



# ***Attitudinal Survey Component of the Study *Quantity, Quality, and Support for Research in the U.S. Fish and Wildlife Service: An Organizational Assessment****

## **Report of Methods and Frequencies**

By Jennefer Ragan Neilson, Berton Lee Lamb, Earlene M. Swann, Joan Ratz, Phadrea D. Ponds, and Joyce Liverca



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## Contents

Purpose .....	1
Survey Methods.....	2
Participants.....	2
Survey Development.....	3
Procedures .....	4
Sample Characteristics .....	4
Question Summaries.....	5
Question Track 1 .....	6
Question Track 2.....	12
Final Questions.....	13
References Cited .....	14



# **Attitudinal Survey Component of the Study *Quantity, Quality, and Support for Research in the U.S. Fish and Wildlife Service: An Organizational Assessment***

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### **Purpose**

The U.S. Fish and Wildlife Service (FWS) is responsible for managing the Nation's fish and wildlife resources so that these trust resources are preserved for the present and future use and enjoyment of the citizens of the United States. The FWS achieves this mission by managing many programs. These include the national system of refuges and fish hatcheries, Fish and Wildlife Management Assistance Offices, migratory birds program, law enforcement, and working with tribal, state, and other Federal agencies to ensure protection of threatened and endangered species. Another role of the FWS is consulting with tribal, state, and other Federal agencies and private sector interests on the best conservation management practices consistent with Federal law. Each of these activities requires a workforce that is recognized for its professionalism, dedication to public service, and command of expert knowledge. Recognition for expert knowledge in fish and wildlife conservation is demonstrated, in part, when FWS personnel direct, conduct, or report research that is well-designed to answer questions of importance for natural resource management. The data reported in this document are one part of a three-part study of the status of organizational support for research in FWS, which was commissioned by the Directorate of the FWS. Funding for this study was provided by the FWS, and the Science Support Program of the U.S. Geological Survey (USGS).

In 1994, the biological research functions of the FWS were transferred to the National Biological Survey, and subsequently into the USGS. This transfer was principally accomplished by moving whole research units from one agency to another. The result was that some employees whose positions were involved with research were not transferred. In addition, some research, information, and management needs of the FWS have continued to be met by studies conducted within the FWS itself. Although the FWS relies on the USGS and others for most basic research investigations, the FWS also conducts its own studies to meet management needs. Because it is vital for FWS employees to be able to conduct such tactical and applied research tasks in a timely manner, the agency must promote the culture necessary to support and encourage these activities. Such research activities are spread widely across the various programs of the FWS, and there is presently no collective, formal, or systematic record of planned or existing research activities. In

commissioning this organizational assessment research, the Directorate of the FWS recognized that it would be to the advantage of the agency to more fully understand its research capacity.

To develop a clearer picture of the nature, extent, quality, and degree of administrative support available for conducting research within the FWS, investigations have been undertaken to:

1. identify positions in the FWS that may include, in whole or in part, a component of scientific research;
2. identify organizational units within the FWS that may conduct research as a significant portion of their mission; and
3. assess the attitudes of employees and managers about the obstacles and opportunities for scientific research existing within the FWS by using a scaled-response survey instrument.

The findings presented in this report represent the basic results derived from the attitude assessment survey conducted in the last quarter of 2004. The findings set forth in this report are the frequency distributions for each question in the survey instrument for all respondents. The only statistics provided are descriptive in character - namely, means and associated standard deviations.

