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WATERSHED PROJECT STRUCTURES

GOVERNMENT
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HEARING BEFORE A SUBCOMMITTEE OF THE COMMITTEE ON AGRICULTURE AND FORESTRY UNITED STATES SENATE EIGHTY-EIGHTH CONGRESS

FIRST SESSION

ON

S. 566

A BILL TO AMEND THE WATERSHED PROTECTION AND FLOOD PREVENTION ACT SO AS NOT TO EXCLUDE FROM THE BENEFITS PROVIDED BY SUCH ACT, AREAS WHICH INCLUDE STRUCTURES OF TWELVE THOUSAND FIVE HUNDRED OR LESS ACRE-FEET OF FLOODWATER DETENTION CAPACITY

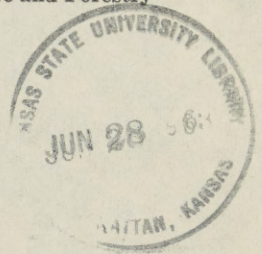
JUNE 3, 1963

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WATERBURY PROJECT STRUCTURES

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II



WATERSHED PROJECT STRUCTURES

MONDAY, JUNE 3, 1963

U.S. SENATE, SUBCOMMITTEE ON SOIL
CONSERVATION AND FORESTRY OF THE
COMMITTEE ON AGRICULTURE AND FORESTRY,
Washington, D.C.

The subcommittee met, pursuant to notice, at 10:25 a.m., in room 324, Old Senate Office Building, Senator J. Howard Edmondson, presiding.

Present: Senator Edmondson.

Senator EDMONDSON. The subcommittee is called to order.

This is a hearing on S. 566 by Mr. Burdick.

(S. 566 referred to follows:)

[S. 566, 88th Cong., 1st sess.]

A BILL To amend the Watershed Protection and Flood Prevention Act so as not to exclude from the benefits provided by such Act areas which includes structure of twelve thousand five hundred or less acre-feet of floodwater detention capacity

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That section 2 of the Watershed Protection and Flood Prevention Act (16 U.S.C. 1002) is amended by striking out "more than five thousand acre-feet of floodwater detention capacity" and inserting in lieu thereof "more than twelve thousand five hundred acre-feet of floodwater detention capacity".

Senator EDMONDSON. We will lay in the departmental report dated March 29, 1963, and the request from the Department of Agriculture dated March 25, 1963. Also the statement of Senator Quentin N. Burdick before Subcommittee No. 1, Soil Conservation and Forestry, June 3, 1963, in support of his bill, S. 566.

(The documents referred to follow:)

DEPARTMENT OF AGRICULTURE,
Washington, D.C., March 29, 1963.

HON. ALLEN J. ELLENDER,
*Chairman, Committee on Agriculture and Forestry,
U.S. Senate.*

DEAR MR. CHAIRMAN: This is in reply to your letter of January 31, 1963, requesting the views of this Department on S. 566, a bill to amend the Watershed Protection and Flood Prevention Act so as not to exclude from the benefits provided by such act areas which include structures of 12,500-or-less acre-feet of floodwater detention capacity.

The Department of Agriculture strongly recommends enactment of this bill.

This bill would accomplish the recommendation of the President in his message to the Congress on January 31, 1963, on the agricultural program in which he states: "Legislation is also needed to increase substantially the capacity for floodwater detention in small reservoirs in order to permit the full development, under the Watershed Protection and Flood Prevention Act, of available sites for multipurpose use. Such action this year will supplement and strengthen the provisions of the Food and Agriculture Act of 1962 to strengthen the rural

economy through more adequate development of available water and related land resources for multiple use."

The bill would amend section 2 of the Watershed Protection and Flood Prevention Act (16 U.S.C. 1002) by striking out "more than five thousand acre-feet of floodwater detention capacity" and inserting in lieu thereof, "more than twelve thousand five hundred acre-feet of floodwater detention capacity."

This change would permit full utilization of available sites for multiple-purpose development within the already existing authority in the act to include structures having a total capacity of up to 25,000 acre-feet. Under the present limitation of 5,000 acre-feet on floodwater detention capacity, it is often not technically possible to design multiple-purpose structures to meet the requirements and desires of local organizations for recreation or fish and wildlife development and municipal or industrial water supply under authorizations contained in the Food and Agriculture Act of 1962 (Public Law 87-703). Particularly in low and moderate rainfall areas, the drainage area required to yield sufficient water supply to meet community needs is too large to be controlled by 5,000 acre-feet of flood prevention capacity. The 5,000 acre-foot limitation is incompatible with the 25,000 acre-foot maximum size allowed for any single structure and the 250,000-acre maximum watershed size permitted by the act. Increasing the flood prevention limitation to 12,500 acre-feet will permit designing technically sound structures to utilize fully available sites to meet all needs occurring within 250,000-acre watersheds.

The Bureau of the Budget advises that the enactment of this proposed legislation would be consistent with the administration's objectives.

Sincerely yours,

ORVILLE L. FREEMAN, *Secretary.*

DEPARTMENT OF AGRICULTURE,
Washington, D.C., March 25, 1963.

HON. LYNDON B. JOHNSON,
President of the Senate.

DEAR MR. PRESIDENT: Enclosed for the consideration of the Congress is a draft bill to amend the Watershed Protection and Flood Prevention Act (68 Stat. 666, as amended).

