APPRAOCHES TO MANAGEMENT EFFECTIVENESS

IN STATE FISH AND WILDLIFE AGENCIES

by

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(ABSTRACT)

Agency directors, program administrators and planners as well as U. S. Fish and Wildlife Service regional federal aid supervisors provided input that defined 22 factors considered most important in determining management effectiveness of state fish and wildlife agencies. I grouped the factors into the following six categories: public support and awareness, conflict resolution, politics, planning and funding, agency management and personnel. State agency directors, commissioners and legislators ranked the factors.

In cooperation with the U. S. Fish and Wildlife Service and Organization of Wildlife Planners, I conducted case studies of nine state fish and wildlife agencies widely recognized by their peers as being particularly effective relative to the identified factors. Questionnaires and interviews with 845 agency members and constituents revealed effective fish and wildlife agencies had much in common with the excellent companies described by Peters and Waterman
(1982) in *In Search of Excellence*. Effective agencies were proactive in dealing with issues and frequently among the nation's leading agencies in dealing with issues of national scope. Effective agencies used a variety of techniques to understand public desires and involve the public in making important decisions. Effective agencies grant their employees much freedom to make decisions and try new ideas without fear of punishment for making mistakes. They are committed to the personal development of employees. Effective agencies are good planners, with well defined missions and goals. Personal missions of employees are highly congruent with agency missions, resulting in a missionary-like zeal for their work. Effective agencies have a strong biological basis for their decisions and maintain credibility by balancing biological factors with public opinion. Effective agencies have stable political environments and experienced, enlightened resource management professionals as their leaders. Leaders emphasize participative decision making and teamwork. Finally, effective agencies have strong public support and are effective in mobilizing that support when important policy decisions are made. Many specific examples that illustrate the characteristics of effective agencies are discussed.
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Many people contributed advice and their time in developing the questionnaires and interview instruments used throughout this project. Most of them were members of the Organization of Wildlife Planners or regional personnel of the U. S. Fish and Wildlife Service Division of Federal Aid. Although they are too numerous to mention here, my thanks go to all those who helped along the way. The names of those who helped with the case studies appear in the appendices.
The directors and staffs of the nine agencies who participated in case studies deserve special thanks for arranging case study team visits and for letting us upset their normal routines for a week at a time. All nine agency directors were very supportive throughout the project. The designated agency/project liaisons (listed in the appendices) devoted countless hours to arranging our visits.

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Chapter 1.

General Background

INTRODUCTION

In this dissertation, I report the findings of a study of what is right with state fish and wildlife agencies. The focus here is on the common threads that link some of the country's most effective fish and wildlife agencies. I also share many specific management success stories. The goal of this research is to contribute to better management of fish and wildlife agencies by helping them communicate their successes to each other.

In his opening address to the 50th North American Wildlife and Natural Resources Conference, Daniel A. Poole remarked, "Again and again, the wildlife management profession has demonstrated that it can resolve wildlife problems of a biological nature. But the profession makes meager headway in surmounting social and political opposition to necessary actions" (Poole 1985). While Poole's address made the case for scientific management of wildlife resources, he unwittingly acknowledged the
importance of social and political factors in determining the effectiveness of wildlife management. It was, in fact, the success of scientific management in restoring depleted populations of American wildlife (Lewis 1987; Downing 1987) that allowed concerns to shift from purely scientific matters about status of wildlife populations to social and political matters such as allocation issues and organizational effectiveness (Wright et al. 1991).

A session dedicated to comprehensive planning systems, held at the same conference addressed by Poole, gave evidence that the wildlife profession was beginning to look inward at organization management principles as they applied to fish and wildlife agencies (Dexter 1985). Improving organizational efficiency and effectiveness, for example, was cited as the primary reason for planning (Amend 1985).

Organizational effectiveness, like intelligence, motivation and satisfaction, is not a simple concept, but a complex construct that cannot be explained easily (Cameron and Whetten 1983a). No single empirical model can explain it (Hall and Clark 1980). Although many people have tried, Hage (1988) suggested too much effort has been put into trying to find the single "best" model of organizational effectiveness.

Interest in the study of organizational effectiveness grew in the early 1980s when books detailing case studies of America's best-run companies frequently made the best-
sellers lists (Peters and Waterman 1982; Kanter 1983). Peters and Waterman's *In Search of Excellence* is probably the best known example of the case study approach to the study of organizational effectiveness in the popular management literature. Peters and Waterman distilled their findings about excellent companies down to eight basic principles that they generalized as applicable to most organizations. *In Search of Excellence* spawned a rush of research, including efforts to apply Peters and Waterman's criteria to the public sector. For example, Sipel's (1984) and Barbour's (1984) excellence criteria for local governments were nearly identical to those of Peters and Waterman, with allowances made for the politics of public organizations.

Not everyone agreed, however, with the conclusions or the approach of Peters and Waterman, especially as they applied to government (Golembiewski and Kiepper 1988). Critics pointed out that several of Peters and Waterman's excellent companies later fell on hard times (Anonymous 1984; Cox and Cooper 1985; Reimann 1986). The most recent example is International Business Machines (IBM), prominently featured in *In Search of Excellence* as one of Americas' best companies. And yet, shortly before this was written, IBM reported its first ever annual loss, laid off thousands of employees, and prepared to reduce the dividend
on its stock, which had fallen to less than one-half its value of two years earlier.

People may argue the merits of excellence criteria and the rigor of Peters and Waterman's study approach. However, most would agree that one of the primary avenues of improving organizational effectiveness is watching and learning from other organizations—a process called benchmarking (Cole 1993). Businesses have always watched their competition and adapted competitors' products or processes to improve their own operations. Benchmarking specifically refers to studying the company acknowledged as the best at doing something and making changes to surpass that benchmark.

The study reported here originated with a desire to define management effectiveness in state fish and wildlife agencies by documenting how those agencies acknowledged as being among the best in the profession are managed. The agencies participating in the study were identified by their peers in the profession. The data and descriptions presented should provide benchmarks for all fish and wildlife agencies to observe, analyze and improve upon. The data presented here represent a descriptive model (a description of the things successful agencies are doing) rather than a normative model (a description of the things agencies ought to do to be effective; Steers 1977).
The study was not designed to rank agencies against one another. Throughout this dissertation, tables reporting responses of agency personnel protect the identity of the participating agencies by using numbers rather than names. The order in which agencies appear varies from table to table.

Finally, this study was a team effort. Although I analyzed all the data and wrote the report, many people provided input into the study design and helped collect the data. Throughout the text, where appropriate, I refer to the study team to indicate areas where I had significant help in collecting data. The project advisory team refers to those individuals who provided guidance and input.

**Statement of Objectives**

The objectives of this study are:
1. To identify and rank the factors that determine management effectiveness of state fish and wildlife agencies, and
2. To document the strategies and actions of state fish and wildlife agencies acknowledged as being effectively managed.
Chapter 2.

Identification and Ranking of

Effectiveness Factors

INTRODUCTION

This chapter addresses the first study objective, identification and ranking of management effectiveness factors. It concludes with a discussion that compares the findings of this study with other efforts to define effectiveness criteria and the implications of the findings for state fish and wildlife agencies.

As suggested by Seashore (1983), the study team developed the framework for assessing effectiveness from multiple perspectives by asking those people most directly involved in management of fish and wildlife agencies what constitutes management effectiveness. Agency directors, other policy makers (commissioners and legislators), agency personnel and representatives of the U. S. Fish and Wildlife Service's (USFWS) Division of Federal Aid (who provide significant funding for state agencies) were asked to identify and/or rank effectiveness factors. Agency constituents were omitted from the process because obtaining
a representative, nationwide sample of constituents was beyond the scope and capabilities of this study.
METHODS

Identification of
Effectiveness Factors

Many groups associated with fish and wildlife agencies provided input to the process of identifying effectiveness factors. The groups included four separate groups of state agency directors (approximately 50 directors, assembled as the four regional bodies of the International Association of Fish and Wildlife Agencies), the American Fisheries Society (AFS) Fisheries Administrators section (approximately 25 administrators primarily from state agencies), Northeast Wildlife Administrators (administrators from 13 northeastern states), Northeast Information and Education Administrators (again from the 13 northeastern states), members of the Organization of Wildlife Planners (OWP; approximately 20 state and federal agency members attending a work session at their annual meeting) and USFWS Regional Federal Aid Supervisors (approximately 25 people attending an annual meeting of the supervisors).

Two methods of securing input were employed, both operating primarily as brain-storming exercises to generate an expansive list of potential factors. Study team members
facilitated discussions of the factors that determine effectiveness with the western and midwestern director groups, Federal Aid supervisors and OWP members. Results of the discussions were recorded on flip charts.

The second method, written suggestions of potential factors, was employed when the time available with a group was insufficient for a facilitated discussion. Team members meeting with these groups briefly described the project and asked those present to write their ideas on a form that was provided (Appendix B). The form listed five major areas that might contribute to agency success. The major areas, selected after review of the literature and discussion with study team members, were citizen participation, funding, political relationships, conflict resolution and employee satisfaction. Respondents were asked if each major area was important in contributing to the effectiveness of fish and wildlife agencies and how it was important. The northeastern and southeastern directors, northeastern wildlife and information and education administrators and the AFS fisheries administrators provided written input.

A single list of factors was generated from the combined input of the various program administrators. Responses were received from 7 fisheries administrators, 4 wildlife administrators, 2 information and education administrators, 1 planner, 1 unclassified administrator and
1 fisheries administrator from the U. S. Fish and Wildlife Service.

Separate lists of effectiveness factors were generated for each of the four regional groups of directors, Federal Aid supervisors and OWP members. The final condensed list of 22 effectiveness factors included those factors that appeared most frequently on the several independent lists.

**Ranking of Effectiveness Factors**

I mailed the condensed list of effectiveness factors to 55 agency directors (including Puerto Rico, U. S. Virgin Islands and 2 agencies each in Washington, Pennsylvania and North Carolina), 27 former agency directors, 60 fish and wildlife commissioners (members of citizen policy making boards) and 32 state legislators serving on fish and wildlife or related committees. The former agency directors and legislators were selected from lists compiled from a previous request for information. The former directors and legislators represented 23 states from various geographic areas. A national sample of commissioners was selected at random from a directory of conservation organizations (National Wildlife Federation 1989a).

Each addressee was asked to rate the importance of each factor on the condensed list on a scale of one to five
(where 1=less important and 5=more important; Appendix B). The subjects were also asked to identify the five most important factors on the list (or factors they added). The ranking process followed a modified version of Dillman's (1978) total design method. A postcard reminder and one follow-up letter and additional survey were sent to nonrespondents.

Separate rankings were compiled for each group. Mean rank of each effectiveness factor was determined by averaging across the four respondent groups. Comparison of mean ranks yielded final overall rankings of the effectiveness factors.
RESULTS

Response rates of commissioners (73%), directors (89%) and former directors (96%) for the ranking surveys met or exceeded expectations for professional groups (Dillman 1978). The response rate of legislators, although lower (56%), was still characteristic of expected response rates when respondents are not directly involved in the subject matter (Dillman 1978). Lower response of legislators also may have been affected by the timing of the survey (the mailings occurred during the 1990 election campaign).

Twenty-one factors were lumped into these six major categories relating to agency management:

A. Public support and awareness
   1. Openness to public input
   2. Public support and satisfaction with the agency
   3. Public awareness of agency programs

B. Conflict resolution
   4. Ability to resolve issues before conflicts arise
   5. Ability to resolve conflicts without appeal or override
   6. Public perception of fairness in resource allocation and conflict resolution
C. Politics

7. Agency credibility with the legislative and executive branches
8. Sensitivity to politics
9. Relationships with other agencies

D. Planning and funding

10. Adaptability and innovation in response to change
11. Monitoring of societal trends
12. Management system links planning and budgeting
13. Amount, diversity and stability of funding

E. Agency management

14. Leadership and management skills of leaders
15. Participative decision-making
16. Teamwork within the agency
17. Internal communication

F. Personnel

18. Employee morale
19. Definition of personnel roles
20. Public and personnel understanding of agency mission
21. Employee recognition and rewards

The remaining factor, status of animal populations and habitat, related more to technical aspects of fish and wildlife management than to management of agencies.
Three effectiveness factors (leadership and management skills; credibility with legislative and executive branches; public support and satisfaction) topped both the list of individually ranked factors (Table 1) and the list of factors chosen as being among the five most important (Table 2). Four other factors (public awareness and understanding of agency programs; amount, diversity and stability of agency funding; public and personnel understanding of agency mission; openness to public input) ranked in the top ten of both lists. The teamwork factor ranked 11th on one list (the five most important factors; Table 2), but ranked 5th among the individually scored factors (Table 1).

The eight lowest ranked items were the same on both lists--definition of personnel roles; employee recognition and rewards; ability to resolve issues without appeal or override; sensitivity to politics; relationships with other agencies; participative decision making; monitoring of societal trends; and ability to resolve issues before they become major conflicts. The other six factors fell in the middle.

Agency directors ranked public support for and satisfaction with the agency highest, followed by agency credibility with the legislative and executive branches and agency funding, regardless of which ranking method was used. Directors' rankings were similar to those of ex-directors (Spearman's rho=0.84 for numeric rankings), commissioners
Table 1. Rankings of 22 agency effectiveness factors (1= highest rank, 22= lowest rank) by state fish and wildlife agency directors (DIR), ex-directors (XDIR), fish and wildlife commissioners (COMM) and state legislators serving on fish and wildlife or related committees (LEG). Rankings are based on mean numerical responses of each group for each effectiveness factor on a scale of one to five (five= greater importance).

<table>
<thead>
<tr>
<th>Functional areas</th>
<th>Rankings</th>
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<tr>
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<td>15</td>
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<tr>
<td>Ability to resolve conflicts without appeal or override</td>
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Table 1 continued.

<table>
<thead>
<tr>
<th>Effectiveness factors by Functional areas</th>
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<td>Agency monitors societal trends, looks towards future</td>
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<td>Agency has management system in place linking planning &amp; budget allocation</td>
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<td>Teamwork within agency</td>
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<tr>
<td>Internal communication</td>
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<tr>
<td>Status of animal populations and habitat</td>
<td>DIR: 17</td>
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Table 2. Rankings of 22 agency effectiveness factors (1= highest rank, 22= lowest rank) by state fish and wildlife agency directors (DIR), ex-directors (XDIR), fish and wildlife commissioners (COMM) and state legislators serving on fish and wildlife or related committees (LEG). Rankings are based on the number of times each factor was selected as one of the five most important in determining agency effectiveness.

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(rho=0.81) and legislators (rho=0.85). The only substantial difference (defined as a difference between the rank assigned by directors and the mean rank of all groups of at least 5) was that directors chose employee morale as one of the five most important factors less frequently than the other groups.

Former directors also rated public support for and satisfaction with the agency and agency credibility with the legislative and executive branches as two of the three most important factors. They differed from present directors, however, by ranking leadership and management skills among the top three rather than agency funding. Former directors ranked funding lower than any of the other groups. Correlation of former directors' rankings with commissioners and legislators (rho=0.75 and 0.77, respectively) were consistently lower than present directors. Former directors differed substantially from other groups on only one factor --they chose internal communication as one of the five most important factors less frequently than other groups.

Commissioners had a distinctly different view of what is important in determining agency effectiveness. Commissioners numerical rankings placed public awareness of agency programs, leadership and management skills and teamwork within the agency at the top of the list. Their choices of the five most important factors were more in line with other groups, with public support and satisfaction,
leadership and management skills and agency credibility with the legislative and executive branches ranking highest. Commissioners' rankings consistently yielded the lowest correlations (0.81 compared with directors, 0.75 compared with both ex-directors and legislators). Commissioners' rankings differed substantially from other groups on several factors. In the numerical rankings, commissioners were the only group not to rank public support and satisfaction among the top three (they ranked it 8th). They ranked status of animal populations and habitat substantially higher than other groups regardless of ranking method.

Legislators ranked agency credibility with the legislative and executive branches, leadership and management skills and openness to public input as the most important factors by both ranking methods. Correlation of legislators' rankings were nearly as low as commissioners' rankings, but there were more outliers among legislators' rankings. In the numerical rankings, legislators ranked openness to public input, perception of fairness in resource allocation and resolution of conflicts higher than other groups. They ranked internal communication lower. Legislators chose ability to resolve conflicts without appeal or override and employee recognition and rewards among the five most important factors more frequently than other groups.
DISCUSSION

Only one of the effectiveness factors identified in this study is unique to fish and wildlife agencies. That factor, status of animal populations and habitat, could be considered the ultimate measure of organizational effectiveness for fish and wildlife agencies. Effective protection and management of fish and wildlife populations and their habitats is the basis for the agencies' missions. That status of animal populations and habitat did not rank higher, is probably a reflection of the study team explaining the study's organizational emphasis to participants. The investigations reported in the following chapter reflect a choice to focus on the factors that determine organizational management effectiveness rather than technical aspects (biological and ecological factors) of resource management effectiveness.

The 21 remaining factors could be applied equally to any public organization. It is not surprising then, that many of the factors overlap the effectiveness criteria suggested by other researchers.

Steers (1977) identified four general types of factors contributing to organizational effectiveness. First, organizational characteristics include structure (how human resources are organized and used) and technology (how
variations in technical knowledge are brought to bear on goal-directed activities). Second, environmental characteristics include external and internal factors. External environmental factors include those forces arising outside the organization that affect internal decisions and actions. Internal environmental factors include all the factors that make up the organizational culture and work environment of the organization. Third, employee characteristics focus on the individual differences among organizational members. Fourth, managerial policies and practices include the role of leaders and managers in planning, coordinating and facilitating goal-directed activities.

The effectiveness factors identified in this study fall primarily into Steers' environmental characteristics and managerial policies and practices areas. The internal environmental factors are the factors most directly under the control of agency leaders. Many scholars in the field of leadership argue that manipulation of the factors that define the agency's purpose (Barnard 1938) or develop and protect the agency's distinctive competence (Selznick 1957; Terry 1990) is the primary responsibility of leaders. Effective organizations and their leaders must also deal with their external environments. For government agencies, external environments often translate to a complex web of
constraints that impinge upon the agency's ability to operate effectively (Wilson 1989).

There are two probable explanations for the lack of organizational structure factors on the list. First, the study team approached the study from an organizational behavior point of view, and thus structural characteristics were not included in the major categories offered on surveys. Second, in spite of the opportunity to do so, survey respondents rarely mentioned structural characteristics among other factors considered important in determining agency management effectiveness.

Knuth and Nielsen (1989) developed a 16-cell matrix containing 377 resource management indicators that could be used to monitor (and presumably improve) performance of natural resource agencies. Data needed to monitor nearly all the indicators was presumed to be easily available in agency reports. Approximately one-half of the factors identified in this study (mostly in the categories of public support and awareness, agency management and personnel) are addressed by some of Knuth and Nielsen's social and institutional indicators. The overlap between the indicators of Knuth and Nielsen and the factors identified here suggests agency members should be consistent in what they say is important in determining effectiveness and in what they report to constituents as annual agency accomplishments.
However, adequate assessment of agency performance relative to the effectiveness factors identified here requires research techniques that go beyond reading agency reports. Monitoring of indicators gleaned from agency reports yields neither the breadth nor the depth of information that can be collected by interviewing agency members. Thus, the case study approach employed in this study seems essential to adequately explore and describe management effectiveness—the second objective of this study.

Many state fish and wildlife agencies have been evaluated, in part or in total, by private firms under contract to the state or by investigators in state government. At least 2 of the 9 agencies participating in this study have recently participated in such evaluations (Balukoff, Lindstrom & Co., P.A. 1991; Conant 1992). The Wildlife Management Institute (WMI) has conducted evaluations of most state fish and wildlife agencies in the country during the last 40 years (although none of the agencies participating in this study have been evaluated recently by the WMI). The WMI evaluations, conducted upon request, focus on organizational structure and environmental characteristics. In one recent agency evaluation (Wildlife Management Institute 1989), 39 of the 53 recommendations made by the WMI related to political and organizational structure and staffing, the constraints Wilson (1989)
considered so important to the performance of government agencies. Only six of the recommendations overlapped the effectiveness factors identified in this study.

The lack of overlap between WMI evaluations and this study reflects the desire of study team members to avoid duplication of WMI efforts. However, it also reflects the sense of agency leaders that factors they can more directly control—-the factors addressed in this study—are especially important in determining management effectiveness. Most of the factors identified in this study, and the strategies associated with those factors (described in Chapter 3), can be implemented by agencies without the approval of higher authorities.

As several ranking survey respondents indicated, all 22 effectiveness factors are important in determining agency management effectiveness. At least one factor in each of the six major categories (excluding ecological factors) was ranked in the top one-half of all factors. However, more importance was attached to factors in the public support and awareness category, where all three factors ranked in the top six. Agency management factors were also weighted heavily, with two (leadership and management skills, teamwork) ranking in the top seven factors.

Crowe (1983) described a comprehensive management system consisting of a continuous feedback loop with four components—inventory (Where are we?), strategic planning
(Where do we want to go?), operational planning (How do we get there?) and evaluation (Did we make it?). Fish and wildlife agencies have traditionally emphasized the inventory component, generating information for fish and wildlife management. The evaluation component of the loop has traditionally been weak. The effectiveness factors identified here provide a basis for agencies to evaluate their performance in the social and institutional areas of management effectiveness.

Fish and wildlife agencies need to expand inventory and evaluation efforts outside the traditional animal population, habitat and user categories (McMullin et al. 1991). Inventory and evaluation of management effectiveness must include monitoring of how the agency allocates resources and deals with external and internal constituencies. External constituencies include not only resource users, but politicians, other agencies and nongovernmental organizations. The agency's employees are a critically important internal constituency.
Chapter 3.

Characteristics and Strategies
of Effective Agencies

INTRODUCTION

This chapter addresses the second study objective, documentation of strategies and actions of state fish and wildlife agencies acknowledged by their peers as being effectively managed. Meeting that objective required first, identification of agencies perceived to be exceptionally effective and recruiting them to participate in the study, and second, developing materials and procedures to document the performance of effectively managed agencies relative to the effectiveness factors described in Chapter 2. The results presented include numerous examples. Management implications and comparisons to other studies of natural resource agencies are discussed.

This phase of the study met many of the criteria described by Yin (1989) as appropriate for a multiple case study approach. Meeting study objective 2 required asking primarily what, how and why questions regarding contemporary events, over which the study team had no control. The case
studies were designed to determine what agencies were doing, how strategies developed and why particular strategies were chosen.

Due to the complexity of the management effectiveness construct, both quantitative and qualitative approaches were employed (Brewer 1983). A quantitative survey approach was used to develop comparative standards of the case study agencies. The qualitative approach consisted of focused interviews designed to elicit the hows and whys of agency strategies and attributes difficult to quantify.

The amount of data needed to adequately describe each of the case study agencies was far more than the author could collect alone. Consequently, volunteers from other state agencies (many of them active participants in the Organization of Wildlife Planners) and the U. S. Fish and Wildlife Service Division of Federal Aid were recruited to assist in case study investigations. As Yin (1989) pointed out, "A well-trained and experienced investigator is needed to conduct a high-quality case study because of the continuous interaction between the .. .issues being studied and the data being collected."
METHODS

Selection of Agencies for Case Studies

Five different sources helped identify effective agencies. Each source had a different perspective on state fish and wildlife agencies. Two sources, staff members at the Wildlife Management Institute (WMI) and the International Association of Fish and Wildlife Agencies (IAFWA), work regularly with agencies from all over the country, and consequently, have a national perspective. USFWS Federal Aid regional supervisors, the third source, work closely with agencies within their respective regions, reviewing and approving agency projects that use Federal Aid in Fish and Wildlife Restoration matching funds (over 30% of some agency budgets). The fourth source was state agency directors, who meet regularly with their peers within each of the IAFWA four geographic regions. They meet less frequently with directors outside their regions. Consequently, directors' perspectives are largely regional with some national exposure. Project advisory team members, the fifth source, are reasonably well acquainted with the 20 to 25 agencies from all over the country that regularly participate in the OWP. They also have some knowledge of agencies in their regions.
Surveys were sent to the directors of 53 state agencies (two each in Washington, Pennsylvania and North Carolina). The survey form listed the specific effectiveness factors under each of the six major categories (Appendix B). Directors were asked to identify agencies, including their own, they thought were exceptional performers in each of the major categories. No follow-up mailings were made. Sixteen members of the project advisory team received a color-coded version of the same survey sent to directors. USFWS Federal Aid regional supervisors were interviewed by telephone. I sent each regional supervisor a list of the categories and effectiveness factors prior to the interview. The regional supervisors discussed exceptional performance by agencies within their respective regions relative to each major category and identified the agencies they thought were best candidates for case studies. I conducted face-to-face interviews with key staff persons at the WMI and the IAFWA. In each case, the interviewees received a list of the categories and effectiveness factors prior to the interview. During the interview, exceptional performers were identified by category.

I compared the five lists of agencies identified in each major category to develop a short list of exceptional performers. The short list in each category included agencies identified by at least three of the sources. Agencies that appeared on the short list in at least five of
the categories were considered top candidates for comprehensive case studies. Comprehensive case studies consisted of documentation of agency strategies and performance relative to all 21 effectiveness factors. Agencies that appeared on the short list in two to four categories were considered as candidates for categorical case studies, i.e., documentation of strategies and performance relative to those categories and factors.

**Development of Case Study Instruments**

Development of instruments began with a review of the literature for existing instruments that could be used in this study. Some elements of the Ohio State University studies (Kerr et al. 1974) and the University of Michigan studies (Kahn and Katz 1960) of leadership were helpful. Other ideas were gleaned from Cook et al.'s (1981) compendium of work-related surveys. The fish and wildlife resource indicators described by Knuth (1986) and Knuth and Nielsen (1989) also provided a basis for developing questions.

The USFWS project leader, Spencer Amend, and I developed questions relative to each of the 21 effectiveness factors. The project advisory team reviewed the draft questions for relevance and importance and submitted
additional questions of their own. Following the team's review, I compiled a written questionnaire consisting of 90 close-ended questions and an interview instrument consisting of 40 open-ended questions. Both instruments were designed for use with agency employees only. The agency personnel questionnaire included 90 statements to which participants could respond on a five-point Likert scale (strongly agree, agree, neutral, disagree, strongly disagree). Several questions were added to collect demographic data such as age, sex, position title, time in current position, total service with the agency, previous position title, highest degree earned, subject of degree and school where the degree was received.

Separate interview instruments, all similar in content (Appendix B), were designed for agency constituents (primarily representatives of interest groups), legislators, executive staff members and members of the mass media.

Two different approaches to assessing organizational culture were developed. The first approach used scales adapted from the Ohio State University Supervisory Behavior Description Questionnaire (SBDQ; Cook et al. 1981). The second approach used the Organizational Culture Inventory® (OCI), a commercial instrument that assesses organizational culture relative to behavioral norms along 12 axes (Human Synergistics, Inc. 1989).
The instruments and procedures were field tested with the cooperation of the Virginia Department of Game and Inland Fisheries (VDGIF). A team of 4 investigators interviewed 14 VDGIF central office personnel and 5 field office personnel who had previously filled out the questionnaire. One-half of the participants were given the adapted SBDQ. The remainder were given the OCI. One interview with an agency constituent tested the external respondent instruments.

Most VDGIF personnel completed the questionnaire in fewer than 30 minutes. Because the interview instrument was too long, starting points were staggered to be sure all questions were tested. After interviewing the central office personnel, the study team discussed the interview questions and responses, reducing the instrument from 40 questions to 29. The shortened version was tested on field personnel the following day. Upon completion of the field test, one question from the interview instrument was converted to the Likert-scale format and added to the questionnaire. An additional interview question that gave respondents the opportunity to discuss anything else they thought important was added to complete the interview instrument (Appendix B).

The SBDQ was dropped in favor of the OCI because the OCI provided a more complete assessment of organizational culture. The OCI measures how agency personnel believe they
are expected to behave relative to the 12 axes. Relationships between the 12 axes are based on the same studies that produced the SBDQ and on Maslow's (1954) hierarchy of needs (Cooke and Burack 1989a). Although both the OCI and SBDQ have been widely used, the OCI has been recently used by several fish and wildlife agencies.

Case Study Protocol

Two types of case studies were conducted. In the comprehensive case studies, agency performance relative to all 21 effectiveness factors was assessed. Two site visits were made to each comprehensive case study state. Categorical case studies included assessment of agency performance in the 2 to 4 categories in which the agencies were identified as being effective. Only one site visit was made to categorical case study states. The entire case study procedure is graphically illustrated in Figure 1.

Selection of Study Participants

Each agency that participated in the project designated a person to serve as liaison between the agency and the study team. The liaison consulted with the study team and agency leadership to select a representative sample of
Figure 1. Schematic illustration of the case study protocol. The final two steps (gray arrows) apply only to comprehensive case studies.
participants. The only constraints placed on the selection process were (1) the agency director, assistant directors and all division chiefs had to be included, and (2) a representative cross-section of field personnel, preferably from more than one field location, had to be included.

Sampling focused on the traditional functions of fisheries, wildlife, enforcement, administrative support and information and education. Some interviews with persons in disciplines outside these traditional functions (e.g., forestry, parks, environmental protection) were conducted in the larger agencies having responsibilities in those areas.

Efforts of the study team (described below) were focused on agency personnel during the initial site visit to comprehensive case study agencies. The purpose of the initial visit was to inventory strategies related to the effectiveness factors. The follow-up visit focused more on the evolution of those strategies, specific examples to illustrate agency strategies and interviews with persons external to the agency. Agency personnel who were interviewed during follow-up visits were selected for their knowledge of strategies identified as being of particular interest to the study.

Categorical case study efforts varied with the categories being assessed. Since categorical case studies included only one site visit, they focused primarily on inventory of strategies. Procedures were identical to those
followed in comprehensive case studies. However, in those states where interviews with constituents, other agency members and politicians were required, slightly fewer agency personnel participated.

The total number of participants in both types of case studies was limited by the number of interviews that could be conducted by the study team in three days. Each team member conducted five one-hour interviews per day. Since teams consisted of 4 or 5 people, a total of 60 to 75 persons could be interviewed.

Each case study visit involved a different team of investigators. I participated in all case study site visits. Spencer Amend participated in all of the initial site visits. Other team members were recruited from a list of volunteers, most of whom were active members of the OWP or USFWS Federal Aid personnel. A total of 40 people participated as study team members (study team members for each visit are listed in Appendix A). Each team member received copies of the instruments and cover letters to be used in the case study one week prior to the site visit. In many cases, the agency liaison also sent team members agency annual reports and strategic plans to prepare them for the visit. I reviewed the instruments and procedures with team members when they assembled on site the day before case study visits began.
Initial Site Visits

The questionnaire and a cover letter (Appendix B) were sent to each agency participant 10 to 14 days prior to the site visit. The cover letter emphasized the confidentiality of participants' responses, briefly explained the project and detailed what was expected of respondents. In most cases, agency leaders sent a separate memorandum to their staff assuring participants of confidentiality and requesting their cooperation. Participants were instructed to complete the questionnaire and bring it to their interviews. The same questionnaire was used in all nine agencies. However, in analyzing the questionnaire responses relating to each effectiveness factor, we included only the data from those agencies identified as exceptional performers in the category containing that factor.

The questionnaire form was generated using Survey Pro™ (Apian Software 1991), a personal computer software package. The questionnaires were printed on colored paper in the hope they would be more noticeable in the stack of an in-basket. Questionnaire data were entered in the same software package each evening during the case study visit. Sample sizes ranged from 46 to 77 employees. A summary of responses was sent to agency leaders, usually within one week of the site
visit, using the report generating function of the software package.

Interviews were scheduled to last one hour, although additional time was often scheduled with agency directors and assistant directors. Case study team members began each interview by introducing themselves, asking a few questions about the interviewee's position in the agency and collecting the completed questionnaire. The team member then summarized the major goals of the project and answered any questions brought up by the interviewee. Participants were reminded again of the confidentiality of their responses.

The comprehensive case study interview was difficult to complete in one hour. Consequently, every other interview was begun at the midpoint of the instrument. Categorical case study interviews covered only four categories—the categories in which the agency had been identified as an exceptional performer and one or two others of the agency's choice. Categorical case study interviews usually consisted of about 20 questions and could almost always be completed in one hour. Interview responses were compiled in a word processing file. Similar responses were indicated by slash marks, facilitating the search for patterns in responses.

At the end of the interview, each agency participant was given an Organizational Culture Inventory (OCI) and a self-addressed, stamped envelope in which to return it.
Interviewers instructed the participants to complete the OCI in terms of expected behavioral norms for the entire agency, except in Minnesota and New York, where they were instructed to respond at the division level. In both of those states, the Division of Fish and Wildlife is roughly equivalent to a traditional fish and wildlife agency within a larger agency. Approximately 50% of the participants returned the OCIs within 10 days. Follow-up reminders were given to non-respondents, through the agency liaisons, approximately two weeks following the site visit.

Information gathered from agency constituents and other external participants was limited to interviews. Most were face-to-face interviews, but several were done by telephone to accommodate conflicts with their jobs or because they were located in remote areas.

A case study summary report was prepared for each agency within a few months of the site visit. The summary report consisted of a narrative describing findings relative to each effectiveness factor. It also included summary reports of questionnaire responses for the whole agency and various office locations, as well as graphic representations of the OCI results for the whole agency, separate offices and bureaus. The report also identified the strategies and examples of comprehensive case study agencies that would be targeted for further investigation in the follow-up visits.
Follow-up Site Visits

The goal of follow-up visits was to elucidate the hows and whys of agency strategies, to complement the simple inventory done during the initial visits. The team attempted to discover how a strategy evolved and what choices were made as it evolved. There was also more focus on external constituencies—the public, media, members of other agencies and politicians.

Data were collected only by interview during follow-up site visits (except in Wisconsin where a few additional agency staff completed questionnaires). Nearly every interview during the follow-up visits was unique, depending on the specific topics to be addressed with the individual. Most interviews focused on topics identified after the initial visit as agency strengths or items of particular interest. Some topics were addressed in all of the comprehensive case study agencies. For example, interviews with persons who had been previously identified as leaders (regardless of their position in the agency) focused on where they learned about leadership and how their leadership styles had evolved throughout their careers. To assess how proactive comprehensive case study agencies were in addressing major issues, I adapted Jones and Chase's (1979) descriptions of reactive, adaptive and dynamic strategies.
and Crable and Vibbert's (1985) description of the catalytic strategy to a 10-point scale (Appendix B). Interviewees (both agency personnel and members of other agencies) were asked to rate the agency and explain why they rated the agency as they did.

Questions in each of the special topic areas followed a pattern which consisted of asking for (1) a description of the background that led to development of the strategy, (2) if agency goals relative to the strategy were being attained, and (3) how attainment of those goals was evaluated. Interviewers also asked for the most important pieces of advice that could be offered to other agencies dealing with similar problems, what the agency would do differently if beginning to face the problem all over again, and how the strategy contributed to the agency's effectiveness.

Since the participants were not randomly selected, use of inferential statistics in analyzing the data is inappropriate. However, concerted efforts were made to get representative, if not random, samples of agency personnel. I used the nonparametric sign test to determine if there were significantly (p<.05) more positive (agree or strongly agree) than negative (disagree or strongly disagree) responses to questionnaire items within each agency. The sign test does not distinguish between responses of agree and strongly agree (or between responses of disagree and
strongly disagree), nor does it include neutral responses. Consequently, it is possible for a mean response of 2.8 in Agency 1 to be significantly different from neutral (3.0) while a mean response of 2.7 in Agency 2 is not significantly different. This would occur if a majority of responses in Agency 1 were positive, but somewhat balanced by a smaller number of strongly negative responses. Conversely, the lower mean of Agency 2 could be the result of equal numbers of positive and negative responses (and therefore a non-significant sign test) if there were many strongly positive responses. Judgments as to the real (as opposed to statistical) significance of responses were based on the direction of responses in the majority of the nine agencies.

No inferential statistics were used in comparing questionnaire responses of the various employee groups. Differences between the six bureau groups (directors and their deputies, enforcement, fisheries, wildlife, information and education and administrative support personnel) that exceeded the 75th percentile (difference ≥ 0.5) were considered substantial (Figure 2). Differences between men and women, and between headquarters and field personnel were distributed differently than those of the bureau groups (Figure 3). Eighty percent of the differences between these groups were ≤ 0.2. Differences between bureau groups ≥ 0.5 and between men and women or headquarters and
Mean Response Differences
Bureau Groups

Figure 2. Distribution of 1,365 absolute differences between mean responses of the six bureau groups (directors, enforcement, fisheries, wildlife, information and education and administration).
Mean Response Differences
Men & Women, HQ & Field

Figure 3. Distribution of 182 absolute differences between mean responses of men and women and headquarters and field personnel.
field personnel $\geq 0.3$ are referred to as substantial differences.
RESULTS

Selection of Agencies

Twenty-six of the 53 agency directors (49%) responded to the request for information about agencies they considered to be exceptional performers in the six major categories. Eleven of 16 (69%) project advisory team members responded. All USFWS Federal Aid regional supervisors, WMI staff and IAFWA staff contacted, responded to our inquiries.

Eighty-three percent (44 out of 53) of the state fish and wildlife agencies in the country were identified by someone as being an exceptional performer in at least one category. Twelve agencies were recognized by a majority of the sources as exceptional performers in at least two categories and five were recognized in 5 or 6 of the categories. The five agencies that received nearly universal recognition (Florida, Idaho, Missouri, Wisconsin, Wyoming) were asked to volunteer as comprehensive case study agencies. Four of the remaining seven agencies were asked to volunteer in categorical case studies (Arizona, Minnesota, New York, South Carolina). All nine agencies agreed to volunteer (Figure 4). The four categorical case study agencies were selected to complete a desirable
Figure 4. States where case studies were conducted. Hatching indicates comprehensive case study states. Stippling indicates categorical case study states.
geographic and structural distribution of agencies, and to balance the number of agencies recognized for exceptional performance in each of the six categories. Of the nine agencies, seven were recognized for exceptional performance in the public support and awareness category. Seven were recognized in the conflict resolution category, six in politics, seven in planning and funding, six in agency management and eight in personnel.

**Characteristics and Strategies**

**of Effectively Managed Agencies**

In the following sections, I will present the findings of the case studies relative to each of the 21 effectiveness factors in a consistent format. I will begin with responses to the questionnaire, for those effectiveness factors which it addressed. I will then discuss the interviews of agency members and, where appropriate, the interviews of those people external to the agency. Finally, I will describe examples of some of the most interesting or unique strategies. Following the first three categories (effectiveness factors 1-9), which are externally focused, an example that illustrates aspects of all three categories will be described. Another example illustrating aspects of the second three categories (effectiveness factors 10-21),
which are internally focused, will be described following the results of those categories.

Category: Public Support and Awareness

Factor 1: Openness of the Agency to Public Input

Questionnaire responses

Employees of all seven agencies identified as effective in the public support category agreed the public is adequately involved in agency decision making processes (Table 3). They also agreed the agencies have formal plans or processes for citizen participation. Responses were mixed regarding the adequacy of citizen participation training for employees who work with the public. Employees of two agencies with strong training programs generally agreed training was adequate. Employees of two other agencies disagreed fairly strongly, while three were neutral. All agencies strongly agreed public involvement can make a difference in agency decision making, particularly in setting the agency's goals and objectives. Four agencies agreed constituents should have major roles in developing, selecting and evaluating management plans or actions. Agency 6 was consistently more conservative about
Table 3. Mean responses to questionnaire items related to the effectiveness factor, openness of the agency to public input.¹

<table>
<thead>
<tr>
<th>Question</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The public is adequately involved in agency decision making processes</td>
<td>2.3*</td>
<td>2.3*</td>
<td>2.0*</td>
<td>2.2*</td>
<td>2.1*</td>
<td>2.3*</td>
<td>2.0*</td>
<td>2.2</td>
</tr>
<tr>
<td>2. Most employees who work with the public get adequate training in public involvement</td>
<td>3.2</td>
<td>2.9</td>
<td>3.3*</td>
<td>3.5*</td>
<td>3.2</td>
<td>2.7*</td>
<td>2.8*</td>
<td>3.1</td>
</tr>
<tr>
<td>3. The agency has a formal plan/process for public involvement</td>
<td>2.5*</td>
<td>2.4*</td>
<td>2.2*</td>
<td>2.0*</td>
<td>1.9*</td>
<td>2.6*</td>
<td>2.1*</td>
<td>2.2</td>
</tr>
<tr>
<td>4. Public involvement can make a difference in agency decision making processes</td>
<td>1.8*</td>
<td>1.5*</td>
<td>1.6*</td>
<td>1.5*</td>
<td>1.6*</td>
<td>1.7*</td>
<td>1.5*</td>
<td>1.6</td>
</tr>
<tr>
<td>5. The agency's constituents should have a major role in setting the agency's goals and objectives</td>
<td>2.3*</td>
<td>2.2*</td>
<td>2.0*</td>
<td>2.0*</td>
<td>2.4*</td>
<td>2.6*</td>
<td>2.0*</td>
<td>2.2</td>
</tr>
<tr>
<td>6. The agency's constituents should have a major role in the development of management plans/actions</td>
<td>2.8</td>
<td>2.7*</td>
<td>2.5*</td>
<td>2.3*</td>
<td>2.8</td>
<td>3.2*</td>
<td>2.3*</td>
<td>2.7</td>
</tr>
<tr>
<td>7. The agency's constituents should have a major role in selection of management plans/actions</td>
<td>2.9</td>
<td>2.6*</td>
<td>2.5*</td>
<td>2.5*</td>
<td>2.8</td>
<td>3.4*</td>
<td>2.6*</td>
<td>2.8</td>
</tr>
<tr>
<td>8. The agency's constituents should have a major role in evaluation of management plans/actions</td>
<td>2.7*</td>
<td>2.4*</td>
<td>2.4*</td>
<td>2.4*</td>
<td>2.6*</td>
<td>3.0</td>
<td>2.4*</td>
<td>2.6</td>
</tr>
</tbody>
</table>
Table 3 continued.

<table>
<thead>
<tr>
<th>Question</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>9. The agency usually makes resource decisions based primarily upon biological information</td>
<td>2.8*</td>
<td>2.4*</td>
<td>2.4*</td>
<td>2.7*</td>
<td>2.2*</td>
<td>2.1*</td>
<td>2.4*</td>
<td>2.4</td>
</tr>
<tr>
<td>10. Attaining use or harvest goals is usually more important than public opinion when the agency makes resource management decisions</td>
<td>2.8</td>
<td>2.9</td>
<td>2.8</td>
<td>3.0</td>
<td>2.9</td>
<td>2.9</td>
<td>3.0</td>
<td>2.9</td>
</tr>
<tr>
<td>11. The agency usually tries to &quot;sell&quot; resource management decisions to the public</td>
<td>2.0*</td>
<td>2.4*</td>
<td>2.3*</td>
<td>2.2*</td>
<td>2.4*</td>
<td>2.2*</td>
<td>2.4*</td>
<td>2.3</td>
</tr>
<tr>
<td>12. The agency monitors public needs and desires</td>
<td>2.5*</td>
<td>2.5*</td>
<td>2.0*</td>
<td>2.2*</td>
<td>2.4*</td>
<td>1.9*</td>
<td>2.2*</td>
<td>2.2</td>
</tr>
<tr>
<td>13. Public opinion is usually as important as biological information when the agency makes resource management decisions</td>
<td>3.1</td>
<td>3.0</td>
<td>2.9</td>
<td>2.9</td>
<td>3.1</td>
<td>3.3*</td>
<td>3.0</td>
<td>3.0</td>
</tr>
</tbody>
</table>

1Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. Asterisks indicate responses that differ significantly from neutral (p ≤ .05).
the role of constituents in various aspects of decision making.

Responses to questionnaire items 9 through 13 indicate all seven agencies balance biology and public opinion in making resource management decisions. Some principles of marketing are internalized, but as would be expected, agency managers lean toward biological principles. The agencies monitor public needs and desires and develop programs designed to satisfy those needs. However, employees of all seven agencies agreed the agencies base most resource management decisions on biological information. Public opinion is often an important factor in shaping agency programs, but all agencies strongly agreed they sell decisions to the public. Employees were ambivalent about whether agency goals are more important than public opinion, or if public opinion is as important as biological information when resource management decisions are made.

Bureaus differed substantially on 9 of the 13 questionnaire items related to openness to public input (Table 4). Agency directors and their deputies differed substantially from all or nearly all other bureaus on 4 of the 13 questions and had the most extreme views on 10 of the 13 questions. Directors agreed strongly that constituents should have major roles in all aspects of agency decision making—goal setting, development, selection and evaluation of management plans and actions. While all other bureaus
Table 4. Mean responses of employee groups to questionnaire items related to the effectiveness factor, openness of the agency to public input.

<table>
<thead>
<tr>
<th>Question</th>
<th>DIR N=16</th>
<th>ENF N=63</th>
<th>FIS N=85</th>
<th>WIL N=83</th>
<th>I&amp;E N=33</th>
<th>ADM N=76</th>
<th>75th Percentile Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The public is adequately involved in agency decision making processes</td>
<td>2.0</td>
<td>1.9</td>
<td>2.2</td>
<td>2.0</td>
<td>2.7</td>
<td>2.4</td>
<td>I&amp;E &gt; all but ADM; ADM &gt; ENF</td>
</tr>
<tr>
<td>2. Most employees who work with the public get adequate training in public involvement</td>
<td>3.0</td>
<td>2.7</td>
<td>3.2</td>
<td>3.2</td>
<td>3.1</td>
<td>3.0</td>
<td>ENF &lt; FIS, WIL</td>
</tr>
<tr>
<td>3. The agency has a formal plan/process for public involvement</td>
<td>2.0</td>
<td>2.0</td>
<td>2.3</td>
<td>2.4</td>
<td>2.2</td>
<td>2.4</td>
<td>-----</td>
</tr>
<tr>
<td>4. Public involvement can make a difference in agency decision making processes</td>
<td>1.3</td>
<td>1.7</td>
<td>1.6</td>
<td>1.5</td>
<td>1.6</td>
<td>1.6</td>
<td>-----</td>
</tr>
<tr>
<td>5. The agency’s constituents should have a major role in setting the agency’s goals and objectives</td>
<td>1.7</td>
<td>2.4</td>
<td>2.1</td>
<td>2.3</td>
<td>2.3</td>
<td>2.2</td>
<td>DIR &lt; all but FIS;</td>
</tr>
<tr>
<td>6. The agency’s constituents should have a major role in the development of management plans/actions</td>
<td>2.2</td>
<td>2.6</td>
<td>2.7</td>
<td>2.9</td>
<td>2.6</td>
<td>2.7</td>
<td>DIR &lt; FIS, WIL, ADM</td>
</tr>
<tr>
<td>7. The agency’s constituents should have a major role in selection of management plans/actions</td>
<td>1.9</td>
<td>2.8</td>
<td>2.7</td>
<td>2.9</td>
<td>2.8</td>
<td>2.8</td>
<td>DIR &lt; all others</td>
</tr>
<tr>
<td>8. The agency’s constituents should have a major role in evaluation of management plans/actions</td>
<td>2.3</td>
<td>2.4</td>
<td>2.7</td>
<td>2.5</td>
<td>2.4</td>
<td>2.6</td>
<td>-----</td>
</tr>
</tbody>
</table>
Table 4 continued.

<table>
<thead>
<tr>
<th>Question</th>
<th>DIR</th>
<th>ENF</th>
<th>FIS</th>
<th>WIL</th>
<th>I&amp;E</th>
<th>ADM</th>
<th>75th Percentile Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>9. The agency usually makes resource decisions based primarily upon biological information</td>
<td>1.8</td>
<td>2.1</td>
<td>2.4</td>
<td>2.4</td>
<td>2.3</td>
<td>2.5</td>
<td>DIR &lt; all but ENF</td>
</tr>
<tr>
<td>10. Attaining use or harvest goals is usually more important than public opinion when the agency makes resource management decisions</td>
<td>3.5</td>
<td>2.6</td>
<td>3.1</td>
<td>3.1</td>
<td>2.4</td>
<td>2.9</td>
<td>I&amp;E &lt; all but ENF; ENF &lt; DIR,FIS,WIL; ADM &lt; DIR</td>
</tr>
<tr>
<td>11. The agency usually tries to &quot;sell&quot; resource management decisions to the public</td>
<td>2.3</td>
<td>2.1</td>
<td>2.2</td>
<td>2.4</td>
<td>2.1</td>
<td>2.3</td>
<td>-----------</td>
</tr>
<tr>
<td>12. The agency monitors public needs and desires</td>
<td>1.8</td>
<td>2.0</td>
<td>2.1</td>
<td>2.4</td>
<td>2.4</td>
<td>2.5</td>
<td>DIR &lt; WIL,I&amp;E,ADM; ENF &lt; ADM</td>
</tr>
<tr>
<td>13. Public opinion is usually as important as biological information when the agency makes resource management decisions</td>
<td>2.6</td>
<td>3.1</td>
<td>2.9</td>
<td>3.1</td>
<td>3.2</td>
<td>3.2</td>
<td>DIR &lt; all but FIS</td>
</tr>
</tbody>
</table>

1Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. DIR=agency directors and their deputies, ENF=enforcement, FIS=fisheries, WIL=wildlife, I&E=information and education and ADM=administrative support. 75th percentile difference ≥ 0.5.
agreed constituents should have major roles, they agreed less strongly. Directors were the only group to agree that public opinion is usually as important as biological information when the agencies make resource management decisions. They were also the only group to disagree that attaining use or harvest goals is usually more important than public opinion when the agency makes resource management decisions. Both information and education personnel and enforcement personnel differed from directors in agreeing that use and harvest goals are more important than public opinion. Fisheries, wildlife and administrative support personnel were essentially neutral. Information and education personnel showed the weakest agreement that the public is adequately involved in agency decision making processes. Only enforcement personnel agreed public involvement training is adequate.

