

Florida Private Landowner Wildlife Habitat Monitoring Survey – Phase III

Final Report on the Florida Private Landowner Wildlife Habitat Monitoring Survey

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I. Introduction

In 2015 the third phase of the Florida Private Landowner Wildlife Habitat Monitoring Survey was implemented. This final report provides an overview of:

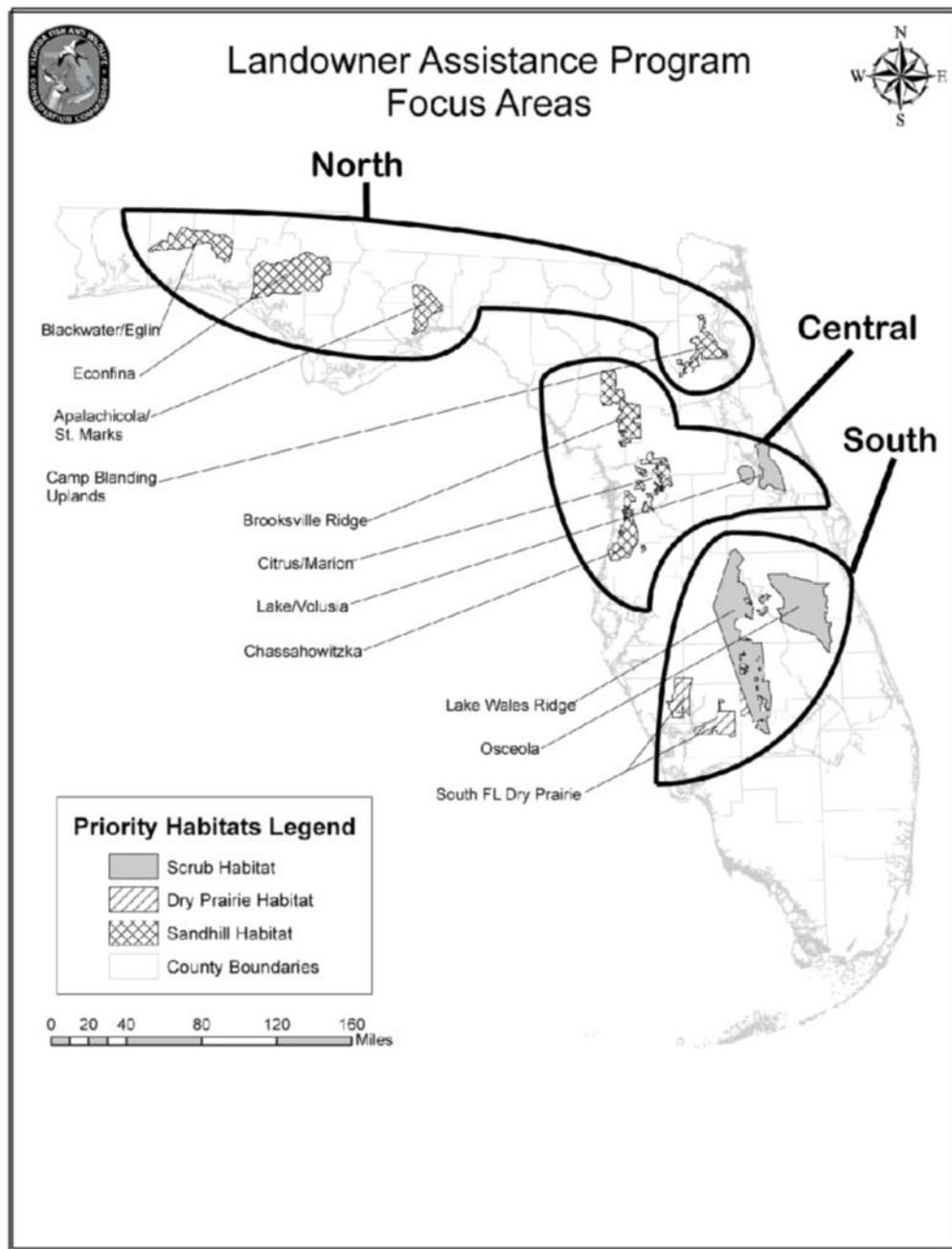
1. the dissemination of the survey, and
2. final results (aggregated data and statistics) for each of the survey questions; and
3. landowner recommendations on how the Florida Fish and Wildlife Conservation Commission (FWC) can improve its working relationship with private landowners.

II. Survey Implementation

Dr. Joseph Prenger from the Florida Fish and Wildlife Conservation Commission (FWC) provided a list of 6,241 potential addresses to which the survey could be mailed. These addresses were obtained from parcel data for properties located in three different regions of Florida: the Landowner Assistance Program (LAP) Focus Areas (see map below). The address list was verified by against the United States Postal Service (USPS) address list. In total, 5,876 addresses were verified:

- 2,454 addresses for the Northern LAP Focus Area;
- 1,644 addresses for the Central LAP Focus Area; and
- 1,778 addresses for the Southern LAP Focus Area.

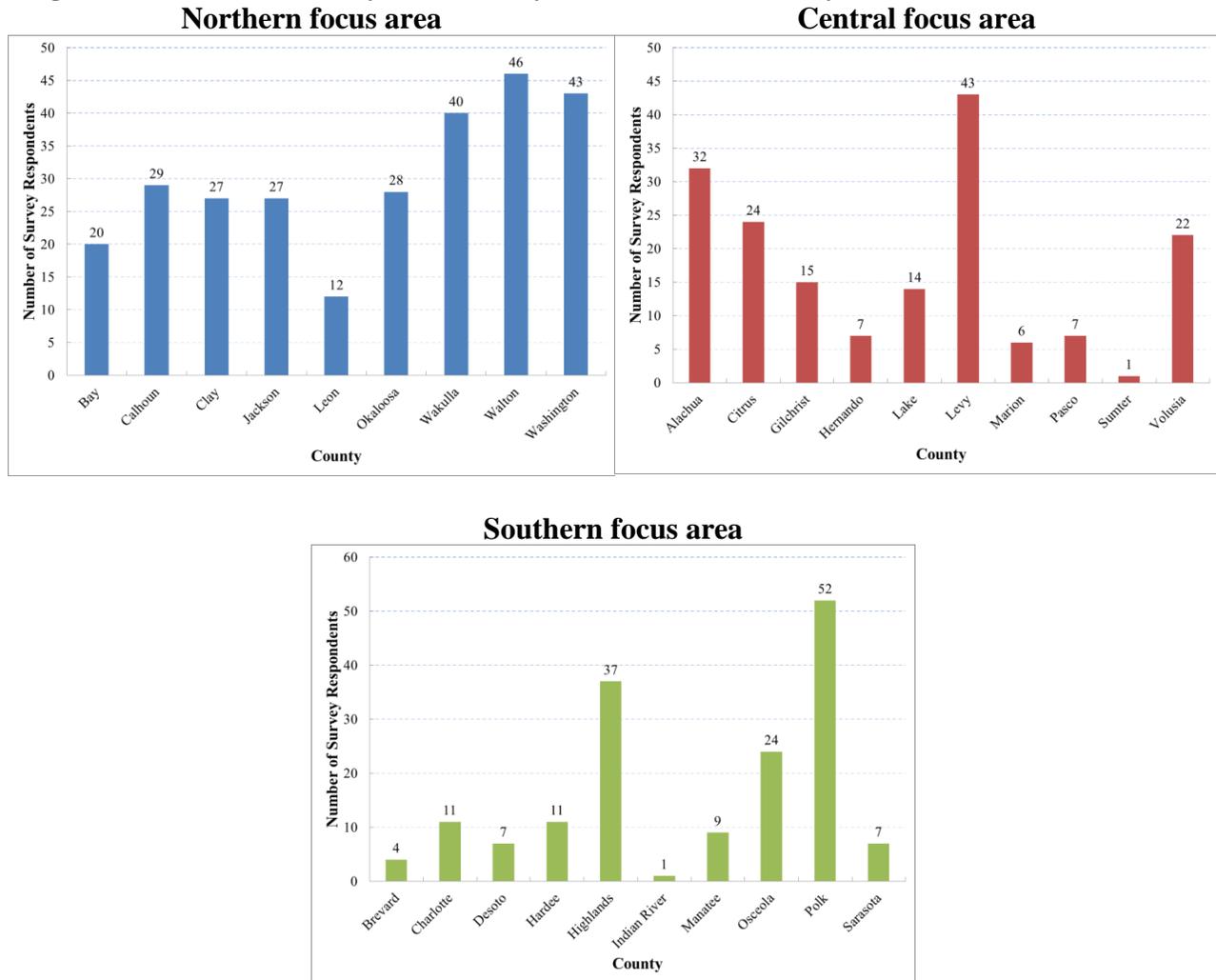
Dr. Elizabeth Pienaar from the University of Florida then used stratified random sampling to select 3,845 landowners from the address list to survey. Addresses were selected based on landholding size and county. To the extent possible, an equal number of surveys were sent to each of the counties. For those counties for which the number of addresses exceeded the sample size, addresses were randomly selected based on landholding size. An equal share of addresses was randomly selected from each quintile of landholding size. The intention of the stratified random sampling was to ensure that surveys were sent to small, medium and large landowners across the focus areas.



The Dillman Tailored Design Method (Dillman et al., 2014) was used to implement the survey. The survey was implemented in two waves: an initial mailing and a second mailing to survey non-respondents. Postcards announcing the survey were mailed out on April 1, 2015. The first round of the survey was mailed out on April 10, 2015. Reminder postcards were sent to survey non-respondents on May 19, 2015. A second round of the survey was mailed out on June 26, 2015.

A total of 608 surveys were returned after both mailings (response rate of 15.8%). A total of 272 surveys were received from the Northern Focus Area. A further 171 surveys were received from the Central Focus Area, and 163 surveys were received from the Southern Focus Area (Figure 1).

Figure 1: Number of surveys received by focus area and county



III. Survey Results

1. Socioeconomic Characteristics

The average age of survey respondents was 64 years (n=554) (Table 1). In total, 441 survey respondents were male (72.5%) and 126 were female (20.7%). The median annual income of respondents was \$50,000 - \$99,999 for the northern and central focus areas, and \$100,000 - \$149,999 for the southern focus area (Table 2). The majority of respondents use their land for agricultural production.

Table 1: Socioeconomic description of respondents

	Number	Percent		Number	Percent
Gender:			Asian	1	0.2
Male	441	72.5	African American	5	0.8
Female	126	20.7	American Indian	7	1.2
No answer	41	6.7	Latino	8	1.3
Income:			Other	5	0.8
\$0 - \$24,999	58	9.5	No answer	45	7.4
\$25,000 - \$49,999	73	12.0	Land Uses on Property:		
\$50,000 - \$99,999	149	24.5	Agricultural	516	84.9
\$100,000 - \$149,999	88	14.5	Recreational	224	36.8
\$150,000 - \$199,999	42	6.9	Residential	246	40.5
> \$200,000	83	13.7	Future development	53	8.7
No answer	115	18.9	Industrial	10	1.6
Race:			Other	13	2.1
White	537	88.3	No answer	25	4.1

Table 2: Sociodemographic information by focus area

	Northern focus area		Central focus area		Southern focus area	
	Mean	Median	Mean	Median	Mean	Median
Age of respondent	63.9	65	66	65.5	62.2	64
Income (\$'000)	-	\$50-\$100	-	\$50-\$100	-	\$100-\$150
Property size (acres)	126.3	55.7	118.3	48.4	406.7	85.5
Years owned, leased or managed property	36.2	25	36.1	30	32.2	21

2. Land Stewardship and Habitat

The majority of respondents actively manage their land for wildlife. Almost 68 percent of respondents engage in land stewardship practices that likely benefit wildlife (Table 3). A smaller share of respondents (47.7%) engage in land stewardship practices that are specifically intended to benefit wildlife (Figures 2 to 5).

Table 3: Number and percent of respondents who engage in stewardship practices that benefit wildlife on their land

Question 2	Number	Response Rate	% Yes
Do you actively manage for wildlife, including land stewardship practices that <u>likely</u> benefit wildlife?	572	94.1%	67.8%
Do you actively manage for wildlife, including land stewardship practices <u>specifically intended to benefit</u> wildlife?	530	87.2%	47.7%

