ MALE

15. Are you: \_93%\_ WHITE \_2%\_ BLACK \_2%\_ HISPANIC \_1%\_ ASIAN
- 
- \_1%\_ AMERICAN INDIAN \_<1%\_ MULTIRACIAL OTHER \_<1%\_ (Note: <2% refused)

16. How old are you? \_9 median and mean\_\_ years old

17. Do you live in MICHIGAN? 90%\_YES 10%\_NO



18. I DON'T live in Michigan. I live in \_\_\_\_\_

19. What grade will you be going into starting this fall? \_\_\_\_\_4th\_\_\_\_\_ grade

THANK YOU VERY MUCH FOR DOING THIS SURVEY.

**APPENDIX E****Fishing in the Parks Survey****For Adults Attending the Program****FINAL RESULTS FOR THE SUMMER OF 1996 296 CASES**

At the completion of the program, please take about 10 minutes to complete this survey and hand it to a Michigan State University Research Aide or Adventure Ranger.

The following questions are asked in a variety of ways. Some of the questions will require you to circle the most appropriate response, others will require checking, and where appropriate you should fill in the blank.

1. Is this your **FIRST** Fishing in the Parks program in 1996? 99% YES 1% NO  
  - 1a. If no, how many other Tuesday night clinics have you attended in 1996? 2.5
2. Did you attend one of these programs in a State Park last summer? 6% YES 94% NO
3. Have you ever attended any other fishing clinics, derbies or other events? 11% YES 89% NO  
  - 3a. If yes, were these activities held during Free Fishing Days (typically the second weekend in June)? 37% YES 63% NO

|                                                                  |
|------------------------------------------------------------------|
| The following questions ask about your involvement with fishing. |
|------------------------------------------------------------------|

4. Do you belong to any fishing organizations? 2% YES 98% NO  
  - 4a. If yes, please list: \_\_\_\_\_
5. Have you ever fished before? 85% YES (Please continue with the next question.)  
 15% NO (Skip to question 8 on the back of this page→)
6. The following questions ask how often you purchase a Michigan Resident Annual Fishing License or any one of the following Michigan Licenses: Sportsman's License, Daily Fishing License, or Senior Resident Annual Fishing License.
  - 6a. Do you currently have any of the fishing licenses listed above? 43% YES 57% NO
  - 6b. Please check the number of years that you have purchased any of the above fishing licenses during the last 5 year period:  
 36% 0 YEARS 27% 1 or 2 YEARS 15% 3 or 4 YEARS 22% 5 YEARS
  - 6c. Please check the number of years that you have gone fishing at least once a year during the past 5 years:  
 23% 0 YEARS 28% 1 or 2 YEARS 19% 3 or 4 YEARS 30% 5 YEARS

Please continue on the back of this page.

**APPENDIX E**

7. Please estimate the total number of days you spent fishing during each of the period of the fishing season listed below. (Any part of a day counts as a whole day. If you did not fish in that period, please write "0" in the blank for that period.)

NOTE: RESULTS ARE MEDIAN DAYS FISHED.

I FISHED ABOUT   3   DAYS TOTAL DURING LAST SUMMER 1995 (June 1, 1995 to August 31, 1995).

I FISHED ABOUT   0   DAYS TOTAL DURING LAST FALL 1995 (September 1, 1995 to November 30, 1995).

I FISHED ABOUT   0   DAYS TOTAL DURING LAST WINTER 1995-96 (December 1, 1995 to March 31, 1996).

I FISHED ABOUT   0   DAYS TOTAL DURING THIS SPRING 1996 (April 1, 1996 to May 31, 1996).

8. For you how important is fishing compared with all other recreational activities you pursue? (Please check only ONE answer.)

Importance of fishing compared with other recreation

  4%   MY MOST IMPORTANT RECREATION ACTIVITY

 10%  MORE IMPORTANT THAN MOST OTHER RECREATION ACTIVITIES

 25%  IMPORTANT, BUT MANY OTHER ACTIVITIES ARE MORE IMPORTANT

 15%  SOMEWHAT IMPORTANT, BUT MOST OTHER ACTIVITIES ARE MORE IMPORTANT

 28%  ONLY SLIGHTLY IMPORTANT TO ME

 19%  IT IS NOT IMPORTANT TO ME

9. To what extent do you agree or disagree that the following statements describe your involvement in fishing? (Please circle one number for each statement listed below.)

| STATEMENT                                                                                                                                  | Strongly agree | Agree | Neutral | Disagree | Strongly Disagree |
|--------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------|---------|----------|-------------------|
| I frequently watch fishing or outdoor shows on television                                                                                  | 10%            | 18%   | 29%     | 17%      | 26%               |
| I frequently visit stores to view new equipment related to my interest in fishing                                                          | 3%             | 17%   | 23%     | 23%      | 35%               |
| I frequently read about fishing                                                                                                            | 3%             | 12%   | 29%     | 21%      | 32%               |
| Fishing says a lot about who I am                                                                                                          | 2%             | 10%   | 26%     | 25%      | 38%               |
| I often talk to my friends about fishing                                                                                                   | 3%             | 20%   | 26%     | 20%      | 31%               |
| I spend a great deal of money on fishing                                                                                                   | 2%             | 4%    | 24%     | 26%      | 44%               |
| I find that a lot of my life is organized around fishing                                                                                   | 1%             | 4%    | 16%     | 28%      | 51%               |
| My enjoyment of fishing has influenced my selection of where I live                                                                        | 2%             | 7%    | 16%     | 25%      | 50%               |
| I maintain a membership in an organization directly related to fisheries or fisheries management (E.G., MUCC, Trout Unlimited, Bass ETC.). | 1%             | 2%    | 10%     | 21%      | 65%               |
| My enjoyment of fishing has influenced my choice of vacation destinations                                                                  | 5%             | 23%   | 20%     | 16%      | 37%               |
| I own a recreational property primarily so that I can be close to fishing                                                                  | 4%             | 5%    | 10%     | 21%      | 61%               |

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The following questions ask about those with whom you are attending this program.

10. Are you attending this program with someone who has never fished before? 35%YES 65%NO

11. I am attending this program: (check all that apply)

- ☐ 3% alone
- ☐ 25% with my spouse
- ☐ 80% with my own child
- ☐ 9% with my grandchild
- ☐ 18% with other children
- ☐ 1% with a teenage friend
- ☐ 9% with another adult
- ☐ 4% other: \_\_\_\_\_

12. Please check the ONE phrase that best describes your household composition.

- ☐ 4% 1 adult, no children
- ☐ 10% 1 adult, with child/children    How many? \_\_\_\_\_ What age(s)? \_\_\_\_\_
- ☐ 9% 2 adults, no children
- ☐ 76% 2 adults, with child/children    How many? \_\_\_\_\_ What age(s)? \_\_\_\_\_
- ☐ 1% 3 adults or more, no children
- ☐ 0% 3 adults or more, with child/children    How many? \_\_\_\_\_ What age(s)? \_\_\_\_\_

The following questions ask about your use of the Michigan State Parks.

13. Did you visit this State Park specifically to attend this program? 37%\_YES 63%\_NO

14. Is this your first visit to THIS Michigan State Park? 28%\_YES 72%\_NO

15. Have you visited ANY other Michigan State Parks before?

- ☐ 87%\_ YES (Please go on to the next question.)
- ☐ 13%\_ NO (Please skip to question 19.)

16. How many years have you been visiting Michigan State Parks? \_\_\_\_\_YEARS  
mean=19 median=20

17. Approximately how many days did you visit Michigan State Parks in 1995?  
\_\_\_\_\_ DAYS mean=14 median=10

18. If you did not visit Michigan State Parks in 1995, when was the last year you did visit? 19\_\_\_\_ mean=88 median=93

19. Did you purchase a DAILY State Park permit? 26%\_YES 74%\_NO

20. Did you purchase an ANNUAL State Park permit? 84%\_YES 16%\_NO

21. Are you Camping in this State Park during this visit? 64%\_YES 36%\_NO

Please continue on the back of this page.

**APPENDIX E**

22. How did you **FIRST** hear of this "Fishing in the Parks" program?  
(Please check only **ONE** response.)

\_51%\_ DISCOVERED THE PROGRAM AT THE PARK (FLYER OR POSTER)  
 \_13%\_ INFORMED BY PARK STAFF  
 \_1%\_ FROM A LETTER FROM THE DEPARTMENT OF NATURAL RESOURCES  
 \_0%\_ FROM A DNR OFFICE  
 \_3%\_ RECOMMENDATION OF A FRIEND  
 \_3%\_ RECOMMENDATION OF AN ADULT FAMILY MEMBER  
 \_<1%\_ RECOMMENDATION OF A YOUNG PERSON  
 \_<1%\_ LOCAL SOURCES (e.g. gas stations or tackle shop)  
 \_3%\_ FROM A PROMOTIONAL FLYER  
 \_1%\_ FROM THE 1996 MICHIGAN STATE PARKS SCHEDULE OF EVENTS  
 \_<1%\_ THROUGH RADIO  
 \_0%\_ THROUGH TELEVISION  
 \_14%\_ THROUGH NEWSPAPER  
 \_2%\_ THROUGH THE "MICHIGAN NATURAL RESOURCES" MAGAZINE  
 \_1%\_ THROUGH OTHER MAGAZINE(s)  
 \_1%\_ THROUGH MEMBERSHIP IN AN ORGANIZATION (MUCC, 4-H, SCOUTS)  
 \_<1%\_ THROUGH A SCHOOL  
 \_5%\_ OTHER \_\_\_\_\_

23. Did you hear about this program in any other ways? 12%\_YES 88%\_NO  
If yes, please write in any additional ways you heard about the program: \_\_\_\_\_

The questions below ask about your reactions to the program you just attended.