The Department of Agriculture strongly recommends enactment of the proposed amendment to section 2 of the act as a means to provide a more adequate national land and water resources development program and to permit the utilization of the amendments to this act, already enacted in the Food and Agriculture Act of 1962, in the development of sound multipurpose watershed projects. Experience under the existing provisions of the act has demonstrated the need for this amendment.

This change would permit full utilization of available sites for multiple-purpose development. Under the present limitation of 5,000 acre-feet on floodwater-detention capacity, it is not technically possible to design multiple-purpose structures large enough to meet the desires and needs of local organizations for recreation or fish and wildlife development and municipal or industrial water supply under authorizations contained in the Food and Agriculture Act of 1962 (Public Law 87-703). Particularly in low and moderate rainfall areas, the drainage area required to yield the water supply needs of the local people is too large to be controlled by 5,000 acre-feet of flood prevention capacity. As a result, it has been necessary to design multiple-purpose structures with a total capacity substantially below the 25,000 acre-foot maximum size allowed by the act. Increasing the flood prevention limitation to 12,500 acre-feet will permit designing technically sound structures with capacities up to the 25,000 acre-feet total capacity limitation in practically all parts of the country.

This amendment was recommended to the last Congress in a letter to you dated June 7, 1962.

Since all proposals for projects under the act must be initiated by local agencies and types of projects will differ widely, it is not possible at this time to foresee what effect this amendment would have on requests for assistance and on potential projects.

In addition, the Department recommends an amendment to section 5 of the act to assure full coordination in the review of watershed work plans which include provisions for municipal or industrial water supply with the Department of Health, Education, and Welfare.

The Bureau of the Budget advises that the enactment of this proposed legislation would be consistent with the administration's objectives.

Sincerely yours,

ORVILLE L. FREEMAN, *Secretary.*

STATEMENT FILED BY HON. QUENTIN N. BURDICK, A U.S. SENATOR FROM THE STATE OF NORTH DAKOTA.

Mr. Chairman, I welcome this opportunity to present the case for my bill, S. 566, to increase the capacity of flood-detention structures under Public Law 566, the Watershed Protection and Flood Prevention Act, to 12,500 acre-feet. In his agriculture message in January 1963, the President specifically endorsed legislation with this objective.

The other day I was asked whether the number of my bill had been planned to coincide with the number of the public law it seeks to amend. This was not planned. It is just one of those happy coincidences.

The Watershed Protection and Flood Prevention Act now limits the amount of floodwater detention capacity that can be included in single structures to 5,000 acre-feet, but it sets a limitation of 25,000 acre-feet for total capacity for all purposes.

These limitations are not compatible, because in order to limit floodwater detention capacity to 5,000 acre-feet, it is often necessary to locate the structures upstream where water supply is inadequate to permit conversion to multipurpose development.

My bill would increase the limitation on floodwater detention capacity to 12,500 acre-feet, so structures could be located downstream, where it would be possible to utilize the 25,000 acre-feet of capacity allowable under the act for municipal water supply, irrigation, and recreation.

This change would make it possible to move ahead on a number of watershed projects for which local organizations are seeking assistance under the act. The present limitation is blocking many multiple-purpose structures that would be economically justified.

For example, in my own State of North Dakota, the North Branch of Park River watershed in Walsh, Pembina, and Cavalier Counties, was authorized for planning in April 1960, and is still in the planning stage. In this watershed the only physically and economically feasible storage site requires a floodwater detention capacity of about 9,500 acre-feet. This site could be developed as a multiple-purpose site if it could be included in the project and would provide the level of flood protection desired by the sponsors.

Another example in my State, is the South Branch of Park River watershed, also in Walsh, Pembina, and Cavalier Counties, which was authorized for planning in June 1961, and is now being planned. A proposed structure is designed for 5,000 acre-feet of floodwater detention capacity. This structure under the limitation of 12,500 acre-feet proposed in this amendment could be located at a more feasible site downstream and, thereby, permit the incorporation of additional storage for purposes other than flood prevention. This would result in a much better project and would tend to maximize net benefits as desired by both the sponsors and the Federal Government.

I have cited these examples to point out the need for this amendment in my State. I understand that there is a similar need in many other States throughout the Nation. I feel that this amendment would be a great move forward in adapting the watershed program to the needs and desires of the local organizations that are showing such an intense interest in protecting and improving the water and related land resources of the small watersheds of the Nation.

I would also like to point out that the proposed amendment would not change the limitations on total capacity or watershed size, but would only permit greater flexibility within these limitations.

Senator EDMONDSON. Mr. Hollis R. Williams, Acting Administrator for the Soil Conservation Service.

STATEMENT OF HOLLIS R. WILLIAMS, ACTING ADMINISTRATOR,
SOIL CONSERVATION SERVICE, AND HAROLD OGROSKY, CHIEF,
HYDROLOGY BRANCH, ENGINEERING DIVISION, SOIL CONSERVA-
TION SERVICE, U.S. DEPARTMENT OF AGRICULTURE

Mr. WILLIAMS. If it is agreeable, I would like to have Mr. Ogrosky and Mr. Swigart join me here at the table.

Senator EDMONDSON. I think there is plenty of room. You have just as many as you want to join you.