Women were consistently less positive than men in responding to questionnaire items related to openness to public input (Table 5). Men agreed more strongly than women that the public is adequately involved in decision making processes, that constituents should have a major role in setting agency goals and objectives, that a formal public involvement plan existed and that decisions are based on biological information. Women felt more strongly than men that attaining use or harvest goals outweigh public opinion
<table>
<thead>
<tr>
<th>Question</th>
<th>Men N=374</th>
<th>Women N=55</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The public is adequately involved in agency decision making processes</td>
<td>2.1</td>
<td>2.6</td>
<td>0.5*</td>
</tr>
<tr>
<td>2. Most employees who work with the public get adequate training in public involvement</td>
<td>2.9</td>
<td>3.1</td>
<td>0.2</td>
</tr>
<tr>
<td>3. The agency has a formal plan/process for public involvement</td>
<td>2.2</td>
<td>2.6</td>
<td>0.4*</td>
</tr>
<tr>
<td>4. Public involvement can make a difference in agency decision making processes</td>
<td>1.6</td>
<td>1.8</td>
<td>0.2</td>
</tr>
<tr>
<td>5. The agency's constituents should have a major role in setting the agency's goals and objectives</td>
<td>2.2</td>
<td>2.7</td>
<td>0.5*</td>
</tr>
<tr>
<td>6. The agency's constituents should have a major role in the development of management plans/actions</td>
<td>2.6</td>
<td>2.8</td>
<td>0.2</td>
</tr>
<tr>
<td>7. The agency's constituents should have a major role in selection of management plans/actions</td>
<td>2.8</td>
<td>2.9</td>
<td>0.1</td>
</tr>
<tr>
<td>8. The agency's constituents should have a major role in evaluation of management plans/actions</td>
<td>2.5</td>
<td>2.5</td>
<td>---</td>
</tr>
<tr>
<td>9. The agency usually makes resource decisions based primarily upon biological information</td>
<td>2.3</td>
<td>2.6</td>
<td>0.3*</td>
</tr>
<tr>
<td>10. Attaining use or harvest goals is usually more important than public opinion when the agency makes resource management decisions</td>
<td>3.0</td>
<td>2.7</td>
<td>0.3*</td>
</tr>
<tr>
<td>11. The agency usually tries to &quot;sell&quot; resource management decisions to the public</td>
<td>2.3</td>
<td>2.3</td>
<td>---</td>
</tr>
<tr>
<td>12. The agency monitors public needs and desires</td>
<td>2.2</td>
<td>2.4</td>
<td>0.2</td>
</tr>
<tr>
<td>13. Public opinion is usually as important as biological information when the agency makes resource management decisions</td>
<td>3.0</td>
<td>3.2</td>
<td>0.2</td>
</tr>
</tbody>
</table>

*Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree, 5=strongly disagree. Differences between means exceeding the 80th percentile (≥ 0.3) are noted with an asterisk (*).
when decisions are made, the only one of the 13 items about which women agreed more strongly than men.

Headquarters and field personnel did not differ substantially on questionnaire items related to openness to public input.

**Interview responses**

Employees generally showed a strong commitment to public involvement in agency decision making processes, particularly in setting goals and objectives. The public meeting is still the most widely used citizen participation tool, rating among the most frequently mentioned methods of participation in every case study agency. However, many of the resource professionals interviewed were dissatisfied with public meetings as a citizen participation tool. They felt meetings rarely attracted a representative cross section of the general public and were often seen as forums for special interests. Similar remarks about public meetings are common in the literature (Burch 1976; McMullin and Nielsen 1991; Twight 1977). The formality of commission hearings can be intimidating to many potential participants. Some of the case study agencies (particularly the Florida Game and Freshwater Fish Commission and the Missouri Department of Conservation) have adopted a workshop format.
that allows constituents a less formal opportunity to meet and discuss issues with commissioners prior to formal hearings.

In two of the case study states, a major avenue of public input is a long established citizen conservation group. The Missouri Conservation Federation serves as an important link between Missouri citizens, the department and the state's numerous independent conservation groups. Wisconsin's Conservation Congress is a politically powerful body of sportspersons which has significant effects on wildlife policy. Each Wisconsin county elects members to the Conservation Congress. The local meetings of the Congress, held in the spring of the year, are attended by large numbers of people. The Wisconsin Department of Natural Resources, or its Board of Resources, only rarely adopts policies counter to the wishes of the Conservation Congress.

If the popularity of public meetings is waning in fish and wildlife agencies, the popularity of surveys is clearly waxing. In six of the seven agencies identified in this category, surveys were one of the most frequently used tools of participation. This is consistent with the desire to monitor constituent needs that is part of the marketing orientation displayed by these agencies. Some of the larger agencies have well established human dimensions research groups who conduct market research, while others have close
links with human dimensions researchers at universities. The Responsive Management program initiated by the Western Association of Fish and Wildlife Agencies is being implemented in most of the case study agencies. The Responsive Management program provides training and survey software to assist agencies in adopting a marketing orientation.

The focus group, another traditional tool of marketing, also is used by some of these agencies. A focus group consists of a small, carefully chosen group of people (often paid a fee) who participate in a facilitated, video taped, roundtable discussion of an issue. Agency personnel do not participate in the discussion, but may observe through one-way windows. Focus groups provide qualitative information that can be valuable in assessing public opinion on an issue. The Wisconsin Department of Natural Resources has used focus groups frequently to investigate the qualitative aspects of public opinion (Petchenik 1992).

The constituents interviewed almost universally agreed their fish and wildlife agencies were very responsive to public needs and desires. They sometimes complained the agencies were slow to give up on agency positions, but almost always felt they were adequately heard in decision making processes. Constituents were impressed with the accessibility of agency personnel. Many constituents stated they could call or walk in to visit with anyone in the
agency, including the director. While the constituents interviewed were almost exclusively representatives of organized groups, nearly all of them indicated anyone who took the time could gain equal access to department personnel.

**Examples of openness to public input**

The approach of the Wyoming Game and Fish Department is just one of many that could be cited as examples of agency openness to public input. In sparsely populated Wyoming, the public meeting is usually quite successful. The department holds over 500 public meetings per year. They favor the open-house format, in which citizens can drop in at their leisure to speak with department representatives. This format provides maximum personal contact with the public while minimizing the influence of vocal special interests.

The Minnesota Department of Natural Resources tried a different approach with its Fishing Roundtables. The first roundtable was held in January, 1991, to identify the factors affecting fishing quality in Minnesota and strategies for dealing with them. Roundtable participants were selected to represent a cross section of anglers with varying economic, political and social perspectives on
quality fishing (Minnesota Department of Natural Resources 1991). The participants, nearly all representatives of organized groups, generated a vision of future fishing in Minnesota. Review of the vision document and input from the general public was solicited at a series of eight subsequent regional public meetings.

The increasing role of citizens in natural resource decision making is reflected in the increasing use of advisory committees and citizen task forces. The South Carolina Wildlife and Marine Resources Department has several permanent advisory committees to provide citizen input in specific functional areas. The Wisconsin Department of Natural Resources makes effective use of citizen task forces to develop goals and objectives for controversial land acquisitions.

One of the more successful Wisconsin task forces was the Lower Wisconsin Riverway Task Force. Preservation of the Lower Wisconsin Riverway was fraught with controversy and political warfare until the Lower Wisconsin Riverway Task Force was charged with development of a management plan. Members of the riverway task force (and several other Wisconsin citizen task forces) told the study team the citizen groups were able to accomplish things that could not have been achieved by the department alone. The task forces enjoyed a level of credibility with department critics the agency could not hope to attain, simply because policy
making power was in the hands of citizens. Department personnel serve as staff to the task forces, rather than directing them. There is now an expectation among Wisconsin residents that citizen task forces will be used to deal with controversial issues. When a major land acquisition or controversial issue is in the news, citizens call the department wanting to participate on task forces that have not yet been formed.

Deer management in New York has changed dramatically as a result of urban deer management task forces established by the Division of Fish and Wildlife. The division enlisted the help of the New York extension service to select citizens representing a diversity of views to serve on task forces in each major urban area. The division's openness to input was demonstrated with the inclusion of anti-hunting interests on some of the task forces. As was the case in Wisconsin, empowering the task forces resulted in attaining objectives that could not have been attained by the division alone.

The trend in these effective agencies is towards greater recognition of the public's role in natural resource decision making. Biology may still be the fundamental base, but resource managers have come to realize that many allocation decisions hinge on other factors. As one employee of the Wyoming Game and Fish Department described their fisheries allocation process, "We can manage Wyoming's
fisheries in any way that is biologically possible, sociologically desirable and economically feasible."

Factor 2: Public Support for the Agency

Information relative to this effectiveness factor was collected only by interviews with agency constituents.

Interview responses

Support for the seven agencies identified as exceptional performers in this category was very high among constituents, the only source of information relative to this effectiveness factor. Nearly all constituents rated the agencies' overall performance as very good or good. Among the more common reasons for their favorable opinions were the openness and responsiveness of the agencies to the public. Accessibility to the public of all agency personnel, from the director to the local game warden, was frequently cited as a strength. Constituents often recognized and appreciated the professionalism and dedication of agency employees. Constituents strongly supported expanding agency missions to actively protect and manage all wildlife populations, i.e., to become more holistic wildlife agencies rather than game and fish
agencies. Constituents also saw a need to develop broader agency constituencies consisting of all wildlife interests, rather than just anglers and hunters.

All seven state agencies recognized for exceptional performance in the public support and awareness category served constituents that participated in hunting and fishing at or above the national average. Wyoming, Minnesota and Idaho rank in the top four states in participation rates (U.S. Fish and Wildlife Service 1988). Five of the seven agencies also ranked above the national average in percent of the population that participated in nonconsumptive wildlife activities. In those five states, an average of 89% of the state population participated in nonconsumptive wildlife activities.

The agencies identified as exceptional performers in this category have benefitted from supportive, involved constituencies. However, they have also actively built supportive constituencies. The Missouri Department of Conservation has had one of the country's most active education programs since the department was founded in 1936 (Keefe 1987). As a result, Missouri school children probably get more exposure to the principles of wildlife conservation than children in any other state. Active nongame and watchable wildlife programs in most of the case study agencies also help to promote education.
Examples of public support

The ultimate measure of public support for fish and wildlife agencies often shows in political decisions. Elected officials in many of the case study states mentioned the strong public support enjoyed by fish and wildlife agencies. Passage of Missouri's Conservation Sales Tax, which earmarked one-eighth of one percent of the state sales tax for conservation, was a vote of support for the Department of Conservation. The winning margin in the close vote was strong support in the state's metropolitan areas. The Missouri Department of Conservation continues to reward that urban support with urban programs such as large nature centers in metropolitan areas, acquisition of wildlife tracts near urban areas and emphasis on urban wildlife management.

The Wyoming Game and Fish Department received strong public support during the state legislative session of 1992. Two large land acquisitions made by the department in 1991 raised the ire of agricultural groups. Legislators sympathetic to agricultural interests introduced two bills to curtail the department's ability to acquire land. One bill would have required the state, when acquiring land, to dispose of an equal amount of land by offering it for bid to private parties. The bill also would have required all
state lands to be managed under a "multiple-use concept" (Kruckenberg and Gasson 1992). The second bill would have required the department to obtain consent from the legislature prior to acquiring additional property, overriding the statutory authority of the Wyoming Game and Fish Commission.

The department conducted a telephone survey of 590 randomly selected Wyoming households to determine how the "average" Wyoming person felt about the land acquisition program. The survey demonstrated that 79% of Wyoming residents supported continuation of the department's land acquisitions and over 90% supported management of department property with a primary focus on wildlife. The survey also showed about one-half of Wyoming residents opposed both bills, while one-third or fewer supported the bills. The survey results were instrumental in helping to defeat both bills in the legislature.

Factor 3: Public Awareness of Agency Programs

Public awareness of agency programs was addressed in interviews with agency employees and constituents, but not in the questionnaire.
Interview responses

Agencies identified as effective performers in this category were generally aggressive about getting information out to the public. They used a variety of media, including press releases, agency magazines, newsletters, radio and television.

Information personnel in these agencies are more likely to be trained media professionals than converted biologists. Television and videotape have become important avenues of informing constituents, especially in urban areas. As a result, most of these agencies have hired electronic media specialists. To help media specialists learn about fish and wildlife, the Wisconsin Department of Natural Resources assigns them to specific program areas where they can develop some technical familiarity with the disciplines they serve.

Despite the increasing dependence on high technology information transfer, direct personal contact between agency personnel and the public is still a primary strategy. Constituents often cited one-on-one contacts as the primary means of keeping up on agency actions. Effective agencies frequently targeted sportsman clubs, conservation groups and local opinion leaders as conduits of information. The Minnesota Department of Natural Resources pays particularly
close attention to communication with organized conservation groups. The Idaho Department of Fish and Game targets local opinion leaders, through their Wildlife Ambassadors program, to receive detailed information from the agency on a regular basis. The Wildlife Ambassadors, often officers in conservation groups, are expected to help inform people in their communities regarding department programs and actions. The Missouri Conservation Federation and the Wisconsin Conservation Congress are the primary sources of information for many sportspersons in those states. The Missouri and Wisconsin departments send all department press releases to those organizations, which in turn, inform officers of independent constituent clubs.

Seventy-one percent of the 69 constituents responding to the interview question felt their state agency effectively informed and educated the state's citizens regarding fish and wildlife. Media representatives indicated fish and wildlife agencies could be even more aggressive, as public demand for wildlife-oriented news is very high. However, media representatives saw a need for more information in the environmental and nonconsumptive use areas and less of the traditional hunting and fishing stories. Several of the outdoor writers who were near retirement age indicated they would eventually be replaced with reporters oriented more towards environmental news than outdoor news.
Examples of public awareness

Nearly every state fish and wildlife agency in the country produces a magazine to help inform constituents. While many of the magazines are high quality publications, they do not reach large audiences. The Missouri Department of Conservation sends its magazine, free of charge, to each of the approximately 400,000 Missouri residents who request it.

Some of the case study agencies produce tabloid-style magazines in addition to their regular full-color, slick paper publications. The less expensive tabloid newsletters can be produced in greater numbers and reach wider audiences. The Idaho Department of Fish and Game occasionally sends its tabloid newspaper to every license holder in the state. The Wyoming Game and Fish Department has developed several newsletters that target specific audiences, including traditional users, landowners, children and those primarily interested in viewing wildlife.

The Idaho Department of Fish and Game has ventured successfully into the popular talk radio market. Jerry Conley, the department director, has a weekly call-in radio show. He addresses all questions, either answering them or promising prompt responses to questions he cannot answer immediately. He frequently opens the show with information
about a particular department program or action. The show began as weekly experiment on a Boise radio station. It became so popular that it was expanded, at the request of the radio station, to a statewide, one-hour program.

Category: Conflict Resolution

Factor 4: Ability to Resolve Issues Before Conflicts Arise

Questionnaire responses

Employees in six of the seven agencies identified as effective performers in the conflict resolution category agreed their agencies maintain a dialogue with all stakeholders, including opponents (Table 6). The agencies unanimously agreed that public involvement includes "listening to see how we need to change." They agreed most strongly that the agencies gather input on potentially controversial issues on a regular basis.

Enforcement personnel, who probably spend more time afield making public contacts than other agency personnel, agreed most strongly that the agencies maintain a dialogue with all stakeholders (Table 7). Information and education personnel were the only group failing to agree, differing substantially from all other groups except wildlife
Table 6. Mean responses to questionnaire items related to the effectiveness factor, ability to resolve issues before conflicts arise.¹

<table>
<thead>
<tr>
<th>Question</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>14. The agency maintains a dialogue with all of its stakeholders, including opponents</td>
<td>2.5*</td>
<td>2.5*</td>
<td>2.3*</td>
<td>2.3*</td>
<td>2.9</td>
<td>2.6*</td>
<td>2.3*</td>
<td>2.5</td>
</tr>
<tr>
<td>15. To the agency, the meaning of public involvement includes, &quot;listening to see how we need to change.&quot;</td>
<td>2.3*</td>
<td>2.6*</td>
<td>2.3*</td>
<td>2.3*</td>
<td>2.5*</td>
<td>2.4*</td>
<td>2.3*</td>
<td>2.4</td>
</tr>
<tr>
<td>16. The agency regularly gathers input on issues that are potentially controversial</td>
<td>2.3*</td>
<td>2.1*</td>
<td>2.1*</td>
<td>2.1*</td>
<td>2.3*</td>
<td>2.5*</td>
<td>1.9*</td>
<td>2.2</td>
</tr>
</tbody>
</table>

¹Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. Asterisks indicate responses that differ significantly from neutral (p ≤ .05).
Table 7. Mean responses of employee groups to questionnaire items related to the effectiveness factor, ability to resolve issues before they become major conflicts.  

<table>
<thead>
<tr>
<th>Question</th>
<th>DIR N=17</th>
<th>ENF N=49</th>
<th>FIS N=101</th>
<th>WIL N=105</th>
<th>I&amp;E N=26</th>
<th>ADM N=66</th>
<th>75th Percentile Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>14. The agency maintains a dialogue with all of its stakeholders, including opponents</td>
<td>2.5</td>
<td>2.2</td>
<td>2.4</td>
<td>2.6</td>
<td>3.0</td>
<td>2.4</td>
<td>I&amp;E &gt; all but WIL</td>
</tr>
<tr>
<td>15. To the agency, the meaning of public involvement includes &quot;listening to see how we need to change&quot;</td>
<td>1.9</td>
<td>2.2</td>
<td>2.4</td>
<td>2.5</td>
<td>2.8</td>
<td>2.3</td>
<td>DIR &lt; FIS,WIL,I&amp;E;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>I&amp;E &gt; ADM,ENF;</td>
</tr>
<tr>
<td>16. The agency regularly gathers input on issues that are potentially controversial</td>
<td>1.8</td>
<td>1.9</td>
<td>2.2</td>
<td>2.3</td>
<td>2.2</td>
<td>2.1</td>
<td>DIR &lt; WIL</td>
</tr>
</tbody>
</table>

1 Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. DIR=agency directors and their deputies, ENF=enforcement, FIS=fisheries, WIL=wildlife, I&E=information and education and ADM=administrative support. 75th percentile difference ≥ 0.5.
personnel. Directors and their deputies agreed most strongly that the meaning of public involvement includes, "listening to see how we need to change." Information and education personnel showed the weakest agreement. However, all groups fell on the agreement side of neutral. All groups strongly agreed the agencies gather input on potentially controversial issues.

Men agreed more than women on all three questions related to this factor, although the difference was substantial only with respect to agencies regularly gathering input on issues that are potentially controversial (Table 8).

Headquarters and field personnel did not differ substantially on the questionnaire items related to this effectiveness factor.

Interview responses

Agencies that are effective at recognizing and resolving issues before they become major conflicts depend upon their field staff to be the eyes and ears of the agencies. Field staff are in frequent contact with the public. Their experience in recognizing potential controversies is often the agency's first warning. The most frequent methods mentioned for learning about potential
Table 8. Mean responses of men and women to questionnaire items related to the effectiveness factor, ability to resolve issues before they become conflicts.¹

<table>
<thead>
<tr>
<th>Question</th>
<th>Men N=397</th>
<th>Women N=53</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>14. The agency maintains a dialogue with all of its stakeholders, including opponents</td>
<td>2.4</td>
<td>2.5</td>
<td>0.1</td>
</tr>
<tr>
<td>15. To the agency, the meaning of public involvement includes, &quot;listening to see how we need to change&quot;</td>
<td>2.3</td>
<td>2.5</td>
<td>0.2</td>
</tr>
<tr>
<td>16. The agency regularly gathers input on issues that are potentially controversial</td>
<td>2.1</td>
<td>2.4</td>
<td>0.3*</td>
</tr>
</tbody>
</table>

¹Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. Differences between means exceeding the 80th percentile (difference ≥ 0.3) are noted with an asterisk (*).
controversies were attendance at club meetings, one-on-one contacts in the field and monitoring of local newspapers. Good two-way communication between field offices and headquarters also is essential for keeping agency leaders informed about emerging issues. Interviewees frequently mentioned the expectation that they would monitor local news media and inform headquarters personnel of significant events. Inter-office communication has been enhanced with the advent of electronic mail and facsimile machines, but the telephone remains the most frequently used tool for maintaining communication between offices.

Longer term strategies for recognizing potential controversies included the use of surveys and other public involvement tools in planning processes. All of the case study agencies survey their constituents regularly.

Employees in the five comprehensive case study agencies generally rated their agencies towards the proactive end of the adapted 10-point scale of issue management strategies. Mean ratings ranged from 6.1 to 8.0, indicating the agencies generally attempt to anticipate changes and perhaps to initiate projects and policies which are more desirable than other alternatives. Mean ratings of members of other agencies and politicians were similar to employee ratings, ranging from 6.6 to 7.5. Several agency leaders pointed out that while it is desirable to be proactive in managing issues, it is not always possible, or desirable, to take the
initiative in shaping policy. Resources prevent agencies from leading on all issues. In some cases, it is more desirable to be in a supportive or opposing role than to carry the lead on an issue.

Examples of resolving issues before they become conflicts

Interviewees described few examples of issues that were resolved before they became conflicts. Many agency personnel explained that issues that failed to become conflicts were quickly forgotten. They were more likely to remember issues that became conflicts, but due to agency actions, the conflicts were less severe than they otherwise would have been.

The Missouri Department of Conservation's education program has already been mentioned as an example of developing public support for the agency. The department's long term commitment to education is also an excellent example of an agency pursuing Crable and Vibbert's (1985) catalytic strategy of issue management. Catalytic strategies are long term strategies designed to shape policy by taking issues through the issue management cycle described by Jones and Chase (1979) so that they are resolved in directions favorable to the agency. Missouri's long term commitment to conservation education has produced
several generations of Missourians who have grown up with Otis the field mouse teaching them about conservation principles. As a result, public opinion regarding policy issues usually favors the department.

The department's commitment to shaping public opinion and policy was recently demonstrated anew when the State of Missouri created a task force charged with developing competency standards for Missouri school children. The department made sure its representatives served on the task force. As a result, conservation principles were woven throughout the competency standards. Missouri children now are exposed to conservation not only in science, but throughout their entire curriculum.

To be sure conservation-related competency standards are met, the department's education division develops lesson plans that make it easy for teachers to integrate conservation principles into the curriculum. Lesson plans and a plethora of other materials are available at no charge to Missouri educators. A team of 17 educational consultants, all former teachers, ensures that educators throughout the state receive the materials they need, and provide training for teachers.

The Florida Game and Freshwater Fish Commission has been particularly successful in dealing with anti-hunting controversies. Rising water levels in the Everglades in 1982 caused deer to crowd on to islands of overused habitat.
Anti-hunting activists protested plans to thin the herd through a special hunt. The activists maintained they could thin the herd through nonlethal trapping and transplanting. Although department officials were certain the deer were under too much stress to survive trapping and transplanting, they allowed the activists to try. The activists were able to trap only a small percentage of the deer they planned to capture and nearly all of them died before they could be transplanted. Eventually, the hunt was held as planned, with little additional protest.

More recently, protestors tried to disrupt special youth hunts at Camp Blanding in northern Florida. Department employees were specially trained to handle protestors, the media and hunters. Youths participating in the hunt, and their adult companions, were coached by department personnel to avoid confrontations with protestors. When the confrontation occurred, it was the anti-hunting activists that appeared as unreasonable radicals.

Many state fish and wildlife agencies have faced legal challenges from native Americans over regulation of hunting and fishing rights. The Minnesota Department of Natural Resources has been particularly successful at reaching negotiated rather than litigated settlements with native Americans. The department's philosophy in dealing with native Americans is based on compensation to tribes in
return for their giving up rights to commercial harvest of fish and wildlife.

The philosophy developed in response to a court challenge from the Leech Lake Band of the Chippewa Tribe. The Leech Lake Band sued the state for rights of exclusive harvest on their open reservation (the reservation included many tracts of land held by nonnative Americans), and the right to harvest fish and wildlife free of state regulation on ceded lands. Ceded lands were lands outside the reservation, designated in treaties as areas where native Americans could hunt and fish. The Band won the right to harvest fish and wildlife on the reservation free of state regulation, but lost on the ceded lands issue. Neither the Band nor the state were satisfied with the decision. Both parties agreed they would rather negotiate a settlement than litigate one. Eventually, an agreement was reached that gave the Band authority to regulate its members on the reservation, while the state regulated others. The Band agreed not to commercially harvest fish and wildlife (the state's major concern), in return for compensation equivalent to five percent of the state's hunting and fishing license fees (currently about $1.6 million annually). The five percent figure was based on estimates of actual use on the reservation. The Leech Lake agreement served as a model for negotiations with other native
Americans in Minnesota. Subsequent agreements have been reached with nearly every band in the state.

Factor 5: Ability to Resolve Conflicts Without Appeal or Override

Questionnaire responses

Agency responses to questions related to this factor were fairly uniform. Agency leaders and staff are mutually supportive in all agencies when dealing with public conflicts (Table 9). The process for conflict resolution is controlled at the central office level in most of the agencies. One agency with a strongly decentralized structure was a notable exception. Effective agencies approached conflict resolution with a long-term view, i.e., they look for win-win solutions rather than focusing on winning every battle.

The seven agencies identified as effective in this category fell into three distinct groups in terms of having decisions overturned. Employees of two agencies with unchallenged constitutional authority for making resource protection and management decisions strongly agreed agency decisions are rarely overturned (mean responses = 2.0 and 2.1). The idea of having an agency decision overturned was foreign to employees of these agencies. Two agencies
Table 9. Mean responses to questionnaire items related to the effectiveness factor, ability to resolve conflicts without appeal or override.¹

<table>
<thead>
<tr>
<th>Question</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>17. When public conflicts arise, agency leaders support the rank and file employees</td>
<td>2.6*</td>
<td>2.6*</td>
<td>2.7*</td>
<td>2.5*</td>
<td>2.9*</td>
<td>2.5*</td>
<td>2.1*</td>
<td>2.6*</td>
</tr>
<tr>
<td>18. When public conflicts arise, the rank and file support agency leaders</td>
<td>2.6*</td>
<td>2.7*</td>
<td>2.7*</td>
<td>2.1*</td>
<td>2.8*</td>
<td>2.4*</td>
<td>2.4*</td>
<td>2.5*</td>
</tr>
<tr>
<td>19. The agency's process for conflict resolution is controlled at the central office level</td>
<td>2.4*</td>
<td>2.7*</td>
<td>2.5*</td>
<td>2.1*</td>
<td>2.9*</td>
<td>2.4*</td>
<td>3.7*</td>
<td>2.7*</td>
</tr>
<tr>
<td>20. In dealing with public conflict, the agency's primary concern is to win the battle</td>
<td>3.4*</td>
<td>3.2</td>
<td>3.6*</td>
<td>3.5*</td>
<td>3.4*</td>
<td>3.5*</td>
<td>3.7*</td>
<td>3.5*</td>
</tr>
<tr>
<td>21. Agency decisions are rarely overturned in the political or legal arena</td>
<td>3.0</td>
<td>2.5*</td>
<td>3.0</td>
<td>2.1*</td>
<td>2.9</td>
<td>2.0*</td>
<td>2.4*</td>
<td>2.6*</td>
</tr>
<tr>
<td>22. In seeking to resolve public conflicts, win-win solutions are sought</td>
<td>2.4*</td>
<td>2.4*</td>
<td>2.0*</td>
<td>2.4*</td>
<td>2.6*</td>
<td>2.3*</td>
<td>2.1*</td>
<td>2.3*</td>
</tr>
</tbody>
</table>

¹Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. Asterisks indicate responses that differ significantly from neutral (p ≤ .05).
lacking the constitutional mandate, but insulated somewhat from the political process by citizen commissions with broad authority, agreed less strongly that decisions are rarely overturned (mean responses = 2.4 and 2.5). Employees of these two agencies noted that while an agency decision could be overturned, it rarely happened. Three agencies that were more directly involved in the political process were essentially neutral regarding decisions being overturned (mean responses = 2.9, 3.0 and 3.0). Employees of these three agencies accepted occasional reverses as inevitable in the political process, but noted the agencies were not often overturned.

Directors and their deputies agreed more strongly than all or nearly all other groups that agency leaders support rank and file employees when conflicts arise, that agency decisions are rarely overturned in the political arena and that agencies seek win-win solutions to conflicts (Table 10). They disagreed more strongly than any other group (although not substantially more) that agencies try to win the battle when dealing with conflict. Information and education personnel agreed far more strongly than any other group that the process for conflict resolution is controlled at the central office level. This is not surprising in view of the role of information and education personnel as designated spokespersons for the agencies on many controversial issues. Information and education personnel
Table 10. Mean responses of employee groups to questionnaire items related to the effectiveness factor, ability to resolve conflicts without appeal or override.1

<table>
<thead>
<tr>
<th>Question</th>
<th>DIR N=17</th>
<th>ENF N=49</th>
<th>FIS N=101</th>
<th>WIL N=105</th>
<th>I&amp;E N=26</th>
<th>ADM N=66</th>
<th>75th Percentile Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>17. When public conflicts arise, agency leaders support the rank and file employees</td>
<td>2.1</td>
<td>2.5</td>
<td>2.5</td>
<td>2.7</td>
<td>2.6</td>
<td>2.5</td>
<td>DIR &lt; WIL, I&amp;E</td>
</tr>
<tr>
<td>18. When public conflicts arise, the rank and file support agency leaders</td>
<td>2.4</td>
<td>2.4</td>
<td>2.5</td>
<td>2.6</td>
<td>2.8</td>
<td>2.5</td>
<td></td>
</tr>
<tr>
<td>19. The agency’s process for conflict resolution is controlled at the central office level</td>
<td>2.8</td>
<td>2.7</td>
<td>2.6</td>
<td>2.6</td>
<td>2.1</td>
<td>2.9</td>
<td>I&amp;E &lt; all others</td>
</tr>
<tr>
<td>20. In dealing with public conflict, the agency’s primary concern is to win the battle</td>
<td>3.9</td>
<td>3.6</td>
<td>3.5</td>
<td>3.5</td>
<td>2.8</td>
<td>3.5</td>
<td>I&amp;E &lt; all others</td>
</tr>
<tr>
<td>21. Agency decisions are rarely overturned in the political or legal arena</td>
<td>2.0</td>
<td>2.3</td>
<td>2.6</td>
<td>2.7</td>
<td>2.8</td>
<td>2.6</td>
<td>DIR &lt; all but ENF; ENF &lt; I&amp;E</td>
</tr>
<tr>
<td>22. In seeking to resolve public conflicts, win-win solutions are sought</td>
<td>1.7</td>
<td>2.3</td>
<td>2.4</td>
<td>2.3</td>
<td>2.4</td>
<td>2.3</td>
<td>DIR &lt; all others</td>
</tr>
</tbody>
</table>

1Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. DIR=agency directors and their deputies, ENF=enforcement, FIS=fisheries, WIL=wildlife, I&E=information and education and ADM=administrative support. 75th percentile difference ≥ 0.5.
had a substantially different picture of agency efforts to deal with public conflicts, as they were the only group to agree that agencies try to win the battle in dealing with public conflict.

Men and women differed substantially on the question of mutual support between agency leaders and the field in dealing with public conflicts (Table 11). Men in all seven agencies agreed that agency leaders support the rank and file (mean response = 2.4) and that rank and file employees support agency leaders (mean response = 2.4). Mean responses for women were essentially neutral (2.9 for both items). Mean responses for women were decidedly negative (3.4-3.5) in four agencies with respect to leader support for employees and in two agencies with respect to employee support for leaders. Women also differed from men in agreeing less strongly that decisions are rarely overturned and that win-win solutions are sought.

Headquarters and field personnel did not differ substantially on the questionnaire items related to this effectiveness factor.

Interview responses

Interview responses revealed that effective agencies focus on two major strategies for resolving conflicts.
Table 11. Mean responses of men and women to questionnaire items related to the effectiveness factor, ability to resolve conflicts without appeal or override.¹

<table>
<thead>
<tr>
<th>Question</th>
<th>Men N=397</th>
<th>Women N=53</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>17. When public conflicts arise, agency leaders support the rank and file employees</td>
<td>2.4</td>
<td>2.9</td>
<td>0.5*</td>
</tr>
<tr>
<td>18. When public conflicts arise, the rank and file support agency leaders</td>
<td>2.4</td>
<td>2.9</td>
<td>0.5*</td>
</tr>
<tr>
<td>19. The agency’s process for conflict resolution is controlled at the central office level</td>
<td>2.6</td>
<td>2.7</td>
<td>0.1</td>
</tr>
<tr>
<td>20. In dealing with public conflict, the agency’s primary concern is to win the battle</td>
<td>3.4</td>
<td>3.3</td>
<td>0.1</td>
</tr>
<tr>
<td>21. Agency decisions are rarely overturned in the political or legal arena</td>
<td>2.5</td>
<td>2.8</td>
<td>0.3*</td>
</tr>
<tr>
<td>22. In seeking to resolve public conflicts, win-win solutions are sought</td>
<td>2.2</td>
<td>2.5</td>
<td>0.3*</td>
</tr>
</tbody>
</table>

¹Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. Differences between means exceeding the 80th percentile (difference ≥ 0.3) are noted with an asterisk (*).
without appeal or override. First, these agencies focused on early communication with and involvement of affected interests to develop support for solutions before decisions are made. The agencies targeted vocal groups with potential "veto" power (Institute for Participatory Planning 1981) to be sure they were informed and to build support for decisions. Second, effective agencies emphasized building a solid biological underpinning for decisions. Interviewees often referred to the agency "doing its homework" before decisions were made.

Effective agencies work closely with their citizen commissions to develop agreement over solutions to controversial issues so that differences are rarely aired in public. The commission is often the first step above the agency in the decision-making chain. As a result, effective agencies put much effort into informing and educating commissioners regarding controversial issues. Commissioners, in turn, often provide valuable input from their contacts with constituents and help direct agency efforts in developing solutions.

In 1985, 43 state fish and wildlife agencies were governed by unpaid citizen commissions or boards (Wildlife Management Institute 1987). Seven of the nine agencies participating in this study had citizen commissions responsible for adopting regulations and agency policies.
The study team interviewed commissioners in four of those states, and found them generally to be well informed people who cared deeply about their states' fish and wildlife resources. However, few of them came to their positions prepared for their duties. In general, more effort goes into the selection and training of biologists, wardens and perhaps even technicians, than of the commissioners that are charged with making the agencies' most important decisions. In most states, commissioners are simply appointed by the governor. Many states specify commissioner positions to represent specific interests or political parties. Among the case study states, only Arizona had a rigorous process for selecting commissioners. Candidates for commissioner in Arizona must apply for the position, meet minimum standards and undergo a rigorous review before being appointed. Not surprisingly, Arizona employees and constituents alike felt the Game and Fish Commission was a strong asset to the department.

Examples of the ability to resolve conflicts without appeal or override

One of the best examples of the agency "doing its homework" comes from an agency that has no citizen commission, the Minnesota Department of Natural Resources. The Minnesota strategy for dealing with controversial issues
revolves around targeting organized conservation groups. As the fishing roundtables exemplified, the department gets organized conservation groups involved early in the planning phase of decision making. Since these groups usually contain the most politically active and astute of the agency's constituents, they are also the most likely to appeal a decision with which they disagree. Consequently, department efforts are geared towards getting groups involved early, learning what the groups desire and sharing information to educate the groups regarding department efforts. As a result, they are usually able to work out differences and generate solutions without getting into public disputes.

Factor 6: Public Perception of Fairness in Agency Decision Making

Questionnaire responses

Agency employees were their own worst critics in evaluating the public's perception of fairness in agency decision making and conflict resolution. Only three of seven agencies agreed the public perceives agency decision making processes are fair and equitable. The other four agencies were essentially neutral (Table 12). Five out of seven agencies were neutral on the question of whether the
Table 12. Mean responses to questionnaire items related to the effectiveness factor, public perception of fairness in agency decision making.\(^1\)

<table>
<thead>
<tr>
<th>Question</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>23. The public perceives the agency's decision making process to be fair (equitable).</td>
<td>3.0</td>
<td>2.5*</td>
<td>2.9</td>
<td>2.6*</td>
<td>3.1</td>
<td>2.3*</td>
<td>2.9</td>
<td>2.8</td>
</tr>
<tr>
<td>24. The public feels that they have a meaningful role in agency decision making.</td>
<td>3.2</td>
<td>2.7*</td>
<td>3.0</td>
<td>2.8</td>
<td>3.2*</td>
<td>2.9</td>
<td>3.0</td>
<td>3.0</td>
</tr>
<tr>
<td>25. The agency's publics believe they have adequate opportunity for involvement in the agency's priority setting process.</td>
<td>3.2</td>
<td>2.8</td>
<td>3.0</td>
<td>3.0</td>
<td>3.4*</td>
<td>2.8*</td>
<td>3.2*</td>
<td>3.1</td>
</tr>
</tbody>
</table>

\(^1\) Responses were coded 1 = strongly agree, 2 = agree, 3 = neutral, 4 = disagree and 5 = strongly disagree. Asterisks indicate responses that differ significantly from neutral (p ≤ .05).
public feels their role in decision making is meaningful, while one agency agreed and one disagreed. Four out of seven agencies were neutral regarding their publics believing they have adequate opportunity for involvement in agency priority setting processes. Two agencies disagreed while one agreed.

Directors and their deputies tended to be more positive about the public's perception of fairness than other groups. However, most differences between bureaus were minor (Table 13).

Men responded more positively than women on all three questionnaire items related to public perception of fairness (Table 14), as they did on nearly every item related to dealing with the public.

Headquarters and field personnel did not differ substantially on any questionnaire items related to this factor.

Interview responses

The most common response to the interview question that asked what the agencies do to enhance the public's perception of fairness in decision making was being open, honest, accessible and responsive to the public. Agency employees emphasized actively involving the public in
Table 13. Mean responses of employee groups to questionnaire items related to the effectiveness factor, public perception of fairness in agency decision making.¹

<table>
<thead>
<tr>
<th>Question</th>
<th>DIR N=17</th>
<th>ENF N=49</th>
<th>FIS N=101</th>
<th>WIL N=105</th>
<th>I&amp;E N=26</th>
<th>ADM N=66</th>
<th>75th Percentile Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>23. The public perceives the agency’s decision making process to be fair (equitable)</td>
<td>2.4</td>
<td>2.5</td>
<td>2.8</td>
<td>2.7</td>
<td>2.7</td>
<td>2.9</td>
<td>DIR &lt; ADM</td>
</tr>
<tr>
<td>24. The public feels that they have a meaningful role in agency decision making</td>
<td>2.7</td>
<td>2.8</td>
<td>3.0</td>
<td>3.0</td>
<td>3.0</td>
<td>3.0</td>
<td>---</td>
</tr>
<tr>
<td>25. The agency’s publics believe they have adequate opportunity for involvement in the agency’s priority setting process</td>
<td>2.6</td>
<td>2.8</td>
<td>3.1</td>
<td>3.2</td>
<td>3.2</td>
<td>3.0</td>
<td>DIR &lt; FIS, WIL, I&amp;E</td>
</tr>
</tbody>
</table>

¹Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. DIR=agency directors and their deputies, ENF=enforcement, FIS=fisheries, WIL=wildlife, I&E=information and education and ADM=administrative support. 75th percentile difference ≥ 0.5.
Table 14. Mean responses of men and women to questionnaire items related to the effectiveness factor, public perception of fairness in agency decision making.¹

<table>
<thead>
<tr>
<th>Question</th>
<th>Men N=397</th>
<th>Women N=53</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>23. The public perceives the agency's decision making process to be fair (equitable)</td>
<td>2.7</td>
<td>3.0</td>
<td>0.3*</td>
</tr>
<tr>
<td>24. The public feels that they have a meaningful role in agency decision making</td>
<td>2.9</td>
<td>3.2</td>
<td>0.3*</td>
</tr>
<tr>
<td>25. The agency's publics believe they have adequate opportunity for involvement in the agency's priority setting process</td>
<td>3.0</td>
<td>3.2</td>
<td>0.2</td>
</tr>
</tbody>
</table>

¹Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. Differences between means exceeding the 80th percentile (difference ≥ 0.3) are noted with an asterisk (*).
decision making through commission hearings, other public meetings and various other public involvement techniques. They also stressed informing and educating the public to explain the reasoning behind agency decisions. Responsiveness and customer service were common themes. Several of the agencies make special efforts to respond personally to every public inquiry or letter of comment. Effective agencies also enhanced the public's perception of fairness by going out of their way to inform and involve opponents on issues.

Constituents interviewed by the study team were almost universally supportive of agency decision making processes. The bottom line for most constituents was "doing what's right for the resource." However, they also recognized that many agency decisions have more than one right answer. Most constituents felt the agencies were doing a good job of balancing biology and public opinion in their decision making. There was no consistent pattern among the few constituents that expressed some dissatisfaction with agency decision making. Some felt there was too much politics in decision making, while others said the agency always put biology first. Some constituents felt the agencies went too far to accommodate public opinion, while others felt public involvement in decision making was inadequate.
Examples of enhancing the perception of fairness

All of the case study agencies were concerned about paying attention to their constituents and maintaining fair and equitable decision making processes. While none of the agencies performs perfect customer service, two agencies stand out for their efforts to serve constituents and enhance the perception of fairness.

The Missouri Department of Conservation is a study in contrasts when dealing with the public. Of the nine agencies participating in this study, employees of the Missouri department most closely adhere to the traditional, professional management model of resource management. Many Missouri employees expressed the feeling that, "We are the experts. The public should trust us to make the right management decisions." At the same time, Missouri employees universally expressed the need to serve their constituents. Every department employee was aware that the citizens of Missouri approved the constitutional initiative giving the department millions of dollars in sales tax revenue. They were also aware that, "What the public giveth, the public can taketh away." That awareness translates into a feeling throughout the agency that, "We have to take care of our customers."
The Missouri Department of Conservation is thus, an agency that is, philosophically, quite conservative about the public's role in decision making. At the same time, it is an agency that is very advanced in the use of human dimensions research to identify constituent groups and design programs to meet their needs. The Missouri model of professional management has internalized the marketing principles of understanding constituent desires and incorporating them into the development of management strategies.

Many employees of the Minnesota Department of Natural Resources were trained in techniques for creating satisfied citizens and customers. The training course taught employees how to recognize various behaviors and appropriate ways of dealing with them. Employees were coached in responding to various situations in ways that minimized stress and maximized citizen satisfaction. For example, the study team noticed several employees retained cards by their telephones that listed words and phrases under columns of "Words to use" and "Words to avoid." Several employees mentioned during their interviews how the training course had helped them provide better service to their constituents.
Factor 7: Agency Credibility with Executive and Legislative Branches

Questionnaire responses

The six agencies identified as effective in the political category were quite uniform in their responses to the questionnaire. Employees in five agencies agreed they have a high level of credibility with the state legislature (Table 15). The only agency not to show strong agreement was a western agency where agricultural interests routinely dominate the legislature. Antipathy between agricultural and fish and wildlife interests is common throughout the western states. All six agencies strongly agreed they have high credibility with the governor's office and all agreed quite strongly their agencies are politically effective.

Directors and information and education personnel tended to agree most strongly with the questionnaire items related to political credibility (Table 16). This was one of the few areas where information and education personnel were more similar to directors than other bureaus, possibly because information and education personnel are often involved with directors in shaping and communicating policies. Fisheries personnel were the most skeptical about
Table 15. Mean responses to questionnaire items related to the effectiveness factor, agency credibility with legislative and executive branches. ¹

<table>
<thead>
<tr>
<th>Question</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>26. The agency has a high level of credibility with the legislature.</td>
<td>2.0*</td>
<td>2.3*</td>
<td>3.2</td>
<td>2.0*</td>
<td>1.8*</td>
<td>2.0*</td>
<td>2.2</td>
</tr>
<tr>
<td>27. The agency has a high level of credibility with the governor’s office.</td>
<td>1.7*</td>
<td>2.3*</td>
<td>1.8*</td>
<td>1.9*</td>
<td>1.8*</td>
<td>2.0*</td>
<td>1.9</td>
</tr>
<tr>
<td>28. The agency is a politically effective state agency.</td>
<td>1.9*</td>
<td>2.2*</td>
<td>2.2*</td>
<td>2.4*</td>
<td>2.0*</td>
<td>2.0*</td>
<td>2.1</td>
</tr>
</tbody>
</table>

¹Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. Asterisks indicate responses that differ significantly from neutral \( p \leq .05 \).
Table 16. Mean responses of employee groups to questionnaire items related to the effectiveness factor, agency credibility with the legislative and executive branches. *

<table>
<thead>
<tr>
<th>Question</th>
<th>DIR</th>
<th>ENF</th>
<th>FIS</th>
<th>WIL</th>
<th>I&amp;E</th>
<th>ADM</th>
<th>75th Percentile Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>26. The agency has a high level of</td>
<td>1.9</td>
<td>2.2</td>
<td>2.5</td>
<td>2.3</td>
<td>1.8</td>
<td>2.2</td>
<td>I&amp;E &lt; FIS, WIL, DIR &lt; FIS</td>
</tr>
<tr>
<td>credibility with the legislature</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27. The agency has a high level of</td>
<td>1.6</td>
<td>1.7</td>
<td>2.2</td>
<td>1.9</td>
<td>1.6</td>
<td>1.8</td>
<td>FIS &gt; DIR, ENF, I&amp;E</td>
</tr>
<tr>
<td>credibility with the governor's office</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28. The agency is a politically</td>
<td>1.6</td>
<td>2.1</td>
<td>2.3</td>
<td>2.1</td>
<td>1.8</td>
<td>2.0</td>
<td>DIR &lt; ENF, FIS, WIL; I&amp;E &lt; FIS</td>
</tr>
<tr>
<td>effective state agency</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. DIR=agency directors and their deputies, ENF=enforcement, FIS=fisheries, WIL=wildlife, I&E=information and education and ADM=administrative support. 75th percentile difference ≥ 0.5.
political credibility, however, all responses showed fairly strong agreement.

Political credibility was one of the few factors about which men and women did not differ substantially on any questionnaire items (Table 17).

Headquarters personnel agreed more strongly than field personnel on credibility with the legislature and political effectiveness (Table 18). Again, however, both groups agreed fairly strongly with all three questionnaire items.

Interview responses

The three most common responses of agency employees to the question, "What makes the agency effective in the political arena?" were (1) the agency's reputation and credibility, (2) strong public support for the agency and (3) the reputation and political acumen of the director and key political liaisons. The credibility of these effective agencies is enhanced among legislators because they are perceived as being unique among state agencies. In some cases, the agency has a unique constitutional or statutory status that grants the power of budget approval to its citizen board or commission. However, even in those agencies where the legislature retains the authority to review and approve the budget, the agencies are perceived as
Table 17. Mean responses of men and women to questionnaire items related to the effectiveness factor, agency credibility with the legislative and executive branches.¹

<table>
<thead>
<tr>
<th>Question</th>
<th>Men N=331</th>
<th>Women N=50</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>26. The agency has a high level of credibility with the legislature</td>
<td>2.2</td>
<td>2.1</td>
<td>0.1</td>
</tr>
<tr>
<td>27. The agency has a high level of credibility with the governor's office</td>
<td>1.9</td>
<td>1.9</td>
<td>---</td>
</tr>
<tr>
<td>28. The agency is a politically effective state agency</td>
<td>2.1</td>
<td>2.2</td>
<td>0.1</td>
</tr>
</tbody>
</table>

¹Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. Differences between means exceeding the 80th percentile (difference ≥ 0.3) are noted with an asterisk (*).
Table 18. Mean responses of headquarters and field personnel to questionnaire items related to the effectiveness factor, agency credibility with the legislative and executive branches.¹

<table>
<thead>
<tr>
<th>Question</th>
<th>Headquarters</th>
<th>Field</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>26. The agency has a high level of credibility with the legislature</td>
<td>2.1 N=171</td>
<td>2.4 N=204</td>
<td>0.3*</td>
</tr>
<tr>
<td>27. The agency has a high level of credibility with the governor’s office</td>
<td>1.8 N=171</td>
<td>2.0 N=204</td>
<td>0.2</td>
</tr>
<tr>
<td>28. The agency is a politically effective state agency</td>
<td>2.0 N=171</td>
<td>2.3 N=204</td>
<td>0.3*</td>
</tr>
</tbody>
</table>

¹Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. Differences between means exceeding the 80th percentile (difference ≥ 0.3) are noted with an asterisk (*).
different from other state agencies because they are largely or entirely self-funded. The case study agencies whose budgets contained no general fund revenue seemed to be automatically granted higher credibility than other agencies within their states.

Many interviewees felt their agency's reputation and credibility was enhanced by steadfastly maintaining a biological basis for their political stances. Legislators frequently felt credibility of fish and wildlife agencies was enhanced because they were viewed as being more professional than political.

