

K. CARTER-MATTHEWS

M.S.

133
535
THS



1998

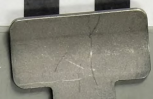
M.S.

133
535
THS

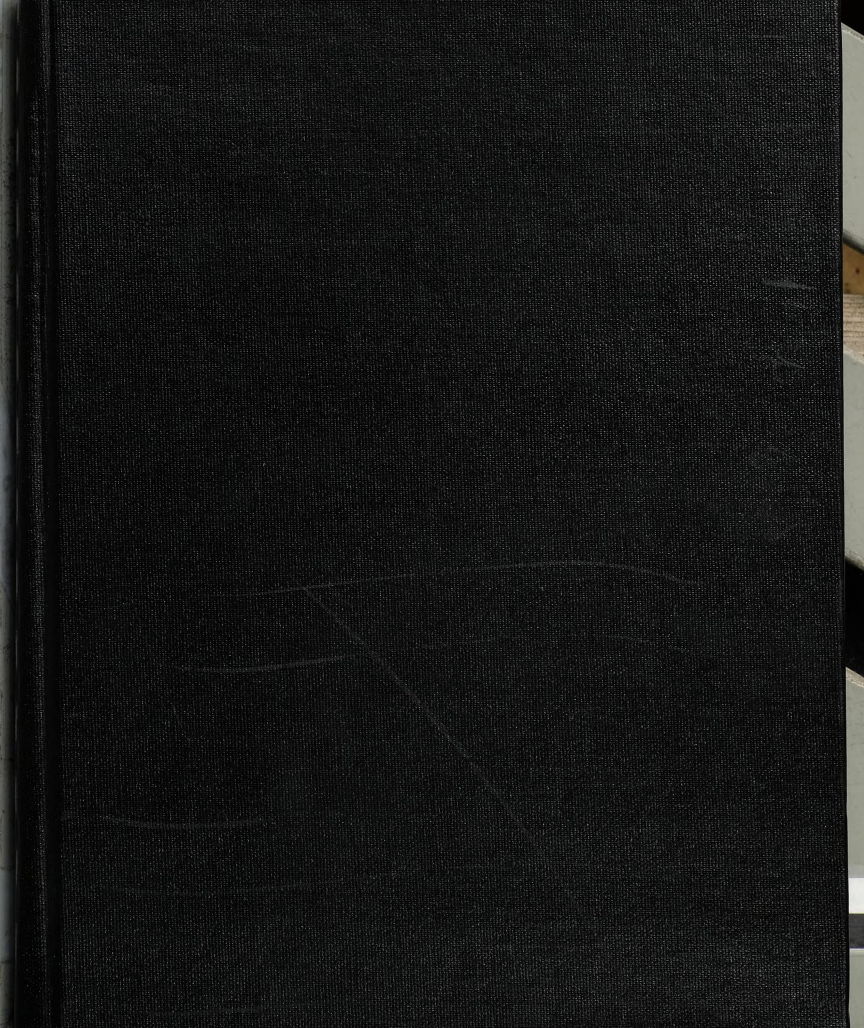


1998

M. S.









3 1293 01801 7479

LIBRARY
Michigan State
University

This is to certify that the

thesis entitled

Strategic Planning of Fisheries Communications: An
Internal Assessment of the Michigan Department
of Natural Resources Fisheries Division's
Needs and Priorities
presented by

Kelly Carter-Matthews

has been accepted towards fulfillment
of the requirements for

M.S. degree in Fish. & Wildl.

Major professor

Date December 17, 1998

PLACE IN RETURN BOX to remove this checkout from your record.
TO AVOID FINES return on or before date due.
MAY BE RECALLED with earlier due date if requested.

DATE DUE	DATE DUE	DATE DUE
NOV 28 2000 42107		

**STRATEGIC PLANNING OF FISHERIES COMMUNICATIONS: AN
INTERNAL ASSESSMENT OF THE MICHIGAN DEPARTMENT OF
NATURAL RESOURCES FISHERIES DIVISION'S NEEDS AND
PRIORITIES**

by

Kelly Carter-Matthews

A THESIS

**Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of**

MASTERS OF SCIENCE

Department of Fisheries and Wildlife

1998

ABSTRACT

STRATEGIC PLANNING OF FISHERIES COMMUNICATIONS: AN INTERNAL ASSESSMENT OF THE MICHIGAN DEPARTMENT OF NATURAL RESOURCES FISHERIES DIVISION'S NEEDS AND PRIORITIES

by
Kelly Carter-Matthews

Natural resources agencies are struggling to understand how their management and communication activities can meet the demands of diverse stakeholders while maintaining allegiance to their conservation and stewardship missions. The purpose of this study was to identify the Michigan Department of Natural Resources Fisheries Division's communications needs and priorities as perceived by Fisheries personnel. A total of 75 Division employees participated in eight focus groups (77 % of invited staff, 32.9 % of the study population). Participants ranked youth, general anglers, the general public, youth anglers, schools, and riparian landowners as priority target audiences to target for communications. Highest-ranked desired outcomes to achieve with communications related to developing a citizenry well informed about fisheries management and biological/ecosystem processes, motivating interest and action (e.g., stewardship behaviors), and encouraging positive public attitudes toward the Fisheries Division. Perceived needs were: a communication strategy, a long-term commitment to and support for integrating communications in fisheries management, and training to improve personnel communication skills. In addition, results demonstrated that there were differing needs between employee groups (e.g., hatcheries, research, field operations), and between supervisors and non-supervisory personnel. The outcome of this research is a communication strategy designed to guide Division decision-making and planning. Integrated into fisheries management decision-making, strategic communications can help achieve management objectives that are responsive, predictive and proactive in an ever-changing environment.

ACKNOWLEDGMENTS

This research was funded by the Michigan Department of Natural Resources Fisheries Division. I would like to express my appreciation to John Robertson, former Chief of the Fisheries Division, Kelley Smith, Fisheries Division Chief, and Dennis Conway, Division Information Specialist for their interest and support for this research. In particular, I would like to thank the Fisheries Division personnel who enthusiastically participated in this study.

Thanks too, to Dr. Shari Dann, my major professor, and to my committee members, Dr. Tom Coon of the Department of Fisheries and Wildlife and Dr. Gail Vander Stoep from the Department of Parks, Recreation and Tourism Resources for providing guidance and input throughout this project. I would also like to acknowledge several communications specialists who were consulted during this research: Mark Duda, Executive Director of Responsive Management; Bob Wattendorf, Biological Administrator III (Marketing & Special Projects Coordinator) of the Division of Fisheries, Florida Game and Fresh Water Fish Commission; Linda Erickson-Eastwood and Tom Dickson, of the Minnesota Department of Natural Resources; Carl Richardson, Aquatic Education Manager of the Pennsylvania Fish and Boat Commission; Scott Wilson, Office of Information and Education, Florida Department of Environmental Protection, Division of Marine Resources; Dave Case, Natural Resources Communications Specialist of D.L. Case and Associates; and, Dr. Ed Mahoney, of the Department of Parks, Recreation and Tourism Resources at Michigan State University.

I would also like to thank Jessica Kovan, Dr. Angela Mertig and Bernie Ylkanen, for providing valuable input while reviewing my focus group discussion guide and to Michelle Neidermier, Melissa Middleton and Mary Riley for their assistance in data recording.

Much appreciation goes to Department of Fisheries and Wildlife Chair, Dr. William Taylor, for his interest in and support for fisheries communications. Matching my research and work interests with that of the Fisheries Division was truly insightful. To those (past and present) at the Fisheries Division and others in the Department whom with I have greatly enjoyed working, my heartfelt thanks for the laughter shared and the friendships built.

Finally, my love and thanks to my family, who have been helpful and supportive in so many ways, and to Bruce, whose sincerity for passing on an appreciation of natural resources helps to put this work into perspective.

TABLE OF CONTENTS

CHAPTER 1

INTRODUCTIONAN OVERVIEW OF NATURAL RESOURCES COMMUNICATIONS	
PROBLEMS	1
WHAT ARE NATURAL RESOURCES COMMUNICATIONS?.....	1
IDENTIFYING AND WORKING WITH PUBLICS.....	2
Constituents of Natural Resources	2
Other Users of and Interests in Natural Resources	3
USING RESEARCH IN THE COMMUNICATION FUNCTION OF NATURAL	
RESOURCES MANAGEMENT	4
Human Dimensions Research	4
The Role of Marketing Research in Communications Management.....	5
PLANNING FOR COMMUNICATIONS	6
Communications as a Natural Resources Management Tool	7
Strategically Planned Communications	10
Communications Planning in Michigan	12
Communications Planning Within the Fisheries Division of the Michigan	
Department of Natural Resources	13
PROBLEM STATEMENT, RESEARCH NEEDS, RESEARCH OBJECTIVES AND	
QUESTIONS	15
RESEARCH OBJECTIVES, QUESTIONS AND HYPOTHESES	15

CHAPTER 2

LITERATURE REVIEW	
ORGANIZATION OF THIS CHAPTER	17
STRATEGIC PLANNING - WHAT IS IT?.....	17
WHAT IS THE STRATEGIC PLANNING PROCESS?	20
Phase 1: Mission Formulation or Review	22
Phase 2: Internal and External Environmental Analysis	24
The Internal Environmental Analysis.....	24
The External Environmental Analysis	27
Making Strategic Sense of the SWOT Analysis	29
The Boston Consulting Group Growth/Share Matrix	30
General Electric Multi-factor Portfolio Matrix.....	32
Organizational Culture.....	34
Phase 3: Identifying Strategic Issues	37
The Market Opportunity Identification Model.....	39
Phase 4: Establish Objectives and/or Goals.....	40
Phase 5: Examining Strategies, Tactics (Activities) and Resources	40
Phase 6: Monitoring and Evaluation.....	42

WHAT IS THE <u>PURPOSE</u> OF STRATEGIC PLANNING?	43
DECIDING WHAT THE BEST COMMUNICATION PROCESSES ARE: DESIGNING STRATEGIC COMMUNICATION ACTIVITIES	45
Definitions and an Example from Minnesota Division of Fisheries and Wildlife	45
Research-based Communications	46
Research on and Theories of Behavior Change	47
Environmental and Outdoor Education Influences on Behavioral Change	51
Theories Explaining the Communications Process	53
SUMMARY OF LITERATURE REVIEW	57

CHAPTER 3

METHODS	59
OVERVIEW OF METHODS	59
WHAT IS A NEEDS ASSESSMENT?	59
Primary Data Collection for Needs Assessments: Focus Groups & Telephone Interviews	61
STUDY POPULATION	63
RESEARCH DESIGN	64
Sampling to Obtain Homogeneous Focus Groups	64
Focus Group Sampling	67
Discussion Guide	70
Participant Information Forms	71
Study Participant Consent, Anonymity and Confidentiality	71
ADDITIONAL STUDY PARTICIPANTS AND DATA	72
Telephone Interviews	72
ADMINISTRATION	73
Focus Groups	73
The Use of Common Fisheries Language	74
Identifying Priority Ideas	74
DATA ANALYSIS	75
Data Management and Handling	76
Coding	77

CHAPTER 4

RESULTS	83
ORGANIZATION OF RESULTS	83
RESULTS OF FOCUS GROUP ADMINISTRATION	84
FISHERIES DIVISION PERSONNEL BACKGROUND	87
FOCUS GROUP RESULTS	90
Current Fisheries Communication Activities	90
Audiences Reached by Current Fisheries Communications	95
Public Requests for Information or Assistance	99

Strengths Toward Planning, Developing and Implementing Fisheries Communications.....	106
Weaknesses Toward Planning, Developing and Implementing Fisheries Communications.....	111
Opportunities and Threats: Trends Awareness.....	127
Audiences the Division Ought to be Targeting With Future Fisheries Communication	139
Priority Target Audiences	144
Desired Knowledge Outcomes	147
Priority Desired Knowledge Outcomes	161
Desired Behavioral Outcomes	165
Priority Desired Behavioral Outcomes	170
Desired Attitudinal Outcomes:.....	172
Priority Desired Attitudinal Outcomes	177
ADDITIONAL AUDIENCES AND DESIRED OUTCOMES IDENTIFIED BY FISHERIES	
PERSONNEL	179
Additional Audiences to Target with Fisheries Communications	180
Additional Knowledge Outcomes.....	184
Additional Behavioral Outcomes.....	187
Additional Attitudinal Outcomes.....	189
STRATEGIC MATCHING OF DIVISION STRENGTHS, WEAKNESSES, OPPORTUNITIES AND THREATS.....	
	191
GAPS OR DISCREPANCIES IN THE SWOT ANALYSIS	192
GAPS BETWEEN THE DIVISION'S CURRENT AND DESIRED COMMUNICATION SITUATIONS	
	199
APPLYING MARKETING ANALYSIS TO DETERMINE DIVISION PRIORITIES	201
SUMMARY OF RESULTS.....	204
CHAPTER 5	209
DISCUSSION AND RECOMMENDATIONS.....	209
LIMITATIONS OF THIS RESEARCH	209
ORGANIZATIONAL AND PROGRAM CHANGES IN THE MDNR.....	211
MDNR FISHERIES DIVISION COMMUNICATION NEEDS: A STRATEGY FOR MDNR FISHERIES DIVISION'S COMMUNICATIONS	213
INTEGRATION OF COMMUNICATIONS INTO FISHERIES MANAGEMENT	
DECISION-MAKING.....	216
LONG-TERM COMMITMENT TO THE COMMUNICATION FUNCTION OF FISHERIES MANAGEMENT	219
COMMUNICATIONS TRAINING FOR FISHERIES DIVISION PERSONNEL	223
THE MDNR FISHERIES DIVISION COMMUNICATION PRIORITIES: MATCHING DIVISION STRENGTHS AND WEAKNESSES WITH EXTERNAL OPPORTUNITIES AND THREATS.....	
	225
TARGET AUDIENCES AND DESIRED OUTCOMES.....	227
FURTHER RESEARCH: HUMAN DIMENSIONS/MARKETING RESEARCH AND	

EVALUATION.....	229
NATIONAL OUTREACH AND COMMUNICATIONS PROGRAM	232
IMPLICATIONS FOR FISHERIES COMMUNICATIONS.....	232

BIBLIOGRAPHY.....	235
--------------------------	------------

APPENDICES

APPENDIX A: PROJECT APPROVAL BY THE MICHIGAN STATE UNIVERSITY COMMITTEE ON RESEARCH INVOLVING HUMAN SUBJECTS.....	245
APPENDIX B: FISHERIES COMMUNICATIONS FOCUS GROUP INVITATION LETTERS.....	247
APPENDIX C: FOCUS GROUP DISCUSSION GUIDE.....	249
APPENDIX D: FOCUS GROUP PARTICIPANT BACKGROUND FORM.....	259

TABLE 1-1. APPLYING
FRAMEWORK TO S
ROSENAL, 1982)

TABLE 3-1. HOMOGENE

TABLE 3-2. FOCUS GROUP
LOCATION.....

TABLE 4-1. FISHERIES
RESPONDENT RATE

TABLE 4-2. LEVEL OF
GROUP PARTICIPAN

TABLE 4-3. MDNR FISHER
COMMUNICATION
THAT THE FOCUS G
THE ROWS, MORE

TABLE 4-4. MDNR FISHER
REACHED BY CURR
FOCUS GROUP POSTER
MORE SPECIFIC RE

TABLE 4-5. MDNR FISHER
OUTREACH, EDUC
DIVISION. AN "X"
THE INFORMATION

TABLE 4-6. MDNR FISHER
DIVISIONAL AND D
COMMUNICATIONS
WITH THE INFORM

TABLE 4-7. MDNR FISHER
LEVEL WEAKNESSE
INDICATES THAT F

LIST OF TABLES

TABLE 1-1. APPLYING THE CLASSIC BUSINESS MANAGEMENT STRATEGIC PLANNING FRAMEWORK TO STRATEGIC COMMUNICATIONS PLANNING (ADAPTED FROM ROSENAU, 1982).....	11
TABLE 3-1. HOMOGENEOUS GROUPINGS OF FISHERIES DIVISION PERSONNEL.....	65
TABLE 3-2. FOCUS GROUP INVITATION PROTOCOL, TIMELINE AND SESSION LOCATION.....	69
TABLE 4-1. FISHERIES DIVISION FOCUS GROUP SESSION SAMPLING AND RESPONDENT RATES.....	85
TABLE 4-2. LEVEL OF EDUCATION AMONG MDNR FISHERIES DIVISION FOCUS GROUP PARTICIPANTS (N=73).....	89
TABLE 4-3. MDNR FISHERIES DIVISION PERSONNEL PERCEPTIONS OF CURRENT COMMUNICATION ACTIVITIES PROVIDED BY THE DIVISION. AN "X" INDICATES THAT THE FOCUS GROUP(S) RESPONDED WITH THE INFORMATION LISTED IN THE ROWS; MORE SPECIFIC RESPONSES ARE SHOWN IN FOOTNOTES.....	91
TABLE 4-4. MDNR FISHERIES DIVISION PERSONNEL PERCEPTIONS OF AUDIENCES REACHED BY CURRENT COMMUNICATIONS. AN "X" INDICATES THAT THE FOCUS GROUP(S) RESPONDED WITH THE INFORMATION LISTED IN THE ROWS; MORE SPECIFIC RESPONSES ARE SHOWN IN FOOTNOTES.....	96
TABLE 4-5. MDNR FISHERIES DIVISION PERSONNEL PERCEPTIONS OF PUBLIC OUTREACH, EDUCATION AND INFORMATION REQUESTS OF THE MDNR FISHERIES DIVISION. AN "X" INDICATES THAT THE FOCUS GROUP(S) RESPONDED WITH THE INFORMATION LISTED IN THE ROWS.....	100
TABLE 4-6. MDNR FISHERIES DIVISION PERSONNEL PERCEPTIONS OF INDIVIDUAL, DIVISIONAL AND DEPARTMENTAL STRENGTHS IN PROVIDING FISHERIES COMMUNICATIONS. AN "X" INDICATES THAT THE FOCUS GROUP(S) RESPONDED WITH THE INFORMATION LISTED IN THE ROWS.....	107
TABLE 4-7. MDNR FISHERIES DIVISION PERSONNEL PERCEPTIONS OF DEPARTMENT- LEVEL WEAKNESSES IN PROVIDING FISHERIES COMMUNICATIONS. AN "X" INDICATES THAT FOCUS GROUP RESPONSES ARE LISTED IN THE ROWS.....	112

TABLE 4-8. MIDNRE
DIVISION-LEVEL
COMMUNICATION
WITH THE INFO

TABLE 4-9. MIDNRE
LEVEL WEAKNESSES
INDICATES THEM
LISTED IN THE F

TABLE 4-10. MIDNRE
WEAKNESSES IN
INDICATES THEM
LISTED IN THE F

TABLE 4-11. MIDNRE
AND RELATED D
INDICATES THEM
IN THE ROWS; N

TABLE 4-12. MIDNRE
RELATED TREN
GROUPS RESPON
SPECIFIC RESP

TABLE 4-13. MIDNRE
TRENDS OCCUR
GROUPS RESPON
SPECIFIC FOCU

TABLE 4-14. MIDNRE
OCCURRING IN
WITH INFORM

TABLE 4-15. MIDNRE
THAT FUTURE F
AN "X" INDICA
LISTED IN THE F
IN FOOTNOTES.

TABLE 4-16. SUMME
PRIORITY AUDI

TABLE 4-8. MDNR FISHERIES DIVISION PERSONNEL PERCEPTIONS OF DIVISION-LEVEL WEAKNESSES IN PROVIDING FISHERIES COMMUNICATIONS. AN "X" INDICATED THAT FOCUS GROUPS RESPONDED WITH THE INFORMATION LISTED IN THE ROWS.....	117
TABLE 4-9. MDNR FISHERIES DIVISION PERSONNEL PERCEPTIONS OF INDIVIDUAL- LEVEL WEAKNESSES IN PROVIDING FISHERIES COMMUNICATINS. AN "X" INDICATES THAT THE FOCUS GROUPS RESPONDED WITH THE INFORMATION LISTED IN THE ROWS.....	122
TABLE 4-10. MDNR FISHERIES DIVISION PERSONNEL PERCEPTIONS OF WEAKNESSES IN INTERNAL COMMUNICATIONS AT THE MDNR. AN "X" INDICATES THAT THE FOCUS GROUPS RESPONDED WITH INFORMATION LISTED IN THE ROWS.....	124
TABLE 4-11. MDNR FISHERIES DIVISION PERSONNEL PERCEPTIONS OF DEMOGRAPHIC AND RELATED POPULATION TRENDS OCCURRING IN MICHIGAN. AN "X" INDICATES THAT FOCUS GROUPS RESPONDED WITH THE INFORMATION LISTED IN THE ROWS; MORE SPECIFIC RESPONSES ARE SHOWN IN FOOTNOTES.....	128
TABLE 4-12. MDNR FISHERIES DIVISION PERSONNEL PERCEPTIONS OF FISHERIES RELATED TRENDS OCCURRING IN MICHIGAN. AN "X" INDICATES THAT FOCUS GROUPS RESONDED WITH THE INFORMATION LISTED IN THE ROWS; MORE SPECIFIC RESPONSES ARE SHOWN IN FOOTNOTES.....	129
TABLE 4-13. MDNR FISHERIES DIVISION PERSONNEL PERCEPTIONS OF ATTITUDE TRENDS OCCURRING IN MICHIGAN. AN "X" INDICATES THAT THE FOCUS GROUPS RESPONDED WITH THE INFORMATIN LISTED IN THE ROWS; MORE SPECIFIC FOCUS GROUPS RESPONSES ARE SHOWN IN FOOTNOTES.....	131
TABLE 4-14. MDNR FISHERIES DIVISION PERSONNEL PERCEPTIONS OF ISSUE TRENDS OCCURRING IN MICHIGAN. AN "X" INDICATES THAT FOCUS GROUPS RESPONDED WITH INFORMATION LISTED IN THE ROWS.....	133
TABLE 4-15. MDNR FISHERIES DIVISION PERSONNEL PERCEPTIONS OF AUDIENCES THAT FUTURE FISHERIES COMMUNICATIONS OUGHT TO REACH OR TARGET. AN "X" INDICATES THAT FOCUS GROUPS RESPONDED WITH INFORMATION LISTED IN THE ROWS; MORE SPECIFIC FOCUS GROUP RESPONSES ARE SHOWN IN FOOTNOTES.....	140
TABLE 4-16. SUMMARY OF MDNR FISHERIES DIVISION PERSONNEL VOTES FOR PRIORITY AUDIENCES FOR FUTURE FISHERIES COMMUNICATION.....	145

TABLE 4-17.
KNOW
"X" IN
LISTED

TABLE 4-18.
KNOW
AN "X"
INFORM

TABLE 4-19.
ANGU
AN "X"
LISTED

TABLE 4-20.
ANGU
AN "X"
INFORM

TABLE 4-21.
MISCO
THAT I
ROWS.

TABLE 4-22.
KNOW
EACH I

TABLE 4-23.
BEHAV
INDICA
LISTED

TABLE 4-24.
BEHAV
RESULT
FOCUS

TABLE 4-25.
PRIORI
COMM
TWO 12

TABLE 4-17. MDNR FISHERIES DIVISION PERSONNEL PERCEPTIONS OF DESIRED KNOWLEDGE OUTCOMES FOR FUTURE FISHERIES COMMUNICATIONS. AN "X" INDICATES THAT THE FOCUS GROUPS RESPONDED WITH INFORMATION LISTED IN THE ROWS.....	148
TABLE 4-18. MDNR FISHERIES DIVISION PERSONNEL PERCEPTIONS OF DESIRED KNOWLEDGE (IMPACTS) OUTCOMES FOR FUTURE FISHERIES COMMUNICATIONS. AN "X" INDICATES THAT THE FOCUS GROUPS RESPONDED WITH THE INFORMATION LISTED IN THE ROWS.....	151
TABLE 4-19. MDNR FISHERIES DIVISION PERSONNEL PERCEPTIONS OF DESIRED ANGLING KNOWLEDGE OUTCOMES FOR FUTURE FISHERIES COMMUNICATIONS. AN "X" INDICATES THAT FOCUS GROUPS RESPONDED WITH INFORMATION LISTED IN THE ROWS.....	154
TABLE 4-20. MDNR FISHERIES DIVISION PERSONNEL PERCEPTIONS OF DESIRED NON-ANGLING KNOWLEDGE OUTCOMES FOR FUTURE FISHERIES COMMUNICATIONS. AN "X" INDICATES THAT THE FOCUS GROUPS RESPONDED WITH THE INFORMATION LISTED IN THE ROWS.....	155
TABLE 4-21. MDNR FISHERIES DIVISION PERSONNEL PERCEPTIONS OF PUBLIC MISCONCEPTIONS OF FISH AND FISHERIES MANAGEMENT. AN "X" INDICATES THAT THE FOCUS GROUPS RESPONDED WITH INFORMATION LISTED IN THE ROWS.....	157
TABLE 4-22. SUMMARY OF MDNR FISHERIES DIVISION PERSONNEL TOP FIVE PRIORITY KNOWLEDGE OUTCOMES AS A RESULT OF FUTURE FISHERIES COMMUNICATIONS. EACH INDIVIDUAL FOCUS GROUP PARTICIPANT CAST TWO (2) VOTES.....	162
TABLE 4-23. MDNR FISHERIES DIVISION PERSONNEL PERCEPTIONS OF DESIRED BEHAVIORAL OUTCOMES FOR FUTURE FISHERIES COMMUNICATIONS. AN "X" INDICATES THT THE FOCUS GROUPS RESPONDED WITH THE INFORMATION LISTED IN THE ROWS.....	166
TABLE 4-24. MDNR FISHERIES DIVISION PERSONNEL PERCEPTIONS OF DESIRED BEHAVIORAL OUTCOMES FOR NON-ANGLING AUDIENCES TO ACHIEVE AS A RESULT OF FISHERIES COMMUNICATIONS. AN "X" INDICATES THAT THE FOCUS GROUPS RESPONDED WITH THE INFORMATION LISTED IN THE ROWS...	169
TABLE 4-25. SUMMARY OF MDNR FISHERIES DIVISION PERSONNEL VOTES FOR PRIORITY BEHAVIORAL OUTCOMES AS A RESULT OF FUTURE FISHERIES COMMUNICATINS. EACH INDIVIDUAL FOCUS GROUP PARTICIPANT CAST TWO (2) VOTES.....	171

TABLE 4-26. MED
ATTITUDE
AN "X" IN
NORMAL

TABLE 4-27. SUM
PRIORITY A
EACH INDE

TABLE 4-28. SUM
VOTES FOR
EACH INDE

TABLE 4-29. SUM
VOTES FOR
COMMON
TWO(2) VO

TABLE 4-30. SUM
VOTES FOR
COMMON
TWO(2) VO

TABLE 4-31. SUM
VOTES FOR
COMMON
TWO(2) VO

TABLE 4-32. EXA
WEAKNESSE
TRENDS BY
HOW THE DE
WEAKNESSE
AS THREATS
COMMUNIC

TABLE 4-33. THI
TO EMERGEN
AND COMM

TABLE 4-34. SUM
COMMUNIC
COMMUNICA
PERSONNEL
ITALICIZED

TABLE 4-26. MDNR FISHERIES DIVISION PERSONNEL PERCEPTION OF DESIRED
ATTITUDINAL OUTCOMES AS A RESULT OF FISHERIES COMMUNICATIONS.
AN "X" INDICATES THAT THE FOCUS GROUPS RESPONDED WITH THE
INFORMATION LISTED IN THE ROWS.....173

TABLE 4-27. SUMMARY OF MDNR FISHERIES DIVISION PERSONNEL VOTES FOR
PRIORITY ATTITUDINAL OUTCOMES OF FUTURE FISHERIES COMMUNICATIONS
EACH INDIVIDUAL FOCUS GROUP PARTICIPANT CAST TWO (2) VOTES.....178

TABLE 4-28. SUMMARY OF MDNR FISHERIES DIVISION PERSONNEL'S REMAINING
VOTES FOR AUDIENCES TO TARGET WITH FUTURE FISHERIES COMMUNICATIONS
EACH INDIVIDUAL FOCUS GROUP PARTICIPANT CAST (2) VOTES.....181

TABLE 4-29. SUMMARY OF MDNR FISHERIES DIVISION PERSONNEL'S REMAINING
VOTES FOR KNOWLEDGE OUTCOMES AS A RESULT OF FUTURE FISHERIES
COMMUNICATIONS. EACH INDIVIDUAL FOCUS GROUP PARTICIPANT CAST
TWO (2) VOTES.....185

TABLE 4-30. SUMMARY OF MDNR FISHERIES DIVISION PERSONNEL'S REMAINING
VOTES FOR BEHAVIORAL OUTCOMES AS A RESULT OF FUTURE FISHERIES
COMMUNICATIONS. EACH INDIVIDUAL FOCUS GROUP PARTICIPANT CAST
TWO (2) VOTES.....188

TABLE 4-31. SUMMARY OF MDNR FISHERIES DIVISION PERSONNEL'S REMAINING
VOTES FOR ATTITUDINAL OUTCOMES AS A RESULT OF FISHERIES
COMMUNICATIONS. EACH INDIVIDUAL FOCUS GROUP PARTICIPANT CAST
TWO (2) VOTES.....190

TABLE 4-32. EXAMPLES OF A SWOT ANALYSIS, MATCHING DIVISION STRENGTHS AND
WEAKNESSES, AND EXTERNAL OPPORTUNITIES AND THREATS (IDENTIFIED AS
TRENDS BY FOCUS GROUP PARTICIPANTS. ITALICIZED TEXT DEMONSTRATES
HOW THE DIVISION MIGHT MAKE THE MOST OF EXISTING STRENGTHS, HOW
WEAKNESSES MIGHT BE ADDRESSED AND HOW TRENDS CAN BE INTERPRETED
AS THREATS OR OPPORTUNITIES TOWARD FISHERIES MANAGEMENT OR
COMMUNICATIONS.....193

TABLE 4-33. THE DIVISION'S STRENGTHS AND WEAKNESSES LISTED IN COMPARISON
TO EMERGING THREATS AND OPPORTUNITIES FOR FISHERIES MANAGEMENT
AND COMMUNICATIONS.....197

TABLE 4-34. SUMMARY OF THE DIVISION'S CURRENT AND DESIRED FISHERIES
COMMUNICATION SITUATIONS. GAPS/DISCREPANCIES OBSERVED BETWEEN
COMMUNICATIONS CURRENTLY OFFERED AND THOSE PARTICIPATING FISHERIES
PERSONNEL REPORTED THEY DESIRED TO PROVIDE ARE LISTED IN BOLD
ITALICIZED TEXT.....200

Number

FIGURE 2-1. A BASIC S
AND DONNELLY 19
AL. 1996, LORAN-

FIGURE 2-2. SAMPLE S
ORGANIZATIONAL
KOTLER ET
AL. 1996).....

FIGURE 2-3. THE BOS
(SOURCE: KOTLER

FIGURE 2-4. GENERAL
(ADAPTED FROM

FIGURE 2-5. MARKET
PRODUCT MARKET

FIGURE 2-6. TRADITION
FROM HUNGARIAN

FIGURE 2-7. THE HINE
(ADAPTED FROM
ECOLOGY ARE EN
RESPONSIBILITY A
CONTROL AND KNOW
VARIABLES.....

FIGURE 2-8. A THEOR
PERSON'S BEHAVIO
HYPOTHESIZED RE
AZEN AND FISHER

FIGURE 2-9. MODEL O
MANFREDO 1992.

FIGURE 3-1. APPLYING
PROCESS (SOURCE:

LIST OF FIGURES

<i>Number</i>	<i>Page</i>
FIGURE 2 -1. A BASIC STRATEGIC PLANNING MODEL (ADAPTED FROM PETER AND DONNELLY 1986; GOODSTEIN ET AL. 1993; HAY 1990; KOTLER ET AL. 1996; LORANGE 1979).	21
FIGURE 2 -2. SAMPLE STRATEGIC BALANCE SHEET FOR ANALYSIS OF ORGANIZATIONAL STRENGTHS AND/OR WEAKNESSES (ADAPTED FROM: KOTLER ET AL. 1996).	26
FIGURE 2 -3. THE BOSTON CONSULTING GROUP GROWTH/SHARE MATRIX (SOURCE: KOTLER ET AL. 1996).	31
FIGURE 2 -4. GENERAL ELECTRIC'S STRATEGIC BUSINESS-PLANNING GRID (ADAPTED FROM: KOTLER ET AL. 1996).	33
FIGURE 2 -5. MARKET OPPORTUNITY IDENTIFICATION THROUGH THE PRODUCT/MARKET MATRIX (SOURCE: KOTLER ET AL. 1996).	40
FIGURE 2 -6. TRADITIONAL, LINEAR BEHAVIORAL CHANGE MODEL (ADAPTED FROM HUNGERFORD AND VOLK, 1990).	47
FIGURE 2 -7. THE HINES MODEL OF RESPONSIBLE ENVIRONMENTAL BEHAVIOR (ADAPTED FROM HINES ET AL. 1986-87). ATTITUDES AND KNOWLEDGE OF ECOLOGY ARE ENTRY-LEVEL VARIABLES; IN-DEPTH KNOWLEDGE, PERSONAL RESPONSIBILITY ARE OWNERSHIP VARIABLES; ACTION SKILLS, LOCUS OF CONTROL AND KNOWLEDGE OF ACTION STRATEGIES ARE EMPOWERMENT VARIABLES.	48
FIGURE 2 -8. A THEORY OF REASONED ACTION: FACTORS DETERMINING A PERSON'S BEHAVIOR (ARROWS INDICATE THE DIRECTION OF INFLUENCE WITHIN HYPOTHESIZED RELATIONSHIPS) (SOURCE: MANFREDO 1992 ADAPTED FROM AJZEN AND FISHBEIN 1980).	50
FIGURE 2 -9. MODEL OF THE PERSUASIVE COMMUNICATION PROCESS (SOURCE: MANFREDO 1992, ADAPTED FROM AJZEN AND FISHBEIN 1975).	56
FIGURE 3 -1. APPLYING A NEEDS ASSESSMENT TO THE STRATEGIC PLANNING PROCESS(SOURCE: ADAPTED FROM NUTT AND BACKOFF 1992).	60

FIGURE 3-2. THE NUD•
ORGANIZATION OF
THE FOCUS GROUP
SECOND-LEVEL CO
LEVEL CODING.....

FIGURE 4-1. SAMPLE S
FISHING DIVISION
KOTLER ET AL. 199

FIGURE 4-2. MDNR ES
THROUGH THE PR
ET AL. 1996).....

FIGURE 3-2. THE NUD•IST INDEXING SYSTEM OR “NODE TREE” DEPICTING THE ORGANIZATION OF CODE CATEGORIES BASED ON TOPIC AREAS PROVIDED IN THE FOCUS GROUP DISCUSSION GUIDE. BOLD ITALICIZED TEXT REPRESENTS SECOND-LEVEL CODING, WHILE NON-ITALICIZED TEXT REPRESENTS FIRST-LEVEL CODING.	80
FIGURE 4 -1. SAMPLE STRATEGIC BALANCE SHEET FOR ANALYSIS OF THE MDNR FISHERIES DIVISION’S STRENGTHS AND/OR WEAKNESSES (ADAPTED FROM: KOTLER ET AL. 1996).	211
FIGURE 4 -2. MDNR FISHERIES DIVISION MARKET OPPORTUNITY IDENTIFICATION THROUGH THE PRODUCT/MARKET MATRIX (SOURCE: ADAPTED FROM KOTLER ET AL. 1996).....	212

u Overview of Natural Resources

Natural resources

meet the demands of a

conservation and stewardship

United States are influenced

resources are managed. As

and communicate effectively

interactions within natural

inspired throughout management

the next century.

Before discussing

to start to clearly define

What are Natural Resources?

Advances in technology

of ways to a multitude

transfer of information

Waller (1989: 298) defines

information by speech

Natural Resource Management

expression of thoughts

Chapter 1

INTRODUCTION

An Overview of Natural Resources Communications Problems

Natural resources agencies are struggling to understand how their management activities can meet the demands of an increasingly diverse constituency while maintaining allegiance to their conservation and stewardship missions. Changing demographics and social environments across the United States are influencing fish and wildlife use and the ways in which many natural resources are managed. Agencies attempting to respond to these and other changes will need to be able to communicate effectively with their various publics. Recognizing the importance of communications within natural resource management and understanding how this function is supported throughout management processes will be vital to responsive and proactive management in the next century.

Before discussing problems and issues associated with fisheries communications, it is important to clearly define what is meant by communications in this study.

What are Natural Resources Communications?

Advances in technology mean that vast amounts of information can be made available in a variety of ways to a multitude of people with just the push of a button. Yet, the quick and quantifiable transfer of information does not necessarily equate to effective communications.

Webster (1989: 298) defines communication as “the imparting or interchange of thoughts, opinions or information by speech, writing or signs.” In their text, Public Relations and Communications for Natural Resource Managers (1981), Fazio and Gilbert describe communications as the successful transmission of thoughts or ideas, without significant distortion, so that understanding is achieved.

believe that the key

is when a thought

is very much the

of the term "inter

is opportunity to comm

is important mechanism

In natural resources

including public relations, a

formation and education, a

some of some communica

various forms of commu

most natural resource

office visitors, driv

significant forms of con

re

Fazio and Gilbert (

communications within natu

needs and planning

Identifying and Working

Elements of Natural

Prior to the 1970s, f

communication efforts towa

et al. 1978; Decker

They believe that the key element of this definition is *understanding*—that communication takes place only when a thought is reconstructed in the mind of the person intended to receive the communiqué very much the same as it occurred in the mind of the original sender. Webster’s inclusion of the term “interchange” also alludes to two-way communications—whereby the receiver has an opportunity to communicate with the sender. The receiver’s response (or non-response) can be an important mechanism for judging the effectiveness or accuracy of the communication process.

In natural resources management, there are many approaches to communications, including: public relations, advertising, marketing, legislative action, citizen participation, information and education, interpretation and public affairs. These approaches are clearly for the purpose of some communication objective: to inform, persuade, promote and/or involve. Inadvertent forms of communications need to be recognized as well. The routine, day-to-day contact most natural resources employees have with the public while answering the telephone, greeting office visitors, driving the organization’s vehicle, or performing job duties in the field are also significant forms of communications. Internal or other professional interchanges are important, too.

Fazio and Gilbert (1981) list three essential steps for the effective practice of communications within natural resources management: identifying and working with publics, research, and planning.

Identifying and Working With Publics

Constituents of Natural Resources

Prior to the 1970s, fish and wildlife management professionals concentrated much of their communication efforts toward traditional resource users such as anglers, hunters and trappers (Bennett et al. 1978; Decker et al. 1996b; Hendee and Schoenfeld 1973; Knight and Gutzwiller

g. These users fit one
of the or support the eff
response, resource man
decisions and actions,
goals and other resource

By the late 1960s
first began to influence
and Multiple Use-Sustain
ness Act. The first Part
consumptive users had inter
management (Decker et al.

For Users of and Inter

While the focus of
hunting, anglers, and trapper
to show a consistent patte
of the bird and fish watch
the interested groups may
compared with consumptive
article demonstrates that
nonconsumptive wildlife-
and many regions of the
consistency is diminishing

1995). These users fit one definition of a “constituency”: a group of people (constituents) who authorize or support the efforts of others (professionals) to act on their behalf (Webster 1989: 314). In response, resource management professionals have attended to user groups’ interests through their decisions and actions, predominantly managing for consumptive uses—the harvest of game species and other resource commodities such as commercial fisheries, timber and minerals.

By the late 1960s and early 1970s, public interest in the environment had grown, and this interest began to influence management of natural resources through policy-making legislation such as the Multiple Use-Sustained Yield Act, National Environmental Policy Act, and the Endangered Species Act. The first Earth Day in 1970 further demonstrated that people other than traditional consumptive users had interests in wildlife and a reason to be considered beneficiaries of management (Decker et al. 1996b).

Other Users of and Interests in Natural Resources

While the focus of natural resource management has primarily benefited users such as hunters, anglers, and trappers, (the so-called “consumptive” users), the orientation of U.S. residents has shown a consistent pattern of increased interest in non-consumptive activities (e.g., hiking; wildlife, bird and fish watching) (USFWS 1989, 1991, 1996). These non-consumptive users and other interested groups may represent a greater proportion of the national perspective when compared with consumptive recreational use of natural resources. A recent national survey, for example, demonstrates that while only 18% of U.S. residents fish, twice that (36%) participate in “non-consumptive wildlife-associated recreation” (USFWS 1997). In fact, decreased angler license sales in many regions of the U.S. suggest that the traditional base of the fisheries agency constituency is diminishing (USFWS 1997).

Attitudes toward

ought to have an effect

taxpayers, for example

part of the public. In

regulate or environment

through legislation

to species (Deane 199

Using Research in the C

Human Dimensions Rese

As public values pe

range, conflicts will grow

resource management will be

described by Zinn and M

regulation which attempts

to protect natural environment

strong stewardship of n

But (1996) state that the p

pressures on natural res

be brought into decision m

of interest groups and

Deane et al. 1996a, Decker

Decker et al. (1996)

and a broad range of in

Attitudes toward consumptive recreation and certain wildlife management methods are beginning to have an effect on the way natural resources are managed. Public attitude surveys and tracking polls, for example, reveal that existing management policies are not supported by a majority of the public. In many states, utilitarian values are being challenged by those holding appreciative or environmentalist views. Increasingly, these groups are influencing management policy through legislation and public referenda aimed at banning hunting and trapping of particular wildlife species (Deane 1990; Loker and Decker 1995; Yozwiak 1994).

Using Research in the Communication Function of Natural Resources Management

Human Dimensions Research

As public values pertaining to natural resources and their use continue to diversify and change, conflicts will grow and the need to understand the social or human dimensions of fish and wildlife management will become increasingly important. This field of human dimensions research is described by Zinn and Manfreda (1992 as cited in Manfreda et al. 1995: 54) as “an area of investigation which attempts to describe, predict, understand and affect human thought and action toward natural environments and to acquire such understanding for the primary purpose of improving stewardship of natural resources.” Decker and Lipscomb (1991 as cited in Decker and Enck 1996) state that the purpose of human dimensions research is to understand and clarify diverse perspectives on natural resources management programs and issues and systematically incorporate such insight into decision making. Recent human dimensions research has examined the needs of diverse interests groups and how this information can assist with responsive resource management (Decker et al. 1996a; Decker et al 1996b; Decker and Enck 1996).

Decker et al. (1996b) believe that the philosophy of resource management should evolve to include a broad range of interests and recommend a stakeholder approach to decision-making. This

ment is different from
theory because it includes
management decisions and
the behavior and value
formation for management
management decisions." P
more effective and more
the needs (Decker et al

Topic of Marketing I

Since the late 1970s
multidimensional research
relation segments with
49 Duda (1993); Pajak (19
marketing e.g., "social ma
marketing public needs a
drive a social cause, ide
cases such as fish and f
communications viewpoi
specific communication
the interests and need
More recently, Ku
decision-making as a socie
be met and want through

approach is different from the “customer” or “constituent” user-pay resource management **philosophy** because it includes all individuals and groups who may be affected by or can affect **management** decisions and programs. Decker and Enck (1996: 61) believe that an understanding of **human** behavior and values will result in “public involvement processes that yield better **information** for management decision making and, hopefully, better and more broadly accepted **management** decisions.” By adopting a stakeholder approach, natural resource management will be more effective and more adaptive and dynamic in recognizing and dealing with current, new and future needs (Decker et al. 1996b).

The Role of Marketing Research in Communications Management

Since the late 1970s, many fisheries professionals have advocated that insight gained from human dimensions research be applied in a marketing approach designed to target specific population segments with recreational opportunities (Bennett et al. 1978; Ditton 1995; Duda et al. 1989; Duda 1993; Pajak 1994; Scheffer 1976; Thorne et al. 1992). This type of approach to marketing (e.g., “social marketing”) has been defined by Kotler (1982: 490) as “an activity directed at satisfying public needs and wants through the design of specific products and services....to advance a social cause, idea or behavior.” From a natural resources perspective, these products and services, such as fish and fishing opportunities, are the outcomes of resource management. From a communications viewpoint, marketing fisheries products and services would entail the development of specific communication activities targeted to specific population segments and designed to meet diverse interests and needs.

More recently, Kotler et al. (1996: 23) have described how marketing can be integrated into decision-making as a social and managerial process “by which individuals and groups obtain what they need and want through creating and exchanging products and values to others...for the purpose

achieving organizational

can just providing s

engagement tool with wh

Planning for Commun

Only a few exampl

business management tool

of the MN Div. of F & W

communications into resou

regarding marketing and co

relations and communica

communicated to various p

management and decision-

mission of the Commun

tailored, proactive co

Business emphasis th

Once Minnesota fis

defined, specific commu

needs and services) and

states Minnesota Dep

(1988, 4), writes that

research is not to justify t

emulate the way the age

relations Chiat advoc

of achieving organizational objectives.” This approach represents communications or marketing as more than just providing services and products targeted to specific audiences, but as a resource *management* tool with which to achieve organizational and communication objectives.

Planning for Communications

Only a few examples are available that clearly integrate communications as a natural resources management tool used by state agencies. In Minnesota, the Division of Fisheries and Wildlife (MN Div. of F&W) recognizes the utility and value of integrating marketing and communications into resource management. Applied as a management tool, the MN Div. of F&W integrates marketing and communications-based management on an agency-wide basis. human dimensions and communications specialists help the agency to identify key issues which need to be communicated to various publics, or to identify communications which will assist with resource management and decision-making. Their commitment to communications-management is seen in the mission of the Communications Program of the Minnesota Division of Fish and Wildlife: “to make focused, proactive communications an integral part of improving the Division’s management effectiveness” (emphasis theirs) (MN Division of Fish and Wildlife 1994: 1).

Once Minnesota fish and wildlife management and communication needs and priorities are identified, specific communication objectives guide the development of activities (e.g., programs, products and services) and specific marketing plans (the implementation and promotion of activities). Minnesota Department of Natural Resources (MNDNR) marketing coordinator, Bill Chiat (1988: 4), writes that “public agencies which approach marketing correctly realize that the end result is not to justify the existence of the agency.” Rather, he suggests that the end result is to restructure the way the agency does business with its stakeholders by better meeting their expectations. Chiat advocates marketing by claiming that it allows natural resource agencies “to

successfully meet challenges

. He summarizes Minnesota

of doing business. M

thing about what we do

Many fish and wild

research agencies and the p

annual funding for resour

(Kris and Decker 1989)

roles and strategies. Pey

of involvement strategi

begin to improve mana

responsibilities for resour

raising research-based

the responsive, and prec

Communications as a

As the number and

management increase, fish

handling conflicts, mana

encouraging public invol

managers specialists agr

the extent to which

With the exception

of and integrating re

successfully meet challenges ahead of time rather than continually playing catch-up” (Chiat 1988: 4). He summarizes Minnesota’s marketing approach as “a philosophy, an attitude, a perspective—a way of doing business. Marketing means putting a customer focus to all aspects of the DNR: thinking about what we do and how we do it from the customer perspective” (1988: 7).

Many fish and wildlife professionals believe that an improvement in communications between agencies and the public will create more support for natural resource programs and additional funding for resource management agencies (Decker et al. 1987; Decker et al. 1996b; Shanks and Decker 1989). In his paper addressing public acceptance of resource management policies and strategies, Peyton (1987) suggests that improving communications and developing public involvement strategies can increase public acceptance of management decisions, decrease disruption, improve management plans, represent a broader range of values, and develop citizen responsibilities for resources. When integrated into decision-making, human dimensions and marketing research-based communications can enable resource managers to make decisions that are more responsive, and predictive and proactive in an ever-changing environment.

Communications as a Natural Resources Management Tool

As the number and diversity of constituents and their demands in natural resource management increase, fisheries management is increasingly becoming the management of people: resolving conflicts, managing for recreational satisfactions and multiple uses, enabling and incorporating public involvement into management decisions and other activities. Human dimensions specialists agree that the effectiveness of natural resource management rests in large part on the extent to which human dimensions insights have been incorporated.

With the exception of a few state agencies (e.g., Florida, Minnesota and Wyoming), planning and integrating research-based communications within the management process has been a

George Amend 1993: 6

by Mason 1992). Cas

and making a "mana

following questions:

1. How important?
2. How well are w
3. How can we do

One problem ident

agency function. A

for the little involvement

uses Adams et al. 1988. C

Another problem c

communications as a mana

40. Studies reveal that n

importance in the managem

Wade et al. 1996). Severa

that the communicati

education (I&E) divisio

and resource agencies fo

and were staffed by

that 21 percent of all

regions and other public

Adams et al. (19

challenge (Amend 1993; Crowe 1983; Decker and Enck 1996; Decker et al. 1996b; Decker et al. 1989; Madson 1992). Case (1989) calls the integration of communications into management decision-making a “management mix,” and challenges natural resource agencies to ask themselves the following questions:

1. How important are communications in natural resource management?
2. How well are we addressing the communications function?, and
3. How can we do better?

One problem identified is that the communications process is typically structured as a separate agency function. As a consequence, human dimensions and communication specialists often have little involvement in management decisions aimed at responding to social trends or issues (Adams et al. 1988; Case 1989; Decker et al. 1989).

Another problem cited is that managers have been slow to recognize the value of using communications as a management tool (Case 1989; Crowe 1983; Madson 1992; Schmidly et al. 1990). Studies reveal that resource professionals believe that communications are of major importance in the management function (Adams et al. 1988; Mather et al. 1995; Parrish et al. 1995; Wilde et al. 1996). Several natural resources communication planning specialists, however, have noted that the communication function is not adequately supported. A national study of information and education (I&E) divisions—the typical “home” for agency communications—within state natural resource agencies found that I&E divisions received 2.7 percent of the total reported agency budgets and were staffed by 2.6 percent of the total personnel (Adams et al. 1988). The same study found that 21 percent of all I&E personnel had duties related to the production of the agency magazine and other publications, and 53 percent of all I&E program dollars were dedicated to these functions. Adams et al. (1988) questioned the effectiveness of state I&E efforts based on their

return to short-term

articles.

To put this inform

ghal and Taylor (1986

forming businesses. I

ministry, increased cap

& U businesses, Mad

the All showed excell

resses made major com

relations—one func

MAE.

Case (1989, 633) b

ing agency organizati

wide management. De

management theory may p

trans dimensions knowle

agency culture may influ

ness. This knowledge

need and changes occur

design mechanism

appropriate needs and expect

orientation to short-term objectives and a heavy reliance on potentially outdated communication **techniques**.

To put this information into some perspective, Madson (1992) reported findings on a study **by Paul and Taylor (1986 as cited in Madson 1992)** which examined 101 of the nation's best **performing businesses**. They defined "best performing" as a combination of increased labor **productivity**, increased capital productivity, creation of new jobs and increased stock prices. Out of **the 101 businesses**, Madson chose 20 whose products and/or services were offered to the general **public**. All showed excellent productivity and return on investment (\$38.9 billion). And all **businesses** made major commitments (\$9. 2 billion or 23.7%) to promotion, sales, advertising and **public relations**— one function Madson regards as "information and education," (though only a part of I&E).

Case (1989: 633) believes that in addition to insufficient resources (staff and funding), existing agency organizational structure has resulted in communications being the "weak link" in resource management. Decker et al. (1989) suggest that research in organizational behavior and **management theory** may provide innovations in resource management essential for integrating **human dimensions knowledge** and the communication process. They suggest that an understanding of agency culture may influence how human dimensions is accepted as part of every day agency business. This knowledge also can help agency and professional organization leaders better understand changes occurring in their organizations, adapt organizational procedures to facilitate change, design mechanisms to improve communication among all organization members, and anticipate needs and expectations of changing organization members (Decker et al. 1996a).

gradually Planned

Identifying and a

the classic business

which loops) consistin

elementary assessment

from planning and align

evaluation).

In comparison, Ro

remaining:

- what is being comm
- what needs to be c
- what ought to be c
- the communication
- how well the comm
- objectives.

The strategic business plan

Ideally, communica

panies with agency mis

and prioritize objec

45) This pattern of thin

the management process

regarding communication

Strategically Planned Communications

Identifying and adapting to change is what strategic planning is all about. Rosenau (1982) defines classic *business* management strategic planning as a comprehensive system (which includes feedback loops) consisting of these questions: (1) who are we? (mission formulation) (2) where are we? (inventory/assessment); (2) where do we want to go? (vision); (3) where should we go? (priority planning and alignment); (4) how do we get there? (operational planning); and, (5) how did we do? (evaluation).

In comparison, Rosenau (1982) illustrates strategic *communications* planning as determining:

- what is being communicated, and to whom
- what needs to be communicated
- what ought to be communicated, and to whom
- the communication processes to accomplish objectives, and
- how well the communication reached the intended audience and achieved communication objectives.

Thus, strategic business planning and planning for communications are parallel processes (Table 1-1).

Ideally, communications planning should include a process for aligning communication objectives with agency mission and goals. Aligned communications are those which clearly identify and prioritize objectives and audiences with agency and division missions (Vaske et al. 1995). This pattern of thinking and planning along all communications lines and throughout the entire management process is what defines strategically planned communications. Strategically integrating communications, human dimensions and marketing research will enable management

Figure 14. Applying the communications planning

The Classic Business Management Planning Framework

Where are we now? (inventory)
Where do we want to go? (vision)
Where should we go? (priorities)
How do we get there? (operational plan)
How did we do? (evaluation)

business which are responsible

and proactive in position

In addition, the importance

not overlooked. Ken N.

communications effort was

Wine (1993). Channels for

example, need to be open

collaboration of

simplified and more in

analysts and educators a

(1985). Decker (1985) p

communications—

the good external comm

the person for it.”

Table 1-1. Applying the classic business management strategic planning framework to strategic communications planning (adapted from Rosenau, 1982).

The Classic Business Management Strategic Planning Framework	Strategic Communications Planning
Where are we now? (inventory/assessment) -----	What is being communicated and to whom?
Where do we want to go? (vision) -----	What needs to be communicated?
Where should we go? (priority planning & alignment) -----	What ought to be communicated, and to whom?
How do we get there? (operational planning) -----	What communication processes do we use?
How well did we do? (evaluation) -----	How well did the communication reach the intended audience/ achieve communication & organizational objectives?

decisions which are responsive, representative of diverse publics, predictive of trends and emerging issues, and proactive in policy, communications objectives and services (Decker and Enck 1996).

In addition, the importance of internal communications among agency employees should not be overlooked. Ken Norrie, of the Idaho Department of Fish and Game, warned that no amount of communications effort with external publics will compensate if internal publics are ignored (Norrie 1993). Channels for communications among agency managers, researchers and educators, for example, need to be opened or created in order to adequately address needs identified by all or to enable collaboration of efforts. Issues important to fisheries managers need to be agreed upon and prioritized and more importantly, effectively communicated to researchers or communication specialists and educators attempting to address, work together and solve these concerns (Mather et al. 1995). Decker (1985) proposes that fisheries management must be based on effective and efficient communications—and states that “good internal communications is required of an agency before good external communications can be expected, because every individual in an agency is a spokesperson for it.”

