

CITIZENS' AND AGENCY STAFF MEMBERS' EVALUATION OF  
DECISION-MAKING PROCEDURES:  
A CASE STUDY OF THE NEW YORK STATE MOOSE  
REINTRODUCTION ISSUE



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### FINAL REPORT

STATE: New York  
GRANT: WE-173-G

**GRANT TITLE:** New York State Wildlife Management

**PROJECT TITLE:** Public Attitudes Toward Wildlife and Its Accessibility

**STUDY:** 2: Assure that we meet the public desire for information about wildlife and its conservation, use and enjoyment

**STRATEGY:** 2.1: Developing and implementing actions to acquire public input and involvement

**JOB NUMBER AND TITLE:** 146-02-02 - Communication Strategies for Wildlife Management Decisions [Citizens' and Agency Staff Members' Evaluation of Decision-making Procedures: A Case Study of the New York State Moose Reintroduction Issue]

**JOB OBJECTIVES:**

- (1) Conduct formative evaluations of communication strategies that provide an opportunity for immediate feedback to and response by managers.
- (2) Compare the strengths and weaknesses of various citizen participation strategies under different conditions, such as levels of conflict, scope of decision, species of interest, and human communities affected.
- (3) Identify factors contributing to the success of the above citizen participation strategies.
- (4) Evaluate BOW attempts to expand and improve incorporation of citizen-generated ideas within management decision-making.

**JOB DURATION:** 1 April 1993 - 31 March 1995 (Reporting completed under Job 146-06-01)

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## **EXECUTIVE SUMMARY**

### **Chapter 1: Overview**

In a case study of the decision-making process recently used to decide whether or not to reintroduce moose to northern New York, we studied how citizens and DEC staff members evaluated the quality of the citizen participation activities that were part of this process. The intention of this research was to generate insights that could aid in designing citizen participation strategies in the future.

The research objectives were:

- Describe those beliefs held by DEC staff regarding the nature of appropriate decision-making processes that influenced the moose management decision-making process.
- Describe those beliefs held by the public regarding the nature of appropriate decision-making processes that influenced the moose management decision-making process.
- Describe those beliefs held by DEC staff about moose management that influenced the moose management decision-making process.
- Describe those beliefs held by the public about moose management and DEC's moose management proposal that influenced the moose management decision-making process.
- Determine what factors influenced the structure of the moose management decision-making process (e.g. DEC staff beliefs, beliefs of the public, external constraints).
- Determine what factors influenced participants' satisfaction with the decision-making process (e.g. judgments about fairness or other criteria).
- Determine what factors influenced participants' satisfaction with the moose management decision (e.g. satisfaction with decision-making process, judgments about fairness or other criteria).
- Determine what effect the decision-making process and the moose management decision had on participants' satisfaction with the DEC.
- Discuss the implications of alternative beliefs, decision-making procedures, and management constraints for participants' satisfaction with decision-making procedures, satisfaction with management decisions, and satisfaction with DEC.

The research was conducted in three phases:

- An analysis of written and videotaped documents related to the decision-making process, including editorials, letters-to-the-editor, citizens' letters to DEC, and a variety of DEC publications, press releases, and memos.
- Semi-structured open-ended interviews of 26 citizens and 20 DEC staff members who had been involved in the decision-making process.
- A mail survey of citizens who had commented on the reintroduction issue. Questionnaires were sent to 1132 citizens and 758 were returned for a response rate of 67%.

This results section of this report (Chapters 2-4) is divided into three chapters covering three distinct topics:

- Citizens' evaluation of the moose management decision-making process (Chapter 2).
- Barriers to obtaining informed opinions from citizens (Chapter 3).
- Conflicts in DEC staff members' visions of decision-making (Chapter 4).

These chapters are designed to be understandable if distributed independently of each other.

## **Chapter 2: What is a Good Process? The Citizens' View**

We identified a set of nine criteria (grouped according to Susskind and Cruikshank's (1987) categories of fairness, wisdom, efficiency, and stability) that citizens used to judge the quality of the moose management decision-making process. These criteria, and citizens' ratings of the quality of the process according to each of these criteria (5-point Likert scale on which "1" is negative, "3" is neutral, and "5" is positive) were:

### **Fairness:**

- The adequacy of opportunities for citizens to participate (3.40).
- DEC's receptivity to citizen input (3.79).
- The degree of influence citizens had over the final decision (3.57).

### **Wisdom:**

- The quality of DEC's knowledge and reasoning (3.31).
- The quality of citizens' knowledge (2.61).

### **Efficiency:**

- The cost of the process (3.13).
- The time required to complete the process (3.31).

### **Stability:**

- The degree to which the decision it produced was expected to endure (2.82).
- The degree to which relationships improved between stakeholders during the process (3.00).

Judgments about fairness were important for several reasons:

- Fairness was an important consideration in judging the overall quality of the decision-making process.
- Judgments about the quality of the process affected judgments about the quality of the decision it produced.



- Judgments about the quality of the process were correlated with satisfaction with DEC.

Several factors were found to influence citizens' judgments about the process:

- Knowledge about the process. Many citizens knew little about the decision-making process and tended to make assumptions about what occurred during the process.
- Preexisting relationship with DEC or state government.
- Understanding of DEC's reasoning for the reintroduction proposal, decision-making process, and decision.
- Ways in which citizens participated in the process. Citizens who attended public meetings were more likely to perceive the process and decision favorably according to a wide variety of criteria.

### Chapter 3: Barriers to Informed Citizens' Opinions

We evaluated the suitability of the moose management decision-making process as a way to encourage citizens to develop informed opinions about the moose reintroduction issue because:

- Both citizens and DEC staff members expressed considerable concerns about the quality of citizens reasoning and the accuracy of information on which they based their opinions during interviews we conducted.
- The quality of citizens' knowledge was the aspect of the process that citizens who responded to our mail survey were least satisfied with (mean rating of 2.61 where "1" indicates dissatisfaction, "3" is neutral, and "5" indicates satisfaction).
- Some 40-50% of all citizens who commented on the reintroduction proposal could not answer some basic knowledge questions about the issue correctly.

We found that, of the three mechanisms DEC used for collecting public comment on the issue, the telephone survey of northern New Yorkers was least suitable as a way of soliciting informed opinions because:

- A random sample northern New Yorkers was surveyed (who could be expected to be less informed about the issue than citizens who attended public meetings or wrote letters).
- No attempt was made to assess whether citizens were well-informed about the issue.
- The survey provided citizens with very little information about the moose reintroduction issue.
- Those citizens who balked at responding to the survey because they lacked information were encouraged to respond anyway.

We compared telephone survey respondents to citizens who attended public meetings or wrote letters to DEC and found that telephone survey respondents:

- Were less likely to be able to answer basic knowledge questions about the reintroduction issue correctly.
- Were more likely to have no opinion on the reintroduction issue.
- Were less likely to have a strong opinion on the reintroduction issue.

#### **Chapter 4: Conflicting Visions of Decision-making within DEC**

In this chapter, we describe differences in DEC staff members' beliefs about how wildlife management decisions should be made and explore how these differences shaped the moose reintroduction decision-making process. We identified three critical questions with which staff members struggled:

- The role of the public in decision-making.
- The role of DEC in decision-making.
- The identification of stakeholders.

Perspectives expressed on the roles of the public and DEC in decision-making depended on the type of decision being made. Some staff distinguished between management issues in which DEC was mandated to pursue particular actions and other management issues. Perspectives included:

- Citizens should make wildlife management decisions and DEC should serve as a neutral facilitator and educator.
- Citizens should make wildlife management decisions but DEC should advocate for certain policies.
- DEC should make wildlife management decisions considering public comments.

The most contentious issue concerning the identification of stakeholders was the role that anti-hunters and animal rights activists should play in decision-making processes. Perspectives were quite varied on this issue and included.

- DEC should seek to prevent anti-hunters from being involved in its decision-making processes.
- DEC should accept comments from anti-hunters but not take them into consideration.
- DEC should consider the involvement of anti-hunters on an issue by issue basis. Anti-hunters may not be appropriate to involve in setting hunting regulations, but may be as legitimate as other stakeholders on other issues.

#### **Recommendations**

Recommendations to DEC arose out of each of the three results chapters of this report.

##### **Chapter 2**

Many citizens are intensely interested in the processes DEC uses to make decisions about wildlife issues. Consequently, DEC should expend considerable effort not only in designing high quality processes, but communicating to the public about them. DEC should test the following hypotheses in its communication with the public:

- Communication about a decision-making process will improve citizen perceptions of the process and the resulting decision.
- Communication about DEC's reasoning for a proposed management action, for the structure of a decision-making process, and for the final decision resulting from a process will improve perceptions of a process and the resulting decision.
- Communication will have a greater influence in improving perceptions of a process and the resulting decision among DEC's adversaries than it will among DEC's supporters.
- Attendance at a public meeting will improve positive evaluations of a decision-making process and the resulting decision.
- Public involvement strategies that incorporate more opportunity for interaction between citizens and DEC staff and between different citizens will improve positive evaluations of a decision-making process and the resulting decision.

##### **Chapter 3**

Staff generally have multiple goals for decision-making processes, and some of these goals may conflict. In an effort to encourage DEC to identify and resolve such conflicts, we make the following recommendations:

- Staff responsible for coordinating decision-making processes should explicitly describe all goals for the process at the beginning of the process.
- Staff responsible for coordinating decision-making processes should identify strategies that will contribute to each decision-making goal.

- If staff want informed citizens' opinions on an issue, DEC must play an active role in educating citizens who comment on an issue.

#### Chapter 4

Many staff members have different notions about how DEC should be involving citizens in its decision-making processes. Although some such differences will always remain, DEC decision-making will improve to the degree to which it can develop a clearer vision to guide its decision-making processes. Consequently, we make the following recommendations:

- DEC leadership should involve its staff in a periodic, ongoing conversation about a) the role of the public in decision-making, b) the role of DEC in decision-making, and c) the definition of stakeholders.
- DEC staff responsible for particular decision-making processes should describe explicitly before the process begins a) the role they want DEC to play in the process, b) the role they want the public to play in the process, and c) the particular stakeholders they plan to involve.
- DEC leadership should engage animal rights and animal welfare advocates in a dialogue about how DEC will involve the public in its decision-making process.
- DEC staff responsible for particular decision-making processes should develop a plan for staff involvement, as well as citizen involvement, identifying which staff should be involved in the decision-making process, the role that those staff members should play in the process, and specific strategies for accomplishing this involvement.

#### ACKNOWLEDGMENTS

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**CHAPTER ONE**

**OVERVIEW**

**Introduction**

Citizen participation has been an important component of wildlife management decision-making in the Division of Fish and Wildlife within the New York State Department of Environmental Conservation (DEC) for many years. Citizen participation processes can be judged from a variety of perspectives, including their fairness, efficiency, wisdom, and the quality of outcomes they produce. In a case study of a decision-making process recently used to decide whether or not to reintroduce moose to northern New York, we studied how citizens and DEC staff members evaluated the quality of the citizen participation activities that were part of this process. The intention of this research was to generate insights that could aid in designing citizen participation strategies in the future.

In the spring of 1993, DEC decided to abandon its proposal to reintroduce a sizable moose population into the Adirondack region of northern New York. Although a small number of moose had been present in the Adirondacks since approximately 1980, DEC had proposed to accelerate their return by adding to the existing population 100 additional moose transplanted from other areas. If the release had occurred, the population of moose in the Adirondacks would have been expected to increase to about 1,300 within twenty years (twenty years faster than what would have occurred naturally). DEC abandoned the proposal after substantial citizen concern was expressed about such issues as moose-vehicle collisions, future hunting of moose, and the cost of the reintroduction (Hicks and McGowan 1992).

DEC provided a number of opportunities for the public to influence its decision about whether to proceed with the reintroduction proposal. After preparing and releasing an environmental impact statement describing the proposal in June 1992, DEC collected comment from citizens over a period of several months. Three major phases were included in the comment period. A series of 15 public meetings were held throughout New York State (about half in northern New York) to explain the reintroduction proposal and to solicit citizen comment on the plan. DEC also solicited letters from citizens expressing opinions about the moose reintroduction issue. Finally, DEC conducted a telephone survey of randomly selected residents of northern New York to obtain a representative sample of public opinion.

Research conducted by the Cornell University Human Dimensions Research Unit (HDRU) under this job (Job II-2) consisted of a case study of the process DEC used to make its decision not to reintroduce moose to northern New York. We evaluated DEC's strategies for communicating with the public about the issue and involving citizens in the decision-making process. In particular, we studied what people (both citizens and DEC staff) believed was necessary for a "good" decision-making process and how these beliefs affected the moose reintroduction decision-making process. We placed a special emphasis on understanding what people looked for in a "fair" process because fairness is an important concern in many citizen participation activities. Judgments about the fairness and appropriateness of a decision-making process may affect satisfaction with the process, satisfaction with the resulting decision, and satisfaction with DEC as the lead agency. Knowing how citizens and staff thought about and judged this decision-making process will be important when deciding how to structure decision-making processes in the future.

The moose reintroduction effort provided a unique opportunity for this research for several reasons. First, the reintroduction proposal was a controversial one and generated a substantial amount of public interest. Second, DEC made a considerable effort to involve citizens in the decision-making process. Finally, we evaluated the decision-making process after DEC's decision not to reintroduce moose was announced. The timing of our research was important because it allowed us to determine not just what people thought of the decision making process, but how the final decision influenced their perceptions of the process.

### **Format of Report**

This report is divided into four chapters. This first chapter discusses the objectives and methodology of this project. The remaining chapters cover three distinct topics: citizens' evaluation of the moose management decision-making process (Chapter 2), barriers to obtaining informed opinions from citizens (Chapter 3), and conflicts in DEC's vision of decision-making (Chapter 4). These chapters are designed to be understandable if distributed independently of each other.

### **Objectives**

The specific research objectives for this job were as follows:

#### **Beliefs about Decision-making**

1. Describe those beliefs held by DEC staff regarding the nature of appropriate decision-making processes that influenced the moose management decision-making process.
2. Describe those beliefs held by the public regarding the nature of appropriate decision-making processes that influenced the moose management decision-making process.

### **Beliefs about Moose Management**

3. Describe those beliefs held by DEC staff about moose management that influenced the moose management decision-making process.
4. Describe those beliefs held by the public about moose management and DEC's moose management proposal that influenced the moose management decision-making process.

### **Analysis**

5. Determine what factors influenced the structure of the moose management decision-making process (e.g. DEC staff beliefs, beliefs of the public, external constraints).
6. Determine what factors influenced participants' satisfaction with the decision-making process (e.g. judgments about fairness or other criteria).
7. Determine what factors influenced participants' satisfaction with the moose management decision (e.g. satisfaction with decision-making process, judgments about fairness or other criteria).
8. Determine what effect the decision-making process and the moose management decision had on participants' satisfaction with the DEC.

### **Implications**

9. Discuss the implications of alternative beliefs, decision-making procedures, and management constraints for participants' satisfaction with decision-making procedures, satisfaction with management decisions, and satisfaction with DEC.

### **Methods**

Because the decision not to reintroduce moose into northern New York was announced by DEC in the spring of 1993, this study, begun in January 1994, was necessarily retrospective. We conducted our research in three primary phases. The timing of the implementation of these

phases overlapped somewhat, but the earlier phases were used as an aid in the development of research strategies for those which followed them.

### **Phase 1: Document Analysis**

#### **Written Documents**

An analysis of written documents related to the moose management decision-making process was conducted between January 1994 and May 1994. A large number of written documents was available (Table 1.1). We were able to analyze the entire sample of documents categorized as "*DEC documents*" because they were relatively few in number. For the remaining categories of documents (editorials, letters-to-the-editor, and citizens' letters to DEC), we chose a sample of documents to analyze that were rich in relevant information.

Data were analyzed using the grounded theory procedures of Strauss and Corbin (1990). These authors described a set of techniques whereby qualitative data are used to develop theory. The most distinctive feature of these techniques is "*coding*," a series of operations in which data are broken down into meaningful units, labeled according to the concepts represented by each unit, and built into a theory which is grounded in the data. Coding is divided into three stages: open coding, axial coding, and selective coding. Open coding is the process of breaking the data down into units, labeling each unit with a conceptual label or "*code*," and grouping concepts into specific categories. Axial coding involves defining the relationships between particular categories. Strauss and Corbin make use of a common framework to depict the relationships between codes in axial coding. Each set of codes is centered around one or more "*phenomena*," which may be

**Table 1.1:** Documents analyzed during Phase 1.

Type	Number Analyzed	Number Available
Editorials	16	32
Letters-to-the-editor	12	38
Citizen letters to DEC	32	447
DEC Documents:		
Form letters to stakeholders	8	8
Press releases	5	5
Internal memos	9	9
Final moose management plan	1	1
Mission and values statement of the Division of Fish and Wildlife	1	1

represented by codes. Other codes may represent: 1) causal conditions of the phenomena, 2) the context of the phenomena, 3) action/interaction strategies to manage, carry out, or respond to the phenomena, 4) intervening conditions which directly influence these strategies, and 5) the consequences of strategies used in relation to the phenomena. These six types of codes thus serve as an organizing framework for beginning to develop theory from the data. Selective coding is the process of developing the system of categories into a coherent whole by defining how each central phenomenon and associated codes relate to each other. The coding process was accomplished using AQUAD (Tesch 1992), a software package designed specifically for the purpose of theory-building qualitative data analysis. Strauss and Corbin's (1990) coding procedures follow an emergent approach. Codes and relationships between codes are hypothesized as the initial documents are analyzed, but these codes and relationships are revised and added to throughout the analysis of additional documents.

Videotaped Documents

Videotaped documents included tapes of parts of 7 out of the 15 public meetings. Most of the tapes recorded DEC's informational presentation about its moose management proposal, which opened each meeting, and a subsequent question and answer period about the proposal. DEC tried to delay public comments about the proposal until citizens were broken down into small groups so their responses could be better recorded. These small group sessions were not videotaped.

The analysis of the videotapes, completed in January 1995, was used to explore further those themes identified in the written document analysis and the interviews (Phase 2). The videotapes were used to explore: 1) the relative emphasis DEC placed in the public meetings on describing the moose management proposal versus describing the decision-making process that would be used to make a decision about the proposal, 2) the relative emphasis DEC gave to describing the costs versus the benefits of reintroduction, and 3) attitudes and concerns expressed by citizens or DEC staff about the moose management decision-making process. For each of these themes, a simple observation guide was developed with which to record data relevant to those themes.

Phase 2: Interviewing

During the second phase of the research, July - August 1994, we conducted a series of semi-structured, open-ended interviews of DEC staff and citizens who had commented on the moose reintroduction proposal. The interviews were conducted using an interview guide (Patton 1990). An interview guide is a list of topics or questions to be covered during the course of an interview. It helps to ensure that similar information is collected from a series of respondents. Interviewers, however, pursue avenues of inquiry during the interview that appear to be most

productive. An interview guide, therefore, provides some structure while allowing flexibility for the interviewer to discover valuable new types of information during the course of an interview.

In order to develop theory from the interviews that is as defensible as possible, it was important to include individuals representing diverse perspectives among the respondents. Our sampling strategy, therefore, was designed to maximize heterogeneity among the interview respondents. The sample of DEC staff members to interview was selected in consultation with coordinators of the moose management decision-making process. They were selected because of their interest in or involvement with the project. The sample of citizens who participated in the decision-making process was selected on the basis of DEC records. They were selected to provide a diverse sample in terms of a variety of characteristics. Table 1.2 lists the characteristics of the citizens who were interviewed.

