Opinions and Behaviors

of

Landholders Regarding

Conservation Practices and Programs

Final Report for

The Lower Yazoo Basin Project

Sponsored by

Mississippi Chapter
The Nature Conservancy
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Numerous persons and organizations made significant contributions to the Lower Yazoo Basin Project's study of ***Opinions and Behaviors of Landholders Regarding Conservation Practices and Programs***. Among the most significant were the members of the Project Task Force who advised the Project Manager and Consultant as the questionnaire was developed and helped pretest it. They wrote and mailed the letter describing the project goals which accompanied the questionnaire, which they mailed to the sample in the county where they lived. Also, Task Force members made numerous telephone calls to respondents. To their credit, a 41 percent return rate was obtained from the questionnaire which was distributed by U. S. Mail. Special appreciation is extended to: Ray Acycock, Jackson, MS; Bill Brown, Belzoni, MS; Chat Phillips, Yazoo City, MS; Poe Lutkin, Hollandale, MS; and Ernest Thomas, Vicksburg, MS.

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Tax Assessors in each of the LYB counties enabled the Project Manager and Consultant to obtain official data base files for landholders in each county. Their help contributed significantly to the attainment of a reliable population from which the sample was drawn.

Jerry W. Robinson, Jr., Ph. D., is Director of the Center for Community Development at Delta State University, Cleveland, Mississippi and Professor Emeritus in Rural Sociology at the University of Illinois, Champaign-Urbana, served as the LYB project consultant. Dr. Robinson has more than 35 years of professional experience in areas related to soil and water conservation, forest fire prevention, reforestation and the management of Soil and Water Conservation Districts and Watersheds. He is recognized nationally and internationally for his contributions Soil and Water Conservation Districts, the U.S. Forest Service, and the U. S. Department of Interior. He provided intellectual leadership to the LYB project, being responsible for overseeing all aspects related to data collection and tabulation and he prepared this report.

Albert Nylander, Graduate Research Assistant in the Social Science Research Center at Mississippi State University, Steven Benjamin, Interim Program Administrator for Delta Service Corps, and Mark Stiles of Cleveland, MS, coded data, and used the Statistical Package for Social Sciences to run frequency distributions and statistical tests.

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As Project Director, I wish to express my deep appreciation to each of the above persons and organizations for their help and support.

Mark Yarborough, Project Director
Lower Yazoo Basin Project
July 25, 1997

Contents

I. The Problem

Before this study, there was a lack of scientific information on the knowledge, awareness, attitudes and behaviors of land holders in the Lower Yazoo Basin (LYB) regarding conservation practices. This study sought to obtain valid and reliable information the opinions and behaviors of landowners regarding the numerous conservation programs available: (1) to reduce the cost of on-farm production, reforestation and habitat improvements; (2) to increase the effectiveness of on-farm and forest land conservation; and (3) to improve the quality of the habitat for fish and wildlife. Most of these conservation programs are offered through: the Soil Conservation Service; the Farm Services Agency (formerly the Agricultural Stabilization and Conservation Service); the U.S. Forest Service; The Mississippi Department of Forestry; the Department of Fisheries and Wildlife; Soil and Water Conservation Districts; the Mississippi Cooperative Extension Service; the U. S. Department of Interior; private Hunting and Fishing Associations; The Environmental Protection Agency; the Nature Conservancy; and other private or public sector organizations.

Previous research has documented that the participation of landowners in conservation programs is influenced by: (1) their knowledge, attitudes and beliefs about various programs or conservation practices; (2) the information they read in or hear through the media; (3) face-to-face conversations with their friends, neighbors and conservation professionals; and (4) their participation in outreach and educational programs based on scientific information and presented in an unbiased or objective manner.

To help the Lower Yazoo Basin Project deal more effectively with the lack of information, a Task Force of LYB Land Holders was formed to provide advise and guidance to the LYB Project Manager and the consultant as this survey of landowners was designed, administered, analyzed, distributed and as policies for conservation programs may be developed and implemented. Also, the LYB Landowner Task Force played a major role in creating acceptance of the importance of the survey and in obtaining community input into the survey process.

II. Purposes of the Study

The primary goals of this study were: (1) to provide information which will support the development of a consensus for policies and selected conservation practices and strategies which might be used in the region; and (2) to provide guidelines to The Nature Conservancy's Lower Yazoo Basin Project as it seeks to engage local and state government agencies, educational institutions, and private landowners in action projects to help assure that preferred conservation practices are in fact implemented.

III. Methods and Procedures

The Study Area and Sampling Procedures

A stratified and multi-stage random sample of 373 private sector landowners was selected from the Delta portion of six counties in the Lower Yazoo Basin. The sample included landowners from the following counties: Humphreys, Isaquenna, Sharkey, Warren, Washington, and Yazoo. Following is a description of procedures and steps use to select a scientific sample from the population of landholders which was stratified into three categories by the number of acres owned.

Using computerized data-base files or hard-copy files from county tax records with the name, address, and total number of acres owned by each landholder in the delta portion of the six counties, the total population of landholders was grouped into three categories based on the number of acres owned. Statistical analysis revealed that one-third of the landholders owned 39.1 acres or less; one-third owned 39.2 to 112.1 acres; and, one-third of the population owned more than 112.2 acres.

After aggregating landowner data for all six counties into each of the three types (small, medium and large) of land holders, a stratified random sample was drawn for the LYB Project Area, with an equal number of landholders owning small, medium and large acreage in each of the three sample categories. In several cases where landholders who owned multiple tracks of land appeared in the sample more than once, the second or "duplicate" selection was dropped and a replacement was selected randomly.

Furthermore, the LYB Project Task Force was a group of knowledgeables aware of who landholders were and of land use. They advised the consultant on dropping those tracks of land which were used for manufacturing or other ventures where the adoption or use of conservation practices for purpose of farming, forestry, or recreation was not feasible. Thus, a total of 373 questionnaires was distributed in the six-county area. The number of questionnaires distributed in each county was: Humphreys, 59; Isaquenna, 62; Sharkey, 69; Warren, 65; Washington, 67; and, Yazoo, 51.

Developing the Questionnaire

The consultant worked with the Project Manager and the YLB Task Force to develop the survey questionnaire which would be distributed to each landholder in the sample. After samples of questionnaires or reports from similar studies were obtained and analyzed, the Project Manager and the consultant reached consensus on types of information which should be collected. After a draft copy of the survey questionnaire was prepared in November of 1996, it was critiqued, reviewed, and subsequently approved by the Project Manager and the YLB Task Force. Task Force members made numerous substantive and practical contributions to the content and design of the questionnaire.

The final questionnaire was not distributed to the random sample of landowners until it was formally approved by the YLB Task Force and the Project Manager. The questionnaire contained 42 types of questions, which contained 102 variables and required approximately 30 minutes to complete.

Distributing and Collecting Questionnaires

Three hundred and seventy three (373) questionnaires were numbered and coded by county and mailed to the sample of landholders with a cover letter prepared by the consultant. The letter was on Nature Conservancy letterhead, and it explained the purpose of the survey. The letter was signed by one of the YLB Task Force members who lived in the same county were the landholder owned land. Accompanying each questionnaire was a large, self-addressed and stamped envelope which the respondent could use to return the completed questionnaire. Respondents were assured of confidentiality and anonymity and urged to return the questionnaire by U. S. Mail to the Office of the LYB Project Manager within ten days. If questionnaires were not received within three weeks, the Project Manager mailed a post card to sample members asking them to return the questionnaire soon.

When landholders lived out-of-state, members of the LYB Task Force placed personal calls asking respondents to complete and return the questionnaire. Finally, when LYB Task Force Members

or the Project Manager, knew landholders included in the sample, they spoke with these landholders by telephone or in face-to-face conversations to explain the purpose of the survey and to encourage them to complete and return it. Thanks to the hard work of the LYB Task Force and the Project Manager, one-hundred and fifty-two, or 41 percent, of the questionnaires which were returned and were usable.

Unanticipated Delays

Work began in September of 1996. With the intent of obtaining a valid sample, every opportunity was exhausted to obtain an accurate data base of land holders in the LYB project area. Instead of using a data base from ASCS, which would have included farmers only, a data base was obtained from the Tax Assessor's Office in each county. Collecting and aggregating the six data base files required considerable time and effort. Also, this process was costly and it delayed the project for several reasons.

First, unanticipated difficulty was encountered in obtaining data-base files on landholders from the offices of the tax assessors in several counties. The consultant purchased data base files from a private company which maintains tax records for three counties. In two counties, a printed copy of the landholders was obtained from the Tax Assessor's Office and in two other counties, a computer disk was obtained with that county's data base. It was necessary to convert all of these data into one computer file before the data would be available for drawing the sample.

Second, the amount of time between the date that the questionnaires were distributed by U. S Mail and the date that collection of completed questionnaires ended was much longer than anticipated because the Project Manager and consultant desired to obtain a return rate of 40% or more. Data collection extended over a four-month period, from mid-February until mid-June of 1997. If the "drop-off, pick-up method" had been used, as was proposed by the consultant, data collection would have been completed within two weeks, or less, and the return rate would have been much higher.

Tabulating, aggregating and analyzing the data and preparing the report

The consultant was responsible for the tabulation of the data from completed questionnaires and for aggregating the data for the first run of simple frequency distributions for grouped data each variable. Additional statistical analysis (cross tabulations which included statistical procedures to provide additional insights) were calculated before the final report was prepared. After the final tabulation and statistical analysis of data was completed, the consultant prepared the report

IV. Presenting the Results

Part One is a descriptive analysis which presents the frequency and percentage distributions for each variable in terms of respondents' characteristics regarding their: (1) social, demographic and economic factors; (2) attitudes and opinions toward private organizations and governmental agencies; (3) attitudes and opinions toward the use of conservation and leisure practices; and (4) behaviors regarding the use of conservation and leisure practices.

Part Two interprets the results further by using cross tabulations and statistical tests to explain correlations and relationships among variables such as: (1) the relationship between demographic and occupational variables and support for conservation practices; (2) support for reforestation in relation to whether the landholder owns wetland or desires to reforest marginal farm land; (3) opinions toward conservation programs and practices and how these opinions might influence decisions related to conservation; and (4) level of support for reforestation in general and particularly in regard to marginally productive agricultural lands.

Part One: The Descriptive Analysis of Landholder Characteristics

Social, Demographic and Economic Characteristics

Data on the social and economic characteristics and behavior of the 152 respondents are presented in Tables 1 through 30. Opinions and behavior of respondents are presented in tables 31 - 45. Table 1 reveals that the number of persons who completed and returned the questionnaire varied considerably among the six counties, with only 15 persons or 9.9 percent of the 152 respondents were from Humphreys County to 29 or 19.1 percent from Sharkey County. While the response rates in Warren, Isaquenna, and Yazoo Counties were acceptable, they did not approach what had been expected. Variation among return rates for the counties might be attributed to persistent efforts of members of the Lower Yazoo Task Force. Thirteen respondents did not respond to the question about where they lived.