Figure 2: Land stewardship by all respondents

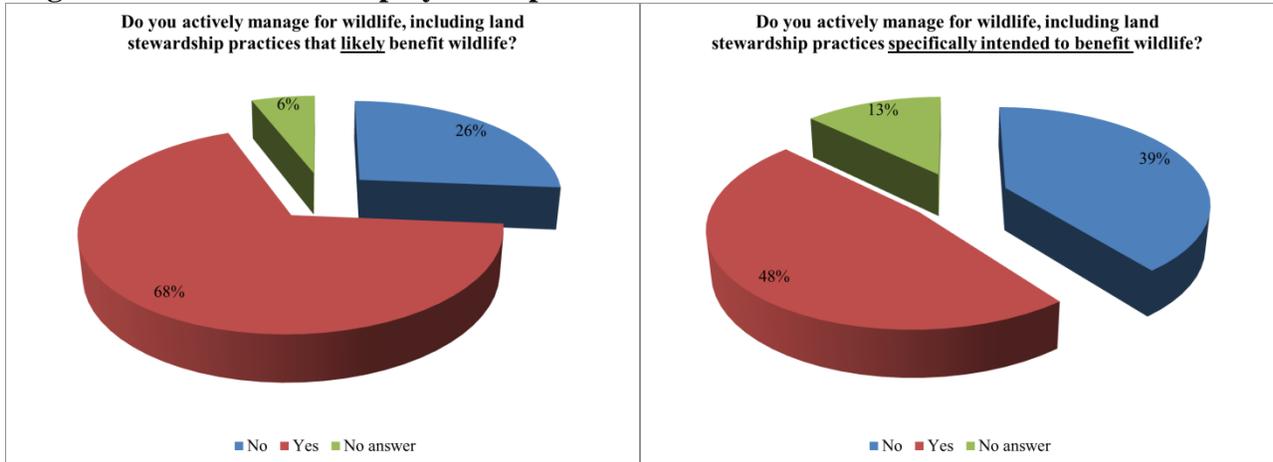


Figure 3: Land stewardship by respondents from the northern focus area

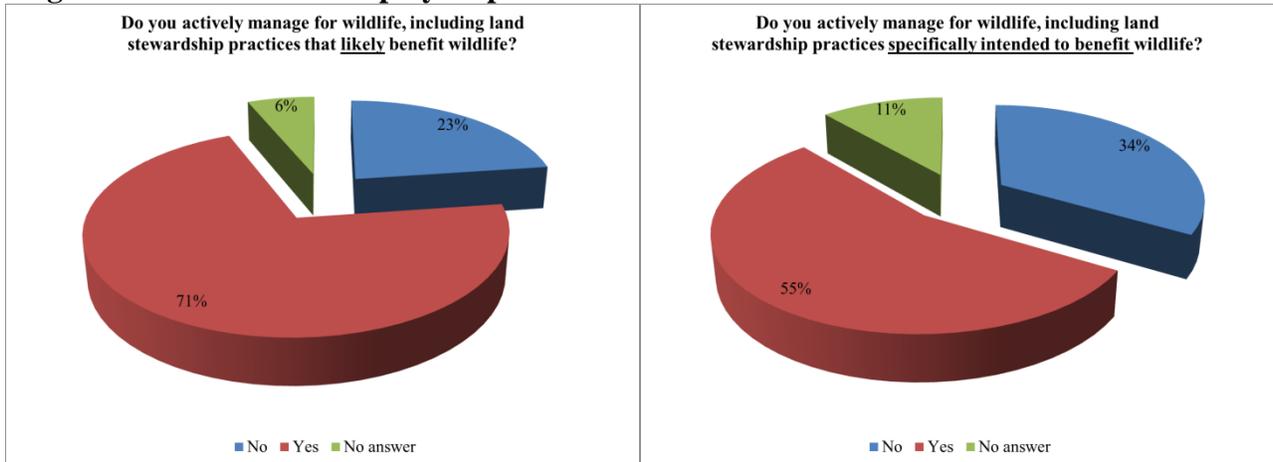


Figure 4: Land stewardship by respondents from the central focus area

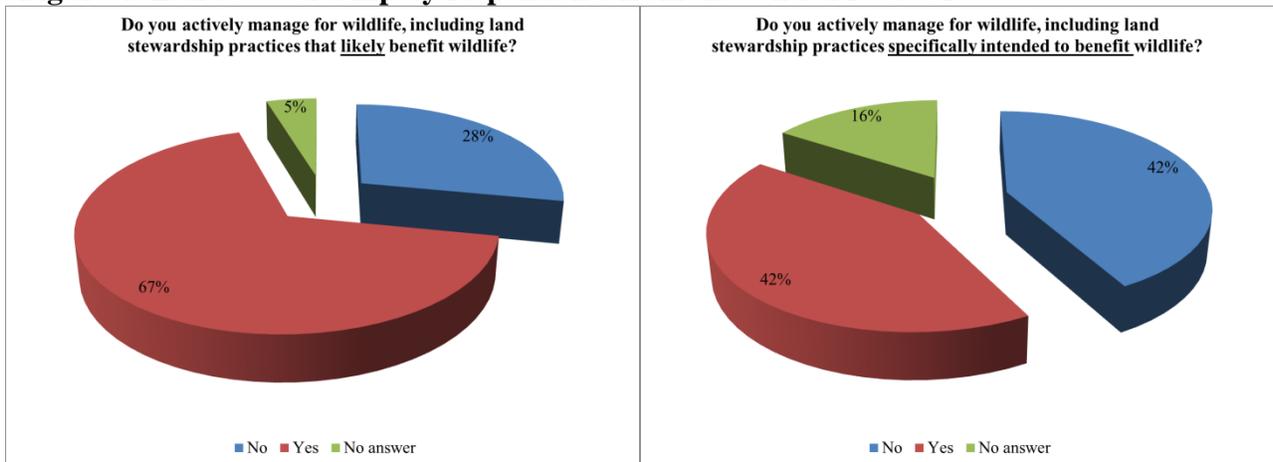
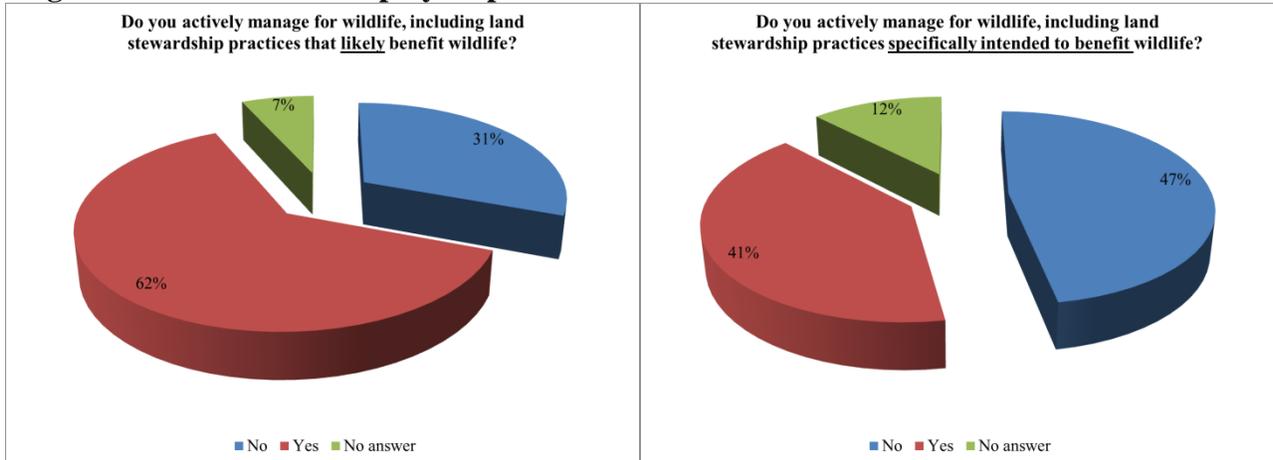


Figure 5: Land stewardship by respondents from the southern focus area



A total of 568 respondents identified specific land stewardship practices in which they engage (93.4% response rate). The most common land stewardship practices are actively managing or protecting areas of native habitat (50.7% of respondents), controlling exotic plants (35.9%), understory/brush management (32.7%), and prescribed fire (32.2%) (Tables 4 and 5).

Table 4: Number and percent of respondents engaging in specific stewardship practices

	Number	Percent
Prescribed fire	196	32.2
Exotics control	218	35.9
Plant native grasses and plant species	167	27.5
Restore habitat for threatened or endangered species	100	16.4
Actively manage/protect areas of native habitat	308	50.7
Livestock production:		
Prescribed/rotational grazing	185	30.4
Roller chopping/brush management	115	18.9
Exclude livestock from streams, wetlands or natural waterbodies	84	13.8
Silviculture (forestry):		
Thinning	160	26.3
Longer rotation (saw and pole production)	112	18.4
Understory/brush management	199	32.7
Row crops/sod production:		
Cover crops	75	12.3
Field borders	39	6.4
Water conservation	70	11.5
Wildlife plantings in pivot corners	73	12.0
Other stewardship activities	62	10.2
No stewardship activities	52	8.6
Not specified	40	6.6

Table 5: Number and percent of respondents engaging in specific stewardship practices by focus area

	Northern Focus Area		Central Focus Area		Southern Focus Area	
	#	%	#	%	#	%
Prescribed fire	104	38.2	40	23.4	52	31.9
Exotics control	73	26.8	60	35.1	83	50.9
Plant native grasses and plant species	90	33.1	45	26.3	32	19.6
Restore habitat for threatened/endangered species	53	19.5	28	16.4	18	11.0
Actively manage/protect areas of native habitat	149	54.8	88	51.5	70	42.9
Livestock production:						
Prescribed/rotational grazing	43	15.8	56	32.7	84	51.5
Roller chopping/brush management	30	11.0	27	15.8	57	35.0
Exclude livestock from streams, wetlands or natural waterbodies	40	14.7	21	12.3	23	14.1
Silviculture:						
Thinning	100	36.8	38	22.2	21	12.9
Longer rotation (saw and pole production)	75	27.6	27	15.8	10	6.1
Understory/brush management	107	39.3	47	27.5	43	26.4
Row crops/sod production:						
Cover crops	41	15.1	19	11.1	14	8.6
Field borders	16	5.9	14	8.2	8	4.9
Water conservation	30	11.0	19	11.1	20	12.3
Wildlife plantings in pivot corners	38	14.0	14	8.2	20	12.3
Other stewardship activities	22	8.1	24	14.0	15	9.2
No stewardship activities	23	8.5	13	7.6	16	9.8
Not specified	13	4.8	9	5.3	18	11.0

Note: Three most common land stewardship practices highlighted in blue.

Respondents were asked about activities performed that benefit native wildlife. The provision of wildlife feeders (average of 5.1 feeders per property) and wildlife food plots (average of 24.4 acres per property) were the most common actions taken by survey respondents over the last 5 years (Tables 6 and 7).

Table 6: Number and percent of respondents performing specific conservation actions on their land in the past 5 years

	All Respondents		Northern Focus Area		Central Focus Area		Southern Focus Area	
	#	%	#	%	#	%	#	%
Plant wildlife food plots	272	44.7	156	57.4	56	32.7	59	36.2
Plant native trees	153	25.2	79	29.0	41	24.0	32	19.6
Plant native groundcover	65	10.7	38	14.0	15	8.8	12	7.4
Maintain nest boxes or birdhouses	226	37.2	120	44.1	70	40.9	35	21.5
Maintain wildlife feeders	277	45.6	130	47.8	60	35.1	86	52.8
Maintain bird feeders	229	37.7	127	46.7	62	36.3	38	23.3

Table 7: Average amount of conservation undertaken by respondents in the past 5 years

	All Respondents		Northern Focus Area		Central Focus Area		Southern Focus Area	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median
	Plant wildlife food plots (acres)	24.4	7.0	22.0	5.0	22.0	5.0	33.0
Plant native trees (acres)	45.2	15.0	43.6	20.0	68.9	10.0	19.5	10.0
Plant native groundcover (acres)	24.2	4.5	8.6	3.0	14.4	5.0	86.0	8.9
Maintain nest boxes or birdhouses	8.4	5.0	9.1	5.0	7.7	5.0	4.8	3.0
Maintain wildlife feeders	5.1	3.0	5.8	3.0	3.8	2.5	4.7	3.0
Maintain bird feeders	4.5	2.0	4.9	3.0	4.1	2.0	3.2	2.0

3. Wildlife Populations

Respondents were asked about the population trends of several wildlife species on their properties (Figures 6 and 7). (Note that the n values below each column indicate the number of respondents who reported population levels for each of the species.) In total, 44.4% of respondents stated that coyote populations had increased on their properties; and 36.8% of respondents stated that turkey populations had increased on their properties. A quarter of respondents (25.3%) stated that quail populations had decreased on their properties. Respondents were also given the option of indicating “N/A” (not applicable) for species that are not found on their land. Based on these responses, 51.8% of respondents indicated that black bears do not occur on their property. In total, 44.4% of respondents stated that alligators do not occur on their property.

Respondents were asked which wildlife populations they would like to increase (or decrease) on their land. The majority of respondents wanted game species to increase on their land. A total of 52.0% of respondents wanted quail and turkey populations to increase (Table 8). A total of 42.8% of respondents wanted deer populations to increase. Over half of respondents (55.4%) wanted coyote populations on their land to decrease, and 31.9% of respondents wanted feral hog populations on their land to decrease (Table 9).

Respondents were asked about the benefits they receive from wildlife on their property. Family wildlife watching and helping to maintain healthy land were the largest benefits identified by respondents (median response of ‘moderate benefit’), followed by family hunting (median response of ‘little benefit’) (Figure 8 and Table 10). Other benefits included in the survey scored low in terms of benefits provided (median response of ‘no benefit’).

When asked about nuisance wildlife species, respondents identified coyotes and feral hogs as the most serious nuisance species on their properties (Figure 9). Interestingly, the gopher tortoise and the Florida panther (both of which are imperiled species) were seldom identified as nuisance species. In total, 1.6% of respondents identified the gopher tortoise as a serious or extreme problem, and 0.2% of respondents considered the Florida panther a serious or extreme problem. Furthermore, only 6.4% of respondents identified the Florida black bear as a serious or extreme problem. ‘Other’ problem wildlife included raccoons, armadillos, possums, foxes, and humans.

Figure 6: In the last 5 years, have the populations of the wildlife listed below decreased, stayed the same, or increased on your property?

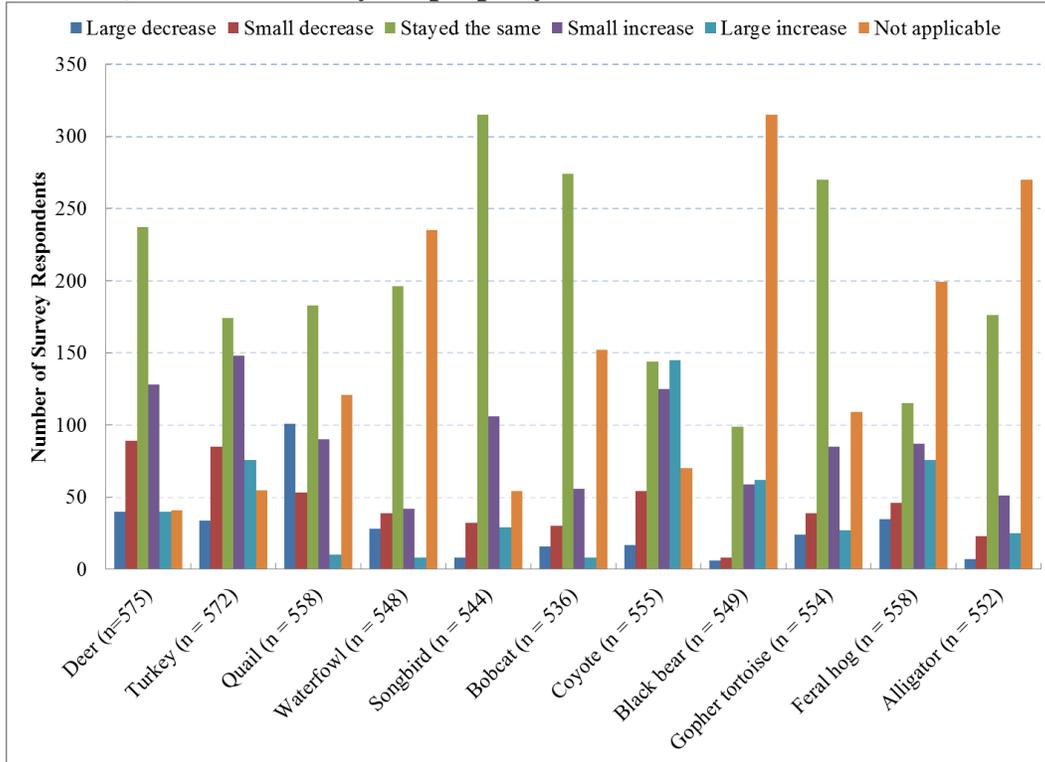
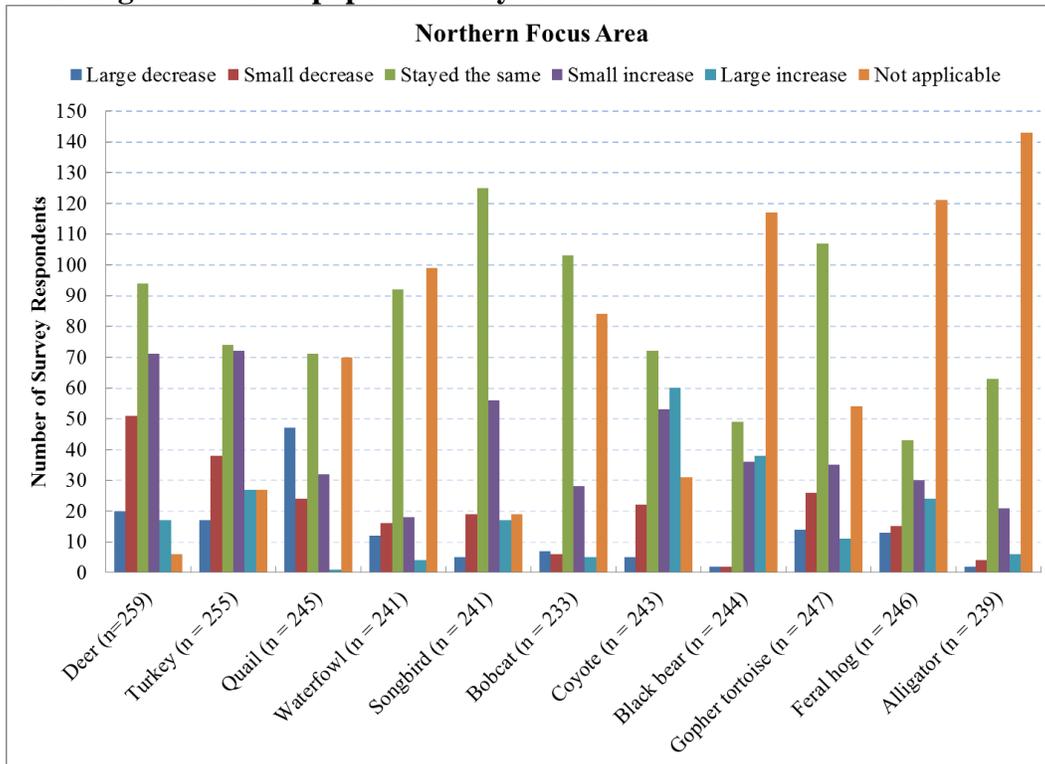