Some 26 citizens were interviewed for this project, and 23 of these interviews were tape recorded. Some 20 DEC staff were interviewed, and 13 of these interviews were tape recorded. All but one of the citizen interviews were conducted with individuals. The exception was an interview with a married couple. Several interviews with DEC staff were conducted with groups of staff, and the rest were conducted with individuals. Most interviews were conducted face-to-face, but several were conducted over the telephone when face-to-face interviews were impractical. All interview tapes were transcribed. Transcripts of the interviews were analyzed using the procedures of Strauss and Corbin (1990) described under Phase 1. The analysis of the interviews began with the coding system developed during Phase 1. The coding system was expanded as needed to accommodate the interview data.

**Table 1.2:** Characteristics of citizen interview respondents.

Characteristic	Number of Interview Participants
Gender:	
Male	12
Female	14
Residency:	
Residents of northern New York	13
Non-residents of northern New York	13
Organizational membership:	
Members of organizations taking a stance on moose reintroduction	9
Non-members of such organizations	17
Opinions on moose reintroduction:	
Opposed	19
Supported	7
Mode of participation in decision-making:	
Letter-writing	10
Public meetings	12
Blue Mountain Lake	1
Canton	1
Lake George	1
Millbrook	1
Plattsburgh	1
Ray Brook	1
Troy	6
Telephone survey	4

The purpose of the interviews was to develop a detailed description of DEC staff members' and citizens' beliefs about decision-making, in general, and the moose management decision-making process, in particular. Interviews are a particularly effective research tool for this purpose because they allow respondents to answer questions in detail and in their own words. Nevertheless, the issues explored during this study were complex, and the interviews elicited extemporaneous responses. Therefore, readers should bear in mind that interview excerpts used



throughout the report reflect respondents' impromptu reflections on one particular day and not necessarily the views that they would hold if they gave further thought to the issues discussed.

### Phase 3: Mail Survey

During the final phase of research, we conducted a mail survey of citizens who participated in the moose management decision-making process through writing letters to DEC, attending a public meeting, or responding to DEC's telephone survey.

### Sampling

DEC supplied us with lists containing the names and addresses of citizens who had written letters to comment on the moose reintroduction proposal or who had attended one of the public meetings DEC held. Some 447 citizens had written letters, and 491 citizens had attended meetings. DEC also supplied us with a list of the telephone numbers of the residents of northern New York who had responded to DEC's telephone survey. The names and addresses of these individuals were not available because of the methodology DEC used in its survey. To implement their survey, DEC drew a sample of randomly selected telephone numbers for residences in northern New York. A DEC representative called these numbers and asked to speak with an adult member of the household. Surveyers did not obtain the names and addresses of the individuals they called, even if these individuals completed the survey. Some 626 individuals responded to DEC's telephone survey.

We drew three samples to complete the list of individuals to be sent our mail survey: one from each of the three subpopulations defined by the ways in which citizens had participated in the decision-making process (by attending a meeting, by writing a letter, or by responding to DEC's telephone survey). We wanted to be able to estimate population parameters for survey responses for each of these subpopulations with a minimum accuracy of  $\pm 5\%$  using a 95%

confidence coefficient. We calculated the necessary sample size for each of the three groups according to the procedures of Kish (1965) assuming that 15% of the surveys would be non-deliverable<sup>1</sup> and that the survey would yield a response rate of 65%. Consequently, 376 surveys were sent to citizens who wrote letters to DEC, 392 were sent to citizens who attended public meetings, and 385 were sent to people who were surveyed by telephone by DEC. The total number of surveys sent out was 1132<sup>2</sup>.

Because the names and addresses of the individuals who had participated in the telephone survey were not available, we randomly ordered the list of telephone numbers with which DEC had supplied us and called these numbers to request participation in this study of the individuals who had responded to DEC's original telephone survey. This procedure was continued until the desired sample of 385 individuals had been obtained. Sometimes we would reach a telephone number at which all adults in the household denied participating in DEC's telephone survey. A number of these individuals most likely did not remember participating in the original telephone survey because of the length of time that had elapsed between the original survey and our follow-up telephone call (almost two years) and because of their lack of interest in the moose reintroduction issue. (Many people who responded to DEC's telephone survey were not particularly interested in the moose reintroduction issue because they were selected at random from amongst all northern New Yorkers.) In those cases in which we could not identify with certainty the individual who had participated in DEC's original survey, we requested the

<sup>1</sup> This 15% figure applies to the citizens who wrote letters to DEC or attended public meetings. We assumed that only 5% of the surveys would be nondeliverable to citizens who responded to DEC's telephone survey. This assumed rate was much lower because the names and addresses of these individuals were obtained about a month before surveys were sent out, as explained below.

<sup>2</sup> This number is somewhat smaller than the sum of the sample sizes from each of the three populations. Because some individuals both attended public meetings and wrote letters to DEC, their names were drawn twice in the sampling process. Eliminating names drawn twice reduced the total sample size slightly.

participation of any adult member of the household. We reasoned that these individuals would be comparable with the individuals DEC's original telephone survey had reached because they 1) were members of the same households and 2) were selected using the same methodology DEC had used in selecting individuals for its original telephone survey.

### Survey Instrument

The development of the questionnaire and implementation of the survey was modeled after the procedures of Dillman's Total Design Method (1978).

#### Conceptualization of Survey:

The survey was focused on citizens attitudes towards decision-making, both towards the moose management decision-making process in particular and decision-making by DEC in general. The concepts around which it was developed were based on the results of the interviews conducted in Phase 2 with some influence of theory and research about decision-making. The survey instrument (Appendix A) collected information in three general areas: citizens' knowledge, citizens' beliefs about appropriate decision-making, and citizens' evaluation of the moose management decision-making process. Certain descriptive information (e.g. gender) about survey respondents was also collected because of the possibility that it may have been related to the other types of information collected. Many questions about decision-making were organized into scales; questions in each scale were intended to assess the same construct<sup>3</sup>.

Questions 1 through 9 covered basic descriptive information about respondents to the survey and their attitudes towards the proposal. Questions 10 through 15 inquired about respondents' knowledge. This knowledge was divided into several areas: 1) knowledge about

<sup>3</sup> Following initial analysis of the survey returns, some of the scales were modified -- generally by combining questions from two closely related scales into a single scale. The scales described in this report are the final modified scales that were used in all analyses.

moose in northern New York, 2) knowledge about DEC's moose management proposal, 3) knowledge about DEC's moose management decision, and 4) knowledge about how DEC made its moose management decision. None of these areas was probed exhaustively. Rather, we attempted to assess one or more key pieces of information in each area.

The remaining two sections of the survey instrument measured beliefs about decision-making by DEC in general and evaluations of the moose management decision-making process in particular. A list of the concepts explored in these sections of the survey instrument is presented in Table 1.3. Each concept is discussed in turn below.

Beliefs about Decision-making: We measured three key constructs in respondents' beliefs about how DEC should make decisions in general (Question 20), because these beliefs could have affected citizens' evaluations of the moose management decision-making process. 1) Opportunity for participation (Questions 20c,f,g,i,k,l). These items assessed whether citizens believed that DEC had a responsibility to involve the public in its decision-making or whether they believed that DEC should be able to make its decisions with no public input, if it chose. 2) DEC impartiality (Questions 20a,d,h). During the interview phase, we encountered some citizens who believed that DEC should be completely neutral with regard to natural resource decisions and merely follow the public will. Others believed that DEC should actively advocate what it believed to be the best course of action. This scale measured where citizens' views fell on a continuum between these two extremes. 3) Decision-making authority (Questions 20b,e,j). These items measured whether citizens believed the final decisions about natural resource management should be made by citizens or by DEC.

**Table 1.3:** List of scales calculated in the analysis of survey data.

Concept	Survey Questions
Evaluation of the moose management decision-making process:	
Evaluation of outcomes:	
Interest satisfaction	18l,h
Satisfaction with DEC	18b,e,k
Evaluation of the process:	
Overall evaluation:	
Fairness of the decision-making process:	17l,m,n
Specific aspects:	
Wisdom:	
DEC's knowledge and reasoning	16b,d,g
Citizens' knowledge	16c,f,h
Fairness:	
DEC's receptivity	17b,c,g,j,f,d
Adequate opportunity	19a,i,f,b,m,g,c,k
Influence	17e,h,k
Efficiency:	
Cost	18f,i
Time	18d,j
Stability:	
Stable decision	18c,n,g
Stable relationships	19d,j
Beliefs about decision-making:	
Opportunity for participation	20g,i,l,c,f,k

The remaining questions (Questions 16-19) formed the heart of the survey and assessed how citizens evaluated the moose management decision-making process and the resulting decision. These questions provided insight into what criteria were most important in citizens' evaluations of this decision-making process (with a special emphasis on fairness) and how evaluations of the decision-making process were related to evaluation of the decision. The aspects of the decision-making process that were used as the basis for these questions were generated during the interviews in Phase 2.

A number of items measured, in very general terms, respondents' evaluations of and satisfactions with the decision, the decision-making process, and DEC. Six individual questions assessed whether respondents viewed the moose management decision-making process as good (Question 16e), fair (Question 17i), and whether it satisfied them (Question 18m) and whether they viewed the moose management decision as good (Question 16a), fair (Question 17a), and whether it satisfied them (Question 18a). In addition to these questions, two scales assessed whether citizens believed their interests had been satisfied in the decision-making process (Questions 18l,h) and whether they were satisfied with the DEC in general (Questions 18b,e,k). Finally, one three-item scale was used as an additional evaluation of the fairness of the decision-making process (Questions 17l,m,n).

The remaining questions in this section were intended to assess citizens' evaluations of particular aspects of the decision-making process. They were organized under four criteria proposed by Susskind and Cruikshank (1987) as fundamental to good decision-making: wisdom, fairness, efficiency, and stability.

Wisdom: Two scales were used to assess the wisdom of the decision-making process.

One was used to assess whether DEC was perceived to be well-informed about moose management and having good reasons for its moose management recommendations (DEC's Knowledge and Reasoning -- Questions 16b,d,g). The second was used to assess whether citizens were perceived to be well-informed about the moose reintroduction issue (Citizens' Knowledge -- Questions 16c,f,h).

Fairness: Three scales were used to assess the fairness of the decision-making process. The first measured whether DEC was perceived to have been receptive to citizen input (DEC's Receptivity -- Questions 17b,c,d,f,g,j). The second was used to assess whether DEC was

perceived to have provided adequate opportunities for citizens to participate in the decision-making process (Adequate Opportunity -- Questions 19a,b,c,f,g,i,k,m). The last reflected whether citizens believed they had any influence over the final moose management decision (Influence -- 17e,h,k).

Efficiency: Two scales were used to assess how efficient the moose management decision-making process was perceived to be with regard to cost (Cost -- Questions 18f,i) and with regard to time (Time -- Questions 18d,j).

Stability: We used two scales to reflect this concept. The first measured perceptions of the stability of the final moose management decision (Stable Decision -- 18c,n,g). The second was used to assess whether relationships between key stakeholders were perceived to have improved during the decision-making process (Stable Relationships -- 19d,j).

#### Survey Development

An initial draft of the survey instrument was reviewed by five DEC staff members and five members of the Human Dimensions Research Unit at Cornell University. In addition, it was pretested by sending it to a group of 23 citizens who had participated in the moose management decision-making process. Some 15 of these citizens completed the survey and returned it to Cornell. Comments received from reviewers and citizens were used to clarify directions and the wording of questions, choose the most suitable questions for each scale, and reduce the length of the final survey instrument.

#### Survey Implementation

Questionnaires were mailed from Cornell on October 19, 1994 with a cover letter describing the project. A reminder letter was sent out on October 26. A second reminder and an additional copy of the questionnaire were sent out on November 2. A final reminder was sent out

on November 9. Some 758 out of 1132 questionnaires mailed out were returned, for a response rate of 67%.

A telephone survey of non-respondents was conducted in December 1994. The telephone survey instrument, Appendix B, contained a few key questions adapted from the mail survey. It was administered in an effort to determine whether the respondents to our survey represented a biased sample. Nonrespondents were selected randomly. A final sample of 100 nonrespondents was reached in the telephone survey.

#### Survey Analysis

##### Scale Calculation

Items in each scale were averaged to produce a single scale value. If a respondent failed to answer one item in a scale with three or more items, we calculated scale values by taking the mean of the responses to the remaining items. If more than one item was unanswered in a scale, we did not calculate a value for the scale.

##### Validity

To test the validity of scales, we calculated interitem correlations and performed factor analyses<sup>4</sup>. When examining the interitem correlations, we expected stronger correlations between items within a scale than between items in different scales. In the factor analyses, we expected high communality estimates for each item in a scale and items within a scale to load strongly on the same factor. These analyses resulted in the combination of several scales that had originally been conceptualized as separate. All scales discussed in this report were judged to be valid.

<sup>4</sup> Factor analysis creates a set of "factors" from a group of variables (e.g. responses to different questions on our survey). Each factor is a linear combination of the members of the group of variables. Variables that are weighted heavily on the same factor tend to be correlated. Thus, factor analysis identifies variables that measure closely related concepts by grouping them on the same factor.

Reliability

As a check on the reliability of the scales, we calculated Cronbach’s alpha (Table 1.4) and interitem correlations for each scale. Both the interitem correlations and the values of Cronbach’s alpha support the reliability of the final set of scales.

Adjustment for Nonresponse Bias

The characteristics of the nonrespondents reached through our telephone survey were somewhat different than the characteristics of mail survey respondents. The nonrespondent telephone survey reached a greater number of DEC’s telephone survey respondents (67.0% of respondents to nonrespondent survey) than it did citizens who wrote letters (15.0%) or who attended public meetings (18.0%). These differences are somewhat surprising because the pool of nonrespondents contained approximately equal numbers of citizens who attended public meetings (140), citizens who wrote letters (140), and citizens who responded to DEC’s telephone survey (130). Apparently, the disproportionate representation of DEC’s telephone survey respondents in the nonrespondent telephone survey was because these individuals were easier to reach by telephone.

Because so few meeting attendees and letter-writers were reached in the nonrespondent survey, it was not possible to correct for nonresponse bias among these groups. Considering only those citizens who had participated in DEC’s telephone survey, however, fewer nonrespondents than respondents viewed the process as fair. For citizens who responded to the question about the fairness of the process, 54.6% of the respondents viewed the process as fair or very fair whereas only 45.5% of the nonrespondents viewed the process as fair or very fair. On the other

Table 1.4: Cronbach’s alpha values for scales used in this study.

Scale	Cronbach’s Alpha
Interest satisfaction	0.837
Satisfaction with DEC	0.889
Fairness of the decision-making process	0.751
DEC’s knowledge and reasoning	0.783
Citizens’ knowledge	0.709
DEC’s receptivity	0.933
Adequate opportunity	0.964
Influence	0.841
Cost	0.761
Time	0.672
Stable decision	0.824
Stable relationships	0.622
Importance of opportunity for participation	0.926

hand, approximately equal proportions of nonrespondents and respondents judged the final moose management decision to be good or very good.

For those questions which were asked both on the mail survey and on the telephone follow-up survey, we adjusted for nonresponse bias among DEC’s telephone survey respondents using the procedures of Scheaffer et al. (1990). Means for the entire population of interest ( $\bar{y}_t$ ) were calculated by first computing means for the subpopulations of respondents and nonrespondents. These means were weighted according to the size of each subpopulation to calculate a population mean:

$$\bar{y}_t = \frac{1}{N} [N_R \bar{y}_R + N_N \bar{y}_N]$$

Variances were calculated by a similar procedure:

$$V(\bar{y}_t) = \frac{1}{N^2} [N_R^2 V(\bar{y}_R) + N_N^2 V(\bar{y}_N)]$$



Estimates of population proportions were calculated in an analogous fashion.

The adjustment for nonresponse bias could only be made for certain questions because the nonrespondent telephone survey contained only a subset of the questions from the original mail survey. We have indicated wherever figures have been adjusted for nonresponse bias.

#### Population-level Correction

The sample drawn for the mail survey was not a simple random sample of the entire population of citizens who participated in the moose management decision-making process. Rather, we drew separate random samples from each of three subpopulations: those who attended public meetings, those who wrote letters, and those who responded to DEC's telephone survey. In addition, some individuals drawn had both attended public meetings and written letters. Because the size of these four samples was not directly proportional to the size of the four subpopulations from which they were drawn, we had to apply a population-level correction when calculating statistics describing the entire population of citizens.

Because many respondents left items blank on the survey, we could not simply weight the subpopulation means in the same manner that we did in adjusting for nonresponse bias. For example, the subpopulation of citizens who attended public meetings made up 30.1% of the entire population of citizens who had commented on the moose reintroduction proposal whereas the citizens who responded to DEC's telephone survey made up 40.8% of the entire population. If we used an approach analogous to the adjustment for nonresponse bias to apply a population-level correction in the calculation of the mean response for a particular item, this would involve applying a weighting factor of 0.301 to the meeting subpopulation mean and a weighting factor of 0.408 to the survey subpopulation mean (in addition to weighting factors for the other two subpopulations). If, however, only 5 out of 253 of the telephone survey respondents answered

this item while 250 out of 252 of the meeting attendees answered this item, this approach would involve placing an unreasonably great weight on the responses of the 5 telephone survey respondents who answered this item.

Rather than weighting subpopulation means, therefore, we weighted the responses of individuals who had responded to the survey. These weighting factors were calculated (Table 1.5) by first determining the size of each subpopulation as a proportion of the total population of individuals who had commented on the moose reintroduction proposal (p). This proportion for each subpopulation was then multiplied by the total number of individuals who responded to the mail survey to determine the number of individuals who would have responded to the survey if these responses had been proportionate to the actual sizes of the subpopulations (weighted number of individuals). This weighted number of individuals was then divided by the actual number of individuals who responded from each subpopulation to determine the weighting factor to be applied to the responses of individuals from that subpopulation.

**Table 1.5:** Calculation of weighting factors for applying population-level correction. N is the total number of individuals in the subpopulation. n is the number of individuals in the mail survey sample.

	N	n	p	Weighted Number of Respondents	Weight Factor
Letters	419	236	0.2728	204.6	0.8669
Meetings	463	252	0.3014	226.1	0.8972
Survey	626	253	0.4076	305.7	1.2080
Meetings and Letters	28	9	0.0182	13.7	1.5222
Total	1536	750		750	

CHAPTER TWO

WHAT IS A GOOD PROCESS? THE CITIZENS' VIEW

Background

An important thrust of our study was to determine what criteria citizens considered in evaluating the moose management decision-making process. Past research has shown that fairness is a particularly important consideration in how people judge decision-making procedures (Houlden et al. 1978, Latour 1978, Lind et al. 1980, Lissak and Shepherd 1983, Cohen 1985, Tyler 1987, Bies and Shapiro 1988, Tyler 1988, Conlon et al. 1989, Kitzmann and Emery 1993, Greenberg 1994). Consequently, we focused on fairness and, specifically, on how citizens developed subjective perceptions about fairness. In other words, rather than defining what we expected of a fair process and evaluating the moose management decision-making process on that basis, we explored what citizens perceived to be fair or unfair in the process and why they perceived it that way.

We distinguished between distributive and procedural fairness, a common practice among psychologists (Lind and Tyler 1988). Distributive fairness judgments are those concerned with the fairness of an outcome, in this case the final moose management decision. Procedural fairness judgments are those concerned with the process that leads up to an outcome, in this case the moose management decision-making process. Our study focused on procedural fairness perceptions, although we did explore distributive fairness judgments to a limited extent.

