

**Administration of the Small Watershed Program, 1955-1978, -An
Analysis**

by

Wildon J. Fontenot



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ADMINISTRATION OF THE SMALL WATERSHED
PROGRAM, 1955-1978--AN ANALYSIS

A Special Study

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by

Wilton J. Fontenot

WATER RESOURCES RESEARCH INSTITUTE
Colorado State University
Fort Collins, Colorado 80523
Norman A. Evans, Director

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SUMMARY

The purpose of this paper is to 1) examine the intent of Congress when it passed PL83-566, 2) examine the administration of the Small Watershed Program from 1955-1968 and from 1969-1978, 3) determine whether or not conditions which existed during that period would have permitted the program to have been administered differently, thus preventing the conflict which arose because of the practice of stream channelization, and 4) describe how administration of the Act has and is changing. This is accomplished by studying the basic factors which affected and is affecting policy formulation and decision making and by using various public administration theories to analyze the case.

Changes in factors such as physical environment, sustenance patterns, technology, policy, and continuation of other factors such as disasters and certain ideologies encouraged and strongly supported the growth of the program following an economic development philosophy. On the other hand, the effects of some of these factors and the incongruity of the program outputs with wildlife advocates' desires caused opposition to the program.

SCS administered the program consistent with the dominate influencing factors. For the agency to have done otherwise would have been irrational. Consequently, the channelization controversy was largely unavoidable and necessary to clearly establish that the public's needs and desires have changed and the program needs to be administered with a different emphasis.

Incremental changes are being made in the program and will continue until a better mix of economic development and environmental quality objectives are achieved. Future projects will place more emphasis on land treatment and non-structural measures. The program will diminish in areas where economic development remain the primary concern and erosion and agricultural pollution are not severe.

INTRODUCTION

PURPOSE

The purpose of this paper is to examine how the administrators in public organizations react or adapt to changing conditions. This will be accomplished through the study of the "Small Watershed Program" and the impacts that various factors had on its administration. The "Small Watershed Program" is the more common name for the activities of the Soil Conservation Service (SCS) as authorized by the Watershed Protection and Flood Prevention Act of 1954 (Public Law 83-566).

The objective of this paper is to describe the conditions which led to the conflict between SCS and the environmentalists, describe and analyze how each side approached and dealt with the conflict, and evaluate the approaches used by each. This description, analysis and evaluation will hopefully prove to be a useful reference to present and future SCS line and related staff personnel who are not familiar with the history of the conflict.

Change in the power balance is a condition with which organizations periodically have to deal. Hopefully, this case study would also be useful to other organizations involved in resource management as they have to adapt to changes that affect their programs.

The study does not attempt to judge whether right or wrong decisions were made, but rather to explain what did happen and why. Once this is accomplished the readers can decide for themselves the similarities between this case and their situation and determine which factors they want to vary to achieve the results they desire.

METHODOLOGY

The case study approach was used to study the problem. The data gathered are presented in three parts:

- I. PRE-PL83-566 PERIOD (1935-54)
- II. PROGRAM BUILD-UP ERA (1955-1969)
- III. ENVIRONMENTAL ERA (1970-78)

Data for the first period were gathered mainly from secondary published sources and is presented in the form of a legislative history. Data for the second and third periods were obtained from unpublished and published secondary sources and supplemented with telephone conversations and personal interviews with active and retired agency personnel.

Behavior, reactions, and actions were gleaned from the aforementioned sources and analyzed to determine the direction the program was taking relative to the forces that were influencing its administration. These situations were then evaluated to determine whether actions taken were typical of those types explained by public administration literature.

PARTS I and II are written to parallel closely. They each contain a SETTING section which describes the conditions that affected the following sections of each part. For instance, the conditions described in the SETTING of PART I are the factors which pertain to the LEGISLATIVE HISTORY. In PART II, the SETTING pertains mostly to the administration of the program by the agency. Together, PARTS I and II describe the conditions which led to SCS's involvement in the channelization controversy or, on a broader scale, the environmental crisis.

In PART III, there is no attempt to give a detailed description of the policy determinants by category as in the other parts. Rather, the emphasis is on describing the agency's reaction to the various events that were forcing the agency toward change.

PART I. THE PRE- PL-566 ERA

This section deals with the passage of Public Law 83-566 (PL-566) entitled the "Watershed Protection and Flood Prevention Act." Neither concept, watershed protection or flood prevention, was new at the time of the passage of the act since both were authorized and practiced in varying degrees since the 1930's and earlier.

The purpose of this section is to analyze the conditions that led to the enactment of this legislation. The section is presented in two main parts:

- (1) The setting which is the author's attempt to describe the "times" in terms of the basic ingredients of policy formation.

- (2) A legislative history using portions of the Jones model.

The setting is intended to explain in a general way previous occurrences and conditions relative to the Act. The legislative history is intended to deal mainly with the processes which led to legitimation.

SETTING

Many factors affect the way that problems are perceived and the way in which solutions are visualized. Factors such as physical environment, disasters, sustenance patterns, prevailing ideologies, people (actors), previous policy decisions, and the state of technology all interact to create a unique set of conditions. The actors will be discussed as part of the legislative history. The following is a description of the other factors which set the mood for the "Watershed Protection and Flood Prevention Act."

PHYSICAL ENVIRONMENT

Land and water, two of the basic ingredients necessary for mankind to maintain life on this earth, can also be the cause of much human misery. This is especially true when man misuses these resources. When vegetative cover is removed from soils,

they erode at rates which are much higher than normal geologic erosions. Water runs off of these denuded areas at accelerated rates causing higher stream flows during given periods of time. Soils eroded off uplands are deposited on bottomlands and in streams. Flood waters inundate improvements in the stream valleys leading to serious economic losses.

Air, another of man's essentials for life, also can play havoc when soils are unprotected with vegetation. Wind erosion has moved large amounts of topsoil and caused great changes in the physical environment during certain periods of our history.

SUSTENANCE PATTERNS

In our early history, the agrarian way of life was the dominant means of support. In 1820, 72 percent of all workers were agricultural.¹ Population growth and push for expansion played a large role in the use of marginal lands. Practices such as clean tillage, plowing up and down slopes, overgrazing of grasslands, and cutting and burning timbered areas kept vegetative cover at levels which allowed accelerated erosion. This caused soils on steep slopes or in windy semi-arid areas to deplete to the point of low to non-productivity.

The census of 1910 measured the crest of development that had occupied the land from the Atlantic to the Pacific. In that year, there were 11.5 million farm workers. The number was larger than the total labor force half a century earlier, and almost three times as large as the total population of the United States at the time of the first census in 1790.²

In the years from 1820 to 1910, the numbers of farm workers increased decade by decade, but the rate of the increase was slowing even before the Civil War. In 1880, the numbers of farm and non-farm workers were almost equal. By 1910 farm workers were less than one-third of all workers, and growth with the 1900-1910 decade had slowed to less than 10 percent.³

The slowing increase in the numbers of agricultural workers was related more to economic growth than to pressures on the land. The number of agricultural workers constituted 30.9 percent of the work force in 1910, 21.2 percent in 1930, and 11.8 percent in 1950.⁴

Overtime sustenance patterns changed. By the 1950's people living on subsistence farms, barely scratching a living from the soil during good economic conditions, were forced to abandon this way of life. Farming was fast becoming mechanized and requiring higher capital investment. At the same time price of raw agricultural products failed to keep pace with the rest of the economy.

Although substantially fewer people were farming the land, mechanization gave them the potential to farm as many acres as in previous times. Some acres were taken out of production because of the incentive payments made through the Land Bank Program. However, erosion and flooding were still serious problems. Farming methods for the large part were still by the plow. Only an estimated 15 percent of the agricultural land was treated to the point where soil loss was within acceptable conservation limits.

DISASTERS

Abuse of the soil resource described in the previous two sections periodically contributed to large scale disasters which gained national attention. Large floods on major rivers caused high economic damages and much human misery. These disasters caused leaders in the damaged areas to exert pressure on public officials for remedial action. Pressure was especially strong after each disaster.

In the late forties and early fifties, a number of major and costly floods occurred on various rivers in the Missouri Basin. These floods made the small watershed phase of the basin-wide program very attractive to a variety of interests.⁵ Hearings held during July 31, August 4, and 6, 1951 indicated serious damages. Damages to Kansas City alone were estimated at \$145 million.⁶

Although not mentioned in the Congressional hearings, the depressed agricultural market and low commodity prices of the early 1950's had a flavor that reminded many of the "Depression." This, although not very apparent, helped set the mood for PL-566. Experience had shown that the practices of soil conservation are at their lowest during adverse economic conditions. Since the law provided for accelerated application of conservation measures, it was seen as a needed piece of legislation.

PREVAILING IDEOLOGIES

The three policy thrusts which have traditionally been manifested in the field of natural resources all played a role in the conditions which lead to PL-566. The developmental thrust which promotes growth in the quantity of material goods and services encouraged the opening and tillage of lands which were really not suited for cultivation. The emphasis on production, growth, and expansion obscured the need for conservation. Users of the land were reluctant to channel their operating capital on measures which had little noticeable short run economic benefits for them. Although they probably agreed that the soil needed to be conserved for the prosperity of future generations, this was too far fetched to have much effect. This, plus the abundance of land, detracted greatly from the practice of good stewardship. People that had the opportunity and were influenced by this thrust were farming in flood plains highly susceptible to damage. They also wanted to open and make use of lands that were too wet for cultivation.

The progressive thrust, like the developmental, played an important role in agriculture since the birth of our nation. Jefferson's egalitarian concepts have always been prominent in agricultural policy. The family farm was the dominant means of support for the nation's population until 1870. The family farm was believed to be one of the most important features of our free, capitalistic society. This thrust helped mold the homesteading legislation to favor the small family enterprise and hamper large enterprises and speculators.

The progressive thrust had a significant influence on the policy which guided the U.S. Department of Agriculture (USDA) programs in the early 1950's. One aspect of the philosophy was that agencies such as the Production and Marketing Administration, Farmers Home Administration, Cooperative Extension Service, and Soil Conservation Service were to provide services and assistance which would improve the small producers chance for survival. This was especially true for the 1950's since prices were depressed by large surpluses and farmers were beginning to feel the "cost-price squeeze." Although not prominent in the passage of PL-566, it played a complementary role since the Act stressed flood prevention through treatment of individual private farms.

The conservation thrust did not become prominent in agriculture until the turn of the century when Gifford Pinchot popularized the multiple use-sustained yield (M.U.-S.Y.) philosophy in forestry management. It took another thirty years for this philosophy to be forcefully introduced to the farming sector. Through the crusading efforts of Hugh Hammond Bennett, the Soil Erosion Service was created in 1933 and, subsequently replaced by the Soil Conservation Service, a permanent agency, in 1935. The motto of this agency, "use each acre of agricultural land within its capability and treat each acre according to its need,"⁷ was definitely from a M.U.-S.Y. conservation thrust.

The faction of the conservation thrust, which advocated preservation of the natural environment, did not have as much influence on soil conservation activities during the 1930's to the 1950's as it later would in the 1970's. The treatment of ugly gullies, the conservation of soil fertility needed to produce habitat, and the reduction of sediment in streams were all desirable features. Therefore, accelerated conservation land treatment in the early 1950's appealed to members of the Sierra Club, National Wildlife Federation and several other groups (see Appendix Tables 1 and 2). The bills which eventually led to PL-566 had enough appeal to draw support from all three thrusts.

Studies presented at the hearings showed that on an average annual basis, the largest economic losses occurred from storms of 10-year frequency or less. High damages did occur from high frequency storms such as the 50 or 100-year, but these represented a small part of the average annual damages. Consequently, efforts to treat the upper watersheds to alleviate the damage which in its separate parts was not spectacular, but in the aggregate was larger than the terrifically high-disaster storms,⁸ held much appeal to the development ideology. The flood protection would reduce production losses, which meant production could be increased. It would, in some cases, make it possible to convert land in low intensity uses such as woodlands or grass to cropland, especially if channel work or drainage was part of the program. This would also increase production.

In summary, the bills leading to PL-566 had enough appeal to all three thrusts to be conducive to coalition building. However, of the three thrusts, the developmental was the strongest proponent. The need to reduce damage from inundation and sediment deposits in the floodplains was stronger than the need to conserve soil for the prosperity of future generations and the need to aid the small farmer per se.

The actors in the developmental thrust were interested in upstream watershed treatment mainly because it would retard water and reduce floods. The fact that it conserved soil was a good motherhood and apple pie type bandwagon which the developmentalist could use to further their ends. This author is led to these conclusions by the fact that (1) the Act only required that agreements be obtained... "to carry out recommended soil conservation measures and proper farm plans from owners of not less than 50 per centum of the lands situated in the drainage area above each retention reservoir."⁹ ...and (2) drainage projects were definitely part of this Act.¹⁰

If the main thrust of the Act was conservation, an amount higher than 50 per cent would have been required. In addition, it would have also been required in areas other than just above retention structures.

Land that is in need of drainage is usually not erosive. Drainage also helps move water downstream faster which would tend to intensify downstream floods rather than prevent them.

One might ask, how could Congress and the President approve an act which was developmental during times of depressed market conditions and surpluses? They saw the nation's ability to produce food as a large asset which would stand the country in good stead at some point in the not too distant future. They recognized that our soil was one of our most important natural resources and it needed to be conserved.

Also, in a much more subtle, unspoken way, they saw the Act as having much localized developmental potential. It tended toward small projects, which initially would have very little impact on total national agricultural production. However, an aggregate of several of these small projects could have a significant impact on a Congressman's district. It would also take several years lag time before a significant number of these projects would get installed and functioning nationwide. By this time, the agricultural markets could be expected to have stabilized somewhat. In time, the further development of our capacity to produce agriculturally, would be a good national defense feature and would help maintain the United States in its position of leadership.

STATE OF TECHNOLOGY

Essentially, two methods of controlling floods over relatively extensive areas were known. One was to build systems of large dams and levees in the flood plains of the larger rivers. This would give good protection to those sections below the large dams, but would do nothing for areas above the dams. The technology to build large dams and levees was highly developed since the engineering profession had been doing flood protection work on large systems since the late 1800's. A large pool of expertise was housed in the U.S. Army Corps of Engineers and the Bureau of Reclamation.

