

One further observation should be reported here. There has been no known concerted effort to make use of or expand this anti-drainage law. It would seem likely that the Fish and Wildlife Service would have at once appreciated the omissions and initiated some provisions for maximum implementation of the law where applicable. It would also seem that the Soil Conservation Service, which is given the technical "responsibility for determining whether proposed drainage practices will drain types 3, 4 and 5 wetlands"<sup>5</sup> would have requested assistance of the Fish and Wildlife Service and the state wildlife agencies to delineate the wetland areas in question. When the above did not materialize, it would seem that the state agencies would request an understanding of both the above mentioned services based on the law to protect their wetland areas. Except in the state of Florida, there is no report of the law being used in the southeast.

According to the plates in Circular 39, the Southeast, excluding the state of Florida, has an estimated 300,000 acres in Type 5 alone, for which technical and financial drainage subsidies have been prohibited by law.

The law is now two years old and it is based on a publication eight years old. There is still the immediate need for the agencies involved to combine efforts and utilize P. L. 87-879 as it was intended.

#### LIST OF REFERENCES

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3. Agricultural Conservation Program/Summary By States 1962. U.S.D.A.A.S.C.S. Washington, D. C. pp. 6-61.
4. Interdepartmental correspondence: U.S.F. & W.S. Bureau of Sport Fisheries and Wildlife to Kentucky Department of Fish and Wildlife Resources. Dated February 20, 1963.
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### WATER USE COMMITTEE

#### Southeast Section Wildlife Society

Summary Report, 1964

HAROLD E. ALEXANDER, *Chairman\**

Vast changes in rivers, streams, marshes and wetlands types in the U. S. and in the southeastern states have been the result of water developments of many types, which have altered the age-old environments in which fish, wildlife and associated organisms evolved over centuries of time, and to which they became adapted. These develop-

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\*Other Committee members are: Ted Ford, Dan Russell, Spencer Smith, Bob Klant, Max Summers & Robert Smith. Members of Watershed Sub-Committee: Ralph H. Allen, Jr., Bob Klant, Howard D. Zeller, Robert Hornsby, Max Summers, Kenneth Hicks, Jack Bayless, Robert Smith, Farrell Copelin & Jack M. Hoffman.

ments, which included multiple impoundments, drainage, dredging and channelizing of marshes, rivers, and streams, the intrusion of polluting agents and silt into formerly uncontaminated waters, and vast associated land use changes were the result of what we often refer to as "developments for practical purpose to advance the common welfare." Many and perhaps most of these developments were essential and inevitable, and brought large economic benefits, while others have destroyed certain features of our environment which contributed to our physical, cultural, emotional and spiritual needs. Among these features have been losses of streams and wetlands which provided habitat for fish and wildlife of many kinds, and for opportunities for recreation and escape from the increasing complexities of civilized living. Standards were originally devised to justify developments so that today, most water developments have been planned for limited and "practical" purposes, and these long established criteria have failed to recognize many significant values which are being lost forever.

Today we are in a period of "last chances," as far as our opportunities for preserving some streams, marshes, and other wetlands are concerned. Our engineering skills and mighty machines permit the rapid gouging of deep and ramifying ditches to drain the land, and the construction of impoundments, levees and waterways goes on at an accelerated pace augmented by the increased appropriations for such developments.

In support of this view of the acceleration and rapid growth of water developments, one need only look to Federal appropriations for two major water management agencies—the Corps of Engineers and Bureau of Reclamation, where combined approved budgets totaling \$603 million in 1957 have increased to \$1,131 million in 1964 (Bureau of Budget estimates). In addition to these, there are some thirty other federal agencies concerned with water management, including the considerable appropriations for watershed developments by the USDA. State, local and private developments add to these problems.

