

THE UNIVERSITY OF NORTH CAROLINA
WATER RESOURCES RESEARCH INSTITUTE

NORTH CAROLINA STATE UNIVERSITY
at RALEIGH

THE UNIVERSITY OF NORTH CAROLINA
at CHAPEL HILL

124 Riddick Building
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Raleigh, North Carolina, 27607

February 19, 1971

MEMO: To Whom It May Concern

FROM: David H. Howells, Director

SUBJECT: Institute Report No. 47 - "Perception of Water Resource
Information Sources and Educational Needs by Local Officials
and Special Interest Groups"

Of particular interest in this report are the findings that seven out of ten respondents felt the public does not know where to go for answers to water resource problems. Eighty-four percent indicated a need for additional information and eighty-two percent felt that there is not an adequate public education program on water resources in North Carolina. Your attention is called to the summary and conclusions and recommendations on Pages 6-10.

The principal recommendation is that the North Carolina Department of Water and Air Resources should intensify public information and educational programs in water resources. Initial emphasis should be on water pollution control.

There also was an expressed need for more citizen participation in water resource management programs and a recommendation that a deliberate and concerted effort be made to increase citizen involvement. This should be associated with an educational program which would equip citizens to participate more effectively.

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PERCEPTION OF WATER
RESOURCE INFORMATION SOURCES
AND EDUCATIONAL NEEDS
BY
LOCAL OFFICIALS AND SPECIAL INTEREST GROUPS

by

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ABSTRACT

Study is a phase of a more comprehensive research effort on communication and educational techniques in water resource management and deals with perception of water resource information sources and educational needs at the local level. Includes Chairmen of County Boards of Commissioners, City Managers, Officers of League of Women Voters, Presidents of County Wildlife Clubs, Soil and Water Conservation District Supervisors, County Extension Chairmen, and Executive Committee of Conservation Council of North Carolina.

Results show marked deficiencies in public information and education dealing with water resources and will be useful to water resource agencies in assessment and planning of public information and education programs.

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INTRODUCTION

Major pressures placed upon the water resources of the state as a result of expanding industry, increasing agriculture, and accelerated population growth have intensified efforts by state and federal agencies to meet the multiple demands for water resources. Public interest in environmental quality has brought increased awareness of problems without an accompanying knowledge of existing programs and understanding of the public role in water resource decision making.

This study represents one phase of a more inclusive research effort on communication and educational techniques in water resources management. It deals with perception of water resource information sources and educational needs. The results will be useful to water resource agencies in assessment and planning of public information programs. The report presents the results of questionnaires mailed to seven local groups during the summer of 1970. These included the Chairmen of County Boards of Commissioners, City Managers, Officers of the League of Women Voters, Presidents of County Wildlife Clubs, Soil and Water Conservation District Supervisors, County Extension Chairmen of the Agricultural Extension Service, and the Executive Committee of the Conservation Council of North Carolina.

SAMPLE DESCRIPTION

This section briefly describes sample groups and the reasons for their inclusion in the survey.

Chairmen of County Boards of Commissioners

The top elected policy-making and governing group in each county is the County Board of Commissioners. This group was selected because of its interest and responsibility for county-wide programs ranging from soil and water conservation to municipal water supply and sewage disposal. It can be expected to reflect attitudes and knowledge of the rural and urban populations in the context of county government. Questionnaires were mailed to all Chairmen of County Boards of Commissioners.

City Managers

The City Managers of North Carolina were selected to participate in the survey because of their deep interest and concern with a wide range of urban problems. They are involved with programs relating to domestic and industrial waste disposal, water supply, urban planning, flood plain zoning, and other water resource programs. All City Managers listed in the 1970 directory published by the North Carolina League of Municipalities were included in the survey.

The League of Women Voters

The League of Women Voters has for a number of years been a stalwart supporter of land and water conservation, water pollution control, and water resource management. The League has been active in educational efforts relative to water problems and has supported bond referendums geared to improving the quality of this resource. The

League's educational program includes the development of citizen action groups for public participation, seminars, and publication of educational materials. This organization has provided major leadership in support of federal and state water quality improvement and waste treatment legislation. Club Presidents and Chairmen of the Natural Resource Committee were included.

County Wildlife Clubs

Presidents of each County Wildlife Federation in North Carolina were selected because of their interest in promoting the conservation, restoration, management, and proper use of wildlife and other resources in North Carolina. These individuals have a sincere interest in many aspects of water resources and a broad knowledge of people and natural resource conditions in North Carolina.