## Survey Methods

### Participants

Our goal was to select a sample of employees who had job titles and grades that made them candidates to conduct research. We queried the Federal Personnel/Payroll System (FPPS) for FWS employees and limited this query to professional positions (including biologists, ecologists, hydrologists, economists, etc.); this procedure eliminated administrative, technical, clerical, and other positions. Subsequently, we created a database of all FWS employees who were obtained from this query. We defined this database of employees as our population ( $n = 3,939$ ); this is the total population of FWS employees who hold positions that might allow them to conduct research. We used standard probability statistics to determine that a sample size of 843 employees would allow us to say with 95% confidence that the error attributable to sampling and other random effects would be plus or minus 3% for the overall survey. In survey research, it is common to have a response rate in the range of 65%. Therefore, in order to obtain at least 843 respondents, and to make sure our completed sample was representative of the population, we determined we needed to administer the survey to at least 1,297 individuals.

We also wanted to ensure that the eight regions (Regions: 1–7, and 9) within the FWS were proportionately represented in the survey sample. We stratified the random sample so that the number of participants in the survey sample from each region was representative of the proportion that each region makes up of the study population. Thus, we calculated the percentage of employees that each region contributed to the entire study population. We established parameters within the statistical software package known as the *Statistical Package for the Social Sciences* (SPSS™) so that the program would randomly select a percentage of employees from each region that corresponds to the region's percentage of the study population. For example, Region 1 makes up approximately 25% of the total study population of potential FWS researchers. Therefore, we used the SPSS™ software to randomly select 353 employees from Region 1 so that employees from this region would make up approximately 25% of the study sample. Once we made certain the appropriate percentage of participants from each region was represented in the study sample, we

ended up with a sample size of 1392. This figure slightly exceeds the targeted sample size of 1297 needed to say with 95% confidence that the error attributable to sampling and other random effects would be plus or minus 3% for the overall survey.

In addition to the stratified random sample of potential FWS researchers, we identified a group of FWS employees who had published at least one article in a peer-reviewed, scientific journal since 1995 while they were employees of the FWS. This resulted in 492 names. Out of this group of “known” researchers, we included in our study sample those who were in professional series positions and for whom we had email addresses ( $n = 471$ ). Adding the known researchers to the random sample of 1,392 professional series employees (Table 1) resulted in a total sample size of 1,863.

**Table 1.** Description of sampling design.

<b>Region</b>	<b># of individuals receiving the survey</b>	<b>% of overall study sample</b>
Region 1	353	25
Region 2	157	11
Region 3	149	11
Region 4	214	15
Region 5	132	10
Region 6	176	13
Region 7	93	7
Region 9	118	9
Total	1392	-

<sup>a</sup>Known researchers = 471

<sup>b</sup>Total sample size = 1863

## Survey Development

Our objective for the survey instrument was to ask questions that would ascertain the attitudes and perceptions of employees involved in research regarding (1) the nature of their research assignments, (2) the resources available for their research activities, (3) how their research results are reported, (4) how their research results are used, (5) both the obstacles and the opportunities for conducting research, and (6) the level of satisfaction they experienced associated with working in a research capacity at the FWS. We wrote a number of items to map onto these objectives. Two pre-tests of the survey instrument were conducted in order to improve the survey.

The first pre-test of the survey instrument took the form of a review by FWS regional research coordinators who were asked to either pre-test the survey instrument themselves or identify someone in their region who would be willing to do so. Specifically, they were asked to serve as a pre-test panel by completing the questionnaire, recording the time required, and noting any difficulties they encountered. They were also encouraged to provide specific feedback on any of the items on the survey. Eight individuals served on the first pre-test panel, one from Region 5, five from Region 6, and one from Region 9. The second pre-test was given to five field office employees of the Service. These employees were asked to complete the questionnaire, record the time required, and comment on any problems encountered. The results from these employees were examined to ascertain whether or not significant problems could be identified. Finally, three

scientists outside of the U.S. Geological Survey were asked to review the survey instrument regarding its content, structure, and wording. The comments and suggestions from both pre-tests and the peer review were incorporated into the final survey instrument.