Mr. WILLIAMS. Thank you. That is very kind of you.

Mr. Chairman, we appreciate this opportunity to appear before your subcommittee in connection with your consideration of Senate bill 566 to increase the limitation on floodwater-detention capacity from 5,000 to 12,500 acre-feet.

The President in his message to Congress January 31, 1963, on this agricultural program stated:

Legislation is also needed to increase substantially the capacity for floodwater detention in small reservoirs in order to permit the full development, under the Watershed Protection and Flood Prevention Act, of available sites for multipurpose use. Such action this year will supplement and strengthen the rural economy through more adequate development of available water and related land resources for multiple use.

The Department of Agriculture recommends an increase from the existing 5,000 acre-feet to 12,500 acre-feet in the limitation of floodwater detention capacity in any single structure constructed under the provisions of Public Law 566.

The problem created by the 5,000 acre-foot limitation, although widespread, has up to this time affected the planning on only a small proportion of all the Public Law 566 watersheds. We have made a careful State-by-State analysis of effects of the limitation. The results show that the limitation has been a problem on a total of 99 watersheds in 24 States and Puerto Rico, or about 15 percent of all the Public Law 566 watersheds on which planning assistance has been provided. In 5 other States the limitation is expected to be a problem in watersheds now under consideration for planning while in 21 States there has not been any evidence of a problem to this date.

The existing limitation of 5,000 acre-feet is incompatible with the overall limitation on total capacity of 25,000 acre-feet and the watershed size of 250,000 acres. The Department does not propose any change in the limits on total capacity or overall watershed size. Thus, the program carried out under Public Law 566 will remain a small watershed program in which reservoirs will continue to be small as compared with those heretofore constructed by Federal public works agencies such as the Corps of Engineers or Bureau of Reclamation.

Increasing the limitation on floodwater-detention capacity from 5,000 to 12,500 acre-feet will serve four purposes. In the order of their importance they are:

1. Provide an equitable balance between the floodwater-detention capacity for other purposes, thus allowing for the full maximum development of the available sites for multiple purposes.
2. Reduce the overall cost of the program on particular watersheds that have unusual topography or distribution of benefits.

3. Increase the economic justification of projects in some areas having unusual topographic features by allowing the protective measures to be located nearer the damage areas.

4. Develop a justifiable program for some Western watersheds subject to flood damage by snowmelt runoff.

The most important need of the amendment, as we see it, is to provide for the full utilization of available reservoir sites for multiple purposes. This will implement the amendments to Public Law 566 contained in the Food and Agriculture Act of 1962, Public Law 87-703.

The 5,000 acre-foot limitation on detention storage limits the maximum size of drainage area above any floodwater retarding structure. The size of the drainage area determined by this limitation is inadequate to yield the additional runoff for agricultural or nonagricultural water supply permissible under total capacity limitation of 25,000 acre-feet.

Despite the urgent need it is impossible in some watersheds to develop the full allowable storage for agricultural and nonagricultural water use because of this 5,000 acre-foot floodwater detention storage limitation. Drainage areas large enough to produce a sufficient volume of water to fully utilize a multiple-purpose reservoir for flood prevention and water supply require a floodwater detention capacity in excess of 5,000 acre-feet.

The floodwater detention capacity needed in a 25,000 acre-foot reservoir varies from about 9,000 acre-feet in a 60-inch rainfall belt to about 12,500 acre-feet in a 20-inch rainfall belt. This existing inequity imposes a particular hardship on small municipalities that wish to develop a dependable water supply to attract small industry. However, it causes the wasteful use of scarce reservoir sites.

Increasing the limitation on floodwater detention capacity to 12,500 acre-feet will also result in reduction of overall project costs and increase the benefits in some watersheds. The reduction in costs would be accomplished by substituting one larger structure for two or more smaller structures. The increase in benefits would result in those watersheds where the topography and flood plain development make it desirable to locate larger structures nearer the damage areas.

This explanation should not be taken as an indication, however, that the small watershed program is inherently inefficient or more costly on the average than a program of large structures. Indeed, the opposite is true. The need for floodwater detention capacity in excess of 5,000 acre-feet is relatively rare. This is clearly demonstrated in our studies in Texas which show that of the 1,647 floodwater retarding structures planned, 1,448, or 88 percent, were planned with a detention capacity exceeding 5,000 acre-feet before the limitation went into effect.

This conclusion is supported by the analysis in Oklahoma which shows that of the 591 structures planned, only 13, or 2.2 percent, have detention capacity exceeding 4,000 acre-feet. Of the structures planned on the Washita River Basin prior to the effective date of the limitation, only 2 percent exceeding 5,000 acre-feet in floodwater detention capacity.

Although the need for detention capacity in excess of 5,000 acre-feet is relatively uncommon, there are a sufficient number of cases where the saving in both Federal and private funds would be sub-

stantial and the benefits increased to state without qualification that the average cost of watershed projects to accomplish the desired objectives would be reduced by this amendment.

In some Western States such as Washington and Utah, the justification of projects in areas where snowmelt runoff is the principal source of damage is particularly difficult under the 5,000 acre-foot limitation. Runoff from snowmelt frequently has a duration of several weeks with only moderate fluctuations in rate. The desired reduction in damages requires sufficient detention capacity to regulate runoff for extended periods without the relief usually afforded by the release of stored water between periods of runoff.