Communications Plan

Organizations often
communication plans
Every Commission have
Information and Educ
ward the Communicat
The documents, h
essential in *strategic*

Based on what the
stage approach may not
cess is likely due to sev
teaching or intervention s
approaches do not incorpor
implementation plans (Rice
need more elements in str
that integrated into resou
Schmidly et al. 1990)

Strategic planning
focusing on "the plan" rather
range and lacks long-term
analysts suggest that sub
implementation) is like show
state that strategic
issues and public needs

Communications Planning in Michigan

Organizations charged with resource management in Michigan have recognized the need for communication planning. Both the MDNR Surface Water Quality Division and the Great Lakes Fishery Commission have produced documents designed to assist with communications planning (the Information and Education Strategy for Michigan's Non-point Source Pollution Program [no date] and the Communications Strategy for the Great Lakes Fishery Commission [Cole-Misch 1992]). The documents, however, largely refer to operational planning and omit much of the process essential in *strategic* planning described by Rosenau (1982).

Based on what the research indicates, communications lacking essential elements seen in a strategic approach may not work, either for citizens or for the resources. The potential lack of success is likely due to several factors: (1) approaches are not built upon current research in marketing or intervention strategies to affect client/customer behavior (Winett 1992); (2) approaches do not incorporate the important step of formative research or evaluation in their implementation plans (Rice and Atkin 1989); (3) approaches are not strategically planned, lacking one or more elements in strategic planning as described earlier (Rosenau 1982); and (4) approaches are not integrated into resource management processes (Crowe 1983; Decker et al. 1989; Madson 1992; Schmidly et al. 1990).

Strategic planning specialists Migliore et al. (1995) believe that the consequence of focusing on "the plan" rather than the process results in a plan which is inflexible to environmental change and lacks long-term utility. Without a foundation based on research, strategic planning specialists suggest that subsequent operational planning (including the message, action plan and implementation) is like shooting an arrow without aiming at the target. Migliore et al. (1995) and Hay (1990) state that strategic "aim" is necessary for effectively focusing actions representative of real issues and public needs.

Communications Planning Within the Fisheries Division of the Michigan Department of Natural Resources

The Fisheries Division of the Michigan Department of Natural Resources (MDNR) has specified in its mission a need to foster and contribute to public stewardship of natural resources through a scientific understanding of fish, fishing, and fishery management (MDNR Fisheries Division 1997). Current Fisheries Division communication activities serve to address the information needs of the public through: print material (e.g., brochures), personal communications (e.g., answering telephone and in-person inquiries), electronic media (the Weekly Fishing Report via the telephone and internet), Division attendance at regional sport shows (e.g., Michigan United Conservation Clubs' "Outdoorama"), and participation in and coordination of fishing events (e.g., fishing derbies). Public involvement strategies (e.g., Great Lakes Fisheries Advisory Committees, MDNR Listening Sessions) may reach some non-angling audiences, as well. Still, the Division recognizes that its current communication activities are "poorly targeted for their intended audience and there is no consistency of format or style" (MDNR Fisheries Division, 1997: 69).

As with other fisheries agencies in the nation, the MDNR Fisheries Division focuses much of its communication efforts on anglers. In fact, the Division views recreational fishing as "the largest and highest-valued use of the state's fishery resources" (MDNR Fisheries Division 1997: 4). Yet, anglers represent but a small proportion of Michigan residents (18%) (USFWS 1996). Furthermore, as a public trust agency, the Division has an obligation "to meet the needs of broad public interests" (MDNR Fisheries Division, 1997: 6).

In its recent strategic plan, the Division has recognized that its publics are diverse and that it needs to be more responsive to the needs and interests of these publics in its management and communications processes (MDNR Fisheries Division 1997). Yet, while the Division is currently engaged in an ongoing strategic planning process to identify its mission, programs and "key results"

desired outcomes to

communication objectives

in strategic plan

in long-term communication

- to educate
- to create residents
- to develop activities
- to develop and social

Text outlining specific

communication needs

to results to address

strategic opportunities

for Division resources

to accomplishment of core

Before the Division

understanding of perceived

that Publics and its

communications strategy

internal and external

MDNR Fisheries

(desired outcomes to achieve through specific Division activities) for fisheries management, aligned communication objectives based on human dimensions and marketing research, have yet to undergo similar strategic planning. For example, in its most recent Strategic Plan, the Division describes the following communication needs (MDNR Fisheries Division 1997):

- to educate interested publics including youth (1997: 20);
- to create opportunities and programs designed to make fishing easily available to urban residents, those less affluent, women and children (1997: 35);
- to develop communications to address the needs of people participating in appreciative activities and animal rightists (1997: 52); and,
- to develop fishing recruitment efforts targeted at anglers from different demographic and socio-economic groups (1997: 53).

Text outlining specific communication “key results,” however, does not address the communication needs the Division has stated that it desires to address. In other words, there are no key results to address appreciative and animal rightists interests nor non-traditional audience recreational opportunities as proposed in the Strategic Plan (MDNR Fisheries Division 1997). Further, Division resources such as staff and funding are not clearly allocated for the accomplishment of communications objectives (MDNR Fisheries Division 1996 and 1997).

Before the Division can become more responsive to its diverse publics, a better understanding of perceived public interests and needs regarding fisheries communications is needed. Publics and issues are dynamic. To accomplish these tasks, the Division seeks to develop a communications strategy model to assist with determining ongoing communications needs (internal and external), communications processes and activities with which to respond to these needs (MDNR Fisheries Division 1996 and 1997).

Problem Statement

The MDNR
processes and strategies
coordination of its
Forest Division
Division in making
communications as a

The purpose
and priorities
forming and group
Forest communication
communications situation

Research Objectives

This study will
Objective 1: Describe
Forest personnel.

- Research Questions
- What
 - What
 - What
 - What
 - plan

Problem Statement, Research Needs, Research Objectives and Questions

The MDNR Fisheries Division seeks to improve and enhance its communications products, processes and strategies. The Division has recognized a lack of research-based information and coordination of its communication activities conducted on many levels within the Division (MDNR Fisheries Division 1997). This information and coordination is needed in order to assist the Division in making optimum investments of time, staff and financial resources in using communications as a management tool.

The purpose of this study was to identify the DNR Fisheries Divisions' communications needs and priorities. To accomplish this, focus groups were conducted using open-ended questioning and group discussion aimed at exploring personnel perceptions toward the current fisheries communications situation, and what personnel desired as the Division's future communications situation.

Research Objectives, Questions and Hypotheses

This study was based on the following research objectives, questions and hypotheses:

Objective 1: Describe the Division's current communications situation as perceived by Fisheries Division personnel.

Research Questions:

- What communications does the Fisheries Division currently provide?
- What audiences are being reached with current Division communications?
- What are people requesting of the Division?
- What are the Division's strengths, weaknesses, opportunities and threats in planning, developing and implementing fisheries communications?

Objective 2: Descriptive
Figures Division p

Research Q

- Why
why
- Why
is th
- Why
Wha
- Why
a.
b.
c.
Why

Hypotheses:

1. Perspectives of th
vary with regards
2. Discrepancies or
Division's current

When planning

important if personnel
opportunities of all pe

The Division

er that there are spec
this create opport
identical. Yet, the cu
ratives designed to
a gap or disc

Objective 2: Describe the Division's future or desired communications situation as perceived by Fisheries Division personnel.

Research Questions:

- What trends exist that may be influencing who the Division ought to consider when targeting future Fisheries communications?
- What audiences ought to be targeted with future Fisheries communication? Who is the Division serving?
- Which audiences ought to be a priority for future Fisheries communications?
- What are the desired outcomes of future Fisheries communications?
 - a. Desired knowledge outcomes
 - b. Desired behavioral outcomes
 - c. Desired attitudinal outcomes
- Which outcomes ought to be a priority for future Fisheries communications?

Hypotheses:

- 1) Perspectives of the MDNR Fisheries Division's communication situations, needs and priorities vary with regards to personnel's occupational status (e.g., supervisors and non-supervisors).
- 2) Discrepancies or gaps exist between what MDNR Fisheries Division personnel described as the Division's current communications situation and the desired communications situation.

When planning communications, the internal needs and priorities of all personnel are important if personnel buy-in and active participation is to take place. Thus, the opinions, needs and priorities of all personnel need to be examined and considered.

The Division recognizes that the current communication activities are "poorly targeted," and that there are specific communication needs that ought to be addressed (e.g., educate interested publics, create opportunities and programs designed to make fishing easily available to urban residents). Yet, the current strategic planning does not address these communication needs with objectives designed to achieve "key results" or outcomes. Witkin and Altschuld (1995: 9) describe need as "a gap or discrepancy between a present state and a desired, future state."

Organization of

Effective and
starting process wh
and consider the c
and outcomes ("wh
What are the best c
view contains two
in the process of p
The second section pr
communication proce
achieve certain outco

Strategic Planning

Exactly what
Madsen, Nolan and
addressing the most
staff professor at th
starting as the anticip
M. Goodstein et al

Chapter 2

LITERATURE REVIEW

Organization of This Chapter

Effective and efficient fisheries communications (both internal and external) rely upon a planning process which is strategic—one which takes into consideration current activities (i.e. which consider the question: “what is being communicated and to whom?”) and desired activities and outcomes (“what ought to be communicated?”), as well as implementing communications (“what are the best communication processes to achieve management objectives?”). This literature review contains two major sections. The first section describes research on the variables associated with the *process* of planning an overarching fisheries management **and** communications strategy. The second section provides a theoretical research-based foundation for identifying “best communication processes” (e.g., products and services designed to reach specific audiences and achieve certain outcomes).

Strategic Planning - What is it?

Exactly what is planning, and how can it be made strategic? Planning consultants Goodstein, Nolan and Pfeiffer (1993) describe planning as the process of establishing objectives and choosing the most suitable means for achieving these objectives prior to taking action. Russell Ackoff, professor at the Wharton Business School and strategic planning consultant, refers to planning as “... anticipatory decision-making ... a process of deciding... before action is required” (1981). Goodstein et al. (1993: 3) define *strategic* planning as the process by which guiding

members of an organization

believe that future

Steiner (1974)

comprehensive description

To establish
the future of
the enterprise
activities, and
both the goals
them. Alternative
policies, plans

Gioia, Chittipeddi

"A strategy is
just any plan
enterprise to
enterprise. A
each other and
of the environment
of the firm must

In an article published

strategy should always

resources and capabilities

and other related elements

Marketing research

strategic planning is a

method for identifying

researchers Kotler et al.

orientation for a

interesting twist as "the

members of an organization envision its future and develop the necessary procedures and operations to achieve that future.

Steiner (1979: 11), author of numerous texts and articles, offers the following comprehensive description of strategic planning as:

“... establishing basic objectives and goals which management wishes to achieve in the future. In conjunction with goal setting is an examination of present trends of the enterprise, future environmental possibilities and their relationship to firm activities, and a variety of external and internal affairs that have a bearing upon both the goals sought and the manner in which the enterprise wishes to achieve them. Alternative courses of action are examined and the enterprise chooses those policies, plans, or strategies to achieve the objectives sought.”

Glueck, characterizes the planning processes as follows:

“A strategy is the means used to achieve the ends (objectives). A strategy is not just any plan, however. A strategy is a plan that is unified: it ties all the parts of the enterprise together. A strategy is comprehensive: it covers all major aspects of the enterprise. A strategy is integrated: all the parts of the plan are compatible with each other and fit together well and relate advantages of the firm to the challenges of the environment. A strategy begins with a concept of how to use the resources of the firm most effectively in a changing environment” (1980: 9).

In an article published by *The Harvard Business Review*, Mainer (1968: 40) claims that a strategy should always be stated “in terms of the relationships between the organization, its resources and capabilities, and its total environment, suppliers, technologies, and government,” as well as other related economic and non-economic environmental variables.

Marketing researchers Peter and Donnelly (1986) provide this simple description of strategic planning: a large plan or blueprint for the entire organization, providing an over-arching context for identifying general approaches or major directions for planning activities. Marketing specialists Kotler et al. (1996) take these definitions of strategic planning and assume a customer-based orientation for achieving an organization’s objectives. They describe strategic planning with a marketing twist as “marketing management” and define it as follows:

"Marketing
programs of
buyers for"
29).

Many comm

to test that strate

figals and objecti

Jackson et al. (199

strategic goals, critic

planning is character

ing of priorities.

In fact, most

to the process of p

gives that the process

environmental forces

resources and the

(Liggett et al. 1995)

planning is that plans

strategic planning inv

external opportunities

however, the distinc

organization's vision

the product or acti

the process of p

the activity plan

“Marketing management is the analysis, planning, implementation and control of programs designed to create, build and maintain beneficial exchanges with target buyers for the purpose of achieving organizational objectives” (Kotler et al. 1996: 29).

Many common elements exist among the above definitions of strategic planning, including the ideas that strategic planning is anticipatory, or future-oriented, and is based on the establishment of goals and objectives oriented to the organization’s internal and external environments.

Goodstein et al. (1993) suggest that although an organization may delineate mission statement, strategic goals, critical success indicators, functional objectives, and so on, successful strategic planning is characterized by the process of self-examination, confrontation of difficult choices and setting of priorities.

In fact, most strategic planning specialists agree that the focus of strategic planning should be on the *process* of planning, and not the plan that is produced. Strategic planning consultants agree that the process of strategic planning enables organizations to adapt to changing environmental forces in order to maintain a proper fit between the organization’s objectives, skills and resources and the demands of its changing environment and opportunities (Kotler et al. 1996; Migliore et al. 1995). They suggest that the key difference between plans and the process of planning is that plans involve identifying and describing specific outcomes or activities, whereas strategic planning involves a matching process between an organization’s internal resources and its external opportunities. While both the process of planning and product/activity plans are necessary, the distinction between the two is important: one aims to identify and describe the organization’s vision and to set priorities based on information about its environment, while the other (product or activity plans) aims to implement or operationalize that vision. Another difference is that the process of planning includes evaluative and modification feedback loops, whereas a product/activity plan may not.

What is the Strategic Planning Process?

Most business organizations use strategic planning process to define their long-term direction and objectives, establish their major programs, and allocate resources to achieve these objectives. The strategic planning process is a systematic process for defining the organization's mission, vision, and strategic goals, and for developing and implementing strategies to achieve these goals.

According to Mintzberg and McHugh (1985), there are three types of strategic planning: (1) *deliberate*, which is a planned and systematic process; (2) *emergent*, which is a process that evolves over time; and (3) *combined*, which is a process that combines elements of both deliberate and emergent planning. The strategic planning process is a continuous process that evolves over time as the organization's environment changes. The strategic planning process is a process that involves the following steps: (1) defining the organization's mission and vision, (2) defining the organization's strategic goals, (3) developing strategies to achieve these goals, (4) implementing these strategies, and (5) evaluating the results of the strategic planning process. The strategic planning process is a process that involves the following steps: (1) defining the organization's mission and vision, (2) defining the organization's strategic goals, (3) developing strategies to achieve these goals, (4) implementing these strategies, and (5) evaluating the results of the strategic planning process.

What is the Strategic Planning *Process*?

Most business and marketing professionals agree that the fundamental phases of the strategic planning process include: formulating or reviewing the mission, regularly analyzing the organization's internal and external environments, identifying strategic issues, establishing goals and/or objectives, examining strategies or activities and resources, and monitoring and evaluating the planning process or specific activities (Figure 2-1).

According to marketing management specialists Kotler et al. (1996), an organization which plans strategically will have market alternatives identified and will be making conscious choices concerning to which market it may (or should) be offering products and services that will ultimately help to achieve organizational goals. The function of the strategic marketing process is to help make these choices based on (1) priorities identified, (2) an assessment of the organizational environments, (3) an assessment of the organization's strengths and weaknesses matched against outside environmental opportunities and threats, and (4) an alignment with the organization's mission (Goodstein et al. 1993; Hay 1990; Migliore et al. 1995; Peter and Donnelly 1986). How these four choices relate to the process of strategic management and communications planning are outlined below.

Strategic Plan
Operational Q.

"Who are we?"

"Where are we?"

"Where do we want to be?"

"How will we get there?"

"How well do we do?"

Figure Chapter
Donnelly 198

Strategic Planning
- Operational Questions -

Strategic Communications
- Operational Questions -

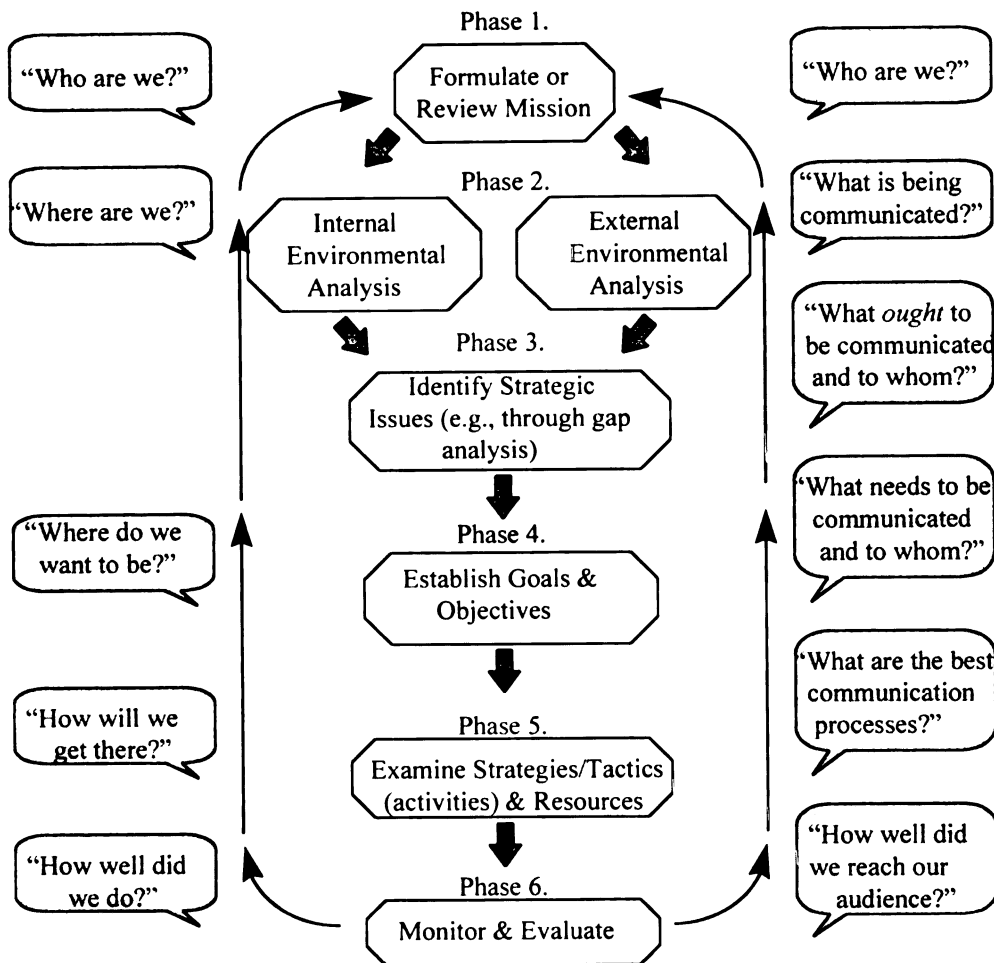


Figure Chapter 2 -1. A basic strategic planning model (adapted from Peter and Donnelly 1986; Goodstein et al. 1993; Hay 1990; Kotler et al. 1996; Lorange 1979).

Both busi

mission statement

functional role

By 1990, Miglio

We suggest tha

keeping and cr

consider the follow

- What
- For w
- How c
- Why c

Key operations:

Figure 2-1).

The key di

In recent mark

decisions to formu

for question, that c

transfers according

assumed to strat

act saying "we m

Goldstein et al., 199

ities provided "r

new developer

Phase 1: Mission Formulation or Review

Both business (including profit and not-for-profit) and marketing planners agree that a mission statement should address the organization's fundamental reason for being and describe the functional roles that the organization is going to play in its environment (Goodstein et al. 1993; Hay 1990; Migliore et al. 1995; Peter and Donnelly 1986). Goodstein et al. (1993) and Bryson (1998) suggest that how the organization envisions the future should provide insight into developing and critiquing its mission. Goodstein et al. (1993) recommend that an organization consider the following questions when formulating its mission:

- What function(s) does the organization perform?
- For whom does the organization perform this function?
- How does the organization go about filling this function?
- Why does this organization exist?

The key operational question during this first phase of strategic planning process is “Who are we?” (Figure 2-1).

The key difference between a traditional business orientation toward strategic planning and a more recent marketing management approach lies in how an organization answers the above questions to formulate its mission statement (Peter and Donnelly 1986; Goodstein et al. 1993). The first question, that of what functions are performed, has traditionally been answered by business planners according to the product or service their organization provided. Fisheries managers accustomed to strategic planning from a traditional business orientation, for example, might be heard saying “we manage fish” or “we provide opportunities for fishing.” Levett (1960 as cited in Goodstein et al. 1993) called this nearsighted view of mission formulation in terms of the goods or services provided “marketing myopia.” In contrast, the marketing management approach to mission development is focused on *markets* rather than on products and services; consequently,

position statements

Hay (1990), Kotler &

recommendation for

states that the organiza-

organization is often

Thinking about

stakeholders should

needs and a continuous

is more likely to de-

with stakeholders and

Goldstein et al. (1990)

This leads to

when market or seg-

the organization

identification of who

primary market.

end users) who might

the buyers is called

Hay (1990).

"marketing match" can

permission. This will

stakeholders, such as

entities and products

mission statements switch from an internal to an external focus (Chiat 1988; Goodstein et al. 1993; Hay 1990; Kotler et al. 1996). This market-focused philosophy echoes Chiat's (1988) recommendation for natural resources communications: that mission focus should be based on the needs that the organization is seeking to satisfy, not on the physical product or service that the organization is offering at present.

Thinking about what needs the organization is attempting to fill for customers or stakeholders should make the organization more sensitive to a clear initial identification of those needs and a continual monitoring of those needs. As needs change, need-conscious organizations are more likely to develop new goods and services to meet the emerging needs of their customers and stakeholders and are less likely to become outdated and decline in function and utility (Goodstein et al. 1993).

This leads to the second aspect of mission formulation: identifying the "who," that is, which market or segment of the market the organization is attempting to serve. Most planners agree that no organization can be everything to everyone. Mission formulation requires a clear identification of what portion or segment of the total potential customer base the organization has as its primary market. The process of dividing a market into distinct groups of buyers (or stakeholders and users) who might require separate products or services, and deciding on the means of reaching those buyers is called market segmentation (Kotler et al. 1996).

Hay (1990: 167), specializing in non-profit business planning, suggests that a "service-marketing match" can help to identify effective strategies to answer "how" organizations may fulfill their mission. This would involve focusing on characteristics of the organization's customers or stakeholders, such as specific demographic and psychographic descriptors and matching programs, services and products that serve the needs and interests of specific stakeholders.

Strategic plan

external environment

working both with

and how they will

to revisit its mission

operational ques

communicating?"

Figure 2-1: Overa

communications sit

The environ

strategies in the organiz

no weaknesses for m

Whe are et al. 1995

communities and thro

Thompson as

resources of the organ

ability. A strength

source or competi

competitive advantage. A

large expertise or ca

Phase 2: Internal and External Environmental Analysis

Strategic planning specialists agree that an analysis of the organization's internal and external environments provides planners and decision-makers with information about what is occurring both within the organizational and external environments to make informed decisions about how they will conduct business. The environmental analysis may even lead an organization to revisit its mission based on information about who its customers or stakeholders are. In general, the operational question asked during this phase of strategic planning is still "With whom are we communicating?" But, it should also include a new question "*What* is being communicated?" (Figure 2-1). Overall, the two questions should aid in identifying and monitoring the current communications situation.

The environmental analysis is often conducted by identifying emerging opportunities and threats in the organization's external environment as well as the organization's internal strengths and weaknesses for meeting these opportunities and threats (Bryson 1988; Goodstein et al. 1993; Migliore et al. 1995). This type of analysis is called a SWOT analysis (for strengths, weaknesses, opportunities and threats).

The Internal Environmental Analysis

Thompson and Strickland (1995) define a strength as something the organization (or members of the organization) is good at doing or a characteristic that gives it an important capability. A strength can be an individual skill, important expertise, a valuable organizational resource or competitive capability, or an achievement that puts the organization in a position of market advantage. A strength can also result from alliances or cooperative ventures with a partner having expertise or capabilities that enhance a company's competitiveness. Michigan's

computerized data

increasing fish

A weakne

comparison to other

the an organizat

the marketplace

considered a weak

Once the

estimated from a sta

because they matter

market strategy. I

z prove fatal, wh

Stallard (1995) an

states by consi

ses and which we

computerized database of fishing license holders would likely be considered a strength for implementing fisheries communications.

A weakness, on the other hand, is something the organization lacks or does poorly (in comparison to others) or a condition that puts it at a disadvantage. A weakness may not necessarily make an organization vulnerable competitively, depending on how much that characteristic matters in the marketplace. Biologists lacking public relations and other communications skills might be considered a weakness in providing fisheries communications.

Once the organization's strengths and weaknesses have been identified, the two lists are evaluated from a strategy-making perspective. Some strengths are more important than others because they matter more in determining performance, in competing successfully and in forming a powerful strategy. Likewise, Thompson and Strickland (1995) say that some internal weaknesses can prove fatal, while others are either not significant or can be easily remedied. Thompson and Strickland (1995) and Kotler et al. (1996) recommend that a company assess its strengths and weaknesses by constructing a strategic balance sheet—showing which strengths are competitive assets and which weaknesses are competitive liabilities (Figure 2-2). Kotler et al. (1996)

Organizational Competencies

Marketing

Organization's reputation
Market share
Product quality
Service quality
Pricing effectiveness
Distribution effectiveness
Promotional effectiveness
Personnel effectiveness
Financial effectiveness
Geographical coverage

Finance

Availability of capital
Liquidity
Financial stability

Production and Services

Facilities
Economies of scale
Flexibility
Semi-skilled personnel
Ability to produce on time
Technical skills

Personnel

Human capital
Leadership
Motivated employees
Entrepreneurial orientation
Rapidly responsive

Sample Strategic Balance Sheet

Organizational Competencies	Performance					Importance		
	Major Strength	Minor Strength	Neutral	Minor Weakness	Major Weakness	Hi	Med	Low
<u>Marketing</u>								
Organization's reputation								
Market share								
Product quality								
Service quality								
Pricing effectiveness								
Distribution effectiveness								
Promotion effectiveness								
Personnel effectiveness								
Innovation effectiveness								
Geographical coverage								
<u>Finance</u>								
Cost/availability of capital								
Cash flow								
Financial stability								
<u>Products and/or Services</u>								
Facilities								
Economies of scale								
Capacity								
Able dedicated personnel								
Ability to produce on time								
Technical skills								
<u>Organization</u>								
Visionary capable leadership								
Dedicated employees								
Entrepreneurial orientation								
Flexible/responsive								

Figure Chapter 2 -2. Sample strategic balance sheet for analysis of organizational strengths and/or weaknesses (adapted from: Kotler et al. 1996).

commend that in

financial, manufac

performance." The

may weakness. No

organization's

organization will be

weaknesses in areas

will achieve a

Opportunity

and technology

1995, Jacobson

including customers.

Brustein et al. (1999)

strategies, competitive

In appraising

relevant to the particu

where an organ

through which the co

is all this "market a

was probability de

statements for oper

recommend that internal managers or outside consultants review the organization's marketing, financial, manufacturing and organizational competencies. Each factor is rated on its "performance," i.e. whether it is a major strength, minor strength, neutral factor, minor weakness or major weakness. Next, each factor is rated on its "importance," i.e. how important it is to achieving the organization's mission, goals and objectives. By completing the balance sheet, members of the organization will know what areas need strengthening. For example, organizations with weaknesses in areas that are considered important will not be want to make the necessary changes that will achieve a balanced state of competence and capabilities.

The External Environmental Analysis

Opportunities and threats can be discovered by monitoring a variety of political, economic, social and technological forces and trends (PESTs) (Bryson 1988; Goodstein et al. 1993; Migliore et al. 1995; Jacobson 1997). In addition to monitoring PESTs, various stakeholder groups, including customers, competitors, or collaborators, should be monitored. Bryson (1988) and Goodstein et al. (1993) suggest that typical products and services offered, typical marketing strategies, competition, and market segmentation patterns also be identified.

In appraising opportunities, Thompson and Strickland (1995) state that opportunities most relevant to the particular organization are those that offer important avenues for profitable growth, those where an organization has the most potential for creating a competitive advantage and those through which the company has the financial and personnel resources to pursue. Kotler et al. (1996: 64) call this "market attractiveness and success probability." They state that the organization's success probability depends on whether its business strengths not only match the key success requirements for operating in the target market but also exceed those of its competitors. The

increased particip

communications

In addition

measures its well-ri

advice posed by

moving action, t

viewed from a for-g

tical resources and

organizations, howe

lating revenues di

makers and huma

te among whites—

management fundin

Additionally

competitive forces a

lack of competition

competitors, resource

compete with other

psychological acces

and/or activities

family obligations an

es often than in the

22. Additionally

cases products or

increased participation in fishing among women could be considered an opportunity in fisheries communications.

In addition to providing opportunities, the organization's external environment may pose threats to its well-being. Kotler et al. (1996: 64) define an environmental threat as follows: a challenge posed by unfavorable trends or developments that would lead, in the absence of defensive marketing action, to sales or profit deterioration. This particular definition works best when viewed from a for-profit orientation rather than from the not-for-profit position of fisheries or other natural resources agencies. The external environment can still pose threats to not-for-profit organizations, however. An example of a threat to fisheries management might be the loss of funding revenues due to social, political or economic trends. For example, many fisheries marketers and human dimensions researchers have noted that the decline in the population growth rate among whites—who currently represent over 90% of licensed anglers—is likely to affect management funding dependent on these license sales (Murdock et al. 1996) .

Additionally, Thompson and Strickland (1995) state that threats often stem from competitive forces as well as from economic, technological, social and political circumstances. The idea of competition should not be novel to resource managers. Just as for-profit businesses have competitors, resource agencies providing services, such as recreational opportunities (e.g., fishing) compete with other leisure activities, the public's sense of "access" to recreational activities (psychological access in addition to physical access), and other constraints or barriers associated with outdoor activities. In fact, research indicates that lack of time, other recreational activities and family obligations are factors mentioned most often as reasons why people either quit fishing or fish less often than in the past (Harrington Market Research 1991; The NPD Group 1985; Ritter et al. 1992). Additionally, other agencies, private-for-profit or non-profit organizations may offer similar services, products or programs that do pose as competitors by duplicating effort. Communication

owners will want

existing programs

support for resour

Kotler et al

culture of the en

business is h

size high or low

communities and in

is big factor in sh

each strategy to its

organization's grow

There is a c

necessary compo

for Thompson and

not just an exercise

addresses, opportu

organization's situat

Most busine

efficient program

business portfolio ev

tools—as tools use

planners will want to address these competing factors appropriately when deciding to continue with existing programs or to develop special programs, services or products aimed at attracting public support for resource management decisions and uses.

Kotler et al. (1996) recommend that major threats and opportunities be assembled to create a picture of the environment's overall attractiveness. They describe four possible outcomes. An ideal business is high in major opportunities and low in major threats, a speculative business is either high or low in both major opportunities and threats. Finally, a troubled business is low in opportunities and high in threats. Thompson and Strickland (1995) believe that market opportunity is a big factor in shaping an organization's strategy. They further state that an organization cannot match strategy to its situation without first identifying each relevant opportunity and appraising the organization's growth potential in each.

Making Strategic Sense of the SWOT Analysis

There is a critical difference between having attractive opportunities available and having the necessary competencies, or strengths to succeed in these opportunities (Kotler et al. 1996). In fact, Thompson and Strickland (1995) describe the matching process of the SWOT analysis as more than just an exercise in making four lists. The SWOT analysis involves **evaluating** strengths, weaknesses, opportunities and threats and **drawing conclusions** about the attractiveness of the organization's situation and the possible need for strategic action.

Most businesses are involved in a variety of different management objectives which result in different programs, products and services that are offered. Kotler et al. (1996) describes two business portfolio evaluation models—the Boston Consulting Group model and the General Electric model—as tools useful in objectively analyzing and classifying an organization's potential or

agencies. The

test for how th

The Boston

Group (BCG), a l

classify what prog

Figure 2-3 (Kotl

eg, the annual tra

relative market sha

service offered b

represented by the

measure of the orga

means that sales are

particular program.

strongest organizat

The matrix

the four cells acco

stories that repre

capabilities. The purpose of these models is to allocate funding appropriately (i.e. build, hold or divest) for how the organization wishes to proceed with management objectives.

The Boston Consulting Group Growth/Share Matrix: The Boston Consulting Group (BCG), a leading management consulting firm, developed the growth/share matrix to help classify what programs an organization specializes in and what products and services it offers (Figure 2-3) (Kotler et al. 1996). The vertical axis indicates the annual growth rate of the market (e.g., the annual increase or decrease in fishing license sales), while the horizontal axis represents relative market share compared to that of the largest competitor. Each circle represents a product or service offered by the business and is assigned to the matrix based on profitability or value (represented by the size of the circles). The position of the circles on the matrix serves as a measure of the organization's strength in the relative market. A relative market share of 0.1 means that sales are only 10% of the leading competitor's sales volume, and 10 means that that particular program, product or service is the leader and has 10 times the sales of the next strongest organization in the market.

The matrix works by plotting the products and services offered by the organization in one of the four cells according to the organization's growth rate and market share (Figure 2-3). Plotted as circles that represent earnings (larger circles bringing in a greater volume of company

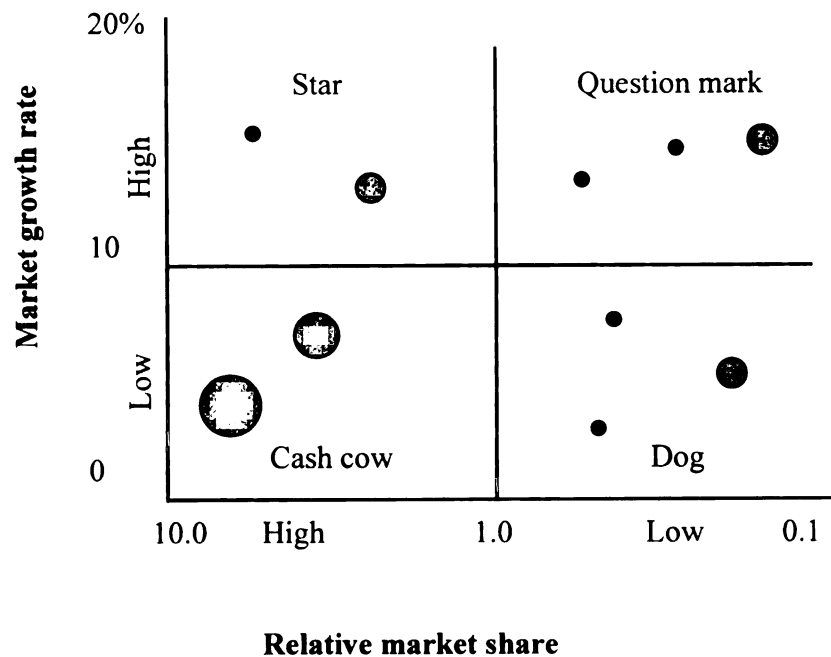


Figure 2-3. The Boston Consulting Group growth/share matrix (source: Kotler et al. 1996).

earnings), each program, product or service can be examined relative to each other to determine the balance of a organization's investments and potential earnings.

Programs which are unclear operate in high-growth markets but have low relative market shares and usually require a lot of cash to get started or to maintain (represented by question marks in the matrix). Kotler et al. (1996) state that, typically, most new business activities can be described as question marks because market attraction (how many people will want the new program, product or service) and effectiveness of these ventures are uncertain. If the question-mark business is successful, it becomes a star. Stars represent high-growth market leaders but still require substantial funds to keep up with high market growth or competitors. A star becomes a cash cow

its annual growth

the cash cow

and dogs, wh

services that hav

it may even g

or less.

Having plot

not determine w

an unbalanced p

shows. Balance

its organizati

General El

isions about pro

rate and growth ra

in weaknesses int

products or services

General Electric (G

ence in term of m

when its annual growth rate drops but it still has the largest relative market share. As the market leader, the cash cow produces lots of cash for the company and helps to finance the stars, question marks and dogs, which tend to be cash hungry. Dogs describe organizational programs, products and services that have weak market shares in low-growth markets. They typically generate low profits or may even consume more management time and funds than all other activities and result in a net loss.

Having plotted its various businesses in the growth/share matrix, the organization then is able to determine whether its business portfolio is healthy or balanced. Kotler et al. (1996) states that an unbalanced portfolio would have too many dogs or question marks and/or too few stars and cash cows. Balancing a business portfolio involves deciding how the organization should prioritize or alter its organizational programs, products and services based on market return and potential.

General Electric Multi-factor Portfolio Matrix: Kotler et al. (1996) recommend that decisions about products or services an organization provides should not be determined on market share and growth rate or potentials alone, but should take business strengths, core competencies, and weaknesses into consideration as well. To assist with decisions about what programs, products or services to continue (either by expansion/growth or by maintaining the current status), General Electric (GE) pioneered the multi-factor matrix to help to rate each program, product or service in term of market attractiveness and organizational strengths (Figure 2-4).

Zone

A ☒




B ☐

C ☐

The GE m
in the upper left
the market is most
recesses and low
information for de
right to invest or r
at same time, the
conditions ar
Clearly, the
and. In natural re

		Business strength		
		Strong	Average	Weak
Market attractiveness	High	A		
	Medium		B	
	Low			C

Zone

- A**  **Build/invest:** Increase the market share. Appropriate for question marks whose shares have to grow to become stars.
- B**  **Maintain/hold:** Preserve the market share. Appropriate for strong cash cows if they are to continue to yield a large positive cash flow.
- C**  **Divest:** Increase the cash flow by eliminating the product/service. Appropriate for weak cash cows whose future is dim and from whom more cash flow is needed. Divesting can also be used with question marks and dogs.

FigureChapter 2 -3. General Electric's strategic business-planning grid (adapted from: Kotler et al. 1996).

The GE matrix is divided into nine cells and three zones. The zones change diagonally from the upper left corner down to the lower right corner of the matrix, with zone A being where the market is most attractive and business strengths are high, while zone C shows business weaknesses and low market attractiveness and zone B lies in the middle. The GE matrix provides information for deciding what program areas (products and services) in which an organization ought to invest or maximize based on both market attractiveness and organizational strengths. At the same time, the GE matrix helps to point out areas where the organization is operating under weak conditions and ought to divest.

Clearly, the two marketing models described here are designed with for-profit businesses in mind. In natural resources management, however, the concepts of "earnings," "market share" and

more attractive
relations" and
occupation in fis
values. The key
services an or
open.

Kotler po
and should in
about five years
action mark, si

Organiz.
ation be paid
organization. Ta
relative streng
agency "cultur

Strategic
management phil
organization's ma
invested, whi
linked favora
organization, and
43. The cultu

“market attractiveness,” could be considered in human dimensions terms such as user “satisfactions” and “motivations,” public support of management decisions and programs, rate of participation in fishing or fish viewing, and the funds generated through license sales and other revenues. The key here is that market information should help guide decisions about what products and services an organization provides to maintain the market share, or in not-for-profit terms, public support.

Kotler points out that the application of the marketing analytical models seen in Figures 2-3 and 2-4 should include a forecasting of the expected position of each program area over the next three to five years. This would include analyzing where each product or service is in its life cycle (question mark, star, and so on).

Organizational Culture: Effective environmental analysis requires that careful attention be paid to those issues that have high potential impact on the future success of the organization. Taken together, internal environmental factors, such as the organization’s distinctive strengths and weaknesses, its history and members’ attitude are sometimes referred to as agency “culture.”

Strategic planning specialists agree that the organization’s culture influences the entire management philosophy (Bryson 1988; Goodstein et al. 1993; Hay 1990). Culture guides the organization’s members in decision making and, consequently, it also affects how time and energy are invested, which facts are examined with care and which are summarily rejected, which options are looked favorably upon from the start, which types of people are selected to work for and in the organization, and how practically everything else is done in the organization (Goodstein et al. 1993). The culture of the organization will either facilitate or hinder both the strategic planning

ness and the imp

actically, natura

Organizat

used in a central s

of found that a

rearing that are tr

of culture is deve

new with its proble

ought to be consid

serve, think, and

Dea and Kennedy

When attens

the profession m

we say that a m

relationships can inf

with a culture that

reaching in the inte

of think if not imp

itself a cultural is

then is to determ

right to be" betwe

organization's succ

are that planners n

process and the implementation of the plan. For these reasons, organizational—and more specifically, natural resources agency—culture will be explored in more detail.

Organizational culture has been defined by Goodstein et al. (1993) as a social system based on a central set of beliefs and values. In an analysis of natural resource agencies, Kennedy (1985) found that agency culture provides social groups with patterns of thinking, feeling, and behaving that are transmitted from person to person and from generation to generation. How and why culture is developed is described by Schein (1990) as: (a) the way an organization learns to cope with its problems of external adaptation and internal integration (b) that has worked well enough to be considered valid and, therefore, (c) is taught to new members as the (d) correct way to perceive, think, and feel. More generally, culture is viewed as “the way we do things around here” (Deal and Kennedy in Goodstein et al. 1993).

When attempting to address, plan and manage for change, Kennedy (1985) recommends that a profession must understand itself—especially its strengths and weaknesses. Goodstein et al. (1993) say that a misunderstanding or distortion of one’s professional culture, strengths and weaknesses can influence the realism of the entire planning process. They advise that organizations with a culture that ordinarily avoids confronting harsh realities will find the need for objective soul-searching in the internal and external analyses (e.g., the SWOT analysis) phase of the process difficult, if not impossible, to achieve. The willingness to admit that a weakness can and does exist is itself a cultural issue. One purpose in the next strategic planning phase, *Identifying Strategic Issues*, is to determine the discrepancies (or identifying the “gap”) between “what is” and “what ought to be” between the organization’s existing culture and the culture necessary to achieve the organization’s success (Goodstein et al. 1993). Goodstein et al. warn, however, that a common error that planners make is the belief that their own culture can be adjusted to the strategy, rather

by the other way

giving should de

Natural Re

Gill (1996)

evolved need

ervation or wis

evolution. As

social interests, res

The import

source manage

ommends that re

herent from the p

available agency

general public and t

ferences in value

sometimes difficult

regarded throughout

An example

forming public cha

practices. Human

exists. Yet, whe

being and attempt

than the other way around. They further state that changing a culture takes time, and strategic planning should deal primarily with the here and now.

Natural Resource Agency Culture

Gill (1996) describes the overarching utilitarian culture of natural resources management as having evolved nearly a century ago when over-harvest of resources led to a philosophy of conservation or wise, sustainable use. At nearly the same time, licenses and other user regulations were initiated. As Gill describes the situation, license fees effectively married public servants to special interests, resulting in a management culture of resource use by and for paying interests.

The importance of recognizing and understanding agency culture is essential when resource management agencies consider their response to larger public interests. Gill (1996) recommends that resource management must recognize what its culture is and how it may be different from the public that agencies are commissioned to serve and represent. Evidence exists that wildlife agency biologists have attitudes and values which are different from those of the general public and the clients served by the biologists (Peyton and Langenau 1985); it is likely that differences in values also exist between fisheries managers and users as well. Though complex and sometimes difficult, it is imperative that both public and professional values and viewpoints be weighed throughout the decision-making processes (Amend 1993).

An example of the cultural differences between agency personnel and publics is seen by the recurring public challenge of specific recreational harvest activities and resource management practices. Human dimensions research has served to document many of these changing public attitudes. Yet, when faced with this information, wildlife professionals often argue that the public is “wrong” and attempt to re-educate them back to “proper” wildlife values (Kennedy 1985). Along

business. Kennedy

"a wall that
creating a
contest of
emotional

Most strate

training process

organization, that w

strategic planning p

Phase 3: Identif

Planning &

between an organiz

analysis is one way

can describe a g

assessment) as an id

organization and the

planning process. T

"an active p

state to the s

provides the

sufficient to

period (Go

A gap analy

analyses and determ

between. It should be

internal strengths ar

these lines, Kennedy (1985: 571) describes wildlife management culture as:

“a wall that defends the vested interests at the expense of the larger public interest creating a defensive, Bastille-mentality that views itself and dissenting publics as a contest of right and wrong, the informed vs. the uninformed, the rational vs. the emotional.”

Most strategic business and marketing managers believe that an environmental analysis or monitoring process can uncover a variety of important factors, both internal and external to the organization, that would otherwise have been overlooked but that need to be considered as part of the strategic planning process.

Phase 3: Identifying Strategic Issues

Planning specialists agree that strategic planning should focus on achieving the best “fit” between an organization and its environment. Though mentioned rarely in the literature, a gap analysis is one way of finding this “fit” (Goodstein et al. 1993; Lorange 1979). Goodstein et al. (1993) describe a gap analysis (in evaluation literature, this is often referred to as a needs assessment) as an identification of discrepancies or gaps between the current performance of the organization and the desired performance required for the successful realization of the strategic planning process. They say that a gap analysis is:

“an active process of examining how large a leap must be taken from the current state to the desired state—an estimate of how big the ‘gap’ is. The analysis provides the answer to the question of whether the skills and resources at hand are sufficient to close the gap—to achieve the desired future within the proposed period (Goodstein et al. 1993: 261).”

A gap analysis compares data generated during the internal and external environmental analyses and determines (through careful consideration) what discrepancies or gaps exist between the two. It should be a focused effort that involves the simultaneous study of the organization’s internal strengths and weaknesses and of the external opportunities and threats that may positively

negatively affect

overall the operat

discrepancies or g

overall the other

tion and what to

organizational strat

Strategic Balance S

firm's growth sh

operational que

The outcome

was the organizat

lyson (1988). A d

ified.

Goodstein et

strategic planning p

ditional questions

ization:

1. How do

2. How do

both cur

3. How doe

What is

success i

4. What are

capacity

5. How diff

desired fi

or negatively affect the organization in its efforts to achieve a desired future (Goodstein et al. 1993). Overall, the operational questions to be considered during the gap analysis phase are: “What are the discrepancies or gaps between the internal and external environments?” “Can these gaps be closed, given all the other things the organization is seeking to do?” and, “Is there alignment between the mission and what the results of the environmental assessment/monitoring suggest ought to be the organizational strategic issues/priorities?” (Goodstein et al. 1993) (Figure 2-1). This is where the Strategic Balance Sheet (Figure 2-2) and the two marketing models—the Boston Consulting Group’s growth/share matrix and the GE multi-factor portfolio matrix—may be useful in answering the operational questions.

The outcome of the gap analysis phase should help to identify the strategic (or priority) issues the organization can and should pursue to achieve organizational goals and objectives (Bryson 1988). Additionally, this process may illuminate specific strategies to use to close each gap identified.

Goodstein et al. (1993) and Lorange (1979) agree that a gap analysis is a critical step in the strategic planning process. In fact, Goodstein et al. (1993) recommend addressing the following additional questions that can help point out issues or priorities that may be of importance to the organization:

1. How does the desired strategic profile compare with the current one?
2. How do planned objectives fit with existing ones **and** with the organization’s resources, both current and planned, to bring them in line?
3. How does the organization measure “success” (e.g., what are the indicators of success?). What is the organization’s current level of success? What does the current level of success indicate about its capacity to meet new objectives?
4. What are the organization’s current strategies and what do they indicate about its capacity to execute new ones?
5. How different is the organization’s existing culture from the one required to achieve its desired future situation?

The Mar

strategic issues, and

decision grid. Pl

jectives better

ings to do. In e

concentrate on pre

comes as a prod

The matrix provid

zone of closing

The produc

extended to: (1) pe

ould be develop

that new markets

identify strategic a

demonstrates that a

products and on pre

The Market Opportunity Identification Model: In order to make decisions about strategic issues, an organization might use another marketing model—the product/market expansion grid. Peter and Donnelly (1986) state that there are two ways to achieve management objectives: better management of what the organization is presently doing and/or finding new things to do. In either of these approaches, the organization will also need to decide whether to concentrate on present customers, or seek new ones, or both. Marketers describe these strategic choices as a product/market matrix (Figure 2-5) (Kotler et al. 1996; Peter and Donnelly 1986). This matrix provides another model for analyzing how an organization can determine if it is capable of closing the gap between “what is” and “what ought to be.”

The product/market matrix is a tool used to determine whether **existing** products should be expanded to: (1) penetrate existing markets, or (2) enter **new** markets and (3) whether new products should be developed to satisfy existing markets (product development), or (4) be diversified to attract new markets. The beauty of the matrix, Donnelly and Peters point out, is that it helps to identify strategic alternatives available to an organization for achieving its objectives. It demonstrates that an organization can grow in a variety of ways by concentrating on present or new products and on present or new customers.

	Existing products	New products
Existing markets	1. Market penetration	3. Product development
New markets	2. Market development	4. Diversification

Figure 2-4. Market opportunity identification through the product/market matrix (source: Kotler et al. 1996).

Page 4: Establish

Goals are
concise, written
defined in the ga
that are cons
national questio
communicated (to
Johnson (1988) sug
future. While
any in the strateg
organization is bet
environmental and
decides to address
have according

Migliore
jectives help pr
for management, c
x. The importan
and with the orga

Page 5: Exam

Migliore et
that needs to hap
communications a

Phase 4: Establish Objectives and/or Goals

Goals are long-term, broad statements of intent about management while objectives are clear, concise, written statements outlining what is to be accomplished in key priority areas (as identified in the gap analysis or through other approaches), over a certain time period, in measurable terms that are consistent with the overall purpose of the organization (Migliore et al. 1995). The operational question for this phase of strategic communications planning is “What needs to be communicated (to achieve organizational objectives and mission), and to whom?” (Figure 2-1). Bryson (1988) suggests that the organization develop a “best” or “ideal” picture of how it envisions its future. While some strategic planning specialists suggest an organization develop this vision early in the strategic planning process, Bryson (1988) and Goodstein et al. (1993) believe that the organization is better equipped to envision a realistic picture once the combination of the environmental and gap analyses phases have been underway. Additionally, the strategic issues it chooses to address (identified during the gap analysis phase) will then guide how it would look and behave according to this vision.

Migliore et al. (1995) and Peter and Donnelly (1986) say that organizational goals and objectives help provide direction and establish long-term priorities. In addition to establishing goals for management, objectives should be established for communications, marketing, research and so on. The important consideration for all objectives and goals is that they are aligned with each other **and** with the organizational mission.

Phase 5: Examining Strategies, Tactics (Activities) and Resources

Migliore et al. (1995) describe operational plans as very detailed and designed to spell out what needs to happen to *implement* the strategic plan. These are the specific programs and communications activities (e.g., products and services) the organization engages in to “get the job

Goodstein

ness of resources

as be impossib

ommunication pr

Peter and

alates the deve

ization. This

organization will

erged in by the

activities and tactic

and considerate of

Many plan

ress used to supp

ommunications cr

zealed plans is de

228 Migliore et al

rganizational obje

ase multiple-area

omprehensive wh

ach organizational

esting in full ali

This phase

For the Best Com

done.” Goodstein et al. (1993) add that operational plans are dependent on and contingent to the process of resource allocation, for, without adequate staff and funding, “getting the job done” will likely be impossible. Thus, the operational question to ask during this phase is “What are the best communication processes?” (Figure 2-1).

Peter and Donnelly (1986) state that this later phase of the strategic planning process facilitates the development of operational plans for each product or service offered by the organization. This is because after following the process of strategic planning, the members of the organization will know exactly where they wish to go in reference to the communications activities engaged in by the organization. Armed with this knowledge, managers can develop objectives, activities and tactics which are consistent and aligned with the organization mission and objectives, and considerate of the organizational culture, strengths and weaknesses.

Many planning specialists agree that operational plans need to be developed in multiple areas used to support the overall strategy. These include the areas of management or operations, communications (including internal communication), finance, and staff. Each of these more detailed plans is designed to specify what needs to happen in a given area to *implement* the strategic plan (Migliore et al. 1995; Goodstein et al. 1993). Each of these plans should reflect the organizational objectives and needs to involve budgets, marketing plans, and timetables. After these multiple-area plans have been separately developed, they need to be integrated into a comprehensive whole. In other words, the first task is to develop a specific operational plan for each organizational element, then the second task is to knit them together into a seamless whole resulting in full alignment with the organization mission and vision (Goodstein et al. 1993).

This phase will be reviewed in more detail in the literature review section titled: *Deciding What the Best Communication Processes Are: Designing Strategic Communication Activities* (pp. 45).

The effect

and these are im

monitoring of time

organization's per

questions asked du

re organizational

Evaluation

for the planning

Arg et al. 1987, S

without an evaluat

rating process o

evaluation process

Evaluation

analysis of the org

evaluation, feedba

effectiveness (call

operational strateg

for types of prog

1. Form

audie

provi

2. Proce

imple

mod.

3. Outc

evalu

Phase 6: Monitoring and Evaluation

The effectiveness of the communication program, products, services or the processes by which these are implemented requires some sort of monitoring of activities. This includes the monitoring of timetables and personnel activities, and the feedback of results which reflect the organization's performance in reaching its objectives (Shadish et al. 1979). The operational questions asked during this phase is "How well did we reach our intended audience and/or achieve our organizational and communication objectives?" (Figure 2-1).

Evaluation consultants agree that evaluation or feedback techniques should be formulated when the planning or program first begins *as part* of the planning process (Beech and Dake 1992; King et al. 1987; Shadish et al. 1991; U.S. Department of Health and Human Services 1992). Without an evaluation system in place, the organization has no way of knowing if either the planning process or the resulting action plans are effective, and is unlikely to implement an evaluation process after the fact.

Evaluation can take place at several phases during strategic planning process: initial analysis of the organization and its internal and external environments (called formative evaluation); feedback loops integrated throughout the entire planning process to determine its effectiveness (called process evaluation); and evaluation of the specific impacts of actions or operational strategies (called either impact, outcome or summative evaluation). More specifically, four types of program evaluation are as follows (Shadish et al. 1991):

1. **Formative evaluation:** undertaken to test materials and ideas and to understand target audiences and communication issues before a project is started. Formative evaluation provides information useful in the development of the program.
2. **Process evaluation:** monitoring of program activities useful to program implementation staff and administrators. Process evaluation is most often used to modify and improve a program before too many resources have been allocated.
3. **Outcome evaluation:** short-term results of the program can be measured using outcome evaluation.

4. Impact
evalu.
Outco
other

What is the Pur

According
thing is that it
less situations s
arms based on
end of time. Str
be better unders
such iders—curr

Strategic p
current events ar
external and ext
enables managers t
environments and t
collective means
direction for the all
ed (1995).

Migliore et
shift focus from
ad "down-board"
the charge of its ow
Name (Goodstein

4. **Impact/summative evaluation:** longer-term results may vary from short-term, so impact evaluation can be used to measure the ultimate outcome and value of the program. Outcome and impact evaluation can provide information to program administrators and other stakeholders about the continuance of the program.

What is the Purpose of Strategic Planning?

According to Goodstein et al. (1993), the single most important reason for doing strategic planning is that it provides a framework for action for managers and others in the organization to assess situations similarly, discuss the alternatives for action in a common language, and decide on actions (based on a shared set of values and understandings) that need to be taken in a reasonable period of time. Strategic planning, they contend, also helps the organization develop, organize, and use a better understanding of the environment in which it operates, of its customer or stakeholders—current and potential—and of its own capabilities and limitations.

Strategic planning provides an opportunity on at least an annual basis to make adjustments to current events and actions, as well as toward trends suggestive of the future, occurring in both the internal and external environments (Goodstein et al. 1993). Planning consultants agree that this enables managers to develop scenarios of the future and helps the organization adapt to changing environments and take advantage of opportunities created by change. Strategic planning is seen as an objective means of establishing priorities, of providing a clear assessment of market position and direction for the allocation of organizational resources (Goodstein et al. 1993; Hay 1990; Migliore et al. 1995).

