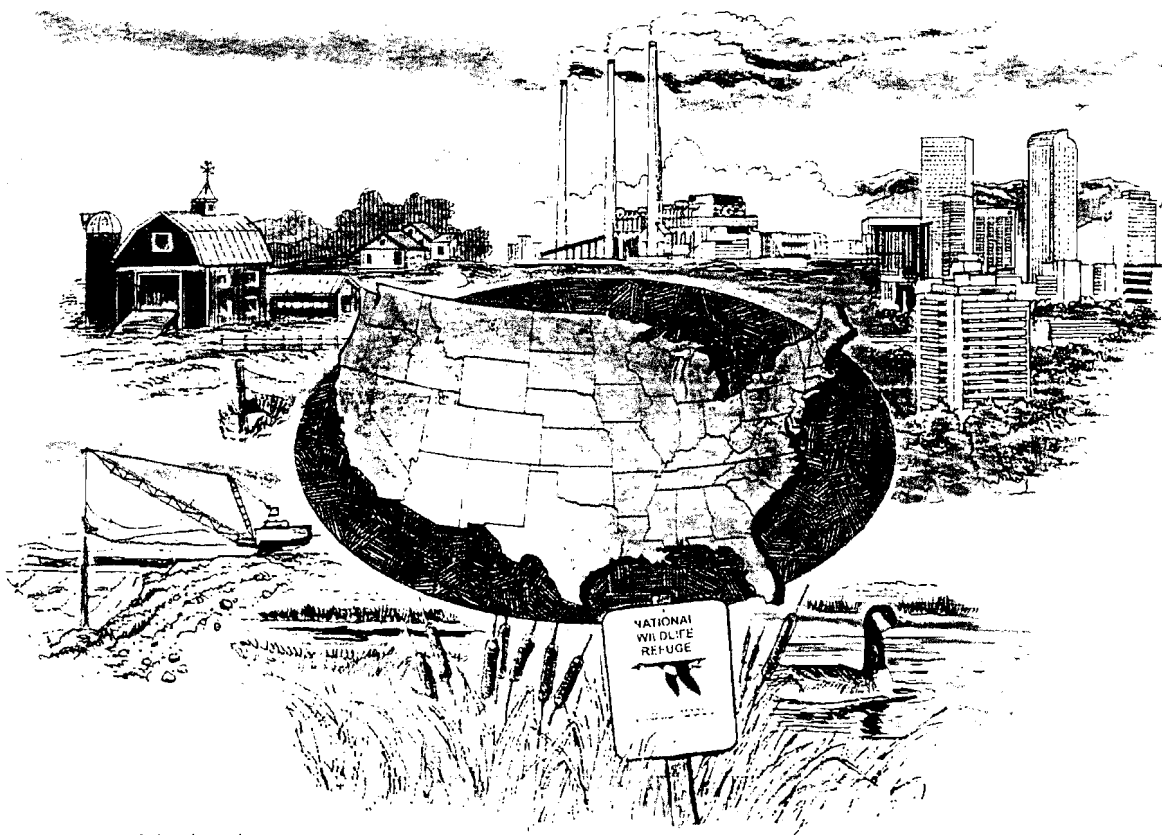


Values and Attitudes of National Wildlife Refuge Managers and Biologists: *Report to Respondents*

Open File Report OF 02-459



U.S. Department of the Interior
U.S. Geological Survey



U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

**Values and Attitudes of
National Wildlife Refuge Managers and Biologists:
*Report to Respondents***

by

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Executive Summary

The issues affecting natural resource management, the society in which natural resource management occurs, natural resource agency personnel, and the publics they serve have changed in recent decades. Previous studies of Refuge professionals in the U.S. Fish and Wildlife Service (Service) have revealed that employees lack strong commitment to the current organizational structure, were frustrated with the lack of communication within the agency and felt there was a need for strong leadership (PEER 1998, 1999). These results prompted the authors to have further questions about refuge management in the Fish and Wildlife Service. What do employees value about their agency? Is there a difference in values between refuge managers and biologists and if so, what are those differences and what influences those differences?