Figure 7: Changes in wildlife populations by focus area



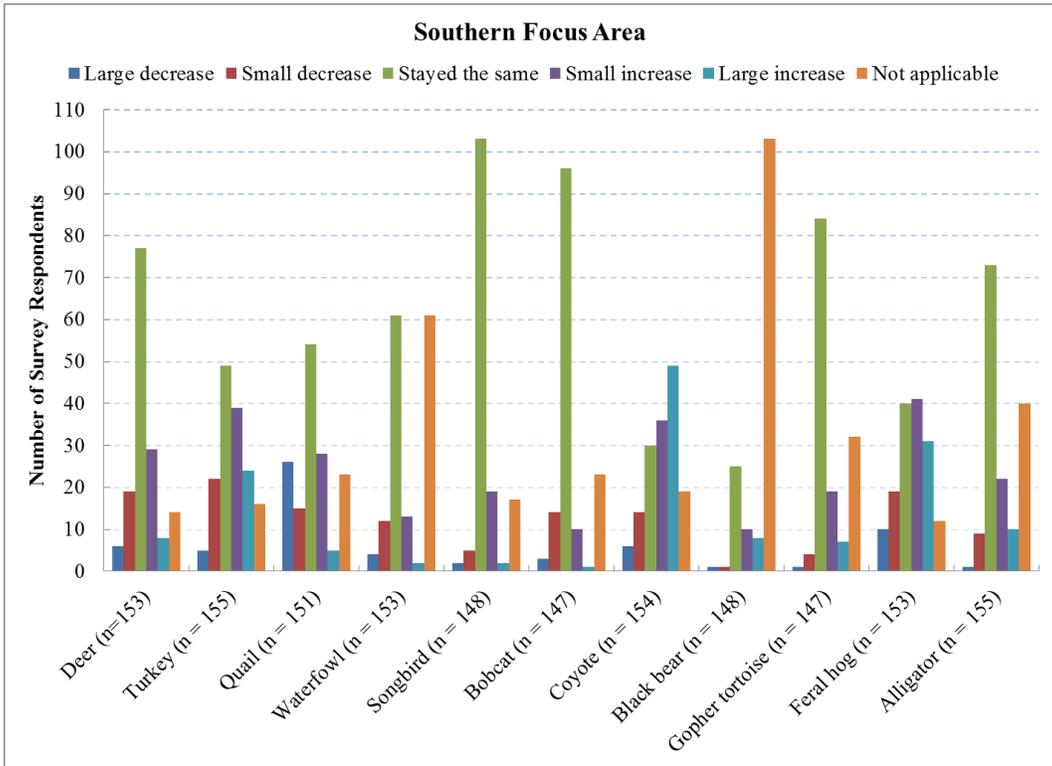
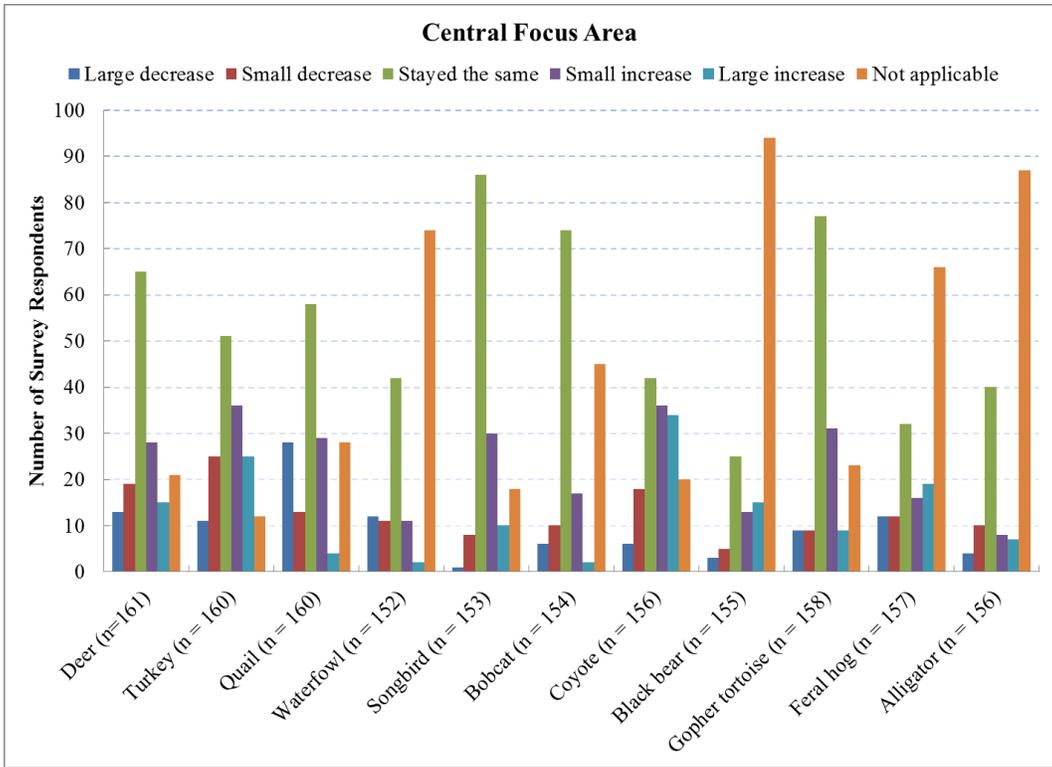


Table 8: Which (if any) of the wildlife populations would you like to increase?

	All respondents		Northern focus area		Central focus area		Southern focus area	
	#	%	#	%	#	%	#	%
Deer	260	42.8	122	44.9	67	39.2	69	42.3
Turkey	316	52.0	157	57.7	85	49.7	73	44.8
Quail	316	52.0	141	51.8	89	52.0	86	52.8
Waterfowl	87	14.3	40	14.7	20	11.7	26	16.0
Songbird	100	16.4	54	19.9	24	14.0	22	13.5
Bobcat	20	3.3	8	2.9	7	4.1	5	3.1
Coyote	7	1.2	4	1.5	1	0.6	2	1.2
Black bear	24	3.9	13	4.8	4	2.3	7	4.3
Gopher tortoise	69	11.3	49	18.0	12	7.0	8	4.9
Feral hog	16	2.6	7	2.6	3	1.8	6	3.7
Alligator	10	1.6	5	1.8	2	1.2	3	1.8
Other	5	0.8	2	0.7	2	1.2	0	0.0

Table 9: Which (if any) of the wildlife populations would you like to decrease?

	All respondents		Northern focus area		Central focus area		Southern focus area	
	#	%	#	%	#	%	#	%
Deer	26	4.3	12	4.4	9	5.3	5	3.1
Turkey	2	0.3	0	0.0	2	1.2	0	0.0
Quail	1	0.2	1	0.4	0	0.0	0	0.0
Waterfowl	1	0.2	0	0.0	0	0.0	1	0.6
Songbird	2	0.3	1	0.4	0	0.0	1	0.6
Bobcat	42	6.9	24	8.8	7	4.1	11	6.7
Coyote	337	55.4	154	56.6	87	50.9	94	57.7
Black bear	74	12.2	51	18.8	17	9.9	6	3.7
Gopher tortoise	12	2.0	4	1.5	4	2.3	4	2.5
Feral hog	194	31.9	71	26.1	50	29.2	71	43.6
Alligator	41	6.7	17	6.3	6	3.5	17	10.4
Other	18	3.0	10	3.7	4	2.3	4	2.5

A total of 591 respondents indicated whether they had attempted to control nuisance wildlife on their property (response rate = 97.2%). Of these respondents, 285 (46.9%) had tried to control nuisance wildlife (Table 12). The FWC was the organization most frequently contacted for help (58 people). UF Extension and commercial nuisance wildlife operators were also used to control nuisance species (15 and 18 people, respectively). And 42 respondents contacted another organization or individual to help them control nuisance wildlife. The median response to the question “How successful were your attempts to control problem wildlife?” was slightly successful (Figure 10). Only 8.4% of respondents who had attempted to control nuisance wildlife stated that their efforts had been highly successful.

Figure 8: What types and level of benefit do you get from wildlife on your land?

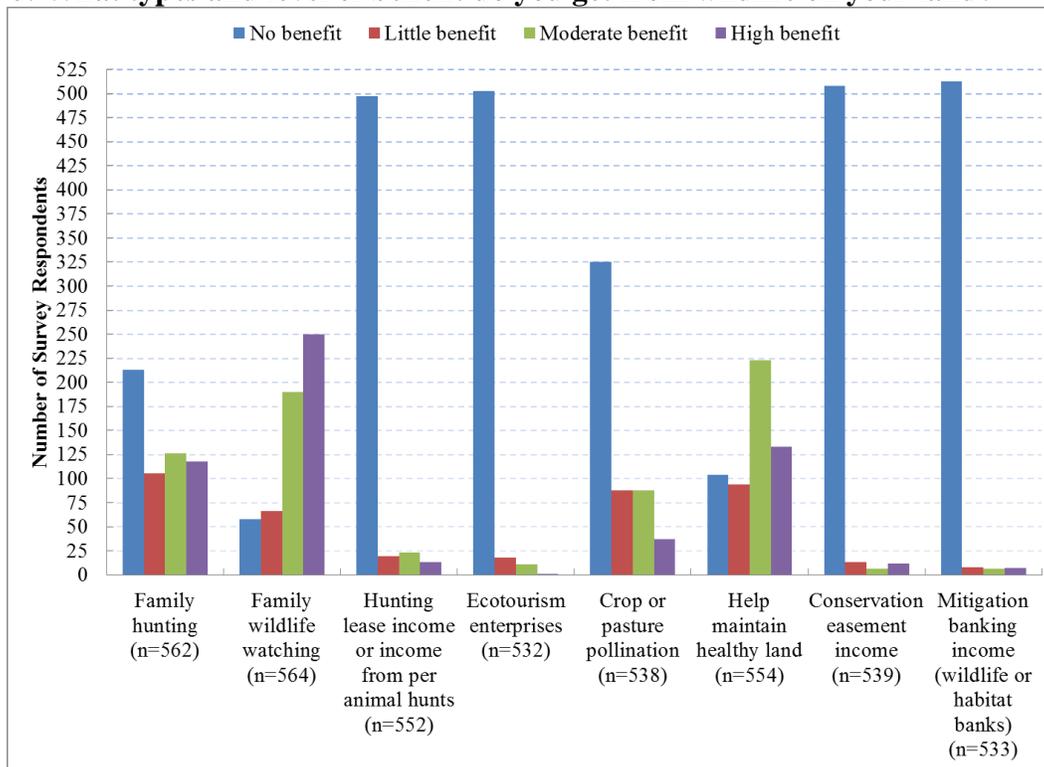


Table 10: Benefits of wildlife by focus area

	Northern focus area		Central focus area		Southern focus area	
	Mean	Median	Mean	Median	Mean	Median
Family hunting	2.4	2	1.9	1	2.3	2
Family wildlife watching	3.2	3	3.1	3	3.0	3
Hunting lease income or income from per animal hunts	1.2	1	1.2	1	1.2	1
Ecotourism enterprises	1.1	1	1.1	1	1.1	1
Crop or pasture pollination	1.7	1	1.8	1	1.6	1
Help maintain healthy land	2.8	3	2.7	3	2.6	3
Conservation easement income	1.1	1	1.1	1	1.2	1
Mitigation banking income (wildlife or habitat banks)	1.1	1	1.1	1	1.1	1

Note: 'No benefit' = 1; 'little benefit' = 2; 'moderate benefit' = 3; 'high benefit' = 4

Note: Two most highly ranked benefits highlighted in blue.

Figure 9: In the last 5 years, have the following wildlife caused problems on your property?