Place of residence: Table 2 shows that 24 or 15.8 percent of the respondents lived out of state, with only 29.6 percent or 45 of the respondents actually living in the same county where they owned the land. A high number, 38, of the respondents lived elsewhere in Mississippi, and 34 respondents, or 22 percent, lived in an adjacent county *The response rate of 41 percent to a mailed questionnaire is*

excellent when one considers the fact that approximately 70 percent of the respondents did not live in the same county where their LYB landholdings were located. The LYB Task Force and Project Manager are to be commended for their efforts to obtain a such a high response rate.

Most of the 27 respondents (16 percent) who did not live in Mississippi resided in an adjacent state - Arkansas, Alabama, Louisiana or Tennessee (see Table 4). However, the remaining 11 respondents were distributed throughout the U.S. Data in Table 2 reveal that 11 respondents did not respond to the question which asked where they resided.

Table 1. County where respondents own land in the LYB

LYB County	Frequency	Percent
Humphreys	15	9 9
Isaquenna	26	17.1
Sharkey	29	19.1
Yazoo	22	14.5
Warren	27	17.8
Washington	20	13.2
No Response	13	8.6
Total	152	100

Table 2. County where respondents reside

County of Residence	Frequency	Percent
Same County as Land	45	29.6
Adjacent County	34	22 4
Elsewhere in Mississippi	38	25
In State Adjacent to Mississippi	14	9 2
Elsewhere in United States	10	6 6
No Response	11	7.2
Total	152	100

Place of and Length of Residence and Land Tenure: Data in Table 3 show that more than half of the respondents had lived in the present LYB county for more than 50 years, and 30 percent or 46 respondents had resided in the present county for less than 31 years. At least, one can conclude that

the respondents are not very mobile when it comes to moving around the state or country (see Table 3). Also, in response to other questions which are not presented in the tables, seventy five or 49.3 percent of the respondents reported that they had lived in the present county all of their life. Furthermore, 82.9 percent or 126 respondents reported that they "expected to live in the present county for the next five years." Also, 93 percent of the respondents reported that they owned their place of residence, three percent rented, and there was no response from four percent.

Table 3. Number of years respondent has lived in present county

Years Lived in County	Frequency	Percent
Low: 0 - 31 years	46	30.3
Medium: 32 - 49	46	30.3
High: 50 - 80	50	32.9
No Response	10	6.5
Total	152	100

Table 4. State of residence for respondents who do not live in Mississippi

Region	Frequency	Percent
Adjacent State -(AK; AL; LA; TN)	16	10.5
Other Southeastern U S. State	2	1.3
Northeastern U. S	2	1.3
Midwest	3	2.0
Southwest	3	2.0
West	1	.7
No Response or in Mississippi	125	82.2
Total	152	100

Ownership outside of the LYB: Since most of the respondents did not reside in the same county where they owned LYB land, it is not surprising that twenty seven respondents owned farm land (see Table 5) and twenty six owned forest land outside (see Table 7) of the LYB area. Acres of farm land owned tended to be fewer than 411, with nine respondents owning more than 500 acres (see

Table 6). However, acres of forest lands owned tended to be larger, with 10 respondents owning from 1,200 to 25,000 acres, ten owning 150 to 1,000 acres, and the remaining one-third owning fewer than 120 acres of forest land (see Tables 5 - 8).

Table 5. Respondents' status regarding ownership of farmland outside of the Lower Yazoo Basin Project area

Owns Land Outside LYB Area	Frequency	Percent
No	113	74.3
Yes	27	17.8
No Response	12	7.9
Total	152	100

Table 6. Number of acres of farmland owned by respondents outside the Lower Yazoo Basin Project area

Acres Owned	Frequency	Percent
Low: 1 - 60 acres	5	3.2
Medium: 83 - 411	11	7.1
High: 500 - 4,500	9	5.8
No Response	129	83.8
Total	154	99.9

Table 7. Respondents' status on ownership of forest land outside of the Lower Yazoo Basin Project area

Owns Forest Land Outside LYB Area	Frequency	Percent
No	108	71.1
Yes	26	17.1
No Response	18	11.8
Total	152	100

Table 8. Number of acres of forest land owned by respondents outside the Lower Yazoo Basin Project area

Acres Owned Outside LYB Area	Frequency	Percent
Low: 1 - 120 acres	10	6.6
Medium: 150 - 1,000	10	6.6
High: 1,200 - 25,000	10.	6 6
No Response	122	80.2
Total	152	100

Gender, Education, Race and Age of Respondents: Sixty-eight percent of the respondents were male, and 40 or 26 percent were female (see Table 9). The number of females was slightly higher than expected. But when the age distribution of the respondents is considered, see Table 9, one notes that 31.8 percent of the respondents were beyond 65 years of age. Cross tabulations are expected to show that a majority of the respondents beyond 65 years of age will be female and non-farmers.

More than 77 respondents (48 percent) graduated from college, with 14.5 percent having a graduate degree (see Table 11). Twenty three percent or 35 respondents have a high school diploma or less and 22.4 have at least attended college. Surprisingly, only 15 of the respondents are African Americans, two are "other" and 126 or 83 percent are Caucasian (see Table 10). When number of acres owned in the Lower Yazoo Basin project acre is presented in Table 14, one will note that 12.5 percent of the respondents owned fewer than 39 acres. This may account for the small number of African Americans among the respondents.

Table 9. Respondents' status by gender

Gender	Frequency	Percent
Female	40	26.3
Male	104	68.4
No Response	8	5.3
Total	152	100

Table 10. Respondents' status by race

Race	Frequency	Percent
Other	2	1.3
African American	15	9.9
Caucasian	126	82.9
No Response	9	5.9
Total	152	100

Table 11. Respondents' status by level of education

Level of Education	Frequency	Percent
Less than High School	6	3.9
High School Graduate	29	19.1
Some College	34	22.4
College Degree	42	27.6
Some Graduate School	10	6 6
Graduate Degree	22	14.5
No Response	9	5.9
Total	152	100

Two thirds of the respondents were more than 50 years of age, with 49 or 31.8 percent being 66 or more years old (see Table 12). Of note is the fact that the age of the respondents coincides with national and state statistics regarding an aging rural population and the fact that much farm land is owned by absentee landlords.

Table 12. Respondents' status by age

Years of Age	Frequency	Percent
Low: 29 -50 years	49	31.8
Medium: 52 - 65	45	29.2
High: 66 - 90	49	31.8
No Response	11	7.1
Total	154	99.9

Household Income: Range of household income among the respondents varied considerably (see Table 13), with 31.5 percent earning less than $54,999 per year and 34.2 percent earning more than $75,000 per year. The largest number of respondents in any category was in the $95,000 or more household income per year, with 38 or 25 percent of the respondents in the highest category. Conversely, 9.9 percent or seven households earned less than $24,999 per year, and eight were in the $15,000 to $24,999 range.

Table 13. Respondents' status by range of household income

Range of Household Income	Frequency	Percent
Less than $15,000	7	4 6
15,000-24,999	8	5.3
25,000-34,999	10	6 6
35,000-44,999	6	3.9
45,000-54,999	15	9 9
55,000-64,999	11	7 2
65,000-74,999	5	3 3
75,000-84,999	11	7 2
85,000-94,000	3	2.0
95,000 or more	38	25
No Response	38	25
Total	152	100

Size of land holdings: Respondents who owned more than 112.2 acres or more were over represented in the questionnaires that were returned. While 33.3 percent of the stratified random sample included persons who owned more than 112.2 acres, 66.5 percent of respondents were from the category of "large acreage landholders." *Persons who owned large tracks of land were five times more likely to complete and return the questionnaire than were persons who owned fewer than 39 acres.* Also, only 27 or 17.8 percent of persons who owned between 40 -112.1 acres of land returned a completed questionnaire (see Table 14), and 12.5 percent of the small acreage land holders returned questionnaires.

Acreage in forest lands: When return rates are compared for persons who owned forest lands, one notes in Table 15 that the return rates for small, medium, and high landholders of forest land are almost identical. However, 86 or 55.8 percent of the respondents either did not own forest land or did

not respond to this question. Only 38 or 24.6 percent of the respondents owned land dedicated to aquaculture.

Table 14. Number of acres owned in Lower Yazoo Basin Counties

Acres in Yazoo Basin	Frequency	Percent
Small: 39 or fewer acres	19	12.5
Medium: 40 - 112 acres	27	17.8
Large: 120 or more acres	101	66.5
No Response	5	3 3
Total	152	100.1

Table 15. Number of forested acres owned in LYB

Forested Acres Owned	Frequency	Percent
Small: 1 - 50 acres	21	13.6
Medium: 60 - 200	24	15.6
Large: 201 - 4600	23	14 9
No Response or None	86	55.8
Total	154	99.9

Acreage in aquaculture and pasture: The variation of respondents by aquaculture acreage owned was small among the three sample types — 12 respondents owned fewer than 10 acres; 11 owned 11 to 75 acres; and 15 owned from 100 to 4,800 acres. The same phenomenon appears among respondents who owned pasture land and other types of acres. As expected, only 19 respondents reported that they owned pasture acreage (see Table 17). Also, only 22 responded reported that they had land devoted to other types of use in the LYB (see Table 18). However, 52 or 34.2 percent of the respondents reported that they owned acreage which had been designated as wetland by the NRPS (see Table 19).

Table 16. Number of aquaculture acres owned in LYB

Acres Owned in Aquaculture	Frequency	Percent
Small: 1 - 10 acres	12	7.8
Medium: 11 - 75	11	7.1
Large 100 - 4800	15	9 7
No Response or None	116	75.3
Total	154	99.9

Table 17. Number of pasture land acres owned in LYB

Acres of Pasture	Frequency	Percent
Small. 50 - 160 acres	5	3.2
Medium: 200 - 400	7	4.5
Large. 570 - 2100	7	4 5
No Response or None	135	87.7
Total	154	99.9

Table 18. Other acres owned in LYB

Other Acres	Frequency	Percent
Small. 1 - 25 acres	7	4 5
Medium: 32 - 65	6	3 9
Large 100 - 975	9	5 8
No Response or None	132	85.7
Total	154	99.9

Ownership of Wetlands: Eighty three or 54.6 percent of the respondents reported that they owned land which had been officially designated as wetlands (see Table 19). The presence of so many wetlands owners among the respondents provides opportunity for The Nature Conservancy and other conservationists to expand the amount of LYB land that may be included in Conservation Reserve Programs.