The other method of controlling floods was more recent and had grown out of Hugh Hammond Bennett's upstream watershed treatment philosophy. Bennett was a big advocate of stopping the raindrop where it fell. Land treatment systems as had

been developed and applied in the CCC projects of the 1930's would increase infiltration and reduce the amount and rate of runoff. This would contribute toward decreasing the amount of flooding downstream. The term "flood prevention" came to be the popular nomenclature for this method. However, the greatest benefit of reducing flooding would be in the small upstream tributaries.

Although Bennett did not advocate this, some personnel within the Soil Conservation Service recognized that land treatment, such as terraces, diversions, grassed waterways and other erosion preventive measures, would not adequately reduce and retard the amount of runoff. Consequently, the damming of small streams was included as a related measure. The effectiveness of the upstream type treatment had not been tested and proved nearly to the extent of the large dams. Nevertheless, some projects had been installed under the Flood Control Act of 1944 and surveys and preliminary studies conducted under the Flood Control Act of 1936. The people who were served by the projects seemed to be satisfied with the manner in which these projects functioned. The Soil Conservation Service realized that upstream watershed treatment would not solve the total problem. Their position was that both upstream and downstream treatment were needed to do the total job. The Corps of Engineers was in agreement with this approach, but did not want to see SCS get in the dam building business.

In summary, technology existed to control floods which was administered mainly by two different agencies under two different departments. One was an old line agency that had been in the flood control business for a number of years, while the other agency was a relatively new one which did not engineer large measures. However, in their 20 years of existence, SCS's work was sufficient to have built a large following.

PREVIOUS POLICY DECISIONS

The concept of conservation land treatment to control soil erosion and prevent floods first received official recognition from Congress when it passed the

1928 Buchanan amendment to the agricultural appropriations bill (PL-70-769). This bill provided \$160,000 to be used by the Secretary of Agriculture for soil erosion investigations. With these funds, supplemented by additional amounts provided in the next two years, the Bureau of Chemistry and Soils, in cooperation with the Bureau of Agricultural Engineering, set up 10 regional soil erosion experiment stations.¹¹

In 1933 the Soil Erosion Service was created to administer erosion-control work as a means of unemployment relief provided for in the National Industrial Recovery Act. The Soil Conservation Act of 1935 created the Soil Conservation Service (SCS) within the Department of Agriculture. The Soil Erosion Service was abolished with all of its functions and the experiment stations transferred to SCS. By mid-1936 SCS had 147 operational demonstration projects averaging 25,000 to 30,000 acres in size.¹²

Congress, recognizing the two methods of obtaining flood control, divided the responsibilities of the Flood Control Act of 1936 between the U.S. Army Corps of Engineers (Corps) and USDA. The Corps was to have primary responsibility throughout most of the country for controlling floods through downstream water control methods such as large dams. USDA was authorized to conduct surveys and investigations of watersheds for flood prevention purposes and to install measures to retard water flow and runoff and to prevent soil erosion. Responsibility was assigned to SCS in cooperation with the Forest Service and Bureau of Agricultural Economics. Work accomplished by SCS under this Act was concerned chiefly with surveys and preliminary studies of flood prevention projects.¹³

The Flood Control Act of 1944 authorized USDA to undertake flood prevention projects, using upstream water control methods for 11 watersheds which covered 30 million acres in 12 states. SCS began work on these 11 watersheds in 1945.¹⁴

Mainly at the urging of several groups from Nebraska and Missouri working through Senator Frank Carlson and Representative Clifford R. Hope of Kansas, the Congress approved a \$5 million appropriation in 1953 for the purpose of a pilot

water program. This was approved after the initial attempt in 1951 had failed.¹⁵

The passage of this bill was an indication that the Flood Prevention Acts of 1936 and 1944 were not functioning sufficiently well to meet the upstream flood prevention needs.

LEGISLATIVE HISTORY

PROBLEM IDENTIFICATION

As indicated in the preceding PREVIOUS POLICY DECISIONS section, Congress had perceived flooding as a problem since they had passed the Flood Control Act of 1936 and of 1944. Approximately \$3 billion of Federal funds had been spent on flood control projects in the four decades preceding the fifties. The majority of this money had been spent by the Corps of Engineers building large dams and other structures on major rivers. USDA, based on appropriations received under the Flood Control Act of 1936, had spent \$17 million in making surveys and reports on upstream watersheds.¹⁶

The SCS did not get what many would judge to be a fair share of the flood control appropriations. During the House hearings, Mr. T.W. Ferguson of the Yadkin PeeDee Soil Conservation and Flood Control Association stated that for every \$100 appropriated, Corps got \$96 while SCS got \$4. This situation occurred partly because of the obscurity of SCS's work. Another reason was the relationship of USDA and the Corps to the congressional committees. Flood control committees of Congress authorized surveys for all projects, and the public works subcommittees of the appropriations committees passed on the estimates for all work under the flood control acts. Funds were appropriated to the War Department and later transferred to USDA. Both agencies and their supporters in Congress were competing for limited federal appropriations for programs that had the same name, but rarely overlapped so far as specific projects were concerned. The Corps had first call on flood control money because it was supported by congressmen from constituents having major rivers which could threaten valuable urban or rural property (as along the Mississ-

ippi flood plain). They simply were not interested in diverting funds to USDA for upstream projects. USDA had little bargaining power in this situation.¹⁷ As a result of this, not one single upstream river basin project had been completed or even scheduled for completion for the sixties.¹⁸

The committee began formal hearings on this subject in August 1950. They continued in the fall of 1951 with a series of four hearings held in the midwest by a subcommittee under the chairmanship of Mr. Poage (Texas).¹⁹ These meetings were well attended with a total of 153 statements and 16 letters presented. As a result of these hearings and studies, the committees reached several conclusions:

"First, that our problems for soil and water conservation and downstream river development and flood prevention are closely interrelated and that there is a serious gap in our coordinated attack on this problem.

"Second, that gap lies in our approach to the matter of upstream watersheds. The soil conservation and water conservation activities of the Department of Interior do not reach far enough downstream and the flood-control activities of the Corps of Engineers do not reach far enough upstream to meet and form a unified program...

"Third, it is not necessary to wait until complete plans have been developed for full river valley development before this small watershed work is undertaken...

"Fourth, since from 25 to 75 percent of all flood damages occurs in these upstreams areas, beyond the furthest benefits of the major downstream structures, the planning and installation of these upstream programs and projects should be a cooperative matter between the Federal Government, the States, local government agencies, municipalities, and private citizens. Each should bear, insofar as possible, an equitable proportion of the cost based upon anticipated benefits." ²⁰

The Poage subcommittee held its hearings from October 12 to November 1, 1951. The problem of big dams versus upstream treatment also began to be made more public about this time as illustrated by a news article entitled "Uniting Against Floods" appearing in the Kansas City Times, August 9, 1951. The opening paragraph of the article stated, "From the devastation of flood the people of this area are rising with a greater show of unity than we have ever seen before. Of course they still hold their own ideas on methods behind the labels of MVA or Pick-Sloan. A

large share of the farmers put first emphasis on a bigger soil-conservation program that includes many little retention dams on the creeks. Others directly exposed in the city or farm areas of the valley's are likely to think first of big dams.²¹

This quote well summarizes the problems as first perceived. The people were first concerned about flood devastation. The problem was not a matter of agreement that something should be done, but one of agreeing on the methods to be used to reduce the damages. The fact that the majority of the money was going to the "big dam" programs caused resentment on the part of farmers and their Congressmen. Their fertile land in the valleys was being taken for reservoirs which offered protection to the city dwellers downstream, but did nothing for farmers upstream. They wanted to see government ownership of land decrease rather than increase. Others, such as businessmen in small towns who feared the economic consequences of a continued loss of farm population, tended to support the agricultural program. For obvious reasons, private electric utility companies also supported it. Other groups were interested in securing flood control and more water for the smaller urban areas where the Corps had not developed projects, or where its proposed works were not entirely satisfactory to local interest for various reasons. Among these groups, there was a feeling that the Corps of Engineers was not very interested in the relatively small projects important to the smaller urban centers and, certainly, the Corps had no experience which qualified it to deal with the agricultural phases of flood control.²²

The leaders of watershed associations continued to confer with their congressmen after the original hearings about the need for a program which would bridge the gap between the on farm conservation program and the big dam programs. Editorials and newspaper and magazine articles grew from the neutrality of the previously mentioned article, "Uniting Against Floods," to being critical of big dams and advocating upstream treatment.

The fires were kept burning by a large degree through the efforts of Raymond A. McConnell, Jr., editor of the Lincoln Journal. Mr. McConnell's newspaper crusaded for the watershed approach to flood control with the imagination and zeal that once won it the Pulitzer Prize. Mr. McConnell, Stanley Matske, his farm editor, and Otto Liebers, a leading dairy farmer, spread the idea of the small watershed association through much of Nebraska, Kansas, and Iowa.²³

Additional writings that seemed of particular importance were those of Mr. Elmer T. Peterson. His article, entitled "The Army Engineers Are Imposing their Flood Control Ideas on Creeks" and published in one of the February 1952 issues of Saturday Evening Post, spoke largely against Corps dams and for SCS upstream treatment. This article was introduced to the House by Mr. Paul B. Dague, Congressman from Pennsylvania serving on the Agriculture Committee, with these remarks, "...Your House Committee on Agriculture is studying the problem of flood control as it affects soil conservation, and I can assure you, that most of us are convinced that upstream dams are more effective and at the same time less destructive of productive land than are the big downstream dams in which the Army Engineers take so much delight."²⁴

Another of Peterson's articles, "Big Dam Foolishness," appeared in the May 1952 issue of Country Gentleman. In this article Peterson compares an SCS upstream plan with a Corps downstream plan for one of the subwatersheds of the Washita River. The Corps plan would have protected 3,371 acres of bottomland at a cost of \$6 million while the SCS plan would have protected 8,080 acres at a cost of about \$2 million. Mr. A.S.J. Carnahan, Congressman from Missouri serving on the Foreign Affairs Committee, in an extension of remarks on May 15, 1952, introduced this article to the House.²⁵

James S. Golden, Congressman from Kentucky serving on the Agriculture Committee in an extension of remarks, states that no one program is a cure-all. However, when coordinated and working together, they can accomplish the desired results. One of his main points is that soil conservation must be expanded on a broad scale and this

can best be done by complete watershed treatment which would include flood control.²⁶

A study of the House and Senate hearings (see Appendix Tables 1 and 2) shows that the problem was still largely expressed as being floods and the prevention of these through the multiple use-sustained yield philosophy of conservation land treatment. However, in the House debate on H.R. 6788 the beginning of a change surfaced. Mr. Jones of Alabama made a direct inquiry as to whether the bill authorizes drainage projects. Mr. Hope of Kansas stated that drainage would be permissible as an incidental feature needed for flood prevention.²⁷

As time passed the developmental thrust must have taken a stronger hold. The Senate in Report No. 1620 redefined the problem to include agricultural water management as a more prominent feature. This is reflected in one of their justifications for a change of wording..."in order to make it absolutely clear that a work of improvement may consist solely of an undertaking for agricultural phases of the conservation, development, utilization, and disposal of water, such as a drainage project,"... Therefore, the problem was enlarged to not just address soil conservation and flood prevention, but to include drainage as well.

FORMULATION AND REFORMULATION

The first attempt at formulation was by Congressman Carnahan of Missouri. On October 20, 1951, the last day of the first session of the 82 d Congress, H.R.5846 (To promote flood prevention and land and water conservation by encouraging the construction of check-dams and other improvements for water-flow retardation and sediment control) was introduced and referred to the Committee on Public Works. However, Carnahan did not reintroduce the bill in the second session or the 83 d Congress. This bill may have been just an attempt to show the constituency back in Missouri that he was trying to do something to solve their problems.

On the other hand, the bill was referred to the Public Works Committee which was against the Soil Conservation Service's involvement in flood control. This is evidenced by Mr. Jones' (Alabama) Subcommittee to Study Civil Works report, The

Flood Control Program of the Department of Agriculture, December 5, 1952. This report included nine recommendations which would have repealed USDA's authority to make flood surveys and would have made USDA's involvement in flood control subordinate to the Corps.²⁸ Since another similar bill was introduced in 1952, Mr. Carnahan probably saw no need to pursue his bill in the Public Works Committee.

Representative Wickersham of Oklahoma, serving on the Armed Services Committee but with a farm background, introduced a bill (HR 6910) which may have been an attempt to offset the anticipated adverse Jones Report. The purpose of the bill was to establish a temporary commission to investigate the cost and effects of watershed programs for flood control in agricultural watershed. A similar bill (S 376) was introduced by Senator Monroney, a strong watershed advocate from Oklahoma, in 1953.

Mr. Poage (Texas) introduced HR 7868 (To authorize the Secretary of Agriculture to cooperation with States and local agencies in planning and carrying out works of improvement for soil conservation, and for other purposes) on May 15, 1952. Mr. Curtis of Nebraska introduced a similar bill (HR 8400) on June 27, 1952. The Poage bill was referred to the House Committee on Agriculture. Extensive hearings (unprinted) were held on this bill in June 1952. At these hearings, the bill was supported not only by USDA, but also by every major farm organization, most of the major groups interested in resource conservation and development, as well as by such organizations as the National Association of Manufacturers and the United States Chamber of Commerce.²⁹

Opposition was expressed only by a spokesman for the Department of Interior (USDI). Following the hearings, the committee amended the bill in a manner which, it hoped, would meet the fears expressed by the Department of the Interior spokesman and make it quite clear that it was not the intention of the committee to interfere or conflict in any way with the proper exercise of authority of the USDI in the field of reclamation and irrigation.³⁰

At the direction of the committee, the author of the bill introduced a clean bill (HR 8243) embodying the amendments. This bill was favorably reported to the House (H. Rept. No. 2222, 82 d Cong.). A rule was sought on the bill, but at the hearing before the Rules Committee opposition to the measure appeared. The bill did not receive a rule enabling it to be brought to the floor of the House.³¹ The record does not show who the opposition was or why they opposed.