Migliore et al. (1995) and Goodstein et al. (1993) agree that strategic planning involves a shift in focus from crisis management and “fire fighting” to a proactive consideration of the future and “down-board” thinking such as that seen in the board game, chess. It allows an organization to take charge of its own destiny and create its own future rather than passively waiting for the future to arrive (Goodstein et al. 1993: ix).

Strategic
going their com
with a sense of
eff who participa
themselves as part
rmer. This can
lated from man
taring can help
start to the entire

How can
communications?

"Biologist
protecting
people to
budgets. E
customers

Masser et al. (199
the most import
ces of land and w
line will not tell a
lations.

Strategic planning also gives a sense of direction to staff members and provides a basis for gaining their commitment. The vision that can be gained during the planning process can also instill a sense of loyalty among personnel and stakeholders. Strategic planning specialists agree that staff who participate in the process and implementation of strategic planning are more likely to see themselves as part of the larger whole and to understand the purpose of the organization in a unified manner. This can be important when individuals or organizational units are accustomed to being isolated from many of the functions of the organization (Migliore et al. 1995). Finally, strategic planning can help to reduce competition or duplication of effort and gain a sense of perspective in relation to the entire organizational mission, vision and purpose (Migliore et al. 1995).

How can strategic planning be useful in resource management marketing and communications? Salwasser et al. (1989: 265) provide the following conclusion:

“Biologists care for wild animals and their habitats. To do a better job of protecting or producing wildlife they need more research, more technology, more people to inventory, plan, evaluate, and carry out projects; i.e., they need bigger budgets. How do biologists get bigger budgets? They create more happy customers: a simple positive feedback loop.”

Salwasser et al. (1989) further point out that customers (or stakeholders), rather than resources, may be the most important factor in making fish and wildlife conservation more competitive with other uses of land and waters. Thorne et al. (1992) advise that *strategic* planning and market information alone will not tell an agency what management decisions to make, but it will provide clues to guide decisions.

Deciding What
Communication

Adaptations and

By comp

are that member

communication as

Fisheries and Wild

activities planning

The MN I

between the Divis

Article 1994: 8)

regards the Divis

Division to its var

systematic manner

activity that affects

resources commun

relations and relat

division influen

Pizzo and Gilbert

In its comm

total resources co

fishers, news relea

by Of Fisheries an

recommends, shoul

Deciding What the Best Communication Processes Are: Designing Strategic Communication Activities

Definitions and an Example from Minnesota Division of Fisheries and Wildlife

By completing the strategic planning process just described, Peter and Donnelly (1986) state that members of the organization should know exactly what they wish management and communication activities (i.e. products and/or services) to accomplish. Minnesota's Division of Fisheries and Wildlife (MN Div. of F&W) is used as an example for approaching communication activities planning.

The MN Div. of F&W defines communications as “the process of exchanging information between the Division and its various user groups” (emphasis theirs) (MN Division of Fish and Wildlife 1994: 8). The Division categorizes its communications planning according to the outcome (or goals) the Division desires to achieve: public information (the dissemination of facts from the Division to its various user groups); education (the dissemination of information in a planned, systematic manner to build awareness and shape attitudes [emphasis theirs]); public relations (any activity that affects how various user groups feel about the Division). Other common natural resources communications goals include interpretation (an education activity aimed to reveal meanings and relationships through the use of objects, experience and illustrative media) and persuasion (influencing attitudes, beliefs or behavior change, i.e. developing resource stewards) (Fazio and Gilbert 1981).

In its communications strategic planning process, the MN Div. of F&W recognizes that natural resources communication activities are often based on how to get information to users (posters, news releases, videos, etc.). The Division calls this “tool-driven communications” (MN Div. Of Fisheries and Wildlife 1994: 8). *Strategic* communications planning, the Division recommends, should be based on “objective-driven communications” —a new approach toward

communications a

communications

pages) are nee

are intended

communication a

specific managem

Research-based

Identify

communication s

communication a

communications

practices to mak

research which c

of specific co

According

channels such as

corporates (Ad

to be effective

probably not

McC. Rice and A

managers agree t

external object

communications activities based on what an organization wants to accomplish with communications. This is because different communications tools (or combination of tools and/or strategies) are needed to effectively accomplish different communications objectives, such as those which are intended to inform versus persuade. Vander Stoep and Roggenbuck (1996) suggest that communication activities should be based on their effectiveness and appropriateness for achieving specific management and communication objectives.

Research-based Communications

Identifying objectives and goals is the first step in deciding on management and communication strategies. In order to know which “tools” to use to accomplish particular communication and management objectives, a research-based understanding of social and communications science is needed. Fisheries managers consult the research on fish and habitat dynamics to make their management decisions. Similarly, there is a body of social [science] research which can be applied to increase the effectiveness and appropriateness of the design and use of specific communication activities or “tools” to achieve management objectives and goals.

According to several studies, resource agencies typically use passive communication channels such as brochures, posters, news releases, videos and magazines to communicate with their publics (Adams et al. 1988;). Research indicates, however, that these communication tools *may* be effective at informing or developing awareness and knowledge among various publics, but are probably not as effective in changing public behavior (Ajzen 1992; Fishbein and Manfredo 1992; Rice and Atkin 1989; Selnow and Crano 1987; Slater 1992). Most natural resources managers agree that encouraging and enabling citizens to become resource stewards is primarily a behavioral objective or outcome included within their agency mission. According to Benson and

Frederick (1990)

Using curricula

Research on an

Research

• Help in devel

ation service

Hungerf

exes and prod

reassumption th

ment and

Figure 2-6.

Research

much more than

60. Hungerf

60-80 reveal

Informa

Figure 2
Hungerf

Pomerantz (1990), in contrast to passive communication channels, learners can be actively engaged by using curricula, facilitator training, public involvement strategies and educational programs.

Research on and Theories of Behavior Change

Researchers believe that an understanding of communications and behavior change theory will help in developing and implementing communications strategies—especially outreach and education services and products—which will affect public behavior (Hungerford and Volk 1990).

Hungerford and Volk (1990) state that much of the design of information and education services and products (e.g., outreach programming, print material, videos, etc.) has been based on the assumption that we can change behavior by making people more knowledgeable about the environment and related issues. This linear way of thinking looks something like the model in Figure 2-6.

Researchers and practitioners, however, observe that changing public behavior involves **much** more than just imparting knowledge or creating a level of awareness (Fishbein and Ajzen 1980; Hungerford and Volk 1990). Research by Hungerford and Volk (1990) and Hines et al. (1986-87) reveals that in addition to knowledge and awareness, many entry-level, ownership and

Information → Knowledge → Awareness → Behavior Change or Action

Figure 2-5. Traditional, linear behavioral change model (adapted from Hungerford and Volk, 1990).

environment var

environmental ser

environment), kn

environmental iss

Attitudes

Locus of control

Personal
responsibility

Figure 2-6. The H
(8-87). Attitude
personal responsibi
action strategies are

empowerment variables influence how people behave (Figure 2-7). Entry-level variables include environmental sensitivity (an affective construct describing an empathetic perspective toward the environment), knowledge of ecology, and attitudes about the environment. Ownership personalizes environmental issues, creating individual ownership of the problem or issue. People acquire

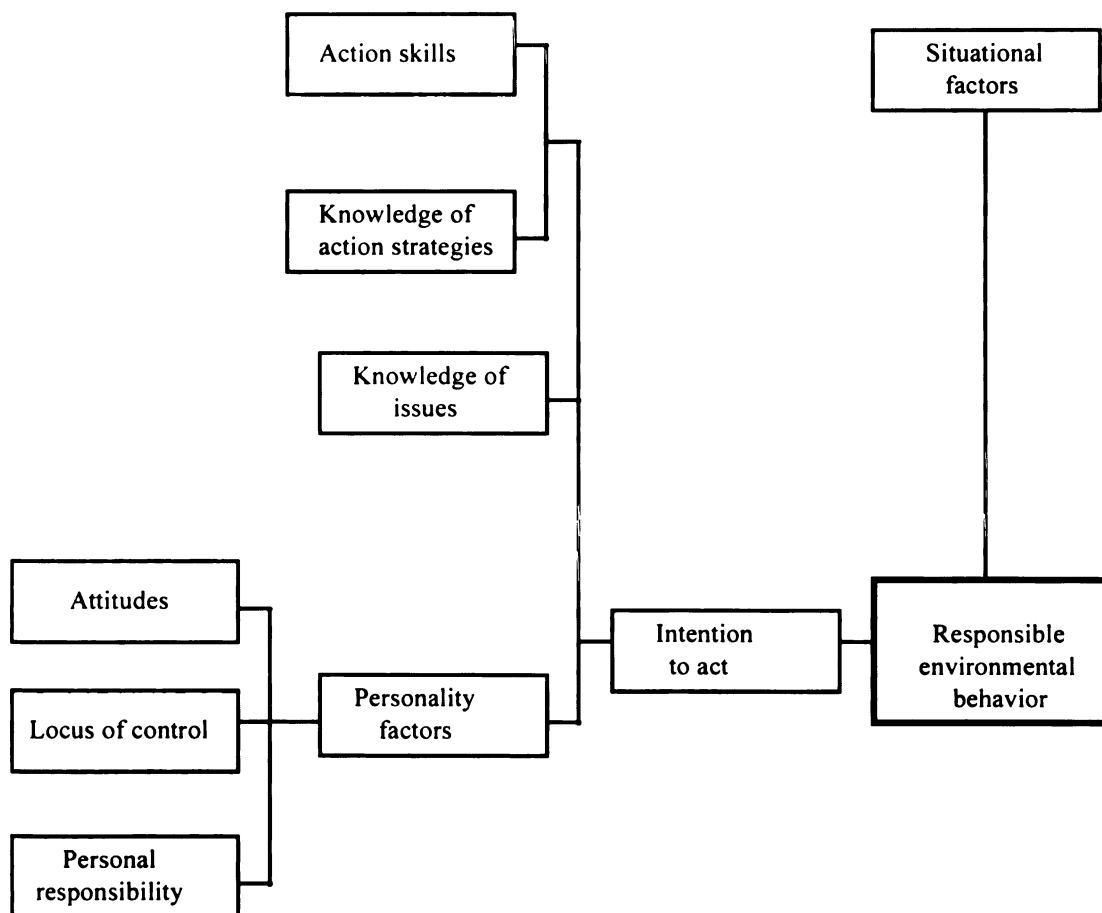


Figure 2-6. The Hines Model of Responsible Environmental Behavior (adapted from Hines et al. 1986-87). Attitudes and knowledge of ecology are entry-level variables; in-depth knowledge, personal responsibility are ownership variables; action skills, locus of control and knowledge of action strategies are empowerment variables.

friendship when

Empowerment of

uses. The acqui-

ing people becom

Many re-

casts of attitude

Compton and Se

1991, Iozzi 1989

behavior change

examining that be

44. The analogy

illustrates this theo

define the horse

person may know

the consequence

enforcing regula

toward the MDNR

tax and other an

ating license.

ownership when they understand an issue in great depth and identify with it personally.

Empowerment enables people to sense that they can make changes and resolve environmental issues. The acquisition of skills in action strategies and the belief in one's ability (locus of control) help people become empowered.

Many researchers contend that the “gateway” to the learning and behavioral processes consists of attitudes, values and beliefs—also collectively known as the affective domain (Crompton and Sellar 1981; Fishbein and Ajzen 1980; Hines et al. 1986-87; Hungerford and Volk 1990; Iozzi 1989). Fishbein and Manfredo (1992) suggest that in order to change or reinforce behavior change (or even the *intention* to act), one must change or strengthen the attitude toward performing that behavior and/or the subjective or social norms associated with the behavior (Figure 2-8). The analogy “you can lead a horse to water but you can’t make it drink” illustrates this theory. The horse may know that the water is there, but it just isn’t thirsty—therefore, the horse does not intend to drink. This analogy can be generalized to the fisheries arena: A person may know that a fishing license is required to fish legally—the person may even be aware of the consequences of poaching. But, if the person’s attitudes and values are such that they believe that fishing regulations are an infringement on their personal rights or they have a negative attitude toward the MDNR—the agency responsible for regulating fishing—then these and other attitudes will likely have some influence on their behavioral intention to purchase a fishing license.

The person's belief that the behavior leads to certain outcomes and evaluations of those outcomes

Person's belief that specific individuals or groups think he or she should not perform the behavior and that this information is relevant to the specific referents

Figure 2-7. A Theory of Planned Behavior
indicate the direct
adapted from Ajzen

It is important to note that negative (e.g., knowledge that the behavior is a bad stepping stone) can also be a stepping stone for these individuals. The reaction on those who are "stepping stones" is...

Fishbein and Ajzen
information and inter-

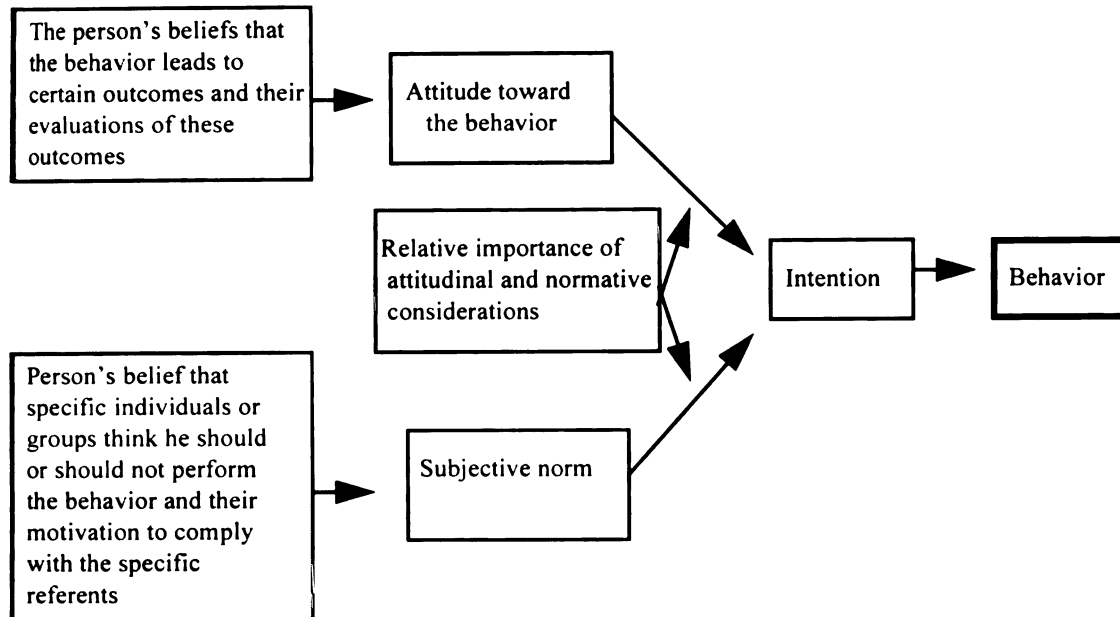


Figure 2-7. A Theory of Reasoned Action: factors determining a person's behavior (arrows indicate the direction of influence within hypothesized relationships) (source: Manfredo 1992 adapted from Ajzen and Fishbein 1980).

It is important to note that the affective domain does not work independently from the cognitive (e.g., knowledge, skills and abilities) domain. On the contrary, knowledge is one of the basic stepping stones towards responsible environmental behavior. Hines et al. (1986-7: 3) found that “those individuals with greater knowledge of environmental issues and/or knowledge of how to take action on those issues were more likely to have reported engaging in responsible environmental behaviors...”

Fishbein and Ajzen (1980) contend that the development and implementation of education, information and intervention programs are rarely grounded in these kinds of theoretical

considerations. V

identify or deve

rates influence

ingford and V

ponents to ma

1. teach c
interrel

2. provide
of env

3. provide

4. provide
and inv

5. provide
for issa

6. provide
acting i
learners

Environmental d

Environme

standing our b

related with tho

the develop

inter-relatednes

environmental p

considerations. Viewing the above models on behavior change, it becomes clear why it is difficult to identify or develop any single strategy to influence public behavior. This is because so many variables influence a person's decision-making processes or attitude or behavior change.

Hungerford and Volk (1990: 14) suggest that agencies should incorporate several critical education components to maximize opportunities to change behavior in the environmental arena:

1. teach environmentally significant ecological concepts and the environmental interrelationships that exist within and between these concepts;
2. provide carefully designed and in-depth opportunities for learners to achieve some level of environmental sensitivity that will promote a desire to behave in appropriate ways;
3. provide information and experiences that will result in an in-depth knowledge of issues;
4. provide information and experiences that will teach learners the skills of issue analysis and investigation as well as provide the time needed for the application of these skills;
5. provide information and experiences that will teach learners the citizenship skills needed for issue remediation as well as the time needed for the application of these skills, and;
6. provide an instructional setting that increases learners' expectancy of reinforcement for acting in responsible ways, i.e., attempt to develop an internal locus of control in learners.

Environmental and Outdoor Education Influences on Behavioral Change

Environmental education can be defined as a lifelong, interdisciplinary approach to understanding our biophysical and socio-cultural environments as well as the issues and problems associated with those environments (Matthews 1989). The goal of environmental education is to enable the development of knowledge, skills and attitudes necessary to understand and appreciate the inter-relatedness among people, their culture, and their surroundings and to develop solutions for environmental problems, in part by adopting a sense of stewardship and responsibility for the

UNESCO

awareness about e

imation of the

components (Hun

Studies by

imation-only a

monmental edu

that outdoor

sexes' environm

for individual's

personal frien

ness to natural r

iking and other o

environmentally se

periences that en

activities over lo

ownership and e

et al. 1981).

It should h

plied in other are

strategies or for co

Engenbuck (1996)

stration, persuasi

Earth (UNESCO 1978). Thus, environmental education includes cognitive (e.g., knowledge and awareness about ecology or environmental systems), affective (e.g., attitudes, values, beliefs, appreciation of the environment) and normative (e.g., morals and ethics related to the environment) components (Hungerford and Volk 1990).

Studies by Iozzi (1989) and Crompton and Sellar (1981) indicate, in contrast to information-only approaches (e.g., brochures, mass media, etc.), that experiential outdoor and environmental education offer great potential for affecting attitude and behavior change. They found that outdoor learning environments can provide stimulation which can strongly influence a person's "environmental sensitivity." It appears that environmental sensitivity is often a function of an individual's contact with the outdoors in relatively pristine environments either alone or with close personal friends or relatives—not often associated with formal education. Of particular interest to natural resources outreach and education planners are studies indicating that hunting, fishing and other outdoor activities are important life experience variables encountered by environmentally sensitive individuals (Scholl 1983; Tanner 1980). In addition to first-hand outdoor experiences that **engage** learners, other important variables include: opportunities and reinforcement of activities over long periods of time, access to role models and instruction which develops a sense of ownership and empowerment (Crompton and Sellar 1981; Hungerford and Volk 1990; Ramsey et al. 1981).

It should be noted that theories of behavioral change and communications can also be applied in other areas of communications such as for developing effective public involvement strategies or for conflict resolution (Peyton 1987). Whatever the objective, Vander Stoep and Roggenbuck (1996) recommend that a combination of communication strategies (e.g., information, education, persuasion) be used in order to be effective with diverse publics and circumstances.

James Explains

In addition

communications-

ed can help the

red issues at h

recommendation

involved in the c

Berlo (199

erent in nearly

Snow and Cran

one kind of cha

egs what, how, a

complex, involve

Source f

age race, gender

factors, credibility

fluence on the

In additi

essage is addre

never may pro

ormation can b

rious channels

not information

Theories Explaining the Communications Process

In addition to theories on changing public behavior, theories about the process of communications—variables influencing actual message transmission—are important to understand and can help the communications specialist or planner make informed decisions about the audience, media, issues at hand, and goals for the communication piece or program. To make recommendations for improving fisheries communications, understanding theoretical components involved in the communication process is essential.

Berlo (1960 as cited in Selnow and Crano 1987) identified four elemental components inherent in nearly all communication scenarios: a Source, Message, Channel and Receiver (SMCR). Selnow and Crano (1987: 16) describes the SMCR model as: a source who sends a message through some kind of channel to a receiver. In lay terms, this concept could be translated to mean “who says what, how, and to whom.” Nearly every communication activity, no matter how simple or complex, involves these four components.

Source factors are characteristics of the communicator, either observed or inferred (e.g., age, race, gender, mannerisms, dress and others—assuming the source is personal). Two source factors, credibility and attractiveness have been studied extensively and appear to have a significant influence on the acceptance and persuasiveness of a message (Ajzen 1992).

In addition to source factors, are characteristics of the receiver or audience to whom the message is addressed. Ajzen (1992) states that any attribute or combination of attributes of the receiver may provide a context contributing to the effectiveness of the message. The message or information can be communicated face-to-face, in writing, or by audio or video tape. These are the various channels by which messages are communicated. Message factors involve the ways in which information is communicated to the audience such as delivery style (the use of humor,

etc. etc.) types

negative aspect

Selnow a

person receives

acted from the

never to the me

both Other fac

never holds mis

Second,

toward elements in

same way of in

science of an iss

can and cultivate

to sum, increase th

by Hungerford and

Berlo's S

of the destination

communication pr

distractions (from

only in the messa

never barriers o

distraction as the

mediate versus

components in the

music, etc.) types of appeals, inclusions and omissions, organization of the material included and quantitative aspects such as length and repetition as well as many sub-categories.

Selnow and Crano (1987) describe the SMCR process as working like this: In the first step, a person receives information and obtains knowledge about a topic. The level of knowledge acquired from the information is based on the completeness of the information, attention of the receiver to the message (i.e. the receiver may selectively disregard information), or a combination of both. Other factors that influence the receiver's interpretation of the information occur when the receiver holds misconceptions or when their knowledge base is formed from incorrect information.

Second, the receiver responds to the message, issue or event based on the attitudes held toward elements in the message and toward the message source. Selnow and Crano (1987) suggest that one way of increasing the success of communications is to elevate the perceived importance (or salience) of an issue. This can be done by showing the audience how the matter relates directly to them and cultivate within the audience a perception of personal relevance and concern for the topic. In sum, increase the salience of the message. This is similar to the "ownership" variable described by Hungerford and Volk (1990).

Berlo's SMCR model has been expanded, and today theorists agree that situation factors and the destination of the communications should also be considered as components of the communication process (Ajzen 1992; Rice and Atkin 1989). Ajzen describes situation factors as distractions (from noise or when the receiver is preoccupied) and forewarning (as when information early in the message delivery cues the receiver about an influence attempt). Forewarning can raise receiver barriers or defenses to receiving the communication. Rice and Atkin (1989) describe destination as the type of target behavior toward which the communication is aimed, such as immediate versus long-term knowledge, attitude or behavior change. By including these components in the process, communication theorists believe that communications can be designed

aged in the situ-

native (Ajzen

Ajzen an

ability in their

message content.

audience's beliefs

can be designed

importance of pro

large base, pred

Figure 2-9). no m

fluence the audie

te public does no

noteworthy indivi

Audience

and characteris

range of informat

realists have fo

communication re

whether the re

(see 1987). The

packages (program

evaluation char

based on the situation factors influencing the audience and the desired communication outcome or objective (Ajzen 1992).

Ajzen and Fishbein (1975 as cited in Manfredo 1992) address the importance of source credibility in their Model of Persuasive Communication Process (Figure 2-9). They describe how message content, audience beliefs and source credibility interact and may influence a change in the audience's beliefs or behavior. In fisheries management, for example, a communication message might be designed to inform (create an understanding or new belief among) anglers about the importance of properly disposing live bait. Live bait released into a body of water may disrupt the forage base, predator-prey relationships and other ecosystem processes. As the model implies (Figure 2-9), no matter how convincing the message, the credibility of the information source may influence the audience members' actual belief outcome. Rice and Atkin (1989) suggest that when the public does not believe the source to be credible, using intermediaries (community leaders, other trustworthy individuals or organizations) can help to reach target audiences effectively.

Audience-based communication strategies, like marketing described earlier, are designed around characteristics associated with the target group the communication is attempting to reach. In an age of information overload, in which there is competition for attention, communication specialists have found that in addition to the importance of source credibility, the success of the communication relies on the salience or relative importance of the communication message or issue, and whether the receiver supports or opposes the issue (Rice and Atkin 1989; Selnow and Crano 1987). These factors can best be addressed in a specific target audience approach. This way, messages (programs and services) can be designed with specific source, message, channel, receiver and situation characteristics in mind as they relate to the communication objective.

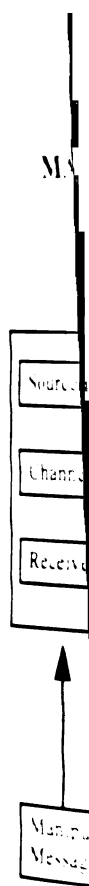


Figure 2-8.
adapted from

In order to
to suggest that
and audiences' n
agement starts

MANIPULATIONS

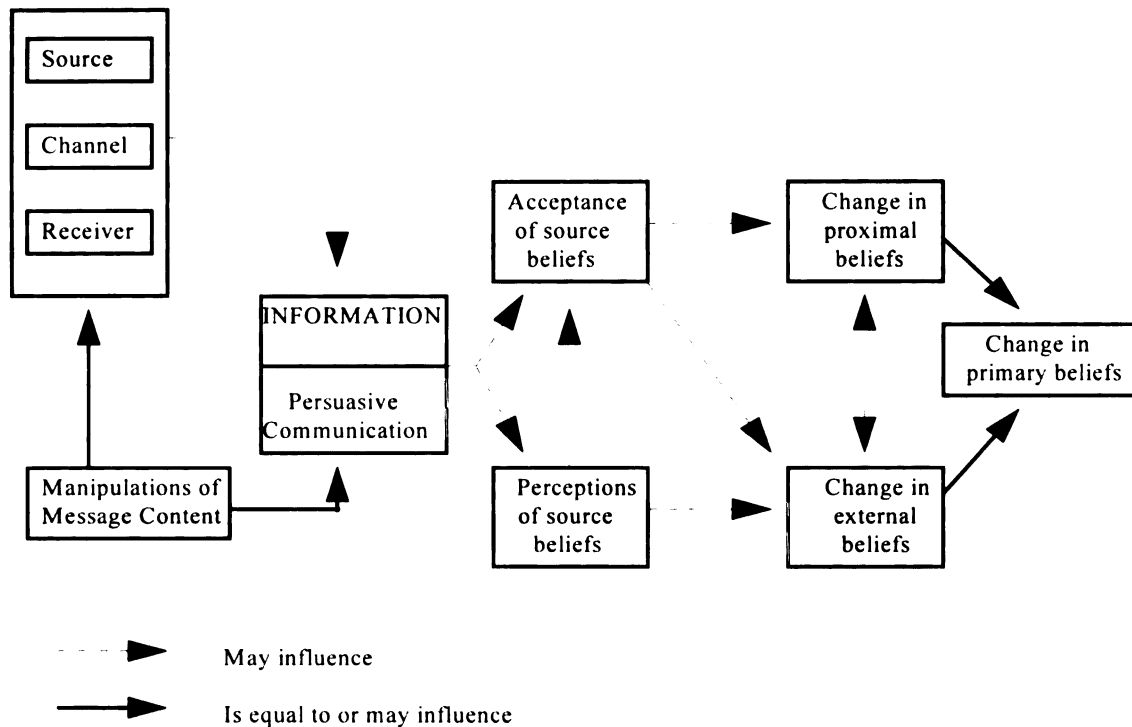
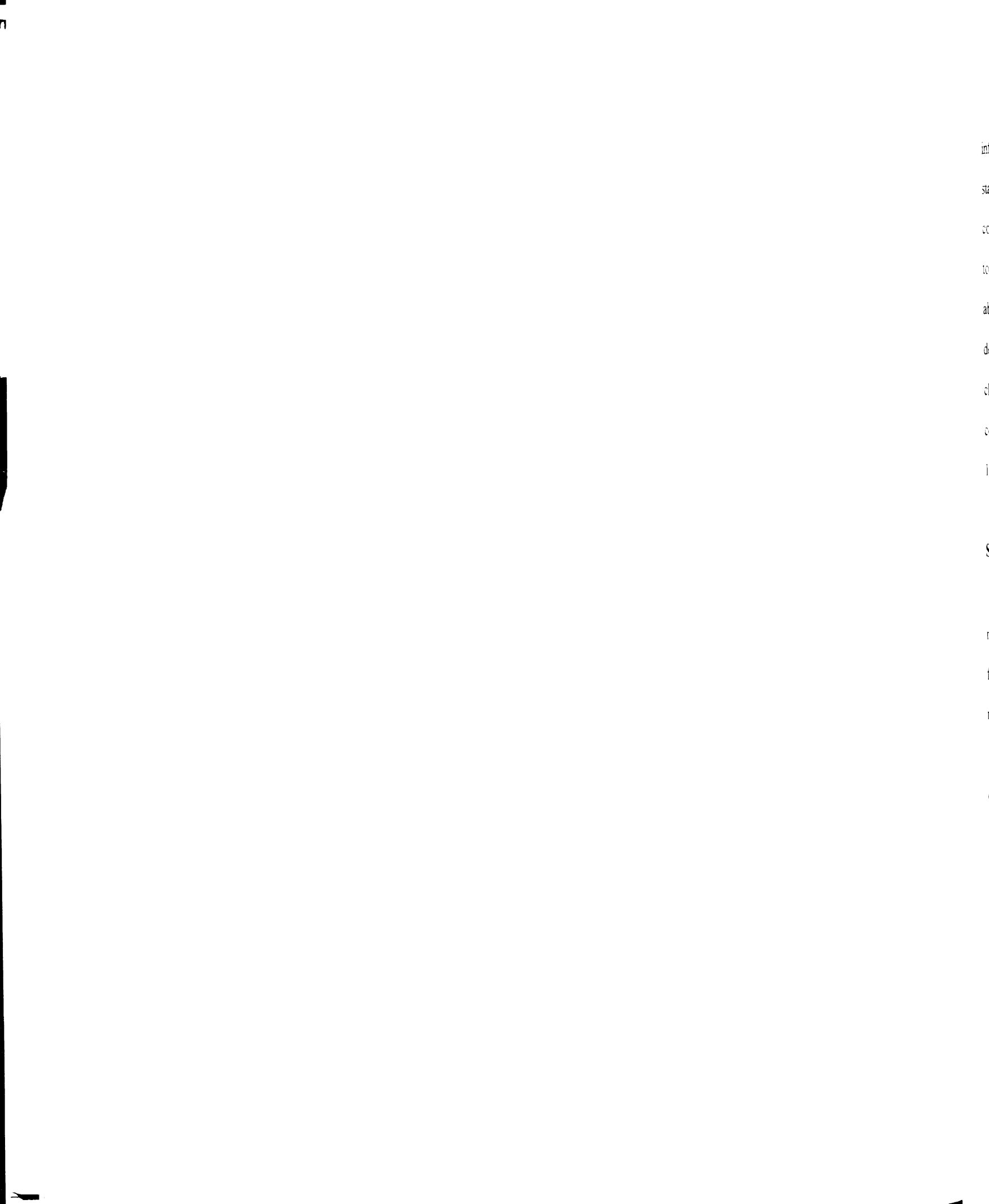


Figure 2-8. Model of the Persuasive Communication Process (source: Manfredo 1992, adapted from Ajzen and Fishbein 1975).

In order to apply marketing principles within fish and wildlife management, Thorne et al. (1992) suggest that the agency and managers have fundamental market information to understand target audiences' needs, wants and satisfactions. They remind us that successful wildlife management starts with information about populations and habitats. Fundamental market



information, they say, is similar, but consists of research-based information about constituent [or stakeholder] wants and satisfactions. Discovering constituents' wants and demands requires collecting data about characteristics, behaviors, perceptions, attitudes and participation rates related to fish and wildlife interests and recreation. Thorne et al. (1992) say that armed with information about current and prospective clients, the organization can tailor products and services to satisfy the desires of the clientele. More importantly, this information can be used by the agency to anticipate changes in customer [or stakeholder] needs, wants, and perceptions, enabling proactive communication and management strategies rather than crisis-based, reactive management (Chiat 1988; Goodstein et al. 1993; Migliore et al. 1995).

Summary of Literature Review

Strategic planning is a systematic process of establishing or re-examining the agency's mission, assessing the internal and external environments, identifying strategic issues and priorities for action, establishing goals and objectives, deciding on specific tactics and activities, and monitoring or evaluating this process or the activities that are a result of this process.

The problem with the application of communications in resource management is that communications planning often happens in the "tactic and activity planning" phase only. The result is that tactics and activities are determined *before* identifying the organizational and communication outcomes to be achieved with communications, before using the best research-based information available to clearly identify the issue or problem to be addressed, before identifying who should be targeted or reached with a communication campaign, or, before examining if members in the organization have the skills or resources needed to plan, develop, implement and evaluate an effective communications program.

When
information can
party and wh
around the
communication

Communi
attach a partic
zones, and prin
gated about the
audiences' c
campaign

Together,
communication ac
aging society, v
visions

When applied strategically, however, the integration of marketing and human dimensions information can help resource managers and communicators clearly determine what issues are a priority and what communication outcomes managers desire to seek based on what's happening in and around the agency. The information gained through this process can **then** help guide what communication tactics to use or activities to conduct.

Communication professionals suggest that in determining what tactics or activities to use to approach a particular issue or objective, an understanding of behavior change and communication theories, and principles of environmental education is needed. Additionally, information should be gathered about the Source, Message, Channel and Receiver (SMCR) components including the target audiences' affective and cognitive domains *relative to the particular communication campaign*.

Together, the systematic approaches of the strategic planning process and resulting communication activities can help to address the natural resources interests and needs of an ever-changing society, while helping resource managers achieve their conservation and stewardship missions.

Overview of N

The purp
and prior
strategic plan
personnel percep
strengths, weakne
personnel desired

What is a Need

Within an
a system
making de
of resource
a series of
states in a
in order o

Within an
discrepancy betwe
is neither the

Chapter 3

METHODS

Overview of Methods

The purpose of this study was to identify the MDNR Fisheries Division's communications needs and priorities. To accomplish this, I conducted a needs assessment (addressing phase two of the strategic planning process, see Figure 2-1) using a focus group method aimed at exploring personnel perceptions about the Division's current fisheries communications situation, including its strengths, weaknesses, opportunities and threats toward providing communications, and what personnel desired as the Division's future communications situation (Figure 3-1).

What is a Needs Assessment?

Witkin and Altschuld (1995: 4) broadly define a needs assessment as:

“a systematic set of procedures undertaken for the purpose of setting and making decisions about program or organizational improvement and allocation of resources. The priorities are based on identified needs. It can be viewed as a series of procedures for identifying and describing both present and desired states in a specific context, deriving statements of need and placing the needs in order of priority for later action.”

Witkin and Altschuld (1995: 9) describe need, when used as a noun, as “a gap or discrepancy between a present state (what is) and a desired, future state (what ought to be). The need is neither the present nor the future state; it is the gap between them.” When need is used

CURRENT SITUATION	INTERNAL ENVIRONMENT	EXTERNAL ENVIRONMENT	DESIRED SITUATION
----------------------	-------------------------	-------------------------	----------------------

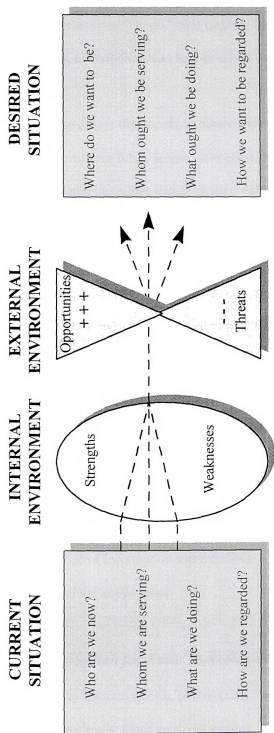


Figure 3-1. Applying a needs assessment method to the strategic planning process (source: adapted from Nutt and Backoff 1992).

assert, it po

end. This

in the ends

assessment find

ness or soluti

A need

ness, and set ;

ness as a guide

tion and Alt

ness assessmen

organization i

standing wh

ness among con

Within a

background

organization i

personnel, or (d)

ization at the N

statement, new (

ization in sever

Primary Data (

According

equip process, s

phases are the

as a verb, it points to what is required or desired to fill the discrepancy—the solutions, or a means to an end. This difference is important—because a needs assessment should not focus on solutions, but on the ends to be attained (i.e. on “what ought to be” versus “how to get there”). The needs assessment findings, nevertheless, can help to establish guidelines and criteria for selecting the means or solutions.

A needs assessment then, seeks to determine such discrepancies, examine their nature and causes, and set priorities for future action. It is conducted to gain information and perceptions of values as a guide to making policy and program decisions that will benefit specific groups of people (Witkin and Altschuld 1995). Witkin and Altschuld (1995) claim that the overall intention of a needs assessment is to lead to action, change and improvement that directly benefit the individuals or organization having the need. Thus, the needs assessment serves as an aid to decision-making by clarifying what needs exist and how important certain needs are. It presumes that choices will be made among competing alternative solutions and/or actions (Witkin and Altschuld 1995).

Witkin and Altschuld (1995) state that some purposes of needs assessments are (a) laying the groundwork for designing a new or improved program of service or education, (b) restructuring an organization in light of better understanding of its goals, (c) setting criteria for hiring and training personnel, or (d) determining possible solutions to a complex problem. In light of the current situation at the MDNR (e.g., the administrative split of natural resources responsibilities, early retirement, new Office of Information and Education), it is likely that this needs assessment will function in several of the above areas.

Primary Data Collection for Needs Assessments: Focus Groups & Telephone Interviews

According to Buttram (1990), primary data for a needs assessment can be gathered by using a group process, specifically focus group interviews. Aside from administering surveys, group processes are the most widely used method for gathering opinions and data for needs assessments

Buttram (1990)

provide only a p

assessment surv

within an organi

ated questionin

ident concerns

Focus g

training, during

pe in focus gro

search, attentio

problem. As a re

respondents. If t

for the user sho

characteristics (k

omines, is typic

ed understanding

ensions research

zard resources

I chose to

followed the gain

tered state of Fis

ket insight and d

ose used in focus

provide descriptive

rating (Buttram 1

(Buttram 1990). Krueger (1994) notes that needs assessments using quantitative surveys often provide only a portion of the desired information and omit critical factors. Furthermore, needs assessment surveys tend to identify concerns that already have achieved some level of awareness within an organization or community. A qualitative approach such as that offered through open-ended questioning and/or a focus group discussion process, on the other hand, can identify less salient concerns.

Focus groups can be used for needs assessment, before planning (including strategic planning), during program design, or for market research (Krueger 1994). Krueger states that the goal in focus group research is to understand reality. Because of the inductive nature of focus group research, attention is directed to discovering the manner and way in which respondents perceive a problem. As a result, the researcher develops a clear idea of how the issue is understood by respondents. If the focus group research has been carefully conducted and appropriately analyzed, then the user should be able to make generalizations to other respondents who possess similar characteristics (Krueger 1994). The qualitative nature of focus group data, Krueger (1994) continues, is typically welcomed by decision-makers because the results are presented in a concrete and understandable manner. Minnis et al. (1997) report that focus groups are a useful human dimensions research tool and note the increasing use of the focus group method in research on natural resources management and policy issues.

I chose to use a focus group method to assess the current communications situation because it allowed the gaining of insight on Fisheries Division personnel perceptions of the current and desired state of Fisheries communications, and the Division's communication needs and priorities. Such insight and discovery are best accomplished with the use of open-ended questions such as those used in focus group discussions (Buttram 1990). Researchers agree that the resulting data provide descriptive information, rich in detail and depth, and useful in planning and decision-making (Buttram 1990; Morgan and Krueger 1993; Krueger 1994).

The elem

ing the respon

(Kreger, 1994).

and assessment

re discussion to

g of previous

to group partici

22

Focus gr

homogeneous in

trained, but are

Several groups are

all cause misrep

focus groups dep

ities of the fa

re-facilitators a

discussion guide i

essions (Morgan

re conversations

Study Populati

The Fische

personnel are biol

technicians and

February, 1997.

The elements of a focus group include: the facilitator, multiple respondents, interaction among the respondents and the use of a discussion guide composed of open-ended questions (Krueger 1994). Using a discussion guide developed to address specific topic areas relevant to the needs assessment questions, the focus group facilitator (the person leading the focus group) can lead the discussion toward specific topics and probe into areas “discovered” earlier during the focus group or previous focus groups (Morgan and Krueger 1993). Furthermore, the interaction among the group participants encourages them to talk freely in response to both the facilitator and each other.

Focus groups are usually composed of 8-15 willing members of a target group which are homogeneous in relation to certain relevant characteristics (Krueger 1994). Participants are recruited, but are not briefed in detail concerning the specific nature of the study (Krueger 1994). Several groups are conducted to counteract the possibility that the dynamics of one particular group will cause misrepresentation or misinterpretation of the results. Further, the quality of the results of focus groups depends on the effectiveness of the presentation of concepts for discussion and on the qualities of the facilitator (Krueger 1994). For these reasons, it is important to carefully select and train facilitators and develop a discussion guide for use in the focus group interviews. The discussion guide includes topics to be discussed, directions for facilitators, and ideas for probing questions (Morgan and Krueger 1993). Groups are usually video or audio-taped, and transcripts of the conversations are developed for analysis purposes.

Study Population

The Fisheries Division is composed of diverse personnel. While a large proportion of personnel are biologists and fisheries managers, there are also accountants, computer technicians, receptionists and others in the Division who contribute to the management of the State’s fisheries. In January, 1997, Fisheries personnel were organized by Division Units representing Program

has outline

- F
- F
- F
- F
- F

These units of

Bay City, Cal

Donna, Mich.

Harriet and

Marquette, Ont.

Spera, Charles

Research facility

The st

January 199

was the Div

was esse

cause of the i

Research Des

Sampling to C

At first g

ogeneous. C

rganizational U

ifications and

Personnel list of
January 199

Areas outlined in the Strategic Plan as follows:

- Administration (n=7)
- Field Operations (n=92)
- Hatcheries (n=55)
- Program Services (n=26)
- Research (n=48)

These units operated out of the MDNR Lansing headquarters, one of the district offices (Baraga, Bay City, Cadillac, Comstock Park, Crystal Falls, Escanaba, Gaylord, Grand Rapids Jackson, Livonia, Mio, Newberry, Plainwell, Roscommon, Shiawassee, and Waterford), field offices (Harrietta and Grayling), warehouses (Roscommon and Rose Lake), hatcheries (Harrietta, Marquette, Oden, Platte River, Thompson and Wolf Lake), the Wolf Lake Fish Laboratory, the Alpena, Charlevoix, Hunt Creek, Marquette and Mt. Clemens Fisheries stations, and the Ann Arbor Research facility.

The study population consisted of 228 MDNR Fisheries Division personnel employed as of 29 January 1997. The study population included 204 classified permanent employees (CPE), as well as the Division's 24 seasonal creel census clerks. I determined that gaining input from creel clerks was essential to assessing the Division's fisheries communications needs and priorities, because of the level of public contact experienced in their jobs.

Research Design

Sampling to Obtain Homogeneous Focus Groups

At first glance, the organizational structure of Division personnel appears to be homogeneous. Closer examination of the personnel list¹, however, revealed that each of the organizational Units was represented by personnel with varying Michigan Civil Service classifications and job responsibilities. For the purposes of this study, it was necessary to develop a

¹ Personnel list obtained from Anita Simon (Division Secretary), on 18 February, 1997 and dated 29 January 1997.

system of class

74

Using th

person

revisory func

levels status

esting the ex

Don differ

Table 3-1. Hom

Homogene
Groups Wit
Fisheri

Early Retiree

Administrativ

Crab Clerks

Management

Program Serv

Hatcheries

Field Operati
Supervisors

Field Operati
Non-supervis

system of classification from which to draw samples in order to recruit participants for each focus group.

Using the personnel list and Division organizational charts (Appendix B), I re-classified Fisheries personnel based on Civil Service job classification, Division-level responsibilities and supervisory function (Table 3-1). In addition to understanding how personnel with different jobs and levels/status within the Division perceived fisheries communications needs, I was interested in assessing the extent to which Fisheries personnel with a long history of employment with the Division differed from personnel with less work experience or length of service. At the

Table 3-1. Homogeneous groupings of Fisheries Division personnel.

Homogeneous Employee Groups Within the MDNR Fisheries Division	Civil Service Classification Levels	Number of Personnel Re-classified to Employee Groups
Early Retirees	12 - 18	26
Administrative Support	6 - E10	22
Creel Clerks	E7 - E8	24
Management Personnel	14 - 15	21
Program Services	P11 - 13	13
Hatcheries	E6 - P11	37
Field Operations/Research - Supervisors	P11 - 13	35
Field Operations/Research - Non-supervisors	E6 - E10	52

the state gov

consequently,

gist. I deve

for this study,

typists, account

to distinction

turned in non

is compared to

be administra

through their

reading vari

communicati

(#22).

Another

Invision recep

pass, creel cie

zali and effe

him either th

tax person

Final

personnel wh

the superviso

collaborative

budget and pe

list of pers

on 18 Febru

time, state government agency employees were being offered an early retirement option, and, consequently, I was able to obtain a list of Fisheries personnel eligible for early retirement.² From this list, I developed an employee group which I called “Early Retirees” (n=25).

For this study, I also wanted to re-classify administrative support personnel (e.g., receptionists, typists, accountants, etc.) separately from other Division personnel. I had two reasons for making this distinction: (1) educational background differs among administrative support personnel (trained in non-biological, administrative, communications or clerical fields) as compared to most other Division personnel (trained in the biological sciences); and, (2) many of the administrative support personnel provide a “front-line” communications role in the Division through their respective job responsibilities (e.g., answering telephones, staffing reception desks, providing various written correspondence), thus providing a unique perspective on fisheries communications needs and priorities. I called this employee group “Administrative Support” (n=22).

Another important personnel group to distinguish was the creel census clerks. Along with Division receptionists, the role of creel clerks is to interface with the public. Hired on a seasonal basis, creel clerks survey Great Lakes and inland anglers for the purposes of collecting angling catch and effort data used in various Fisheries Division studies. Creel clerks report to supervisors from either the Field Operations or Research Units. Sorted as a distinct employee group, I called these personnel “Creel Clerks” (n=24).

Finally, to assure that no supervisors were assigned to participate in focus groups with personnel whom they supervise, I identified remaining supervisory staff from the personnel list. One supervisory group, the Division Management Team, is made up of individuals who collaboratively manage and advise the Division Chief on decisions about the Division’s facilities, budget and personnel (n=7) (MDNR Fisheries Division, 1997). I believed that a focus group

² List of personnel eligible for early retirement obtained from Anita Simon (Division Secretary), on 18 February, 1997, and dated 23 December 1996.

composed of the
series com
of person
service to this
2011.

Sorting
Program Ser
supervisors 1
services" (n=13
however, were e
added to com
Iterations Rese
supervisors" (n=

Focus Group

The ass
employee
participants are
McCarthy 1978
rate to particip

To allow
personnel who
did not attend) a
sampled from n

comprised of these management personnel would differ from field and other personnel in perceived fisheries communication needs. To better represent how this team would be restructured after the loss of personnel due to early retirement, I added personnel classified at level 14 (by Michigan Civil Service) to this employee group. I called this group of individuals “Management Personnel” (n=21).

Sorting out Administrative Support and Management personnel from the personnel list left the Program Service and Hatchery Units, each composed of homogeneous personnel (meaning that no supervisors from these Units remained on the list). I called these employee groups “Program Services” (n=13) and “Hatcheries” (n=38). The remaining Units, Field Operations and Research, however, were each composed of biologists with supervisory and non-supervisory responsibilities. I decided to combine these two Units to form one supervisory level employee group called “Field Operations/Research - Supervisors” (n=33) and another called “Field Operations/Research - Non-supervisors” (n=52).

Focus Group Sampling

The assignment of Fisheries Division personnel to homogeneous categories resulted in eight employee groups. According to Krueger (1994), multiple focus groups with similar participants are needed to detect patterns and trends across groups. Using a random numbers table (McCarthy 1978), I randomly selected personnel from these homogeneous employee groups to invite to participate in one of eight focus groups on the topic of fisheries communications.

To allow for personnel choosing to decline the focus group invitation and “no-shows” (personnel who reply that they intended to participate in a focus group session, but for some reason did not attend) and to ensure the desired 8-12 participants in each focus group session, I over-sampled from most groups. Program Services personnel and Creel Clerks were the exceptions.

the re-class

employee gro

Recru

logical prob

minulas of N

reast of prov

seasonal person

thought that it

der responsib

Verbal Resour

determined that

interviews wou

encourage parti

drop site. The

lets operating

to and south

Telephone Inter

Most se

anticipate volu

stated that p

showed this in

the clerks we

pending cree

anticipate in th

transfer.

After re-classification of personnel to homogeneous employee groups, the Program Services employee group was small (n=13).

Recruiting, scheduling and organizing the Creel Clerk focus group session posed several logistical problems. Creel clerks were distributed across both the upper (U.P.) and lower (L.P.) peninsulas of Michigan, making it impossible to schedule one two-hour focus group session without the cost of providing meals and over-night accommodations. Additionally, since creel clerks are seasonal personnel, they were not on the Division payroll at the time I conducted the focus groups. I thought that it would be inappropriate to ask clerks to volunteer more than half a day away from other responsibilities they may have had (i.e. employment elsewhere). Therefore, with the advice of Natural Resource Manager, Bernie Ylkanen (personal communication -12 March 1997), I determined that one focus group session offered in a central L.P. location combined with telephone interviews would be adequate to provide for creel clerk responses to focus group questions. To encourage participation, creel clerks were offered compensation for round-trip mileage to the focus group site. The employee group for the Creel Clerk focus group session was, therefore, limited to clerks operating in the northern half of the L.P. (n=12), while clerks representing Michigan's U.P. (n=6) and southern L.P. (n=6) were recruited to participate in one of five telephone interviews (see Telephone Interviews).

Most sampled personnel were first contacted by letter (Appendix B) and invited to participate voluntarily in a "fisheries communications" focus group (Table 3-2). In the invitation, I requested that personnel telephone or e-mail their intent to participate by a specified date. I followed this initial invitation with one telephone call when this reply date had passed. Creel clerks were the exception to this invitation design. Due to time constraints with the impending creel census season, it was necessary to telephone creel clerks to invite them to participate in the focus group. I followed the telephone call with a written invitation immediately hereafter.

Table 3-2. Focus

Focus Group
Session

Early Retirees

Administrative
Support

Haiberies

Field Operative
& Research -
Supervisors

Field Operative
& Research -
Non-supervisors

Management
Personnel

Field Clerks

Program Serv

The im

Top Concern

How to conduct

Field Clerk and

Senior Program

Table 3-2. Focus group invitation protocol, timeline and session location.

Focus Group Session	Initial Invitation		Follow-up Invitation		Supplemental Invitation		Focus Group Session	
	Method	Date	Method	Date	Method	Date	Location	Date
Early Retirees	letter	2/19/97	call	2/27/97	call	2/27/97	Traverse City	3/4/97
Administrative Support	letter	2/19/97	call	2/27/97	call	2/27/97	Traverse City	3/4/97
Hatcheries	letter	2/19/97	call	2/27/97	call	2/27/97	Traverse City	3/5/97
Field Operations & Research - Supervisors	letter	2/19/97	call	2/27/97	call	2/27/97	Traverse City	3/3/97
Field Operations & Research - Non-supervisors	letter	2/19/97	call	2/27/97	call	2/27/97	Traverse City	3/4/97
Management Personnel	letter	3/19/97	call	3/23/97	call	3/23/97	Lansing	3/25/97
Creel Clerks	call	3/13/97	letter	3/19/97	n/a	n/a	Gaylord	3/27/97
Program Services	letter	4/9/97	call	4/16/97	n/a	n/a	Lansing	4/21/97

The initial focus group invitations resulted in three to ten affirmative replies per focus group. Concerned with the possibility of no-shows further reducing focus group participation, I chose to conduct a supplemental sample for six of the eight focus groups (the exceptions being Creel Clerk and Program Services). I chose not to conduct a supplemental sample for the Creel Clerks or Program Services focus groups because these two employee groups were too small.

Fisher

context within

Michigan. The

Michigan on 3

de Inservice T

social particip

clinical staff w

demonstration

Lechos

March 1997. I

conducted as p

focus group. m

Discussion C

I deve

sion particip

prepared to m

sed open-end

periences in

questionnaire

Severa

personnel: Joh

communication

mental Resou

Van Dann (A

University).

Fisheries annual Inservice Training Program offered a convenient and cost-effective context within which to conduct several focus groups composed of personnel from all regions of Michigan. Therefore, I conducted five focus groups during Inservice Training in Traverse City, Michigan on 3-5 March 1997. Because focus groups were scheduled at the same time as some of the Inservice Training sessions and meetings, each of the five focus groups was carefully scheduled so that participants were less likely to miss training offered for their specific employee group (e.g., clerical staff were scheduled for a focus group during a different period than computer software demonstrations) and, thus, more likely to attend a focus group.

I chose Gaylord, Michigan as the location to host the Creel Clerk focus group session on 27 March 1997. Finally, two focus groups were held in Lansing, Michigan: Management Personnel, conducted as part of the scheduled team meeting on March 25 1997; and, the Program Services focus group, mainly composed of Lansing staff, was conducted on 4 April 1997.

Discussion Guide

I developed a discussion guide with specific questions and suggested probes designed to solicit participant responses relevant to the research questions (Appendix C). This guide was prepared to make sure that essentially the same information was obtained from each focus groups. I used open-ended questions that were carefully sequenced to capture the richness of participants' experiences in their own terms without predetermining their perspectives through prior selection of questionnaire categories (Patton 1987).

Several reviewers commented on drafts of the discussion guide, including MDNR personnel: John Robertson (then- Chief, Fisheries Division), Dennis Conway (Fisheries Communications Specialist), John Schrouder (Natural Resources Manager), Bernie Ylkanen (Natural Resources Manager), Bruce Matthews (Chief, Office of Information and Education), and; Shari Dann (Assistant Professor in the Department of Fisheries & Wildlife, Michigan State University).

Participant Information

I collected data from a sample of educational professionals through focus groups (FGs). After the invitation letter, the study and participation information, participants were able to choose to participate or not. Participants who withdrew from the study were not included in the analysis.

Study Participants

All focus group participants provided names or specific identifiers. During focus group sessions, tape-recorded data were collected. The study was approved by the Institutional Review Board.

All focus group participants were given the opportunity to choose whether or not to participate in the study. Participants were given separate time to read and understand the information at the beginning of the session. Participants were given the opportunity to participate in the study. The study was approved by the Institutional Review Board.

Participant Information Forms

I collected biographical information (e.g., number of years employed in the Division, level of education) about study participants by using a form that doubled as participant registration for the focus groups (Appendix D). I distributed these forms at the beginning of each focus group. As did the invitation letter, the registration form included information about the voluntary nature of this study and participant confidentiality. A statement on the form informed participants that they could choose to not answer any questions on the form or during any part of the study. While study participants were not required to complete the background form, no participants refused nor withdrew from any focus group or telephone interview.

Study Participant Consent, Anonymity and Confidentiality

All focus group and telephone interview sessions were audio tape-recorded; however, no names or specific job titles or descriptions were used in the transcription of these recordings. During focus group participant recruitment, I informed the subjects that the focus groups were to be tape-recorded and that anyone who objected had the opportunity to decline to participate in the study.

All focus group participants were assured of confidentiality and informed of their rights to choose whether or not to participate in the research project. This information was provided three separate times (on the invitation letter, on the focus group registration form and verbally at the beginning of each focus group session). Furthermore, individuals had the opportunity to decide not to participate at any point of the study without penalty. The Michigan State University Committee on Research Involving Human Subjects (UCRIHS) approved all the primary data methods used during this study (Appendix A).