Soil and Water Conservation District Supervisors

Soil and Water Conservation Districts cover virtually all of North Carolina. There are eighty-eight soil and water conservation districts with 470 District Supervisors. Both rural and urban areas are represented. All of the District Supervisors are members of a state association with similar interests. They have actively supported legislation, research, and other activities in soil and water conservation, water pollution control, and water law.

North Carolina Agricultural Extension Service

The Extension Service is an educational organization actively engaged in providing the latest research information on a wide range of subjects to citizens at the county level. One of its four major areas

of program emphasis is natural resource development. County Extension Chairmen are in a position to markedly influence public understanding and support of water resource planning and management efforts.

The Conservation Council of North Carolina

The purpose of the Conservation Council of North Carolina is to participate in and coordinate local, state, and regional programs for conservation and conservation education. It publicizes and encourages cooperative action on matters related to changes in the natural environment. The Council's nine-man Executive Committee was included in the sample.

ANALYSIS OF QUESTIONNAIRES

A total of 566 (65 percent) usable questionnaires were returned by the seven groups included in the sample. Responses were obtained from each of the state's one hundred counties. The largest number of questionnaires (53 percent) came from the densely populated Piedmont region of the state. The highest percentage return (94 percent) was from the County Extension Chairmen, and the lowest return (51 percent) from the Chairmen of the County Boards of Commissioners.

The sixty-eight City Managers responding were from cities of 1000 to over 100,000 population with a mean population of 15,000.

The mean age for all persons participating in the survey was fifty-one years. Chairmen of County Boards of Commissioners had the highest mean age level of fifty-six, and the lowest was forty-four for the League of Women Voters and the Conservation Council of North Carolina.

Respondents came from a wide range of occupations. Agriculture was reported by 221, public services by 188 and business-related occupations by 90. Nineteen held professional positions, eighteen were housewives, twenty-two were retired or unclassified individuals, and five were in industry.

The questions and responses data are included in the appendix. A summary of findings, conclusions, and recommendations follows.

SUMMARY AND CONCLUSIONS

The major findings related to water resource information sources and educational needs are:

1. Individuals received information on water resources most frequently from the Soil Conservation Service, Agricultural Extension Service, North Carolina Department of Water and Air Resources, National Association of Conservation Districts, North Carolina Wildlife Federation, Army Corps of Engineers, Water Resources Research Institute, and the North Carolina State Board of Health.
2. Faced with water resource problems the individuals would turn for information to the Soil Conservation Service, North Carolina Department of Water and Air Resources, Agricultural Extension Service, State and County Boards of Health and Army Corps of Engineers.
3. Seven out of ten respondents felt that the public does not know where to go for answers to water resource problems.
4. Eighty percent of the individuals in the survey had asked for some information on water resource problems.
5. The media most frequently indicated as a source of water resource information were meetings, newsletters, magazines, bulletins and personal contact.
6. Eighty-four percent of all the respondents indicated a need for additional information.
7. Sixty percent of the leaders perceived that individuals in their counties desired to find ways to improve the total water resources.

8. Seventy-nine percent described the interest in their counties as "concerned but not sure what action to take" or "they need more information."
9. Pollution control and maintaining water quality ranked first as the subject in which respondents needed additional information.
10. Eighty-two percent of the respondents felt that there was not an adequate public education program on water resources in North Carolina. The major findings relating to leader participation in water resource activities were:
 - a. Two-thirds of all the respondents had some opportunity to take part in the decisions regarding water resources.
 - b. Five of the seven groups of leaders felt that there were not adequate opportunities for public participation in water resource planning and management.
 - c. The majority (79 percent) of the respondents from the League of Women Voters, Presidents of Wildlife Clubs, and the Conservation Council of North Carolina felt they did not have opportunities to take part in decision making.
 - d. Over two-thirds of all the respondents reported they had either attended or spoken in public

hearings relating to water management. The frequency and quality of this participation was not measured.

- e. Public hearing topics more frequently given were watershed planning, water resource planning, reservoir planning, pollution, community water systems and supply.
- f. Major sponsors of public hearings were Soil Conservation Service, Soil and Water Conservation Districts, Local Government, Army Corps of Engineers, and Civic Organizations.