While the source of income is important in contributing to agency credibility and effectiveness, it pales in comparison to the power of grass roots public support for the agencies. In several of the states visited by the study team, the fish and wildlife agency was considered the most politically powerful of all state agencies. This was particularly true in the west, even though agricultural interests often control the legislatures. One lobbyist for a western agricultural group told the study team, "When we oppose the department, they always win, unless they are way out in left field on the issue."

Many people mentioned the respect, and sometimes fear, politicians had for fish and wildlife agency public support. Several legislators mentioned how impressed they were with the agencies' public support, and with the agencies' ability
to "rally the troops" when support for or opposition to a bill was required. Legislators commonly receive more mail and phone calls regarding fish and wildlife issues than any other legislative items.

Constructive, responsive relationships between agency leaders and legislators are especially important. The participating agencies made strong efforts to build bridges of open, responsive communication with their legislatures. Legislators repeatedly told the study team of the responsiveness of fish and wildlife agencies to their requests for information. Most of the agency leaders interviewed indicated they always tried to be honest with legislators rather than telling them what they thought legislators wanted to hear.

The stature and reputation of the agency director, which often comes with seniority, can play a key role in determining the political effectiveness of the agency. Stability of agency leadership is a common characteristic of most of the case study agencies. Average tenure of directors in the six case study agencies identified as effective in the political category was 10 years, compared to the national average of less than five years (Wildlife Management Institute 1987). The South Carolina Wildlife and Marine Resources Department has had only four executive directors since 1913. Dr. James Timmerman, the executive director since 1974, is affectionately called the godfather
in South Carolina because many of his previous subordinates now hold high positions throughout South Carolina state government. The Missouri Department of Conservation has had only five directors since being organized in 1937. Four of the case study agency directors are among the nation's most senior fish and wildlife agency directors. Frequently however, routine political contacts are made by deputy directors or another designated political liaison. Legislators in the case study states often also had high praise for the efforts of these agency political liaisons.

Examples of political credibility

The case study agencies also relied heavily on field staff to develop effective political bases at the grass roots level. The Idaho Department of Fish and Game makes especially strong efforts to maintain local political ties. All department employees are expected to act as political liaisons between the department and legislators in their home communities. The agency's emphasis on political contacts shifted over the years from a centralized approach to the grass roots approach because agency leaders felt many legislators had their minds made up on issues before they came to the legislative session. Developing staff to contact legislators at home in their districts is part of an
agency philosophy called "Taking care of the votes before they come to Boise." To ensure continuity, the agency emphasizes internal communication to be sure all employees know what the department's legislative objectives are. Agency leaders are satisfied with the decentralized approach to political contacts. Headquarters staff support the efforts of field personnel by actively enhancing the field staff's credibility with legislators. Whenever a letter complimenting a department employee is received, a copy is sent to the legislator representing the district in which the employee works.

The Missouri Department of Conservation affords a different example of agency political effectiveness and credibility. A ballot initiative in 1990 would have created the Natural Streams Act. The initiative was developed by environmental interests to regulate use and protection of streams and riparian corridors. The proposed act was especially controversial among landowners, who saw it as an infringement on their property rights. The department was developing a program called Streams for the Future at about the same time. The department program was intended to accomplish many of the same objectives as the Natural Streams Act, but emphasized education, incentives and volunteerism rather than regulation. Because the initiative was based in environmentalism, many conservationists looked to the department for signs of support or opposition,
calling the department to learn of its position on the initiative. Their complete faith in the department was demonstrated by their reactions. When told the agency opposed it, many people said they didn't care what the reasons were, the fact that the agency was opposed was good enough for them. The Natural Streams Act initiative was defeated and the department program has been implemented.

Factor 8: Sensitivity to Politics

Questionnaire responses

The case study agencies were remarkably consistent in their responses to questionnaire items related to sensitivity to politics. All six agencies identified as effective in this category disagreed that setting of seasons, habitat protection and land acquisition decisions are primarily political decisions (Table 19). They strongly rejected the notion of political resource management decisions. Employees of all six agencies agreed their agencies are regional and national leaders, and that they consider the implications of their actions for other fish and wildlife agencies.

Personnel in all bureaus were consistent in their responses to questionnaire items related to sensitivity to
Table 19. Mean responses to questionnaire items related to the effectiveness factor, sensitivity to politics.¹

<table>
<thead>
<tr>
<th>Question</th>
<th>Agency</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>29. Setting of seasons, limits and other fish and wildlife resource allocation activities are primarily political decisions.</td>
<td>3.3*</td>
<td>3.9*</td>
<td>4.1*</td>
<td>4.1*</td>
<td>4.7*</td>
<td>4.0*</td>
<td>4.0</td>
<td></td>
</tr>
<tr>
<td>30. The agency’s habitat protection decisions are primarily political.</td>
<td>3.7*</td>
<td>4.0*</td>
<td>4.0*</td>
<td>4.0*</td>
<td>4.6*</td>
<td>4.1*</td>
<td>4.1</td>
<td></td>
</tr>
<tr>
<td>31. Land acquisitions by the agency are primarily political decisions.</td>
<td>3.7*</td>
<td>4.0*</td>
<td>4.0*</td>
<td>3.9*</td>
<td>4.4*</td>
<td>4.1*</td>
<td>4.0</td>
<td></td>
</tr>
<tr>
<td>32. The agency is a leader in dealing with regional (multi-state) conservation issues.</td>
<td>1.9*</td>
<td>2.0*</td>
<td>2.0*</td>
<td>2.0*</td>
<td>1.8*</td>
<td>1.9*</td>
<td>1.9</td>
<td></td>
</tr>
<tr>
<td>33. The agency is a leader in dealing with national conservation issues.</td>
<td>2.2*</td>
<td>2.1*</td>
<td>2.7*</td>
<td>2.2*</td>
<td>2.1*</td>
<td>1.9*</td>
<td>2.2</td>
<td></td>
</tr>
<tr>
<td>34. The agency considers what the implications of its actions might be for other fish and wildlife agencies.</td>
<td>2.4*</td>
<td>2.4*</td>
<td>2.4*</td>
<td>2.4*</td>
<td>2.3*</td>
<td>2.4*</td>
<td>2.4</td>
<td></td>
</tr>
</tbody>
</table>

¹Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. Asterisks indicate responses that differ significantly (p ≤ .05) from neutral.
politics, but directors and their deputies were especially emphatic in their responses (Table 20).

Men and women did not differ substantially on these questionnaire items (Table 21).

Field personnel differed from headquarters personnel on two items (Table 22). Headquarters personnel disagreed more strongly than field personnel that land acquisitions are primarily political decisions and agreed more strongly than field personnel that the agency is a national leader. In spite of the differences, field personnel still strongly disagreed that land acquisitions are political and fairly strongly agreed the agency is a national leader.

Interview responses

Sensitivity of agencies to politics may be the most difficult of factors to evaluate. For many fish and wildlife agency employees, the word politics conjures up negative images of favoritism and back room deals. Few fish and wildlife agency employees would consider politics as the natural process by which public policy is set (at least in the natural resource arena). The vast majority of agency personnel maintained their agencies were nonpolitical.

Credibility of agencies among employees, constituents and politicians seems to be based upon technical expertise
Table 20. Mean responses of employee groups to questionnaire items related to the effectiveness factor, sensitivity to politics.1

<table>
<thead>
<tr>
<th>Question</th>
<th>DIR</th>
<th>ENF</th>
<th>FIS</th>
<th>WIL</th>
<th>I&amp;E</th>
<th>ADM</th>
<th>75th Percentile Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>29. Setting of seasons, limits and other fish and wildlife resource</td>
<td>4.6</td>
<td>4.0</td>
<td>4.0</td>
<td>4.2</td>
<td>4.2</td>
<td>3.9</td>
<td>DIR &gt; ENF,FIS,ADM</td>
</tr>
<tr>
<td>allocation activities are primarily political decisions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30. The agency's habitat protection decisions are primarily political</td>
<td>4.7</td>
<td>4.1</td>
<td>4.1</td>
<td>4.2</td>
<td>4.2</td>
<td>4.0</td>
<td>DIR &gt; all others</td>
</tr>
<tr>
<td>considerations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31. Land acquisitions by the agency are primarily political decisions</td>
<td>4.7</td>
<td>3.8</td>
<td>4.0</td>
<td>4.2</td>
<td>4.3</td>
<td>4.1</td>
<td>DIR &gt; all but I&amp;E; I&amp;E &gt; ENF</td>
</tr>
<tr>
<td>32. The agency is a leader in dealing with regional (multi-state)</td>
<td>1.4</td>
<td>2.0</td>
<td>2.0</td>
<td>2.0</td>
<td>1.8</td>
<td>1.9</td>
<td>DIR &lt; all but I&amp;E</td>
</tr>
<tr>
<td>conservation issues</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>33. The agency is a leader in dealing with national conservation issues</td>
<td>1.6</td>
<td>2.1</td>
<td>2.3</td>
<td>2.2</td>
<td>2.0</td>
<td>2.1</td>
<td>DIR &lt; all but I&amp;E</td>
</tr>
<tr>
<td>34. The agency considers what the implications of its actions might be</td>
<td>1.9</td>
<td>2.5</td>
<td>2.3</td>
<td>2.5</td>
<td>2.1</td>
<td>2.5</td>
<td>DIR &lt; ENF,WIL,ADM</td>
</tr>
<tr>
<td>for other fish and wildlife agencies</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. DIReqency directors and their deputies, ENF=enforcement, FIS=fisheries, WIL=wildlife, I&E=information and education and ADM=administrative support. 75th percentile difference ≥ 0.5.
Table 21. Mean responses of men and women to questionnaire items related to the effectiveness factor, sensitivity to politics.1

<table>
<thead>
<tr>
<th>Question</th>
<th>Men N=331</th>
<th>Women N=50</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>29. Setting of seasons, limits and other fish and wildlife resource allocation activities are primarily political decisions</td>
<td>4.1</td>
<td>3.9</td>
<td>0.2</td>
</tr>
<tr>
<td>30. The agency's habitat protection decisions are primarily political</td>
<td>4.1</td>
<td>3.9</td>
<td>0.2</td>
</tr>
<tr>
<td>31. Land acquisitions by the agency are primarily political decisions</td>
<td>4.0</td>
<td>3.9</td>
<td>0.1</td>
</tr>
<tr>
<td>32. The agency is a leader in dealing with regional (multi-state) conservation issues</td>
<td>1.9</td>
<td>1.9</td>
<td>---</td>
</tr>
<tr>
<td>33. The agency is a leader in dealing with national conservation issues</td>
<td>2.2</td>
<td>2.1</td>
<td>0.1</td>
</tr>
<tr>
<td>34. The agency considers what the implications of its actions might be for other fish and wildlife agencies</td>
<td>2.4</td>
<td>2.4</td>
<td>---</td>
</tr>
</tbody>
</table>

1Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. Differences between means exceeding the 80th percentile (difference ≥ 0.3) are noted with an asterisk (*).
Table 22. Mean responses of headquarters and field personnel to questionnaire items related to the effectiveness factor, sensitivity to politics.¹

<table>
<thead>
<tr>
<th>Question</th>
<th>Headquarters N=171</th>
<th>Field N=204</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>29. Setting of seasons, limits and other fish and wildlife resource allocation activities are primarily political decisions</td>
<td>4.1</td>
<td>4.0</td>
<td>0.1</td>
</tr>
<tr>
<td>30. The agency's habitat protection decisions are primarily political</td>
<td>4.2</td>
<td>4.0</td>
<td>0.2</td>
</tr>
<tr>
<td>31. Land acquisitions by the agency are primarily political decisions</td>
<td>4.3</td>
<td>3.9</td>
<td>0.4*</td>
</tr>
<tr>
<td>32. The agency is a leader in dealing with regional (multi-state) conservation issues</td>
<td>1.9</td>
<td>2.0</td>
<td>0.1</td>
</tr>
<tr>
<td>33. The agency is a leader in dealing with national conservation issues</td>
<td>2.0</td>
<td>2.4</td>
<td>0.4*</td>
</tr>
<tr>
<td>34. The agency considers what the implications of its actions might be for other fish and wildlife agencies</td>
<td>2.3</td>
<td>2.5</td>
<td>0.2</td>
</tr>
</tbody>
</table>

¹Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. Differences between means exceeding the 80th percentile (difference ≥ 0.3) are noted with an asterisk (*).
and decision making processes that emphasize resource protection over political considerations. Political structure in most states contributes to the image of nonpolitical fish and wildlife agencies. For example, in 34 states, agency directors are selected by citizen commissions, while governors select directors in 11 states (Wildlife Management Institute 1987; since the Institute's report was published, the procedure in Wyoming has changed from selection by the commission to selection by the governor from a list of candidates supplied by the commission). As discussed previously, the earmarked revenue bases and political insulation provided by citizen commissions frees many agencies from some political pressures.

And yet, in spite of all of the foregoing evidence, fish and wildlife agencies, and fish and wildlife management, are political. Every case study agency develops a legislative agenda, tracks legislation and testifies on bills of interest to the agency. Every agency makes special efforts to keep legislators informed of actions that will affect their districts. Every agency emphasizes responsiveness to legislators, but without playing favorites. Every agency has at least one person whose primary responsibility is to serve as a liaison (therefore, lobbyist) with the legislature. And as legislators were
quick to point out, every agency is very good at mustering public support or opposition when it is needed.

The nonpolitical image of fish and wildlife agencies, held by employees, constituents and politicians, may be due to acceptance of much political activity as normal day-to-day operation of the agencies. The fact that fish and wildlife agencies avoid playing favorites and making politically expedient compromises makes them appear nonpolitical. Legislators are viewed as another constituency that requires information and agency attention.

Politics may play a larger role in the day-to-day activities of the case study agencies that had significant amounts of general fund revenue in their budgets than those that were funded entirely from earmarked sources. However, with one exception, all the agencies were considered by legislators as essentially nonpolitical entities. Several legislators mentioned the relative political naivete of fish and wildlife agencies. They usually felt that naivete was offset by the strong technical basis for agency positions.

Many of the leaders of the case study agencies have held leadership positions in the International Association of Fish and Wildlife Agencies or its regional affiliates. Given the longevity of many of the case study agency heads, this is to be expected. However, the horizon for the leaders of these agencies clearly extends well beyond state borders. Several of the case study agencies are among the
nation's most active in dealing with national conservation issues. Agencies in Minnesota, Missouri, New York, South Carolina and Wisconsin have been especially active in shaping national policy regarding wetlands, the Farm Bill, migratory birds and water quality issues.

Examples of political sensitivity

The Missouri Department of Conservation and the South Carolina Wildlife and Marine Resources Department are about as far apart politically as any two agencies can be. Employees of the Missouri department consider it to be almost completely apolitical. The department headquarters office sits on a wooded hillside at the edge of town, overlooking a pond, several miles from the state's political nerve center in downtown Jefferson City. The agency was created by a constitutional initiative that gave the Missouri Conservation Commission, rather than the legislature, complete policy and budgetary control over the department. The Missouri Department of Conservation does not have to play politics--but it is still politically sensitive. When other state employees were forced to go without a salary increase recently, the Department of Conservation decided to follow suit even though their separate constitutional status meant they did not have to.
The department displays the same responsiveness and desire
to inform legislators found in every other case study agency.

The South Carolina Wildlife and Marine Resources
Department, on the other hand, operates in a political
environment requiring great political sensitivity. The
department allocates a budget containing nearly 50% general
fund revenue from an office that overlooks the capitol steps
in downtown Columbia. South Carolinians describe the state
as a "legislative state." The reins of state government are
held firmly by the legislature, rather than the governor.
Final approval of most regulations and policies rests with
the legislature rather than the Wildlife and Marine
Resources Commission.

Connections with elected officials are part of formal
processes. Until recently, the commission was chaired by a
legislator. Applicants selected to fill warden positions
must live in the legislative district in which they will
serve. Funds for purchasing much of the department's
equipment are controlled by local politicians.

The South Carolina Wildlife and Marine Resources
Department must play politics—and they do it well. Despite
the lack of constitutional separation and unquestioned
authority to make resource management decisions, the agency
succeeds in effective, professional management of fish and
wildlife. They succeed by paying attention to legislators
and especially by mobilizing the public to pressure legislators into supporting the department's professional judgment. Of course, the agency must compromise occasionally. Agency leaders admit they have been saddled with some poor regulations pushed through as pets of a legislator, but the agency rarely loses on the big issues.

The environments of the Missouri and South Carolina agencies may be polar opposites. The strategies they employ, however, are very similar—as are the strategies of every other case study agency. Politically effective fish and wildlife agencies treat politicians as another of their constituencies, paying particular attention to keep them informed and respond to their inquiries. They develop legislative agendas, track legislation, take positions on bills and muster support or opposition when it is needed. At the same time, they do everything they can to foster the image of a nonpolitical agency.

Factor 9: Relationships with other Agencies

Questionnaire responses

All six of the agencies identified as effective in the political category strongly agreed they maintain close relationships with other state, local and federal agencies
(Table 23). While directors and their deputies tended to be more emphatic and optimistic in their responses, there was little difference among bureaus (Table 24).

There were no differences of note between men and women (Table 25) or between headquarters and field personnel on these questionnaire items.

**Interview responses**

The case study agencies strongly emphasize partnerships with other agencies to promote landscape-scale, holistic management of resources. The study teams uncovered many efforts to avoid interagency conflicts through joint efforts to plan for land and wildlife management. The agencies emphasized interagency cooperation rather than turf battles over agency responsibilities. The U. S. Fish and Wildlife Service and the U. S. Forest Service were most frequently mentioned as agencies with which the state agencies had especially valuable relationships. Several branches of the Fish and Wildlife Service were specifically mentioned, including Ecological Services, Federal Aid and Enforcement. Land management agencies, such as the Forest Service and the Bureau of Land Management, were often mentioned in the western states where federal agencies control large tracts of land. Enforcement personnel were more likely to mention
Table 23. Mean responses to questionnaire items related to the effectiveness factor, relationships with other agencies.¹

<table>
<thead>
<tr>
<th>Question</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>35. The agency maintains regular contact with other agencies within the state.</td>
<td>1.9*</td>
<td>2.0*</td>
<td>2.1*</td>
<td>1.8*</td>
<td>2.0*</td>
<td>1.9*</td>
<td>2.0</td>
</tr>
<tr>
<td>36. The agency maintains regular contact with federal agencies.</td>
<td>1.7*</td>
<td>2.0*</td>
<td>1.9*</td>
<td>1.9*</td>
<td>1.8*</td>
<td>1.8*</td>
<td>1.9</td>
</tr>
<tr>
<td>37. The agency maintains regular contact with local (county and city) agencies.</td>
<td>2.5*</td>
<td>2.4*</td>
<td>2.2*</td>
<td>2.2*</td>
<td>2.0*</td>
<td>1.8*</td>
<td>2.2</td>
</tr>
</tbody>
</table>

¹Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. Asterisks indicate responses that differ significantly (p ≤ .05) from neutral.
Table 24. Mean responses of employee groups to questionnaire items related to the effectiveness factor, relationships with other agencies.\(^1\)

<table>
<thead>
<tr>
<th>Question</th>
<th>DIR</th>
<th>ENF</th>
<th>FIS</th>
<th>WIL</th>
<th>I&amp;E</th>
<th>ADM</th>
<th>75th Percentile Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>35. The agency maintains regular contact with other agencies within the state</td>
<td>1.6</td>
<td>1.9</td>
<td>2.0</td>
<td>2.1</td>
<td>1.9</td>
<td>1.9</td>
<td>DIR &lt; WIL</td>
</tr>
<tr>
<td>36. The agency maintains regular contact with federal agencies</td>
<td>1.6</td>
<td>1.9</td>
<td>2.0</td>
<td>1.8</td>
<td>1.7</td>
<td>1.9</td>
<td>--------</td>
</tr>
<tr>
<td>37. The agency maintains regular contact with local (county and city) agencies</td>
<td>1.9</td>
<td>2.0</td>
<td>2.2</td>
<td>2.4</td>
<td>2.1</td>
<td>2.2</td>
<td>WIL &gt; DIR</td>
</tr>
</tbody>
</table>

\(^1\)Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. DIR=agency directors and their deputies, ENF=enforcement, FIS=fisheries, WIL=wildlife, I&E=information and education and ADM=administrative support. 75th percentile difference $\geq 0.5$. 

120
Table 25. Mean responses of men and women to questionnaire items related to the effectiveness factor, relationships with other agencies.*

<table>
<thead>
<tr>
<th>Question</th>
<th>Men N=331</th>
<th>Women N=50</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>35. The agency maintains regular contact with other agencies within the state</td>
<td>2.0</td>
<td>1.9</td>
<td>0.1</td>
</tr>
<tr>
<td>36. The agency maintains regular contact with federal agencies</td>
<td>1.8</td>
<td>1.8</td>
<td>---</td>
</tr>
<tr>
<td>37. The agency maintains regular contact with local (county and city) agencies</td>
<td>2.2</td>
<td>2.1</td>
<td>0.1</td>
</tr>
</tbody>
</table>

*Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. Differences between means exceeding the 80th percentile (difference ≥ 0.3) are noted with an asterisk (*).
local law enforcement agencies (county sheriff departments) that provided radio and officer support. Enforcement personnel also maintained close relationships with federal enforcement agents and enforcement personnel in other agencies within the state.

Interviews with members of other agencies with which the fish and wildlife agencies work revealed strong feelings of respect for the technical skills, professionalism and dedication of the wildlife agency employees. They agreed that relationships and coordination between agencies were excellent. In general, relationships were viewed as best between field units of agencies.

Examples of agency relationships

The study teams found many innovative examples of interagency partnerships. Among the several that merit discussion are South Carolina's ACE Basin project, federal-state partnerships in Idaho and Missouri and state-local partnerships in Missouri and Wyoming.

The ACE Basin project is a cooperative effort involving the South Carolina Wildlife and Marine Resources Department, Ducks Unlimited, The Nature Conservancy, private landowners and the U. S. Fish and Wildlife Service. ACE is an acronym for the Ashepoo, Combahee and Edisto Rivers, all of which
drain into the Atlantic Ocean south of Charleston, South Carolina. The project is designed to preserve 350,000 acres of wetlands that provide winter habitat for up to 14% of the dabbling ducks in the Atlantic Flyway. The various parties combined to form the ACE Basin Task Force when they realized their combined efforts could add up to more than the sum of the parts (the U. S. Fish and Wildlife Service joined the task force after the other parties identified the creation of a national wildlife refuge within the basin as a priority).

Through the combined efforts of the various parties, the ACE Basin project quickly became a high priority wetlands protection project. Lobbying efforts by various members brought federal funding support and a seat for the department's executive director on the North American Wetlands Council. The project became one of the highest priority items in the North American Waterfowl Plan. The South Carolina Wildlife and Marine Resources Department, along with the Fish and Wildlife Service, continues to provide technical expertise to the task force, while Ducks Unlimited provides funding and lobbying support. The Nature Conservancy provides expertise in the use of conservation easements to protect habitat.

Both the Idaho Department of Fish and Game and the Missouri Department of Conservation have entered into partnership arrangements with federal agencies to improve
land management for wildlife. In Idaho, the department has developed a cooperative management program on selected wildlife management units with two national forests and the Nez Perce Tribe. The objective of the Venture 20 project (so called because it began in Wildlife Management Unit 20) is to integrate land management and wildlife management at the planning level, thereby reducing public disputes and appeals. Cooperation among the agencies has since expanded to include joint training and continuing education opportunities. The Missouri Department of Conservation and the USDA Soil Conservation Service (SCS) have joined together to place wildlife biologists in SCS offices. The biologists are department employees who answer to supervisors in both agencies. The result has been increased consideration given to wildlife in developing management plans for private lands.

Missouri's Community Assistance Program (CAP) and Wyoming's Fish Wyoming Program are similar efforts to enhance fishing opportunities through partnership efforts with local communities. The CAP program focuses on department acquisition and development of impoundments which can then be maintained by the local communities. Fish Wyoming is a matching grant program that assists communities in developing fishing and boating access. It was patterned after Colorado's Fishing is Fun program. Both the Missouri and Wyoming programs have been successful in developing
urban fishing opportunities and furthering relationships with local governments.

**Integrating the External Factors: The Idaho Wildlife Congress**

As the Idaho Department of Fish and Game approached its 50th anniversary in 1988, two major problems loomed large. First, agency leaders wanted to get the public significantly involved in updating and revising the department's 15-year policy plan. Second, the department was concerned about fragmentation of conservation groups into over 200 narrowly defined special interests. To deal with the first problem, the agency needed to convince its constituents that it was truly interested in their ideas and to find one or more vehicles to facilitate their input. To overcome the second problem, the agency wanted to find a way to more easily communicate with the many wildlife interests and unify the voices speaking for wildlife.

Department director Jerry Conley decided to tackle both problems with the single strategy of calling together the Idaho Wildlife Congress. The goals of the Congress were to gather all fish and wildlife interests together at one time to identify the issues and strategies the department should pursue in the ensuing 10 to 20 years and to develop an umbrella group that could represent and speak for all
wildlife interests in the state. A large portion of the agency's people and resources focused on organizing and implementing the 2-day Congress in November, 1988.

Although planning began as early as 18 months prior to the Congress, the bulk of preparation and publicity occurred during the summer and fall of 1988. Response cards were distributed throughout the state by department personnel, license vendors, interest groups and the media. The postage paid response cards were designed to give the department an idea of the issues most needing discussion at the Congress, as well as demographic information about potential attendees. The department developed a list of 21 discussion topics from the 849 response cards received.

Ten thousand invitations to the Congress were sent, and publicity prior to the Congress made it clear that all interested people were welcome to attend. The department organized car pools to help people get to Boise for the Congress. Boise area department employees opened their homes to those who could not afford a motel room. Approximately 1000 people attended the Congress, making it the largest gathering of wildlife interests in Idaho history. The attendance figure was remarkable in light of the competition from the ongoing hunting season and the University of Idaho-Boise State University football game.

Delegates (as the Congress attendees were called) were asked to choose two discussion groups in which to
participate. The nominal group technique (Creighton 1981) was used in the discussion groups. Department employees and volunteers from other state and federal agencies were trained to facilitate the groups. RSVP cards were sent out prior to the Congress to determine the level of interest in each discussion topic. Facilitators were assigned to handle the multiple discussion groups for each topic, based on the RSVP card responses.

The Congress opened with a multi-media slide show with stereo sound. The theme was, "Thank God I live in Idaho." The slide show and opening speeches by Conley, Governor Cecil Andrus, state supreme court justice Byron Johnson and state senator Laird Noh emphasized the importance of each individual's contribution in protecting and preserving Idaho's fish and wildlife resources. The message, and its delivery, were inspirational for the delegates as they left the opening session for the discussion groups.

Delegates identified 37 major issues in the discussion groups. Department employees worked through the night compiling and printing the information collected. A printed summary was handed to all delegates as they entered the Sunday morning session. Each delegate ranked the 10 most important issues and Conley reported the results in the closing session. The rest of the Sunday morning session was spent in regional meetings to form steering committees which would lead to the creation of regional wildlife councils.
The Congress was a turning point in the history of the Idaho Department of Fish and Game. Public support for the department and the public's impression of the department's professional capabilities increased substantially as a result of the Congress. The department's flawless handling of arrangements for the Congress, especially the distribution of results from Saturday's discussion groups on Sunday morning, left delegates impressed with the agency's professionalism. The event increased awareness of the agency's efforts. Subsequent attacks on the department by the Idaho Hunters Association and agricultural groups brought many people together in support of the department.

The Congress also served to bring the department together. Organization and implementation of the Congress was a team building effort. The sense of team work within the department and pride in making the Congress successful significantly enhanced enthusiasm and morale throughout the agency.

The Idaho Wildlife Congress proved to be a valuable tool for public involvement, conflict resolution and politics. The Congress renewed dedication among department employees to public involvement in building wildlife policy and let the Idaho public know that its fish and game department was listening. A new atmosphere of openness to public input was created. The public had become an integral part of identifying the major issues and potential conflicts
facing wildlife management. The department continued to enhance its credibility with constituents by reporting back to the Wildlife Councils regarding progress made towards the top priority issues identified at the Congress.

The unification of wildlife interests sought by the department was only partially achieved. The wildlife councils set up at the Congress have functioned to channel input and conflict through a single voice, although the many special interests have continued to pursue their narrower goals. They have been united, however, on the major issues identified at the Congress.

The political effectiveness of fish and wildlife interests increased substantially as a result of the Congress and formation of the Wildlife Councils. An unforeseen result of the Congress was closer cooperation between the department and other agencies. Federal and state land management agencies, as well as the department, took notice that most of the highly ranked issues at the Congress concerned land management. Improved interagency cooperation in planning for land and wildlife management may be attributed, in part, to the wake up call delivered by the Congress.
Category: Planning and Funding

Factor 10: Adaptability and Innovation in Response to Change

Questionnaire responses

Employees in five of the seven agencies identified as effective in the planning and funding category agreed their agencies anticipate change well (Table 26). All seven agencies agreed they are good at taking advantage of opportunities. Responses to questionnaire items related to agency encouragement of creativity and innovative thinking by individuals were mixed. Four of the agencies agreed creativity and innovation are rewarded, but risk taking, a necessary precursor to innovation, was only encouraged in one agency. However, employees in all seven agencies agreed their mistakes are not punished.

Directors and their deputies agreed more strongly than all or nearly all other groups on every questionnaire item related to adaptability and innovation (Table 27). The difference was most striking in terms of risk taking. Directors and their deputies strongly agreed risk taking is encouraged. None of the other bureaus responded positively. Information and education personnel were the only group to fall into the disagree range on the items related to taking
Table 26. Mean responses to questionnaire items related to the effectiveness factor, adaptability and innovation in response to change.¹

<table>
<thead>
<tr>
<th>Question</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>38. The agency does a good job of anticipating change.</td>
<td>3.0</td>
<td>2.6*</td>
<td>2.8</td>
<td>2.6*</td>
<td>2.5*</td>
<td>2.6*</td>
<td>2.4*</td>
<td>2.6</td>
</tr>
<tr>
<td>39. The agency is good at taking advantage of opportunities.</td>
<td>2.7*</td>
<td>2.7*</td>
<td>2.3*</td>
<td>2.6*</td>
<td>2.5*</td>
<td>2.3*</td>
<td>2.4*</td>
<td>2.5</td>
</tr>
<tr>
<td>40. Creativity and innovation are rewarded.</td>
<td>2.7*</td>
<td>3.2</td>
<td>2.5*</td>
<td>3.0</td>
<td>3.0</td>
<td>2.7*</td>
<td>2.8*</td>
<td>2.8</td>
</tr>
<tr>
<td>41. Risk taking is encouraged.</td>
<td>3.1</td>
<td>3.3*</td>
<td>3.0</td>
<td>3.4*</td>
<td>3.5*</td>
<td>3.1</td>
<td>2.7*</td>
<td>3.2</td>
</tr>
<tr>
<td>42. Mistakes are not automatically punished.</td>
<td>2.4*</td>
<td>2.1*</td>
<td>2.3*</td>
<td>2.4*</td>
<td>2.2*</td>
<td>2.2*</td>
<td>2.1*</td>
<td>2.2</td>
</tr>
</tbody>
</table>

¹Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. Asterisks indicate responses that differ significantly (p ≤ .05).
Table 27. Mean responses of employee groups to questionnaire items related to the effectiveness factor, adaptability and innovation in response to change.¹

<table>
<thead>
<tr>
<th>Question</th>
<th>DIR (N=18)</th>
<th>ENF (N=56)</th>
<th>FIS (N=83)</th>
<th>WIL (N=86)</th>
<th>I&amp;E (N=32)</th>
<th>ADM (N=85)</th>
<th>75th Percentile Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>38. The agency does a good job of anticipating change</td>
<td>2.1</td>
<td>2.3</td>
<td>2.7</td>
<td>2.9</td>
<td>2.8</td>
<td>2.5</td>
<td>DIR &lt; FIS, WIL, I&amp;E; ENF &lt; I&amp;E, WIL;</td>
</tr>
<tr>
<td>39. The agency is good at taking advantage of opportunities</td>
<td>2.0</td>
<td>2.3</td>
<td>2.7</td>
<td>2.5</td>
<td>3.1</td>
<td>2.3</td>
<td>I&amp;E &gt; all but FIS; DIR &lt; FIS, WIL, I&amp;E</td>
</tr>
<tr>
<td>40. Creativity and innovation are rewarded</td>
<td>2.2</td>
<td>2.5</td>
<td>2.9</td>
<td>3.0</td>
<td>3.3</td>
<td>2.8</td>
<td>DIR &lt; all but ENF; ENF &lt; WIL, I&amp;E; ADM &lt; I&amp;E</td>
</tr>
<tr>
<td>41. Risk taking is encouraged</td>
<td>2.1</td>
<td>3.2</td>
<td>3.2</td>
<td>3.4</td>
<td>3.3</td>
<td>3.0</td>
<td>DIR &lt; all others</td>
</tr>
<tr>
<td>42. Mistakes are not automatically punished</td>
<td>1.7</td>
<td>2.4</td>
<td>2.2</td>
<td>2.4</td>
<td>2.5</td>
<td>2.1</td>
<td>DIR &lt; all but ADM</td>
</tr>
</tbody>
</table>

¹Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. DIR=agency directors and their deputies, ENF=enforcement, FIS=fisheries, WIL=wildlife, I&E=information and education and ADM=administrative support. 75th percentile difference ≥ 0.5.
advantage of opportunities and rewarding creativity and innovation.

Men differed substantially from women only on the question of risk taking. Men were essentially neutral, while women clearly disagreed but, as with many other factors, women's responses were generally less positive than men's responses (Table 28).

Field personnel also disagreed that risk taking is encouraged, while headquarters personnel were neutral (Table 29). Headquarters personnel agreed creativity and innovation are rewarded while field personnel were neutral.

Interview responses

Passive encouragement of creativity and innovation, by allowing employees the freedom to do their jobs, is more common than active encouragement. Although employee awards were frequently given to creative people, the study teams found few instances of specific actions taken to encourage creativity and innovation. The second most common response to the question "How does the agency encourage creativity and innovation?" was, "The agency doesn't," or "Not very well." Interviewees commonly mentioned an emphasis on recruitment of creative people.
<table>
<thead>
<tr>
<th>Question</th>
<th>Men N=367</th>
<th>Women N=55</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>38. The agency does a good job of anticipating change</td>
<td>2.6</td>
<td>2.8</td>
<td>0.2</td>
</tr>
<tr>
<td>39. The agency is good at taking advantage of opportunities</td>
<td>2.5</td>
<td>2.6</td>
<td>0.1</td>
</tr>
<tr>
<td>40. Creativity and innovation are rewarded</td>
<td>2.8</td>
<td>3.0</td>
<td>0.2</td>
</tr>
<tr>
<td>41. Risk taking is encouraged</td>
<td>3.1</td>
<td>3.4</td>
<td>0.3*</td>
</tr>
<tr>
<td>42. Mistakes are not automatically punished</td>
<td>2.2</td>
<td>2.3</td>
<td>0.1</td>
</tr>
</tbody>
</table>

1Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. Differences between means exceeding the 80th percentile (difference ≥ 0.3) are noted with an asterisk (*).
Table 29. Mean responses of headquarters and field personnel to questionnaire items related to the effectiveness factor, adaptability and innovation in response to change.

<table>
<thead>
<tr>
<th>Question</th>
<th>Headquarters N=203</th>
<th>Field N=211</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>38. The agency does a good job of anticipating change</td>
<td>2.7</td>
<td>2.6</td>
<td>0.1</td>
</tr>
<tr>
<td>39. The agency is good at taking advantage of opportunities</td>
<td>2.4</td>
<td>2.6</td>
<td>0.2</td>
</tr>
<tr>
<td>40. Creativity and innovation are rewarded</td>
<td>2.7</td>
<td>3.0</td>
<td>0.3*</td>
</tr>
<tr>
<td>41. Risk taking is encouraged</td>
<td>3.0</td>
<td>3.3</td>
<td>0.3*</td>
</tr>
<tr>
<td>42. Mistakes are not automatically punished</td>
<td>2.1</td>
<td>2.3</td>
<td>0.2</td>
</tr>
</tbody>
</table>

*Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. Differences between means exceeding the 80th percentile (difference ≥ 0.3) are noted with an asterisk (*).
Creativity and innovation were frequently mentioned by agency directors as concerns. Several directors indicated they had specifically emphasized encouragement of creativity and innovation. Planning processes that rewarded creativity by funding innovative projects were often cited by rank and file employees as methods of encouraging creativity.

Examples of adaptability and innovation

The Florida Game and Freshwater Fish Commission recognized a void in the state's enforcement of environmental regulations and filled it. Compliance with environmental regulations is the purview of another state agency whose personnel have little or no enforcement capability. Responding to citizen interest in better enforcement of environmental regulations, the Commission created an Environmental Enforcement Unit by reclassifying and training approximately 30 enforcement personnel. The unit specifically targeted compliance with illegal dumping of garbage and toxic materials in its first few years of existence. The uniformed environmental enforcement personnel, with full police powers, have been effective in improving Florida's environmental regulation enforcement. The unit has been exceptionally popular with the state's
citizens and has enhanced Commission relationships with other state agencies.

One regional supervisor for the Idaho Department of Fish and Game felt so strongly that creativity was important that he modified the department performance appraisal form to strike the section on neatness and replace it with creativity.

One of the five major themes of the Wisconsin Department of Natural Resources strategic plan is to develop and maintain a progressive work climate. The plan recognizes agency employees as a valuable resource, and states, "They need to have the tools to do the job and the support necessary to be innovative, take risks--and sometimes fail..." Employees indicated the agency lives up to its strategic promise by sending clear messages of tolerance for errors of commission. The Wisconsin agency emphasizes responsible risk taking by employees in its training courses (to be discussed later).

Factor 11: Agency Monitors Societal Trends, Looks Towards the Future

Questionnaire responses

All seven agencies identified as effective in the planning and funding category agreed they were good at long
term planning (Table 30). There were substantial differences among agencies, however, regarding effective tracking of socioeconomic trends. Three agencies agreed they were effective in tracking trends. Two of those three had active, formal processes for tracking trends while in the third case, trend tracking appeared to result from activities of interested individuals. Three agencies were essentially neutral regarding tracking trends and one disagreed with the statement.

Differences among bureaus were minor although directors and enforcement personnel felt more strongly than other groups that agencies are good at long-term planning (Table 31).

Differences between men and women (Table 32) and headquarters and field personnel also were minor.

Interview responses

Surveys were frequently mentioned as the tool used to track socioeconomic trends. Full-time social researchers in the Wisconsin Department of Natural Resources and the Missouri Department of Conservation provide information on constituent attitudes and opinions. Agencies in Arizona, Florida, Idaho and Wyoming have developed Responsive Management Units to provide socioeconomic data for use in
Table 30. Mean responses to questionnaire items related to the effectiveness factor, agency monitors societal trends and looks toward the future.¹

<table>
<thead>
<tr>
<th>Question</th>
<th>Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>43. The agency does a good job of long term planning.</td>
<td>2.7*</td>
</tr>
<tr>
<td>44. The agency effectively tracks socio-economic factors and trends.</td>
<td>3.3*</td>
</tr>
</tbody>
</table>

¹Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. Asterisks indicate responses that differ significantly (p ≤ .05) from neutral.
Table 31. Mean responses of employee groups to questionnaire items related to the effectiveness factor, agency monitors societal trends and looks towards the future.1

<table>
<thead>
<tr>
<th>Question</th>
<th>DIR N=18</th>
<th>ENF N=56</th>
<th>FIS N=83</th>
<th>WIL N=86</th>
<th>I&amp;E N=32</th>
<th>ADM N=85</th>
<th>75th Percentile Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>43. The agency does a good job of long term planning</td>
<td>2.0</td>
<td>1.9</td>
<td>2.5</td>
<td>2.6</td>
<td>2.3</td>
<td>2.2</td>
<td>ENF,DIR &lt; FIS, WIL</td>
</tr>
<tr>
<td>44. The agency effectively tracks socioeconomic factors and trends</td>
<td>2.4</td>
<td>2.6</td>
<td>2.5</td>
<td>2.8</td>
<td>2.7</td>
<td>2.5</td>
<td>---------------</td>
</tr>
</tbody>
</table>

1Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. DIR=agency directors and their deputies, ENF=enforcement, FIS=fisheries, WIL=wildlife, I&E=information and education and ADM=administrative support. 75th percentile difference ≥ 0.5.
Table 32. Mean responses of men and women to questionnaire items related to the effectiveness factor, agency monitors societal trends and looks towards the future.¹

<table>
<thead>
<tr>
<th>Question</th>
<th>Men N=367</th>
<th>Women N=55</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>43. The agency does a good job of long term planning</td>
<td>2.3</td>
<td>2.4</td>
<td>0.1</td>
</tr>
<tr>
<td>44. The agency effectively tracks socioeconomic factors and trends</td>
<td>2.6</td>
<td>2.5</td>
<td>0.1</td>
</tr>
</tbody>
</table>

¹Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. Differences between means exceeding the 80th percentile (difference ≥ 0.3) are noted with an asterisk (*).
strategic planning. In every case study agency, planning was frequently mentioned as the best thing the agency does to look towards the future. The agencies that had formal mechanisms for tracking trends frequently used trends information in their planning efforts.

Monitoring of trends was most frequently associated with watchable wildlife and nongame wildlife programs. Recognition of changing clientele and expansion of traditional missions to develop more comprehensive wildlife agencies, rather than game and fish agencies, were frequently cited as the best thing agencies were doing to look towards the future.

Many agency employees were unaware of efforts to track trends or, if they were aware of the efforts, they were unsure who was responsible. "I don't know" was the second most common response to the question of how the agency tracks socioeconomic trends.

Examples of monitoring societal trends

The best example of active efforts to track socioeconomic trends is the Wisconsin Department of Natural Resources Trends Analysis Group (TAG team). The TAG team was established to improve the department's planning efforts. The agency hired consultants to train department
personnel for planning, but was dissatisfied with the results. However, the consultants raised the agency's awareness of the need to watch societal trends. The initial TAG team was a collection of free-thinking department employees, specially chosen because they were somewhat unconventional and unafraid to challenge existing agency thought patterns. They were allocated some time to work on the TAG team, but they were purposely not allowed to make trends analysis a full-time job. TAG team members were, and remain today, people who were interested enough in tracking trends to take on the extra work.

The TAG team produced reports and newsletters that stirred interest throughout the agency and in some cases created controversy. The agency's top managers gave TAG team members their full support, ensuring their continued efforts to challenge existing norms. The agency philosophy was, "If it doesn't ruffle some feathers, it probably isn't working."

The TAG team is indeed working. TAG reports have become an integral part of the agency's strategic planning efforts. The TAG team's mailing list has grown substantially as people both within and outside Wisconsin have learned of it.
Factor 12: Agency Management System Links

Planning and Budgeting

Questionnaire responses

In general, employees of the seven agencies identified as effective in the planning and funding category better understood planning systems and had greater faith in them than they did in budgeting systems. Employee responses to questionnaire items indicated moderate to good understanding of planning processes (Table 33). Five of the seven agency mean responses regarding understanding of planning processes were in the agreement range, although only three were significantly different from neutral. Similarly, employees in five of the seven agencies agreed roles and responsibilities for planning are clearly spelled out. They generally agreed participation in the planning process is encouraged and that the process allows everyone's ideas to be heard and fairly considered. Employees of most agencies agreed planning drives preparation of the budget and allocation of personnel and financial resources. They agreed planning decisions and priorities would determine where to spend budget increases and where to make budget cuts.
Table 33. Mean responses to questionnaire items related to the effectiveness factor, agency has a management system in place linking planning and budgeting.1

<table>
<thead>
<tr>
<th>Question</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>45. Most people in the agency understand the planning process.</td>
<td>3.0</td>
<td>2.7</td>
<td>2.6*</td>
<td>2.7*</td>
<td>2.8*</td>
<td>3.3*</td>
<td>2.9</td>
<td>2.9</td>
</tr>
<tr>
<td>46. Most people in the agency understand the budgeting process.</td>
<td>3.3*</td>
<td>3.1</td>
<td>3.2</td>
<td>3.2</td>
<td>2.8*</td>
<td>3.8*</td>
<td>2.9</td>
<td>3.2</td>
</tr>
<tr>
<td>47. Planning decisions drive preparation of the budget.</td>
<td>3.0</td>
<td>2.4*</td>
<td>3.0</td>
<td>2.6*</td>
<td>2.6*</td>
<td>2.7*</td>
<td>2.4*</td>
<td>2.7</td>
</tr>
<tr>
<td>48. Planning decisions drive the allocation of resources (dollars and human resources).</td>
<td>3.0</td>
<td>2.5*</td>
<td>2.6*</td>
<td>2.6*</td>
<td>2.6*</td>
<td>2.6*</td>
<td>2.5*</td>
<td>2.6</td>
</tr>
<tr>
<td>49. The planning process allows everyone’s ideas to be fairly considered and evaluated.</td>
<td>2.7*</td>
<td>2.8</td>
<td>2.7*</td>
<td>2.8</td>
<td>2.7*</td>
<td>2.8</td>
<td>2.6*</td>
<td>2.7</td>
</tr>
<tr>
<td>50. The budgeting process allows everyone’s ideas to be fairly considered and evaluated.</td>
<td>3.1</td>
<td>2.9</td>
<td>3.1</td>
<td>3.4*</td>
<td>3.0</td>
<td>3.2</td>
<td>3.0</td>
<td>3.1</td>
</tr>
<tr>
<td>51. Participation in the planning process is encouraged.</td>
<td>2.2*</td>
<td>2.7</td>
<td>2.1*</td>
<td>2.3*</td>
<td>2.2*</td>
<td>2.3*</td>
<td>2.1*</td>
<td>2.3</td>
</tr>
<tr>
<td>52. Participation in the budgeting process is encouraged.</td>
<td>2.7*</td>
<td>2.7</td>
<td>2.7*</td>
<td>3.1</td>
<td>2.4*</td>
<td>2.9</td>
<td>2.4*</td>
<td>2.7</td>
</tr>
<tr>
<td>53. Roles and responsibilities for planning are clearly spelled out.</td>
<td>2.7*</td>
<td>2.9</td>
<td>2.3*</td>
<td>2.5*</td>
<td>2.5*</td>
<td>2.9</td>
<td>2.5*</td>
<td>2.6</td>
</tr>
<tr>
<td>54. Roles and responsibilities for budgeting are clearly spelled out.</td>
<td>2.5*</td>
<td>2.8</td>
<td>2.3*</td>
<td>2.8*</td>
<td>2.3*</td>
<td>2.7*</td>
<td>2.6*</td>
<td>2.6</td>
</tr>
</tbody>
</table>
Table 33 continued.

<table>
<thead>
<tr>
<th>Question</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>55. If a substantial budget increase occurred, planning decisions and priorities would determine where to spend the funds.</td>
<td></td>
<td></td>
<td></td>
<td>2.4*</td>
<td>2.4*</td>
<td>2.3*</td>
<td>2.3*</td>
<td>2.4</td>
</tr>
<tr>
<td>56. If substantial budget cuts were required, planning decisions and priorities would determine which items would be cut.</td>
<td></td>
<td>3.0</td>
<td>2.6*</td>
<td>2.8</td>
<td>2.4*</td>
<td>2.6*</td>
<td>2.6*</td>
<td>2.6</td>
</tr>
</tbody>
</table>

^1Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. Asterisks indicate responses that differ significantly (p ≤ .05) from neutral.
Understanding and faith in budgeting processes were much lower than those in planning. Only one agency's employees agreed they understand the budgeting process and two agencies significantly disagreed. While employees in four out of seven agencies agreed participation in the budgeting process is encouraged, none agreed the process allows everyone's ideas to be heard and fairly considered. The fact that employees of all seven agencies agreed their roles and responsibilities for budgeting were clearly spelled out indicates a low expectation of participation.

Directors and their deputies differed substantially from all or nearly all other bureaus on nearly every questionnaire item related to agency planning and budgeting systems (Table 34). The largest differences were on the items related to budgeting. None of the employee groups shared the directors' belief that most people understand the budgeting process. Only directors agreed the budgeting process allows everyone's ideas to be heard and fairly considered. Agreement among directors was much stronger than among other employee groups that planning and budgeting roles are clearly spelled out and that participation in the processes is encouraged. In general, enforcement personnel responses were most similar to those of directors.