According to a press report five months later, Poage said that he would again introduce such legislation in the Eighty-third Congress. His bill, he said, was "strongly opposed" by the Public Works Committee and Rules Committee. A member of the Agriculture Committee's staff was quoted as saying that "we didn't have time to make a fight of it last time; it will be at the top of our agenda next year and we'll fight for it all the way." This "sweeping new flood control bill will involve two House Committees in a jealous fight for jurisdiction supremacy early next year."³²

Early in the 83 d Congress, the bill reported in 1952 was reintroduced by Mr. Hope, with some slight modification as HR 4877. Mr. Hope mentioned, in his opening remarks to the hearings held from April 28 to May 11, 1953, that the amendments were proposed by USDA. One provision was that the authority that USDA had to conduct surveys and make reports under the Flood Control Act of 1936 be repealed. The bill substituted in its place a general authority for USDA to make river basin studies in cooperation with other agencies.

Other similar bills were introduced in 1953 indicating that support for this type of legislation was growing and the time was right. The other bills introduced and sponsors were HR 6795 by Poage, HR 599 by Poage, HR 1810 by Curtis. The Senate bills were S 2549 by Aiken, Thye, Schoeppel, Anderson, Young, and Monroney, S 877 by Johnson and S 1916 by Carlson.

During the hearings on HR 4877, some comments were also received on Poage's HR 599 (see Appendix table 1). Of the two comments judged to be unfavorable, one pertained to HR 599's assigning authority to SCS rather than USDA as did HR 4877.

This proved to be no big obstacle since HR 4877 proved to be the main bill. The other statement judged to be unfavorable was made by John C. Lynn of the American Farm Bureau Federation. He was not opposed to the philosophy of the bill, but believed that the timing was wrong.

It was at this time that a reorganization plan was being proposed to transfer SCS and its functions to the Cooperative Extension Service (CES). The Farm Bureau was a strong advocate of CES and did not want any legislation introduced which would weaken the chance of reorganization.

An analysis of the House hearings shows that 44 statements were made pertaining to the topic of HR 4877 (Appendix Table 1). The tone of these statements were judged and classified according to policy thrust and favorable or unfavorable comments toward the bill. There were 8 statements which were of the developmental thrust, 33 of the multiple use-sustained yield, two that discussed both developmental and M.U.-S.Y., while one was mainly progressive. As previously mentioned, there were two unfavorable statements. Most of the favorable statements advocated the upstream approach to flood control and spoke unfavorably of the Corps' downstream program. Some saw the need for both to get the job done effectively.

Several suggestions for reformulation were made during the House hearings.

These included:

- (1) Establishing criteria which would clearly delineate SCS and Corps responsibilities.
- (2) Adding the word forest to show emphasis on that resource.
- (3) Adding another section to the bill which would provide the Secretary of Agriculture authority to initiate and carry out flood control measures where the lands involved are either predominately or exclusively Federally owned and under his jurisdiction.

Of the 43 statements, 7 in some way or form related to item 3. The advocates of this section were Congressmen whose states contained national forest lands, forest industry representatives, professional forestry organizations, or others interested in national forest lands.

The bill (HR 4877) apparently needed some amendment after the Bureau of the Budget coordination with the Department of the Army and Department of Interior. This is inferred in the Bureau of the Budget's report on HR 6788 (the amended HR 4877). The Bureau approved HR 6788 based on the fact that it correctly addressed certain items which must have been the concern of the two departments. The first concerns deal with limiting the size of a project area to be 250,000 acres and not including any single structure which provides more than 5,000 acre feet of total capacity.³³ This apparently was due to the Corps wanting to maintain its large flood prevention projects without competition from SCS.

The second concern dealt with the Federal government providing cost sharing assistance for only those portions of structures or features relating to flood prevention.³⁴ This amendment was to prevent encroachment on the Bureau of Reclamation's irrigation projects.

The third amendment was a change in the Congressional approval process. They would not have to give individual authority on each project but would retain a level of control on the program through annual appropriations.³ This may have been done to reduce the pork barreling which was one of the criticisms of the Corps' program.

The Senate held hearings on S 2549 for three days, January 14, 15 and February 16, 1954. A summarization of these hearings (see Appendix Table 2) lists 30 statements that were presented. Of this total 16 statements were presented in writing, 8 were by people in attendance, and 6 were presented in writing and the spoken word. All of the statements were judged favorable except those by the Secretary of the Army and the Chief Engineer of the Corps. Multiple use-sustained yield was the main policy thrust depicted in the statements. The word "development" was only used by one person in the summarization of hearings and that was by President Eisenhower.

The Department of the Army personnel agreed that soil conservation was needed. However, they did not agree that structures up to 5,000 acre feet of holding cap-

acity were part of the conservation program. They saw this bill as competition and duplication of work, especially since these plans would not have to come to Congress for approval.

A comparison of the two hearings shows some interesting differences:

- (1) The Department of the Army did not testify in the House hearings.
- (2) The push by the forestry interests for the Secretary of the Department of Agriculture's authority to undertake flood prevention on land in his jurisdiction without local initiative is absent in the Senate hearings held after the House hearings.
- (3) The American Farm Bureau Federation, who in the House hearings recommended that no new programs be initiated, made recommendations to improve the bill in the Senate hearings.
- (4) Two statements of the 44 given at the House hearings represented fish and wildlife interests while 6 of 30 represented those at the Senate hearings.
- (5) Eight statements suggesting reformulation (but really suggesting only two changes) were made at the House hearings, while nine (most suggesting more than one change and with little overlap) were made at the Senate hearings.
- (6) Six statements at the House hearings strongly opposed big dams while only 2 at the Senate hearings. Also nine statements at the House hearings indicated a need for both programs while only 4 at the Senate hearings.

These changes are probably indicative of the negotiation and coalition building that was going on by the proponents and opponents. The change in the Farm Bureau's position is explained by the fact that the plans to transfer SCS to CES had been dropped.

The tone and content of the statements at the Senate hearings also concentrated more on upstream treatment in terms of reformulation. They also reflected less criticism of the big dams. This is probably the result of people recognizing that strong support existed for the bill, and since it stood a good chance for legitimation, they had better mold it to fit their needs.

The House Committee on Agriculture submitted its report on HR 6788 on February 2, 1954. The House debated the bill on March 11 and offered the following amendments:

Mr. Carl Andersen... "such sums to remain available until expended." This was to allow carryover of funds appropriated but not expended. This was agreed to.³⁶

Mr. Poage... "and shall come into agreement with the Committee on Agriculture and Forestry of the Senate and the Committee on Agriculture of the House of Representatives with respect to such plan." The purpose of this change was to require the USDA to return these projects to the House and Senate committees and leave some degree of supervision in the hands of the House and Senate. However, there was a question about the constitutionality of this amendment. It was agreed to but with the understanding that they would check with the Bureau of the Budget. If unconstitutional, the amendment could be changed during the conference.³⁷

Mr. Jones... "in accordance with regulations presented by the Secretary of Agriculture." This would assure that the Secretary would have supervisory control of the project. This was agreed to.³⁸

The bill was passed and referred to the Senate Committee the next day. Several of the suggested amendments made during the Senate hearings were incorporated in the Committee of Agriculture and Forestry's report of June 18, 1954 relating to HR 6788. These include:

- (1) Senator Mundt's suggestion that State Government should be brought in at the initiation of studies and have control within their boundaries.
- (2) A change in wording which helped clarify that several 250,000 acre subwatersheds may be planned together when the sponsors so desire.
- (3) Non-Federal contributions shall be at least 50 percent of cost.
- (4) Local organizations not be held responsible for all operation and maintenance cost when part of the benefits accrue to Federal lands.
- (5) Local organization acquire all land, easements, and rights-of-way; clarify that these are not to be transferred to the United States.
- (6) Local organization acquire or provide assurance that landowners have acquired, such water rights, pursuant to State law as may be needed.
- (7) Assistance should be limited to aiding the locals undertake the work rather than the Secretary participating in the installation and maintaining control.
- (8) Obtain agreement from owners that at least 50 percent of the lands above each retention reservoir will be treated with recommended soil conservation measures.
- (9) Requirement that projects with any structure with total storage capacity between 2,000 to 5,000 acre feet get Congressional approval.

One recommendation was to eliminate the need for examination of projects by the Secretary of the Army. Instead of deleting this, they extended the review time from 60 to 90 days.

Other changes included in Senate Report No. 1620 were:

- (1) Changed wording and punctuation to make it absolutely clear that a work of improvement may consist solely of an undertaking for "agricultural phases of the conservation, development, utilization, and disposal of water such as a drainage project.
- (2) Changed requirement that benefits must exceed costs to a more limited requirement that flood prevention and soil conservation benefits exceed their costs.
- (3) Omitted the provision for committees of House and Senate coming into agreement because of question of constitutionality.
- (4) Include a provision for issuance of regulations by the President.
- (5) Expanded cooperation with the Secretary of Interior from planning to planning and development of works and programs for lands under his jurisdiction.
- (6) Added to persecute emergency measures under the Flood Control Act of 1938.
- (7) Added a section which provided a short title, "Watershed Protection Act." ¹³

The report was submitted to the Senate on June 18. The bill as amended by the report was considered by the Senate on June 22 and passed. The House disagreed with the Senate's amendment and agreed to a conference. The result of the conference was that the bill as amended by the Senate was found to be acceptable with only few changes. These were:

- (1) Section 2- Raising the lower limit of structure capacity requiring Congressional approval from 2,000 acre feet to 2,500 acre feet. They also changed the wording from "approved by the Congress" to "approved by resolutions adopted by the Senate and House Agriculture Committees." ³⁹
- (2) Section 3- The requirement that application for assistance "has been reviewed and approved by the State agency having supervisory responsibility over programs provided for this act, or by the governor if there is no state agency having such responsibility.." ⁴⁰ was changed to "has been submitted to, and not disapproved within 45 days by, the State agency having supervisory responsibility over programs provided for in the act, or by the Governor if there is no State agency having such responsibility..." ⁴¹
- (3) Section 5- The Senate had deleted the House's authorization allowing the Secretary to construct or contract for structures. This deletion was changed to permit the Secretary to perform such construction or enter such contracts only in those States where local organizations do not have authority to perform such construction or enter into such contracts, and then only until July 1, 1956. The conference further authorized the Secretary to contract for installation of that part of any work which it is necessary to perform on Federal lands. ⁴²

- (4) Section 5- The 90 day period for submission of views of the Secretary of Interior or the Secretary of the Army was changed to 60 days.⁴³
- (5) Section 9- The short title was changed from the "Watershed Protection Act" to the "Watershed Protection and Flood Prevention Act."⁴⁴

The Senate agreed to the conference report on July 19, 1954. The House agreed to the conference report on July 22, 1954.

LEGITIMATION

The difficulties which the bills had during 1951 and 1952 in reaching legitimation were reduced by the election of a Republican President and Congressional majority in the later part of 1952. Watershed interests through the work of Raymond McConnell were assured of aid from one of the most vigorous Congressional supporters of the SCS, Representative Clifford Hope of Kansas, new chairman of the House Committee on Agriculture. Similar support was expected of Senator Frank Carlson of Kansas, one of the President's trusted advisors at that time. In addition, the inclusion of watershed advocates in Texas and North Carolina gave assurance of assistance from the minority in Representatives Poage and Cooley. Further entree to the White House was available through Ex-Senator Fred Seaton of Nebraska, who had been a very close campaign advisor to the President. The watershed advocates wasted little time. On February 23, 1953 representatives of the National Informal Citizens Committee on Watershed Conservation, met with the President to secure his support. As a result the President urged that legislation be enacted in his address to Congress on the following July 31.⁴⁵ The bill in the form approved by the Bureau of the Budget and recommended by the President was reintroduced as HR 6788 and reported to the whole house by unanimous action of the committee on February 2, 1954.⁴⁶

The bill as reported out of conference was signed by the Speaker of the House and President of the Senate on July 22, 1954. It was presented to the President on July 23, 1954 and approved the bill on August 4. Upon signing the Act President Eisenhower made this statement, "This Act recognizes by law for the first time the great importance of upstream watershed protection in our over-all water resource

policy. For the first time also, this Act provides a broad program of federal... assistance to such local watershed groups as are willing to assume the responsibility for initiating, carrying out and sharing the costs of watershed protection."⁴⁷

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PART II. PROGRAM BUILDUP ERA

(1955-1968)

The Program Buildup Era is that period after the passage of the act up to the time that severe criticism began appearing in nationally distributed media. This period was named the "buildup era" because during this time, Congress amended the act nine times. All of the amendments except for one broadened or loosened previous restraints on projects which could be implemented under the act. The one exception proved to be ineffective. During this time the trend in planning and construction activity was generally up. It was also during this period that wildlife interests became more disgruntled with channelization. Opposition became more visible, but not in sufficient force to cause significant changes in the administration of the program.

This PART discusses changes in the setting, growth of the program, and administrative behavior which eventually lead to SCS involvement in the channelization controversy.

SETTING

The changes in the setting which occurred during the Program Buildup Era were in some instances a continuation of previous trends as discussed in PART I. In other instances, trends changed and took on a new look.

PHYSICAL-NATURAL ENVIRONMENT

The threat from erosion resulting from misuse of the land diminished in some areas of the country. This was particularly true in the Piedmont and Coastal Plain areas of the South. These steeper soils which had been seriously depleted from earlier cultivation were converted to forest (pine) and grass cover. The land which had presented such an ugly picture and helped Hugh Hammond Bennett sell the need for a soil conservation agency in the 1930's began to appear healed in the 1950's. This trend continued on into the late 1960's. Cropland used for crops in Virginia,

West Virginia, North Carolina, Kentucky, and Tennessee decreased from 19.9 million acres in 1955 to 15.5 million in 1968 (22 percent). This same downward trend held true for South Carolina, Georgia, and Alabama. Cropland used for crops in those states decreased from 17.3 million in 1955 to 11.8 million in 1968 (44 percent).¹

In reality this trend may have been more drastic than the preceding figures indicate. The figures were aggregated from state totals and do not reflect changes from one land resource area to another within a state. In addition, portions of other states including Mississippi, Louisiana, Arkansas, Texas, and Oklahoma underwent similar decreases.