Table 19. Respondent owns acreage in LYB that has been designated as wetland by NRPS

Owns Wetland Acres	Frequency	Percent
No	52	34.2
Yes	83	54.6
No Response	17	11.2
Total	152	100

Farmer or Non-Farmer and Farming as Primary Occupation: Fewer respondents than was expected, only 59 or 38.3 percent, reported that they were actually engaged in farming (see Table 20); and among the 152 respondents, only 50 or 32.9 percent regarded farming as their primary occupation (see Table 21). Seventeen landholders did not respond to this question. Number of acres farmed

Table 20 . Respondents' status by farm or non-farm

Farm Status	Frequency	Percent
Non-farm	86	56.6
Farm	59	38 8
No Response	7	4.6
Total	152	100

varied considerably, from as few as 10 up to 35,000 (see Table 22). The majority of the respondents, 24, were in large acreage category, with from 2,400 to 35,000 acres being in production agriculture; 23 farmed 125 to 2,300 acres; and only 11 farmed 1 to 120 acres (see Table 22).

Table 21. Farming as respondents' primary occupation

Farming is Primary Occupation	Frequency	Percent
No	85	55.9
Yes	50	32.9
No Response	17	11.2
Total	152	100

Table 22. Total number of acres farmed in LYB

Acres Farmed	Frequency	Percent
Small: 1 - 120 acres	11	7.1
Medium: 125 - 2,300 acres	23	14.9
Large: 2,400 - 35,000 acres	24	15.6
No Response	96	62.3
Total	154	99.9

Leasing land to farm: Fifty eight respondents who farmed indicated that they leased land for farm purposes (see Table 23), and the number of acres leased ranged from less than 50 to as high as 6,000. Twenty respondents leased from 1,400 to 6,000 acres to farm (see Table 24).

Table 23. Respondents' status on leasing land to farm in LYB

Leases Land to Farm	Frequency	Percent
No	54	35.5
Yes	58	38 2
No Response	40	26.3
Total	152	100

As revealed in Table 23, apparently some of the persons who did not farm responded "NO" to the question about whether they leased land to farm since the response for "No" and "Yes" is 112 or more than the total number of persons who regarded themselves to be farmers.

Table 24. Number of acres leased to farm

Acres Leased	Frequency	Percent
Small 1 - 250 acres	16	10 4
Medium: 260 - 1,200	18	11 6
Large. 1,400 - 6,000	20	13
No Response	98	65
Total	152	100

Leasing Land for Hunting, Fishing or Recreation: Thirty-two or 21 percent of the respondents reported that they leased land for leisure (see Table 25). Nine respondents reported that

they leased from 900 to 5,500 acres, eight leased from 200 to 640 acres and five leased less than 140 acres (see Table 26). Conversely, 57.9 percent or 88 respondents leased out land to others for recreation and leisure (see Table 27). The number of acres leased out for all purposes ranged from a

Table 25. Respondents' status on leasing land for hunting, fishing, or recreation in LYB

Leases Land for Recreation	Frequency	Percent
No	102	67.1
Yes	32	21 1
No Response	18	11.8
Total	152	100

high of 8,000 acres to as few as 10 (see Table 28). Only 14 respondents reported that they leased out land to others for leisure, with nine respondents leasing out more than 600 acres (see Table 29).

Only eleven respondents reported that they leased out wetland property that they owned to others for hunting, with half of these landholders leasing out fewer than 500 acres, two leased out 1,000 to 1,500 acres, and three leased out 2,800 to 5,000 acres. Only eight respondents received income for leasing out hunting rights on land that they owned, and seven of the eight leased out fewer than 600 acres for hunting rights, while one landholder leased out 3,000 acres for hunting. The overwhelming majority of the respondents did not lease out wetland or other property for hunting or fishing.

Table 26. Number of acres leased for hunting, fishing, or recreation in LYB

Acres Leased	Frequency	Percent
Small: 1 - 150 acres	5	3.2
Medium: 200 - 640	8	5 2
Large: 900 - 5,500	9	5 8
No Response	132	85 7
Total	154	99.9

Table 27. Respondents' status on leasing out LYB land to others for recreation

Leases out land for recreation	Frequency	Percent
No	55	36.2
Yes	88	57.9
No Response	9	5.9
Total	152	100

Table 28. Number of acres of land in LYB leased out to others

Acres Leased Out	Frequency	Percent
Small: 1 - 68 acres	21	13.6
Medium: 77 - 265	30	19.5
Large: 272 - 8,000	32	20.8
No Response	71	46.1
Total	154	100

Table 29. Number of LYB acres leased out to others for hunting, fishing, or recreation

Acres Leased Out	Frequency	Percent
Small: 10 - 500	5	3.3
Medium. 600 - 1,000	5	3.3
Large 1,500 - 5,000	4	2.6
No Response	138	90.8
Total	152	100

Land tenure practices: About one third of the respondents reported (see Table 30) that they would like to have land they owned reforested; and, 59.2 percent stated that they did not wish to reforest their land. Preferences for agricultural usages seemed to prevail. Among the primary reasons for reforesting land were: (1) to improve the habitat for wildlife - 48 respondents; (2) to obtain an economic return- 43 respondents; (3) to improve water quality - 30 respondents; and (4) to improve

habitat for waterfowl - 27 respondents (see Table 31). Forty-four percent of the respondents stated that there were no factors which limited their participation in the reforestation of land (see Table 32).

Table 30. Status of respondent regarding owning land in LYB that they would like to have reforested

Desires to reforest	Frequency	Percent
No	90	59.2
Yes	49	32.2
No Response	13	8.6
Total	152	100

Table 31. Reasons respondent would like to reforest land

Reasons	Frequency
1. To improve habitat for wildlife	48
2. To improve water quality (deer, turkey, etc.)	30
3. To obtain an economic return	43
4. To improve habitat for waterfowl	27
5. To improve the beauty of the landscape	21

Table 32. Respondent has factors that limit participation in reforestation of land

Presence of limiting factors	Frequency	Percent
No	67	44.1
Yes	50	32.9
No Response	35	23.0
Total	152	100

Attitudes Toward and Participation in Private and Governmental Organizations

Respondent's opinions toward and involvement in a wide range of private and governmental organizations were obtained. Questions were directed primarily toward those organizations which were associated with production agriculture, forestry, and environmental issues related to conservation, fish and wild life. Data presented in Table 33 reveal that memberships were more likely to be held in Delta Council - 42, Delta Wildlife - 32, and Ducks Unlimited - 27. Only two

Table 33. Respondents' membership status and opinions regarding in private organizations

Membership		Opinions				
Organization	Current Member	Strongly Support	Support	No Opinion	Oppose	Strongly Oppose
Delta Council	42 yes 62 no	29	44	45	0	0
Delta Wildlife Foundation	32 yes 67 no	26	45	0	0	0
Ducks Unlimited	27 yes 71 no	19	42	50	2	0
International Audubon Society	2 yes 86 no	7	16	76	8	2
Mississippi Wildlife Federation	12 yes 80 no	17	33	52	4	8
National Wild Turkey Federation	12 yes 78 no	14	23	66	2	0
The Nature Conservancy	7 yes 83 no	10	27	65	4	3
Sierra Club	1 yes 83 no	5	9	54	17	22

respondents belonged to the International Audubon Society; 12 were members of the Mississippi Wildlife Federation and of the National Wild Turkey Federation; seven belonged to the Nature Conservancy; and, only one was a member of the Sierra Club.

High levels of support seems to exist for those private organizations to which members tend to belong. For example, no respondent opposed Delta Council or Delta Wildlife Foundation. Only two respondents opposed Ducks Unlimited or the National Wild Turkey Federation. Seven opposed the

Nature Conservancy. Ten opposed or strongly opposed the International Audubon Society, 12 opposed the Mississippi Wildlife Federation, and thirty nine opposed or strongly opposed the Sierra Club. In general, there was more support for organizations which have a regional focus and more opposition for those organizations with a national and international focus (see Table 33). Skewness of opinions in the "strongly support" or "support" direction created problems for construction of scales and indexes for purposes of statistical analysis, which follows in Part Two.

Opinions toward Government Agencies: The level of support or strong support for agencies of the federal government operating within the LYB project area seems to be much stronger (see Table 34) than the support for "outside" private organizations which have come to the area (see Table 33) and which may be seen to have a national mission. While 74 opinions of opposition were registered for the eight private organizations (see Table 33), only 58 opinions of opposition were indicated toward public agencies(see Table 34).

Respondents tended to be quite supportive of ASCS, the Mississippi Department of Wildlife, Fisheries and Parks, the Mississippi Forestry Commission, SCS, the U.S. Army Corps of Engineers, and the U.S. Fish and Wildlife Service. While twenty seven respondents opposed the U.S. Environmental Protection Agency, forty eight either supported or strongly supported the US EPA (see Table 34).

Table 34. Respondents' opinions toward government agencies

	Opinions				
Agency	Strongly Support	Support	No Opinion	Oppose	Strongly Oppose
Farm Service: ASCS	34	68	37	2	0
MS Dept. of Environment Quality	10	42	66	7	5
MS Dept. of Wildlife, Fisheries, and Parks	39	62	33	1	1
MS Forestry Commission	31	68	39	0	0
National Resource Conservation Service (ASCS)	27	53	52	0	0
U. S. Army Corps of Engineers	29	58	43	6	3
U. S. E. P. A.	11	37	57	18	9
U. S. Fish and Wildlife Service	26	71	44	5	1

Respondents' Awareness of and Participation in Conservation Programs

A major focus of this study was to determine if opinions and awareness of conservation programs was associated with landholder's actual participation in conservation programs. Behavior is more easily to measure and is more specific than attitudes, knowledge or opinions. Thus, the

questionnaire sought data on participation in conservation programs and whether respondents were sufficiently committed to participate in selected conservation programs without outside financial support. It asked, "Would landholders use and pay for conservation practices, especially those practices for which there might not be a financial return?"

Tables 35 through 38 present data about respondents' awareness of, attitudes toward and participation in eight to ten conservation practices or farm programs which are sponsored by state or federal agencies. The number of respondents who were aware of the eight practices was not as high as had been expected. For example, about or less than a third of the respondents were not aware of Farm Services Agency Cost-Share, Forestry Incentive Program, U.S. Fish and Wildlife Service Partners Program, Water Bank and Wetlands Reserve Program. About fifty percent of the respondents were aware of Delta Wildlife and Ducks Unlimited, while only 62 were aware of the Conservation Reserve Program. More importantly, while 33 respondents had participated in Farm Services Agency (ASCS) Cost Share programs, fewer than 15 responded had participated or was currently participating in any of the remaining seven conservation programs (see Table 35).

Table 35. Respondents' awareness of and participation in conservation programs

Agency	Aware of	Has Participated	Currently Participating
Conservation Reserve Program (CRP)	62	15	15
Delta Wildlife	73	8	8
Ducks Unlimited	72	14	5
Farm Services Agency Cost-Share (formerly ASCS)	43	33	20
Forestry Incentive Program (FIP)	51	11	1
U.S. Fish and Wildlife Service Partners Program	41	4	10
Water Bank	41	10	2
Wetlands Reserve Program (WRP)	53	12	10

Opinions about Conservation Practices: The questionnaire contained six attitude or opinion statements which were used to form an "Index of Landholder Opinions Toward Selected Conservation Practices." Statistical tests for significance will be calculated in Part Two of data analysis to determine the relationship between opinions about conservation practices and other variables which are of interest to The Nature Conservancy and policy makers. The six statements and the opinions of the respondents are presented in Table 36.