The major findings relating to knowledge of the Water Resources Research Institute were:

- a. The Institute's contacts were greatest with City Managers, League of Women Voters, Soil and Water Conservation District Supervisors, and County Extension Chairmen.
- b. Only nine percent of the respondents knew of or utilized research conducted by the Institute.
- c. Ninety-four percent of the respondents would like to be better informed of research sponsored by the Water Resources Research Institute.

RECOMMENDATIONS

The recommendations which follow were formulated on the basis of the findings of this study:

County leaders across the state expressed a firm desire for more information on a broad range of water resource subjects; therefore, it is recommended that the North Carolina Department of Water and Air Resources, the organization charged with ultimate responsibility for the preservation and development of water resources in the best interest of all its citizens, should assume the leadership role in initiating and coordinating a public education program in water resources.

It is further recommended that the State Department of Water and Air Resources examine its own educational efforts and review the efforts of other agencies involved with water resources in the state to encourage intensification of their educational programs. Initial education emphasis should focus on pollution control, maintaining water quality and water resource planning.

This educational emphasis should include as a minimum a variety of publications and audio visuals that would objectively present educational material on water resources for use by the general public, civic groups and organizations, public officials, and others who desire such information. Greater use of mass media, particularly television, radio, and newspapers, should be made to present educational information on subjects relating to water resources.

Leaders expressed the need for more citizen participation in water resources programs in the state; therefore, it is recommended that a deliberate and concerted effort be made to increase citizen involvement. This must be tied to an educational program which would equip citizens to participate more effectively in decision making.

Local leaders expressed a relatively low level of knowledge of the Water Resources Research Institute's research program but did express a strong desire for additional information. As the agency charged with major water resources research responsibilities in the state, the Institute should increase communication with these local user groups.

APPENDIX

Questionnaire and Response Data

SECTION I

1. This survey is being sent to selected members of the following organizations; please check the one in which you are a member.

- County Board of Commissioners
 City or Town Government
 League of Women Voters
 County Wildlife Federation
 Soil and Water Conservation District
 North Carolina Agricultural Extension Service
 Conservation Council of North Carolina

Summary of Questions Mailed and
Returned by Leader Groups

County Leaders	Mailed	Usable surveys returned	Total percent usable returns
Chrmn., Co. Bds. of Comm.	100	51	51
City Managers	96	68	71
League of Women Voters	30	23	77
Pres., County Wildlife Feds.	73	39	53
Soil & Water Conservation District Supervisors	468	283	61
County Extension Chairmen	100	94	94
Exec. Comm., Conservation Council of North Carolina	9	8	89
TOTAL	876	566	65

2. What is the name of your county? _____

Location of Respondents by Regions of the State

County Leaders	Mountains	Piedmont	Coastal Plain	Total
Chrmn., Co. Bds. of Commissioners	9	24	18	51
City Managers	3	41	24	68
League of Women Voters	6	16	1	23
Presidents, County Wildlife Feds.	5	26	8	39
Soil & Water Cons. Dist. Supers.	48	142	93	283
County Extension Chairmen	17	44	33	94
Exec. Comm., Conservation Council of North Carolina	1	6	1	8
TOTAL	89	299	178	566

The 68 City Managers were from cities with the following population ranges:

<u>City Population</u>	<u>No. of City Managers</u>
5,000 and under	26
6,000 to 20,000	28
Greater than 20,000	14
TOTAL	68

The mean city population for all the 68 City Managers was 15,000.

As part of the initial data about the respondents for possible future analysis, their ages were obtained.

3. In what year were you born? 19__

Mean Age of Respondents

County Leaders	Mean Age
Chairmen, County Boards of Commissioners	56
City Managers	Not obtained
League of Women Voters	44
Presidents, County Wildlife Federations	47
Soil & Water Conservation District Supervisors	52
County Extension Chairmen	48
Executive Committee, Conservation Council of N.C.	44
Mean age for all respondents	51

The age range ran from a low of 22 to a high of 88 years of age.

4. What would you consider to be your major occupation? _____

Major Occupation of Respondents

County Leaders	Pub. Serv.	Indus.	Bus.	Agr.	Prof.	House-wife	Other	Total
Chrmn., Co.B. of Com.	7	1	22	9	7		5	51
City Managers	68							68
L. of Women Voters			1		2	18	2	23
Pres., Co.Wild. Feds.	5	3	23	1	5		2	39
Soil & Water Conserv. Dist. Supervisors	11	1	44	211	1		15	283
Co. Exten. Chairmen	94							94
Exec. Comm., Conserv. Council of N. C.	3				4		1	8
TOTAL	188	5	90	221	19	18	25	566

SECTION II

Individuals are in contact with a variety of organizations and receive information from many sources and in many forms. This is to be expected. We would like to determine your present sources of water related information and the kinds of materials you receive.