Watching such changes in the landscape, and the concomitant losses of fish and wildlife with concern for these resources, only after other objectives are satisfied, is a matter of deep concern to agencies and individuals who have been dedicated to the administration and perpetuation of these resources. Unfortunately, they have had neither the personnel nor the finances to match the monies allocated to water developments for other "practical" purposes, and in many instances have seemed to evade making efforts to understand and cope with these problems. The time, is short, for formulation of standards, plans and support essential to the preservation of these invaluable resources with which we are personally and professionally concerned.

### *The Committee*

In a meager (in terms of means) effort to point out some of the problems with which we are confronted, and suggest courses of action needed to stem the tide of our losses, the Water Use Committee, S.E. Section, of the Wildlife Society, was formed in 1957. It was provided that this Committee would have a permanent membership, would be small, and would be composed of members who had a special interest in water problems. Originally, this Committee was composed of four members including the chairman. At this time, 7 men comprise the members of this Committee.

Over the past eight years the W.U. Committee has, each year, reviewed some aspect of those water problems which concern us, and has presented formal reports to the Society, and at the technical sessions of the annual meeting. These reports have included reviews of opportunities for enhancement of developments, water projects and their effects on other resources, stream values and recreational uses, watershed developments, water legislation, reviews of water management plans, and evaluations of research and management needs for

the future. These reports encompass some twelve major reviews or papers written by committee members or by individuals working with other agencies who made contributions, to committee purposes. I believe these studies and reports have made a contribution to an understanding of and solution to some major problems. After working with this committee since its inception, it is my observation that the greatest need is a wider concern with these problems.

In addition, the committee has prepared annual activity reports, participated in related resource meetings, and prepared resolutions in support of desirable legislation. With the means at its disposal, it has attempted to pursue its objectives and make contributions to better understanding. Because of limited means, however, such efforts fall far short of the needs for reviews, studies and actions.

#### *Activities in 1964*

In keeping with its original intent to select and review a pertinent problem each year, the committee at its Hot Springs, Ark. meeting in 1963 presented recommendations to the Southeastern association that it lend its support to a further review of the effects of watershed developments in the southeastern region. This review was predicated on previous studies carried out by committee members and others, and to provide data supplemental to information presented to the S.E. Association in 1962 in which the overall effects of watershed developments on fish and wildlife habitat was determined to be extensive. Briefly, these 1962 studies showed that approved watershed developments in 12 states as of January 1, 1962, would result in construction of 810 impoundments, 2,684 miles of channelization and decreases in woodland and idle land important to wildlife of 38,546 acres, and 242,278 acres respectively. These extensive changes would, it appeared, greatly alter and reduce fish and wildlife habitat in the south.

With reference to furthering these studies, and keeping up with subsequent plans and affects, the committee contacted each of the S.E. states and requested assignment of a man from each state to serve as a member of a water shed study subcommittee. Eleven states, including Oklahoma and Missouri, complied with this request, and the subcommittee was formed. Committee objectives were, generally, to compile and summarize data on watershed developments and their effects on wildlife in each state, and summarize these data in a report for the S.E. Association and all agencies concerned.

For several (and usual) reasons, and because of its scope, this mission was only partially accomplished. Working together, however, the W.U. and Watershed Committees did accomplish part of their purposes and has plans for completion of surveys in 1965. It should be observed however, that any such review is never complete when concerned with a growing and expanding development plan such as those carried on under the terms of Public Law 566. Continuous reviews are necessary. Data obtained in the 1964 year supply answers to a questionnaire presented to the Director of SCS units in all southeastern states. These data are summarized in tables appended to this report, but are incomplete as of this time and need supplemental information to give an adequate review of the problems considered. During 1965, a committee objective will be completion of a more comprehensive survey of these problems.