24. Please rate each aspect of this clinic or workshop on the following scale: poor, fair, good, very good, excellent).

| ASPECT OF THE PROGRAM                                                    | Poor | Fair | Good | Very Good | Excellent |
|--------------------------------------------------------------------------|------|------|------|-----------|-----------|
| Program content as described in the materials you saw prior to attending | 1%   | 3%   | 29%  | 31%       | 36%       |
| Coverage of the subject matter                                           | 0%   | <1%  | 22%  | 34%       | 44%       |
| Pace of the program                                                      | <1%  | <1%  | 23%  | 32%       | 38%       |
| Attitudes of instructors                                                 | 0%   | <1%  | 7%   | 19%       | 74%       |
| Quality of instructors                                                   | 0%   | 1%   | 9%   | 22%       | 68%       |
| Quality of instruction                                                   | 0%   | <1%  | 9%   | 28%       | 63%       |
| Overall quality of the program                                           | <1%  | 0%   | 11%  | 29%       | 60%       |

25. Did you expect to catch fish during the program? 52%\_YES 48%\_NO
26. Did you or anyone in your party catch fish during the program? 70%\_YES 30%\_NO
27. Did you or anyone in your party keep the fish you caught? \_4%\_YES 96%\_NO  
Please continue on the next page.



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28. To what extent were you satisfied that this program helped you in each of the following areas? (Please circle one number for each area.)

| TO WHAT EXTENT ARE YOU SATISFIED THAT THIS PROGRAM HELPED YOU..... | Not an important reason for attending | Very Dissatisfied | Dissatisfied | Neutral | Satisfied | Very Satisfied |
|--------------------------------------------------------------------|---------------------------------------|-------------------|--------------|---------|-----------|----------------|
| To learn new fishing skills                                        | 8%                                    | 2%                | 0%           | 15%     | 37%       | 38%            |
| To fish on my own                                                  | 12%                                   | 2%                | <1%          | 19%     | 37%       | 31%            |
| To learn about fish                                                | 11%                                   | 3%                | 2%           | 31%     | 33%       | 21%            |
| To get better at my fishing skills                                 | 8%                                    | 2%                | 0%           | 22%     | 34%       | 33%            |
| To be better able to use my equipment                              | 9%                                    | 2%                | 0%           | 17%     | 39%       | 33%            |
| To be with family                                                  | 5%                                    | 2%                | 0%           | 11%     | 38%       | 45%            |
| To be with friends                                                 | 17%                                   | 2%                | 1%           | 25%     | 28%       | 28%            |
| To meet new people                                                 | 17%                                   | 3%                | 0%           | 31%     | 27%       | 23%            |
| To become more interested in fishing                               | 11%                                   | 1%                | <1%          | 16%     | 41%       | 30%            |
| To enjoy time outdoors                                             | 2%                                    | 2%                | <1%          | 6%      | 38%       | 52%            |

The following questions ask about your intentions after this program.

29. In the license year 1996 through 1997 (from April 1996 through March 1997) do you intend to:

Purchase a fishing license?

\_37%\_ ALREADY HAVE A LICENSE  
 \_12%\_ YES, DEFINITELY  
 \_11%\_ PROBABLY  
 \_15%\_ MAYBE  
 \_19%\_ NO  
 \_5%\_ UNDECIDED

Go fishing again?

\_59%\_ YES, DEFINITELY  
 \_22%\_ PROBABLY  
 \_12%\_ MAYBE  
 \_6%\_ NO  
 \_2%\_ UNDECIDED

Attend another clinic or workshop?

\_23%\_ YES, DEFINITELY  
 \_26%\_ PROBABLY  
 \_34%\_ MAYBE  
 \_13%\_ NO  
 \_5%\_ UNDECIDED

Purchase fishing equipment?

\_31%\_ YES, DEFINITELY  
 \_28%\_ PROBABLY  
 \_24%\_ MAYBE  
 \_16%\_ NO  
 \_2%\_ UNDECIDED

The following general information is being asked for statistical purposes only.

For the questions below, check or fill in the appropriate blank.

30. Are you: \_52%\_ FEMALE \_48%\_ MALE
31. Are you: \_9%\_ SINGLE \_82%\_ MARRIED \_9%\_ DIVORCED/WIDOWED
32. Are you: \_94%\_ WHITE \_2%\_ BLACK \_2%\_ HISPANIC \_0%\_ ASIAN  
 \_2%\_ AMERICAN INDIAN \_<1%\_ MULTIRACIAL OTHER \_0%\_

Please continue on the back of this page.

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33. In what year were you born? 19\_\_\_\_ Median year=57 age=39
34. In what type of an area do you currently reside? (Please check only ONE.)  
 \_14%\_ RURAL - FARM  
 \_11%\_ RURAL - NONFARM - AREA OF LESS THAN 2,500 PEOPLE  
 \_37%\_ SMALL TOWN - AREA OF 2,500 TO 50,000 PEOPLE  
 \_39%\_ URBANIZED AREA (CITY OR SUBURBAN AREA OF GREATER THAN 50,000 PEOPLE)
35. In what MICHIGAN county do you currently reside? \_\_\_\_ 93% residents of MI \_\_\_\_
- 35a. If you are not a resident of Michigan, in what state do you currently reside? \_\_\_\_
36. Please circle the number that represents the highest grade level you have completed.  
 Elementary High School College Graduate Level  
 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22  
 Median education=14
37. In 1995, what was your TOTAL HOUSEHOLD INCOME (before taxes) from employment and all other sources?
- |                           |                           |                            |
|---------------------------|---------------------------|----------------------------|
| _4%_ Less than \$10,000   | _17%_ \$40,000 - \$49,999 | _4%_ \$80,000 - \$89,999   |
| _7%_ \$10,000 - \$19,999  | _20%_ \$50,000 - \$59,999 | _2%_ \$90,000 - \$99,999   |
| _10%_ \$20,000 - \$29,999 | _12%_ \$60,000 - \$69,999 | _4%_ \$100,000 and above   |
| _16%_ \$30,000 - \$39,999 | _7%_ \$70,000 - \$79,999  | (Note: 22% did not answer) |

We would appreciate any additional comments or suggestions about what should be added to this program:

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We would appreciate any additional comments or suggestions about what should be deleted from this program:

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**THANK YOU VERY MUCH FOR COMPLETING THIS SURVEY.** We appreciate your willingness to provide this information. Results of this survey will be provided to the Michigan Department of Natural Resources Fisheries Division to assist in improving this program.

## APPENDIX E

## 1996 ADULT SURVEY OPEN ENDED TALLY

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**4a. Fishing organizations list:**

BASS (2)

In Fisherman (1)

Tucson, Arizona Fly Fishing Club (1)

Trout Unlimited (1)

American Fishing Assoc. (1)

**11. Attending program with other:**

Niece (3)

Nephew (3)

Friends and their family (1)

Campground host (1)

Kalamazoo Rec. Dept. (1)

Pennsylvania Sportsman's Club (1)

**22. How did you first hear of FIP other:**

Park Staff (6)

Newspaper (3)

Notices at campground (2)

Saw the program happening (2)

Child (1)

Homeschooling Conference (1)

Brighton Library (1)

Other campers (1)

Glen Laker (1)

Saw program previous week (1)

Dewitt local paper (1)

Host (1)

Park office (1)

Wife (1)

Recommendation of family member (1)

Announced by rangers (1)

DNR office (1)

Kalamazoo Rec. Dept (1)

**23. What additional ways did you hear of FIP:**

Park staff (13)

Newspaper (5)

Friend (3)

Recommendation of a young person (2)

MI Natural Resources Magazine (2)

Flyers (2)

Someone at dock (2)

Muskegon Chronicle (1)

Library (1)

Michigan Living Magazine (1)

Battle Creek Shopper News (1)

Word of mouth (1)

From last year (1)

Telephone (1)

DNR office (1)

Junior ranger (1)

Adventure Ranger program (1)

Campground Hosts (1)

**FISHING IN THE PARKS**  
**1996 COMMUNICATIONS CAMPAIGN**  
**December 12, 1995**

**ORGANIZATIONAL BACKGROUND**

This communications campaign is being prepared for the Michigan Department of Natural Resources (MDNR) Fisheries Division and Parks and Recreation Division's "Fishing in the Parks" outreach program. The major elements of the campaign will be approved by the program's steering committee and implemented by MDNR staff in January of 1996.

This outreach program is being funded by the Fisheries Division with in kind support being granted by the additional program partners identified in the next section of this report. The Fisheries Division serves the citizens of Michigan on a statewide basis and is funded by three broad mechanisms: 1) Game and Fish Protection Fund, 2) Sport Fish Restoration Fund, and 3) General Funds. In 1995, 91 percent of the \$20,000,000 Fisheries Division budget was generated by the Game and Fish Protection Fund and the Sport Fish Restoration Fund. Both of these funds are derived from fishing license sales and excise taxes on fishing and boating equipment (MDNR 1995). Over the past 20 years license sales have been declining in proportion to the population growth in Michigan resulting in the loss of a considerable amount of revenue for the Fisheries Division (Fisheries Division 1994). The "Fishing in the Parks" program is an effort to reverse the decline in license sales over the next ten years by providing an opportunity for nonanglers and novices to learn how to fish.

The mission of the MDNR Fisheries Division is to protect and enhance the public trust in populations and habitat of fisheries and other forms of aquatic life, and promote optimum use of these resources for the benefit of the people of Michigan. (Fisheries Division 1994).

**CAMPAIGN RATIONALE**

During the summer of 1995, the Michigan Department of Natural Resources (MDNR) Fisheries Division and Parks and Recreation Division, in conjunction with Michigan State University's Department of Fisheries and Wildlife and Michigan United Conservation Clubs, sponsored over 100 fishing education programs in the Michigan State Parks. The "Fishing in the Parks" program was promoted by the partners using "traditional" media channels (i.e. newspapers, flyers, and radio). At the completion of each program, participants were asked to complete a survey about the "Fishing in the Parks" program, and 83% of adults responded. One section of the questionnaire asked how the participants first heard about the program. Because 53% of the respondents first heard of the program at the State Park, there exists a great need to develop a communication campaign to attract new or non-traditional MDNR program participants. In other words, an effective campaign will allow the MDNR to reach

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new and non-traditional users in addition to State Park campers. This effort will allow for greater citizen awareness of the State Parks and the "Fishing in the Parks" program.