5. Please check the agencies or organizations from which you have received some information relating to water or water resources.

1. Soil Conservation Service
 2. Agricultural Extension Service
 3. National Association of Conservation Districts
 4. Army Corps of Engineers
 5. League of Women Voters
 6. Water Resources Research Institute
 7. North Carolina Wildlife Federation
 8. State Department of Water and Air Resources
 9. North Carolina State Board of Health
 10. Conservation Council of North Carolina
 11. Federal Water Quality Administration
 12. U.S. Geological Survey
 13. Tennessee Valley Authority
 14. Others - List _____

Frequency Count of Present
Sources of Water Resource Information

County Leaders	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Chrmn., County Bds. of Commissioners	48	36	7	20	1	16	17	38	26	2	3	8	6	2
City Managers	34	14	0	35	0	22	12	60	49	3	21	22	4	7
L. of Women Voters	10	8	2	2	23	12	10	12	1	6	4	2	2	2
Pres., Co. Wildlife Federations	17	13	1	7	0	4	38	9	6	3	3	5	5	4
Soil & Water Cons. Dist. Supers.	277	208	160	57	4	50	95	66	40	16	9	20	28	5
Co. Exten. Chrmn.	88	89	61	50	2	63	52	61	31	1	4	27	25	7
Exec. Comm., Cons. Council of N.C.	3	2	0	4	1	1	4	3	1	8	3	0	0	3
TOTAL	477	370	231	175	31	168	228	249	154	39	47	84	70	30

6. In what manner have you received information about water resources?

- | | |
|--|---|
| <input type="checkbox"/> 1. Meetings | <input type="checkbox"/> 6. Personal Contacts |
| <input type="checkbox"/> 2. T.V. | <input type="checkbox"/> 7. Newspapers |
| <input type="checkbox"/> 3. Radio | <input type="checkbox"/> 8. Magazines |
| <input type="checkbox"/> 4. Films | <input type="checkbox"/> 9. Bulletins |
| <input type="checkbox"/> 5. Newsletter | |

Frequency Count of the Media Through
Which Information is Received

County Leaders	Key to responses in question 6								
	1	2	3	4	5	6	7	8	9
Chairmen, County Bds. of Comm.	38	24	16	10	37	31	28	25	27
City Managers	48	22	10	9	37	52	32	48	44
League of Women Voters	20	13	6	10	18	16	20	20	19
Pres., Co. Wildlife Feds.	20	21	14	15	24	22	26	25	21
Soil & Water Cons. Dist. Super.	249	148	93	90	232	150	162	168	160
County Extension Chairmen	77	52	40	29	85	69	74	74	75
Exec. Comm., Cons. Council of North Carolina	4	3	1	1	7	6	6	7	5
TOTAL	456	283	180	164	440	346	348	367	351

7. Please list the first three agencies you might contact for more information on subjects relating to water resources. (List in order of priority.)

1. _____
2. _____
3. _____

Agency which would be looked to for water resource information in order of priority by all respondents:

<u>Agency Indicated as First Priority</u>	<u>Number</u>
Soil Conservation Service	230
North Carolina Department of Water and Air Resources .	110
Soil and Water Districts	41
Agricultural Extension Service	38
Water Resources Research Institute	25
State and County Boards of Health	13
Army Corps of Engineers	7

<u>Agency Indicated as Second Priority</u>	<u>Number</u>
Agricultural Extension Service	122
North Carolina Department of Water and Air Resources .	84
Soil Conservation Service	67
State and County Boards of Health	40
Water Resources Research Institute	38
Army Corps of Engineers	30
Agricultural Stabilization & Conservation Service	16

<u>Agency Indicated as Third Priority</u>	<u>Number</u>
Agricultural Extension Service	65
Army Corps of Engineers	52
North Carolina Department of Water and Air Resources ..	51
Soil Conservation Service	38
Water Resources Research Institute	37
State and County Boards of Health	29
Tennessee Valley Authority	18
North Carolina Wildlife Federation	18