Data reveal that while opinions of most landholders tended to be supportive of conservation practices, this was not the overwhelming opinion of many respondents. For example, a large number (at least 20 per cent) of the respondents reported that the had "No Opinion" on every item in this Index, with more than half having no opinion about the "conservation aspects of the 1996 Farm Bill."

Highly relevant to The Nature Conservancy is the fact that: (1) 103 respondents favored "the reforestation of marginally productive agriculture lands;" and (2) eighty one respondents felt that it was appropriate for the federal government to acquire and reforest land from "willing sellers" while seventy one supported such action by the state government. The introduction of the phrase "willing sellers" into items five and six in the above Index appears to make a significant difference in landholder opinions. For example, only fifty eight respondents supported the statement which asked if the respondents if they supported "the state or federal government acquiring land for reforestation" when the phrase "willing sellers" was not included.

Easement Preferences: Use of easements for Wetland Reserve Programs can be a controversial issues for some landholders. It was interesting to learn that the majority of the landholders (92) reported that they had "no opinion" on the use of easements for Wetland Reserve Programs (see Table 37). About 20 percent preferred perpetual easements and eleven percent preferred 30-year easements.

Adoption of On-Farm Conservation Practices - With Outside Financial Support: Data in Table 38 present information on the adoption or use of ten conservation practices in farming. As expected, the practice which was used most frequently was crop rotation, while terracing was used less frequently. About one third of all respondents used Drop/Overfall Pipes and conservation tillage. One fifth used cover crops, integrated pest management, winter flooding, no till, and straight levees. These items will be aggregated to form an "Index of Conservation Farming Practices" and statistical tests for significance will be calculated to determine the relationship between actual use of

conservation practices and other variables which are of interest to The Nature Conservancy and policy makers.

Table 36. Respondents' opinions toward selected conservation practices

	Opinion				
Opinions of Agency Programs	Strongly Support	Support	No Opinion	Oppose	Strongly Oppose
1.Respondents' opinion about reforestation of marginally productive agriculture lands.	33	70	35	4	1
2. Respondents' opinion about participating in the Wetlands Reserve Program.	25	48	55	5	4
3. Respondents' opinion about state or federal agencies acquiring land for reforestation.	17	41	48	27	7
4. Respondents' opinion about the conservation aspects of the 1996 Farm Bill.	3	44	85	4	2
5. Respondents opinion about the state acquiring land from willing sellers for reforestation purposes when it is adjacent to state - operated wildlife management areas.	4	67	40	14	2
6. Respondents opinion about the federal government acquiring land from willing sellers for reforestation purposes when it is adjacent to federally-operated wildlife management areas.	18	63	39	16	5

Table 37. Types of Wetland Reserve Program Easements preferred by respondents

Program	Frequency	Percent
30-year easements	17	11.2
Perpetual easements	30	19 7
No Opinion	92	60.5
No Response	13	8 6
Total	152	100

Table 38. Respondents' status regarding use of the following conservation farming practices

Conservation practice	Use	Does Not Use
1. Conservation Tillage	43	35
2. Cover Crops	30	30
3. Crop Rotation	63	26
4. Drop/Overfall Pipes	49	36
5. Grassed Waterways	19	39
6. Integrated Pest Management	29	44
7. No-Till	31	34
8. Straight Levees	27	37
9. Terracing	9	36
10. Winter Flooding	36	32

Adoption of On-Farm Conservation Practices - Without Outside Financial Support: Of special interest is the fact that a number of respondents were using on farm conservation practices and underwriting *all* of the costs that were associated with the use of such practices. For example, data in Table 38 present the frequency of use for most of the conservation practices which are also presented in Table 39 **without** outside financial support. *The drop in frequency of on-farm use for each conservation practice is slight. It is not significant and the rank in frequency of use of each practice without outside financial support is the same as it is with outside support.*

Table 39. Respondents NOT receiving outside financial support for conservation practices used

Conservation practices used with no outside support	Frequency
Conservation tillage	39
Cover crops	23
Crop rotation	51
Drop/overfall pipes	33
Grassed waterways	17
Impounding water for waterfowl	41
Pumping water for waterfowl habitat	22
Integrated pest management	26
No-till	19
Reforestation	7
Straight levees	5

Opinions on the Quality of the Environment: While about 20 percent of the respondents reported that they did "not know" if the quality of the environment has improved or gotten worse, the majority of the landholders who responded to statements about the quality of the environment in the county believe that the quality of the environment has either remained the same or improved during the past 10 years. Only 12 respondents believed that "wildlife-related recreational opportunities" has gotten worse; twenty six reported that the"beauty of the landscape" has worsened; twenty two reported that the "quality of water in streams and lakes" has worsened; seventeen reported that "drinking water quality" has gotten worse; and thirteen reported that "air quality" has gotten worse. Conversely, sixty percent of the landholders responded positively on each of the above items (see Table 40).

Table 40. Respondents' opinions on the quality of the environment

	Opinions			
Environment in the County	Has Improved	Same	Has Gotten Worse	Don't Know
Wildlife-Related Recreational Opportunities	61	33	12	33
Beauty of Landscape	32	52	26	28
Quality of Water in Streams and Lakes	49	33	22	35
Drinking Water Quality	28	61	17	32
Air Quality	23	65	13	33

Responsibility for the Environment: The overwhelming choice among actions proposed for improving the quality of the environment was "more public education and involvement," with 32.2 percent of the respondents electing this option. Only 10 percent favored "stricter enforcement of present laws or regulation," and four percent favored "more stringent environmental laws." Of note is the fact that 72 or 47.4 of the landholders elected not to respond to this question (see Table 41). Furthermore, respondents are divided on who is primarily responsible for protecting the quality of the environment with 24.3 percent believing individual citizens should be primarily responsible; 21 percent prefer that the major responsible party should be state government; 20.4 percent prefer that local government be responsible; and, only six percent believe that the federal government should have

primary responsibility for the environment. Note in Table 42, however, that 21 percent of the landholders did not respond to the question about, "Who is primarily responsible for maintaining the quality of the environment?"

Table 41. Respondents' opinion about actions that should be taken to improve the environment

Preferred Actions	Frequency	Percent
Nothing	5	3.3
More Stringent Environmental Laws	6	3.9
Stricter enforcement of present laws or regulations	15	9.9
More public education and involvement	49	32.2
Other	5	3.3
No Response	72	47.4
Total	152	100

Table 42. Respondents' opinions about who is primarily responsible for protecting the quality of the environment in their county

Responsible Party	Frequency	Percent
Federal Government	9	5.9
State Government	32	21.1
Local Government	31	20.4
City Government	6	3.9
Individual Citizens	37	24.3
Other	5	3.3
No Response	32	21.1
Total	152	100

Participation in Outdoor Recreation and Leisure Activities: Respondents tended to be active participants in recreation and leisure activities, with 108 or 71 percent reporting that they engage in leisure activities (see Table 43). A majority of the respondents think there are adequate opportunities for leisure in the LYB region (see Table 44). Furthermore, favorite choices for leisure

Table 43. Respondents' status regarding participation in outdoor recreational or leisure activities

Participates in outdoor recreation	Frequency	Percent
No	26	17.1
Yes	108	71.1
No Response	18	11.8
Total	152	100

and recreation were hunting (52%), fishing (48%), boating (27.6%), and site seeing (25%). Ten to twenty percent of the respondents participated in birdwatching, camping, hiking, waterskiing, and snow skiing, and fewer than nine percent engage in jet skiing or other activities (see Table 45). No

Table 44. Respondents' opinion about whether there are adequate opportunities (places) for outdoor recreation or leisure activities in the Lower Yazoo Basin area

Opinion on Adequate Opportunity for Leisure	Frequency	Percent
No	31	20.4
Yes	87	57.2
No Response	34	22.4
Total	152	100

doubt participation is several of these leisure activities is related to income. For example, one must travel considerable distance from the LYB to areas where snow skiing is available and boats are expensive. Wether there is a significant relationship between participation in fishing and hunting and the adoption and use of on-farm conservation practices remains to be seen.

Table 45. Respondents' status regarding participation in the following outdoor leisure and recreational activities

Participates in Recreational Activity	Frequency	Percent
Birdwatching	29	19.1
Boating	42	27.6
Camping	25	16.4
Fishing	73	48
Hiking	23	15.1
Hunting	79	52
Jet Skiing	8	5.3
Site Seeing	38	25
Snow Skiing	16	10.5
Water Skiing	20	13.2
Other	13	8.6

Part Two. Additional Interpretative Analysis

Part Two of this report presents additional results derived from cross tabulation and tests for significance and correlations among a number of key variables, such as: (1) selected demographic and occupational variables and opinions toward and participation in conservation practices, organizations, and agencies; (2) relationships regarding opinions toward and participation in conservation programs and organizations; (3) opinions about the quality of the environment in relation to opinions toward and participation in conservation programs; and (4) support for reforestation among landholders with various characteristics of owners of wetland or marginal farm land.

Methods and Procedures

Earlier analysis revealed that opinions or level of support among landholders toward conservation programs and practices and toward government agencies and private groups was skewed strongly in the positive direction. Even after the five levels of support or opposition toward organizations or conservation practices were collapsed into three levels, as follows, data were still skewed strongly in a positive direction "Strongly support" and "support" responses were combined or coded into one category; "no opinion" or undecided were left as one category; and "oppose" or "strongly oppose" were combined into one category. This decision of three groupings was justified because of the few number of respondents who expressed opinions of opposition or strong opposition toward conservation programs, governmental agencies and/or private sector organizations. Furthermore, collapsing the responses from five into three categories strengthened the researcher's confidence in those statistical tests of significance which were run.

It must be noted that some researchers might regard the use of statistical tests of significance and tests for correlation as being limited with such a small number of respondents (152), especially when their responses are divided into additional subcategories for cross tabulation and statistical tests. Chi square, Pearson's R, and occasionally a few other statistical tests were calculated for tests of significance and correlations for each cross tabulation. When test for significance result in a .05 confidence level, the results are presented following the appropriate table. Tests which were not significant are not presented. In several cases indexes and scales were constructed by grouping responses in similar categories. Explanations on how indexes were constructed will be described as results are presented.

Support for and Participation in Conservation Practices and Programs

Data in this section presents results for cross tabulations on support for and participation in conservation practices with concentration on respondents' demographic, socio-economic characteristics, and other variables. Table 46 presents the cross tabulations between the three sample types based on number of acres owned (small, 0 - 39; medium, 40 - 112; and large, 120 or more), and level of support for a number of conservation practices.

Level of support for conservation practices was obtained by forming an index for "Level of Support for Conservation Issues" by developing a total score for each respondent to the six conservation issues which were presented earlier in Table 36. To develop the index or scale, scores were determined and aggregated for each respondent as follows: "strongly oppose and oppose" were scored as "1"; "no opinion" was scored as "2"; and, "support or strongly support" were scored as "3". After determining the aggregate score for each respondent, three categories of support for this index were derived as follows: "no to low support" respondent scores ranged from 6 through 11; the range for "low support to no opinion" was 12 through 13; and "high support" ranged from 14 through 18.