**OBJECTIVES**

- 1) To increase awareness of the "Fishing in the Parks" program with the citizens of southern lower Michigan through public service announcements using a variety of media at minimal cost to the program.  
**Strategy:** The MDNR has several full time employees that are responsible for interacting with the media. They will send out the provided press releases to all local and state level newspapers, TV, and radio stations. The media specialists will also be responsible for following up with editors or other contacts and collecting clippings and other evidence of the information being published or broadcasted. Other MDNR employees that communicate with the media on a regular basis will be informed of the program and will be asked to "plug" it when appropriate.
- 2) To communicate with the program's target audiences (all with little or no fishing experience): 1) southern lower Michigan families with young children, 2) southern lower Michigan single parent, female heads of households and 3) Detroit, Lansing, and Flint urban youth (youth are being defined as less than 16 years of age.)  
**Strategy:** Flyers with information about the program will be distributed by direct mail or hand delivered with presentations to schools within a 30 mile radius of the program locations, regional Boy and Girl Scout Councils, 4-H county offices, and urban churches.
- 3) To increase exposure in the family, lifestyles, and travel sections of newspapers (as opposed to exclusive coverage in the outdoor section).  
**Strategy:** MDNR media specialists will be making personal contacts with editors to assure that the press release information is included in sections other than the outdoor section.
- 4) To increase program media coverage to 20% of all fishing programs having some form of media coverage.  
**Strategy:** Program instructors will be provided with local media contact names. Each program instructor will be responsible for inviting the media to the fishing programs and attempting to have at least one story for TV and one for print media. Steering committee members will be responsible for inviting live radio coverage to weekend special events that also have a fishing program.
- 5) To have television media exposure at 10 different programs.  
**Strategy:** Program instructors will be responsible having one fishing program covered by TV. MDNR media specialists will provide support and assist the instructors in making the necessary contacts.

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- 6) To recruit volunteer anglers from local angling groups to assist the fishing program instructors in teaching participants basic fishing skills.  
**Strategy:** Potential volunteers will be contacted by direct mail and asked to return a post card with the necessary re-contact information and will be added to a database for the instructor to use as needed. A limited number of presentations will be made at group meetings to recruit volunteers and inform them about the program. Michigan United Conservation Clubs (MUCC) will provide the names and addresses for the direct mailing.
  
- 7) To implement the campaign to attract at least 2,100 participants to the 1996 "Fishing in the Parks" program (double the 1995 participation rate).  
**Strategy:** At the conclusion of the summer participation registration forms will be totaled to determine if this goal was reached.
  
- 8) To decrease the number of participants who first hear of the program at the State Park to less than 25%. This decrease will indicate the campaign's success and increased exposure for the program and the State Parks.  
**Strategy:** This objective will be assessed at the conclusion of the summer by calculating the responses to the question, "How did you first hear of this program?" on the program evaluation questionnaire. The survey will be distributed to each participant at the conclusion of the fishing program.

## **DESCRIPTION OF THE PROGRAM**

"Fishing in the Parks" is a new program developed specifically for Michigan from existing fishing instruction materials. The program is intended to attract a target market/audience of non-angling families with young children, non-traditional anglers, and novice anglers. The specific goal of this program is to enhance participants' fishing skills in the hope that they will become well-informed and committed customers of the MDNR Fisheries Division. The program will feature day fishing programs offered each week at 12 State Parks and natural resource weekends offered once per summer at 3 State Parks thus, providing 15 different locations for participation throughout southern Michigan (These numbers do not include urban parks because the details are still being arranged). The goal of the programs is to provide basic fishing skills and the opportunity for repeat attendance to master fishing skills; while the weekends will allow for more intensive instruction on fishing and other natural resource information. The program will utilize the efforts of local volunteers to assist in organizing and instructing Fishing in the Parks. These volunteers will be recruited through the program partners of MDNR Fisheries Division, MDNR State Parks Division, Michigan United Conservation Clubs (MUCC), and Michigan State University's Department of Fisheries and Wildlife and Extension.

## **TARGET AUDIENCE ANALYSIS**

Survey results from the 1995 "Fishing in the Parks" program indicated: 78 percent of adults attended with their own child/children, 74% of the participants described their household as two adults with child/children, and 8% described their household as one adult with child/children. We are reaching the families with "young children" target market. However, other demographic information collected indicates that most participants fit the "typical" State Park user description. For example, 94% of 1995 adult participants were white, an average of 40 years old, and had completed an average of 15 years of education. Additionally, 90% of 1995 participants had visited State Parks in the past with an average of 20 years of visiting. These results are consistent with the 1986 Michigan State Parks Study. This information has caused the program's steering committee to question if we are reaching new clientele for the Michigan Department of Natural Resources.

The target markets for the 1996 "Fishing in the Parks" program are (all with little or no fishing experience): 1) southern lower Michigan families with young children, 2) southern lower Michigan single parent, female heads of households and 3) Detroit, Lansing, and Flint urban youth (youth are being defined as less than 16 years of age). Very little demographic and psychographic information exists in terms of each group's fishing involvement. In fact, the absence of this information justifies targeting these groups for this outreach program.

**Families with young children living in southern lower Michigan:**

- Certainly this program should be marketed as a fun, family activity.
- Families with children are very diverse and consist of people from all socio-economic, ethnic, and cultural backgrounds.
- Potentially, the campaign may need to target families from different socio-economic, ethnic, and cultural backgrounds using separate messages or techniques.

**Southern lower Michigan single parent, female heads of households:**

- Women made up 45.6% of the 1993 civilian labor force.
- In 1993, 27.9 million households were headed by women.
- Women influence 73 - 85% of all consumer product purchases.

**Urban youth living in Detroit, Lansing, and Flint Michigan:**

- The "Fishing in the Parks" program will be expanded in 1996 to include selected urban parks and fishing areas.
- Sixty-four percent of Americans live in urban/metro areas consisting of 1.7% of U.S. land area.
- Fishing instruction can be easily implemented into existing urban parks and recreation programs.

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**POSITION**

Clearly, the program partners of MDNR Fisheries Division, MDNR State Parks Division, Michigan United Conservation Clubs (MUCC), and Michigan State University's Department of Fisheries and Wildlife and Extension are in a unique position to offer this introductory fishing program.

**CAMPAIGN MESSAGE**

The campaign's message platform is—"learning to fish is quality family time that lasts a lifetime!" This message can be manipulated to suit the selected target audiences. For example families with young children may receive the message in this format—YOU + YOUR CHILDREN + STATE PARKS + DNR FISHING INSTRUCTOR = A LIFETIME OF FAMILY FUN; or QUALITY FAMILY FUN = YOU + YOUR CHILDREN + STATE PARKS + DNR FISHING INSTRUCTOR.

There is no "special offer" other than families will have the opportunity to spend quality time together and learn to fish for the cost of admission into the state park (\$4.00/day). There are many benefits for participants: very low cost family fun, learn a new skill, equipment provided for participants to try fishing, expert instructors available to help, free worms, can attend as many times as they like, and open to all who choose to participate! Special event packaging will occur during the natural resource weekend programs. During these weekends the fishing programs will be only one of the many activities offered at the selected state park.

**MEDIA SELECTION**

Because this campaign is being developed for a MDNR outreach program, there is very little money being allocated for the purchase of advertising time or space. Unfortunately, public sector agencies believe they should not spend "tax payer" money on advertising since they have been heavily criticized for advertising programs in the past. Therefore, the program will rely heavily on public service announcements and news coverage for news paper, radio and TV. Direct mail will be used to distribute flyers to local schools within a 30 mile radius of the program locations, regional Boy and Girl Scout Councils, 4-H county offices, and urban churches. Direct mail will also be utilized to develop a volunteer database.

**BUDGET**

|                                     |                                        |
|-------------------------------------|----------------------------------------|
| Communication campaign              | In-kind support MSU Graduate Assistant |
| Press releases and PSA's            | In-kind support MDNR Media Specialists |
| School flyer (\$0.03/flyer x 5,000) | \$150.00                               |

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**\$200.00**

**\$750.00**

**In-kind support MDNR and MSU**

**Included in MSU research grant**

**\$1,100.00**

**NOTE: This budget does NOT reflect the true cost of this campaign due to the in-kind support of the MDNR and MSU. Additionally, if this campaign were to purchase advertising time and space the budget would likely approach \$100,000.**

## TIMELINE

## Finalize communication campaign and park selection

## Finalize PSA's and program flyer

**Distribute flyers to selected park managers and staff, Direct mail to potential volunteers**

## Volunteer instructor training at MSU

## Follow-up with volunteers

**Distribute flyers to schools, youth organizations, and churches**  
**Issue press releases and prepare news stories.**

**Follow-up with media contacts about press release and program's first day for use as a news item.**  
**Follow-up with volunteers (MDNR instructors to call directly)**

**Continue to issue press releases, invite media to Fishing in the Parks, and write news stories about the program.**

**Continue to follow-up with media contacts.**

96 **Conclude program with thank you letters to all volunteers and media contacts.**

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**APPENDIX F**

**EVALUATION**

Campaign objectives will be compared to the results of the 1995 and 1996 participant surveys. Again in 1996, attendees will be asked how they first heard about the program as well as any additional ways they heard. Program instructors will also register all attendees at each clinic to monitor participation and build a clientele database. The database will be used to evaluate the "Fishing in the Parks" program by comparing the registrants to the license database during the next ten years.

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**APPENDIX G****Introduction to Fishing**

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**Best Time:** Any time before teaching the Goin' Fishing Lesson.

**Best Location:** A quiet atmosphere outdoors or indoors with plenty of room to cast.

**Time Required:** 30 to 45 min.

**Objectives:**

Participating young people and adults will:

1. Learn the fundamentals of safe fishing.
2. Learn two skills needed for fishing: knot tying and casting.
3. Have fun while learning.

**Roles for Teen and Junior Leaders:**

1. Help instructor demonstrate knot tying and casting.
2. Assist participants with knot tying and with casting.

**Potential Parental Involvement:**

Help their own or other children with activities.

**Equipment and materials:\***

**Casting:**

- 1 rod and closed face spinning reel per pair\*\*
- 1 casting plug per person. Store bought or a rubber eraser. Tie the line through a hole made through the eraser.

**Knot Tying:**

- Cotton rope, 1/2" inch in diameter and 30 inches long. One piece per two people.
- 1 washer or key ring per person

\*This session will go more smoothly if: all rods and reels are similar and if rods and reels are in good working order prior to this lesson. If you are not able to provide rods and participants bring their own, you might consider going over some basic maintenance information as a part of this lesson.

\*\*Instructions are only included for the closed face reels. This type of reel is easier for beginners to use and recommended for this lesson.

**APPENDIX G****Exhibit or Sharing Suggestions****Project for the fair**

1. Group Demonstration - describe the different types of fishing and the different equipment used with each type. eg: fly fishing, ice fishing, etc.
2. Exhibits - Research different types of knots and show pictures of how to tie them. Have actual tied knots at the exhibit.
3. Research the different equipment needed for the various types of fishing. Photograph or draw pictures of each type of equipment.