Recently, there has been speculation that changes in society and the demographic make-up of natural resource professionals has caused a paradigm shift for natural resource management (Ballard 2002; Brown and Harris 1992abc, 2000; Maestas 2002). But, there has been little work assessing the values, attitudes or behaviors of natural resource professionals to determine if a paradigm shift is really occurring. Most of the work in the field of values, attitudes, and behaviors has focused on the public and their interaction with environmental management issues; such as, endangered species management (Lybecker et al. 2002; Solomon 1998), human-wildlife conflict (Baker and Fritsch 1997; Chase et al. 1999; Jones and Thomas 1999; Mankin et al. 1999), changes in hunting or trapping regulations (Loker et al. 1998; Manfredo et al. 1999; Whittaker and Torres 1998), or management of public lands (Badalamente et al. 2000). The purpose of this study was to gain a better understanding of the values and attitudes refuge employees have toward natural resources.

The goal was to survey National Wildlife Refuge professionals about natural resource management. We surveyed Refuge Managers and Refuge Biologists (n=480) at staffed U.S. National Wildlife Refuges in the contiguous 48 states in the fall of 2001. We used a modified Dillman design, resulting in a 68% response rate. The objectives of this study were to (1) determine and compare the environmental values of refuge managers and biologists at selected refuges and (2) assess attitudes about various institutional factors (public involvement and planning).

Analyses of data revealed that these managers and biologists did not differ substantially in terms of their environmental values. Refuge professionals were supportive of public involvement in planning and management, but hoped to maintain management authority throughout the process. Professionals were skeptical concerning the applicability of long term planning, but were generally supportive of the planning process. Attitudes toward the Service were conflicting: professionals felt that the Service needed to provide better leadership and direction, but that the Refuge System needed to assert its autonomy and independence from the rest of the Service.

Background

Natural resource management has changed over the past 50 years for a variety of reasons, which include changes in society, more women and cultural diversity within the workforce and public controversies surrounding natural resource planning and decision-making. The United States is an urbanized society and most Americans no longer have direct day-to-day contact with wildlife (Muth et al. 1998). As a result, most people idealize nature and view it non-consumptively (Kellert 1996). Society itself continues to undergo rapid cultural and social change. Traditional refuge clientele groups, hunters and anglers, are no longer the only political forces in natural resource management. Many other organizations represent numerous ideologies about wildlife and nature. Compared to 50 years ago, the composition of the wildlife management workforce is different as well. More women now occupy positions in wildlife management than in previous years (Angus 1995). Controversies frequently surround wildlife management issues. Litigation is frequently injected into natural resource management, forcing judges to make decisions that natural resource professionals traditionally made. Wildlife management issues are also affected by legislation at the national (e.g., Endangered Species Act), state (e.g., state NEPA laws), and local levels (e.g., county zoning ordinances). As a result, a manager's ability to interpret and influence public policy is important (Muth et al. 1998).

Wildlife biologists comprise their own distinct sub-culture of American society characterized by a unique language, social structure and belief system (Yoakum and Zagata 1982; Kennedy 1985). Although commodity-based management is still prevalent, some conservation professionals from the American Fisheries Society, North American Wildlife Enforcement Officer's Association, Society for Conservation Biology, and The Wildlife Society no longer see fish and wildlife as only commodities, but rather as important aspects of the ecosystem (Muth et al. 1998).

Many studies have found that natural resource managers hold different basic values and beliefs than the public about wildlife management (Bjerke and Kaltenborn 1999; Brown and Harris 1992abc, 1998, 2000; Harris and Brown 1994; Peyton and Langenau 1985; Saltiel and Irby 1998). Various studies have suggested differences between staff and line officers (field and supervisory personnel) of resource management agencies. A study of the USDA Forest Service found that staff personnel were shifting toward a resource management paradigm (encompassing non-commodity resource use, ecosystem management, etc) faster than line officers (Brown and Harris 1998, 2000). In an Australian example, managers and biologists had different beliefs about acceptable use in wilderness areas (Ramsay 1996). Recent discussions of the future of wildlife management have focused on the possibility of changing paradigms for new incoming professionals (Maestas 2002; Muth et al. 2002). Some of these studies suggest that there may be differences in values between managers and biologists (Bjerke and Kaltenborn 1999; Brown and Harris 1992abc, 1998, 2000; Harris and Brown 1994; Muth et al. 2002, 1998; Peyton and Langenau 1985; Ramsay 1996; Saltiel and Irby 1998).