The regulation of snowmelt runoff to within bank stages, with the excess stored for irrigation use, would be possible under the 25,000 acre-foot limitation of total capacity in some watersheds if the 5,000 acre-foot limitation were increased to 12,500 acre-feet. Under the present limitation, it is necessary to release waters from the floodwater retarding pool at rates that often produce insufficient benefits to justify a project, and wastes the scarce water.

In addition to the prepared statement, I would like to add that it is my understanding that a question has been raised concerning the effect of this amendment on downstream water users. We cannot visualize any adverse effect that would accrue to downstream water users as a result of its enactment.

It is the policy of the Soil Conservation Service to honor fully State water laws and to withhold assistance on watershed projects where local organizations have failed to comply with such laws in all respects.

We are not aware of any instances where downstream interests have not been fully considered by the Soil Conservation Service in the design of structures providing for control of water. We are fully aware of the importance of water and make every effort to conserve it to the maximum possible extent for the benefits of all users in accordance with State water rights law.

Mr. Chairman, you have before you here an assembly that shows a map, "Survey of Need to Raise the Public Law 566 Detention Capacity to 12,500 acre-feet."

Senator EDMONDSON. In here?

Mr. WILLIAMS. Yes, sir.

We also have typical statements from our State conservationists regarding the 5,000 acre-foot limitation on floodwater storage and I am going to ask Mr. Harold Ogrosky to give an abbreviation of what is contained here for the record in order that this might be more fully treated.

Mr. OGROSKY. Mr. Chairman, the purpose of this map is to show the States which have found problems where the 5,000 acre-foot limitation generally made it more expensive to install a program.

You will note that on the States colored in red, the upper figure indicates the number of watersheds in which this 5,000 acre-foot limitation was a problem. The number below the line indicates the total number of watersheds studied. So you can see that there are not a lot of watersheds involved. They are relatively few in number. But it is generally a problem throughout the United States.

The States in orange indicate that they anticipate a problem.

Senator EDMONDSON. It looks to me like you have quite a few problems in Oklahoma, 15 out of 34.

Mr. OGROSKY. Yes, sir.

Senator EDMONDSON. That is higher than any of them. No; Alabama looks like it has a lot of them, too. Twelve out of twenty.

Mr. OGROSKY. Well, this was intended to give you some idea of the coverage nationwide.

The second chart indicates the number of dams constructed by the Soil Conservation Service in various size groups as shown on the left. On the right, the number of dams and the storage capacity of dams built by the Corps of Engineers. You will note that the number with capacities between 12,500 and 25,000 acre-feet is very small in comparison to the others. Just from the way our river systems develop, there should be a fewer number of sites for larger dams. As you go upstream, tributaries branch off and there should be an increasing number of sites.

Therefore, this indicates that neither the Corps of Engineers nor the Soil Conservation Service is adequately covering this range, particularly from the 5,000 to 25,000 acre-foot level.

Then the remaining part of this booklet contains statements by different State conservationists indicating the types of problems that they have found. I don't know if you would like to go over these in detail, but I think we could pick a few at random.

For instance, Georgia. I might read this first paragraph.

We are in the final phase of assisting the sponsoring organizations prepare a watershed work plan for the Big Creek watershed, located in Cherokee, Forsyth, and Fulton Counties, Ga. To achieve the protection needed from floodwater damage, as agreed between the sponsors and the Service, would require the retention of 6,293 acre-feet of floodwater retarding storage below the crest of the emergency spillway. We will not be able to complete an economically feasible watershed work plan for this project unless the limitation of storing floodwater in a single structure is raised above 5,000 acre-feet.

There are further details regarding this watershed and also two additional watersheds where this limitation has been a problem.

I might jump over to Louisiana. We have a statement here which I think points out the fact that increasing this limitation would permit economy in carrying out this work. The fourth paragraph:

An estimated \$1,691,000 will be needed to apply the structural measures to be included in the plan presently being considered on Bogue Lusa Creek watershed. We believe the same degree of protection could be provided for \$1,358,300 if the larger amount of flood storage could be provided in any given structure. Of the \$332,700 savings, \$287,500 would be to Public Law 566 funds and \$45,200 would be to local funds.

Again, if you are interested in going into further details, we would be glad to do that.

Senator EDMONDSON. Go back to this chart right over here, will you, please. What are these numbers right here?

Mr. OGROSKY. The numbers on the right are the number of structures that have been built in any given size. For example, the—

Senator EDMONDSON. And the length of that line indicates proportionately the acre-feet involved?

Mr. OGROSKY. No. The length of the line—

Senator EDMONDSON. Indicates the number?

Mr. OGROSKY. Yes, sir. The number of structures.

Senator EDMONDSON. I see.

Mr. OGROSKY. The capacity is over on the other side. For example, over 1 million acre-feet, the Corps of Engineers have built 38.

Senator EDMONDSON. I have got it. Thank you.

I don't know whether you are the proper one to ask this question, or whether it would be somebody later, Mr. Williams. But I think one question that might be summarized for the record is what is your best estimate of the percentage of structures involved? First of all, percentage of watersheds involved all over the country. I see you have it broken down here on this map per State.

Mr. WILLIAMS. I think we estimate 15 percent.