Procedural fairness judgments have important implications. They affect satisfaction with procedures (Latour 1978, Lind et al. 1978, Lind et al. 1980, Tyler and Caine 1981, Tyler 1988, Kitzmann and Emery 1993), satisfaction with the outcomes of the procedures (Tyler and Caine

1981, Tyler and McGraw 1986, Tyler 1988), and satisfaction with the decision-makers responsible for the procedures (Tyler and Caine 1981, Tyler et al. 1985a, Tyler et al. 1985b, Tyler and Rasinski 1991). Consequently, we suspected that judgments about the fairness of the moose management decision-making process might affect public perceptions of DEC and its activities. Fairness is not the only consideration by which participants judge decision-making procedures, however. Other characteristics of a process such as its cost, speed, and the quality of reasoning demonstrated by decision-makers can also affect perceptions of its quality (Leventhal et al. 1980, Lissak and Shepherd 1983). Therefore, we explored these other considerations, as well.

### Methods

We used a combination of three techniques to study how citizens perceived the moose management decision-making process: an analysis of documents related to the process, interviews of citizens and DEC staff involved in the process, and a mail survey of citizens who commented on the reintroduction proposal. These methods are described in detail in Chapter 1 of this report.

Both the document analysis and the interviews relied on qualitative data sources, and our use of data from these sources requires additional explanation. We relied on excerpts from these sources to illustrate the most important themes encountered in the data. Qualitative data have a distinct advantage over quantitative data for some purposes; they express the thoughts and opinions of people in their own words. Researchers have argued that qualitative data are less influenced by the researchers' subjectivity than are quantitative techniques (such as surveys) that reduce thoughts and opinions down to single numbers (Guba and Lincoln 1989). Consequently, qualitative data are often argued to be more appropriate for describing perceptions of complex phenomena than are quantitative data. For these reasons, we have used both qualitative and quantitative methods in presenting our results.

### Criteria for Judging the Decision-making Process

As we anticipated, we found that fairness and a number of other criteria were important considerations of citizens in judging the quality of the moose management decision-making process. Through our interviews and mail survey, we identified nine criteria that citizens considered in evaluating the process. These criteria were classified under Susskind and Cruikshank's (1987) headings of fairness, wisdom, efficiency, and stability. We asked citizens who responded to the mail survey to judge the decision-making process on the basis of each criterion using a 5-point scale on which a "1" was negative, a "3" was neutral, and a "5" was positive (Table 2.1). On average, citizens evaluated the process as neutral to slightly positive on the basis of all but two of these criteria, although substantial variation in citizens' perceptions of the process existed. We shall discuss each criterion in turn.

#### Fairness

Both the interviews and the mail survey suggested that citizens judged the fairness of the decision-making process based on three different considerations: the adequacy of opportunities for citizens to participate in the process, DEC's receptivity to citizen input, and the degree to which citizens influenced the final moose management decision. On the mail survey, citizens evaluated the fairness of the process more favorably (mean scores of 3.40 - 3.79) than they did any other characteristic of the process (Table 2.1).

**Adequate Opportunity:** We used a six-item scale on our mail survey to assess the degree to which citizens believed that citizen participation in DEC's decision-making processes was

**Table 2.1:** Criteria used by citizens to evaluate the moose management decision-making process. Each criterion was rated on a 5-point scale on which a “1” was negative, a “3” was neutral, and a “5” was positive.

Evaluation Criterion	Mean Score	Standard Error of the Mean
Fairness		
Adequate Opportunity	3.40	0.09
DEC’s Receptivity	3.79	0.08
Influence	3.57	0.10
Wisdom		
Knowledge and Reasoning of DEC	3.31	0.10
Knowledge of Citizens	2.61	0.09
Efficiency		
Cost	3.13	0.11
Time	3.31	0.09
Stability		
Stable decision	2.82	0.09
Improvement of Relationships	3.00	0.10

important. Some 91.6% (+/- 1.5%)<sup>1</sup> of the citizens who commented on the reintroduction proposal agreed that citizen participation was important yielding a mean rating of 4.40 on a 5-point Likert scale (on which a rating of 3 is a neutral rating).

Some 30.8% (+/- 2.1%) of citizens who commented on the reintroduction proposal agreed that DEC had provided adequate opportunities for citizens to comment while only 13.0% (+/- 1.8%) disagreed for a mean rating of 3.40 (+/- 0.09) on a 5-point scale. Thus, the vast majority of citizens who answered this question were satisfied with the participation opportunities DEC had provided. Many citizens interviewed echoed these sentiments: “*I don’t know any other state agency that invited that kind of public participation. . . .*” And:

*They had pretty much covered all the grounds. They had their public meetings. . . . They had the write-ins. . . . They did a telephone survey. I think they did a good job. I really do.*

<sup>1</sup> All confidence intervals are at the 95% level.

The reasons that some citizens were dissatisfied with participation opportunities also became evident during our interviews. A considerable amount of disagreement existed as to who should have the opportunity to participate. DEC prioritized soliciting opinions from northern New Yorkers because they believed that these citizens would have to bear most of the costs of a larger moose population. Although some citizens interviewed thought that this emphasis was appropriate, others (even some northern New Yorkers) believed that all New Yorkers should have a say in the decision-making:

*Just because you live in downtown Albany doesn’t mean that you . . . won’t be driving around the north country highways sometime and have a five-year old child. The first time they’ve ever seen a moose is standing alongside the road. Or then again, the first accident you’ve ever been in is because you hit one. . . . I think the land belongs to all of us.*

On the other hand, some northern New York residents interviewed believed that not only should DEC emphasize input from northern New Yorkers but that they should focus only on those northern New Yorkers living in rural areas. Their reasoning was that residents of larger towns would not be substantially affected by the reintroduction:

*And they don’t even really have much to say in it because they don’t really live in the woods, or in the mountains. . . . I mean I don’t think they’re going to take their moose and drop them off in the city.*

The other principal area of disagreement as to who should be represented in the process involved hunters and anti-hunters. During the interviews, some hunters said that they believed that many anti-hunters belonged to well-organized groups which encouraged members to attend public meetings and write letters to DEC about the reintroduction issue. Hunters believed these groups dominated the process far out of proportion to their numbers. Anti-hunters, on the other hand, were just as convinced that the process overrepresented the interests of hunters. They

believed that DEC's communication about opportunities to comment on the reintroduction proposal was biased towards hunters and against anti-hunters:

*Usually they announce something like this to the sportsman's groups . . . to their own supporters, so to speak. But I don't think they would send an announcement to Fund for Animals or Defenders of Wildlife. I don't think they'd say "Oh, by the way guys, this is what we're going to do."*

Although their reasoning was different from that of the anti-hunters, many DEC staff members interviewed agreed that communication about the reintroduction issue and the decision-making process was inadequate. In one internal memo, most of this problem was attributed to poor coordination with the DEC press office which staff tended to view as a "*hurdle to be overcome*" rather than a resource in advertising the process.

**DEC's Receptivity:** Another consideration used to judge the fairness of the decision-making process was DEC's receptivity to citizen input. Some 42.3% (+/- 2.2%) of citizens who had commented on the issue thought that DEC was receptive to citizen input while only 6.9% (+/- 1.3%) disagreed for a mean rating of 3.79 (+/- 0.08) on a 5-point scale, which was higher than the mean rating for any other criterion (Table 2.1). During the interviews, those who believed DEC was receptive to citizen input often cited the numerous opportunities for public comment and DEC's considerable efforts to disseminate information to the public about the proposal.

Concerns that were expressed about DEC's receptivity were rooted in several different factors. Some citizens (particularly northern New Yorkers and anti-hunters) simply did not trust DEC because of bad past experiences with DEC or with other government agencies. This distrust was aggravated because some perceived DEC to be promoting the reintroduction of moose. As some staff members feared, the designation of a preferred alternative in the draft Environmental Impact Statement convinced some citizens that the reintroduction was a foregone conclusion:

*"They apparently wanted to [reintroduce moose] or they wouldn't have brought it up in the first place."* Similarly, anti-hunters believed that DEC had already decided that hunting would be a part of any moose management plan.

*There was a meeting in Troy. Basically when they brought that meeting to an end, they said something like: "We're not even going to go through with this unless we can get legislation passed to say that we can hunt the moose if the population grows to where it could be controlled by hunting." So you know if you have animal groups there, people who care about animals . . . they automatically labeled Encon: "OK. That's it. That's what this is all about. It's about hunting."*

In interviews, some citizens said that their concerns about DEC's lack of receptivity were reinforced by the way the decision-making process was structured. For example, many citizens were suspicious of DEC's motives for separating them into small groups at the public meetings before letting them express their opinions. They perceived it as a tactic by DEC to prevent them from hearing what each other had to say. Furthermore, many felt that their opportunities to present information that might differ from DEC's information were severely constrained:

*Most public meetings should be an exchange of information within the public. . . . People should be able to get up and have some time to present information. . . . That's the purpose of it. The way they conducted it . . . . They're essentially telling you what they're going to do. At the end of that, they break the public meeting up into small groups of people and ask them questions. And each yes or no is given a mark or tally. . . . But the thing was that . . . you weren't really allowed to express yourself, and if you did, it was done within a small group of people. So where were the reporters and the people who could actually report to the public at large?*

Indeed, some citizens and staff interviewed believed that the staff member who coordinated the process was biased in favor of reintroduction of moose. They did not tend to blame him for this, but rather viewed it as a staffing mistake, suggesting that it would be difficult for anyone to develop a proposal without becoming invested in it. Several people suggested that



this bias could have been removed if the responsibilities of developing the proposal and orchestrating the decision-making process were separated.

*I could see the excitement that [the project manager] had. I was happy for him, but I felt he should have been more objective or independent. Maybe someone else should have run the program. There should have been a separation there. . . I felt that him personally wanting moose in the area would also change the way the questions were worded, the presentation was developed, carried out, and ultimately affect the decision, too.*

Ultimately, what convinced many citizens of DEC's receptivity to their input was the fact that the "preferred" alternative of reintroducing moose was eventually abandoned by DEC. In answer to a question about why DEC collected public comment on the reintroduction proposal, one citizen answered: "Well, in hindsight, because they wanted to know what people thought. I wasn't sure at the time." Thus, the moose management decision had a major effect on how some people perceived the process which preceded it.

**Influence:** A related but distinct consideration which influenced perceptions of fairness was the belief that citizens should have some influence over the final moose management decision. A number of citizens interviewed professed the concept of "majority rules," arguing that this type of decision should be made by the public. Others, however, struggled with the issue of just how much influence citizens should have over decisions relative to DEC. They believed that a tension sometimes existed between what the public wants and what is the right thing to do:

*I hope they don't always use just majority because in the Park the majority is usually wrong (laugh) when it comes to environmental things. I hope they look at . . . legitimate concerns and . . . give them weight because of their validity. And not just gross number of votes.*

These citizens emphasized the consideration of public input by DEC rather than a simple rule of the majority: "It should be a factor. But not the whole factor. Definitely public opinion should be weighed." Some 41.8% (+/- 2.3%) of citizens who commented on the reintroduction proposal

agreed that citizens had influenced the moose management decision while only 14.3% (+/- 1.8%) disagreed (mean rating of 3.57 +/- 0.10).

### Wisdom

Both DEC staff and citizens who were interviewed expressed the concern that the moose management decision not only be fair but based on sound reasoning. Concerns were expressed both about the knowledge and reasoning of DEC staff and the knowledge and reasoning of citizens who commented on the proposal.

**Knowledge and Reasoning of DEC:** Citizens thought that DEC should have convincing reasons for its moose reintroduction proposal. Although many interviewed believed it was "a good program," others did not think it had been adequately justified:

*I don't think that they had a really good solid reason for bringing them back. If they could say that the moose was going to better the environment, help maple trees, whatever. If they had a good reason for it . . .*

Of citizens who had commented on the reintroduction proposal, 37.0% (+/- 2.3%) were satisfied with the quality of DEC's reasoning while 19.7% (+/- 2.0%) were dissatisfied (mean rating of 3.31 +/- 0.10).

Citizens were not only interested in the reasoning behind the proposal, however, but they also were concerned with the reasoning behind the final moose management decision. Most people perceived that DEC had made its decision to abandon the reintroduction proposal based on public opposition to it. Many interviewed considered this to be a reasonable basis for making a decision -- even some of the proposal's supporters:

*I thought it was appropriate. I think the Commissioner made the right decision, given what public testimony. I don't think he had any other choice. The die had been cast in stone.*

Others, however, had serious concerns that DEC had not based its decision on reason at all, but had simply abdicated its responsibility to the public. From the perspective of these citizens, the decision-making process was a poor one because DEC “*bowed to . . . political pressure*” and did not make the best moose management decision.

**Knowledge of Citizens:** A closely related consideration in the evaluation of the process was how knowledgeable citizens who commented on the reintroduction proposal were. DEC based its management decision on public input. Numerous citizens and staff members, however, had concerns about how knowledgeable the public was about moose management. In fact, our mail survey indicated that citizens were less satisfied with the knowledge of citizens who commented on the proposal than with any other characteristic of the process. Only 15.1% (+/- 1.8%) of citizens who commented on the reintroduction issue were satisfied with the quality of citizens’ reasoning whereas 34.8% (+/- 2.4%) were dissatisfied (mean rating of 2.61 +/- 0.09). Because of the centrality of this concern to both citizens and DEC staff, Chapter 3 of this report is devoted to an analysis of citizens’ knowledge and of barriers to the development of informed opinions by citizens about the moose reintroduction issue.

### **Efficiency**

Another group of criteria citizens used to evaluate the decision-making process had to do with its efficiency. We grouped these concerns under the headings of cost and time.

**Cost:** Relatively few citizens expressed concerns about the cost of the decision-making process during the interviews. Although only 23.2% (+/- 2.0%) of citizens who commented on the proposal thought the decision-making process was completed for a reasonable cost, even fewer (15.9% +/- 1.9%) thought it was not completed for a reasonable cost (mean rating of 3.13 +/- 0.11). Of those citizens who were concerned about cost, however, it was often a major

concern. They considered the moose reintroduction to be such a trivial issue that they objected to the state even considering the project. These concerns were effectively expressed in numerous editorials and letters-to-the-editor:

*There are plenty of reasons to be skeptical. While the state maintains the \$1.3 million cost associated with the program over a five-year period will be paid for by a dedicated fund supported by private donations, this is misleading, at best. Just to hold the recent public hearings on the subject, one of which took place in Ray Brook, cost money.*

**Time:** The time required to complete the process also did not appear to be a major concern. Among citizens who had commented on the reintroduction proposal, 28.9% (+/- 2.2%) thought the time required for the process was reasonable while 13.3% (+/- 1.7%) thought it was unreasonable (mean rating of 3.31 +/- 0.09). Of those citizens interviewed who thought the time required was unreasonable, some were concerned about the long time after the public comment period during which they heard little or nothing about the issue:

*I think it was a long time period from when they had the public forums and when the decision was made. The issue just kind of disappeared into a vacuum. I don't recall seeing much in the way of information in the papers or anything from them . . . in The Conservationist or news releases . . . where “they were in the process” or something like that.*

Other citizens were concerned that some parts of the decision-making process, primarily the public comment period, occurred in too little time. More time was needed, they believed, in order to be able to digest DEC’s information and develop intelligent comments:

*Well, there's many instances when the response time just isn't enough. . . . There's something like a 30-day response period. By the time you find out about it, by the time you absorb it, you get about two or three days to write an intelligent response. It's unfair. We should get involved earlier and see draft copies, and have draft copies available. Before the final copy gets put out.*

### Stability

Two kinds of concerns were grouped under the general heading of stability: the stability of the final moose management decision and the degree to which the process led to improved (or more stable) relationships among stakeholders.

**Stable Decision:** The stability of the decision was one of only two criteria which citizens rated negatively on average. While 20.3% (+/-2.0%) of citizens thought that the moose management decision was a stable one, 26.2% (+/-2.2%) did not (mean rating of 2.82 +/- 0.09). Some opponents of the reintroduction we interviewed feared that the decision DEC announced would not last. DEC's interest in the reintroduction was believed to be so great that they would find some way to implement it eventually:

*In my opinion, there was no final decision. Nobody said: "We will not do this." I don't believe the booklet I got ever said that. . . . I think it was just: "We're going to put it on hold." Sounded like a school board vote. We keep bringing it up until the people get sick of it and let it pass.*

Others, however, actually hoped that the decision would not last. These citizens were supporters of the reintroduction who believed that the decision not to reintroduce was a bad decision. Therefore, if they believed that the decision would not last, it might actually improve their evaluation of the decision-making process.

**Improvement of Relationships:** Based on our interviews, few citizens seemed to judge the decision-making process by the degree to which it improved relationships between stakeholders. According to the mail survey, only 14.7% (+/- 1.8%) of citizens agreed that the process had improved relationships while 15.2% (+/- 1.8%) disagreed (mean rating of 3.00 +/- 0.10). Nonetheless, during the course of interviews, a number of citizens did indicate that their perceptions of DEC had improved because DEC had seemed to listen to their concerns: "Now I'm

*one of those who were favorably impressed with the decision they came up with because it seemed based on the input."* Others, however, were not convinced that DEC acted in good faith: "I think they tried publicly to make it appear to be very fair. I'm a cynic and I don't believe that that was the case." In fact, some anti-hunters had their concerns about DEC confirmed and aggravated during the decision-making process because they believed that DEC tried to obstruct their participation in the process.

### The Importance of a Fair Process

#### A Fair Process is a Good Process

Citizens' perceptions of the fairness of the moose management decision-making process were important for several reasons. First, in a finding consistent with past research, fairness was one of the most significant considerations in evaluations of the quality of the process (Houlden et al. 1978, Latour 1978, Lind et al. 1980, Lissak and Shepherd 1983, Cohen 1985, Tyler 1987, Bies and Shapiro 1988, Tyler 1988, Conlon et al. 1989, Kitzmann and Emery 1993, Greenberg 1994). Perceptions of the fairness of the process and the overall quality of the process were highly correlated ( $r = 0.634$ ,  $P < 0.0005$ ). Many citizens' comments confirmed that fairness was one of their primary concerns about the process:

*I think it worked very well. I think that in the final analysis the DEC did consider public input . . . very, very seriously, and, even if they had a bias ahead of time . . . they incorporated those public concerns and perceptions in their final decision.*

On the other hand, fairness was not the only consideration citizens used to judge the quality of the process. As described above, citizens also were concerned with the wisdom, efficiency, and stability of the process. Indeed, more of our mail survey respondents rated the process a fair one than rated it a good one (Table 2.2), suggesting that some citizens may have

**Table 2.2:** Percentages of citizens who rated the moose management decision-making process a good process and a fair process. Mean scores (5-point scale, 1=strongly disagree, 5=strongly agree) differ significantly ( $P < 0.005$ ).

	Agree	Disagree	Mean Score
Good Process?	57.2%	24.1%	3.44
Fair Process?	61.9%	17.3%	3.59

been satisfied with the fairness of the process but dissatisfied with other aspects of it. This distinction between a good process and a fair one was alluded to by many of the citizens and DEC staff we interviewed: *"It was an imperfect system, for a number of reasons, but it was fair."* It is also a distinction that has been noted by social psychologists. Leventhal et al. (1980) and Lissak and Shepherd (1983) both describe the importance of criteria other than fairness in subjective judgments of the appropriateness of decision-making procedures.