#### *Results From Questionnaire*

Submission of a questionnaire to the State SCS Directors was the result of plans made at a meeting of committee members held at Reelfoot Lake at the end of June. It was also the outgrowth of communications between James Webb, Secretary, S.E. Association, and the Office of the Secretary of Agriculture, in which damaging effects of watershed developments were reviewed, and the USDA issued directives

(January, 1964) to implement greater coordination of efforts, and alleviate conflicts and difficulties. Subsequently, I prepared a questionnaire (see Appendix) designed to evaluate the extent of work done on watershed projects in each southeastern state, the scope of future plans, the effects of projects on land uses and developments. The problems as presented to the SCS State Conservationists, and, as stated in accompanying correspondence, included proposals for efforts to reduce damages to fish and wildlife, and resolve some of the opposing conflicts of interest.

Replies to the questionnaire were received from twelve of the fourteen states contacted. (No reply was received from Oklahoma or North Carolina). Most other state conservationists submitted very complete replies, provided carefully considered answers to questions, and expressed much concern over the problems involved. The scope of State-SCS conflicts over watershed developments appeared to exist in direct relation to the extent of interagency working relationships. Very few conflicts were evident in one state (Missouri) where state and SCS personnel maintain regular and continuous contact and resolve their differences. In nine of the respondent states, replies indicated that the State Game and Fish Agency had personnel who participated on a full-time basis, with SCS offices and field agents, in the survey of proposed projects and plans from the time they are first proposed. Two states assign district biologists to part-time work with SCS agents, and one state has no personnel available to work directly with field survey crews and evaluate initial proposals and plans. Apparently one of the primary needs is full time attention to and review of all watershed projects by state game and fish personnel who can give concerted attention to these matters. Because of the scope of projects, and problems, this is not being fully accomplished.

It is of particular interest that one State Conservationist expressed the opinion that U. S. Fish and Wildlife personnel should have "greater authority" to make recommendations and decisions in the field. This is in keeping with the views often expressed that the "Coordination Act" should be strengthened and recommendations incorporated into and as part of interagency plans for water developments of all types.

The most evident problem demonstrated by replies is the conflict of interest conditioned by the purposes and objectives of wildlife agencies in contrast with the agricultural development objectives promoted by the agricultural agencies. The interpretation of what constitutes fish or wildlife habitat by a wildlife biologist is often radically different than interpretations made by agricultural agency personnel. There is also the basic problem of the decreasing wildlife resource as opposed to the agricultural surplus.

Also, it should be recognized that what is called mitigation is often a process of "locking the barn door after the horse is gone." The fact is that some types of losses of habitat (human or animal) simply *can't be mitigated*. The rapid growth of the watershed program is indicated by the increase in authorized projects in eleven of the states surveyed in 1962, through this report. In these states there has been an increase of 117 projects in the past two-year period.

Data presented will be further evaluated in a more detailed report. Replies to questionnaires are summarized in the appendix to this report.

#### *Other Committee Activities*

This committee did present a statement to the program committee of the Watershed Congress, with the request that time be allocated for its presentation at the "Congress," in Little Rock, in April, 1964. This request was rejected by the Watershed Congress program committee. We feel that wildlife agencies and interests should have opportunities to participate in this and other water resource meetings to present their views. They should seek and demand such opportunities.

Dan Russell's report proposing a review and revision of the original Wetlands Surveys is a contribution from this Water Use Committee, which is in full accord with his views on this subject. (Dan is a member of the Committee). The tremendous loss of wetlands since the initial survey make those remaining of much greater significance.

### *Midyear Meeting*

Members of the Water Use and Watershed study committee met at Tennessee Game and Fish Commission Headquarters, Reelfoot Lake, June 20 and 30, and July 1. They were hosted by the Tennessee Department. Seven states and the U. S. F&W Service were represented. The primary purpose of the meeting was to discuss means for implementation of watershed studies. Questions raised pertaining to these studies included needs for research, estuary problems, stream preservation, water laws, interagency relations, F&W Service obligations, and effects of Memo 69 on State SCS work relations and reduction in damages in wildlife habitat. Better organization of subcommittees was proposed. A boat trip on Reelfoot Lake followed the committee meetings.