Additional St

In addit
employed discr
cases which off
Strauss and Co
the ability to us
cases were: (1
Michigan.

Telephone In

I conc
representatives
initially contac
communication
voluntary and
each schedule
registration fo
mail the inform
using the disc
focus groups.

Additional Study Participants and Data

In addition to the stratified random sampling of Division personnel described above, I also employed discriminate sampling, a strategy where the researcher deliberately selects additional cases which offer insight, verification, or the opportunity to refine categories (Henderson 1991; Strauss and Corbin 1990). Henderson (1991) states that the number of cases is less important than the ability to use the selected cases for interpretation and verification. In this study, the additional cases were: (1) telephone interviews of creel clerks representing the U.P. and southern L.P. of Michigan.

Telephone Interviews

I conducted five telephone interviews with a discriminate sample of creel clerks: three representatives of Michigan's U.P. and two L.P. inland creel census clerks. These creel clerks were initially contacted by telephone and invited to participate in a telephone interview about fisheries communications. At this time, clerks were informed that participation in the interview was voluntary and that interviews were to be audio-recorded. Clerks who agreed to participate were each scheduled for one 45-minute telephone interview. Clerks were then mailed a participant registration form (complete with confidentiality and voluntary participation clauses) and asked to mail the information sheet to the Fisheries Division Lansing office. All interviews were conducted using the discussion guide. Data handling and analysis followed the protocol established with the focus groups.

Administrative

Focus Groups

Consistent

facilitate all focus

(1995) and drew

I began

ground rules for

that participants

and asked if cl

Once

questions. A

and Melissa M

providing opp

discussion.

I solic

questions and

to clarify que

Not all questi

responses rel

homogeneous

consisted of

participating

Michigan
Field Rep
Department
from the E

Administration

Focus Groups

Consistency in data collection is important (Krueger 1994); therefore, I chose to facilitate all focus groups myself. I followed guidelines outlined in Krueger (1994) and Morgan (1993) and drew upon experiences from participating in similar group process discussions.

I began each focus group by explaining the purpose of the discussion, reviewing the basic ground rules for the focus groups, and asking participants to introduce themselves. To make sure that participants understood my use of the term “communications,” I provided a brief definition and asked if clarification was needed.

Once introductions were completed, I turned the groups’ attention to the discussion questions. A recorder (recording responsibilities provided alternately by Michelle Niedermeier³ and Melissa Middleton⁴) noted participant comments on newsprint. These notes were displayed, providing opportunities for ongoing participant reflection and additions during the focus group discussion.

I solicited participant perceptions toward fisheries communications by posing specific questions and, when necessary, by using probes provided in my discussion guide. Probes were used to clarify questions, to solicit more detailed responses, and to solicit comments from all participants. Not all questions or probes were used in each focus group session due to participants volunteering responses related to discussion questions. Additionally, because focus groups were organized into homogeneous groups of Fisheries Division personnel, discussions in each focus group often consisted of unique concerns or interests relating to the specific jobs or Unit responsibilities of participating respondents. As a result of this within-group homogeneity, some focus groups spent

³ Michigan State University graduate student in the Department of Fisheries and Wildlife.

⁴ Field Representative, Soil Erosion and Sedimentation Control Program with the Michigan Department of Environmental Quality, and former Michigan State University graduate student from the Department of Fisheries and Wildlife.

more time with

more time prob

I enc

facilitate this. I

and the record

Fisher

focus group, a

For example, i

they wanted th

of fish life his

theme in the s

focus group re

statements. T

clarification o

discussion. L

misrepresente

After

communicati

the desired fi

target audien

what they pe

modified no

more time with certain topic areas than others (either out of interest or because I needed to spend more time probing when responses were not forthcoming).

The Use of Common Fisheries Language

I encouraged participants to respond to questions from their particular perspectives. To facilitate this, I structured questions and probes that used language common to Fisheries personnel, and the recorders wrote on newsprint respondents' actual statements, verbatim, as much as possible.

Fisheries Division language and common phrases and words were identified during the first focus group, and, when recurrent, were used consistently throughout the remaining focus groups. For example, in the first focus group, respondents began to list very specific knowledge outcomes they wanted the public to understand about fisheries biology. Several respondents listed knowledge of fish life history, limiting factors, food webs, predation and so on. One respondent, noticing a theme in the statements, provided the broader term "biological processes." In this manner, the focus group respondents came up with their own term or statement that aggregated several ideas or statements. The recorders, attempting to keep up with this exchange, did not hesitate to ask for clarification or to ask whether the newsprint notes represented what was being said during the discussion. Likewise, participants offered corrections and clarifications when they saw their ideas misrepresented on the newsprint or when their responses were not noted accurately.

Identifying Priority Ideas

After focus group participants discussed what they perceived to be the Division's current communications situation (identifying current communication activities and audiences reached) and the desired future communications situation (identifying desired communication outcomes and target audiences communication activities for future activities to reach), I asked them to vote on what they perceived to be the Division's communication priorities. This was conducted using a modified nominal group process (Delbecq et al. 1975).

Using
audiences and
opportunity to
and provide clear
statements. I u
the Division to
desired behavior

At thi
when identify
(1992) points
topic, but to id
particular to c
priorities, how
(1990), by co
groups can be
1979).

DATA ANALYSIS

Data
asked during
systematic ap
questions wh
aggregate th

In a
were labeled

Using the newsprint notes for reference, I asked participants first to review the lists of target audiences and desired behavioral, attitudinal and knowledge outcomes. Groups then had the opportunity to discuss the newsprint notes, gain general agreement on the meanings of statements, and provide clarification where needed. Next, some groups chose to aggregate similar ideas and statements. I then asked that individuals cast two votes for what each perceived to be a priority for the Division to consider in its future communications planning. Due to a low number of identified desired behavioral and attitudinal outcomes, each Hatchery employee was allotted only one vote.

At this point, it is important to note that I did not ask that each group arrive at consensus when identifying priorities. Instead, this was an opportunity to offer individual perspective. Morgan (1993) points out that the purpose of focus groups is not to arrive on consensus around a particular topic, but to identify a variety of needs to be addressed, some shared by the entire group and some particular to one or more individuals in the group. Morgan (1993) indicates that the final list of priorities, however, is reflective of the study population vantage point. According to Buttram (1990), by convening multiple focus groups on the same topic, needs identified by individual groups can be validated. Researchers call this methodological triangulation (Buttram 1990; Jick 1979).

DATA ANALYSIS

Data analysis was guided primarily by the study objectives and subsequent questions asked during data collection. Krueger (1994) states that the key to good qualitative analysis is a systematic approach. Thus, the process I used was a deliberate and planned categorization of questions while first designing the discussion guide and subsequent coding of responses to help aggregate the qualitative data into meaningful patterns.

In addition to note-taking, all focus groups were audio-taped, and all tapes and newsprints were labeled for later reference. Tapes were transcribed by Office Services at Michigan State

University and

10 font. Times

Analysis

have been store

rigorous strateg

with field note

focus groups a

participants (e

be gathered an

characteristics

I begg

corresponding

transcription

typed up the r

transcripts in

Data Manag

Rich

process of re

exploration o

found in the

and discover

links with d

One

retrieving d

(coding or i

University and stored electronically. Transcripts ranged from 36 to 55 pages long (single-spaced, 10 font, Times New Roman).

Analysis of qualitative data depends on the means by which the data and other information have been stored or recorded. Krueger (1994) states that transcript-based analysis is the most rigorous strategy for analyzing focus group data. Transcripts of audio-taped focus groups combined with field notes and other background data provide the researcher with a means of revisiting the focus groups and hearing/reading actual participant responses. Additional information about participants (e.g., the biographical information collected on the focus group registration form) can be gathered and used during analysis to group or type responses according to specific participant characteristics.

I began data analysis by reviewing each focus group session tape, transcript and corresponding newsprint notes. During this first review, I checked accuracy, corrected transcription errors or filled in where the transcriber was unclear about technical language, and I typed up the newsprint notes. At this time, I also deleted focus group participant names from the transcripts in order to maintain confidentiality.

Data Management and Handling

Richards and Richards (1994: 446) describe the management of qualitative textual data as a process of recognizing categories *in the data*, the generation of ideas about them, and the exploration of meaning *in the data* (emphasis theirs). Because the categories and meanings are found in the text or data records, this process demands management methods that support insight and discovery, encourage recognition and the development of categories, and store them and their links with data.

One traditional method of managing qualitative textual data involves manually coding and retrieving data. Coding consists of labeling passages of the data according to what they are about (coding or indexing), then providing a way of collecting identically labeled passages (retrieving)

(Richards and B

process of qual

of rich and com

Richar

topic or topics

packages have

and efficient.

building (NUL

textual data (C

separately imp

"case" in prep

Coding

Codi

text. As the

phenomenon

The

what ideas or

1987: 153) a

represent pat

categories ha

have emerge

have been ex

Rich

is a contribu

significance

(Richards and Richards 1994). Richards and Richards (1994) note that the coding and retrieval process of qualitative data analysis is the most widely recommended technique for the management of rich and complex records.

Richards and Richards (1994) state that the ability to retrieve all the text about a certain topic or topics (codes) strongly supports the development of new insights. Computer software packages have been designed to help make coding and retrieving complex textual data easy, fast and efficient. I choose the Non-numerical Unstructured Data Indexing Searching and Theory-building (NUD•IST version 4.0) computer software to assist with handling and analyzing my textual data (QSR Research Pty. Ltd. 1997). After saving the electronic transcripts as text files, I separately imported each transcript into the NUD•IST program, treating each focus group as a “case” in preparation for coding.

Coding

Coding is the process of marking or noting text and developing categories or subjects of text. As the researcher comes across an idea or phenomenon, a label is attached. When the idea or phenomenon reappears, the label is once again attached.

The first step in coding involves developing criteria about coding categories. Figuring out what ideas or phenomena fit together or “converge” is described by Guba (1978 as cited in Patton 1987: 153) as a systematic classification of “recurring regularities” in the data. These regularities represent patterns that can be sorted into categories. Convergence is accomplished when sets of categories have been saturated so that new sources lead to redundancy and when clear regularities have emerged. Guba states that closure is brought to the process when novel ideas or phenomena have been exhausted or when ideas become “divergent.”

Richards and Richards (1994) suggest that the decision process required while coding data is a contribution to theory building. First, decisions are made about what is a category of significance to the study, what questions are being asked, what concepts developed, what ideas

explored, and v

Second, decisio

Third, the view

a new way of s

the code and re

theory constru

patterns by co

supervisors ha

supervisory po

While

that the topic

current audien

I electronically

NU D

carriage retur

focus group r

with hard car

simple (singl

group transer

by a space is

"Wh

you

Like

Pop

I thi

olde

Ok

explored, and whether these categories should be altered, redefined or deleted during analysis.

Second, decisions about what text segments are relevant involve some theoretical consideration.

Third, the viewing of segments from many documents on one topic or selected topics always offers a new way of seeing data. According to Richards and Richards (1994), this is the major claim of the code and retrieve method to support analysis, and researchers using it clearly engage in the theory construction. Moreover, they state that coding and retrieval of text supports the pursuit of patterns by comparison of text segments on topics from different sources (i.e. did the managers or supervisors have different ideas about communication outcomes than did non-management, non-supervisory personnel?). They state that such questions may be crucial for locating patterns.

While reviewing the study data (transcripts, audio-recordings and field notes), I determined that the topic areas developed in the discussion guide (e.g., current communication activities, current audiences reached, etc.) could serve as initial coding categories. Using these coding criteria, I electronically coded each focus group separately, coding data as I read through the transcript.

NUD•IST software uses hard carriage returns to distinguish text units and thus, each hard carriage return is the smallest “codable” text unit (QSR Research Pty. Ltd. 1997). In my study, the focus group narrative was transcribed by separating respondent, moderator and recorder statements with hard carriage returns. These statements, interpreted by NUD•IST as text units, consisted of the simple (single words) to the complex (entire sentences or paragraphs). A passage from one focus group transcript offers an example of how NUD•IST interprets text units. Each passage separated by a space is interpreted by NUD•IST as a text unit:

“What kind of trends are you aware of that might be affecting some of the audiences you’ve listed here?

Like, angler trends?

Population trends that might be occurring in Michigan.

I think one of the things that I’ve noticed is that our users or anglers are becoming older.

Okay.

I th

Certa
and t

Well,
over
Milw
front
in oth
the m
ther p

So, yo
trend

I think
use of
seem
there
else.

Anoth
gratin
group

Code Retrie

After

Index can be

WDSST, hav

codes enabling

between many

level of data ha

z of "nodes"

national tech

I think that's pretty much pretty universal. As far as the largest groups.

Certain groups, certain special interest groups are becoming more vocal and influential and not necessarily they're the largest but they're carrying a lot more influence.

Well, what we've got a lot of is people that are leap-frogging areas that they feel are overwhelmed and crowded in, say in Wisconsin, and the Chicago people and Madison, Milwaukee, all that are just, are just kind of moving up to as the realtor calls it the next frontier which are the areas in Michigan that are just north of those congested areas. So in other words, increasing fishing pressure and then user conflicts and people feeling the nonresidents are taking all of the fish and not paying enough for their license and then jet skis and all of the normal conflicts you run into when...

So, you're saying, 'user allocation trends and then some even geographical migration trends'?

I think you see more, push towards non-angling type of development, you know, the use of the waters just for recreation that doesn't include fishing whereas it always seemed to, used to be fishing. If there was a lake involved it was for fishing but now there's lots more of like you say the jet skis, the sailing, the other boats and everything else.

Another trend that I'm noticing a lot more now is the phone call that's more like instant gratification. I've got a short weekend. I want to go somewhere I can fish" (Focus group 1: lines 625-648).

Code Retrieval

After coding the focus group transcripts, all the text on one particular idea or phenomenon (code) can be retrieved, further coded or analyzed. Sophisticated software programs, such as NUD•IST, have the ability not only to retrieve all coded text quickly, but also to cross-reference codes enabling the researcher to view and analyze co-occurrence and non-co-occurrence of codes between many documents (or cases, such as separate focus groups) or within one document. This level of data handling and management is possible because NUD•IST uses an index system made up of "nodes" to organize coded text. Storing textual data at nodes can be compared to the traditional technique of copying coded text onto index cards (hence, the term "indexing system"),

and organizing

Pty. Ltd. 1997

I used

to represent th

served to orga



Figure 3
categori
tem repr

and organizing the different cards (code ideas or phenomena) into different piles (QSR Research Pty. Ltd. 1997).

I used the NUD•IST option of organizing the index system into a hierarchy or “node tree” to represent the organization of code ideas and phenomena into categories (Figure 3-2). Each node served to organize coded responses around the focus group topic areas relevant to

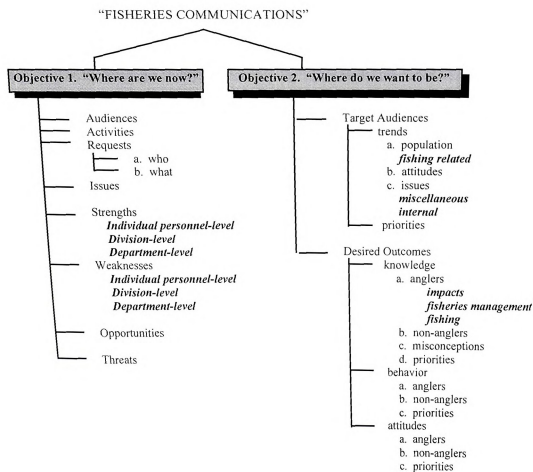


Figure 3-1. The NUD•IST indexing system or “node tree” depicting the organization of code categories based on topic areas provided in the focus group discussion guide. Bold italicized text represents second-level coding, while non-italicized text represents first-level coding.

my research q

in Figure 3-2)

coding represe

Additionally,

representative

I could use re

NUD

index codes. I

Additionally,

original docu

1997).

Compiling

I ex

isolate relev

these highlig

began with

ideas togeth

ideas or phr

statements

-FG! (the

another foc

audiences

were ident

my research questions and objectives. The first level of coding (represented by non-italicized text in Figure 3-2) was based on the focus group discussion guide questions, while the second-level coding represents sub-categories which were a result of themes that emerged from the focus groups. Additionally, while undertaking initial coding, I coded respondent quotes which appeared representative of major themes I was observing during preliminary analysis. I also determined that I could use respondent quotes to support data interpretation.

NUD•IST designers state that the node tree not only offers a taxonomy of concepts and index codes, but also represents conceptual relations, thus assisting with theory building. Additionally, NUD•IST offers the ability to electronically “chase back” the coded text to the original document passage and view the ideas and statements in context (QSR Research Pty. Ltd. 1997).

Compiling and Organizing Data Tables

I examined initial coding by reviewing each node report and using a highlighter pen to isolate relevant coded words or phrases from remaining “garbage” text. I then generated lists of these highlighted code ideas or phrases, using respondent phrases verbatim as much as possible. I began with the first focus group and continued in consecutive order to the eighth, grouping similar ideas together. Very little aggregation of focus group responses was needed because respondent ideas or phrases first generated were used thereafter in subsequent focus groups. I then typed these statements or ideas, noting the focus group that made the response (e.g., “target audiences: women” – FG1 [the first focus group conducted]). When the same or similar statement was identified by another focus group, then that focus group number was added to the original listing (e.g., “target audiences: women” – FG1; FG3; FG4, and so on). In this manner, frequencies across focus groups were identified and statements reported by single focus groups were retained.

I comp

by frequency.

while statemen

Compiled in th

focus groups

dominant idea

Richards and

Act

points out tha

frequently m

question to a

was achieved

identified du

To

supervisory-

that aggrega

Results).

I compiled initial summary tables using the lists described above. Tables were organized by frequency, meaning that statements or ideas identified by multiple focus groups were listed first, while statements or ideas reported by individual focus groups were listed later in the table. Compiled in this manner, the tables enabled me to evaluate patterns observed within individual focus groups as well as across focus groups, and to determine the range of ideas as well as the dominant ideas that participants had offered (Cartwright 1953; Folch-Lyon and Trost 1981; Richards and Richards 1991).

Actual frequency of *statements* per focus group was not determined. Krueger (1994: 61) points out that an analysis error sometimes made in focus groups is “to assume that what is frequently mentioned is of greater importance. A far less risky approach is to include a specific question to allow the participants to comment on what they consider to be most important.” This was achieved in my focus groups by providing opportunities for participants to prioritize ideas identified during the focus group discussion.

To determine whether there were patterns across particular focus groups (e.g., all supervisory-level focus groups or all non-supervisory focus groups), I created another set of tables that aggregated personnel groups most similar to each in consecutive order on the tables (see Results).

The p
needs and pri
models in ana

Organizati

I beg
by a brief de
registration r

I the
present the n
among all o
unique to pe
non-superv
ideas that re
and deserve
participants

Chapter 4

RESULTS

The purpose of this study was to identify the MDNR Fisheries Division communications needs and priorities as perceived by Fisheries personnel, and to apply several marketing analysis models in analyzing the results and for recommending a communications strategy.

Organization of Results

I begin this chapter by first describing the response rates of the eight focus groups, followed by a brief description of participant background information gathered from the focus group registration forms.

I then describe focus group results, organized by research objectives and questions. I **present** the results of each research question by first describing ideas or themes that were **common among** all or most of the eight focus groups convened. I then note concerns or points that were **unique** to particular focus groups, and where applicable, I note differences between supervisory and **non-supervisory-level** personnel perceptions toward fisheries communication. Additionally, many **ideas** that reflect the views of only one or two participants in a group demonstrate particular insight **and** deserve mention. I have included quotes to help illuminate typical or common ways in which **participants** responded.

Results of F

Eight

Division perso

participate in

communicatio

to participate.

which resulte

affirmative re

(5.5%) who v

To a

a supplement

(exceptions b

additional ei

supplementa

Of t

(22.5% of th

were teachin

respondents

Inservice tra

two (5.0%)

their home

half of thos

participate

the focus gr

Results of Focus Group Administration

Eight focus groups were conducted between March and April, 1997. Of the 228 Fisheries Division personnel employed at the time, a total of 121 were randomly selected and invited to participate in the focus groups (Table 4-1). With the first invitation to participate in a “fisheries communications” focus group, 109 Fisheries employees were sampled and 61 respondents agreed to participate, while 26 declined. I followed this initial invitation with a telephone call “reminder,” which resulted in an additional six affirmative responses and ten declines, for a total of 67 affirmative responses (61.5% of initial sample) and 36 declines (33% of initial sample) and six (5.5%) who were still unable to be reached (non-respondents).

To achieve the desired 8-10 participants per focus group and to off-set potential no-shows, a supplemental sample of personnel was invited to participate in six of the eight focus groups (exceptions being Program Services and Creel Clerks). The supplemental sample resulted in an additional eight (67% of the supplemental sample) affirmative responses and four (33.3% of the supplemental sample) who declined to participate.

Of the 40 employees who declined invitations to participate in the focus groups, nine (22.5% of those declining to participate) stated that they had conflicting job responsibilities (e.g., were teaching at Inservice training or were required to attend a concurrent meeting), five respondents (12.5%) indicated that they were unable to participate because they were not attending Inservice training where many of the focus groups were held, five (12.5%) were on personal leave, two (5.0%) stated that they would like to participate, but the focus group location was too far from their home/office, two (5.0%) were on annual leave, and one (2.5%) had retired. In total, more than half of those who declined to participate in the focus groups (60%, or 24 of the 40 declining to participate) had one of the “excused absences” listed above. It is conceivable that others declining the focus group invitations had similar “excuses” that restricted them from

Table 4. Fisheries Division focus group session sampling and respondent rates

Table 4-1. Fisheries Division focus group session sampling and respondent rates.

Focus Group Sessions	INITIAL INVITATION				SUPPLEMENTAL INVITATION		
	Sample n =	Respondents affirmative	declined	Non-response	Sample n =	Respondents Affirmative	Declined
Early Retirees	15	11	3	1	1	1	0
Management Personnel	15	4	9	2	6	2	4
Program Services	11	8	3	0	0	n/a	n/a
Field Operations & Research-Supervisors	15	11	3	1	1	1	0
Field Operations & Research- Non-supervisors	15	9	5	1	1	1	0
Hatcheries	15	9	5	1	1	1	0
Creel Clerks	8	8	0	0	0	n/a	n/a
Administrative Support	15	7	8	0	2	2	0
Totals:	109	67	36	6	12	8	4

Table 4-1 (Cont'd).

Focus Group Sessions	Total Sampled per session n =	Final # Affirmative Respondents	Focus Group Attendance	Employee Group Response Rate	Excused Absents
Early Retirees	16	12	11 ^a	.69	1
Management Personnel	21	6	6	.29	12
Program Services	11	8	8	.73	2
Field Operations & Research-Supervisors	16	12	12	.75	0
Field Operations & Research- Non- supervisors	16	10	10	.63	1
Hatcheries	16	10	11 ^b	.69	1
Creel Clerks	8	8	8	1.0	0
Administrative Support	17	9	9	.53	7
Totals:	121	75	75		24
Adjusted Affirmative Response Rate^c	.77				

^a One no-show due to illness.

^b One participant originally declining the invitation to participate in the focus group changed his/her mind and attended, resulting in one additional participant for this session.

^c Adjusted response rate = focus group attendance [n=75] ÷ total sampled population [n=121] - "excused absents" [n=24].

participating.

participation.

adjusted affir

achieved (Ta

invitation (w

sample (n=9

In to

attended. Fr

participants

ended up pa

of affirmativ

Fisheries

Nee

participant

included in

percentage

participants

Administra

focus group

participatin

A

were colle

was reporte

reported m

participating, but these individuals did not offer further information about their reasons for non-participation. When personnel who offered an excused absence were removed from the sample, an adjusted affirmative response (those who agreed to participate) rate of 77.3 percent was achieved (Table 4-1). Sixteen percent (16.5%) of fisheries personnel declined the focus group invitation (without an excused absence), while non-response was 6.2 percent (n=6) of the adjusted sample (n=97). A survey to detect any non-response bias was not conducted.

In total, 75 MDNR Fisheries Division employees (32.9% of study population, N=228) attended. From all selected to participate in the focus groups, there was one no-show (1.3% of participants) due to illness, while one participant who originally declined the invitation to attend, ended up participating. Among all focus groups, there was a final attendance rate of 100%, or 99% of affirmative response.

Fisheries Division Personnel Background

Nearly all focus group participants (73 of 75, or 97%) filled in some portion of the participant background information form (Appendix E). Of the 228 Division personnel who were included in the study population, 79.4% (n=181) were male, and 20.6% (n=47) were female. This percentage was closely represented in Division personnel focus group participation (72% of participants were male, while 28% were female). It should be noted, however, that the Administrative Support employee group was 99% female (n=19). Thus, the Administrative Support focus group was composed entirely of women (n=9), representing nearly half of the females participating in this study.

A tabulation of participating Fisheries personnel's level of education revealed that most were college graduates (71.2%, n=52). Graduates had diverse college majors, but a Fisheries major was reported most often (35% of all majors reported, n=18), and nearly as many Division personnel reported majoring in Fisheries and Wildlife Management (n=15, or 29% of all majors reported).

Nineteen other majors
emphasis in science
Resources Management
Economics. Resource
Education. Human
Journalism. and Pa

Five percent
some graduate-level
2). Personnel near
level of education.

Over one-f
Of those without d
education courses.
diploma.

² Majors do not ac
respondents rep

Nineteen other majors (53% ⁵ of all majors) reported by focus group participants included a similar emphasis in science: Biology, Aquatic Biology, Aquatic Ecology, Entomology, Zoology, Natural Resources Management, Environmental Science and Sociology. Other emphases included: Economics, Resource Development and Agriculture Communications, Urban Planning, Elementary Education, Human Resources Management, Industrial Engineering, Wood Products Engineering, Journalism, and Packaging.

Five percent of participating Fisheries personnel with a college degree reported completing some graduate-level courses, and one-fourth (25%) had either a masters or Ph.D. degree (Table 4-2). Personnel nearing retirement age (Early Retirees) and those working in research had the highest level of education.

Over one-fourth (29%) of participating Fisheries personnel did not have a college degree. **Of** those without degrees, nearly three-fourths (71%) reported having taken some post-secondary **education** courses, while 29% reported their highest level of education achieved was a high school **diploma**.

⁵ **Majors** do not add to 100 percent due to respondents having had multiple majors. Fifty-one **respondents** reported college majors.

Table 4-2. Level
(n=73).

MDNR Fisheries
Division Personnel
Groups

Early Retirees

Research -
Supervisors

Research -Non-
Supervisors

Management
Personnel

Field Operations
Supervisors

Field Operations
Non-supervisors

Program Services

Hatcheries

Creel Clerks

Administrative
Support

Table 4-2. Level of education among MDNR Fisheries Division focus group participants (n=73).

MDNR Fisheries Division Personnel Groups	% High School Graduate	% with Some College	% College Graduate	% with Some Graduate Course Work	% Masters Completed	% Ph.D. Completed
Early Retirees			18.0	9.0	64.0	9.0
Research - Supervisors			40.0		40.0	20.
Research -Non- Supervisors		25.0	25.0		50.0	
Management Personnel			60.0		20.0	20.0
Field Operations - Supervisors			85.7		14.3	
Field Operations - Non-supervisors		40.0	60.0			
Program Services		37.5	25.0	12.5	25.0	
Hatcheries	22.2	33.3	44.4			
Creel Clerks	25.0	37.5	37.5			
Administrative Support	20.0	40.0	30.0	10.0		

Focus Group Results

The objectives of the focus groups were to:

communication skills

communication skills

To address the following issues:

groups differed in

groups were compared

Field Operations

were composed of

Administrative Services

grouping supervisors

Current Fisheries

Focus groups were conducted with

currently provide

Division personnel

(i.e., writing letters)

Division publications

group reported that

correspondence.

Focus Group Results

The objectives of this research were to identify the Division's current and desired communication situation, as perceived by Fisheries personnel, to make recommendations for a communication strategy designed to guide the Division in its on-going communication planning.

To address hypothesis one, I have noted when supervisory and non-supervisory-level focus groups differed in their perceptions toward the Division's communications. Supervisory-level focus groups were composed of the following employee groups: Management Personnel, Early Retirees, Field Operations/Research -Supervisors and Program Services. Non-supervisory-level focus groups were composed of the Field Operations/Research -Non-supervisors, Hatcheries, Creel Clerks and Administrative Support focus groups. All tables presented in this chapter are organized by grouping supervisory and non-supervisory-level focus groups separately.

Current Fisheries Communication Activities

Focus group participants described 29 communication activities the Fisheries Division currently provide (Table 4-3). The most frequently reported job-related communication activities Division personnel listed on the participant background information forms were correspondence (i.e., writing letters, answering the telephone), encounters in the field, public presentations and Division publications. This was corroborated in the focus group discussions, when each focus group reported that daily contact with diverse audiences consisted of various forms of correspondence, such as telephone calls, letters and office visits.

Table 4-3. MDNR Fisheries Division personnel perceptions of current communication activities provided by the Division. An "x" indicates that the focus group(s) responded with the information listed in the rows; more specific focus group responses are shown in footnotes.

<i>Activities Identified as Current Fisheries Communications.</i>	<i>FG1</i>	<i>FG2</i>	<i>FG3</i>	<i>FG4</i>	<i>FG5</i>	<i>FG6</i>	<i>FG7</i>	<i>FG8</i>
correspondence - letters, telephone calls	x	x	x	x	x	x	x	x
spot show booths	x	x	x	x	x	x		x
media relations- interviews (TV, radio, newspaper, popular magazines), press releases	x	x	x	x	x	x		x
citizen advisory committees & Great Lakes Task Force participation	x	x	x	x	x	x		x
public encountered while in the field (including creel census)	x	x	x	x	x	x	x	x
school presentations	x	x ²	x	x	x	x ³		
presentations for fishing/sport groups	x	x	x	x	x	x		x
Department & Division Webpage	x		x	x	x		x	x
public meetings	x		x	x	x	x		x
various angling education outreach activities (see footnotes)	x ⁴	x ⁵	x	x	x ⁶	x ⁷	x ⁸	x ⁹
Partnering with agencies & interest groups on projects	x			x	x			x
professional presentations & reports/articles (i.e. AFS)	x	x	x	x	x			x
preparation and distribution of the Weekly Fishing Report								
Division publications	x	x	x	x	x			x

1FG1 - Field Operations/Research - Supervisors; FG2 - Early Retirees; FG3 - Management Personnel; FG4 - Program Services; FG5 - Field Operations/Research - Non-supervisors; FG6 - Hatcheries; FG7 - Creel Clerks; FG8 - Administrative Support.

2 Including university seminars.

3 From kindergarten to college.

4 Sea Grant workshops.

5 Fishing in the Parks, the Urban Fishing Program, Project FISH.

6 Angling education derbies, fish netting demonstrations.

7 Salmon in the Classroom, fishing at hatcheries, Earth Day events, camps, programs with Binder Park Zoo, traveling exhibits.

8 Fishing derbies.

9 Electro-fishing demonstrations.

10 The Fishing Guide.

Table 4-3 (cont'd).

<i>Activities Identified as Current Fisheries Communications</i>	FG1	FG2	FG3	FG4	FG5	FG6	FG7	FG8
briefing policy makers (i.e., Governor's office, legislators, etc.)	x	x ¹¹	x	x				
state & federal resource agencies & committees		x	x	x	x			
presentations to lake associations	x			x	x			
the state fair	x				x			x
district newsletters								x
the hatchery interpretation & tours					x	x		
presentations to the Michigan Charter Boat Association			x		x			
federal regulators (licensing)		x		x				
mitigating with private businesses & municipalities		x		x				
collecting fish heads from vendors								x
1-800-ASK-FISH					x			
Free Fishing Weekend					x			
projects with universities		x						
Carl T. Johnson Hunting & Fishing Museum						x		
sharing data with other states & agencies				x				

¹¹ Including providing legal advice.

Activities that were

- sport
- media
- Divis
- public
- prese
- meeti
- the D
- vario
- fisher
- publi

Most Fis

either with the p

Several times, for

"communication

fact, they were in

Study pa

during field work

participants belie

important part of

"It's the
because
Supervi

"Pretty
especia
and ask

"Gener
anyone

* All Fisheries E
group transcr
te.g., Field O

Activities that were identified by most focus groups were:

- sport show booths,
- media relations,
- Division participation on advisory committees and task forces,
- public encountered while working in the field,
- presentations for school groups,
- meetings and presentations with sport and fishing organizations,
- the Division and Department web pages,
- various Division outreach education activities (e.g., angling skills education, fisheries management demonstrations),
- public meetings/listening sessions.

Most Fisheries personnel recognized that some part of their job involved communications (either with the public or with other professionals internally at the MDNR or in other agencies).

Several times, focus group participants began introducing themselves with the disclaimer “communications aren’t really part of my job...” and then proceeded to list several areas where, in fact, they were involved in some form of public or internal communications.

Study participants listed as a current/on-going activity one-on-one contact with the public during field work and outreach activities, such as presentations to sport and fishing groups. A few participants believed that the one-on-one contact they experienced with various publics was an important part of their job:

“It’s the one-on-one contact that is probably some of the more important stuff we do because of the extremely lasting impression of it.” (Field Operations/Research - Supervisors: 306⁶)

“Pretty much everything we do is some sort of communication out to the public, especially out in the district offices because we are where they can come in any time and ask for information.” (Field Operations/Research - Supervisors: 99)

“General contact? I think that we have more contact with the public than almost anyone else in the Division wearing a uniform.” (Creel Clerks: 58)

⁶ All Fisheries Division personnel quotes are referenced to numbered lines in each of the eight focus group transcripts. Each transcript was labeled according to the participating employee group (e.g., Field Operations/Research - Supervisors, Early Retirees, Creel Clerks).

Although

duties, one Early R

"Commun
My motto
service."

In exami

Program Services

group primarily v

public contact or

Respond

personnel (Field

Program Service

supervisors. Hat

supervisory-level

with agencies an

communication

current Fisherie

Compa

not well inform

participates in

"I som
really
not gi
would
dedica

Although the following statement was not the norm when personnel described their job duties, one Early Retiree participant had this to say about the role of communications in his job:

“Communications? That’s what I do for a living. That’s basically what my job is. My motto for success: talk to lots of people every day, be real nice, and give good service.” (Early Retirees: 101).

In examining differences between focus group responses, I found that personnel in the Program Services focus group reported little one-on-one contact with the public. This employee group primarily worked out of the Lansing office and likely did not experience much field-related public contact or walk-in traffic.

Respondent differences were also observed between participating supervisory-level personnel (Field Operations/Research - Supervisors, Early Retirees, Management Personnel and Program Services), and non-supervisory-level personnel (Field Operations/Research - Non-supervisors, Hatcheries, Creel Clerks and Administrative Support). Three-fourths of non-supervisory-level focus groups and half of the supervisory-level focus groups identified partnering with agencies and interest groups on projects as an activity in which the Division provides communications. All supervisory-level focus groups identified “briefing policy makers” as a current Fisheries Division communication activity, whereas non-supervisory personnel did not.

Compared with most Fisheries personnel, creel clerks reported that they believe they are not well informed or connected with formal communication activities the Division currently participates in or otherwise provides.

“I sometimes wonder if the Department realizes how much the people in this room really are out there doing such a great thing. I don’t think they utilize us enough by not giving us enough information on some of the topics, that if they knew that they would get nothing, no [census] information at all except for all these people who are dedicated and go the extra mile.” (Creel Clerks: 1655)

The Division
current communication
distribute to all licensees

*"The Fishery"
(Hatchery)*

As with
Division support
including the following

- the
- the
- 1-8
- Free

Audiences Reached

Focus groups
communication
an interest in either
fisheries) as well as
identified individuals

- fish
- ge
- the
- fis
- of
- ci
- re

Members of the

The Division's *Fishing Guide* was identified by only one focus group (Hatcheries) as a current communication tool. The Division prints 1.5 million copies of the *Fishing Guide* to distribute to all licensed anglers and, as one Hatcheries focus group participant recognized:

"The *Fishing Guide* is one of the biggest communication devices we have."
(Hatcheries: 343).

As with the *Fishing Guide*, several other fisheries communications activities which the Division supports (with FTEs and resources) were not widely recognized by Division personnel, including the following:

- the state fair,
- the hatchery interpretive center and tours provided by other State hatcheries,
- 1-800-ASK-FISH, and
- Free Fishing Weekend.

Audiences Reached by Current Fisheries Communications

Focus groups listed a total of 33 audience types that they perceived current fisheries communications are reaching (Table 4-4). Most focus groups listed groups and individuals having an interest in either fishing or other related aquatic resources uses (including the management of fisheries) as well as those predisposed to fisheries interests and fishing. The audiences commonly identified included:

- fishing-related businesses,
- general anglers or outdoors people (e.g., sport show attendees, public encountered in the field),
- fishing and sport groups (organized anglers),
- office and hatchery visitors,
- citizen advisory groups, and
- regulators.

Members of the media and schools were also listed by most focus groups.

Table 4-4. MDNR Fisheries Division personnel perceptions of audiences reached by current communications. An "X" indicates that the focus group(s) responded with the information listed in the rows; more specific focus group responses are shown in footnotes.

Current Audiences Reached	FG1	FG2	FG3	FG4	FG5	FG6	FG7	FG8
Fishing related businesses (charter operators, tackle retailers, fishing guides, fish	X	X	X	X	X		X	X

Table 4-4. MDNR Fisheries Division personnel perceptions of audiences reached by current communications. An "x" indicates that the focus group(s) responded with the information listed in the rows; more specific focus group responses are shown in footnotes.

<i>Current Audiences Reached</i>	<i>FG1</i>	<i>FG2</i>	<i>FG3</i>	<i>FG4</i>	<i>FG5</i>	<i>FG6</i>	<i>FG7</i>	<i>FG8</i>
fishing related businesses (charter operators, tackle retailers, fishing guides, fish food producers, etc.)	x	x	x	x	x		x	x
sport show attendees	x	x	x	x	x	x		x
fishing/sport groups	x	x	x	x	x	x		x
members of the media	x	x	x	x	x	x		x
general outdoor public encountered during field work	x	x	x		x	x	x	
Lansing, field office & hatchery visitors	x	x	x	x	x	x		x
advisory groups & committee participants	x	x	x	x	x	x		x
creel census participants	x	x	x		x	x		x
regulators	x ²	x ³	x ⁴	x ⁵	x	x ⁶	x	x
elementary schools & teachers	x	x	x		x	x		x
general anglers	x	x		x		x		x
youth	x			x		x	x	x
Governor's office, legislators, senators	x	x	x	x		x	x	x
commercial fishing operations			x	x	x	x		
watershed councils	x		x	x	x		x	
universities			x	x	x			
non-residents & local tourists		x	x			x	x	x

1 FG1 - Field Operations/Research - Supervisors; FG2 - Early Retirees; FG3 - Management Personnel; FG4 - Program Services; FG5 - Field Operations/Research - Non-supervisors; FG6 - Hatcheries; FG7 - Creel Clerks; FG8 - Administrative Support.

2 Drain commissioners and township supervisors.

3 Other states, nations and tribes.

4 Other states, nations, the United States Fish and Wildlife Service, Environmental Protection Agency and the Great Lakes Fisheries Commission.

5 The United States Forestry Service and the National Oceanic and Atmospheric Association.

6 The United States Fish and Wildlife Service, the Department of the Interior, and the United States Forestry Service.

<i>Current Audiences Reached</i>		FG1 ⁷	FG2	FG3	FG4	FG5	FG6	FG7	FG8
conservation groups		X	X	X					
other MDNR Divisions & professionals			X	X	X				
business & municipalities			X		X				
American Fisheries Society & related professional organizations					X				
urban residents		X							
community & civic organizations			X				X		
county parks		X							
Sea Grant		X							
women		X							
tournament participants									X
the aquatic resource (fish)						X			
private dam owners						X			
other recreationists			X						
internet users							X		
seniors				X				X	
families								X	

⁷ FG1 - Field Operations/Research - Supervisors; FG2 - Early Retirees; FG3 - Management Personnel; FG4 - Program Services; FG5 - Field Operations/Research - Non-supervisors; FG6 - Hatcheries; FG7 - Creel Clerks; FG8 - Administrative Support.

When asked.

"Lots of
like Trou
Yeah. S
(Hatche

"...our c
(Manage

"Angler

"Sports

"Fishem

"Angler

"Just re

"Angle
Operati

There

audiences. Cre

the field—at v

narrow view of

description of

commercial fis

"And
a daily

Describing the

this to say abo

When asked, “who is the Fisheries Division serving?” several focus groups responded similarly:

“Lots of times the squeaky wheel gets the grease and maybe we cater a lot to groups like Trout Unlimited...”

Yeah. Specialists. Because they’re small in number but they’re big in voice.”
(Hatcheries: 369-373).

“...our current existing constituency group, our current core...are general anglers.”
(Management Personnel: 1451-1461).

“Anglers.” (Management Personnel: 325)

“Sportsmen. The guy that goes out fishing.” (Hatcheries: 367).

“Fishermen.” (Program Services: 166).

“Angler groups” (Field Operations/Research - Supervisors: 416)

“Just regular fishermen” (Administrative Support: 249)

“Anglers. Anglers, and then all the public in the State, all the people.” (Field Operations/Research - Non-supervisors: 287)

There was much similarity in focus group responses in identifying the above list of audiences. Creel Clerks, however, only identified people that they encountered while working in the field—at various Great Lakes ports—as Fisheries Division’s current audiences. While this is a narrow view of the Division’s audiences, Creel Clerks did, however, provide much detail in their description of who they see accessing or fishing the Great Lakes (e.g., seniors, families, charter and commercial fishermen). Clerks reported that they see many repeat anglers:

“And you see the same people. Seventy-five percent of the people you see, you see on a daily basis.” (Creel Clerks: 258).

Describing the audiences seen over the course of the creel season, one Creel Clerk participant had to say about Great Lakes anglers:

"As the y
Your Joe
you can s
and it ge
see midd
money."

Differen

supervisory than

fishing operation

currently reache

communication

listed neither sel

Program

encountered wh

Public Reque

In total

information of

related requests

- fis
- fis
- fis

“As the year goes, it starts out with my local people, very local, small boat fishery public. Your Joe Blow got out of the factory, came down to go fishin’. As the year progresses, you can see it changing from the inflow of tons of families, when the school year gets out and it gets a little warmer. There are also older people out too, when it get warmer. You see middle-aged folks with cash and big boats come to fish for salmon and spend a lot of money.” (Creel Clerks: 567-662)

Differences between supervisory and non-supervisory personnel were observed. More **supervisory** than non-supervisory focus groups listed regulators, governing officials, commercial **fish**ing operations, watershed councils, conservation groups and other professionals as audiences **currently** reached by fisheries communications. Management Personnel reported that current **communication** activities were reaching schools (in the form of “presentations”), and Early Retirees listed **neither** schools nor youth as audiences being reached via current communication activities.

Program Services and Administrative Support personnel did not identify “people encountered while in the field.” This is likely because these personnel do little or no field work.

Public Requests for Information or Assistance

In total, focus groups identified fourteen audiences or groups who request various forms of **information** of the MDNR Fisheries Division (Table 4-5). Most focus groups reported fishing-related **requests**, such as:

- fishing information (e.g., how to fish and where to fish),
- fishing access information (access with and without a boat), and
- fish stocking information.

Table 4-5. MDNR Fisheries Division personnel perceptions of public outreach, education and information requests of the MDNR Fisheries Division. An "x" indicates that the focus group(s) responded with the information listed in the rows.

Specific audiences and their requests of the MDNR Fisheries Division.	FG1 ¹	FG2	FG3	FG4	FG5	FG6	FG7	FG8
GENERAL PUBLIC								
fishing information (how to, where to, what to use, etc.)	x	x	x	x	x		x	x
fisheries management information	x	x	x	x			x	
access information (with/without a boat)		x	x	x			x	x
fish planting information		x			x	x	x	
various MDNR permits			x			x	x	x
information or clarification of regulations				x	x			x
study results & reports on the status of Michigan fisheries	x		x				x	
legal inquiries		x		x				
how to contact a conservation officer						x	x	
various animal nuisance problems (wildlife)							x	x
how to contact other agencies								x
Division publications (e.g., Better Fishing Waters, etc.)							x	
SPORT & FISHING GROUPS								
presentations								
study results & reports on the status of Michigan fisheries	x			x				
local fishing information	x			x				
input & "blessing" on group projects	x				x			

¹ FG1 - Field Operations/Research - Supervisors; FG2 - Early Retirees; FG3 - Management Personnel; FG4 - Program Services; FG5 - Field Operations/Research - Non-supervisors; FG6 - Hatcheries; FG7 - Creel Clerks; FG8 - Administrative Support.

Table 4-5 (cont'd).

Specific audiences and their requests of the MDNR Fisheries Division										
NON-RESIDENTS (anglers)										
	FG12	FG2	FG3	FG4	FG5	FG6	FG7	FG8		
		X								

<i>Specific audiences and their requests of the MDNR Fisheries Division.</i>									
NON-RESIDENTS (anglers) fishing & tourist information	FG12	FG2	FG3	FG4	FG5	FG6	FG7	FG8	
BOATERS boat launch & fishing information		X							
MEMBERS OF THE MEDIA interviews, background information for stories & follow-up information resulting from MDNR press releases	X		X			X			
PUBLIC ENCOUNTERED DURING FIELD WORK "what are you doing?" general fishing & fish planting information							X		
LAKE ASSOCIATIONS & WATERSHED ORGANIZATIONS special project information & presentations (e.g., assistance/information on habitat improvement projects, population surveys) study results & reports on the status of Michigan fisheries input & "blessing" on group projects	X			X	X X				
CITIZEN ADVISORY GROUPS special project information & presentations (e.g., assistance/information on habitat improvement projects, population surveys) study results & reports & related fisheries management information on the status of Michigan fisheries	X		X		X				X

2 FG1 - Field Operations/Research - Supervisors; FG2 - Early Retirees; FG3 - Management Personnel; FG4 - Program Services; FG5 - Field Operations/Research - Non-supervisors; FG6 - Hatcheries; FG7 - Creel Clerks; FG8 - Administrative Support.

Table 4-5 (cont'd).

<i>Specific audiences and their requests of the MDNR Fisheries Division.</i>	<i>FG13</i>	<i>FG2</i>	<i>FG3</i>	<i>FG4</i>	<i>FG5</i>	<i>FG6</i>	<i>FG7</i>	<i>FG8</i>
input & "blessing" on group projects					N			

<i>Specific audiences and their requests of the MDNR Fisheries Division.</i>	<i>FG13</i>	<i>FG2</i>	<i>FG3</i>	<i>FG4</i>	<i>FG5</i>	<i>FG6</i>	<i>FG7</i>	<i>FG8</i>
input & “blessing” on group projects					x			
SCHOOLS/TEACHERS/STUDENTS								
presentations & hatchery tours			x			x		x
career information			x					
fisheries population data for mathematical modeling			x					
continuing education workshops			x					
fisheries information for school reports		x						x
POLICY MAKERS (e.g., GOVERNOR’S OFFICE, LEGISLATORS)								
policy statements & management policy/practices, briefs		x						
OTHER SCIENTIFIC PROFESSIONALS								
study results & reports on the status of Michigan fisheries				x				x
employment information				x				x
advise/input on habitat protection & restoration projects				x				x
information about Department/Division policies (e.g., permit review information by DEQ)	x			x				x
REALTORS/BUYERS								
fishing information on specific water bodies		x	x			x		
CHAMBERS OF COMMERCE								
fishing information on specific water bodies		x			x			

3 FG1 - Field Operations/Research - Supervisors; FG2 - Early Retirees; FG3 - Management Personnel; FG4 - Program Services; FG5 - Field Operations/Research - Non-supervisors; FG6 - Hatcheries; FG7 - Creel Clerks; FG8 - Administrative Support.

Table 4-5 (cont'd).

Specific audiences and their requests of the MDNR Fisheries Division.										
LOCAL/COMMUNITY BUSINESSES										
Request for information & mitigating efforts										
	FG14	FG2	FG3	FG4	FG5	FG6	FG7	FG8		X

<i>Specific audiences and their requests of the MDNR Fisheries Division.</i>	<i>FG1⁴</i>	<i>FG2</i>	<i>FG3</i>	<i>FG4</i>	<i>FG5</i>	<i>FG6</i>	<i>FG7</i>	<i>FG8</i>
LOCAL/COMMUNITY BUSINESSES information about impacts on fisheries & mitigating efforts								X

⁴ FG1 - Field Operations/Research - Supervisors; FG2 - Early Retirees; FG3 - Management Personnel; FG4 - Program Services; FG5 - Field Operations/Research - Non-supervisors; FG6 - Hatcheries; FG7 - Creel Clerks; FG8 - Administrative Support.

Most focus group

appears that most

public (Table 4-2)

spawning runs of

gear and water b

requests for fish

level focus group

the Division has

Other c

- fish
- oth
- off
- inf
- pre

Division

were reported t

- the
- la
- w
- sp
- ot

Personnel rep

provide a pres

- la
- w
- sp
- s
- C

A
E

most focus groups reported that these requests were made by the “general public,” although it appears that most of the requests listed above are more likely to be attributed to the general *angling* public (Table 4-5). Media promotion of fishing season openers combined with fishing reports of spawning runs or “hot action” were perceived to lead to more specific requests related to species, size and water body conditions. Creel Clerks and Administrative Support personnel reported requests for fishing information more than other focus groups; however, three of four management focus groups recognized that, while this information may not be requested of them, others in the Division handle these inquiries.

Other commonly identified requests were for:

- fisheries management information,
- other Department information (e.g., MDNR permits, how to contact conservation officers, wildlife information and animal nuisance complaints, etc.),
- information about what Fisheries personnel working in the field are doing, and
- presentations.

Division research or study results and information about fisheries management projects

are reported to be popular requests made by the following audiences:

- the general public,
- lake associations,
- watershed groups,
- sport/fishing organizations, and
- other natural resources professionals.

Personnel reported that these various public and private institutions requested Division personnel to

provide a presentation on study results or fisheries management:

- lake associations,
- watershed groups,
- sport/fishing organizations,
- schools, and
- Chambers of Commerce.

“I get about a request a month from elementary school teachers. At *least* once a month. It’s usually like once a week.” (Field Operations/ Research - Supervisors: 268-274)

Adminis

hatchery tours by

organizations and

which the Divis

and advice on h

personnel repor

Membe

information or

Department or

Field C

reported that pe

doing?" where

reported that th

information. F

various permit

the public exp

"I cou
the D

"If it
360)

Super

non-supervise

Administrative Support, Creel Clerks and Management Personnel reported requests for hatchery tours by schools and teachers. Lake associations, watershed and sport/fishing organizations and citizen advisory groups request updates and information on various projects in which the Division/Department is a partner. These organizations also ask for MDNR permission and advice on habitat improvement projects and studies they are undertaking. Additionally, personnel reported that these groups request study results and population survey information.

Members of the media interview Fisheries Division personnel and request additional information or verification for stories. The media also follow up on press releases initiated by the Department or Division.

Field Operations/Research -Non-supervisory, Creel Clerks and Program Service personnel reported that people they encounter while conducting field duties typically ask “what are you doing?” whereupon personnel provide information. Both Field Operations/Research focus groups reported that these encounters often result in the public wanting general fishing and fish plant information. Field personnel also reported requests for general Departmental information (e.g., various permits, wildlife, parks and hunting information). Creel Clerks, in particular, reported that the public expects clerks to know a variety of Departmental information:

“I could sum it up by saying that the public wants to know everything that concerns the DNR.” (Creel Clerks: 234)

“If it flies, crawls, walks, dies, we’re supposed to know all about it.” (Creel Clerks: 360)

Supervisory-level personnel were more likely to have legal and policy-related requests than non-supervisory-level focus groups.

Strengths Town

Focus g

Department-level

Depar

Office of Inform

providing fishes

could assist wit

"It seen
someth
networ
Right.
the Div

Two s

that cooperatio

providing fishes

Non-supervisor

by the passing

"environmenta

opportunities.

non-supervisor

Strengths Toward Planning, Developing and Implementing Fisheries Communications

Focus group responses were grouped into three overarching categories of strengths:

Department-level, Division-level, and individual, personnel-level strengths (Table 4-6).

Department-level Strengths: Five focus groups (mostly supervisory) listed the new Office of Information and Education (OIE) as a strength with the potential for developing and providing fisheries communications (Table 4-6). Focus group participants expressed that the OIE could assist with establishing a unified mission, vision and voice for the Department:

“It seems that the I&E office could cross a lot of Divisions and come up with something fairly unified...I&E efforts could stretch across Divisions, sort of a networking of communications. Right. I&E could work it out not only from the Department to the public, but within the Divisions.” (Field Operations/Research -Non-supervisors: 1622-1672)

Two supervisory focus groups (Management Personnel and Program Services) indicated that cooperation among various Departments and agencies was a strength in developing and providing fisheries communications. Management Personnel and Field Operations/Research - Non-supervisors reported that public support for scientific fisheries management was demonstrated by the passing of proposal G in 1996. Management Personnel suggested that the popularity to be an “environmentalist” helped with regard to public support of natural resources management. Training opportunities, specifically focused on cross-training between Divisions, was listed as a strength by a non-supervisory focus group.

Table 4-6. MDNR Fisheries Division personnel perceptions of individual, Divisional and Departmental strengths in providing fisheries communications. An "x" indicates that the focus group(s) responded with the information listed in the rows.

Specific MDNR strengths for providing communications		FG1	FG2	FG3	FG4	FG5	FG6	FG7

Table 4-6. MDNR Fisheries Division personnel perceptions of individual, Divisional and Departmental strengths in providing fisheries communications. An "x" indicates that the focus group(s) responded with the information listed in the rows.

<i>Specific MDNR strengths for providing communications</i>		FG1 ¹	FG2	FG3	FG4	FG5	FG6	FG7	FG8
INDIVIDUAL PERSONNEL-LEVEL STRENGTHS									
professional expertise/knowledge		x	x	x	x	x		x	
individual dedication & enthusiasm toward jobs & resource management		x	x		x	x	x	x	
positive willingness to provide communications			x	x	x		x	x	x
objectivity of fisheries staff			x						
DIVISION-LEVEL STRENGTHS									
good & supportive leadership			x	x	x			x	x
information base/data		x	x		x	x		x	
specific talented fisheries staff conducting "[&E]" functions			x		x	x	x		x
technology (i.e., computerized data bases, Internet, webpage, etc.)		x			x			x	x
track record working with various partners & groups (i.e. advisory groups, universities, MUCC, sport/fishing groups, etc.)			x		x	x			x
Michigan's bountiful & unique resources		x	x		x				
participatory management processes: interaction & input among diverse staff		x	x		x				
workshops/discussion sessions versus lectures at in-service training				x			x		x
cooperation among Fisheries Units - a united Division			x	x	x	x			
the strategic planning process									
the interpretive center & field offices		x	x				x		x
improved cooperation among Divisions									x
electronic communications for internal/external education on current issues, etc.			x		x				x
the fishing report									x
training opportunities									x

¹ FG1 - Field Operations/Research - Supervisors; FG2 - Early Retirees; FG3 - Management Personnel; FG4 - Program Services; FG5 - Field Operations/Research - Non-supervisors; FG6 - Hatcheries; FG7 - Creel Clerks; FG8 - Administrative Support.

Table 4-6 (cont'd).