**For example:**

- A. Fly fishing: fly rod, waders, creel, net, hat
- B. Ice Fishing: rods, tip up, lures bait, bucket, hand-warmer.
- C. Shore fishing: rod/reel, bobbers, stringer, bucket, lures/worms/minnows.
- E. Illustrated talks - Show fishing rods and different ways that the reels work.

**Community service**

See the Goin' fishing lesson.

## APPENDIX G

### Presentation

#### Introduction:

#### The program basics:

1. knot tying
2. casting

#### I. Knot tying - palomar knot

1. Knot strength experiment

2. The importance of a strong knot

3. Demonstrate the knot using the rope and large washers, bolts or key rings. Then let the youth try it.

#### III. Basic parts of a rod

1. Handle

### Application

Tell them: "This is a very basic program about fishing. We are going to teach you all that you need to know to start fishing and then get you fishing as soon as possible. First we will start with knot tying and casting. Then we will move into the Goin' fishing program and fish!"

Ask one of the participants to tie a knot with fishing line onto a key ring for you, it is a good idea to pick someone who has not fished before. Tie a palomar knot on the other side, spit on it, and then have a tug of war.

Discuss why one knot broke and why a strong knot on fishing line is important. Mention that if the knots are not tied properly they may loose fish, as well as, tackle

Use five steps:\*

1. Thread line through hole.
2. Loop the thread through in same direction, so it is doubled.
3. Tie a simple overhand knot. (Like the first knot to tie shoes.)
4. Take loop end, put it over the end of hook
5. Tell them that if they are working with fishing line they would spit on it which helps to tighten the knot.

Point out each part of the rod and reel as it is mentioned and explain how each is used.

\*See lesson pictures provided in the end of this lesson narrative.

1. Handle - a place to hold on.  
Remember that you want to hold the rod with the reel facing up, to the sky.

**APPENDIX G****2. Closed face reel****3. Eyes or guides****4. Tip****2. Closed face reel - Thumb**

button, which releases the fishing line so it can cast. Cover - covers the inside of the reel, contains all the mechanisms which allow it to cast.

**3. Eyes - guide the fishing line to the tip.**

Why are these important? (because without them the line would not cast properly.)

**4. Tip- the thin end, usually flexible to play the fish, and so you can feel the fish better.****III. Casting Demonstration****1. Look behind you**

**Ask: "How can you be safe when casting?"**

If no one guesses the answer, take a rod and turn around in a circle dangling the casting plug above their heads. Besides not wanting to hit people, it is not fun to hook a large tree or bush that is behind you.

**2. Baseball analogy or clock analogy****Baseball:**

Think of how to throw overhand: move your arm back, aim, throw forward, and follow through.

1. Point your feet at the target and bring the rod back over the shoulder, far enough so the rod is not vertical.
2. Push in the line button and hold it down.
3. Bring the rod forward release the button before the rod is pointing at the target.
4. Follow through.

**Clock:**

Think of the hands of a clock and how they move.

1. Start by moving the rod back to 2:00, behind the shoulder.
2. Push the button down and hold it down.
3. Move the rod quickly up to 10:00 and release the button, allowing the rod to keep moving even after you have let go.

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## 3. Accuracy and aiming

Aim and accuracy improve with time. If the line casts into the ground, the button is being released too late. If line flies out without control the button was released too early.

## 4. Reeling in, the positioning of the rod tip.

Try to remember to point the tip of the rod at the ground as it is being reeled in. This helps to set the hook (which is explained later.) If the line does not reel in well, try pinching the line with your fingers as you reel. This gives the line tension as it enters the reel.

## 5. Tie on the casting plugs with a palomar knot. Remember to spit on the knot.

NOTE: Before casting, make sure all participants have "LOOK BEHIND YOU" imprinted in their heads.

## IV. Casting practice:

1. Cast at large targets: hoola hoops, or circles of string 1 yd. in diameter
2. Close casting

When the group first starts have the target 20 to 30 yards away.

As the group advances in skill move the target forward, 10 - 15 yards away and make diameter smaller. For most youth, the closer target forces them to be more accurate and to aim more carefully.

## 3. Casting under objects

If the group would like some challenge set up a casting course. Let them try casting under an object (a tree or a 2 by 4, five feet off the ground or casting between two close objects. Use your imagination and have fun.

## VI. Closure

## 1. Review

- A. Knots
- B. Parts of rod
- C. LOOK BEHIND YOU!
- D. Basics of casting.

A closure may be used or the next lesson, Goin' Fishing, may be taught. Just review what has happened in the lesson. Encourage the participants to remember most of it.

- A. Knots - "Who remembers the name of this knot?" Was it Pinto?
- B. Rod - "What is the name of this part?"
- C. "What is the most important part of casting?"  
(LOOK BEHIND YOU!)
- D. "How do we cast?"  
(Like a clock or throwing baseball...)

**APPENDIX G****Lesson Narrative****Knot tying**

There are special fishermen knots which hold the hook almost as strongly as the line. These knots are important to know because they help prevent the loss of line, hooks, bobbers, and fish. Basic knot strength can be shown with a simple experiment. Tie, with fishing line, an overhand knot and a palomar knot. Next try tug of war and see which knot wins.

The palomar knot can be taught in five simple steps. See the included diagram.

1. Thread the line through the hole once.
2. Loop the thread through in the same direction, so the line is doubled over through the hole. (This has the same effect as folding the line in half and sticking it through the hole.)
3. Tie a simple overhand knot, just like the first knot you use when you tie your shoes.
4. Take the loop end, put it over the end of the hook.
5. Spit on the knot and tighten it. The saliva allows the fishing line to slide smoothly and tighten firmly without weakening the line.

**Getting to know the rod and reel**

The parts of the rod and reel are important to know in order to better understand the cast. The tip of the rod is long and flexible. This flexibility helps with casting and "playing" the fish. Guides or eyes guide the fishing line along the rod.

**Casting Demonstration**

Casting is an activity where injury might occur! When casting, there is a razor sharp hook dangling at the end of a line. To avoid setting a hook in a person always follow the golden casting rule: **LOOK BEHIND YOU.**

Casting can be taught in two different ways: the baseball and the clock method. When a baseball is thrown, the thrower needs to wind-up, toss, aim, and follow-through. When casting a spin casting rod and reel:

1. Wind-up by looking over your shoulder and then moving the rod back.
2. Push the button in, holding it tight. Toss with an easy movement of the elbow and forearm.
3. Aim by releasing the button just before you are pointing at the target and follow through by keeping your rod moving after you have released the button.

For the clock method of casting, only two markers are needed: 10:00 and 2:00 o'clock.

1. Move your rod back to 2:00.
2. Push the button down and hold it tight.
3. Move your rod forward up to 10:00 and release the button.

While reeling in the rod, the tip should be pointed down to make setting the hook easier.

Aim and accuracy come with practice. After the basic techniques are learned, the rest comes with time, and practice makes perfect.

**APPENDIX G****Casting Practice**

To begin, it is easiest to cast at large targets from a distance. Start with targets approximately 5 meters from the casting line. As participants improve allow them to move closer to the targets so they can improve their aim and accuracy.

At this point the lesson can be smoothly tied in with the Goin' Fishing lesson or you can wrap up the program and talk about when you will be fishing next.

**Trouble Shooting**

Spin casting reels tend to have several basic problems:

1. Occasionally the fishing line does not have enough tension when it is being reeled in. This problem is solved by lightly pinching between the thumb and index finger in front of the reel, while taking up excess line. This action usually provides tension which helps prevent kinks in the line and birds nests. (A birds nest can be defined as a huge knot of line on your reel.)
2. The fishing line tends to become caught up under the mechanisms of the reel. Simply remove the screw-on cover and the top bolt, and untangle the line. Replace everything, and the reel should cast.
3. Sand can sometimes get into the reel. Take apart the reel, as mentioned above and rinse out the mechanisms. Then, grease the insides well with reel grease and reassemble.

**APPENDIX G****Goin' Fishing**

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**Objectives:**

Participating young people and adults will:

1. Learn how to rig their own rod and reel.
2. Bait their own hook.
3. Know how to: set the hook, remove it from the fishes' mouth, properly release the fish and/or keep the fish and clean it.
4. Have fun while learning.

**Roles for Teen and Junior Leaders:**

1. Assist with rigging the rod.
2. Help put bait on hooks.
3. Help locate a fishing spot.
4. Untangle lines, fix reels, and fish.

**Potential Parental Involvement:**

1. Assist youth
2. Assist leaders
3. Conduct fish fry

**Best time:** Fishing is fun any time, but cover the *Introduction to Fishing* lesson first. Seasonally late spring or early summer, when panfish are spawning is best. They offer the new angler many opportunities to catch something, ice fishing can also provide these same successes.

**Best Location:** A spot with numerous small fish that bite readily is better than an area with only few a, large, predator fish. Ponds, lake edges with plentiful panfish (bluegills, sunfish, perch); rivers with good access sites (docks etc.).

**Time required:** As much as is needed to relax and enjoy the moment plan on spending at least one and a half hours. Don't force youth to fish if they lose interest - take a break and come back to it.

**Equipment and Material:** Fishing rods, hooks, sinkers, bobbers, live and artificial bait.

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**Safety Considerations:**

1. Sunglasses or safety glasses to protect the eyes while casting. A hat with front bill (baseball cap) and suntan lotion are also recommended.
2. Use care when baiting the hook. Youths under age 7 or 8 will need supervision around hooks. It is an excellent idea to crimp the hook barb flat to make hook removal from fish (and people) easier.

**Extensions or ways of learning more**

- Find someone willing to be a mentor for young anglers.
- Take family and friends fishing
- Go to a bait shop and learn about the different types of tackle, rods and bait.

**Community service**

Go to a public park where people fish and spend time cleaning up the area.

**Exhibits**

Collect different types of rigging and lures and make an exhibit explaining each type, how they are used and their function.

**Links to other programs**

People must learn how to fish before they can fish. Once you learn to fish it is something which can be used for the rest of your life. Fishing is a quiet time: to learn patience, enjoy the outdoors and learn more about yourself.