## Procedures

Dillman’s (2000) Tailored Design Method was followed to conduct the survey. Data were collected primarily via an interactive web page located on a server housed at the USGS Fort Collins Science Center. Because most FWS employees have access to computers connected to the Internet, we followed Dillman’s method by sending email invitations to the FWS employees included in the study sample, asking them to access a web page to complete the questionnaire. We provided three follow-up invitations via email. Because we recognized that some remote FWS locations would not have adequate Internet access and anticipated that we might encounter technical difficulties in administering an Internet survey, we provided a back-up procedure. All of the study participants were given the options of either downloading a PDF version of the questionnaire or requesting that a hard copy of the questionnaire be mailed to them. Before the survey began, notification was given to employees indicating that the study was an official activity of the FWS. Of the 1,293 employees (69.4%) who responded to the survey, a total of 1149 respondents (88.9%) used the Internet to complete the questionnaire and 144 (11.1%) either requested a paper questionnaire or downloaded the PDF file and submitted the questionnaire through the mail.

## Sample Characteristics

Of the 1293 FWS employees who participated in the survey (Table 2), the average age of participants was 44.5 years, with a standard deviation of 8.8 years. Sixty-six percent of the sample was male. The participants have worked for the FWS an average of 12.8 years, with a standard deviation of 8.9 years. We asked participants to designate their highest completed educational degree and found that 37% have completed a Bachelor’s Degree, 49% have completed a Master’s Degree, and 11% have completed a Doctor of Philosophy Degree. The other 3% of the sample completed another type of degree (e.g., High School diploma, Associate’s Degree, Doctor of Medicine, etc.).

**Table 2.** Description of sample by region of the U.S. Fish and Wildlife Service.

	<b># of individuals completing the survey</b>	<b>% of study sample</b>
Region 1	233	25.8
Region 2	89	9.9
Region 3	95	10.5
Region 4	135	15
Region 5	95	10.5
Region 6	134	14.9
Region 7	64	7.1
Region 9	56	6.2
Total	901	-

<sup>a</sup> Known researchers = 368

<sup>b</sup> No region designated = +24

<sup>c</sup> Total number of respondents = 1293



## Question Summaries

*The following are summary statistics for all the questions that appeared in the survey.*

Below is a list of activities that may constitute involvement in research. Please consider these activities and place a check mark by all of the activities that you have performed in your current position with the FWS ( $n = 1293$ ).

If a participant endorsed any one of the items below, they were asked to complete Question Track 1. If they did not endorse any one of the items below, they were asked to complete Question Track 2. Because of the nature of the survey, some respondents answered questions from both track 1 and 2. In the analyses, we used data from one track per respondent.

<b>Activity</b>	<b>% of sample that endorsed item</b>
Test hypotheses that further the state of scientific knowledge	30.6
Design methods of data collection for research projects	40.7
Write research project proposals	37.5
Analyze data (statistically or qualitatively)	53.9
Write reports of research results	43.1
Collect data and use those data to evaluate particular management actions	51.4
Collect data and use those data to inform managers or decision-makers who develop plans or policies	52.0
Collect data and use those data to provide input to environmental impact statements	18.3
Use monitoring data to detect environmental or ecological trends or causes of trend	48.1
Collaborate with individuals from other organizations (e.g., U.S. Geological Survey, universities) on a research project where they may be the Principal Investigator, but you write some portion of the final research input	39.7
Supervise or coordinate the efforts of other FWS employees who are engaged in one or more of the research activities listed above	43.9