While results presented in Table 46 are not statistically significant, the tabulation reveals that level of support by landholders for conservation increases as number of acres owned increases and that lack of support decreases with acres owned. *Fifty-nine percent of the landholders with more than 120 acres fall into the "high support" category.* Tests for significance were influenced by the fact that so few landholders (only 15) with fewer than 39 acres responded to the survey, while 81 landholders with 120 or more acres did. Nevertheless, data in Table 46 are useful and revealing.

Table 46: Crosstabulation of support for conservation issues with the respondents' by number of acres owned in the Lower Yazoo Basin counties.

		Number of acres owned in Lower Yazoo Basin counties			
		Low: 39 or fewer acres	Medium: 40-112 acres	High 120 or more acres	Total
Index of support for conservation issues	no to low support	1	2	15	1
		6.7%	8.3%	18.5%	15 0
	low support to no opinion	5	5	18	2
		33.3%	20.8%	22.2%	23.3
	High support	9	17	48	7
		60.0%	70.8%	59.3%	61.7
Total		15	24	81	12
		100.0%	100.0%	100.0%	100 0

Table 47: Crosstabulation of index of support for conservation issues with farmers/non farmers.

		Do you farm?		
		no	yes	Total
Index of support for conservation issues	no to low support	12	6	18
		16.2%	12.0%	14.5%
	low support to no opinion	23	6	29
		31.1%	12.0%	23.4%
	high support	39	38	77
		52.7%	76.0%	62.1%
Total		74	50	124
		100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp Sig (2-sided)
Pearson Chi-Square	7.619[a.]	2	.022
N of Valid Cases	124		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 7.26.

Data in Table 47 show the relationship between "support for conservation issues" (the same Index presented in Table 46) for 124 respondents who were either "farmers and non-farmers." Note that the data in this table are more symmetrical or less skewed — there are usable data from 74 non-farmers and 50 farmers. It is clear that stronger levels of support for conservation issues exist among farmers than respondents who are not farmers, with 76% of the farmers being in the high support category. As revealed in the boxes following Table 47, statistical tests for significance and correlations Chi-Square are significant beyond the .05 confidence level.

Data in Table 48 present cross tabulations on the index which measures level of support for conservation issues "support for conservation issues" (the same Index presented in Table 46 and 47) by whether the respondent is male or female. Note that there were 121 usable files, with 33 females and 88 males. Data analysis reveal that more males tended to be more supportive of conservation issues than females and the Chi-Square test was significant at the .021 level.

Table 48: Crosstabulation of support for conservation issues with male or female.

		Are you male or female?		
		female	male	Total
Level of support for conservation issues	no to low support	3	14	17
		9.1%	15 9%	14.0%
	low support to no opinion	13	14	27
		39.4%	15 9%	22.3%
	high support	17	60	77
		51.5%	68.2%	63.6%
Total		33	88	121
		100 0%	100 0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.774[a]	2	.021
N of Valid Cases	121		

a. 1 cells (16.7%) have expected count less than 5. The minimum expected count is 4.64.

Table 49: Crosstabulation of support for conservation issues with respondents' education.

		Respondents' Education				
		high school or less	some college	college graduate	Graduate school degree or experience	Total
Level of support for conservation issues	no to low support	4	3	8	3	18
		14.8%	10.3%	22.2%	11.1%	15.1%
	low support to no opinion	10	6	3	7	26
		37.0%	20.7%	8.3%	25.9%	21 8%
	high support	13	20	25	17	75
		48.1%	69.0%	69.4%	63 0%	63.0%
Total		27	29	36	27	119
		100.0%	100.0%	100.0%	100.0%	100 0%

Data presented in Table 49 show cross tabulations between "support for conservation issues" and level of education. As has been reported in each of the above descriptions, there is high support for conservation issues, and the opinions tend to be skewed so heavily in the positive direction that they do not appear to be influenced by level of respondents' education. For example, one can note in the totals for the bottom row of Table 49 that the number of respondents for each of the five levels of education ranges from 27 to no more than 36, thus there are no noteworthy directional trends. *It appears that all respondents in the LYB Project Area tend to be very supportive of conservation issues whether they are highly educated or not, and*

this finding is statistically different from the results found in most studies of attitudes toward conservation.

Cross tabulations and tests for statistical significance were calculated on the Index of Support for Conservation Issues and age of respondents. Frequency distributions for age were reported earlier in Table 12, where it was noted that respondents tended to be older, with no one being less than 29 years of age. While Chi-Square tests were not statistically significant, Pearson's R for correlation was significant at the .01 level of confidence. Perhaps this accounts for the fact that among the older group, only 47.6 percent were "highly supportive of conservation issues." Conversely, one should note that the percent of respondents (76.7%) who are between 29 and 49 years of age and sixty-eight percent of the persons in the 50 -64 years of age group differed slightly — they were "highly supportive of conservation issues." Furthermore, persons more than 65 were twice as likely (21.4% versus 9.3%) than the younger group to fall in the "no to low support" category. Fewer than 15 percent of the respondents for all three age categories were in the "no to low support" category.

Table 50: Crosstabulation of support for conservation issues with respondents' age.

		Age of respondent			
		29-49	50-64	65 and above	Total
Level of support for conservation issues	no to low support	4	5	9	18
		9 3%	14 3%	21.4%	15.0%
	low support to no opinion	6	6	13	25
		14 0%	17.1%	31 0%	20 8%
	high support	33	24	20	77
		76 7%	68 6%	47.6%	64.2%
Total		43	35	42	120
		100 0%	100 0%	100.0%	100.0%

Correlation

	Value	Approx. Sig
Pearson's R	- 234	.010
N of Valid Cases	120	

Cross tabulations and tests for statistical significance were calculated on the Index of Support for Conservation Issues and respondents' ranges of household income. Results are presented in Table 51. Frequency distributions for income were presented earlier in Table 13. To facilitate cross tabulations, categories of income were collapsed from ten to three groupings, as follows: less than $45,000, $45,000 to $74,999, and more than $75,000. It was noted earlier that the number of households with low levels of income is much fewer than the population in the LYB project area. The number of home owners is higher too. Thus, data are influenced by the high number of respondents who are large landholders, highly educated, and who have high levels of household income. One should note, however, that this is a study of land holders, persons who have the authority and power to make land tenure decisions. Thus, for purpose of this study, their opinions are likely to be very useful.

Statistical tests are not significant and cross tabulations on these two variables do not reveal insights which are different from results reported above. A majority of the persons in all three household income groups are in the "high support" category of conservation issues, as was the case with all educational levels. Also, fewer than 12.6 percent of the respondents were among the "no to low support" category.

Table 51: Crosstabulation of support for conservation issues with respondents' income.

		Income			
		less than $45,000	$45,000 to $74,999	more than $75,000	Total
Level of support for conservation issues	no to low support	4	4	3	11
		16.0%	13 8%	9 1%	12 6%
	low support to no opinion	6	7	5	18
		24 0%	24 1%	15 2%	20 7%
	high support	15	18	25	58
		60.0%	62 1%	75 8%	66 7%
Total		25	29	33	87
		100 0%	100.0%	100 0%	100 0%

Data presented in Table 52 show cross tabulations between the Index of Support for Conservation Issues and the "Index of Total Participation in Conservation Programs." The Index of Total Participation in Conservation Programs was constructed using the 10 items presented in Table 38. The index was derived by scoring participation in each practice as "1" and no

participation as "0." Then using the same methods that were used to construct the Index of Support for Conservation Issues, the respondents were divided into three categories. No participation was defined as a score of 0, low to medium participation was a score of 1 - 3, and medium to high participation in conservation programs was a score of 4 - 6.

Data analysis from the cross tabulation (see Table 52) reveal that frequency and level of participation in conservation programs is low and that statistical tests are not significant. While there were 125 persons who responded to the questions in these two indexes, only 16 respondents appeared in the top two levels of participation.

Table 52: Crosstabulation of support for conservation issues with respondents' total participation conservation cost/share programs.

		Total participation in conservation cost/share programs			
		no participation in conservation cost/share programs	low to medium participation in conservation cost/share programs	medium to high participation in conservation cost/share programs	Total
Level of support for conservation issues	no to low support	15	2	1	18
		13 8%	25 0%	12 5%	14 4%
	low support to no opinion	26		3	29
		23 9%		37 5%	23 2%
	high support	68	6	4	78
		62 4%	75 0%	50 0%	62 4%
Total		109	8	8	125
		100 0%	100 0%	100 0%	100.0%

Cross tabulations and tests for statistical significance were calculated between the "Index of Participation in Conservation Programs" (the same Index of Participation that was presented in Table 52) and the County where the respondents owned land (see Table 53). The results are not statistically significant and the statistical trends among the six counties are similar. By far, a large majority of the 139 respondents whose results were usable reported that they do not participate in conservation programs. However, one must that while the data for this cross tabulation include 139 useable cases, and only 58 of all 152 respondents reported that they were farmers.

Table 53: Crosstabulation of total participation in conservation cost/share programs by county when land is owned.

		County						
		Humphreys	Issaquena	Sharkey	Yazoo	Warren	Washington	Total
Level of participation in conservation cost/share programs	no participation	13	23	27	20	24	17	124
		86.7%	88.5%	93.1%	90.9%	88.9%	85.0%	89.2%
	low to medium	1		1	1	2	1	6
		6.7%		3.4%	4.5%	7.4%	5.0%	4.3%
	medium to high	1	3	1	1	1	2	9
		6.7%	11.5%	3.4%	4.5%	3.7%	10.0%	6.5%
Total		15	26	29	22	27	20	139
		100.0%	100.0%	100.0%	100.0%	100 0%	100.0%	100.0%

Data presented in Table 54 present results from cross tabulations between two indexes: "Level of Support for Conservation Issues," and "Level of Participation in Conservation Practices **WITHOUT** Outside Financial Support." Table 39, which was presented in an earlier section, list the eleven conservation practices which were used to derive this index and presents the frequency distributions for each practice. The same tabulation and aggregation methods were used to calculate independent scores for each respondent. This "Index on Level of Participation in Conservation Practices **WITHOUT** Outside Financial Support" was created because of the high number of respondents who reported that they were using conservation practices without any outside financial support. Score categories were aggregated as follows: low was 1 - 3, medium was 4 - 6, and high was 7 - 11. Note that data from only 61 respondents were available for the items in the two indexes.

While there is high support for conservation issues, it is not matched by high use of conservation practices without outside financial support. Only five landholders had high level of participation in conservation practices without outside financial support. It appears that most respondents were likely to use only one or two practices without outside support. Statistical tests between the two variables were not significant.