#### **A Good Process and a Good Decision**

Citizens' judgments about the process were important because they were interrelated with their judgments about the decision. Perceptions of the fairness of the process were strongly correlated with perceptions of the fairness of the final decision ( $r=0.657$ ,  $P < 0.0005$ ). Similarly, perceptions of how good the process was were correlated with perceptions of how good the decision was ( $r=0.497$ ,  $P < 0.0005$ ). Some citizens' comments during the interviews indicated that they linked their evaluation of the decision with their evaluation of the process:

*I'm not sure of all the factors that went into making the decision, but from what I've seen, if they listened to the people, I guess that was a fair way of making a decision. And the final decision I think was fair. Because they followed what they heard in the decision-making process. Nobody intervened at the end and said "Well, that's fine but we're going to do it another way."*

Thus, the fairness of the decision was dependent on DEC listening to citizens' concerns, a part of the process which preceded it. This finding is important because it illustrates that perceptions of

decision-making procedures can influence perceptions of DEC's wildlife management policies and decisions.

Nevertheless, perceptions of the final moose management decision were not influenced only by the process. Indeed, during interviews many citizens clearly distinguished their attitudes towards the process from their attitudes towards the decision: *"My opinion is that the decision was a fair decision. I do not feel that the process was necessarily a fair process."* Even for this citizen, however, process was an important consideration. Rather than judging the decision exclusively based on the process that he observed, however, he judged it based on what he believed would have resulted from an ideal decision-making process:

*I would say it was an appropriate decision because of two reasons: 1) the way I personally felt about the process and the issue and 2) because I also feel that the majority of the people within the area being affected by the program would also feel the same way. I do not know that. I only suppose that.*

This citizen believed that the decision was a good one because it was what he would have expected from a process that accurately determined the sentiment of the majority of affected citizens. Most other citizens, regardless of whether they approved of the actual process, also believed that a good decision would have resulted from a good process.

On the other hand, this citizen also acknowledged that he did not truly know what other citizens thought. He made suppositions about it. Because he did not know what decision would really have resulted from an ideal decision-making process, his evaluation of the quality of the decision was partly based on the way he *"personally felt about the . . . issue."* This type of thinking was evident in other citizens as well.

Citizens want a good decision-making process. If they are not convinced that the process is a good one, however, they may make assumptions about what the decision should be based on

an imagined ideal process. Because their ability to predict what would come out of an ideal process is limited, their judgments may very well be colored by their own interests. Indeed, perceptions of the quality of the decision were closely correlated with the degree to which citizens' interests were satisfied ( $r=0.680$ ). Thus, citizens may judge the quality of a decision by the quality of the process which preceded it if they have enough information to believe that the process is a good one. If not, however, their judgments of the decision may be influenced more strongly by the extent to which their personal interests were met. This finding underscores the importance of educating citizens about how policy decisions are being made.

#### **Fairness and Satisfaction with DEC**

Citizens' perceptions of the process were also related to their satisfaction with DEC. On the mail survey, responses to the question about the fairness of the process were correlated with responses to the scale measuring satisfaction with DEC ( $r=0.509$ ,  $P<0.0005$ ). The relationship between satisfaction with DEC and evaluation of the process is probably not a simple cause and effect one, however. Past researchers have debated whether judgments about procedural fairness improve perceptions of decision-makers or perceptions of decision-makers affect judgments about procedural fairness (Tyler and Rasinski 1991, Mondak 1993). In this study, the evidence discussed above under "*Improvement of Relationships*" suggests that both were true; positive perceptions of the process improved perceptions of DEC for some citizens, but negative preexisting perceptions of DEC colored perceptions of the process for others.

#### **Influences on Process Judgments**

Because of the potential implications of citizens' perceptions of the decision-making process, it is important to understand those variables and contextual factors that influenced their process judgments. In our study, three factors stood out as having a significant influence on

process judgments: knowledge about the process, preexisting relationship with DEC or state government, and an understanding of DEC's reasoning.

The amount of knowledge that citizens have about a decision-making process will obviously affect the kind of judgments they can make about that process. Despite the fact that citizens expressed an interest in the moose management decision-making process, many had very little knowledge about it. We can illustrate this lack of knowledge in two ways. First, on our mail survey, we asked all citizens three very general questions about their evaluation of the decision-making process: how good they thought the process was, how fair they thought it was, and how satisfied they were with the process. We interpreted a failure to answer these questions as an indication that citizens did not have enough information about the process to be able to evaluate it, even in very general terms. Between 36% and 42% of the respondents to our survey failed to answer each of these questions (Table 2.3).

We also asked mail survey respondents which key activities they remembered taking place during the decision-making process. In particular, we focused on DEC's distribution of the environmental impact statement, the public meetings, the solicitation of letters from citizens, and the telephone survey of northern New Yorkers. Between 51% and 72% of citizens who participated in the process were not aware of each of these activities taking place (Table 2.4). These statistics illustrate that a considerable percentage of citizens had little knowledge about the decision-making process.

On the other hand, many citizens expressed a clear interest in the process, particularly those who opposed the moose reintroduction proposal or were suspicious of DEC. One verbal exchange between citizens who attended the Lake George public meeting and the DEC moderator effectively illustrates the depth of this interest. Citizens questioned the moderator again and again



**Table 2.3:** Percentages of citizens who failed to answer questions requesting general evaluation of decision-making process.

Question	Percent Failing to Answer
Good Process?	36.6%
Fair Process?	41.1%
Satisfied with Process?	37.6%

**Table 2.4:** Percentages of citizens who were unaware of major components of the moose management decision-making process.

Activity	Percent Unaware of Activity
Distribution of EIS	57.2%
Public Meetings	42.0%
Solicitation of Letters	51.7%
Telephone Survey	71.8%

about the decision-making process until they had a clear statement about how public input would be used:

**Citizen 1:** *What effect will the public input have on what you do?*  
**Staff:** *In what respect?*  
**Citizen 1:** *Will these people's input have any more effect on what you do than the public input had on Lake George or the Adirondack Park or anything like that? If we all sat here, if you had a quorum of people here that said: "We don't want it." It has absolutely nothing to do with what your decision is going to be. Is this correct or not?*  
**Citizen 2:** *Is this a fait accompli?*  
**Staff:** *It really isn't.*  
**Citizen 1:** *We've been involved with other agencies before and seen that public input has had nothing whatsoever to do with reality once the bureaucracy gets a hold of it.*  
**Staff:** *That's fine. . . . You've dealt with other agencies. You've probably dealt with this agency. O.K. As it now stands, if we don't get the authority to hunt, if we don't get the ability for the people in the area to be able to say when a problem is a problem and deal with a problem, we don't do a release. Does that mean the problems go away? No it doesn't. It means you're going to sit here*

*twenty years from now and be having the same meeting. And it won't be because DEC released moose. It's because they're already here.*  
**Citizen 1:** *That wasn't my question. My question was what effect will our input have as far as your action.*  
**Staff:** *If the people at these meetings come to us and say: "Hey, we don't want moose. We don't want moose even though you're telling us we'll have the authority to deal with problems down the line. . . ." If that's the case, we may very well not release moose at all. We probably wouldn't. Why? For two reasons. One, do you think it would fly if all the people in northern New York were complaining about it?*  
**Citizen 1:** *Yes, I do. I think the bureaucracy could shove it down our throat.*  
**Citizen 2:** *I have two questions. First of all, how do you really arrive at your decision? What format, what methodology, do you use to say yes it's a go or no it's not a go?*  
**Staff:** *We will provide . . . We drafted the EIS. We're having this series of meetings. . . . We will summarize these comments. We will provide them to the Commissioner. . . . We will modify based on these comments or provide reasons why we're not going to modify. . . . And the Commissioner will make the decision.*

This exchange not only illustrates citizens' interest in exactly how DEC was making its decision, but it also demonstrates that it was those who were suspicious of DEC who were particularly interested in the decision-making process. Citizens who trusted DEC were more inclined to accept that DEC makes its decisions in a fair way, even when they had little evidence that this was actually the case. On the other hand, citizens who tended to oppose DEC also tended to assume that DEC was behaving unfairly unless they had direct evidence that this was not true.

As discussed earlier in this chapter, one of the important criteria citizens considered in evaluating the decision-making process was DEC's reasoning for proposing the reintroduction of moose and for making its final moose management decision. Thus, citizens' judgments about the decision-making process could be affected not only by information about the process itself but by information about DEC's reasoning, as well. An interest in this type of information was expressed by many citizens:

*I wanted to hear why they would want to do such a thing. And I wanted to see how they felt it made sense in this day and age to bring the moose back when the Adirondacks is not like it used to be.*

### **The Influence of Mode of Participation**

We compared attitudes towards the decision-making process among citizens who had participated in the process in different ways. In almost all cases, citizens who attended public meetings were on average more or at least as supportive of both the decision and the process used to reach it than citizens who wrote letters to DEC or citizens who were reached by the telephone survey (Tables 2.5 and 2.6). At least two possible explanations exist for this finding. The first is that citizens who attended public meetings were more likely to be supportive of DEC's final decision and the process used to reach it, perhaps because they are more supportive of DEC and its policies in general. The second is that something about the public meetings resulted in more favorable evaluations of the decision and the decision-making process.

We find the first explanation less plausible than the second. If citizens who attended public meetings were more likely to be supportive of DEC's decisions and policies, we would also expect them to be more likely to have supported the moose reintroduction proposal. Meeting attendees, however, were more supportive of the decision-making process and the final decision even when support for the reintroduction was controlled for. In other words, whenever a significant difference existed between the responses of supporters and opponents, both supporters and opponents were more supportive of the decision-making process and the final decision if they had attended public meetings.

This finding suggests that something about the meetings may have contributed to these more positive evaluations. Although it is impossible to determine exactly what this something

**Table 2.5:** Citizen evaluations of the moose management decision. Grouped by mode of participation in the decision-making process (letter writers, meeting attendees, and telephone survey respondents) and level of support for the original reintroduction proposal. Means based on a 5-point scale where "1" is negative and "5" is positive. All differences shown are significant ( $P < 0.05$ ).

Criterion	Level of Support	Mode of Participation		
		Letters	Meetings	Survey
Good Decision	Opponents	3.10	4.01	2.90
	Supporters	2.73	2.88	3.62
Fair Decision		3.19	3.53	3.56
Satisfied with Decision	Opponents	3.55	4.17	3.10
	Supporters	2.35	2.48	3.63
Interests Satisfied by Decision	Opponents	3.51		
	Supporters	2.48		

**Table 2.6:** Citizen evaluations of the moose management decision-making process. Grouped by mode of participation in the decision-making process (letter writers, meeting attendees, and telephone survey respondents) and level of support for the original reintroduction proposal. Means based on a 5-point scale where "1" is negative and "5" is positive. All differences shown are significant ( $P < 0.05$ ).

Criterion	Level of Support	Mode of Participation		
		Letters	Meetings	Survey
Good Process		3.26	3.63	3.38
Fair Process		3.41	3.81	3.41
Adequate Opportunity		3.19	3.66	3.04
DEC's Receptivity		3.62	4.02	3.44
Influence		3.49	3.88	3.12
Stable Decision		2.54	2.95	2.81
DEC's Knowledge and Reasoning	Opponents	2.81	3.13	2.50
	Supporters	3.50	3.74	3.44
Citizens' Knowledge	Opponents	2.97		
	Supporters	2.43		
Cost	Opponents	2.34	2.79	2.18
	Supporters	3.43	3.65	3.37
Time	Opponents	3.12	3.43	2.96
	Supporters	3.16	3.52	3.22

could be, one possibility is that the meetings provided more direct and extended communication between DEC and citizens and between different citizens. Some citizens who attended public meetings clearly benefited from the comments of other citizens and DEC: *"There were some suggestions that were well-educated and appropriate. . . . I can remember something that I hadn't thought about, comments that people made, and obviously that a lot of people hadn't thought about either."* Even some of the most vocal opponents of the reintroduction plan seemed to get a better understanding of DEC's reasoning from the public meetings: *"I'm telling you DEC had good points also. Again, I thought my opinion was better than anyone else's."*

Thus, a significant finding of this study is that the ways that citizens participate in a DEC decision-making process may affect the way they perceive that process and the decision it produces. Although the several mechanisms for gathering citizen input may be part of a whole process, that whole may be perceived very differently by citizens depending on how they participate in the process. This finding has important implications for designing decision-making processes. In particular, it is possible that citizens' perceptions of the process and decision may benefit from greater interaction with other citizens and with DEC.

#### **Management Implications**

Several conclusions with important management implications stand out from this study. Because this analysis was based on a case study of one management scenario, it is important to recognize its potential limits in terms of generalizability, even though the moose reintroduction decision-making process was quite extensive, and our analysis multi-faceted. We, therefore, present the management implications growing out of this study in terms of hypotheses to be tested in a variety of other decision-making scenarios.

First, many citizens were very interested in the process by which the moose management decision was made. Therefore, if DEC is concerned about its public image and citizens' acceptance of its decisions, it is important to devote considerable effort not only to designing high quality decision-making processes but communicating to the public about them. Particularly strong concerns were expressed about the fairness of the process and the quality of reasoning evident in the process. Consequently, in those cases in which DEC has attempted to design a high quality decision-making process incorporating substantial public input the following hypotheses may be worth testing:

- 1) Communication about a decision-making process early in the process will improve citizen perceptions of the process and the resulting decision.**
- 2) Communication about DEC's reasoning for a proposed management action, for the structure of a decision-making process, and for the final decision resulting from a process will improve perceptions of a process and the resulting decision.**

Indeed, several recent studies have shown that this type of communication from decision-makers can improve perceptions of a decision-making process (Bies 1987, Bies and Shapiro 1988, Greenberg 1994). Process concerns were particularly important among citizens (primarily northern New Yorkers and anti-hunters) who distrusted DEC. Consequently, it may be useful to test the following hypothesis:

- 3) Communication will have a greater influence in improving perceptions of a process and the resulting decision among DEC's adversaries than it will among DEC's supporters.**

Finally, substantial differences in perceptions of the process were evident amongst citizens who had participated in different ways in the process. Citizens who attended public meetings

were more supportive of the process than citizens who wrote letters or citizens who responded to DEC's telephone survey. It is not clear to what extent this was an effect of the public hearing per se, an artifact of who attends public hearings, or the effect of personal interaction between citizens and DEC staff. We suggest testing the following hypotheses:

- 4) Attendance at a public meeting will improve positive evaluations of a decision-making process and the resulting decision.**
- 5) Public involvement strategies that incorporate more opportunity for interaction between citizens and DEC staff and between different citizens will improve positive evaluations of a decision-making process and the resulting decision.**

## **BARRIERS TO INFORMED CITIZENS' OPINIONS**

### **CHAPTER THREE**

#### **Background**

Citizens and DEC staff members involved in the moose reintroduction issue were concerned about the quality of reasoning and information on which the moose management decision was based. They expressed interest both in the quality of reasoning of staff members and the quality of reasoning of citizens who had commented on the issue (see Chapter 2). Because the quality of reasoning of interested citizens was of particular interest to both citizens and staff members, this chapter is devoted to describing barriers that existed to the development of informed citizens' opinions during the moose management decision-making process.

Concerns about the quality of reasoning and information on which decisions are based have been explored to some extent in the social psychology literature. Although fairness is often the dominant consideration in studies of how people evaluate decision-making procedures (Houlden et al. 1978, Latour 1978, Lind et al. 1980, Lissak and Shepherd 1983, Cohen 1985, Tyler 1987, Bies and Shapiro 1988, Tyler 1988, Conlon et al. 1989, Kitzmann and Emery 1993, Greenberg 1994), other characteristics also have been recognized as important. Susskind and Cruikshank (1987) argued that the wisdom of a public policy decision-making process is one of the primary characteristics by which it should be judged. Several social psychologists have reported results that suggest that people do indeed evaluate decision-making procedures on the basis of such characteristics as wisdom, reasoning, and the quality of information used in the process (Lind et al. 1973, Leventhal 1980, Leventhal et al. 1980, Lissak and Shepherd 1983, Bies and Shapiro 1988, Tyler 1988, Greenberg 1994). The data we collected on how citizens and

DEC staff members evaluated the quality of the moose management decision-making process were consistent with these observations (see Chapter 2). Consequently, an identification of the barriers preventing citizens from developing informed opinions about the reintroduction issue is quite relevant.

### Methods

We used a combination of three techniques to study how citizens perceived the moose management decision-making process: an analysis of documents related to the process, interviews of citizens and DEC staff involved in the process, and a mail survey of citizens who commented on the reintroduction proposal. These methods are described in detail in Chapter 1 of this report.

Both the document analysis and the interviews relied on qualitative data sources, and our use of data from these sources requires additional explanation. We relied on excerpts from these sources to illustrate the most important themes encountered in the data. Qualitative data have a distinct advantage over quantitative data for some purposes; they express the thoughts and opinions of people in their own words. Researchers have argued that qualitative data are less influenced by the researchers' subjectivity than are quantitative techniques (such as surveys) that reduce thoughts and opinions down to single numbers (Guba and Lincoln 1989). Consequently, qualitative data are often argued to be more appropriate for describing perceptions of complex phenomena than are quantitative data. For these reasons, we have used both qualitative and quantitative methods in presenting our results.

### Citizens' Knowledge about the Reintroduction Issue

Because DEC based its moose management decision on citizen input, it was particularly important to staff members that citizens' opinions be based on accurate information. In fact, this was such a concern to the staff members coordinating the process that following the completion

of the public input period, they wrote in a memo: "*If the public based their comments on well-informed decisions, then the process worked perfectly. If not, we failed.*"

Indeed, many staff members eventually concluded that numerous citizens had not been particularly well-informed about the reintroduction issue:

*It was frustrating because you take the approach of presenting the pertinent information, and then you entrust the public with the decision based on that information. But when you boil down public attitudes about it, oftentimes their attitudes are based on misinformation and so the frustration is that you're not really getting the message out and you're responding to a public opinion that may be based on misinformation.*

Many citizens shared this concern. In fact, our mail survey indicated that citizens were less satisfied with the knowledge of citizens who commented on the proposal than with any other characteristic of the process. Only 15.1% (+/- 1.8%) of citizens who commented on the reintroduction issue were satisfied with the quality of citizens' reasoning whereas 34.8% (+/- 2.4%) were dissatisfied (mean rating of 2.61 +/- 0.09)<sup>1</sup>.

DEC staff were particularly concerned about the degree to which citizens were aware of the components of the moose reintroduction proposal. For example, some citizens opposed the proposal because they did not want tax dollars spent on reintroducing moose. Because DEC proposed to fund the reintroduction with voluntary donations rather than tax revenues, staff had reservations about basing the moose management decision on such comments. As a staff member wrote in a summary memo:

*It is not clear if accurate or inaccurate information, or a lack of information drove the public decision-making process. Did the public accept either the merits or the facts of the case? Were they aware of them? Was the decision well-informed but simply contrary to our expectations? Misinformation did appear in the media and many people misunderstood our message. For example, some*

<sup>1</sup> On a 5-point scale on which "1" is negative, "3" is neutral, and "5" is positive.

never understood that we proposed to fund the project through public contributions.

Data from the mail survey support the intuition of staff members and citizens that citizens were not well-informed about the moose reintroduction issue. We asked several questions on the survey (Appendix A) to assess citizens' general knowledge about moose and about DEC's reintroduction proposal. We reasoned that citizens should have been able to answer these questions if they were to make an informed decision about where they stood on the moose reintroduction issue. These questions assessed citizens' knowledge about 1) the size of the current moose population in northern New York (Question 11), 2) the rate of change of the moose population (Question 12), and 3) the way DEC proposed funding the moose reintroduction (Question 13). About 40% to 50% of all citizens who commented on the proposal did not answer each of these questions correctly less than two years after they commented on the proposal (Table 3.1).