## Question Track 1 (76% of overall sample, $n = 981$ )

1. The following items concern employees' perceptions of the role of research in the U.S. Fish and Wildlife Service.

	1 = Strongly disagree	2 = Somewhat disagree	3 = Neutral	4 = Somewhat agree		5 = Strongly agree				
			1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	<i>n</i>	Mean	SD
I am expected to conduct research as part of my normal job duties.			16.4	14.8	14.2	52.2	2.5	972	3.1	1.2
There is a clear career path leading to advancement for me through conducting research.			37.3	29.2	20.9	9.2	3.4	971	2.1	1.1
I am able to obtain the financial resources that are necessary to conduct research from FWS funds.			31.7	33.9	18.8	13.3	2.3	974	2.2	1.1
My supervisor encourages me to publish research.			16.8	14.7	36.9	18.0	13.6	971	3.0	1.2
I feel that the FWS encourages me to publish research.			17.8	22.2	35.2	20.0	4.8	970	2.7	1.1
I feel comfortable approaching my supervisor when I have questions or need help regarding my research projects.			6.2	8.8	21.9	26.4	36.8	971	3.8	1.2
I have been in other positions within the FWS that have been more supportive of conducting research than my current position. <sup>a</sup>			13.2	12.3	51.7	12.5	10.3	952	2.9	1.1
I have been in other positions within the FWS that have been less supportive of conducting research than my current position. <sup>a</sup>			12.1	12.0	56.3	12.5	7.1	953	2.9	1.0
Support for FWS employees to do research has increased in the past 10 years. <sup>b</sup>			25.1	23.8	29.3	17.9	3.9	963	2.5	1.2
Support for FWS employees to do research has decreased in the past 10 years. <sup>b</sup>			4.4	16.7	31.3	24.4	23.3	965	3.5	1.1
I feel that the FWS encourages me to get involved in research.			11.6	21.0	26.1	32.8	8.5	970	3.1	1.2

<sup>a</sup>These two questions are correlated ( $r = -.31, p < .01$ ).

<sup>b</sup>These two questions are correlated ( $r = -.89, p < .01$ ).

2. The following items concern employees' perceptions of the resources available to them for conducting research.

A.

	<b>1 =</b>	<b>2 =</b>	<b>3 =</b>	<b>4 =</b>	<b>5 =</b>				
	<b>Strongly disagree</b>	<b>Somewhat disagree</b>	<b>Neutral</b>	<b>Somewhat agree</b>	<b>Strongly agree</b>				
		<b>1 (%)</b>	<b>2 (%)</b>	<b>3 (%)</b>	<b>4 (%)</b>	<b>5 (%)</b>	<b>n</b>	<b>Mean</b>	<b>SD</b>
I have access to the equipment (e.g., tools, machinery, etc.) I need to conduct research. <sup>a</sup>		6.5	15.2	11.5	50.9	15.9	971	3.5	1.1
I have access to the technology (e.g., computers, tracking devices, etc.) I need to conduct research. <sup>a</sup>		4.5	14.8	8.4	51.6	20.6	972	3.7	1.1
I have access to the computer software (e.g., statistics, etc.) I need to conduct research. <sup>a</sup>		4.1	14.2	12.9	45.3	23.6	972	3.7	1.1
I have access to the journals, books, etc. that I need to conduct research. <sup>a</sup>		5.6	14.1	9.9	44.8	25.6	970	3.7	1.2
I have access to the training I need to keep me current in research and data analysis methods. <sup>a</sup>		10.2	22.6	17.7	37.6	11.9	971	3.2	1.2
My supervisor is a valuable resource to me because he or she is knowledgeable about research.		15.4	20.7	24.3	24.8	14.9	969	3.0	1.3
My co-workers are a valuable resource to me because they are knowledgeable about research.		5.7	13.0	15.7	42.4	23.3	970	3.7	1.1
I feel that the time necessary to conduct research is made available to me.		23.7	28.6	17.1	21.5	9.0	962	2.6	1.3
I am able to obtain the financial resources that are necessary to conduct my research by partnering with:									
i. City, county, or state government agencies.		16.8	15.9	27.1	32.0	8.1	962	3.0	1.2
ii. Other federal agencies.		8.3	10.6	21.1	46.8	13.3	964	3.5	1.1
iii. Non-profit agencies.		13.6	15.4	36.8	29.1	5.0	961	3.0	1.1
iv. Private companies.		22.9	19.5	39.8	15.0	2.7	959	2.6	1.1
v. Universities.		10.8	12.9	27.7	39.0	9.6	933	3.2	1.1

<sup>a</sup>These five items are interrelated ( $\alpha = .81$ )

B. Which of the following resources do you use to support research projects? Options are rank-ordered from those receiving the highest average percentage to those receiving the lowest average percentage.