A change of the opposite direction began to appear in the Southern Mississippi Alluvial Valley land resource area (the Delta). Large acres of bottomland hardwood forests were cleared for crop production. This land resource area represents about 24 million acres in Louisiana, Mississippi, Arkansas, Tennessee, Missouri, and Kentucky. During the period 1950-69, about 4 million acres of bottomland hardwood forest were cleared. This resulted in a 35 percent decrease in forest, while agricultural uses such as cropland and grassland increased 38 and 14 percent, respectively.²

Another area where changes proved to be of importance, although the changes were not nearly as drastic, was the pothole country of Minnesota, the Dakota's and wetlands in other mid-western states. Wetlands serving as wild duck habitat were being drained and put into agricultural production.

These changes in land use further increased the need for water management. SCS contended that in the Piedmont, PL-566 projects would cause the erosive upland soils to be planted to grass cover and the more fertile bottomland soils to be farmed more intensively, or if wooded, converted to cropland. Before these changes could be brought about, flood protection had to be provided. In the typical case, this called for a combination of land treatment, flood water retarding structures (dams), and channel work. The channel work was often required because existing stream capacities were not sufficient to carry small storm flows (3-5 year frequency) even with the upland measures installed. This modification of streams (channelization) came to be

viewed by many in the non-agricultural sector as severely lowering the esthetics, and biological productivity of stream environs. The higher degree of flood protection was also intended to cause idle, low intensity use, or wooded bottomlands, (valuable wildlife habitat) to be converted to cropland. In some cases wetlands were also drained and put into production. Channelization was the main feature of projects in the "Delta" and "Pothole country". Because of the flat terrain, no dam sites existed. The only way to control flooding and improve drainage was to enlarge channel capacities.

The original 127 million acres of wetlands in the 48 contiguous states had been reduced to about 74 million acres by 1955.³ The constant attrition of wetlands caused by private development activities and public works projects continued throughout the BUILDUP ERA. These land use changes were deemed as highly undesirable by fish and wildlife interests and attributed to drainage and flood prevention.

SUSTENANCE PATTERNS

The trend of decreasing numbers of the population involved in agricultural production continued during the BUILDUP ERA. It got continually more difficult for people to earn a living by depending solely on farm income. By 1969 the agricultural work force had decreased from the 11.8 percent of 1950 to about 5 percent (a decrease of over 50 percent). Tenant farmers, especially in the Southeast, were migrating to the big cities. Of those that stayed, many got jobs in nearby towns farming only part-time. For example, a study of 12 South Carolina counties reflected an increase in off-farm work from 54 percent in 1954 to 65.6 percent in 1969.⁴

Another notable change was that the average age of farmers was increasing. As the older farmers exited, few younger people were coming in to replace them. As indicated earlier, this resulted in land going out of crop production, especially in the Southeast. However, the decrease in land used for crops was lower than the decrease in farmers. In 1950, 377 million areas of cropland nationwide were used for crops while 333 million were used in 1968.⁵ This 12 percent decrease in land

used is small compared to the greater than 50 percent decrease in the agricultural work force. Consequently, size of farms were continually increasing. The world food situation also played a part in bringing a change in sustenance patterns. As mentioned in the preceding section, this caused new lands to be brought into production. Farmers that had been earning their livelihood principally from corn and wheat production began incorporating a third crop into their systems.

This crop, soybeans, is one of the world's three main sources of protein. The expanding demand for protein caused the U.S. soybean acreage to expand from 17 million acres in 1950 to 54 million acres in 1973.⁶ This expanding demand for soybeans was the main stimulus to the large scale land clearing which occurred in the "Delta".

DISASTERS

Disasters, namely flooding, continued to play an important role in the BUILDUP ERA. However, their importance was not so much in the form of causing new national policy to come about but in creating a demand for the services available under the program. It was easy to generate sponsorship and applications for assistance after a damaging storm. Recurring floods also served to keep interest alive in unserved areas.

STATE OF TECHNOLOGY

As the installation of pilot watersheds progressed, SCS entered into agreements with the U.S. Geological Survey (USGS) to make hydrologic evaluations. Congress's objective, when it established these projects in 1953, was to demonstrate the effectiveness of complete watershed treatment.⁷ The results of USGS's evaluations caused SCS to adjust some of its planning criteria.

The evaluations showed that reductions in flood flows as a result of land treatment were much lower than previously believed. SCS personnel thought that reductions up to 25 percent were possible with land treatment only. The USGS studies showed that reductions were less than 5 percent. Although SCS continued to plan land treat-

ment for its other benefits, it began to take a less visible role.

Although landowners were still interested in land treatment, their main concern was flood prevention and drainage. Because dams and channels were the most effective means of dealing with these problems, they received the greatest amount of attention.

Despite the steady decline in farm population and cropland as described in the SUSTENANCE PATTERNS section, the tendency was for agricultural production to increase faster than demand. These increases were a result of technological advances such as mechanization, heavier use of commercial fertilizer, lime, insecticides, and the spread of specialization and scientific farming.⁸ The economies of scale allowed by the increasing size of farm units also gave farmers the capability to use technical advances to best advantage.

The flat wet-droughty "back-swamp" clayey soils of "Delta" and similar soils in the other regions which were previously untillable became prime areas for expanded soybean production. Large tracts of these forested areas had been cutover as much as 3 times. They were producing very little merchantable timber. The companies which owned this land were ready to sell when the soybean boom hit. The flatness of the land made it well adapted to the use of large equipment. The use of large heavy duty tractors and multi-row equipment allowed farmers to plant large acreages of these heavy soils in short periods of time. Previous to the early 1960's, farmers commonly believed that soybeans would not grow on wet soils. Improved farming methods and the large multi-row equipment disproved this as it became feasible to plant later in the season when soil moisture was lower. For instance, a common rule of thumb in North Louisiana was to have soybeans planted before July 4. If they were planted after this date, the growing season was too short to allow sufficient yields to cover production costs. Farmers strived to plant before this time because it increased their chances of making good returns. The need to reduce wetness and frequency and duration of floods to lengthen the cropping season led to a greater demand for watershed projects.

POLICY DECISIONS

Among the major issues of public policy following World War II, none proved more difficult to solve than the farm problem as described under SUSTENANCE PATTERNS. Although it produced some of the sharpest sectional and party clashes and congressional debate, it was no closer to a solution in 1968 than it had been in 1945.⁹

There were two different schools of thought on how to solve the problem. Many believed that the solution laid in a free market for agriculture. The surpluses would drive prices down. Less efficient farmers unable to make a profit would leave farming. Lower prices would bring about a reduction in capital investments and production inputs by the remaining farmers. The advocates of this approach contended that these decreases would continue until supply had dropped sufficiently to meet effective demand.¹⁰

Opponents of this policy argued that it would mean the collapse of farm prices and the economic ruin of hundreds of thousands, maybe millions, of farm families. The consequences, they contended, would be an overall national depression, the destruction of traditional social values seen in American family farm life, and the transfer of vast numbers of persons untrained for other types of work to urban labor markets and unemployment rolls. Instead of a free market this group favored federal management of farm prices along with other policies. The intent was to keep farm income high enough to sustain the smaller farmers, but use production controls to prevent the accumulation of surpluses.¹¹

Instead of one faction winning out, the tug and pull of various interests resulted in a compromise designed to protect farm income but at moderate levels, and to limit production but not very stringently. Two different types of programs evolved to accomplish this. One involved activities not directly affecting the market such as technical advice, cheap credit, soil conservation and water supply assistance and pest and disease control. The other involved activities and controls aimed at sustaining high farm prices included price supports, "surplus disposal" programs, and production controls.¹²

Even before the problems in the agricultural sector had grown to such high levels, the policy mood of the country for the 1950's and 1960's had been set. Section 2 of the Employment Act of 1946 reflects the economic development tone which policy was to take:

"Sec. 2. The Congress hereby declares that it is the continuing policy and responsibility of the Federal Government to use all practicable means consistent with its needs and obligations and other essential considerations of national policy with the assistance and cooperation of industry, agriculture, labor and State and local governments, to coordinate and utilize all its plans, functions, and resources for the purpose of creating and maintaining, in a manner calculated to foster and promote free enterprise and the general welfare, conditions under which there will be afforded useful employment, for those able, willing, and seeking to work, and to promote maximum employment, production, and purchasing power." ¹³

It was under this national framework of policy that SCS began and continued its administration of PL-566 for 14 years. It should come as no surprise that the thrust would be to expand PL-566 and strengthen the emphasis on economic development.

Amendments

PL-566 did not play as important a role in Congress' attempts to alleviate the farm situation as did the commodity and price support programs. But nevertheless, advocates of the watershed program were able to capitalize on the existing conditions and expand the law.

In 1956, PL-566 was amended in response to complaints that the Act gave its local clientele less financial assistance than the programs of the Corps of Engineers and the Bureau of Reclamation provided. The complaints further stated that local interests who wished to participate could not meet their costs. Although the Administration opposed, Congress passed the amendment.¹⁴

The 1956 amendments were contained in PL-84-1018, 70 Stat. 1058 (August 7, 1956). They provided the following:

1. Required the Federal government to pay 100 percent of the construction costs allocated to flood prevention;
2. Added agriculture water management (irrigation and drainage) as eligible purposes;

3. Increased the maximum size of dams and reservoirs for upstream protection from 5,000 to 25,000 acre-feet, provided that not more than 5,000 acre-feet were devoted to flood protection;

4. Authorized the inclusion of works for municipal and industrial water supply. Such works were to be paid for by local interests, including engineering assistance for this purpose;

5. Authorized the Secretary to make loans up to \$5,000,000 to local organizations to finance their share of the costs;

6. Extended the program to include Hawaii, Alaska, Puerto Rico and the Virgin Islands.¹⁵

These amendments also changed the rules concerning agency review and congressional committee supervision. Those projects which do not require Federal financial contributions to construction costs in excess of \$250,000 and which do not include any single structure which provides more than 2,500 acre-feet of total capacity can be approved administratively without review by the other construction agencies. All larger projects require review by the Corps of Engineers. If they include irrigation works or affect public lands or wild life, they also must be reviewed by the Department of the Interior.¹⁶

The larger projects must be approved individually by the appropriate committees of the Senate and House of Representatives. Any plan which involves no single structure providing more than 4,000 acre-feet of total capacity comes under the jurisdiction of the Committee on Agriculture and Forestry of the Senate and the Committee on Agriculture of the House. Any plan involving a single structure providing more than 4,000 acre-feet of total storage capacity comes under the jurisdiction of the Committees on Public Works of the Senate and the House.¹⁷

Subsequent amendments to the basic Act during the Buildup Era are:

1. PL-85-624, 72 Stat. 563, (August 12, 1958)- Provided that coordination with the Secretary of the Interior on the approved fish and wildlife aspects of the proposed watershed projects;

2. PL-85-865, 72 Stat. 1605, (September 2, 1958)- Authorized cost-sharing for fish and wildlife purposes;
3. PL-86-468, 74 Stat. 131, (April 13, 1960)- Extended the provisions of PL-83-566 for additional works of improvement to the 11 authorized watershed improvement programs;
4. PL-86-545, 74 Stat. 254, (June 29, 1960)- Liberalized procedures with respect to acquisition of land, easements, and rights-of-way where condemnation of land rights is involved;
5. PL-87-170, 75 Stat. 408, (August 30, 1961)- Broadened the definition of "local organizations";
6. PL-87-703, 76 Stat. 615, (September 27, 1962)- Provided for recreation cost-sharing, advancement of funds for sites for future construction, and advancement of funds to develop water supply for future municipal and industrial use in any multiple purpose reservoir;
7. PL-89-337, 79 Stat. 1300, (November 8, 1965)- Increased allowable storage capacity for flood prevention from 5,000 acre-feet to 12,500 acre-feet;
8. PL-90-361, 82 Stat. 25, (June 27, 1968)- Authorized the Secretary of Agriculture to contract for the construction of works of improvement upon request of the local organization.¹⁸

Congressional Committee Constraints

Although Congress continued to expand PL-566, it did not give SCS free rein to administer without legislative oversight. The House Agriculture Sub-Committee on Conservation and Credit has to pass on all plans which have to be approved by the Agriculture Committee. Through its influence on appropriations, this Sub-Committee was able to mold the program to a large degree.

SCS was able to meet the constraints set by the Sub-Committee and maintain its support, but this severely reduced the opportunity for overall legislative coordination. This fragmented, feudal-like approach to administrative oversight could have

served to narrow the agency's perspective and willingness to respond to needed change.

These constraints had and still have significant impact on the type of watershed work plans it developed:

1. The prorated PL-566 construction cost per benefitted acre should not exceed \$200 per acre;

This criterion was established about 1961. At that time \$200 per acre represented the average top value of agricultural enterprise land. In the middle nineteenth sixties, some exceptions were made for especially high valued agricultural areas such as orchard and vegetable land. Between 1961 and 1974, construction costs increased about 146 percent and farm real estate values increased about 163 percent. This rise in construction costs and the resulting costs per acre benefitted made it increasingly difficult to meet the cost per benefitted acre limitation.

2. Flood prevention or drainage must be the dominant purpose; the determination of dominant purpose poses several questions:

- Will the determination be made on cost relationships or benefit relationships?

- Will keeping flood prevention the dominant purpose limit the formulation of the plan to something less than is needed or desired to solve all water resource problems and needs?

- Will this criterion relegate small projects to single purpose flood prevention projects?

- Will sponsors of small projects be denied municipal water supply or recreation services as a result of this criterion?

3. PL-566 project costs should be limited to \$5,000,000; with the great increase in construction costs, this places a severe limitation on project scale and scope.

4. Single purpose recreation sites should not be included in projects; in some instances this may deny a community a needed service.

5. The benefit-cost ratio should still be favorable when secondary, re-development, and incidental benefits are excluded; this penalizes the watershed project with respect to other types of water resource development projects.

6. Projects with irrigation as a primary purpose should not be submitted to the Committee; this criterion denies many watersheds in the Western States the services and benefits of this program.