8. Faced with a water resource problem in the area, would most people generally know where to go for answers?

1. Yes
 2. No
 3. Not Sure

The Response of 565 Leaders to Question 8

<u>Response</u>	<u>Number</u>	<u>Percentage</u>
Yes	170	30
No	266	47
Not Sure	<u>129</u>	<u>23</u>
Total	565	100

9. Have you ever asked any agency for information on water-related problems?

1. Yes 2. No 3. Not Sure

The Response of 566 Leaders to Question 9

<u>Response</u>	<u>Number</u>	<u>Percentage</u>
Yes	453	80
No	99	18
Not Sure	<u>14</u>	<u>2</u>
Total	566	100

10. Would you say there is a need for additional water resources information to meet the needs of local citizens?

1. Yes 2. No 3. Not Sure

The Response of 565 Leaders to Question 10

<u>Response</u>	<u>Number</u>	<u>Percentage</u>
Yes	472	84
No	40	7
Not Sure	<u>53</u>	<u>9</u>
Total	565	100

11. Do you feel most individuals in general in your county have a desire to find out more about what could be done to improve the total water resources of the area?

1. Yes
 2. No
 3. Not Sure

County Leaders	Yes		No		Not Sure		Total
	No.	%	No.	%	No.	%	
Chairmen, County Bds. of Comm.	31	61	13	25	7	14	51
City Managers	32	46	18	27	18	27	68
League of Women Voters	3	13	7	30	13	57	23
Presidents, County Wildlife Feds.	26	67	5	13	8	20	39
Soil & Water Conservation District Supervisors	192	69	42	15	45	16	279
County Extension Chairmen	48	51	22	23	24	26	94
Exec. Committee, Conservation Council of North Carolina	2	25	5	62	1	13	8
TOTAL	334	60	112	20	116	20	562

12. Which of the following would best describe interest in water resources in this area? (Please check one)

1. Greatly concerned and want to see things improved
 2. Concerned but not sure what to do
 3. Concerned but need more information
 4. Enough effort is already being made
 5. Little interest
 6. No interest

County Leaders	Key to responses in question 12					
	1	2	3	4	5	6
Chairmen, County Bds. of Comms.	15	15	10	2	9	
City Managers	18	16	14	4	13	
League of Women Voters	3	3	7	2	8	
Presidents, County Wildlife Feds.	10	11	14	0	4	
Soil & Water Conservation District Supervisors	50	84	90	4	50	1
County Extension Chairmen	15	30	33	2	14	
Executive Committee, Conservation Council of North Carolina		3	2	1	2	
TOTAL	111	162	170	15	100	1

13. Listed below are problems in water resources. Please indicate the problem(s) which are especially applicable to your area. (Check one or more.)

1. Stream pollution from runoff and erosion
 2. Industrial water pollution
 3. Municipal water pollution
 4. Fish and wildlife
 5. Need for water resources planning
 6. Flood control
 7. Garbage and related solid waste disposal
 8. Limited community water supply
 9. Need for water-based recreation
 10. Groundwater
 11. Septic tanks
 12. List any other water resources problems you desire.

County Leaders	Key to the problems checked in question 13										
	1	2	3	4	5	6	7	8	9	10	11
Chrmn., County Bds. Comm.	24	17	15	12	25	20	34	21	25	5	29
City Managers	22	24	14	11	22	21	23	30	16	13	24
League of Women Voters	15	15	7	9	15	7	15	7	9	2	13
Pres., County Wild. Feds.	21	23	15	17	19	4	13	6	11	6	10
Soil & Water Conservation District Supervisors	184	102	72	60	134	99	130	65	69	26	83
County Extension Chrmn.	52	48	35	21	55	38	70	35	31	15	57
Executive Comm., Conserv. Council of N. C.	6	8	7	5	3	0	5	1	2	2	5
TOTAL	324	237	165	135	273	189	290	165	163	69	221

The respondents checked more than one problem in water resources.
The problem areas in order most frequently checked were:

- Stream pollution from runoff and erosion
 Garbage and related solid waste disposal
 Need for water resources planning
 Industrial water pollution
 Septic tanks
 Flood control
 Limited community water supply
 Municipal water pollution
 Need for water-based recreation
 Fish and wildlife
 Groundwater