In order to achieve our goal (surveying refuge professionals about natural resource management) we developed the following objectives:

- 1) To determine and compare the environmental values of refuge managers and biologists

- 2) To assess attitudes about various institutional factors (public involvement and planning)

The Survey

One of the best methods of finding out what people think about something is to ask them. We used a mailed questionnaire to find out what National Wildlife Refuge managers and biologists think about natural resource and refuge management in the United States. Staffed refuges in the contiguous 48 states were used as locations to send surveys to refuge managers and staff biologists. To administer the survey, we followed a procedure called the Total Design Method (Dillman 1978, 2000). This technique maximizes the quality and quantity of responses for mail and telephone surveys. We followed these steps:

- 1) We sent the survey package, which included: the survey, a postage-paid return envelope and a cover letter explaining the study.
- 2) One week later, we sent a postcard to all respondents to: (1) thank those who had returned the survey, and (2) encourage those who had not responded to return the survey.
- 3) Three weeks later, we sent another survey package to those who had not responded.
- 4) As a final attempt, we telephoned a sample of those from whom we had not yet received responses ($n=20$). The purpose of the telephone calls was two-fold: (1) to encourage responses from nonrespondents, and (2) to see if nonrespondents differed from the respondents. We achieved the latter by asking a sub-set of questions from the survey and then comparing those answers (telephone respondents) with mail respondents' answers.

Before administering the survey, we pre-tested a draft of the questionnaire with 11 volunteers from Colorado State University, the USGS Fort Collins Science Center, and the National Wildlife Refuge System in an effort to identify any questions that were not easily understood or any answer set that was unclear. We used the results of these pre-tests to develop the survey instrument that was sent for approval to the Human Subjects Review Board, which oversees human-based research within Colorado State University.

Results

Response rates

After all mailings were completed and a sample of nonrespondents was contacted, we received 314 useable responses ($n_{\text{managers}} = 174$, $n_{\text{biologists}} = 140$), resulting in a 68.4% response rate. The sampling and random effects error rate was plus or minus approximately 3.11% for the 95% confidence interval. Typically, well-administered public surveys are able to achieve a 50% or greater response rate (Dillman 1978, 2000). In other surveys of agency professionals, response rates of greater than 60% are typical (Angus 1995; Brown and Harris 1992abc, 2000; Burkardt et al. 1990; Muth et al. 1998; Peyton and Langenau 1985).

Non-response telephone survey

After the third mailing, we conducted a telephone survey to assess the non-response bias. Over the course of three weeks, we made three attempts to establish contact with a sample of the nonrespondents ($n=20$). We were unable to establish contact with 10 of the nonrespondents. Of the 10 telephone respondents we contacted, one respondent answered the telephone survey; four

respondents (20%) returned their questionnaires or asked for a supplemental copy and eventually returned the survey; two positions were vacant; and three others did not return the questionnaire.

We found one difference when comparing the respondents who answered after the telephone survey to the original respondents. Telephone respondents were more likely to be refuge managers. There were no other significant differences between the telephone respondents and the mail respondents; therefore, we concluded that a non-response bias does not exist in this study.

Question Summaries

The following shows descriptive results (percentages) for all survey questions. They are placed within the actual survey template.

Section 1: In this section, we would like to know about your philosophy as either a Refuge Manager or Biologist.

1. Are you a:

a. Refuge Manager (or Acting Refuge Manager)	55.4%
b. Refuge Biologist (or Acting Refuge Biologist)	44.6%
c. Other	0.6%

2. How would you like others to perceive you as a professional?

a. A good technician	0.0%
b. A good scientist	12.6%
c. A good wildlife manager	31.9%
d. A good people manager	2.9%
e. A good program administrator	7.1%
f. A good land steward	33.2%
g. Other	12.3%

3. What is the most important source of your job *satisfaction*? (The following are categorized groupings of answers to open-ended questions. Men and women had significantly different answers to this question.)