7. Low priority is given to projects where flood prevention benefits are largely urban.

This could penalize agricultural areas adjacent to urban areas because the urban damage values would exceed the agricultural values. Also, in some instances it could deny urban areas the only opportunity for protection against floods which originate on adjacent agricultural lands.¹⁹

Senate Document 97

On October 6, 1961 President Kennedy requested the Secretaries of Agriculture, Army, Interior, and Health, Education and Welfare to review existing evaluation standards and to recommend improvements. The resulting report was approved by the President and on May 29, 1962 was ordered printed as Senate Document No. 97, 87th Congress, 2nd Session (S.D.97).²⁰

S.D.97 was the first document to recognize development, preservation, and well-being of people as co-equal planning objectives. However, plans were to be formulated initially on the basis of economic benefits and costs and then adjusted to take account of intangibles such as preservation and well-being of people.²¹ The main idea was to determine the opportunity costs of providing the intangibles. This could theoretically lead to more objective decisions because effects could be reduced to a common unit of measurement, dollars.

In actual plan formulations in subsequent years, preservation and well-being were not given co-equal consideration with development. Because Congress never considered S.D.97 as a policy statement, its impact on implementation of multi-objective

in small watersheds planning was minimal. However, Congress began enacting laws during this same time frame that gave new and more definitive directions for considering environmental objectives in planning for water and related land resources.²²

President's Moratorium

In 1966 the administration objected to the requirement that watershed project plans be approved by Congressional Committees. This requirement was included in the 1956 amendments to PL-83-566 (PL-84-1018, 70 Stat. 1058, August 7, 1956). For several months no project plans were transmitted through the Office of Management and Budget to the Congressional Committees. Backlog of more than 50 plans developed. When the Administration finally released the watershed work plans being withheld from the committees, it also transmitted proposed legislation. This proposed legislation would amend PL-83-566 to provide for Congressional review but not approval. It was transmitted to the Second Session of the 89th Congress and again on January 17, 1967, to the First Session of the 90th Congress. This legislation was not enacted.²³

The Administration continued to send watershed work plans to the appropriate Congressional Committees. However, in each transmittal it stated that the Congress should either (1) enact the legislation proposed by the Administration, or (2) take action by the Congress as a whole on legislation authorizing individual or preferably groups of projects. If this were not done, the President gave instructions not to proceed with the accomplishment of the projects.²⁴

Only 27 projects were approved for operations in 1967 and 10 in 1968. These were made possible by administrative approvals and a few plans in the hands of the Committees before the Moratorium was placed in effect.²⁵

PREVAILING IDEOLOGIES

SCS in the initial years attempted to administer the program following the sustained yield-conservative ideology. The farm problem and the findings that conservation land treatment had little effect on preventing floods encouraged economic

development to become a dominant force in the program's administration. The constraints imposed by the House Agriculture Committee also strongly enforced this thrust. The practices and measures receiving the greatest attention were the ones reducing flood losses (increased production) and improving farm income.

The progressive ideology gained in importance as rural development became a major thrust of USDA in the 1960's. The emphasis on trying to slow the rural out-migration became a critical issue. The increase in prominence of this ideology was probably also aided by the large agricultural surpluses. Increased production became an undesirable thing from a national standpoint. This change in emphasis to rural development was important in getting recreation and municipal and industrial water shortage added as purposes under PL-566.

The increase in importance of the progressive ideology is reflected in the wording of watershed work plans. Emphasis was given on showing how rural population loss would decrease through project actions. Conversely, the plans showed little new land being brought into production. This was covered in a category known as "restoration to former productivity". Shifts in land use to reduce erosion were also mentioned, but in most cases these did not materialize to the extent planned.

The conservation ideology, although not prominent, was visible during the BUILD-UP ERA and made efforts to modify the program. Because of the other problems which faced agriculture, they were not able to muster enough power to significantly modify the way the program was being administered.

The ideology of the movement during this era was still largely traditional. It was concerned with fish and wildlife management and preservation to serve this purpose. It also was much more conservation rather than preservation oriented as it was destined to become later. This is exemplified by excerpts from Dr. Durward L. Allen's presentation during the second National Watershed Congress (1955). Dr. Allen at the time was an Associate Professor of Wildlife Management at Purdue University. He had formerly been a Research Biologist with the Michigan Department of Conservation, and later with F.W.S. Dr. Allen states:²⁶

"In considering the wildlife potential of good watershed management, I am tempted to assert that if we do an effective job of preserving and building up the soil, if we stabilize as much as possible the flow of clean water, and if we employ forestry, grazing, and farming practices consistent with land capability, we will have done most of what is necessary for maximum wildlife benefits.

"Widespread drainage is the greatest damage we have done to fish and game resources. I think the generality holds that it will pay to get water back on the land in small ponds and marshes wherever this can be done at a reasonable cost. We should keep in mind that it is the shoreline and marshy edges that produce wildlife. Ten thousand one-acre ponds are worth vastly more than a 10,000-acre lake. In this the wildlife interest is one with flood control interest. We will never know how much downstream work is necessary until we have made an honest trial of stopping water where it falls and storing it in the ground.

"...On agricultural areas he (the wildlife manager) may wish to make specific types of plantings, such as contour hedges, field borders, and living fences, but our most economical approach to good wildlife habitats is to promote, control, and refrain from destroying the most useful stages in natural plant successions."²⁷

Just as they had testified in the hearings before the law was enacted, the wildlife interests still had great hopes that the program would increase and improve fish and wildlife habitat. However, their opposition to drainage had the potential of leading to a highly emotional conflict with the agricultural sector (economic development proponents).

The complexity and degree of intensity of this problem and the changes in perceptions of the problem are illustrated in the following quotes. The initial position is exemplified in 1956 at the Third Watershed Congress by a presentation given by Chester S. Wilson, Commissioner of Conservation (St. Paul, Minnesota) and the dialogue that follows. Speaking on the topic "Wetlands Versus Open Water Drainage", Mr. Wilson says:

"This is a highly controversial subject. The program committee has enjoined us to discuss it from the standpoint of national public interest. That means stepping on the toes of some local or special interest. For myself, I have no ax to grind. I am not a duck hunter or any kind of a hunter. My background is that of a farm hand, a lawyer and a state conservation administrator concerned with all types of natural resources- soil, water, forests, wildlife and minerals, with perhaps greater

leaning towards the basic resources, soil and water than to any of the others. If I speak for any special group, it is those who cannot speak for themselves because they are not born yet--that is, future generations.

"People are sharply divided over this problem, with farmers in one corner, sportsmen and other wildlife conservationists in another, and many people in no corner at all. The best solution we can hope for is a compromise that will give fair consideration to all the interests concerned and produce the greatest good to the greatest number of people in the long run. In trying to find a solution, the different groups must exercise forbearance and try to understand each other's problems.

"The sportsmen must remember that the farmers own most of the best waterfowl wetlands. They have a right to drain them for their own benefit at their own expense. If a farmer gives up draining wetlands to raise ducks for the public benefit, he is entitled to fair compensation. No program for saving wetlands can succeed without the cooperation of the farmers, because they own the wetlands, and exercise commanding influence in the halls of Congress and many state legislatures.

"The farmers should remember that waterfowl and other wildlife are a great national resource in which they have a share. The late Justice Oliver Wendell Holmes, of the United States Supreme Court, in the famous case of *Missouri vs. Holland* (sustaining the Migratory Bird Act), said that migratory birds involve a national interest of very nearly the first magnitude.

"I am not talking about draining temporary excess water that interferes with farming. That type of drainage is necessary on many farms, and usually does no harm to wetlands or other wildlife habitat. I am concerned only with drainage of wetlands withstanding water useful for waterfowl habitat.

"After a thorough study of the problem, I have worked out a prescription for saving wetlands. It will take much money and much effort to put it over. However, I am confident that it is feasible, and that if it is carried out it will save a large part of the most valuable waterfowl wetlands. Here is the plan.

"I. Temporary measures to be adopted as soon as possible to retard drainage of wetlands and give more time for developing the permanent or long-range measures to be described:

(1) Stop all federal aids for drainage through ACP cost sharing payments and SCS technical service in connection therewith. This would check the rapid inroads of drainage to a considerable extent, especially in areas of low land value in the western part of the region, where these aids are a substantial inducement. More than that, the undermanned forces of the SCS would be relieved from servicing a large number of ACP cost sharing projects, and could devote their entire time to vitally important soil and water conservation and watershed work. This would save a lot of irreplaceable top soil that is not going down the rivers because the application of soil and water conserving practices on the land is still far behind the needs, according to estimated goals.

(2) However, if complete stoppage of federal aid for drainage is not governmentally or politically feasible, the following alternative measures are suggested:

(a) Provide for strict enforcement to stop evasions of the present ACP regulation against cost sharing for ditches the primary purpose of which is to bring more land into agricultural production.

(b) To help such enforcement, strengthen the present weak regulation by amending it to read as follows:

"No federal cost sharing will be allowed for ditches which will cause any material damage to waterfowl or other wildlife or habitat thereof."

(3) In administration of the soil bank, encourage farmers to plug old ditches, flood land that was drained thereby, and put it in the conservation reserve.

(4) Amend the soil bank regulations, if necessary, to provide for including in the conservation reserve existing undrained wetlands having value for waterfowl, water conservation, or other purposes, and encourage farmers to do so.

(5) Educate and encourage farmers to preserve wetlands voluntarily for their own benefit or the public benefit for the purposes before mentioned (muskrat farming, enhancement of farm value, etc.)." ²⁸

Another approach he described as permanent measures. These consists of either buying land, obtaining permanent easements, or entering into agreements with farmers. He also makes a third proposal:

"Coordinate operations of the Department of Agriculture and the Department of the Interior to stop the present indefensible pulling at cross purposes, whereby the Department of the Interior, through the U.S. Fish and Wildlife Service, spends public money to save wetlands, while the Department of Agriculture spends public money to destroy them through ACP cost sharing and SCS technical service for drainage. This could be handled through the coordinating agency and board of review attached to the President's office, proposed by the President's Water Policy Committee, or by action of Congress." ²⁹

Mr. Wilson's presentation gave rise to some emotionally charged comments from Mr. Jack Smitgert, a farmer from North Dakota and a member of the State Soil and Water Conservation Committee.

"Mr. Wilson, I object to any change in any rules on drainage, because I got my farm drained and the neighbors helped pay for it, both in town and in the country, by Federal aid, and I object that Jack Smitgert should have his farm drained and my neighbor can't have his farm drained. That's not equality as provided to have the same rights as I have, and let's keep that straight.

"Now, there were ducks on my farm in '42 and I paid taxes to the tune of \$205; my total in crops was less than \$200. The ducks took over.

"The Soil Conservation District people came out and we organized a Soil Conservation District. It was engineered and our township paid \$9,000 for waterfowl in 1943. Today we have as much runoff as we had in 1943. That's all right. That was \$9,000 saved by proper engineering.

"Now we're farmers and we must maintain a home on that land and raise crops on the land. Nobody ever gave me one red cent for raising ducks, thank you! Now, this afternoon I located one quarter of land in North Dakota that was for sale for \$31.25 an acre- and that's \$5,000 for this quarter of section of land.

"We have the township, we have the farmers, the county, the State and the Federal government working hand and foot to get a watershed program to protect the people and the cities and to protect the land and places where the ducks will grow and the wildlife guys with their guns and ammunition and boats to enjoy themselves.

"There is a proper place for the ducks. There is a proper place for the farmer. There is a proper place for the sportsman. There is a proper place to store water. Watersheds are common sense. You store from the top to the bottom and control all the way.

"Now, the American people or farmers that own the land, and the businessmen who own their business- and there's no bigger guy than the American people, I want you to understand- and we want our will done, and we want to understand that our neighbors have the same rights as we have.

"Now, in North Dakota we have watched these watershed applications come in. We have introduced wildlife on every one that we received, and what do we get in return? No thank you. No watershed program, as far as I know. They haven't bought one piece of land and haven't cooperated in any way. Why?

"Listen. I've got a gun. I like to hunt. I like to buy a license, but I also like to hunt where the ducks are, and I'm willing to pay for that privilege. Just like I told my boys, if they wanted public hunting then they better buy public hunting grounds, because I'm not one to come into anybody's own lot and say, "Here, you grow ducks." We might say that we're lucky we don't have buffalo hunters in the crowd." 30

Mr. Wilson's reply indicates that he understood Mr. Smitgert's position, but nevertheless, the problem still remained from a national standpoint.

"Mr. Chairman: I don't think there's a man in this room that sympathizes more deeply than I do with the statements that have just been made. They're made from the standpoint of the individual farmer, and they drive home the point that I made here awhile ago that if the farmer is asked to give up anything of his legal rights to drain his land that he should be compensated for it. The great Aldo Leopold, the greatest conservationist of them all, was a strong advocate of that principle.

"At the same time, if we're looking at this thing from a national public standpoint, it fronts right up to the proposition that the Congress of the United States establishes the policy, and whether you like it or not or whether I like it or not, the policy has been declared that no more drainage shall be created, the primary purpose of which was to bring more land into production.

"Now, I could go on and discuss that proposition for a long time this afternoon because it won't be very many years before that

process will be reversed, and we are going to have to get land into production.

"The only thing I was saying awhile ago was that as much of these wetlands should be saved as possible, and then if they have to be brought into production the decision should be made only in case of necessity and by the highest authority, and if the farmers lose anything by it they certainly should be paid." ³¹

Another person, Mr. C.P. Crawford, President of the Minnesota Association of Soil Conservation asked Mr. Wilson two questions:

"...do you really believe that cutting off aid to farmers for drainage would materially reduce the amount of drainage that has been done?" and..."Do you think we can ever stop the drainage of good agricultural land as long as we have private ownership?" ³²

Mr. Wilson summarizes his answer to the first question:

"So the situation is this today: The Federal aids are encouraging the most drainage in the areas where it does the most damage to waterfowl. Now, the obvious solution to that is that if you would withdraw those aids it will curtail drainage, but it wouldn't stop the farmers for a minute in continuing to drain their land at their own expense. It is perfectly obvious." ³³

His answer to the second question:

"Only by purchasing it. That is why I suggested that the only permanent solution is for the State or Federal government to acquire those wetlands and convert them into public waters, and that would preserve them for a long, long time. I think that time would be a long time off before it will become necessary if the public buys those lands to drain them again, and it should never be done except as a result of great necessity." ³⁴

The topic arose again in 1957 at the Fourth Watershed Congress. The Honorable Ross Leffler, Assistant Secretary for Fish and Wildlife, Department of the Interior had this to say:

"Where our streams still provide fishery resources...it is wise to preserve these resources, rather than trading them in on a large volume of low-grade fishing (meaning reservoirs); or, still worse, through channelization of streams or drainage, to part with them for a little less water on a few surplus acres.