Women showed substantially less agreement, or stronger disagreement, than men on 5 of the 12 questionnaire items related to planning and budgeting systems (Table 35).
Table 34. Mean responses of employee groups to questionnaire items related to the effectiveness factor, agency has a management system in place linking planning and budgeting.¹

<table>
<thead>
<tr>
<th>Question</th>
<th>DIR N=18</th>
<th>ENF N=56</th>
<th>FIS N=83</th>
<th>WIL N=86</th>
<th>I&amp;E N=32</th>
<th>ADM N=85</th>
<th>75th Percentile Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>45. Most people in the agency understand the planning process</td>
<td>2.3</td>
<td>2.6</td>
<td>2.9</td>
<td>3.0</td>
<td>2.9</td>
<td>2.9</td>
<td>DIR &lt; all but ENF;</td>
</tr>
<tr>
<td>46. Most people in the agency understand the budgeting process</td>
<td>2.5</td>
<td>3.0</td>
<td>3.1</td>
<td>3.4</td>
<td>3.4</td>
<td>3.2</td>
<td>DIR &lt; all others</td>
</tr>
<tr>
<td>47. Planning decisions drive preparation of the budget</td>
<td>2.3</td>
<td>2.4</td>
<td>2.6</td>
<td>3.0</td>
<td>2.7</td>
<td>2.6</td>
<td>DIR, ENF &lt; WIL</td>
</tr>
<tr>
<td>48. Planning decisions drive the allocation of resources (dollars and</td>
<td>2.1</td>
<td>2.3</td>
<td>2.5</td>
<td>2.9</td>
<td>2.8</td>
<td>2.7</td>
<td>DIR &lt; WIL, I&amp;E, ADM</td>
</tr>
<tr>
<td>human resources)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ENF &lt; WIL, I&amp;E</td>
</tr>
<tr>
<td>49. The planning process allows everyone’s ideas to be fairly considered</td>
<td>2.5</td>
<td>2.6</td>
<td>2.8</td>
<td>2.9</td>
<td>3.0</td>
<td>2.6</td>
<td>DIR &lt; I&amp;E</td>
</tr>
<tr>
<td>and evaluated</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50. The budgeting process allows everyone’s ideas to be fairly considered</td>
<td>2.7</td>
<td>3.0</td>
<td>3.1</td>
<td>3.4</td>
<td>3.4</td>
<td>2.9</td>
<td>DIR, ADM &lt; WIL, I&amp;E</td>
</tr>
<tr>
<td>and evaluated</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>51. Participation in the planning process is encouraged</td>
<td>1.8</td>
<td>2.2</td>
<td>2.2</td>
<td>2.3</td>
<td>2.3</td>
<td>2.3</td>
<td>DIR &lt; WIL, I&amp;E, ADM</td>
</tr>
<tr>
<td>52. Participation in the budgeting process is encouraged</td>
<td>2.1</td>
<td>2.9</td>
<td>2.7</td>
<td>2.8</td>
<td>2.7</td>
<td>2.6</td>
<td>DIR &lt; all others</td>
</tr>
<tr>
<td>53. Roles and responsibilities for planning are clearly spelled out</td>
<td>1.9</td>
<td>2.5</td>
<td>2.7</td>
<td>2.8</td>
<td>2.4</td>
<td>2.5</td>
<td>DIR &lt; all others</td>
</tr>
</tbody>
</table>
Table 34 continued.

<table>
<thead>
<tr>
<th>Question</th>
<th>DIR</th>
<th>ENF</th>
<th>FIS</th>
<th>WIL</th>
<th>I&amp;E</th>
<th>ADM</th>
<th>75th Percentile Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>54. Roles and responsibilities for budgeting are clearly spelled out</td>
<td>1.8</td>
<td>2.5</td>
<td>2.6</td>
<td>2.7</td>
<td>2.2</td>
<td>2.5</td>
<td>DIR &lt; all but I&amp;E; I&amp;E &lt; WIL</td>
</tr>
<tr>
<td>55. If a substantial budget increase occurred, planning decisions and</td>
<td>2.0</td>
<td>2.1</td>
<td>2.5</td>
<td>2.6</td>
<td>2.5</td>
<td>2.4</td>
<td>DIR &lt; FIS,WIL,I&amp;E; ENF &lt; WIL</td>
</tr>
<tr>
<td>priorities would determine where to spend the funds</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>56. If substantial budget cuts were required, planning decisions and</td>
<td>2.1</td>
<td>2.2</td>
<td>2.7</td>
<td>3.0</td>
<td>2.9</td>
<td>2.6</td>
<td>DIR &lt; all but ENF; ENF &lt; FIS,WIL,I&amp;E</td>
</tr>
<tr>
<td>priorities would decide which items would be cut</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

¹Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. DIR=agency directors and their deputies, ENF=enforcement, FIS=fisheries, WIL=wildlife, I&E=information and education and ADM=administrative support. 75th percentile difference ≥ 0.5.
Table 35. Mean responses of men and women to questionnaire items related to the effectiveness factor, agency has a management system in place linking planning and budgeting.\(^1\)

<table>
<thead>
<tr>
<th>Question</th>
<th>Men N=367</th>
<th>Women N=55</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>45. Most people in the agency understand the planning process</td>
<td>2.8</td>
<td>3.3</td>
<td>0.5*</td>
</tr>
<tr>
<td>46. Most people in the agency understand the budgeting process</td>
<td>3.1</td>
<td>3.5</td>
<td>0.4*</td>
</tr>
<tr>
<td>47. Planning decisions drive preparation of the budget</td>
<td>2.6</td>
<td>2.8</td>
<td>0.2</td>
</tr>
<tr>
<td>48. Planning decisions drive the allocation of resources (dollars and human resources)</td>
<td>2.6</td>
<td>2.8</td>
<td>0.2</td>
</tr>
<tr>
<td>49. The planning process allows everyone's ideas to be fairly considered and evaluated</td>
<td>2.7</td>
<td>2.9</td>
<td>0.2</td>
</tr>
<tr>
<td>50. The budgeting process allows everyone's ideas to be fairly considered and evaluated</td>
<td>3.1</td>
<td>3.4</td>
<td>0.3*</td>
</tr>
<tr>
<td>51. Participation in the planning process is encouraged</td>
<td>2.2</td>
<td>2.7</td>
<td>0.5*</td>
</tr>
<tr>
<td>52. Participation in the budgeting process is encouraged</td>
<td>2.7</td>
<td>2.9</td>
<td>0.2</td>
</tr>
<tr>
<td>53. Roles and responsibilities for planning are clearly spelled out</td>
<td>2.5</td>
<td>2.9</td>
<td>0.4*</td>
</tr>
<tr>
<td>54. Roles and responsibilities for budgeting are clearly spelled out</td>
<td>2.5</td>
<td>2.7</td>
<td>0.2</td>
</tr>
<tr>
<td>55. If a substantial budget increase occurred, planning decisions and priorities would determine where to spend the funds</td>
<td>2.4</td>
<td>2.5</td>
<td>0.1</td>
</tr>
<tr>
<td>56. If substantial budget cuts were required, planning decisions and priorities would determine which items would be cut</td>
<td>2.6</td>
<td>2.7</td>
<td>0.1</td>
</tr>
</tbody>
</table>

\(^1\)Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. Differences between means exceeding the 80th percentile (difference ≥ 0.3) are noted with an asterisk (*).
Although differences were not substantial on the other seven items, the pattern of differences was consistent. Differences were particularly striking with regard to understanding of planning and budgeting processes, where men were nearly neutral but women substantially disagreed. Men agreed fairly strongly that participation in the planning process is encouraged, while agreement among women was much weaker. Men agreed planning roles are clearly spelled out, but women were essentially neutral. Women disagreed the budgeting process allows everyone's ideas to be heard and fairly considered, while men were nearly neutral.

Headquarters and field personnel responded similarly on all questionnaire items related to planning and budgeting systems.

Interview responses

Although most of the case study agencies think about the long-term future, nearly all have a practical planning horizon of three to five years. In almost all cases, strategic plans were written to cover a five-year period.

Even among these agencies identified as effective in planning and funding, the link between planning and budgeting is weak in most cases. Field personnel generally had a stronger belief that plans and budgets were linked.
than did headquarters personnel. Field staff were strongly supportive of planning in agencies with the most mature planning systems. Although some complaints were heard regarding the amount of paperwork associated with planning, field staff generally felt planning systems rewarded employees who effectively planned projects to meet strategic plan goals.

Examples of linked planning and budgeting systems

The Wyoming Game and Fish Department and the Wisconsin Department of Natural Resources have well established management systems that are strongly supported throughout the agencies. The structure and development of both systems was described by Crowe (1983) and, therefore, will not be repeated here. For the purpose of illustrating management effectiveness, the important point is that both agencies have adopted project-based budgeting systems that explicitly link strategic and operational planning phases. Study team members in both states often heard employees say that well written project proposals that clearly addressed strategic plan objectives were likely to be funded. Widespread support of the management systems among field employees derives largely from the explicitly stated objectives.
(usually developed at the field level, with public input) and criteria for approving project proposals.

The New York Division of Fish and Wildlife recently redefined its mission and values. Development of the new statements was a team effort, involving all employees of the division. Study team members were struck by the enthusiasm generated throughout the division for the effort. Employees were especially enthusiastic about the values statement which clarified why the division pursues its mission as it does. The values statement identifies the citizens of New York, rather than fish and wildlife, as the division's clients. It further identifies employees as the division's most important assets, the importance of diversity in managing fish and wildlife populations and achievement of attainable and measurable objectives, developed with public participation.

Factor 13: Amount, Diversity and Stability of Agency Funding

Questionnaire responses

Employees in the majority of the seven agencies identified as effective in the planning and funding category believe neither their own programmatic budgets nor their agency's budgets are adequate to achieve the objectives for
which they are responsible (Table 36). Only two agencies agreed that nontraditional funds (funds other than license revenue and Federal Aid in Fish and Wildlife Restoration matching funds) provide a dependable, continuous part of the agencies' budgets. All but one agency agreed more nontraditional funds are needed in their agencies' budgets. The one agency that disagreed has a budget composed of more than 50% sales tax revenue.

Only directors and fisheries personnel agreed programmatic and agency budgets are adequate to achieve the objectives for which they are responsible (Table 37). None of the study participants suggested why fisheries personnel would feel differently from other employee groups about funding. However, it is reasonable to assume that recent increases in federal funding as a result of the Wallop-Breaux amendment to the Federal Aid in Sport Fish Restoration Act (which increased state fisheries budgets substantially) may account for the difference. Information and education personnel were the only group to agree that nontraditional sources provide a dependable, continuous source of agency funds. However, that result probably occurred because 15 of the 32 information and education personnel responding to that questionnaire item were from two states having large percentages of their budgets in nontraditional funds.
Table 36. Mean responses to questionnaire items related to the effectiveness factor, amount, diversity and stability of agency funding.  

<table>
<thead>
<tr>
<th>Question</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>57. My budget is adequate to achieve the objectives for which I am responsible.</td>
<td>3.8*</td>
<td>2.6*</td>
<td>2.9</td>
<td>3.3</td>
<td>2.5*</td>
<td>3.2</td>
<td>3.3*</td>
<td>3.1</td>
</tr>
<tr>
<td>58. The agency's budget is adequate to achieve its mission.</td>
<td>3.6*</td>
<td>2.9</td>
<td>2.8*</td>
<td>3.6*</td>
<td>2.2*</td>
<td>3.1</td>
<td>3.4*</td>
<td>3.1</td>
</tr>
<tr>
<td>59. Non-traditional sources provide a dependable, continuous part of the agency's funds.</td>
<td>3.9*</td>
<td>2.9</td>
<td>3.6*</td>
<td>3.1</td>
<td>2.0*</td>
<td>2.5*</td>
<td>3.6*</td>
<td>3.1</td>
</tr>
<tr>
<td>60. The agency needs to increase the amount of non-traditional funds in the budget.</td>
<td>2.0*</td>
<td>2.1*</td>
<td>2.1*</td>
<td>2.3*</td>
<td>3.4*</td>
<td>2.2*</td>
<td>2.0*</td>
<td>2.3</td>
</tr>
</tbody>
</table>

1Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. Asterisks indicate responses that differ significantly (p \leq .05) from neutral.
Table 37. Mean responses of employee groups to questionnaire items related to the effectiveness factor, amount, diversity and stability of agency funding.¹

<table>
<thead>
<tr>
<th>Question</th>
<th>DIR</th>
<th>ENF</th>
<th>FIS</th>
<th>WIL</th>
<th>I&amp;E</th>
<th>ADM</th>
<th>75th Percentile Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>57. My budget is adequate to achieve the objectives for which I am responsible</td>
<td>2.3</td>
<td>3.1</td>
<td>2.7</td>
<td>3.4</td>
<td>3.4</td>
<td>3.1</td>
<td>DIR &lt; all but FIS; FIS &lt; WIL, I&amp;E</td>
</tr>
<tr>
<td>58. The agency's budget is adequate to achieve its mission</td>
<td>2.5</td>
<td>3.2</td>
<td>2.8</td>
<td>3.4</td>
<td>3.2</td>
<td>3.0</td>
<td>DIR &lt; all but FIS; FIS &lt; WIL</td>
</tr>
<tr>
<td>59. Nontraditional sources provide a dependable, continuous part of the agency's funds</td>
<td>3.1</td>
<td>3.2</td>
<td>3.1</td>
<td>3.2</td>
<td>2.8</td>
<td>3.2</td>
<td>------</td>
</tr>
<tr>
<td>60. The agency needs to increase the amount of nontraditional funds in the budget</td>
<td>2.2</td>
<td>2.4</td>
<td>2.7</td>
<td>2.0</td>
<td>2.4</td>
<td>2.3</td>
<td>FIS &gt; WIL, DIR</td>
</tr>
</tbody>
</table>

¹Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. DIR=agency directors and their deputies, ENF=enforcement, FIS=fisheries, WIL=wildlife, I&E=information and education and ADM=administrative support. 75th percentile difference ≥ 0.5.
Women did not believe their programmatic budgets are adequate to achieve the objectives for which they are responsible (Table 38), while men were neutral. Women also agreed more strongly than men that agencies need to increase the amount of nontraditional funds in their budgets. Differences between men and women on other items were inconsequential.

Headquarters and field personnel did not differ substantially on items related to budgets.

**Interview responses**

One characteristic common to nearly all of the case study agencies is their success in finding alternative sources of funding. Seven of the nine agencies (including six of the seven identified as effective in the planning and funding category) received significant amounts of funding from nontraditional sources. Most interesting, and perhaps most promising for other agencies, is the variety of nontraditional sources that agencies have tapped. All but one of the case study agencies continues to pursue alternative funding sources actively. However, no consensus existed regarding strategies to ensure stable funding bases in the future.
Table 38. Mean responses of men and women to questionnaire items related to the effectiveness factor, amount, diversity and stability of agency funding.¹

<table>
<thead>
<tr>
<th>Question</th>
<th>Men</th>
<th>Women</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>57. My budget is adequate to achieve the objectives for which I am responsible</td>
<td>3.0</td>
<td>3.4</td>
<td>0.4*</td>
</tr>
<tr>
<td>58. The agency’s budget is adequate to achieve its mission</td>
<td>3.0</td>
<td>3.2</td>
<td>0.2</td>
</tr>
<tr>
<td>59. Nontraditional sources provide a dependable, continuous part of the agency’s funds</td>
<td>3.2</td>
<td>3.2</td>
<td>---</td>
</tr>
<tr>
<td>60. The agency needs to increase the amount of nontraditional funds in the budget</td>
<td>2.3</td>
<td>2.0</td>
<td>0.3*</td>
</tr>
</tbody>
</table>

Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. Differences between means exceeding the 80th percentile (difference ≥ 0.3) are noted with an asterisk (*).
Examples of alternative funding

Because alternative funding is a topic of great interest and importance to so many agencies, the discussion here will focus on the many examples encountered. The most famous example of alternative funding is Missouri's Conservation Sales Tax. Approval of the 1976 Conservation Sales Tax initiative added one-eighth of one percent of the state's sales value to the department's coffers. The sales tax generated nearly $55 million in department revenue in FY 1991 (63% of the agency's total receipts; Missouri Department of Conservation 1991).

The substantial, and relatively stable, funding base provided by the sales tax allowed the department to develop active urban wildlife, nongame wildlife and watchable wildlife programs. The education program also benefitted from the sales tax. The mistaken perception, however, that Missouri's excellence in conservation education is a result of the sales tax is widespread. Actually, the department has made a strong commitment to education throughout its existence. Addition of sales tax revenue allowed the department to add more educational consultants, field staff who stay in constant contact with schools. More importantly, the additional funds allowed the department to produce more materials for free distribution to schools,
ensuring wide dispersal of the department's conservation message.

The down side to the sales tax story is that sales tax revenues are closely linked to performance of the state's economy. When sales decline, as they have in recent years, sales tax revenues decline. The department compensates by maintaining a balance in their account to carry them through short-term slumps in the economy. Because the tax is based on a percentage of sales, it is relatively inflation proof.

No other fish and wildlife agencies have been able to duplicate Missouri's success with the sales tax. However, other sources of state revenue have become important parts of many agency budgets. Arizona voters approved Proposition 200 in 1990, establishing the Arizona Heritage Fund. The Heritage Fund expanded the Arizona Game and Fish Department budget by $10 million per year (nearly a 50% increase in the agency budget) with unobligated state lottery funds. The funds must be appropriated in a block, thus eliminating the ability of legislators to dictate how they will be spent.

The South Carolina Wildlife and Marine Resources Department budget is made up of nearly 50% general revenue funds, a source of funds eschewed by the majority of fish and wildlife agencies. The general revenue funds were added to the department budget by sympathetic legislators that controlled the state's budget process.
The Florida Department of Game and Freshwater Fisheries budget also contains a significant amount of general revenue funds. The Florida department elected to allocate its entire block of general revenue funds to its enforcement division, rather than spread it out over many divisions. This allows the department to track general revenue more easily. This strategy also puts the most vulnerable funds in the agency budget where they are least likely to be cut during hard times and most likely to be increased during good times.

The Florida department has also been successful in finding unique sources of revenue for its nongame wildlife program, widely recognized as one of the nation's best. Because Florida has no state income tax, the department did not have the option of pursuing a tax check off common to many states. They now consider that a blessing, since nongame tax check off revenues have failed to keep pace with inflation and expanding program needs in most states (Wildlife Conservation Fund of America 1992). In looking for ways to fund their nongame program, the department followed a consultant's advice to impose a surcharge on the fee charged to new state residents when they transferred their automobile titles. Since the fee only applied to people who could not yet vote in the state of Florida, it sailed through the legislature unopposed. Thus, the department was able to tap into one of Florida's most
important resources--population growth. The modest $4 per vehicle fee has raised approximately $2.5 million annually.

The Florida nongame program, however, has outgrown the title transfer funding source. Another unique approach to funding has been created to fill the gap. The "Speeding for Wildlife" program will add an estimated $3-4 million per year to the budget. The money will come from an addition of $.25 per mile per hour to the fine for speeding violations. As with the title transfer fee, funds for the department will come from a source that almost no one opposes.

Both the Minnesota Department of Natural Resources and the Wisconsin Department of Natural Resources receive general revenue funds as part of special state initiatives to preserve and protect natural resources. The Minnesota program began with a citizen commission appointed by the governor to look into ways of improving and promoting hunting and fishing in the state. The commission recommended an investment of $600 million over 10 years (Governor's Citizen Commission to Promote Hunting and Fishing in Minnesota 1984). The program was called Reinvest in Minnesota (RIM). Although the program was never funded at the suggested level, it has provided significant funding for many conservation projects. The Wisconsin Stewardship Initiative is providing $250 million over 10 years for land acquisition, streambank easements and landscape-scale wildlife management programs.
The Wyoming Game and Fish Department established a trust account in 1987 after several unsuccessful attempts at seeking funding from the state's severance tax fund for nongame wildlife and watchable wildlife programs. All proceeds from the sale of a special conservation license (which must be purchased with all hunting and fishing licenses) are placed into the trust account. The department also markets a variety of products related to its watchable wildlife program, placing the sales receipts into the trust account. Nongame and watchable wildlife programs are funded from the interest on the account. The trust account yielded a total of $800,000 in FY 1991. The principal in the account is growing at the rate of about $3 million per year.

The Idaho Department of Fish and Game has taken the unique approach of pursuing private funding sources for specific projects. The department employs a full-time private funding source coordinator. One example of their success is the highly popular nature center located adjacent to the department's Boise headquarters. A large donation from Morrison-Knudsen, an international engineering firm headquartered in Boise, assisted the department in building the nature center. The center has rapidly become one of the most popular attractions in the Boise area, with visitation rates exceeding all projections.
Category: Agency Management

Factor 14: Leadership and Management Skills of Agency Leaders

Questionnaire responses

Employees in all six of the agencies identified as effective in the agency management category agreed the leaders of their agencies have the skills needed to do their jobs effectively, although in one agency, the agreement was not significantly different from neutral (Table 39). Employees generally agreed that leaders are encouraged to improve their leadership and management skills, but there were substantial differences of opinion regarding training for other department employees. Only one agency's employees felt the next generation of leaders is being developed, or that employees have training plans that are followed. Employees in three agencies disagreed that new leaders are being developed and those in four agencies disagreed that employees have training plans.

Employees in four out of six agencies agreed their leaders spend most of their time reacting to crises, but at the same time, two of those agencies' employees agreed their leaders focus on the future. The two agencies with the strongest agreement that leaders react to crises also showed
Table 39. Mean responses to questionnaire items related to the effectiveness factor, leadership and management skills of agency leaders.¹

<table>
<thead>
<tr>
<th>Question</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>61. Agency leaders and managers have the skills needed to do their jobs effectively.</td>
<td>2.4*</td>
<td>2.8</td>
<td>2.5*</td>
<td>2.3*</td>
<td>2.5*</td>
<td>2.1*</td>
<td>2.4</td>
</tr>
<tr>
<td>62. Leaders and managers are encouraged to take periodic training in management skills.</td>
<td>3.1</td>
<td>2.6*</td>
<td>2.9</td>
<td>2.0*</td>
<td>2.0*</td>
<td>1.8*</td>
<td>2.4</td>
</tr>
<tr>
<td>63. There is an active program for developing the next generation of leaders and managers within the agency.</td>
<td>3.9*</td>
<td>3.8*</td>
<td>3.6*</td>
<td>2.9</td>
<td>2.8</td>
<td>2.1*</td>
<td>3.2</td>
</tr>
<tr>
<td>64. Most employees in the agency have training plans that are followed.</td>
<td>3.6*</td>
<td>3.6*</td>
<td>3.6*</td>
<td>3.3*</td>
<td>3.1</td>
<td>2.5*</td>
<td>3.3</td>
</tr>
<tr>
<td>65. I keep up with literature and theory relevant to the major duties of my current position.</td>
<td>2.1*</td>
<td>2.5*</td>
<td>2.3*</td>
<td>2.1*</td>
<td>2.1*</td>
<td>2.4*</td>
<td>2.3</td>
</tr>
<tr>
<td>66. Agency leaders spend most of their time dealing with whatever crises erupt.</td>
<td>2.4*</td>
<td>2.3*</td>
<td>2.8</td>
<td>2.9</td>
<td>2.6*</td>
<td>2.7*</td>
<td>2.6</td>
</tr>
<tr>
<td>67. Agency leaders focus their attention on the future.</td>
<td>3.0</td>
<td>3.2</td>
<td>2.7*</td>
<td>2.6*</td>
<td>2.5*</td>
<td>2.5*</td>
<td>2.8</td>
</tr>
<tr>
<td>68. Agency leaders and managers are primarily task oriented.</td>
<td>2.6*</td>
<td>2.7*</td>
<td>2.5*</td>
<td>2.9</td>
<td>2.6*</td>
<td>3.0</td>
<td>2.7</td>
</tr>
<tr>
<td>69. Agency leaders and managers demonstrate concern for employees.</td>
<td>2.4*</td>
<td>3.0</td>
<td>2.5*</td>
<td>2.7*</td>
<td>2.4*</td>
<td>2.2*</td>
<td>2.5</td>
</tr>
</tbody>
</table>

¹Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. Asterisks indicate responses that differ significantly (p ≤ .05) from neutral.
the least agreement that leaders are focused on the future. Agency leaders seem to balance concern for getting the job done with concern for employees. In four out of six agencies, employees agreed leaders are task-oriented, but at the same time, five out of six agreed leaders show concern for employees. Employees of all agencies agreed they keep up with literature and theory relevant to their current positions.

Responses of directors and their deputies were at one extreme on 8 of the 9 items related to leadership and management skills (Table 40). Directors and enforcement personnel agreed more strongly than fisheries, wildlife and information and education personnel that agency leaders have the skills needed to do their jobs effectively. While all groups agreed leaders are encouraged to take periodic training in management skills, directors were more emphatic in their agreement than all other groups. None of the groups felt strongly that new leaders are being developed, and only enforcement personnel agreed that most employees have training plans that are followed. This is not surprising in view of the fact that, in many agencies, enforcement personnel are required to complete a minimum level of training each year. Enforcement personnel also felt more strongly that they keep up with literature and theory relevant to their positions than other groups. Directors were the only group to disagree that agency
Table 40. Mean responses of employee groups to questionnaire items related to the effectiveness factor, leadership and management skills of agency leaders.¹

<table>
<thead>
<tr>
<th>Question</th>
<th>DIR N=14</th>
<th>ENF N=60</th>
<th>FIS N=60</th>
<th>WIL N=64</th>
<th>I&amp;E N=34</th>
<th>ADM N=74</th>
<th>75th Percentile Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>61. Agency leaders and managers have the skills needed to do their jobs effectively</td>
<td>2.0</td>
<td>2.1</td>
<td>2.6</td>
<td>2.6</td>
<td>2.6</td>
<td>2.4</td>
<td>DIR, ENF &lt; FIS, WIL, I&amp;E</td>
</tr>
<tr>
<td>62. Leaders and managers are encouraged to take periodic training in management skills</td>
<td>1.9</td>
<td>2.3</td>
<td>2.3</td>
<td>2.5</td>
<td>2.3</td>
<td>2.3</td>
<td>DIR &lt; WIL</td>
</tr>
<tr>
<td>63. There is an active program for developing the next generation of leaders and managers within the agency</td>
<td>2.9</td>
<td>3.0</td>
<td>3.4</td>
<td>3.1</td>
<td>3.3</td>
<td>2.9</td>
<td>FIS &gt; DIR, ADM</td>
</tr>
<tr>
<td>64. Most employees in the agency have training plans that are followed</td>
<td>3.2</td>
<td>2.6</td>
<td>3.5</td>
<td>3.7</td>
<td>3.3</td>
<td>3.1</td>
<td>ENF &lt; all others; ADM, DIR &lt; WIL</td>
</tr>
<tr>
<td>65. I keep up with literature and theory relevant to the major duties of my current position</td>
<td>2.5</td>
<td>1.9</td>
<td>2.4</td>
<td>2.3</td>
<td>2.3</td>
<td>2.2</td>
<td>ENF &lt; DIR, FIS;</td>
</tr>
<tr>
<td>66. Agency leaders spend most of their time dealing with whatever crises erupt</td>
<td>3.3</td>
<td>2.9</td>
<td>2.6</td>
<td>2.3</td>
<td>2.7</td>
<td>2.7</td>
<td>DIR &gt; all but ENF; ENF &gt; WIL</td>
</tr>
<tr>
<td>67. Agency leaders focus their attention on the future</td>
<td>2.3</td>
<td>2.5</td>
<td>2.8</td>
<td>2.9</td>
<td>2.9</td>
<td>2.7</td>
<td>DIR &lt; FIS, WIL, I&amp;E</td>
</tr>
<tr>
<td>68. Agency leaders and managers are primarily task oriented</td>
<td>3.0</td>
<td>2.7</td>
<td>2.6</td>
<td>2.6</td>
<td>2.7</td>
<td>2.8</td>
<td>--------------------------</td>
</tr>
</tbody>
</table>
Table 40 continued.

<table>
<thead>
<tr>
<th>Question</th>
<th>DIR</th>
<th>ENF</th>
<th>FIS</th>
<th>WIL</th>
<th>I&amp;E</th>
<th>ADM</th>
<th>75th Percentile Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>69. Agency leaders and managers demonstrate concern for employees</td>
<td>1.8</td>
<td>2.3</td>
<td>2.8</td>
<td>2.7</td>
<td>2.8</td>
<td>2.4</td>
<td>DIR &lt; all others; ENF &lt; FIS, I&amp;E</td>
</tr>
</tbody>
</table>

¹Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. DIR=agency directors and their deputies, ENF=enforcement, FIS=fisheries, WIL=wildlife, I&E=information and education and ADM=administrative support. 75th percentile difference ≥ 0.5.
leaders spend most of their time dealing with crises. All groups more or less agreed leaders focus on the future, however. Directors also differed substantially from other employee groups on the question of task-orientation versus concern for employees. Directors agreed more strongly than other groups that agency leaders show concern for employees and were the only group not to agree that leaders are primarily task-oriented.

Responses of men and women on items related to leadership and management skills were similar on most items. The largest differences were on task-orientation of leaders, about which women agreed more strongly than men, and on concern for employees, about which women agreed less strongly than men (Table 41).

Headquarters and field personnel differed substantially on two items. Headquarters personnel disagreed more strongly than field personnel that employees have training plans that are followed (Table 42). Field personnel agreed more strongly than headquarters personnel that leaders focus their attention on the future.

**Interview responses**

The leadership and management skills considered most important by employees were those of communication and interpersonal relationships. The most frequently mentioned
<table>
<thead>
<tr>
<th>Question</th>
<th>Men N=324</th>
<th>Women N=46</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>61. Agency leaders and managers have the skills needed to do their jobs effectively</td>
<td>2.4</td>
<td>2.6</td>
<td>0.2</td>
</tr>
<tr>
<td>62. Leaders and managers are encouraged to take periodic training in management skills</td>
<td>2.3</td>
<td>2.4</td>
<td>0.1</td>
</tr>
<tr>
<td>63. There is an active program for developing the next generation of leaders and managers within the agency</td>
<td>3.1</td>
<td>2.9</td>
<td>0.2</td>
</tr>
<tr>
<td>64. Most employees in the agency have training plans that are followed</td>
<td>3.2</td>
<td>3.3</td>
<td>0.1</td>
</tr>
<tr>
<td>65. I keep up with literature and theory relevant to the major duties of my current position</td>
<td>2.2</td>
<td>2.2</td>
<td>---</td>
</tr>
<tr>
<td>66. Agency leaders spend most of their time dealing with whatever crises erupt</td>
<td>2.6</td>
<td>2.9</td>
<td>0.3*</td>
</tr>
<tr>
<td>67. Agency leaders focus their attention on the future</td>
<td>2.7</td>
<td>2.6</td>
<td>0.1</td>
</tr>
<tr>
<td>68. Agency leaders and managers are primarily task oriented</td>
<td>2.8</td>
<td>2.5</td>
<td>0.3*</td>
</tr>
<tr>
<td>69. Agency leaders and managers demonstrate concern for employees</td>
<td>2.4</td>
<td>2.8</td>
<td>0.4*</td>
</tr>
</tbody>
</table>

1Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. Differences between means exceeding the 80th percentile (difference ≥ 0.3) are noted with an asterisk (*).
Table 42. Mean responses of headquarters and field personnel to questionnaire items related to the effectiveness factor, leadership and management skills of agency leaders.¹

<table>
<thead>
<tr>
<th>Question</th>
<th>Headquarters</th>
<th>Field</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>61. Agency leaders and managers have the skills needed to do their jobs effectively</td>
<td>2.5</td>
<td>2.4</td>
<td>0.1</td>
</tr>
<tr>
<td>62. Leaders and managers are encouraged to take periodic training in management skills</td>
<td>2.4</td>
<td>2.4</td>
<td>---</td>
</tr>
<tr>
<td>63. There is an active program for developing the next generation of leaders and managers within the agency</td>
<td>3.2</td>
<td>3.1</td>
<td>0.1</td>
</tr>
<tr>
<td>64. Most employees in the agency have training plans that are followed</td>
<td>3.4</td>
<td>3.1</td>
<td>0.3*</td>
</tr>
<tr>
<td>65. I keep up with literature and theory relevant to the major duties of my current position</td>
<td>2.3</td>
<td>2.2</td>
<td>0.1</td>
</tr>
<tr>
<td>66. Agency leaders spend most of their time dealing with whatever crises erupt</td>
<td>2.6</td>
<td>2.6</td>
<td>---</td>
</tr>
<tr>
<td>67. Agency leaders focus their attention on the future</td>
<td>2.9</td>
<td>2.6</td>
<td>0.3*</td>
</tr>
<tr>
<td>68. Agency leaders and managers are primarily task oriented</td>
<td>2.8</td>
<td>2.7</td>
<td>0.1</td>
</tr>
<tr>
<td>69. Agency leaders and managers demonstrate concern for employees</td>
<td>2.4</td>
<td>2.6</td>
<td>0.2</td>
</tr>
</tbody>
</table>

¹Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. Differences between means exceeding the 80th percentile (difference ≥ 0.3) are noted with an asterisk (*).
characteristics of people considered good leaders (regardless of their position in the agency) were (1) being a good listener and communicator and (2) being sensitive to or supportive of employees. Decisiveness (coupled with openness to input), vision and technical knowledge were also valued characteristics.

Apparently, most agency leaders fit the description given, as employees most often characterized the style of agency leadership as participative, open and teamwork oriented. Nearly all of the people specifically identified as leaders in the case study agencies indicated they had become more participative and delegative as their careers progressed.

The most common methods of learning about leadership were learning from the successes and mistakes of other people and personal experience. Training courses, books and journals played only minor roles in the development of leaders in most cases. Formal training in leadership and management skills was more likely to have had an effect early in a leader's career.

Several of the case study agencies displayed strong commitments to training and continuing education for their employees. Training was by far the most common answer to the question, "What is the best thing the agency does to improve the leadership and management skills of agency employees?" In spite of that emphasis, one of the most
frequently voiced concerns of agency employees was inadequate opportunities for training. Along with public involvement, training opportunities to improve leadership and management skills were most often sought by agency employees. Many employees, while acknowledging the capabilities of agency leaders, were concerned that new generations of leaders were not being developed.

Examples of developing leadership and management skills

Many of the case study agencies emphasized employee training. The Idaho Department of Fish and Game holds an in-service training school for all employees every other year. Several training modules are offered at each school. The Arizona Game and Fish Department holds an annual meeting of all employees where training opportunities are combined with awards ceremonies and team building exercises. Many Arizona employees are participants in the rigorous state certified-public-manager training program. The Missouri Department of Conservation's Human Resources Division offers a comprehensive set of training courses designed to meet employee desires defined in a training needs survey. Many of the courses are taught by department-employed instructors.
The Wisconsin Department of Natural Resources also offers a comprehensive training program that is tied to the department performance appraisal system. All department employees have training plans, which are developed annually in cooperation with their supervisors. Copies of the training plans are sent to the department training office where the information is computerized. The training office is then able to determine demand for the various training courses and schedule them in convenient locations. When schedules are set, the computerized file facilitates notification of employees regarding training opportunities. The flagship course in Wisconsin's training program, "Managing for the Future," is discussed in a subsequent section.

The New York Division of Fish and Wildlife took an aggressive, but different, approach to employee training. After conducting a needs assessment, the department developed three training modules that have been offered repeatedly throughout the state. The first module, "Comprehensive Management," dealt with the planning process. The second module, "Communication and Citizen Participation," concerned planning and implementing a citizen participation program, dealing with difficult publics and written communication skills. The third module, "Negotiation and Litigation," covered New York's State Environmental Quality Review process, litigation in New
York, witness skills, various legal settings and procedures, negotiation skills and alternative dispute resolution techniques. The training modules have been extremely popular among division employees. Many of the employees interviewed indicated the training program was the best thing the division had done in recent memory. Employees of the division, more than those in any other agency, cited training as the best thing the agency does to improve management and leadership skills of its employees.

Factor 15: Participative Decision Making

Questionnaire responses

Employees of all six agencies identified as effective in the agency management category agreed agency leaders seek ideas from their subordinates (Table 43). In five of the six agencies, they agreed leaders act on the ideas received. Directors and their deputies showed substantially stronger agreement on both items than other employee groups (Table 44). There was little variation among the other employee groups.

Men agreed more strongly than women that agency leaders seek ideas from employees and act upon the ideas received.
Table 43. Mean responses to questionnaire items related to the effectiveness factor, participative decision making within the agency.¹

<table>
<thead>
<tr>
<th>Question</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>70. Leaders actively seek ideas from agency employees</td>
<td>2.8*</td>
<td>2.7*</td>
<td>2.7*</td>
<td>2.6*</td>
<td>2.4*</td>
<td>2.1*</td>
<td>2.6</td>
</tr>
<tr>
<td>71. Agency leaders act on ideas received from the employees</td>
<td>2.7*</td>
<td>3.0</td>
<td>2.7*</td>
<td>2.7*</td>
<td>2.4*</td>
<td>2.3*</td>
<td>2.6</td>
</tr>
</tbody>
</table>

¹Response were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5= strongly disagree. Asterisks indicate responses that differ significantly (p ≤ .05) from neutral.
Table 44. Mean responses of employee groups to questionnaire items related to the effectiveness factor, participative decision making within the agency.¹

<table>
<thead>
<tr>
<th>Question</th>
<th>DIR</th>
<th>ENF</th>
<th>FIS</th>
<th>WIL</th>
<th>I&amp;E</th>
<th>ADM</th>
<th>75th Percentile Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>70. Leaders actively seek ideas from agency employees</td>
<td>1.9</td>
<td>2.5</td>
<td>2.7</td>
<td>2.7</td>
<td>2.6</td>
<td>2.5</td>
<td>DIR &lt; all others</td>
</tr>
<tr>
<td>71. Agency leaders act on ideas received from the employees</td>
<td>1.9</td>
<td>2.6</td>
<td>2.7</td>
<td>2.7</td>
<td>2.9</td>
<td>2.6</td>
<td>DIR &lt; all others</td>
</tr>
</tbody>
</table>

¹Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree, 5=strongly disagree. DIR=agency directors and their deputies, ENF=enforcement, FIS=fisheries, WIL=wildlife, I&E=information and education and ADM=administrative support. 75th percentile difference ≥ 0.5.
(Table 45). There were no substantial differences between headquarters and field personnel.

Interview responses

All of the case study agencies placed a high priority on involvement of employees in decision making processes. The most often mentioned mechanisms for employee participation were planning processes and various types of staff meetings. Involvement of employees in planning processes, allowing them to play an important role in determining their futures, creates a sense of empowerment and job satisfaction (Spector 1986). Case study agencies frequently delegated decision making authority to the lowest possible level. The prevailing attitude among employees of the case study agencies was, "You are only left out of the decision making process if you want to be."

Examples of participative decision making

Since agency directors were universally viewed as open to input, examples of participation in decision making processes could be borrowed from almost any of the case study agencies. The examples cited reflect exceptionally aggressive efforts to involve employees in decision making.
Table 45. Mean responses of men and women to questionnaire items related to the effectiveness factor, participative decision making within the agency.\(^1\)

<table>
<thead>
<tr>
<th>Question</th>
<th>Men N=324</th>
<th>Women N=46</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>70. Leaders actively seek ideas from agency employees</td>
<td>2.5</td>
<td>2.8</td>
<td>0.3*</td>
</tr>
<tr>
<td>71. Agency leaders act on ideas received from the employees</td>
<td>2.5</td>
<td>2.9</td>
<td>0.3*</td>
</tr>
</tbody>
</table>

\(^1\) Responses were coded 1 = strongly agree, 2 = agree, 3 = neutral, 4 = disagree and 5 = strongly disagree. Differences between means exceeding the 80th percentile (difference ≥ 0.3) are noted with an asterisk (*).
When the New York Division of Fish and Wildlife began developing a new mission statement and a statement of values, everyone in the division was involved. Although a strategic management team was formed, it functioned as a central coordination point for division-wide participation in development of the new statements. Several months of effort and several drafts of the statements were involved before the statements were accepted. Division leadership sent a clear message to employees--the new mission and values were developed by and belonged to the employees.

Study team members heard more statements about delegation of decision making authority in Arizona and Wisconsin than in any other states. In the Arizona Game and Fish Department, the emphasis on delegation appeared to reflect the personal philosophy of the director. In Wisconsin, the decentralized structure of the Department of Natural Resources is designed to maximize delegation of decisions to field personnel. Representatives of every division are located in each district office. District directors are equal to division administrators in the department hierarchy. Thus, all the expertise and authority to make decisions are present at the local level. Central office personnel serve as true staff, rather than line personnel, on most matters. All agency personnel can contribute to top level policy discussions by developing
"Secretary's issues," briefing items concerning emerging issues that may need consideration by the secretary's staff.

The decentralized structure of the Wisconsin Department of Natural Resources appears to contribute to excellent relationships between headquarters and field personnel. As would be expected, study team members heard some complaints from field personnel about headquarters staff in every agency visited. While the complaint level was low in all the case study agencies, the nearly complete lack of complaints in the Wisconsin Department of Natural Resources was astounding. Headquarters and field staff respected and supported each other's role, just as the structure was designed.

Factor 16: Teamwork Within the Agency

Questionnaire responses

Employees of all six agencies identified as effective in the agency management category agreed major issues are usually addressed by teams rather than individuals (Table 46). Five out of six agreed that roles and responsibilities of teams are clearly spelled out, that people are eager to serve on teams and that teams are usually representative of the entire agency.
Table 46. Mean responses to questionnaire items related to the effectiveness factor, teamwork within the agency.¹

<table>
<thead>
<tr>
<th>Question</th>
<th>Agency</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>72. Major issues and decisions are usually addressed by teams of people (versus individuals)</td>
<td></td>
<td>2.5*</td>
<td>2.1*</td>
<td>2.7*</td>
<td>2.2*</td>
<td>2.1*</td>
<td>1.9*</td>
<td>2.3</td>
</tr>
<tr>
<td>73. When teams are set up, their roles and responsibilities related to decision making are clearly spelled out</td>
<td></td>
<td>2.6*</td>
<td>2.5*</td>
<td>2.8*</td>
<td>2.6*</td>
<td>2.8</td>
<td>2.4*</td>
<td>2.6</td>
</tr>
<tr>
<td>74. When teams are being set up, people are eager to participate</td>
<td></td>
<td>2.7*</td>
<td>2.9</td>
<td>2.5*</td>
<td>2.7*</td>
<td>2.8*</td>
<td>2.5*</td>
<td>2.7</td>
</tr>
<tr>
<td>75. Teams are usually representative of the entire agency</td>
<td></td>
<td>2.6*</td>
<td>2.5*</td>
<td>2.9</td>
<td>2.5*</td>
<td>2.5*</td>
<td>2.6*</td>
<td>2.6</td>
</tr>
</tbody>
</table>

¹Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. Asterisks indicate responses that differ significantly from neutral (p ≤ .05).
Little variation occurred among employee groups on questionnaire items related to teamwork, although directors and their deputies generally agreed more strongly than others (Table 47). No major differences existed between the responses of men and women (Table 48) nor between field and headquarters staff.

Interview responses

In most of the case study agencies, teamwork is valued and promoted through the frequent use of teams and committees to address problems. Interviewees commonly referred to "team happy" agencies, but they liked the emphasis on teams. Several agencies had training workshops to teach and promote teamwork. In fact, training sessions were often cited by employees as excellent team building opportunities themselves, because they brought people together who did not usually work together.

Employees had a broad perspective on what constitutes a team. When interviewees described teams, they talked at various times about staff of a bureau, regional office staff that crossed bureau lines or ad hoc committees established to deal with specific problems. The most common use of ad hoc committees were interdisciplinary teams established for planning purposes. As discussed in the previous section,
Table 47. Mean responses of employee groups to questionnaire items related to the effectiveness factor, teamwork within the agency.¹

<table>
<thead>
<tr>
<th>Question</th>
<th>DIR N=14</th>
<th>ENF N=60</th>
<th>FIS N=60</th>
<th>WIL N=64</th>
<th>I&amp;E N=34</th>
<th>ADM N=74</th>
<th>75th Percentile Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>72. Major issues and decisions are usually addressed by teams of people (versus individuals)</td>
<td>1.9</td>
<td>2.3</td>
<td>2.3</td>
<td>2.4</td>
<td>2.4</td>
<td>2.1</td>
<td>DIR &lt; WIL, I&amp;E</td>
</tr>
<tr>
<td>73. When teams are set up, their roles and responsibilities related to decision making are clearly spelled out</td>
<td>2.4</td>
<td>2.5</td>
<td>2.8</td>
<td>2.9</td>
<td>2.7</td>
<td>2.6</td>
<td>DIR &lt; WIL</td>
</tr>
<tr>
<td>74. When teams are being set up, people are eager to participate</td>
<td>2.6</td>
<td>2.7</td>
<td>2.8</td>
<td>2.5</td>
<td>2.7</td>
<td>2.6</td>
<td>------</td>
</tr>
<tr>
<td>75. Teams are usually representative of the entire agency</td>
<td>2.7</td>
<td>2.7</td>
<td>2.7</td>
<td>2.6</td>
<td>2.5</td>
<td>2.5</td>
<td>------</td>
</tr>
</tbody>
</table>

¹Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. DIR=agency directors and their deputies, ENF=enforcement, FIS=fisheries, WIL=wildlife, I&E=information and education and ADM=administrative support. 75th percentile difference ≥ 0.5.
Table 48. Mean responses of men and women to questionnaire items related to the effectiveness factor, teamwork within the agency.¹

<table>
<thead>
<tr>
<th>Question</th>
<th>Men</th>
<th>Women</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>72. Major issues and decisions are usually addressed by teams of people (versus individuals)</td>
<td>2.3</td>
<td>2.2</td>
<td>0.1</td>
</tr>
<tr>
<td>73. When teams are set up, their roles and responsibilities related to decision making are clearly spelled out</td>
<td>2.6</td>
<td>2.6</td>
<td>---</td>
</tr>
<tr>
<td>74. When teams are being set up, people are eager to participate</td>
<td>2.7</td>
<td>2.7</td>
<td>---</td>
</tr>
<tr>
<td>75. Teams are usually representative of the entire agency</td>
<td>2.6</td>
<td>2.6</td>
<td>---</td>
</tr>
</tbody>
</table>

¹Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. Differences between means exceeding the 80th percentile (difference ≥ 0.3) are noted with an asterisk (*).
planning lends itself well to participation and teamwork because of the satisfaction generated among employees empowered to determine their future.

When employees were asked what made teams successful, empowerment was the most frequent response. They also frequently cited the chemistry among team members. Employees thought it was important for teams to be representative of the agency and to have the right mix of leaders, thinkers, communicators and experienced individuals. Other factors that were considered important to successful team efforts were having clear goals, a specific time frame to accomplish goals and adequate support (time and resources) to accomplish the goals.

The major concerns were appropriateness of the tasks assigned and follow up by agency leadership. Agency employees appreciated the use of teams to address many issues, but they did not expect leaders to abdicate their leadership responsibilities. Employees disapproved of delegation of tasks they thought should have been handled by individual leaders. The worst sin a leader can commit, according to many interviewees, is to ask a team to address an issue and then fail to heed the team's advice.
Examples of teamwork

The Wisconsin Department of Natural Resources teaches employees to recognize the importance of interpersonal communication styles in making team efforts successful. One of the most popular training courses offered by the department teaches people to recognize four general communication styles. During the course, the employees learn how their closest associates perceive their communication style. A conversation with almost any department employee will reveal the extent to which the communications training has been internalized in the agency, as the employee identifies herself as a controller, analyzer, advocate or facilitator. One of the exercises used to drive home the importance of communication styles is to group people of like styles together and assign them a team task. They usually have a difficult time completing the task. When teams are rearranged to include people with different communication styles, team tasks are completed more easily.

The same principle, albeit without the formal assessment of styles, was used by the Idaho Department of Fish and Game in setting up teams for each of their 5-year species plans. Each team was carefully chosen to include
leaders, respected thinkers, experienced field personnel and at least one good writer.

The Arizona Game and Fish Department has had extensive training in principles of teamwork, including a department-wide effort to develop "Team Wildlife." They used their teamwork training when the Heritage Initiative passed, giving the department a windfall of new funding. A "Heritage Team" was established to develop a plan for spending the new money. The task was large, as were the implications for the department. Consequently, team members were relieved of many of their normal responsibilities so they could concentrate on developing the Heritage plan. The task was further facilitated by moving the team to a separate work site where they could work relatively undisturbed. The obvious and strong commitment made by agency management to the team was a clear message of the importance of teamwork. Several of the team members indicated participation on the team was an especially rewarding experience.
Case study agency employees agreed agency leaders are good listeners who are approachable regardless of whether the news is good or bad (Table 49). Many employees were skeptical, however, about the effectiveness, openness and honesty of internal communication. Employees in only three of the six agencies agreed communication related to agency decision making is open and honest. The other three agencies fell into the neutral range. All but one of the agencies were neutral on the question of effective information sharing throughout the agency. Leaders in five out of six agencies were categorized as good listeners. All agencies agreed leaders need to visit field stations more often. Only two agencies agreed leaders have a good feeling for issues and concerns of field personnel.