Greatest source of job satisfaction	N	Percentage (%)
Accomplishing projects for wildlife/habitat	69	22.0
Working with wildlife for people	40	12.7
Seeing results of actions	38	12.1
Habitat protection and improvement	36	11.5
Working outdoors and with other wildlife professionals	17	5.4
Visitor appreciation	12	3.8
Teamwork and partnerships for conservation	10	3.2
Other	62	19.7

4. What is the most important source of your job *dissatisfaction*? (The following are categorized groupings of answers to open-ended questions. Men and women had significantly different answers to this question.)

Greatest source of job dissatisfaction	N	Percentage (%)
Bureaucracy and red tape	59	18.8
Lack of funding and staff	41	13.1
Politics	30	9.6
Paperwork	28	8.9
Personnel issues	19	6.1
Poor working relationship with supervisor	11	3.5
Public disapproval and anti-environment rhetoric	10	3.2
Lack of support from upper management	10	3.2
Other	106	33.8

5. Do you think it is generally a good idea to look for new ways of doing things, or do you think it is better to continue to use methods with which you are familiar?

a. New ways	16.0%
b. Familiar methods	0.3%
c. Both a and b	81.4%
d. Neither a nor b	2.2%

6. In which sector(s) would you advise bright, young people to seek careers?

a. Federal agencies	37.4%
b. State agencies	1.0%
c. Local or municipal agencies	0.3%
d. Non-governmental agencies	10.5%
e. Private for profit businesses	3.3%
f. Private land management businesses	2.0%
g. No preferences	33.4%
h. Other	12.1%

Section II: In this section, we would like to know about your philosophy and priorities for refuge management.

7. What are the top two priority issues for *refuge* management?

Top Priority	Second Priority	Issue
50.0%	12.7%	Habitat protection
22.3%	27.7%	Habitat restoration
8.6%	4.1%	Other
5.4%	14.6%	Cooperation and collaboration
5.4%	7.0%	Endangered species management
1.9%	1.3%	Ranch and farm practices
1.0%	3.2%	Private land development
1.9%	7.6%	Population management
1.6%	17.8%	Invasive species management
0.6%	0.3%	Game management
0%	1.9%	Tourism and recreation opportunities

8. What are the most important issues facing management of fish and wildlife in *your state*?
(The following are categorized groupings of answers to open-ended questions.)

Response	N	Percentage (%)
Population growth, development and urban sprawl	83	26.4
Habitat loss	62	19.7
Habitat protection and restoration	29	9.2
Adequate funds to protect the resource	16	5.1
Invasive species management	14	4.5
Wetland loss	12	3.8
Lack of water	10	3.2
Water issues	8	2.5
Endangered species management	8	2.5
State and federal conflicts	7	2.2
Agricultural practices	6	1.9
Other	47	14.7
Total	302	95.7

*Responses may not total to 100% due to blank answers on individual questions.

Section III: In this section, we would like your personal opinion on the National Wildlife Refuge System and governing policies.

9. How many visitors come to your refuge in an average year?

Mean: 193,072.2 people

Median: 47,000 people

10. How many visitors do you want at your refuge?

a. One-fourth the number of current visitors	1.4%
b. One-half the number of current visitors	2.8%
c. No change in the number of visitors	57.3%
d. Twice the number of current visitors	24.6%
e. Three times the number of current visitors	10.8%

11. Please rank the following activities for the amount of usage by the public at your refuge

Activity	Mean
Hunting	21.2%
Fishing	19.1%
Wildlife observation	32.4%
Wildlife photography	6.3%
Environmental education	9.8%
Environmental interpretation	9.2%
Other	19.7%

12. In your opinion, a realistic role for the public in natural resource management should be:

1. The public should provide suggestions and let the resource professionals decide.	56.4%
2. The public should serve on advisory boards that review and comment on resource management decisions.	27.4%
3. Other	8.5%
4. The public should act as a full and equal partner in making natural resource management decisions.	5.9%
5. None. Let the natural resource professionals make all of the decisions.	1.6%
6. The public should decide management issues and resource professionals should carry them out.	0.3%

13. Has the Comprehensive Conservation Planning (CCP) process been conducted at your refuge?

a. No	52.9%
b. Yes	46.1%
c. Not sure	1.0%

14. In your opinion, should the range of management alternatives for the Comprehensive Conservation Plan for your refuge be based upon?

a. Individual refuge purposes	8.4%
b. National Wildlife Refuge system purposes	1.3%
c. Both a and b	88.3%
d. Neither	1.9%

15. When selecting management alternatives for the Comprehensive Conservation Plan, will your refuge base management alternatives upon: (The following are categorized groupings of answers to open-ended questions.)