These data, however, do not explain why citizens did not answer these knowledge questions correctly. An incorrect response to one of the knowledge questions may have meant either that a citizen had not received information from DEC or that she had received it but not believed it. The distinction is important. If citizens had not received information from DEC, DEC had a communication problem. If citizens had received the information, however, and simply did not believe it, then DEC had a credibility problem. Indeed, the interviews suggested that both factors were important. When asked whether he knew where the money would have come from for this project, one citizen replied: *"I don't know anything, but I imagine it would have come from out of our pockets."* This reply suggests that this individual was not aware of DEC's claim that it would fund the reintroduction using voluntary donations. Other citizens,

**Table 3.1:** Percentages of citizens who were able to answer key knowledge questions about moose and moose reintroduction proposal correctly. Respondents were offered several closed-ended choices for each question (See Appendix A -- Questions 11, 12, and 13). Confidence intervals are at the 95% level.

Question	Percentage Correct
<b>Population Size:</b> About how many moose do you think there are in northern New York today?	50.6% +/- 2.6%
<b>Population Growth Rate:</b> Without a large-scale reintroduction of moose, what do you think the moose population in northern New York will most likely do?	53.6% +/- 2.6%
<b>Reintroduction Funding:</b> I believe DEC would have funded its proposed 5-year moose reintroduction program . . . using:	57.6% +/- 2.5%

however, clearly were aware of this claim: *"I just have a problem with spending money. And don't tell me private donations are going to do this, because that's hogwash! But that is what they said."* Thus, to ensure that citizens are developing their positions on issues based on correct information, DEC may have to improve both its communication and its credibility.

Resolving credibility problems may be a more difficult project than resolving communication problems. DEC's credibility in the eyes of citizens will be affected by citizens' exposure to DEC over a variety of issues whereas communication strategies are often more issue specific. Because this research project was a case study of one issue, it was better suited to identify barriers to effective communication than barriers to DEC's credibility. Consequently, most of the rest of this chapter will focus on obstacles to effective communication during the moose reintroduction decision-making process.

**DEC's Conceptualization of the Process**

Improving communication strategies is a multi-faceted problem. It requires both a clear vision of what information is important to communicate and an effective approach for communicating that information. The data we collected suggest that a lack of clarity in DEC's



vision of decision-making contributed to citizens being poorly informed about the moose reintroduction issue. To explain the implications of DEC's vision of decision-making requires a detailed discussion of the way that staff members conceptualized the moose management decision-making process.

### The Role of the Public

Staff involved in the moose reintroduction effort distinguished between two types of wildlife issues that DEC addressed. This distinction had important ramifications for how citizens were involved in decision-making. Some wildlife decisions were considered to be related to certain mandates that DEC is obligated to meet under New York State law (what one DEC biologist called "*megamandates*" in the course of an interview) (Gould 1991). For example, DEC is legally mandated to<sup>2</sup> 1) preserve wildlife populations, 2) manage wildlife so as to maximize human benefits and minimize human costs, and 3) provide certain specified benefits, such as hunting of some species. Many staff members argued that when a "*megamandate*" is at stake in an issue, DEC should take a strong advocacy role and prioritize meeting its mandates above satisfying immediate public desires. For example, one staff member argued that: "*We know that we've got a mandate to manage big game and that we are going to manage big game.*"

Those staff who orchestrated the moose management decision-making process, however, did not believe that a "*megamandate*" was at stake in this issue. As the situation was described in one DEC memo:

*Moose will eventually reoccupy the state without assistance. . . . We are meeting our fundamental mandates of species preservation and providing for the*

<sup>2</sup> Some DEC memos also used the term "*issue of biology*" to describe issues that involved DEC's mandate. Their logic seemed to be that biological expertise was often needed to determine the best decisions in issues involving DEC's mandate (e.g. how to best preserve an endangered species or sustain a maximum hunting yield).

*use and enjoyment of moose by future generations without an active restoration program.*

Because no megamandate was at stake, the same memo classified the moose reintroduction decision as a matter to be decided based on public desires (emphasis ours):

*[W]e were meeting our basic mandates concerning moose without restoration. Therefore restoration was an issue about the desires of today's public that should be decided by today's public.*

Thus, the moose reintroduction issue was believed to call for a much stronger decision-making role by the public than did issues in which one of DEC's mandates was at stake.

This perspective on what constituted an appropriate decision-making process was reflected by numerous staff members involved in the reintroduction issue. As one biologist put it:

*What we were looking for was: "Hey folks, we can take it or leave it one way or another. These are the options associated with moose . . . and these would be the consequences. What would you like to do?" That really was our intent.*

This approach to the moose management decision is consistent with a more general vision of wildlife management decision-making shared by many DEC staff members whom we interviewed: the belief that citizens should make decisions about many wildlife management issues. One DEC supervisor described it: "*I think public policy is established by the public. . . . Or should be.*"

These quotations also imply a particular role for DEC. DEC wanted to avoid communicating any moose management preferences of its own. Rather, the message it wanted to communicate was: "*Hey folks, we can take it or leave it one way or another.*" As the quotation in the preceding paragraph illustrates, staff members simply wanted to present the alternatives and the consequences of those alternatives and let the public decide what they preferred. Nevertheless, as argued in a preceding section, DEC also hoped that public preferences would be "*well-informed.*"

### The Public Comment Period

The public comment period was structured to try to achieve DEC's objective of making the moose management decision on the basis of citizens' preferences with DEC playing a neutral role. Originally, the public comment period consisted of two components: 1) DEC held a series of fifteen public meetings at which citizens were given the opportunity to express their opinions on the issue; and 2) DEC solicited letters from interested citizens. Many staff members judged these components to be inadequate, however. To begin with, one staff member believed that, in an effort to avoid appearing to advocate the moose reintroduction, DEC sometimes communicated less information to the public than they had available:

*[I]t was difficult to know whether to be an advocate or whether to just try to present the facts. . . . I think we tended to downplay the positive. I think [staff member's name] did at the meetings. We spent so much time researching the negative consequences . . . I think if we went through the slide show that was given, the ratio of negative to positive issues weighed toward the negative. That may have affected people's . . . sense of what it all meant. . . . I think we could have given them [positive and negative aspects] equal treatment.*

Indeed, in the executive summary of the EIS, two paragraphs were devoted to discussing the benefits of moose reintroduction while thirty paragraphs were devoted to discussing the costs. Similarly, during the informational presentation at the Lake George public meeting, DEC's presenter devoted ten minutes to discussing the possible negative social consequences of moose reintroduction and one minute to the possible positive social consequences.

As the previous interview excerpt illustrates, at least one staff member perceived that this imbalance in information resulted from uncertainty as to how to educate the public about moose management without advocating a particular course of action. Communicating extensively about the perceived benefits of moose reintroduction could be interpreted as an argument for moose reintroduction, and, therefore, was considered to be an inappropriate action by DEC as a neutral

decision-maker. DEC appeared to struggle with how to communicate factual information without letting it be influenced with DEC's values:

*[W]e have a tendency to be too quick to translate our values . . . and put them in terms of scientific fact and cognitive knowledge. That the reason for hunting is to control animal populations and to stop the spread of disease and keep nature in balance and all these wonderful things that we've been saying for years when realistically there are very few species that we need hunting for to keep their population in check. So that to me is a bogus education, but we try to do that anyhow. . . . We're doing it because these are our facts and while they're fact to us, they're not facts to somebody with a different value set.*

This perceived difficulty in communicating information in an unbiased manner was important because several DEC staff members believed that it was their failure to communicate their neutrality during the early stages of the public comment period that was the biggest shortcoming of the process. In particular, the designation of a preferred alternative in accord with a perceived requirement of the State Environmental Quality Review Act was labeled as a pivotal decision in a summary memo about the process:

*It was generally accepted that the biggest single mistake that we made in the entire process was to have a preferred alternative. It misled people about our intent. Further, it gave people with an anti-state agenda something to shoot at. It allowed unrelated issues to rise to the top of the public's decision-making cauldron.*

Numerous staff members' comments echoed this concern that much opposition to the reintroduction was generated because DEC appeared to advocate a particular action. Because many northern New Yorkers distrust state government, DEC staff feared that people had opposed the preferred alternative simply because it seemed to be what the state wanted:

*The Bureau of Wildlife could propose bringing Jesus back to the Adirondacks and we still would have been shot down!*

*It was real tough. There seemed to be a lot of background noise in what we were hearing from folks. . . . Some of the meetings! Gosh, the people were really hostile and it had nothing to do with moose! It was like a conduit for other*

*concerns. And we didn't know how much of that was real or how much of it was just an artifact of the people that were attending some of the meetings.*

Staff members' frustration was evident in these comments. They did not want to make the decision about the moose reintroduction on the basis of comments from people who would oppose anything the state proposed. Rather, they wanted to separate the project from people's attitudes towards the state and find out what people would have wanted if the project was evaluated on its own merits. As a staff member described it:

*Well, what I wanted to accomplish was basically to have an accurate view of what the people across the state and specifically the people in the Adirondacks were interested in having done. . . . An accurate view is if you pull away all the noise, all the clatter, what really are their interests? What really are their concerns? And what would they really like done?*

When asked what "noise" and "clatter" meant, he continued:

*"I didn't get my 1992 tax return back. . . . You're not going to do this moose project." That kind of deal.*

Therefore, DEC eventually decided to conduct a telephone survey of randomly selected residents of northern New York to try to minimize the "noise" and the "clatter" they felt like they were getting at the public meetings and through the letters and obtain a less biased understanding of citizens' preferences. In this survey, they went to great efforts to avoid communicating any management preferences of their own so as not to bias respondents. As we have argued above, however, staff members struggled with the issue of how to communicate any information in a neutral way. Consequently, DEC staff decided to include very little information of any kind about moose and the reintroduction proposal in the survey in an effort to allow citizens to make decisions for themselves. In the opening lines of the telephone survey, citizens were told:

*Presently there are a small number of moose widely scattered throughout northern New York. This moose population is expected to increase very gradually. Northern New Yorkers have expressed varied opinions in regard to DEC's future management of moose in this region.*

Respondents who said that they had little information and who balked at offering an opinion were told that their "*opinions were important anyway.*" Then they were asked: "*Would you like to see the moose population in northern New York increase, remain at current levels, decrease, or do you have no opinion on this?*" and "*Would you like to see moose populations increase naturally over many years, or managed to increase rapidly?*"

### Conflicting Goals in the Decision-making Process

This approach to the telephone survey seems appropriate as a way to measure the preferences of a representative sample of northern New Yorkers, one of the main goals of DEC staff for the decision-making process. Indeed, the survey was the component of the public comment period with which staff members seemed to be most satisfied. One staff member said that one aspect of the process that worked "*particularly well*" was "*to carry out in a very short . . . period of time a telephone survey to . . . verify some of the responses we'd summarized from the public meetings.*" Another said:

*[W]e had a survey we did that . . . did a good job of collecting the northern zone individuals' opinions, in a relatively inexpensive way. And seemed to be accepted with a level of credibility that much of the other stuff wasn't.*

The survey, however, was not an effective way for gathering "*well-informed*" input from citizens, a secondary goal of DEC staff for the process. To be part of a process of gathering informed input, citizens either 1) should have been provided with enough information while they were responding to the survey that they could offer informed input, or 2) should have been well-informed about the issue before they responded to the survey. Neither of these conditions were met. The information that DEC provided to survey respondents about the reintroduction issue was lacking in relevant specifics. How small is the small number of moose currently present in northern New York? What does it mean for this population to "*increase very gradually*?" What

does it mean to manage a moose population? How slow is “gradual?” How fast is “rapid?” If citizens were uninformed about the issue, they were offered little additional information on which to base their opinions. At no point in the survey did DEC reveal that they had developed a plan by which moose could be reintroduced into New York. This information, however, is relevant. Citizens might be much more willing to accept moose reintroduction if they knew that there was a well-thought out plan behind it than if all they knew was that moose could be “*managed to increase rapidly*.”

Providing information about the reintroduction issue during the telephone survey would not have been important if respondents were already well-informed about the issue. The mail survey we conducted, however, indicated that this was not the case. Using the three knowledge questions on the mail survey (Table 3.1) as a simple index of how well-informed citizens were about the reintroduction issue, we found that citizens who had responded to the telephone survey knew significantly less about the issue than other citizens who commented on the issue (Table 3.2). Fewer telephone survey respondents could correctly identify the approximate size of the current moose population in northern New York. Fewer knew that the existing population was slowly increasing. Fewer knew that DEC planned to fund the reintroduction using voluntary donations<sup>3</sup>.

Furthermore, the telephone survey respondents were not as interested in the moose management decision as other citizens who commented on the proposal. Table 3.3 compares the opinions of telephone survey respondents about the proposal (as measured on the mail survey)

<sup>3</sup> In this case, however, telephone survey respondents and letter writers could correctly identify the proposed source of funding in approximately equal proportions.

**Table 3.2:** Percentages of citizens who were able to answer key knowledge questions about moose and moose reintroduction proposal correctly. Grouped by mode of participation. Percentages within each column differ significantly (chi-squared test,  $P < 0.0005$ ).

	Mode of Participation			Total
	Meeting	Letter	Survey	
Size	65.9%	50.4%	39.1%	50.6%
	+/- 4.0%	+/- 4.2%	+/- 4.7%	+/- 2.6%
Growth Rate	68.3%	53.4%	41.9%	53.6%
	+/- 3.9%	+/- 4.2%	+/- 4.7%	+/- 2.6%
Funding	77.4%	47.0%	48.6%	57.6%
	+/- 3.5%	+/- 4.2%	+/- 4.8%	+/- 2.5%

**Table 3.3:** Responses to mail survey question about opinion on moose reintroduction proposal. “*Don’t Know*” includes respondents who answered “*Don’t Know*” or left question blank. “*Strong Opinion*” includes both citizens who strongly supported proposal or strongly opposed it. Percentages within each column differ significantly (chi-squared test,  $P < 0.0005$ ).

	Mode of Participation		
	Letters	Meetings	Survey
Don’t Know	13.1% +/- 2.9%	4.8% +/- 1.8%	22.9% +/- 4.0%
Neutral	0.4% +/- 0.5%	1.6% +/- 1.0%	9.1% +/- 2.7%
Strong Opinion	54.2% +/- 4.2%	53.2% +/- 4.2%	17.4% +/- 3.6%

with the opinions of other citizens. A significantly higher percentage of telephone survey respondents than other citizens said they were neutral towards the reintroduction proposal or expressed no opinion about it. Also, only 17.4% of telephone survey respondents said they had a strong opinion about the proposal compared to over 50% of the other citizens who had commented on the issue.

Thus, the way that DEC used a telephone survey in the decision-making process had important implications. It was a fairly effective tool for measuring the opinions of a representative sample of northern New Yorkers in that it was administered to a sample that were randomly selected from among the population. It was not, however, an appropriate tool for assessing informed opinions for several reasons: 1) The random sample of the population surveyed was less well-informed about the reintroduction issue than the citizens who wrote letters or attended public

meetings; 2) No attempt was made to assess whether citizens were well-informed about the issue; 3) The survey provided citizens with very little information about the moose reintroduction issue; 4) Those citizens who balked at responding to the survey because they lacked information were encouraged to respond anyway.

Consequently, in their use of the telephone survey, DEC effectively prioritized their goal of making the moose management decision based on the preferences of a representative sample of northern New Yorkers above their goal of making the decision on the basis of well-informed input. The reasoning behind the use of the survey is thus worthy of further examination. We have argued that a major component of DEC’s conceptualization of the moose management decision-making process was that the issue was “*a matter of public desires*.” This conceptualization of the process was critical, we believe, in DEC’s decision to implement the telephone survey in the manner in which they did.

**The Implications of Preferences**

Conceptualizing the moose reintroduction decision-making process as “*a matter of public desires*” or preferences had substantial implications for how DEC approached the process. In particular, the way that DEC viewed desires or preferences was critical. Sagoff (1988, pp. 99-123) has written extensively on this issue and has argued that “*preferences*” are typically thought of as subjective wants that are arbitrary from a moral standpoint; any one citizen’s preferences are as legitimate as any other citizen’s. Sagoff (1988, p. 102) contends, however, that all preferences and desires are not equally legitimate. Indeed, some preferences are “*sadistic, envious, racist, or unjust*.” Furthermore, some citizens’ preferences may be based on inaccurate information (or a lack of information) and may change quickly and dramatically as available information changes.

DEC staff implicitly recognized this issue as their comments (quoted earlier in this chapter) on the importance of “*well-informed*” input from citizens indicate. The structure of the moose management decision-making process, however, did not reflect this recognition. Rather, the way that the process was structured effectively treated all citizens’ preferences as if they were equally legitimate. Sagoff (1988) argued that when preferences are conceptualized as equally legitimate, decision-makers structure a process that treats the reasons why citizens hold their preferences as unimportant. Consequently, a decision-making process that focuses on equally legitimate preferences simply emphasizes the measurement of preferences and a subsequent “*mechanical or mathematical balancing of interests*” (Sagoff 1988, p.11). No attempt is made, however, to judge the quality of these preferences.

Such a characterization is consistent with the way that DEC staff members structured the moose management decision-making process, particularly the telephone survey. The telephone survey was designed as a tool for measuring the opinions of a representative sample of citizens, but not for educating them or understanding the quality of reasons underlying their opinions. Citizens were given very little information on which to base their opinions and were even encouraged to express their opinions if they said that they did not have enough information on which to base them. Furthermore, once these opinions were collected, DEC’s use of these data reflected the “*mechanical or mathematical balancing of interests*” that Sagoff (1988, p. 11) described. As one DEC memo described it:

*If the survey indicates strong support and limited opposition (e.g. 55% or more of respondents in favor and no more than 25% opposed) we would likely recommend proceeding with a moose release program of some sort.*

The shortcoming of this approach to decision-making is that it is only appropriate if all citizen input is reducible to equally legitimate preferences and, therefore, if the reasons that people

hold these preferences are unimportant. As stated above, however, DEC staff did not truly believe that all citizens’ preferences were equally legitimate; they believed that preferences should be well-informed. Therefore, the reasons behind individual opinions were important, and the telephone survey (as it was conducted), was not ideal if DEC staff wanted to base the moose management decision on informed citizen input.

### Management Implications

Treating all citizens’ preferences as if they are equally legitimate will not always be consistent with making wildlife management decisions on the basis of informed input. The telephone survey was very effective at measuring what citizens’ preferences were, but it was not effective for generating informed input. DEC staff need to recognize that distinctions exist between the kind of preferences and desires that citizens have. In particular, some preferences will be based on accurate information and others will not, and preferences may change as available information changes. Assessing existing preferences is not necessarily the same thing as assessing informed preferences. Different strategies will be needed for each.

Consequently, DEC staff need to make the effort to resolve potential conflicts between different goals for their decision-making processes in order to make sure that all goals can be, and are, achieved. We make the following recommendations for future BOW decision-making activities involving the public.

- 1) Staff responsible for coordinating decision-making processes should explicitly describe all goals for the process at the beginning of the process.

Because decision-making procedures are important to both DEC staff and citizens, it is important for DEC to develop a clear and consistent vision of how it wants to approach decision-making around major issues. In the moose reintroduction process, DEC staff did not recognize



that measuring citizens' existing preferences might not be compatible with measuring well-informed preferences. Listing the multiple goals staff have for a process more explicitly would help to identify and resolve potential conflicts early. Typical goals might include 1) letting citizens make a policy decision, 2) making a decision on the basis of accurate information and sound reasoning, and 3) making a decision that the public will support. These goals are all potentially compatible, but achieving one will not necessarily mean that the others will also be achieved.