Senator EDMONDSON. Of the watersheds. And what about structures? Or do you have a figure on that?

Mr. WILLIAMS. Less than 3 or 4 percent.

Senator EDMONDSON. Not over 3 or 4 percent.

This, as you pointed out a minute ago on the Washita watershed in Oklahoma and others, this 5,000 acre-feet limitation did not formerly exist. When was it put into effect?

Mr. WILLIAMS. That was put into effect with the passage of Public Law 566. In other words, we had operations under the regular Flood Prevention Act that applied to the 11 authorized watersheds, 1 of which was the Washita in Oklahoma.

Senator EDMONDSON. Why was it put in?

Mr. WILLIAMS. Well, the general pattern in passing Public Law 566, Mr. Chairman, was to make all provisions of the Public Law 566 applicable to the 11 authorized watersheds.

Senator EDMONDSON. Why did they put the 5,000 limitation in 566 when, heretofore, it didn't exist?

Mr. WILLIAMS. Well, it was just felt to be needed, I assume, at that time in order to hold down the size of structures to that capacity and—

Senator EDMONDSON. You don't know any logical reason why it was put in in the beginning, then, or maybe I had better rephrase it, and say, did you consider it necessary at that time?

Mr. WILLIAMS. We did not.

Senator EDMONDSON. That is all.

I would like to further add for the record that I had some conversations with our State soil conservation people in Oklahoma and they are very much in favor of this amendment and so stated to me. They are in favor of it, and one of the principal reasons that they gave for it was this factor you mentioned about water supply for small towns and cities. I mean, the fact that the 5,000-acre limitation was a little bit below what could in many instances be said to be more feasible for the purpose of water supply for small towns.

Mr. WILLIAMS. Senator, we have a limited use for this increased limitation, and it would enable us to better use the sites for multipurpose use. The law provides for an overall capacity of 25,000 acre-feet for municipal and other water supply development. But when you have this limitation of 5,000 acre-feet on flood storage, it is just incompatible with the total of 25,000 acre-feet.

Senator EDMONDSON. And you aren't recommending it to range from 25,000 because you don't think that is needed?

Mr. WILLIAMS. This was considered, Senator and after negotiation with other departments and the Bureau of the Budget, it was the considered judgment that this 12,500 acre-feet would take care of most of our cases, not all.

Senator EDMONDSON. Well, I certainly agree from my conversations with the Soil Conservation people in Oklahoma, and from what I know about it, that it would be very advantageous to the overall program to raise the limitation to this figure of 12,500.

Mr. WILLIAMS. Would you like for us to leave this assembly for the record?

Senator EDMONDSON. I imagine we would.

(The document referred to will be found in the files of the subcommittee.)

Mr. WILLIAMS. We would be happy to pass these out.

Thank you, Senator Edmondson. We have enjoyed coming before this committee and any consideration you can give favorably to this amendment I am sure will be appreciated by all interest since it will make our small watershed program more effective in our multipurpose development.

Senator EDMONDSON. We in Oklahoma have always been in favor of this small watershed program and we don't have any intention to change it now, and I appreciate very much your coming, Mr. Williams. Sorry you were held up.

Mr. WILLIAMS. That is all right.

Senator EDMONDSON. Mr. Weber.

STATEMENT OF EUGENE W. WEBER, DEPUTY DIRECTOR OF CIVIL WORKS, OFFICE OF THE CHIEF OF ENGINEERS, DEPARTMENT OF THE ARMY

Senator EDMONDSON. Mr. Weber, Deputy Director of Civil Works, Office of the Chief of Engineers.

Mr. WEBER. Yes, sir.

Mr. Chairman, I am appearing at the request of the staff of the committee to present the views of the Department of the Army on the proposal to raise, from 5,000 acre-feet to 12,500 acre-feet, the limit on the capacity that may be included for flood control purposes in any reservoir constructed pursuant to the authorities of Public Law 566.

Since the Department of the Army was not asked to submit a report on S. 566, we have not prepared an official position on that specific bill. However, the amendment contemplated by S. 566 was one of several proposals which the Department of Agriculture submitted to the Bureau of the Budget last year, and which were reviewed by the Department of the Army at that time.

The position then taken by the Department of the Army was set out in a letter of February 7, 1963, to the Director of the Bureau of the Budget signed by Mr. Powell Pierpoint, Special Assistant to the Secretary for the Army for Civil Functions. We have obtained informal clearance from the Office of the Secretary of the Army and from the Bureau of the Budget to quote those parts of that letter which bear upon the amendment proposed by S. 566.

The Department of the Army's views on the proposal to raise the limit on flood control capacity from 5,000 to 12,500 acre-feet are embodied in the following quotations from Mr. Pierpoint's letter:

The Department of the Army would prefer that the present limit of 5,000 acre-feet for flood detention capacity be retained and that all projects requiring more than that amount for an optimum solution be authorized for construction by the Corps of Engineers. The proposed increase would greatly enlarge the area of overlap (and its serious attendant problems) between the Public Law 566 program and the programs of the Corps of Engineers and Bureau of Reclamation. However, the Department will interpose no objection to the increase to 12,500 acre-feet provided certain essential principles outlined below are also recognized in the amendment to Public Law 566. These principles are:

(a) Public Law 566 plans in which flood protection is an objective should be formulated with a view to providing such benefits primarily within an area not exceeding 250,000 acres.