As might be expected, directors and their deputies agreed strongly with all of the questionnaire items related to internal communication, differing substantially from all other employee groups on 4 of the 7 items (Table 50). The only item on which directors' responses were similar to other groups was the need for agency leaders to visit field stations more often, which all groups strongly agreed was
Table 49. Mean responses to questionnaire items related to the effectiveness factor, internal communication.¹

<table>
<thead>
<tr>
<th>Question</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>76. Communication related to agency decision making is open and honest</td>
<td>2.9</td>
<td>3.0</td>
<td>2.7*</td>
<td>2.9</td>
<td>2.5*</td>
<td>2.4*</td>
<td>2.7</td>
</tr>
<tr>
<td>77. Agency leaders are accessible to the rank and file</td>
<td>2.2*</td>
<td>1.8*</td>
<td>2.5*</td>
<td>2.3*</td>
<td>1.8*</td>
<td>2.2*</td>
<td>2.1</td>
</tr>
<tr>
<td>78. Agency leaders need to visit field stations more often</td>
<td>2.0*</td>
<td>2.0*</td>
<td>1.9*</td>
<td>2.2*</td>
<td>2.3*</td>
<td>2.0*</td>
<td>2.1</td>
</tr>
<tr>
<td>79. Agency leaders have a good feel for issues and concerns of agency personnel in field stations</td>
<td>2.8*</td>
<td>3.0</td>
<td>3.0</td>
<td>3.1</td>
<td>2.8</td>
<td>2.8*</td>
<td>2.9</td>
</tr>
<tr>
<td>80. Agency leaders are good listeners</td>
<td>2.5*</td>
<td>2.8</td>
<td>2.4*</td>
<td>2.8*</td>
<td>2.4*</td>
<td>2.4*</td>
<td>2.6</td>
</tr>
<tr>
<td>81. When given bad news, agency leaders appreciate getting the information; they are not likely to &quot;shoot the messenger&quot;</td>
<td>2.3*</td>
<td>2.2*</td>
<td>2.4*</td>
<td>2.3*</td>
<td>2.2*</td>
<td>2.0*</td>
<td>2.2</td>
</tr>
<tr>
<td>82. Information is effectively shared throughout the agency</td>
<td>3.1</td>
<td>2.9</td>
<td>3.1</td>
<td>2.9</td>
<td>2.9</td>
<td>2.8*</td>
<td>3.0</td>
</tr>
</tbody>
</table>

¹Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. Asterisks indicate responses that differ significantly (p ≤ .05) from neutral.
Table 50. Mean responses of employee groups to questionnaire items related to the effectiveness factor, internal communication.¹

<table>
<thead>
<tr>
<th>Question</th>
<th>DIR N=14</th>
<th>ENF N=60</th>
<th>FIS N=60</th>
<th>WIL N=64</th>
<th>I&amp;E N=34</th>
<th>ADM N=74</th>
<th>75th Percentile Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>76. Communication related to agency decision making is open and honest</td>
<td>1.9</td>
<td>2.5</td>
<td>2.9</td>
<td>2.9</td>
<td>2.9</td>
<td>2.5</td>
<td>DIR &lt; all others</td>
</tr>
<tr>
<td>77. Agency leaders are accessible to the rank and file</td>
<td>1.6</td>
<td>2.0</td>
<td>2.2</td>
<td>2.3</td>
<td>2.3</td>
<td>2.0</td>
<td>DIR &lt; FIS, WIL, I&amp;E</td>
</tr>
<tr>
<td>78. Agency leaders need to visit field stations more often</td>
<td>2.0</td>
<td>1.8</td>
<td>2.1</td>
<td>2.0</td>
<td>2.3</td>
<td>2.1</td>
<td>ENF &lt; I&amp;E</td>
</tr>
<tr>
<td>79. Agency leaders have a good feel for issues and concerns of agency personnel in field stations</td>
<td>2.2</td>
<td>2.8</td>
<td>3.2</td>
<td>3.3</td>
<td>2.8</td>
<td>2.7</td>
<td>DIR &lt; all others; WIL &gt; ENF, I&amp;E</td>
</tr>
<tr>
<td>80. Agency leaders are good listeners</td>
<td>2.1</td>
<td>2.3</td>
<td>2.7</td>
<td>2.9</td>
<td>2.6</td>
<td>2.5</td>
<td>DIR &lt; FIS, WIL, I&amp;E</td>
</tr>
<tr>
<td>81. When given bad news, agency leaders appreciate getting the information; they are not likely to &quot;shoot the messenger&quot;</td>
<td>1.2</td>
<td>2.3</td>
<td>2.2</td>
<td>2.5</td>
<td>2.3</td>
<td>2.2</td>
<td>DIR &lt; all others</td>
</tr>
<tr>
<td>82. Information is effectively shared throughout the agency</td>
<td>1.8</td>
<td>2.6</td>
<td>3.0</td>
<td>3.2</td>
<td>3.1</td>
<td>2.9</td>
<td>DIR &lt; all others; ENF &lt; WIL, I&amp;E</td>
</tr>
</tbody>
</table>

¹Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. DIR=agency directors and their deputies, ENF=enforcement, FIS=fisheries, WIL=wildlife, I&E=information and education and ADM=administrative support. 75th percentile difference ≥ 0.5.
necessary. Differences were particularly striking on the items related to honest and open communication, effective sharing of information, leaders' understanding of issues and concerns of field personnel and willingness of leaders to accept bad news without "shooting the messenger." Directors strongly agreed communication within the agencies is open and honest. Enforcement and administrative support personnel moderately agreed, while fisheries, wildlife and information and education personnel were neutral. Only enforcement personnel agreed with directors (although substantially less strongly) that information is shared effectively throughout the agencies. All other groups were neutral or disagreed. Fisheries and wildlife personnel disagreed that leaders understand the issues and concerns of field personnel. Enforcement, information and education and administrative support personnel moderately agreed. Although the difference between mean responses of directors and other groups was large on the item related to "shooting the messenger," all groups showed relatively strong agreement.

Men differed substantially from women in agreeing agency leaders are good listeners (Table 51). Differences between men and women were minor on the remaining items related to internal communication. However, men consistently responded more positively than women.
<table>
<thead>
<tr>
<th>Question</th>
<th>Men N=324</th>
<th>Women N=46</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>76. Communication related to agency decision making is open and honest</td>
<td>2.7</td>
<td>2.8</td>
<td>0.1</td>
</tr>
<tr>
<td>77. Agency leaders are accessible to the rank and file</td>
<td>2.1</td>
<td>2.3</td>
<td>0.2</td>
</tr>
<tr>
<td>78. Agency leaders need to visit field stations more often</td>
<td>2.1</td>
<td>2.2</td>
<td>0.1</td>
</tr>
<tr>
<td>79. Agency leaders have a good feel for issues and concerns of agency personnel in field stations</td>
<td>2.9</td>
<td>3.1</td>
<td>0.2</td>
</tr>
<tr>
<td>80. Agency leaders are good listeners</td>
<td>2.5</td>
<td>2.9</td>
<td>0.4*</td>
</tr>
<tr>
<td>81. When given bad news, agency leaders appreciate getting the information; they are not likely to &quot;shoot the messenger&quot;</td>
<td>2.2</td>
<td>2.3</td>
<td>0.1</td>
</tr>
<tr>
<td>82. Information is effectively shared throughout the agency</td>
<td>2.9</td>
<td>3.0</td>
<td>0.1</td>
</tr>
</tbody>
</table>

1Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. Differences between means exceeding the 80th percentile (difference ≥ 0.3) are noted with an asterisk (*).
There were surprisingly few differences between headquarters and field personnel on items related to internal communication. Field staff substantially differed from headquarters staff only with regard to leaders' knowledge of issues and concerns of field personnel (Table 52).

Interview responses

Agency employees indicated communication within the case study agencies occurs in many ways. Among the most common communication techniques listed as most effective were internal newsletters, notices enclosed with paychecks, meetings of many types, personal contacts and the grapevine. Newsletters and paycheck enclosures seem to be effective for informing employees regarding routine department affairs. When the need to share information is immediate, the telephone is still the preferred communication tool. Facsimile machines have improved the ability of agencies to share information rapidly. Only a few of the case study agencies rely on computer links, such as electronic mail, to a significant degree. The grapevine, the informal communication network that exists in any organization, is often the most rapid method of sharing information. A few agency administrators indicated they had tested the
Table 52. Mean responses of headquarters and field personnel to questionnaire items related to the effectiveness factor, internal communication.\(^1\)

<table>
<thead>
<tr>
<th>Question</th>
<th>Headquarters N=179</th>
<th>Field N=189</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>76. Communication related to agency decision making is open and honest</td>
<td>2.7</td>
<td>2.7</td>
<td>---</td>
</tr>
<tr>
<td>77. Agency leaders are accessible to the rank and file</td>
<td>2.1</td>
<td>2.2</td>
<td>0.1</td>
</tr>
<tr>
<td>78. Agency leaders need to visit field stations more often</td>
<td>2.1</td>
<td>2.0</td>
<td>0.1</td>
</tr>
<tr>
<td>79. Agency leaders have a good feel for issues and concerns of agency personnel in field stations</td>
<td>2.7</td>
<td>3.1</td>
<td>0.4(^*)</td>
</tr>
<tr>
<td>80. Agency leaders are good listeners</td>
<td>2.6</td>
<td>2.5</td>
<td>0.1</td>
</tr>
<tr>
<td>81. When given bad news, agency leaders appreciate getting the information; they are not likely to &quot;shoot the messenger&quot;</td>
<td>2.2</td>
<td>2.3</td>
<td>0.1</td>
</tr>
<tr>
<td>82. Information is effectively shared throughout the agency</td>
<td>3.0</td>
<td>2.8</td>
<td>0.2</td>
</tr>
</tbody>
</table>

\(^1\)Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. Differences between means exceeding the 80th percentile (difference ≥ 0.3) are noted with an asterisk (\(^*\)).
grapevine and found it to be a surprisingly swift and accurate means of getting word out to employees. However, information flowing through the grapevine is slower to reach employees in remote locations.

Large meetings, such as professional society meetings and statewide gatherings of division personnel, were cited as especially valuable to field personnel. Opportunities for field personnel to meet and share information with field staff from other areas of the state or with employees of other agencies are rare. Concern about the loss of the few existing opportunities for personal communication were especially keen in those states experiencing budget problems, where travel for meetings has been one of the first budget items to be cut.

Examples of internal communication

As the questionnaire responses suggested, the study teams found few examples of outstanding internal communication to share. The Wisconsin Department of Natural Resources makes effective use of an electronic mail system. Wisconsin employees have become accustomed to instant sharing of information through electronic memoranda.

Minutes of staff meetings were mentioned in nearly every agency as a means of keeping up with the rest of the
agency. "Briefing items" prepared weekly by each bureau and region for director's staff meetings in the Arizona Game and Fish Department were frequently mentioned as effective in communication. Minutes were not always seen as particularly effective communication tools, however, as they were often out of date by the time field personnel saw them.

Bureau of Wildlife employees in the New York Division of Fish and Wildlife saw their bureau newsletter as particularly valuable. The newsletter was begun with the expressed intent of improving communication within the bureau. Each quarterly issue of the newsletter contains articles about statewide wildlife policy issues, information about bureau planning and citizen participation efforts, bureau employment opportunities and personal profiles of a few bureau employees.

Category: Personnel

Factor 18: Employee Morale

Questionnaire responses

Employees in five of the eight agencies identified as effective in the personnel category agreed employee morale
is generally good (Table 53). In two of the remaining three agencies, employees disagreed, although not significantly.

Directors and their deputies agreed more strongly than all other employee groups except enforcement personnel that morale is good (Table 54). Enforcement and administrative support personnel also generally agreed, while fisheries, wildlife and information and education personnel responses were essentially neutral.

Men generally agreed that morale is good, while women were neutral (Table 55).

Both headquarters and field personnel mildly agreed with the employee morale question.

Interview responses

In general, financial compensation was the most important factor affecting employee morale in the case study agencies. However, the total amount of compensation was rarely the issue, as few state fish and wildlife employees expect high salaries. The two aspects of compensation that affected morale most were increases in salary and feelings of equity. Employees of some of the case study agencies had not received a salary increase in several years, due to tight state budgets. Salary equity issues may arise within or among states. Salary inequity issues within agencies
Table 53. Mean responses to questionnaire items related to the effectiveness factor, employee morale.¹

<table>
<thead>
<tr>
<th>Question</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>In general, the morale of agency employees is good</td>
<td>3.0</td>
<td>3.2</td>
<td>2.3*</td>
<td>2.7*</td>
<td>3.2</td>
<td>2.7*</td>
<td>2.6*</td>
<td>2.6*</td>
<td>2.8</td>
</tr>
</tbody>
</table>

¹Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. Asterisks indicate responses that differ significantly (p ≤ .05) from neutral.
Table 54. Mean responses of employee groups to questionnaire items related to the effectiveness factor, employee morale.¹

<table>
<thead>
<tr>
<th>Question</th>
<th>DIR N=19</th>
<th>ENF N=68</th>
<th>FIS N=94</th>
<th>WIL N=104</th>
<th>I&amp;E N=37</th>
<th>ADM N=91</th>
<th>75th Percentile Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>83. In general, the morale of agency employees is good</td>
<td>2.1</td>
<td>2.4</td>
<td>2.9</td>
<td>3.1</td>
<td>3.1</td>
<td>2.6</td>
<td>DIR &lt; all but ENF; ENF &lt; FIS,WIL,I&amp;E</td>
</tr>
</tbody>
</table>

¹Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. DIR=agency directors and their deputies, ENF=enforcement, FIS=fisheries, WIL=wildlife, I&E=information and education and ADM=administrative support. 75th percentile difference ≥ 0.5.
Table 55. Mean responses of men and women to questionnaire items related to the effectiveness factor, employee morale.1

<table>
<thead>
<tr>
<th>Question</th>
<th>Men N=437</th>
<th>Women N=61</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>83. In general, the morale of agency employees is good</td>
<td>2.7</td>
<td>3.0</td>
<td>0.3*</td>
</tr>
</tbody>
</table>

1Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. Differences between means exceeding the 80th percentile (difference ≥ 0.3) are noted with an asterisk (*).
have more serious implications for employee morale, but also occur less frequently than inequities among agencies. Feelings of salary inequity within an agency occur when one or more groups of employees perceive they are paid substantially less than other groups with similar backgrounds and responsibilities. Feelings of salary inequity among agencies are more common, as employees compare their salaries with those of counterparts in neighboring states.

Recognition of good work was the second most often cited item affecting employee morale. Many interviewees indicated that recognition was particularly important because of the lack of financial rewards in most state agencies. Both formal and informal methods of recognition were cited as important in affecting morale.

Other important morale factors were related to communication and participation. Employees wanted to feel as though they were important in agency decision making processes. They desired effective communication, avenues of input into decision making and a feeling of making a difference in their jobs.
Examples of employee morale

The study teams found no specific examples to discuss in this area.

Factor 19: Definition of Personnel Roles

Information relative to this effectiveness factor was collected only through the employee questionnaire. There were no interview questions related to role definition, and consequently, no examples to describe.

Questionnaire responses

Employees of all eight agencies identified as effective in the personnel category agreed their job descriptions accurately reflect what they do (Table 56). They also agreed their job descriptions accurately reflect what they think they should do. There was no apparent explanation for the substantially lower agreement among employees of two of the agencies.

Directors and their deputies agreed most strongly on both questionnaire items (Table 57). However, all groups agreed fairly strongly with both items. Men and women did
<table>
<thead>
<tr>
<th>Question</th>
<th>Agency</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>84. The job description for my position accurately reflects what I do</td>
<td></td>
<td>2.2*</td>
<td>2.6*</td>
<td>2.3*</td>
<td>2.2*</td>
<td>2.3*</td>
<td>2.3*</td>
<td>2.4*</td>
<td>2.3*</td>
<td>2.3</td>
</tr>
<tr>
<td>85. The job description for my position accurately reflects what I think I should do</td>
<td></td>
<td>2.2*</td>
<td>2.4*</td>
<td>2.3*</td>
<td>2.4*</td>
<td>2.3*</td>
<td>2.3*</td>
<td>2.4*</td>
<td>2.3*</td>
<td>2.3</td>
</tr>
</tbody>
</table>

Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. Asterisks indicate responses that differ significantly (p ≤ .05) from neutral.
Table 57. Mean responses of employee groups to questionnaire items related to the effectiveness factor, definition of personnel roles.¹

<table>
<thead>
<tr>
<th>Question</th>
<th>DIR N=19</th>
<th>ENF N=68</th>
<th>FIS N=94</th>
<th>WIL N=104</th>
<th>I&amp;E N=37</th>
<th>ADM N=91</th>
<th>75th Percentile Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>84. The job description for my position accurately reflects what I do</td>
<td>1.9</td>
<td>2.3</td>
<td>2.4</td>
<td>2.5</td>
<td>2.3</td>
<td>2.2</td>
<td>DIR &lt; FIS, WIL</td>
</tr>
<tr>
<td>85. The job description for my position accurately reflects what I think I should do</td>
<td>1.8</td>
<td>2.3</td>
<td>2.3</td>
<td>2.5</td>
<td>2.3</td>
<td>2.2</td>
<td>DIR &lt; all ADM</td>
</tr>
</tbody>
</table>

¹Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. DIR=agency directors and their deputies, ENF=enforcement, FIS=fisheries, WIL=wildlife, I&E=information and education and ADM=administrative support. 75th percentile difference ≥ 0.5.
not differ substantially on either questionnaire item (Table 58) nor did headquarters and field personnel.

Factor 20: Public and Personnel Understanding of Agency Mission

Information relative to this effectiveness factor was collected only through the employee questionnaire. Consequently, public understanding of agency mission was not assessed. There were no interview questions relative to this factor, and consequently, no examples to describe.

Questionnaire responses

Employees of all eight agencies identified as effective in the personnel category strongly agreed they understand the missions of their agencies and their roles in helping to achieve those missions (Table 59). Agreement with these questionnaire items was among the strongest of all items. Variation among agencies was low.

Directors and their deputies agreed more strongly than fisheries and wildlife personnel that they knew the agency's mission and understood their role in helping to achieve it, but all groups agreed strongly with both items (Table 60). There were no substantial differences in the responses of
Table 58. Mean responses of men and women to questionnaire items related to the effectiveness factor, definition of personnel roles.

<table>
<thead>
<tr>
<th>Question</th>
<th>Men</th>
<th>Women</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>84. The job description for my position accurately reflects what I do</td>
<td>2.3</td>
<td>2.4</td>
<td>0.1</td>
</tr>
<tr>
<td>85. The job description for my position accurately reflects what I think I should do</td>
<td>2.3</td>
<td>2.3</td>
<td>---</td>
</tr>
</tbody>
</table>

1Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. Differences between means exceeding the 80th percentile (difference ≥ 0.3) are noted with an asterisk (*).
Table 59. Mean responses to questionnaire items related to the effectiveness factor, personnel understanding of the agency's mission.

<table>
<thead>
<tr>
<th>Question</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>86. I know what the agency's mission is</td>
<td>2.0*</td>
<td>1.6*</td>
<td>1.8*</td>
<td>1.9*</td>
<td>2.1*</td>
<td>1.7*</td>
<td>1.5*</td>
<td>1.7*</td>
<td>1.8</td>
</tr>
<tr>
<td>87. I understand my role in helping the agency achieve its mission</td>
<td>1.9*</td>
<td>1.6*</td>
<td>1.8*</td>
<td>1.9*</td>
<td>2.0*</td>
<td>1.8*</td>
<td>1.6*</td>
<td>1.8*</td>
<td>1.8</td>
</tr>
</tbody>
</table>

'Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. Asterisks indicate responses that differ significantly (p ≤ .05) from neutral.
<table>
<thead>
<tr>
<th>Question</th>
<th>DIR (N=19)</th>
<th>ENF (N=68)</th>
<th>FIS (N=94)</th>
<th>WIL (N=104)</th>
<th>I&amp;E (N=37)</th>
<th>ADM (N=91)</th>
<th>75th Percentile Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>86. I know what the agency's mission is</td>
<td>1.4</td>
<td>1.8</td>
<td>1.9</td>
<td>1.9</td>
<td>1.7</td>
<td>1.7</td>
<td>DIR &lt; FIS, WIL</td>
</tr>
<tr>
<td>87. I understand my role in helping the agency achieve its mission</td>
<td>1.4</td>
<td>1.7</td>
<td>1.9</td>
<td>1.9</td>
<td>1.6</td>
<td>1.8</td>
<td>DIR &lt; FIS, WIL</td>
</tr>
</tbody>
</table>

1Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. DIR=agency directors and their deputies, ENF=enforcement, FIS=fisheries, WIL=wildlife, I&E=information and education and ADM=administrative support. 75th percentile difference ≥ 0.5.
men and women on either questionnaire item (Table 61). Headquarters and field personnel also responded similarly.

Factor 21: Employee Recognition and Rewards

Questionnaire responses

Overall, the weakest aspect of management effectiveness in the case study agencies was in recognizing and rewarding employees. Only one agency's employees agreed that the agency's performance appraisal system adequately documents employee performance. Employees of three agencies substantially disagreed, while the other four were in the neutral to disagree range (Table 62). Employees in the majority of the eight agencies identified as effective in the personnel category disagreed fairly strongly that outstanding performance is rewarded in their agencies. Only one agency's employees agreed. Not even promotion is seen as a reward for outstanding performance in the majority of agencies. Employees felt the agency's best people are promoted in only two of the eight agencies. Only one agency's employees felt an adequate career ladder is available to most employees.

Directors and their deputies agreed more strongly than all or most other employee groups on all questionnaire items.
Table 61. Mean responses of men and women to questionnaire items related to the effectiveness factor, personnel understanding of the agency mission.

<table>
<thead>
<tr>
<th>Question</th>
<th>Men N=437</th>
<th>Women N=61</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>86. I know what the agency's mission is</td>
<td>1.8</td>
<td>1.9</td>
<td>0.1</td>
</tr>
<tr>
<td>87. I understand my role in helping the agency achieve its mission</td>
<td>1.8</td>
<td>1.9</td>
<td>0.1</td>
</tr>
</tbody>
</table>

¹Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. Differences between means exceeding the 80th percentile (difference ≥ 0.3) are noted with an asterisk (*).
<table>
<thead>
<tr>
<th>Question</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>88. The agency's performance appraisal system adequately documents employee performance</td>
<td>3.4</td>
<td>3.3*</td>
<td>3.3</td>
<td>3.5*</td>
<td>3.4*</td>
<td>3.0</td>
<td>2.7*</td>
<td>3.1</td>
<td>3.2</td>
</tr>
<tr>
<td>89. Outstanding performance is rewarded in the agency</td>
<td>3.7*</td>
<td>3.8*</td>
<td>2.4*</td>
<td>3.4*</td>
<td>3.7*</td>
<td>3.3*</td>
<td>2.9</td>
<td>3.0</td>
<td>3.3</td>
</tr>
<tr>
<td>90. The agency's best people are promoted</td>
<td>3.3</td>
<td>3.4*</td>
<td>2.7*</td>
<td>3.0</td>
<td>3.3*</td>
<td>3.2*</td>
<td>2.7*</td>
<td>3.1</td>
<td>3.1</td>
</tr>
<tr>
<td>91. There is an adequate career ladder in most areas of specialty within the agency</td>
<td>3.6*</td>
<td>3.8*</td>
<td>2.6*</td>
<td>3.1</td>
<td>3.9*</td>
<td>3.1</td>
<td>3.0</td>
<td>3.6*</td>
<td>3.3</td>
</tr>
</tbody>
</table>

1Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. Asterisks indicate responses that differ significantly (p ≤ .05) from neutral.
related to recognition and rewards (Table 63). Directors moderately agreed that performance appraisal systems adequately document employee performance. All other groups, with the exception of administrative support personnel (who were essentially neutral) disagreed. Directors agreed fairly strongly that outstanding performance is rewarded. Enforcement and administrative support personnel were essentially neutral on the question, while fisheries, wildlife and information and education personnel disagreed fairly strongly. Directors were the only group to agree that the agency's best people are promoted. Information and education personnel disagreed most strongly. Directors' responses were most similar to other groups with respect to career ladders. Directors mildly agreed career ladders are adequate, while enforcement and administrative support personnel were nearly neutral. Fisheries personnel moderately disagreed, while information and education and wildlife personnel disagreed fairly strongly.

Men and women differed little on questionnaire items related to recognition and rewards, both mildly disagreed with all items (Table 64).

Field personnel differed from headquarters personnel only with respect to promotion of the agency's best people. Field personnel mildly disagreed, while headquarters personnel were essentially neutral (Table 65).
Table 63. Mean responses of employee groups to questionnaire items related to the effectiveness factor, employee recognition and rewards.¹

<table>
<thead>
<tr>
<th>Question</th>
<th>DIR N=19</th>
<th>ENF N=68</th>
<th>FIS N=94</th>
<th>WIL N=104</th>
<th>I&amp;E N=37</th>
<th>ADM N=91</th>
<th>75th Percentile Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>88. The agency’s performance appraisal system adequately documents employee performance</td>
<td>2.7</td>
<td>3.3</td>
<td>3.2</td>
<td>3.3</td>
<td>3.3</td>
<td>2.9</td>
<td>DIR &lt; all but ADM</td>
</tr>
<tr>
<td>89. Outstanding performance is rewarded in the agency</td>
<td>2.4</td>
<td>3.0</td>
<td>3.5</td>
<td>3.6</td>
<td>3.5</td>
<td>2.9</td>
<td>DIR &lt; all others; ADM, ENF &lt; FIS, WIL, I&amp;E</td>
</tr>
<tr>
<td>90. The agency’s best people are promoted</td>
<td>2.1</td>
<td>3.1</td>
<td>3.1</td>
<td>3.2</td>
<td>3.5</td>
<td>2.9</td>
<td>DIR &lt; all others; ADM &lt; I&amp;E</td>
</tr>
<tr>
<td>91. There is an adequate career ladder in most areas of specialty within the agency</td>
<td>2.8</td>
<td>2.9</td>
<td>3.3</td>
<td>3.8</td>
<td>3.6</td>
<td>3.0</td>
<td>DIR &lt; FIS, WIL, I&amp;E</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>WIL &gt; all but I&amp;E</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>I&amp;E &gt; ADM, ENF</td>
</tr>
</tbody>
</table>

¹Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. DIR=agency directors and their deputies, ENF=enforcement, FIS=fisheries, WIL=wildlife, I&E=information and education and ADM=administrative support. 75th percentile difference ≥ 0.5.
Table 64. Mean responses of men and women to questionnaire items related to the effectiveness factor, employee recognition and rewards.¹

<table>
<thead>
<tr>
<th>Question</th>
<th>Men N=437</th>
<th>Women N=61</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>88. The agency’s performance appraisal system adequately documents employee performance</td>
<td>3.2</td>
<td>3.2</td>
<td>---</td>
</tr>
<tr>
<td>89. Outstanding performance is rewarded in the agency</td>
<td>3.2</td>
<td>3.2</td>
<td>---</td>
</tr>
<tr>
<td>90. The agency’s best people are promoted</td>
<td>3.1</td>
<td>3.3</td>
<td>0.2</td>
</tr>
<tr>
<td>91. There is an adequate career ladder in most areas of specialty within the agency</td>
<td>3.4</td>
<td>3.4</td>
<td>---</td>
</tr>
</tbody>
</table>

¹Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. Differences between means exceeding the 80th percentile (difference ≥ 0.3) are noted with an asterisk (*).
Table 65. Mean responses of headquarters and field personnel to questionnaire items related to the effectiveness factor, employee recognition and rewards.

<table>
<thead>
<tr>
<th>Question</th>
<th>Headquarters N=232</th>
<th>Field N=260</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>88. The agency’s performance appraisal system adequately documents employee performance</td>
<td>3.2</td>
<td>3.2</td>
<td>---</td>
</tr>
<tr>
<td>89. Outstanding performance is rewarded in the agency</td>
<td>3.2</td>
<td>3.3</td>
<td>0.1</td>
</tr>
<tr>
<td>90. The agency’s best people are promoted</td>
<td>2.9</td>
<td>3.2</td>
<td>0.3*</td>
</tr>
<tr>
<td>91. There is an adequate career ladder in most areas of specialty within the agency</td>
<td>3.2</td>
<td>3.4</td>
<td>0.2</td>
</tr>
</tbody>
</table>

^Responses were coded 1=strongly agree, 2=agree, 3=neutral, 4=disagree and 5=strongly disagree. Differences between means exceeding the 80th percentile (difference ≥ 0.3) are noted with an asterisk (*).
Interview responses

All of the case study agencies had formal awards, usually given on an annual basis. Various "Employee of the Year" awards were most frequently cited as the best thing done by agencies to reward outstanding performance. The annual employee awards were coveted in nearly every agency. However, the majority of employees felt more should be done to reward good performance. The second most common response to the question about the best thing done by agencies to reward outstanding performance was, "Nothing, or not very much." Merit systems to provide financial rewards for high performers existed in several of the case study agencies, but were often unfunded or poorly funded due to budget constraints.

Interviews revealed that employee responses to the questionnaire item regarding promotion of the agency's best people was not always a reflection of selection processes. Some talented people in every agency had no desire to be promoted to the central office, but were content to remain in the field. Discontent with career ladders, however, was almost universal. Nearly everyone agreed that good technical people should not have to become administrators to be promoted.
Examples of employee recognition and rewards

Two examples of rewarding employee performance clearly stood out. The Arizona Game and Fish Department hands out scores of awards to individuals and teams at an annual meeting attended by all employees. Some of the department's employees thought the large number of awards reduced their value. The overwhelming sentiment, however, was one of appreciation for the effort to recognize people.

The Idaho Department of Fish and Game approaches recognition and rewards on many fronts. The department is particularly aggressive about giving raises or one-time bonuses through the state merit system. The department gives merit increases to a significantly higher percentage of its employees than any other Idaho state agency. Employees who relocate for employment purposes also receive a bonus. The department even has a physical fitness program that includes time off to exercise and small monetary awards for meeting minimum physical standards.

In addition to formal "Employee of the Year" awards, Idaho also stresses informal modes of recognition. Employees are regularly given recognition at staff meetings and in the department magazine. As discussed previously, letters from constituents praising department employees are
routed to state legislators representing the districts in which the employees work.

**Integrating the Internal Factors: Managing for the Future in Wisconsin**

The Wisconsin Department of Natural Resources (WDNR) is one of the largest and most complex state natural resource agencies in the country. However, the agency is anything but impersonal. Imagining a family of nearly 3,000 people is difficult, but that is clearly the feeling among WDNR employees. The agency has blended planning, management and personnel practices into a package that makes the WDNR one of the most effectively managed agencies in the country. The agency's Managing for the Future training course exemplifies its approach to management.

Managing for the Future was the result of a WDNR study of agency management training needs in the late 1980s. WDNR executives recognized an impending problem as many upper and mid-level managers in the agency were approaching retirement. They were concerned about preparing new leaders to fill those positions. A Management Development Committee was formed to analyze department training needs. Among its recommendations was a three-day course entitled, Orientation to WDNR Management. The committee further recommended the course needed "strong hands-on involvement by members of
Secretary's staff" to better establish the agency's culture, values and "how we manage in the department" (internal memorandum, January 27, 1989).

Agency leadership took the committee recommendations to heart and set out to create a new training course. A consultant helped the agency's top management team determine what should be taught. The Secretary's staff (the agency's top 13 people, including the Secretary, Deputy Secretary, division administrators and district supervisors) agreed so strongly with the committee about their personal involvement in the course that they broke up into several teams to design and deliver the course. Managing for the Future developed into a week-long course designed to teach employees "what it means to be a member of the DNR management team" (WDNR brochure, undated). The process of developing the course also produced a stronger top management team during the year it took to put it together.

Previous management training efforts, offered by people from outside the agency, focused on skills. Managing for the Future, while offering tips on management skills learned by the experienced management team members, focuses on concepts as applied in the WDNR. The management team shares their management experiences to mentor, lead and help develop the agency managers who will someday "fill their shoes."
The course is offered twice per year to mid-level managers who meet criteria for prerequisite training. The management team members (who underwent training in teaching and presentation skills) emphasize having fun while learning. Course topics include agency traditions, strategy and philosophy, how agency policy is made and changed, management systems, human resources, change and customer service. As the week progresses, participants learn not only the skills needed to be effective managers and the mechanics of planning, budgeting and policy making in the agency, but also the sense of history and culture that has shaped the WDNR into the agency it is today.

Evaluations of the course by former participants have been glowing. Many consider it the best training course they have ever taken. They agree the course successfully imparts a sense of the agency's heritage and mission and promotes a team feeling among participants. It also allows employees to get to know the agency's leaders on a personal basis. The most powerful message, however, is the commitment of top management to the agency's employees. The management team could have passed delivery of the course along to professional instructors. The fact they did not, and that they continue to spend about four weeks per year preparing and giving the course, demonstrates the depth of their commitment to people as the agency's most important resource.
Employee Group Comparisons

Directors and their deputies had a distinctly different and more optimistic view of agency processes than all other employee groups. The mean response of directors was at one extreme of the group responses on 76 of the 91 questionnaire items. Directors' responses differed substantially ($\geq 0.5$) from all other groups on 16 of the 91 questionnaire items. The mean absolute difference between directors and other employee groups on all 91 questionnaire items was 0.49, more than twice the mean difference between the remaining groups (Table 66). Directors' responses differed most from those of wildlife personnel (0.60), information and education personnel (0.55) and fisheries personnel (0.51). Responses of enforcement personnel (0.39) and administrative support personnel (0.42) were closer to those of directors.

Other bureau groups rarely differed substantially from all other groups. Information and education personnel differed substantially from all other groups on two items related to conflict resolution. Enforcement personnel differed substantially from all other groups only with respect to employees having training plans. Fisheries, wildlife and administrative support personnel never differed substantially from all other groups. Fisheries and wildlife personnel responses were most similar (mean absolute
Table 66. Mean absolute differences between responses of employee groups on all 91 questionnaire items.

<table>
<thead>
<tr>
<th></th>
<th>DIR</th>
<th>ENF</th>
<th>FIS</th>
<th>WIL</th>
<th>I&amp;E</th>
<th>ADM</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIR</td>
<td>--</td>
<td>0.39</td>
<td>0.51</td>
<td>0.60</td>
<td>0.55</td>
<td>0.42</td>
</tr>
<tr>
<td>ENF</td>
<td>0.39</td>
<td>--</td>
<td>0.24</td>
<td>0.29</td>
<td>0.29</td>
<td>0.17</td>
</tr>
<tr>
<td>FIS</td>
<td>0.51</td>
<td>0.24</td>
<td>--</td>
<td>0.16</td>
<td>0.21</td>
<td>0.17</td>
</tr>
<tr>
<td>WIL</td>
<td>0.60</td>
<td>0.29</td>
<td>0.16</td>
<td>--</td>
<td>0.19</td>
<td>0.23</td>
</tr>
<tr>
<td>I&amp;E</td>
<td>0.55</td>
<td>0.29</td>
<td>0.21</td>
<td>0.19</td>
<td>--</td>
<td>0.23</td>
</tr>
<tr>
<td>ADM</td>
<td>0.42</td>
<td>0.17</td>
<td>0.17</td>
<td>0.23</td>
<td>0.23</td>
<td>--</td>
</tr>
</tbody>
</table>

**Mean** 0.49 0.28 0.26 0.29 0.29 0.24

¹DIR=directors and their deputies, ENF=enforcement personnel, FIS=fisheries personnel, WIL=wildlife personnel, I&E=information and education personnel and ADM=administrative support personnel
difference = 0.16). Close behind were both fisheries and enforcement personnel compared to administrative support personnel (0.17).

The largest absolute differences between directors and other groups were on questionnaire items related to the following internal effectiveness factors: employee recognition and rewards (0.75), participative decision making (0.74), internal communication (0.73), employee morale (0.72) and adaptability and innovation (0.71). Directors' responses were most similar to other employee groups on questionnaire items related to the effectiveness factors, teamwork (0.23), relationships with other agencies (0.27) and monitoring of societal trends and looking towards the future (0.28).

Directors' responses, pooled by effectiveness factor, were substantially different from other employee groups on 46 of 95 (48%) possible comparisons (5 comparisons on each of 19 factors addressed on the questionnaire). The other employee groups differed substantially from each other on only 11 of 190 (6%) possible comparisons.

None of the employee groups differed substantially on questionnaire items related to the factor, openness to public input (Table 67). However, directors and their deputies differed the most from other groups (mean absolute difference=0.42). Administrative support and wildlife personnel differed least (mean absolute difference=0.14).
Table 67. Mean absolute differences between responses of employee groups to questionnaire items related to effectiveness factors in the category, public support and awareness.

<table>
<thead>
<tr>
<th></th>
<th>DIR</th>
<th>ENF</th>
<th>FIS</th>
<th>WIL</th>
<th>I&amp;E</th>
<th>ADM</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIR</td>
<td>---</td>
<td>0.38</td>
<td>0.37</td>
<td>0.42</td>
<td>0.48</td>
<td>0.45</td>
</tr>
<tr>
<td>ENF</td>
<td>0.38</td>
<td>---</td>
<td>0.25</td>
<td>0.25</td>
<td>0.19</td>
<td>0.25</td>
</tr>
<tr>
<td>FIS</td>
<td>0.37</td>
<td>0.25</td>
<td>---</td>
<td>0.15</td>
<td>0.22</td>
<td>0.15</td>
</tr>
<tr>
<td>WIL</td>
<td>0.42</td>
<td>0.25</td>
<td>0.15</td>
<td>---</td>
<td>0.22</td>
<td>0.14</td>
</tr>
<tr>
<td>I&amp;E</td>
<td>0.48</td>
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<td>0.22</td>
<td>0.22</td>
<td>---</td>
<td>0.15</td>
</tr>
<tr>
<td>ADM</td>
<td>0.45</td>
<td>0.25</td>
<td>0.15</td>
<td>0.14</td>
<td>0.15</td>
<td>---</td>
</tr>
<tr>
<td>MEAN</td>
<td>0.42</td>
<td>0.26</td>
<td>0.23</td>
<td>0.24</td>
<td>0.25</td>
<td>0.23</td>
</tr>
</tbody>
</table>

¹DIR=directors and their deputies, ENF=enforcement personnel, FIS=fisheries personnel, WIL=wildlife personnel, I&E=information and education personnel and ADM=administrative support personnel.
Directors saw their agencies as better able to resolve conflicts than other employee groups. Their responses differed most from those of information and education personnel and least from those of enforcement personnel (Table 68). Both directors and enforcement personnel differed substantially from information and education personnel on the ability of agencies to resolve issues before conflicts arise. Overall in the conflict resolution category, only directors and information and education personnel differed substantially (mean absolute difference=0.60), while fisheries and administrative support personnel were most similar (0.07).

In the political category, directors differed from other employee groups most on items related to the factor sensitivity to politics (Table 69). Overall in the political category, fisheries personnel differed most and information and education personnel were most similar to directors. Administrative support and enforcement personnel gave the most similar responses (0.09).

Directors differed substantially from all other employee groups on items related to the effectiveness factor adaptability and innovation in response to change (Table 70). Directors differed substantially from wildlife personnel on all four factors in the planning and funding category. They differed substantially from information and education personnel on three out of four factors. Overall,
Table 68. Mean absolute differences between responses of employee groups to questionnaire items related to effectiveness factors in the category, conflict resolution.

<table>
<thead>
<tr>
<th>Ability to Resolve Issues Before Conflicts Arise</th>
<th>DIR</th>
<th>ENF</th>
<th>FIS</th>
<th>WIL</th>
<th>I&amp;E</th>
<th>ADM</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIR</td>
<td>---</td>
<td>0.23</td>
<td>0.33</td>
<td>0.40</td>
<td>0.60</td>
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</tr>
<tr>
<td>ENF</td>
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<td>0.37</td>
<td>0.57</td>
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</tr>
<tr>
<td>FIS</td>
<td>0.33</td>
<td>0.23</td>
<td>---</td>
<td>0.13</td>
<td>0.33</td>
<td>0.07</td>
</tr>
<tr>
<td>WIL</td>
<td>0.40</td>
<td>0.37</td>
<td>0.13</td>
<td>---</td>
<td>0.27</td>
<td>0.20</td>
</tr>
<tr>
<td>I&amp;E</td>
<td>0.60</td>
<td>0.57</td>
<td>0.33</td>
<td>0.27</td>
<td>---</td>
<td>0.40</td>
</tr>
<tr>
<td>ADM</td>
<td>0.27</td>
<td>0.17</td>
<td>0.07</td>
<td>0.20</td>
<td>0.40</td>
<td>---</td>
</tr>
<tr>
<td>MEAN</td>
<td>0.37</td>
<td>0.31</td>
<td>0.22</td>
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<td>0.43</td>
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<table>
<thead>
<tr>
<th>Ability to Resolve Conflicts without Appeal or Override</th>
<th>DIR</th>
<th>ENF</th>
<th>FIS</th>
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<th>I&amp;E</th>
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<tbody>
<tr>
<td>DIR</td>
<td>---</td>
<td>0.28</td>
<td>0.40</td>
<td>0.45</td>
<td>0.70</td>
<td>0.37</td>
</tr>
<tr>
<td>ENF</td>
<td>0.28</td>
<td>---</td>
<td>0.12</td>
<td>0.17</td>
<td>0.42</td>
<td>0.12</td>
</tr>
<tr>
<td>FIS</td>
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<td>0.12</td>
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<td>0.30</td>
<td>0.07</td>
</tr>
<tr>
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<td>0.17</td>
<td>0.08</td>
<td>---</td>
<td>0.27</td>
<td>0.12</td>
</tr>
<tr>
<td>I&amp;E</td>
<td>0.70</td>
<td>0.42</td>
<td>0.07</td>
<td>0.12</td>
<td>---</td>
<td>0.37</td>
</tr>
<tr>
<td>ADM</td>
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<td>0.12</td>
<td>0.07</td>
<td>0.12</td>
<td>0.37</td>
<td>---</td>
</tr>
<tr>
<td>MEAN</td>
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<td>0.22</td>
<td>0.19</td>
<td>0.22</td>
<td>0.41</td>
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</table>
Table 68 continued.

### Public Perception of Fairness in Agency Decision Making

<table>
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<th>DIR</th>
<th>ENF</th>
<th>FIS</th>
<th>WIL</th>
<th>I&amp;E</th>
<th>ADM</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIR</td>
<td>---</td>
<td>0.13</td>
<td>0.40</td>
<td>0.40</td>
<td>0.40</td>
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<td>ENF</td>
<td>0.13</td>
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<td>0.27</td>
<td>0.27</td>
<td>0.27</td>
<td>0.27</td>
</tr>
<tr>
<td>FIS</td>
<td>0.40</td>
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<td>---</td>
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<td>0.07</td>
</tr>
<tr>
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<td>0.07</td>
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<td>0.00</td>
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<td>0.00</td>
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<td>0.13</td>
</tr>
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<td>0.07</td>
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</tr>
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### Conflict Resolution Category Total

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<th>FIS</th>
<th>WIL</th>
<th>I&amp;E</th>
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¹DIR=directors and their deputies, ENF=enforcement personnel, FIS=FIS=fisheries personnel, WIL=wildlife personnel, I&E=information and education personnel and ADM=administrative support personnel
Table 69. Mean absolute differences between responses of employee groups to questionnaire items related to effectiveness factors in the category, politics.

<table>
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Table 69 continued.

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¹DIR=directors and their deputys, ENF=enforcement personnel, FIS=fisheries personnel, WIL=wildlife personnel, I&E=information and education personnel and ADM=administrative support personnel.
Table 70. Mean absolute differences between responses of employee groups to questionnaire items related to effectiveness factors in the category, planning and funding.

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Table 70 continued.

**Amount, Diversity and Stability of Agency Funding**

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**MEAN**

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**Planning and Funding Category Total**

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</tbody>
</table>

1DIR=directors and their deputies, ENF=enforcement personnel, FIS=fisheries personnel, WIL=wildlife personnel, I&E=information and education personnel and ADM=administrative support personnel
enforcement personnel were most similar and wildlife personnel differed most from directors. The most similar responses were between administrative support and enforcement personnel and between administrative support and fisheries personnel (0.17).

Directors differed substantially from all other employee groups on items related to two of the four factors in the agency management category (Table 71). The largest differences were on items related to the factors, participative decision making (0.74) and internal communication (0.73). The difference on items related to participative decision making was particularly striking in view of the consistently low difference between the other employee groups (mean of comparisons between other bureaus = 0.15). It should be noted that responses of all employee groups to questionnaire items related to participative decision making showed substantial agreement, however, they did not agree as strongly as directors. Overall, administrative support and enforcement personnel were most similar to directors while wildlife personnel differed most. Fisheries and information and education personnel were most similar in their responses (0.11).

Some of the most dramatic differences between directors and other employee groups occurred in the personnel category (Table 72). Directors differed substantially from fisheries and wildlife personnel on every effectiveness factor in this
Table 71. Mean absolute differences between responses of employee groups to questionnaire items related to factors in the category, agency management.

<table>
<thead>
<tr>
<th></th>
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234
Table 71 continued.

**Internal Communication**

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**Agency Management Category Total**

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¹DIR=directors and their deputies, ENF=enforcement personnel, FIS=fisheries personnel, WIL=wildlife personnel, I&E=information and education personnel and ADM=administrative support personnel
Table 72. Mean absolute differences between responses of employee groups to questionnaire items related to factors in the category, personnel.1

<table>
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<th>Definition of Personnel Roles</th>
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Table 72 continued.

**Employee Recognition and Rewards**

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**Personnel Category Total**

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1. DIR=directors and their deputies, ENF=enforcement personnel, FIS=fisheries personnel, WIL=wildlife personnel, I&E=information and education personnel and ADM=administrative support personnel.
category. The largest differences occurred on items related to the effectiveness factors recognition and rewards (0.75) and employee morale (0.72). The relationship between recognition and morale has already been discussed. Differences between directors and other employee groups on items related to the effectiveness factors, definition of personnel roles and understanding of mission were smaller than those on the other personnel factors, but nevertheless in stark contrast to the similarity of responses among the other employee groups (mean of comparisons between other bureaus = 0.13 for definition of roles and 0.14 for understanding of mission). Overall, administrative support personnel were most similar to directors while wildlife personnel differed most. Fisheries and wildlife personnel were most similar in their responses (0.14).

Organizational Culture Profiles

Organizational culture is a pattern of basic assumptions that governs how organization members react to and solve problems. The pattern is taught to new members as the correct way to perceive, think and feel in relation to those problems (Schein 1990). Leaders significantly affect the development of culture by providing a model of expected behavior (Schein 1983). Leader behavior that affects
culture includes (1) what leaders pay attention to, measure and control, (2) how leaders react to critical incidents and organizational crises, (3) deliberate role modeling and coaching, (4) operational criteria for allocation of rewards and status, and (5) operational criteria for recruitment, selection, promotion, retirement and discharge (Schein 1990). Wilson (1989) described the importance of strong leaders such as Gifford Pinchot (U. S. Forest Service) and J. Edgar Hoover (Federal Bureau of Investigation) in developing the cultures of effective organizations.

The Organizational Culture Inventory (OCI) can be used to quantitatively assess organizational culture (Cooke and Rousseau 1988). The OCI assesses culture based on the extent to which an organization emphasizes concern for people versus tasks and promotes behaviors leading to fulfillment of higher order satisfaction needs rather than lower order security needs (Cooke and Burack 1989a). The OCI's 12 axes are theoretically grounded in the works of Stogdill (1963) and Maslow (1954). Raw scores on the 12 axes are normally plotted on a circumplex resembling a clock face. Scales for each axis are arranged so that raw scores can easily be converted to percentile scores compared to a data base of 3,939 OCI responses from many different types of organizations.

The OCI assesses three types of organizational culture styles simultaneously (Table 73). First, the constructive
<table>
<thead>
<tr>
<th>Style/Behavioral Axis</th>
<th>Description</th>
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<td>Constructive Styles</td>
<td>Members are encouraged to interact with others and approach tasks in ways that will help them meet higher-order satisfaction needs</td>
</tr>
<tr>
<td>Achievement (11:00)</td>
<td>Organizations that do things well, value members who set and accomplish their own goals, establish plans to reach those goals and pursue them with enthusiasm</td>
</tr>
<tr>
<td>Self-actualizing (12:00)</td>
<td>Organizations that value creativity, quality over quantity and both task accomplishment and personal growth</td>
</tr>
<tr>
<td>Humanistic-encouraging (1:00)</td>
<td>Participative organizations that expect members to be supportive of one another</td>
</tr>
<tr>
<td>Affiliative (2:00)</td>
<td>Organizations that emphasize constructive interpersonal relationships, members expected to be friendly, open and sensitive to satisfaction of the group</td>
</tr>
<tr>
<td>Passive/Defensive Styles</td>
<td>Members believe they must interact with people in ways that will not threaten their own security</td>
</tr>
<tr>
<td>Approval (3:00)</td>
<td>Conflicts are avoided and interpersonal relationships are at least superficially pleasant, members feel they must gain approval of others</td>
</tr>
<tr>
<td>Conventional (4:00)</td>
<td>Conservative, traditional, bureaucratically controlled organizations that expect members to conform and follow the rules</td>
</tr>
<tr>
<td>Dependent (5:00)</td>
<td>Hierarchically controlled, nonparticipative organizations with centralized decision making, members do what they are told and clear decisions with superiors</td>
</tr>
</tbody>
</table>
Table 73 continued.

<table>
<thead>
<tr>
<th>Style/Behavioral Axis</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avoidance (6:00)</td>
<td>Organizations that fail to reward success but do punish mistakes, leading members to shift responsibilities and avoid being blamed for mistakes</td>
</tr>
<tr>
<td>Aggressive/Defensive Styles</td>
<td>Members are expected to approach tasks in forceful ways to protect their status and security</td>
</tr>
<tr>
<td>Oppositional (7:00)</td>
<td>Confrontation and negativism are rewarded, members expected to be critical of the ideas of others</td>
</tr>
<tr>
<td>Power (8:00)</td>
<td>Nonparticipative organizations structured on the basis of positional authority, members believe they will be rewarded for taking charge and controlling subordinates</td>
</tr>
<tr>
<td>Competitive (9:00)</td>
<td>Winning is valued, members are rewarded for out-performing one another, working against peers rather than with them</td>
</tr>
<tr>
<td>Perfectionistic (10:00)</td>
<td>Perfectionism, persistence and hard work are valued, members feel they must avoid all mistakes, stay on top of everything and work long hours</td>
</tr>
</tbody>
</table>
cultural style assesses the extent to which members are encouraged to interact with others and approach tasks in ways that will help them meet their higher-order satisfaction needs (Cooke and Burack 1989a). The constructive culture is measured by the Achievement (11:00), Self-actualizing (12:00), Humanistic-encouraging (1:00) and Affiliative (2:00) axes. Second, the passive/defensive cultural style assesses the extent to which members believe they must interact with people in ways that will not threaten their own security. The passive/defensive cultural style is assessed by the Approval (3:00), Conventional (4:00), Dependent (5:00) and Avoidance (6:00) axes. Third, the aggressive/defensive cultural style assesses the extent to which members are expected to approach tasks in forceful ways to protect their status and security. The aggressive/defensive cultural style is assessed by the Oppositional (7:00), Power (8:00), Competitive (9:00) and Perfectionistic (10:00) axes.