<b>Resources to support research</b>	<b>Mean (%)</b>	<b>SD (%)</b>
Base operating funds	42.3	35.8
Inter-agency agreements with other federal agencies, where they provide some or all of the funding	24.9	27.0
Research grants obtained independently or through collaboration with others	15.1	20.6
Partnerships with other organizations where no money changes hands	13.5	17.0
Agreements with other governments (e.g., state, local), where they provide some or all of the funding	12.4	16.7
Agreements with universities and/or non-profit organizations, where they provide some or all of the funding	12.0	15.5
Volunteers	8.2	12.2
Line-item funds from Congress	6.1	17.2
Agreements with for-profit organizations, where they provide some or all of the funding	4.9	11.8
Reverted Federal Aid funds	1.2	7.1

3. The following items concern employees' perceptions of the nature of their research.

A. What is the subject or topic of your current or most recent research project? (For example, black-footed ferret reintroduction monitoring, migration, reproduction, fire management, hydrological study of refuge marshes, etc.)

*[Open-ended responses are not included in this report; see Completion Report].*

B. What percentage of your job involves research?

Mean response	25 (%)
Standard deviation	25.1
Range of responses	0-100
Mode response	5
Median response	15

C.

	<b>1 = None</b>	<b>2 = Very little</b>	<b>3 = Some</b>	<b>4 = Most</b>	<b>5 = All</b>					
			<b>1 (%)</b>	<b>2 (%)</b>	<b>3 (%)</b>	<b>4 (%)</b>	<b>5 (%)</b>	<b>n</b>	<b>Mean</b>	<b>SD</b>
How much of your research do you consider to be applied (i.e., collecting data with the goal of solving a practical problem)?			4.0	5.9	15.3	46.7	28.1	958	3.9	1.0
How much of your research do you consider to be basic (i.e., collecting data with the goal of increasing scientific knowledge)?			24.6	28.5	29.4	14.1	3.4	948	2.4	1.1

D.

	<b>1 = Strongly disagree</b>	<b>2 = Somewhat disagree</b>	<b>3 = Neutral</b>	<b>4 = Somewhat agree</b>	<b>5 = Strongly agree</b>					
			<b>1 (%)</b>	<b>2 (%)</b>	<b>3 (%)</b>	<b>4 (%)</b>	<b>5 (%)</b>	<b>n</b>	<b>Mean</b>	<b>SD</b>
When I do research, I am usually asked by other researchers to join projects they have initiated.			14.9	21.3	26.0	29.0	8.8	954	3.0	1.2
I usually initiate the research projects I conduct.			7.8	12.3	21.5	37.4	21.1	954	3.5	1.2
The research I engage in is conducted independently, which is to say that I am usually the sole investigator.			33.5	29.6	13.5	17.0	6.4	955	2.3	1.3
The research I engage in is usually conducted with a team of investigators.			7.5	10.6	13.1	37.8	30.9	954	3.7	1.2

4. The following items concern employees' perceptions of how their research results are reported.

	<b>1 = Never</b>	<b>2 = Infrequently</b>	<b>3 = Frequently</b>	<b>4 = Always</b>
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A. How frequently do you present the results of your research in the following sources?