Management goals based upon?	N	Percentage (%)
Single species management	7	2.3
All native species	161	53.0
Balance between maximizing all native species and a single target species	39	12.4
Habitat management	32	10.2
Threatened/endangered species and migratory bird management	23	7.3
Balance refuge and refuge system purposes	16	5.1
Maximize all native species, plus emphasizing specific refuge purposes	10	3.2
Maximize critical refuge species	3	1.0
Waterfowl management	3	1.0
Fish and Wildlife Service trust species	2	0.6
Wetland dependent species	2	0.6
Habitat management and refuge purposes	2	0.6
Based upon cultural/historical resources and maximizing all native species	1	0.3
Maintaining the ecological functioning of the surrounding area	1	0.3
Politics	1	0.3

16. How do you view the Comprehensive Conservation Plan?

a. A political requirement that will soon change	9.4%
b. A useful tool for refuge management	43.0%
c. A means of getting more funding and staff at the refuge	6.5%
d. A somewhat useful tool for refuge management	38.1%
e. A useless tool for refuge management	2.9%

17. In regards to question 16, why did you choose your answer in the above question? (The following are categorized groupings of answers to open-ended questions.)

Reason	N	Percentage (%)
Evaluates refuge activities to develop goals/objectives and provide direction	111	35.4
It is important to have something that management has to pay attention to even with staffing and agency changes	34	10.8
It will sit on a shelf or become outdated too quickly	19	6.1
The structure of the CCP does not facilitate use in management	18	5.7
Negative past experience with plans	17	5.4
Achieves public involvement; the public, stakeholders and other agencies will understand Refuge direction	16	5.1
Takes valuable staff time and resources	13	4.1
Politically driven	9	2.9
Strength of CCP depends on the amount of effort put in	8	2.5
CCP will soon be replaced with another planning requirement	8	2.5
Brings more money and staff to the refuge	6	1.9
There will be no funds to implement the plan	6	1.9
If CCP's are kept around, they could be effective	6	1.9
Other*	13	4.2

* Some of the other comments included: useful for new refuges, and written by contractors.

18. How has the philosophy of the National Wildlife Refuge System changed in the last ten years? (The following are categorized groupings of answers to open-ended questions.)

Reason	N	Percentage (%)
Toward ecosystem management	110	33.0
Increased outreach efforts	31	9.9
Increased public use	28	8.9
Cannot comment	21	6.7
The philosophy has not changed	17	5.4
Toward politically motivated and charged management	12	3.8
Wildlife first	10	3.2
Toward ecosystem management and increased outreach efforts	9	2.9
More people oriented	9	2.9
Increased wildlife compatible recreation	5	1.6
Decisions are now made to please the public	4	1.3
Employees are not as committed to refuge management	4	1.3
Refuges are being held back by the U.S. Fish and Wildlife Service	4	1.3
Other	26	8.2

19. What should the philosophy of the National Wildlife Refuge System be in the future? (The following are categorized groupings of answers to open-ended questions.)

Reason	N	Percentage (%)
Wildlife first	76	24.2
Ecosystem and holistic management approach	43	13.7
Current mission	26	8.3
Habitat restoration, management and protection	24	7.6
Provide wildlife experience for the public without damaging the resource	16	5.1
Maintain ecological integrity and biodiversity and mimic natural processes	15	4.8
Follow the Refuge Improvement Act of 1997	14	4.5
Use the best science and tools available to be good examples of habitat management and land stewardship	12	3.8
Lands managed for wildlife as a system	9	2.9
More on the ground management	8	2.5
No change from current philosophy	5	1.6
Other*	32	10.2

*Some of the other comments included: reduce the bureaucracy and avoid reorganization, go back to our roots of maximizing game species, manage based upon the original purpose of the refuge, become more people oriented, manage for future generations, and manage existing refuges before adding new lands.