Twenty OWP members generated an ideal fish and wildlife agency cultural profile by completing the OCI in terms of how agency members should ideally be expected to behave. Mean scores of the ideal profile were near the 90th percentile on the constructive axes and near or below the 25th percentile on the all of the defensive axes except for the Oppositional axis (7:00), which scored near the 50th percentile (Figure 5). The ideal profile was exceptionally
Figure 5. Ideal OCI profile as determined by OWP members. Responses are plotted as percentiles of a large sample across many types of organizations.
low on the Conventional axis (4:00, below the 10th percentile) and the Perfectionistic axis (10:00, slightly above the 10th percentile).

The ideal cultural profile indicates that OWP members value agency cultures that promote setting of goals, creativity, moderate risk taking, concern for personal growth, participative decision making processes, good interpersonal communication, cooperation and friendliness. They appear to place low value on cultures that promote avoidance of conflicts, heavy reliance on rules, conformity, autocratic decision making, waiting for others to act first, positional authority, competition among employees and perfectionism. They placed moderate value on a culture that promotes critical thinking and being difficult to please (Cooke and Hartmann 1989).

Organizational Culture of the Case Study Agencies

Employees of the case study agencies returned 515 (94%) OCIs. Return rates were exceptional in all nine agencies, ranging from 88% to 100%.

Pooled mean responses of participants in all nine agencies were substantially lower than the ideal responses of OWP members on the constructive axes, substantially higher than the ideal on the passive/defensive axes and
similar to the ideal on three of the four aggressive/defensive axes (Figure 6). Case study agencies scored substantially higher than the ideal on the Perfectionistic (10:00) axis. Pooled mean responses were generally near the 50th percentile on the constructive axes and near or below the 40th percentile on the passive/defensive and aggressive/defensive axes. The highest agency means on the aggressive/defensive axes were below the 50th percentile. Thus, behavioral norms in the case study agencies, compared to the many other organizations in which the OCI has been tested, reflect slightly less emphasis on defensive behavioral styles.

Differences among agencies on all four of the constructive style axes were significant (p<.05) in a one-way analysis of variance (Table 74). Agency 1 scored highest on all four constructive axes, while Agency 4 scored lowest on all four. Differences among agencies were significant for three of the four passive/defensive axes and nearly significant for the fourth. Agency 1 scored lowest on three of the four passive/defensive axes (all but the Approval axis). High scores were spread among three agencies. None of the differences among agencies on the four aggressive/defensive style axes were significant. Agency 1 scored lowest on all four of the aggressive/defensive axes. High scores were spread among four agencies.
Case Study States vs. Ideal Profile

Figure 6. Comparison of ideal OCI profile to mean of nine case study agencies. Responses are plotted as percentiles of a large sample across many types of organizations.
Table 74. Mean raw scores of employees in the nine case study agencies on each of the 12 axes of the Organizational Culture Inventory (OCI). Levels of significance in a one-way analysis of variance are listed in the far right column.

<table>
<thead>
<tr>
<th>Behavioral Style</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>Mean</th>
<th>F-test</th>
</tr>
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<tbody>
<tr>
<td><strong>Constructive Styles</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Achievement (11:00)</td>
<td>40.0</td>
<td>37.5</td>
<td>36.5</td>
<td>35.5</td>
<td>37.2</td>
<td>36.5</td>
<td>37.4</td>
<td>35.6</td>
<td>37.0</td>
<td>37.1</td>
<td>p=.002</td>
</tr>
<tr>
<td>Self-Actualizing (12:00)</td>
<td>34.8</td>
<td>31.7</td>
<td>32.5</td>
<td>31.0</td>
<td>32.6</td>
<td>32.7</td>
<td>31.1</td>
<td>32.2</td>
<td>31.7</td>
<td>32.3</td>
<td>p=.041</td>
</tr>
<tr>
<td>Humanistic-Encouraging (1:00)</td>
<td>39.2</td>
<td>35.0</td>
<td>34.0</td>
<td>33.0</td>
<td>35.3</td>
<td>36.3</td>
<td>35.1</td>
<td>34.8</td>
<td>33.9</td>
<td>35.3</td>
<td>p&lt;.001</td>
</tr>
<tr>
<td>Affiliative (2:00)</td>
<td>40.3</td>
<td>35.3</td>
<td>35.5</td>
<td>34.3</td>
<td>36.6</td>
<td>37.7</td>
<td>36.3</td>
<td>36.2</td>
<td>34.6</td>
<td>36.4</td>
<td>p&lt;.001</td>
</tr>
<tr>
<td><strong>Passive/Defensive Styles</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approval (3:00)</td>
<td>23.1</td>
<td>24.5</td>
<td>24.3</td>
<td>24.1</td>
<td>26.2</td>
<td>25.4</td>
<td>26.1</td>
<td>25.2</td>
<td>22.9</td>
<td>24.7</td>
<td>p=.042</td>
</tr>
<tr>
<td>Conventional (4:00)</td>
<td>22.3</td>
<td>25.4</td>
<td>25.2</td>
<td>25.5</td>
<td>25.8</td>
<td>25.3</td>
<td>26.6</td>
<td>27.8</td>
<td>25.7</td>
<td>25.5</td>
<td>p=.010</td>
</tr>
<tr>
<td>Dependent (5:00)</td>
<td>25.1</td>
<td>28.9</td>
<td>28.4</td>
<td>27.6</td>
<td>28.1</td>
<td>28.7</td>
<td>29.2</td>
<td>29.8</td>
<td>30.3</td>
<td>28.4</td>
<td>p=.001</td>
</tr>
<tr>
<td>Avoidance (6:00)</td>
<td>16.5</td>
<td>18.1</td>
<td>19.8</td>
<td>19.5</td>
<td>18.9</td>
<td>19.5</td>
<td>18.9</td>
<td>20.2</td>
<td>17.8</td>
<td>18.8</td>
<td>p=.061</td>
</tr>
<tr>
<td><strong>Aggressive/Defensive Styles</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oppositional (7:00)</td>
<td>20.0</td>
<td>20.2</td>
<td>21.3</td>
<td>20.2</td>
<td>21.5</td>
<td>21.4</td>
<td>20.3</td>
<td>20.4</td>
<td>21.3</td>
<td>20.7</td>
<td>p=.323</td>
</tr>
<tr>
<td>Power (8:00)</td>
<td>20.4</td>
<td>23.9</td>
<td>23.2</td>
<td>23.6</td>
<td>23.6</td>
<td>24.6</td>
<td>23.4</td>
<td>24.1</td>
<td>24.1</td>
<td>23.4</td>
<td>p=.068</td>
</tr>
<tr>
<td>Competitive (9:00)</td>
<td>19.5</td>
<td>21.4</td>
<td>20.2</td>
<td>20.0</td>
<td>21.9</td>
<td>20.6</td>
<td>20.9</td>
<td>19.9</td>
<td>22.1</td>
<td>20.7</td>
<td>p=.368</td>
</tr>
<tr>
<td>Perfectionistic (10:00)</td>
<td>23.7</td>
<td>25.0</td>
<td>25.5</td>
<td>26.7</td>
<td>27.1</td>
<td>26.3</td>
<td>24.7</td>
<td>26.0</td>
<td>26.7</td>
<td>25.6</td>
<td>p=.114</td>
</tr>
</tbody>
</table>
Overall, eight of the case study agencies had similar organizational cultural profiles as assessed by the OCI. Agency 1 had the most desirable profile and stood apart on many axes.

OCI Responses of Employee Groups

Responses of directors and their deputies were similar to the ideal (Figure 7) and substantially different from other agency personnel on nearly all axes. Enforcement personnel were generally most similar to directors while information and education personnel generally differed most (Table 75). Administrative support, fisheries and wildlife personnel scores were nearly always intermediate.

With the exception of enforcement personnel, directors and their deputies scored significantly higher than all or nearly all other groups on all four constructive style axes (Table 75). Directors differed most on the Humanistic-encouraging (1:00) axis, indicating directors viewed their agencies' cultures as significantly more participative and employee-centered than other employee groups (except enforcement personnel). Directors scored lower than other employee groups on all four passive/defensive axes, although none of the comparisons were significant for the Approval (3:00) axis and only two comparisons were significant for the
Figure 7. OCI profile of agency directors and their deputies. Responses are plotted as percentiles of a large sample across many types of organizations.
Table 75. Mean raw scores of employee groups on the 12 axes of the Organizational Culture Inventory. Levels of significance in a one-way analysis of variance and significant differences between means (Tukey-b multiple comparisons) are listed in the right hand columns.

<table>
<thead>
<tr>
<th>Behavioral Style</th>
<th>DIR N=18</th>
<th>ENF N=73</th>
<th>FIS N=103</th>
<th>WIL N=117</th>
<th>I&amp;E N=34</th>
<th>ADM N=94</th>
<th>F-Test</th>
<th>Comparisons</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Constructive Styles</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Achievement (11:00)</td>
<td>41.6</td>
<td>38.1</td>
<td>36.2</td>
<td>36.5</td>
<td>35.3</td>
<td>37.1</td>
<td>p=.003</td>
<td>DIR&gt;I&amp;E,FIS,WIL, ADM</td>
</tr>
<tr>
<td>Self-Actualizing (12:00)</td>
<td>37.7</td>
<td>34.5</td>
<td>31.3</td>
<td>31.3</td>
<td>29.6</td>
<td>31.9</td>
<td>p&lt;.001</td>
<td>DIR&gt;I&amp;E,FIS,WIL, ADM; ENF&gt;I&amp;E,FIS, WIL</td>
</tr>
<tr>
<td>Humanistic-Encouraging (1:00)</td>
<td>42.1</td>
<td>37.3</td>
<td>33.9</td>
<td>33.5</td>
<td>32.7</td>
<td>36.2</td>
<td>p&lt;.001</td>
<td>DIR&gt;I&amp;E,WIL,FIS, ADM; ENF&gt;I&amp;E,WIL, FIS</td>
</tr>
<tr>
<td>Affiliative (2:00)</td>
<td>40.6</td>
<td>38.6</td>
<td>35.0</td>
<td>35.2</td>
<td>34.9</td>
<td>37.1</td>
<td>p&lt;.001</td>
<td>DIR&gt;I&amp;E,FIS,WIL; ENF&gt;I&amp;E,FIS,WIL</td>
</tr>
<tr>
<td><strong>Passive/Defensive Styles</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approval (3:00)</td>
<td>21.7</td>
<td>24.0</td>
<td>25.1</td>
<td>25.4</td>
<td>27.1</td>
<td>24.0</td>
<td>p=.124</td>
<td>None</td>
</tr>
<tr>
<td>Conventional (4:00)</td>
<td>18.8</td>
<td>26.3</td>
<td>25.4</td>
<td>27.1</td>
<td>27.6</td>
<td>24.5</td>
<td>p&lt;.001</td>
<td>DIR &lt; all others</td>
</tr>
<tr>
<td>Dependent (5:00)</td>
<td>24.2</td>
<td>29.0</td>
<td>28.5</td>
<td>29.5</td>
<td>31.9</td>
<td>27.0</td>
<td>p&lt;.001</td>
<td>DIR&gt;I&amp;E,WIL; ADM&lt;I&amp;E</td>
</tr>
<tr>
<td>Avoidance (6:00)</td>
<td>14.3</td>
<td>17.6</td>
<td>18.7</td>
<td>20.6</td>
<td>19.6</td>
<td>18.6</td>
<td>p=.003</td>
<td>DIR,ENF&lt;WIL</td>
</tr>
</tbody>
</table>
Table 75 continued.

<table>
<thead>
<tr>
<th>Behavioral Style</th>
<th>DIR</th>
<th>ENF</th>
<th>FIS</th>
<th>WIL</th>
<th>I&amp;E</th>
<th>ADM</th>
<th>F-Test</th>
<th>Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggressive/Defensive Styles</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oppositional (7:00)</td>
<td>21.0</td>
<td>21.0</td>
<td>20.5</td>
<td>21.4</td>
<td>20.6</td>
<td>20.9</td>
<td>(p=.171)</td>
<td>None</td>
</tr>
<tr>
<td>Power (8:00)</td>
<td>22.2</td>
<td>23.7</td>
<td>22.4</td>
<td>24.9</td>
<td>24.6</td>
<td>23.1</td>
<td>(p=.064)</td>
<td>None</td>
</tr>
<tr>
<td>Competitive (9:00)</td>
<td>19.0</td>
<td>22.1</td>
<td>20.1</td>
<td>22.0</td>
<td>21.2</td>
<td>19.8</td>
<td>(p=.029)</td>
<td>None</td>
</tr>
<tr>
<td>Perfectionistic (10:00)</td>
<td>20.9</td>
<td>26.4</td>
<td>24.5</td>
<td>27.5</td>
<td>26.9</td>
<td>24.9</td>
<td>(p&lt;.001)</td>
<td>DIR$&lt;$WIL, I&amp;E, ENF; FIS$&lt;$WIL</td>
</tr>
</tbody>
</table>

\(^1\)DIR=directors and their deputies, ENF=enforcement personnel, FIS=fisheries personnel, WIL=wildlife personnel, I&E=information and education personnel and ADM=administrative support personnel.
Dependent (5:00) and Avoidance (6:00) axes. The difference was most pronounced on the Conventional (4:00) axis, indicating employees felt more strongly than directors that agency cultures emphasized conservative, traditional behavior and following rules. Directors differed significantly from other employees on only one of the four aggressive/defensive axes, the Perfectionistic (10:00) axis. Information and education, wildlife and enforcement personnel felt more strongly than directors that agency cultures emphasized hard work, achieving narrowly-defined goals, staying on top of everything and never making a mistake.

Enforcement personnel scored above the 50th percentile on all four constructive style axes (Figure 8), indicating they viewed their agency cultures as encouraging behavior that allows them to meet higher-order satisfaction needs. Enforcement personnel scored significantly higher than fisheries, wildlife and information and education personnel on the Self-actualizing (12:00), Humanistic-encouraging (1:00) and Affiliative (2:00) axes (Table 75). However, their scores were lower (although not statistically different) than directors on all four constructive style axes. Enforcement personnel responses were below the 50th percentile on all passive/defensive and aggressive/defensive axes and similar to those of other bureau groups in most cases. Enforcement personnel differed most from directors
Figure 8. OCI profile of enforcement personnel. Responses are plotted as percentiles of a large sample across many types of organizations.
on the Conventional (4:00) and Perfectionistic (10:00) axes. This is not surprising in view of the military-style structure of many enforcement bureaus that emphasizes following orders and officer training that emphasizes narrowly-defined procedures to ensure violations are properly handled.

Information and education (I&E) personnel viewed culture of the case study agencies quite differently than directors and enforcement personnel. I&E personnel scored lower than all other bureau groups on all four constructive style axes and higher than all other groups on three of the four passive/defensive style axes (Table 75). I&E responses were well below the 50th percentile on the constructive axes and above the 50th percentile on three of four passive/defensive axes (Figure 9). I&E personnel differed from other bureau groups most on the Approval (3:00) and Dependent (5:00) axes, indicating a greater feeling among I&E personnel that agency cultures emphasize avoidance of interpersonal conflicts, lack of participation and clearing all decisions with superiors.

Responses of wildlife personnel were similar to those of I&E personnel, although slightly higher on the constructive axes (Figure 10). Wildlife personnel scored higher than all other bureau groups on the Avoidance (6:00) axis and three of the four aggresive/defensive style axes (Table 75). Higher scores on the Avoidance, Oppositional
Figure 9. OCI profile of information and education personnel. Responses are plotted as percentiles of a large sample across many types of organizations.
Figure 10. OCI profile of wildlife personnel. Responses are plotted as percentiles of a large sample across many types of organizations.
(7:00) and Power (8:00) axes indicate a greater perception among wildlife personnel of cultures that emphasize avoidance of risk taking, being critical of the ideas of others and protecting personal security by being responsive to the demands of superiors.

Responses of fisheries personnel (Figure 11) and administrative support personnel (Figure 12) were intermediate to other bureau groups on nearly all axes. Fisheries personnel scored lower than all other groups on the Oppositional axis (7:00), indicating a perception of less emphasis on confrontation and being critical of the ideas of others.

Men had a more positive view of agency culture than women, scoring significantly higher on all four constructive style axes (Figure 13). Men also differed significantly from women on the Approval (3:00), Oppositional (7:00) and Competitive (9:00) axes (Table 76). Thus, men were more likely than women to view agency cultures as (1) encouraging members to set their own goals and establish plans to accomplish those goals and, (2) emphasizing creativity, personal growth, participation and constructive interpersonal relationships. Men also perceived agency cultures to encourage being critical of others and competing with others to be noticed. Women were more likely to perceive that agency cultures required them to avoid interpersonal conflicts and gain approval of others.
Fisheries Profile

Figure 11. OCI profile of fisheries personnel. Responses are plotted as percentiles of a large sample across many types of organizations.
Figure 12. OCI profile of administrative support personnel. Responses are plotted as percentiles of a large sample across many types of organizations.
Men and Women's Profiles

![Bar chart showing percentile response for Men and Women across different construct types: Constructive, Passive, and Aggressive.]

Figure 13. Comparison of OCI profiles for men and women. Responses are plotted as percentiles of a large sample across many types of organizations.
Table 76. Mean raw scores and T-test levels of significance for men and women on the 12 axes of the Organizational Culture Inventory.

<table>
<thead>
<tr>
<th>Behavioral Styles</th>
<th>Men N=452</th>
<th>Women N=63</th>
<th>Men - Women</th>
<th>T-Test</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Constructive Styles</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Achievement (11:00)</td>
<td>37.4</td>
<td>35.2</td>
<td>+2.2</td>
<td>p=.005</td>
</tr>
<tr>
<td>Self-Actualizing (12:00)</td>
<td>32.6</td>
<td>30.3</td>
<td>+2.3</td>
<td>p=.007</td>
</tr>
<tr>
<td>Humanistic-Encouraging (1:00)</td>
<td>35.5</td>
<td>33.6</td>
<td>+1.9</td>
<td>p=.043</td>
</tr>
<tr>
<td>Affiliative (2:00)</td>
<td>36.7</td>
<td>34.7</td>
<td>+2.0</td>
<td>p=.033</td>
</tr>
<tr>
<td><strong>Passive/Defensive Styles</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approval (3:00)</td>
<td>24.5</td>
<td>26.2</td>
<td>-1.7</td>
<td>p=.049</td>
</tr>
<tr>
<td>Conventional (4:00)</td>
<td>25.4</td>
<td>26.3</td>
<td>-0.9</td>
<td>p=.332</td>
</tr>
<tr>
<td>Dependent (5:00)</td>
<td>28.5</td>
<td>27.9</td>
<td>+0.6</td>
<td>p=.475</td>
</tr>
<tr>
<td>Avoidance (6:00)</td>
<td>18.8</td>
<td>19.1</td>
<td>-0.3</td>
<td>p=.659</td>
</tr>
<tr>
<td><strong>Aggressive/Defensive Styles</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oppositional (7:00)</td>
<td>20.9</td>
<td>19.3</td>
<td>+1.6</td>
<td>p=.005</td>
</tr>
<tr>
<td>Power (8:00)</td>
<td>23.5</td>
<td>22.2</td>
<td>+1.3</td>
<td>p=.158</td>
</tr>
<tr>
<td>Competitive (9:00)</td>
<td>20.9</td>
<td>18.7</td>
<td>+2.2</td>
<td>p=.009</td>
</tr>
<tr>
<td>Perfectionistic (10:00)</td>
<td>25.6</td>
<td>25.8</td>
<td>-0.2</td>
<td>p=.804</td>
</tr>
</tbody>
</table>
Headquarters personnel scored higher than field personnel on all constructive style axes and lower on all passive/defensive style axes (Figure 14). Only three of the differences, Achievement (11:00), Humanistic-encouraging (1:00) and Conventional (4:00) were significant (Table 77). Thus, headquarters personnel were more likely than field personnel to view agency cultures as (1) encouraging setting of goals and establishing plans to accomplish them and, (2) emphasizing participation and constructive interpersonal relationships. Field personnel were more likely to view agency cultures as emphasizing bureaucratic control, conformity and following the rules.
Headquarters and Field Staff Profiles

Figure 14. Comparison of OCI profiles of headquarters and field personnel. Responses are plotted as percentiles of a large sample across many types of organizations.
Table 77. Mean raw scores of headquarters (HQ) and field personnel, differences between scores and T-test levels of significance on the 12 axes of the Organizational Culture Inventory.

<table>
<thead>
<tr>
<th>Behavioral Styles</th>
<th>HQ</th>
<th>Field</th>
<th>HQ-Field</th>
<th>T-Test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N=227</td>
<td>N=286</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Constructive Styles</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Achievement (11:00)</td>
<td>37.7</td>
<td>36.6</td>
<td>+1.1</td>
<td>p=.049</td>
</tr>
<tr>
<td>Self-Actualizing (12:00)</td>
<td>32.8</td>
<td>31.9</td>
<td>+0.9</td>
<td>p=.107</td>
</tr>
<tr>
<td>Humanistic-Encouraging (1:00)</td>
<td>36.0</td>
<td>34.7</td>
<td>+1.3</td>
<td>p=.044</td>
</tr>
<tr>
<td>Affiliative (2:00)</td>
<td>36.9</td>
<td>36.1</td>
<td>+0.8</td>
<td>p=.233</td>
</tr>
<tr>
<td><strong>Passive/Defensive Styles</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approval (3:00)</td>
<td>24.1</td>
<td>25.1</td>
<td>-1.0</td>
<td>p=.085</td>
</tr>
<tr>
<td>Conventional (4:00)</td>
<td>24.4</td>
<td>26.4</td>
<td>-2.0</td>
<td>p=.001</td>
</tr>
<tr>
<td>Dependent (5:00)</td>
<td>27.8</td>
<td>28.9</td>
<td>-1.1</td>
<td>p=.073</td>
</tr>
<tr>
<td>Avoidance (6:00)</td>
<td>18.2</td>
<td>19.3</td>
<td>-1.1</td>
<td>p=.068</td>
</tr>
<tr>
<td><strong>Aggressive/Defensive Styles</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oppositional (7:00)</td>
<td>20.5</td>
<td>20.8</td>
<td>-0.3</td>
<td>p=.442</td>
</tr>
<tr>
<td>Power (8:00)</td>
<td>23.5</td>
<td>23.2</td>
<td>+0.3</td>
<td>p=.635</td>
</tr>
<tr>
<td>Competitive (9:00)</td>
<td>20.8</td>
<td>20.5</td>
<td>+0.3</td>
<td>p=.685</td>
</tr>
<tr>
<td>Perfectionistic (10:00)</td>
<td>25.1</td>
<td>26.0</td>
<td>-0.9</td>
<td>p=.112</td>
</tr>
</tbody>
</table>
DISCUSSION

External Factors: Public Support and Awareness,

Conflict Resolution and Politics

Effectiveness in all categories of the external factors—public support, conflict resolution and politics—appeared to be based on the ability to balance biology and public opinion. Interviews with agency employees, constituents and politicians indicated agency credibility was based on putting biology first. At the same time, there was a strong expectation of meaningful public involvement and agency responsiveness to constituents in making resource allocation decisions. As a result, most of the case study agencies focused on extensive public involvement in the early stages (problem identification and goal setting) of the decision making process. Public involvement early in the process allowed the agencies to quickly identify potential conflicts between biological factors and public opinion.

Information and education bureaus that were effective in raising awareness and sophistication of constituents contributed significantly to agency effectiveness. Informed, effective constituents may be even more important
to fish and wildlife agency effectiveness than Nord (1983) found them to be to organizations in general.

The trend in decision making among the case study agencies was away from the authoritarian professional management arena and towards the more egalitarian public management arena (Gale and Miller 1985). However, the case study agencies displayed characteristics of both policy making arenas. All of the case study agencies strongly agreed that their constituents should have a major role in setting agency goals. They monitored public desires and opinions and gave the public ample opportunities to get involved in setting goals (public arena). Agreement was weaker regarding constituent roles in developing and selecting management plans and actions (professional arena). All of the agencies agreed that their decisions were primarily biological and that agencies sold their decisions to their publics, presumably to assure that their biological basis would be acknowledged and accepted (professional arena). Nearly every agency was evenly divided regarding the relative importance of use and harvest goals versus public opinion and the relative importance of biological information and public opinion (public arena).

The most striking characteristics of agencies that were effective in resolving conflicts were openness, accessibility and equity in decision making. The agencies aggressively involved the public in decision making
processes. Constituents frequently mentioned the openness and accessibility of the agencies to input. Constituents in several states were especially pleased that they had easy access to anyone in the department, from the local warden to the director. Even the constituents that frequently opposed the agencies conceded the decision making processes were fair and equitable. Creating and maintaining the impression of fairness in decision making was the most important factor in preventing decisions from being overturned. Employees of several case study agencies described strategies designed to be sure that all interests had the opportunity to be involved in making important decisions. They made special efforts to bring opponents into the process early and prevent them from exercising their "veto" power later (Institute for Participatory Planning 1981).

The most difficult conflicts to resolve are those in which biological factors are secondary to social, economic, political and legal factors. Citizens are more likely to contest an agency decision when there is no clear biological imperative. Two examples that were frequently encountered were urban deer management and acquisition and management of large tracts of land. The New York Division of Fish and Wildlife (deer management) and the Wisconsin Department of Natural Resources (land acquisition and management) were particularly successful in addressing these complex problems. They shared decision making authority with their
publics in the most open and democratic of public involvement techniques, citizen task forces, to achieve management solutions they could not have implemented unilaterally. Empowering constituents helps build public support and at the same time increases the desire of constituents to participate (Zimmerman and Rappaport 1988).

The marketing approach to fish and wildlife management described by Duda (1990) includes (1) understanding the public, (2) identifying, defining and targeting publics, (3) considering demographic, social, economic and political trends, and (4) paying attention to product, price, place and promotion. A marketing approach would increase the management effectiveness of an agency operating in the public management arena. An increasing emphasis on marketing would help to explain why the case study agencies were making increasing use of surveys, a primary marketing tool, and questioning the value of public meetings that often do not attract representative publics (Force and Williams 1989). Public meetings may result in increased polarization of groups rather than bringing them to a compromise solution (McMullin and Nielsen 1991b).

Success of the case study agencies in resolving conflicts was closely related to the emerging marketing approach and effectiveness in public involvement. Fragmentation of agency constituents into many narrowly-focused special interest groups, each demanding a voice in
making resource allocation decisions, increased the likelihood of conflict. Use of surveys and a variety of other public involvement techniques allowed the case study agencies to understand their publics better and to target which of the many fragmented groups required their closest attention.

Political effectiveness of the case study agencies was based on the ability of agencies to maintain an image of being nonpolitical while working effectively in the political arena. Broad-based grass roots public support was the basis of political effectiveness. Public support was related to the agencies' ability to balance biology and politics while at the same time appearing to rely heavily on biology and very little on politics. And yet, politicians often described the fish and wildlife agencies as the most powerful of all state agencies because of their ability to quickly mobilize support or opposition on issues. As previously described, the South Carolina Wildlife and Marine Resources Department operated effectively in a highly political environment because department personnel were adept at bringing public pressure to bear when and where it was most needed.

The dedicated funding sources that comprise such a large part of fish and wildlife agency budgets, as well as the independence afforded by answering to citizen commissions rather than directly to politicians, allow the
agencies to avoid much of the political manipulation to which other government agencies are subjected. However, they are not immune from the political process. Effective agencies have learned to treat politicians as an important group of constituents which must be kept informed.

**Internal Factors: Planning and Funding.**

**Agency Management and Personnel**

All of the case study agencies were actively involved in developing or maintaining comprehensive management systems. The Wyoming Game and Fish Department and the Wisconsin Department of Natural Resources (specifically the Resource Management Division) are widely known for having mature, complete management systems firmly linked to budgeting processes. Agencies in Arizona, Florida, Idaho, Minnesota and Missouri have made significant progress towards development of complete management systems. The New York Division of Fish and Wildlife developed new mission and value statements as a first step towards beginning a new planning process. The South Carolina Wildlife and Marine Resources Department recently began exploring the planning process with the intent of developing a comprehensive management system.
The case study agencies generally had a futuristic outlook and a vision of the desired future condition. Schneider (1983) characterized effective organizations as those that continuously invest resources in generating data about what the future requires. Interviewees indicated the agencies were proactive in shaping attitudes and policy rather than sitting back and waiting for things to happen. The success enjoyed by most of the case study agencies in finding alternative sources of funding exemplifies their proactive orientation.

Participative decision making, teamwork and constructive interpersonal relationships were valued in all of the case study agencies. Planning processes were often vehicles for promoting teamwork and participation. Participative management styles were the norm rather than the exception. Delegation of decision making authority was related to employee perceptions of openness and honesty in communication. The two agencies that emphasized delegation most also agreed most strongly that communication was open and honest.

Agency leaders were respected (in some cases venerated) by employees in nearly every agency. One or more charismatic (transformational) leaders could be found in the director's office of nearly every case study agency. These leaders fit Bennis' (1984) description as persons with a compelling vision or sense of purpose, able to communicate
that vision in clear terms with which their followers could readily identify, demonstrated consistency and focus in the pursuit of their vision and ability to capitalize on knowledge of their own strengths.

A potential problem with strong, charismatic leadership is the stifling of development of new leaders due to the centralization of power and responsibility by the charismatic leader (Conger 1990). Case study agencies that were led by charismatic individuals but did not have a strong emphasis on training were generally the agencies in which employees felt most strongly that new generations of leaders were not being developed.

The characteristics of good leaders (regardless of position) identified by agency employees closely matched Axley's (1990) description of good leaders. Employees most frequently mentioned good interpersonal skills, decisiveness, vision and technical knowledge. Not surprisingly, agency leaders often exhibited those characteristics. Employees also frequently mentioned openness to input. Nearly all of the leaders interviewed indicated they had become more participative and delegative as their careers had progressed.

Employees of the case study agencies met all of the criteria listed by Angle and Perry (1981) as indicators of strong organizational commitment. They strongly believed in and accepted the organization's goals, were willing to exert
considerable effort on behalf of the organization and
desired to maintain organizational membership. Krantz
(1990) described one aspect of leadership as contributing to
organizational effectiveness and personal competence by
helping employees link organizational purposes and missions
with personal value systems.

The central principle of McGregor's (1960) Theory Y was
the creation of conditions that allow organization members
to achieve their own goals best by directing their efforts
towards the success of the organization. Employee
participation in determining agency and personal goals is
characteristic of Theory Y organizations. The close match
between agency missions and personal missions of fish and
wildlife agency employees resulted in a missionary-like zeal
to pursue their jobs. The employees were highly motivated,
with a zeal for their work and desire to improve themselves.
The agency leaders promoted good group relations,
participation, teamwork and delegation of responsibility.

The final question, "Is there anything else that is
important in contributing to the effectiveness of this
agency that we haven't discussed?" generated the most
consistent response of any of the interview questions.
Employees in every agency identified agency employees as one
of the most important factors contributing to agency
effectiveness. Employees of the case study agencies were,
in general, motivated by altruistic desires to benefit
wildlife resources. The strong desire expressed for more training opportunities indicated many of the agency employees fit into the self-actualizing portion of Maslow's (1954) hierarchy of needs. Several agency members who previously worked for other government agencies before coming to the state fish and wildlife agency indicated the fish and wildlife agency employees were the most dedicated, hardest-working people they had known.

In spite of the missionary zeal of employees, morale in the case study agencies was generally only moderate. Morale was most closely tied to participation, compensation and recognition. However, participation and recognition appeared to be more important than compensation. The three agencies ranking highest in morale (questionnaire item 83) also ranked highest on items related to participation (questionnaire items 49 through 52, 70, 71, 77 and 80), while the three ranking lowest in morale were among the four lowest ranking agencies on items related to participation (Spearman's rho = 0.78). The relationship between recognition and morale was also strong (Spearman's rho = 0.80), with the agency ranking highest in morale also ranking highest on three questionnaire items related to recognition (questionnaire items 89, 90, and 91). The three agencies ranking lowest in morale also ranked the lowest in recognition.
There were no clear relationships between compensation and morale in the case study agencies. Correlations between average salaries and morale among division chiefs, wardens, education specialists (National Wildlife Federation 1989b) and fisheries biologists (Hayman and Brouha 1991) were either negative or near zero. Although compensation was often mentioned by interviewees as an important determinant of morale, it was most often mentioned in the context of equity. Adams (1965) suggested employee perceptions of underpayment inequity were important determinants of motivation and job satisfaction.

**Implications of Employee Group Comparisons**

**Directors and Other Bureau Groups**

Directors and their deputies had a much more optimistic view of the internal effectiveness factors than did other employee groups. The six effectiveness factors where directors differed most from other groups were all internal—employee recognition and rewards, participative decision making, internal communication, employee morale, adaptability and innovation, and agency planning system links planning and budgeting.
Directors were the only group to agree that performance appraisal systems adequately document employee performance, that outstanding performance is rewarded and that the agencies' best people get promoted. While other employee groups generally agreed participation in making decisions is encouraged, directors agreed much more emphatically. Directors were the only group to strongly agree that information is effectively shared throughout the agencies. Enforcement personnel agreed less strongly, while all other groups were either neutral or disagreed. Directors agreed substantially more than all other groups that employee morale is good. Directors differed substantially from the majority of other employee groups on all questions related to adaptability and innovation, but especially on encouragement of risk taking. Directors were the only group to agree that risk taking is encouraged. Directors had much greater faith that employees understood the planning and budgeting processes, and their roles in those processes, than the employees did. Directors also felt more strongly that employees were encouraged to participate in planning and budgeting processes.

Directors' responses to the questionnaire were consistent with their OCI profiles. Directors' optimistic view of recognition, communication, participation, encouragement of creativity and employee morale helps to explain why their scores on the constructive axes of the OCI
were near the ideal profile. None of the other employee
groups' OCI profiles came close to matching the ideal.

Relative to external effectiveness factors, directors
were more attuned to political processes and resolution of
conflicts and were more inclined to give constituents
important roles in making decisions than other employee
groups.

Directors felt more strongly than other employees that
constituents should play a large role in all aspects of
agency decision making, including setting goals, developing
and selecting management plans or actions. Directors
emphasized operating in the public management arena more
than the professional management arena compared to other
employee groups. Directors' preference for the public
management arena was indicated by their stronger agreement
on selection of management plans and actions, their stronger
disagreement that attaining use or harvest goals is more
important than public opinion and their stronger agreement
that public opinion is as important as biology when agency
decisions are made.

Directors agreed more strongly than others that the
agencies listen to public input to see how they should
change and that the agencies look for win-win solutions to
conflicts rather than trying to win the battle. Possibly
because of directors key roles in dealing with crises, every
group except the directors agreed agency leaders spend most of their time dealing with whatever crises erupt.

Directors felt more strongly than other groups that resource allocation, land acquisition and habitat protection decisions are primarily biological rather than political.

The overall picture of effective agencies that emerges from the responses of directors is one of strongly democratic agencies, both internally and externally. Directors viewed their agencies as responsive, attuned to potential conflicts, politically effective, innovative and supportive of employees. It is clear, however, that in many respects other agency employees do not share directors' views.

Wildlife personnel differed most from directors in their questionnaire responses and on several of the OCI axes. Wildlife personnel differed substantially from directors on items related to 12 out of 19 effectiveness factors addressed by the questionnaire and overall, differed more from directors than all other groups. Wildlife personnel differed most from directors on the internal factors employee morale (1.00), recognition and rewards (0.98), internal communication (0.90), adaptability and innovation (0.82), participative decision making (0.80) and planning system links planning and budgeting (0.73). Not surprisingly, wildlife personnel differed from directors more than other bureau groups on several of the defensive
behavioral axes of the OCI. Wildlife personnel responses to the OCI indicated they viewed their agencies' cultures as avoiding risk taking, being critical of others and protecting personal security.

Information and education personnel differed almost as greatly as wildlife personnel compared to directors and scored lowest of the bureau groups on the constructive style axes of the OCI. Information and education personnel differed greatly from directors on nearly the same internal factors as wildlife personnel. The key role of information and education personnel in dealing with controversial issues and informing legislators showed in their questionnaire responses. They differed from directors more than any other group on questionnaire items related to conflict resolution but were most similar to directors on items related to politics. Information and education personnel were the only group that did not agree the agencies maintain a dialogue with all stakeholders, including opponents. In addition, information and education personnel were the only group that disagreed the agencies are good at taking advantage of opportunities and rewarding creativity and innovation. The low scores of information and education personnel on the constructive style axes of the OCI, coupled with their relatively high scores on most of the passive/defensive axes was consistent with their questionnaire responses. OCI responses indicated information and education personnel
viewed the agencies as less likely to contribute to their higher-order satisfaction needs and more inclined to emphasize avoidance of interpersonal conflicts and lack of participation.

Enforcement personnel were most similar to directors in their questionnaire responses, differing substantially on 5 of the 19 factors addressed by the questionnaire. Enforcement personnel differed most from directors on the internal factors participative decision making (0.65), employee recognition and rewards (0.58), internal communication (0.56), adaptability and innovation (0.52) and the external factor sensitivity to politics (0.63). Their responses to many questionnaire items were intermediate between directors and the other employee groups. Enforcement personnel were also intermediate in their OCI responses, scoring lower than directors (although not statistically significant) on all four constructive style axes but significantly higher than fisheries, wildlife and information and education personnel on three of the four axes.

Responses of administrative support personnel also tended to be intermediate between directors and other employee groups. This is not surprising, considering the mixed representation of persons with backgrounds in all of the other disciplines in the administrative support group.
Fisheries personnel differed most from directors on the same internal factors as most other groups—participative decision making (0.80), employee morale (0.80), internal communication (0.79), recognition and rewards (0.78) and adaptability and innovation (0.72). Fisheries personnel were more skeptical about the political credibility of their agencies than other groups, differing substantially from every group except wildlife personnel.

Responses of Men and Women

Men and women differed substantially on 30% (27 out of 91) of the questionnaire items. Gender differences were consistent, even when they were not substantial, and were especially noticeable in two areas, (1) participative decision making and internal communication and, (2) public involvement in decision making and conflict resolution.

Men had a substantially more positive view than women on 11 questionnaire items related to participative decision making and internal communication. Men agreed more strongly than women that leaders support rank and file employees and vice versa when dealing with public conflicts. Men also agreed more strongly that (1) risk taking is encouraged, (2) they understand planning and budgeting processes, (3) budgeting processes allow everyone's ideas to be heard and
considered, (4) participation in planning processes is encouraged and (5) planning roles are clearly spelled out. Women thought leaders were more task-oriented than men and agreed less strongly than men that (1) leaders demonstrate concern for employees, (2) leaders seek ideas from employees and act on those ideas and (3) leaders are good listeners. Not surprisingly, men agreed more strongly than women (2.7 versus 3.0) that employee morale is good.

Questionnaire responses of men and women were consistent with their OCI responses. Given the stronger agreement of men with questionnaire items related to participation and communication, it is not surprising that men scored significantly higher on all four constructive style axes of the OCI.

Women were more skeptical than men in answering questions about the public's role in decision making and conflict resolution, differing substantially on 10 out of 22 questionnaire items. Women agreed less strongly than men that (1) the public is adequately involved in decision making, (2) the agency has a formal public involvement plan, (3) the agency regularly gathers input on potentially controversial issues, (4) agency decisions are rarely overturned, (5) win-win solutions to conflicts are sought, (6) the public perceives the agency's decision making process to be fair and equitable and (7) the public feels their role in agency decision making is meaningful. Women
agreed more strongly than men that attaining use or harvest goals is more important than public opinion in making resource allocation decisions. However, women agreed less strongly that decisions are primarily biological and agreed much less strongly than men that constituents should have a major role in setting agency goals.

Women differed substantially from men in three areas when responses were pooled by effectiveness factor. Women were substantially less positive on items related to ability of the agency to resolve conflicts without appeal or override, participative decision making and employee morale. Responses of men and women were most similar on items related to teamwork, definition of personnel roles, employee recognition and rewards, political credibility of the agency and relationships with other agencies.

The substantially less positive view that women held of these agencies is consistent with the findings of other research concerning women in the workplace. Women are commonly the victims of subtle discrimination in the form of microinequities (Rowe 1990) or are judged by inappropriate male standards (Yokota 1988). These problems tend to be particularly acute in traditionally male-dominated disciplines (like fisheries and wildlife), where a "male locker room atmosphere" may prevail and women have fewer female peers and role models (Ehrhart and Sandler 1987).
The responses of men and women participating in this study on the defensive scales of the OCI indicated even these effective fish and wildlife agencies face the same problems. Women scored significantly higher than men on the Approval axis, indicating they feel more pressure than men to do things to please others rather than themselves. Men scored significantly higher than women on the Oppositional and Competitive axes, consistent with traditional expectations that men will behave in a more aggressive manner. Since this study was not designed to specifically assess problems of women in the agencies, the interviews yielded no specific examples.

Responses of Headquarters and Field Personnel

Responses of headquarters and field personnel were remarkable for their similarities rather than their differences. Since this study documented performance only in agencies perceived as being effective, no judgment can be made as to whether the high degree of similarity between headquarters and field personnel is characteristic of effective agencies, or if the same results might be found in a larger sample of fish and wildlife agencies.

Headquarters and field personnel differed substantially on only 10% (9 out of 91) of the questionnaire items. When
pooled by effectiveness factor, none of the mean differences were substantial. Headquarters personnel agreed more strongly than field personnel that (1) the agency has high credibility with the legislative and executive branches, (2) is politically effective, (3) the agency is a national leader in dealing with conservation issues, (4) risk taking is encouraged, (5) leaders understand issues and concerns of field employees and (6) the agency's best people are promoted. Field personnel agreed more strongly than headquarters personnel that (1) land acquisitions are primarily political decisions, (2) employees have training plans that are followed and (3) leaders focus on the future.

**Comparison of Questionnaire Results and Organizational Culture Inventory Responses**

Responses patterns to the questionnaire and the OCI were similar in all comparisons. Director's responses were substantially different from all other groups on both the questionnaire and the OCI and most closely approached the ideal cultural profile. Responses of enforcement personnel were most similar to directors on both instruments. Men's responses were substantially more positive than women's responses to both instruments. Headquarters and field personnel responses were similar on both instruments.
Since the questionnaire focused on effective agency performance, responses to the questionnaire items should correlate most strongly with responses on the constructive style scales of the OCI. Among the numerous organizational characteristics that describe the four behavioral axes of the constructive styles are, encouragement of moderate risk taking, creativity and innovation, avoidance of punishment for mistakes, participative management, teamwork, emphasis on personal development, mutual support between leaders and subordinates, good internal communication, constructive interpersonal relationships, high autonomy and recognition of good performance. Rankings of pooled mean responses by agency to the 29 questionnaire items most closely related to those organizational characteristics (Table 78) were strongly correlated with ranked agency responses to the constructive style scales of the OCI (Spearman's rho = 0.83). Since the questionnaire was designed to assess positive aspects of agency management performance, no attempt was made to correlate questions with the defensive styles of the OCI.
Table 78. Questionnaire items correlated with the constructive styles of the Organizational Culture Inventory.

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<tbody>
<tr>
<td>17. When public conflicts arise, agency leaders support the rank and file employees</td>
<td></td>
</tr>
<tr>
<td>18. When public conflicts arise, rank and file support agency leaders</td>
<td></td>
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<tr>
<td>38. The agency does a good job of anticipating change</td>
<td></td>
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<tr>
<td>39. The agency is good at taking advantage of opportunities</td>
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<tr>
<td>40. Creativity and innovation are rewarded</td>
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<tr>
<td>41. Risk taking is encouraged</td>
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<tr>
<td>42. Mistakes are not automatically punished</td>
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<tr>
<td>43. The agency does a good job of long-term planning</td>
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<tr>
<td>44. The agency effectively tracks socio economic factors and trends</td>
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<tr>
<td>49. The planning process allows everyone's ideas to be fairly considered and evaluated</td>
<td></td>
</tr>
<tr>
<td>50. The budgeting process allows everyone's ideas to be fairly considered and evaluated</td>
<td></td>
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<tr>
<td>51. Participation in the planning process is encouraged</td>
<td></td>
</tr>
<tr>
<td>52. Participation in the budgeting process is encouraged</td>
<td></td>
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<tr>
<td>61. Agency leaders and managers have the skills needed to do their jobs effectively</td>
<td></td>
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<tr>
<td>63. There is an active program for developing the next generation of leaders and managers within the agency</td>
<td></td>
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<tr>
<td>64. Most employees in the agency have training plans that are followed</td>
<td></td>
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<tr>
<td>69. Agency leaders and managers demonstrate concern for employees</td>
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<tr>
<td>70. Leaders actively seek ideas from agency employees</td>
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<tr>
<td>71. Agency leaders act on ideas received from the employees</td>
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<tr>
<td>72. Major issues and decisions are usually addressed by teams of people (versus individuals)</td>
<td></td>
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<tr>
<td>74. When teams are being set up, people are eager to participate</td>
<td></td>
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<tr>
<td>76. Communication related to agency decision making is open and honest</td>
<td></td>
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<tr>
<td>77. Agency leaders are accessible to the rank and file</td>
<td></td>
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<tr>
<td>80. Agency leaders are good listeners</td>
<td></td>
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<tr>
<td>81. When given bad news, agency leaders appreciate getting the information; they are not likely to &quot;shoot the messenger&quot;</td>
<td></td>
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<tr>
<td>82. Information is effectively shared throughout the agency</td>
<td></td>
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<tr>
<td>88. The agency's performance appraisal system adequately documents employee performance</td>
<td></td>
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<tr>
<td>89. Outstanding performance is rewarded in the agency</td>
<td></td>
</tr>
<tr>
<td>90. The agency's best people are promoted</td>
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</table>
Chapter 4.

Management Effectiveness and the Organizational Literature

Both the effectiveness factors identified in this research and the findings of the case studies overlap the results of previous organizational effectiveness research. Neither this study nor the recent organizational literature contain surprising new insights into organizational effectiveness. The significance of this research lies in the realization that effective fish and wildlife agencies have much in common with other effective organizations and at the same time take advantage of unique aspects of the natural resource management arena.

Steers (1977) identified the following general areas of effectiveness factors: organizational characteristics, environmental characteristics, employee characteristics and managerial policy and practice. The specific components of the four areas were similar to many of the factors identified in this study. The first of Steers' areas, organizational characteristics, was not a major focus of this research. Nevertheless, some parallels can be drawn. The components of Steers' organizational characteristics
category are (1) decentralization, (2) specialization, (3) formalization, (4) span of control and, (5) organization size.

According to Steers, decentralization increases managerial efficiency, leads to open communications, increased job satisfaction and better utilization of human resources. The agencies participating in this study were all physically decentralized. The majority of employees in the agencies worked in remote offices rather than central headquarters. The amount of functional decentralization varied, but in general, leaders acted as though the agencies were decentralized by emphasizing delegation of decisions to field personnel.

Specialization to improve efficiency is derived from Weber's (1947) scientific management. The participating agencies contained many specializations. Excessive formalization, the extent to which activities are governed by rules and regulations, can suppress adaptability and innovation. The participating agencies varied in formalization, but autonomy of agency personnel was a hallmark. Span of control was not addressed by this research.

Steers identified a trade off in organization size. Larger organizations tend to be more efficient but employee attachment is normally greater in smaller organizations. The participating agencies ranged in size from 300+ people
to over 3,000 people. Three agencies were large (by fish and wildlife agency standards), multi-function natural resource agencies and 6 of the 9 agencies were among the largest in the country. However, none of the case study agencies were large compared to federal agencies or large corporations—the kind of organizations where much research has been conducted. Steers concluded, however, that no universally desirable structure can facilitate effectiveness in any environment.

Environmental characteristics, the second of Steers' general areas, included external and internal environments. Organizations facing dynamic, complex external environments tend to be more successful when there is significant differentiation among functional departments. Stable external environments promote more integration and interdepartmental cooperation. Steers found effective organizations scored high on both scales, indicating a balance between differentiation and integration. The participating agencies were generally highly differentiated but emphasized interdivisional teamwork, especially in developing strategic plans and in addressing complex problems. Steers' view of the most desirable internal environment (organizational culture) is one that emphasizes achievement of organizational goals and employee consideration, leading to satisfaction of both organization and individual objectives. Agency missions and personal
missions of agency employees were remarkably similar in the participating agencies. Explicit statements in the strategic plans of several agencies indicated caring for agency employees was a common theme.