<i>Specific MIDNR strengths for providing communications</i>	<i>FG1</i>	<i>FG2</i>	<i>FG3</i>	<i>FG4</i>	<i>FG5</i>	<i>FG6</i>	<i>FG7</i>	<i>FG8</i>
	$\frac{FG1}{2}$							X

Table 4-6 (cont'd).

<i>Specific MDNR strengths for providing communications</i>	FG1 2	FG2	FG3	FG4	FG5	FG6	FG7	FG8
radio shows								X
knowledge of Great Lakes anglers via creel census					X			
financial resources (e.g., passing of new license package, Fish & Game Fund, litigation revenues)		X						
diverse staff skills		X						
independent & unconstrained staff: opportunities for public speaking & promotion of Division & Department policies & messages		X						
access to anglers via computerized fishing license data base			X					
access to publications & reports								
successful recruitment of quality staff				X			X	
DEPARTMENT-LEVEL STRENGTHS								
the new Departmental I&E office	X	X			X	X		X
cooperation among various Departments & agencies				X	X			
officials as spokespeople (i.e. K. Cool during propositions D & G)					X			X
past cross-training opportunities					X			
inter-departmental management team					X			
positive exposure of uniforms & vehicles				X		X		
Agency reputation among other professionals								
MISCELLANEOUS STRENGTHS								
public support for scientific fisheries management (e.g., passing of proposal G)		X		X	X			
the <i>Northwoods Call</i> periodical						X		
“politically correct/peer pressure” for public to be “green” or environmental			X					

2 FG1 - Field Operations/Research - Supervisors; FG2 - Early Retirees; FG3 - Management Personnel; FG4 - Program Services; FG5 - Field Operations/Research - Non-supervisors; FG6 - Hatcheries; FG7 - Creel Clerks; FG8 - Administrative Support.

Division

strengths in plan

- Div
- sou
- to b
- spe
- par
- un:



- te

- r

Alt

only supervi

strength with

Division-level Strengths: Focus groups listed many indicators that they perceived to be strengths in planning, developing or implementing fisheries communications:

- Division leadership is “good and supportive”,
- sound, science-based information or data collected as a result of research is a strength to be tapped in fisheries communications,
- specific personnel are particularly talented at conducting “I&E” functions— however, participants reported that these efforts have often gone untapped, unrewarded or unsupported (by leadership or resource support),

“_____. He takes salmon eggs to schools. It’s really cool. It’s actual hands-on right where they can watch them [the salmon eggs/fry] day to day. They get all excited when they take the fry out to the stream and they get to plant them themselves.” (Hatcheries: 314-318)

“Some people are really good at it [communications]. _____ and _____ are both wizards at it. You watch those guys deal with the public, they are just fabulous at it. But, both are extremely patient people. They are willing to put up with a lot of inane questions. That’s hard ...you have to pick the right people to do that sort of job. Not every fish biologist is cut out for that.” (Program Services: 1057)

- technology (e.g., computerized data bases, internet access, web pages), and

“We know who our license buyers are and we can contact them, that’s a strength.
It’s a data base of anglers...that’s all it is.
Yeah. But compared to industry, they would give their right arms for a database on who bought their equipment or their product the previous year.
We are in an enviable position.” (Management Personnel: 1314-1320)

- track record of working with various partners and groups.

Although these strengths were listed by supervisory and non-supervisory focus groups, only supervisory personnel reported that Michigan’s bountiful and quality fisheries resources was a strength with regards to future fisheries communications. Similarly, supervisory personnel

identified the Di

cooperation amo

differently (see

"I think
average
first siz

Non-supervisor

training opport

Indivi

professional ex

build fisheries

having the req

also be percei

strategies (e.g

and providing

perceived the

Division resp

fisheries com

communicati

"We
com

identified the Division's "participatory management style," the Division's Strategic Plan, and cooperation among Division units as strengths, while non-management Fisheries personnel felt differently (see Weaknesses, page 120).

"I think that our management system has improved, it is certainly more open to the average employee to have input into the decision-making process than it was when I first started here." (Program Services: 904)

Non-supervisory personnel listed inservice training workshops, discussion sessions and other training opportunities as strengths.

Individual Personnel Strengths: Most focus group participants reported that professional expertise and knowledge among Division personnel were strengths upon which to build fisheries communications. This was stated in the context of Fisheries Division personnel having the required knowledge and expertise to perform effective fisheries management, but could also be perceived as personnel having the necessary background to assist with communication strategies (e.g., identifying priority communication issues, writing and editing materials, developing and providing public presentations, etc.). Additionally, most focus groups reported that they perceived themselves as being enthusiastically dedicated to their jobs and to the overarching Division responsibilities of fisheries management. Relating this enthusiasm for their jobs with fisheries communications, most personnel reported a positive willingness to provide communications.

"Well, the greatest strengths we have is our employees and their willingness to communicate and share their knowledge base." (Management Personnel: 1294)

Three focus groups
toward fisheries

"I've a
is a lot
Yeah.
Depar
Service
"I thin
(Field

Early
objective whe
on emotions).

Weaknesses

Many
and implemen
reported weak
perceptions o
level weakne

Dep:
Department-
support in ter
communicati

Three focus groups reported that, collectively, personnel enthusiasm resulted in a united effort toward fisheries management within the Division *and* the Department.

“I’ve always thought that internally, we have been a very supportive group, that there is a lot of support for each other within the Division.

Yeah...there is definitely an esprit de corps to the Division and to an extent, the Department. I think that everyone is in this...to help the resource.” (Program Services: 918- 920)

“I think one of our strengths is that it seems that our Division is pretty well united.” (Field Operations/Research - Non-supervisors: 1323)

Early Retirees reported that Division personnel have, as a strength, the ability to be objective when making management decisions (making decisions based on science, versus acting on emotions).

Weaknesses Toward Planning, Developing and Implementing Fisheries Communications

Many more weaknesses than strengths were identified with regard to planning, developing and implementing fisheries communications (Tables 4-7 through 4-10). In fact, some focus groups reported weaknesses that contradict strengths other focus groups listed above. Personnel perceptions of weaknesses are organized into four groups: Department-level weaknesses, Division-level weaknesses, internal communication weaknesses and individual personnel-level weaknesses.

Department-level Weaknesses: Personnel listed 18 weaknesses or problems at the Department-level (Table 4-7). Six focus groups reported a lack of long-term commitment and support in terms of management decisions and allocation of resources to the function of communications.

Table 4-7. MDNR Fisheries Division personnel perceptions of Department-level weaknesses in providing fisheries communications. An "X" indicates that the focus group(s) responded with the information listed in the rows.

<i>Specific Division-level weaknesses in providing communications ...</i>	<i>FG1</i>	<i>FG2</i>	<i>FG3</i>	<i>FG4</i>	<i>FG5</i>	<i>FG6</i>	<i>FG7</i>	<i>FG8</i>

Table 4-7. MDNR Fisheries Division personnel perceptions of Department-level weaknesses in providing fisheries communications. An "x" indicates that the focus group(s) responded with the information listed in the rows.

<i>Specific Division-level weaknesses in providing communications ...</i>	<i>FG14</i>	<i>FG2</i>	<i>FG3</i>	<i>FG4</i>	<i>FG5</i>	<i>FG6</i>	<i>FG7</i>	<i>FG8</i>
DEPARTMENT-LEVEL WEAKNESSES								
lack of long-term Divisional & Departmental commitment/support for I&E	x	x	x	x	x	x		
lack of priority audiences & messages		x	x		x	x		x
lack communication strategy; current communication efforts are untargeted & lack objectives	x	x	x	x	x			
ability for Office of I&E: staff, tools, funds		x		x	x	x		x
Department/Division focus on traditional constituents: accountable only to angler & hunter			x	x	x		x	
lack of support or priority from Governor's office & legislators	x	x						
lack of direction from Chief/Director	x		x			x		
haunted by past Division/Department abuses (i.e., heavy-handed policies, institutional arrogance, management errors, etc.)				x	x	x		
lack of central telephone/information service								
lack of 1-800 telephone number: the need for the public to make to long-distant telephone calls							x	x
lack of targeting legislative official with communications	x						x	
Department relationship with Dept. of Education: inability to get messages into schools		x					x	
lack of common vision/voice in communications								
negative news gets all the action (internally & externally)						x		

4FG1 - Field Operations/Research - Supervisors; FG2 - Early Retirees; FG3 - Management Personnel; FG4 - Program Services; FG5 - Field Operations/Research - Non-supervisors; FG6 - Hatcheries; FG7 - Creel Clerks; FG8 - Administrative Support.

"The O

"It has

Yeah.

But, no

That's

See, th

Choice

And ri

"The

dolla

I've

down

(Prog

"I thin

"It's c

handl

to do

comm

to say

realit

"We

and e

We k

Oper

"I thi

fish p

More specific

lacked clear

messages). I

subject repea

“The Office of I&E? It rises and falls...like a Phoenix.” (Early Retirees: 2471)

“It has not been a priority... You’d have to give something up.

Yeah. We need I&E to be a priority and a staff.

But, not at the expense of the existing staff...

That’s right...

See, that’s the dilemma.

Choices. It is a dilemma.

And right now, with our body count limitations...” (Early Retirees: 2425-2513)

“There seems to be a lot of support for communications until it gets down to the dollar and then it disappears totally. I can’t tell you the arguments and discussions I’ve seen about that. Everybody is in total support of communications until it gets down to dividing up the money and then it’s as if it never existed. Every year.” (Program Services: 1097)

“I think it’s a lack of a commitment by management.” (Hatcheries: pg. 39)

“It’s competing priorities. If you are going to give somebody \$100,000 to go out and handle a project or do a communication effort or are you going to not hire the people to do this project over here, you know. And it is turf and it is internal politics, but communications, in my viewpoint, has failed every single time to be successful. So, to say that there is support? There appears to be an illusion of it, I haven’t seen the reality of it.” (Program Services: 1102)

“We like to say it’s a priority but we don’t follow it up with the actions in personnel and expertise in those particular areas and dollars to go with it. We know what needs to be done. We just haven’t done it.” (Field Operations/Research- Supervisors: 1852-1854)

“I think it’s the direction of the program. No one has said a major component of the fish program is going to be education.” (Early Retirees: 2381)

More specifically, five focus groups indicated that current communications lacked strategy (i.e. lacked clear communication and management objectives and priority issues, audiences and messages). During the focus group discussion, Management Personnel participants returned to this subject repeatedly, and Program Services participants also commented:

"We n
want to
of getti

"Well
audien

"We u
1342)

"We l
delive
manag
Right.

"Well
talkin
to jus
going
proce
some
is als

"...the
self-p
becar

In ac
pointed out t
ability to fur

"Th
com

Thr
Services) re

“We need to identify those messages, the information that we want out there. We’ll want to prioritize that as a Division and then try to find the most effective means of getting it out there.” (Management Personnel: 313)

“Well our problem is that we try to target all audiences instead of focusing on a few audiences that we can best serve.” (Management Personnel: 1330)

“We use the same [communication] tool for everything.” (Management Personnel: 1342)

“We’ll have to be very careful how we present information and what messages we deliver. Especially with what we want them to know. It is way beyond the fisheries management issues.
Right. They are really broad-based, value-based.” (Management Personnel: 1575)

“Well, the problem here is that we have limited resources here and the Department is talking about initiating a major information and education initiative and they are liable to just go off in a different direction than what we see as the direction we ought to be going. So, you know, there is a potential here for them to drain our resources in the process and then we are not going to be able to reach the audiences as we want to. So somehow, we have got to reconcile where we are heading with where the Department is also headed.” (Management Personnel: 1704)

“...the question that people are going to ask is ‘why did you spend the money on this self-promotion and advertisement.’ You got to be really careful with your messages because you can really hang yourself.” (Program Services: 1145)

In addition to lack of Departmental commitment to communications, five focus groups pointed out that lack of support and resources (e.g., FTEs, funds, and tools) jeopardized the OEI’s ability to function effectively.

“The Office of Information and Education as a strength toward developing communications? It’s like a staff of two.” (Early Retirees: 2493)

Three focus groups (Field Operations/Research - Supervisors, Early Retirees and Program Services) reported a lack of direction and support for communications from the Governor’s office

and legislators. V

Personnel and H

and or Division

"It com
Yeah. I
respon
I think
suppor

It's be
Manag
are pro
2156)

"There s
2026/)

"Then
rallie
1837

Half

Program Ser

traditional co

management

"Me
we'
wid
sup

"W
[an
163

and legislators, while another three (Field Operations/Research - Supervisors, Management Personnel and Hatcheries) indicated a lack of direction or support internally, within the Department and/or Division.

“It comes back to staffing. It comes back to direction. It comes back to I&E ability. Yeah, but it’s an attitude higher up that told us we won’t do it. That it’s not our responsibility.

I think probably we have the interest but we don’t have the support... Legislative support.” (Early Retirees: 2387-2397)

It’s been implied, but I think that you have to put this down: the Department of Management and Budget and the Governor’s office. Because, they’re the ones that are presently constraining the program.” (Field Operations/Research -Supervisors: 2156)

“There seems to be no direction from above.” (Field Operations/Research -Supervisors: 2026/)

“There is not always top down support. There’s talk about it, especially at these pep rallies, but we leave here and it’s right back to the same old thing.” (Hatcheries: 1837)

Half of the focus groups (Field Operations/Research Non-supervisors, Creel Clerks and Program Services and Management Personnel) reported that there was too much focus on traditional constituents (hunters and anglers) within Department and Division communications and management practices.

“Most of our communications are with anglers already. It’s the other groups that we’re really falling short on and we have very little communications with them and, with them are probably the biggest gains we can have in anything we do—with support or funding or whatever.” (Field Operations/Research -Supervisors: 1507)

“We were essentially speaking to the choir when we were talking to these groups [anglers] previously instead of targeting our audiences.” (Management Personnel: 1636)

"We tend
in those
aren't d

"A lot of
places I
already
Clerks:

More s

and support for

logistical weak

Division

reported (Tabl

reportedly attr

- a
 - a
 - a
 - la
- D

Field Operati

the MDNR F

communicati

toward comm

"We tend to speak presently to the people who already demonstrate pretty high skills in those areas that we want to encourage. We are not speaking to the people who aren't already at least most of the way there." (Management Personnel: 1640)

"A lot of times where we 'advertise' or where we put our 'punch' it's at sport shows or places like that. To me it seems kind of goofy, you know, because those people are already into it. They take the fly-swatter and their ruler and leave, you know?" (Creel Clerks: 984)

More supervisory than non-supervisory-level focus groups reported a lack of commitment and support for communications, while participants in non-supervisory level focus groups listed logistical weaknesses in the Department's communications (e.g., telephones).

Division-level Weaknesses: A "laundry list" of 43 Division -level weaknesses were reported (Table 4-8). Weaknesses in actually planning or providing fisheries communications were reportedly attributed to:

- a lack of funds,
- a decrease in personnel (due to the early retirement program),
- a lack of personnel with communications expertise, and
- lack of follow-through or commitment to fisheries communications in the Fisheries Division's strategic planning document/process.

Field Operations/Research - Supervisors, Early Retirees and Hatcheries focus groups reported that the MDNR Fisheries Division Strategic Plan does not clearly identify fisheries communication objectives and that the activities listed lacked resources to support follow-through toward communication efforts.

"In the Strategic Plan there actually are a bunch of items about communications with the public, but it's a fuzziness, sort of without priorities. Absolutely. And to what degree do those items even happen? Right. It's unclear." (Field Operations/Research -Supervisors: 2144-2152)

Table 4-8. MIDNIR Fisheries Division personnel perceptions of Division-level weaknesses in providing fisheries communications. An "N" indicates that the focus group(s) responded with the information listed in the rows.

<i>Specific Division-level weaknesses in providing communications ...</i>	<i>FG12</i>	<i>FG2</i>	<i>FG3</i>	<i>FG4</i>	<i>FG5</i>	<i>FG6</i>	<i>FG7</i>	<i>FG8</i>

Table 4-8. MDNR Fisheries Division personnel perceptions of Division-level weaknesses in providing fisheries communications. An "x" indicates that the focus group(s) responded with the information listed in the rows.

<i>Specific Division-level weaknesses in providing communications ...</i>	<i>FG1²</i>	<i>FG2</i>	<i>FG3</i>	<i>FG4</i>	<i>FG5</i>	<i>FG6</i>	<i>FG7</i>	<i>FG8</i>
DIVISION-LEVEL WEAKNESSES								
lack of allocating Fisheries Division resources (e.g., funds, FTEs) for fisheries communications	x	x	x	x	x	x	x	x
early retirement & decreasing staff	x	x	x	x	x	x		x
lack of personnel with expertise in public speaking, education, program development, etc. (e.g., the Division hires fisheries biologists to "be everything & do everything")	x	x	x	x	x	x		x
lack of follow-through with communication objectives identified in the Strategic Plan (i.e. FTEs, funds & actual activities)		x		x	x			
inflexibility to "give something up" or alter management structure in return for improving I&E ability	x	x	x				x	
public accessibility to information	x	x	x					
MDNR's ability to reach various publics								
lack of targeted "things" or tools (i.e. videos, publications, promotional items, programs, etc.)					x			x
lack of cross-training between Fisheries Division Units		x			x			x
public does not currently know what the Department or Division is or does		x					x	x
public unable to contact conservation officers						x	x	x
lack of Unit & Divisional cross-training		x			x			x
insufficient technology/not keeping pace with technology & communication opportunities	x		x					

2ndFG1 - Field Operations/Research - Supervisors; FG2 - Early Retirees; FG3 - Management Personnel; FG4 - Program Services; FG5 - Field Operations/Research - Non-supervisors; FG6 - Hatcheries; FG7 - Creel Clerks; FG8 - Administrative Support.

Table 4-8 (cont'd).

<i>Specific Division-level weaknesses in providing communications ...</i>	<i>FG13</i>	<i>FG2</i>	<i>FG3</i>	<i>FG4</i>	<i>FG5</i>	<i>FG6</i>	<i>FG7</i>	<i>FG8</i>
insufficient staff in Livonia (i.e., percentage of Michigan population, ability to						x		x

Table 4-8 (cont'd).

<i>Specific Division-level weaknesses in providing communications ...</i>	<i>FG1³</i>	<i>FG2</i>	<i>FG3</i>	<i>FG4</i>	<i>FG5</i>	<i>FG6</i>	<i>FG7</i>	<i>FG8</i>
insufficient staff in Livonia (i.e., percentage of Michigan population, ability to answer telephones, etc.)						X		X
presentation of data is not user-friendly				X	X			
participatory management style is indecisive & slow to react		X				X		
staff are not demographically diverse		X	X					
Fisheries staff not wearing uniforms: evading negative public attitudes & flood of requests						X	X	
uniforms convey inappropriate messages to the public; general belief that all MDNR staff are conservation officers						X	X	
propagating the concept that all fish come from hatcheries	X			X				
confusing regulations			X				X	
lack of communications inventory: what skills, knowledge and staff are available			X	X				
lack of in-service training topics for non-biologist staff			X				X	X
lack Great Lakes fishing access for youth							X	X
unfocused strategic plan: attempts to "do all & satisfy all"			X					
inability of hatcheries to accommodate public: insufficient staff, materials, programming						X		
unlisted telephone number to Great Lakes Station			X					
stagnant hatchery exhibits						X		
lack of information on inland anglers					X			
lack of foul weather uniforms - public does not recognize Fisheries staff							X	
supervisor only contacts field staff to complain							X	
outdated publications							X	
current public telephone directory listings are vague								X

³FG1 - Field Operations/Research - Supervisors; FG2 - Early Retirees; FG3 - Management Personnel; FG4 - Program Services; FG5 - Field Operations/Research - Non-supervisors; FG6 - Hatcheries; FG7 - Creel Clerks; FG8 - Administrative Support.

Most fo

support and abil

(Early Retirees

Rather, the wea

passages from

"Let's
fund. a
consid
sure.
1898-

"I thin
not to
I mea
not to

"I thi
to aq
... w

"We
Serv

Three-fourth

pattern of hi

fisheries con

"I
I m
(E

"...

Most focus groups identified a lack of funds as a weakness in Division and individual support and ability to provide fisheries communications. Two supervisory-level focus groups (Early Retirees and Program Services) noted, however, that funds were not actually lacking. Rather, the weakness was in not allocating Fisheries funds toward communications. The following passages from the Early Retirees focus group serve as cases in point:

“Let’s talk about funding: Given the fact that we have a passage of the game and fish fund, a new license package, we have new sources of money from litigation. If you consider those, do we have the financial resources? I’m asking a question. I’m not sure. I think what we’ve got more than that, we have public support.” (Early Retirees: 1898-1900)

“I think we’ve got the money to do it. We’ve got a \$22 million budget. We choose not to spend \$22 million on developing a communication program but we could do it, I mean, the bucks are there. We have the financial resources. It’s that we’re choosing not to.” (Early Retirees: 2080-2088)

“I think one of our weaknesses might be not allocating Sport Fish Restoration dollars to aquatic education..
... well, again, it’s a choice.” (Early Retirees: 2094-2096)

“We’ve been through this exercise before ... No one is willing to fund it.” (Program Services: 1169)

Three-fourths more supervisory than non-supervisory focus groups reported that the Division’s pattern of hiring biologists to “be everything and do everything” was a weakness in providing fisheries communications.

“I don’t think that we have the [communications] expertise in-house ...
I mean, they hire fish biologists to be managers, supervisors and communicators.”
(Early Retirees: 2182-2186)

“...we are not trained as educators...” (Early Retirees: 2547)

"I guess
Webmaster
need to

Partic

lack of commi

staffing structu

"I gue
struct
We la
Oper

Thre

Early Retiree

publics was a

"I th
amc
com
for
(Ea

"W
did
Ed

"A
to
(M

"I guess we may not have the appropriately trained people. Like, we don't have a Webmaster. You know, we don't have the right kind of positions to do the things we need to do." (Field Operations/Research -Non-supervisors: 1467)

Participants in the Early Retirees and Program Services focus groups indicated that the lack of commitment in terms of resources such as funds and job positions was due to an inflexible staffing structure in the Division:

"I guess maybe a weakness is that we don't have the flexibility to alter the Division's structure as it needs to be, as it may need to be altered, or, you know, when necessary. We lack flexibility... I suppose, it's partly related to turnover of employees. (Field Operations/Research - Non-supervisors: 1479)

Three groups noted that the ability to reach (target) various audiences was a weakness. Early Retirees and Management Personnel, in particular, reported that access to urban-metro publics was a weakness in fisheries communications:

"I think that we can sit around this table and say that we realize that we're limited in the amount of access we have in metro areas of the state. But I don't think that we're communicating that message effectively within the agency, to the people responsible for that activity. That's the legislature, Parks and Recreation, Forest Management..." (Early Retirees: 1373)

"Well, it's congressional support or the state representatives' support. The one time we did that they came to us and said 'NO, you will not do this.' That's the Department of Education. You will not go into the schools." (Early Retirees: 2383)

"And then there are the unorganized anglers which is the biggest and the hardest group to reach. We've never succeeded in contacting unorganized anglers." (Management Personnel: 421)

Indiv

personnel. non-

communication

support" (Tabl

"I've ne
to do:
your v
the do
really

The f

weaknesses c

cooperative D

supervisors a

"isolated" in

react." Creel

they play in

"Ho
that

"I th
offi

"I g
som

"In
how
to t

"I e
atta
16:

Individual personnel weaknesses: While most focus groups identified a lack of time and personnel, non-supervisory-level focus groups reported that when it came to providing fisheries communications related to their jobs, there was a “conflict of duties” and a “lack of supervisory support” (Table 4-9).

“I’ve noticed, and the others here probably can back me up on this: we have our duties to do; on the weekend, there’s only one person there and you have duties to complete your work day. But, at my hatchery, some days it’s a steady stream of people rolling in the door and they all want a tour; you’re the tour guide. ..We really aren’t set up to really deal with the public, you know?” (Hatcheries: 76)

The following non-supervisory personnel perceptions of Division and individual-level weaknesses contradict strengths listed earlier by supervisory personnel regarding a “united and cooperative Division.” Non-supervisory personnel reported a lack of information sharing between supervisors and staff, and between the Lansing and field offices. They also reported feeling “isolated” in field offices and that the “participatory management style was indecisive and slow to react.” Creel Clerks repeatedly voiced a lack of supervisory or Division-level support for the role they play in fisheries management:

“How are you supposed to answer public questions when you don’t know anything that the Division or Department is doing?” (Creel Clerks: 2051)

“I think to sum it up for me would be [needing] the support from the people in the office.” (Creel Clerks: 185)

“I get one call from my supervisor all summer and it’s because of a complaint from some angler.” (Creel Clerks: 1735)

“In our free time at Fisheries Inservice training, we got together ourselves to learn how to fill out the new creel forms. They didn’t even have a training session planned to teach us this. That’s how inconsequential they look at us.” (Creel Clerks: 1777)

“I equate it with sending the sheep to the wolves. They send us out there and we’re attacked by the wolves out there and they [supervisors] never check.” (Creel Clerks: 1657)

Table 4-9. MIDNR Fisheries Division personnel perceptions of individual weaknesses in providing fisheries communications. An "X" indicates that the focus group(s) responded with the information listed in the rows.

<i>Individual personnel-level weaknesses in providing communications ...</i>	<i>FG1</i>	<i>FG2</i>	<i>FG3</i>	<i>FG4</i>	<i>FG5</i>	<i>FG6</i>	<i>FG7</i>	<i>FG8</i>
<i>8-2-2-10a individual personnel-level weaknesses in providing communications ...</i>								

Table 4-9. MDNR Fisheries Division personnel perceptions of individual weaknesses in providing fisheries communications. An "x" indicates that the focus group(s) responded with the information listed in the rows.

<i>Specific individual personnel-level weaknesses in providing communications ...</i>	<i>FG1</i>	<i>FG2</i>	<i>FG3</i>	<i>FG4</i>	<i>FG5</i>	<i>FG6</i>	<i>FG7</i>	<i>FG8</i>
INDIVIDUAL PERSONNEL WEAKNESSES								
lack of time	x	x	x	x	x	x		x
lack of computer support & training			x		x	x		x
conflict of duties		x			x	x		x
isolation of field staff/offices			x		x	x	x	x
lack of supervisory support/flexibility in job duties					x	x	x	x
lack of public relations skills/training among front line staff	x					x		x
staff not returning telephone calls							x	x
staff attitude: "communications is not part of my job"					x			x
lack of "voice": staff muzzled by executive office					x	x		x
staff burn-out						x		

1|FG1 - Field Operations/Research - Supervisors; FG2 - Early Retirees; FG3 - Management Personnel; FG4 - Program Services; FG5 - Field Operations/Research - Non-supervisors; FG6 - Hatcheries; FG7 - Creel Clerks; FG8 - Administrative Support.

7

Additional

Division, non-5

executive office

"...we
comm

...we

Well,
to hav

You
Rese

Wea

weaknesses t

communicat

•

Additionally, in contrast to what supervisory personnel reported as a strength in the Division, non-supervisory personnel reported that they lacked a “voice” and felt “muzzled” by the executive office.

“...we at times have been discouraged from doing that [providing fisheries communications] and told to go through a spokesperson ...

...we’ve been told that it’s [communication] not our job.

Well, but I think the Department wanted to put a muzzle on the everyday employee to have one person who is allegedly the spokesperson.

You [individual Fisheries employees] don’t have a voice.” (Field Operations/- Research - Non-supervisors: 1390-1420)

Weaknesses in internal communications: Focus group participants listed thirteen internal weaknesses they believed have an effect on the Division or Department’s ability to carry out communications (Table 4-10), including the following:

- a poor internal communications network,

“I think we have a very poor internal communication system which, in turn, makes it difficult to communicate with the public.” (Program Services: 864)

“Within Fisheries Division, [cooperation/communications] is pretty good. But, you get outside of the Division and, at my level, I don’t know anybody in the other Divisions....there is better communications at the field level. Right.

Exactly.

Than in Lansing. In Lansing, there are definitely brick walls between the Divisions.” (Management Personnel: 1445-1453)

Table 4-10. MDNR Fisheries Division personnel perceptions of weaknesses in internal communications at the MDNR. An "X" indicates that the focus group(s) responded with the information listed in the rows.

	FG1 ³	FG2	FG3	FG4	FG5	FG6	FG7	FG8
<i>Weakness in Internal Communications in the MDNR or Fisheries</i>								

Table 4-10. MDNR Fisheries Division personnel perceptions of weaknesses in internal communications at the MDNR. An "x" indicates that the focus group(s) responded with the information listed in the rows.

<i>Specific weaknesses in internal communications in the MDNR or Fisheries Division.</i>	<i>FG15</i>	<i>FG2</i>	<i>FG3</i>	<i>FG4</i>	<i>FG5</i>	<i>FG6</i>	<i>FG7</i>	<i>FG8</i>
WEAKNESSES IN INTERNAL COMMUNICATIONS								
lack of communications between Divisions	x	x		x	x	x		
lack of cooperation or sharing of resources between Divisions		x	x	x	x			
the organizational "split" between the Michigan Dept. of Environmental Quality and the Michigan Dept. of Natural Resources	x	x	x	x				
a poor internal communications network								
lack of information sharing (between supervisors & staff; between Lansing & field offices)				x	x	x	x	x
insufficient distribution of press releases & information on Division & Department programs/projects				x		x	x	x
lack of direct telephone line to Lansing from field offices							x	x
unanswered telephones at district offices/inability to access field staff (internally & public)							x	x
purchasing contract & relationship with Dept. of Management & Budget	x					x		
Agency buy-in & cooperation for communicating with metro areas		x						
internal politics - "turf"				x				
lack of contact with supervisors							x	
lack of a means of communications in the field (i.e., radio, cell phone)							x	

5FG1 - Field Operations/Research - Supervisors; FG2 - Early Retirees; FG3 - Management Personnel; FG4 - Program Services; FG5 - Field Operations/Research - Non-supervisors; FG6 - Hatcheries; FG7 - Creel Clerks; FG8 - Administrative Support.

• CO



• 2
b



•

Th
and with ov

- cooperation and resources and/or information sharing between Divisions,

“I think that in Lansing, there needs to be more cooperation. I’m not sure it is a problem in the field. My experience with the field staff is that they work pretty closely together and I think the Lansing staffs do not.” (Program Services: 1087)

“When we had a strong field organization or regional organization, I think the Divisions worked together much more. I don’t see that as much now— inter-divisional within the Department, I think that’s decreased.” (Early Retirees: 2310)

- a lack of information sharing between supervisors and subordinate personnel, and between Lansing and District and or field offices, and

“When I got this letter about ‘fisheries communications,’ I thought: ‘how can we communicate with the public? We can’t even communicate amongst ourselves.’” (Hatcheries: 1379)

“See, a lot of us here pretty much work at a hatchery, so we don’t have the opportunity to see what the Division, other Divisions are doing.” (Hatcheries: 1388)

“I get most of my information out of the newspaper.” (Creel Clerks: 64)

“...when I go to the office, it’s like I got to pull teeth out of them to get copies of the fish plants.” (Creel Clerks: 147)

- the split of authority and management between the MDNR and the Michigan Department of Environmental Quality.

The Program Services focus group mentioned problems of “turf” within the Department and with other agencies and partners as weaknesses in providing Fisheries communications.

...it [
politics

In exa

level focus gr

and nearly thro

Creel Clerks a

Participants in

and Traverse

members of t

at either of th

"W
urba
that
they

"Th
with
Sup

Administra

vague way

unanswere

“...it [allocation of resources to communications] is turf and it is internal politics ...” (Program Services: 1102)

In examining differences in responses between focus groups, I found that non-supervisory -
level focus groups listed over twenty percent more Division-level and individual-level weaknesses,
and nearly three-fourths more internal weakness than did supervisory-level focus groups. Among
Creel Clerks and Hatcheries personnel, there was much discussion on problems with uniforms.
Participants in Creel Clerks and Administrative Support focus groups pointed out that the Livonia
and Traverse City field offices were difficult to reach via the telephone. Personnel reported that
members of the public call MDNR telephone extensions and complain that phones are not answered
at either of these offices.

“We are shooting ourselves in the foot in Livonia because it’s the southeast, it’s an urban area. We have all these people we want to recruit. We have a phone system that people can’t get through. They can’t talk to anyone. They get so frustrated that they just hang up.” (Administrative Support: 1318)

“They have to make three or four long-distance phone calls and they get real upset with that. After awhile, they say ‘forget it—I’m going elsewhere.’” (Administrative Support: 718)

Administrative Support personnel suggested that other telephone problems were attributed to the
vague way MDNR telephone numbers were listed in the phone books. They reported that
unanswered telephones is an internal problem as well.

Opportunities

Division

into topics or a

These trends o

fisheries comm

demographic.

(Tables 4-11 t

- P

-
-
-

-
-

During t
without

Opportunities and Threats: Trends Awareness

Division personnel identified several trends and emerging issues that may provide insight into topics or audiences fisheries communications ought to address with communication efforts. These trends or emerging issues can be viewed as opportunities to pursue or threats to offset with fisheries communications. Personnel perceptions of trends are organized into four categories: demographic, impacts on fisheries management and fishing, public attitudes trends, and conflicts (Tables 4-11 through 4-14). Overall, most focus groups reported the following patterns or trends:

- people moving north and the subsequent land development of northern Michigan,

“So many people moving north, they want to get away from some of the congestion in southeast Michigan and if that trend carries out, we could end up with some of the similar kinds of things in 10, 20 years down the road [and these people] being dissatisfied with the dream they had... unless it's managed better, with user conflicts.” (Administrative Support: 607)

- the development of riparian corridors,
- landowner issues (e.g., land use, development, public access to waterways),
- animal rights sentiments, increased user conflicts (particularly catch and release versus harvest fishing⁷, angling versus non-angling groups, and commercial versus tribal fishing),
- decreased public access, increased crowding and fishing pressure, and
- increased public distrust of MDNR policies and management practices.

“Distrust, distrust comes through lack of communication over the years.”
(Field Operations/Research -Non-supervisors: 928)

⁷ During the focus groups, the response “catch and release versus consumptive or harvest anglers” without elaborating further.

TABLE 4-1.1. MDNR Fisheries Division personnel perceptions of demographic and related population trends occurring in Michigan. An "x" indicates that the focus group(s) responded with the information listed in the rows; more specific focus group responses are shown in footnotes.

<i>Demographic and Related Population Trends</i>		FG1 ¹	FG2	FG3	FG4	FG5	FG6	FG7	FG8
DEMOGRAPHIC TRENDS									
northern migration of Michigan residents		x	x	x		x	x		x
urbanization		x	x	x					
aging population				x	x			x	
changing family structure (e.g., single parent households, decreased family size)			x					x	
increase in minority populations			x			x			
crowding in southern Michigan							x		
career oriented young people starting families later/hot marrying									
MISCELLANEOUS TRENDS									
technology revolution		x	x	x ²	x			x ³	
less leisure time		x ⁴		x ⁵	x			x	x
more vocal public		x	x	x	x				
competition for leisure time		x		x					
more knowledgeable public							x		x
seniors returning to the "me" lifestyle									
more public attention to health advisories									
increase in tourism									x

1 FG1 - Field Operations/Research - Supervisors; FG2 - Early Retirees; FG3 - Management Personnel; FG4 - Program Services; FG5 - Field Operations/Research - Non-supervisors; FG6 - Hatcheries; FG7 - Creel Clerks; FG8 - Administrative Support.

2 "Techno-fishing," the use of electronic or specialized gear to improve fishing success.

3 "Techno-fishing," the use of electronic or specialized gear to improve fishing success.

4 The technology revolution is resulting in "power vacations," easy access to the best amenities, resulting in high satisfaction experiences.

5 The technology revolution is resulting in "power vacations," easy access to the best amenities, resulting in high satisfaction experiences.

Table 4-12. MDNR Fisheries Division personnel perceptions of fisheries related trends occurring in Michigan. An "S" indicates that the focus group(s) responded with the information listed in the rows; more specific focus group responses are shown in footnotes.

	FG16	FG2	FG3	FG4	FG5	FG6	FG7	FG8

<i>Fisheries Related Trends</i>	<i>FG1⁶</i>	<i>FG2</i>	<i>FG3</i>	<i>FG4</i>	<i>FG5</i>	<i>FG6</i>	<i>FG7</i>	<i>FG8</i>
IMPACT ON FISHERIES MANAGEMENT OR FISHING								
increased animal rights sentiments	X	X	X ⁷			X	X	X
increased development in riparian/rural areas	X			X	X	X	X	
increased fishing pressure & crowding	X	X	X		X	X	X	X
increased user conflicts	X ⁸				X	X ⁹		X ¹⁰
increase in catch & release fishing	X		X				X	
decreased fishing access				X	X	X	X	
most anglers are 50+ years old	X				X		X ¹¹	
management of natural resources is becoming increasingly more political				X	X	X		
decreased participation per capita in fishing (and hunting)	X							X
"power fishing" & "drive-through fishing" (big, fast & easy access)	X		X					
decrease in mentoring or passing on the traditions or heritage of fishing	X						X	
increased angling participation among minority/ethnic groups				X	X			
decrease in public lands				X				
increased reliance on management & manipulation (i.e. stocking fish)				X		X		
increase in fly fishing		X	X					
transferred "urbanites" do not understand their impact on rural/riparian lands		X	X					
(more likely to be non-anglers & hunters)					X	X		
public less connected with the land or resources			X	X				

6 FG1 - Field Operations/Research - Supervisors; FG2 - Early Retirees; FG3 - Management Personnel; FG4 - Program Services; FG5 - Field Operations/Research - Non-supervisors; FG6 - Hatcheries; FG7 - Creel Clerks; FG8 - Administrative Support.

7 Including increased anti-management legislation.

8 Particularly catch and release angling versus kill.

9 Particularly catch and release angling versus kill.

10 Particularly catch and release angling versus kill.

11 Young people are fishing less.

Table 4-12 (cont'd).

Table 4-12 (cont'd).									
Fisheries Related Trends									
	FG112	FG2	FG3	FG4	FG5	FG6	FG7	FG8	
	X								

<i>Fisheries Related Trends</i>	<i>FG1¹²</i>	<i>FG2</i>	<i>FG3</i>	<i>FG4</i>	<i>FG5</i>	<i>FG6</i>	<i>FG7</i>	<i>FG8</i>
increase in trophy fishing & desire for big fish	x							
increased focus on habitats, more interest in watershed issues	x							
diverse fishing interests (e.g., specific species, gear fishing, Great Lakes, etc.)								x
diverse watershed interests (e.g., interest & participation among non-anglers as well as anglers)					x			
increased public interest fisheries management decisions		x						
increasingly the public does not know what the MDNR is or what Fisheries Division does		x						
increased interest in fish viewing (non-consumptive outdoor recreation)		x						
the media increasingly report negatively about the MDNR						x		
the public has "forgotten" that many species are exotic (e.g., sea lamprey, Pacific salmon, etc.)			x					
increased participation among female anglers							x	
loss of habitats						x		
policy makers do not understand biological processes or natural resources management needs or practices						x		

¹² FG1 - Field Operations/Research - Supervisors; FG2 - Early Retirees; FG3 - Management Personnel; FG4 - Program Services; FG5 - Field Operations/Research - Non-supervisors; FG6 - Hatcheries; FG7 - Creel Clerks; FG8 - Administrative Support.

Table 4-13. MDNR Fisheries Division personnel perceptions of attitude trends occurring in Michigan. An "x" indicates that the focus group(s) responded with the information listed in the rows; more specific focus group responses are shown in footnotes.

	FG13	FG2	FG3	FG4	FG5	FG6	FG7	FG8
--	------	-----	-----	-----	-----	-----	-----	-----

<i>Attitude Trends</i>	<i>FG1¹³</i>	<i>FG2</i>	<i>FG3</i>	<i>FG4</i>	<i>FG5</i>	<i>FG6</i>	<i>FG7</i>	<i>FG8</i>
increased distrust of the MDNR	X	X	X		X	X	X	
the desire for instant gratification		X	X	X				
unrealistic management expectations	X			X	X	X		
unrealistic fishing expectations	X		X	X			X	X ¹⁵
perception of misallocation of resources							X ¹⁴	
"uninterested" populations in southern Michigan		X	X			X	X	
Michigan's bountiful natural resources & fishing opportunities are taken for granted								
increased satisfaction among Great Lakes anglers (e.g., the rebound of Chinook populations)	X							
increased MDNR credibility						X		
increased disrespect & lack of tolerance among user groups; increased disrespect for resources (particularly among non-residents)			X					
increase in unethical angling								
materialistic youth			X				X	

¹³ FG1 - Field Operations/Research - Supervisors; FG2 - Early Retirees; FG3 - Management Personnel; FG4 - Program Services; FG5 - Field Operations/Research - Non-supervisors; FG6 - Hatcheries; FG7 - Creel Clerks; FG8 - Administrative Support.

¹⁴ Management favors recreational anglers versus tribal fishermen.

¹⁵ Management favors charter boat operators versus inland anglers.

Conflicts with

- la
- tr
- ri
- g
- c

Five groups (

described as

fishing fisher

(the use of el

to correspon

-
-
-

Conflicts with other specific stakeholder groups were listed as well (Table 4-14):

- landowners: public versus private lakes,
- tribal and commercial fishing versus recreational fishing,
- riparian development versus conserving fisheries habitat,
- gear specialists versus generalist anglers, and
- canoeists versus fly anglers.

Five groups (all of the supervisory-level focus groups plus Creel Clerks) reported what they described as a “new wave in technology” that appeared to impact leisure interests and fishing/fisheries management expectations. Two groups specifically mentioned “techno-fishing” (the use of electronic or specialized gear to improve fishing success) as a trend. This trend appears to correspond with other identified trends, such as:

- competition for leisure time,
- less leisure time, and
- unrealistic fishing and fisheries management expectations.

“You can’t just take, take, take and then bitch you don’t limit out every time, you know. People have to be realistic. It is fishing, not catching.”
(Creel Clerks: 793)

“People expect more from us.
That’s true. Expectations are higher.” (Hatcheries: 577)

“The trends in technology have increased greatly in terms of the success of the individual. If you look at the equipment that’s on the market for the Great Lakes fishing...
That raises expectations though in terms of what people are doing.
(Management Personnel: 704-706)

Table 4-14. MIDNIR Fisheries Division personnel perceptions of issue trends occurring in Michigan. An "x" indicates that the focus group(s) responded with the information listed in the rows.

<i>Conflicts occurring in Michigan ...</i>	<i>FG1</i>	<i>FG2</i>	<i>FG3</i>	<i>FG4</i>	<i>FG5</i>	<i>FG6</i>	<i>FG7</i>	<i>FG8</i>
MISCELLANEOUS ISSUES AREAS & CONFLICTS								
general user conflicts: angling & non-angling users	X	X	X	X		X	X	X
landowners: public vs. private lakes	X	X		X		X		X
tribal/commercial fishing vs. recreational fishing	X	X		X				X
catch & release vs. harvest	X			X	X	X		
riparian development vs. fisheries habitat	X			X		X		X
gear specialists vs. generalists	X					X		X
canoeists vs. fly anglers				X		X		X
Great Lakes vs. river fishing	X			X		X		X
snagging		X		X			X	
animal rightists vs. anglers				X		X		
crowding				X		X		
parity: management of Great Lakes fisheries vs. inland			X	X				
sport groups vs. charter boat operators	X			X			X	
lake associations wanting private lakes vs. anglers	X	X						
species specialists vs. generalist anglers	X							
regulations & management practices in other states vs. Michigan								
health advisories								
non-English speaking anglers vs. law enforcement					X			X
competitive fishing								X
canoe liveries (river access)		X						
industry vs. angling/habitats						X		

¹ FG1 - Field Operations/Research - Supervisors; FG2 - Early Retirees; FG3 - Management Personnel; FG4 - Program Services; FG5 - Field Operations/Research - Non-supervisors; FG6 - Hatcheries; FG7 - Creel Clerks; FG8 - Administrative Support.

Table 4-14 (cont'd).

<i>Conflicts occurring in Michigan ...</i>	<i>FG1²</i>	<i>FG2</i>	<i>FG3</i>	<i>FG4</i>	<i>FG5</i>	<i>FG6</i>	<i>FG7</i>	<i>FG8</i>
MDNR INTERNAL CONFLICTS								
pro-business governor vs. natural resources management staff not wearing uniforms				x		x		
DEQ: politics in permitting approval/process						x		
politics driving natural resources management federal vs. state agencies				x				
uninformed judges & their rulings				x				
GLFC sea lamprey barriers vs. migrating fish species				x				
USFS access vs. angler impacts				x				

² FG1 - Field Operations/Research - Supervisors; FG2 - Early Retirees; FG3 - Management Personnel; FG4 - Program Services; FG5 - Field Operations/Research - Non-supervisors; FG6 - Hatcheries; FG7 - Creel Clerks; FG8 - Administrative Support.

The P

they perceived

there was a tr

MDNR to ma

Field Operati

management

"T

sc

su

"Y

we

"I

for

sol

"T

is

yo

pr

D

were obse

whereby

experien

(Field Op

The Program Services and Hatcheries focus groups identified several internal issues that they perceived could impact fisheries management and communications. Both groups reported that there was a trend in pro-business politics from the Governor's office that hindered the ability of the MDNR to manage the state's resources. More generally, three focus groups (Program Services, Field Operations/Research -Non-supervisors and Hatcheries) reported that natural resource management is becoming more political.

"The agency's decision-making processes which haven't always been based on science and, even still have political constraints. (Field Operations/Research -Non-supervisors: 1240)

"Yeah, well, there's the political reality of how politics affect our division and what we do, and that's another thing." (Hatcheries: 389)

"I think it's really important that the public realizes that natural resources are here forever, you know, and we have to go with political whims which are short-term solutions a lot of times." (Hatcheries: 762)

"There are so many politics in fisheries. I mean the political pressure and where fish is stocked or where it is not, or who gets what fish, is really quite tremendous. Do you think, I wonder if it's instant gratification mode that puts more pressure, political pressure on us to stock where they want us to stock?" (Program Services: 293)

Differences in responses between supervisory-level and non-supervisory level focus groups were observed. In addition to the reported "revolution in technology," a trend in "power vacations" whereby people want "everything" (easy access to the best amenities resulting in high satisfaction experiences) out of their short weekend getaways was reported by two supervisory focus groups (Field Operations/Research - Supervisors and Management Personnel).

"A trend is high competition for recreational time. I mean, so many more opportunities are available." (Management Personnel: 568)

"I bel
use of
easier
going
Perso

"Pow
(Fiel

A related att
gratification

"Ar
mor
som

"I t
wa

"I t
anc
riv
Ar

Supervisor
urbanizati
N

Hatcherie
•

"I believe that there is a trend towards shorter vacations and, therefore, more intensive use of free time. So, [recreational] opportunities must be more readily available, easier to access if you will. It comes down to a choice between two items, you are going to take the one that's the easiest to get to and the fastest to get to." (Management Personnel: 688)

"Power fishing, power vacations. They want to know right when and where [to fish]." (Field Operations/Research -Supervisors: 650)

A related attitude trend reported by supervisory-level personnel was the desire for instant gratification.

"Another trend that I'm noticing a lot more now is the phone call that's more like [a request for] instant gratification: 'I've got a short weekend. I want to go somewhere I can fish.' (Field Operations/Research -Supervisors: 648)

"I think there's a trend for immediate gratification. I think people want to come up and catch big fish without [much effort]." (Early Retirees: 750)

"I think one of the problems you have is the instant gratification mode. People want it and they want it now...they want to drive up, park their vehicle, take two steps in the river, catch a trophy, put it in their trunk, drive home and be home in time for dinner. And they don't want to work for it anymore." (Program Services: 279- 289)

Supervisory-level personnel also reported that the public was more vocal than in the past, and that urbanization and sub-urbanization is becoming a trend.

Non-supervisory-personnel from the Field Operations/Research - Non-supervisory and Hatcheries focus groups provided the following insights:

- "transferred urbanites" (people who have moved to rural Northern Michigan) do not understand their impacts on rural or riparian lands,

"Tons of urbanites from southern Michigan and others moving up north that haven't really been in a less developed area and don't understand the impacts of what they're doing." (Field Operations/Research -Non-supervisors: 377)

-
-
-

Participants

groups belie

referenda av

“TI
us.

In addition

many items

developing

“R
of
ini
“T
If
an
W
W
to
Pe

- the public is becoming increasingly distrustful of government and for fisheries research,
- the public does not forget past MDNR “mistakes,” and
- policy makers not understanding biological processes or natural resources management needs and practices.

Participants in the Early Retirees, Field Operations/Research -Non-supervisors and Hatcheries focus groups believed that the public was more knowledgeable (e.g., species specialists and public referenda avenues) than they had been in the past.

“The public is more knowledgeable, I think, on a lot of issues. They’re way beyond us. You know, we can’t keep up with them on certain issues.” (Early Retirees: 845)

In addition to personnel perceptions of trends occurring in Michigan, focus group participants listed many items that could be “opportunities” for the Division to pursue with regard to planning, developing and implementing fisheries communications, for example:

“Right here in Traverse City at the salmon harvest weir there’s a tremendous number of fish and people come down to watch the [egg-take] operation. We haven’t tapped into that at all.” (Early Retirees: 1128)

“The unorganized anglers-- which is the hardest group and the biggest group to reach. If we could just figure out, we’ve never been successful in contacting unorganized anglers.

We have all their addresses.

We have all their addresses, we are one of the few organizations that sells something to the people who give us their names and addresses each year.” (Management Personnel: 421-425)

Focus groups

“The
work
“Inte
spea

Five focus g
particularly
Thus, there

“W
beg
ma
aw
“V
sp
are
Op

Field Ope
partners. s
Division’

“
V
C

Focus groups listed many opportunities for improvement in internal communications, such as:

“There’s a need to know what their fellow staff are doing... what projects they are working on.” (Administrative Support: 1565-1575)

“Internal communications and cross-training, information sharing will help us to speak more intelligently.” (Administrative Support: 1776)

Five focus groups recognized that there are certain people in the Fisheries Division that are particularly talented in public relations, outreach education and other communication functions. Thus, there exists the opportunity to tap into this strength.

“We have a lot of very talented people. They have capabilities I don’t think we’ve begun to tap in some areas, only because we’re not aware of them. I think there’s maybe technicians and others out there that have great capabilities and we’re just not aware of what all they can do.” (Administrative Support: 1369)

“We need to encourage those people within the Division who aren’t afraid of public speaking, and it doesn’t matter to me what their title is, technician, biologist, if they aren’t afraid of any type of public speaking, we need to encourage that more.” (Field Operations/Research -Non-supervisors: 1372)

Field Operations/Research -Non-supervisors suggested working with existing and potential partners, such as sport fishing organizations (e.g., Trout Unlimited, Bass Masters) to enhance the Division’s communication efforts.

“I think that there’s a lot of opportunity for working with those groups who are very, very loaded with people who are interested in volunteering and helping.” (Field Operations/Research -Non-supervisors: 780)

Most focus gr

public contac

Division.

"The
bigg
cont
Ope

"Son
don
to p
(Ad

A Program

greatly by s

"...
con
spe
kin
[w
de
(P

Audience

P

variety of

interested

Most focus groups recognized that communications, including non-formal communications (e.g., public contact in the field), were an opportunity to promote a positive image of the Fisheries Division.

"There's distrust, but distrust lessens quite a bit with more contact. That's one of the biggest pluses of our Great Lakes creel census program—it's that they still want that contact because they're still telling that creel clerk their feelings." (Field Operations/Research -Non-supervisors: 922)

"Sometimes when you go out and people find out that you work for the DNR, you don't just get fish questions. You get a lot of questions and that's a real opportunity to promote who we are or to get information from other Divisions [to the public]." (Administrative Support: 1774)

A Program Services focus group participant believed that fisheries management could benefit greatly by supporting communications:

"...it is a matter of priority. When it comes down to it, we claim that communications are important, but when it actually comes down to what we're spending the money on, we are going to spend it on what we like to do. You know, it's kind of scary opening up your mind, you know, bringing in additional resources to help [with communications] because you feel like you are giving something up and you don't understand that you are really gaining twice as much [in the long run]." (Program Services: 1140)

Audiences the Division Ought to be Targeting With Future Fisheries Communication

Personnel perceived that fisheries communications ought to be targeting or reaching a variety of audiences, which were categorized as: demographic groups, angling groups, other interested groups or resource users, and state and local governments (Tables 4-15). Many of the

Table 4-15. MDNR Fisheries Division personnel perceptions of audiences that future fisheries communications ought to reach or target. An "X" indicates that the focus group(s) responded with the information listed in the rows; more specific focus group responses are shown in footnotes.

	FG1	FG2	FG3	FG4	FG5	FG6	FG7	FG8
Target Audience Communications to Reach	FG1	FG2	FG3	FG4	FG5	FG6	FG7	FG8

Table 4-15. MDNR Fisheries Division personnel perceptions of audiences that future fisheries communications ought to reach or target. An "x" indicates that the focus group(s) responded with the information listed in the rows; more specific focus group responses are shown in footnotes.

Target Audiences or Publics for Future Fisheries Communications to Reach	FG1 ¹	FG2	FG3	FG4	FG5	FG6	FG7	FG8
DEMOGRAPHIC GROUPS								
youth	x	x	x	x	x	x	x	x
seniors	x	x	x	x	x	x	x	x
women		x	x	x				
minorities		x	x	x	x			
handicapped anglers				x				
single-parents		x					x	
non-users (urban - SE Michigan)		x				x		
families							x	
ANGLING GROUPS								
non-organized or general anglers		x	x	x	x ²	x ³		x
catch & release and harvest anglers (information supporting each view)	x		x	x	x	x		x
young anglers	x		x	x			x	
fishing related businesses (charters, guides, tournaments, tackle retailers)		x	x	x	x			
organized anglers (sport fishing groups)	x	x	x	x				
tribal/commercial		x	x	x		x		x
non-resident anglers								
frequent anglers								
female anglers		x					x	x
senior anglers		x						
							x	

¹ FG1 - Field Operations/Research - Supervisors; FG2 - Early Retirees; FG3 - Management Personnel; FG4 - Program Services; FG5 - Field Operations/Research - Non-supervisors; FG6 - Hatcheries; FG7 - Creel Clerks; FG8 - Administrative Support.

² Including inland anglers.

³ Including general outdoors-people.

Table 4-15 (cont'd).

Target Audiences or Publics for Future Fisheries Communications to Reach	FG14	FG2	FG3	FG4	FG5	FG6	FG7	FG8

Table 4-15 (cont'd).

Target Audiences or Publics for Future Fisheries Communications to Reach	FG14	FG2	FG3	FG4	FG5	FG6	FG7	FG8
OTHER INTERESTED GROUPS OR RESOURCE USERS								
riparian property owners	x	x	x	x	x	x		x
other aquatic resource recreationists		x	x	x ⁵	x		x	x
elementary schools/teachers	x	x ⁶	x			x		x
watershed groups/councils		x			x	x		
industry & municipalities		x				x	x ⁷	
other professionals (universities & scientific organizations)		x	x	x				
lake associations/watershed groups		x		x	x			
environmental groups	x							
Chambers of Commerce/tourism council/tourists		x	x				x	
partners (metro parks, USFS, etc.)	x					x		
members of the media - outdoor writers	x		x					
farmers			x					
foresters			x					
private dam owners						x		
animal activists						x		
STATE & LOCAL GOVERNMENT								
policy makers (Governor's office, legislators, local units of government, etc.)	x	x	x	x ⁸				
state & local agencies/government		x	x	x				

4 FG1 - Field Operations/Research - Supervisors; FG2 - Early Retirees; FG3 - Management Personnel; FG4 - Program Services; FG5 - Field Operations/Research - Non-supervisors; FG6 - Hatcheries; FG7 - Creel Clerks; FG8 - Administrative Support.