Section IV: In this section, we would like to know more about you and your reasons for entering this profession.

20. What activities, events, people, etc...stimulated you to enter this profession? (The following are categorized groupings of answers to open-ended questions. Men and women had significantly different answers to this question.)

Stimulus to enter natural resource profession	N	Percentage (%)
Hunting and fishing	84	26.8
Interest in outdoors, woods, wildlife and natural world	65	20.7
Family	26	8.3
Elementary, high school, or college classes and teachers	17	5.4
Conservation literature and television	15	4.8
Grew up on a farm, hunting and fishing	14	4.5
Rural background	9	2.9
Camping and hiking	8	2.5
Work experience on public land or with refuge people	8	2.5
Other	60	19.1

21. In your opinion, based upon your experiences in the National Wildlife Refuge System, what are the critical elements needed for persons employed as a refuge biologist and a refuge manager? (The following are categorized groupings of answers to open-ended questions.)

Refuge Biologist:

Area	N	Percentage (%)
Technical skills	155	56.4
Social skills	2	.7
Personal qualities and basic knowledge	10	3.6
Technical and social skills	37	13.5
Technical skills and personal qualities	54	19.6
Social skills and personal qualities	2	.7
All of the above	15	5.5
Total	275	100.0

Refuge Manager:

Area	N	Percentage (%)
Technical skills	64	23.9
Social skills	13	4.9
Personal qualities and basic knowledge	19	2.1
Technical and social skills	51	19
Technical skills and personal qualities	41	15.3
Social skills and personal qualities	11	4.1
All of the above	69	25.7
Total	268	100.0

22. Please list all of your degrees and subject areas. (The following are categorized groupings of answers to open-ended questions.)

Undergraduate Degree Area	N	Percentage (%)
Wildlife	153	48.7
Biology	51	16.2
Wildlife and fisheries management	26	8.3
Zoology	15	4.8
Forestry	9	2.9
Social sciences	7	2.2
Wildlife management, range management	6	1.9
Natural resources	5	1.6
Wildlife and forestry	5	1.6
Other	28	7.2
Master's Degree Area		
None	150	47.8
Wildlife	82	26.1
Biology	26	8.3
Zoology	12	3.8
Other	44	14.0
PhD Degree Area		
None	306	97.5
Wildlife	5	1.6
Other	3	0.9

23. Answers to question 23 were used to create an index known as the New Environmental Paradigm (NEP). The measure predicts respondents' environmental values (Dunlap and Van Liere 1978, 1984; Van Liere and Dunlap 1980, 1981). The result is a 5-point scale with the higher score indicating increased biocentrism or support of the NEP.

	Strongly disagree	Somewhat disagree	No opinion	Somewhat agree	Strongly agree	Mean (std dev)
<i>The balance of nature is very delicate and easily upset by human activities</i>	0.6	11.8	0.6	55.1	30.3	4.05 (0.92)
<i>The earth is like a spaceship with only limited room and resources</i>	2.5	1.9	2.5	22.0	69.4	4.60 (0.83)
<i>Plants and animals do not exist primarily for human use</i>	5.4	10.5	6.7	26.8	49.4	4.13 (1.23)
<i>Modifying the environment seldom causes serious problems</i>	2.2	3.8	1.0	32.9	58.9	4.46 (0.87)
<i>People were created to rule over the rest of nature</i>	7.3	9.2	8.6	14.3	59.2	4.21 (1.33)

Overall NEP mean and standard deviation: 4.00, 0.61

Managers and Biologists were significantly different in their scores on the environmental values index, the New Environmental Paradigm.