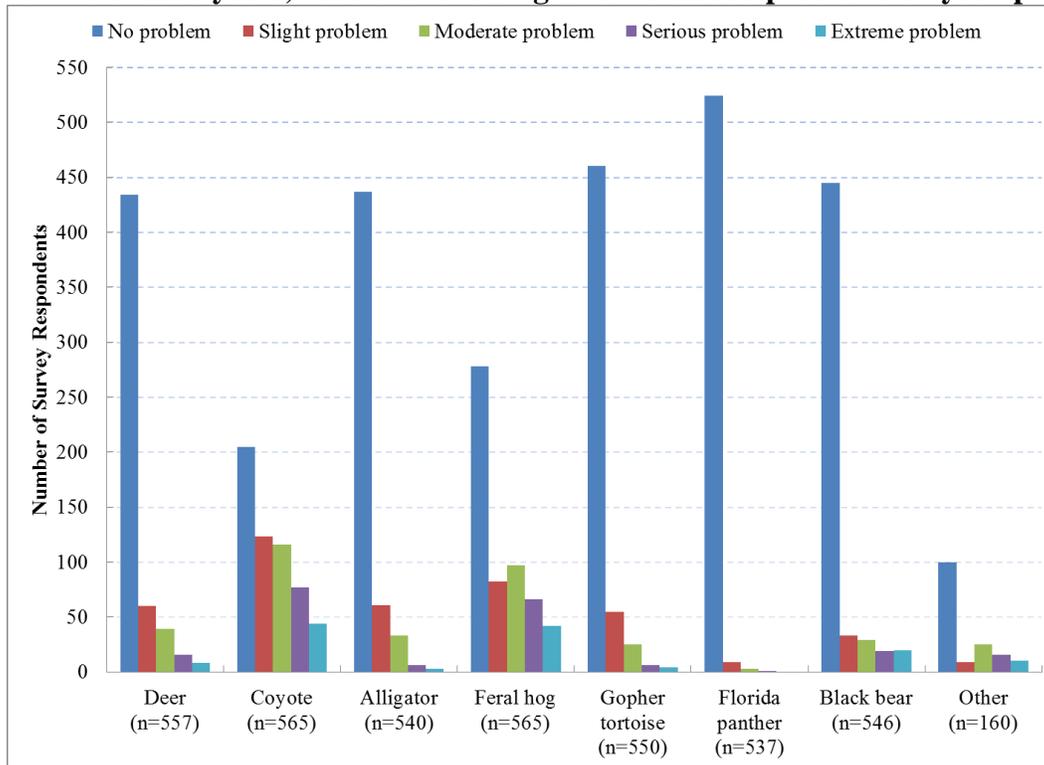


Table 11: Nuisance wildlife by focus area

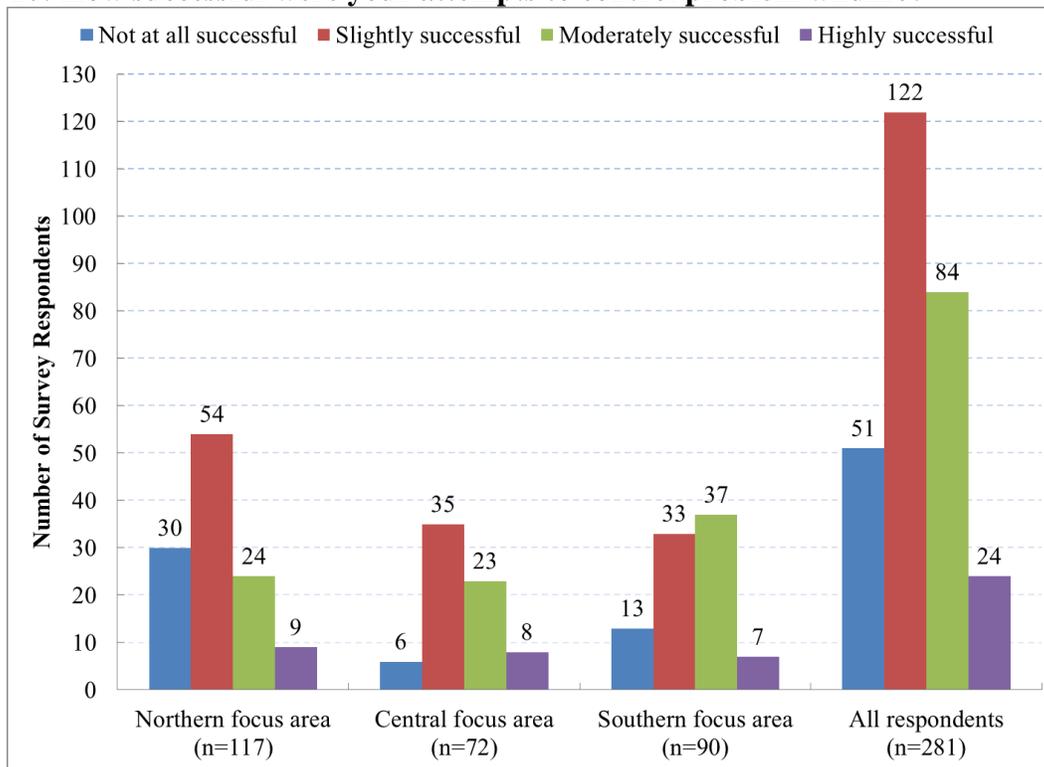
	Northern focus area		Central focus area		Southern focus area	
	Mean	Median	Mean	Median	Mean	Median
Deer	1.4	1	1.3	1	1.4	1
Coyote	2.3	2	2.2	2	2.4	2
Alligator	1.2	1	1.2	1	1.5	1
Feral hog	1.7	1	2.0	2	2.9	3
Gopher tortoise	1.2	1	1.4	1	1.3	1
Florida panther	1.0	1	1.0	1	1.1	1
Black bear	1.6	1	1.3	1	1.2	1
Other	2.1	1	1.6	1	1.9	1

'No problem' = 1; 'slight problem' = 2; 'moderate problem' = 3; 'serious problem' = 4; 'extreme problem' = 5

Table 12: Who did you contact to assist you with controlling problem wildlife?

	Northern focus area		Central focus area		Southern focus area	
	#	%	#	%	#	%
Commercial nuisance wildlife operator	6	5.1	4	5.4	7	7.6
Florida Fish and Wildlife Conservation Commission (FWC)	24	20.5	19	25.7	13	14.1
University of Florida county extension agents	8	6.8	4	5.4	2	2.2
Other organization/individual	20	17.1	11	14.9	11	12.0
I didn't contact anyone to assist me in controlling problem wildlife	57	48.7	32	43.2	55	59.8
No answer	14	12.0	10	13.5	8	8.7

Figure 10: How successful were your attempts to control problem wildlife?



4. Habitat and Land Management Planning

A total of 588 survey respondents answered the question “Before starting this survey, were you aware that government agencies provide land management plans to landowners?” (96.7% response rate). Of these individuals, 365 (60.0%) answered yes to this question. However, 223 respondents (36.7%) were unaware that government agencies assist private landowners with creating land management plans (Figure 11).

A total of 519 respondents identified specific topics that would be most useful to them in land management plans (85.4% response rate). Habitat management/restoration (241 respondents) and game management (228 respondents) were identified most often, followed by timber production (216 respondents), agriculture/livestock production (214 respondents), and fish pond management (213 respondents) (Tables 13 and 14).

In total, 579 respondents answered the question ‘how interested are you in learning about land management plans?’ (95.2% response rate). The median response was ‘moderately interested’ (Figure 12). The average response was 2.6, where a response of ‘slightly interested’ was coded as 2 and a response of ‘moderately interested’ was coded as 3.

In total, 553 respondents answered the question regarding their interest in enrolling in three different types of land management plans (91.0% response rate). Figure 13 shows the distribution of responses to this question, including level of interest expressed by respondents in specific types of land management plans. The median level of interest in a short, minimal plan only used for ‘Greenbelt’ tax certification was ‘slight interest’ (mean response of 2.2 where

‘slight interest’ was coded as 2 and ‘moderate interest’ was coded as 3). The median level of interest in a detailed plan focusing on one land use or activity was ‘slight interest’ (mean response of 1.9 where ‘no interest’ was coded as 1). And the average level of interest in a detailed plan focusing on all land uses or activities was 2.4 – the most popular option amongst the three types of land management plan (median response of ‘slight interest’).

Figure 11: Before starting this survey, were you aware that government agencies provide land management plans to landowners?

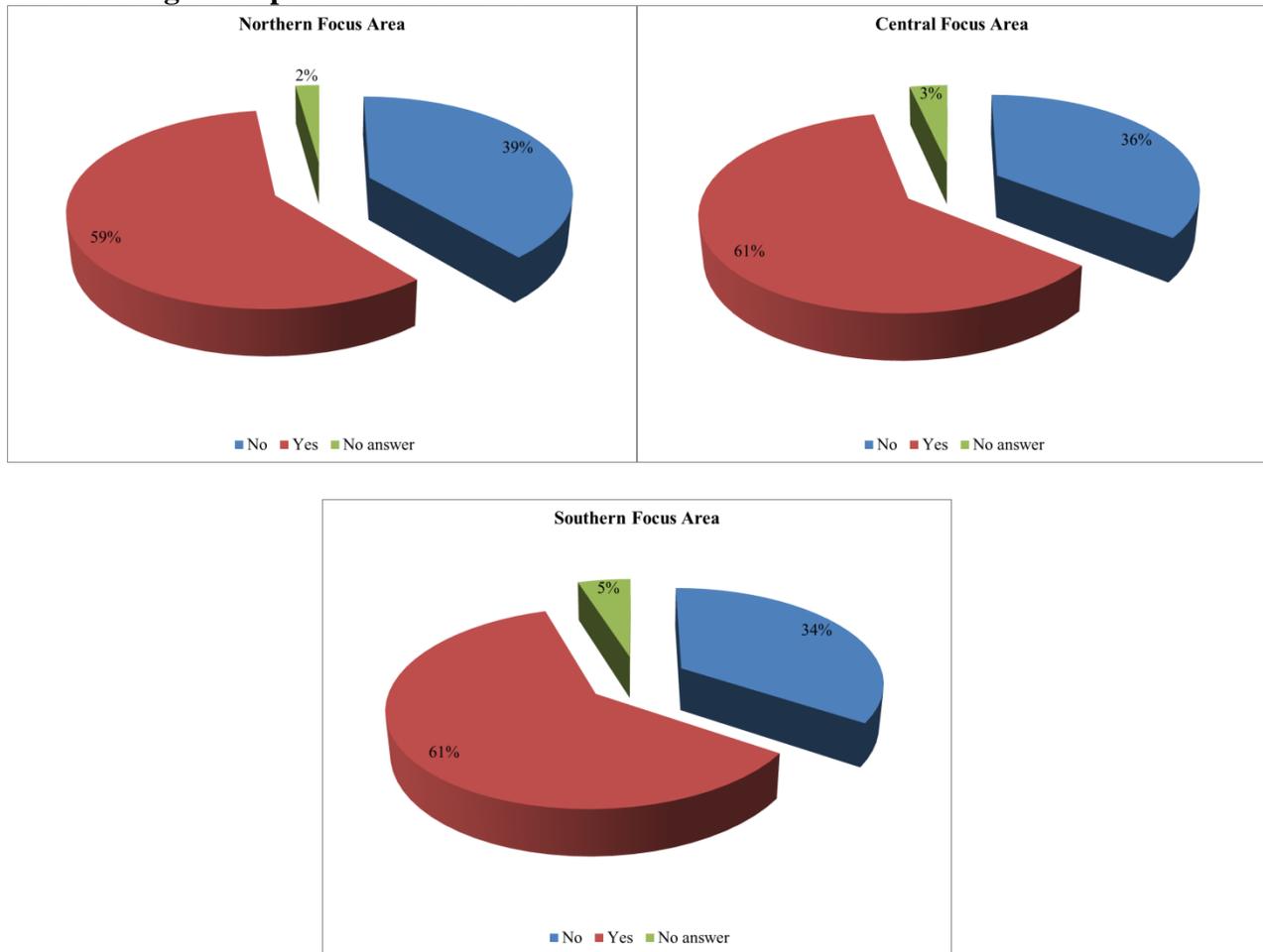


Table 13: What topics would be most useful to you in land management plans?

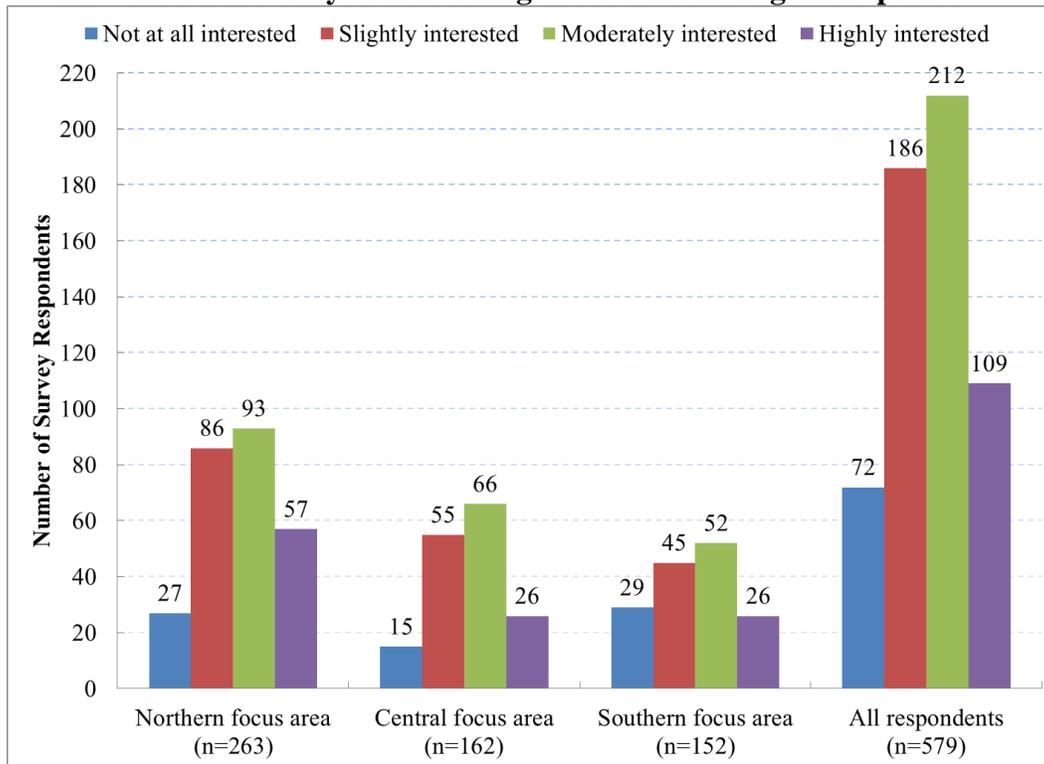
	Number	Percent
Timber production	216	35.5
Agriculture/livestock production	214	35.2
Water management	143	23.5
Habitat management/restoration	241	39.6
Non-game wildlife management	134	22.0
Game management	228	37.5
Fish pond management	213	35.0
Threatened/endangered species management	130	21.4
Integrating wildlife management with production land uses	146	24.0
Other	18	3.0

Table 14: Topics that would be most useful in land management plans by focus area

	Northern focus area		Central focus area		Southern focus area	
	#	%	#	%	#	%
	Timber production	135	49.6	53	31.0	28
Agriculture/livestock production	62	22.8	68	39.8	83	50.9
Water management	67	24.6	30	17.5	46	28.2
Habitat management/restoration	120	44.1	68	39.8	52	31.9
Non-game wildlife management	71	26.1	32	18.7	30	18.4
Game management	117	43.0	50	29.2	61	37.4
Fish pond management	99	36.4	57	33.3	57	35.0
Threatened/endangered species management	64	23.5	37	21.6	28	17.2
Integrating wildlife management with production land uses	69	25.4	38	22.2	38	23.3
Other	7	2.6	6	3.5	4	2.5

Note: Three most frequently selected topics highlighted in blue.