"Wet and waterlogged lands, with native vegetation growing on them, constitute the one habitat type in this country we can least afford to lose. Acre for acre, they are our most productive wildlife lands, and the ones we should work the hardest to save." ³⁵

He also mentions a forthcoming action which should help the situation:

"Under the Coordination Act, the Fish and Wildlife Service assists and cooperates with federal, state, public or private agencies in planning for the needs of fish and wildlife... Experience has shown...that the Act needs strengthening to provide more clearcut authority for the planning agencies to include measures to prevent drainage to fish and wildlife habitat... A draft of amendments to accomplish these and other purposes has been prepared, and we are hopeful that it may be cleared and presented to Congress and receive favorable consideration when it reconvenes." 36

The problem of drainage wetlands and channelization was again mentioned in 1958 at the Fifth National Watershed Congress in a Committee Report entitled "Federal Agency Conflicts in Programs, Practices and Policies."

The wildlife conservationists' disenchantment with the program continued to grow. In 1963 at the Tenth National Watershed Congress, Mr. Forrest V. Durand, Director of the Tennessee Fish and Game Commission, in a talk entitled "Watersheds and Wildlife" expressed these sentiments:

"We see financial formula followed in a way completely contrary to the ideals of conservation in the development of some eye-catching installation, justified through such formula only by the destruction of valuable resources. Recreational values of reservoirs are pointed out while under the formula used to support their construction, downstream, thousands of acres of actual and potential waterfowl shooting grounds are scheduled for drainage and clearing; clearing which involves the removal of bottomland hardwoods, themselves a unique and disappearing asset.

"More and more we see watersheds justified strictly on the basis of drainage. ...It is strongly indicated that the goal of holding water on the land is gradually being resolved into a program of getting water off of the land." 37

Mr. Thomas L. Kimball, Executive Secretary of the National Wildlife Federation presented the Committee Report- "Recreation, Fish, and Wildlife in Watershed Development in 1964." The report was analytical and critical in nature examining nine areas of concern about the Act and administration of the program. In addition, Kimball reported on the effects of watershed projects on waterfowl habitat and trout streams. A lively discussion followed dealing with mitigation, public access to and user fees on reservoirs.

The Fifteenth Congress held in 1968 took a different tone although many of the old concerns were reiterated. William E. Towell, Executive Vice President of the American Forestry Association gave an address entitled "Competitive Demands: The Growing Need for More Effective Systems of Identifying Alternatives and Making Choices in Watershed Development." Although he was quoting from a paper written by Dr. John Krutilla of Resources for the Future, he introduced phrases like preservation of remaining wilderness areas, protection of endangered species, fragile ecosystems, and value of natural environments.

In this same paper, Towell quoted from a paper written by Henry Caulfield, Executive Director of the Water Resources Council. Quoting from Caulfield's paper: The basic objective in the formulation of plans is stated to be the provision of the 'best use, or combination of uses, of water and related land resources to meet all foreseeable short- and long-term needs.' Full consideration shall be given: to all developmental purposes; to preservation of 'open space, green space and wild areas of rivers, lakes, beaches, mountains and related lands for recreation purposes... and areas of unique natural beauty, historical and scientific interest...for the inspiration, enjoyment and education'; and to measures for the "well-being of the people." ³⁸

These two quotes were to prove to be a forecast of things to come, namely, NEPA and the Water Resources Council's "Principle and Standards."

Another important point was made by Mr. Tom Kimball in an effort to explain why few sponsors included fish and wildlife programs in their plans:

"It may have something to do with the attitude of the chairman of the House Agriculture Committee (Bob Poage)... He wrote a letter to the Secretary of Agriculture saying that he did not want any projects sent over by the Department for any purpose other than flood control... To me, it turned our watershed planning back 30 years..." ³⁹

In later remarks Kimball had this to say:

"No longer will the people tolerate the heretofore accepted and sacrosanct cost-benefit ratio for a single use as the last work in determining the feasibility of a water resource development project.

"Ecology...is that new branch of science concerned with the interrelationship of living organisms, not only between themselves but with the non-living environment- the soils, waters, weather, and air- in which we live. And for the first time, mankind is beginning to realize that human beings, as well as birds and bees, are as influenced by Nature's laws as we are by scientific discovery and economic progress." 40

Dr. Kenneth C. Nobe, Department of Economics, Colorado State University presented a paper entitled "An Economic Perspective of Fish and Wildlife in the PL-566 Small Watershed Program." His concluding statement was:

"...growing public concern for the environmental management should clearly dictate an immediate change in evaluation procedures to insure that all project effects, both positive and negative, are taken into account." 41

ADMINISTRATION OF THE PROGRAM

The administration of PL-566 during the 14 year BUILDUP ERA encouraged expansion of the program. SCS, being a relatively new agency and having received new responsibilities in construction, was determined to show Congress, that as an action agency, it could be depended upon to accomplish its mission.

WATERSHED PLANNING

One of the first steps in getting the program off the ground was to establish additional planning staffs roughly patterned after the ones involved in the pilot program. Eventually planning staffs were established in 47 states, Puerto Rico, and Hawaii. Another essential step was to make field personnel aware of the program's capabilities. In addition, management had to devise means to help field personnel develop a willingness to use the program to solve problems in their work area.

The program became the new "glamour girl" of SCS activities. Because of the cost sharing assistance and developmental benefits received, the program appealed to potential beneficiaries. The added inducement of a promotion, because of the increased responsibility generated by the program, may in some cases have helped the field personnel accept and push projects at a rapid rate.

By 1961, applications for planning assistance had been received on 1,088 watersheds. Of these 516 had been authorized to receive planning assistance. By July 1, 1965, applications for planning assistance increased to 2,317 with 1,111 approved for planning.⁴² Within a 4 year period the planning phase of the program had more than doubled in size.

The growth of the program is also reflected in the activities of State legislatures. Between 1955 and 1963, 43 State legislatures enacted laws to expedite cooperation between State and local agencies and the Department of Agriculture in water project activities. A total of 285 laws were enacted in the 43 States during this 9 year period.⁴³

Obligation of funds for investigations and planning increased 483 percent from 1955 to 1968. This increase is not a realistic representation since initial appropriations are usually low. Using 1960 as a base year, the obligations had increased by 138 percent by 1968 (Table II-1). After the initial 5 years, the obligations had fairly well stabilized. There were small increments of decline during some years, but generally obligations increased over time.

WATERSHED OPERATIONS

When a watershed project is approved by resolutions of appropriate Committees of Congress it moves into the operations phase. The land treatment program to protect the watershed can be accelerated in accordance with the plan, and structural measures can be installed.

The rate at which plans were approved for operations corresponded closely to the rate of growth of applications for planning assistance and authorizations for planning. By January 1961, 289 plans had been authorized for operations and by July 1, 1965, 635 plans had been approved.⁴⁴ Just as in the other two categories, this portion of the program had roughly doubled in a 4 year period.

Table II-1. Annual Watershed Obligations for Investigations and Planning,
SCS and Other Agencies, 1955 to 1968.⁴⁵

Year	Funds Obligated		Total	Growth Index (1960 Base)
	SCS	Other Agencies		
1955	\$ 1,173,141	\$ 126,364	\$ 1,299,505	29
1956	2,965,526	352,170	3,317,696	73
1957	3,562,375	341,291	3,903,666	86
1958	4,152,851	393,003	4,545,854	100
1959	4,278,935	384,675	4,663,610	102
1960	4,193,595	360,306	4,553,901	100
1961	4,645,824	351,883	4,997,707	110
1962	5,056,861	386,346	5,443,207	120
1963	5,184,178	402,106	5,586,284	123
1964	4,801,424	344,029	5,145,453	113
1965	4,912,813	417,959	5,330,772	117
1966	5,913,058	434,521	6,347,579	139
1967	5,940,872	499,158	6,440,030	141
1968	<u>5,786,925</u>	<u>484,015</u>	<u>6,270,940</u>	138
TOTAL	\$62,761,882	\$5,124,561	\$67,886,443	

A comparison of obligations for operations (Table II-2) with those for planning (Table II-1) shows a much larger growth rate for construction. This is explainable by the fact that it took longer to install projects than it did to plan them. As more projects were authorized for operations, the cumulative needs for funds increased. Increasing construction costs also were a cause of increasing obligations.

By December 31, 1968, SCS had 844 watershed projects approved for operations (Table II-3). The South and Mid-western Regions had the largest proportion of projects with 46.7 and 26.5 percent, respectively. This is as might be expected since the formulators of the law and its strongest proponents in Congress were from those Regions.

Watershed protection is the first increment planned in all projects. It is automatically a purpose and is not included in Table II-3. Of the other purposes authorized by the Act, as of 1968, flood prevention was the dominant purpose being included in 98.2 of all projects. It is followed by drainage representing 25.4 percent. This is reflective of the House Sub-Committee on Conservation and Credit constraint that flood prevention or drainage shall be a dominant purpose in projects which it had to pass over.

Other purposes in order of frequency of occurrence were recreation (18.0 percent), municipal and industrial water supply (11.4 percent), fish and wildlife (7.9 percent), irrigation (5.9 percent), rural water supply (0.1 percent), and water quality (0.1 percent). These figures present some interesting comparisons. Cost sharing for fish and wildlife purposes was authorized in 1958 while not until 1962 for recreation. However, the cost sharing assistance which could be provided under the 1958 amendment did not include land rights. The 1962 amendment did include this provision for both recreation and fish and wildlife purposes. Even so, the number of projects including recreation were more than double the number including fish and wildlife.

Two important factors contributed to this situation. Measures included for fish and wildlife purposes were primarily for the improvement of habitat. Sponsors were generally reluctant to expend scarce tax dollars to construct and operate and main-

Table II-2. Annual Watershed Operations Obligations, SCS and Other Agencies, 1955-1968.⁴⁶

Year	Funds Obligated			Growth Index (1960 Base)
	SCS	Other Agencies	Total	
1955	0	0	0	0
1956	10,708	5,630	16,338	0.1
1957	3,432,154	87,380	3,519,534	20
1958	6,118,633	218,624	6,337,257	37
1959	20,878,064	335,652	21,213,716	122
1960	16,662,472	604,475	17,266,947	100
1961	28,472,049	772,173	29,244,222	169
1962	38,599,580	573,161	39,172,741	227
1963	47,290,661	692,802	47,983,463	278
1964	52,854,042	501,553	53,355,595	309
1965	54,219,476	577,686	54,797,162	317
1966	57,147,678	794,698	57,942,376	335
1967	60,673,580	974,776	61,648,356	357
1968	<u>55,348,773</u>	<u>907,470</u>	<u>56,256,243</u>	326
	\$441,707,870	\$ 7,046,080	\$448,753,950	

Table II-3. Public Law 566 Projects Approved for Operations by Region, State, & Purpose, 1955 to 1968.

Region and State or Territory	PURPOSE							Total Projects
	Flood Prevention	Drainage	Irrigation	Rural Water	Recreation	Fish & Wildlife	Municipal & Industrial	
SOUTH								
Alabama	22	1	2		1		4	22
Arkansas	35	22			3	1	3	35
Florida	16	14	3			0		16
Georgia	45	7	7		13	1	16	46
Kentucky	25				8	2	6	25
Louisiana	20	16	5		3	1	2	22
Mississippi	31	8			6	2	0	31
North Carolina	37	27			1	0	2	37
Oklahoma	45	5	3		8	1	8	45
South Carolina	22	7			2	1	3	22
Tennessee	27	3			3	1	2	27
Texas	54	6	1		5		3	55
Subtotal	379	116	21		53	10	49	383
(% of Projects)	(99.0)	(30.3)	(5.5)		(13.8)	(2.6)	(12.8)	(100)
(% of Nat. Total by purpose)	(45.7)	(54.2)	(42.0)		(34.8)	(14.9)	(51.0)	(45.4)

Region and State or Territory	PURPOSE							Total Projects
	Flood Prevention	Drainage	Irrigation	Rural Water	Recreation	Fish & Wildlife	Municipal & Industrial	
MIDWEST								
Illinois	12	4			3		6	12
Indiana	25	12	1		13	3	3	25
Iowa	34	3			3		2	35
Kansas	29			1	5	1	6	29
Michigan	15	13	1		1	1		15
Minnesota	13	8			3	8	1	13
Missouri	14	0			4		2	14
Nebraska	31		1		4	2		31
North Dakota	14	7			3	5		14
Ohio	13	6	1		4	0	5	13
South Dakota	9	1			2	1		9
Wisconsin	17				7	2		17
Subtotal	226	54	4		52	23	25	227
(% of Projects)	(99.6)	(23.8)	(1.8)		(22.9)	(10.1)	(11.0)	(100)
(% of Nat. Total by purpose)	(27.2)	(25.2)	(8.0)		(34.2)	(34.3)	(26.1)	(26.9)

Table II-3. (Continued) Public Law 566 Projects Approved for Operations by Region, State, & Purpose, 1955 to 1968. 47

Region and State or Territory	PURPOSE							Total Projects
	Flood Prevention	Drainage	Irrigation	Rural Water	Recreation	Fish & Wildlife	Municipal & Industrial	
NORTHEAST								
Connecticut	8				3	3		10
Delaware	4	4						4
Maine	5				5	1	2	5
Maryland	14	10			3	2	2	14
Massachusetts	8				4	4	1	8
New Hampshire	5	1			2	0	1	5
New Jersey	12	8	1		3	2		12
New York	9	3			2	6		9
Pennsylvania	20				10	5	5	20
Puerto Rico	3	3			0	0	0	3
Rhode Island	0	0			1	0		0
Vermont	2	1			1	1	7	19
Virginia	19	1	2		1	3		15
W. Virginia	15	-	-		5	3		126
Subtotal	124	30	3		39	26	21	(100)
(% of Projects)	(98.4)	(23.8)	(2.4)		(31.0)	(20.6)	(16.7)	(14.9)
(% of Nat. Total by purpose)	(15.0)	(14.1)	(6.0)		(25.7)	(38.9)	(21.9)	
WEST								
Arizona	9							9
California	11	0			1	1		11
Colorado	10		3			1		13
Hawaii	5				0			5
Idaho	4	2	3					5
Montana	5	0	1		2	1		5
Nevada	3		1		0			5
New Mexico	19	0	0		0			4
Oregon	7	1	3		2	1	1	19
Utah	10	0	8		3	3		10
Washington	10	8						10
Wyoming	7	3			0	1		9
Subtotal	100	14	22		8	8	1	108
(% of Projects)	(92.6)	(13.0)	(20.4)		(7.4)	(7.4)	(0.9)	(100)
(% of Nat. Total by purpose)	(12.1)	(6.5)	(44.0)		(5.3)	(11.9)	(1.0)	(12.8)
TOTAL								
(% of Total Projects)	829	214	50	1	152	67	96	844
(% of Nat. Total by Purpose)	(98.2)	(25.4)	(5.9)	(0.1)	(18.0)	(7.9)	(11.4)	(100)
	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)

tain measures which would not bring in revenues. Federal and State fish and wildlife agencies, in some cases, did not want to co-sponsor such measures because it meant added workload without increases in funds or personnel. Ultimately, most sponsors chose to include recreation which created or improved habitat, but also had provisions for use which would help generate funds for operation and maintenance.