5 Including fish watchers.

6 Kindergarten through college.

7 Including drain commissioners.

8 Including judges.

mentioned to

Michigan. C

lists of target

De

should be to

all focus gr

were viewe

supervisor

focus grou

parents. an

A

organized

needed to

...
a
f
n
n
y
2

Catch an

groups.

listed fi

as a tar

mentioned target audiences are a reflection of trends Division personnel identified as occurring in Michigan. Overall, Management Personnel and Early Retirees identified the most comprehensive lists of target audiences.

Demographic groups: Participating Division personnel reported that young and old alike should be targeted with some sort of fisheries communications. Michigan youth were identified by all focus groups, while seniors were recognized by seven. Five focus groups indicated that schools were viewed as an important group with which to continue communicating, three of which were supervisory-level. Five focus groups indicated that women should be reached. Less than half of the focus groups listed much more specific target audiences: minorities, handicapped anglers, single parents, and non-users (reportedly urban, southeast Michigan residents).

Angling Groups: Recognizing that current communication activities tended to reach the organized angling sector, most Division personnel indicated that general non-organized anglers also needed to be reached.

“Well, there are anglers who we are not communicating to because they might not be associated with a specific organized group. For example, the general walleye fishermen of Saginaw Bay—we have trouble reaching. Our only access is through the media and through organized groups. Inland panfish fishermen are very difficult [to reach].” (Field Operations/Research -Non-supervisors: 332)

“There are the unorganized anglers which is the hardest group and the biggest group to reach...we’ve never succeeded in contacting unorganized anglers.” (Management Personnel: 421)

Catch and release anglers were thought to need targeted communications by six of the eight focus groups. Five focus groups listed young anglers as a target audience. Only half of the focus groups listed fishing-related businesses, and fewer focus groups (three) identified organized angling groups as a target audience for future fisheries communications.

Oth

by seven of

that the Div

communica

"W
of
bir
cli
"V
at

Watershed

association

association

"
M
in
s
r
c
c

They bel

Other Interested Groups or Resource Users: Riparian property owners were identified by seven of eight focus groups, three of which were supervisory-level. Five focus groups believed that the Division ought to target “other aquatic resource recreationists” with fisheries communications.

“We need to also communicate with people who are involved in non-consumptive use of natural resources...non-consumptive use has gone up significantly whether it is bird-watching and fish-watching is also popular in some areas. That’s another major clientele that is significantly increasing.” (Program Services: 192)

“Well, those fish out there belong to everybody. There’s a lot of public that don’t fish at all.” Field Operations/Research -Non-supervisors: 624)

Watershed groups/councils were recognized by three groups and an additional group listed lake associations. One respondent had this to say about targeting communications toward lake associations:

“I hope people are working with lake associations. We have thousands of lakes in Michigan and I’ll bet you we have a thousand lake associations at least. And, when it comes to user conflicts on inland lakes, lake associations are the only group that is so prolific and so thoroughly covered in the state that they could probably do some networking with townships and local governments and set up zoning for resolution of user conflicts. That’s their most powerful role and some of them haven’t even come to that realization yet.” (Management Personnel: 237-241)

Only Management Personnel identified farm-riparian property owners as a target audience. They believed farmers to be an important group to target:

“... farmers probably are the most influential group when it comes to habitat [impacts] of any single group in Michigan.” (Management Personnel: 992)

Sta

units of gov

personnel li

responsibili

"I

un

or

un

att

yc

ar

in

"y

su

I

is

re

S

Priority

Division

tallied re

^s Due to
did no

State and Local Government: Only supervisory-level focus groups listed state and local units of government as audiences for targeted fisheries communications. Supervisory-level personnel likely have the most contact with these constituents in carrying out their job responsibilities.

“I think you can talk also on a state and national level—your legislators. They have to understand the importance of aquatic resources. Many of them have no understanding or no interest. A group that we have probably been pretty remiss in attempting to understand and have them understand us is judges. I think we never paid much attention to them and as we get more and more into various regulatory arenas, what you find out is most judges are completely ignorant of natural resources issues. They are ruling on things they have no understanding of and they have profound implications on how we do business.” (Program Services: 245-253)

“We need to increase our legislature awareness of things that we do so we can get support on laws and protection avenues that we need to take. I think that it’s important to add—to educate the legislative officials on down...There isn’t anyone in this room that doesn’t realize the impact and importance of it as it relates to our jobs, and we’ve failed miserably at this.” (Field Operations/Research - Supervisors: 9962-981)

Priority Target Audiences

In all but one focus group⁸, participants individually voted for audiences they believed the Division ought to be targeting in future fisheries communications (Table 4-16). All votes were tallied resulting in the following top priority audiences (most individual votes received):

- youth (21 votes, 16% of total votes),
- general anglers (15 votes, 11% of total votes),
- general public (14 votes, 10% of total votes),
- youth anglers (14 votes, 10% of total votes),
- schools (13 votes, 10% of total votes), and
- riparian landowners (11 votes, 8% of total votes).

⁸ Due to an oversight in focus group facilitation, participants in the Program Services focus group did not have the opportunity to vote for priority target audiences.

Table 4-16. Summary of MDNR Fisheries Division personnel votes¹ for priority audiences for future fisheries communications.

Priority Target Audiences	Field	Early	Mgt.	Program ²	Field	Hatchery	Creel Clerks	Admin. Support	Total Number
---------------------------	-------	-------	------	----------------------	-------	----------	-----------------	-------------------	-----------------

Table 4-16. Summary of MDNR Fisheries Division personnel votes¹ for priority audiences for future fisheries communications.

Priority Target Audiences	Field Operations/Research - Supervisors	Early Retirees	Mgt. Personnel	Program ² Services	Field Operations/Research - Non-Supervisors	Hatchery	Creel Clerks	Admin. Support	Total Number of Votes
youth		9		-		12			21
general anglers				-	6	3		6	15
general public		6	1	-	7				14
youth anglers	7		1	-			4	2	14
schools	7		2	-				4	13
riparian landowners	3			-	4	3		1	11

¹ Each individual focus group participant cast two (2) votes for priority audiences.

² Focus group participants did not have the opportunity to cast votes for priority audiences.

Per
communica
audiences c
Each votin
groups vot
preference

youth vers
36% of all

Pe
anglers" as
focus gro
third audi
Managem

general p
Operation
more spe

M
audience
focus gro

with two
Operatio
while As
among t

Personn

Personnel voting for audiences they believed ought be the Division's priority in upcoming communication efforts overwhelmingly favored Michigan youth. Out of the top five target audiences chosen, three separate young audiences were listed: youth, young anglers and schools. Each voting focus group prioritized at least one of the youth-oriented categories, with two focus groups voting twice for a youth audience. Young anglers received the greatest cross-section of preference, receiving votes from four focus groups. Hatchery personnel voted four to one (12:3) for youth versus the next highest ranking audience, general anglers. In total, young audiences received 36% of all votes.

Personnel also indicated that fisheries communications should broadly serve "general anglers" and the "general public." General anglers and the general public received votes from three focus groups. Summed across all focus groups, the general public and youth anglers tied as the third audience for whom to target with future fisheries communications. Early Retirees and Management Personnel favored the "generalist" approach (voting for general anglers and the general public), while non-supervisory fisheries personnel from three focus groups (Field Operations/Research - Non-supervisory; Hatcheries and Administrative Support) were somewhat more specific in choosing general anglers over the general Michigan population as a whole.

More than half the focus groups (four of seven) voted for riparian landowners to be a target audience for future fisheries communications. Only young anglers were favored within as many focus groups. Hatchery personnel gave riparian landowners their second highest rank (albeit, tied with two other audiences). Riparian landowners ranked fourth (of seven) among Field Operations/Research - Supervisors and third among Field Operations/Research-Non-supervisors, while Administrative Support ordered riparian landowners last (tied with two other audiences) among their seven audience priorities.

Most focus groups spread their votes across various audience groups. The Management Personnel focus group was the most diverse in choosing target audiences, spreading one or two

votes across

youth receiv

Desired K

K

public to k

"I

ha

R

"

S

Most focu

regulation

of the nat

managem

votes across eight audience groups. Hatchery personnel voting exhibited the most partiality, with youth receiving more than half their votes (55%).

Desired Knowledge Outcomes

Knowledge of Fisheries Management (Table 4-17): All eight focus groups wanted the public to know what the MDNR Fisheries Division is and what it does.

“I would like people to know who we are. I think a lot of the general public don’t have a clue who the DNR is and specifically what Fish Division does.” (Early Retirees: 903)

“You know, a lot of people don’t even know the Fisheries Division exists.” (Program Services: 1040)

Most focus groups wanted the public to know why fishing regulations are necessary and how regulations are determined. Most focus groups were also interested in increasing public knowledge of the natural biological processes of fish and ecosystems, and in increased recognition that fisheries management is based on the scientific study of fisheries.

“I sometimes think they don’t understand why we have the rules. You know, creel limits or times of the year. If [the regulations] say you’re not supposed to fish for these fish at this particular period because if you do that’s when they’re spawning, you know. People sometimes just don’t understand that and that would make them more open to those things if they knew why.” (Creel Clerks: 1321)

“We need to educate them about the interactions of all the species in the lake because one thing affects the other, the life cycle, the food chain, food webs...natural processes.” (Creel Clerks: 1146)

Table 4-17. MDNR Fisheries Division personnel's perception of desired knowledge outcomes for future fisheries communications. An "N" indicates that the focus group(s) responded with the information listed in the rows.

FG1	FG2	FG3	FG4	FG5	FG6	FG7	FG8
-----	-----	-----	-----	-----	-----	-----	-----

Table 4-17. MDNR Fisheries Division personnel's perception of desired knowledge outcomes for future fisheries communications. An "x" indicates that the focus group(s) responded with the information listed in the rows.

<i>After participating in communication programs, audiences should gain an understanding in or knowledge of...</i>	FG1 ³	FG2	FG3	FG4	FG5	FG6	FG7	FG8
KNOWLEDGE OF FISHERIES MANAGEMENT								
understand who the Fisheries Division is, what it does and why ⁴	X	X	X	X	X	X	X	X
there are reasons for regulations - to sustain fish populations & foster better fishing opportunities	X	X	X	X	X	X		X
biological systems/processes								
fisheries management is based on science (the study of population dynamics & biological systems/processes)								
biological systems have limits								
the Fisheries Division is moving toward watershed/ecosystem management & why	X	X		X	X			
the MDNR Fisheries Division function is to maximize fisheries resources for multiple interests/uses in terms of angling, aesthetic values & habitats	X	X		X	X			X
there are limiting factors on biological systems - fish, water, vegetation	X			X				
various riparian, watershed & aquatic habitats have value, a role & may be sensitive to impact			X		X			
fisheries professionals do not have total control over fish populations	X							
policy makers (i.e. Governor's office, legislators, etc.) should know what the Fisheries Division does and why to encourage and enable informed support	X							
knowledge of the scientific processes that inform fisheries management					X			
knowledge of tribal issues and fishing rights						X	X	

³ FG1 - Field Operations/Research - Supervisors; FG2 - Early Retirees; FG3 - Management Personnel; FG4 - Program Services; FG5 - Field Operations/Research - Non-supervisors; FG6 - Hatcheries; FG7 - Creel Clerks; FG8 - Administrative Support.

⁴ The salience of this category can be seen by examining the order in which each focus group identified "who the Fisheries Division is, what it does & why"; FG3, 4 & 5 listed this outcome statement first during the focus group; FG1 & 2 - listed it second; FG8 - 3rd; FG6 - sixth; and, FG7 - listed this statement near the end of the discussion of knowledge outcomes.

Table 4-17 (cont'd).

<i>After participating in communication programs, audiences should gain an understanding in or knowledge of...</i>	FG1 ⁵	FG2	FG3	FG4	FG5	FG6	FG7	FG8
there is a rationale for research/surveys					x			
the source of funding for fisheries management (not general fund "tax dollars")					x			
basic ecosystem & ecological processes should be learned in school - enable teachers to adequately teach these subjects		x						
it may take time to re-establish fishable populations						x		
the Division is managing for the long-term and has a 5, 10 and 50 year plan						x		
role of creel clerks in fisheries management							x	
sometimes we have to live with what we have versus re-engineer the environment				x				
Fisheries Division is composed of individual professionals				x				

⁵ FG1 - Field Operations/Research - Supervisors; FG2 - Early Retirees; FG3 - Management Personnel; FG4 - Program Services; FG5 - Field Operations/Research - Non-supervisors; FG6 - Hatcheries; FG7 - Creel Clerks; FG8 - Administrative Support.

Knowledge of Impacts on Fisheries Resources (Table 4-18): Five focus groups wanted the public to understand how the public can play a role in fisheries management and how they can be stewards of fisheries resources.

"I would love to see the public recognize us as people who can help them be stewards, resource stewards...and why they as individuals, need to become stewards of the resources." (Management Personnel: 821 and 841)

A few groups wanted the public to understand how the following activities impact fisheries resources:

- riparian development (this knowledge is needed particularly among non-angling riparian landowners),

"I think as far as non-angling publics and people moving into areas and building and developing, that we should be able to explain to them the characteristics of the area they're moving into and why it's that way and what happens if you change [the habitat]. A lot of people are buying property along streams and they want a nice view, so they cut all the vegetation along the stream so they can see it and what that does is impact a lot of lake populations, it increases erosion, impacts fish populations. You know, there's a whole sequence of events that happen because of what they did, unknowingly, you know, unknowingly." (Field Operations/Research -Non- supervisors: 517)

- overuse of aquatic and fisheries resources, and
- economic choices related to land development, businesses and industries.

Table 4-18. MDNR Fisheries Division personnel's perceptions on desired knowledge outcomes for future fisheries communications. An "x" indicates that the focus group(s) responded with the information listed in the rows.

<i>After participating in communication programs, audiences should gain an understanding in or knowledge of...</i>	FG11	FG2	FG3	FG4	FG5	FG6	FG7	FG8
GENERAL FISHERIES KNOWLEDGE								
Michigan has bountiful & unique aquatic resources	x			x			x	
Michigan has the largest fresh water system in the world				x		x		
KNOWLEDGE OF IMPACTS								
their role/responsibility & knowledge of how to be involved in fisheries management	x				x	x		x
their role/responsibility & knowledge of how to be stewards of resources	x				x	x		
aquatic users need to share the resource with diverse groups & interests	x		x	x				x
their activities may impact the entire ecosystem								
development along riparian corridors has impact on water quality & fish populations			x	x	x	x		
Michigan's resources are limited - limited number of lakes, miles of streams in relation to an ever increasing human population	x							
aquatic resources can be overused/abused	x							
wise use enables fisheries resources to be sustainable & conserved	x							
stewardship means considering long-term needs & benefits								
industries and business may have long-term impacts & costs to fisheries & ecosystem management (i.e. hydroelectric power)		x						
other users/beneficiaries have rights							x	
riparian landowners should consider their impact on other users/beneficiaries			x					
						x		

1 FG1 - Field Operations/Research - Supervisors; FG2 - Early Retirees; FG3 - Management Personnel; FG4 - Program Services; FG5 - Field Operations/Research - Non-supervisors; FG6 - Hatcheries; FG7 - Creel Clerks; FG8 - Administrative Support.

Table 4-18 (cont'd).

<i>After participating in communication programs, audiences should gain an understanding in or knowledge of...</i>	FG12	FG2	FG3	FG4	FG5	FG6	FG7	FG8
the Fisheries Division is composed of people who can help the public be resource stewards			x					
resources be managed scientifically rather than politically								
their votes can determine fisheries management practices, policies & capabilities			x					
Michigan fisheries have improved - promote & inform success stories			x					
the "invasion of exotics" can impact fisheries & Michigan's economy							x	
there are current problems (i.e. populations, habitats, etc.) that are affecting fisheries management & fishing							x	
water quality is important to sustainable fisheries, fishing & community health				x				
fisheries impact local communities (\$2 billion business)				x				

²FG1 - Field Operations Research - Supervisors; FG2 - Early Retirees; FG3 - Management Personnel; FG4 - Program Services; FG5 - Field Operations Research - Non-supervisors; FG6 - Hatcheries; FG7 - Creel Clerks; FG8 - Administrative Support.

Angling Knowledge (Table 4-19): Five focus groups believed that the Division ought to provide more basic angling information, such as:

- where to fish (including urban access, access with and without a boat, barrier-free access), and
- how to fish (including information for novice anglers, minorities, women and urban residents).

Three focus groups wanted the public to understand Michigan's fishing heritage.

“[a desired knowledge outcome to] somehow help in preserving the fishing heritage. It's a behavior if you're getting them out there fishing and that's preserving the heritage but, it crosses over. You can also get people accepting and having a knowledge that there was a fishing heritage they don't have to fish. Heritage is important, I think.”
(Early Retirees: 1199-1203)

Michigan's angling and fisheries heritage was highly salient among Creel Clerks, who began and ended their discussion of desired knowledge outcomes on the topic of Michigan's fishing heritage.

Non-anglers' Knowledge of Fisheries Resources (Table 4-20): Most focus groups wanted the non-angling public to understand that development of riparian corridors can have negative impacts water quality, fish and other aquatic species.

“There's a lot of information that I think we'd like to direct toward landowners, like information about how to manage for riparian lands, what things they can do to improve the river corridor, not taking all the trees or mowing the lawn down to the river's edge type approach—that some screening is nice and that it also helps to protect the river.” (Program Services: 453)

Table 4-19. MDNR Fisheries Division personnel's perception of desired knowledge outcomes for future fisheries communications. An "x" indicates that the focus group(s) responded with the information listed in the rows; more specific focus group responses are shown in appropriate columns.

<i>After participating in communication programs, audiences should gain an understanding in or knowledge of...</i>	FG16	FG2	FG3	FG4	FG5	FG6	FG7	FG8
ANGLING KNOWLEDGE								
where and how the public can fish	x		x		x	x		x
handicap/barrier free access areas	x	x						x
fishing is a part of Michigan's heritage		x				x	x	
access areas for anglers without a boat	x				x	x		
where to locate or who can help them find more information on fishing & access	x	x						
information on fishing opportunities for urban residents - where to (including access) & how to fish						x		
boat launch access								
single parents & women - how to fish, where to fish, equipment they "really" need				x	x		x	x
understand that fish populations aren't static			x				x	
realistic expectations of catches/efforts							x	
multilingual printed/audio material	x							
non-sport fish are fun to catch too: know that diversifying their catch is fun				x	x			
seasonal information in response to national/international publication of Michigan fishing opportunities (i.e. salmon, steelhead, smelt runs)								x
all lakes and streams are not the same & will not support all fish species								
the need for public access		x						
the importance of knowing how to swim while near water		x						
the need for self policing - angler ethics			x					
fishing licenses are a bargain and are rarely raised							x	

6 FG1 - Field Operations/Research - Supervisors; FG2 - Early Retirees; FG3 - Management Personnel; FG4 - Program Services; FG5 - Field Operations/Research - Non-supervisors; FG6 - Hatcheries; FG7 - Creel Clerks; FG8 - Administrative Support.

Table 4-20. MDNR Fisheries Division personnel's perception of desired knowledge outcomes for future fisheries communications. An "x" indicates that the focus group(s) responded with the information listed in the rows.

<i>After participating in communication programs, audiences should gain an understanding in or knowledge of...</i>	FG1 ⁷	FG2	FG3	FG4	FG5	FG6	FG7	FG8
KNOWLEDGE FOR THE NON-ANGLING PUBLICS								
development & management of riparian corridors have impacts on water quality & fish populations	x		x	x	x	x		x
access to aquatic resources is limited and therefore ought to be shared								
the Fisheries Division is accountable to multiple users/beneficiaries, not just anglers (MDNR employees need to be reminded of this as well as the public)		x			x	x		x
the Fisheries Division manages for the "big picture" - ecosystem & watershed		x			x			
lake is not swimming pool	x	x						
it is okay to fish - fishing is part of Michigan's heritage	x	x						
land use is important to the quality of aquatic ecosystems	x	x						
for those moving north to "get away from it all," if they demand all of the "urban" amenities, they won't "be away" for long! - proper/aesthetic land use planning	x					x		x
management can assist with reducing user conflicts								
fish are a necessary part of the ecosystem								
they can enjoy fish by viewing - fish ladders & hatcheries		x						x
who the Fisheries Division is, what it does and why						x		x
the Fisheries Division is composed of people who can help the public be resource stewards			x					
farm land use management is extremely important to aquatic ecosystems			x					
the importance of user ethics - all users ought not to litter, damage property, trespass, etc.				x				

⁷ FG1 - Field Operations/Research - Supervisors; FG2 - Early Retirees; FG3 - Management Personnel; FG4 - Program Services; FG5 - Field Operations/Research - Non-supervisors; FG6 - Hatcheries; FG7 - Creel Clerks; FG8 - Administrative Support.

Correction of General Misconceptions About Fisheries (Table 4-21): Focus group participants identified several misconceptions they perceived the public to have regarding fishing and fisheries management. In general, focus group participants reported that the public lacks an understanding of the biological processes of fisheries and aquatic systems. The most widely identified (five focus groups) public misconception reported was that fisheries are not limited resources.

“Another misconception is that there is unlimited number of fish in Michigan, in any given lake, is a bottomless pit, there are no limits to the resource.” (Management Personnel: 1087)

Four focus groups reported that one public misconception is that all MDNR personnel are either conservation officers or work in a fish hatchery.

“We either raise fish or arrest people.” (Field Operations/Research -Supervisors: 1213)

“You know, even in a small town, I tell people I’m with the Fisheries Division and they say ‘what hatchery do you work at.’ You know, that’s their concept of what Fisheries does.” (Management Personnel: 911)

Several misconceptions about fisheries management concerned stocking or the role of stocked fish in Michigan’s aquatic systems. For example, the concept “they don’t understand that planting fish doesn’t necessarily make for better fishing” was heard from many groups (Administrative Support: 738).

Table 4-21 (cont'd).

<i>Public misconceptions about fish, fisheries management or fishing ...</i>	<i>FG1⁹</i>	<i>FG2</i>	<i>FG3</i>	<i>FG4</i>	<i>FG5</i>	<i>FG6</i>	<i>FG7</i>	<i>FG8</i>
"You're a fisheries research station. What do you do in the winter?"								X
why there are fish kills, how fish kills are a natural occurrence								X
Fisheries Division exists for anglers (a MDNR and public misconception)								
the public can see BIG fish at hatcheries					X			
don't know what the hatchery system is or how it relates to management						X		
believe that lake treatments are "bad"						X		
lack of understanding management processes						X		
restoring fish populations should not take years						X		
do not understand that riparian development affects aquatic ecosystems						X		
"I can do anything I want, it's my property"						X		
loss of perspective - forgotten that the Great Lakes fisheries were declining & highly contaminated			X			X		
take Michigan's bountiful aquatic resources for granted								
Great Lakes are self-regulating (no need to manage exotics or declining native species)			X					
introducing exotic sport fish is okay								
do not understand what creel clerks are doing			X					
taxes are paying for creel clerks to "sit around, drink coffee and watch the sunset"							X	
it's not okay for creel clerks to "sit in a state vehicle doing nothing" - using state vehicle for personal use							X	
all fish that do not have fin clips are natural							X	
why do tribal fishermen get to use gill nets?							X	
lack of understanding that there are other states/countries managing Great Lakes fisheries							X	

⁹ FG1 - Field Operations/Research - Supervisors; FG2 - Early Retirees; FG3 - Management Personnel; FG4 - Program Services; FG5 - Field Operations/Research - Non-supervisors; FG6 - Hatcheries; FG7 - Creel Clerks; FG8 - Administrative Support.

Table 4-21. MDNR Fisheries Division personnel's perceptions of public misconceptions of fish and fisheries management. An "X" indicates that the focus group(s) responded with the information listed in the rows.

<i>Public misconceptions about fish, fisheries management or fishing ...</i>	<i>FG1⁸</i>	<i>FG2</i>	<i>FG3</i>	<i>FG4</i>	<i>FG5</i>	<i>FG6</i>	<i>FG7</i>	<i>FG8</i>
fisheries are not limited	X		X	X	X	X		
lack an understanding of biological processes/systems	X	X		X		X		
the Fisheries Division either (1) raises fish, or (2) arrests people (are conservation officers)	X	X			X	X		
that planting fish means better fishing				X		X	X	X
lack understanding that stocking fish is dependent on suitable habitat & foodweb				X		X	X	X
lake associations need to understand the biological processes involved in lakes - the need for suitable & diverse habitats & fish populations	X	X	X	X				
tax dollars pay for fisheries management					X	X	X	
lake associations want every lake to be everything to everybody	X			X				
the function of the Fisheries Division is to produce, raise and stock fish	X	X						
it is okay to depend on managed & engineered fisheries vs. restoring habitats	X			X				
stocking enables us to "do whatever we want" to the environment	X			X				
the Fisheries Division plots to ruin the fishing	X				X			
do not understand that ecosystems mean that habitats & species are dependent on interconnected processes						X	X	
confusion over regulations: why it's okay to harvest some spawning fish and not others				X			X	
how regulations help manage fisheries								
all fish come from a hatchery	X			X			X	
policy makers need to understand that fish live in our aquatic systems	X							
fisheries are static	X							
all fish are contaminated and unsuitable for eating								X

⁸ FG1 - Field Operations/Research - Supervisors; FG2 - Early Retirees; FG3 - Management Personnel; FG4 - Program Services; FG5 - Field Operations/Research - Non-supervisors; FG6 - Hatcheries; FG7 - Creel Clerks; FG8 - Administrative Support.

Table 4-21 (cont'd).

<i>Public misconceptions about fish, fisheries management or fishing ...</i>	<i>FG1¹⁰</i>	<i>FG2</i>	<i>FG3</i>	<i>FG4</i>	<i>FG5</i>	<i>FG6</i>	<i>FG7</i>	<i>FG8</i>
pressure for stocking when it is not biologically justified				x				
demand parity (i.e. equal stocking from one lake to another regardless of potential success)				x				
the importance of naturally reproducing fish								
why are we "picking on" dam owners and hydroelectrical power?				x				

¹⁰ FG1 - Field Operations/Research - Supervisors; FG2 - Early Retirees; FG3 - Management Personnel; FG4 - Program Services; FG5 - Field Operations/Research - Non-supervisors; FG6 - Hatcheries; FG7 - Creel Clerks; FG8 - Administrative Support.

Focus groups reported that the public lacks an understanding that:

- all fish do not come from a hatchery,
- fish stocking must be biologically justified (is dependent on suitable habitat and forage),
- fisheries management does not depend on stocked fish alone, but should consider fish and habitat conservation and natural reproduction, and
- there exists a need to regulate and manage fisheries resources (e.g., to manage for exotics or declining native aquatic species).

“They figure that you can do whatever you want to the environment and then just go to the hatchery and throw more fish in. That you can re-engineer the fisheries.” (Field Operations/Research -Supervisors: 1187-1189)

“There is a misconception that we can introduce any exotic species here that the public has an inkling for, like large mouth bass to stripers, and we can ignore native fishes that do well here.” (Management Personnel: 1089)

“Anglers think that all we have to do to provide fishing is to just stock fish, rather than protection of natural resources and protection of habitat. More of a manmade situation.

Yep. There’s more reliance on management. (Management Personnel: 570-574)

“There’s pressure for stocking, when it’s not biologically justified. People need to understand the importance of naturally reproducing fish populations where you get the genetic diversity and so forth, which leads to stronger, healthier fish populations.” (Program Services: 289)

Participants from the Program Services and Field Operations/Research - Supervisors focus groups recognized that the Division is responsible for some public misconceptions, for example:

“Stocking fish equals good fishing. It is the simplest [misconception] and we are the own cause of that. We did that to ourselves.” (Program Services: 646)

As an agency, one of the easiest ways for us to teach groups of people or children or show them anything is to take them to either a hatchery and give them a tour or to an egg tank facility and give them a tour. So, we propagate the idea that all fish come from hatcheries...So, we’re not good ourselves at giving the right impression to people on that.” (Field Operations/Research - Supervisors: 1153)

The Program Services focus group highlighted confusing regulations as a cause for public misconceptions:

“I think that there is no question that we cause a lot of confusion due to the way we write regulations, where we’ll take one sport species and we’ll say ‘hey, they are spawning now, so we are going to open up the season and let you get ‘em’ and then, ‘hey, another species is spawning now, so we are going to close the season on that particular species.’ And the public says ‘what?’ and it has a domino affect right down to their ethics and attitude and everything else...because there is confusion out there as to why we do things.” (Program Services: 648)

Few differences in responses between supervisory and non-supervisory level focus groups were observed. Supervisory-level personnel indicated that lake association members should have understanding of biological processes related to a healthy lake ecosystem. Non-supervisory personnel (Field Operations/Research - Non-supervisory, Hatcheries and Creel Clerks) reported the public misconception that general tax dollars fund fisheries management. Regarding impacts, Early Retirees indicated that they wanted the public to know that “stewardship means considering long-term needs and benefits.”

Priority Desired Knowledge Outcomes

Focus group participants voted for the desired public knowledge that they believed ought to be the outcomes from the Division’s future fisheries communications (Table 4-22). All votes were tallied resulting in the following top five desired knowledge outcomes (most individual votes received).

Table 4-22. Summary of MDNR Fisheries Division personnel top five priority knowledge outcomes as a result of future fisheries communications. Each individual focus group participant cast two (2) votes.

Desired Knowledge Outcomes	Field Operations/ Research - Supervisors	Early Retirees	Mgt. Personnel	Program Services	Field Operations Research - Non-Supervisors	Hatchery	Creel Clerks	Admin. Support	Total Number of Votes
After participating in a communications program, target audiences should know or understand... what the MDNR Fisheries Division is and does		8	1	3	4	9	4	2	31
the "big picture" of ecosystem processes and natural resources management		8		2	8	2		7	27
biological processes of aquatic systems and organisms	12			5			4		21
the impacts of various resource use/misuse and the resulting costs/effects			2	1		11			14
that Michigan's aquatic resources are unique and bountiful	7			3			4		14
that aquatic resources are limited	5		2		2				9

After receiving or participating in Division-sponsored communication programs, audiences should:

- know what the MDNR Fisheries Division is and does (31 votes, 21% of total votes),
- understand the “big picture” of ecosystem processes and resource management (26 votes, 17% of total votes),
- understand biological processes of aquatic systems and organisms (21 votes, 14% of total votes),
- understand the impacts of various aquatic resource use and/or misuse and the resulting costs and/or effects (14 votes, 9% of total votes),
- understand or have an awareness of Michigan’s unique and bountiful fisheries resources (14 votes, 9% of total votes), and
- understand that aquatic resources are limited (9 votes, 6% of total votes).

Seven out of eight participating focus groups reported that the public should have an understanding of what the Fisheries Division is and does. “What the Fisheries Division is and does” received the highest (or tied for highest) votes from three focus groups (Early Retirees, Creel Clerks and Hatcheries).

In addition to receiving a high number of votes as a desired outcome, “knowing what the Fisheries Division is and does” was a salient concept among most participating Fisheries personnel. For instance, when asked to identify desired knowledge outcomes for fisheries communications, “What the Division is and does” was the first mentioned outcome by Field Operations/Research - Non-supervisory, Early Retirees and Hatchery personnel; second by Field Operations/Research - Supervisory and Administrative Support; third by Program Services personnel, while Management Personnel and Creel Clerks identified “what the Division does and why” later in their discussion of knowledge outcomes. Further, several other knowledge outcome statements relate to a public understanding of the Division: the reasons for regulations, fisheries management is based on science, and that fisheries management is moving toward watershed and ecosystem management approaches.

“Understanding the big, ecosystem picture of fisheries processes and fisheries management” was favored by five of eight focus groups, with Early Retirees Field

Operations/Research - Non-supervisors and Administrative Support giving it their highest (or tied for highest) communications priority.

A similar category, “understanding biological processes of aquatic systems and organisms,” was ranked third among desired knowledge outcomes for fisheries communications. Yet, three focus groups (Field Operations/Research - Supervisors, Program Services and Creel Clerks) ranked that this category highest for desired knowledge outcomes, with Field Operations/Research - Supervisors favoring this category nearly twice as much as any other category.

Tied for the fourth desired knowledge outcome were: “understanding impacts of various resource use or misuse and the costs and benefits of these impacts,” and “knowledge of Michigan’s bountiful aquatic resources.” Hatchery personnel ranked “understanding impacts” as their highest priority. More specifically, three focus groups chose “knowledge of business and industrial development impacts,” while two focus groups voted for “riparian development as public impacts on fisheries systems” (these votes were added to the more general “understanding impacts” category).

Awareness of Michigan’s bountiful aquatic resources was ranked high among the focus groups that identified it as a desired knowledge outcome. This outcome tied for first priority among Creel Clerks personnel, while Field Operations/Research -Supervisors and Program Services gave it their second highest number of votes.

Finally, both Field Operations/Research groups and Management Personnel wanted the public to understand that fisheries are limited. Field Operations/Research -Supervisors ranked this category highest among the knowledge outcomes.

Desired Behavioral Outcomes

Participant responses to what desired behavioral outcomes they wanted fisheries communications to impact were sorted into two categories: desired behavioral outcomes for anglers and non-anglers.

Anglers (Table 4-23): Most Division personnel wanted fisheries communications (particularly from the media) to influence anglers to become involved in fisheries management and stewardship of fisheries resources, including public advocacy for fishing and sound fisheries management.

"I want the public to not only to be advocates with regard to becoming involved in fisheries management decision-making, but to be advocates to other members of the publics and peers. In other words, to spread the word about Michigan's fisheries and fishing opportunities." (Management Personnel: 914-918)

When asked to define stewardship, focus groups responded with the following:

"A good steward doesn't think just for his own short-term needs. He thinks for the long-term benefit of the resource. That's what I view as stewardship." (Early Retirees: 1662)

"By everything from catch and release [fishing], to participating in decisions about licensing of dams, participating actively in watershed initiatives. Becoming involved." (Management Personnel: 862)

Table 4-23. MDNR Fisheries Division personnel's perception of desired behavioral outcomes for future fisheries communications. An "x" indicates that the focus group(s) responded with the information listed in the rows.

<i>After participating in a communication program, audiences should exhibit the following behavior ...</i>	FG1	FG2	FG3	FG4	FG5	FG6	FG7	FG8
ANGLER BEHAVIOR								
participate in management programs/advisory groups	x		x		x	x	x	x
limit their take	x	x		x		x		x
minimize impacts on aquatic resources (i.e. littering & other habitat degradation)	x		x	x		x	x	x
participate in habitat improvement		x	x		x	x	x	x
practice catch & release fishing	x		x	x		x	x	
comply with regulations	x	x	x			x	x	
be advocates for fishing: become a mentor & pass on the traditions of fishing to others	x	x	x				x	
become stewards of aquatic resources	x	x	x					x
be ethical anglers		x		x		x	x	
complain less	x			x		x	x	
share resources & cooperate with other anglers & diverse users	x				x			x
promote the MDNR/Fisheries Division positively: particularly outdoor writers as advocates	x		x			x		
purchase more licenses - increase participation in angling	x		x					
increase angling among women/single mothers							x	x
ethical recreation		x		x				
community involvement			x				x	
use simple/primitive angling techniques				x			x	
report tagged fish	x							
promote themselves (i.e. sport & fishing group activities)	x							

1 FG1 - Field Operations/Research - Supervisors; FG2 - Early Retirees; FG3 - Management Personnel; FG4 - Program Services; FG5 - Field Operations/Research - Non-supervisors; FG6 - Hatcheries; FG7 - Creel Clerks; FG8 - Administrative Support.

Table 4-23 (cont'd).

<i>After participating in a communication program, audiences should exhibit the following behavior ...</i>	<i>FG1²</i>	<i>FG2</i>	<i>FG3</i>	<i>FG4</i>	<i>FG5</i>	<i>FG6</i>	<i>FG7</i>	<i>FG8</i>
contact the MDNR/Fisheries Division for information					X			
fewer tournaments		X						
promote public access		X						
increase angling among urban residents		X						
visit hatcheries						X		
report poaching & other fish & game violations			X					
police themselves				X				
diversify their catch				X				

² FG1 - Field Operations/Research - Supervisors; FG2 - Early Retirees; FG3 - Management Personnel; FG4 - Program Services; FG5 - Field Operations/Research - Non-supervisors; FG6 - Hatcheries; FG7 - Creel Clerks; FG8 - Administrative Support.

Additionally, many specific outcomes were listed that relate to stewardship of fisheries resources:

- anglers limiting their take,

"If everybody didn't get their limit on salmon out here they were disappointed and maybe with better technology and people know how to fish better then maybe in the future it's going to have to be two or three salmon a day instead of five."
(Field Operations/Research -Supervisors: 886)

"Limits and their limits." (Field Operations/Research -Supervisors: 799)

"Limit their creel." (Field Operations/Research -Non-supervisors : 555)

- public participation in habitat improvement projects, and
- public minimizing personal impacts on fisheries resources.

Four focus groups wanted anglers to become a mentor and teach and encourage others to fish.

Three focus groups wanted anglers to share fisheries resources with other anglers and other recreationists.

"I don't know exactly how to say it but I think we'd like people to learn to be more accepting, like, one angler needs to be able to accept another angler group. We'd like everybody to learn to live together and share the pie." (Field Operations/Research-Supervisors: 809)

"And also maybe the understanding that they have to share the resource with other users." (Field Operations/Research-Supervisors: 1383)

"And that there is a limited amount, there's just so much water and access and so it has to be shared." (Administrative Support: 603)

Non-anglers (Table 4-24): Compared to desired behavioral outcomes for anglers, there were fewer responses to the question "What behavioral outcomes would you want non-anglers to have as a result of fisheries communications?" Four focus groups, represented predominantly by

Table 4-24. MDNR Fisheries Division personnel's perception of desired behavioral outcomes for future fisheries communications. An "x" indicates that the focus group(s) responded with the information listed in the rows.

<i>After participating in a communication program, audiences should exhibit the following behavior ...</i>	<i>FG13</i>	<i>FG2</i>	<i>FG3</i>	<i>FG4</i>	<i>FG5</i>	<i>FG6</i>	<i>FG7</i>	<i>FG8</i>
NON-ANGLING BEHAVIOR								
riparian landowners/farmers minimize impacts & participate in habitat improvement			x		x	x	x	
share resources & cooperate with other diverse users	x	x				x		x
environmental stewardship	x	x						
tolerant of anglers		x						
accommodate the fishing business								
buy a fishing license		x		x				
ethical recreation				x				

3 FG1 - Field Operations/Research - Supervisors; FG2 - Early Retirees; FG3 - Management Personnel; FG4 - Program Services; FG5 - Field Operations/Research - Non-supervisors; FG6 - Hatcheries; FG7 - Creel Clerks; FG8 - Administrative Support.

non-supervisory-level personnel, wanted riparian landowners and farmers to minimize their impacts on watersheds and fisheries resources, and to participate in habitat improvement projects. Both supervisory and non-supervisory-level personnel wanted non-anglers to share aquatic resources and to cooperate with other diverse users. The desired behavioral outcomes, "environmental stewardship" and "ethical recreation" for non-anglers were reported by only one focus group. There were few other differences in responses between supervisory and non-supervisory level personnel.

Priority Desired Behavioral Outcomes

Focus group participants voted for the desired behavioral outcomes that they believed ought to be a priority for the focus of the Division's future fisheries communications (Table 4-25). All votes were tallied, resulting in the following top five priority desired behavioral outcomes (most individual votes received):

- public resource stewardship (27 votes, 22% of total votes),
- cooperation among recreational, tribal and commercial anglers and other resource users (22 votes, 18% of total votes),
- public involvement in resource management or stewardship activities (18 votes, 14% of total votes),
- mentoring - angler recruitment (14 votes, 11 % of total votes), and
- outdoor writers/reporters as advocates for sound fisheries management and fishing (13 votes, 10% of total votes).

Participating Division personnel ranked "stewardship" as the highest priority for desired behaviors resulting from fisheries communications. In fact, all of the remaining behavior categories may be interpreted as behaviors which a steward for fisheries resources may display. Field Operations/Research -Supervisors, Early Retirees and Administrative Support each gave stewardship their highest vote.

Four focus groups (both Field Operations/Research groups, Administrative Support and Early Retirees) wanted to promote cooperation among angler groups and other users; "public

Table 4-25. Summary of MDNR Fisheries Division personnel votes for priority behavioral outcomes as a result of future fisheries communications. Each individual focus group participant cast two (2) votes.

Desired Behavioral Outcomes	Field Operations/ Research - Supervisors	Early Retirees	Mgt. Team	Program Services	Field Operations/ Research - Non-Supervisors	Hatchery	Creel Clerks	Admin. Support	Total Number of Votes
After participating in a communications program, target audiences should...									
demonstrate public resources stewardship	6	13						8	27
cooperate with other anglers (recreational, tribal, commercial and other aquatic resource users)	3	2			9			8	22
demonstrate public involvement in fisheries management	4			3	2	4	5		18
mentor - participate in angler recruitment	2	5	4				3		14
promote the MDNR positively (particularly outdoor writers/reporters advocate for fisheries management and fishing			6			7			13

involvement in resource management" was viewed as a priority among many focus groups, though not as strongly among supervisory-level personnel. Public involvement opportunities targeted toward anglers was described in six different desired behavioral outcome statements. Non-supervisory personnel were particularly interested in promoting or enabling the public to become involved in habitat improvement projects.

Mentoring, or passing on the fishing tradition, was stated in the context of teaching anglers and supporting angler recruitment. Mentoring was favored by four focus groups (represented by supervisory-level personnel in addition to Creel Clerks). Management Personnel and Hatcheries were the only focus groups to identify outdoor writers as a means to help the Division provide fisheries information, or to help pass on fishing traditions; each of these groups ranked this category very high.

Desired Attitudinal Outcomes:

Personnel responses toward desired attitudinal outcomes were sorted into angler and non-angler categories (Tables 4-26). Most personnel wanted the public (anglers and non-anglers) to respect and trust the MDNR.

"That's where the lack of trust is so true, because when they ask you a question, they want a positive answer. They want the answer that they want to hear and if you say anything else, they feel that you're doing a snow job on them." (Field Operations/Research -Non-supervisors: 455)

"Distrust? Distrust comes through lack of communications over the years." (Field Operations/Research -Non-supervisors: 928)

"There have been many times when I've seen people actually think that there's a plot. You know, what we do in our job is plot to ruin their fishing." (Field Operations/Research -Supervisors: 1245)

(cont'd on page 175)

Table 4-26. MDNR Fisheries Division personnel's perception of desired attitudinal outcomes as a result of future fisheries communications. An "x" indicates that the focus group(s) responded with the information listed in the rows.

<i>After participating in a communication program, audiences should exhibit the following attitudes ...</i>	FG1 ¹	FG2	FG3	FG4	FG5	FG6	FG7	FG8
ANGLER ATTITUDES								
respect and a sense of ownership, responsibility & stewardship toward resources & management for the resources	x	x	x	x	x		x	x
respect and trust/confidence of MDNR professionals & resources management	x		x	x	x	x	x	x
positive outlook toward the MDNR - "we're working for their best interests"				x	x	x	x	x
realistic expectations toward fisheries management, fishing & the ecosystem	x	x	x	x	x		x	x
pride/value/appreciation towards Michigan's unique resources & ecosystem	x	x		x	x			
acceptance & tolerance toward diverse users & interests	x	x	x	x				
reciprocity & support of MDNR programs, decisions & management practices (including regulations)	x		x	x				
appreciation toward the experience of fishing; that success does not have to be measured in catching fish or the size or number of fish		x		x			x	
less greed - encourage environmental/angling ethics & sense of sharing		x					x	
interest in fisheries management				x	x			
pride in fishing and Michigan's fisheries heritage				x	x		x	
simple, inexpensive equipment is fun				x			x	
value & respect toward resource protection					x			
the MDNR is receptive or listens to the public					x			
value of fisheries resources from urban residents					x			
harvesting fish is "okay"					x		x	

¹ FG1 - Field Operations/Research - Supervisors; FG2 - Early Retirees; FG3 - Management Personnel; FG4 - Program Services; FG5 - Field Operations/Research - Non-supervisors; FG6 - Hatcheries; FG7 - Creel Clerks; FG8 - Administrative Support.

Table 4-26 (cont'd).

<i>After participating in a communication program, audiences should exhibit the following attitudes ...</i>	<i>FG1²</i>	<i>FG2</i>	<i>FG3</i>	<i>FG4</i>	<i>FG5</i>	<i>FG6</i>	<i>FG7</i>	<i>FG8</i>
NON-ANGLERS								
acceptance, respect & tolerance of diverse users, including anglers		X	X					X
respect and value toward aquatic resources, including the intrinsic value of fish	X	X		X				X
value & support of the sport or tradition of fishing - feel that it is "okay" to fish	X		X			X		
respect, value & confidence toward the MDNR								X
Michigan fisheries have an economic impact on Michigan communities (\$2 billion business annually)					X			

² FG1 - Field Operations/Research - Supervisors; FG2 - Early Retirees; FG3 - Management Personnel; FG4 - Program Services; FG5 - Field Operations/Research - Non-supervisors; FG6 - Hatcheries; FG7 - Creel Clerks; FG8 - Administrative Support.

(cont'd from page 172)

"There's distrust, but distrust lessens quite a bit with more contact. That's one of the biggest pluses of our Great Lakes creel census program—is that they [anglers] still want that contact because they are still telling that creel census clerk their feelings." Field Operations/Research-Non-supervisors: 922)

In particular, fisheries personnel wanted anglers to have respect for Division personnel as trained professionals and to have realistic expectations toward management decisions and fishing.

"In terms of improving their attitude, we need to promote respect for the Division and Division programs. Respect for Fisheries personnel as professionals, that we are professionals.

You promote respect most by showing what you do. So, you need to show what we do as a subset. That's part of promoting respect as professionals, they don't know what we do, if they did, I'd feel pretty confident that they would respect us more." (Management Personnel: 1046-1051)

"I think we'd like the people to see the DNR employees in a positive light, as them doing something good, rather than just writing me a ticket for doing something wrong. But, doing something good and protecting and enhancing the resource." (Program Services: 457)

"I want them to feel that we're working for their interests, and not for our own." (Field Operations/Research - Non-supervisors: 608)

"Well, one of the big things that I'd like to see is to inform the public to be more cognizant of their expectations and what a resource can provide." (Field Operations/Research - Supervisors: 784)

"We should balance our expectations with what the ecosystem can provide." (Early Retirees: 927)

Additionally, most focus group participants wanted anglers to have respect toward, and feel ownership and stewardship for fisheries resources.

“It’s going to be increasingly important, as we see more and more urbanization, in order to encourage people to respect and regard their resource as something that’s valuable, you need to show that there are uses and things that they can get from it, and that’s where I think it will be more and more important to get into urban areas and show people that it is something that’s worth enjoying and keeping.” (Field Operations/Research -Non-supervisors: 805)

Some differences in responses about desired attitudinal outcomes between supervisory and non-supervisory level personnel were observed. Non-supervisory personnel groups wanted the public to have a positive outlook toward the MDNR and to feel that employees were working toward the public’s best interests. More non-supervisory than supervisory personnel wanted anglers to have realistic expectations toward fisheries management and fishing. Field Operations/Research -Non-supervisors wanted anglers to value and respect resource protection. They also wanted urban residents to value fisheries resources.

Supervisory-level personnel wanted anglers to accept and tolerate diverse aquatic resource users. Two supervisory-level focus groups wanted non-anglers to support the traditions of fishing and to feel that “fishing is okay.” In addition to wanting the public to have a positive outlook toward the MDNR, supervisory personnel wanted anglers to be receptive and supportive of MDNR programs, decisions and management practices.

Priority Desired Attitudinal Outcomes

Focus group participants voted for the desired attitudinal outcomes that they believed ought to be a priority for the Division's future fisheries communications (Table 4-27). All votes were tallied resulting in the following top five desired attitudinal outcomes (most individual votes received):

- public trust and respect for the MDNR (40 votes, 27% of total votes),
- public respect, stewardship and ownership for aquatic resources (34 votes, 23% of total votes),
- feel that the purpose of the MDNR Fisheries Division is to manage the State's aquatic resources for the benefit of various users: the MDNR Fisheries Division is a public service organization (16 votes, 11% of total votes),
- realistic expectations (among anglers) of fisheries management and for fishing (16 votes, 11% of total votes),
- public support and respect for Fisheries personnel as trained professionals (15 votes, 10% of total votes), and
- public support and respect toward all aquatic resource users and/or uses; to share fisheries resources (11 votes, 7% of total votes).

Most personnel wanted the public to trust and respect the MDNR and to have confidence in management decisions and in personnel as professionals. Division personnel were consistent with their concerns about the MDNR's image with the public. Recalling that "understanding what the DNR is and does" was ranked as the highest knowledge outcome, six out of eight focus groups voted for a similar desired attitudinal outcome, "respect and trust the MDNR." Four focus groups gave it their highest ranking (Early Retirees, Field Operations/Research -Supervisors, Administrative Support and Hatcheries).

Six out of eight focus groups (the exceptions being Field Operations/Research -Non-supervisors and Hatcheries), wanted to promote a sense of respect, ownership, responsibility and

Table 4-27. Summary of MDNR Fisheries Division personnel votes for priority attitudinal outcomes of future fisheries communications. Each individual focus group participant cast two (2) votes.

Desired Attitudinal Outcomes	Field Operations/ Research - Supervisors	Early Retirees	Mgt. Personnel	Program Services	Field Operations Research - Non-Supervisors	Hatchery	Creel Clerks	Admin. Support	Total Number of Votes
After participating in a communications program, target audiences should...									
trust & respect MDNR	10	11		5		5		9	40
respect and feel stewardship and ownership for aquatic resources	10	6	2	5			6	5	34
have realistic expectations for fisheries management and fishing	4			2	8		2		16
have a positive outlook toward the MDNR, feel that the MDNR works for the public's best interests					8		8		16
support for fisheries managers as professionals	4	1	3	3	4				15
public respect for all resource users/uses	1	1	4	5					11

stewardship for aquatic resources. Field Operations/Research - Supervisors ranked this category the highest.

“The purpose of the MDNR is to manage the States resources for the benefit of various users” was only perceived as a priority among two focus groups (Field Operations/Research - Non-supervisors and Creel Clerks), however these focus groups gave this category most of their votes.

Realistic expectations toward fisheries management and fishing was listed as an attitude outcome by four focus groups and relates back to the public needing a basic understanding of biological processes and fisheries management (desired knowledge outcome). This category received low priority from three of the four focus groups voting on it, the exception being Field Operations/Research -Non-supervisors, who ranked “realistic expectations” the highest attitudinal outcome for future fisheries communications.

Public support and respect toward all aquatic resource users and uses—or sharing of resources—was ranked last among desired attitude outcome priorities. This category was favored by supervisory personnel only, with Management Personnel giving it their highest rank. Additionally, Management personnel particularly wanted non-anglers to respect, tolerate and support angling.

Additional Audiences and Desired Outcomes Identified by Fisheries Personnel

Each focus group worked independently from the other focus groups when describing the current and desired communication situations, including target audiences and desired outcomes. The independence of the focus groups becomes important when one considers the final listing of priority target audiences and desired outcomes to achieve with fisheries communications. For example, some audiences and outcomes were identified by only one or two groups, and, when voted upon, these items received few votes, and, thus were not ranked as a priority for future fisheries communications. Items which failed to be ranked as a communication priority should not be

interpreted as unimportant, however. On the contrary, if all focus groups had had the opportunity to rank target audiences and outcomes from a compiled list of items, it is likely that the outcome of the final priorities for fisheries communications would be different.

Furthermore, during its communication planning, the Division may want to consider the particular communication needs perceived by each of the employee groups, supervisory and non-supervisory-level personnel, or within various geographic regions in Michigan.

Additional Audiences to Target with Fisheries Communications

The following audiences received fewer than eleven votes for fisheries communications, yet, deserve attention in the Division's communication planning (Tables 4-28):

- **Policy makers** (legislators, Governor's office, etc.): Legislators were specifically identified for receiving targeted fisheries information by all supervisory-level focus groups (Field Operations/Research -Supervisors; Management Personnel; Program Services; and, Early Retirees). It should be noted, however, that during focus group discussion, the term "legislators" was sometimes used synonymously with "policy makers," so this target audience could be interpreted more broadly. When prioritizing target audiences, policy makers received seven votes (four votes from Field Operations/Research -Supervisors; two votes from Management Personnel; and one vote from Early Retirees).
- A variety of **specific angler groups** received some level of prioritization from focus groups:
 - seniors/senior anglers: seniors were recognized as a target audience by seven focus groups (five votes, all from Creel Clerks; their highest audience priority for targeting fisheries communications),
 - catch and release anglers versus consumptive anglers: recognized as an audience to target by six focus groups and as an emerging issue by three (two votes, from from Field Operations/Research -Non-supervisors),
 - non-resident anglers: recognized as a target audience by two focus groups (one vote, from Administrative Support),
 - frequent anglers (one vote from Early Retirees),
 - organized anglers/or sportfishing organizations: recognized as a target audience by four focus groups (one vote from Field Operations/Research -Supervisors),
 - tribal fishermen: recognized as a target audience by three focus groups (one vote from Administrative Support), and
 - women anglers: (one vote from Management Personnel).

Table 4-28. Summary of the MDNR Fisheries Division personnel's remaining votes¹ for audiences to target with future fisheries communications. Each individual focus group participant cast two (2) votes.

Remaining Votes for Priority Target Audiences	Field Operations/ Research - Supervisors	Early Retirees	Mgt. Personnel	Program ² Services	Field Operations/ Research - Non- Supervisors	Hatchery	Creel Clerks	Admin. Support	Total Number of Votes
policy makers-legislators, Governor's office, etc.)	4	1	2						7
senior anglers							5		5
single-parents							4		4
families							3		3
other recreationists								3	3
members of the media	2		1						3
"non-users"									3
urban residents		2				3			3
women		2							2
farmers			2						2
catch & release anglers versus harvest/kill anglers					2				2
the "general public" in MI's Lower Peninsula		1							1
frequent anglers		1							1
organized anglers	1								1
female anglers			1						1
non-resident anglers								1	1
tribal fishermen								1	1

² Focus group participants did not have the opportunity to cast votes for priority audiences.

- Several distinct **demographic groups** were prioritized:
 - single-parents, female heads-of-households: recognized as a target audience by two focus groups (four votes, each from Creel Clerks),
 - families (three votes, each from Creel Clerks),
 - women: recognized as a target audience by five focus groups (two votes, each from Early Retirees),
 - urban residents: recognized as a target audience by two focus groups (two votes, each from Early Retirees), and
 - southern Michigan general public: recognized as a target audience by two focus groups (one vote from Early Retirees).
- **Other users and other interested individuals/groups** were widely recognized as an audience with which to communicate, such as:
 - members of the media: recognized as a target audience by two focus groups (three votes, two from Field Operations/Research-Supervisors, one from Management Personnel),
 - other recreationists: recognized by six focus groups (three votes, each from Administrative Support),
 - non-users: recognized as a target audience by two focus groups (three votes, each from Hatcheries),
 - farmers: recognized as a target audience by one focus group (two votes, from Management Personnel),
 - animal activist groups/animal rights sentiment: recognized as an increasing trend by six focus groups (one vote, from Hatcheries),
 - Michigan Chambers of Commerce and tourism councils: recognized by two focus groups (one vote, from Management Personnel),
 - environmentalist: recognized as a target audience by two focus groups (one vote, from Field Operations/Research -Supervisors), and
 - watershed organizations: recognized as a target audience by three focus groups (one vote, from Field Operations/Research -Non-Supervisors).