**2) Staff responsible for coordinating decision-making processes should identify strategies that will contribute to each decision-making goal.**

An explicit identification of decision-making strategies will also help to prevent achieving one goal but not others. In the moose reintroduction scenario, an evaluation of the telephone survey as part of a process leading to a well-informed decision would have led to some changes in the way the survey was implemented, which leads into the next recommendation.

**3) If staff want informed citizens' opinions on an issue, DEC must play an active role in educating citizens who comment on an issue.**

Because existing citizens' preferences will not always be informed, making a decision based on citizens' preferences will not always be compatible with making a decision on the basis of informed input. Citizens responding to DEC's moose management telephone survey could have been educated in more than one way. For example, DEC could have targeted the general public in northern New York with a more extensive education campaign before conducting the survey, or they could have educated the individual citizens who were targeted by the survey.

## CONFLICTING VISIONS OF DECISION-MAKING WITHIN DEC

### CHAPTER FOUR

#### Background

Much of the social psychology theory on which the research described in this report is based suggests that people judge the fairness and quality of decision-making processes on the basis of a variety of different criteria (see Chapter 2). Indeed, many people use similar criteria to judge the quality of a process. In this chapter, however, we focus on differences rather than commonalities in individuals' beliefs about how decisions should be made. In particular, we describe differences in DEC staff members' beliefs about decision-making and how these differences shaped the moose reintroduction decision-making process. To a lesser extent, we compare staff members' beliefs about decision-making with those of citizens who were involved in the process.

During our analysis, we identified three critical, interrelated issues with which staff members struggled when deciding how to structure the process: the role of DEC, the role of the public, and the identification of stakeholders. How staff members resolved these issues was of fundamental importance in determining the structure of the process. Consequently, we have organized this chapter according to these themes, although the interrelated nature of these issues led to considerable overlap between sections.

#### Methods

We used a combination of three techniques to study how citizens perceived the moose management decision-making process: an analysis of documents related to the process, interviews

of citizens and DEC staff involved in the process, and a mail survey of citizens who commented on the reintroduction proposal. These methods are described in detail in Chapter 1 of this report.

Both the document analysis and the interviews relied on qualitative data sources, and our use of data from these sources requires additional explanation. We relied on excerpts from these sources to illustrate the most important themes encountered in the data. Qualitative data have a distinct advantage over quantitative data for some purposes; they express the thoughts and opinions of people in their own words. Researchers have argued that qualitative data are less influenced by the researchers' subjectivity than are quantitative techniques (such as surveys) that reduce thoughts and opinions down to single numbers (Guba and Lincoln 1989). Consequently, qualitative data are often argued to be more appropriate for describing perceptions of complex phenomena than are quantitative data. For these reasons, we have used both qualitative and quantitative methods in presenting our results.

### **The Roles of DEC and the Public<sup>1</sup>**

Although all DEC staff members with whom we spoke agreed upon the need for the public to play a role in DEC decision-making processes, the role prescribed for the public varied. As discussed at length in Chapter 3, the staff members most responsible for the moose reintroduction effort stressed the importance of the public actually making the decision about the moose reintroduction issue. This perspective is succinctly illustrated by the words of one biologist:

*What we were looking for was: "Hey folks, we can take it or leave it one way or another. These are the options associated with moose . . . and these would be the consequences. What would you like to do?" That really was our intent.*

<sup>1</sup> This section summarizes some of the material contained in Chapter 3 of this report so that this chapter may stand alone. New material begins in the following section.

DEC staff saw their own role as neutral educators and facilitators. Their job was to provide citizens with the information they needed in order to be able to make the moose management decision. Their approach to education was consistent with what has been called the alternatives-consequences approach (House 1992, Danielson and Garber 1993) to public policy education. According to this approach, educators emphasize conveying the full range of possible alternative actions and the consequences of these actions to citizens. This approach was reflected in the comments of the staff members we interviewed:

*I really think that our key role is to be an honest broker of information on wildlife . . . you have to be able to tell someone very accurately, look, if you choose this, this is what is going to happen and have that prediction actually occur with a high enough frequency. . .*

*Public opinion sets the objectives for a wildlife management program. I think our job is to deliver what the public wants out of wildlife. And we have a tremendous burden because we have to be good enough at explaining the consequences so that they understand what the consequences of a set of decisions are. . .*

This approach to education was also reflected in the two major mechanisms DEC used to educate the public: the EIS and the public meetings. The major chapters of the EIS (Hicks and McGowan 1992) all focused either on describing alternatives ("*Description of Proposed Action*," "*Alternatives*," and "*Mitigation Measures to Minimize Adverse Impacts*") or their consequences ("*Environmental Impact*"). An informational presentation that began each public meeting followed a similar format.

This overall vision of the role of citizens and DEC in the reintroduction issue depended in part on the way that the staff members viewed the issue. They drew a distinction between issues in which DEC had a legal mandate to take certain actions (e.g. provide big game hunting opportunities) and issues in which no such mandate was at stake. The moose reintroduction issue was viewed as one of the latter:

*[W]e were meeting our basic mandates concerning moose without restoration. Therefore restoration was an issue about the desires of today's public that should be decided by today's public.*

This excerpt illustrates an important distinction that DEC staff made in approaching this decision-making process. In their eyes, an issue was either a matter of meeting DEC's mandate or it was not<sup>2</sup>. The way staff classified the issue had important implications because it determined the role that public input should have in the decision-making process. In particular, issues that were not matters of DEC's mandate should be decided by the public. Indeed, one DEC memo suggested the importance of applying this distinction to future wildlife issues as well when deciding how to structure the decision-making process: "[K]now what issues are solely a matter of public desires and what issues relate to meeting our agencies [sic] mandate."

#### The "Preferred" Alternative?

DEC listed four moose management alternatives in its Environmental Impact Statement (EIS): 1) the active elimination of moose; 2) taking no action; 3) reintroducing moose and controlling their population through hunting; and 4) reintroducing moose with no provisions for population control (Hicks and McGowan 1992). The third option, reintroducing moose and controlling their population through hunting, was identified as the "*preferred*" one in the EIS. The designation of a preferred alternative is somewhat surprising given the expressed intent of staff members to convey the message: "*Hey folks, we can take it or leave it one way or another.*" Therefore, it is important to understand why this decision was made.

<sup>2</sup> Some DEC memos also used the term "*issue of biology*" to describe issues that involved DEC's mandate. Their logic seemed to be that biological expertise was often needed to determine the best decisions in issues involving DEC's mandate (e.g. how to best preserve an endangered species or sustain a maximum hunting yield).

Many citizens and staff members (see Chapter 2) believed that the reintroduction program was listed as the preferred alternative because it was the alternative that DEC preferred. One DEC biologist who had been involved in the development of the proposal said that the driving force behind it "*was mostly coming from us.*" The staff most intimately involved in the decision-making process, however, described the reasoning behind the choice quite differently. According to them, staff had originally (and mistakenly) believed that the State Environmental Quality Review Act required the designation of a preferred alternative and identified the reintroduction proposal as the preferred one only for that reason. They discovered that this belief was incorrect only shortly before the EIS was to be sent to the printer:

*The very initial draft had no preferred alternatives. . . . It was just . . . Hey, what do you folks want to do?" And in review of that first draft, we were told that it had to be preferred alternatives, so we switched it to a preferred alternative. And then just before we go to the printer, we're told by a higher authority yet that: "Hey, you don't need to have a preferred alternative." Well, we reasoned that since what we made the preferred alternative was merely what we thought people were interested in having done, it was really one in the same thing and we'll just say that. "This is what we think people would be interested in. Is it? If it isn't, let us know."*

Staff coordinating the decision-making process later became concerned that this choice to designate a preferred alternative misled people about DEC's intent. DEC wanted to communicate that citizens would make the decision about whether moose would be reintroduced, but the designation of a preferred alternative communicated just the opposite, as one DEC memo suggests:

*Our intention not to have a preferred alternative combined with the [perceived] requirement to have one resulted in a permanently mixed message. It still remained mixed in the minds of some staff at the time of these debriefing meetings.*

Even though they were aware of this explanation for why the reintroduction proposal was designated as the preferred alternative, other DEC staff members did not accept it. Whether the

architects of the program admitted it or not, they maintained, DEC did prefer the moose reintroduction alternative. This perspective is well-illustrated by the following discussion between several DEC staff members about whether DEC was “*promoting*” a particular management option during the decision-making process.

Staff 1: *Promotion . . . implies that you have a decision in mind.*

Staff 2: *Yeah. Didn't we?*

Staff 3: *Oh yeah. Fait accomplis.*

Staff 2: *What did we tell the public? “We're thinking about it.” Well, we've been thinking about it for twenty years! . . . We said, “Hey, now's the time.”*

### The Issue of Advocacy

Thus, some DEC staff members did not believe that DEC had played a neutral role in the decision-making process. Others, however, did not even believe that DEC should have played a neutral role in the decision-making process. In fact, some staff members did not agree with the emphasis on simply asking the public “*Hey, what do you folks want to do?*” in the moose reintroduction decision-making process:

*I think a better way of phrasing the public's role in the reintroduction process would be to say that the public input would be weighted very strongly in the Department's decision, but it was still ultimately our decision and we needed to balance resource needs, the mandate under the Environmental Conservation Law, the Fish and Wildlife Law, and the public's desires. I think the impression that we left people with was “Well, if you say no, we're not going to do it.”*

Indeed, some believed that DEC not only should have retained the ultimate decision-making authority but that they should have tried to sell the moose program to the public aggressively:

*Presentation is so much. You pack them up, you put them in a car, you drive them to the town . . . in New Hampshire — they claim they're the moose capital of the world — and you show them how they're marketing and bringing in tourists. And so suddenly, the facts are the same . . . yeah, we're going to spend \$2 million dollars restoring the moose, but boy, if we can get the outfitters on board, the Chambers on board, they're going to make so much money! That \$2 million is*

*peanuts. . . . Those kind of relationships, selling from day one. Not at the end! I think that's the whole thing.*

This type of comment reflected a more general concern of some staff members that DEC did not emphasize its advocacy role enough.

*I think sometimes we're a little too careful and too afraid to express our own opinion, and, as public employees, we're not really like elected officials that are given the task of making decisions, checking with their constituencies on everything that they do. . . . If the decision's involving wildlife, I think we should put on our biologists' hats and be a little more opinionated and represent our opinion more based on biological information than we have in the past.*

And:

*I feel that as professionals, we're paid to make decisions and to do what we think is right and go out and approach it with that viewpoint.*

The issue of advocacy was one with which staff members struggled. As the preceding interview excerpts illustrate, most staff members viewed themselves as possessing expertise that is relevant to wildlife management decision-making. Some had no qualms about the idea of trying to convince the public to accept certain actions based on this expertise:

*If biologically the project is sound, I think the Department owes it to the public to try to convince them . . . I see nothing wrong with it. Trying to influence them as long as it is a compatible project.*

Others, however, had considerable reservations about DEC playing an advocacy role.

One described it as a path that was “*fraught with danger.*” The idea of advocating did not seem to be compatible with the other role he saw DEC as playing, that of “*an honest broker of information on wildlife.*” In particular, several staff members expressed concerns about DEC advocating for particular wildlife users groups, such as hunters:

*The Bureau of Wildlife relies in large part for support on folks . . . who purchase hunting, fishing, trapping licenses. And buy arms and ammunition. Is it appropriate for us to play an advocacy role for those groups? If you go back into . . . the state finance law, it may be Conservation Law, you can see that, as far as I understand it, a license to hunt or fish equated to a fee for taking public*

*resources out of the public and into private possession and therefore you would not be required based on that reading to advocate for a certain use of the resource. That's really not how it's interpreted today or understood by sportsmen because every time we go and say we need more money, we go to the sportsmen and say "if we raise the license fees, we'll have more money and we can deliver such and such program." And that very quickly turns into an advocacy role for the state on behalf of the sportsman. . . .*

These reservations were rooted in a concern that advocacy would involve DEC trying to impose its values on the general public:

*If you're selling a particular line, you want to have a 100% guarantee. If you don't, your credibility is going to suffer. . . . And we in DEC don't operate from a high position of credibility . . . Oftentimes we've gone to the public, we've gone out to our customers, and told them that they have to do something, that this is what we view as the best decision and not portrayed to them the other options that they have. And so much of the decision-making criteria are based on values rather than in technical or scientific fact, that the value judgments tend to be ours. We don't have enough information about the value judgments of the community at large that we can say "Here's the decision you need to make because it's technically sound, scientifically-well based and we've looked into your very core being and we know this one will satisfy the values of the local community."*

Nevertheless, even those staff members that had reservations about DEC playing an advocacy role often believed that some type of advocacy on DEC's part was appropriate. Most believed that it was appropriate for DEC to advocate for decisions that were based purely on technical issues:

*If the public comes and says "We want 12 deer per square mile in County X, and we are going to hunt them," then I think it's very appropriate for us to go and say, "You need 600 permits." or whatever!*

Others believed more generally that it was appropriate for DEC to advocate both to protect wildlife and to promote wildlife use since it had a mandate to do both:

*I think we should advocate for wise use of natural resources -- that includes trapping, fishing. . . . I think the agency should advocate proper management of wildlife resources, natural resources . . . and part of that management is going to be use. Part of that use if going to be taking it into private possession,*

*part of it will not be. Part of it will be nonconsumptive use. But I think we should advocate for the use of natural resources within limits, uses that are sustainable.*

Thus, considerable differences in opinion existed among DEC staff members about the roles that DEC and the public should play in the moose reintroduction decision-making process and, more generally, in wildlife management decision-making. Although we have argued that the staff with the most influence over this process prioritized making the reintroduction decision on the basis of citizens' preferences with DEC playing a neutral role, the uncertainty within DEC over this and other issues probably influenced the way the process was approached. In a preceding section, we quoted from a memo in which staff concluded that they sent a "mixed message" to the public on how public input would be used. Although staff argued that the decision would be based on the "desires of today's public," they found it much more difficult to specify how these desires would be used to make a decision. When pressed on the issue by citizens at a public meeting, the response of staff made it much less clear that the public would actually decide:

*We will summarize these comments. We will provide [these comments] to the Commissioner. Say these are the comments that came in. We will modify based on these comments or provide reasons why we're not going to modify based on comments. And the Commissioner will make the decision.*

### The Citizens' View

Such ambiguity may have been related to the differences of opinion within DEC about how the decision-making process should be approached. Surprisingly similar differences in opinion were also reflected by citizens' comments. Indeed, even individual citizens seemed to be uncertain what types of roles DEC and the public should play in decision-making processes. Some citizens believed an advocacy role was entirely appropriate for DEC: "I think that's very important. Because of all people that should know, that would be DEC." And:

*I guess I expected DEC to be more of an advocate for this than they were. They seemed to be playing the role of an impartial judge when that was the public's role. I think that their job was really in this case to be a salesman for the moose.*

Others believed that advocacy was only appropriate under certain circumstances. In particular, some were troubled with the idea of DEC advocating a course of action if the action would benefit DEC (e.g. creating another game species that DEC could use to raise revenue):

*[Advocacy by DEC is appropriate] if they can convince people that it's best for everybody all around. But to really strongly push something that's a game species, that's really different from a nongame. . . it probably would look inappropriate. . . . It would almost look like they were . . . looking for a way to get more money.*

Finally, some citizens believed that DEC should never advocate particular management actions: "I think they should be there to issue the facts in an uncolored form and let people come to their own conclusions." Indeed, one citizen believed that DEC not only should not have advocated the reintroduction proposal, but they never should have proposed it in the first place. Rather, only the public should initiate such proposals:

*Citizen: It would take strong public action to stop the process versus strong public action to start the process. In other words, if the public felt strongly about the moose issue, then maybe there should be action by the public and public hearings and a rally of support.*

*Interviewer: So you might see some of these things even as citizen-initiated, as opposed to. . .*

*Citizen: Government-initiated. Yeah. It's a democracy, yeah?*

Thus, the appropriateness of advocacy by DEC was a very complex issue with no answer to which citizens universally agreed.

Similar differences in opinion were reflected with regard to the question of whether DEC or the public should make the final moose management decision. To many people, it was

important that citizens influence, if not determine, the moose reintroduction decision. As one citizen said in an interview:

*Well, I've always been a great believer in "majority rules." Because there's only so many tax dollars to spend. You don't want to waste them. If they don't want them [the moose], so be it. I kind of agree with that fact.*

Most citizens, however, struggled with the issue of exactly how much influence citizens should have over policy decisions relative to the government. This struggle was reflected in responses to interview questions. Some citizens, such as the one quoted above, believed that citizens should always make decisions. Even those who believed strongly in "majority rules," however, had some concerns about citizens making decisions:

*Well, again it's a democracy, and if I'm in a minority and . . . if I felt strongly that moose should not be reintroduced, but if for example, there were a referendum and the majority of the people felt that it should be, my question would be, are those informed decisions? If they were or are informed decisions, then I would have to say it's fair, even if it's not that which I agree with.*

This concern with "informed decisions" reflects a tension that many people recognized between what citizens want and what is the best thing to do. Some described this tension quite explicitly:

*I hope they don't always use just majority because in the Park the majority is usually wrong (laugh) when it comes to environmental things. I hope they look at . . . legitimate concerns and they give them weight because of their validity. And not just gross number of votes.*

Consequently, many citizens believed that DEC should consider public input and not just let it determine policy: "It should be a factor. But not the whole factor. Definitely public opinion should be weighed."<sup>3</sup>

<sup>3</sup> Barriers to obtaining informed citizens' opinions are discussed in Chapter 3.



### The Definition of Stakeholders

#### The Affected Public

Even if making the moose management decision on the basis of citizens' preferences was a principle that was universally accepted by DEC staff, it would still be difficult to apply. In particular, the question would still remain as to which citizens' preferences should be used to make the moose management decision. Most staff believed that DEC should concentrate on those citizens who would be affected by the moose reintroduction. To many, this meant northern New Yorkers -- those citizens living in the region to which moose were to be reintroduced. The argument went as follows in two DEC memos:

*Because moose would be introduced to northern New York and because disadvantages of a large moose population would most likely be felt in northern New York, northern New Yorkers should be prioritized in the public input period.*

And:

*Our decision on moose restoration should place weight on attitudes of northern New Yorkers. . . . Moose reintroduction is not an endangered species issue and [the risk of moose-vehicle] collision[s] does present a real, albeit small, risk to residents. For these reasons, we believe that moose restoration should be driven by local opinion more than are many other wildlife restoration issues.*

Consistent with this reasoning, DEC targeted residents of northern New York in its telephone survey and held about half of its public meetings in northern New York, although the human population of this region is far less than half the population of New York State.

DEC staff recognized that other citizens besides northern New Yorkers were affected by the moose reintroduction issue. In choosing to prioritize northern New Yorkers, they chose to prioritize the interests of those who could be most affected negatively by the reintroduction (as reflected in the above references to "the disadvantages of a large moose population" and "real, albeit small, risk" to northern New Yorkers). Both northern New Yorkers and New York State

residents outside of the northern zone had the potential to be positively affected by the moose reintroduction, and, therefore, all citizens were arguably affected by the decision-making process. Some DEC staff members explicitly recognized this point. One, whose jurisdiction is outside of the northern zone, said:

*Adirondack issues are important to a large part of the people who live here . . . but it goes beyond that. There are people throughout the region who are interested in Adirondack issues. So I insisted in the Bureau that we need to be involved in Adirondack decision-making.*

Although the views of downstate residents who could benefit from the reintroduction were considered by DEC, they were emphasized less in the decision-making process than those of northern New Yorkers.