14. Have you had opportunities to take part in the decisions being made on water resources by your community?

- ___ 1. Yes
 ___ 2. No
 ___ 3. Comment _____

Leaders' Opportunity to Take Part in
 Decision Making on Water Resources

County Leaders	Yes		No		Comments		Total
	No.	%	No.	%	No.	%	
Chrmn., County Bds. of Comms.	42	82	8	17	1	1	51
City Managers	55	86	6	9	3	5	64
League of Women Voters	4	17	14	61	5	22	23
Pres., County Wildlife Feds.	11	28	26	67	2	5	39
Soil & Water Conservation District Supervisors	183	66	85	31	9	3	277
County Extension Chairmen	60	65	29	31	4	4	93
Exec. Comm., Conservation Council of North Carolina	1	12	7	88			8
TOTAL	356	64	175	32	24	4	555

15. Have you ever attended or spoken at a public hearing related to water management?

1. Attended _____
 2. Spoken _____
 3. Give Subject Matter _____
 and Sponsoring Agency _____

Leaders' Participation in Public Hearings
 Relating to Water Management

County Leaders	Attended		Spoken		Neither		Total
	No.	%	No.	%	No.	%	
Chrmn., Co. Bds. of Comms.	26	51	6	12	19	37	51
City Managers	32	48	12	18	23	34	67
League of Women Voters	8	35	5	22	10	43	23
Pres., County Wildlife Feds.	12	31	10	25	17	44	39
Soil & Water Conservation District Supervisors	168	61	32	12	75	27	275
County Extension Chairmen	50	54	26	28	17	18	93
Executive Comm., Conservation Council of North Carolina	2	24	3	38	3	38	8
TOTAL	298	53	94	17	164	30	556

Summary of Leaders' Listings of Public Hearing Subjects

Key to the major subjects indicated:

0. No subject indicated
1. Reservoir Planning
2. Water and Sewer Charges and Waste Disposal
3. Stream Classification
4. Water Resources Planning
5. Community Water Systems and Supply
6. Watershed planning including erosion control and flood control
7. Drainage
8. Pollution
9. Others

County Leaders	Key to subject matter indicated above										
	0	1	2	3	4	5	6	7	8	9	Total
Chrmn., County Bds. Comm.	35	4	1	0	1	3	1	1	2	3	51
City Managers	42	2	3	6	3	3	1	0	4	4	68
League of Women Voters	12	0	1	0	5	1	3	0	1	0	23
Pres., Co. Wildlife Feds.	22	1	1	1	1	0	1	0	6	6	39
Soil & Water Conservation District Supervisors	188	6	0	2	7	4	51	8	6	9	281
County Extension Chairmen	46	6	0	0	4	6	19	4	1	8	94
Executive Comm., Conserv. Council of N. C.	4	1	0	1	1	0	1	0	0	0	8
TOTAL	349	20	6	10	22	17	77	13	20	30	564

Sponsoring Agencies for Public Hearings in
Which Respondents Attended or Participated

Key to Sponsoring Agencies:

0. No sponsoring agency indicated
1. Water Resources Research Institute
2. Army Corps of Engineers
3. Soil and Water Conservation Districts
4. Civic organization e.g. Ruritans
5. Local government
6. Agricultural Extension
7. State Department of Water and Air Resources
8. Agr. Stabilization and Conservation Service
9. Joint sponsorship and others

Responses by county leaders to the sponsoring agency at the public hearings they attended:

County Leaders	Key to sponsoring agencies at the public hearings attended										
	0	1	2	3	4	5	6	7	8	9	Total
Chrmn., County Bds. of Comm.	37	0	1	4	0	3	0	0	0	6	51
City Managers	43	0	4	1	0	5	0	6	0	9	68
League of Women Voters	11	0	0	0	1	1	1	1	0	8	23
Pres., County Wild. Feds.	23	0	0	0	2	3	0	2	0	9	39
Soil & Water Conserv. Dist. Supervisors	178	0	12	63	3	7	0	0	4	14	281
County Extension Chairmen	49	1	10	9	5	4	7	0	0	9	94
Exec. Comm., Conservation Council of N. C.	5	0	0	0	0	1	0	1	0	1	8
TOTAL	346	1	27	77	11	24	8	10	4	56	564

16. Are there adequate opportunities for public participation in water resources planning and management?

___ 1. Yes ___ 2. No 3. Comment _____

Leader Perception of Adequacy of Opportunity for Public Participation in Water Resource Planning and Management

County Leaders	Yes	No	Comment	Total
Chairmen, County Boards of Commissioners	18	27	5	50
City Managers	39	23		62
League of Women Voters	5	15	2	22
Presidents, County Wildlife Federations	5	30	2	37
Soil and Water Conservation District Supervisors	129	119	20	268
County Extension Chairmen	41	44	8	93
Executive Committee, Conservation Council of North Carolina	1	6	1	8
TOTAL	238	264	38	540

17. Do you feel there is an adequate public educational program on most phases of water resources in your area? (Check one.)