Table 54: Crosstabulation of support for conservation issues with respondents' total participation conservation practices in which respondent did not receive any outside financial support

		Total participation in conservation practice in which respondent did not receive any outside financial support			
		low participation	medium participation	high participation	Total
Level of support for conservation issues	no to low support	4	5		9
		12 9%	21 7%		14 8%
	low support to no opinion	7		2	9
		22 6%		28.6%	14.8%
	high support	20	18	5	43
		64 5%	78.3%	71.4%	70.5%
Total		31	23	7	61
		100 0%	100.0%	100.0%	100 0%

Cross tabulations were calculated between the "Index for Level of Support for Conservation Issues" and respondents' "Opinions about the Quality of the Environment in their County." Data presented earlier in Table 40 indicate that many respondents tended to believe that the environment

had either improved or remained the same. Few indicated that the quality of the environment had gotten worse. Data in Table 55 indicate that opinions of respondents on both of these indexes lean toward a positive direction. However, the relationship is not statistically significant. Forty-three of the seventy respondents who have high support for conservation issues believe that the environment has either improved or stayed the same over the last 10 years. Again, the few number of responses in the first column limits the usefulness of statistical tests for significance.

Table 55: Crosstabulation of support for conservation issues with respondents' opinions of local environment.

		Opinions of the local environment in last 10 yrs			
		have gotten worse	have stayed the same	have improved	Total
Level of support for conservation issues	no to low support		6	4	10
			16.7%	13.8%	14.3%
	low support to no opinion	1	7	5	13
		20.0%	19.4%	17.2%	18.6%
	high support	4	23	20	47
		80.0%	63.9%	69.0%	67 1%
Total		5	36	29	70
		100.0%	100.0%	100.0%	100 0%

Data presented in Table 56 show results from cross tabulations for 147 respondents between the Index on Participation in Conservation programs and the number of acres owned — the three categories that were used for sample type. While results are not statistically significant, as expected the majority of the respondents report that they do not participate in conservation practices. *Nineteen useable cases reported that they do not use any of the conservation practices.*

Table 56: Crosstabulation of total participation in conservation cost/share programs with the number of acres owned in Lower Yazoo Basin counties.

		Number of acres owned in Lower Yazoo Basin counties			
		Low. 39 or fewer acres	Medium 40-112 acres	High 120 or more acres	Total
Total participation in conservation cost/share programs	no participation	19	27	82	128
		100 0%	90 0%	83.7%	87 1%
	low to medium		2	7	9
			6 7%	7 1%	6 1%
	medium to high		1	9	10
			3 3%	9 2%	6.8%
Total		19	30	98	147
		100 0%	100 0%	100 0%	100.0%

Data presented in Table 57 show cross tabulations between use of conservation practices and whether or not the respondents are farmers. All 59 of the farmers appeared in the 145 usable cases, with 86 of the respondents not being farmers. While the total number of farmers reporting the use of conservation programs is small (only 13), farmers are twice as likely as landholders who are not farmers to use conservation programs — 10.2% versus 3.5%. Chi-Square test was not significant,

Table 57: Crosstabulation of total participation in conservation cost/share programs with farmers and non farmers.

		Do you farm?		
		no	yes	Total
Total participation in conservation cost/share programs	no participation	80	47	127
		93 0%	79 7%	87.6%
	low to medium	3	6	9
		3 5%	10.2%	6.2%
	medium to high	3	6	9
		3 5%	10.2%	6.2%
Total		86	59	145
		100 0%	100 0%	100.0%

Correlation

	Value	Approx. Sig
Pearson's R	188	024
N of Valid Cases	145	

but Pearson's R value was .188 and significant at the .024 level.

As was indicated in Table 33 and described earlier, the survey obtained information on the types and number of private organizations to which landholders belonged. An "Index of Total Private Organizational Involvement" was created and three categories of participation in private organizations were established: none to low, medium, and high. Cross tabulations were run between participation in conservation programs and the number of private organizations to which respondents belong. The notion was that participation in private organizations which support conservation goals and use of conservation practices would be related The cross tabulations which follow reveal a statistical significance, but the relationship is negative because of the high number of respondents (62 out of 81 cases) who did not participate in private organizations or in conservation cost-share programs.

Table 58: Crosstabulation of participation in conservation cost/share programs with organizatioN involvement.

		Private organizational involvement			
		no to low involvement	medium involvement	high involvement	Total
Total participation in conservation cost/share programs	no participation	62	8	1	71
		91.2%	80.0%	33 3%	87.7%
	low to medium	2		1	3
		2.9%		33 3%	3 7%
	medium to high	4	2	1	7
		5 9%	20 0%	33 3%	8 6%
Total		68	10	3	81
		100 0%	100.0%	100.0%	100 0%

Chi-Square Tests

	Value	df	Asymp Sig. (2-sided)
Pearson Chi-Square	12.970[a]	4	.011
N of Valid Cases	81		

[a] 6 cells (66.7%) have expected count less than 5. The minimum expected count is .11.

Correlation

	Value	Approx Sig.
Pearson's R	.292	008
N of Valid Cases	81	

Data which follow in Table 59 show cross tabulations between the Index of Participation in Conservation Programs and an index that is introduced here for the first time - "Opinions or Support for Private Organizations." To develop the index or scale, scores were determined on each of eight private organizations as follows: "strongly oppose" or "oppose" were scored as "1"; "no opinion" was scored as "2"; and, "support" or "strongly support" were scored as "3". After determining the aggregate score for each respondent, three categories of support for the "Index of Support for Private Organizations" were established as follows: no support 12 - 15; no opinion to low support 16 - 19, and support to high support 20 - 26.

Again, the notion was that support for conservation programs would be positively related to opinions toward or support for private organizations which support conservation efforts. This was not the case. Data in Table 59 are not statistically significant, primarily because of the large number of "no opinion" responses and the lack of participation in conservation programs. Only 14 of the 93 respondent cases in this situation participated in conservation practices.

Table 59: Crosstabulation of participation in conservation cost/share programs with respondents' support for private organizations.

		Support for private organizations			
		no support	no opinion to low support	support to high support	Total
Total participation in conservation cost/share programs	no participatio	3	54	22	79
		75.0%	88 5%	78 6%	84 9%
	low to medium		2	3	5
			3 3%	10 7%	5.4%
	medium to high	1	5	3	9
		25 0%	8 2%	10 7%	9 7%
Total		4	61	28	93
		100.0%	100 0%	100 0%	100.0%

It was noted earlier (see Table 39) that a number of landholders who used conservation practices reported that they did not receive outside support to help underwrite the cost associated with the practice. Thus, cross tabulations were calculated between the use of cost/share conservation practices and whether or not respondents received outside support to help underwrite the costs. The three categories in the Index for Use of Conservation Practices **Without Outside Support** were used in these calculations. Statistical tests were not significant, when cross tabulations and statistical analysis were calculated among the two indexes (see Table 60). Further, only two respondents who used conservation practices **without outside support** had a high level of participation in conservation cost share programs and eight had no participation in conservation cost/share programs. To illustrate the situation more clearly, 58 or 79.5 % of the 73 respondents did not participate in cost/share programs for which financial support might be available. (See earlier section on opinions toward conservation issues and use of conservation practices without outside financial support.)

Table 60: Crosstabulation of participation in conservation cost/share programs with participation in conservation practices in which respondent did not receive any outside financial support.

		Participation in conservation practices in which respondent did not receive any outside financial support			
		low participation	medium participation	high participation	Total
Participation in conservation cost/share programs	no participation	31	19	8	58
		81.6%	76 0%	80 0%	79 5%
	low to medium	2	4		6
		5.3%	16 0%		8 2%
	medium to high	5	2	2	9
		13 2%	8 0%	20.0%	12 3%
Total		38	25	10	73
		100.0%	100.0%	100 0%	100 0%

As was mentioned earlier, the survey asked respondents' opinions regarding the quality of the environment in the county where land was owned. Data presented in Table 61 present cross tabulations between participation in conservation programs and opinions about the quality of the environment. Statistical test for Chi-Square is significant at the .048 level, with most of the respondents believing that the quality of the environment had improved tending not to participate in conservation programs.

Table 61: Crosstabulation of participation in conservation programs with respondent opinions of the local environment.

		Opinions of the local environment in last 10 yrs			
		have gotten worse	have stayed the same	have improved	Total
Participation in conservation cost/share program	no participation	2	34	31	67
		40.0%	82.9%	86.1%	81.7%
	low to medium	2	2	2	6
		40.0%	4 9%	5.6%	7.3%
	medium to high	1	5	3	9
		20 0%	12.2%	8.3%	11.0%
Total		5	41	36	82
		100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp Sig (2-sided)
Pearson Chi-Square	9.598[a]	4	.048
N of Valid Cases	82		

a. 7 cells (77.8%) have expected count less than 5 The minimum expected count is 37

Cross tabulations and statistical tests of significance were calculated for farmer, non-farmer participation in conservation programs. Data presented in Table 62 reveal no significance; however, the percentage and number of farmers who fall in the medium and high rage of participation of conservation programs without financial support is much higher than the numbers for respondents who are not farmers.

Table 62: Crosstabulation of participation in conservation practices with no outside financial support with farmer and non farmer.

		Do you farm?		
		no	yes	Total
Participation in conservation practices (no financial support)	low participation	15	23	38
		68.2%	46.9%	53.5%
	medium participation	5	18	23
		22.7%	36.7%	32.4%
	high participation	2	8	10
		9.1%	16.3%	14.1%
Total		22	49	71
		100.0%	100.0%	100.0%

Data presented in Table 63 were derived from cross tabulations of two indexes of behavior, one of the strongest types of measurements that can be made. The Index of Participation in Conservation Programs **Without** Outside Financial Support and the "Index of Organizational Involvement" (membership) both measure behavior of respondents. For this Index of Organizational Involvement, low levels were 0 - 2, medium scores were 2 - 4, and high levels were 5 - 8. Further, statistical tests and correlations are significant, but the relationship is negative, e.g. most of the cases fall into no levels participation in conservation and no to low involvement in private organizations.

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	15.815[a]	4	.003
N of Valid Cases	46		

a. 7 cells (77.8%) have expected count less than 5. The minimum expected count is 39

Table 63: Crosstabulation of participation in conservation practices with no outside financial support with private organizational involvement.

		Private organizational involvement			
		no to low involvement	medium involvement	high involvement	Total
Participation in conservation practice (no financial support)	low participation	21	2		23
		61.8%	22.2%		50.0%
	medium participation	11	3	3	17
		32.4%	33 3%	100.0%	37.0%
	high participation	2	4		6
		5.9%	44 4%		13 0%
Total		34	9	3	46
		100.0%	100 0%	100.0%	100.0%

Correlation

	Value	Approx. Sig
Pearson's R	394	007
N of Valid Cases	46	

Another measure was to test for the relationship between attitudes and behavior, e.g. level of support or opinions toward private organizations and participation in conservation practices without outside financial support. Using the two indexes which have been described above, cross tabulations

Table 64: Crosstabulation of participation in conservation practices (with no outside financial support) with support of private organizations.