Steers' third general area, employee characteristics, consisted of employee attachment and commitment. Attachment refers to attracting and retaining qualified people to the organization. Commitment refers to the attraction of employees to the organization's goals. Schneider (1983) found employees were attracted to and remained with organizations when there was high congruence of organization and personal goals. Employees of the participating agencies displayed high congruence with agency goals.

The fourth and final of Steers' general areas of effectiveness factors was managerial policy and practice. He identified six aspects of managerial policy and practice that facilitate organizational effectiveness. First, strategic goal setting should result in clear, measurable goals. The participating agencies were strong in the strategic planning area. Second, the organization must be able to acquire and utilize the resources it needs. Nearly all of the participating agencies were especially effective in acquiring nontraditional sources of funds. Third, managers must create a performance environment that promotes employee motivation to perform. Employees of the case study agencies were strongly motivated by their personal
commitments to agency goals. Agency leaders contributed to employee motivation by emphasizing participative management. Motivating factors were generally offset by poor recognition and reward systems and concerns regarding financial compensation. Fourth, good internal communication is especially important when the organization must deal with high levels of uncertainty. Communication within the participating agencies was generally good, although not as good as leaders thought. Fifth, leaders must create a culture that promotes congruence of organizational and employee goal attainment. Employee participation in establishing strategic planning goals of the case study agencies was an important aspect of creating that culture. The sixth and final aspect of managerial policy and practice is the function leaders play in organizational adaptation and innovation, a key characteristic of successful organizations. The participating agencies were quite adaptable, although few could be labeled truly innovative.

The case study agencies compared favorably with most of Steers' effectiveness criteria. The agencies were largely decentralized with only moderate levels of formalization. The agencies were mostly smaller organizations (in the context of organizational research) with great employee attachment. The agencies' mix of differentiation and integration (through emphasizing interdisciplinary team approaches to complex problems) matched Steers'
prescription. Agency and employee personal goals were highly congruent, leading to high employee attachment to the agencies. The agencies were effective in planning with clear goals established through extensive employee participation. And finally, the agencies were successful in finding alternative funding resources.

The agencies did not exhibit strength relative to Steers' criteria for size, performance environment, internal communication and innovation. The smaller size of the agencies may contribute to less efficiency compared to larger organizations. Many agency managers and employees expressed frustration with their lack of control over factors that affect performance environment (particularly incentive pay). Internal communication was generally regarded as fair but not exceptional. Innovation was desired but often not specifically encouraged.

Cameron and Whetten (1983b), in comparing multiple approaches to the study of organizational effectiveness, concluded there cannot be one universal model of effectiveness. They also concluded it is more worthwhile to develop frameworks for assessing effectiveness, to engineer effectiveness, than to theorize about it. In developing a framework, the major challenge facing researchers and managers is selecting appropriate criteria and instruments. The measuring device must be as complex as the construct
being measured. Consequently, multiple indicators of effectiveness are required.

One of the primary contributions of this research is the framework for assessing agency effectiveness that employs multiple indicators and methods. Although the research focused only on the positive aspects of agency performance, managers can learn about agency weaknesses by interpreting results of the questionnaire.

The questionnaire developed for this study could be a useful metric for managers wishing to compare employee perceptions of their agencies' performance to those of employees in agencies acknowledged as effectively managed. Mean responses to questionnaire items reported herein could serve as benchmarks to be attained or surpassed. Through successive iterations of this "benchmarking" process (Cole 1993), management effectiveness should improve significantly.

An alternative approach is to focus on variation in perceptions of agency performance. The Total Quality Management (TQM) process espoused by W. E. Deming (Gabor 1990) is grounded in statistical monitoring of variation in organizational outputs. Proponents of TQM strive to "continuously improve forever" by systematically reducing sources of variation. The questionnaire developed for this study could be used to monitor variation in employee perceptions of agency performance relative to many of the
effectiveness factors. Agencies wishing to fully implement a TQM system would need to develop additional instruments to monitor variation in perceptions of constituents.

The Attributes of Excellence

Peters and Waterman (1982) distilled the findings of their case studies of "excellent" companies down to eight basic principles. Those principles were:

1. A bias for action-- identifying problems and developing answers quickly
2. Staying close to the customer-- listening intently and regularly to customers to provide quality, service and reliability
3. Autonomy and entrepreneurship-- emphasizing innovation and practical risk taking throughout the organization
4. Productivity through people-- creating awareness in all employees that they are the source of quality and organizational success
5. Hands-on, value driven-- key executives behave consistently with well defined company values
6. Stick to the knitting-- engaging in and staying close to the businesses the companies know how to run
7. Simple form, lean staff-- simple structural form with few administrative layers and relatively small administrative staffs, and
8. Simultaneous loose-tight properties-- fostering a climate where employees are dedicated to the company's central values while allowing much autonomy in implementing them.

Other researchers have suggested that rather than universal principles, the Peters and Waterman criteria are simply, "pretty good ideas that work most of the time" (Anonymous 1984). Nevertheless, the excellence principles have been widely discussed and applied.

Sipel (1984) and Barbour (1984) adapted the Peters and Waterman principles to management of local governments. Adapting the principles to the public sector required recognition of the greater role of politics, but otherwise, the criteria were very similar to those of Peters and Waterman. Sipel's criteria were:

1. Action orientation-- identify problems and deal with them quickly, fighting through structural, political, legal and environmental constraints that make operating in the public sector more difficult than the private sector
2. Closeness to citizens-- establish and maintain a variety of close linkages with citizens being served, they listen and are responsive to public input

3. Autonomy and entrepreneurship-- develop a climate conducive to doing new things and solving problems with creative solutions

4. Employee orientation-- insist on intense, pervasive treatment of employees as human beings and adults

5. Values-- a defined set of values, want to be the best in providing superior quality and service to the public

6. Mission, goals and competence-- evaluated their missions based on changing resource levels and citizen demands and used the mission statement as a basis for establishing community and organization goals

7. Structure-- the potential negative effects of antiquated, bureaucratic structures have been minimized with fewer management levels, fewer central office staff, firm central direction and maximum autonomy to employees, and
8. Political relationships-- positive, open, respectful relationships with policy makers, deal openly and effectively with their environments and are politically stable.

Barbour (1984) found managers in local governments were eager to talk about what they were doing relative to Sipel's excellence criteria and further, they were eager to learn what others were doing. The study team found the same attitude among the case study agencies. Nearly every agency leader, when first approached, was proud to share the agency's success stories and eager to learn from the successes of other agencies.

The common attributes of effective fish and wildlife agencies can also be distilled to a framework similar to those of Peters and Waterman or Sipel (Table 79). The primary differences between effective fish and wildlife agencies and excellent companies or local governments are in the areas of congruence of agency and personal goals and maintaining a biological basis for agency actions. The eight basic principles listed below represent common approaches of the case study agencies, but were not necessarily found in all agencies.

First, effective fish and wildlife agencies are forward-looking and proactive in dealing with issues. They are constantly looking ahead, trying to anticipate issues. They depend on well-informed field staff to recognize
Table 79. A comparison of Peters and Waterman's (1982) eight principles of excellence, Sipel's (1984) adaptation of the principles to local governments and the general principles of management effectiveness described in this study.

<table>
<thead>
<tr>
<th>Peters and Waterman Excellence Criteria</th>
<th>Sipel Criteria for Local Governments</th>
<th>Effectiveness Criteria for Wildlife Agencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. A bias for action-</td>
<td>1. Action orientation-</td>
<td>1. Proactive action on issues- Agencies are</td>
</tr>
<tr>
<td>Companies identify problems, develop</td>
<td>Governments identify problems and</td>
<td>constantly looking ahead to anticipate</td>
</tr>
<tr>
<td>solutions and implement them quickly</td>
<td>deal with them quickly, fight</td>
<td>issues, are regional and national leaders</td>
</tr>
<tr>
<td></td>
<td>through structural, political, legal</td>
<td>in dealing with wildlife issues</td>
</tr>
<tr>
<td></td>
<td>and environmental constraints</td>
<td></td>
</tr>
<tr>
<td>2. Close to the customer-</td>
<td>2. Closeness to citizens- Governments</td>
<td>2. Closeness to citizens- Agencies use a</td>
</tr>
<tr>
<td>Companies listen intently and</td>
<td>establish &amp; maintain variety of close</td>
<td>variety of public involvement &amp; marketing</td>
</tr>
<tr>
<td>regularly to their customers to provide</td>
<td>linkage with citizens served. They</td>
<td>techniques to listen to public, understand</td>
</tr>
<tr>
<td>quality, service &amp; reliability</td>
<td>listen, are sensitive &amp; responsive</td>
<td>their desires &amp; involve them in making</td>
</tr>
<tr>
<td></td>
<td>to public input</td>
<td>decisions. Agency personnel are accessible,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>open to input and responsive</td>
</tr>
<tr>
<td>Innovation &amp; practical risk taking</td>
<td>Government leaders create climate</td>
<td>empower employees to make decisions &amp; try</td>
</tr>
<tr>
<td>common at all levels. Big problems</td>
<td>conducive to thinking up &amp; doing</td>
<td>new ideas without fear of punishment for</td>
</tr>
<tr>
<td>solved by &quot;chunking,&quot; breaking company</td>
<td>new things to solve problems. A</td>
<td>failures. Employees have wide latitude to</td>
</tr>
<tr>
<td>up into smaller pieces to encourage</td>
<td>track record of implementing creative</td>
<td>do their jobs their way</td>
</tr>
<tr>
<td>independent &amp; competitive thinking</td>
<td>solutions</td>
<td></td>
</tr>
<tr>
<td>4. Productivity through people-</td>
<td>4. Employee orientation-</td>
<td>4. Valued employees- Employees are the</td>
</tr>
<tr>
<td>Companies treat employees as the</td>
<td>Governments insist on intense,</td>
<td>agency's most valued resource. Agency</td>
</tr>
<tr>
<td>source of all quality &amp; productivity</td>
<td>pervasive treatment of employees</td>
<td>committed to personal development of</td>
</tr>
<tr>
<td>gains. Employees share in company's</td>
<td>as human beings &amp; adults</td>
<td>employees</td>
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<tr>
<td>success</td>
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Table 79 continued.

<table>
<thead>
<tr>
<th>Peters and Waterman Excellence Criteria</th>
<th>Sipel Criteria for Local Governments</th>
<th>Effectiveness Criteria for Wildlife Agencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. Hands-on, value driven- The company’s basic philosophy is well defined &amp; key executives behave consistently with company values</td>
<td>5. Values- Governments have a defined set of values &amp; want to be the best in providing superior quality &amp; service to the public</td>
<td>5. Missionary zeal- Agency mission and goals are well defined and highly congruent with employee personal missions, leading to missionary-like zeal of employees for their work.</td>
</tr>
<tr>
<td>6. Stick to the knitting- Companies stay close to the businesses they know best</td>
<td>6. Mission, goals, competence- Governments evaluate missions in light of available resources &amp; citizen demands as basis for establishing goals.</td>
<td>6. Biological base- Agency credibility based on bottom line of keeping biology and the resource first while at the same time balancing biology &amp; public opinion in making resource management decisions.</td>
</tr>
<tr>
<td>7. Simple form, lean staff- Company has a relatively simple structure &amp; small administrative staff</td>
<td>7. Structure- Governments minimize potential negative effects of antiquated bureaucratic structures, have fewer management levels, fewer central &amp; support staff but maintain firm central direction while allowing maximum autonomy</td>
<td>7. Stable, respected, enlightened leadership - Agencies are led by experienced wildlife professionals with good management skills. Decentralized structure and participative decision making, delegation of authority but leaders decisive when it is needed</td>
</tr>
<tr>
<td>8. Simultaneous loose-tight properties- Companies have centralist tendencies on core values but emphasize tolerance for individuality and autonomy</td>
<td>8. Political relationships- Governments maintain positive, open relationship with policy makers. Deal openly, effectively with political environment. Politically stable</td>
<td>8. Political/non-political- Agencies have strong public support &amp; are effective in mobilizing it when needed to support or oppose policies. Open, equitable decision making processes &amp; responsive to public. Biological basis for decisions contributes to non-political image</td>
</tr>
</tbody>
</table>
potential issues before they become major problems. They are regional and national leaders in dealing with big issues that face all fish and wildlife agencies, usually being among the first and most active agencies to address the issues. Some of the current issues they are addressing include anti-hunting movements, migratory wildlife and agency funding. The horizon for effective fish and wildlife agencies extends well beyond the state borders.

Second, effective fish and wildlife agencies stay close to their constituents. They use a variety of public involvement and marketing techniques to listen to constituents, understand their desires and involve them in making important decisions. They are strongly committed to involving the public in making decisions, especially in early, goal-setting phases of resource allocation. They recognize the difference between decisions that must be driven by biological imperatives and those that are primarily sociological. They further empower constituents to assist in making sociologically or politically complex resource allocation decisions through the use of citizen task forces. Agency personnel are accessible, open to input and responsive to their constituents. Their attitude can be characterized by the statement, "We can manage fish and wildlife resources in any way that is biologically possible, sociologically desirable and economically feasible."
Third, effective fish and wildlife agencies have an atmosphere of employee autonomy and empowerment. They empower their employees to make decisions and try new ideas without fear of punishment when they fail. Agency leaders desire to encourage creativity and innovation, even if that desire is slow to filter throughout the agency. Employees determine their own work objectives and are free to do their jobs their way.

Fourth, effective fish and wildlife agencies value their employees highly. They explicitly state that employees are among the agencies' most valuable resources and are committed to the personal development and well-being of employees. Employees are given many opportunities to continue learning and improve needed skills. Effective agencies maintain an emphasis on training and education even when facing more restrictive budgets. They recognize the constraints that impinge upon the ability of public organizations to create excellent performance environments and emphasize training, participation, autonomy and other factors they can control.

Fifth, effective fish and wildlife agencies have clearly defined missions and goals and benefit from having passionately motivated wildlife missionaries as employees (Kennedy 1986). The agencies and their employees share a common mission, to manage wildlife for wildlife's sake and for the enjoyment of the citizens they serve. The agencies
are good planners and effective in finding the resources needed to accomplish their well defined missions, goals and objectives. The high congruence of agency goals and altruistic personal goals results in missionary-like zeal of employees for their work.

Sixth, just as excellent companies "stick to their knitting," effective fish and wildlife agencies never stray too far from their biological bases. They never forget that agency credibility is based on balancing biology and public opinion. They accommodate public opinion when they can and they recognize when resource allocation decisions should be driven by biological concerns or sociological concerns. However, their publics have faith that the agencies will always maintain a bottom line of putting the resource first.

Seventh, effective fish and wildlife agencies are led by experienced wildlife professionals who know how to manage and are given the chance to do so in a politically stable environment. The agencies are physically decentralized and have leaders that emphasize participation and teamwork. Functional decentralization is enhanced by delegation of much decision making authority out to the grass roots. At the same time, leaders provide clear, firm policy guidance, make tough decisions that rise to their level and back their employees when they make decisions.

Eighth, effective fish and wildlife agencies are simultaneously political and nonpolitical. They maintain
open, constructive relationships with the commissioners, legislators and executive branch persons that establish their policy agendas. The agencies have strong public support and are effective in mobilizing it when it is needed to implement policy agendas or oppose poor policy initiatives. They have open, equitable decision making processes, demonstrate responsiveness to public input and go out of their way to involve opponents early in decision making processes so they will not exercise veto power later on. They are powerful, effective forces in the political arena but maintain a nonpolitical image among politicians and constituents.

**Potential Problems**

Although this study was designed to document strengths of agencies acknowledged as effective performers, some weaknesses were evident. The most widespread problem was lack of adequate recognition and rewards. Lack of funding for merit pay systems was commonly cited as a problem. In the last decade of the twentieth century, it is the rare state that is not experiencing financial difficulties. Thus, significant increases in compensation, merit-based or otherwise, are unlikely. Unfortunately, the study teams frequently encountered an attitude of helplessness and
acceptance of the status quo regarding recognition and rewards. While compensation is certainly important, there are many non-monetary ways to reward employees with the altruistic, missionary-like motivation characteristic of fish and wildlife agency employees. Agency leaders need to be creative in rewarding employees in ways that are meaningful. For example, the strong desire for more training provides an excellent opportunity to reward employees who are eager to improve themselves.

The significant difference in perceptions of the agencies by men and women presents another opportunity for improvement. Efforts to raise the awareness of employees regarding the subtle inequities that make the workplace less friendly to women and minorities should continue. In addition, state fish and wildlife agencies must be more aggressive about diversifying their work forces. Leaders in every case study agency were aware of the need to diversify and often frustrated about not being able to attract more female and minority candidates. Part of the problem is the lack of diversity of students in university fish and wildlife programs. However, state agencies have been relatively passive about recruiting women and minorities compared to federal agencies. Few of the women and minorities currently graduating from university fish and wildlife programs go to work for state agencies because federal agencies aggressively recruit them through
cooperative employment programs. The U. S. Forest Service developed a strategic plan to achieve workforce diversity that includes the insertion of diversity goals in the performance appraisals of supervisory personnel (USDA Forest Service 1991). If significant progress is to be made in diversifying the work forces of state fish and wildlife agencies, they must begin recruiting women and minorities before they graduate.

A third area of potential improvement, the wide gap between perceptions of agency leaders and other agency employees relative to many of the effectiveness factors, is more general and difficult to approach. Considering the fervent dedication of fish and wildlife employees to their jobs, it is surprising that only the organizational culture profiles of directors approached the ideal profile. Agencies will need to improve in the areas of recognition and rewards, encouraging creativity and innovation and internal communication to create more constructive agency cultures.

**Further Research Needs**

This project should be viewed as a beginning rather than an end. The common strategies and unique examples uncovered in the nine case study agencies should be helpful
to any fish and wildlife agency manager. I began this study believing that agencies learn primarily by watching other agencies. As I complete the study, I am even more strongly convinced that observation is the primary means of information transfer. This project has helped to facilitate transfer of information among fish and wildlife agencies.

However, many success stories are waiting to be shared. As the study team went through the process of identifying potential case study agency candidates, it became abundantly clear that many agencies were effective relative to at least a few of the factors. Research efforts should continue to discover and share the successes of other agencies.

There are, of course, agencies that are not particularly effective in one or more of the areas defined by the effectiveness factors. As agency leaders decide their agencies need to improve their performance in those areas, comparison of those agencies to the benchmarks established here would be especially valuable. The fish and wildlife profession won't know if the characteristics and strategies described here are unique to effective agencies until the data are compared to those of self-admitted less effective agencies.

Specific areas of this study that bear further study include leadership in natural resource agencies, public involvement strategies, reward and recognition systems and opportunities for continuing education and training.
Leadership research should focus on backgrounds, behaviors and situational contingencies that contribute to effective leadership in natural resource agencies. Improving the effectiveness of public involvement was uppermost in the minds of many agency employees. Effective strategies and methods should be documented and shared. Even the effective agencies struggled with adequate rewards and recognition for their employees. Innovative reward systems need to be developed to recognize overworked wildlife missionaries. The desire for continuing education and training opportunities was universal among the employees of the effective agencies. They were especially interested in training related to public involvement and basic management principles. The field is ripe for development of courses that address the specific needs of natural resource professionals.

There is much that is right with state fish and wildlife agencies. This study of effective agencies has established a benchmark. However, management effectiveness is a dynamic, continually changing goal. The information shared here will only be useful when it is used to surpass the benchmark and establish new ones.
Literature Cited


Stogdill, R. M. 1963. Manual for the Leader Behavior Description Questionnaire -Form XII. Ohio State University. Columbus, Ohio.


APPENDIX A

Case Study Agency Descriptions

Arizona Game and Fish Department ............... 318
Florida Game and Freshwater Fish Commission .... 322
Idaho Department of Fish and Game .............. 326
Minnesota Department of Natural Resources ....... 331
Missouri Department of Conservation .......... 335
New York Department of Environmental Conservation
  Division of Fish and Wildlife ................. 340
South Carolina Wildlife and Marine Resources Department 343
Wisconsin Department of Natural Resources ....... 347
Wyoming Game and Fish Department ............ 352
Director: Duane Shroufe  
Deputy Director: Tom Spalding  
  Director's office personnel--27 (including planning & personnel)  

Field Operations Division:  
  Assistant Director--Lee Perry  
  Division employees--237 (includes enforcement & regional administration personnel)  

Information and Education Division:  
  Assistant Director--Dave Daughtry  
  Division employees--36  

Special Services Division:  
  Assistant Director--Roland Sharer  
  Division employees--117 (includes data management, development, support services, finance & accounting)  

Wildlife Management Division:  
  Assistant Director--Bruce Taubert  
  Division employees--321 (includes fisheries, game, habitat, law enforcement specialists, nongame, research)  

Total department employees--738 (October, 1992)  

Annual Budget (FY 1991): $34,127,858  
  License revenue--36%  
  Federal Aid & grants--32%  
  Heritage funding--18% (Heritage funds were only available during part of FY 1991)  
  General fund revenue--none  
  Miscellaneous funds--14% (includes watercraft licenses)  

Agency/project liaison: Todd Pringle  

Case Study Visit: March, 1992  

Case study team members--  
  Steve McMullin (Virginia Tech)  
  Spencer Amend (U.S. Fish & Wildlife Service)  
  Stan Allen (Idaho Department of Fish and Game)  
  Mark Burch (Indiana Department of Natural Resources)  
  Therese Thompson (Proactive Strategies Project)
Interviews--61
Agency personnel--53 (36 headquarters, 17 field staff)
Commissioners--3
Constituents--2
Media representatives--3

Agency Description:

The Arizona Game and Fish Department is a traditional fish and wildlife agency that is rapidly becoming nontraditional. The Arizona Heritage Fund Initiative, passed in 1990, will substantially increase the department budget for habitat acquisition and protection, nongame programs, urban wildlife management and conservation education. The department is headed by a five-member commission. Candidates for commissioner must meet rigorous criteria before being appointed by the governor for five-year terms. The Commissioners appoint the department director. Duane Shroufe, the current director, was appointed in 1989.

The Arizona Game and Fish Department participated as a categorical case study agency. The study team investigated agency performance relative to four categories--public support and awareness, planning and funding, agency management and personnel.

Arizona citizens are extremely supportive of the department and its efforts to expand beyond the traditional roles of a game and fish agency, as indicated by passage of the Heritage Fund Initiative. The information and education division is highly respected by the public and media.
representatives. Expectations for an even more effective information and education program are high as the Heritage Fund increases available funding. The agency is very open to public input and everyone from the director to wildlife managers (enforcement of wildlife regulations are handled by wildlife managers who spend approximately 50% of their time on enforcement and the remainder on wildlife monitoring and management activities) are available to any citizen at any time.

Innovative ideas are encouraged and rewarded by the director. A futuristic outlook pervades the agency. Even before plans were made to allocate the Heritage Fund windfall, employees were aware that the Heritage Fund will not be adequate to carry department programs indefinitely. The agency's management system is incomplete but progressing. A recently established Responsive Management Unit is designed to help the agency track opinions and societal trends.

Both employees and constituents have strong faith in agency leadership. Many employees take advantage of the state's strong training program, including the series of Certified Public Manager training courses.

Department leaders have built a culture based on teamwork through training sessions entitled "Team Wildlife." Teams are given the time to accomplish assigned tasks. Participation and delegation of decision making authority is
the norm throughout the agency. Employees feel communication within the agency is exceptional.

Employee morale is high, despite complaints about compensation. Much effort is expended in recognizing the value of individual and team contributions and rewarding employee performance. As in the other case study agencies, employees personally identify with the agency mission and are extremely dedicated.
Executive Director: Robert M. Brantly  
Assistant Executive Director: Allan Egbert  
Executive Director's office employees--14  

Division of Administrative Services:  
   Director--Bill Sumner  
   Division employees--58  

Division of Law Enforcement:  
   Director--Bob Edwards  
   Division employees--435  

Office of Environmental Services:  
   Director--Brad Hartman  
   Office employees--25  

Office of Information Services:  
   Director--Duke Hammond  
   Office employees--47.5  

Division of Wildlife:  
   Director--Frank Montalbano  
   Division employees--166.5  

Division of Fisheries:  
   Director--Smokie Holcomb  
   Division employees--167.5  

Regional Administration:  
   Regional directors--Bob Ellis, Larry Martin, Robert Butler, Greg Holder,  
   Regional administration employees--10  

Total department employees--923.5 (August, 1991)  

Annual Budget (FY 1991): $51,652,972  
   License revenue--29%  
   Federal Aid & other government revenue--24%  
   General fund revenue--36%  
   Miscellaneous revenue--11%  

Agency/project liaison: Dave McElveen
Case Study Visits: January, 1992 and September, 1992

Case study team members (1st visit)--
Steve McMullin (Virginia Tech)
Spencer Amend (U.S. Fish & Wildlife Service)
Larry Cartee (South Carolina Wildlife & Marine Resources Department)
Robert Henshaw (New York Division of Fish & Wildlife)
Dwight Guynn (Montana Department of Fish, Wildlife & Parks)

Follow-up visit team members--
Steve McMullin (Virginia Tech)
Calvin DuBrock (Pennsylvania Game Commission)
Tom Wasson (Ohio Department of Natural Resources)
Dan Zekor (Missouri Department of Conservation)

Interviews--126
Agency members--99 (50 headquarters, 49 field staff)
Commissioners--2
Other agencies--11
Constituents--14

Agency Description:

The Florida Game and Fresh Water Fish Commission is constitutionally separate from other Florida agencies. The governor appoints five commissioners to staggered terms. The commissioners appoint the executive director, set policy and allocate dedicated funding sources. Colonel Robert M. Brantly, executive director since 1977, answers to the Commission rather than the governor. The state legislature has substantial influence on the agency due to the relatively large portion of the agency budget derived from general fund revenue. In addition to traditional fish and wildlife agency responsibilities, the agency is active in
enforcing environmental regulations, particularly in the area of toxic waste dumping and criminal littering.

Florida citizens generally support the Commission's efforts to expand its mission beyond that of a traditional fish and wildlife agency. The agency's nongame and environmental enforcement programs were especially popular with the public. Resources for information and education efforts are limited. Public input in agency decision making processes is very formalized, but employees feel strongly that citizens can make a difference in the agency's decisions.

Field personnel are conditioned to feed information about potentially controversial issues up the chain of command to Tallahassee headquarters. Because of the agency's constitutional status, the notion of having a decision overturned is foreign to most employees. Both employees and the public feel the decision making process is fair and equitable.

The agency is considered very effective in the political arena for many reasons. The current executive director is highly regarded as an administrator and has been in office for 16 years, building many effective relationships. The Commission's constitutional status contributes to its political effectiveness by shielding the agency from parts of the political process. Establishment
of the Environmental Enforcement Unit improved the already good relationships with other agencies in the state.

Perhaps because Florida's human population and wildlife habitats are changing more rapidly than those of most states, the Commission is acutely aware of changing trends in the agency environment. A formalized system for routing employee suggestions for change through the chain of command allows them to participate in shaping the agency's future. The Commission has been particularly successful in developing innovative funding sources for its nongame program. The auto title transfer impact fee and the Speeding for Wildlife program should be models for other agencies.

Agency employees have great faith in the executive director. Headquarters staff is open and accessible to field employees. The agency emphasizes communication through its chain of command.
IDAHO DEPARTMENT OF FISH AND GAME

Director: Jerry M. Conley
Assistant Director: Kenneth Norrie
Assistant Director, Operations: Jerry Mallet
Director's office employees--8

Bureau of Administration:
Chief--Stephen Barton
Bureau employees--45

Bureau of Enforcement:
Chief--Frank NeSmith
Bureau employees--105

Bureau of Engineering:
Chief--Grant Christensen
Bureau employees--21

Bureau of Fisheries:
Chief--Steve Huffaker
Bureau employees--126

Bureau of Wildlife:
Chief--Tom Reinecker
Bureau employees--81

Bureau of Information and Education:
Chief--William Goodnight
Bureau employees--24

Bureau of Resource Planning/Program Coordination:
Chief--Calvin Groen
Bureau employees--12

Regional Administration:
Regional supervisors--David Ortmann, Jerry
Thiessen, Stacy Gebhards, Carl Nellis, Tracey
Trent, Herbert Pollard
Regional administration employees--23

Total department employees--445 (June, 1991)

Annual Budget (FY 1991): $31,507,026
License revenue--58%
Federal aid & grants--34%
General fund revenue--none
Miscellaneous funds--8%
Agency/project liaison: Stan Allen

Case Study Visits: August, 1991 and June, 1992

Case study team members (1st visit) --
Steve McMullin (Virginia Tech)
Spencer Amend (U.S. Fish & Wildlife Service)
Tom Chmurt (Arizona Game and Fish Department)
Tim Farley (California Fish and Game Department)

Follow-up visit team members --
Steve McMullin (Virginia Tech)
Bill Hesselton (U.S. Fish & Wildlife Service)
Bruce Hawkinson (Minnesota Department of Natural Resources)
Dave Hamm (South Dakota Department of Game, Fish and Parks)

Interviews --97
Agency members --70 (42 headquarters, 28 field staff)
Commission --5
Constituents --4
Other agencies --11
Legislators, governor's staff --4
Media representatives --3

Agency Description:

The Idaho Department of Fish and Game was organized by constitutional initiative in 1938. The department was headed by a five-member citizen commission until 1990, when a sixth commission position was created. The agency director is selected by the commission. Jerry Conley has served as director since 1981. The agency has no responsibilities outside of traditional fisheries, wildlife, enforcement and information and education duties. Agency funding is derived mostly from license revenue and Federal Aid, although federal grants (primarily from the Bonneville Power Administration) contribute significant amounts to the
agency budget. The budget contains no general fund revenue.

Public support for the department is very strong in Idaho, a state with one of the highest hunting and fishing participation rates in the nation. The agency is aggressive about reaching out to constituents. The Information and Education Bureau is highly regarded and active. In addition to standard media contacts, the agency publishes a tabloid newsletter that is occasionally mailed to every license holder in the state. The department is effective at both disseminating and receiving information from constituents. Local opinion leaders are targeted to receive information from the department through its Wildlife Ambassadors program. The director's statewide call-in radio show has been extremely successful. Constituents are actively involved in setting agency goals through input to management plans. The 1988 Idaho Wildlife Congress, organized by the department, helped to create an atmosphere of openness and responsiveness to public input.

The agency exhibits leadership in dealing with policy issues, as demonstrated by the Wildlife Congress and policy planning process. A healthy balance between biological needs and social desires governs management policy. The entire agency is active in the political arena. The director and assistant director are both recognized as effective in dealing with legislators and the governor's office. Field personnel are encouraged to "get the votes
taken care of before they come to Boise" by contacting local legislators regarding department programs in their areas.

Interagency coordination is important in a state where nearly 90% of the land is in public ownership. Idaho is also at the upstream end of the Columbia River Basin and consequently is active (along with the other northwest states) in implementing the Northwest Power Planning Council's Columbia River Basin Fish and Wildlife Program. A member of the director's staff serves as a full-time liaison with the council. The department, two national forests and the Nez Perce Tribe have experimented with cooperative management of land and wildlife in north Idaho. Partnerships with private industry are also important, as illustrated by Morrison-Knudsen's sponsorship of the Boise Nature Center and Potlatch Forest Industries' participation in the department's road closure management program.

The 15-year policy plan and many 5-year management plans are ample evidence that the agency emphasizes strategic planning. The link between strategic plans and operational plans and budgets is more implicit than explicit. Agency funding is generally adequate. However, the agency is seeking legislative approval of fee indexing that would automatically adjust license fees to match approved budget increases.

Although the agency has a decentralized structure, most employees feel the balance of power has shifted in the last
decade from regional offices to the Boise headquarters. The department appears to mirror the strong leadership and high energy level of its director. Employees are encouraged to take advantage of numerous training opportunities. Nearly everyone attends an in-service training school every other year. Internal communication is strongly emphasized and key to the agency's effort to decentralize political contacts.

The agency demonstrates concern for its employees, and as a result, morale of agency employees is very good. The department has a strong program of employee recognition and rewards. Merit pay increases are given to a higher percentage of Fish and Game employees than any other state agency. Bonuses are granted to employees who relocate for job-related purposes. Every letter received by the agency that compliments an employee is sent to the legislators representing the district in which the employee works. The department even has a physical fitness awards program.
MINNESOTA DEPARTMENT OF NATURAL RESOURCES
DIVISION OF FISH AND WILDLIFE

Division Director: Roger Holmes
  Director's office employees--3

  Administrative Services Unit:
    Chief--Richard Hassinger
    Unit employees--11

  Section of Ecological Services:
    Chief--Lee Pfannmueller
    Section employees--59

  Section of Fisheries:
    Chief--Jack Skrypek
    Section employees--340

  Section of Wildlife:
    Chief--Tim Bremicker
    Section employees--267

Total division employees--680 (July, 1992; approximate
  total, does not include enforcement which is in a
  separate division)

Annual Budget (FY 1992): $51,242,872
  License revenue--72%
  Federal Aid--24%
  Miscellaneous funds--4%
  General fund revenue--none

Agency/project liaisons: Richard Hassinger, Brian Stenquist

Case Study Visit: April, 1992

Case study team members--
  Steve McMullin (Virginia Tech)
  Spencer Amend (U.S. Fish & Wildlife Service)
  Don Friberg (U.S. Fish & Wildlife Service)
  Kevin Delaney (Alaska Department of Fish and Game)
  Virgil Kopf (Virginia Department of Game and
    Inland Fisheries)
Interviews--72
Agency members--59 (24 headquarters, 35 field staff)
Constituents--11
Legislators--2

Agency Description:

The Minnesota Department of Natural Resources is a large (>3,100 employees) agency charged with management of a wide variety of natural resources, including minerals, waters, forestry, parks and trails in addition to fish and wildlife. Agency responsibilities do not include environmental protection. Enforcement personnel are placed in a separate division from fisheries and wildlife personnel. The agency is headed by a single, paid commissioner. There is no formal citizen policy making board. Roger Holmes was promoted from the chief of wildlife position to director of the Division of Fish and Wildlife in 1990.

The Division of Fish and Wildlife participated as a categorical case study agency. The study team investigated the division's performance relative to four categories—public support and awareness, conflict resolution, politics and planning and funding.

Many factors contribute to strong public support for the division. High participation rates and strong environmental and conservation ethics among Minnesota citizens are important. In addition, the division makes strong efforts to involve citizens in decision making.
Organized constituent groups are specifically targeted for input into decision making processes. Information and education personnel (in another division) are considered particularly effective.

The primary strategy for resolving conflicts is aggressively seeking input from constituent groups early in decision making processes and being open to their input. The agency has been particularly effective in dealing with Native Americans by negotiating and reaching mutually agreed settlements out of court. The conflict resolution process is controlled at the central office level.

The agency is quite effective in the state political arena. People inside and outside the department attributed much of that effectiveness to the agency commissioner and division director. Politicians noted an increase in the agency's willingness to deal with the public and legislators when the current leaders took office. The agency is very active in dealing with issues that extend beyond Minnesota's borders, including wetlands and waterfowl issues, the Farm Bill and neotropical migrant birds. Minnesota's nongame program is widely admired as one of the country's best.

Creativity and innovation are encouraged and rewarded. Employees can try new ideas without fear of seeing mistakes punished. The agency is active in strategic planning and involving constituents in setting strategic goals. A futuristic outlook includes evolution of the division
towards a comprehensive, holistic wildlife agency. The agency's management system is well developed. Although the planning-budgeting link has been weak, it is getting stronger. Minnesota citizens place a high priority on natural resource protection and management, as evidenced by their support for the Reinvest in Minnesota program and the Legislative Commission on Minnesota Resources. Both programs provide funding to the department on a special project basis.
MISSOURI DEPARTMENT OF CONSERVATION

Director: Jerry J. Presley
Assistant Directors: Kenneth M. Babcock
                   David D. Hurlbut
                   Gerald E. Ross

Director's office employees--14

Protection Division:
   Chief--Robert B. King
   Division employees--197

Wildlife Division:
   Chief--Ollie Torgerson
   Division employees--178

Fisheries Division:
   Chief--James P. Fry
   Division employees--186

Operations Division:
   Chief--Everett E. Clark
   Division employees--116

Natural History Division:
   Chief--James H. Wilson
   Division employees--44

Education Division:
   Chief--Donald K. Heard
   Division employees--25

Human Resources Division:
   Chief--Roger E. Ponder
   Division employees--23

Planning Division:
   Chief--Dan F. Dickneite
   Division employees--17

Public Affairs Division:
   Chief--Dixie Powers
   Division employees--34

Information Services Division:
   Chief--Shannon D. Cave
   Division employees--15

Fiscal Services Division:
   Chief--Aaron R. Chapman
   Division employees--49
Engineering Division:
Chief--Charles E. Hooker
Division employees--53

Forestry Division:
Chief--Marvin D. Brown
Division employees--269

Total department employees--1,220 (October, 1992)

Annual Budget (FY 1991): $92,978,244
License revenue--22.6%
Federal Aid--5.8%
Conservation sales tax--59.0%
General fund revenue--none
Miscellaneous funds--12.6% (including 6.6% from previous cash balance)

Agency/project liaison: Dan Zekor

Case Study Visits: August, 1991 and May, 1992

Case study team members (1st visit)--
Steve McMullin (Virginia Tech)
Spencer Amend (U.S. Fish & Wildlife Service)
Tommy Shropshire (Mississippi Department of Fish, Parks and Wildlife)
Bill Graves (Kentucky Department of Fish and Wildlife Resources)
Brian Stenquist (Minnesota Department of Natural Resources)

Follow-up visit team members--
Steve McMullin (Virginia Tech)
Verlyn Ebert (U.S. Fish & Wildlife Service)
Paul Johansen (West Virginia Department of Natural Resources)
Roland Shanks (Cornell University, Human Dimensions Unit)

Interviews--119
Agency members--103 (47 headquarters, 56 field offices)
Constituents--13
Other agencies--1
Media representatives--2
Agency Description:

The Missouri Department of Conservation was created by constitutional initiative in 1936. Prior to the election of 1936, fish and wildlife resources in Missouri were under the jurisdiction of a politically appointed game and fish commission. Dissatisfaction with political management of wildlife resources led to the formation of the Restoration and Conservation Federation of Missouri. The Federation's goal was to establish a nonpartisan conservation department. The drive was led by such conservation luminaries as Aldo Leopold and J. N. "Ding" Darling, as well as prominent Missouri conservationists.

The constitutional initiative established a four-member conservation commission, of which, no more than two members may belong to any one political party. The agency director is selected by the commission. Jerry J. Presley is the current director, having served in that position since 1987. The agency has a record of stability in the director's position, as Mr. Presley is only the fifth person to serve as director since the department officially began operations in 1937.

In addition to traditional fisheries, wildlife, enforcement, information and education duties, the department is also responsible for managing Missouri's forest resources. Approximately 60% of the agency's budget is derived from dedicated sales tax revenue. Sales tax
revenue was added to the department budget in 1977 after passage of a constitutional amendment initiative in November, 1976. The one-eighth of one percent conservation sales tax now generates over $50 million per year, making the Missouri Department of Conservation one of the nation's best funded fish and wildlife agencies. License revenue and Federal Aid make up approximately 30% of the budget. There is no general fund revenue in the budget.

From its inception, the department has emphasized conservation education. As a result, Missouri's citizens are among the nation's best informed regarding natural resources and conservation. Several generations of citizens have been exposed to the department's aggressive education program. Missourians have great faith in the department and strongly support its programs. Addition of sales tax revenues allowed the department to increase production of education materials and to add several positions in education. Nearly every Missouri school system teaches conservation principles throughout its curriculum.

Department employees emphasize service to the customer. Human dimensions researchers are active in conducting marketing research. The department understands its constituents very well. However, the department is generally conservative about public involvement in making management decisions. While there is not a high expectation of participation in agency decision making among the public,
there is strong faith that the agency will do the right thing.

Missouri's Conservation Commission has unchallenged authority in making natural resource management decisions as a result of its constitutional autonomy. There is essentially no avenue of appeal beyond the commission. The agency's strong public support gives it great political strength. Although the department is less political than most fish and wildlife agencies, it has excellent credibility with Missouri legislators. The department works well with other agencies. A cooperative program with the USDA Soil Conservation Service places department wildlife biologists in SCS offices to assist district conservationists in developing land management plans on private land.

The department tends to be more conservative than innovative. However, nationwide recruiting and the agency's reputation have filled the department personnel roster with top notch, creative people. The planning system generally rewards creativity. As is the case with many fish and wildlife agencies, the department has a strategic plan but its link with operational plans is somewhat weak.

Agency personnel have strong faith in department leaders. Many training opportunities are offered and employees are encouraged to take advantage of them. Major problems are usually addressed by interdisciplinary teams.
NEW YORK DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF FISH AND WILDLIFE

Commissioner: Thomas C. Jorling
Division Director: Kenneth Wich
Assistant Director: Gerald Barnhart
   Director's office employees--37

Bureau of Fisheries:
   Chief--Bruce D. Shupp
   Bureau employees--167

Bureau of Wildlife:
   Chief--Gary Parsons
   Bureau employees--182

Bureau of Environmental Protection:
   Chief--James R. Colquhoun
   Bureau employees--56

Regional Administration: (Regional directors are not
members of the Division of Fish and Wildlife)
Regional directors--H. Berger, C. Ash, R. Manna,
   J. Magee, T. Monroe, T. Brown, W. Krichbaum,
   P. Bush, J. Spagnoli

Total division employees--479 (January, 1991; includes 37
   people in miscellaneous categories)

Annual Budget (FY 1991): $30,718,000
   Conservation Fund--71% (includes 88% license revenue,
      income tax check off & wildlife violation fines)
   Federal aid--22%
   General fund revenue--7%

Agency/project liaison: Robert Henshaw

Case Study Visit: February, 1992

Case study team members--
   Steve McMullin (Virginia Tech)
   Spencer Amend (U.S. Fish & Wildlife Service)
   Tom Wasson (Ohio Department of Natural Resources)
   Michael Fraidenburg (Washington Department of
      Fisheries)
   Richard Wydoski (U.S. Fish & Wildlife Service)
Interviews: 74
Agency members--74 (27 headquarters, 47 field staff)

Agency Description:

The New York Department of Environmental Conservation is a large (>3100 employees), multi-purpose agency with a wide range of environmental responsibilities. A paid commissioner, appointed by the governor, heads the agency. Advisory commissions have no legal authority over the department. The Division of Fish and Wildlife is a subdivision of the Office of Natural Resources. Kenneth Wich has served as division director since 1979. Nearly 300 enforcement officers work for a separate division of the agency. The agency is broken up into nine administrative regions and field personnel answer to multiple supervisors in the agency's matrix organization.

New York participated as a categorical case study agency. The study team investigated the agency's performance in four categories--conflict resolution, planning and funding, agency management and personnel.

New York's Division of Wildlife is a national leader in the use of human dimensions information for resource management. Much of the research is conducted in cooperation with Cornell's Human Dimensions Research Unit. The division has been especially effective in dealing with controversial urban deer management problems. Citizen task
forces assist the division in setting management goals in many of the state's urban areas.

Employees throughout the division actively participated in development of new statements of mission and values, the precursors to a new comprehensive management system for the division. Redefining the division's mission and values was a source of energy and pride for many employees. Nearly everyone in the division agrees funding has been inadequate in recent years as the state has suffered through difficult economic times.

Extensive participation in the development of mission and values statements and an aggressive training program resulted in strong faith among the staff that division leadership is heading in the right direction. The division makes extensive use of teams to address problems. Communication is occasionally problematic due to the complex matrix organization and tight budgets, which restrict opportunities for division employees to travel to meetings.

Efforts of division leadership to involve staff in setting new directions and training people to improve their management skills offset the negative effects budget cutbacks and travel restrictions have on morale. As is the case in the other case study agencies, dedicated, hard-working people are seen as the division's major strength.
Executive Director: Dr. James A. Timmerman, Jr.
Assistant Executive Director: Larry D. Cartee
Executive director's office employees--13

Administrative Services Division:
   Director--John B. Reeves
   Division employees--74

Conservation, Education & Communications Division:
   Director--Prescott S. Baines
   Division employees--35

Wildlife & Freshwater Fisheries Division:
   Director--Brock Conrad
   Division employees--207

Marine Resources Division:
   Director--Paul A. Sandifer
   Division employees--156

Law Enforcement & Boating Division:
   Director--William K. Chastain
   Division employees--265

Regional Administration: none

Total department employees--750 (July, 1991)

Annual Budget (FY 1991): $39,552,614
   License revenue--26%
   Federal aid & grants--16%
   General revenue funds--49%
   Miscellaneous funds--9%

Agency/project liaison: Larry D. Cartee

Case Study Visit: February, 1992

Case study team members--
   Steve McMullin (Virginia Tech)
   Spencer Amend (U.S. Fish & Wildlife Service)
   Larry Nielsen (Virginia Tech)
   Walt Gasson (Wyoming Game & Fish Department)
   Kahler Martinson (U.S. Fish & Wildlife Service)
Interviews: 67
Agency members--61 (27 headquarters, 19 field staff, 15 marine resources personnel)
Constituents--5 (including 3 advisory board members)
Legislators--1

Agency Description:

The South Carolina Wildlife and Marine Resources Department is the only case study agency in which the study team interviewed marine resources personnel. Aside from the marine resource responsibilities, the department has only traditional fish and wildlife agency responsibilities. The current seven-member commission is reduced in size from previous commissions, which included senior legislators. Dr. James Timmerman has served as executive director since 1974, making him one of the most senior agency directors in the country. Dr. Timmerman is only the fourth executive director in the agency's 78-year history. The agency operates in a unique political environment with a budget containing nearly 50% general revenue funds.

The South Carolina department participated as a categorical case study agency. The study team investigated agency performance relative to four categories--public support and awareness, politics, planning and funding and personnel.

The respected conservation, education and communication division effectively informs South Carolina citizens regarding fish and wildlife issues and helps the agency
maintain a high level of public support. Many advisory boards provide citizen input to department decision making processes. Although biological factors generally outweigh public opinion in decision making, the public often makes a difference in decisions.

The public is particularly important in helping the department to operate effectively in a unique political environment. South Carolinians call theirs a legislative state. The legislature develops the state budget and wields most of the political clout. All of the state's fish and wildlife regulations must be approved by the legislature. The governor is much weaker by comparison. The power of legislators raises many potential problems which are usually neutralized by effective department mobilization of public support or opposition. Dr. Timmerman's seniority and respect in state political circles and effective political contacts throughout the department enhance agency political effectiveness.

The department is currently exploring alternatives for developing a comprehensive management system. Surveys to track important trends are conducted by agency personnel as well as Clemson University. The budget contains a high percentage of general revenue funds which could be vulnerable during difficult economic times. The agency's excellent political contacts help minimize vulnerability of those funds.
As in other case study agencies, department personnel are extremely dedicated to their jobs. Agency efforts to reward outstanding performance have been hampered by lack of funding for the state merit system.
WISCONSIN DEPARTMENT OF NATURAL RESOURCES

Secretary: (current) George E. Meyer,
(at time of case study visits) C. D. Besadny
Deputy Secretary: Bruce B. Braun
Secretary's office employees--100 (includes planning & administration, legal staff)

Division for Environmental Quality:
Administrator--Lyman F. Wible
Division employees--801

Division of Enforcement:
Administrator--Vacant
Division employees--307

Division of Resource Management:
Administrator--James T. Addis
Assistant Administrator--Steven Miller
Bureau of Endangered Resources:
Chief--Ronald F. Nicotera
Bureau of Fisheries Management:
Chief--Lee T. Kernen
Bureau of Forestry:
Chief--Charles E. Higgs
Bureau of Parks and Recreation:
Chief--David L. Weizenicker
Bureau of Property Management:
Chief--H. S. Druckenmiller
Bureau of Research:
Chief--Robert T. Dumke
Bureau of Wildlife Management:
Chief--Tom Hauge
Division employees--1,284

Division of Management Services:
Administrator--Martin M. Henert
Division employees--192

District Administration:
District administration employees--193

Total department employees--2,877 (November, 1992)
Annual Budget (FY 1993): $393,508,900
Conservation Fund—28%  
Federal Funds—10%  
General Fund Revenue—44%  
Miscellaneous funds—18%

Agency/Project liaison: Harry Libby

Case Study Visits: October, 1991 and July, 1992

Case study team members (1st visit)—
  Steve McMullin (Virginia Tech)  
  Spencer Amend (U.S. Fish & Wildlife Service)  
  Robert Hasenyager (Utah Division of Wildlife)  
  Betty Horton (Nevada Department of Wildlife)  
  Richard Enriquez (U.S. Fish & Wildlife Service)

Follow-up visit team members—
  Steve McMullin (Virginia Tech)  
  Robert Hays (U.S. Fish & Wildlife Service)  
  Walter S. Brown (West Virginia Department of Natural Resources)  
  Todd Pringle (Arizona Game & Fish Department)

Interviews—139
  Agency members—90  
  Constituents—23  
  Other agencies—13  
  Media representatives—4  
  Legislators—7  
  Governor's Office—2

Agency Description:

The Wisconsin Department of Natural Resources (WDNR) is one of the largest and most complex state natural resource agencies in the country. The agency's 2,800 employees are organized into four divisions and 26 bureaus and offices. All or most bureaus are represented in the six district offices. District directors are functionally equivalent to division administrators in the WDNR's decentralized structure. Most of the functions of a traditional fish and
wildlife agency are placed in the Resource Management Division. Enforcement personnel are in a separate division. Information and education personnel are located in the Division of Management Services.