Many of the problems we have in our society are due to its preoccupation with material or economic values, and the failure to recognize the significance of its cultural, ethical, moral and esthetic requirements. Our water problems are, basically, the outgrowth of this materialistic, lopsided philosophy. The critical problem of water pollution is a primary example of our lack of concern for the preservation of a wholesome environment. Basic to the solution of many water problems is recognition of traditional, cultural, recreational, scientific, esthetic and other values that can't be calculated in dollars. Such concerns must recognize the broad scope of human needs and desires, and the needs of future generations in an increasingly crowded world. Some system for calculating values beyond the monetary is necessary if we are to manage these resources with concern for the diversified needs of men now and in the future.

Relative to actions that may be taken, I believe the following courses of action will help lead us in the right direction.

1. We need to concern ourselves with pertinent problems, and let less important matters wait.

2. We need to define some system for determination of "quality" values, such as the importance of free-flowing streams.

3. We need to recognize that "mitigation" cannot compensate for some losses, and that some resources are superior without improvement. That term needs to be less freely used.

4. We need a great deal more research on the immediate and long-term effects of developments and water use. There is, for example almost no research way on recreational uses of water. There are large opportunities for research in the recently passed P.L. 88-379, establishing "Water Research Institutes" in the states.

5. We need to work much more extensively with other agencies.

6. We need much more participation in water resource meetings of all types, including such bodies as the American Society of Civil Engineers.

7. We need extensive work to determine effects of developments on such unknown as water temperatures, chemistry, and changes in streams and estuaries.

8. We need much more education, both of ourselves and the general public, on the scope of our problems. (A recent Montana bulletin showing effects of channelization is an example).

9. And, finally, we need more state personnel assigned to work on water problems. This is absolutely necessary if we are to preserve and perpetuate those resources with which we are concerned. Thus,

our greatest need is also our greatest failure, since few states have given the time and attention to water problems that they merit in terms of the vast changes in these resources which are ahead. Unfortunately, it is often much easier to steer away from these issues involving political and social conflicts.

Submitted by:  
**HAROLD E. ALEXANDER**  
*Arkansas Game and Fish Commission*  
 Chairman, Water Use Committee,  
 Southeastern Section, Wildlife Society  
 Clearwater, Florida  
 October 20, 1964

### QUESTIONNAIRE

Pertaining to Watershed Program  
 P. L. 566

13 States replying\*

October 13, 1964

|   |                  |
|---|------------------|
| 1. Projects for which application have been received in your state.<br>Number 954 | Acres 59,197,313 |
| 2. Number approved for planning assistance.<br>Number 334                         | Acres 21,953,498 |
| 3. Projects authorized.<br>Number 238   | Acres 13,665,684 |
| 4. Projects completed.<br>Number 42   | Acres 952,625    |
| 5. Projects applied for but dropped.<br>Number 81                                 | Acres 5,186,493  |

**Note Reasons:**

Insufficient interest by local people (Alabama, Arkansas, Florida, Kentucky, Mississippi, Missouri, South Carolina, Tennessee.)  
 Not economically feasible (Arkansas, Florida, Tennessee)  
 Objectives not covered by P. L. 566 (Florida, Mississippi, Virginia)  
 Application disapproved by State reviewing agency (Georgia)  
 Lack of sufficient benefits (Kentucky, Maryland, Missouri)  
 Urban sprawl (South Carolina)

**Note**—One project in Virginia (not named) was dropped because of objections of U. S. F&W Service.

|  |   |
|--|---|
| 6. Miles of channelization planned or carried out in the first four listed project categories.<br>1. Information not available <sup>1</sup> —2. 13,067 (2 States replying) | 3. 17,068 (4 States replying)—4. 395 miles (in 42 completed projs.) |
| 7. Anticipated increases in (a) croplands, (b) grasslands, in first four categories (in acres).<br>(a) 1. No information available—2. 13,067 (2 States replying)           | 3. 17,068 (4 States replying)—4. 6,353 (3 States replying).         |

\*Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, Missouri, South Carolina, Tennessee, Texas, Virginia.