Group	N	Mean	Std error of difference
<i>Manager</i>	143	3.91	0.059
<i>Biologist</i>	121	4.12	0.041
Difference	22	0.21	0.074

24. In your personal or leisure time, what recreational activities do you participate in?

Recreational Activity	Zero times per year	1-2 times per year	3-5 times per year	6-10 times per year	More than 10 times per year
Hunting	25.2%	15.0%	13.9%	13.9%	32
Fishing	18.2%	19.2%	17.5%	19.5%	25..
Camping	11.0%	33.4%	30.1%	14.4%	11.0%
Hiking	5.0%	12.3%	24.2%	18.5%	40.1%
Kayaking/canoeing	26.7%	34.7%	20.8%	7.6%	10.1%
Nature viewing	1.3%	1.3%	6.2%	10.8%	80.3%
Photography	19.3%	20.7%	20.0%	13.6%	25.4%
Four-wheeling	83.3%	5.6%	5.2%	2.8%	3.1%
Snowmobiling	95.8%	3.5%	0.3%	0.3%	0.0%
Skiing	58.6%	15.9%	12.1%	5.9%	7.6%
Motorized boating	67.0%	11.5%	9.7%	3.5%	8.3%
Other	3.9%	0.0%	3.9%	17.1%	25.0%

25. Do you belong to any professional organizations? (The following are categorized groupings of answers to open-ended questions.)

Professional Society	N	Percentage (%)
The Wildlife Society	97	30.9
National Wildlife Refuge Association	9	2.9
The Wildlife Society, National Wildlife Refuge Association	7	2.2
State Chapter of The Wildlife Society	7	2.2
The Wildlife Society, Society for Conservation Biology	6	1.9
The Wildlife Society, American Society for Mammologists	3	1.0
The Wildlife Society, State Chapter of the Wildlife Society	3	1.0
Other	20	6.4

Section V: In this section, we would like to know some demographic information about you.

26. Age

Mean 44.5 years
Median 46.0 years

Age Groups

25-29 years	3.9%
30-34 years	12.7%
35-39 years	13.3%
40-44 years	14.9%
45-49 years	25.0%
50-54 years	22.4%
55-59 years	4.9%
60-69 years	2.9%

27. Gender

Male 76.1% Female 24.9%

28. Please select one category that best describes your race and ethnicity.

a. American Indian or Alaska Native	2.6%
b. Asian American	1.3%
c. Black or African American	0.7%
d. Hispanic or Latino	3.0%
e. Native Hawaiian or Pacific Islander	0.0%
f. White or European	90.4%
g. Other	2.0%

29. Did you grow up on a farm or a ranch?

a. Farm	20.7%
b. Ranch	3.5%
c. Neither	73.9%

30. Which of the following best describes the area where you grew up?

a. In a town of less than 500 people	10.9%
b. In a town of 501 – 2,500 people	14.5%
c. In a town of 2,501 – 9,999 people	23.1%
d. In a city of 10,000 – 24,999 people	12.5%
e. In a city of 25,000 – 49,999 people	14.9%
f. In a city of 50,000 – 99,999 people	9.6%
g. In a city of 100,000 – 1 million people	7.9%
h. In a city of greater than 1 million people	6.6%

31. When thinking of your basic political orientation, which statement is most true?

a. I am unsure of my political orientation	2.0%
b. I am somewhat unsure of my political orientation	4.9%
c. I am somewhat sure of my political orientation	32.1%
d. I am sure of my political orientation	58.7%
e. Don't know	2.3%

32. As you think about it now, how would you describe your political orientation?

a. Extremely liberal	1.3%
b. Liberal	20.8%
c. Slightly liberal	21.8%
d. Middle of the road or moderate	23.2%
e. Slightly conservative	15.8%
f. Conservative	16.4%
g. Extremely conservative	0.7%

Liberal	43.8%
Moderate	23.2%
Conservative	33.0%

33. How many years have you been employed by the U.S. Fish and Wildlife Service?

Mean: 16.1 years Median: 15 years

Groups of years employed by the U.S. Fish and Wildlife Service

0-4 years	11.8%
5-9 years	15.7%
10-14 years	20.9%
15-19 years	10.5%
20-24 years	21.6%
25-29 years	11.4%
30-34 years	6.9%
35-42 years	1.3%

34. What is your current GS grade level?

a. GS 5	0.0%
b. GS 7	2.6%
c. GS 9	6.9%
d. GS 11	31.0%
e. GS 12	26.8%
f. GS 13	21.9%
g. GS 14	10.8%
h. GS 15	0.0%
i. Other	0.0%

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