This is what one participant from the Hatcheries focus group session had to say about targeting fisheries communications toward so-called “non-users”:

“I think that last November [the ballot initiatives] showed us that we’ve got to be concerned with those people that aren’t necessarily interested in the outdoors too...we’ve got to expand our reach in communicating with various publics.”
(Hatcheries: 383)

Additional Knowledge Outcomes

The following desired knowledge outcomes for fisheries communications received fewer than nine votes (Table 4-29).

- **Fisheries management is based on science:** Six focus groups listed this as a desired knowledge outcome, but only two focus groups allocated votes toward this category (eight votes, six from Administrative Support, their second highest votes for desired knowledge outcomes, and two votes from Field Operations/Research -Non-supervisors)
- **Knowledge of fishing access:** Five focus groups recognized that the Division will likely need to continue to offer information about fishing (i.e. where to fish, how to fish). Three focus groups listed providing information about handicapper access, and two focus groups listed boat launch access. In total, knowledge of fishing access received four votes (two votes, Early Retirees; one vote each from Field Operations/Research -Supervisors and Administrative Support). More specifically, Early Retirees wanted more opportunities for women and minorities to learn how to fish.
- **An understanding of tribal fishing issues and rights:** Creel Clerks indicated a strong interest in enabling a public understanding of tribal issues and rights, giving this topic three votes, while Hatcheries gave this category one vote.
- **The role of stocked fish in fisheries management:** Nearly all focus groups mentioned some public misconception about the role of stocked fish in fisheries management. Only the Administrative Support focus group voted to make this category a communication priority (two votes).
- **Promoting Michigan's fishing heritage:** Michigan's strong fishing heritage was recognized by four focus groups. Early Retirees voted to make this category a fisheries communication priority (three votes).
- **Fishing is okay:** Two focus groups wanted non-anglers to understand that fishing is "okay." Field Operations/Research -Supervisors cast one vote toward promoting fishing in a positive light among non-anglers.
- **Diversify catch:** Program Services personnel wanted anglers to know that they could target species other than the popular game fish such as trout, walleye, perch, bass and salmon (one vote):

Table 4-29. Summary of MDNR Fisheries Division personnel's remaining votes for knowledge outcomes as a result of future fisheries communications. Each individual focus group participant cast two (2) votes.

Desired Knowledge Outcomes	Field Operations/Research - Supervisors	Early Retirees	Mgt. Personnel	Program Services	Field Operations Research - Non-Supervisors	Hatchery	Creel Clerks	Admin. Support	Total Number of Votes
After participating in a communications program, target audiences should understand or know ...					2			6	8
that fisheries management decisions are science-based									
the limits of fisheries and aquatic resources	1		2		2				5
angling access areas	1	2						1	4
public involvement and stewardship strategies			3				1		4
tribal fishing issues/rights							1	3	4
fishing in Michigan is a heritage		3							3
stocking fish does not necessarily make for better fishing								2	2
that there are multiple users and uses of aquatic, fisheries resources		1							1
that targeting diverse species of fish can be rewarding				1					1
that it is "okay" to fish	1								1

"I think that it would be nice to see anglers utilizing species that they are not utilizing now. There is an awful lot of species that people either turn their nose down or not utilize fully that would provide a lot of angling opportunities. For example, carp fishing or sucker fishing, it is an awful lot of fun. I was thinking the same thing—carp can put a bend in your pole just as well as a trout can and generally they are more readily available depending on where you're at, the time of year... So, we simply can't keep them focusing on the few sport fish that we deal with, 'cause we are going to run out of those [species] given the human population growth that we are experiencing. We've got to get them to diversify their catch. A lot of places where they're limited in the number of "catch-able sized game fish," but there is a lot of rough fish to be had, but people don't think about that, yet across the world they are very much sought after." (Program Services: 633-639)

The following knowledge outcomes for fisheries communications were commonly identified by focus groups, yet, did not receive any votes as a communication priority:

- **Understand the reasons for regulations:** Six focus groups identified this knowledge outcome, yet no focus groups voted to make "know the reasons for regulations" a communication priority. However, by providing information about the "big picture" of aquatic and ecosystem processes and management combined with information about biological processes of aquatic systems, the public could gain an understanding of the reason for regulations.
- **Where and how to fish:** Recognizing the popularity of requests for fishing and access (with and without a boat, barrier-free fishing access, etc.) information, many focus groups reported a need for more information about where to and how to fish. Three focus groups did not list the need for more fishing information: Management Personnel, Program Services (these two personnel groups likely do not interface with the public on these requests) and Creel Clerks (Creel clerks encounter anglers who appear to already know how and where to fish). No fishing related knowledge outcomes were prioritized for future communications.

Additional Behavioral Outcomes

The following desired behavioral outcomes for fisheries communications received less than thirteen votes (Table 4-30).

- **Angling and conservation ethics:** Four focus groups recognized that angling and conservation ethics ought to be an outcome of fisheries communications. Three focus groups allocated votes toward promoting ethical behavior, with Program Services ethics ranking angler and conservation ethics the highest priority for behavioral outcomes of fisheries communications (ten votes, six from Program Services, three from Creel Clerks, and one from Early Retirees).

Note: Many behavioral outcomes fall under the umbrella of stewardship or ethical angling/recreation. Many focus group participants wanted the public to go beyond the "golden rule" of ethics and stewardship (treating others as you would want to be treated) to become advocates for fishing or for fisheries management. Enabling or encouraging a "willingness to act" is suggested in most behavioral outcome statements.

- **Minimizing impacts on aquatic resources:** Among anglers, riparian landowners and farmers, "minimizing impacts" was among the most widely recognized behavioral outcome for fisheries communications and, yet, was not ranked as a priority behavior for future communications (participating Fisheries personnel did rank "*understanding* impacts on fisheries resources, however). Field Operations/Research -Non-supervisors were the only focus group to vote for this outcome as a desired behavioral outcome of fisheries communications and ranked it their highest priority with nine votes.

Several trends were identified that relate to public impacts on fisheries systems as well:

- increased riparian development,
 - non-users ("transferred urbanites") impacting riparian and aquatic systems unknowingly,
 - a loss of fisheries habitat,
 - increased fishing pressure and crowding,
 - decreased fishing access (resulting in increased pressure and crowding on aquatic systems among diverse users and user conflicts),
 - unethical angling, and
 - "limiting out."
-
- **Comply with regulations:** Four focus groups recognized "comply with regulations" as a behavioral outcome of fisheries communications. Creel Clerks ranked this outcome the highest. In total, complying with regulations received eight votes from three focus groups (five votes, from Creel Clerks; two, from Program Services; and, one vote, from Management Personnel).

Table 4-30. Summary of MDNR Fisheries Division personnel's remaining votes for behavioral outcomes as a result of future fisheries communications. Each individual focus group participant cast two (2) votes.

Desired Behavioral Outcomes	Field Operations/ Research - Supervisors	Early Retirees	Mgt. Team	Program Services	Field Operations/ Research - Non-Supervisors	Hatchery	Creel Clerks	Admin. Support	Total Number of Votes
After participating in a communications program, target audiences should...					9				9
reduce public/users impacts on aquatic & fisheries resources									
comply with regulations/follow legal limits			1	2			1		8
decrease competitive uses of resources (e.g., fishing tournaments)		1							1
moderate take/harvest (harvest less than legal limits)				1					1
use more primitive fishing techniques/use less technical devices while fishing)						1			1
maintain current level of fishing participation			1						1

- **Decrease competitive uses of resources** (e.g., fishing tournaments): One focus group, Early Retirees, recognized the need to reduce competitive uses of fisheries resources and gave this outcome one vote.
- **Moderate their take/take less than a full creel:** Five focus groups recognized moderating take as a desired behavioral outcome. Program Services gave this outcome one vote.
- **Use more primitive fishing techniques/less technical devices while fishing:** Only one focus group, Program Services recognized this behavioral outcome. Program Services gave this outcome one vote.
- **Maintain current level of fishing participation:** Management Personnel wanted to maintain the current level of fishing, meaning, anglers who currently fish continue to do so (do not drop out). Management Personnel were concerned with increasing the level of fishing participation due to the potential for increased crowding, user conflicts and impact on fisheries resources and angler satisfaction (one vote, from Management Personnel).

Additional Attitudinal Outcomes

The following desired attitudinal outcomes for fisheries communications received fewer than 15 votes (Table 4-31).

- **Non-anglers tolerant or supportive of angling/anglers:** Four focus groups recognized the need for non-anglers to be supportive of anglers as an attitudinal outcome of fisheries communications. Each of the focus groups identifying this outcome also voted, for a total of nine votes (Field Operations/Research -Supervisors, four votes; Management Personnel, three votes; Early Retirees, one vote; and Administrative Support, one vote). Note: this category could be generalized as "sharing resources with diverse users" and "cooperation among resources users," both of which were prioritized.
- **A public value of fishing:** Nearly all focus groups recognized "public value of Michigan's fisheries resources" in some statement for desired attitudinal outcomes (more specific values received votes listed below). Hatchery personnel ranked this category their second highest priority for fisheries communications, and gave it four votes.
- **Satisfaction of MDNR Fisheries Division informational materials:** Administrative Support personnel wanted the public to be satisfied with fishing informational materials the Division has to offer, and gave this outcome three votes.
- **Feel that Michigan's fisheries resources have an economic value:** Field Operations/Research -Non-supervisors specifically wanted non-anglers to recognize the economic value of Michigan fisheries resources, and allotted this category two votes.

Table 4-31. Summary of MDNR Fisheries Division personnel's remaining votes for attitudinal outcomes of future fisheries communications. Each individual focus group participant cast two (2) votes.

Desired Attitudinal Outcomes	Field Operations/ Research - Supervisors	Early Retirees	Mgt. Personnel	Program Services	Field Operations Research - Non-Supervisors	Hatchery	Creel Clerks	Admin. Support	Total Number of Votes
After participating in a communications program, target audiences should...									
non-anglers tolerant and supportive of anglers and fishing	4	1	3					1	9
value Michigan's fishing heritage					4				4
satisfied with Division I&E materials and other publications								3	3
value fisheries for their economic value in Michigan					2				2
respect different land uses			1						1

- **Respect for land use from an ecological perspective:** Management Personnel and Program Services wanted audiences to value land use, to understand the different costs and benefits associated with how land is used (i.e. for development, agriculture, natural lands, etc.). Management Personnel gave this category one vote.

One desired attitudinal outcome which was not prioritized, yet stands out as addressing many of the reported emerging conflict issues, was noted by several focus groups as “an appreciation toward the experience of fishing.” Personnel stated this concept in the context that angling success does not have to be measured in fish actually caught or the size or number of fish caught.

Strategic Matching of Division Strengths, Weaknesses, Opportunities and Threats

This research was initiated because the Division had an interest in identifying the audiences its communication efforts ought to be targeting and the messages communications ought to be conveying. However, literature on strategic planning suggests that *before* identifying target audiences and messages, the **issues** concerning fisheries communications management need to be identified and prioritized *in relation* to the existing and anticipated internal and external environments (Bryson 1988; Goodstein et al. 1993; Kotler et al. 1996; Thompson and Strickland 1995).

As described in the literature review, the identification and prioritization of issues important to fisheries management can be accomplished by conducting on-going monitoring of external trends. The issues identified are viewed as opportunities and/or threats to fisheries communication and management, while the simultaneous examination of the internal environment identifies strengths and weakness for meeting these opportunities and threats.

Strategic communications, researchers suggest, will make the most of strengths and opportunities, while attempting to reduce weaknesses, address constraints and downplay threats

(Goodstein et al. 1993; Kotler et al. 1996; Thompson and Strickland 1995). Therefore, the SWOT analysis involves **evaluating** the Division's strengths, weaknesses, opportunities and threats in relation to each other and the importance of each in achieving the goals and objectives of the organization. The purpose of this evaluation is to assist in making objective decisions about the priority of issues the Division can and should pursue to achieve management and communication goals and objectives. Table 4-32 provides examples of this type of SWOT analysis, examining how the Division might view certain trends identified by focus group participants as either opportunities or threats, and how the Division might make the most of internal strengths, while offsetting weaknesses in providing fisheries communications.

In the first example in Table 4-32, participating personnel reported as a strength a positive willingness among individual personnel to provide fisheries communications. Yet, in contrast, personnel reported that most Fisheries personnel lacked necessary communication skills. Personnel recognized that a "disconnect" with natural resources was a trend among urban or metro-area residents. This disconnect might represent a threat in public support for consumptive uses of fisheries resources, such as fishing, or toward fisheries management practices. To offset this threat, participating Division personnel viewed communication efforts targeted toward urban or metro area residents as an opportunity for the Division to pursue.

Gaps or Discrepancies in the SWOT Analysis

The example provided above, and other examples presented in Table 4-32, serve to illustrate the matching process of the SWOT analysis. A gap analysis, on the other hand, is aimed at determining discrepancies or gaps between two or more variables, in this case between the internal (strengths and weaknesses) and external (opportunities and threats) environments (Goodstein et al. 1993; Kotler et al. 1996; Thompson and Strickland 1995).

Table 4-32. Examples of a SWOT analysis, matching Division strengths and weaknesses, and external opportunities and threats (identified as trends by focus group participants). *Italicized text demonstrates how the Division might make the most of existing strengths, how weaknesses might be addressed and how trends can be interpreted as opportunities or threats toward fisheries management or communications.*

SWOT Analysis Example #1			
Strength → Making the Most of Existing Strengths <ul style="list-style-type: none"> A positive willingness among individual personnel to provide fisheries communications, and certain Fisheries personnel talented in providing communications → <i>The Division could inventory personnel communication skills and interests; amend personnel job descriptions to include communications; provide supervisory support for personnel conducting communications; establish positions in communications; provide communications training for existing Fisheries personnel.</i> 		Weakness → Addressing Weaknesses <ul style="list-style-type: none"> Lack of expertise and positions in communications; lack of flexibility in job duties and a lack of supervisory support toward providing communications → <i>The Division could provide communication training to Fisheries personnel; create positions specializing in providing communications; and, require communication skills in all newly hired personnel.</i> 	
Trend → Interpreted as an Opportunity <ul style="list-style-type: none"> Urbanization → <i>Could be interpreted as an opportunity to target mass audiences with fishing and related aquatic recreational opportunities and resource messages.</i> 		Trend → Interpreted as a Threat <ul style="list-style-type: none"> A disconnect with natural resources → <i>Could be interpreted as a threat to public support for consumptive uses of fisheries resources, such as fishing, or fisheries management practices.</i> 	

Table 4-32 (cont'd).

SWOT Analysis Example #2	
<p>Strength → Making the Most of Existing Strengths Positive track record working with partners → <i>The Division could enhance the reach of fisheries communications by working with partners better situated at effectively communicating with women and minority audiences.</i></p>	<p>Weaknesses → Addressing Weaknesses</p> <ul style="list-style-type: none"> Lack of diversity in Fisheries personnel → <i>The Division could encourage and enable women and minorities to seek a profession in the field of natural resources management.</i> <p>Trend → Interpreted as a Threat</p> <ul style="list-style-type: none"> Stagnant or decreasing fishing participation → <i>Could be interpreted as a threat to funding fisheries management with license revenues.</i>
SWOT Analysis Example #3	
<p>Strength → Making the Most of Existing Strengths</p> <ul style="list-style-type: none"> Field offices, hatcheries and the hatchery interpretive center → <i>The Division could use existing MDNR facilities (including parks and forests) to provide non-consumptive recreational opportunities.</i> 	<p>Weaknesses → Addressing Weaknesses</p> <ul style="list-style-type: none"> Department/Division focus on traditional constituents → <i>The Division could diversify its communication efforts to include non-consumptive interests.</i> <p>Trend → Interpreted as a Threat</p> <ul style="list-style-type: none"> Increased animal rights sentiment → <i>Public opposition to fishing and certain fisheries management practices could be interpreted as a threat to the management of fisheries and to recreational fishing.</i>

Table 4-32 (cont'd).

SWOT Analysis Example #4			
Strength → Making the Most of Existing Strengths <ul style="list-style-type: none"> MDNR Office of Information and Education → <i>The OI&E could provide a communication "hub" between all Divisions assisting with information sharing and development of Department-level watershed communications (e.g., the "common communication vision" personnel report that is lacking).</i> 		Weaknesses → Addressing Weaknesses <ul style="list-style-type: none"> Poor internal communications and lack of information sharing → <i>Habitat and watershed issues cross MDNR Divisions. The Division could use integrated communications planning to improve internal communications and information sharing.</i> 	
Trend → Interpreted as an Opportunity Increased interest in habitats, habitat restoration and watershed issues → <i>Interpreted as an opportunity to Communicate about ecosystem, watershed and habitat concepts, issues and problems as related to the watershed management philosophy of the MDNR</i>		Trend → Interpreted as a Threat <ul style="list-style-type: none"> Increased development of riparian/rural lands in northern Michigan → <i>Could be interpreted as a threat to fisheries resources and resource users due to loss of fisheries habitat, decreased access to fisheries resources, increased user conflicts.</i> 	

Table 4-33 reveals that the Division's weaknesses far outweigh its strengths in providing fisheries communications. In particular, personnel reported few strengths that the Division possessed in directly planning, developing or implementing fisheries communications. Many of the strengths were reported to be yet untapped, and therefore represent potential internal "opportunities."

Many of the weaknesses participating Fisheries personnel reported appear to be attributed to the reported lack of a communication strategy (e.g., a lack of priority for communications, the lack of identifiable objectives, target audiences and messages and a lack of funds allocated to fisheries communications). Many personnel reported that strategically planned communications could resolve many of the Division's reported woes (e.g., problems with agency credibility and public support, user conflicts, public misconceptions regarding fisheries management, etc.). Additionally, weak internal communications were reported as a problem on both Department and Division levels. Each of these weaknesses, however, seem (according to focus group participants) to be due to a lack of commitment toward using communications as a management tool to achieve management objectives and the Fisheries and Department missions.

When considering the questions, "Can existing strengths meet the challenges posed by external opportunities and threats?", "Do weaknesses exist in areas that are important for achieving fisheries management and communication objectives?", and "Is there alignment between the mission and the strategic issues/priorities that have been identified?" discrepancies between the SWOT are likely. This analysis suggests discrepancies or gaps in the Division's ability to be both responsive and proactive in addressing emerging issues and trends that represent threats to fisheries management.

Table 4-33. The Division's strengths and weaknesses listed in comparison to emerging threats and opportunities for fisheries management and communications.

Strengths/Weaknesses in Addressing Emerging Opportunities and Threats to Fisheries Management and Communications	Emerging Issues and Trends Interpreted as Opportunities and Threats To Communications and Fisheries Management
Strengths	Reported Trends Interpreted as Opportunities
<ul style="list-style-type: none"> • positive willingness to provide communications • Fisheries personnel talented in providing communications • participatory management style of strategic planning and Fisheries Division committees • positive track record working with partners in providing fisheries communications • MDNR Office of Information and Education • electronic communications 	<ul style="list-style-type: none"> • increased fishing participation among minorities • increased fishing participation among females • increased interest in habitats, habitat restoration and watershed issues • increased interest in fly fishing • increased satisfaction among Great Lakes anglers • more vocal and knowledgeable public • increased interest in fish viewing
Weaknesses	Reported Trends Interpreted as Threats
<ul style="list-style-type: none"> • lack of long-term MDNR and Fisheries Division commitment to communications • ability of Office of Information and Education • Department/Division focus on traditional constituents • lack of common voice/message • lack of allocating resources to communications • decrease in personnel due to early retirement • lack of supervisory support • lack of personnel with expertise in communications • lack of a communication strategy 	<ul style="list-style-type: none"> • urbanization → loss of fisheries habitat; public disconnect with resources • a disconnect with natural resources among urban or metro area residents → disinterest in consumptive resource uses (e.g., fishing) • increased animal rights sentiment → threatening public support for fishing and/or fisheries management practices • increased northern migration of Michigan residents → "transferred urbanites" do not understand their impacts on fisheries resources • increased development of riparian/rural lands in northern Michigan → loss or decreased quality of fisheries habitat; decreased public lands and access to fisheries resources

Table 4-33 (cont'd.).

Strengths/Weaknesses in Addressing Emerging Opportunities and Threats to Fisheries Management and Communications	Emerging Issues and Trends Interpreted as Opportunities and Threats To Communications and Fisheries Management
Weaknesses	Reported Trends Interpreted as Threats
<ul style="list-style-type: none"> • insufficient staff in Livonia field office • lack of diversity in Fisheries personnel • lack of time • conflict of duties • personnel attitude that "communications is not my job" • poor internal communications and lack of information sharing 	<ul style="list-style-type: none"> • increased crowding of fisheries/aquatic resources in northern Michigan → increased dissatisfaction among anglers; increased user conflicts • loss of perspective, lack of stakeholder awareness or understanding of exotic species (e.g., public does not remember when Pacific salmon and brown trout were not in Michigan; problems with Great Lakes in the 1950s-60s) → public takes fisheries management for granted • decreased fishing participation among traditional anglers • decreased mentoring—passing on of fishing traditions • less leisure time • "power vacations"¹ • increased distrust of MDNR • increased desire for instant gratification • increased use of technology while fishing • unrealistic expectations toward fisheries management and fishing

¹ Focus group participants described "power vacations" as recreation associated with easy access to the best amenities, resulting in high satisfaction experiences.

Gaps Between the Division's Current and Desired Communication Situations

Discrepancies or gaps were also observed between what participating Fisheries personnel described as the Division's current and desired fisheries communication situations (Table 4-34). While current fisheries communications mainly reach anglers and fisheries interest groups and/or individuals, participating Fisheries personnel reported a desire to reach or target more defined audiences with very particular messages (see Tables 4-14, 4-21, 4-25 and 4-28 for detailed information). For example, personnel were still interested in reaching anglers, although they wanted to *target* general, unorganized anglers (versus organized angling groups, e.g., Trout Unlimited) and youth anglers. Additionally, personnel wanted to target youth (in general) as well as schools with fisheries communications. Recognizing a need to enhance or improve communications with those persons who have a direct connection to aquatic resources, personnel believed that riparian property owners are another audience the Division ought to be addressing.

Based on personnel self-reports, current Fisheries communication activities are, for the most part, responding to public requests for information or Division assistance (as opposed to proactive and strategic communications aimed at achieving Division and Departmental missions, goals and objectives). These requests are primarily about fishing (e.g., where to and how to fish, what fish have been stocked and where), for presentations on study results and related management practices (perceived to be for use in understanding fishing conditions, but also used among fisheries and watershed interests groups for habitat improvement initiatives), and for various Departmental information (e.g., various MDNR permits and Wildlife Division information). Additionally, Division personnel reported that requests were commonly made by people with a particular interest (even a vested interest) in fish, fishing or fisheries management (e.g., anglers, fishing related businesses and regulators, watershed organizations, advisory groups, schools and members of the media) (see Requests, Table 4-5).

Table 4-34. Summary of the Division's current and desired fisheries communication situations. Gaps/discrepancies observed between communications currently offered and those participating Fisheries personnel reported they desired to provide are listed in *bold italicized text*.

Current Communication Situation	Desired Communication Situation
<p>Activities</p> <ul style="list-style-type: none"> • sport show booths • media relations • advisory committees and task forces • field encounters • presentations • Division and Department web pages • angling education outreach activities <p>Audiences Reached</p> <ul style="list-style-type: none"> • anglers • groups/individuals interested in fishing/fisheries management <p>Requests</p> <ul style="list-style-type: none"> • fishing (e.g., where to and how to fish, what fish have been stocked and where) • presentations on study results and related Division management practices • various Department information <p>Requested By</p> <ul style="list-style-type: none"> • anglers • fishing related businesses and regulators • watershed organizations • advisory groups • schools • members of the media 	<p>Future communication activities the Division might provide were not identified in this research. Decisions about communication activities, or channels, need to be identified <i>after</i> issues, outcomes and target (Fazio and Gilbert 1981).</p> <p>Audiences to Target</p> <ul style="list-style-type: none"> • <i>youth</i> • general anglers • the general public • <i>youth anglers</i> • schools • <i>riparian landowners</i> <p>Outcomes to Achieve with Communications</p> <ul style="list-style-type: none"> • <i>resolving management problems</i> (e.g., user conflicts/impacts on fisheries resources) • <i>improving the quality of fisheries and fishing</i> (e.g., decreasing human impacts on fisheries resources, including impacts on habitat, and encouraging ethical outdoor behaviors) • <i>understanding the "big picture" of fisheries and ecosystem management as well as an understanding of biological processes as relate to fishing and fisheries management</i> • <i>pride in Michigan's fisheries and fishing heritage</i> • <i>achieving management objectives and improving agency image</i> (e.g., promoting and enabling public involvement in fisheries management decision-making processes and stewardship activities)

Yet, when asked about the Division's *desired* communication situation, overall, Division personnel were interested in conveying more specific information with resulting knowledge, behavioral and attitudinal outcomes to particular audiences than they perceived the Division to be offering currently (see Target Audiences Table 4-15 and Desired Outcomes, Tables 4-15, 4-21, 4-25, and 4-28). Personnel reported that they were still interested in reaching their angling constituents (e.g., unorganized anglers and youth anglers) as well as other stakeholders of fisheries resources (the general non-angling public, seniors and riparian property owners).

In contrast to current fisheries communications, outcomes in which participating Fisheries personnel were interested focused on:

- resolving management problems (e.g., user conflicts and impacts on fisheries resources),
- improving the quality of fisheries and fishing (e.g., decreasing human impacts on fisheries resources, including impacts on habitat, and encouraging ethical outdoor behaviors),
- promoting a public understanding of the science involved in fisheries management,
- promoting awareness and pride in Michigan's fisheries resources and fishing heritage, and
- achieving management objectives and improving agency image (e.g., promoting and enabling public involvement in fisheries management decision-making processes and stewardship activities).

Overall, most desired outcomes related to developing a citizenry well informed about fisheries management, and biological and ecosystem processes, in order to motivate interest and action (e.g., stewardship behaviors) and to encourage positive public attitudes toward the MDNR Fisheries Division and ethical, responsible behavior regarding fish, fishing and fisheries management.

Applying Marketing Analysis to Determine Division Priorities

The outcome of the gap analysis (the identification of discrepancies/gaps) should help in identifying the strategic (or priority) issues the organization can and should pursue to achieve organizational goals and objectives (Bryson 1988). In addition to the gap analysis, Kotler et al. (1996) recommend using marketing models to help objectively identify organization priorities. The

use of a strategic balance sheet, for example, can help to determine the *relative importance* of an organization's strengths and weaknesses as they relate to achieving goals and objectives (Figure 4-1). The Division's "Operational competencies" (e.g., marketing, finance, products/services, organization) are rated *as they relate to providing fisheries communications*. Participating Fisheries personnel expressed interest in being involved in the on-going monitoring of the Division's internal environment (the SWOTs). Therefore, perhaps Fisheries personnel could have the opportunity to revisit the strengths and weaknesses which they identified in this research and use this tool to evaluate the feasibility of communication priorities. To analyze the feasibility of pursuing certain opportunities or addressing threats, Kotler et al. (1996) recommend the use of the product/market matrix (see Figure 4-2). For example, the trend in increased fishing participation among minorities and women, viewed as an opportunity, would suggest expansion of communications into new markets (as opposed to white males which make up the Division's traditional constituency). The questions to ask, would then be, "Does the Division respond to these new markets—minorities and women—with existing products (fishing opportunities, access and information) by additional market development, or by providing new products (e.g., Becoming an Outdoors Women program) through product development?" These questions should be couched with additional, and equally important questions: "What is the likelihood, based on research in communication and behavior change theory, that existing products or new products will 1) appeal to these markets? and, 2) achieve communication and management objectives?" The answers to these questions can be found in market research pertaining to the target audiences.

Sample Strategic Balance Sheet For the MDNR Fisheries Division

	Performance					Importance		
	Major Strength	Minor Strength	Neutral	Minor Weakness	Major Weakness	Hi	Med	Low
Organizational Competencies <i>as related to fisheries communications</i>								
<u>Marketing</u>								
Fisheries Division Image								
Market share								
Product quality								
Service quality								
Pricing effectiveness								
Distribution effectiveness								
Promotion effectiveness								
Personnel effectiveness								
Innovation effectiveness								
Geographical coverage								
<u>Finance</u>								
Cost/availability of capital								
Cash flow								
Financial stability								
<u>Products and/or Services</u>								
Facilities (e.g., Interpretive Ctr)								
Economies of scale								
Capacity								
Able dedicated personnel								
Ability to produce on time								
Communication skills								
<u>Organization</u>								
Visionary capable leadership								
Dedicated employees								
Entrepreneurial orientation								
Flexible/responsive								

Figure 4-1. Sample strategic balance sheet for analysis of the MDNR Fisheries Division's strengths and/or weaknesses (adapted from: Kotler et al. 1996).

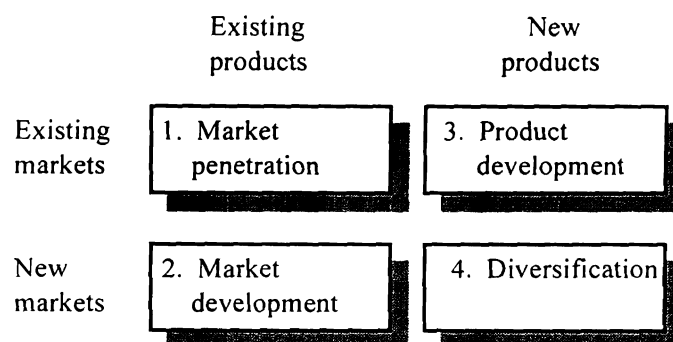


Figure 4-2. MDNR Fisheries Division market opportunity identification through the product/market matrix (source: adapted from Kotler et al. 1996).

Summary of Results

Focus group participants described current Fisheries Division communication activities as day-to-day correspondence and field encounters, media relations, participation on advisory committees, task forces and public meetings, presentations to schools and sport/fishing groups, the agency's web pages, various annual (not ongoing) outreach activities and sport show booths (see Activities, Table 4-3). These activities appear to be incidental to the particular jobs of Fisheries Division personnel, and thus, tended to reach audiences either predisposed to fisheries management activities or those who fish or participate in other outdoor related recreation (see Audiences, Table 4-4). This observation is corroborated by what focus group participants described as typical public requests for information: fishing information (what to fish for, where, when and how), reports and presentations on fisheries management practices, and study results (see Requests, Table 4-5), and by specific quotes later in the section about weaknesses (see Weaknesses, Tables 4-7 through 4-10).

Participating Fisheries personnel were enthusiastic about this study and the idea of improving the Division's communication efforts. Personnel stated a positive willingness to provide

fisheries communications and requested training to improve their communications skills (see Strengths, Table 4-6). They also felt that some Fisheries personnel were particularly talented in public relations and outreach education and that this strength had gone untapped. Personnel indicated that these and other interested personnel ought to be encouraged and given opportunities for additional communications involvement (i.e. revision of personnel position descriptions). Other strengths in providing fisheries communications included: the computerized license database, opportunities provided by the new MDNR Office of Information and Education, and partnering with groups to supplement and strengthen the Division's communication efforts. MDNR field offices and the Wolf Lake Hatchery Interpretive Center were strengths not widely recognized, but offer a means to reach a broad geographic distribution of audiences and particular needs of these audiences.

Most focus groups indicated that a lack of commitment to and support for communications (often termed "I&E" for information and education) was a long-term weakness of the Division as well as the Department (see Weaknesses Tables 4-7 through 4-10). Personnel reported that current communications lacked strategy; personnel noted that current communications did not clearly identify issues or messages, target audiences or use effective communication channels and were not founded on Division or Department priority needs.

Participating Fisheries personnel reported a lack of time, funding, training and support (technical and supervisory support, in addition to FTEs designated to communications) for individuals to provide fisheries communications. A weak internal communications network and a general lack of information sharing along all levels in the Department were reported weaknesses in providing communications.

Participating Fisheries personnel reported on trends and emerging issues that could either be interpreted as opportunities for fisheries communications or threats toward fisheries management practices (see Trends, Tables 4-11 through 4-14). People moving to the northern regions of

Michigan and the subsequent development of rural and riparian lands, increased crowding, and fishing pressure were reported as trends. Numerous user conflicts were reported, but foremost were differences between consumptive and non-consumptive recreationists (anglers and non-anglers) and within the angling population, between catch-and-release anglers and catch-and-keep anglers (respondents did not elaborate on what specific conflicts were occurring). Within all focus groups, personnel believed that animal rights sentiments were on the increase.

Advances in technology in general (computers and electronic communication and/or networking, electronic games and other powered recreation), and more specifically, advances in fishing paraphernalia were also trends which personnel reported. Less leisure time and a trend in instant gratification were reported to affect fishing and other outdoor recreation pursuits. Personnel reported that the public was increasingly distrustful of the MDNR and that the public had unrealistic fisheries management and fishing expectations.

After prioritizing the list of target audiences generated in the focus groups, respondents ranked youth, general anglers, the general public, youth anglers, schools and riparian landowners as the top five audiences which fisheries communications developed in the immediate future ought to target (see Priority Target Audiences, Table 4-16).

Focus group participants ranked knowledge outcomes as a priority for future communications to achieve. As a result of fisheries communications, audiences should: understand what the MDNR Fisheries Division is and does; understand the “big picture” of ecosystem processes and natural resources management; understand biological processes of aquatic systems and organisms; know that the aquatic resources in Michigan are bountiful and unique; and, understand that aquatic resources are limited (see Priority Knowledge Outcomes, Table 4-22).

As a result of communications, focus group participants wanted audiences to have the following behavioral outcomes: stewardship for aquatic resources; cooperating with other anglers (recreational, tribal, and commercial) and other aquatic resources users; involvement in fisheries

management; mentoring by participating in angler recruitment; and, promoting the MDNR positively (see Priority Behavioral Outcomes, Table 4-25).

Focus group participants wanted specific attitudinal outcomes as a result of communications. Personnel wanted audiences to: trust and respect for the MDNR; respect and feel stewardship and ownership for aquatic resources; have realistic expectations for fisheries management and fishing; have a positive outlook toward the MDNR, that MDNR employees are working for the public's best interests; and, support fisheries managers as professionals (see Priority Attitudinal Outcomes, Table 4-27).

In addition to what was ranked as communication priorities, other target audiences and desired outcomes were identified (see Tables 4-28 through 31. When considered with the SWOT analysis, these items may deserve further attention. Additionally, results of the SWOT analysis indicate that the Division's weaknesses for providing fisheries communications far outweigh its strengths (see Table 4-33). This analysis suggests discrepancies or gaps in the Division's ability to be both responsive and proactive in addressing emerging issues and trends that represent threats to fisheries management.

Discrepancies or gaps were also observed between what participating Fisheries personnel described as the Division's current and desired fisheries communication situations (see Table 4-34). Based on personnel self-reports, current Fisheries communication activities are, for the most part, responding to public requests for information or Division assistance (as opposed to proactive and strategic communications aimed at achieving Division and Departmental missions, goals and objectives). In contrast, when asked about the Division's *desired* communication situation, overall, Division personnel were interested in conveying more specific information with resulting knowledge, behavioral and attitudinal outcomes to particular audiences than they perceived the Division to be offering currently.

To assist with making decisions about Division priorities for fisheries communications, feasibility of pursuing certain communication avenues, and the allocation of resources to communications, Kotler et al. (1996) recommend using various marketing models. A sample Strategic Balance Sheet for the MDNR Fisheries Division (see Figure 4-1) and an example of applying the research results to the product/market matrix model (Figure 4-2) were presented.

Chapter 5

Discussion and Recommendations

In this chapter, I first present the limitations of this research, and organizational changes that have occurred in the MDNR or state of Michigan since initiating this research that may affect fisheries communications. I then discuss the Division's communication needs, as identified in this research and present recommendations for meeting these needs. Next, I discuss the communication priorities ranked by focus group participants, as these priorities relate to the Division's strengths, weaknesses, opportunities and threats in relation to achieving Division management and communication objectives. This section is followed by recommendations for further research communications occurring in the nation .

Limitations of this Research

The study population for this research consisted of MDNR Fisheries personnel. When interpreting and applying the results from this research, care must be taken not to generalize these results to all MDNR personnel or to other agency fisheries professionals.

Response to the invitation to participate in the focus groups was satisfactory (77% affirmative responses), and participation was 99% . However, a response bias could have occurred if personnel who agreed to participate represented views different from those who declined. This study used random selection to identify potential focus group participants, and non-response for this study was small (6%). Randomization (a selection process which assures that all participants possess an equivalent chance to be involved in the study) is an effective strategy to minimize the selection bias described above (Krueger 1994).

Krueger (1994) states that random selection is particularly appropriate when inferences are made to a larger population because of the assumption that opinions, attitudes, or whatever is being studied will be normally distributed within that population. Therefore, a random sample of sufficient size will be an adequate substitute for describing the entire population. Participation in this research was 33 percent (n=75) of the 228 Fisheries Division personnel, an adequate representation of the employees of the Division.

Regardless of randomization, it is important to keep in mind that the intent of focus groups is not to infer but to understand, not to generalize but to determine the range of responses, not to make statements about the population but to provide insights about how people perceive a situation. As a result, focus groups require a flexible research design, and although a degree of randomization may be used, it is not the primary factor in selection (Krueger 1994).

Group discussions, such as focus groups, can also cause a response bias caused by people answering questions based on how they believe they *should* answer (due to embarrassment or conforming to other participant views), or responses which are exaggerated or false. Also, supervisors can inhibit subordinate personnel from expressing their opinions, especially opinions that differ from that of their boss. To offset this bias, I created homogeneous focus groups composed of personnel with similar program responsibilities, and organized supervisors into different focus groups from personnel whom they supervise. Furthermore, as a facilitator, I encouraged an atmosphere open to all points of view and encouraged all focus group attendees to be active participants.

Krueger (1994) states that there is a danger in using existing groups of people (e.g., employee work groups) as the basis for establishing homogeneous focus groups. A group of co-workers may have pre-established lines of communications (e.g., jargon, sense of humor, and shared past experiences) that may hinder the ability of the facilitator to understand the nuances of the oral and body language used by the group. My experience working with the Division included

an appointment in the Lansing office providing numerous opportunities to interact as a Division “co-worker” for a year prior to beginning data collection. As facilitator for all eight focus group sessions, I was able to gain frank responses, understand the discussion context, and provide continuity to the focus group delivery, and hence, each group discussion.

Facilitator consistency is an important factor influencing the validity of focus group results. The basic nature of qualitative research—and its claim to validity—lies in the intense involvement between researcher and subject. Because the focus group facilitator can challenge and probe for the most truthful responses, supporters claim, qualitative research can yield a more in-depth analysis than that produced by formal quantitative methods (Krueger 1994). Krueger adds that focus groups typically have high face value validity, which is due in large part to the believability of comments from participants. People open up in focus groups and share insights that may not be available from individual interviews, questionnaires, or other data sources. When confronted with focus group results, decision makers may find explanations that seem infinitely reasonable, explanations that have come directly from participants and not from secondhand summaries.

The intent of this needs assessment was to gain information about the Division’s communication needs and priorities as perceived by Fisheries personnel. This research did not examine how the Division might address its communication needs. Witkin and Altschuld (1995) state that the purpose of a needs assessment is to identify gaps/discrepancies between the present state (what is) and the desired, future state (what ought to be). They caution not to use needs assessments as a means for identifying solutions to needs, but rather for identifying the ends to be attained. The needs assessment findings, however, can help to establish guidelines and criteria for selecting the means or solutions.

Organizational and Program Changes in the MDNR

Since initiating this research in the spring of 1996, several organizational and programmatic changes have occurred in the Department and in the Fisheries Division which might affect how the

results of this research are used. Additionally, agency changes may affect the planning, development or implementation of fisheries communications. The following are changes in the MDNR or Fisheries Division organization:

- **The Addition of the MDNR Office of Information and Education (OIE):** In December, 1996, the MDNR Office of Information and Education (OIE) was established, based on a recommendation from the Hunting and Fishing Heritage Task Force (initiated in March, 1995 by Governor Engler) (Hunting and Fishing Heritage Task Force 1996). The OIE is responsible for developing and implementing a marketing strategy with the goal of educating and informing the citizens of Michigan about hunting, fishing and trapping heritage. The outcome of this initiative is to encourage more citizens to become involved in these and other outdoor activities.
- **The State Early Retirement Initiative:** In June, 1997, many Fisheries Division personnel took advantage of the state option for early retirement. Many positions vacated since the early retirement, to date, have not been filled. Fisheries Chief, John Robertson, who initiated this research, transferred to the Division of Forest Management and Kelley Smith was appointed Fisheries Chief in his place.
- **Fisheries Division Management Team:** The loss of Fisheries personnel due to early retirement meant changes in membership of the Division Management Team.
- **Adoption of Watershed-basin Management of Natural Resources:** Instead of an organizational structure based on arbitrary regions in Michigan, the MDNR Fisheries Division has adopted a watershed-basin approach to resource management. This management structure enables field staff to work efficiently with other MDNR Divisions and other agencies aimed at a landscape, ecosystem approach to resource management.

The following are changes in communication programming:

- **The Michigan Young Angler Program and Small Fry Fishing Club:** In November, 1997 the MDNR Fisheries Division initiated the Michigan Young Angler Program (YAP) in response to the legislative addition of the \$2 Michigan voluntary all-species youth fishing license for youth ages 12-16. The license provides a means of tracking youth fishing participation.
- The Small Fry Fishing Club (SFFC) was initiated in 1998 to provide youth under age 12 an opportunity to participate in a MDNR program and receive MDNR messages. Currently, the YAP consists of the voluntary youth license, an annual collector patch and a quarterly newsletter, *Fish On!* The SFFC consists of a collector's patch and quarterly newsletter. Objectives of the two programs include:
 - providing aquatic resources information and education,
 - encouraging aquatic resources awareness and stewardship,
 - providing a channel for two-way communications between young recreationists

- and aquatic resource educators,
 - providing access information to fishing and related aquatic recreation and involvement opportunities,
 - promoting Michigan's fishing heritage,
 - establishing a Youth Education and Outreach Fund with fees generated through the sale of Youth Angler Licenses, and
 - increasing youth fishing participation and retention.
- **Project FISH (Friends Involved in Sportfishing Heritage):**
 Project FISH is a communication program funded by the Great Lakes Fishery Trust and coordinated by the Michigan Department of Fisheries and Wildlife. It is designed to involve children in long-term, mentor-based, community-supported, sportfishing and aquatic resource education. The program works through a statewide committee with representatives, including MDNR Fisheries Division personnel.

Many results identified in this research can be used in the planning of the YAP and SFFC programs, and other curricula and hatchery interpretation initiatives (e.g., application of the strategic planning process, the identification of messages related to the desired outcomes and to emerging trends/issues, Division strengths and weaknesses for participating in these initiatives addressed).

MDNR Fisheries Division Communication Needs: A Strategy for MDNR Fisheries Division's Communications

This research was initiated because there was an expressed interest by the MDNR Fisheries Division to develop a communication strategy designed to guide Division members in making sound, research-based decisions to improve communication effectiveness and efficiency. This interest was supported by five of the eight focus groups which indicated a need for a fisheries communications strategy to help identify and prioritize: communication and management objectives, issues concerning the management of fisheries resources, and audiences and messages to address with communications. Focus groups also indicated a need to use effective means for delivering communications. Three focus groups recognized that the Division Strategic Plan does not clearly identify fisheries communication objectives and that the few activities listed in the plan lacked the resources necessary to support follow-through of communication efforts.

The comparison of the Division's current and desired communication situations, as described by focus group participants, revealed gaps and discrepancies between the two. For example, current communication activities predominately reach anglers and other fishing-related interest groups, while participating Fisheries personnel reported a desire to reach or target more defined audiences with very particular messages. Additionally, based on personnel self-reports, current Fisheries communication activities are, for the most part, responding to public requests for information or Division assistance as opposed to proactive and strategic communications aimed at achieving Division and Departmental missions, goals and objectives. These gaps and discrepancies demonstrate that needs exist in order for the Division to achieve its desired communication situation.

Gaps and discrepancies also were observed in the SWOT analysis, which compared the Division's strengths and weaknesses in providing communications (and thus, in achieving the desired communication situation) with opportunities and threats external to the Division. The SWOT analysis suggests discrepancies or gaps exist in the Division's ability to be both responsive and proactive in addressing emerging issues and trends that represent threats to fisheries management.

In sum, the methods used in this research illustrate two phases in the process of strategic communications planning process (see Figure 2-1), while research results suggest that the Division can benefit from conducting on-going strategic communications planning. I based this research on theory in strategic planning and communications, and drew heavily upon models from Bryson (1988), Goodstein et al. (1993) and Kotler et al. (1996) from which I incorporated the communication component described by Rosenau (1982). The outcome is a communications strategy model (see Figure 2-1). **I recommend that the Division use the strategic planning model in its communication planning, and continue the strategic planning process initiated by this research.**

Action Plan for Strategic Communications Planning

There are many options as to how the Division might conduct strategic planning of fisheries communications. One option is to include communications planning in the existing annual strategic planning process guiding fisheries management. During the annual strategic planning session, each management program objective and key result could be couched with appropriate communication objectives and key results, as needed. Another option is to establish a Communications Committee charged with the task of annually examining the Division's environments (SWOTs) and its Strategic Plan, and *strategically* determining the communication objectives and Key Results necessary for achieving the plans management objectives. This committee might be composed of personnel representing the different Division Program Units/watershed basins, thus enabling these committee members to integrate Unit and regional communication needs into the Strategic Plan's communication objectives **and** support their implementation as Division communication liaisons. In their prospective Unit/Watershed basin, each communication liaison could **annually** determine the top communication and management issues and report back to the Communication Committee. The committee could then prioritize the issues and correlate them with the **management** priorities. Other options involve integrating strategic communications planning into the decision-making processes of fisheries management, as described below.

If there are weaknesses to conducting strategic planning, they are likely to be—as more than one focus group participant pointed out with regards to the Division's participatory management style—indecisive, slow and cumbersome. On occasion, complex, rapidly emerging issues and opportunities occur which may preclude in-depth strategic planning prior to having to act. Methods exist for rapid assessment of issues, environmental situations, target audiences and communications design which are well documented as effective (Jacobson 1997). In spirit, the

rapid assessment approach follows a the systematic strategic planning steps, albeit, in an abbreviated form.

Integration of Communications into Fisheries Management Decision-Making

The process of strategic planning is aimed at addressing the dynamics of rapidly changing environments, both internal and external to an organization (Bryson 1988; Goodstein et al. 1993; Kotler et al. 1996; Lorange 1979; Migliore et al. 1995; Nutt and Backoff 1992). The foundation of strategic planning, then, is the ongoing monitoring and continued adaptation to external forces, while at the same time, remaining attentive to internal processes and being willing to change them in an open and cooperative manner. Therefore, the results of any particular analysis of the Division's environments and strategic issues are situational, meaning the results are subject to the conditions of the environments at a particular point in time.

Many of the trends and emerging issues identified by focus group participants (e.g., changing demographics and public attitudes toward fisheries management and fishing, and user conflicts) are indicative of change in the Division's external environment. Similarly, several dynamics of the internal workings of the Fisheries Division were reported such as loss of personnel due to early retirement, and changes in organization in response to the administrative split of the Michigan Department of Natural Resources and the Michigan Department of Environmental Quality.

To monitor and address such changes, human dimensions and communication specialists suggest that communications be integrated into every day management decision making (Adams et al. 1988; Case 1989; Mather et al. 1995; Parrish et al. 1995; Wilde et al. 1996). One problem identified, however, is that the communications process is typically structured as a separate agency function (e.g., Public Affairs Divisions and Press Offices, and Information and Education Divisions) (Adams et al. 1988; Case 1989). Studies reveal that, as a consequence, human

dimensions and communication specialists often have little involvement in management decisions aimed at responding to social trends or issues (Adams et al. 1988; Case 1989; Decker et al. 1989). Yet, according to Decker (1985), “good internal communications is required of an agency before good external communications can be expected, because every individual in an agency is a spokesperson for it.”

Poor internal communications was reported as a weakness in providing fisheries communications to the Division’s internal as well as external publics. Participating Fisheries personnel reported a lack of information sharing within the Division and Department, a feeling of isolation among field office and hatchery personnel, and issues of “turf” between Fisheries and others providing communications in the Department. The participatory management style used in the Division, on the other hand, was considered a strength in providing fisheries communications. By integrating the function of communications into fisheries management, via the participatory management opportunities provided by annual revision of the Strategic Plan, the watershed basin management structure, and various Division committees, for example, internal communications can be facilitated.

Specifically, channels for communications among agency managers, researchers and educators, for example, need to be opened or created in order to adequately address needs identified by all or to enable coordination of communication and management efforts. Mather et al. (1995) suggest that issues important to fisheries managers need to be agreed upon and prioritized and, more importantly, effectively communicated to researchers, communication specialists and educators attempting to address, work together and solve these concerns.

Human dimensions specialists suggest that effective internal communications can help in anticipating needs and expectations of changing organization members (Decker et al. 1996a). Case 1989; Decker 1985; Norrie 1993). Because differences in communication needs and priorities between employee groups/Program Units and between supervisory and non-supervisory-level

personnel were observed in this research, integration of communications planning could facilitate ongoing identification and consideration of differing needs. Furthermore, as with the external environment, Division needs and priorities are dynamic, and are subject to change as management decisions are made. To assess, respond to and be proactive in ever-changing communication needs and priorities, the function of communications (including human dimensions and marketing research) will need to be integrated into fisheries management decision making. **I recommend that strategic communications planning be integrated into the Fisheries Division management decision-making.** Integrated into all fisheries management processes, *strategic* communications can be provided on an as needed basis, resulting in a proactive (versus reactive) approach to fisheries communication and management objectives.

Action Plan for Integrating Communications Planning

In addition to the annual review and revision of the Strategic Plan, the Division's new organization structure based on watershed basins provides an option for conducting communications planning at a regional level. This option presents an opportunity to address regional communication needs—a need identified through this research.

Another option for conducting strategic communication planning is through the various Division committees (e.g., the Recreational Fisheries Committee), or through a committee established for the purpose of examining and integrating Division communications (e.g., the Communications Committee described above). In addition, a specialist—a “communications liaison”—trained in communications, human dimensions and marketing could be included on the team conducting fisheries strategic planning. This specialist could be: (1) existing Fisheries personnel expressing an interest in serving in a communications capacity, and interested in receiving training in communications and human dimensions research (with revision of their position descriptions to reflect these responsibilities), (2) a new position in the Fisheries Division,

(3) a representative from the MDNR Office of Information and Education, or (4) an independent consultant to the Division.

Additionally, during any strategic communications planning, members from each employee group/Program Unit should be included to lend their prospective insight into Division communication needs, opportunities and threats as related to management issues being addressed.

Long-term Commitment to the Communication Function of Fisheries Management

The usefulness of a communications strategy and the integration of communications into fisheries management decision-making are ultimately dependent upon the Division and Department's level of commitment to fisheries communications. Without the support and direction from management and the necessary resources, implementing an integrated communication strategy will likely face difficulties (Amend 1993; Crowe 1983; Decker and Enck 1996; Decker et al. 1996b; Decker et al. 1989; Madson 1992).

Participating Fisheries personnel believed that communications were not considered a priority in the Division. They provided supporting evidence by listing a the Division's history of not allocating funds to communications, a lack of communication positions in the Division, a lack of personnel with expertise in communications, a lack of supervisory support for personnel interested in providing communications, and a lack of flexibility in the Strategic Plan and in the Division organizational structure to accommodate communications.

The failure to support the communication function within natural resources management is not unique to Michigan (Adams et al. 1988; Case 1989; Madson 1992). In 1988, a national study of information and education (I&E) divisions revealed that communications received 2.7 percent of the total reported agency budgets and was staffed by 2.6 percent of the total personnel (Adams et al. 1988). A more recent report found that, on average, state fish and wildlife agencies employ 23 full time positions dedicated to I&E functions, with a high of 70 (Missouri). Michigan was one of three

states which did not list having any personnel dedicated to I&E (Wildlife Management Institute 1997).

With regard to funding communications, nearly all states allocate some percentage of their Federal Aid apportionment to aquatic resources education (ARE). Based on a 1994 report (Survey of State Fish and Wildlife Agency Aquatic Resources Education Programs) by the Sport Fishing and Boating Partnership Council, on average, \$200,000 is allocated toward aquatic education and outreach activities nationally, with a high of \$2,000,000 (Ohio⁹) and low of \$5,000 (Michigan) reported. States reported using an average of 63.5% of their Federal Aid funds eligible for aquatic education and outreach, with a high of 100% and low of 0%. In fact, the 1998 reauthorization of the Sport Fish Restoration Act (the 1984 Wallup-Breaux amendment) increased the percentage states can use toward aquatic education from ten to fifteen percent. Yet, while other states are looking to spend increased dollars within aquatic education, Michigan remains one of only two states which does not regularly use any of the Federal Aid funds for this communication effort (personal communication Schneider 1998).

Despite these shortcomings, focus group participants were enthusiastic about improving the Division's communication situation, and reported that there was strong leadership support for fisheries communications and a positive willingness among personnel to providing communications. Participating Fisheries personnel also spoke highly of specific employees who they believed to be particularly talented in communications, such as in public relations and angling education. An interest in communications training and cross-training between Division Units as well as between the different Divisions in the Department was also reported.

⁹ Funds include sources associated with partnerships with zoos, aquariums, museums and others.

Human dimensions researchers contend that there is a need for resource managers to perceive and value communications as a tool which can help achieve management objectives (Adams et al. 1988; Case 1989; Mather et al. 1995; Parrish et al. 1995; Wilde et al. 1996). The benefits of improved between agencies and the public, researchers note, include creating more support for natural resource programs and additional funding for resource management agencies (Decker et al. 1987; Decker et al. 1996b; Shanks 1989). Peyton (1987) suggests that improving communications can increase public acceptance of management decisions, decrease disruption, improve management plans, represent a broader range of values, and develop citizen responsibilities for resources. When integrated into decision-making, human dimensions and marketing research-based communications can enable resource managers to make decisions that are responsive, representative of diverse publics, predictive of trends and emerging issues, and proactive in policy, communication objectives and services (Decker and Enck 1996). Acknowledging that improved communications would have immense benefits for the Division, one focus group participant admitted that it was “kind of scary opening up your mind and bringing in additional resources to help [with communications] because you feel like you are giving something up and you don’t understand that you are really gaining twice as much [in the long run].” (Program Services: 1140)

I recommend that Division managers communicate their commitment to communications by supporting this function in management decision-making processes and through the allocation of Division resources (e.g., funds, personnel time, positions).

Action Plan for Demonstrating Commitment to Fisheries Communications

The Fisheries Division Chief, the Management Team, and area managers and supervisors can demonstrate their individual commitment to using communications as a management tool by establishing a supportive environment for communications. This may include adjusting management objectives and strategies based on human dimensions/market research findings.

Commitment and support for fisheries communications can be demonstrated by the Division managers by the immediate allocation of Division funds to:

- engage a specialist(s) in communications, including human dimensions and marketing research, and
- conduct on-going human dimensions/market research to determine stakeholder fisheries communication and management needs and interests, target audience characteristics (e.g., demographics, attitudes toward natural resource management/use, knowledge of fisheries management and recreational opportunities).

Additionally, the Division might consider formally using a portion of the Sport Fish Restoration funds for aquatic resources education and outreach. To qualify for federal aid funds, the Application for Federal Assistance (administered by the US Fish and Wildlife Service) requires a five-year plan describing the activities, budget and personnel and a projection of the number of people the communication programs, products or services are likely to reach. As a result of this study, the Fisheries Division is armed with information about how it might proceed with strategic planning of fisheries communications, and thus, in an excellent position to initiate aquatic resources education and outreach communication activities.