Prioritizing northern New Yorkers was also a decision to prioritize the opinions of those who would experience one particular type of negative effect: the risks of a larger moose population. (This emphasis is also reflected in the quotations used to begin this section.) Other negative effects would also occur if moose were reintroduced and would be experienced by non-northern New Yorkers. For example, all New York State residents would have to bear the financial costs of DEC's future moose management activities and the associated commitment of the energies of DEC staff. Citizens who oppose hunting might have to bear the cost of increased hunting of moose at some point in the future. Consequently, in deciding whose input to prioritize in the decision-making process, DEC prioritized those who would suffer one type of negative effect among several.

#### The Role of Anti-Hunters

In deciding who should be involved in the decision-making process, DEC also was faced with the choice of who not to involve. Because of the incompatibility between the interest of anti-

hunters in reducing or preventing hunting and DEC's legislative mandate to provide hunting opportunities, conflict between DEC and anti-hunters is inevitable. For years, DEC staff have debated the appropriate place of anti-hunters in wildlife management decision-making. This debate was, of course, relevant to the moose reintroduction issue.

We heard very diverse opinions about the role of anti-hunters in decision-making during the course of our interviews. Some staff members considered themselves affiliated with the hunting community and perceived anti-hunters as an extreme threat. Consequently, they believed it was justifiable to exclude them from all agency decision-making.

*If you let them [anti-hunters] get a foot in the door, then they expand on it. So that's why hunters are real defensive. They don't want to give them an inch because if they get an inch, they'll take a mile! And I think . . . I'm probably as radical as any of the hunters . . . but that's the only reason that . . . I don't want to give those guys an inch because they'll take a whole mile. If they'd only take an inch, hey, I'd give them an inch. But that's their program. If we just get our foot in the door here, and once we've done that, we'll expand . . . we'll shut this hunting down . . . you got an ulterior objective. Once you're dealing with people you can't trust, well then you don't give them nothing, you know what I mean? You stonewall, as opposed to some negotiating with them. That's why guys like me don't want to negotiate. Because you don't negotiate in good faith. Once they get a little, they're going to take it all. If they get an opportunity.*

Although this viewpoint was among the most extreme expressed by DEC staff members, many others also expressed a reluctance to let anti-hunters influence wildlife management decisions. Some of these staff believed that, while anti-hunters had the right to be heard, DEC should stress the opinions of hunters, because hunters fund many of DEC's activities through their purchases of hunting licenses.

*I believe they [anti-hunters] should have an opportunity to be heard. When it comes down to actual support of the program or non-support of the program, I think we should put more weight on the people that are paying for the support of the program. In other words, if the sportsmen, through license sales or Safari International or National Wildlife Federation, somebody's going to put up \$250,000 or \$2 million to fund a program for us, I think we should put more*

*weight on their concerns and comments than we should the Friends of Animals or antis that are opposed to a project because some day in the future you might shoot one of those animals.*

Most staff members did believe that anti-hunters should have some role in wildlife management decision-making, but had a hard time defining just what that role should be. They were concerned that anti-hunters might approach decision-making processes with the intent to disrupt them rather than trying to work towards constructive decisions. Despite this concern, however, they did not feel comfortable excluding them from decision-making.

*I guess I've seen situations where you include them and they use that to their best efforts, and they don't play with the same rules you play with as a state government employee, and that gets very frustrating. It's easy to say, well, we're just not going to include those folks anymore, because they don't play on a level playing field. . . . But I don't think you can just write off that kind of an interest group. They have such a strong feeling about the issues that you're working with that I think to overlook that group would be inadequate.*

The closest thing to a consensus among DEC staff appeared to be that the inclusion of anti-hunters should be considered on a decision by decision basis.

*Well, the role with any group, whether it's an extreme animal rights or an extreme pro-hunting, blast them out of existence group, has to be appropriate to the decision being made. For instance, when it comes to big game management, I don't think there's an appropriate role for an extreme animal rights group. We know that we've got a mandate to manage big game and that we are going to manage big game. Therefore, you're setting them up to participate in a process that they're likely to be frustrated by and their input isn't going to be very valuable. Take, on the other hand, decisions about wildlife populations that animal rights groups may have a strong opinion about and a stake in. For instance, a number of years [DEC] worked . . . on what's become known as the "Wild Bird Law." Which was a law that was passed in '86 or '87 which prohibited the sale of any bird captured in the wild. Which is the reason you don't see any of the large cockatoos and parrots for sale. They now have to be captive bred, not captured from the jungles of the Amazon. And we made very appropriate use of animal rights groups in that discussion. . . . So it would depend on the group's ability to be a productive member of the decision-making process.*

With regard to the moose reintroduction issue, some DEC staff members clearly believed that anti-hunters had a right to be involved in the decision-making process.

*They have a stake in whether there's moose in New York or not. They're certainly appropriately involved in that. You know, they were well heard! (laugh.) They sent us a lot of letters!*

Other staff members involved in the process, however, believed it was appropriate to “rule out” the influence of the anti-hunting community and “to dismiss” their opinions. From these staff members’ perspective, anti-hunters were a small, but vocal, minority who could generate opposition to the program out of proportion to their actual numbers. Therefore, their opinions did not need to be considered by DEC.

### **Representativeness**

Anti-hunters were not the only group that DEC staff thought could disrupt the decision-making process. DEC also expected strong opposition from some Adirondackers, who have a history of distrust of the New York State government. A number of staff members referred to the “anti-government” attitude in northern New York during the course of the interviews.

In general, DEC staff were concerned that outspoken opponents of the moose reintroduction could interfere with the opportunities for other citizens to express themselves and, thus, limit the representativeness of the citizen input received. This concern was one of the reasons DEC divided the citizens who attended its public meetings into small groups before asking them to offer their opinions on the moose management alternatives. One group of staff interviewed said that the small groups denied “rabble-rousers” the chance to “stir up opposition.”

DEC’s concern about representativeness was also the principal reason for the implementation of the telephone survey. As one staff member closely involved in the decision-making process described it:

*So anyway we got all of this information together and we sat down and looked at it and said “Does the information we have in hand accurately reflect the views of northern New York residents?” And we weren’t sure. We were right on the edge*

*of would we do this or wouldn’t we do this, and we wanted more information. So we conducted that telephone survey of northern New York residents to . . . fine tune what we thought we were hearing from up there.*

Thus, DEC did not originally plan to include a telephone survey as one of its mechanisms for collecting public input. In an effort to prevent the domination of the decision-making process by “those who had an ax to grind,” however, DEC randomly selected residents of northern New York for its telephone survey. As one DEC memo indicated, staff hoped the survey would “either refute or corroborate what the general perception was, the negative perception received at the public meetings.”

### **Internal Stakeholders**

Some DEC staff members were also concerned about the opportunities for staff to participate in the process. This concern was closely related to a perceived power imbalance between staff in the central DEC offices, in the Albany area, and staff in the various regional offices. Central office staff were viewed by some regional staff as privileged employees who get frequent opportunities to pursue exciting and interesting projects. Regional staff, on the other hand, have to struggle simply to meet the day-to-day demands of the public:

*Regional wildlife staff’s roles are much more defined by their working environment than . . . central office staff. . . . Regional staff answer the phone. They go out on nuisance wildlife issues. They look at permits. They implement programming in their region. But they don’t have a lot of ability to sit back and say: “Gee, what do I want to do next here? On what issue would I like to work?”*

Some of the regional staff regarded the moose reintroduction proposal as a “central office baby,” and were resentful of that. They did not believe that they were adequately involved in the planning of the reintroduction proposal, but nevertheless they had demands placed on them by “big brother.”

*In the region we actually had the "big brother" attitude too because we went for six months without knowing what was going on. We'd still be getting the calls, and they'd still be out tracking moose, and we'd be working our day-to-day business, and yet this whole process seemed sometimes to have a life of its own in Central Office.*

Ultimately, these staff believed that the failure to involve them in meaningful ways affected both staff and public support for the project:

*I think that's the whole thing. It was not ours. It was not born in the Adirondacks, and it didn't come from the Adirondacks. And I think there's the opposition.*

### The Citizens' View

The same type of differences in opinion regarding who should be involved in the process were reflected among citizens. Dissatisfied citizens criticized the process for overrepresenting certain stakeholders. In particular, some hunters did not believe that anti-hunters should have a significant role in the decision-making process. They characterized anti-hunters as basing their comments on "emotionalism" and "hype," and some believed that their comments should not be weighed as heavily as those of hunters.

*I think they should welcome public opinion from sportsman's groups and the Conservation Council [a sportsman's group], people who are really knowledgeable about what's going on.*

Some of these hunters, however, perceived the decision-making process as giving considerable weight to the opinions of anti-hunters. They believed that anti-hunters were often well-organized, belonging to groups which disseminated information about and organized opposition to the moose reintroduction. Such groups could attend the relatively few large meetings DEC held in sizable numbers, they argued, and have a considerable influence over the discussions which took place. DEC, therefore, was criticized for relying on large public meetings which resulted in the overrepresentation of the anti-hunters' opinions.

*I think if they had more mini meetings, if you will, where they could have informed more people, they might have gotten a better handle on what the people really felt. You know how typically the squeaky wheel gets the grease. Just the way these people [anti-hunters] went at it! You know, they were well prepared. They distributed themselves out throughout the crowd so they didn't look like they were together. But the minute the meeting was over, there were five or six of them assembled together as they were walking out. I don't think they all got in the same car (laugh), but they obviously had come well-prepared to try and shoot everything down.*

On the other hand, many anti-hunters believed that it was the hunters that were overrepresented during the process. They argued that DEC is biased towards hunters' interests because one of its roles is to provide hunting opportunities. While this may have been reasonable when more citizens hunted, they believed, society has changed and now only a small percentage of the population hunts:

*They [DEC] were created based upon the needs of hunters and trappers and the selling of the licenses and that's how it was funded to begin with. But that's not the community that we live in anymore!*

DEC's bias towards the small percentage of the public that hunts, some citizens argued, resulted in much more effective communication to hunters about opportunities to comment on the moose reintroduction proposal. Indeed, many anti-hunters believed that DEC deliberately avoided communicating with them about opportunities to participate in the moose management decision-making process.

*Usually they announce something like this to the sportsman's groups to their own supporters, so to speak. But I don't think they would send an announcement to Fund for Animals or Defenders of Wildlife. I don't think they'd say "Oh, by the way guys, this is what we're going to do."*

Some anti-hunters believed that because of this bias in DEC's communication, hunters were represented at the public meetings far out of proportion to their actual numbers in society. They argued, consequently, that DEC should have given much greater weight to the opinions of

than to individuals, who represented only themselves.

*So there were people at that meeting there that represented groups with memberships of thousands of people. They were expressing the viewpoint of 200,000 members. They were given one mark! One vote! There were people there who thought it would be neat to have a moose in his back yard. And [they were] also given one mark!*

### **Management Implications**

Because of the uncertainties within DEC over the best way to make wildlife management decisions, some staff believed that one of the most important improvements DEC could make in its decision-making was to develop a clearer vision of how it wanted to involve the public. This perspective was emphasized by one staff member in his reflections on stakeholders:

*[I]f we invite people to a meeting and we're going to allow one person to have full weight and another person to have half-weight, I'm willing to bet that you could put an observer in the room who knew nothing about the discussion or the technology of it, just knew body language and communication cues, and they could figure out in a fairly short period of time who had full weight and who had half-weight based on our interaction with those people. . . . I think the clearer that vision is, the better the product could be. We could have a perfect process, I think, and start with a cloudy definition of this stakeholdership issue and the perfect process is not going to give us a perfect product. On the other hand, I think we can start with a process that's not as good, but if we've got a real firm view of stakeholdership, I think we'll come out with a better product.*

In an effort to continue to clarify this vision of decision-making, we make the following recommendations:

- 1) DEC leadership should involve its staff in a periodic, ongoing conversation about**
- a) the role of the public in decision-making, b) the role of DEC in decision-making,**
- and c) the definition of stakeholders.**

Such conversation could occur through a variety of mechanisms such as opinion pieces in the BOW newsletter, seminars, and staff workshops or retreats. Given that 1) such a process is an ongoing one that is unlikely to be "resolved" to everyone's satisfaction and 2) one approach to

decision-making is unlikely to be appropriate for all decisions, DEC will also need to struggle with these issues on an issue-specific basis. Therefore:

- 2) DEC staff responsible for particular decision-making processes should describe explicitly before the process begins a) the role they want DEC to play in the process, b) the role they want the public to play in the process, and c) the particular stakeholders they plan to involve.**

Describing these choices explicitly is important. Different staff involved in the moose reintroduction decision-making process had different visions about the roles that the public and DEC should play in the process, but these differences were not always clearly recognized. Some viewed DEC as a neutral educator. Others viewed DEC as the decision maker. Making such choices explicit will help to prevent differences of opinion from affecting the process unknowingly.

Some parts of these ongoing conversations about how decisions should be made may appropriately include certain members of the public. In particular, one staff member argued that it may be desirable to include animal rights advocates in some discussions about how such decisions should be made:

*I think that we would need to openly address those issues with . . . the animal rights community. . . . a dialogue about how we're going to exist as a community. What are going to be the rules? Do we have to choose one or the other or can both of these philosophies exist, if not in harmony, in a managed debate or whatever?*

Although such a dialogue may be difficult and may not bear fruit for many years, it may be the only way to break the cycle of hostility and distrust that characterizes relationships between DEC and animal rights advocates and interferes with the goals of both groups. Therefore, we make the following recommendation:

**3) DEC leadership should engage animal rights and animal welfare advocates in a dialogue about how DEC will involve the public in its decision-making process.**

Finally, although much attention in DEC decision-making is directed towards public involvement, the data presented in this chapter show that the involvement of DEC staff in decision-making processes is also important to some staff members. Such involvement could lead to many of the same potential improvements of decision-making processes that citizen involvement does: greater staff support, richer perspectives on important issues, etc. Although such involvement may not always be appropriate, it is important to consider.

**4) DEC staff responsible for particular decision-making processes should develop a plan for staff involvement, as well as citizen involvement, identifying which staff should be involved in the decision-making process, the role that those staff members should play in the process, and specific strategies for accomplishing this involvement.**

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## APPENDIX A

## MAIL SURVEY

## MOOSE MANAGEMENT IN NORTHERN NEW YORK:

## A SURVEY OF CITIZENS

Research conducted by the  
Human Dimensions Research Unit  
in the  
Department of Natural Resources  
College of Agriculture and Life Sciences  
Cornell University

Sponsored by  
the Bureau of Wildlife  
in  
the New York State Department of Environmental Conservation

Please complete this questionnaire at your earliest convenience, seal it, and drop it in any mailbox (no envelope needed); return postage has been provided. Your responses will remain confidential and will never be associated with your name.

**THANK YOU FOR YOUR ASSISTANCE!**

Printed on recycled paper  
(This paper will be recycled again after results are tabulated.)

Questions 1-9 ask for general information about you and about how you felt about DEC's moose reintroduction proposal. Please answer these questions as well as you are able, even if you did not know about DEC's moose reintroduction proposal.

Citizens hear information about and express their opinions on DEC's wildlife management proposals in several different ways. In answering Questions 1a and 1b think back to all of the ways in which you heard information about and expressed your opinion on DEC's moose reintroduction proposal. This proposal was under consideration between June 1992 and March 1993.

**1a. Please indicate below all of the ways in which you heard information about DEC's moose reintroduction proposal. (Check all that apply.)**

- ☐ I attended a public meeting sponsored by DEC.
- ☐ I talked with DEC staff about the proposal (either in person or over the telephone).
- ☐ I talked with friends or family about the proposal.
- ☐ I read about the proposal in the newspaper or in magazines.
- ☐ I heard radio or television stories about the proposal.
- ☐ I learned about the proposal from a non-governmental organization.
- ☐ Other (Please list: \_\_\_\_\_)
- ☐ I did not know about the proposal.
- ☐ I don't remember how I learned about the proposal.

**1b. Please indicate below all of the ways in which you expressed your opinion or tried to express your opinion to DEC about its moose reintroduction proposal. (Check all that apply.)**

- ☐ I attended a public meeting sponsored by DEC.
- ☐ I talked with DEC staff about the proposal.
- ☐ I answered questions about my opinions when I was telephoned by a DEC staff member.
- ☐ I wrote a letter to DEC or other government officials.
- ☐ Other (Please list: \_\_\_\_\_)
- ☐ I did not express my opinion about the proposal.
- ☐ I don't remember how I expressed my opinion about the proposal.

**If you did not attend one of the public meetings DEC sponsored, please SKIP TO QUESTION 2.**

1c. DEC sponsored 15 public meetings throughout New York State. In which town or city did you attend a meeting(s)? (Check all that apply.)

- ☐ Blue Mountain Lake

☐ Canandaigua

☐ Canton

☐ Glenfield

☐ Herkimer

☐ Lake George

☐ Long Island City

☐ Millbrook

☐ Northville

☐ Plattsburgh

☐ Ray Brook

☐ Stony Brook

☐ Syracuse

☐ Troy

☐ Watertown

☐ I don't remember

2. By the time DEC announced its final moose management decision in March 1993, did you support or oppose the moose reintroduction proposal? (Circle one number.)

Strongly Opposed	Did Not Care	Strongly Supported	Don't Know
1	2	3	4
5	6		

If you answered "Did Not Care" or "Don't Know" to Question 2, please SKIP TO QUESTION 4.

3. Citizens supported or opposed DEC's moose reintroduction proposal for many different reasons. A number of these reasons are listed below. Please indicate how much you agree with each of the following statements. (Circle one number for each.)

1=Strongly Disagree 4=Agree 6=Don't Know  
2=Disagree 5=Strongly Agree  
3=Neutral

	Strongly Disagree	Strongly Don't Agree Know
a. I preferred that moose repopulate northern New York without human assistance.	1 2 3 4 5 6	
b. I hoped that the reintroduction of moose would eventually lead to moose hunting.	1 2 3 4 5 6	
c. I was concerned about the suffering of moose that would occur if moose were introduced.	1 2 3 4 5 6	

	Strongly Disagree	Strongly Don't Agree Know
d. I believed that an increase in the moose population would help to restore northern New York's ecosystem.	1 2 3 4 5 6	
e. I was concerned about the possibility of moose-vehicle accidents.	1 2 3 4 5 6	
f. I believed that the reintroduction was unnecessary because the moose population in northern New York is increasing without assistance.	1 2 3 4 5 6	
g. I preferred a natural return of moose to northern New York.	1 2 3 4 5 6	
h. I did not want the state to spend money on reintroducing moose.	1 2 3 4 5 6	
i. I did not believe the state was capable of reintroducing moose successfully.	1 2 3 4 5 6	
j. I believed that an increase in the moose population would provide more opportunities to see moose.	1 2 3 4 5 6	
k. I did not believe moose reintroduction was as important as many other societal needs.	1 2 3 4 5 6	
l. I believed that the reintroduction of moose would harm the ecosystem of northern New York.	1 2 3 4 5 6	
m. I believed that the reintroduction of moose would benefit northern New York's economy.	1 2 3 4 5 6	
n. I believed that DEC was only reintroducing moose to make money from the sale of hunting licenses.	1 2 3 4 5 6	
o. I was concerned that the reintroduction of moose would eventually lead to moose hunting.	1 2 3 4 5 6	
p. I believed that there were other wildlife projects of higher priority than moose reintroduction.	1 2 3 4 5 6	

4. Are you a New York State citizen? (Check one.)

- ☐ Yes

☐ No

In questions 5-7, "northern New York" is defined as including the following 14 counties: Clinton, Essex, Franklin, Fulton, Hamilton, Herkimer, Jefferson, Lewis, Oneida, Oswego, St. Lawrence, Saratoga, Warren, and Washington.