	<b>1 (%)</b>	<b>2 (%)</b>	<b>3 (%)</b>	<b>4 (%)</b>	<b>n</b>	<b>Mean</b>	<b>SD</b>
Publications of the FWS or other government agencies	35.5	38.5	20.4	5.6	946	2.0	0.9
Peer-reviewed scientific journals	42.9	40.1	14.9	2.1	948	1.8	0.8
Peer-reviewed professional or trade journals	69.9	27.0	3.0	0.1	943	1.3	0.5
Non-peer-reviewed magazines	69.2	29.0	1.7	0.1	942	1.3	0.5
Newspapers or TV media	52.4	39.7	7.3	0.6	943	1.6	0.7
Web-based media	56.1	32.7	9.6	1.6	941	1.6	0.7
Scientific symposia or conferences	26.9	40.3	29.6	3.2	948	2.1	0.8
Chapters in edited books	77.9	19.8	2.3	0	945	1.2	0.5
Sole-authorship books	97.0	2.8	0.2	0	942	1.0	0.2
Multiple-authorship books	88.2	10.7	1.1	0	941	1.1	0.4
FWS internal symposia or conferences	33.6	46.8	18.6	1.0	929	1.9	0.7

B. There are several possible objectives for publishing or presenting research results. Which would you say best describes your purpose when you publish or present research results?<sup>a</sup>

	<b>% of sample that endorsed item</b>	<b>n</b>
Provide information to other scientists	68.4	957
Provide information for land, water, or wildlife managers	80.9	958
Provide information to the general public	58.1	957
Not applicable to me. I do not publish or present research results	20.9	958

5. The following items concern employees' perceptions of how the results of their research projects are used.<sup>a</sup>

<b>In my current position with the U.S. Fish and Wildlife Service, the results of my research have been used to:</b>		
(Check all of the statements that apply to you.)	<b>% of sample that endorsed item</b>	<b><i>n</i></b>
Inform myself or other FWS employees of better practices	86.6	953
Improve policy	50.5	953
Improve government programs	54.6	953
Write environmental impact statements	31.2	953
Advise administrative rule-making, permits, or licenses	46.8	953
Increase the scientific knowledge in my discipline or field.	80.1	953
Satisfy a directive of my supervisor.	43.5	953

<sup>a</sup>These items were either endorsed or not endorsed by survey respondents. Endorsed statements were coded as "1"; non endorsed statements were coded as "0." If none of the statements within a set were endorsed, we could not determine if the question had been skipped or if the respondent intended a negative response to all statements within the set. Therefore, the responses to those statements were treated as missing data.

6. The following items concern employees' attitudes towards working at the FWS.

A.

	<b>1 = Completely dissatisfied</b>	<b>2 = Somewhat dissatisfied</b>	<b>3 = Neutral</b>	<b>4 = Somewhat satisfied</b>	<b>5 = Completely satisfied</b>				
<b>How satisfied are you with:</b>	<b>1 (%)</b>	<b>2 (%)</b>	<b>3 (%)</b>	<b>4 (%)</b>	<b>5 (%)</b>	<b><i>n</i></b>	<b>Mean</b>	<b>SD</b>	
Your current position at the FWS?	2.1	14.1	4.8	49.0	30.1	974	3.9	1.0	
The weight that is given to research productivity in your performance evaluations, in your current position at the FWS?	5.6	19.2	35.5	24.0	15.7	960	3.3	1.1	
The level of financial support you receive for research in your current position?	18.7	36.1	22.6	17.7	4.9	961	2.5	1.1	
The level of encouragement you receive from your supervisor for research in your current position?	8.0	15.7	29.1	24.5	22.7	961	3.4	1.2	
The amount of research time you have, free from other commitments, in your current position?	18.4	39.6	18.0	16.2	7.7	954	2.6	1.2	

B.

	1 =		2 =		3 =		4 =		5 =	
	Completely unlikely		Somewhat unlikely		Neither unlikely nor likely		Somewhat likely		Completely likely	
	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	<i>n</i>	Mean	SD		
How likely are you to begin looking for another job outside of the FWS in the next six months, due to a lack of opportunity for research in the FWS?	54.6	17.4	12.3	9.5	6.2	967	2.0	1.3		
How likely is it that you would be happier with your job at the FWS if it included greater opportunities for research?	10.7	6.1	21.2	35.4	26.5	961	3.6	1.2		
How likely is it that you would be happier with your job at the FWS if it included fewer opportunities for research?	40.7	28.5	26.3	3.1	1.4	955	2.0	1.0		

C.