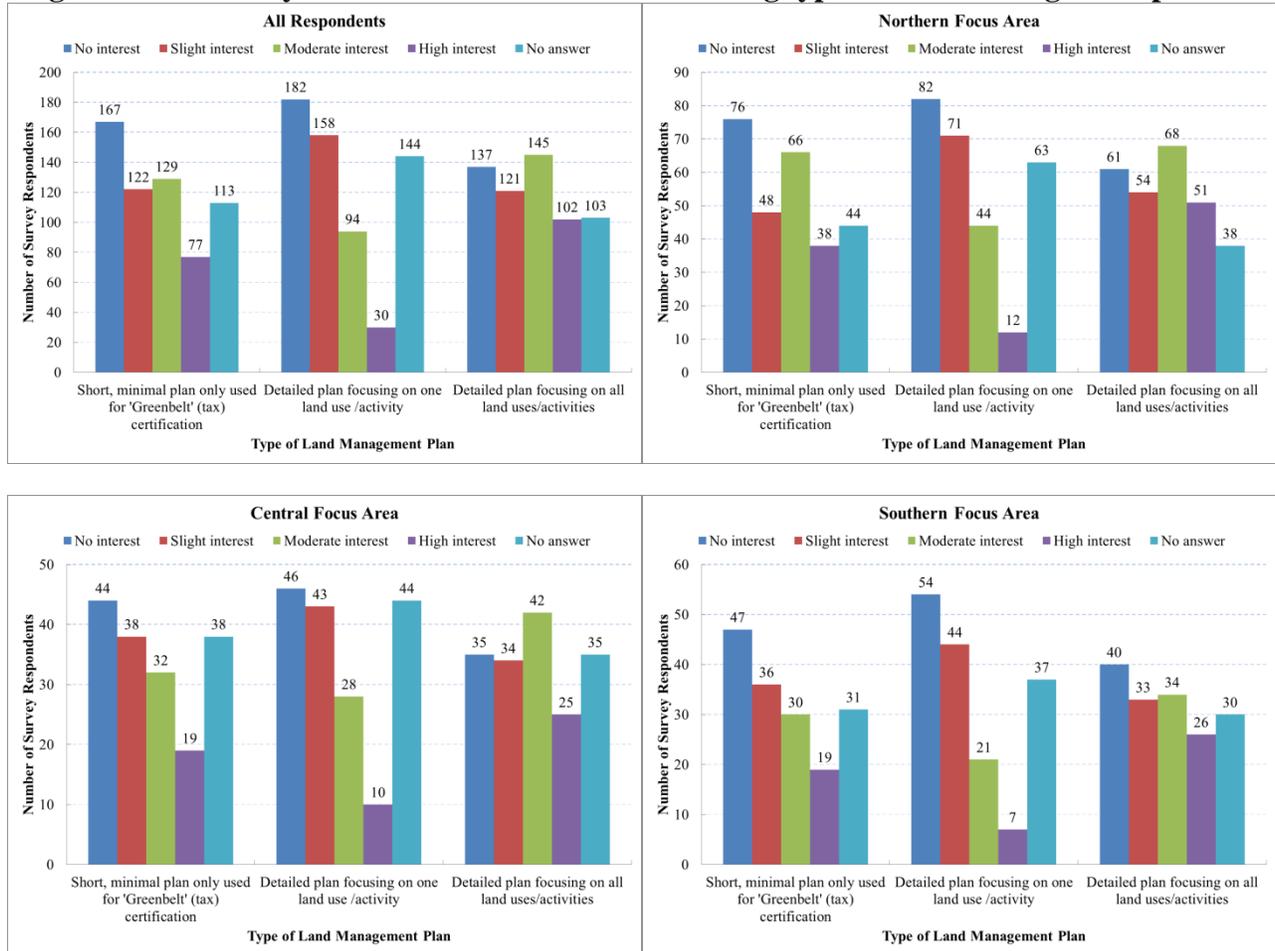
Figure 12: How interested are you in learning about land management plans?



The majority of respondents (428 respondents, 70.4% of all respondents) indicated that they do not have a written land management plan for their property. Of the 359 respondents who were aware that government agencies provide landowners with land management plans, 149 (41.5%) had a written land management plan. These land management plans were prepared by the Florida Forest Service (58 respondents), the United States Department of Agriculture (USDA) (50 respondents), the landowner or a family member (49 respondents), a private contractor or consultant (37 respondents), the FWC (28 respondents), the landowner's staff (11 respondents) or another organization (7 respondents). Based on these responses, 103 respondents (63.6% of

landowners who (1) had a written land management plan, and (2) were aware that the government assists in preparation of these plans) had a plan that was prepared by a government agency. A total of 24 respondents had written plans that had been prepared by more than one government agency.

Figure 13: What is your level of interest in the following types of land management plan?



Of those respondents who stated that they were unaware that the government assists landowners with the preparation of land management plans, only 13 individuals had a written land management plan – prepared by the landowner (7 respondents), a private contractor (4 respondents), staff (2 respondents) or another organization (1 respondent).

Across respondents, the largest share of written management plans were prepared by the Florida Forest Service (58 respondents, 9.5%), followed by the USDA (50 respondents, 8.2%), the landowner (49 respondents, 8.1%), a private contractor (37 respondents, 6.1%), the FWC (28 respondents, 4.6%), the landowner’s staff (11 respondents, 1.8%) and another organization (7 respondents, 1.2%) (Table 15). In total, 119 management plans (76.8% of all written plans) included wildlife and habitat management.

Table 15: Who prepared the written plan(s)?

	Northern focus area		Central focus area		Southern focus area	
	#	%	#	%	#	%
Myself or my family	25	32.5	11	22.7	13	31.7
USDA NRCS or Farm Service Agency	16	20.8	15	34.1	19	46.3
Florida Fish and Wildlife Conservation Commission (FWC)	15	19.5	8	18.2	5	12.2
Florida division of Forestry/Forest Service	27	35.1	22	47.7	9	22.0
Private contractor/consultant	25	32.5	8	18.2	4	9.8
My staff	2	2.6	2	4.5	7	17.1
Other	4	5.2	1	2.3	2	4.9

On average, respondents who had a written management plan considered this plan to be ‘moderately useful’ for land management activities (Figure 14). Only 3 respondents considered the plan to be not at all useful. A total of 80 respondents (49.4% of all respondents with a written land management plan) indicated that their most recent management plan was prepared between 2011 and 2015 (i.e. in the last 5 years) (Table 16).

Figure 14: How useful is the plan(s) for land management activities?

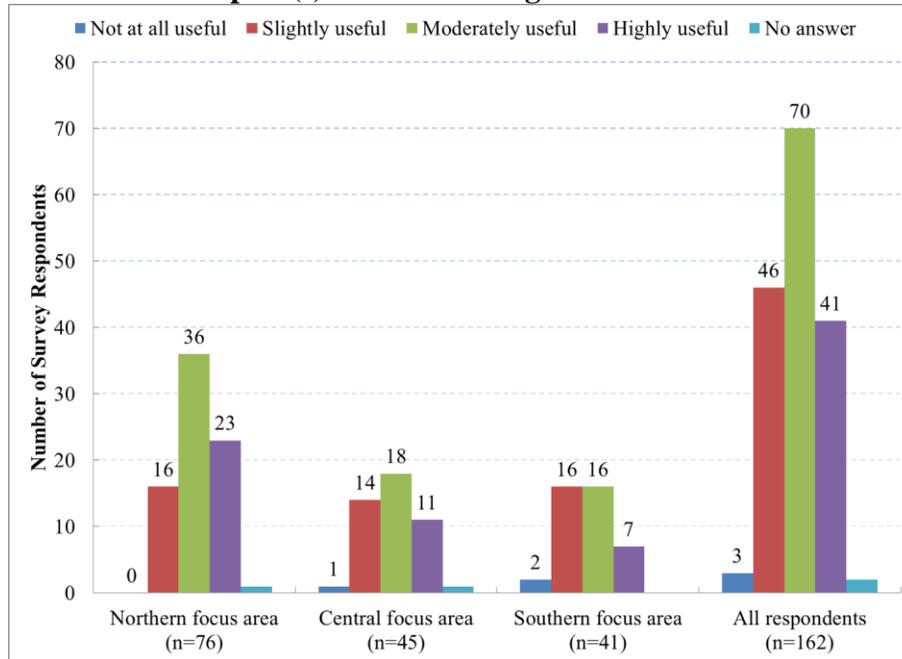


Table 16: Year in which the respondent’s most recent management plan was prepared

Year	Number of respondents	Percent of respondents
2011 – 2015	80	49.4
2006 – 2010	36	22.2
2000 – 2005	22	13.6
Prior to 2000	11	6.8
No answer	13	8.0

5. Financial and Technical Assistance

In total, 586 survey recipients answered the question “Before starting this survey, were you aware government agencies provide financial assistance for wildlife habitat improvement?” (96.4% response rate). A total of 284 respondents (46.7%) indicated that they were aware that government agencies provide financial assistance for wildlife habitat improvement (Figure 15). Although the majority of respondents from the northern and central focus areas were not aware that government agencies provide financial assistance (53%), the majority of respondents from the southern focus area were aware of this fact (55%).

Respondents were asked to assess their level of interest in applying for financial assistance to improve wildlife habitat on their lands. Figure 16 shows the level of interest in applying for financial assistance from specific agencies. The median level of interest in applying for financial assistance from the USDA, the FWC and the Florida Forest Service was ‘slight interest’.

A total of 592 survey recipients answered the question “In the last 5 years, have you participated in financial assistance programs that included wildlife habitat improvement?” (97.4% response rate). A total of 88 respondents (14.5%) indicated that they had participated in financial assistance programs that included wildlife habitat improvement. The providers of financial assistance to these respondents were: USDA NRCS or Farm Service Agency (56 respondents, 9.2% of all respondents); Florida Division of Forestry/Forest Service (37 respondents, 6.1%); the FWC (13 respondents, 2.1%); the Water Management District (6 respondents, 1.0%); and other agencies (4 respondents; less than 1%).

The median response to the question ‘how satisfied were you with the results of the wildlife habitat improvement activities you conducted with financial assistance provided’ was ‘moderately satisfied’. Less than 4% of the respondents who had used financial assistance to engage in wildlife habitat improvement activities were ‘not at all satisfied’ with the outcome. The average response to this question provided by respondents from the northern focus area was 3.12 (where a response of ‘moderately satisfied’ was coded as 3, and a response of ‘highly satisfied’ was coded as 4). The average response provided by respondents from the central focus area was 2.94 (where a response of ‘slightly satisfied’ was coded as 2). Finally, the average response provided by respondents from the southern focus area was 2.74, i.e. the lowest average level of satisfaction in wildlife habitat improvement was expressed by respondents from the southern focus area.

A total of 592 respondents answered the question, “Before starting this survey, were you aware that government agencies provide technical workshops on wildlife habitat improvement?” (97.4% response rate). Of these individuals, 306 respondents (50.3%) indicated that they were not aware that government agencies provide this service (Figure 17).

In total, 246 survey respondents (40.5% of all respondents) were not aware that government agencies provide either financial or technical assistance for wildlife habitat improvement on private lands. Only 228 survey respondents (37.5% of all respondents) were aware that government agencies provide both financial assistance and technical assistance for wildlife habitat improvement.

Figure 15: Before starting this survey, were you aware government agencies provide financial assistance for wildlife habitat improvement?

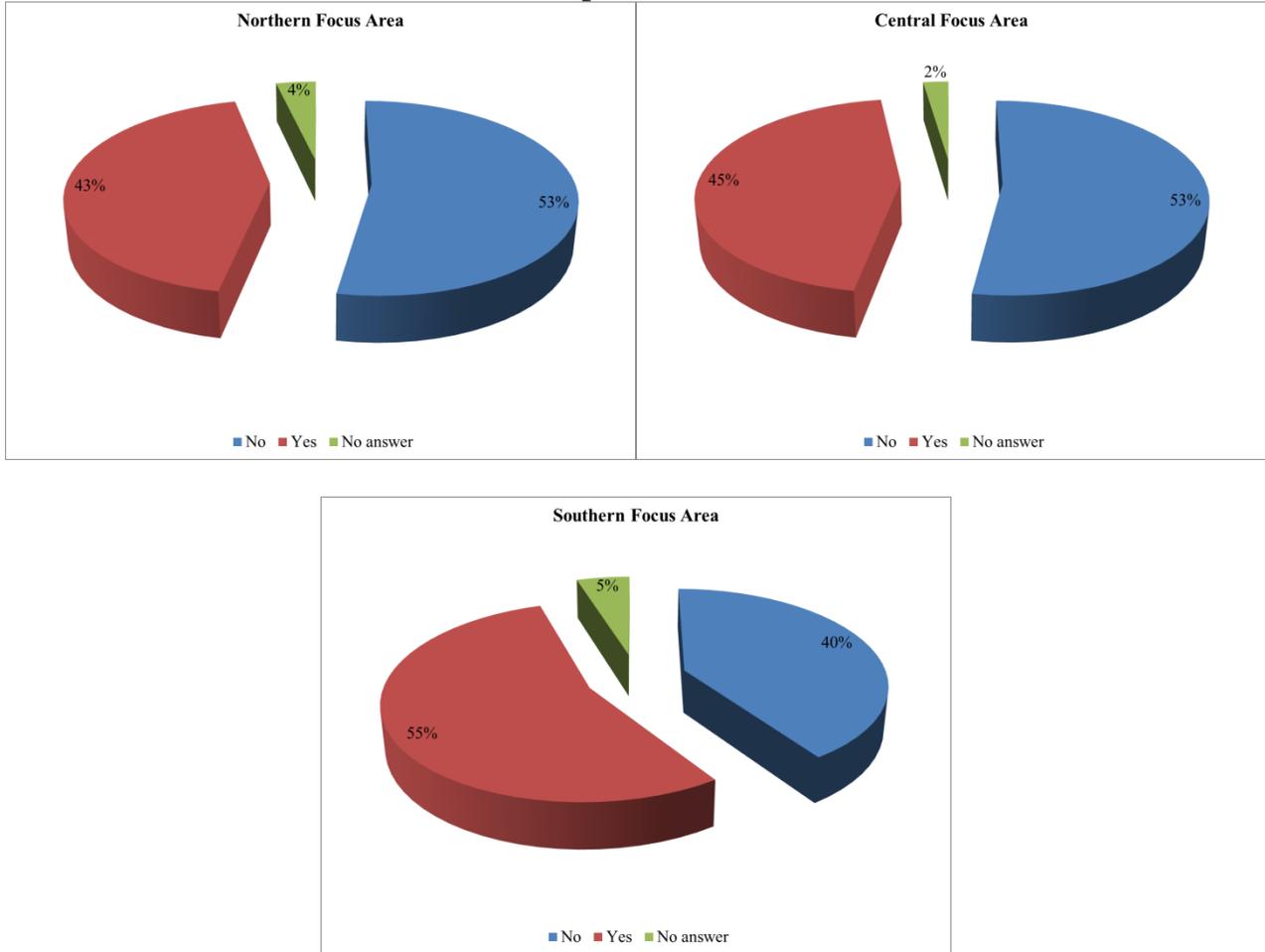
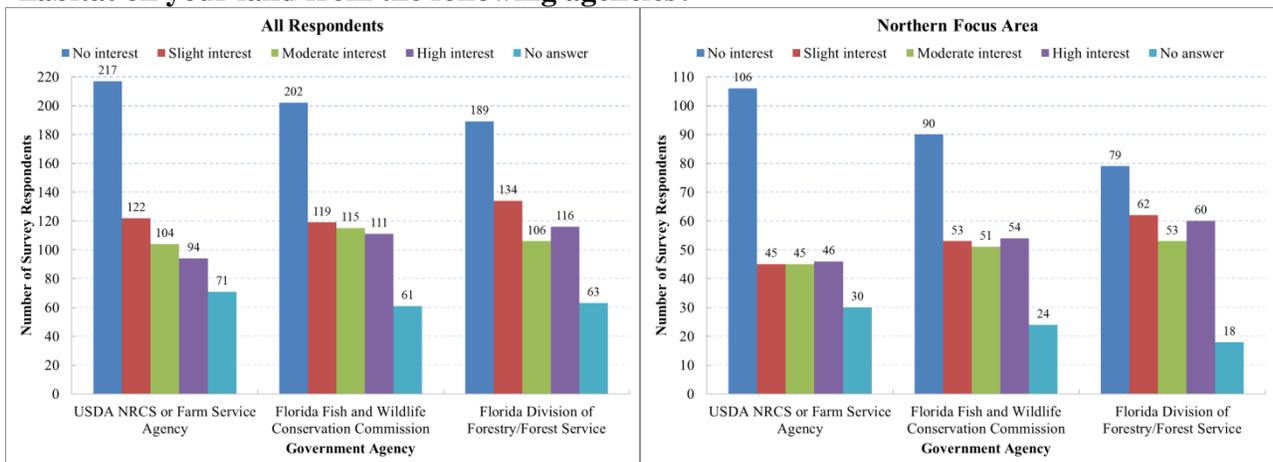
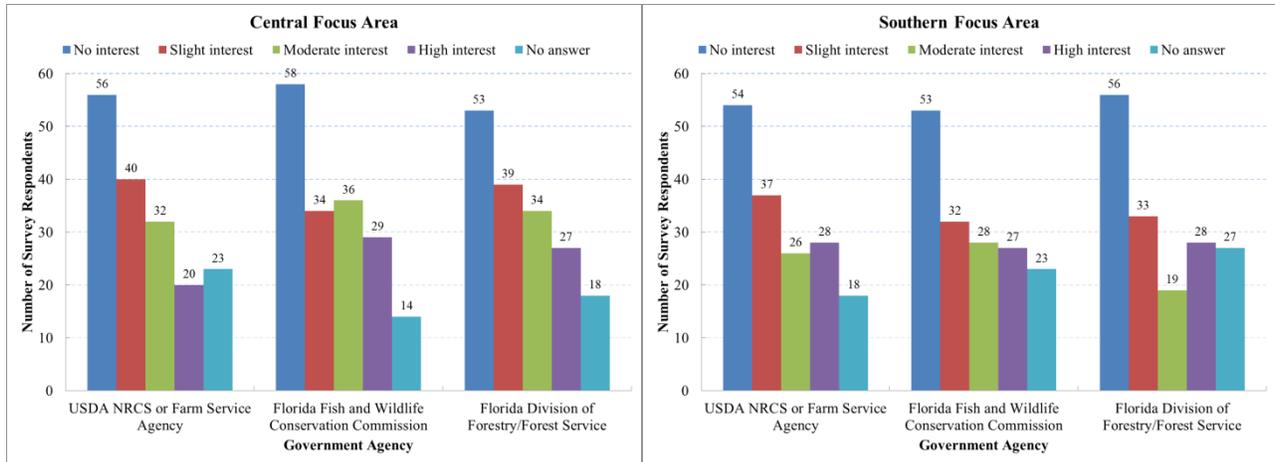