Conduct the "Take Your Limit of Litter" Lesson

Conduct "The Fish Prints" Lesson

## APPENDIX G

### Presentation:

### Introduction:

### The program basics:

1. Catching the fish
2. Caring for the fish
3. Rigging
4. Baiting

### A. Catching the fish

1. Selecting the site
2. Holding the rod
3. Setting the hook

### C. Unhooking the fish

2. Handling
  - a. wetting your hands
3. Keeping
  - a. lines
  - b. buckets

### C. Fish Maintenance

1. Keeping the fish
  - a. lines
  - b. buckets

### 2. Taking the hook out

### Application

Tell them: "This program will teach you how to catch fish, handle the fish, "rig"

(prepare) your fishing line, and how to bait your own hook."

Each participant will want to select a place to fish on the water. They will want to pay attention to what their surroundings are, e.g. trees behind them, bushes at their sides. The place that they select may affect the way they cast - either sideways or over the shoulder casting.

The rod needs to be angled slightly toward the water. This allows the hook to be set, and prevents excess slack in the line. Set the hook. After the bobber bobs up and down, with a quick swift jerk of the wrist. This sets the hook inside the fishes mouth, so the fish is less likely to be lost.

Before handling a fish, wet hands. Explain: Fish slime (the mucus on the outside of the fish) is like the mucus in our nose. Mucus protects us by catching germs and trapping dust we breathe in through our nose and mouth. In the same way, mucus protects the fish and allows the fish to move more easily through the water. If your hands are wet before handling the fish, less of the mucus layer will be removed while the fish is handled.

After the fish is caught what will be done with it? Will it be kept or released? If you are releasing the fish make sure that the participants understand the importance of proper releasing.

The hook usually comes out with a little coaxing and wiggling. If the hook has been swallowed the best option is to cut the line.

### 3. Bent vs. Barbed

### D. Rigging

**APPENDIX G****1. Line**

Teach rigging from the end of the line back toward the rod. As you explain rigging let the participants guess what will go on the fishing line next. Explain each part as it is put on the line.

**2. Swivel (optional)**

Fishing line should be smooth Any nicks or tangles can cause line breakage and should be removed. Visually inspect the lower 12 inches of line and run your fingers along it. If there are kinks or nicks, smooth them out or cut that portion of the line off.

**3. Hook**

Swivel- keeps turning so the line isn't tangled.

**4. Weight**

Hook - holds the worms on, brings the fish in.

**5. Bobber**

Weight - helps the bait sink to the bottom.

**6. Participants rig**

Bobber - Keeps the bait from dragging on the bottom and bobs up and down if a fish is on the line.

**7. Holding the rod**

Each participant should have the necessary tackle(listed above) to rig up a fishing rod.

Wrap the fishing line round the rod and attach the hook on the metal part of the guide. If it is placed on the ceramic portion of the guide it may chip the inside of the guide. This can cause line to get caught in the chips, weakening the line.

Hooks can have the barbs bent back on them. The barbs that are flattened make it easier to get the fish off the hook. This provides the best opportunity for the fish to survive.

**E. Bait****1. Live bait**

- a. leaf worms
- b. crawlers

## APPENDIX G

### 2. Artificial

- a. jigs
- b. worms

### F. Fishing

- 1. Remember to look behind first!
- 2. Take pictures

### G. The fish fry

- 1. Biology lesson in filleting
- 2. Eating and talking

### H. Conclusion

Live bait can be bought or found almost anywhere. Depending on the season leaf worms and night crawlers are the best to buy. Show them how to put the worm on the hook.

Some children are squeamish about live bait. Tell them that if they pick up the worm you will put it on. By the end of the time they should have forgotten their fear and started to bait the hook.

Another trick is to let them practice with gummy worms, they don't wiggle as much.

Artificial lures can be helpful if the child will not touch the live bait, but only use them if a youth will not participate otherwise. Artificial bait is generally not as successful for novice anglers.

Jigs are played across the bottom of the lake, or plastic worms can be used instead of live worms.

Before sending participants off to fish remind them to **LOOK BEHIND BEFORE CASTING!**

Take pictures if you are not keeping the fish they can be kept forever.

If there are enough fish caught, try a fish fry.

If the participants are interested show them how to fillet a fish and point out the different parts of the fish.

Gather the group together and have them talk about the day – the high points and the fun time fishing, things that they learned, things that they enjoyed. If not many fish were caught discuss other elements of the outing that were fun.

## APPENDIX G

### Lesson Narrative

Now that the Introduction to Fishing Lesson has been taught the children are ready for the last few preparations before fishing.

In order to catch a fish a site must be selected. Shore fishing is a good first time experience for fishing and there are two types: shore and pier. Bass, northern pike, sunfish, and stream trout are fish which live and hunt in cover, so they can be caught in weedy, loggy areas. Carp, catfish, suckers, perch, and walleye are bottom feeders. They can be caught near the shore where the appropriate food source is found. Sometimes piers are available to fish from. These structures are built of wood or stone and allow anglers to cast into deeper water than would be possible from shore.

### Fish Maintenance

Many anglers practice catch and release. This gives them a chance to have fun fishing without impacting the fish population. If a fish is not released properly there the chances for the fish to survive will be greatly decreased.

Proper release of a fish can be simple if the hook is unbarbed and has not been swallowed. If it is possible take the hook out while the fish is under water. If the fish must be removed from the water, wet your hand before picking up the fish. The fishes slime is an important part of their immune system. In humans, mucus prevents harmful germs from entering our noses and lungs. Fish mucus keeps harmful germs from attacking the fishes body. A wet hand can keep the mucus layer from being wiped off and dried out.

If a fish swallows a hook and it can not be removed from the fish, cut the line attached to the hook and place the fish back into the water. These actions will give the fish the best opportunity for survival.

To keep fish alive until you are ready to clean and cook them, place them in a bucket full of water or keep them on a stringer through their mouth and/or gills.

### Rigging

An easy way to rig is to start at the end of the rod and work up to the tip. The first piece to go on the fishing line is the swivel, if it is available. The snap swivel is similar to a turning safety pin. Tie it on with a palomar knot. Next is the hook, usually a snelled hook, (one with a line attached to it.) Open the snap swivel and put the hook on it. Place the split shot or weight above the swivel. If you are fishing for small fish, like bluegills only one weight is needed to help the hook sink to the bottom. Finally the bobber. There are several different ways to attach a bobber, but usually wrapping it around both ends works well. When walking with the rod be careful not to hook anyone. Attach the hook to the metal part of one of the guides. This is because placing it on the ceramic part may chip the inside which makes casting more difficult. Hold the rod vertically when walking so no one will get poked with the tip.

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Hooks can have the barbs easily bent back with a pair of pliers. This allows for easier hook removal from the fishes mouth and from clothes.

**Bait**

There are many different types of live bait and several methods of attachment. Two good types for beginners are leaf worms and night crawlers. Two easy ways to hook them:

1. Split the worm in halves or quarters and hook it near both ends leaving a "loop."
2. Thread the worm up the hook so that it covers the hook (like putting on a sock).

Artificial worms work well, although sometime the fish won't hit them (hitting is when the fish grabs the bait). Jigs are used without bobbers and are "bounced" along the bottom. The hits are felt rather than seen.

Fish filleting provides an excellent opportunity for identifying the different internal parts of the fish, sex and external anatomy.

**Fishing**

Remind the anglers to always look behind them before casting as they start to fish. If the fish are not being kept to eat, bring a camera and take pictures of the fish and the youth. Bring fish identification books and try to distinguish the different fish species caught but try to return the fish to the water as soon as possible.

**Fish Fry**

If the children are interested allow them to watch and help with fish filleting. They can see the different parts of the fish and their functions. While the children eat discuss the highlights of the day.

**APPENDIX G****Basic Tackle Box Supplies**

- 1-2            **Casting Plugs ( Just in case you want to practice casting)**
- 5-8            **Small to medium bobbers.** Bobbers come in a variety of sizes and shapes. Choose a few different ones to see what you like best.
- 15-20        **Fishing Hooks**(fishing hooks come in a variety of sizes) Remember, the smaller the hook the smaller the fish you will probably be fishing for. Size 6 is usually a good one for pan fish.
- 1              **Package of snap swivels.** Swivels come in handy for putting on lures. It makes it much easier to switch your lures around.
- 1              **Pair of needle nose pliers or hemostats.** These tools come in real handy your fish is not willing to give up the hook.
- 1              **Pair of toe nail clippers,** which are great for cutting line and saves on dental work.
- 1              **Stringer** (if you plan on keeping your catch)
- 1              **First aid kit.** Always a good idea to have bandages, sunscreen, aspirin, etc.... in case of emergency.
- 1              **Current Fishing Guide** with the regulations for the year

You may add **artificial bait and lures** to your box as you go. Just be careful I have seen men who can not stop buying lures once they start. They claim it is addicting.

Feel free to customize your tackle box everyone will want to add or delete certain items. This list is just to give you an idea of what you will need.

**Good Luck and Happy Fishing!!!!**

## **PROGRAM INSTRUCTOR AND ADVENTURE RANGER FEEDBACK**

### **1995 Fishing Instructor Feedback**

Instructor feedback/program evaluation was conducted at an end-of-season meeting with some of the steering committee members. The five Fishing in the Parks program instructors were asked the questions listed below in bold, and then given several minutes for each question to prepare a hand written response (this technique is known as “free writing”). Finally, each question was discussed by those in attendance. The following is a compilation of all written responses from the five staff members. The numbers in the parentheses represent the number of times that particular response was given (e.g., a three would indicate that three of the five staff members gave the same or a very similar response to that particular question).

#### **Which parks were the best and worst?**

**Best:** Pontiac Lake; Maybury; Fort Custer; Tawas State Park (2) weekend.

**Worst:** Proud Lake ( 2); Muskegon; Yankee Springs; Lake Goebic (2) weekend.

#### **What would you comment on regarding the Adventure Rangers?**

Adventure Rangers should be trained to instruct the program (3).

Keep the training program at Kettenun Center with the Adventure Rangers.

Wished Adventure Rangers would have felt like this was part of their program week.

Adventure Rangers should have an active role in promoting the program.

They should be really good with children.

Some Adventure Rangers scheduled other programs that conflicted with the fishing programs (2).

#### **Describe the “ideal park” for this type of program?**

Helpful park staff that assist at the programs (5).

Good Fishing (5).

Near the campground (5).