		Support of private organizations			
		no support	no opinion	support to high support	Total
Participation in conservation practice (no financial support)	low participation	1	16	7	24
		33.3%	57.1%	43.8%	51.1%
	medium participation	1	7	8	16
		33.3%	25.0%	50.0%	34.0%
	high participation	1	5	1	7
		33.3%	17.9%	6.3%	14.9%
Total		3	28	16	47
		100.0%	100.0%	100.0%	100.0%

and statistical analysis were calculated. Results are presented in Table 64. As in Table 63, most respondents fall into the low participation row and the fewest number were in the high participation row. Thus, tests are not significant.

Table 65: Crosstabulation of participation in conservation practices with no outside financial support with respondents' opinions of the local environment.

		Opinions of the local environment in last 10 yrs			
		have gotten worse	have stayed the same	have improved	Total
Participation in conservation practices (no financial support)	low participation	4	13	14	31
		80 0%	59.1%	51 9%	57 4%
	medium participation	1	8	8	17
		20 0%	36.4%	29.6%	31.5%
	high participation		1	5	6
			4.5%	18.5%	11.1%
Total		5	22	27	54
		100.0%	100.0%	100.0%	100.0%

Proceeding to seek additional information which might help to explain relationships among variables, cross tabulations were calculated between the "Index of Participation in Conservation Practices Without Outside Financial Support" and the "Index of Opinions Toward the Local Environment." Results presented in Table 65 indicate that there are only 54 respondents with

complete responses on these two indexes. However, statistical tests are not significant. High levels of participation remain low, as has been the case for previous analysis.

Data presented in Table 66 show cross tabulations between opinions toward the quality of the environment in the county where the land is owned and the number of acres owned, or the three sample types. While results from this cross tabulation are not statistically significant, an overwhelming number of the respondents who owned large acreage indicated that the quality of the environment has either remained the same (43.8%) or improved (50%) in the past 10 years. No respondent who was a small acreage owner reported that the quality of the environment had gotten worse.

Table 66: Crosstabulation of respondents' opinions of the local environment over the past 10 years with the number of acres owned in Lower Yazoo Basin counties.

		Number of acres owned in Lower Yazoo Basin counties			
		Low: 39 or fewer acres	Medium· 40-112 acres	High 120 or more acres	Total
Opinions of the local environment	Have gotten worse		1	4	5
			11.1%	6 3%	6 3%
	Have stayed the same	6	5	28	39
		85.7%	55.6%	43.8%	48.8%
	Have improved	1	3	32	36
		14.3%	33 3%	50 0%	45 0%
Total		7	9	64	80
		100 0%	100.0%	100.0%	100 0%

Data presented in Table 67 include cross tabulations for farmers and non-farmers on their opinions about the quality of the environment. Again, only five respondents believed that the quality of the environment had gotten worse, three non farmers and two farmers. Distributions between the non-farmer and farmer respondents on if the environment had stayed the same or gotten better were almost identical. See Table 67, which follows.

Table 67: Crosstabulation of respondents' opinions of the local environment over the past 10 years with farmers and non farmers.

		Do you farm?		
		no	yes	Total
Opinions of the local environment	Have gotten worse	3	2	5
		7.7%	5.0%	6.3%
	Have stayed the same	21	20	41
		53.8%	50.0%	51.9%
	Have improved	15	18	33
		38.5%	45.0%	41.8%
Total		39	40	79
		100.0%	100.0%	100.0%

Additional cross tabulations regarding opinions toward the quality of the environment were run with level of education and results are presented in Table 68 and reveal that there were 80 usable cases. As has been the case with every cross tabulation on the quality of the environment, no statistical relationship was found. Persons with high school or less education were most likely to believe that the quality of the environment had improved, and the highest number of observations on the "quality of the environment remaining the same for the last 10 years" was by persons who had a college degree or a graduate degree. See Table 68, which follows.

Table 68: Crosstabulation of respondents' opinions of the local environment over the past 10 years with level of education.

		Level of education of respondent				
		high school or less	some college	college graduate	Graduate school degree or experience	Total
Opinions of the local environment	Have gotten worse	1		3	1	5
		5.3%		11.5%	4 8%	6 3%
	Have stayed the same	8	7	13	11	39
		42 1%	50.0%	50.0%	52 4%	48.8%
	Have improved	10	7	10	9	36
		52.6%	50 0%	38 5%	42 9%	45.0%
Total		19	14	26	21	80
		100.0%	100.0%	100.0%	100 0%	100 0%

Cross tabulations were calculated for age of respondents and quality of the environment, without finding any statistically significant differences of opinion among age categories. However, the percentage of younger respondents who reported that the environment had remained the same or improved was higher that the responses among older persons. See Table 69, which follows.

Table 69: Crosstabulation of respondents' opinions of the local environment over the past 10 years with age.

		Years of age of respondent			
		29-49	50-64	65 and above	Total
Opinions of the local environment	Have gotten worse		3	2	5
			11.5%	9.5%	6.5%
	Have stayed the same	15	11	11	37
		50.0%	42.3%	52.4%	48.1%
	Have improved	15	12	8	35
		50.0%	46.2%	38.1%	45.5%
Total		30	26	21	77
		100.0%	100.0%	100.0%	100 0%

Correlation

	Value	Approx Sig.
Pearson's R	.312	.015
N of Valid Cases	60	

When cross tabulations were run for level of household income and opinions about the quality of the environment, statistical correlation was found for Pearson's R at the .015 level. Among the 28 usable cases in the $75,000 or more category, none reported that the quality of the environment had gotten worse. Conversely, among the respondents in the less than $45,000 category, 68.2% believed that the quality of the environment had remained the same or gotten worse. See Table 70, which follows.

Support for Reforestation Among Landholders

A major purpose of this study was to gather information about opinions toward reforestation and the degree of support among landholders for reforestation of wetlands and marginally productive agricultural land. Data presented in Table 19 indicated that 52 landholders owned land that had been declared as wetlands by the National Resource Conservation Service (formerly SCS). In this section, the results from cross tabulations and statistical tests for significance are presented in relation to the landholder's ownership of wetlands and whether respondents were leasing out lands owned for recreational purposes, the desire to reforest lands owned, opinions on five of the separate items in the Index of Opinion Toward Conservation Issues, age, place of residence and number of acres of wetlands owned. Several relationships of significance and high interest emerge.

Data in Table 71 reveal that the are 41 usable cases for cross tabulation. Of the 17 respondents who appeared in this table, only six who owned indicated that they leasing out this wetland for recreational purposes. These data suggest that little income is being generated among these landholders from leasing wetlands for recreational purposes in the LYB project area. The test for Chi-Square was not significant.

Table 71: Crosstabulation for ownership of land that has been designated as wetlands by the NRCS with are you currently leasing out land owned for recreational purposes.

		Leases Out Land for Recreation		
		No	Yes	Total
Owns Wetlands	no	21	6	27
		65.6%	50.0%	61.4%
	yes	11	6	17
		34.4%	50.0%	38.6%
Total		32	12	44
		100.0%	100.0%	100.0%

Data in Table 72 present cross tabulations between opinions toward the reforestation of wetland and marginally productive agricultural lands by whether or not they owned wetlands Of the 152 respondents, 136 were eligible for analysis for these two variables. Statistical tests reveal a strong relationship between support for reforestation, even though 88 respondents indicated that they did not own wetlands. Of the 136 eligible respondents, 99 supported reforestation of marginally productive agricultural land. Worth noting is the fact that none of the respondents who owned wetlands opposed the reforestation of marginally productive agricultural lands Statistical tests are significant at the .032 level of confidence and a strong correlation exist between these two variables. See data and results presented in Table 72 and the two boxes which follow it.

Table 72 . Cross tabulations for opinion about the ownership of wetlands with opinions about reforestation of marginally productive agricultural lands

Ownership of Wetlands	Opinions about reforestation of marginally productive agric lands			
	oppose	no opinion	support	Totals
No	5	25	58	88
Yes		7	41	48
Totals	5	32	99	136

Chi-Square Tests

	Value	df	Asymp. Sig (2-tailed)
Pearson Chi-Square	6.874[a]	2	.032
Likelihood Ratio	8.666	2	.013
Linear-by-Linear Association	6.817	1	.009
N of Valid Cases	136		

a. 2 cells (33.3%) have expressed count less than 5. The minimum expected count is 1.76.

Symmetric Measures

		Value	Asymp. Std. Error	Approx. T	Approx Sig
Other	Pearson's R	.225	.065	2.669	.009[a]
	Spearrman Correlation	217	073	2 574	.011[a]
Number valid cases		136			

a. Based on normal approximation

Data presented in Table 73 were derived from cross tabulation of 131 eligible cases who responded to the two variables, "opinion about participating in the Wetlands Reserve Program" and "a desire to reforest land that they owned." Again, support for participating in the WRP program was high and 33 of the respondents who owned wetland expressed support for participating in the WRP program. No opinion responses were much higher among those respondents who did not desire to reforest land that they owned. Only two respondents who owned forest lands opposed participation in the WRP program, while only seven of the 86 who reported that they "did not desire to reforest land they owned" opposed the WRP program.

These data indicate that the Nature Conservancy and other organizations such as the U. S. Forest Service and the Mississippi Department of Forestry have and opportunity to expand their

program in the LYB project area. Statistical test for significance and correlation are positive, at the .002 and .001 levels. See results which are presented in Table 73 and the two boxes after it.

Table 73. Cross tabulation of opinion about participating in Wetlands Reserve Program with desire to reforest land owned

Desires to reforest land owned	Opinion about participating in Wetland Reserve Program			
	oppose	no opinion	support	Total
No	7	44	35	86
Yes	2	10	33	45
Total	9	54	68	131

Chi-Square Tests

	Value	df	Asymp. Sig (2-tailed)
Pearson Chi-Square	12.651[a]	2	.002
Likelihood Ratio	13 061	2	.001
Linear-by-Linear Association	10 052	1	.002
N of Valid Cases	131		

a. 2 cells (33 3%) have expressed count less than 5. The minimum expected count is 1 76

Symmetric Measures

		Value	Asymp Std. Error	Approx T	Approx Sig
Other	Pearson's R	278	081	3 288	001[a]
	Spearman Correlation	298	081	3 542	001[a]
N of valid cases		131			

a. Based on normal approximation

Data presented in Table 74 contain the results from cross tabulation of the 134 eligible respondents who desired to reforest land they owned compared with opinions about a specific statement concerning whether respondents supported or opposed a policy which would allow state and federal agencies to acquire land for reforestation. More specific questions about the acquisition of land for reforestation follow in additional cross tabulations.

Forty percent or 54 respondents supported and 33 opposed federal and state agencies acquiring land for reforestation purposes. Respondents who indicated "no opinion" comprised more than one-third of the cases, with 36 or 41% of the respondents who did not desire to reforest land they owned stating that they held "no opinion" on this issue. The percentage of all respondents favoring action by state and federal agencies is slightly higher (50%) among landholders who desire to reforest land than it is for those who do not desire to reforest land (34%). Results indicate that the number of "oppose" and "no opinion" is higher among persons who do not desire to forest land that they own than it is among respondents who desire to reforest land owned.