5. Do you own property in northern New York? (Check one.)

☐ Yes  
☐ No

6. Are you a permanent resident of northern New York? (Check one.)

☐ Yes  
☐ No

If you answered "Yes" to Question 6, please SKIP TO QUESTION 8.

7. How often do you visit northern New York? (Check one.)

☐ Several times a year  
☐ At least once a year  
☐ Less than once a year  
☐ Almost never

8. During the period when DEC was considering reintroducing moose to northern New York, did you belong to any organizations which officially supported or opposed the proposed reintroduction?

☐ Yes (Please list: \_\_\_\_\_)  
☐ No

9. Are you male or female? (Check one.)

☐ Female  
☐ Male

DEC tried to make information about its moose reintroduction proposal available to the public. Questions 10 - 15 help to measure how effective DEC was at getting this information out to people. Please answer each of the questions as well as you can about what YOU BELIEVE to be true, even if you never received any information from DEC about its moose reintroduction proposal.

10. What do you believe that DEC will do regarding moose management in northern New York? (Check all that apply.)

☐ Proceed with a large-scale introduction of moose  
☐ Monitor the existing moose population  
☐ Accept stray moose from other states to transport into northern New York  
☐ Work to obtain the legal authority for hunting moose in the future  
☐ Initiate moose hunting as soon as possible  
☐ I do not believe that DEC will do anything to try to manage moose  
☐ Other (Please specify: \_\_\_\_\_)  
☐ Don't know

11. About how many moose do you think there are in northern New York today? (Circle one.)

0      25      200      1,000      Don't Know

12. Without a large-scale reintroduction of moose, what do you think the moose population in northern New York will most likely do? (Check one.)

☐ Become extinct  
☐ Slowly decrease  
☐ Stay about the same size  
☐ Slowly increase  
☐ Don't Know

13. If DEC had begun a large-scale reintroduction of moose into northern New York, the reintroduction would have occurred in two major stages. The first stage would have been a 5-year program during which a large number of moose were to be brought into northern New York by DEC. In the second stage, DEC would have monitored and managed the growing moose population, but would not have brought any more large numbers of moose into northern New York. I believe DEC would have funded its proposed 5-year moose reintroduction program (the first stage) using: (Check all that apply.)
- ☐ Return a Gift to Wildlife funds  
☐ The Conservation Fund  
☐ Voluntary donations  
☐ General tax revenues  
☐ Other (Please specify: \_\_\_\_\_)  
☐ Don't know
14. If DEC had begun a large-scale reintroduction of moose into northern New York, when do you believe moose hunting in New York State would have occurred? (Check one.)
- ☐ Within five years after DEC released moose into northern New York  
☐ Only after the moose population increased substantially (probably not for at least 20 years)  
☐ Only if the moose population increased to the point at which it began to cause unacceptable problems  
☐ Never  
☐ Other (Please specify: \_\_\_\_\_)  
☐ Don't Know
15. Which of the following activities do you remember taking place during the period in which DEC was considering its moose reintroduction proposal (June 1992 - March 1993)? (Check all that apply.)
- ☐ DEC gave out copies of a document to the public which described its moose reintroduction proposal  
☐ DEC held a series of public meetings related to its moose reintroduction proposal  
☐ DEC produced a video describing its moose reintroduction proposal  
☐ DEC accepted letters from citizens who wanted to comment on the moose reintroduction proposal  
☐ DEC conducted a telephone survey of northern New York residents to find out opinions about its moose reintroduction proposal  
☐ DEC conducted a mail survey of citizens from throughout New York State to find out opinions about its moose reintroduction proposal

Questions 16-19 ask both what you think about the way DEC made its moose management decision AND what you think about the decision itself. Please answer these questions based on your impressions of how the decision was made, even if you knew only a little bit about it.

If you were not even aware of DEC's moose reintroduction proposal before the final decision was reached in March 1993, please SKIP TO QUESTION 20.

16. This question asks what you think about the quality of reasoning that was used to make DEC's moose management decision. Answer these questions as well as you are able based on your knowledge of the moose management decision-making process. Please indicate how strongly you agree or disagree with each of the following statements.

1=Strongly Disagree    4=Agree    6=Don't Know  
 2=Disagree    5=Strongly Agree  
 3=Neutral

	Strongly Disagree					Strongly Don't Agree Know	
a. DEC's final decision about how to manage moose was a good one.	1	2	3	4	5	6	
b. The moose management proposal appeared to be poorly researched by DEC staff.	1	2	3	4	5	6	
c. Most citizens who commented on DEC's moose reintroduction proposal were well-informed about the issue.	1	2	3	4	5	6	
d. DEC did not seem to have good reasons for its moose management decision.	1	2	3	4	5	6	
e. DEC went about making its moose management decision in a good way.	1	2	3	4	5	6	
f. The public did not seem to understand all the issues involved in DEC's moose management proposal.	1	2	3	4	5	6	
g. DEC's moose management decision was not very well-reasoned.	1	2	3	4	5	6	
h. Many citizens who commented on DEC's moose reintroduction proposal seemed to base their comments on incorrect information.	1	2	3	4	5	6	

17. This question asks about how fair you think the moose management decision-making process was. Answer these questions as well as you are able based on your knowledge of the moose management decision-making process. Please indicate how strongly you agree or disagree with each of the following statements.

1=Strongly Disagree 4=Agree  
2=Disagree 5=Strongly Agree  
3=Neutral

6=Don't Know

		<u>Strongly</u> <u>Disagree</u>			<u>Strongly Don't</u> <u>Agree Know</u>		
a.	DEC's decision about its moose reintroduction proposal was a fair one.	1	2	3	4	5	6
b.	DEC was not willing to consider all citizens' viewpoints about moose management.	1	2	3	4	5	6
c.	DEC treated all citizens equally, even those with whom it disagreed.	1	2	3	4	5	6
d.	DEC did not seem to answer all citizens' questions about the moose reintroduction proposal honestly.	1	2	3	4	5	6
e.	Ordinary citizens had a real effect on DEC's moose management decision.	1	2	3	4	5	6
f.	Staff members for DEC willingly provided information to interested citizens.	1	2	3	4	5	6
g.	DEC treated all citizens involved in the decision-making process in the same way.	1	2	3	4	5	6
h.	The amount of influence which citizens had over DEC's moose management decision was very limited.	1	2	3	4	5	6
i.	DEC went about making its decision about moose management in a fair way.	1	2	3	4	5	6
j.	DEC staff answered citizen questions about moose management as well as it could.	1	2	3	4	5	6
k.	Citizens seemed to have no effect on DEC's moose management policy.	1	2	3	4	5	6
l.	The needs of those citizens that would have to bear most of the costs of moose reintroduction were considered during the decision-making process.	1	2	3	4	5	6
m.	The moose management decision-making process did not protect the legitimate interests of all citizens.	1	2	3	4	5	6
n.	The degree to which the benefits of moose management would be shared in society was considered during the decision-making process.	1	2	3	4	5	6

18. This question asks about your overall satisfaction with the moose management decision-making process, with the moose management decision, and with DEC. Answer these questions as well as you are able based on your knowledge of the moose management decision-making process. Please indicate how strongly you agree or disagree with each of the following statements.

1=Strongly Disagree 4=Agree  
2=Disagree 5=Strongly Agree  
3=Neutral

6=Don't Know

		<u>Strongly</u> <u>Disagree</u>			<u>Strongly Don't</u> <u>Agree Know</u>		
a.	I am satisfied with the moose management decision which was reached.	1	2	3	4	5	6
b.	I trust DEC's ability to manage wildlife.	1	2	3	4	5	6
c.	I doubt that the moose management decision announced by DEC will last for very long.	1	2	3	4	5	6
d.	Too much time was required for the moose management decision to be made.	1	2	3	4	5	6
e.	I am satisfied with DEC as a natural resource management agency.	1	2	3	4	5	6
f.	Too much money was spent to make the decision about DEC's moose reintroduction proposal.	1	2	3	4	5	6
g.	DEC will probably change its decision about how to manage moose before long.	1	2	3	4	5	6
h.	The moose management decision DEC announced did not meet my personal interests.	1	2	3	4	5	6
i.	The benefits of the moose management decision-making process were worth the costs.	1	2	3	4	5	6
j.	DEC should have been able to make its decision about moose management in much less time.	1	2	3	4	5	6
k.	I am not satisfied with the way in which DEC manages wildlife.	1	2	3	4	5	6
l.	The moose management decision which was made is the one which I personally preferred.	1	2	3	4	5	6
m.	I am not satisfied with the way DEC made its decision about moose management.	1	2	3	4	5	6
n.	The reintroduction of moose will probably be reconsidered in the near future.	1	2	3	4	5	6



19. This question asks what you think about the ways in which citizens participated in the moose management decision-making process. Answer these questions as well as you are able based on your knowledge of the moose management decision-making process. Please indicate how strongly you agree or disagree with each of the following statements.

1=Strongly Disagree 4=Agree  
2=Disagree 5=Strongly Agree  
3=Neutral

6=Don't Know

		Strongly Disagree					Strongly Don't Agree Know	
		1	2	3	4	5	6	
a.	An equal opportunity existed for all citizens to participate in the moose management decision-making process.	1	2	3	4	5	6	
b.	Some important viewpoints were not heard in the discussions about DEC's moose reintroduction proposal.	1	2	3	4	5	6	
c.	Citizens did not have enough of a chance to say how they would like DEC to manage moose.	1	2	3	4	5	6	
d.	The relationship between DEC and ordinary citizens improved during the moose management decision-making process.	1	2	3	4	5	6	
e.	DEC did not pay attention to the reasons citizens gave for their moose management preferences.	1	2	3	4	5	6	
f.	Some citizens had a better chance to comment on DEC's moose management proposal than others.	1	2	3	4	5	6	
g.	The citizens who commented on DEC's moose reintroduction proposal did not adequately represent all relevant ideas about the issue.	1	2	3	4	5	6	
h.	The moose management decision-making process did not allow citizens to express their moose management preferences.	1	2	3	4	5	6	
i.	No citizens were denied the opportunity to participate in the decision-making process.	1	2	3	4	5	6	
j.	Citizens will be more respectful of each other's opinions since the moose management decision-making process.	1	2	3	4	5	6	
k.	Citizens were given the opportunity to express their preferences about moose management.	1	2	3	4	5	6	
l.	Interest groups will have a harder time cooperating to reach natural resource decisions after their experience with the moose management decision.	1	2	3	4	5	6	
m.	All important views were heard during the deliberation over moose management.	1	2	3	4	5	6	

Questions 20 asks how you believe DEC should go about making natural resource management decisions in general. It does not concern the moose management decision-making process specifically. Answer this question even if you knew nothing about the moose management decision-making process.

20. Please indicate how strongly you agree or disagree with each of the following statements.

1=Strongly Disagree 4=Agree  
2=Disagree 5=Strongly Agree  
3=Neutral

6=Don't Know

		Strongly Disagree					Strongly Don't Agree Know	
		1	2	3	4	5	6	
a.	DEC should try to convince the public to accept the management actions that DEC thinks are best.	1	2	3	4	5	6	
b.	DEC should manage natural resources in the way that the majority of the public wants.	1	2	3	4	5	6	
c.	Citizens should be given the opportunity to express their preferences about natural resource management.	1	2	3	4	5	6	
d.	DEC should argue for the type of management actions it believes are most appropriate.	1	2	3	4	5	6	
e.	Natural resource experts working for DEC should make all final resource management decisions.	1	2	3	4	5	6	
f.	People should have the chance to express the reasons for their natural resource management preferences.	1	2	3	4	5	6	
g.	DEC should give citizens the chance to contribute to its decisions.	1	2	3	4	5	6	
h.	DEC should use its expertise to make recommendations about what types of management actions it thinks are best.	1	2	3	4	5	6	
i.	Citizens should be included in DEC's decision-making processes.	1	2	3	4	5	6	
j.	DEC staff should take the responsibility for making natural resource management decisions and not simply follow public opinion.	1	2	3	4	5	6	
k.	DEC should take the time to listen to citizens describe how they would like natural resources to be managed.	1	2	3	4	5	6	
l.	DEC should not have to include any citizens in its decision-making.	1	2	3	4	5	6	

Please use the space below for any additional comments you may wish to make.

**Thank You For Your Time and Effort!**

To return this questionnaire, simply seal it (postage has been provided) and drop it in the nearest mailbox.

## APPENDIX B

### TELEPHONE NONRESPONDENT SURVEY

Good (Morning, Afternoon, Evening):

My name is \_\_\_\_\_. I work for the Department of Natural Resources at Cornell University. May I speak to \_\_\_\_\_.

(IF INDIVIDUAL IS UNAVAILABLE, FIND OUT WHEN IT WOULD BE CONVENIENT TO CALL AGAIN AND ENTER ON COVER SHEET.)

I'm calling about the questionnaire we mailed to you recently about reintroducing moose to northern New York. We realize that you may have been too busy to fill it out or that you may not be very interested in moose, but we still would like to get your ideas on a few key questions so our study is more representative of what people think.

Would you be willing to spend about 5 minutes now answering a few questions? (IF NO, ASK FOR A MORE CONVENIENT TIME TO CALL BACK AND ENTER ON COVER SHEET. IF YES, SAY: "THANK YOU.")

In June 1992, the Department of Environmental Conservation (also known as the "DEC") proposed reintroducing moose into northern New York. The DEC made its final decision about the reintroduction in the spring of 1993. This survey will help us understand how aware you were of DEC's proposal and whether or not you were satisfied with how DEC made its decision.

**1. Did you hear information or express your opinion about the moose reintroduction proposal in any way (such as by phone, letter, or attendance at a public meeting) between June 1992 and March 1993?**

\_\_\_\_\_ No (skip to Question 2)

\_\_\_\_\_ Yes

\_\_\_\_\_ Don't Know

**a. Did you attend a public meeting sponsored by DEC about the moose reintroduction proposal between June 1992 and March 1993?**

\_\_\_\_\_ No

\_\_\_\_\_ Yes

\_\_\_\_\_ Don't Know

b. Did you receive a phone call from a DEC staff member and answer questions about your opinions on this proposal between June 1992 and March 1993?

- \_\_\_\_\_ No  
 \_\_\_\_\_ Yes  
 \_\_\_\_\_ Don't Know

c. Did you write a letter about the proposal to DEC or other government officials?

- \_\_\_\_\_ No  
 \_\_\_\_\_ Yes  
 \_\_\_\_\_ Don't Know

d. Is there anything else you did which I haven't mentioned?

- \_\_\_\_\_ No  
 \_\_\_\_\_ Yes  
 \_\_\_\_\_ Don't Know

What is it?

SKIP TO QUESTION 3.

2. Were you aware of the moose reintroduction proposal in any way?

- \_\_\_\_\_ No (skip to Question 6)  
 \_\_\_\_\_ Yes  
 \_\_\_\_\_ Don't Know

3. By the time DEC announced its final moose management decision in March 1993, did you support or oppose the moose reintroduction proposal?

\_\_\_\_\_ Oppose

Did you strongly oppose the proposal?

- \_\_\_\_\_ No  
 \_\_\_\_\_ Yes

\_\_\_\_\_ Support

Did you strongly support the proposal?

- \_\_\_\_\_ No  
 \_\_\_\_\_ Yes

\_\_\_\_\_ No Opinion

\_\_\_\_\_ Don't Remember or Don't Know

4. Do you think DEC went about making its decision about the moose reintroduction proposal in a fair way or an unfair way?

\_\_\_\_\_ Fair

Do you think the decision was made in a very fair way?

- \_\_\_\_\_ No  
 \_\_\_\_\_ Yes  
 \_\_\_\_\_ Don't Know

\_\_\_\_\_ Unfair

Do you think the decision was made in a very unfair way?

- \_\_\_\_\_ No  
 \_\_\_\_\_ Yes  
 \_\_\_\_\_ Don't Know

\_\_\_\_\_ No Opinion

\_\_\_\_\_ Don't Remember or Don't Know

5. Do you think DEC's final decision about whether to reintroduce moose was a good one or a poor one?

\_\_\_\_\_ Good

Do you think the decision was a very good one?

\_\_\_\_\_ No

\_\_\_\_\_ Yes

\_\_\_\_\_ Don't Know

\_\_\_\_\_ Poor

Do you think the decision was a very poor one?

\_\_\_\_\_ No

\_\_\_\_\_ Yes

\_\_\_\_\_ Don't Know

\_\_\_\_\_ No Opinion

\_\_\_\_\_ Don't Remember or Don't Know

6. I'm going to read you three statements. Please tell me whether you agree or disagree with each statement.

a. DEC should give citizens the chance to contribute to its decisions. Do you agree or disagree?

\_\_\_\_\_ Agree

Do you strongly agree?

\_\_\_\_\_ No

\_\_\_\_\_ Yes

\_\_\_\_\_ Don't Know

\_\_\_\_\_ Disagree

Do you strongly disagree?

\_\_\_\_\_ No

\_\_\_\_\_ Yes

\_\_\_\_\_ Don't Know

\_\_\_\_\_ No Opinion

\_\_\_\_\_ Don't Know

b. DEC should try to convince the public to accept the management actions that DEC thinks are best. Do you agree or disagree?

\_\_\_\_\_ Agree

Do you strongly agree?

\_\_\_\_\_ No

\_\_\_\_\_ Yes

\_\_\_\_\_ Don't Know

\_\_\_\_\_ Disagree

Do you strongly disagree?

\_\_\_\_\_ No

\_\_\_\_\_ Yes

\_\_\_\_\_ Don't Know

\_\_\_\_\_ No Opinion

\_\_\_\_\_ Don't Know

c. DEC should manage natural resources in the way that the majority of the public wants. Do you agree or disagree?

\_\_\_\_\_ Agree

Do you strongly agree?

\_\_\_\_\_ No

\_\_\_\_\_ Yes

\_\_\_\_\_ Don't Know

\_\_\_\_\_ Disagree

Do you strongly disagree?

\_\_\_\_\_ No

\_\_\_\_\_ Yes

\_\_\_\_\_ Don't Know

\_\_\_\_\_ No Opinion

\_\_\_\_\_ Don't Know

7. Are you a permanent resident of New York State?

\_\_\_\_\_ No (skip to Question 8b - read Question 8 introduction)

\_\_\_\_\_ Yes

\_\_\_\_\_ Don't Know

8. "Northern New York" includes the following 14 counties: Clinton, Essex, Franklin, Fulton, Hamilton, Herkimer, Jefferson, Lewis, Oneida, Oswego, St. Lawrence, Saratoga, Warren, and Washington.

a. Are you a permanent resident of northern New York?

\_\_\_\_\_ No

\_\_\_\_\_ Yes (ask b, but skip c)

\_\_\_\_\_ Don't Know

b. Do you own property in northern New York?

\_\_\_\_\_ No

\_\_\_\_\_ Yes

\_\_\_\_\_ Don't Know

c. How often do you visit northern New York?

\_\_\_\_\_ Several times a year

\_\_\_\_\_ At least once a year

\_\_\_\_\_ Once every few years

\_\_\_\_\_ Almost never

Thank you very much for taking the time to answer my questions.

Respondent's sex: \_\_\_\_\_ Male \_\_\_\_\_ Female