___ 1. Yes ___ 2. No 3. Comments _____

Leader Perception of Adequacy of Public Education
Programs on Most Phases of Water Resources

County Leaders	Yes	No	Comments*	Total
Chairmen, County Bds. of Commissioners	9	41	1	51
City Managers	13	47	4	64
League of Women Voters	2	21		23
Pres., County Wildlife Federations		37	1	38
Soil & Water Conservation Dist. Super.	55	215	6	276
County Extension Chairmen	19	69	6	94
Executive Committee, Conservation Council of North Carolina		7	1	8
TOTAL	98	437	19	554

*Comments were made rather than a yes or no answer and were chiefly directed toward the need for more and better public educational programs in water resources.

18. Statement: "Individual citizens presently play a major role in influencing water resource programs in the area." (Check the answer which best describes your feelings about this statement.)

___ 1. Strongly Agree ___ 4. Tend to Disagree
___ 2. Agree ___ 5. Disagree
___ 3. Tend to Agree ___ 6. Strongly Disagree

Agreement and Disagreement on Individual Roles
Citizens Play in Influencing Water Resources Program

County Leaders	Strongly Agree _____ to _____ Strongly Disagree						Total
	1	2	3	4	5	6	
Chairmen, Co. Bds. of Comms.	8	10	14	6	10	2	50
City Managers	3	13	19	19	10	1	65
League of Women Voters	3	2	4	6	4	3	22
Presidents., County Wildlife Feds.	8	4	6	7	9	4	38
Soil & Water Conservation District Supervisors	44	78	83	48	19	4	276
County Extension Chairmen	16	29	22	20	8	1	96
Executive Comm., Conservation Council of North Carolina				2	2	4	8
TOTAL	82	136	148	108	62	19	555

19. How would you rate your interest in the area of water resources?

1. High
 2. Moderate
 3. Low

Leaders' Interest in Water Resources

County Leaders	High	Moderate	Low
Chairmen, County Boards of Commissioners	27	23	
City Managers	45	19	2
League of Women Voters	18	5	
Presidents, County Wildlife Federations	24	13	1
Soil & Water Conservation District Supers.	169	101	7
County Extension Chairmen	43	50	
Executive Committee, Conservation Council of North Carolina	6	2	
TOTAL	332	213	10

SECTION IV

The Water Resources Research Institute of The Consolidated University of North Carolina was established for the purpose of conducting research and supplying information on important water-related subjects. You may or may not be familiar with this organization, but we would like to determine the extent of public awareness of the Institute and its program.

20. What has been your previous contact with the Water Resources Research Institute? (Check one or more)

1. Have read about it
 2. Attended a conference, seminar or workshop sponsored by the Institute
 3. Requested assistance in obtaining information
 4. Met the Director
 5. Received a newsletter
 6. Heard about it on radio or TV
 7. Other _____
 8. No contact

Respondents' Previous Contacts with the
Water Resources Research Institute

County Leaders	Key to response items checked in question 20							
	1	2	3	4	5	6	7	8
Chrmn., County Boards of Comms.	24	1	2	0	10	3	0	23
City Managers	30	6	1	2	11	5	2	5
League of Women Voters	7	2	3	2	10	3	2	6
Pres., County Wildlife Federations	12	0	2	0	4	10	0	18
Soil & Water Conserv. Dist. Supers.	158	33	9	10	66	63	13	72
County Extension Chairmen	71	6	4	2	56	14	3	4
Exec. Comm., Conservation Council of North Carolina	3	0	1	2	1	2	4	2
TOTAL	305	48	22	18	158	100	24	130

21. Do you know of any research sponsored by this Institute?

___ 1. Yes ___ 2. No ___ 3. Not Sure

Leaders' Knowledge of Research by the Institute

County Leaders	Yes	No	Not Sure	Total
Chairmen, County Boards of Commissioners	3	38	10	51
City Managers	6	46	16	68
League of Women Voters	6	13	4	23
Presidents, County Wildlife Federations	2	31	6	39
Soil & Water Conservation Dist. Supers.	17	190	72	279
County Extension Chairmen	17	54	22	93
Exec. Comm., Conservation Coun. of N.C.	1	6	1	8
TOTAL	52	378	131	561