Again, data suggest that there is a distinct educational and programmatic opportunity in reforestation for The Nature Conservancy, the U. S. Forest Service, the Mississippi Department of Forestry, Delta Wildlife Foundation, and other organizations. While the data in this table are interesting and revealing, statistical tests for differences and correlations approached significance but were not.

Table 74. Cross tabulation for respondents' opinion about state or federal agencies acquiring land for reforestation with ownership of land that may or may not desire to reforest

Desires to reforest land owned	Opinion about state and federal agencies acquiring land for reforestation			
	oppose	no opinion	support	Total
NO	21	36	30	87
Yes	12	11	24	47
Total	33	47	54	134

Data in Table 75 present cross tabulations for respondents' opinions about the state acquiring land from willing sellers for reforestation when that land is adjacent to state-operated wildlife management areas with the desire to reforest land owned. While statistical tests were not significant, frequency of opposition and no opinions were higher among respondents who did not desire to reforest land they owned. Also, 68% or 32 respondents who desired to reforest land they owned supported action by the state to acquire land for reforestation, while only 56% or 49 of the respondents who did not desire to reforest land supported the state acquiring land for reforestation. Only four respondents who desired to reforest land they owned opposed acquisition of land for reforestation by the state, but three times as many (12) who did not desire to reforest land they owned opposed such action.

Table 75. Cross tabulation for respondents' opinions about the State acquiring land adjacent to state-operated wild life management areas from willing sellers for reforestation with desire to reforest land owned

Desire to Reforest Land	Opinions about state acquiring land adjacent to state-operated wild life management areas from willing sellers for reforestation			
	oppose	no opinion	support	Total
No	12	27	49	88
Yes	4	11	32	47
Total	16	38	81	135

Data presented in Table 76, which follows, show cross tabulations for respondents's opinion about the Federal Government acquiring land adjacent to federally-operated National Wildlife Refuges from willing sellers for reforestation with the desire of respondents to reforest land that they owned. Distributions in Table 76 vary only slightly from the previous one. Respondents appear to hold essentially the same opinion about state or federal government acquiring land adjacent to wild life management areas and/or wild refuges from willing sellers. The majority (57%) of the 132 respondents favor such action, but the results are not statistically significant, and frequencies in both of the "no opinion" response cells are high, with 27 or 30% of the respondents who do not desire to reforest land indicating that they have no opinion on this issue. Opportunities for the development of proactive educational programs seem to abound.

Table 76. Cross tabulation for respondents' opinions about the Federal Government acquiring land when it is adjacent to federally-operated National Wildlife Refuges from willing sellers for reforestation with desire to reforest land owned

Desire to Reforest Land	Opinions about Federal Government acquiring land adjacent to federally-operated National Wildlife Refuges from willing sellers for reforestation			
	oppose	no opinion	support	Total
No	14	27	44	85
Yes	5	10	32	47
Total	19	37	76	132

Data presented in Table 77 were obtained from cross tabulation of the respondents' desire to reforest land that they own with age. As revealed in Table 12, Part One of this report, almost one third of the respondents are 66 or more years of age. The percent of respondents who are more than 66 of age and do not desire to reforest land they own is almost four times greater (73% versus 27% or 34 persons versus 13) than for those who do. Also, the cases in the 50 to 65 year age group who do not desire to reforest land that they own are almost two to one against such action. Among the youngest age group, there are more respondents who desire to reforest land they own. Statistical tests for relationships and differences were not significant.

Table 77. Cross tabulations of ownership that respondents' desire to reforest land owned with years of age

Desires to Reforest Land Owned	Age of Respondents			
	29 to 49 years	50 to 65 years	66 years or more	Total
No	25	26	34	85
Yes	19	15	13	47
Total	44	41	47	132

Data present in Table 78 were derived from cross tabulations by the desire to reforest land owned with place of residence. Categories for places of residence were collapsed so comparisons could be made between local landholders and absentee landlords regarding desire to reforest land owned. Data reveal that respondents who live elsewhere in the United States or elsewhere in Mississippi are much less likely to desire to reforest land that they own. Eighteen or 82% of those who live elsewhere in the U. S. reported that they had no desire to reforest land, and 40 or 58% of those who lived outside of the LYB project area, or elsewhere in Mississippi, reported that they had no desire to reforest land they owned.

Conversely, when respondents lived in the same county as their land, only 14 or 35% stated that they desired to reforest land they owned. In brief, approximately two thirds of the 84 respondents who did not live in the LYB project area had no desire to reforest land they owned. Among the respondents who desired to reforest land that they owned, the largest number, 29 or 61%, lived elsewhere in Mississippi and only four lived elsewhere in the United States. One wonders if their desires are influenced by the prevalence of timber in "hill" areas of the state. Chi-Square test were significant beyond the .05 level of confidence.

Table 78. Cross tabulations for respondents' desire to reforest land owned by place of residence

Desires to Reforest Land Owned	Place of Residence			
	Same County	Elsewhere in Miss	Elsewhere in U.S	Total
No	26	40	18	84
Yes	14	29	4	47
Total	40	69	22	131

Chi-Square Tests

	Value	df	sig level
Chi-Square	4.136	2	05
N of Valid Cases	131		

Data presented in Table 79, which are divided into two parts, compares the number of respondents who reported that they owned wetlands with those who desire to reforest wetlands with the number of wetland acres owned. Because the number of eligible cases was so small, only 44, and with only 27 owners of wetland indicating that they desire to reforest it, the frequency distributions were not collapsed.

Of note is the fact that two thirds, or 21 of the respondents who owned fewer than nine acres, reported that they desired to reforest the wetland they owned. This response may be due to the fact that the types of production agriculture which prevail in the LYB project area are not conducive to small scale acreage. Also, it may be that these holders of small acreage use their lands for recreation and reforestation will benefit wildlife. For all of the remaining cells in parts one and two of the table, no more than one case is observed in any cell. Finally, 61% of the respondents who owned wetland reported that they desired to reforest it. Chi-Square test was not an appropriate tests for this analysis; however, a Pearson's R value of .302 was derived and it is significant at the .046 level of confidence.

Table 79 - Part I. Cross tabulations of ownership of wetlands that respondents' desire to reforest with number acres owned

Desires to Reforest Wetland Owned	Category of Wetland acres owned : 1 - 699					
	1- 9	10 -7 4	75 - 499	500 - 599	600 - 649	650- 999
No	11			1	1	
Yes	21	1	1	1	1	1
Total	32	1	1	2	2	1

Table 79 - Part II. Cross tabulations of ownership of wetlands that respondents' desire to reforest with number acres owned

Desires to Reforest Wetland Owned	Categories of Wetland Acres Owned. 1,000 to 5,000				
	1000 - 4999	1500 - 1999	2000 - 4999	5000 +	Total
No	1	1	1	1	17
Yes	1				27
Total	2	1	1	1	44

Symmetric Measures

		Value	Asymp Std. Error	Approx T	Approx. Sig
Other	Pearson's R	.302	.093	2.051	.046[a]
	Spearman Correlation	.194	.154	1.285	.206[a]
N of valid cases		44			

a. Based on normal approximation

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.925[a]	2	.052
N of Valid Cases	132		

[a] 2 cells (33.3%) have expected count less than 5. The minimum expected count is 1.93.

V. Conclusions

There is overwhelming support for conservation practices and programs and for public organizations among the 152 respondents to the Lower Yazoo Basin Project's survey of ***Opinions and Behaviors of Landholders Regarding Conservation Practices and Programs.*** Support for private organizations lagged behind support for public, especially governmental, organizations and agencies. Support is strongest among younger landholders who own large tracts of land, who earn higher levels of income and among farmers who operate large acreage. The Nature Conservancy, and several other private sector organizations, do not have high levels of identity, memberships or support among most of the landholders. While a 41% response rate to mailed-out questionnaires may not be entirely representative of all landholders in the LYB Project Area, the survey does have considerable scientific validity. If the "drop-off, pick-up method" had been used as was recommended by the consultant, a return rate of more than 90% could have been obtained, and 300 or more cases would have been preferable.

There is strong support for reforestation and other programs to improve the quality of the environment and to improve the habitat for wildlife. Also, the belief prevails that the quality of the environment has improved or at least remained the same during the past 10 years. Interestingly, the opinion among respondents with various levels of education about the quality of the environment does not vary significantly. Respondents who are strongly supportive of public organizations and their conservation practices tend to own larger tracks of land, to have higher levels of income and to have graduated from college.

Many respondents were undecided on numerous issues about the use of conservation practices or participating in formal conservation programs. And, many were not aware of these programs or participating in private organizations such as The Nature Conservancy, or Delta Wildlife Foundation. It appears that private organizations which support programs and practices to improve the quality of the environment face a major marketing and educational challenge. Most landholders simply do not belong to these organizations and were uninformed about their work. Frequently, the respondents indicated that they had "no opinion" about the work of many private and public organizations which focus their efforts primarily in areas related to conservation.

Absentee and older landholders present a challenge to The Nature Conservancy and other private and public organizations. Older and absentee landholders are less concerned about issues related to reforestation and improving the quality of the habitat or environment in the LYB Project Area. Also, only a very few of the landholders receive income from leasing out wetlands for recreation. Landholders less than 50 years of age are much more supportive of reforestation and more likely to participate in conservation practices than persons beyond 66 years of age Also, the questionnaire sought landholder opinion about the role of the state or federal government in acquiring marginally productive agricultural land for reforestation. Younger respondents where much more supportive of intervention by state and federal government than were older respondents. Also, LYB Project Area residents were more supportive of government intervention than were absentee landholders.

Strong support for conservation practices may be undergirded by the fact that many of the landholders are "outdoors people." In addition to the fact that 58 are outdoors often because they are farmers, men and women frequently engaged in hunting, fishing, boating, site seeing, birdwatching, etc. However, males have higher levels of support for conservation programs than females.

Only 58 or slightly more than one-third of the respondents were farmers. This may account for the fact that there was so little participation in conservation programs among the 152 respondents. In fact, there is a negative correlation between participation in cost/share conservation programs and support for private organizations.

Results from this study provide The Nature Conservancy and other private and public organizations concerned about the quality of the habitat for wildlife with two major opportunities and challenges. First, those respondents who are most supportive of conservation practices to improve the quality of the environment tend to be younger, highly educated, have much higher levels of income and operate large acreage. One can safely assume that these landholders could be mobilized to help develop and implement policies which will improve the quality of the habitat in the LYB Project Area. Second, a large number of respondents answered that they had "no opinion" on many issues, and that they had no involvement or participation in many practices related to conservation and/or improving the quality of the environment. The Nature Conservancy and other organizations have the opportunity to develop and implement major marketing and mass communication programs to inform landholders about economic, physical, social and aesthetic benefits from participating in programs and practices which will improve the quality of the environment and benefit wildlife.