Picnic tables and pavilion close by (3).

Park staff advertise the program (3).

Has an Adventure Ranger (3).

Near urban areas (3).

Bathroom facilities close by (2).

Good fishing pier (2).

Family oriented (2).

Plenty of parking.

Volunteers who enjoy sharing fishing knowledge with others.

Park staff informed about the program and why it is being done.



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Good location to find from the road.  
Open area for practice casting.  
No weeds.

**Suggestions for getting volunteers involved.**

Recruit from sportsman clubs, Friends of the Park, and Park Staff (2).  
Advertise for volunteers (2).  
Start finding them early.  
Visit clubs personally.  
Schedule volunteers in advance.  
Had a difficult time recruiting volunteers and never knew if they would show up.  
Offer incentives (free State Parks passes, free fishing licenses, fishing lures...).  
Recruit repeat participants as volunteers.  
Find enough volunteers so they do not have to come every week, unless they want to.

**What equipment did you use?**

Fishing rods, tackle box, fish identification chart, clippers/hemostats, casting plugs, training materials, rigging tackle (split shot, barbless hooks, bobbers), knot tying ropes and eye bolts, and worm coolers.

**What equipment did you need?**

Smaller hooks, towel, hand outs for knots and fish habitat, fun casting targets, tiny rods for smaller kids, pails, and an assortment of artificial lures to show and demonstrate use.

**What training did you use?**

Knot tying(4).  
Fishing/casting (3).  
Fish identification (3)  
Instructor Manual (2).  
Taking fish off the hook.  
Hooked On Fishing Not On Drugs (HOFNOD) materials.  
Lesson plans.

**What training did you need?**

More information (facts) about fish (2).  
More about specific types of fishing (bass, walleye, bullhead) (2).  
More about lures (2).  
Where to fish.  
How to handle different types of fish.  
More on aquatic ecology.  
Projects Wet and Wild instead of HOFNOD.

**1996 Adventure Ranger Feedback**

Adventure Ranger feedback/program evaluation was conducted by sending each Ranger and open-ended survey that asked the questions listed below in bold. The following is a compilation of all written responses from all ten Adventure Rangers that taught the program in 1996. The numbers in the parentheses represent the number of times that particular response was given (e.g., a three would indicate that three of the ten Adventure Rangers gave the same or a very similar response to that particular question).

**How did you advertise this program?**

Posters/flyers in the park(9).

Weekly schedule of events(5).

Press releases/tip sheets (5).

Posters/flyers in local bait shop, nature centers, community center, and library (3).

Personal campsite visits.

Brochure of park events.

Sandwich-boards at the gates.

**Did you make any media contacts?**

TV 13 in Grand Rapids morning news (Muskegon).

Monroe Evening News (Sterling).

Radio--WKZO, WKFR, and WBCK (Ft. Custer).

Kalamazoo Gazette and Battle Creek Enquirer (Ft. Custer).

Flint Journal, County Press, Good News Newsletter (Metamora).

Radio--WMPC, WKYO, WWGZ, and WMIC (Metamora).

Ionia Sentinel (Ionia).

Radio-- WION (Ionia).

Brooklyn Newspaper, Clinton Newspaper, The Herald, The Exponent (Hayes).

Radio--WJKN (Hayes).

Ann Arbor News, Oakland Press, Brighton Argus, Livingston County Press (Island Lake).

Radio--93.5 (Island Lake).

Local newspapers (2).

Live TV news cast.

**What additional equipment would you request?**

More poles (3).

More large hooks to teach knot tying (2).

More tackle provided (2).

More hooks (2).

Smaller hooks.

Stick bobbers.

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**Extra hemostats/clippers.**

**Pliers.**

**Towel.**

**Net.**

**Account at local bait shop.**

**Some advanced rods and reels.**

**What additional training would you like to have?**

**Fish ID and biology (parts) (3).**

**Fishing regulations (3).**

**How to keep the rods from tangling together (2).**

**How to repair equipment (2).**

**More about lures and other popular ways to fish.**

**Advanced fishing skills to help repeats "grow-up with fishing."**

**General fishing knowledge.**

**Other comments and suggestions.**

**Always have MSU assistants help out with the program (3).**

**Recruit more volunteers (3).**

**Evaluations/surveys too long (2).**

**Invite local groups to programs (seniors, scouts).**

**Have an additional instructor for busy parks like Yankee Springs.**

**Separate budget for worms, tackle, etc., it gets costly.**

**Had more fun than I thought.**

**Learned a lot about fishing.**

**I enjoyed [teaching] the program much to my surprise.**

**Would like to have Tuesday nights free.**

**Adventure Rangers are not the people ideal as the main teacher--most of us know little about fishing.**

**The program was a real HIT!**

**I had a great time with this program.**

**This program was always well received.**

**Send park managers more information about the program.**

**Have the advanced lessons for repeat participants to the program.**

## **APPENDIX I**

### **Supplemental Data Analysis**

Table I-1. Description of youth participants in Fishing in the Parks in 1995 and 1996.

| Descriptive questionnaire variables                             |  | 1995<br>mean (s.d.) | 1996<br>mean (s.d.) | T-value | d.f. | p    |
|-----------------------------------------------------------------|--|---------------------|---------------------|---------|------|------|
| <b>Fishing activity indicators</b>                              |  |                     |                     |         |      |      |
| Number of years have gone fishing at least once in last 5 years |  | 2.83 (1.75)         | 2.55 (1.74)         | 2.12    | 727  | .034 |
| Days fished last summer                                         |  | 8.53 (12.3)         | 7.77 (11.0)         | 0.85    | 693  | .394 |
| Days fished last fall                                           |  | 3.45 (8.9)          | 1.57 (5.4)          | 3.12    | 400  | .002 |
| Days fished last winter                                         |  | 1.34 (4.5)          | 0.63 (2.3)          | 2.41    | 370  | .016 |
| Days fished this spring                                         |  | 3.99 (7.6)          | 2.55 (7.1)          | 2.50    | 545  | .013 |
| Usually watch fishing or outdoor shows <sup>1</sup>             |  | 2.05 (0.89)         | 2.04 (0.89)         | 0.16    | 772  | .871 |
| Often talk with my friends about fishing <sup>1</sup>           |  | 2.27 (0.85)         | 2.25 (0.85)         | 0.29    | 769  | .770 |
| Frequently read about fishing <sup>1</sup>                      |  | 2.36 (0.78)         | 2.35 (0.82)         | 0.24    | 767  | .814 |
| Ask for or buy own fishing equipment <sup>1</sup>               |  | 1.73 (0.88)         | 1.77 (0.89)         | 0.61    | 772  | .539 |
| <b>Age in years</b>                                             |  | 9.95 (4.52)         | 9.27 (2.67)         | 2.65    | 791  | .008 |
| <b>Grade entering in the fall</b>                               |  | 4.76 (2.46)         | 4.37 (2.58)         | 2.13    | 795  | .033 |

<sup>1</sup> Where 1 = yes, 2 = maybe, 3 = no

Table I-2. Nominal data description of youth participants in Fishing in the Parks in 1995 and 1996.

| Descriptive questionnaire variables                       |  | 1995<br>%<br>responding | 1996<br>%<br>responding | $\chi^2$ | d.f. | p    |
|-----------------------------------------------------------|--|-------------------------|-------------------------|----------|------|------|
| <b>Fishing activity indicators</b>                        |  |                         |                         |          |      |      |
| Have attended fishing derbies or other fishing events     |  | 18                      | 24                      | 4.88     | 1    | .027 |
| Have not attended fishing derbies or other fishing events |  | 82                      | 76                      |          |      |      |
| <b>Have fished before</b>                                 |  | 90                      | 89                      | 0.02     | 1    | .701 |
| Have not fished before                                    |  | 10                      | 11                      |          |      |      |
| <b>Sex</b>                                                |  |                         |                         |          |      |      |
| Female                                                    |  | 37                      | 45                      | 5.08     | 1    | .024 |
| Male                                                      |  | 63                      | 55                      |          |      |      |
| <b>Race</b>                                               |  |                         |                         |          |      |      |
| White                                                     |  | 90                      | 93                      | 14.98    | 6    | .020 |
| Black                                                     |  | 7                       | 2                       |          |      |      |
| Hispanic                                                  |  | 2                       | 2                       |          |      |      |
| Asian                                                     |  | 1                       | 1                       |          |      |      |
| American Indian                                           |  | 0                       | 1                       |          |      |      |
| Multiracial                                               |  | <1                      | <1                      |          |      |      |
| Other ethnicity                                           |  | <1                      | <1                      |          |      |      |
| <b>Residency</b>                                          |  |                         |                         |          |      |      |
| Michigan resident                                         |  | 95                      | 90                      | 0.57     | 1    | .452 |
| Not a Michigan resident                                   |  | 5                       | 10                      |          |      |      |

Table I-3. Satisfaction levels of youth participants in Fishing in the Parks in 1995 and 1996.

| Questionnaire variables for satisfaction.          |  | 1995<br>mean (s.d.) | 1996<br>mean (s.d.) | T-value | d.f. | p     |
|----------------------------------------------------|--|---------------------|---------------------|---------|------|-------|
| Instructor rating <sup>1</sup>                     |  | 4.62 (0.85)         | 4.30 (0.97)         | 4.96    | 752  | <.001 |
| Program rating <sup>1</sup>                        |  | 4.62 (0.83)         | 4.17 (1.02)         | 6.80    | 753  | <.001 |
| Satisfied the program helped them to: <sup>2</sup> |  |                     |                     |         |      |       |
| Learned new fishing skills                         |  | 1.45 (1.32)         | 1.32 (0.77)         | 1.53    | 469  | .126  |
| Able to fish on their own                          |  | 1.73 (1.62)         | 1.58 (1.04)         | 1.47    | 495  | .141  |
| Learned about fish                                 |  | 1.89 (1.73)         | 1.67 (0.92)         | 2.08    | 442  | .038  |
| Got better with fishing skills                     |  | 1.51 (1.44)         | 1.33 (0.78)         | 2.05    | 446  | .041  |
| Were better able to use fishing equipment          |  | 1.55 (1.53)         | 1.37 (1.01)         | 1.77    | 505  | .078  |
| Meet new people                                    |  | 2.04 (1.95)         | 1.55 (1.08)         | 4.40    | 444  | <.001 |
| Became more interested in fishing                  |  | 1.64 (1.50)         | 1.35 (0.80)         | 3.18    | 442  | .002  |
| Enjoyed time outdoors                              |  | 1.29 (0.98)         | 1.19 (0.57)         | 1.63    | 461  | .104  |

<sup>1</sup> Where 1 = poor, 3 = good, 5 = excellent.<sup>2</sup> Where 1 = yes, 2 = sort-of, 3 = no.