Note: Decease indicated in 11 States.

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- (b) 1. 1,424,000 (Texas only)—2. 1,641,406 (Tex., La., Ark.)  
3. 211,838 (7 States replying)—4. 68,685( 4 States replying).
- 
8. Decreases in woodlands anticipated in these categories. (acres)  
1. 23,200 (Texas only)—2. 67,365 (3 States replying).  
3. 50,526—4. 7,859 (Arkansas, Louisiana).
- 

Note: Some states indicate an increase.

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9. Decreases in idle lands in above categories. (acres)  
1. 16,180 (Texas only)—2. 7,850 (Texas only)  
3. 60,744 (7 States replying)—4. 2,182 (3 States replying)
- 

Note: Some states noted no information available.

10. Impoundments planned or constructed. ( in categories 1-4)

| Number                        | Total Acres                 |
|-------------------------------|-----------------------------|
| 1. No information available   | No information available    |
| 2. 474 (3 States replying)    | 14,477 (2 States replying)  |
| 3. 1,400 (13 States replying) | 47,780 (12 States replying) |
| 4. 100                        | 2,879                       |

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11. List number of projects in which mitigation measures to benefit wildlife have been incorporated.—41.  
Types of mitigations. \_\_\_\_\_

*Types of mitigations:*

These included water level control, cold water releases ,extra water storage, low velocity channels, sediment basins, wildlife habitat development, fish lagoons, and fish barriers.

12. Number and type of projects *jointly* participated in by SCS and State Conservation agencies, which include features specifically designed to create fish and/or wildlife habitat.

*Number—36*

*Types of projects:* Stocking impoundments, additional water for fish, construction of permanent pools, recreation and wildlife developments, (Louisiana, has 8), stream "improvement," drainage, flood prevention, seeding, lake development, fish barriers, cold water releases, consignment of water for waterfowl areas.

13. What State agency passes approval on proposed projects?  
State SCS Board—8 Department of Agriculture—1  
Governor—3.
14. Do you have a close working relationship with the State Fish and Wildlife Agency? 13—say yes——. With the U. S. Fish and Wildlife Service? 13—say yes——.
15. Is the State agency informed of all proposals for watershed developments at the time of first demonstration of interest?  
12 say yes; Tenn. State Comm. recommends to SCS.
16. Does the State Wildlife agency make field surveys of proposed projects prior to reference to planning or other committees? 9 say yes.—Georgia and Louisiana say sometimes.  
2 states in two instances, 4 as desired by State, 1 prior to approval, 1, state participates when requested (Mississippi)—team effort.

Are recommendations or reports from this agency incorporated into or attached to project reports? 12 say yes; one has no comment.

Have projects been revised or dropped as the result of such recommendations on reports? 10 say yes; one no comment.

If altered, what changes?

Alterations listed—Structures deleted, “problems resolved in planning,” incorporation of fish and wildlife measures, “one project pending” (Florida), structures relocated, State and F&WS given final approval on State owned lake (Maryland); modifications for fish and wildlife (Missouri), channels avoid “natural lakes” (S. C.), mitigations in work plan; reduction in channel work (Texas), fish barriers, cold water releases.

17. What other State or Federal agencies participate in initial surveys or planning for Watershed Projects?

State Dept. of Conservation, Highway Dept., Health Dept., Extension Service, U. S. F&W, U. S. Forest Service, Corps of Engineers, State Universities, Geological Survey, various flood control districts, Farmer's Home Administration, SCS, State Planning Commissions.

18. In your opinion, does the State agency take advantage of opportunities to participate in the review of watershed development proposals? 12 say yes—1 says no (Arkansas). Is this due to lack of interest or insufficient qualified personnel to participate in such surveys? No reply (except Arkansas).