Senator EDMONDSON. Isn't that what was said a moment ago, that it would still be within the limit of 250,000 acres?

Mr. WEBER. Yes, sir. The size of the watershed areas that would be studied under Public Law 566 would still be 250,000 acres.

Senator EDMONDSON. By law?

Mr. WEBER. By law; yes, sir. But this provision would be that the objective in formulating plans for such areas would be to provide the flood protection within such areas rather than beyond such areas.

Senator EDMONDSON. Well, I thought that that was what was meant when it was said the watershed would still be limited to 250,000 acres.

Mr. WEBER. No, sir.

Senator EDMONDSON. Watershed planning was limited to 250,000 acres by present law. Is it your statement that to pass this amendment raising the acre-feet to 12,500 would enable the Soil Conservation Service to plan flood control beyond 250,000 acres in the watershed?

Mr. WEBER. It would enable plans to be drawn for reservoirs within a 250,000-acre area which would have their effect primarily outside of the 250,000 acres.

Senator EDMONDSON. Primarily outside?

Mr. WEBER. Yes, sir. Theoretically it could be. That is why we ask that this condition be part of the objective if the amendment is considered.

Senator EDMONDSON. The reason I interrupted you is because I thought that is what it was. I mean, I thought that still would be the case.

Mr. WEBER. No, sir. The law does not state that the objective of the reservoirs within the 250,000 acres should be to provide protection primarily within the area, but we feel, as indicated in this report, that this should be the objective.

Continuing the quote, the second principle:

(b) Any Public Law 566 plan or group of plans that would result in downstream effects of sufficient magnitude to require that they be taken into account in the formulation or operation of downstream projects should be coordinated with the agency concerned with the downstream development.

The Department of the Army has repeatedly given its support to the basic principle that all reservoirs in a river basin—whether large or small—should constitute elements of that basinwide reservoir system which best meets the long-range needs of the basin; the best system being that which maximizes the sum total of net benefits, including the benefit to be derived from power generation, water supply for all purposes, water quality improvement, reclamation, navigation, enhancement of recreation and fish and wildlife, as well as flood damage reductions.

The main purpose of paragraphs (a) and (b) above is to implement this basic principle. Paragraph (b) would accomplish this by requiring that the agencies responsible for upstream and downstream planning coordinate their plans in any river basin in which the Public Law 566 projects expected to be undertaken, in the long run, would reduce downstream effects of such magnitude as to require that they be taken into account in the formulation, modification, or operation of downstream projects.

Paragraph (a) would require that Public Law 566 projects be planned to meet needs within the watersheds they cover. It would thus require the Department of Agriculture to confine itself to the minor engineering works needed for the solution of the problems which occur in small headwater drainage areas. This would not prevent the Department of Agriculture from claiming incidental benefits in downstream valleys. It would prevent it from unilaterally proposing projects primarily for the purpose of producing downstream benefits. This is in accord with the clear intent of the Congress that in the engineering field the Department of Agriculture would confine itself to dealing with the problems of small headwater watersheds.

These provisos are necessary for the reason that in some river basins even those Public Law 566 projects designed primarily to meet needs within small headwater watersheds will—after a sufficient proportion of the basin is encompassed by such projects—produce incidental downstream effects large enough to require changes in the design, or the operation, of downstream projects.

This ends the quotation from Mr. Pierpoint's letter.

To complete the record, I should add that after considering the foregoing views of the Department of the Army, the Bureau of the Budget informed the Department of Agriculture that enactment of legislation to raise the limit on flood control capacity from 5,000 to 12,500 acre-feet would be consistent with the administration's objectives, but that to insure proper consideration of the small watershed program with the programs of other Federal agencies it would be necessary to revise the regulations issued by the President pursuant to the last proviso of section 5 of Public Law 566.

So far as I know, there have been no changes in the position of the Department of the Army and of the Bureau of the Budget since the actions to which I have alluded took place; that is, since February and March of 1963.

The Department of the Army and the Corps of Engineers appreciate the opportunity you have given us to place our views before the subcommittee.

That concludes my statement, Mr. Chairman.

Senator EDMONDSON. Do you think that these provisions that you are talking about, subsection (a) and subsection (b) of Mr. Pierpoint's statement, should be included in the law or are you saying that under section 5, Public Law 566, the regulation propounded by the President, should take this matter into account?

Mr. WEBER. Yes, sir. The position the Department of the Army took last February was that these two provisos in the Army's opinion should be in the law. However, the Bureau of the Budget in commenting to Agriculture apparently concluded that it would be satisfactory for the provisions to be taken care of in the Executive order. The preference of the Department of the Army was for them to be taken care of in the law, but we are also aware that the force and effect of the Executive order on the executive departments would be equivalent. However, we felt initially that we would have preferred for the Congress to take cognizance of the conditions.

Senator EDMONDSON. You said that the proposed increase would greatly enlarge the area of overlap and its serious attendant problems

between Public Law 566 programs and programs of the Corps of Engineers and Bureau of Reclamation. Just 1 minute ago we found out about 3 percent of the structures the SCS is building are in this category. Am I talking about apples and are you talking about oranges?