**Table I-4. Expectations of youth participants concerning catching fish at Fishing in the Parks in 1995 and 1996.**

| <b>Questionnaire variables for youth fishing expectations and catch.</b> | <b>1995 % responding</b> | <b>1996 % responding</b> | <b><math>\chi^2</math></b> | <b>d.f.</b> | <b>p</b> |
|--------------------------------------------------------------------------|--------------------------|--------------------------|----------------------------|-------------|----------|
| <b>Expected to catch fish</b>                                            | 73                       | 77                       | 1.81                       | 1           | .178     |
| <b>Did not expect to catch fish</b>                                      | 27                       | 23                       |                            |             |          |
| <b>Caught fish</b>                                                       | 81                       | 76                       | 3.19                       | 1           | .074     |
| <b>Did not catch fish</b>                                                | 19                       | 24                       |                            |             |          |
| <b>Kept the fish caught</b>                                              | 9                        | 9                        | 0.09                       | 1           | .769     |
| <b>Did not keep the fish caught</b>                                      | 91                       | 91                       |                            |             |          |

Table I-5. Post-program intentions of youth participants in Fishing in the Parks in 1995 and 1996.

| Questionnaire variables for post-program intentions.                                                              | 1995            |           |            | $\chi^2$ | d.f. | p     |
|-------------------------------------------------------------------------------------------------------------------|-----------------|-----------|------------|----------|------|-------|
|                                                                                                                   | %<br>responding | 1996<br>% | responding |          |      |       |
| Post-program intentions of youth:<br>will go fishing again<br>might go fishing again<br>will not go fishing again | 86              | 88        |            | 2.79     | 2    | .248  |
|                                                                                                                   | 14              | 10        |            |          |      |       |
|                                                                                                                   | <1              | 1         |            |          |      |       |
| will buy a rod or tackle<br>might buy a rod or tackle<br>will not buy a rod or tackle                             | 44              | 52        |            | 11.4     | 2    | .003  |
|                                                                                                                   | 41              | 29        |            |          |      |       |
|                                                                                                                   | 15              | 19        |            |          |      |       |
| will attend another program<br>might attend another program<br>will not attend another program                    | 36              | 59        |            | 38.7     | 2    | <.001 |
|                                                                                                                   | 53              | 33        |            |          |      |       |
|                                                                                                                   | 11              | 8         |            |          |      |       |

Table I-6. Description of adult participants in Fishing in the Parks in 1995 and 1996.

| Descriptive questionnaire variables.                                               |  | 1995<br>mean (s.d.) | 1996<br>mean (s.d.) | T-value | d.f. | p    |
|------------------------------------------------------------------------------------|--|---------------------|---------------------|---------|------|------|
| <b>Fishing activity indicators</b>                                                 |  |                     |                     |         |      |      |
| Number of years had purchased a license during the past 5 years                    |  | 1.96 (2.04)         | 1.84 (1.96)         | 0.65    | 507  | .515 |
| Number of years had gone fishing at least once in last 5 years                     |  | 2.53 (2.07)         | 2.36 (2.00)         | 0.96    | 512  | .338 |
| Days fished last summer                                                            |  | 6.82 (10.7)         | 7.53 (13.1)         | 0.07    | 502  | .504 |
| Days fished last fall                                                              |  | 2.55 (6.1)          | 2.47 (6.3)          | 0.14    | 471  | .885 |
| Days fished last winter                                                            |  | 1.52 (6.5)          | 1.94 (9.0)          | 0.58    | 462  | .565 |
| Days fished this spring                                                            |  | 2.47 (5.6)          | 2.59 (6.4)          | 0.22    | 471  | .830 |
| <b>Importance of fishing compared to other recreational activities<sup>1</sup></b> |  |                     |                     |         |      |      |
|                                                                                    |  | 3.95 (1.44)         | 4.10 (1.41)         | 1.27    | 570  | .205 |
| <b>Degree of fishing involvement<sup>2</sup></b>                                   |  |                     |                     |         |      |      |
| Frequently watched fishing or outdoor shows                                        |  | 3.14 (1.32)         | 3.32 (1.31)         | 1.69    | 577  | .092 |
| Frequently visited stores to view new fishing equipment                            |  | 3.44 (1.27)         | 3.70 (1.19)         | 2.49    | 574  | .013 |
| Frequently read about fishing                                                      |  | 3.53 (1.20)         | 3.70 (1.15)         | 1.73    | 573  | .085 |
| Fishing says a lot about who I am                                                  |  | 3.68 (1.17)         | 3.86 (1.10)         | 1.90    | 566  | .058 |
| Often talked with friends about fishing                                            |  | 3.39 (1.28)         | 3.57 (1.20)         | 1.74    | 568  | .082 |
| Spent a great deal of money on fishing                                             |  | 3.86 (1.13)         | 4.06 (1.01)         | 2.22    | 565  | .027 |
| Found that a lot of their life was organized around fishing                        |  | 4.06 (1.05)         | 4.22 (0.96)         | 1.97    | 572  | .049 |
| Enjoyment of fishing had influenced where they lived                               |  | 4.00 (1.05)         | 4.14 (1.06)         | 1.65    | 573  | .099 |
| Maintained a membership in a fishing related organization                          |  | 4.25 (1.02)         | 4.46 (0.87)         | 2.64    | 566  | .008 |
| Enjoyment of fishing had influenced vacation destinations                          |  | 3.54 (1.29)         | 3.57 (1.32)         | 0.27    | 574  | .778 |
| Owned a recreational property primarily to be close to fishing.                    |  | 4.20 (1.02)         | 4.30 (1.07)         | 1.18    | 567  | .240 |

Table I-6 (cont'd).

| Descriptive questionnaire variables.                                                                                                                                                                                          |  | 1995<br>mean (s.d.) | 1996<br>mean (s.d.) | T-value | d.f. | p    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------|---------------------|---------|------|------|
| <b>Michigan State Park usage</b>                                                                                                                                                                                              |  |                     |                     |         |      |      |
| Number of years visited Michigan State Parks                                                                                                                                                                                  |  | 20.1 (13.7)         | 19.0 (12.6)         | 1.01    | 531  | .311 |
| Number of days visited Michigan State Parks last year                                                                                                                                                                         |  | 11.7 (10.7)         | 14.1 (13.1)         | 2.35    | 530  | .019 |
| Last visited a Michigan State Park (if not visited in the previous year)                                                                                                                                                      |  | 1987 (5.8)          | 1988 (9.9)          | 0.19    | 36   | .853 |
| <b>Demographic background</b>                                                                                                                                                                                                 |  |                     |                     |         |      |      |
| Age                                                                                                                                                                                                                           |  | 41.7 (9.89)         | 41.0 (9.77)         | 0.94    | 557  | .834 |
| Highest level of education completed                                                                                                                                                                                          |  | 15.12 (3.0)         | 14.34 (2.4)         | 3.46    | 566  | .001 |
| Total household income before taxes<br>(1= to \$9,999, 2= to \$19,999, 3= to \$29,999, 4= to \$39,999, 5= to \$49,999,<br>6= to \$59,999, 7= to \$69,999, 8= to \$79,999, 9= to \$89,999, 10= to<br>\$99,999, 11= >\$100,000) |  | 5.54 (1.90)         | 5.43 (2.31)         | 0.55    | 445  | .582 |

<sup>1</sup> Where 1 = most important, 2 = more important, 3 = important, 4 = somewhat important, 5 = slightly important, and 6 = not important.

<sup>2</sup> Where 1 = strongly agree, 2 = agree, 3 = neutral, 4 = disagree, 5 = strongly disagree.

Table I-7. Nominal data description of adult participants in Fishing in the Parks in 1995 and 1996.

| Descriptive questionnaire variables.                              |  | 1995 %<br>responding | 1996 %<br>responding | $\chi^2$ | d.f. | p    |
|-------------------------------------------------------------------|--|----------------------|----------------------|----------|------|------|
| <b>Fishing activity indicators</b>                                |  |                      |                      |          |      |      |
| Attended fishing clinics, derbies or other fishing events         |  | 10                   | 11                   | 0.16     | 1    | .688 |
| Had not attended fishing clinics, derbies or other fishing events |  | 90                   | 89                   |          |      |      |
| Attended events held during "Free Fishing Days"                   |  | 38                   | 37                   | 0.10     | 1    | .921 |
| Attended events not held during "Free Fishing Days"               |  | 62                   | 63                   |          |      |      |
| Belonged to a fishing organization                                |  | 4                    | 2                    | 0.92     | 1    | .338 |
| Did not belong to any fishing organizations                       |  | 96                   | 98                   |          |      |      |
| Had fished before                                                 |  | 87                   | 85                   | 0.24     | 1    | .621 |
| Had not fished before                                             |  | 13                   | 15                   |          |      |      |
| Had a current Michigan Fishing License                            |  | 42                   | 43                   | 0.06     | 1    | .812 |
| Did not have a current Michigan Fishing License                   |  | 58                   | 57                   |          |      |      |
| Attended the program with someone who never fished before         |  | 35                   | 35                   | 0.00     | 1    | .973 |
| Attended the program with someone who had fished before           |  | 65                   | 65                   |          |      |      |
| <b>Household composition</b>                                      |  |                      |                      |          |      |      |
| adult no children                                                 |  | 4                    | 4                    | 7.76     | 5    | .170 |
| 1 adult w/children                                                |  | 8                    | 10                   |          |      |      |
| 2 adults no children                                              |  | 11                   | 9                    |          |      |      |
| 2 adults w/children                                               |  | 74                   | 76                   |          |      |      |
| 3 or more adults no children                                      |  | <1                   | 1                    |          |      |      |
| 3 or more adults with children                                    |  | 2                    | 0                    |          |      |      |

Table I-7 (cont'd).