19. Are special efforts made to avoid altering and damaging high quality streams or draining wetlands having high wildlife values? All say yes. Are the inherent (natural) recreational scenic or wildlife values of streams or wetlands considered in evaluating development proposals, or are postulated economic benefits the only criteria used in determining project feasibility?

Comments varied—“Yes, all land and water resources are considered” (Maryland); based on joint field studies of U. S. F&WS and F&G Agency; recreation benefits incidental; “Wildlife and scenic values considered in all projects” (Missouri); losses mitigated.

Note:—The keynote in these replies was the term “Considered.” Apparently considerations are the prerogative of the individuals making evaluations in terms of P. L. 566. Interpretation of word “Considered” is the problem involved.

20. Has public access to certain lakes or other developments been provided for? 12 say yes. Where?

Replies varied—where projects were developed jointly (State agencies participating), public access is presumed. One noted that public access is provided on all “water supply” lakes (Virginia). Developments on private lands are open at will of the landowners.

Note:—Because of use of public funds this system has been questioned.

21. Do you feel there has been a better understanding of problems and working relations between your agency, and State Conservation Departments, since issuance of memos, and directives issued from Department of Agriculture Central offices in January, 1964? 6 say yes; none reply no; 6 indicate relationship always good.

Comments Replies varied—actions included interagency discussions, discussions of “specific” problems, joint studies, close personal contacts, coordination of efforts and better understanding.

Note:—Relationships seem to depend on the degree of interagency cooperation and availability of State personnel for cooperative field work. (Missouri is the best example of cooperation.)



22. What are your recommendations regarding resolution of problems and conflicts of interest?

*Comments:* Before and after development studies (research); participation in planning in early phases of studies; adherence to Coordination Act; "Give due consideration to all interest," resolve conflicts on local level; early participation by all agencies; "more authority for Fish and Wildlife Service biologist . . . to negotiate and recommend" (Mississippi); "maintain present working relationships" (Missouri); "determine real damage from theoretical damage"—suggestions from State on reducing damages (S. C.); "State SCS. Committee should have final authority to make the final decision of points of conflicts" (Maryland); One State—no comment. Florida and Missouri expressed satisfaction with present relationships. Virginia wished to continue close working relations.

*Comment:* Most respondents expressed the desire and need for close working relations with State agencies. In terms of these replies, it appears that many conflicts are resolved when the Game and Fish and SCS agencies participate at the field level. Assignment of State personnel to review all proposals at their inception is a critical need. It also appears that basic changes in systems of evaluation established by law need revision. One approach is to give greater strength to the "Coordination Act." Another is to recognize that some losses can not be "mitigated," and avoid or limit developments to protect fish, wildlife, recreation and traditional values where they are significant. Economics should not be the only criteria for judgments made. In terms of present projects, agricultural interests apparently dominate decisions affecting non-agricultural interests, and uses of public funds. This system needs revision.

Appendix to  
Report of Water Use Committee  
S. E. Section, Wildlife Society  
October, 1964  
Clearwater, Florida  
Submitted by:  
HAROLD E. ALEXANDER  
*Arkansas Game and Fish Commission*  
Chairman, W. U. Committee

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## A REVIEW OF THE FARM GAME COMMITTEE ACTIVITIES FOR THE PAST TEN YEARS, 1954-1964 (Including the 1964 Report)\*

EDWARD G. SULLIVAN, *Chairman*

Lloyd G. Webb, Clemson College and South Carolina Wildlife Resources Dept.

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F. H. (Pete) Farrar, National Wildlife Federation (Atmore, Ala.).

Jack A. Crockford, Georgia Game and Fish Commission.

Edward G. Sullivan, Chairman, U. S. Soil Conservation Service (Jackson, Mississippi).

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\* The Farm Game Committee is a technical committee appointed by the Southeastern Section, The Wildlife Society. This paper is respectfully submitted by the Committee.