Mr. WEBER. The overlap, apparently from the Department of Agriculture figures, would not involve a large number of the structures they normally study in the 566 program. Apparently, if I recall the approximate percentages that Mr. Williams mentioned, it was in the order of 3 or 4 percent. However, we find that of the 250 or so reservoirs of the corps that have been completed and are in operation today, 27 have capacities of less than 13,000 acre-feet. So this amounts to roughly 10 percent of our completed program in this zone. With this modification it would have been necessary for us to coordinate very closely to insure that we would not be duplicating. This, of course, we plan to do, but initially our reaction was that we would have preferred not to enlarge this zone of possible joint interest. Rather, we would have preferred to keep it as small as possible. This is not to say we are not perfectly prepared to try to work together.

Senator EDMONDSON. As I understand, you are not objecting to this proposal. You are just making suggestions?

Mr. WEBER. We have stated our preference and we are not going to impose an objection.

Senator EDMONDSON. Thank you, Mr. Weber.

Senator EDMONDSON. Mr. Roberts.

STATEMENT OF JAMES M. ROBERTS, ALCOVY RIVER WATERSHED PROJECT, MONROE, GA.

Mr. ROBERTS. Mr. Chairman, I realize that representing one small watershed before this committee is probably not typical of the entire operation of the watershed program. However, we felt that it might be helpful for the committee to have the experience of one small watershed.

I will read the prepared statement.

We know that the needs of one watershed in Georgia can be of little importance in the overall picture to which Senate bill No. 566 applies. However, we feel that our problems are probably the same as similar problems encountered by watersheds throughout the United States.

The Alcovy River Watershed Association was organized in November 1960 to attempt to secure Federal help under Public Law 566 in doing those things necessary for protection of the watershed of the Alcovy River and prevention of floods in the watershed. The association was sponsored by the Upper Ocmulgee River Soil Conservation District, the governing bodies of Gwinnett, Walton, and Newton Counties, Ga., and the governing bodies of the cities of Monroe, Covington, Lawrenceville, and Social Circle, State of Georgia.

The watershed involved covers approximately 168,000 acres in the counties of Gwinnett, Walton, and Newton in the Piedmont section of the State of Georgia. Approximately 1,300 landowners are in the area and 95 percent of the farms in the area are owner operated. Of the area in the watershed approximately 10,500 acres of bottom lands, the

best land in the area, are now flooded by the overflow waters of the river and secondary streams. Every heavy rain does extensive flood damage not only to the land, but also to roads and bridges.

Pursuant to our request, a preliminary investigation by the U.S. Soil Conservation Service has been made. This investigation revealed the following:

1. A definite need for flood prevention work.
2. A high level of interest among property owners and the general public in the area was apparent.
3. Extensive channel work would be necessary both on the river and secondary streams.
4. Due to the proximity to Atlanta and its metropolitan area and the influx in the watershed area of residents from the Atlanta area, additional recreational facilities, which could be supplied by this project were badly needed.
5. This project could provide additional water for the city of Monroe, county of Walton, and city of Social Circle, all of which are now nearing the capacity of their present water supplies.

The investigation also revealed that, under the present restriction of Public Law 566, to structures of 5,000 acre-feet the project would not be feasible because of the necessity for very large expenditures or channel work to provide a sufficiently large channel to carry off flood waters. The engineers tell us that if a 12,000 acre-foot structure could be constructed at a given point on the river some \$400,000 in channel work could be eliminated and that this saving, even with the cost of the structure being added, would render the entire project feasible from a cost against benefit ratio.

The location of this structure would be almost in the center of Walton County, approximately 2 miles from Monroe, Ga., could furnish water to the Monroe water system, would make a Walton County water system possible, and would be ideally situated for a recreation area for all the residents for miles around.

We are also informed by the engineers that a structure of 12,000 acre-feet is not a very large structure as lakes go, and would create a lake of from 500 to 600 acres when full and the cost of such a structure would be far less than the saving in channel work on the channel below the structure.

The universally recognized need in this country for protection of our water supplies, and for the prevention of floods, demands that everything possible be done in this direction without even considering the incidental benefits, such as supplying municipal water, creating additional recreational areas, and applying soil and water conservation measures to agricultural land, which will be the necessary result of watershed projects under Public Law 566.

We do not know how many watershed projects in the country will be affected by the present proposed amendment, but we do know there are at least two other projects in Georgia which would be made feasible by this amendment and we are sure that there must be a large number throughout the Nation. We are also sure that many projects could save considerable cost in channel work through this amendment even though they are economically feasible without it.

The amendment appears to us to have every argument in its favor and we can think of none against it. We earnestly urge the committee to give this amendment serious consideration.

The amendment appears to us to have every argument in its favor and we can think of none against it. We earnestly urge the committee to give this amendment serious consideration.

We appreciate this opportunity to come before the committee, Senator.

Senator EDMONDSON. You are very welcome, Mr. Roberts. We appreciate your recommendations and your comments.

We thank all of the witnesses who have appeared.

Is there anything further? Is there another witness who wants to testify?

If not, the subcommittee is adjourned.

Thank you very much.

(Whereupon, at 11:10 a.m., the subcommittee was adjourned, subject to the call of the Chair.)

(Additional statements filed for the record are as follows:)

AMERICAN FARM BUREAU FEDERATION,
Washington, D.C., June 3, 1963.