The Division Chief and managers could more strongly voice their encourage and enable positive internal communications (e.g., posting reports and updates on the electronic communication server and encouraging input/comments; enable the communication specialist(s) to interface with the different watershed units, committees; recognize and reward positive internal communications). The Division Chief and the Management Team could implement the Fisheries Communication Strategy described above, in other words, continue the strategic planning process initiated in this research (i.e. finalize strategic issues to address with communications [see Priorities below], establish communication **and** management objectives to address these issues, identify and implement strategic activities/tactics to achieve objectives, evaluate to determine if the process/communication activities were a success) and conduct on-going communications strategic

planning. The Division Chief and managers could encourage and enable interested Fisheries personnel to participate in strategic communications planning and in providing fisheries communications.

Communications Training for Fisheries Division Personnel

In January 1997, the Fisheries Division employed 209 full time and 24+ seasonal employees. Among the 75 Division employees who participated in this research, only 2.7% percent (n=2) reported any training in communications (e.g., journalism, education). As described by focus group participants, however, communications, either formal or non-formal, are some part of every job in the Fisheries Division. Furthermore, some staff members' main job responsibility is to interface with the public (e.g., creel clerks, receptionists).

Focus group participants reported a positive willingness among Fisheries personnel to provide communications. Participants were also interested in workshops and other training opportunities designed to improve communication skills. They believed that cross-training between Program Units and between Divisions could assist with providing effective and efficient fisheries communications, as would a commitment to information sharing among supervisors and personnel whom they supervise, and between others in the Division and Department. Several employee groups reported feeling "isolated" in the field and "uninformed" about what others in the Division and in the Department were doing. They expressed an interest in receiving project updates, press releases and similar information "leaks" that would help to inform and enable them to communicate intelligently with various publics. To make better decisions about communications and to improve the ability of personnel to communicate effectively, **I recommend that the Division provide annual opportunities for training in communications.** Furthermore, **I recommend that the Division provide resources designed to facilitate Division personnel in their communication efforts.**

Action Plan for Personnel Training

Program Units/Watershed basin managers and personnel could annually identify communication training needs (e.g., development and delivery of presentations, public relations). One option is that the proposed Communication Liaisons could be responsible for inventorying personnel communication skills and training needs within their Program Unit/Watershed basin areas.

Division management could enable an in-house specialist or independent consultant to provide seminars/workshops in specific areas of communications, each of which include components of strategic communications planning, identification and use of resources, and evaluation.

Communication training might include:

- non-formal communications (e.g., public relations with people encountered in the field),
- formal communications (e.g., developing and implementing outreach and education services, such as fishing derbies; and developing and delivering presentations for various audiences/ages, participating/facilitating public meetings),
- taking an objective-driven rather than a tool-driven approach to communications (see Literature Review), and
- determining and using the best research-based approach to providing communications (see Literature Review).

The Division might also provide communication resources to enhance the effectiveness of staff communication efforts (e.g., reference materials on planning, developing and implementing fisheries communications, aquatic education materials). The Division could either (1) identify and obtain existing resources (e.g., resources available from other state agencies), or (2) using a strategic planning approach, develop (or have developed) research-based (using what is known to be the most effective means for changing attitudes and behaviors) resources. To ensure the likelihood of personnel to use (and use effectively) communication resources, the Division could include resource training for Fisheries personnel. An evaluation component should be included in

the communication budget to determine the effectiveness of the a) resources, b) training, and c) the communication activities. Other options are that the Division could provide short, 1-2 hour seminars; longer 2-4 hour workshops could be provided on a rotational or as needed basis. These workshops/seminars could be offered at the annual Fisheries Inservice Training, before/after meetings (e.g., committee, watershed basin meetings), or structured as longer, all-inclusive training either offered periodically or regionally.

The MDNR Fisheries Division Communication Priorities: Matching Division Strengths and Weaknesses with External Opportunities and Threats

Although focus groups participants identified emerging issues and trends, these were not specifically presented as potential opportunities or threats to fisheries communications or management. This was due to lack of time during the two-hour focus groups not only to identify strengths, weaknesses, opportunities and threats (SWOT), but also to compare and “match” internal strengths and weaknesses with external opportunities and threats. The final outcome of the SWOT analysis is aimed at setting priorities which take advantage of strengths and opportunities, while offsetting or minimizing weaknesses and threats. This involves an evaluation of the Division’s strengths, weaknesses, opportunities and threats in relation to each other and the importance of each in achieving the goals and objectives of the organization (Goodstein et al. 1993; Kotler et al. 1996; Thompson and Strickland 1995). Participating Fisheries personnel indicated a need to inventory and “match” personnel communications skills, to make the most of untapped strengths (e.g., certain personnel interested or talented in providing communications, the electronic fishing license database) and to improve personnel communication skills through continuing education opportunities.

In addition to the opportunities and threats (the emerging issues and trends) identified by participating Fisheries personnel, other, secondary information should be reviewed and used to

verify personnel perceptions about Michigan publics and issues and to further enlighten fisheries communications needs and priorities. Secondary information on topics such as demographic statistics, public attitudes toward natural resource use/management, recreational satisfactions and constraints would be helpful in determining which audiences and desired outcomes fisheries communications ought to impact.

Witkin and Altschuld (1995) suggest that a needs assessment be conducted in several stages: pre-assessment, for the purpose of gathering information to design the data-collection stage (assessment); assessment, to collect data on perceived needs and to conduct preliminary prioritization of needs; and, post-assessment, designed to establish in-depth criteria with which to systematically prioritize needs identified during assessment.

Until strategic communications planning is established within the Division (through any number of options described above), **I recommend a post-assessment workshop to examine and evaluate the SWOT analysis.** Workshop participants could then evaluate the Division's SWOT for determining the Division's capability for achieving communication objectives.

Action Plan for Matching Division Strengths, Weaknesses, Opportunities and Threats

To help inform workshop participants about trends and emerging issues that might impact on fisheries management and communication priorities, the Division should examine and summarize secondary sources (e.g., social indicators). Witkin and Altschuld (1995) suggest considering a number of questions prior to collecting, interpreting and reporting results of secondary sources:

1. What do we currently know about the need area and what kinds of data do we have that support our knowledge and understanding?
2. What more would we like to know; would existing sources of data be helpful in this regard?
3. What kinds of data are contained in existing sources? Can we obtain access to them?
4. How closely do these data fit our informational needs and what types of inferences might we have to make?
5. How have these data been obtained and maintained? (e.g., What is their quality? This is an especially important question about agency or institutional records).
6. What kinds of safeguards should we observe to guarantee the confidentiality of records?

7. If available records do not fit our informational needs, is it possible to modify the current record-keeping system, or should we develop and implement a new one?
8. Do current agency and institutional records contain qualitative as well as quantitative data? What is their nature and value? and,
9. How do regionally or nationally collected data relate to our local situation? Do the trends in such data apply to the parameters we see locally?

After gathering information about the Division's external environment, I propose the Division convene a workshop composed of diverse Fisheries personnel assigned with the task of evaluating the Division's strengths and weaknesses in relation to each other and as related to the opportunities and threats challenging fisheries management and communications. The use of the Strategic Balance Sheet (Kotler et al. 1996), illustrated in the Literature Review and applied to the Fisheries Division (see Results) might be a helpful tool for evaluating the Division's SWOTs and in establishing communication priorities.

Target Audiences and Desired Outcomes

Each focus group worked independently from the other focus groups when describing the current and desired communication situations, including target audiences and desired outcomes. The independence of the focus groups becomes important when one considers the final listing of priority target audiences and desired outcomes to achieve with fisheries communications. For example, some audiences and outcomes were identified by only one or two groups, and, when voted upon, these items received few votes. These audiences and outcomes, thus, were not ranked as a priority for future fisheries communications (Tables 4-28 through 4-31). Items which failed to be ranked as a communication priority should not be interpreted as unimportant, however. On the contrary, had all focus groups had the opportunity to rank target audiences and outcomes from a compiled list of items, it is likely that the outcome of the final priorities for fisheries communications would be different.

Furthermore, the method of prioritization used in this research helps to demonstrate the different perceptions of communication priorities among Fisheries employee groups, supervisory

and non-supervisory personnel. Therefore, in addition to fisheries communications designed to achieve broad Division management objectives, members of the Division may want to consider the specific communication needs identified by different employee groups, by supervisory and non-supervisory-level personnel, or within various geographic regions in Michigan.

Participating Fisheries personnel recognized the need to design communications which are targeted toward specific stakeholder groups. They further recognized the need for prioritization of communications in order to allocate scarce Division resources efficiently: "We need to identify messages—the information that we want out there, and we'll want to prioritize those as a Division and then try to find the most effective means of getting [the message] out there" (Management Personnel).

Focus group participants also recognized that current communication efforts typically reach anglers and that there is a need to broaden fisheries communications to include non-traditional angling groups and non-angling stakeholder groups as well. Human dimensions research supports this need as well (Dann 1993; Decker et al. 1996b; Duda 1993; Murdock et al. 1996; Rupert 1997; Thomas and Peterson 1993).

I recommend a post assessment workshop to provide members of the Division an opportunity to review and comment on all target audiences and desired outcomes identified in this research. Workshop participants could then prioritize the issues and target audiences to address and the desired outcomes to achieve with fisheries communications.

Action Plan for Determining Priority Target Audiences and Desired Outcomes

The Division would be best served by conducting the prioritization of target audiences immediately following the SWOT evaluation. A workshop to accomplish these two tasks could include several different Division personnel. Participants would be assigned the task of establishing criteria which they will use to prioritize the Division's needs, as identified in this research.

Priorities can be established using force field Analysis, DACUM, mailed Delphi survey, group-modified Delphi technique, electronic groups and concept maps (Witkin and Altschuld 1995).

Regardless of the methods chosen, Witkin and Altschuld (1995: 76-77) recommend that the following factors be considered when assigning priorities to needs:

- the magnitude of discrepancies between the current and desired situations,
- causes and contributing factors to the needs,
- the degree of difficulty in addressing the needs,
- risk assessment—the consequences of ignoring the needs,
- the effect on other parts of the organization or other needs if a specific need is or is not met,
- the cost of implementing solutions, and
- political and other factors that might affect efforts to solve the need, including community values, local and national priorities, and public expectation.

Many of the above factors present considerations that are similar to the “matching” process of the SWOT analysis described by Goodstein et al. (1993), Kotler et al. (1996), and Thompson and Strickland (1995).

Further Research: Human Dimensions/Marketing Research and Evaluation

This research was an internal assessment of the Division’s communication needs and priorities as perceived by Fisheries personnel. *Strategic* planning includes an external environmental assessment aimed at determining a variety of political, economic, social and technological forces and trends (PESTs) that might have an affect on the Division’s ability to fulfill its mission and objectives (Bryson 1988; Goodstein et al. 1993; Migliore et al. 1995). In addition to monitoring PESTs, various stakeholder groups, including customers, competitors, or collaborators, should be monitored. Bryson (1988) and Goodstein et al. (1993) suggest that typical products and services offered, typical marketing strategies, competition, and market segmentation patterns also be identified.

Information gained from the external environmental analysis is particularly important for effectively planning, developing and implementing fisheries communications targeted to specific stakeholder groups. Participating Fisheries personnel reported a wealth of information about Great Lakes anglers', but expressed a need to understand non-traditional angling audiences communication and management needs, and how to best meet these needs through communications.

Focus group participants reported that partnerships (e.g., MUCC, sport organizations like Trout Unlimited, nature centers, Project Wild) were a strength to providing fisheries communications. An assessment of what others are doing in the state (or nation) not only can point out avenues for implementing some fisheries communications, but may also provide ideas for developing innovative programs, products or services (e.g., Becoming An Outdoors Woman, fish viewing facilities at key migration locations, fish festivals, apprentice programs. **I recommend that the Division develop a long-term plan for coordinating on-going human dimensions fisheries research in Michigan.**

Strategic planning and marketing specialists concur that an organization should ask themselves, "How well did we reach our intended audience and/or achieve our organizational and communication objectives?" (Goodstein et al. 1993; Kotler et al. 1996). Participating fisheries personnel questioned the effectiveness of using certain tools (e.g., sport shows, print material) to achieve reach certain audiences. **I recommend that an evaluation component be included in all communication activities.** Furthermore, **I recommend that the strategic communication planning process(s) used undergo an annual review** to assess planning (and internal communication) effectiveness and follow-through.

Action Plan for Considering Human Dimensions/Marketing Research and Evaluation

The Division could begin human dimensions and/or marketing research on priority target audiences identified in this research (e.g., demographics, attitudes toward natural resource

management/use, knowledge of fisheries management and recreational opportunities). Furthermore, the Division will want to formulate stated, measurable objectives from which to evaluate program, product and/or service(s) effectiveness. There are several measures which could be used for evaluating communication effectiveness (e.g., numbers and characteristics of target audiences reached; increased awareness or knowledge based on pre-post tests, exit interviews/surveys, quizzes and informal questioning; satisfactions indicated by return participants/users; increased license sales and participation in management projects). Furthermore, some communication activities may not require lengthy research-based evaluation. The Division may want to use an independent contractor, such as a research firm or university to conduct formal and/or detailed evaluation.

Focus groups are a good means of collecting detailed information about the perceived needs and interests of stakeholder groups quickly and cost effectively (Krueger 1994; Morgan and Krueger 1993). Krueger (1994) states that focus groups are regarded as a crucial step in shaping marketing strategies for products and/or services. Furthermore, focus groups are useful as formative research to help in developing survey questions for quantitative studies. Another option is consulting secondary sources for information about stakeholder knowledge, attitudes, satisfactions and constraints as related to fisheries communication. Program evaluations (e.g., the Great Lakes Education Program, Williamson 1996 and Nevala 1997; Fishing in the Parks, Rupert 1997), MEAP scores, the study of public attitudes toward natural resources management and use (the RAM project) (Koval in progress) and other sources can help to inform communication planners about specific stakeholders and the effectiveness of certain communication channels. In addition to providing marketing information about stakeholders, focus groups can be used for evaluation of programs, products and/or services.

The Division/Department may also want to begin long-term quantitative research to establish pre and post-assessment of stakeholder knowledge, attitudes and behaviors toward

fisheries and natural resources ecology, management and recreation. This research can be conducted in-house or contracted with a consulting firm or university.

National Outreach and Communications Program

The reauthorization of the Sport Fish Restoration Act provides for a broad definition of outreach, education and communications. Changes to this act include the establishment of a National Outreach and Communications Fund. The fund will provide for the development of a National Outreach and Communication Program , aimed at increasing public awareness of and participation in boating and fishing recreation. Opportunities exist for communication campaigns to be developed on a state level. **I recommend that the MDNR Fisheries Division participate in the strategic planning process guiding the National Outreach and Communication Program.** Furthermore, **I recommend that the MDNR Fisheries Division participate in strategic planning for a state level campaign, ensuring that the Division's mission and communication objectives are aligned with any media associated with Michigan's fisheries resources.**

Action Plan for Participating in the National and Regional Outreach Program

Division communication specialists may contact the Sport Fishing and Boating Partnership Council for information on the National Outreach Program and regional outreach efforts being planned for the Great Lakes region.

Implications For Fisheries Communications

Participating Fisheries personnel were very enthusiastic about this research. This spirit was demonstrated by the nearly perfect attendance (99% of affirmative responses) and often lively discussions during the eight focus group sessions. Personnel welcomed the opportunity to provide their voice during this formative stage of strategic fisheries communications planning. In fact, they

expressed great interest in continuing similar “focused” groups, seminars and workshops aimed at enabling personnel involvement in management and communication decisions-making. By encouraging their participation, this process demonstrated the willingness of agency personnel to share their knowledge and highlighted the potential for including these “internal stakeholders” in future cooperative management planning.

BIBLIOGRAPHY

BIBLIOGRAPHY

- Ackoff, R.L. 1981. *Creating corporate future: Plan or be planned for*. Wiley Pub., New York, NY. 287 pp.
- Adams, C.E., Stone, R.A., and J.K. Thomas. 1988. Conservation education within information and education divisions of state natural resource agencies. *Wildl. Soc. Bull.* 16(3): 329-333.
- Azjen, I. 1992. Persuasive communication theory in social psychology: A historical perspective. Pages 1-27 in M.J. Manfredo, ed., *Influencing human behavior: Theory and applications in recreation, tourism and natural resources management*. Sagamore Pub., Inc., Champaign, IL. 371 pp.
- Amend, S. Trans. of the N. A. Wildl. & Nat. Res. Conf. 58: 261-270.
- Beech, R.M. and A.F. Dake. 1992. *Designing an effective communication program: A blueprint for success*. University of Michigan, Ann Arbor, MI. 133 pp.
- Bennett, D.H., E.L. Hampton and R.T. Lackey. 1978. Current and future management goals: implications of fisheries management. *Fisheries* 3(1):10-15.
- Benson, D.E. and G.A. Polmarantz. 1990. Status and trends of conservation education programs. *Trans. N. A. Nat. Res. Conf.* 55: 85-93.
- Bryson, J.M. 1988. *Strategic planning for public and nonprofit organizations: a guide to strengthening and sustaining organizational achievement*. Jossey-Bass Inc., Publ. San Francisco, CA. 311 pp.
- Buttram, J.L. 1990. Focus groups: A starting point for needs assessment. *Evaluation Practice* 11(3): 207-212.
- Case, D.J. 1989. Are we barking up the wrong tree? Illusions, delusions and realities of communications in the natural resource management mix. *Trans. N. A. Wildl. and Nat. Res. Conf.* 54: 630-639.
- Cartwright, D. 1953. Analysis of qualitative material. in L. Festinger & d. Katz (Eds.), *research methods in the behavioral sciences* (pp. 421-470). New York: Holt, Rinehart & Winston.
- Chiat, B. 1988. *Marketing...and the Minnesota Department of Natural Resources*. MDNR, Minneapolis, MN. 7p.
- Cole-Misch, S. 1992. *Communications strategy for the Great Lakes Fishery Commission*. International Joint Commission, Lansing, MI. 30 pp.
- Crompton, J.L. and C. Sellar. 1981. Do outdoor education experiences contribute to positive development in the affective domain? *J. of Environmental Education* 12(4): 79-87.

- Crowe, D.M. 1983. Comprehensive planning for wildlife resources. Wyoming Game and Fish Department. Cheyenne, WY. 143 pp.
- Dann, S.L. 1993. Youth recruitment into fishing: The influence of familial, social and environmental factors and implications for education intervention strategies to develop aquatic stewardship. Unpubl. Ph.D. Dissertation, Michigan State University, East Lansing, MI. 363 pp.
- Deane, J.G. 1990. Lion hunting ban wins in California. *Defenders* 65(4): 4-5.
- Decker, D.J. 1985. Conflict and communications in natural resource management. *Trans. N. E. Sect. Wildl. Soc.* 42: 43-56.
- Decker, D.J., Brown, T.L. and G.F. Mattfeld. 1987. Integrating social science into resource management. *Trans. N. E. Sect. Wildl. and Soc. Conf.* 42:43-45.
- _____. 1989. The future of human dimensions of wildlife management: can we fulfill the promise? *Trans. of N. A. Wildl. & Nat. Res. Conf.* 54: 415-425.
- Decker, D.J., Brown T.L. and B.A. Knuth. 1996a. Human dimensions research: Its importance in natural resource management. Pages 29-47 *in* A.W. Ewert, ed., *Natural Resource Management: The Human Dimension*. Westview Press, Boulder, CO. 263 pp.
- Decker, D.J. and J.W. Enck. 1996. Human dimensions of wildlife management: knowledge for agency survival in the 21st century. *Human Dimensions of Wildlife J.* 1(1):60-71.
- Decker, D.J., Krueger, C.C., Baer, R.A. Jr., Knuth, B.A. and M.E. Richmond. 1996b. From clients to stakeholders: A philosophical shift for fish and wildlife management. *Human Dimensions of Wildlife* 1(1): 70-82.
- Delbecq, A.L., Van de Ven, A.H. and D.H. Gustafson. 1975. Group techniques for program planning: A guide to Nominal Group and Delphi processes. Scott, Foresman, and Company, New York, NY. 174 pp.
- Duda, M.D. 1993. Factors related to hunting and fishing participation in the United States. Responsive Management-Western Association of Fish and Wildlife Agencies. Federal Aid in Sport Fish Restoration Grant Agreement 1-48-0009-92-1252. 281 pp.
- Duda, M. D., S. I. Cerulean and J. A. Gillan. 1989. Comprehensive wildlife education planning in Florida: the value of human dimensions research. *Trans. N. A. Wildl. & Nat. Res. Conf.* 54: 455-467.
- Fazio, J.R. and D.L. Gilbert. 1981. Public relations and communications for natural resource managers, 2nd ed. Kendall-Hunt Publ. Dubuque, IA. 399 pp.
- Fishbein, M. and I. Ajzen. 1980. A theory of reasoned action: Some applications and implications. Pages 65-116 *in* H.E. Howe, ed., *Nebraska symposium on motivation*. Univ. of Nebraska Press, Lincoln, NE.

- Fishbein, M. and M.J. Manfredo. 1992. A theory of behavior change. Pages 29-50 in M. Manfredo, ed. *Influencing human behavior: Theory and application in recreation, tourism, and natural resources management*. Sagamore Publ. Inc., Champaign, IL. 371 pp.
- Folch-Lyon, E., and Trost, J.F. 1981. Conducting focus group sessions. *Studies in family planning*, 12: 443-449.
- Gill, R.B. 1996. The wildlife professional subculture: The case of the crazy aunt. *Human Dimensions of Wildlife*. 1(1): 60-69.
- Goodstein, L.D., Nolan, T.M. and J.W. Pfeiffer. 1993. *Applied strategic planning: A comprehensive guide*. Magraw-Hill, Inc., New York, NY. 379 pp.
- Glueck, W.F. 1980. *Business policy and strategic management*, McGraw-Hill, New York, NY. 393 pp.
- Harrington Market Research. 1991. Fishing motivation study-wave II, vol. 1. AFTMA: Chicago, IL. 57 pp.
- Harrington Market Research and AFTMA. 1991. Fishing motivation study—wave II, executive review of national phone survey. Prepared for American Fishing Tackle Manufacturers Association. Barrington, IL. 56 pp.
- Hay, R.D. 1990. *Strategic management in non-profit organizations: An administrator's handbook*. Greenwood Press, Westport, CT. 398 pp.
- Hendee, J.C. and C. Schoenfeld. 1973. *Human dimensions in wildlife programs: Reports of recent investigations*. Washington, D.C. 193 pp.
- Henderson, K.A. 1991. *Dimensions of choice: A qualitative approach to recreation, parks, and leisure research*. State college, PA: Venture Publ., Inc. 205 pp.
- Hines, J., Hungerford, H. and A. Tomera. 1986-87. Analysis and synthesis of research on responsible environmental behavior: a meta-analysis. *J. of Environmental Education* 18(2): 1-8.
- Hungerford, H.R. and T.L. Volk. 1990. Changing learner behavior through environmental education. *J. of Environmental Education* 21(3): 27-40.
- Hunting and Fishing Heritage Task Force, Final Report. 1996. Governor John Engler's hunting and fishing heritage task force recommendations: a report submitted to Gov. John Engler. Michigan Dept. of Natural Resources Publ. Lansing MI. 17 pp.
- Iozzi, L.A. 1989. What research says to the educator: Part two. *J. of Environmental Education* 20(4): 179-186.
- Jacobson, S.K. 1997. Rapid assessment for conservation education (RACE). *J. of Environmental Education*, (28)3: 10-19.

- Jick, T.D. 1979. Mixing qualitative and quantitative methods: Triangulation in action. *Admin. Sci. Quart.* 24: 602-611.
- Kennedy, J.J. 1985. Viewing wildlife managers as a unique professional culture. *Wildl. Soc. Bull.* 13: 571-579.
- King, J.A., Morris, L.L. and C. T. Fitz-Gibbon. 1987. How to assess program implementation. Sage Publ. Newberry Park, CA 143 pp.
- Knight, R.L. and K.J. Gutzwiller. 1995. Wildlife and recreationists: Coexistence through management and research. Island Press, Washington, D.C. 372 pp.
- Krueger, R.A. 1994. Focus groups: A practical guide for applied research. 2nd. edition. Newbury Park, CA: Sage. 255 pp.
- Kotler, P. 1982. Marketing for nonprofit organizations. 2nd edition. Prentice-Hall Inc., Englewood Cliffs, NJ. 528 pp.
- Kotler, P. Bowen, J. and J. Makens. 1996. Marketing for hospitality and tourism. Prentice Hall Inc., Upper Saddle River, NJ. 704 pp.
- Loker, C.A. and D.J. Decker. 1995. Colorado black bear hunting referendum: What was behind the vote? *Wildl. Soc. Bull.* 23: 370-376.
- Lorange, P. 1979. Implementation of strategic planning. Prentice Hall, Inc., Englewood Cliffs, NJ. 231 pp.
- Madson, C.L. 1992. A field guide to "The New Era" in conservation information. *Trans. of the N. A. Wildl. & Nat. Res. Conf.* 57: 129-133.
- Mainer, R. 1968. The case of the stymied strategist. *Harvard Business Review* 46: 40.
- Manfredo, M.J., Vaske, J.J., and D.J. Decker. 1995. Human dimensions of wildlife management: Basic concepts. Pages 17-31 in R.L. Knight and K.J. Gutzwiller, eds., *Wildlife and recreationists: Coexistence through management and research*. Island Press, Washington, D.C. 372 pp.
- Mather, M.E., Parrish, D.L., Stein, R.A. and R.A. Muth. 1995. Management issues and their relative priority within state fisheries agencies. *Fisheries* 20(10): 14-21.
- Matthews, B.E. 1989. Remarks at a joint public hearing on environmental education in New York (representing Coalition for Education in the Outdoors). Vol 1, Joint hearing in M.D. Hinchey and O. Johnson, eds., *Environmental Education: Are existing environmental education programs in the State of New York adequate to meet the growing need?* Albany NY.
- McCarthy, P.J. 1978. Introduction to statistical reasoning. R.E. Krieger Publ. Co., Huntington NY. 402 pp.
- Migliore, R.H., Stevens, R.E., Loudon, D.L. and S. Williamson. 1995. Strategic planning for not-for-profit organizations. The Haworth Press, New York, NY. 200 pp.

- Minnis, D.L., Holsman, R.H., Grice, L. and R.B. Peyton. 1997. Focus groups as a human dimensions research tool: Three illustrations of their use. *Human Dimensions of Wildlife* 2(4): 40-49.
- MDNR, Surface Water Quality Division and Information and Education Strategy Committee. no date. Information and education strategy for Michigan's non-point source pollution program. MDNR/MDEQ, Lansing, MI. 30 pp.
- MDNR Fisheries Division 1997. Michigan Department of Natural Resources, Fisheries Division strategic plan. MDNR, Lansing MI. 128 pp.
- MDNR Fisheries Division 1996. Michigan Department of Natural Resources programs and budgets. MDNR Mar. 1996. Lansing, MI. 232 pp.
- MN DNR Division of Fisheries and Wildlife. 1994. Communication plan. Minnesota Department of Natural Resources, Minneapolis, MN. 8pp.
- Morgan, D.L. 1993. Successful focus groups, advancing the state of the art. Sage Publ., Newberry Park, CA. 85 pp.
- Morgan, D.L. and R. A. Krueger. 1993. When to use focus groups and why? Pages 3-17 in Morgan, D.L., ed., Successful focus groups: Advancing the state of the art. Sage Publ., Newberry Park, CA. 271 pp.
- Murdock, S.H., Backman, K., Ditton, R.B., Hoque, N. and D. Ellis. 1992. Demographic changes in the United States in the 1990s and the twenty-first century: Implications for fisheries management. *Fisheries* 17(2): 6-13.
- Murdock, S.H., Loomis, D.K., Ditton, R.B. and M.N. Hoque. 1996. The implications of demographic change for recreational fisheries management in the United States. *Human Dimensions of Wildlife* 1(4): 14-37.
- Norrie, K.D. 1993. Paying attention to internal and external publics in Idaho. *Trans. of the N.A. Wildl. & Nat. Res. Conf.* 58: 216-220.
- Nutt, P.C. and R. W. Backoff. 1992. Strategic management of public and third sector organizations: A handbook for leaders. Josse-Bass Publ., San Francisco, CA. 486 pp.
- Pajak, P. 1994. Urban outreach: fisheries management's next frontier? *Fisheries* 19(10):6-7.
- Parrish, D.L. Mather, M.E. and R.A. Stein. 1995. Problem-solving research for management: A perspective. *Fisheries* 20(10): 6-12.
- Patton, M.Q. 1987. How to use qualitative methods in evaluation. Sage Publ. Newberry Park, CA. 176 pp.
- Peter, P.J. and J.H. Donnelly Jr. 1986. Marketing management: Knowledge and skills, text, analysis, cases and plans. Business Pub., Inc., Plano, TX. 730 pp.

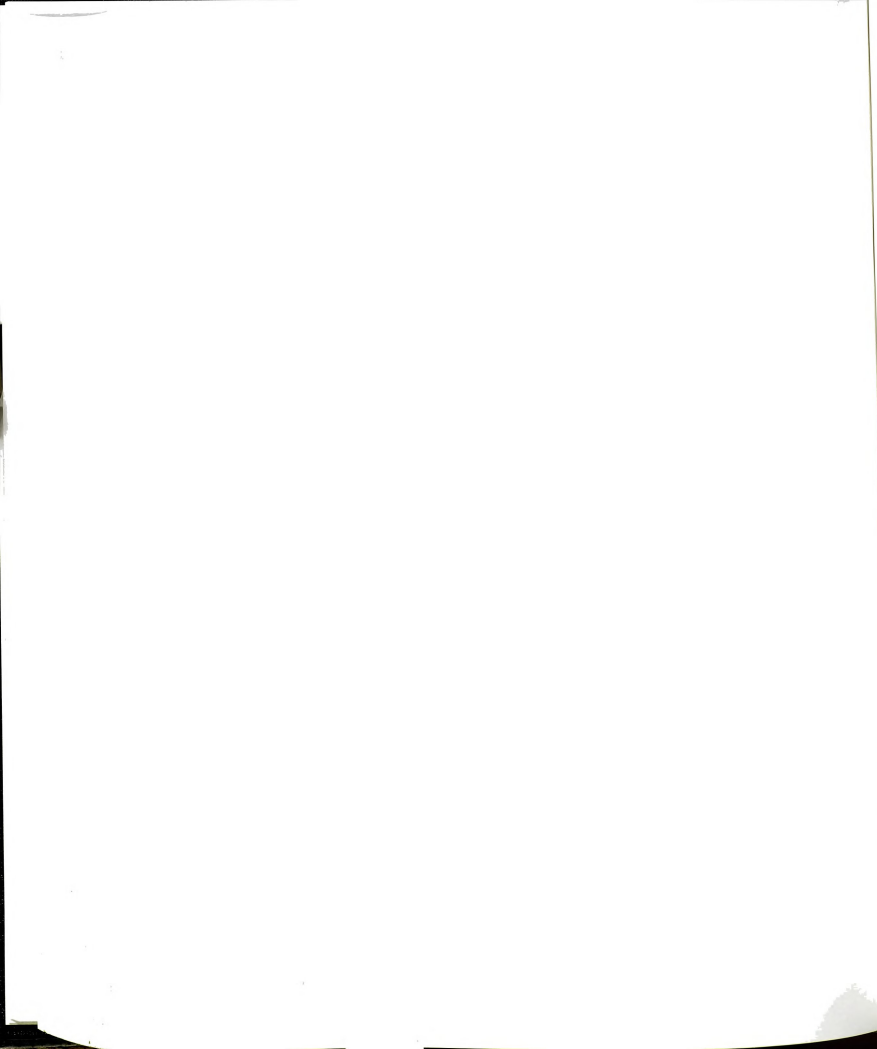
- Peyton, R.B. 1987. Mechanisms affecting public acceptance of resource management policies and strategies. *Can. J. Fish. & Aquat. Sci.* 44(Suppl. 2): 306-321.
- Peyton, R.B. and E.E. Langenau. 1985. A comparison of attitudes held by BLM biologists and the general public towards animals. *Wildl. Soc. Bull.* 13: 117-120.
- Qualitative Solutions & Research Pty. Ltd. 1997. Non-numerical unstructured data indexing searching and theory-building (NUD•IST). SCOLARI, Sage Publ., Thousand Oaks, CA
- Ramsey, J., Hungerford, H.R. and A.N. Tomera. 1981. The effects of environmental action and environmental case study instruction on the overt environmental behavior of eighth-grade students. *J. of Environmental Education* 13(1): 24-30.
- Rice, R.E. and C.A. Atkin. 1989. Public communication campaigns. Sage Pub., Inc., Newberry Park, CA 416 pp.
- Richards, T.J. and L. Richards. 1994. Using computers in qualitative research. Pages 445-462 in Denzin & Lincoln eds., *The handbook of qualitative research*. Sage Publ., Thousand Oaks, CA. 643 pp.
- Ritter, C., Ditton, R.B. and R.K. Riechers. 1992. Constraints to sport fishing: Implications for fisheries management. *Fisheries* 17(4): 16-19.
- Rosenau, F.S. 1992. Strategic market planning in the information industry. Information Industry Assoc., Washington D.C. 92 pp.
- Rupert, J.D. 1997. *Fishing in the Parks: A prototype research-based outreach program in fisheries and aquatic ecosystems*. Unpubl. master's thesis, Michigan State University, East Lansing, MI. 154 pp.
- Scheffer, V.B. 1976. The future of wildlife management. *Wildl. Soc. Bull.* 4: 51-54.
- Schein, E.H. 1990. Organizational culture. *American Psychologist*. 34: 109-119.
- Schmidly, D.J., I.R. Adelman and J.S. Greene. 1990. Educational content of university fish and wildlife programs based on expressed needs of federal and state agency employers. *Trans. N. A. Wildl. & Nat. Res. Conf.* 55: 133-143.
- Schneider, A. 1998. Federal Aid Coordinator, Snelling, MN: U.S. Fish and Wildlife Service. Personal communication.
- Scholl, M. 1983. A survey of significant childhood learning experiences of suburban/urban environmentalists. Paper presented at the 12th Annual Conf. of the North American Association of Environmental Education, Ypsilanti, MI.
- Selnow, G.W. and W.D. Crano. 1987. Planning, implementing, and evaluating targeted communication programs: A manual for business communicators. Greenwood Press, Westport, CT. 291 pp.

- Shadish, W.R. Jr., Cook, T.D. and L.C. Leviton. 1991. Foundations of program evaluation: Theories and practice. Sage Publ, Newberry Park, CA. 529 pp.
- Shanks, R.E. and D.J. Decker. 1990. Communication and image in the wildlife profession: A New York Perspective. Trans. N.E. Wildl. Soc. 47: 27-35.
- Slater, M.D. 1992. Mass communication research: Lessons for persuasive communications. Pages 127-148 in M.J. Manfredo, ed., Influencing human behavior: Theory and applications in recreation, tourism and natural resources management. Sagamore Pub., Inc., Champaign, IL. 371 pp.
- Sport Fishing and Boating Partnership Council. 1994. 1994 Survey of state fish and wildlife agency aquatic resource education programs. M.L. Thieme and J.A. DiCamillo, eds., for the International Association of Fish and Wildlife Agencies, Falcon Press Publ. Co., Inc. Helena, MT. 40 pp.
- Steiner, G.A. 1979. Managerial long range planning. McGraw-Hill, New York, NY. 334 pp.
- Strauss, A., and J. Corbin. 1990. Basics of qualitative research: Grounded theory procedures and techniques. CA: Sage Publ. 270 pp.
- Surface Water Quality Division, Michigan Dept. of Natural Resources. No date. Information and education strategy for Michigan's non-point source pollution program. MDNR, Lansing MI. 32 pp.
- Tanner, T. 1980. Significant life experiences: A new research area in environmental education . J. of Environmental Education 11(4): 20-24.
- The NPD Group. 1985, Quitters/less frequent fishermen study. The NPD Group, Port Washington NY. 82 pp.
- Thomas, C.L. and T.A. Peterson. 1993. Becoming an outdoors-woman: Concept and marketing. Transactions of the North American Wildlife and Natural resources Conference 58:185-192.
- Thompson, A.A and Strickland. 1995. Crafting and implementing strategy: What every manager should know. Irwin Press, Burr Ridge, IL. 323 pp.
- Thorne, D.H., Brown, E.K. and D.J. Witter. 1992. Market information: matching management with constituent demands. Trans. N. A. Wildl. & Nat. Res. Conf. 57: 154-173.
- UNESCO. 1978. Final report: Intergovernmental conference on environmental education, Tbilisi, USSR. 14-26 October. 1977. Connect. Paris: UNESCO/UNEP.
- U.S. Department of Health and Human Services. 1992. Making health communication programs work. NIH Publ. No. 92-1493 pp. 131.
- U.S. Fish & Wildlife Service. 1989. 1985 National survey of fishing, hunting, and wildlife-associated recreation: Michigan. U.S. Govt. Printing Office, Washington, DC. 73 pp.

- U.S. Fish & Wildlife Service. 1997. 1996 National survey of fishing, hunting, and wildlife-associated recreation: Michigan. U.S. Govt. Printing Office, Washington, DC. 169 pp.
- U.S. Fish & Wildlife Service. 1991. 1990 National survey of fishing, hunting, and wildlife-associated recreation: Michigan. U.S. Govt. Printing Office, Washington, DC. 178 pp.
- Vander Stoep, G.A. and J.W. Roggenbuck. 1996. Is your park being "loved to death?": Using communications and other indirect techniques to battle the park "love bug." Pages 85-132 in D.W. Lime, ed., Crowding and congestion in the National Park system: Guidelines for management and research. MAES Misc. Pub. 86-1996. St. Paul, MN: Department of Forest Resources and Minnesota Agricultural Experiment Station, University of Minnesota. 144 pp.
- Vaske, J.J., Decker, D.J. and M. J. Manfredo. 1995. HD of wildlife management: An integrated framework of coexistence. Pages 33-49 in Knight, R.L. and K.J. Gutzwiller Wildlife and recreationists: Coexistence through management and research. Island Press, Washington, D.C. 372 pp.
- Washington Dept. of Fish and Wildlife. 1998. Looking Outward: A survey of information and education programs in 17 state resource agencies. 57 pp.
- Webster, 1989. Webster's encyclopedic unabridged dictionary of the English language. Random House, New York, NY. 2078 pp.
- Wilde, G.R., Ditton, R.B., Shephard, R.G., and R.K. Reichers. 1996. Status of human dimensions surveys sponsored by state and provincial fisheries management agencies in North America. Fisheries 21(11): 12-17.
- Wildlife Management Institute 1997. Organization, authority and programs of state fish and wildlife agencies. Phillips Press Inc., Brentwood CA. 164 pp.
- Winett, R. A. 1992. Behavioral systems framework for media-based behavior change strategies. Pages 103-125 in M. Manfredo, ed. Influencing human behavior: Theory and application in recreation, tourism, and natural resources management. Sagamore Publ. Inc., Champaign, IL. 371 pp.
- Witkin, B.R. and J.W. Altschuld. 1995. Planning and conducting needs assessments: a practical guide. Sage Publ. Thousand Oaks, CA. 302 pp.
- Ylkanen, B. 1997. MDNR Fisheries Division Natural Resource Manager, Marquette, Michigan: Michigan Department of Natural Resources Fisheries Division. Personal communication.
- Yozwiak, S. 1994. Proposition 300 rejected: Trap ban approved. The Arizona Republic, November 9, 1994.

APPENDICES

**APPENDIX A: Project Approval by the Michigan State University Committee on
Research Involving Human Subjects**



**MICHIGAN STATE
UNIVERSITY**

February 21, 1997

TO: Shari L. Dann
11B Natural Resources Bldg.

RE: IRB#: 97-126
TITLE: DEVELOPING A STRATEGIC PLAN FOR FISHERIES
COMMUNICATIONS WITH A CASE STUDY ON MARKETING
THE VOLUNTARY YOUNG ANGLER LICENSE
REVISION REQUESTED: N/A
CATEGORY: 1-C
APPROVAL DATE: 02/21/97

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.
THIS LETTER ACKNOWLEDGES THE REMOVAL OF INGHAM MEDICAL CENTER FROM THE LIST OF SITES WHERE THE STUDY WILL BE CONDUCTED.

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.

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, Ph.D.
UCRIHS Chair

DEW:bed

cc: Kelly S. Casale



**OFFICE OF
RESEARCH
AND
GRADUATE
STUDIES**

University Committee on
Research Involving
Human Subjects
(UCRIHS)

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

517/355-2180
FAX 517/432-1171

The Michigan State University
IDEA is Institutional Diversity
Excellence in Action

MSU is an affirmative action/
equal opportunity institution

APPENDIX B: Fisheries Communications Focus Group Invitation Letter

March 19, 1997

Dear Fisheries Division Employee,

The Fisheries Division is faced with the challenging tasks of communicating with the many diverse publics of Michigan. In order to be responsive to its stakeholders, the Fisheries Division has contracted a project to investigate and design strategies to conduct its communications and outreach education efforts. To gain insight into personnel perceptions and expectations for communications efforts, several focus groups will be held during the annual Fisheries Training March 3-5 in Traverse City and at other times during the months of March and April, 1997.

Through a random sampling process, you have been selected to participate in a two hour focus group to be held at **10:00-12:00 noon on March 27, 1997**. Your participation in the focus group will provide you with the opportunity to share your views and provide valuable input that will assist in the development and implementation of future communications and outreach education efforts.

Though participation in the focus groups *is* voluntary, we will need to confirm your intent to participate. This will help to assure adequate focus group attendance. Therefore, please RSVP your informed consent to participate by **Monday, March 24**. It is important that you RSVP even if you choose not to participate, so that other employees may have the opportunity to fill your space. Once you have agreed to participate in this focus group, we would appreciate it if you would make all necessary efforts to fulfill this obligation. The focus group discussions will be audio taped, however, the information you provide will remain confidential. Your name and job titles/descriptions will not appear in any document resulting from this focus group. In addition, you may also choose to decline answering any questions asked during the focus group.

We are excited to have the opportunity to hear your views and gain your input in fisheries communications! Should you need further information regarding attending the assigned focus group you may contact Kelly Carter at:

(517) 353-0308 (MSU - Mondays 9-5 p.m.)
(517) 373-6702 (MDNR, Fisheries Division
Tuesdays - Fridays 9-4 p.m.)

or e-mail: casaleke@pilot.msu.edu

Sincerely,

Kelly S. Carter
Graduate Research Assistant

Shari L. Dann
Assistant Professor

APPENDIX C: Focus Group Discussion Guide

MDNR Fisheries Division

Focus Group Discussion Guide

[TURN ON TAPE RECORDER]

I. Introductions

A. *Moderator introduces self*

- a. name
- b. From MSU, Dept. of Fisheries & Wildlife
- c. moderator role - I will be moderating the focus group discussions. I will pose specific questions for you to consider this afternoon.

B. *Moderator introduces recorder*

- a. name
- b. name of organization they are from
- c. recorder role - ____ will be recording your responses on newsprint for all of us to see. She will do her best to not paraphrase your responses, but it may be necessary for her to use incomplete sentences.

C. *Orientation*

1. We have organized this discussion group to gather information that will be used in future Fisheries Division communications efforts. Our goal is to identify communications and outreach education needs and priorities and to provide you with a voice in designing a communications strategy specific for the Fisheries Division.

Our discussion today will be used by MSU, the Fisheries Division and Office of Information and Education as the Division plans for meeting future fisheries communications needs in Michigan.

First, let's clarify what I mean when I say "*communications*." For today's purposes, communications will include services, such as Fisheries personnel responding to public questions and the weekly fishing report, print materials such as "Select Waters" and "Michigan Fish and How to Catch Them" and other products, all informational processes such as promotions and public relations as well as all outreach education such as programming like clinics and "*Fishing in the Parks*"). Communications will mean *all aspects* of Fisheries Division's public contact including in-person contact and contacts using different media such as print materials and radio spots and press releases.

Before I move on to other instructions, are there any questions on what I mean by "Fisheries communications"?

2. For today's discussion we are going to follow a focus group format. Focus groups provide a structured format for gathering information through questions and limited discussion. The purpose of focus groups is to gain insight on various views and perceptions in a structured format. This is different from a general discussion session in that there are specific questions outlined. Because of the structure of this focus group, we must try to get to each question so that the objectives of this project can be met. We will move very quickly through *specific* questions that have been carefully prepared for this project.
3. There are only a few things I would like you to remember as we proceed with this focus group.
 - a. We are taping our discussion today so that I don't have to take detailed notes. However, I want to assure you that your names and specific job descriptions will remain confidential and will not appear in any document resulting from this study.
 - b. It is important that you share what is on your mind regarding the topics we discuss. This is a small group, so comments from each participant are very important. There may be some differences in opinion here today, but please don't let that keep you from sharing your thoughts.

There are no right or wrong answers.

Please feel free to ask for clarification any time a question is unclear and you may decline answering any or all questions posed in this discussion.

- c. In order for us to explore several question of fisheries communications in the next 2 hours, it may be necessary for me to occasionally ask you to be brief. And, sometimes I may need to redirect the discussion to other topics. So, please understand that if I interrupt you, it's only because we need your input on so many different things.
- d. Please try to speak one at a time so that all of your comments can be clearly understood when I go back over the tape.
- e. We appreciate you taking the time to participate in this focus group. I will let you out on time in order for you to attend the next block of training topics. I invite you to please stay through the entire time period because it may disrupt our discussions if people are coming and going.

D. *I would like to begin the focus group by having each of you tell us your first name and what it is you do in Fisheries.*

_____, could we begin with you?

1. Briefly tell us what kind of contact you have with the public within your job (or as a Unit)?

[RECORDER LISTS CONTACT AND REQUESTS ON NEWSPRINT]

Probe: How do they contact you?

Probe: How do you contact them?

2. What information or assistance does the public request?

Probe: Who is requesting this?

[RECORDER LISTS COMMUNICATION ACTIVITIES]

3. What other types of communications do you provide?
4. What other Fisheries Division communications are you aware of?

Probe: Remember that communications includes programming such as clinics and FIP as well as print materials and public meetings...what else does the Division do?

5. Is there anything else or is this pretty much a thorough list of the Division's communications efforts?

II. Communications Strategy

A. Audience Identification & Trend Awareness

Now that we've outlined what type of communications are occurring within the Division, turn our discussion to actually identifying these audiences as well as addressing some of the important trends that are occurring among Michigan's population. First of all, to put this into perspective specifically for Fisheries Division, let's review together the Fisheries Division's mission statement:

[FACILITATOR REFERS TO THE HANDOUT AND READS ALOUD TO GROUP]

Fisheries Division Mission: To protect and enhance the *public trust* in populations and habitats of fish and other forms of aquatic life and *promote optimum use* of the resources for the *benefit of the people of Michigan*.

In order to develop effective communications such as programming, materials, services, advertisements and public relations, we need to put a face, or more appropriately *faces* on the "people of Michigan." We need to *specifically identify* the various groups with which the Fisheries Division has the duty to communicate.

[RECORDER WRITES RESPONSES—"AUDIENCES & TRENDS" AND POSTS ON WALL]

1. What groups do you believe are among Fisheries Division's audiences—exactly who is the Fisheries Division serving?
2. Regarding anglers, are there specific angler groups which need to be communicated with?
3. Are there any specific non-angler groups which should be addressed in communications efforts?
4. Regarding fisheries issues, are there conflicts among these groups that should be addressed in communications efforts?
5. Are there population trends occurring that may be causing changes in fishing participation?
6. Are there public attitude trends occurring that may affect fishing participation or fisheries management processes?

B. Identification of Fisheries Division Communications Goals & Objectives—Outcomes

Now that we've identified various Fisheries Division audiences, I'd like to discuss outcomes—such as what you'd like people to do (behaviors), what you'd like them to know (knowledge) and how they feel (attitudes)—that we wish to occur among these groups through communications efforts.

In order to focus Fisheries Division communications—that is programming, products, and services to these publics, we must first decide exactly what it is that we wish to *change* or influence as a result of communications efforts.

I've mainly asked you to respond one-by-one, however I'd like to now I'd like to do a quick brainstorming of public behaviors you'd like to see as outcomes of fisheries communication efforts.

Our brainstorming rules are as follows:

- Quickly toss out any ideas.
- We won't be discussing each idea, we will just be generating a list.

[RECORDER LISTS BEHAVIORS]

1. What specific behavior changes would you like to see as a result of Fisheries Division's communications efforts?

Probe: Are there angling behaviors that you would like to see change as a result of communication efforts?

Probe: What are they?

Probe: What about people who don't fish—are there behaviors that you would like to change as a result of communications?

Probe: What are they?

Probe: Are there other public behaviors directly related to the agency and Division you would like to see change as a result of communication efforts?

[RECORDER LISTS KNOWLEDGE]

Now let's talk about public knowledge of fisheries and aquatic resources...again brainstorming ideas.

1. What areas of knowledge should communications attempt to affect?

Probe: What about specific knowledge of aquatic resources—what do we want the public to be knowledgeable about?

Probe: What about knowledge of the Fisheries Division—(are these publics aware of the Fisheries Division, and what the Division does)?—what should these publics know about the Division?

Probe: What about public involvement—are these publics knowledgeable of their role in fisheries management processes?—what should the publics know?

2. What about angling knowledge—what types of information do these publics need?

3. Considering the publics that you have identified—what knowledge do they need regarding angling opportunities?—what opportunities do we have to provide the publics angling information?

Probe: What access information do these publics need?

4. Does the public understand the processes of fisheries management or do they have misconceptions in this area?

Probe: What aspect or issues in fisheries management should your communication efforts try to address?

5. Are there misunderstandings or misconceptions in their knowledge of fisheries or aquatic resources?

Probe: What aspect or issues in aquatic resources should Fisheries communication efforts try to address?

[RECORDER LISTS ATTITUDES]

Now let's talk about public attitudes of fisheries and aquatic resources...again brainstorming ideas.

1. *In general*, what attitudes toward the agency or Fisheries Division do you think the publics hold?

Probe: Are people receptive to the Division's programming, materials, and management processes?

Probe: What public attitudes toward the Division do you want as outcomes of communication efforts?

2. What attitudes do you think the public holds regarding aquatic resource use?

Probe: What attitudes toward aquatic resources would you like to see as outcomes of communication efforts?

3. What attitudes do you think the public holds toward the resource itself? Fish?

Probe: What attitudes toward fish would you like to see changed?

C. *Prioritizing Audiences and Outcomes*

Obviously, we can't be everything for everybody. We can't do all that we propose here. Therefore, we will need to prioritize our audiences as well as the various *(point to the three "Outcomes" sheets)* outcomes we've identified. Let's first look at the diverse publics you've identified and see if there are priority groups there. Then we'll revisit the outcomes you identified as those which you would like communications to impact and try to prioritize those as well.

Now I'd like to give you each a chance to tell me what groups you feel should be identified as a priority for communication efforts. We'll go round the table one by one. Remember, there are no right or wrong answers, these are your views and we will all respect them.

[RECORDER HIGHLIGHTS THESE AS LISTED]

1. Are there priority publics that Fisheries Division should address in its communications efforts?

[FACILITATOR RELATE TO OUTCOMES POSTED]

Probe: Why are these priorities?

2. Are there priority outcomes that Fisheries Division should address in its communications efforts?

D. *Identification of Challenges and Barriers*

The last few questions that I'd like to ask address challenges or barriers that the fisheries Division may have when developing, coordinating and implementing communications. I'd like to look at both internal challenges or barriers as well as those directly related to communicating with these publics.

[RECORDER KEEPS A RUNNING LIST OF "STRENGTHS" AND "WEAKNESS/BARRIERS"]

[FACILITATOR GOES AROUND ROOM TO GET RESPONSES FROM EACH PARTICIPANT]

1. Do you see or can you foresee any internal barriers or challenges within the Fisheries Division or the Department that may prevent you from communicating with the publics?

Probe: For example, are there challenges or barriers in the development of communications?

Probe: How about strengths within Fisheries Division or the Department—what strengths in communications does Fisheries have?

2. Are there strengths, challenges or barriers in employee skills?

Probe: What strengths are there in employee skills or specialties?

Probe: Are there specific skills or specialties that the Division or Department needs to have in order for the Division or Department to develop communications?

Probe: Are there specific skills or specialties that the Division or Department needs in order to implement communications?

3. Staff who have primary contact with the public—personal contact, telephone contact—are there strengths, barriers or weaknesses there?

4. Is coordination or cooperation among staff, Units or within the Department a strength, barrier or challenge?

Probe: Is the internal “communications network” adequate to meet coordination needs?

Probe: Are there common communications needs among different Units or Divisions which could be met by coordinating or cooperative efforts—the opportunity of forming “partnerships” of sorts?

Probe: Are there areas where cooperation among Units and Divisions would assist in the development of communications?

Probe: Are there areas where cooperation among Units and Divisions would assist in implementing communications efforts?

5. Are there inservice training needs that could address these challenges?

Probe: What challenges can be addressed with inservice training?

6. Think about the communications efforts that you are aware of—is there “top-down” support for your communications efforts?

7. What about operational support—would you say that operations such as technology, funding and facilities are a strength, challenge or barrier facilitating communications?

Probe: How so?

8. How about focus...would you say that current communication efforts within the Division or department are focused?

Probe: Do they support the Fisheries Division's mission?

Probe: Do they support the Department's mission?

9. Do current or existing communication efforts result in the desired outcomes that you have identified today?

E. Closure

1. There are only X minutes left in our focus group session today. Before I share some closing comments with you... are there any other comments or thoughts you would like to add before we finish? Anything that I may have overlooked?
2. Today's discussions of the Fisheries Division's communications efforts will be reviewed and a report will be made available to anyone interested in our findings. Our goal is to review the three key topics areas: (1) public identification and their needs assessment; (2) outcomes identified for communications efforts; and (3) internal needs for communications efforts. This report should be available by the beginning of Summer.
3. Later this year an external audience analysis will be conducted and compared to the internal assessment. These findings should assist Fisheries Division—as well as others involved in aquatic resources communications such as Sea Grant and MSU Extension—in development and implementation of communications efforts. If you are interested in receiving the initial “internal” report or subsequent reports that this study will be developing, please put your name on the list as you leave.

Thanks for your participation and input!!

APPENDIX D: Focus Group Participant Background Form

FISHERIES COMMUNICATIONS FOCUS GROUP SIGN-IN SHEET

**FOR USE DURING FOCUS GROUPS AT:
THE MDNR FISHERIES DIVISION'S ANNUAL INSERVICE TRAINING**

Traverse City, Michigan
March 3-5, 1997

Participation in this focus group will assist the Fisheries Division in its communications and outreach education planning. Employee views and input will provide valuable insight useful in designing communications strategies responsive to Michigan's diverse publics.

(Please note: information you provide is confidential; your name and job titles/descriptions will not appear in any document resulting from this focus group. By completing this form you indicate your informed consent to participate. Participation is voluntary. You may also choose to decline answering any questions listed below or asked during the focus group.)

Name: _____ Unit: _____

Length of time you have been employed in Fisheries Division: _____ year(s).

Highest level of education (please circle one):

high school graduate some college (less than 4 yrs.) college graduate (4-yr. degree)

some graduate coursework masters degree completed Ph.D completed

College degree title(s)/major(s): _____

Job title/duties: _____

Communications responsibilities you undertake (if any): _____

MICHIGAN STATE UNIV. LIBRARIES



31293018017479