Municipal and industrial water supply (M&I) also exceeded the frequency of fish and wildlife as a purpose by 144 percent. This occurred even though the only type of assistance available for M&I was loans.

Irrigation also proved to be an under utilized purpose as did rural water and water quality. Irrigation's greatest potential existed in the West. However, the constraint that projects with irrigation as a primary purpose should not be submitted to the House Agriculture Committee severely limited its expansion. Even if this constraint had not existed, the difficulty of obtaining water rights in some western states would have kept the use of the irrigation purpose at a low to moderate level.

AGENCY ADMINISTRATIVE BEHAVIOR

PUBLIC PARTICIPATION AND PROGRAM SUPPORT

The intent of Congress when it passed PL-566 was for the program to be locally oriented and controlled. PL-566 provided for a Federal-Assistance program rather than a Federal program such as those of the Corps and Bureau of Reclamation. The spirit of the conference report on H.R. 6788 required that ... "the control and the initiative and the contractual power (to) remain in local hands..."⁴⁸ In fact, SCS remained unable to do the contracting on projects until the 1968 amendment. Even then, it could only do contracting upon request of the sponsoring local organization.

The importance of public participation in watershed projects was recognized early by SCS. The agency had learned early in its Conservation Operations Program that without the active participation in planning and financing projects, the services provided would not be accepted or properly maintained and operated by the sponsors.

Local

The procedures developed for providing assistance in watershed planning and construction reflects the emphasis on local involvement. The nature of the program and this emphasis even affected the way in which SCS personnel perceived their role.

"In a number of interviews with SCS field-level personnel the impression received was that these personnel did not think of themselves as planners; they saw their role as (1) providing technical advice and engineering services to the local sponsors, and (2) helping to steer the sponsors' project through the sea of red tape required as a condition of federal funding. This role perception is felt to be a direct result of the federally assisted nature of the SCS small watershed planning program." 49

As a result of this situation, public participation was strongly oriented toward the local proponent group(s). Unless the residents of the project area were strongly split on some tax, benefit distribution or similar economic or social matter, strong opposition usually did not arise. The supporters and leadership were usually strong enough to negate opposition which did not have strong community interests.

At some public meetings or hearings when opposition was expected, the tone was usually set by calling first on U.S. or State Congressmen and local political figures who would make favorable remarks. Typically, the majority of the crowd who attended these meetings were landowners whose land would be benefitted. The State Fish and Game or FWS personnel were often the only ones making statements or expressing views about the detrimental effects of the project and the need for deletion or modification of certain measures. This made them look like they were talking against motherhood and for sin.

These situations would often lead to questioning or statements which would belittle the individual or his statement. Although probably not the typical mode of operation in the majority of states, it happened often enough in some states to cause ill feelings to develop on the part of FWS and State Fish and Game biologist.

In one state, the head of the State Fish and Game Agency ordered his men to stop attending these "southern barbeques".

Other

National Watershed Congress. The first National Watershed Congress was held in Washington, D.C. on December 5 and 6, 1954, only five months after President Eisenhower had signed the bill into law. The Introduction to the Proceedings well describes the intent of the first Congress. This was to remain the intent of the Congress which became an annual event.

"It was a unique meeting. Sponsoring it were twenty-five national organizations of widely diversified policies and views concerning soil and water resources. In advance of the meeting it was agreed that no resolutions would be proposed or adopted. And it was also understood that the purpose of the Congress was not to develop a program or to promote particular solutions to specific problems. Rather, the Congress was a common meeting ground for many varied opinions, ideas and viewpoints.

Eighty three people gave serious study in advance of the meeting to the preparation of committee reports which served as a basis of discussion of critical resource problems.

Three hundred and one people came from forty states to participate in the deliberations. Few people came just to listen. The sessions were alive with discussion and ideas and opinions." 50

In 1961, 27 organizations participated in the Congress. These could be categorized as being economic development oriented (American Pulpwood Association, Chamber of Commerce, National Farmers Union- 10 such organizations), traditional conservation oriented (American Forestry Association, Soil Conservation Society of America, National Wildlife Federation, Sport Fishing Institute- 9 such organizations), and preservation oriented (Izaak Walton League of America, Nature Conservancy, Wilderness Society- 7 such organizations). The Congress provided a good forum for discussion and exchange of ideas. Organizations who had concerns about the economic slant which the program was taking used the Congress to express their views.

National Association of Conservation Districts (NACD). This organization became strong proponents of the program. Unlike the National Watershed Congress, NACD became a strong lobby in the U.S. Congress. They became the third party of a triple alliance

consisting of members of the Subcommittees on Watershed Development of Agriculture and Public Works Committees and SCS. NACD not only made and adopted resolutions relating to PL-566, but also issued policy positions which were distributed to key individuals.

State Governments. Support from this source varied from strong to weak. The strongest support came from the Midwest and Southeast. Texas, Oklahoma, and Georgia, the states with the three largest programs (Table II-3), funded as much as half of the planning expenditures made by SCS. In some states, like Louisiana, funds or assistance were not only furnished for planning, but also for most of the local share of project installation costs.

Congressional Committee Members. U.S. Congressmen who were in influential positions were cultivated by conducting field tours of projects that were installed. Efforts were made to show these key political figures the benefits of projects as well as how appropriations were being spent.

SCS maintained good relationships with and got good support from congressmen which served on the committees which approved its projects. The agency did this by acting politically conservative. Although figures were sometimes stretched to meet the criteria, SCS generally adhered closely to the constraints imposed by the House Agriculture Sub-Committee on Conservation and Credit.

As a general rule, personnel in the field were not encouraged to skirt these constraints. In some cases this could have been done by designing projects so that they would go to the Public Works Committees. Administrators feared that the House Agriculture Committee would reduce its support for the Program when it found out what the agency was doing. Consequently, the program took the form as envisioned by Congressman Poage. Particularly, the main purpose of projects should be mainly for flood prevention or drainage.

INTERAGENCY CONFLICT

If an agency becomes an intrabureaucratic lobby for a claimant group, inter-agency conflict can be expected to develop. Rivalry will be encouraged by jurisdictional overlap, thereby resulting in struggles for primacy in key policy areas.⁵¹

The preceding paragraph summarizes the conditions which led to SCS conflicts with the U.S. Army Corps of Engineers, and Fish and Wildlife Service. SCS became the intrabureaucratic lobby for the rural farm communities as represented by watershed associations and soil and water conservation districts. The latter organization bonded to form state associations and a national association which became the third party to the triple alliance.

U.S. Army Corps of Engineers

As mentioned in PART I, the Corps was against the passage of PL-566. This law created jurisdictional overlap between the two agencies. SCS is limited by PL-566 to areas no larger than 250,000 acres. Therefore, there are limits as to how far downstream its work can be extended. On the other hand, the Corps has no limits as to how far upstream it can go.

This conflict was ended on September 23, 1965 when the two agencies entered into an agreement to more clearly define the area of responsibility of each agency. This agreement provided that:

- 1) SCS would be responsible for protecting upstream (250,000 acres and less) agricultural flood plains and those upstream urbanized areas where flood problems of minor magnitude exist.
- 2) The Corps would be responsible for flood protection for downstream agricultural flood plains and for urbanized areas where flood problems of major magnitude exist.
- 3) Where a flood problem of intermediate magnitude exists in an urbanized area in an upstream watershed, the two agencies would reach an agreement on a case-by-case basis as to which one would provide the needed flood protection.⁵²

Fish and Wildlife Service (FWS)

The damming and channelization of streams by Federal water resource agencies and the subsequent effects on fish and wildlife habitat seriously concerned FWS. Resources which they were authorized and funded to improve and maintain were being destroyed by water resource development agencies. In 1958, a serious attempt was made to overcome this situation by amending the Fish and Wildlife Coordination Act of 1934. As it turned out, Public Law 84-624 amended the Fish and Wildlife Coordination Act and PL-566.

The purpose of the amendment was to recognize the contribution of wildlife resources to the Nation and "to provide that wildlife conservation shall receive equal consideration and be coordinated with other features of water resource development programs through the effectual and harmonious planning, development, maintenance, and coordination of wildlife conservation and rehabilitation..."⁵³ This amendment provided that fish and wildlife resources receive equal consideration with other project measures. The more pertinent provisions are:

1. Allowing FWS and State Fish and Game Agencies to make reports which would identify means and measures that would prevent or mitigate the loss or damage to wildlife resources as well as to provide for development and improvement.
2. Requiring that reports as identified in Item 1 could be an integral part of any report submitted to Congress or any other party for administrative action.
3. Transferring funds from the development agency to FWS for the purpose of conducting the wildlife investigations.
4. Providing for joint approval of plans for wildlife purposes on lands acquired by construction agencies. Plans were to be consistent with primary purposes of the project and approved by the head of the development agency, Secretary of Interior, and State agency responsible for administration of wildlife resources.
5. Providing for acquisition of lands to preserve and assure the wildlife potential when certain conditions were met.⁵⁴

SCS and supporters of the Watershed Program were able to out-flank FWS and its proponents by amending PL-566 through PL-84-624. The amendment to PL-566 was weaker than the other parts of the bill that amended Fish and Wildlife Coordination Act.

The Secretary of Interior, through FWS, was to make recommendations for minimizing damage or improving wildlife resources. The recommendations were to receive full consideration but only had to be included in a plan if acceptable and agreed to by the local watershed sponsors and the Secretary of Agriculture. However, if the Secretary of Interior requested, his report would accompany the plan for works of improvement when submitted to the Secretary of Agriculture for approval or transmitted to the Congress through the President.⁵⁵

To add a little salt to the wound, "the cost of making surveys and investigations and of preparing reports concerning the conservation and development of wildlife resources shall be borne by the Secretary of Interior out of funds appropriate to his Department."⁵⁶ FWS was placed in a position of having the authority to participate in planning of watershed projects, but having to use its own funds to conduct studies. Once its time and money was expended it had no clout in getting its recommendations accepted and included in the plan. All it could do was request that its report accompany the plan. This would have had little impact since the plans were approved by Agriculture or Public Works Committees.

This amendment did not resolve the conflict. It only gave one agency the advantage. For the most part, SCS followed the recommendations in FWS's reports only if they added little or no extra cost, left the sponsors objectives unmodified, and required little operation and maintenance.

The continued concern about drainage of wetlands, coupled with surplus agricultural production, did cause SCS to somewhat modify its policy on drainage practices. In the mid-1960's the agency made the following additions or clarification in the criteria to be followed in formulation of watershed projects containing channelization.

"The primary purpose of the drainage developments shall be to serve land already in the agricultural and woodland products production.

"Full consideration shall be given to timber and fish and wildlife resources, and drainage developments will be formulated to provide the maximum feasible protection to such resources. PL-566 assistance will not be provided for the drainage of wet-

lands of Types 3,4, and 5 as defined in Fish and Wildlife Service Circular 39." 57

Bureau of the Budget (Office of Management and Budget)

SCS engaged in the usual struggles with the Bureau of the Budget (BOB) over budget requests to be submitted to Congress. SCS personnel interviewed perceived these conflicts as part of each agency's trying to do its job rather than them being opponents.

The Presidents Moratorium from 1966 to 1968 caused OMB to withhold plans from Congress. This was a result of a power struggle between President Johnson and Congress and not conflict between the agencies. With a change of administration OMB released the projects.

ANALYSIS AND EVALUATION

The purpose of this section is to analyze and evaluate SCS's behavior in the administration of PL-566 in the context of administrative theory. This will be done by (1) examining the behavior of large organizations and the individuals within them, and (2) applying this theory to the situation as described in the SETTING to determine whether the agency was behaving as could be expected.

THEORETICAL FRAMEWORK

Studies of public agencies have described certain typical modes of behavior. The ones thought to be more appropriate to this study are discussed in the remaining pages of this section.

Bureaucrats will act to achieve their goals rationally "in the most efficient manner possible given their limited capabilities and the cost of information."⁵⁸ The goals include power, income, prestige, security, convenience, loyalty to an institution, or the nation, pride in excellent work, and last, a desire to serve the public interest. Given the conditions existing in most bureaucracies, power becomes the dominate goal. In time this leads to a situation in which most bureaucracies are

dominated by conservers. As bureaus grow older, the decisions of their officials tend to grow more conservative.⁵⁹

The incumbents learn more about the business of the agency and write more rules. Administrators promote people who fit their image. They try to increase efficiency, but become preoccupied with the survival of the agency and their place within it.⁶⁰ Consequently, bureaucratic organizations form subgovernments. They do not count on the President for administrative power, but rather build bridges to Congress, clientele groups, and professional associations. They also try to formalize those ties throughout counterpart organizations at all levels of government. These relationships between agencies, Congressional committees, and clientele groups are also called triple alliances, iron triangles, and power clusters. Bureaucrats are encouraged to form these relationships to increase their power. Power breeds generosity even if the chief executive happens to dislike the agency.⁶¹ This power helps assure the agency's existence.