Re S. 566.

HON. JAMES O. EASTLAND,
Chairman, Subcommittee on Soil Conservation and Forestry,
Senate Committee on Agriculture and Forestry,
Senate Office Building, Washington, D.C.

DEAR SENATOR EASTLAND: We have been asked to comment on the above bill now pending before your subcommittee.

The bill as presented is an amendment to the Watershed Protection and Flood Prevention Act (Public Law 566) (16 U.S.C. 1002) and would increase the flood-water detention capacity of dams constructed under this act to be raised from the present capacity of 5,000 feet to 12,500 feet.

The enactment of this bill would increase the Federal obligation for such structures since the flood deterring feature of such projects is a nonreimbursible cost.

The American Farm Bureau Federation has no position with regard to this specific item and, therefore, makes no recommendation.

We would call your attention to the fact that we vigorously supported Public Law 566 in its original form and do not wish to see its fundamental principles abridged. We believe in the small watershed program; we believe in local participation and local control of this program.

We do not wish to see it evolve into another big dam program or the control of it lost to downstream interests either to municipalities or other agencies. We feel the complete control of this program should remain in the hands of local people.

If these principles are adhered to, we have no objection to the passage of this proposed legislation.

We would be pleased if this letter were made a part of the record.

Sincerely,

JOHN I. TAYLOR,
Assistant Legislative Director.

THE NATIONAL ASSOCIATION OF SOIL AND WATER CONSERVATION DISTRICTS,
Washington, D.C., May 31, 1963.

HON. ALLEN J. ELLENDER,
Chairman, Senate Committee on Agriculture and Forestry,
Senate Office Building,
Washington, D.C.

DEAR SENATOR ELLENDER: The National Association of Soil and Water Conservation Districts earnestly recommends the enactment of S. 566, introduced by Senator Quentin Burdick of North Dakota, to amend the Watershed Protection and Flood Prevention Act.

The amendment would increase the floodwater detention capacity limitation of the act from 5,000 to 12,500 acre-feet. This increase is needed to permit full multipurpose development of upstream reservoir sites within the presently authorized total capacity of 25,000 acre-feet.

We believe the proposed modification of the limitation is both practical and desirable. It will permit more complete utilization, in the public interest, of available reservoir sites for local water supply, recreation, and other multiple-purpose developments.

In areas of low and moderate rainfall, the drainage area required to yield the water supply needed for recreation and other water supply purposes is too large to be controlled by 5,000 acre-feet of floodwater detention capacity. As a result, it has been necessary to design multiple-purpose structures in these low rainfall areas with a total capacity substantially below the 25,000 acre-feet of maximum capacity already allowed by the act.

We believe the present limitation of floodwater detention capacity is incompatible with the limitations of 25,000 acre-feet of total capacity, and 250,000 acres of watershed area, now contained in the act. In our judgment the 5,000 acre-foot floodwater detention capacity limitation is seriously hampering multiple-purpose development of watersheds in those low rainfall sections of the country where water development is most critical.

In response to direction from districts throughout the Nation, our association has been seeking for the past 3 years to obtain this improvement in the Watershed Protection and Flood Prevention Act. The amendment was strongly urged by the NACD Council during our annual convention in Philadelphia in February 1962. The position was reaffirmed by our most recent convention in Denver earlier this year.

As you know, there are now more than 2,930 soil and water conservation districts organized throughout the United States. Ninety-six percent of the Nation's agricultural land is within their boundaries. These districts are the principal sponsors of watershed projects under the provisions of the Watershed Protection and Flood Prevention Act (Public Law 566).

Soil and water conservation districts are legal subdivisions of State government, created by local people under State enabling legislation. They are the Nation's principal local instrumentality for carrying out programs to protect and develop our vital soil and water resources. Public Law 566 is the vehicle through which the Federal Government assists districts in meeting community objectives of soil and water management that are beyond the means of individual farmers and ranchers.

Districts increasingly recognize their responsibilities to nonagricultural as well as agricultural interests in rural America. The amendment proposed in S. 566 is designed to help districts be responsive to the rapidly increasing needs for full community development in our agricultural areas.

We urge the Senate Committee on Agriculture and Forestry to report favorably on S. 566.

Sincerely,

MILTON H. FRICKE,
Chairman, Watersheds and Water Resources Committee.

ATTACHMENT B - SUMMARY OF FINDINGS

The following summary discusses the major findings of the study and the recommendations for action. The summary is intended to provide a general overview of the study and its findings. It is not intended to provide a detailed account of the study or its findings. The summary is organized into several sections, each of which discusses a different aspect of the study. The first section discusses the background of the study and the objectives of the study. The second section discusses the methodology of the study and the data that were collected. The third section discusses the findings of the study and the conclusions that were drawn from the data. The fourth section discusses the recommendations for action that were made as a result of the study. The fifth section discusses the limitations of the study and the areas for further research. The sixth section discusses the significance of the study and the implications of the findings. The seventh section discusses the conclusions of the study and the recommendations for action. The eighth section discusses the limitations of the study and the areas for further research. The ninth section discusses the significance of the study and the implications of the findings. The tenth section discusses the conclusions of the study and the recommendations for action.

James H. [Name]
 Chairman, [Committee Name]

Sincerely,
 [Name]