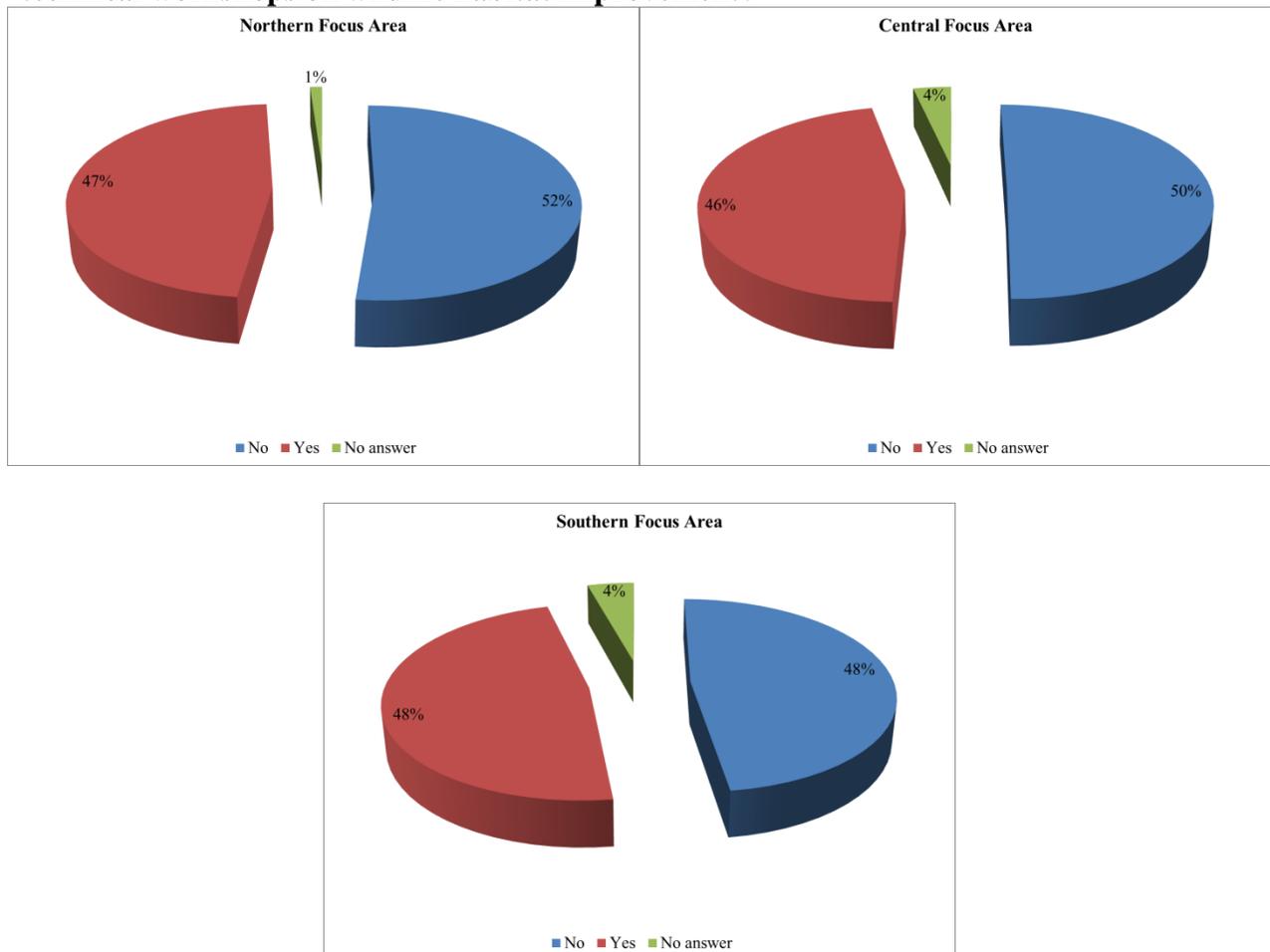
Figure 16: How interested are you in applying for financial assistance to improve wildlife habitat on your land from the following agencies?





When asked to indicate their level of interest in attending technical workshops on how to improve wildlife habitat on their land, the median response given by survey respondents was ‘slightly interested’ (mean response of 2.3 where a response of ‘slightly interested’ was coded as 2, and a response of ‘moderately interested’ was coded as 3) (Figure 18).

Figure 17: Before starting this survey, were you aware that government agencies provide technical workshops on wildlife habitat improvement?



The most common response to the question ‘which agencies would you prefer to run the technical workshops?’ were the FWC (122 survey respondents; 20.1% of all respondents) and the Florida Forest Service (73 respondents; 12.0%) (Table 17). A total of 442 respondents (response rate of 72.7%) indicated which topics they would like to be covered in a technical workshop. The most popular topic was integrating wildlife into land use (Table 18).

When asked how they would prefer to receive technical assistance, 520 respondents answered this question (85.5% response rate). Information brochures and magazine articles in industry journals (e.g. *Florida Forests*, *Florida Agriculture*, *Florida Cattlemen and Livestock Journal*) were the most preferred methods for obtaining technical assistance (Table 19). Less than 10 percent of respondents stated that they did not want to receive technical assistance.

Figure 18: How interested are you in attending technical workshops on how to improve wildlife habitat on your land?

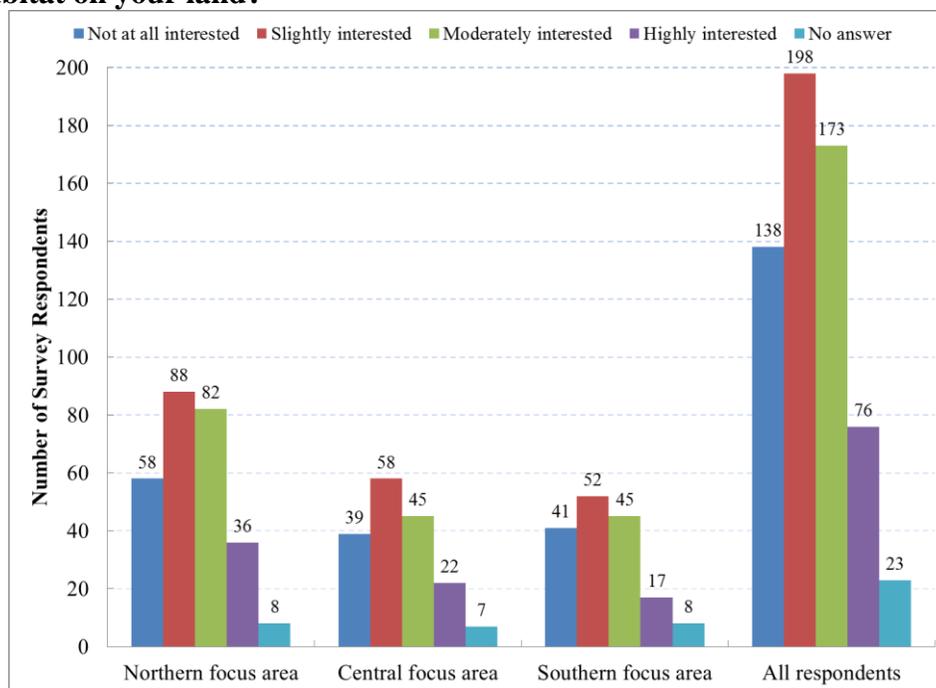


Table 17: Which agencies would you prefer to run the technical workshops?

	All respondents		Northern focus area		Central focus area		Southern focus area	
	#	%	#	%	#	%	#	%
Florida Fish and Wildlife Conservation Commission	122	20.1	61	22.4	29	17.0	31	19.0
Florida Forest Service	73	12.0	42	15.4	18	10.5	12	7.4
United States Department of Agriculture	39	6.4	16	5.9	10	5.8	13	8.0
University of Florida Institute of Food and Agricultural Sciences	32	5.3	16	5.9	11	6.4	4	2.5
Water Management District	6	1.0	5	1.8	0	0.0	1	0.6

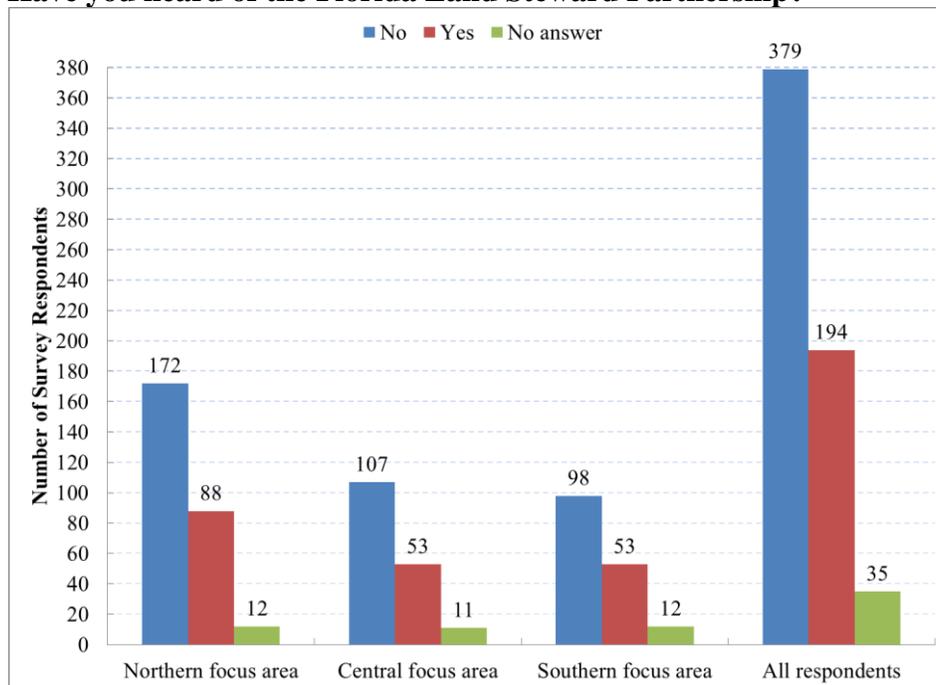
Table 18: Which topics would you like covered in a technical workshop?

	All respondents		Northern focus area		Central focus area		Southern focus area	
	#	%	#	%	#	%	#	%
Integrating wildlife into land use	302	49.7	145	53.3	83	48.5	73	44.8
Prescribed burning	222	36.5	119	43.8	58	33.9	45	27.6
Exotic vegetation control	231	38.0	98	36.0	63	36.8	69	42.3
Timber management options	223	36.7	134	49.3	60	35.1	28	17.2
Other	31	5.1	9	3.3	11	6.4	9	5.5

Table 19: How would you prefer to receive technical assistance?

	All respondents		Northern focus area		Central focus area		Southern focus area	
	#	%	#	%	#	%	#	%
Information brochures	237	39.0	111	40.8	63	36.8	63	38.7
Magazine articles (<i>Florida Forests, FloridAgriculture, Florida Cattlemen & Livestock Journal</i>)	216	35.5	103	37.9	56	32.7	56	34.4
Field days	184	30.3	91	33.5	44	25.7	48	29.4
Visits to your property	180	29.6	90	33.1	45	26.3	44	27.0
Websites	177	29.1	82	30.1	53	31.0	40	24.5
Information DVDs	139	22.9	75	27.6	31	18.1	31	19.0
Short courses (3 to 4 days)	98	16.1	50	18.4	22	12.9	25	15.3
Webinars	72	11.8	30	11.0	19	11.1	23	14.1
Telephone calls	24	3.9	10	3.7	5	2.9	9	5.5
Other	7	1.2	3	1.1	2	1.2	2	1.2
I don't want to receive technical assistance	56	9.2	22	8.1	15	8.8	19	11.7

Figure 19: Have you heard of the Florida Land Steward Partnership?



Respondents were asked whether they had heard of the Florida Land Stewardship Partnership (Figure 19). Of the 573 respondents who answered this question (94.2% response rate), 379 (62.3%) had not heard of this program. Those respondents who had heard of the program were asked whether it was an improvement over working with individual agencies or programs. Of the 148 respondents who answered this question, 93 (62.8%) stated that this program was an improvement; 29 (19.6%) stated that it was not an improvement over working with individual agencies; and 26 (17.6%) stated “it depends.”