	<i>n</i>	% who answered "yes"
Do you feel that your current position description adequately includes the research you do?	946	61.7
Did you initially seek employment with the FWS because you expected research opportunities?	944	41.0

D. Is there any other information you would like to provide regarding the support, lack of support, obstacles, inducements, or resources at the FWS with regard to research? If so, please write your answer below.

*[Open ended responses are not included in this report; see Completion Report.]*

## Question Track 2 (24% of overall sample, $n = 312$ )

1. The following items concern employees' attitudes towards research at the U.S. Fish and Wildlife Service.

A.

	% who answered "yes"	$n$
Overall, would you say that your formal education prepared you to conduct either applied or basic research?	89.7	311
Were you hired originally by the FWS solely or in part to do research?	15.1	311

B.

	1 = Greatly less satisfied	2 = Slightly less satisfied	3 = Neutral	4 = Slightly more satisfied	5 = Greatly more satisfied	$n$	Mean	SD
	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)			
If I had a position in the FWS that was rewarded for conducting research, I would be:	3.9	2.9	47.1	25.0	20.6	310	3.6	1.0

2. The following items concern employees' perceptions of how they are involved in the research process.

A.

	% who answered "yes"	$n$
Do you supervise employees or manage groups of employees who conduct research?	8.1	310

B.

	% who answered "yes"	$n$
Do you or your employees contract outside of the FWS for research to be conducted (such as with private companies, universities, or other agencies)?	30.8	312

If the answer is "Yes" then what is the major consideration you use in deciding to whom you should award these contracts?

*[Open ended responses are not included in this report; see Completion Report.]*



C.

	% who answered "yes"	<i>n</i>
Do you use the results of others' research studies in the course of your work?	84.6	312

If the answer is "Yes" then what percentage of the following sources of research information do you find most helpful?

	Mean % allocated to this source by the sample	SD (%)	Median (%)	Mode (%)	<i>n</i>
a. Professional or scientific conferences	13.4	14.1	10	10	208
b. Professional of scientific journals	25.1	21.3	20	10	235
c. The World Wide Web	18.1	19.8	10	10	204
d. Personal contacts with scientists	15.6	15.4	10	10	216
e. Newspaper, TV or other open media sources	6.5	16.3	1	0	119
f. Colleagues within the FWS	23.1	20.0	20	10	270
g. Colleagues in other agencies (e.g., universities, USGS, etc.)	18.1	13.3	15	10	257
h. Reports of other agencies	15.5	15.5	10	10	211

### Final Questions (Both Track 1 and Track 2 Respondents Answered)

Within the past 3 years, have your research responsibilities changed, or have you moved within the FWS to or from a job with more research responsibility? (*n* = 1264)

	% of sample that selected item
To a job that includes more research responsibilities	9.3
From a job that included more research responsibilities	12.4
Remained in current job, but now have added research responsibilities	13.2
Remained in current job, but now have fewer research responsibilities	8.9
None of the above apply to me	56.1

Please tell us if you have any other comments, suggestions, or information:

*[Open ended responses are not included in this report; see Completion Report.]*

## **References Cited**

Dillman, D.A., 2000, Mail and internet surveys: The tailored design method. 2nd Edition. John Wiley and Sons, Inc: New York.

Ratz, J.M., Ponds, P.D., Neilson, J.R., Liverca, J., and Lamb, B.L., 2005, Quantity, quality, and support for research in the U.S. Fish and Wildlife Service: An organizational assessment: U.S. Geological Survey, Biological Resources Discipline, Open-File Report 2005-1391, 173 p.