Department policy is set by a seven-member Natural Resources Board, whose members are appointed by the governor. Secretary George Meyer was appointed by the Board in January, 1993, to replace C. D. "Buzz" Besadny, who retired after 11 years in the Secretary's position. The WDNR is a comprehensive natural resource agency, with management authority for all natural resources except minerals. General fund revenue makes up nearly 40% of the agency budget, but only 20% of the Resource Management Division budget.

The WDNR enjoys strong support from Wisconsin's conservation-minded citizens. Wisconsin citizens are interested in conservation issues and aware of WDNR programs. The state has a long tradition of democratic decision making processes, which is carried on in the natural resources arena by the Wisconsin Conservation Congress. The Congress is made up of elected delegates from each county who meet each spring to discuss and vote on WDNR policy and regulation proposals. Neither the Board nor the agency are bound to acquiesce to the Congress votes. While there are differences of opinion, they usually follow the recommendations of the Congress. The agency is very open to
public input, a necessity in a state with Wisconsin's democratic traditions. Citizen task forces are frequently used to involve citizens in the decision making process.

Looking ahead to anticipate trends and problems is a strength of the WDNR. The agency's Trends Analysis Group (TAG team) issues reports that speculate on the effects developing trends will have on the WDNR. An active social science research group helps the agency stay in touch with its constituents and identify potential conflicts. Controversial issues are often successfully handled by task forces made up of citizens and agency members. Most conflicts are handled at the district level in the agency's decentralized system.

WDNR's high political credibility is attributed to high quality information promptly provided to legislators and the reputation of former Secretary Besadny as an able administrator. The agency is a national leader in many areas, but particularly in the environmental protection arena. Implementation of environmental protection programs is carried out through close relationships and delegation of some responsibilities to local governments.

Employees are strongly encouraged to take reasonable risks and to dare to be innovative. The agency focuses on the future and has one of the most mature and complete planning and budgeting systems in the country. Agency
funding includes a ten-year Stewardship program to fund landscape-scale management efforts and habitat acquisition.

Agency leaders are highly respected, participative and concerned about the welfare of employees. The agency has a sophisticated employee development program. Employees are encouraged to have career development programs and are regularly counseled by their supervisors. The agency's top 13 administrators teach the "Managing for the Future" course twice each year in an effort to develop future leaders. Communication is exceptional throughout the agency.

Despite the agency's large size, a family atmosphere pervades. Relationships between district office personnel and headquarters staff are exceptionally good, with very little of the "headquarters bashing" that is normal in any organization. The desirability of district office positions sometimes affects recruitment for central office positions.
WYOMING GAME AND FISH DEPARTMENT

Director: Francis E. Petera
Deputy Director: Joseph R. White
Directors' office employees (includes planning)--15

Information and Education Services Division:
Chief--Larry Kruckenberg
Division employees--37

Fiscal Services Division:
Chief--Larry Gabriele
Division employees--31

Fish Division:
Chief--Steve Facciani
Division employees--84

Game Division (includes enforcement):
Chief--Jay Lawson
Division employees--143

Habitat and Technical Services Division:
Chief--Art Reese
Division employees--52

Total department employees--362 (September, 1992)

Annual Budget (FY 1992): $31,090,836
License revenue--59%
Federal aid--19%
General fund revenue--None
Trust Account--3%
Miscellaneous funds--19%

Agency/project liaison-- Walt Gasson

Case Study Visits: November, 1991 and August, 1992

Case study team members (1st visit)--
Steve McMullin (Virginia Tech)
Spencer Amend (U.S. Fish & Wildlife Service)
Kevin Delaney (Alaska Department of Fish and Game)
Mark Duda (Responsive Management Project)

Follow-up visit team members--
Steve McMullin (Virginia Tech)
Jack Hicks (U.S. Fish & Wildlife Service)
Jim Jones (U.S. Fish & Wildlife Service)
Gerald Barnhart (New York Division of Fish & Wildlife)
Interviews--90
  Agency members--65 (37 headquarters, 28 field
  staff)
  Commission--2
  Constituents--10
  Other agencies--9
  Legislators--2
  Media representatives--2

Agency Description:

Wyoming's first state game warden was appointed in
1899. A 6-person Game and Fish Commission was created in
1925, reorganized in 1927 to establish a financially
independent commission and department and reorganized again
in 1953, when a seventh member was added. Department
director Francis Petera was selected by the Commission in
1989. A bill passed by the 1992 legislature changed the
selection process for directors. In the future, the
governor will select a director, to serve at his/her
pleasure, from a list of candidates developed by the
Commission. Agency responsibilities encompass traditional
fish and wildlife, enforcement and information and education
duties. Agency funding is derived entirely from license
revenues, Federal Aid in Fish and Wildlife Restoration and
interest from a department trust account. The budget
contains no general fund revenue.

It is not surprising that public support for the
Wyoming Game and Fish Department is strong, considering
Wyoming residents participate in fishing and hunting at a
rate second only to Alaskans. The agency cultivates support
by actively involving citizens in resource allocation processes. The department holds over 500 public meetings per year. The information and education division is highly regarded and effective at getting information out to targeted groups. The department is especially active in the education area, through its Worth the Watching program and visitor centers.

The Wyoming Game and Fish Department is quite active in tracking issues and trends of national interest and among the nation's leaders in dealing with some--including anti-hunting issues and endangered species issues. Game ranching and introduction of exotic species issues have recently generated controversy in Wyoming. Like many of the western agencies, the Wyoming department frequently is at odds with agricultural and mineral extraction interests but has a good track record of resolving issues.

Strong public support translates into political strength. The agency has very high credibility with the public, but as is the case with many western states, credibility with politicians varies with who is in office. In general, the agency has high credibility with the governor's office but less with the legislature, which is dominated by agricultural and mining interests. Relationships with federal agencies, which manage much of Wyoming's land, are good. The Fish Wyoming program is a
model for providing grants to local governments to develop fishing and boating access sites.

Wyoming has been in the comprehensive planning business as long as any state fish and wildlife agency. Doug Crowe, a former Wyoming Game and Fish staff member, literally wrote the book on planning. Wyoming's management system is one of the most complete in the country and well liked by employees. Individual project budgets are closely linked to strategic plan objectives. The agency developed a trust fund to pay for nongame and watchable wildlife programs. Started less than five years ago, the trust fund is already yielding over $800,000 per year in interest.

Department employees have many opportunities to participate in important decisions, through the planning process and internal ad hoc task forces. The agency has a strong atmosphere of teamwork. Agency leaders are accessible and open to new ideas.

Wyoming employees were similar to those of other case study agencies in having a thorough understanding of the agency mission and their roles in achieving it.
APPENDIX B

Forms and Cover Letters

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TO: Directors and Program Administrators, WEAFWA

FROM: Fish and Wildlife Agency Organizational Management Effectiveness Study Team

As the director or a program administrator in a state fish and wildlife agency, you constantly face the problem of allocating agency resources (money, personnel, equipment, facilities) to address the agency’s mission. You may have asked yourself, "How could we be more effective at what we do?" The Organization of Wildlife Planners, U. S. Fish and Wildlife Service and Virginia Tech have put together a study team to explore answers to that question. In part, the study will consist of identifying common links in successful agencies throughout the country. But first, we need to get top administrators to help us identify the parameters or factors that define an effective/successful agency. Although fish and wildlife agencies are all in essentially the same business, each of them faces a unique combination of opportunities, problems, agency resources and constraints. The clientele served by agencies and the political climate in each state vary as widely as geography and population density.

The diversity of agency environments and approaches to organizational management makes it extremely important for the study team to know what you think are major factors in determining organizational management effectiveness. The questions we are asking are just one step in what we hope is the beginning of a continuing process of communication between the study team and agency leaders. With your help and participation, the study will be a valuable tool for you to use in evaluating agency organizational management. We need your help in defining success and building a working hypothesis of what makes an effective agency.

Please take a few minutes to write down your thoughts on the attached pages. Thanks for your help.
FISH AND WILDLIFE AGENCIES
ORGANIZATIONAL EFFECTIVENESS FACTORS

We are attempting to identify and prioritize the factors that determine the effectiveness (or success) of a fish and wildlife agency. We hope you will help by writing down your ideas. Several of the boxes below list major areas of organizational management that might contribute to success. For each of these, please check yes or no to indicate whether you think it is important to agency success. Following that, please describe briefly some of the things you think about as measures of agency success in that area. You will find some empty boxes at the end where you can add other major areas we haven't listed.

1. CITIZEN PARTICIPATION (Public involvement)
   Do you think citizen participation is important in contributing to fish and wildlife agency organizational effectiveness? Yes____ No____

   How do you judge the effectiveness of an agency's citizen participation program?

2. FUNDING
   Do you think funding is important in contributing to fish and wildlife agency organizational effectiveness? Yes____ No____

   What aspects of funding are important in determining an agency's organizational effectiveness?
3. POLITICAL RELATIONSHIPS
   Do you think political relationships are important in determining agency organizational effectiveness? Yes___ No___

   What aspects of political relationships are important in determining agency organizational effectiveness?

4. CONFLICT RESOLUTION
   Do you think an agency's ability to resolve conflicts is important in determining organizational effectiveness? Yes___ No___

   How do you judge an agency's effectiveness in resolving conflicts?

5. EMPLOYEE SATISFACTION
   Do you think employee satisfaction is important in determining organizational effectiveness? Yes___ No___

   How do you judge the impact of employee satisfaction on organizational effectiveness?
9. Please circle the number of the three major areas you think are most important in determining organizational effectiveness.

10. Your Name____________________________

11. Title______________________  12. State______________________

13. Agency______________________________
Listed below are several indicators of or methods to improve effectiveness of fish and wildlife agency management. Please indicate your opinion of the importance of each of the following indicators by circling a number from 1 to 5, where 1 = less important and 5 = more important. When you have finished, please circle the five indicators you think are most important in determining agency effectiveness.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Less Important</th>
<th>More Important</th>
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</thead>
<tbody>
<tr>
<td>Public support for and satisfaction with agency</td>
<td>1</td>
<td>2</td>
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<tr>
<td>Public awareness and understanding of agency programs</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Openness of agency to public input, opportunities for public involvement in agency decision-making processes</td>
<td>1</td>
<td>2</td>
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<tr>
<td>Leadership and management skills of agency leaders</td>
<td>1</td>
<td>2</td>
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<tr>
<td>Participative decision-making within the agency</td>
<td>1</td>
<td>2</td>
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<td>Teamwork within the agency</td>
<td>1</td>
<td>2</td>
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<tr>
<td>Good internal communication</td>
<td>1</td>
<td>2</td>
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<tr>
<td>Agency credibility with legislature and executive branch</td>
<td>1</td>
<td>2</td>
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<tr>
<td>Agency sensitivity to politics</td>
<td>1</td>
<td>2</td>
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<tr>
<td>Agency adaptability and innovativeness in response to change</td>
<td>1</td>
<td>2</td>
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<tr>
<td>Agency monitors societal trends, looks towards the future</td>
<td>1</td>
<td>2</td>
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<tr>
<td>Agency funding—amount, stability, diversity</td>
<td>1</td>
<td>2</td>
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<tr>
<td>Agency management system in place, linking planning with budget allocation and monitoring of progress towards goals</td>
<td>1</td>
<td>2</td>
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<tr>
<td>Status of animal populations, habitat</td>
<td>1</td>
<td>2</td>
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<tr>
<td>Relationships with other agencies</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Less Important</td>
<td>More Important</td>
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<td>---------------</td>
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<td></td>
</tr>
<tr>
<td>Ability to resolve issues before conflicts arise</td>
<td>1 2 3 4 5</td>
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<tr>
<td>Ability to resolve conflicts without appeal or override</td>
<td>1 2 3 4 5</td>
<td></td>
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<tr>
<td>Public perception of fairness in resource allocation and conflict resolution</td>
<td>1 2 3 4 5</td>
<td></td>
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<tr>
<td>Clear definition of personnel roles</td>
<td>1 2 3 4 5</td>
<td></td>
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<tr>
<td>Employee morale</td>
<td>1 2 3 4 5</td>
<td></td>
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<tr>
<td>Employee recognition and rewards</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>Public and personnel understand agency mission</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
</tbody>
</table>

Are there other indicators of fish and wildlife agency effectiveness that you feel should be included in this list? If so, please list them below and indicate their importance using the same 1 to 5 scale. **Please remember to circle the 5 most important effectiveness indicators.**

Thank you. Please return to:

Steve L. McMullin  
Department of Fisheries and Wildlife  
Virginia Tech  
Blacksburg, VA 24061-0321
EXEMPLARY PERFORMANCE IN FISH AND WILDLIFE AGENCY MANAGEMENT

Listed below are six broad categories of factors that have been identified as important in determining effectiveness of state fish and wildlife agencies. For each category,

*Write the names of state fish and wildlife agencies, including your own, that you think are exceptional performers in that category

*Your responses will be strictly confidential

1. Public Support and Awareness
   - Public support for the agency
   - Public satisfaction with agency performance
   - Public awareness & understanding of agency programs
   - Openness of agency to public input
   - Public involvement in agency decision-making processes

2. Agency Management
   - Leadership & management skills of agency leaders
   - Teamwork between bureaus/divisions
   - Opportunities for participative decision-making
   - Communication within the agency

3. Politics
   - Agency success in dealing with political issues/initiatives
   - Agency credibility with legislature, executive branch
   - Agency sensitivity to local, state, national policies
   - Relationships with other government agencies

4. Planning and Funding
   - Adaptability & innovativeness of agency in response to change
   - Agency recognition of & response to changing societal trends
   - Futuristic outlook
   - Planning that links goals & objectives with budget allocation
   - Amount, diversity and stability of agency funding
5. Conflict Resolution
   - Recognition and solution of issues before conflicts develop
   - Ability to resolve conflicts at agency level—avoidance of appeal
   - Public perception of fairness in resource conflict resolution

6. Agency Personnel
   - Organizational climate/culture
   - Definition of agency personnel roles
   - Employee recognition and rewards
   - Personnel understanding of agency mission

7. Please write additional comments here

Phase return to:

Steve L. McMullin
Management Effectiveness Team
Department of Fisheries and Wildlife
Virginia Tech
Blacksburg, Virginia 24061-0321
(703) 231-8847
TO: Idaho Participants, Management Effectiveness Project

FROM: Management Effectiveness Team

SUBJECT: Questionnaire and Interview Process

Thank you for agreeing to participate in the Fish and Wildlife Agency Management Effectiveness Project. This project is designed to identify the factors that determine effectiveness of state fish and wildlife agencies and document the performance of agencies acknowledged as leaders relative to those factors. During Phase 1 of the project, we asked several groups of people involved in fish and wildlife management, "What makes a fish and wildlife agency effective?" The factors indentified in Phase 1 are listed at the end of this memo. We hope our case studies of nine of the leading state fish and wildlife agencies will produce both common strategies and unique approaches that contribute to agency effectiveness. The project results should benefit any agency that wishes to improve by learning from its peers. The project is sponsored by the Organization of Wildlife Planners (a group of state fish and wildlife agency planners) and the U.S. Fish and Wildlife Service, Division of Federal Aid.

A natural response for many of the project participants is, "Why me?" It is important for us to talk with people throughout the agency. Although several of the questions are aimed at agency leaders, the bulk of our investigation is designed to identify attitudes, opinions and actions throughout the agency that contribute to effectiveness. We are striving for a representative cross-section of the agency (although it will necessarily be a bit top heavy). Everybody's opinions and ideas are important. There are no "right" answers. Your responses to the attached questionnaire, the questions we will ask in your personal interview and the organizational culture questionnaire we will give you after your interview will help us identify successful strategies and actions that can be shared among agencies. We are not attempting to grade, or rank, agencies.

Please complete the questionnaire prior to your scheduled interview. You should be able to complete it in 20 to 30 minutes. The interviewer will pick it up from you. Try to answer the questions as they pertain to the entire agency. If you cannot answer a question with regard to the entire agency, or if there is wide variation within the agency, answer the question as it pertains to the subunit of the agency (e.g., division, bureau, region) with which you most closely identify.
In your personal interview, which will last about one hour, we will ask you more open-ended questions that will allow you to elaborate on some of the topics on the questionnaire. The questions are designed to help us understand how the Idaho Department of Fish and Game approaches the major areas (and 21 specific factors) that have been identified as important in determining agency effectiveness. Your answers, both on the questionnaire and in the interview, will be strictly confidential. The organizational culture instrument yields an overall view of behavioral expectations in the agency. It can be completed in about 20 minutes, although you may wish to spend more time scoring and interpreting it.

If you have any problems with the questionnaire, or questions about the project, call either Steve McMullin (703-231-8847) or Spencer Amend (303-226-9357).

Results of Phase 1

We asked several groups of people what factors they thought were important in determining the effectiveness of state fish and wildlife agencies. The groups involved included agency directors, program administrators, commissioners, agency planners, and U. S. Fish and Wildlife Service Federal Aid Supervisors. The 21 factors they identified fell into six broad groups, as listed below. A more complete discussion of Phase 1 results will be published in this year's Transactions of the North American Wildlife and Natural Resources Conference. The objective of Phase 2 of the project is to conduct case studies to observe and document the strategies of several agencies that result in excellent performance relative to the 21 factors.

Public Support and Awareness

Public support for and satisfaction with the agency
Public awareness of agency programs
Openness of the agency to public input

Agency Management

Leadership and management skills of agency leaders
Participative decision making within the agency
Teamwork within the agency
Internal communication

Politics

Agency credibility with legislative & executive branches
Sensitivity to politics
Relationship with other agencies
Planning and Funding

Adaptability & innovativeness in response to change
Agency monitors societal trends, looks towards future
Agency has management system in place linking planning
& budget allocation
Amount, diversity and stability of agency funding

Conflict Resolution

Ability to resolve issues before conflicts arise
Ability to resolve conflicts without appeal or override
Public perception of fairness in resource allocation &
conflict resolution

Personnel

Definition of personnel roles
Employee morale (agency climate)
Employee recognition and rewards
Public and personnel understanding of agency mission
**FISH AND WILDLIFE AGENCY**

**MANAGEMENT EFFECTIVENESS QUESTIONNAIRE**

Please respond by marking the appropriate box.

<table>
<thead>
<tr>
<th>Number</th>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The public is adequately involved in agency decision-making processes.</td>
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<td>2</td>
<td>Most employees who work with the public get adequate training in public involvement.</td>
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<td>3</td>
<td>The agency has a formal plan/process for public involvement.</td>
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<td>4</td>
<td>Public involvement can make a difference in agency decision-making processes.</td>
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<td>5</td>
<td>The agency's constituents should have a major role in setting the agency's goals and objectives.</td>
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<td>6</td>
<td>The agency's constituents should have a major role in the development of management plans/actions.</td>
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<td>7</td>
<td>The agency's constituents should have a major role in selection of management plans/actions.</td>
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<td>8</td>
<td>The agency's constituents should have a major role in evaluation of management plans/actions.</td>
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<td>9</td>
<td>The agency usually makes resource decisions based primarily upon biological information.</td>
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<td>10</td>
<td>Attaining use or harvest goals is usually more important than public opinion when the agency makes resource management decisions.</td>
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<td>11</td>
<td>The agency usually tries to &quot;sell&quot; resource management decisions to the public.</td>
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<td>12</td>
<td>The agency monitors public needs and desires.</td>
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<td>13</td>
<td>Public opinion is usually as important as biological information when the agency makes resource management decisions.</td>
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<td>14</td>
<td>The agency maintains a dialogue with all of its stakeholders, including opponents.</td>
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<td>15</td>
<td>To the agency, the meaning of public involvement includes, &quot;listening to see how we need to change.&quot;</td>
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<td>16</td>
<td>The agency regularly gathers public input on issues that are potentially controversial.</td>
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<td>17</td>
<td>When public conflicts arise, agency leaders support the rank and file employees.</td>
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<td></td>
<td></td>
<td>Strongly Agree</td>
<td>Agree</td>
<td>Neutral</td>
<td>Disagree</td>
<td>Strongly Disagree</td>
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<tr>
<td>18</td>
<td>When public conflicts arise, the rank and file support agency leaders.</td>
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<tr>
<td>19</td>
<td>The agency's process for conflict resolution is controlled at the central office level.</td>
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<td>20</td>
<td>In dealing with public conflict, the agency's primary concern is to win the battle.</td>
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<td>21</td>
<td>Agency decisions are rarely overturned in the political or legal arena.</td>
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<tr>
<td>22</td>
<td>In seeking to resolve public conflicts, win-win solutions are sought.</td>
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<td>23</td>
<td>The public perceives the agency's decision-making process to be fair (equitable).</td>
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<tr>
<td>24</td>
<td>The public feels that they have a meaningful role in agency decision making.</td>
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<td>25</td>
<td>The agency's publics believe they have adequate opportunity for involvement in the agency's priority setting process.</td>
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<td>26</td>
<td>The agency has a high level of credibility with the legislature.</td>
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<tr>
<td>27</td>
<td>The agency has a high level of credibility with the governor's office.</td>
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<tr>
<td>28</td>
<td>The agency is a politically effective state agency.</td>
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<td>29</td>
<td>Setting of seasons, limits and other fish and wildlife resource allocation activities are primarily political decisions.</td>
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<td>30</td>
<td>The agency's habitat protection decisions are primarily political.</td>
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<td>31</td>
<td>Land acquisitions by the agency are primarily political decisions.</td>
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<td>32</td>
<td>The agency is a leader in dealing with regional (multi-state) conservation issues.</td>
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<td>33</td>
<td>The agency is a leader in dealing with national conservation issues.</td>
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<td>34</td>
<td>The agency considers what the implications of its actions might be for other fish and wildlife agencies.</td>
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<tr>
<td>35</td>
<td>The agency maintains regular contact with other Florida state agencies.</td>
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<tr>
<td>36</td>
<td>The agency maintains regular contact with federal agencies.</td>
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<tr>
<td>37</td>
<td>The agency maintains regular contact with local (county and city) agencies.</td>
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<tr>
<td>(38)</td>
<td>The agency does a good job of anticipating change.</td>
<td>Strongly Agree</td>
<td>Agree</td>
<td>Neutral</td>
<td>Disagree</td>
<td>Strongly Disagree</td>
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<td>(39)</td>
<td>The agency is good at taking advantage of opportunities.</td>
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<td>(40)</td>
<td>Creativity and innovation are rewarded.</td>
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<td>(41)</td>
<td>Risk taking is encouraged.</td>
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<td>(42)</td>
<td>Mistakes are not automatically punished.</td>
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<td>(43)</td>
<td>The agency does a good job of long-term planning.</td>
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<tr>
<td>(44)</td>
<td>The agency effectively tracks socio-economic factors and trends.</td>
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<td>(45)</td>
<td>Most people in the agency understand the planning process.</td>
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<tr>
<td>(46)</td>
<td>Most people in the agency understand the budgeting process.</td>
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<td>(47)</td>
<td>Planning decisions drive preparation of the budget.</td>
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<td>(48)</td>
<td>Planning decisions drive the allocation of resources (dollars and human resources).</td>
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<tr>
<td>(49)</td>
<td>The planning process allows everyone's ideas to be fairly considered and evaluated.</td>
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<tr>
<td>(50)</td>
<td>The budgeting process allows everyone's ideas to be fairly considered and evaluated.</td>
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<td>(51)</td>
<td>Participation in the planning process is encouraged.</td>
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<td>(52)</td>
<td>Participation in the budgeting process is encouraged.</td>
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<td>(53)</td>
<td>Roles and responsibilities for planning are clearly spelled out.</td>
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<tr>
<td>(54)</td>
<td>Roles and responsibilities for budgeting are clearly spelled out.</td>
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<td>(55)</td>
<td>If a substantial budget increase occurred, planning decisions and priorities would determine where to spend the funds.</td>
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<td>(56)</td>
<td>If substantial budget cuts were required, planning decisions and priorities would determine which items would be cut.</td>
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<tr>
<td>(57)</td>
<td>My budget is adequate to achieve the objectives for which I am responsible.</td>
<td></td>
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</tr>
<tr>
<td>(58)</td>
<td>The agency's budget is adequate to achieve its mission.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>(59)</td>
<td>Non-traditional sources provide a dependable, continuous part of the agency's funds.</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>The agency needs to increase the amount of non-traditional funds in the budget.</td>
<td>Strongly Agree</td>
<td>Agree</td>
<td>Neutral</td>
<td>Disagree</td>
<td>Strongly Disagree</td>
</tr>
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<td>60</td>
<td></td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>61</td>
<td>Agency leaders and managers have the skills needed to do their jobs effectively.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>62</td>
<td>Leaders and managers are encouraged to take periodic training in management skills.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>63</td>
<td>There is an active program for developing the next generation of leaders and managers within the agency.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>64</td>
<td>Most employees in the agency have training plans that are followed.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>65</td>
<td>I keep up with literature and theory relevant to the major duties of my current position.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>66</td>
<td>Agency leaders spend most of their time dealing with whatever crises erupt.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>67</td>
<td>Agency leaders focus their attention on the future.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>68</td>
<td>Agency leaders and managers are primarily task oriented.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>69</td>
<td>Agency leaders and managers demonstrate concern for employees.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>70</td>
<td>Leaders actively seek ideas from agency employees.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>71</td>
<td>Agency leaders act on ideas received from the employees.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>72</td>
<td>Major issues and decisions are usually addressed by teams of people (versus individuals).</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>73</td>
<td>When teams are set up, their roles and responsibilities related to decision making are clearly spelled out.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>74</td>
<td>When teams are being set up, people are eager to participate.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>75</td>
<td>Teams are usually representative of the entire agency.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>76</td>
<td>Communication related to agency decision making is open and honest.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>77</td>
<td>Agency leaders are accessible to the rank and file.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>78</td>
<td>Agency leaders need to visit field stations more often.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>79</td>
<td>Agency leaders have a good feel for issues and concerns of agency personnel in field stations.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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</tbody>
</table>
(80) Agency leaders are good listeners.    
(81) When given bad news, agency leaders appreciate getting the information; they are not likely to "shoot the messenger."    
(82) Information is effectively shared throughout the agency.    
(83) In general, the morale of agency employees is good.    
(84) The job description for my position accurately reflects what I do.    
(85) The job description for my position accurately reflects what I think I should do.    
(86) I know what the agency's mission is.    
(87) I understand my role in helping the agency achieve its mission.    
(88) The agency's performance appraisal system adequately documents employee performance.    
(89) Outstanding performance is rewarded in the agency.    
(90) The agency's best people are promoted.    
(91) There is an adequate career ladder in most areas of specialty within the agency.    

To help us analyze the results of this questionnaire, please answer the following questions.

(92) Your age    (93) Your sex    (94) Position Title

(95) Time in Current Position    (96) Total Service with this Agency

(97) Previous Position Title (if < 2 yrs. in current position)

(98) Highest Degree Earned    (100) Subject

(101) School/highest degree

(102) Identification #  
(to be filled in by interviewer)
MANAGEMENT EFFECTIVENESS PROJECT
COMPREHENSIVE CASE STUDY QUESTIONS

Public Support and Awareness

1. How does the agency communicate with the public about important programs?

2. How do I & E people work with agency managers to communicate with the public?

3. What are the best methods the agency uses to involve the public in decision-making processes?

4. Please describe an example of how public involvement has made a difference in agency decision making.

Conflict Resolution

5. How does the agency enhance and preserve the public's perception of fairness in agency decision making?

6. How does the agency recognize emerging issues that may become controversial?

7. Give an example of how the agency has managed a controversial issue to keep it from becoming an open conflict.

8. When a decision is made on a controversial issue, what does the agency do to avoid being overturned or overridden?

Politics

9. Is the agency an active and willing participant in the political process? If yes, how?

10. What makes the agency effective in the political arena?

11. Please describe an example of an action taken by the agency that enhanced its political credibility.

12. Is the agency, or parts of it, a leader in dealing with regional or national conservation issues? Describe what the agency is doing with respect to one of those issues.

13. Think about the most valuable or unique relationship the agency has with another governmental group (local, state or federal)--how does that relationship enhance your agency's effectiveness?
Planning and Funding

14. How long is the agency's planning horizon?
   < 1 yr.  1-2 yrs.  3-5 yrs.  6-10 yrs.  >10 years

15. How does the agency track socio-economic factors and trends?

16. What is the best thing the agency does regarding looking towards the future?

17. How does the agency link planning and budgeting? What makes it successful?

18. What is the agency doing to ensure a stable, long-term funding base?

19. How does the agency encourage creativity and innovativeness by agency employees?

   Agency Management

20. How would you characterize the style of agency leadership?

21. In this agency, irrespective of titles or positions, think of a few people you consider leaders...what are some of the characteristics that make you identify them as leaders?

22. What is the best thing the agency does to improve the leadership and management skills of agency employees?

23. What is the best thing the agency does to involve employees in making decisions?

24. What does the agency do to promote teamwork?

25. For a team with which you are familiar, describe what made it successful.

26. What techniques for sharing information within the agency seem to be most effective?

   Personnel

27. How is outstanding performance rewarded in the agency?

28. What is the most important factor that causes employee morale to rise or fall?

29. Is there anything else that is important in contributing to the effectiveness of this agency that we haven't discussed?
1. My general opinion of the overall performance of the Wisconsin DNR Division of Resource Management is:
   1. Very good
   2. Fairly good
   3. Fairly poor
   4. Very poor
   5. No opinion

2. In the past 5 years, do you think the overall performance of the division has changed?
   1. Yes, greatly improved
   2. Yes, somewhat improved
   3. No change
   4. Yes, somewhat declined
   5. Yes, greatly declined
   6. No opinion

3. If you feel the division's overall performance has changed in the past 5 years, how has it changed?

4. If you feel the division's overall performance has changed in the past 5 years, why do you think it has changed?

5. The division effectively manages the state's fishery resources.
   1. Strongly agree
   2. Agree
   3. Neither agree nor disagree
   4. Disagree
   5. Strongly disagree
   6. No opinion
6. The division effectively manages the state's huntable wildlife resources.

1. Strongly agree
2. Agree
3. Neither agree nor disagree
4. Disagree
5. Strongly disagree
6. No opinion

7. The division effectively manages the state's nonhunted wildlife resources.

1. Strongly agree
2. Agree
3. Neither agree nor disagree
4. Disagree
5. Strongly disagree
6. No opinion

8. The division effectively acquires and protects fisheries habitat.

1. Strongly agree
2. Agree
3. Neither agree nor disagree
4. Disagree
5. Strongly Disagree
6. No opinion

9. The division effectively acquires and protects wildlife habitat.

1. Strongly agree
2. Agree
3. Neither agree nor disagree
4. Disagree
5. Strongly Disagree
6. No opinion

10. Laws and regulations pertaining to fish and wildlife are effectively enforced.

1. Strongly agree
2. Agree
3. Neither agree nor disagree
4. Disagree
5. Strongly disagree
6. No opinion

11. Laws and regulations pertaining to watercraft are effectively enforced.

1. Strongly agree
2. Agree
3. Neither agree nor disagree
4. Disagree
5. Strongly disagree
6. No opinion

12. The division effectively informs and educates the state's citizens regarding fish and wildlife.

1. Strongly agree
2. Agree
3. Neither agree nor disagree
4. Disagree
5. Strongly disagree
6. No opinion
13. In what program areas do you think the agency is most effective? Why?

14. The agency's decision making process is equitable.
   1. strongly agree
   2. Agree
   3. Neither agree nor disagree
   4. Disagree
   5. Strongly disagree
   6. No opinion

15. Is the division responsive to public desires and opinions? How is this responsiveness demonstrated?

16. How do you find out what the agency is doing?

17. If you want to be sure your ideas are heard and considered by the agency, how do you go about it?
18. In general, how can ordinary citizens be sure their ideas are heard and considered by the agency?

19. The division usually makes resource management decisions based primarily upon biological information.
   1. Strongly agree
   2. Agree
   3. Neither agree nor disagree
   4. Disagree
   5. Strongly disagree
   6. No opinion

20. Attaining use or harvest goals is usually more important than public opinion when the division makes resource management decisions.
   1. Strongly agree
   2. Agree
   3. Neither agree nor disagree
   4. Disagree
   5. Strongly disagree
   6. No opinion

21. The agency usually tries to "sell" resource management decisions to the public.
   1. Strongly agree
   2. Agree
   3. Neither agree nor disagree
   4. Disagree
   5. Strongly disagree
   6. No opinion

22. Public opinion is usually as important as biological information when the agency makes resource management decisions.
   1. Strongly agree
   2. Agree
   3. Neither agree nor disagree
   4. Disagree
   5. Strongly disagree
   6. No opinion

23. Is there anything else that is important in determining effectiveness of the Wisconsin DNR Division of Resource Management that we haven't discussed?
1. The Wisconsin DNR Division of Resource Management has a high level of credibility with the legislature.
   1. Strongly Agree
   2. Agree
   3. Neither Agree nor Disagree
   4. Disagree
   5. Strongly Disagree
   6. No Opinion

2. The Wisconsin DNR Division of Resource Management is politically effective.
   1. Strongly Agree
   2. Agree
   3. Neither Agree nor Disagree
   4. Disagree
   5. Strongly Disagree
   6. No opinion

3. Your general opinion of the overall performance of the division is:
   1. Very Good
   2. Fairly Good
   3. Fairly Poor
   4. Very Poor
   5. No Opinion

4. In the past 5 years, do you think the overall performance of the division has changed?
   1. Yes, greatly improved
   2. Yes, somewhat improved
   3. No change
   4. Yes, somewhat declined
   5. Yes, greatly declined
   6. No opinion

5. The division effectively manages the state's fishery resources.
   1. Strongly Agree
   2. Agree
   3. Neither Agree nor Disagree
   4. Disagree
   5. Strongly Disagree
   6. No Opinion

6. The division effectively manages the state's huntable wildlife resources.
   1. Strongly Agree
   2. Agree
   3. Neither Agree nor Disagree
   4. Disagree
   5. Strongly Disagree
   6. No Opinion
7. The division effectively manages the state's nonhunted wildlife resources.
   1. Strongly Agree
   2. Agree
   3. Neither Agree nor Disagree
   4. Disagree
   5. Strongly Disagree
   6. No Opinion

8. The division effectively acquires and protects fisheries habitat.
   1. Strongly Agree
   2. Agree
   3. Neither Agree nor Disagree
   4. Disagree
   5. Strongly Disagree
   6. No Opinion

9. The division effectively acquires and protects wildlife habitat.
   1. Strongly Agree
   2. Agree
   3. Neither Agree nor Disagree
   4. Disagree
   5. Strongly Disagree
   6. No Opinion

10. Fish and wildlife laws and regulations are effectively enforced.
    1. Strongly Agree
    2. Agree
    3. Neither Agree nor Disagree
    4. Disagree
    5. Strongly Disagree
    6. No Opinion

11. The division effectively informs and educates the state's citizens regarding fish and wildlife.
    1. Strongly Agree
    2. Agree
    3. Neither Agree nor Disagree
    4. Disagree
    5. Strongly Disagree
    6. No Opinion

12. In what program areas do you think the division is most effective? Why?
13. Does the division anticipate the impacts of social and economic trends and adjust its management strategies accordingly? How?

14. Is the division responsive to public opinion? How?

15. How does the division manage controversy and conflict?

16. Is the division an active and willing participant in the political process?
17. What makes the division politically effective?

18. Is there anything else that is important in contributing to the effectiveness of the Wisconsin DNR Division of Resource Management that we haven't discussed?
MANAGEMENT EFFECTIVENESS PROJECT

Executive Staff Sampling Frame

1. The Wisconsin DNR Division of Resource Management has a high level of credibility with the governor’s office.
   1. Strongly Agree
   2. Agree
   3. Neither Agree nor Disagree
   4. Disagree
   5. Strongly Disagree
   6. No Opinion

2. The Wisconsin DNR Division of Resource Management is politically effective.
   1. Strongly Agree
   2. Agree
   3. Neither Agree nor Disagree
   4. Disagree
   5. Strongly Disagree
   6. No Opinion

3. Your general opinion of the overall performance of the division is:
   1. Very Good
   2. Fairly Good
   3. Fairly Poor
   4. Very Poor
   5. No Opinion

4. In the past 5 years, do you think the overall performance of the division has changed?
   1. Yes, greatly improved
   2. Yes, somewhat improved
   3. No change
   4. Yes, somewhat declined
   5. Yes, greatly declined
   6. No opinion

5. The division effectively manages the state’s fishery resources.
   1. Strongly Agree
   2. Agree
   3. Neither Agree nor Disagree
   4. Disagree
   5. Strongly Disagree
   6. No Opinion
6. The division effectively manages the state's huntable wildlife resources.

1. Strongly Agree
2. Agree
3. Neither Agree nor Disagree
4. Disagree
5. Strongly Disagree
6. No Opinion

7. The division effectively manages the state's nonhunted wildlife resources.

1. Strongly Agree
2. Agree
3. Neither Agree nor Disagree
4. Disagree
5. Strongly Disagree
6. No Opinion

8. The division effectively acquires and protects fisheries habitat.

1. Strongly Agree
2. Agree
3. Neither Agree nor Disagree
4. Disagree
5. Strongly Disagree
6. No Opinion

9. The division effectively acquires and protects wildlife habitat.

1. Strongly Agree
2. Agree
3. Neither Agree nor Disagree
4. Disagree
5. Strongly Disagree
6. No Opinion

10. Fish and wildlife laws and regulations are effectively enforced.

1. Strongly Agree
2. Agree
3. Neither Agree nor Disagree
4. Disagree
5. Strongly Disagree
6. No Opinion

11. The division effectively informs and educates the state's citizens regarding fish and wildlife.

1. Strongly Agree
2. Agree
3. Neither Agree nor Disagree
4. Disagree
5. Strongly Disagree
6. No Opinion
12. In what program areas do you think the division is most effective? Why?

13. Does the division anticipate the impacts of social and economic trends and adjust its management strategies accordingly?

14. Is the division responsive to public opinion? How?

15. How does the division manage controversy and conflict?
16. Is the division an active and willing participant in the political process?

17. What makes the division effective in the political arena?

18. Is there anything else that is important in contributing to the effectiveness of the Wisconsin DNR Division of Resource Management that we haven't discussed?
1. My general opinion of the overall performance of the Department of Conservation is:
   1. Very good
   2. Fairly good
   3. Fairly poor
   4. Very poor
   5. No opinion

   Comments:

2. In the past 5 years, do you think the overall performance of the Department of Conservation has changed?
   1. Yes, greatly improved
   2. Yes, somewhat improved
   3. No change
   4. Yes, somewhat declined
   5. Yes, greatly declined
   6. No opinion

3. If you feel the Department's overall performance has changed in the past 5 years, how has it changed?

4. If you feel the Department's overall performance has changed in the past 5 years, why do you think it has changed?

5. The Department of Conservation effectively manages the state's fishery resources.
   1. Strongly agree
   2. Agree
   3. Neither agree nor disagree
   4. Disagree
   5. Strongly disagree
   6. No opinion

   Comments:
6. The Department of Conservation effectively manages the state’s huntable wildlife resources.

   1. Strongly agree
   2. Agree
   3. Neither agree nor disagree
   4. Disagree
   5. Strongly disagree
   6. No opinion

   Comments:

7. The Department of Conservation effectively manages the state’s nonhunted wildlife resources.

   1. Strongly agree
   2. Agree
   3. Neither agree nor disagree
   4. Disagree
   5. Strongly disagree
   6. No opinion

   Comments:

8. The Department of Conservation effectively acquires and protects fisheries habitat.

   1. Strongly agree
   2. Agree
   3. Neither agree nor disagree
   4. Disagree
   5. Strongly Disagree
   6. No opinion

   Comments:

9. The Department of Conservation effectively acquires and protects wildlife habitat.

   1. Strongly agree
   2. Agree
   3. Neither agree nor disagree
   4. Disagree
   5. Strongly Disagree
   6. No opinion

   Comments:
10. The Department of Conservation effectively enforces laws and regulations pertaining to fish and wildlife.

1. Strongly agree
2. Agree
3. Neither agree nor disagree
4. Disagree
5. Strongly disagree
6. No opinion

Comments:

11. The Department of Conservation effectively enforces laws and regulations pertaining to watercraft.

1. Strongly agree
2. Agree
3. Neither agree nor disagree
4. Disagree
5. Strongly disagree
6. No opinion

Comments:

12. The Department of Conservation effectively informs and educates the state's citizens regarding fish and wildlife.

1. Strongly agree
2. Agree
3. Neither agree nor disagree
4. Disagree
5. Strongly disagree
6. No opinion

Comments:

13. In what program areas do you think the Department of Conservation is most effective? Why?
14. The Department of Conservation decision making process is equitable.

1. Strongly agree
2. Agree
3. Neither agree nor disagree
4. Disagree
5. Strongly disagree
6. No opinion

Comments:

15. Is the Department of Conservation responsive to public desires and opinions? How is this responsiveness demonstrated?

16. How effective are the department’s media liaisons and what makes them effective?

17. How useful is the material the department sends to you?

18. How does the department’s information program need to change over the next 10 years?
19. The Department of Conservation usually makes resource management decisions based primarily upon biological information.

1. Strongly agree
2. Agree
3. Neither agree nor disagree
4. Disagree
5. Strongly disagree
6. No opinion

Comments:

20. Attaining use or harvest goals is usually more important than public opinion when the department makes resource management decisions.

1. Strongly agree
2. Agree
3. Neither agree nor disagree
4. Disagree
5. Strongly disagree
6. No opinion

Comments:

21. The department usually tries to "sell" resource management decisions to the public.

1. Strongly agree
2. Agree
3. Neither agree nor disagree
4. Disagree
5. Strongly disagree
6. No opinion

Comments:

22. Public opinion is usually as important as biological information when the department makes resource management decisions.

1. Strongly agree
2. Agree
3. Neither agree nor disagree
4. Disagree
5. Strongly disagree
6. No opinion

Comments:
23. Is there anything else that is important in determining effectiveness of the Department of Conservation that we haven't discussed?
1. My general opinion of the overall performance of the Department of Natural Resources is:
   1. Very good
   2. Fairly good
   3. Fairly poor
   4. Very poor
   5. No opinion

   Comments:

2. In the past 5 years, do you think the overall performance of the Department of Natural Resources has changed?
   1. Yes, greatly improved
   2. Yes, somewhat improved
   3. No change
   4. Yes, somewhat declined
   5. Yes, greatly declined
   6. No opinion

3. If you feel the Department's overall performance has changed in the past 5 years, how has it changed?

4. If you feel the Department's overall performance has changed in the past 5 years, why do you think it has changed?

5. The Department of Natural Resources effectively manages the state's fishery resources.
   1. Strongly agree
   2. Agree
   3. Neither agree nor disagree
   4. Disagree
   5. Strongly disagree
   6. No opinion

   Comments:
6. The Department of Natural Resources effectively manages the state’s huntable wildlife resources.
   1. Strongly agree
   2. Agree
   3. Neither agree nor disagree
   4. Disagree
   5. Strongly disagree
   6. No opinion

   Comments:

7. The Department of Natural Resources effectively manages the state’s nonhunted wildlife resources.
   1. Strongly agree
   2. Agree
   3. Neither agree nor disagree
   4. Disagree
   5. Strongly disagree
   6. No opinion

   Comments:

8. The Department of Natural Resources effectively acquires and protects fisheries habitat.
   1. Strongly agree
   2. Agree
   3. Neither agree nor disagree
   4. Disagree
   5. Strongly Disagree
   6. No opinion

   Comments:

9. The Department of Natural Resources effectively acquires and protects wildlife habitat.
   1. Strongly agree
   2. Agree
   3. Neither agree nor disagree
   4. Disagree
   5. Strongly Disagree
   6. No opinion

   Comments:
10. The Department of Natural Resources effectively enforces laws and regulations pertaining to fish and wildlife.
   1. Strongly agree
   2. Agree
   3. Neither agree nor disagree
   4. Disagree
   5. Strongly disagree
   6. No opinion
   Comments:

12. The Department of Natural Resources effectively informs and educates the state's citizens regarding fish and wildlife.
   1. Strongly agree
   2. Agree
   3. Neither agree nor disagree
   4. Disagree
   5. Strongly disagree
   6. No opinion
   Comments:

13. In what program areas do you think the Department of Natural Resources is most effective? Why?

14. The Department of Natural Resources decision-making process is equitable.
   1. Strongly agree
   2. Agree
   3. Neither agree nor disagree
   4. Disagree
   5. Strongly disagree
   6. No opinion
   Comments:
15. What relationship does your agency have with the Department of Natural Resources?

16. How are activities that involve both of your agencies coordinated?

17. From your perspective, what factors contribute most to the effectiveness of the Department of Natural Resources?

18. Additional comments:
1. My general opinion of the overall performance of the Department of Game and Freshwater Fisheries is:
   1. Very good
   2. Fairly good
   3. Fairly poor
   4. Very poor
   5. No opinion
   Comments:

2. In the past 5 years, do you think the overall performance of the Department of Game and Freshwater Fisheries has changed?
   1. Yes, greatly improved
   2. Yes, somewhat improved
   3. No change
   4. Yes, somewhat declined
   5. Yes, greatly declined
   6. No opinion

3. If you feel the Department's overall performance has changed in the past 5 years, how has it changed?

4. If you feel the Department's overall performance has changed in the past 5 years, why do you think it has changed?

5. The Department of Game and Freshwater Fisheries effectively manages the state's freshwater fishery resources.
   1. Strongly agree
   2. Agree
   3. Neither agree nor disagree
   4. Disagree
   5. Strongly disagree
   6. No opinion
   Comments:
6. The Department of Game and Freshwater Fisheries effectively manages the state's huntable wildlife resources.
   1. Strongly agree
   2. Agree
   3. Neither agree nor disagree
   4. Disagree
   5. Strongly disagree
   6. No opinion
   Comments:

7. The Department of Game and Freshwater Fisheries effectively manages the state's nonhunted wildlife resources.
   1. Strongly agree
   2. Agree
   3. Neither agree nor disagree
   4. Disagree
   5. Strongly disagree
   6. No opinion
   Comments:

8. The Department of Game and Freshwater Fisheries effectively acquires and protects fisheries habitat.
   1. Strongly agree
   2. Agree
   3. Neither agree nor disagree
   4. Disagree
   5. Strongly Disagree
   6. No opinion
   Comments:

9. The Department of Game and Freshwater Fisheries effectively acquires and protects wildlife habitat.
   1. Strongly agree
   2. Agree
   3. Neither agree nor disagree
   4. Disagree
   5. Strongly Disagree
   6. No opinion
   Comments:
10. The Department of Game and Freshwater Fisheries effectively enforces laws and regulations pertaining to fish and wildlife.
   1. Strongly agree
   2. Agree
   3. Neither agree nor disagree
   4. Disagree
   5. Strongly disagree
   6. No opinion
   Comments:

12. The Department of Game and Freshwater Fisheries effectively informs and educates the state's citizens regarding fish and wildlife.
   1. Strongly agree
   2. Agree
   3. Neither agree nor disagree
   4. Disagree
   5. Strongly disagree
   6. No opinion
   Comments:

13. In what program areas do you think the Department of Game and Freshwater Fisheries is most effective? Why?

14. The Department of Game and Freshwater Fisheries decision making process is equitable.
   1. Strongly agree
   2. Agree
   3. Neither agree nor disagree
   4. Disagree
   5. Strongly disagree
   6. No opinion
   Comments:
15. What relationship do you and the university (or Coop Unit) agency have with the Department of Game and Freshwater Fisheries?

16. How effectively does the department make use of opportunities (expertise, facilities) at the state's universities?

17. From your perspective, what factors contribute most to the effectiveness of the Department of Game and Freshwater Fisheries?

18. Additional comments:
ISSUES MANAGEMENT

1. On the scale below, where would you place the Wisconsin Department of Natural Resources in terms of strategies for managing change? The descriptions listed are simply anchors for the 10-point scale. You may select any number from 1 to 10.

1--- The agency yearns for the better days of the past and attempts to "ride out" the developments occurring around it.

2

3

4--- The agency attempts to be open to and adjust to changes. When faced with potentially undesirable actions, policies or laws, the agency may attempt to compromise or propose alternatives.

5

6

7--- The agency attempts to anticipate changes and perhaps even initiate projects, policies, etc., which are desirable—or at least more desirable than other possibilities.

8

9

10-- The agency aims at prompting or making things happen. It takes the offensive in shaping issues rather than waiting for things to happen around it.

2. Why did you choose the answer you did for question 1?
VITA

Steve L. McMullin was born in Sacramento, California on March 22, 1950. He was raised in nearby Davis, California, where he graduated from high school in 1968. He attended the University of California at Davis in between periods of full time employment until 1974, when he moved to Moscow, Idaho. He completed the Bachelor of Science degree in fishery resources at the University of Idaho in 1978 (cum laude). He partially enrolled in graduate school at the University of Idaho prior to completing his B.S. degree, receiving the Master of Science degree in fishery resources in 1979.

He worked for the Montana Department of Fish, Wildlife and Parks from 1979 until 1989. He served the department as a research biologist, area management biologist, fisheries coordinator for northwest power studies, regional fisheries manager and fisheries management bureau chief. He left Montana to pursue doctoral research and teach at Virginia Polytechnic Institute and State University.

Steve married Leslie Lindquist in 1977. They have two children, Emily, age 13 and Kyle, age 11.