6. Interactions with the FWC

Survey respondents were asked to indicate the number of times they had interacted with FWC biologists and FWC law enforcement in the past five years. A total of 591 respondents answered this question (97.2% response rate). The majority of respondents had not interacted with either FWC biologists or FWC law enforcement in the last 5 years (Figures 20 and 21). Those respondents who had interacted with the FWC were most likely to have interacted with biologists or law enforcement 5 or less times (i.e. once a year or less on average).

Figure 20: Approximately how many interactions have you had with FWC biologists in the past 5 years?

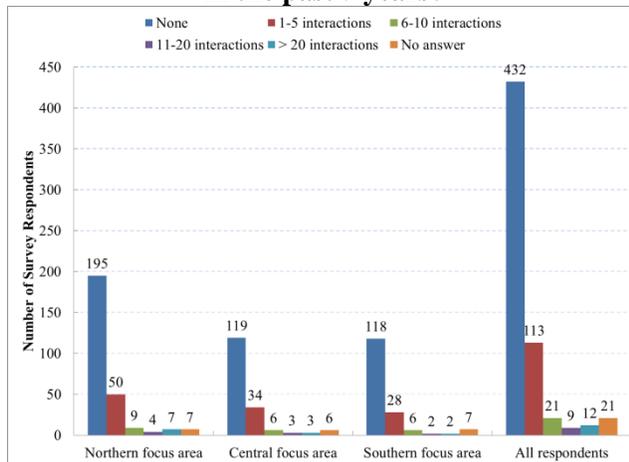
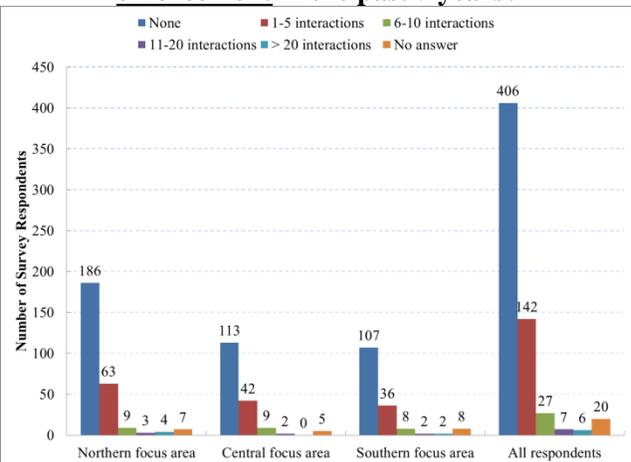


Figure 21: Approximately how many interactions have you had with FWC law enforcement in the past 5 years?



A total of 275 respondents answered the question regarding their level of involvement with the FWC (45.2% response rate). Table 20 indicates how respondents characterized their level of involvement with the FWC. The highest level of interaction was a property visit by the FWC, followed by respondents contacting the FWC with a concern.

Table 20: Types of interactions with FWC personnel

	All respondents		Northern focus area		Central focus area		Southern focus area	
	#	%	#	%	#	%	#	%
FWC visited my property	139	22.9	56	20.6	39	22.8	43	26.4
Attended an FWC workshop	31	5.1	14	5.1	13	7.6	4	2.5
Attended a public meeting that involved the FWC	47	7.7	25	9.2	12	7.0	10	6.1
Received technical assistance from the FWC	52	8.6	28	10.3	15	8.8	8	4.9
Received financial assistance from the FWC	17	2.8	12	4.4	3	1.8	2	1.2
I contacted the FWC with a concern	113	18.6	49	18.0	28	16.4	34	20.9
Other	43	7.1	22	8.1	16	9.4	4	2.5

7. Private Landowner Cooperation with the FWC

Survey participants were asked about their willingness to cooperate with the FWC both in terms of:

1. sharing their knowledge of threatened and endangered species on their property; and
2. allowing FWC personnel to visit their land to more accurately estimate the populations of threatened and endangered species.

Just over half of respondents who answered each of these questions were willing to work with the FWC to better document populations of imperiled species. However, it should be noted that not all respondents answered these two questions (Table 21).

Table 21: Willingness to work with the FWC

	Would you be willing to share your knowledge of threatened and endangered species on your property with FWC?		Would you be willing to allow the FWC to visit your property to more accurately estimate the populations of threatened and endangered species?	
	Number	Percent	Number	Percent
No	151	24.8	160	26.3
Yes	231	38.0	265	43.6
Maybe	75	12.3	85	14.0
No answer	151	24.8	98	16.1

Based on comments provided by respondents, unwillingness to share information with the FWC about imperiled species on their land is likely a combination of at least two factors:

- 1) the landowners' belief that they do not have useful information to share with the FWC, and
- 2) a belief that the FWC would use information provided to justify restrictions in the private land use.

A sample of these comments is included in Table 22.

Table 22: Comments made by respondents regarding sharing knowledge of threatened and endangered species on their property with the FWC

Comments provided by respondents	
No useful information to share	<ul style="list-style-type: none"> • Don't have any • Don't really have very much • No knowledge • Not sure I know • I have limited direct knowledge of such species
Concern over how the information would be used	<ul style="list-style-type: none"> • It just depends on how I felt FWC would use the data. • Only if assured that it wouldn't be used against me • Depends on how it would impact me • I don't have a great deal of trust in the FWC.

Comments related to allowing the FWC to visit the landowner's property to more accurately estimate imperiled species populations largely centered on concerns over how the information would be used (Table 23). The other common type of comment was an insistence on being present during the visit.

Table 23: Comments made by respondents regarding allowing the FWC to visit their property to more accurately estimate the populations of threatened and endangered species

Comments provided by respondents	
Concern over how the information would be used	<ul style="list-style-type: none"> • If it did not result in any restrictions • I don't want someone on my properties that might fine me for "improper" practices (St. John Water Management) • I don't want restrictions put on my land as far as what I can do • Not if it threatens my private property rights • As long as we are fully aware of purpose and agree with it • Would need to understand the process more and what impacts it would have on my property. • What happens with this info?
Insistence on accompanying FWC	<ul style="list-style-type: none"> • Only by accompanied appointment • I must be there • If accompanied by owner or family member.

Respondents were asked to identify specific concerns they have about helping the FWC to conserve threatened or endangered species on private lands. A total of 490 respondents answered this question (80.6% response rate). Although 199 of the respondents who answered this question (32.7%) had no concerns about assisting the FWC with conserving threatened or endangered species on private lands, those landowners who were concerned tended to focus on

how agencies might restrict land uses. Most concern was expressed about how agricultural, forestry, ranching and hunting activities might be restricted by agencies (Tables 24 and 25). In total, 135 respondents (22.2%) would allow the FWC onto their property and would work with the FWC on conservation of imperiled species without concerns.

Table 24: Which concerns do you have about helping the FWC to conserve threatened or endangered species on private lands?

	Number	Percent
None	199	32.7
Agencies will restrict agricultural/forestry activities	196	32.2
Agencies will restrict ranching activities	156	25.7
Agencies will restrict mining	47	7.7
Agencies will restrict hunting activities	145	23.8
Agencies will restrict development activities	134	22.0
Fewer people will want to buy the land if it is put up for sale	115	18.9
Land values will fall	119	19.6
Threatened or endangered species will negatively affect neighboring landowners	66	10.9
Other	30	4.9

Table 25: Concerns about helping the FWC to conserve threatened or endangered species by focus area

	Northern focus area		Central focus area		Southern focus area	
	#	%	#	%	#	%
None	92	33.8	59	34.5	48	29.4
Agencies will restrict agricultural/forestry activities	90	33.1	48	28.1	56	34.4
Agencies will restrict ranching activities	57	21.0	39	22.8	58	35.6
Agencies will restrict mining	22	8.1	8	4.7	15	9.2
Agencies will restrict hunting activities	72	26.5	28	16.4	43	26.4
Agencies will restrict development activities	58	21.3	33	19.3	41	25.2
Fewer people will want to buy the land if it is put up for sale	59	21.7	29	17.0	25	15.3
Land values will fall	62	22.8	31	18.1	25	15.3
Threatened or endangered species will negatively affect neighboring landowners	32	11.8	14	8.2	19	11.7
Other	17	6.3	7	4.1	6	3.7

8. Private Landowner Trust in the FWC

Participants were asked several questions addressing various aspects of trust in the FWC. These included statements to which respondents could indicate their level of agreement, as well as direct assessments of the FWC’s level of performance of various tasks.

On average, respondents most strongly agreed with the following statements: ‘I would allow FWC biologists to enter my property only if I accompanied them’ (mean score of 3.56); and ‘FWC biologists have the expertise to advise landowners about land stewardship’ (mean score of 3.48) (see Table 26). Note that a response of ‘strongly disagree’ was coded as 1, a response of

‘disagree’ was coded as 2, a response of ‘neutral’ was coded as 3, a response of ‘agree’ was coded as 4, and a response of ‘strongly agree’ was coded as 5. The lowest level of agreement was associated with the statement ‘I would be willing to advise the FWC on how to design private landowner assistance programs’ (mean score 2.88). Responses to the statements for each of the focus areas are provided in Tables 27 to 29.

Direct assessments of the FWC’s performance of various tasks were scored on a scale of 1 (very poor) to 5 (excellent) (Table 30). The FWC was assessed the highest on ‘dealing honestly with private landowners’ (mean score of 3.20) and lowest on ‘providing useful financial assistance programs to landowners’ (mean score of 2.74). Responses to the statements for each of the focus areas are provided in Tables 31 to 33.

Respondents were also asked to assess the FWC’s management of threatened and endangered species. The assessments were highest for ‘managing threatened and endangered species on public lands’ (mean score of 3.00) and lowest on ‘accounting for the costs to private landowners from having threatened or endangered species on their land’ (mean score of 2.43) (Table 34). Responses to the statements for each of the focus areas are provided in Tables 35 to 37.

Table 26: Level of agreement with statements about the FWC (1 = strongly disagree; 2 = disagree; 3 = neutral; 4 = agree; 5 = strongly agree)

	Mean	Standard deviation	Number of respondents
The difference between the FWC and other government agencies is clear	3.16	0.90	510
FWC biologists are highly knowledgeable about stewardship	3.43	0.71	504
FWC biologists share my values regarding land stewardship for wildlife	3.36	0.78	503
Private landowner stewardship practices are more effective than FWC recommendations	3.10	0.67	501
FWC biologists have the expertise to advise landowners about land stewardship	3.48	0.74	505
I would be willing to advise the FWC on how to design private landowner assistance programs	2.88	0.87	494
I have greater trust in individual FWC personnel than I have in the FWC as an agency	3.23	0.76	503
I would allow FWC biologists to enter my property only if I accompanied them	3.56	1.04	515

Table 27: Level of agreement with statements about the FWC – northern focus area

	Avg	Med	Percent of respondents				
			SD	D	N	A	SA
The difference between the FWC and other government agencies is clear	3.16	3	4.0	12.9	41.2	22.8	5.9
FWC biologists are highly knowledgeable about stewardship	3.50	3	0.4	2.6	44.5	30.1	8.1
FWC biologists share my values regarding land stewardship for wildlife	3.42	3	1.5	3.3	46.0	26.1	8.1
Private landowner stewardship practices are more effective than FWC recommendations	3.08	3	1.5	8.5	61.0	9.9	4.0
FWC biologists have the expertise to advise landowners about land stewardship	3.58	4	1.1	1.8	37.5	36.8	8.5
I would be willing to advise the FWC on how to design private landowner assistance programs	2.86	3	6.3	15.1	49.6	10.3	2.6
I have greater trust in individual FWC personnel than I have in the FWC as an agency	3.28	3	1.1	8.1	50.4	17.3	8.5
I would allow FWC biologists to enter my property only if I accompanied them	3.54	4	4.4	11.0	23.9	27.9	19.1

Avg = mean; Med = median; SD = strongly disagree (1); D = disagree (2); N = neutral (3); A = agree (4); SA = strongly agree (5)

Table 28: Level of agreement with statements about the FWC – central focus area

	Avg	Med	Percent of respondents				
			SD	D	N	A	SA
The difference between the FWC and other government agencies is clear	3.14	3	4.1	11.1	39.2	22.2	4.1
FWC biologists are highly knowledgeable about stewardship	3.41	3	0.6	2.9	45.6	26.3	5.3
FWC biologists share my values regarding land stewardship for wildlife	3.36	3	1.2	4.7	46.2	21.6	7.0
Private landowner stewardship practices are more effective than FWC recommendations	3.06	3	1.8	7.6	56.7	12.3	1.8
FWC biologists have the expertise to advise landowners about land stewardship	3.45	3	0.6	2.9	43.9	26.3	7.0
I would be willing to advise the FWC on how to design private landowner assistance programs	2.84	3	9.4	11.7	42.1	14.0	1.8
I have greater trust in individual FWC personnel than I have in the FWC as an agency	3.21	3	2.3	3.5	53.8	17.0	4.1
I would allow FWC biologists to enter my property only if I accompanied them	3.56	4	3.5	6.4	26.9	33.3	13.5

Avg = mean; Med = median; SD = strongly disagree (1); D = disagree (2); N = neutral (3); A = agree (4); SA = strongly agree (5)

Table 29: Level of agreement with statements about the FWC – southern focus area

	Avg	Med	Percent of respondents				
			SD	D	N	A	SA
The difference between the FWC and other government agencies is clear	3.21	3	3.1	9.8	39.3	27.0	3.1
FWC biologists are highly knowledgeable about stewardship	3.35	3	1.2	2.5	47.9	25.8	3.7
FWC biologists share my values regarding land stewardship for wildlife	3.27	3	1.2	6.1	46.0	24.5	3.1
Private landowner stewardship practices are more effective than FWC recommendations	3.15	3	0.6	7.4	55.2	14.1	3.1
FWC biologists have the expertise to advise landowners about land stewardship	3.37	3	0.6	4.9	42.3	30.1	3.1
I would be willing to advise the FWC on how to design private landowner assistance programs	2.97	3	5.5	10.4	47.9	12.9	3.1
I have greater trust in individual FWC personnel than I have in the FWC as an agency	3.16	3	1.8	3.7	57.7	14.1	3.1
I would allow FWC biologists to enter my property only if I accompanied them	3.62	4	1.8	5.5	28.2	33.7	13.5

Avg = mean; Med = median; SD = strongly disagree (1); D = disagree (2); N = neutral (3); A = agree (4); SA = strongly agree (5)

Table 30: In your opinion, how well has the FWC staff performed the following tasks?