| Descriptive questionnaire variables.                              |  | 1995 %<br>responding | 1996 %<br>responding | $\chi^2$ | d.f. | p    |
|-------------------------------------------------------------------|--|----------------------|----------------------|----------|------|------|
| Attended the program with:                                        |  |                      |                      |          |      |      |
| alone                                                             |  | 2                    | 3                    | 0.47     | 1    | .493 |
| spouse                                                            |  | 25                   | 25                   | 0.04     | 1    | .833 |
| own child                                                         |  | 78                   | 80                   | 0.51     | 1    | .476 |
| grandchild                                                        |  | 9                    | 9                    | 0.05     | 1    | .817 |
| other child                                                       |  | 18                   | 18                   | 0.01     | 1    | .929 |
| teenage friend                                                    |  | <1                   | 1                    | 0.30     | 1    | .583 |
| another adult                                                     |  | 10                   | 9                    | 0.25     | 1    | .620 |
| other                                                             |  | 6                    | 4                    | 1.43     | 1    | .231 |
| Michigan State Park usage                                         |  |                      |                      |          |      |      |
| Visited this State Park specifically to attend this program       |  | 44                   | 37                   | 3.74     | 1    | .053 |
| Did not visit this State Park specifically to attend this program |  | 56                   | 63                   |          |      |      |
| First visit to THIS Michigan State Park                           |  | 31                   | 28                   | 0.50     | 1    | .479 |
| Was not first visit to THIS Michigan State Park                   |  | 69                   | 72                   |          |      |      |
| Have visited other Michigan State Parks                           |  | 90                   | 87                   | 1.56     | 1    | .212 |
| Have not visited other Michigan State Parks                       |  | 10                   | 13                   |          |      |      |
| Purchased a Daily State Park permit                               |  | 30                   | 26                   | 0.94     | 1    | .333 |
| Did not purchase a Daily State Park permit                        |  | 70                   | 74                   |          |      |      |
| Purchased an Annual State Park permit                             |  | 78                   | 84                   | 3.30     | 1    | .069 |
| Did not purchase an Annual State Park permit                      |  | 22                   | 16                   |          |      |      |

Table I-7 (cont'd).

| Descriptive questionnaire variables.                  |  | 1995 %<br>responding | 1996 %<br>responding | $\chi^2$ | d.f. | p     |
|-------------------------------------------------------|--|----------------------|----------------------|----------|------|-------|
| <b>Michigan State Park usage (cont'd)</b>             |  |                      |                      |          |      |       |
| Were camping in this State Park during this visit     |  | 44                   | 64                   | 24.23    | 1    | <.001 |
| Were not camping in this State Park during this visit |  | 56                   | 36                   |          |      |       |
| <b>Sex</b>                                            |  |                      |                      |          |      |       |
| Female                                                |  | 43                   | 52                   | 4.31     | 1    | .038  |
| Male                                                  |  | 57                   | 48                   |          |      |       |
| <b>Current marital status</b>                         |  |                      |                      |          |      |       |
| Single                                                |  | 9                    | 9                    | 2.22     | 1    | .329  |
| Married                                               |  | 85                   | 82                   |          |      |       |
| Divorced/widowed                                      |  | 6                    | 9                    |          |      |       |
| <b>Race</b>                                           |  |                      |                      |          |      |       |
| White                                                 |  | 94                   | 94                   | 11.18    | 5    | .048  |
| Black                                                 |  | 5                    | 2                    |          |      |       |
| Hispanic                                              |  | 1                    | 2                    |          |      |       |
| Asian                                                 |  | <1                   | 0                    |          |      |       |
| American Indian                                       |  | 0                    | 2                    |          |      |       |
| Multiracial                                           |  | <1                   | <1                   |          |      |       |
| Other                                                 |  | 0                    | 0                    |          |      |       |

Table I-7 (cont'd).

| Descriptive questionnaire variables.                       |  | 1995 %<br>responding | 1996 %<br>responding | $\chi^2$ | d.f. | p    |
|------------------------------------------------------------|--|----------------------|----------------------|----------|------|------|
| Type of area currently reside in:                          |  |                      |                      |          |      |      |
| rural-farm                                                 |  | 11                   | 14                   | 7.35     | 3    | .062 |
| rural-nonfarm (less than 2,500 people)                     |  | 12                   | 11                   |          |      |      |
| small town (2,500 to 50,000 people)                        |  | 29                   | 37                   |          |      |      |
| urbanized area (city of suburban area greater than 50,000) |  | 49                   | 39                   |          |      |      |
| Michigan resident                                          |  | 94                   | 93                   | 5.99     | 10   | .816 |
| Not Michigan resident                                      |  | 6                    | 7                    |          |      |      |

Table I-8. Satisfaction levels of adult participants in Fishing in the Parks in 1995 and 1996.

| Questionnaire variables for satisfaction.             |  | 1995<br>mean (s.d.) | 1996<br>mean (s.d.) | T-value | d.f. | p    |
|-------------------------------------------------------|--|---------------------|---------------------|---------|------|------|
| Rating of the program elements: <sup>1</sup>          |  |                     |                     |         |      |      |
| program content as described in pre-program materials |  | 3.80 (0.93)         | 3.98 (0.94)         | 2.21    | 514  | .027 |
| coverage of the subject matter                        |  | 3.99 (0.84)         | 4.21 (0.81)         | 3.05    | 540  | .002 |
| pace of the program                                   |  | 4.04 (0.87)         | 4.18 (0.84)         | 1.90    | 538  | .058 |
| attitudes of the instructors                          |  | 4.57 (0.66)         | 4.67 (0.62)         | 1.75    | 541  | .081 |
| quality of instructors                                |  | 4.47 (0.71)         | 4.57 (0.70)         | 1.83    | 543  | .068 |
| quality of instruction                                |  | 4.36 (0.77)         | 4.53 (0.67)         | 2.89    | 539  | .004 |
| overall quality of the program                        |  | 4.33 (0.74)         | 4.48 (0.72)         | 2.42    | 537  | .016 |
| Satisfaction ratings <sup>2</sup>                     |  |                     |                     |         |      |      |
| learned new fishing skills                            |  | 4.42 (1.28)         | 4.48 (1.34)         | 0.54    | 520  | .592 |
| able to fish on their own                             |  | 4.45 (1.53)         | 4.52 (1.50)         | 0.52    | 508  | .605 |
| learned about fish                                    |  | 4.16 (1.52)         | 4.24 (1.59)         | 0.56    | 503  | .573 |
| got better fishing skills                             |  | 4.38 (1.45)         | 4.38 (1.39)         | 0.02    | 511  | .982 |
| were better able to use fishing equipment             |  | 4.38 (1.44)         | 4.46 (1.39)         | 0.66    | 510  | .513 |
| were with family                                      |  | 4.49 (1.21)         | 4.47 (1.11)         | 0.21    | 512  | .833 |
| were with friends                                     |  | 4.60 (1.63)         | 4.64 (1.74)         | 0.27    | 481  | .787 |
| met new people                                        |  | 4.60 (1.74)         | 4.51 (1.80)         | 0.56    | 488  | .575 |
| became more interested in fishing                     |  | 4.56 (1.58)         | 4.53 (1.44)         | 0.22    | 499  | .824 |
| enjoyed time outdoors                                 |  | 4.50 (1.15)         | 4.49 (0.96)         | 0.07    | 519  | .945 |

<sup>1</sup> Where 1 = poor, 2 = fair, 3 = good, 4 = very good, and 5 = excellent.<sup>2</sup> Where 1 = very dissatisfied, 2 = dissatisfied, 3 = neutral, 4 = satisfied, and 5 = very satisfied.

**Table I-9. Expectations of adult participants concerning catching fish at Fishing in the Parks in 1995 and 1996.**

| <b>Questionnaire variables for adult fishing expectations and catch.</b> | <b>1995 % responding</b> | <b>1996 % responding</b> | <b><math>\chi^2</math></b> | <b>d.f.</b> | <b>p</b> |
|--------------------------------------------------------------------------|--------------------------|--------------------------|----------------------------|-------------|----------|
| <b>Expected to catch fish</b>                                            |                          |                          |                            |             |          |
| Did not expect to catch fish                                             | 52                       | 52                       | 0.00                       | 1           | .983     |
|                                                                          | 48                       | 48                       |                            |             |          |
| <b>Caught fish</b>                                                       |                          |                          |                            |             |          |
| Did not catch fish                                                       | 68                       | 70                       | 0.16                       | 1           | .691     |
|                                                                          | 32                       | 30                       |                            |             |          |
| <b>Kept the fish caught</b>                                              |                          |                          |                            |             |          |
| Did not keep the fish caught                                             | 4                        | 4                        | 0.10                       | 1           | .754     |
|                                                                          | 96                       | 96                       |                            |             |          |

Table I-10. Post-program intentions of adult participants in Fishing in the Parks in 1995 and 1996.

| Questionnaire variables for post-program intentions. | 1995            |                 | 1996            |                 | $\chi^2$ | d.f. | p |
|------------------------------------------------------|-----------------|-----------------|-----------------|-----------------|----------|------|---|
|                                                      | %<br>responding | %<br>responding | %<br>responding | %<br>responding |          |      |   |
| Post-program intentions of adults:                   |                 |                 |                 |                 |          |      |   |
| intend to definitely go fishing again                | 61              | 59              | 1.74            | 4               | .783     |      |   |
| intend to probably go fishing again                  | 18              | 22              |                 |                 |          |      |   |
| might go fishing again                               | 13              | 12              |                 |                 |          |      |   |
| intend not go fishing again                          | 5               | 6               |                 |                 |          |      |   |
| undecided                                            | 2               | 2               |                 |                 |          |      |   |
| intend to definitely purchase fishing equipment      | 34              | 31              | 2.45            | 4               | .653     |      |   |
| intend to probably purchase fishing equipment        | 30              | 28              |                 |                 |          |      |   |
| might purchase fishing equipment                     | 19              | 24              |                 |                 |          |      |   |
| intend not purchase fishing equipment                | 14              | 16              |                 |                 |          |      |   |
| undecided                                            | 2               | 2               |                 |                 |          |      |   |
| intend to attend another program                     | 25              | 23              | 0.78            | 4               | .942     |      |   |
| intend to probably attend another program            | 25              | 26              |                 |                 |          |      |   |
| might attend another program                         | 32              | 34              |                 |                 |          |      |   |
| intend not to attend another program                 | 13              | 13              |                 |                 |          |      |   |
| undecided                                            | 6               | 5               |                 |                 |          |      |   |