22. Have you used research information from the Institute?

___ 1. Yes ___ 2. No ___ 3. Not Sure 4. Comment _____

County Leaders	Yes	No	Not Sure	Comment
Chairmen, County Bds. of Commissioners	3	39	9	
City Managers	5	48	14	
League of Women Voters	7	7	8	1
Pres., County Wildlife Federations	1	32	6	
Soil & Water Conservation Dist. Supers.	24	190	66	1
County Extension Chairmen	12	56	22	2
Exec. Comm., Conserv. Council of N. C.	1	6	1	
TOTAL	53	378	126	4
PERCENTAGE DISTRIBUTION	9	67	23	1

23. Would you like to be better informed as to the research findings resulting from the Institute-sponsored projects?

1. Yes
 2. No
 3. Not Sure
 4. Comment _____

County Leaders	Yes	No	Not Sure	Comment
Chairmen, County Boards of Commissioners	48	1	2	
City Managers	63	1	2	
League of Women Voters	21	0	1	1
Presidents, County Wildlife Federations	37	0	2	
Soil and Water Conservation District Supervisors	263	2	15	1
County Extension Chairmen	89	2	2	1
Executive Committee, Conservation Council of North Carolina	7	0	0	1
TOTAL	528	6	24	4

24. Please indicate by (X) those areas in which additional information would be helpful in meeting community needs.

1. Water conservation - more efficient utilization
 2. Pollution control - maintaining water quality
 3. Improved methods of agricultural water use
 4. Uses for recreation
 5. Water information relating to wildlife
 6. Water information relating to fish population and production
 7. Water transportation
 8. Water drainage
 9. Erosion control
 10. Flood plain zoning (restricting build-up in flooded areas)
 11. Water sources and supply (above ground)
 12. Ground water supplies
 13. Planning for total water utilization in the area
 14. Stream classifications
 15. List others _____

Leaders' Response to Areas Needing Additional
Information to Meet Community Needs

County Leaders	Key to areas checked by respondents														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Chairmen, County Boards of Commissioners	27	36	17	29	15	12	3	19	23	11	18	16	30	10	1
City Managers	36	52	6	27	9	12	7	22	19	23	29	27	37	24	2
League of Women Voters	15	22	8	12	11	12	2	9	13	7	14	11	18	14	4
Presidents, County Wildlife Federations	16	29	5	19	32	30	0	9	9	9	6	10	16	14	1
Soil and Water Conserva- tion Dist. Supervisors	175	212	144	120	95	99	23	120	183	56	60	82	115	65	9
County Exten. Chairmen	45	75	51	55	33	39	15	31	35	23	26	41	60	24	1
Executive Comm., Conser. Council of N. C.	5	7	3	1	3	3	1	4	5	5	2	1	4	7	2
TOTAL	319	433	234	263	198	207	51	214	287	134	155	188	280	158	20

The most frequently mentioned areas in which additional information would be helpful in meeting community needs listed in order based on frequency checked:

1. Pollution control - maintaining water quality
2. Water conservation - more efficient utilization
3. Erosion control
4. Planning for total water utilization in the area
5. Uses for recreation
6. Improved methods of agricultural water use
7. Water drainage
8. Water information relating to fish population and production
9. Water information relating to wildlife
10. Ground water supplies
11. Stream classifications
12. Water sources and supply (above ground)
13. Flood plain zoning (restricting build-up in flooded areas)
14. Water transportation

25. Please indicate by a (✓) the group in your county which you feel needs additional information on water resources.

1. Public officials
 2. General public
 3. Club groups or civic organizations
 4. Agency employees
 5. Business community
 6. Other - Please list _____

Leaders' Perception of Groups Needing
Additional Information on Water Resources

County Leaders	Key to groups in question 25					
	1	2	3	4	5	6
Chairmen, County Bds. of Comms.	36	39	27	8	12	3
City Managers	45	44	20	6	21	5
League of Women Voters	19	23	15	7	15	5
Presidents, County Wildlife Feds.	24	32	24	5	12	6
Soil & Water Conservation District Supervisors	175	220	113	39	71	12
County Extension Chairmen	77	67	45	47	35	6
Executive Committee, Conservation Council of North Carolina	4	7	5	1	4	2
TOTAL	380	432	249	113	170	39