(1 = very poor; 2 = poor; 3 = average; 4 = good; 5 = excellent)

	Mean	Standard deviation	Number of respondents
Providing useful financial assistance programs to landowners	2.74	0.94	311
Managing public lands	3.14	0.91	351
Explaining the reasoning behind land stewardship programs	2.91	0.90	333
Showing the link between FWC land stewardship programs and FWC wildlife management goals	2.87	0.89	330
Using good science to develop land stewardship programs	3.11	0.91	329
Treating all landowners equally	2.90	1.03	327
Considering landowner concerns when designing wildlife protection programs	3.02	0.92	328
Providing useful technical assistance to private landowners	3.01	0.94	330
Dealing honestly with private landowners	3.20	0.96	342

Table 31: Assessment of FWC – northern focus area

	Mean	Med	Percent of respondents				
			Very poor	Poor	Avg	Good	Excel
Providing useful financial assistance programs to landowners	2.82	3	5.9	12.5	25.4	8.5	2.9
Managing public lands	3.21	3	3.7	4.8	28.7	20.6	2.2
Explaining the reasoning behind land stewardship programs	2.87	3	3.7	14.7	26.5	8.8	2.9
Showing the link between FWC land stewardship programs and FWC wildlife management goals	2.80	3	3.7	16.2	27.2	7.0	2.6
Using good science to develop land stewardship programs	3.14	3	2.6	8.5	27.2	13.6	4.0
Treating all landowners equally	2.83	3	8.1	8.5	26.8	7.7	3.7
Considering landowner concerns when designing wildlife protection programs	3.04	3	2.9	10.3	27.9	11.0	3.7
Providing useful technical assistance to private landowners	2.97	3	2.9	14.7	23.9	11.8	3.7
Dealing honestly with private landowners	3.16	3	5.1	7.0	25.7	15.4	5.5

Med = median; Very poor = 1; Poor = 2; Avg = average (3); Good = 4; Excel. = excellent (5)

Table 32: Assessment of FWC – central focus area

	Mean	Med	Percent of respondents				
			Very poor	Poor	Avg	Good	Excel
Providing useful financial assistance programs to landowners	2.76	3	3.5	15.2	18.1	8.8	1.2
Managing public lands	3.08	3	2.9	8.2	26.3	14.6	1.8
Explaining the reasoning behind land stewardship programs	3.03	3	3.5	8.2	25.1	11.1	2.9
Showing the link between FWC land stewardship programs and FWC wildlife management goals	3.01	3	2.3	11.7	22.2	11.1	2.9
Using good science to develop land stewardship programs	3.17	3	2.9	7.0	22.8	13.5	4.1
Treating all landowners equally	3.02	3	4.1	8.2	23.4	8.2	4.7
Considering landowner concerns when designing wildlife protection programs	3.06	3	2.9	9.4	22.2	11.1	3.5
Providing useful technical assistance to private landowners	3.16	3	1.8	8.8	24.0	11.1	4.7
Dealing honestly with private landowners	3.27	3	2.3	4.7	25.7	14.0	4.7

Med = median; Very poor = 1; Poor = 2; Avg = average (3); Good = 4; Excel. = excellent (5)

Table 33: Assessment of FWC – southern focus area

	Mean	Med	Percent of respondents				
			Very poor	Poor	Avg	Good	Excel
Providing useful financial assistance programs to landowners	2.59	3	3.7	17.8	22.1	4.3	0.6
Managing public lands	3.09	3	3.7	9.8	25.2	16.0	3.1
Explaining the reasoning behind land stewardship programs	2.87	3	2.5	12.3	31.9	7.4	1.2
Showing the link between FWC land stewardship programs and FWC wildlife management goals	2.85	3	2.5	11.7	32.5	6.1	1.2
Using good science to develop land stewardship programs	2.99	3	3.1	6.1	35.0	9.2	1.2
Treating all landowners equally	2.92	3	5.5	8.6	30.7	9.2	3.1
Considering landowner concerns when designing wildlife protection programs	2.97	3	3.7	7.4	33.1	9.2	1.8
Providing useful technical assistance to private landowners	2.95	3	3.1	8.6	31.9	7.4	2.5
Dealing honestly with private landowners	3.23	3	1.8	4.9	32.5	12.9	4.3

Med = median; Very poor = 1; Poor = 2; Avg = average (3); Good = 4; Excel. = excellent (5)

Table 34: How would you rate the FWC’s performance in the following areas?

(1 = very poor; 2 = poor; 3 = average; 4 = good; 5 = excellent)

	Mean	Standard deviation	Number of respondents
Communicating how it will manage threatened and endangered species to private landowners	2.73	0.91	357
Explaining decisions to list species as threatened or endangered	2.73	0.90	362
Providing landowners with updates on threatened or endangered species	2.58	0.91	361
Managing threatened or endangered species on public lands	3.00	0.92	352
Incorporating input from private landowners into the management of threatened or endangered species	2.66	0.90	348
Accounting for the costs to private landowners from having threatened or endangered species on their land	2.43	0.89	347

Table 35: Assessment of FWC’s management of threatened and endangered species – northern focus area

	Mean	Med	Percent of respondents				
			Very poor	Poor	Avg	Good	Excel
Communicating how it will manage threatened and endangered species to private landowners	2.70	3	5.5	19.1	27.2	8.5	1.5
Explaining decisions to list species as threatened or endangered	2.74	3	5.5	17.3	26.8	10.3	1.1
Providing landowners with updates on threatened or endangered species	2.59	3	7.4	21.7	24.3	7.0	1.8
Managing threatened or endangered species on public lands	3.05	3	4.4	9.6	27.9	16.5	2.6
Incorporating input from private landowners into the management of threatened or endangered species	2.61	3	7.0	18.8	26.1	7.0	1.1
Accounting for the costs to private landowners from having threatened or endangered species on their land	2.38	2	10.3	20.6	24.3	2.9	0.7

Med = median; Very poor = 1; Poor = 2; Avg = average (3); Good = 4; Excel. = excellent (5)

Table 36: Assessment of FWC’s management of threatened and endangered species – central focus area

	Mean	Med	Percent of respondents				
			Very poor	Poor	Avg	Good	Excel
Communicating how it will manage threatened and endangered species to private landowners	2.74	3	4.7	15.2	22.8	7.6	1.8
Explaining decisions to list species as threatened or endangered	2.76	3	4.1	15.2	25.1	8.2	1.2
Providing landowners with updates on threatened or endangered species	2.58	3	4.1	21.6	21.1	4.1	1.8
Managing threatened or endangered species on public lands	2.99	3	2.9	9.9	24.6	10.5	2.3
Incorporating input from private landowners into the management of threatened or endangered species	2.77	3	4.1	12.9	23.4	7.6	1.2
Accounting for the costs to private landowners from having threatened or endangered species on their land	2.52	3	5.8	17.0	24.0	2.3	1.2

Med = median; Very poor = 1; Poor = 2; Avg = average (3); Good = 4; Excel. = excellent (5)

Table 37: Assessment of FWC’s management of threatened and endangered species – southern focus area

	Mean	Med	Percent of respondents				
			Very poor	Poor	Avg	Good	Excel
Communicating how it will manage threatened and endangered species to private landowners	2.79	3	4.3	16.6	28.8	8.6	1.8
Explaining decisions to list species as threatened or endangered	2.73	3	5.5	18.4	28.2	8.6	1.8
Providing landowners with updates on threatened or endangered species	2.60	3	6.7	19.6	28.2	4.9	1.8
Managing threatened or endangered species on public lands	2.94	3	4.3	10.4	31.9	11.7	1.8
Incorporating input from private landowners into the management of threatened or endangered species	2.66	3	6.7	16.0	31.3	4.9	1.8
Accounting for the costs to private landowners from having threatened or endangered species on their land	2.46	2	9.2	21.5	24.5	3.7	1.8

Med = median; Very poor = 1; Poor = 2; Avg = average (3); Good = 4; Excel. = excellent (5)

As a follow up, respondents were asked to make recommendations regarding how the FWC could improve its effectiveness in working with private landowners. This was an open-ended question. A total of 130 respondents provided comments. These comments were placed into six categories shown in Table 38.

Table 38: Categories of recommendations from respondents for how the FWC can improve its working relationship with private landowners

Recommendation Themes	Number making the recommendation	Percent making the recommendation (n=130)
Better communication/outreach	59	45.4
Land management suggestions	26	20.0
Don’t know enough about FWC to make a recommendation	24	18.5
Financial suggestions	6	4.6
Complaints about wardens	8	6.2
Miscellaneous	7	5.4
Total	130	

Table 39 provides examples of recommendations included in each of the above categories.

Table 39: Examples of recommendations from respondents for how the FWC can improve its working relationship with private landowners

Recommendations from Respondents	
Better communication/outreach	<ul style="list-style-type: none"> • Have some contact • More publicity • Be visible. Make contact with ranchers, farmers. • Maybe a postcard mailer to land owners with contact information, office location nearest to my property. • Advertisements for these programs • Surveys like this, particularly ones responded to by landowners interested in follow-up.
Land management suggestions	<ul style="list-style-type: none"> • Quit worrying about the vocal minority and do what is best for the wildlife. • Allow more bear hunting
Don't know enough	<ul style="list-style-type: none"> • I have no knowledge of such programs. • Totally unfamiliar with this area.
Financial suggestions	<ul style="list-style-type: none"> • It's not what I can do, bottom line they need more money in budget to do their jobs.
Complaints	<ul style="list-style-type: none"> • Respect citizen as public servants should. Get rid of their arrogant attitudes.

9. Landowner Interactions with the FWC and Level of Trust in the FWC

As noted above, a large proportion of respondents indicated that they have had no interaction with the FWC. One might expect these respondents to have a different assessment of the FWC's performance and level of trust in the FWC than those who have had interactions with the FWC. We tested for the difference in average responses to each of the statements about the FWC based on whether respondents had interacted with the FWC in the past five years or not.

We found that survey respondents who had interacted with the FWC in the last 5 years more strongly agreed with the following statements about the FWC (Table 40):

- The difference between the FWC and other government agencies is clear
- FWC biologists are highly knowledgeable about stewardship
- FWC biologists share my values regarding land stewardship for wildlife
- FWC biologists have the expertise to advise landowners about land stewardship
- I would be willing to advise the FWC on how to design private landowner assistance programs
- I have greater trust in individual FWC personnel than I have in the FWC as an agency

Table 40: Tests for difference in means

	Mean Score Interaction	Mean Score No Interaction	t Statistic	Statistically significant difference in means?
The difference between the FWC and other government agencies is clear	3.28	3.06	2.87	Yes
FWC biologists are highly knowledgeable about stewardship	3.57	3.31	4.26	Yes
FWC biologists share my values regarding land stewardship for wildlife	3.45	3.27	2.57	Yes
Private landowner stewardship practices are more effective than FWC recommendations	3.12	3.07	0.76	No
FWC biologists have the expertise to advise landowners about land stewardship	3.59	3.38	3.16	Yes
I would be willing to advise the FWC on how to design private landowner assistance programs	3.03	2.75	3.59	Yes
I have greater trust in individual FWC personnel than I have in the FWC as an agency	3.36	3.10	4.00	Yes
I would allow FWC biologists to enter my property only if I accompanied them	3.57	3.56	0.13	No

When similar tests were run by focus area we found that for the northern focus area, respondents who had interacted with the FWC in the last 5 years more strongly agreed with the following statements:

- The difference between the FWC and other government agencies is clear
- FWC biologists are highly knowledgeable about stewardship
- FWC biologists share my values regarding land stewardship for wildlife
- FWC biologists have the expertise to advise landowners about land stewardship
- I would be willing to advise the FWC on how to design private landowner assistance programs
- I have greater trust in individual FWC personnel than I have in the FWC as an agency

For the central focus area, respondents who had interacted with the FWC in the last 5 years more strongly agreed with the following statement: ‘I have greater trust in individual FWC personnel than I have in the FWC as an agency’. For the southern focus area, there was no statistically significant difference in how respondents who had interacted with the FWC in the last 5 years rated the FWC’s performance compared those respondents who had not interacted with the FWC.

We found that survey respondents who had interacted with the FWC in the last 5 years rated the FWC higher on the following items (Table 41):

- Providing useful financial assistance programs to landowners
- Providing useful technical assistance to private landowners
- Explaining the reasoning behind land stewardship programs
- Showing the link between FWC land stewardship programs and FWC wildlife management goals
- Treating all landowners equally
- Dealing honestly with private landowners

Table 41: Tests for difference in means

	Mean Score Interaction	Mean Score No Interaction	t Statistic	Statistically significant difference in means?
Providing useful financial assistance programs to landowners	2.85	2.58	2.46	Yes
Managing public lands	3.16	3.11	0.51	No
Explaining the reasoning behind land stewardship programs	3.04	2.73	3.08	Yes
Showing the link between FWC land stewardship programs and FWC wildlife management goals	2.97	2.73	2.45	Yes
Using good science to develop land stewardship programs	3.19	2.99	1.91	No
Treating all landowners equally	3.00	2.76	2.04	Yes
Considering landowner concerns when designing wildlife protection programs	3.09	2.91	1.72	No
Providing useful technical assistance to private landowners	3.16	2.80	3.42	Yes
Dealing honestly with private landowners	3.33	3.00	3.18	Yes

When similar tests were run by focus area we found that for the northern focus area, respondents who had interacted with the FWC in the last 5 years rated the FWC higher on the following items:

- Providing useful financial assistance programs to landowners
- Providing useful technical assistance to private landowners

Landowners from the central focus area who had interacted with the FWC in the last 5 years rated the FWC higher on the following items:

- Providing useful technical assistance to private landowners
- Explaining the reasoning behind land stewardship programs
- Showing the link between FWC land stewardship programs and FWC wildlife management goals
- Using good science to develop land stewardship programs
- Treating all landowners equally
- Dealing honestly with private landowners

Landowners from the southern focus area who had interacted with the FWC in the last 5 years rated the FWC higher on the following items:

- Treating all landowners equally
- Dealing honestly with private landowners

Finally, we found that survey respondents who had interacted with the FWC in the last 5 years rated the FWC higher on the following items (Table 42):

- Communicating how it will manage threatened and endangered species to private landowners
- Explaining decisions to list species as threatened or endangered
- Providing landowners with updates on threatened or endangered species
- Managing threatened or endangered species on public lands

Table 42: Tests for difference in means

	Mean Score Interaction	Mean Score No Interaction	t Statistic	Statistically significant difference in means?
Communicating how it will manage threatened and endangered species to private landowners	2.88	2.54	3.64	Yes
Explaining decisions to list species as threatened or endangered	2.85	2.59	2.75	Yes
Providing landowners with updates on threatened or endangered species	2.70	2.43	2.81	Yes
Managing threatened or endangered species on public lands	3.14	2.82	3.24	Yes
Incorporating input from private landowners into the management of threatened or endangered species	2.71	2.58	1.33	No
Accounting for the costs to private landowners from having threatened or endangered species on their land	2.45	2.41	0.40	No

When similar tests were run by focus area we found that for the northern focus area, respondents who had interacted with the FWC in the last 5 years rated the FWC higher on the following item: ‘managing threatened or endangered species on public lands’.

Respondents from the central focus area who had interacted with the FWC in the last 5 years rated the FWC higher on the following items:

- Communicating how it will manage threatened and endangered species to private landowners
- Explaining decisions to list species as threatened or endangered
- Providing landowners with updates on threatened or endangered species
- Managing threatened or endangered species on public lands

- Incorporating input from private landowners into the management of threatened or endangered species

Respondents from the southern focus area who had interacted with the FWC in the last 5 years rated the FWC higher on the following item: ‘Communicating how it will manage threatened and endangered species to private landowners’.

References

Dillman, D. A., Smyth, J. D., & Christian, L. M. (2014). *Internet, Phone, Mail and Mixed-Mode Surveys: The Tailored Design Method, 4th edition*. Hoboken, NJ: John Wiley.