Herbert A. Simon further explores the subject of goals. He asks the question "What is the meaning of the phrase 'organizational goal'?" His answer "First, we discover that it is doubtful whether decisions are generally directed toward achieving a goal. It is easier and clearer to view decisions as being concerned with discovering courses of action that satisfy a whole set of constraints. It is this set, and not any one of its members, that is most accurately viewed as the goal of the action."⁶²

These constraints are many and varied. They begin with the decision maker, himself. Each individual, to some degree is a product of his environment. The values he has acquired and the image he has of himself and wants to project to others play an integral role in the decision he reaches.

The decisionmaker is next influenced by the people with whom he comes in contact. These include work associates and superiors, clients, his family, church, social and professional organizations, and pressure groups. He weighs each of the opinions expressed by these individuals and tries to estimate the consequences if their recommen-

dations were followed. Based on these estimated effects, the administrator makes his decision. Consequently, public administrative decision making becomes pluralistic.

Pluralistic can briefly be defined as competition among elite-led heterogeneous groups, each of which attempts to increase its leverage over public policy or decisions.⁶³ Because the mission of public agencies represent a policy preference or value, it is initially influenced by the groups who share these same values. However, the jurisdictional redundancy which occurs in the system soon leads to interagency conflicts and new pressure groups trying to break into the influence circle.

The efforts of the new pressure group are strongly resisted by the triple alliance. This new group threatens the balance of power, position of the leaders, values, and the form of the services or product being delivered. Personnel of the agency in the triple alliance view outsiders as politically motivated amateurs who can only upset the technically correct solution to the problem that the professional has calculated.⁶⁴ Professionals of different disciplines (biologist and engineers) tend to view each other similarly when one tends to infringe on another's area.

If the outsiders fail initially to break into the subgovernment, they continue their efforts until they gain enough power to enter. They eventually succeed or dissolve. If success occurs, the new group eventually becomes part of the "establishment" instead of the radical outsider trying to destroy the subgovernment. Things continue smoothly until a new group arises.

The conflicts which arise when one agency tries to influence another agency, tends to make them more rigid and less prone to compromise. Publication of differences tends to draw the battle lines more firmly. Allies are brought in from each side for prevalence. This can in turn lead to policy stalemates. Conflict can also be carried to the point of wasting large amounts of time and resources.⁶⁵

These conflicts also have positive aspects. It is a comfort to support groups to know that their interest is represented and being fought for by an agency. The

competition brings out the best ideas, keeps agencies sharp, highlights inconsistencies in policy and triggers public interest in programs. The decisions and courses of action which are finally decided upon through this political process enhances the definition of the public interest.⁶⁶

PROGRAM ADMINISTRATION

SCS administration of the program during the BUILDUP ERA largely conforms to theory. Because the factors which contributed toward determining the pattern of administration were either beyond SCS's control or desirable within the existing agency setting, the channelization controversy was largely unavoidable. Although not following the best public relations techniques, its decisions were rational considering the orientation of its employees and the motivations of the typical administrator. Its actions were consistent with the power structure.

This conclusion is substantiated by the discussion of the influencing factors which follows. But before going to that discussion, three questions should be posed and answered to put the discussion in proper perspective. These are:

1. Who is the public? The public in the case of the Small Watershed Program was those elected officials, individuals, and representatives of organizations and agencies who had an interest in the program. These occupied either the position of proponents or opponents. SCS knew who these were and involved those who would reenforce the program while trying to exclude the ones that would change or weaken the economic objective.
2. What is the public's will? Although each different public may have a different will, the composite will is that which evolves from the pluralistic process. This study's findings indicate that the dominant will of the public was for SCS to administer the program stressing economic development, and partially accomplishing this through the use of channelization.
3. How does an administrator know he is executing the public's will? Until enough power can be mustered by the opposition to begin to affect program

direction, the administrator has little basis to substantiate that he is doing anything other than the public's will. An attempt to direct the program away from the desires of the dominant power structure would be unsuccessful since an adequate base of support would be lacking. In the use of the Small Watershed Program, the power structure was sufficiently strong to resist any efforts to change it, short of a major crisis.

Many factors contributed to the program and the manner in which it was administered. The changing sustenance patterns and the policies adopted by Congress to alleviate the poor economic and unfavorable social conditions in the rural areas created a good setting for expansion.

The changes in technology and increases in knowledge caused the agency to give more emphasis to structural measures since these provided the largest incremental effect toward economic development. The soybean boom caused the demand for projects to increase on newly opened lands. Consequently, SCS began projecting an image of being strongly structural oriented. This was also reinforced by project sponsors whose requests were mainly for structural measures. This, in turn, was encouraged by the program since it paid 100 percent of the construction cost of structural measures for flood prevention and 50 percent of those for drainage.

On the other hand, financial assistance for land treatment was usually limited to large eroded areas which individual farmers could not afford to treat without assistance. For the most part, projects increased the amount of technical assistance for land treatment, but had little effect on the amount of financial assistance. This policy was also consistent with the economic development philosophy which dominated the program.

Another reinforcing factor was the high visibility of structural measures. SCS could easily keep track of these accomplishments and show Congressmen how much "bang" it was getting for the "buck". This was important in trying to buildup a program in an agency which had traditionally received only a minor portion of flood prevention appropriations. Following typical bureaucratic behavior, they were trying to expand

the program and gain more power.

They resisted any attempts to siphon off appropriations for any purpose other than for what they deemed appropriate (i.e., FWS attempt to get planning funds by amending the Coordination Act). The Chairman of the House Agriculture Committee would not have let the agency take any other position. Since this is where the power and support was, it would have been irrational to have gone against his will. However, these decisions, although rational in the eyes of SCS administrators, were not good decisions from wildlife claimants viewpoint.

In general, the program was supported by all involved with the exception of the wildlife interests. Congress kept increasing the funding and expanding the authority of the Act. The demand for projects continued to grow and had strong support from landowners at the grassroots level and continuing all the way up to national organizations. This is exemplified by the legislation which was proposed during this period.

Congressmen introduced 79 bills in the House and Senate addressing 22 different topics to amend PL83-566 from 1955 to 1968. Nine of these became law yielding an average of 11.4 percent success. By comparison a total of 132,775 general public bills were introduced during this same time period with 5,767 becoming law. This yielded an average 4.3 percent success rate. The success rate of passing bills which amended PL83-566 was 2.7 times greater than other legislation.

Of the 22 topics addressed by the bills, only one could be viewed as constraining. The three bills dealing with this topic were introduced to extend the provisions or application of the principles of the Fish and Wildlife Coordination Act to allow FWS to review proposed drainage and channel modification projects not covered in the 1934 and 1946 legislation. These did result in an amendment to PL83-566. However, it was watered down sufficiently to not affect the program.

Although opposition to the program existed, it came from sources that did not have the power or vehicle to influence decisions. Their attempts to influence project plans were rarely accepted and, if so, usually partially. This is explainable

by the way SCS interpreted these attempts. One, SCS was trying to buildup the program, and any attempt to detract from the desirability of a project was interpreted as an attempt to stymie its efforts. Two, measures which FWS would have liked to see incorporated would have detracted from the economic efficiency of the project. In addition, clients would have been reluctant to shoulder 50 percent of the cost of wildlife measures which would have brought little economic return. SCS was trying to protect its power structure. It saw these interests as wanting to divert funds away from its traditional clients.

Public participation was heavily pro-project oriented. One factor contributing to this was SCS's work with landowners in other programs. The local SCS field office representative had usually made clients of most of the affected landowners before a project got started. The leading farmers were usually on the board of the local Soil and Water Conservation District which was always a project sponsor. Watershed associations were often formed to generate local interest and support.

Counties and municipalities were later added as sponsors because of their power of eminent domain and other purposes added to the Act. Consequently, many of the influentials were automatically co-opted. If they were not, the project never progressed to advanced planning stages. Local opposition was usually pacified in one manner or another before a final plan was developed. The amount of local public involvement varied by project. In its fervor to buildup the program, some projects were planned with inadequate involvement. The agency in some cases began to plan "for people" rather than "with people". This is reflected by those projects which have been operational in some states for 15 to 20 years and are being closed or deauthorized with only a portion of the measures installed.

The Federal-assistance and local orientation of the program also discouraged consideration of issues from a national perspective. From a planning standpoint, each project was looked upon as an entity with its own objectives, it really did not matter to the sponsors what was happening in other parts of the country as long as they got what they wanted.

The two preceding paragraphs indicate that the picket fence or marbled cake relationships of Federal-State-local governments were clearly functional in the program. Any attempts by SCS to modify the program would have met with large resistance from other members of the subsystems. In addition the likelihood of any such attempts within the agency was low. The decision-makers typically had upward-mobile tendencies. This being the case, they would not have done anything which could be interpreted as detrimental to the program.

Values of members of the triple alliance were generally similar. SCS purposely recruited employees that had a farm background. Such employees were thought to have a good work ethic, were self-reliant, could communicate well with rural people, and identified with farmers. With such a background, employees were quickly socialized to the agency's philosophy. This could, to a large degree, explain why no ambivalents arose from within the agency to challenge practices carried out in the program. Or if they did surface, they didn't stay because they didn't fit.

The National Watershed Congress offered an important avenue to vent concerns and make recommendations. However, the Congress had no power over the agency. Indirectly it could have led to influencing the agency as it provided a forum for coalition building. Again, those that may have formed these coalitions did not have sufficient power to change the course of the program.

SCS's additional clarification in project formulation criteria which identified the primary purpose of drainage projects as being to serve land already in production, did not have much impact. Most projects involving drainage had a majority of its land in agricultural production. If it did not, most of the forested areas had been harvested at one time or another. In typical upward mobile behavior, management personnel could easily justify in their minds that any such areas served by a channel were in "woodland products production". Also, any such land brought into production was considered an incidental effect since that was not the primary purpose of projects. Other personnel having indifferent tendencies did not rock the boat by objecting to any contradictions which may have existed.

Many of the wooded floodplains in the Piedmont or coastal areas of the Southeast had been cultivated in the past. Although many of these areas may have been densely overgrown with sizable trees, SCS did not consider a conversion of these areas to cropland as bringing new land into production. It categorized such changes as restoration to former productivity since the channels were installed under the purpose of flood prevention.

Using the standards of increased power, organizational growth, and delivering technically sound products which clients were demanding, SCS administered PL83-566 with a great deal of success. The program grew to consist of over a third of the agency's annual budget. In the process of achieving this, an important coalition broke down. The wildlife interests who had added valuable testimony at the Congressional hearings before enactment of the law became the chief critics of the program. They became more and more frustrated as the program became more economic and less conservation oriented. As the attitude of citizens began to shift to environmental concerns, the opponents of the Small Watershed Program began to gain support. As will be seen in PART III, the opponents got the leverage they needed to get assess into the decision making process. As a result, the intense channelization conflict followed.

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PART III. THE ENVIRONMENTAL ERA

(1969-1978)

The year 1969 was picked as the ENVIRONMENTAL ERA for purposes of this paper. From that point on, SCS was severely chastized by conservationists and preservationists for its channelization activities. Some Congressmen took up the hue and cry that wildlife interests had been expressing. Congress passed the National Environmental Policy Act (NEPA) which proved to be the vehicle the wildlife interests needed to break into the PL83-566 subgovernment. The momentum created by Earth Day in April 1970 continued to build as greater numbers of people became informed and involved. Concern with the state of the natural environment grew in phenomenal proportions. Channelization, the practice of deepening, widening, straightening, or snagging and clearing existing channels or excavating new channels, became one of the major concerns of the environmental movement.

Of all recent American social movements, the environmental movement has probably been the most successful. Its organizational roots lie in such groups as the National Audubon Society, the National Wildlife Federation, and the Sierra Club.¹ These organizations had been expressing concerns about wildlife preservation since before PL83-566 was passed.

These early groups were joined by a younger generation of politically active organizations and research institutions. These were friends of the Earth, Environmental Action, Environmental Law Institute, Natural Resources Defense Council, Environmental Defense Fund, and others.²

The interests of this new marriage grew beyond wildlife preservation to include air and water quality, land use, health and conservation of scarce natural resources. Because of the new groups, the environmental movement was well represented by legal research groups, some of which resemble middle-sized law firms. Total membership in all environmental groups exceeds four million, and an estimated three to five hundred lawyers work fulltime representing various organizations.³

Andrews in his study entitled Environmental Policy and Administrative Change: The National Environmental Policy Act of 1969, 1970-71 identifies five changes in the postwar American social environment which can be counted among the most important roots of the so-called environmental movement. These were:

1. A vast change in productive technologies whose products and by-products began to sharply affect the quantity and quality of natural resources.
2. A gradual change in public perceptions and preferences regarding environmental resources from that of economic development to that of over exploitation to the point of threatening human survival.
3. A gradual shift in the balance of interests represented in Congress resulting from the shift in public perceptions and the increasing urbanization of the population.
4. Close knitting of new perceptions into a national political force, primarily by advances in communication and transportation networks.
5. A cumulative change in our knowledge and understanding of the natural environment and of man's impacts upon it.⁴

Despite all the changes in the American social environment, little corresponding change took place in the behavior of most federal agencies prior to 1970. Most federal agencies, whether because of their statutory missions or because of the traditional norms of their professions or clients, continued much as before to pursue limited and rapidly absolescing mixtures of objectives. The emergence of a recognizable gap between public preferences and administrative response, the increased representation of those preferences in Congress, the election of a President who sought leverage against the traditional patterns and priorities of the federal bureaucracy for his own political reasons, thus provided the necessary conditions for major political action. This action came on New Year's Day, 1970,

with the enactment of the National Environmental Policy Act of 1969.⁵

In this part of the paper, the two factors which had the greatest impact on causing a change in the administration of the Small Watershed Program will be discussed. The reaction of SCS and proponents are described and an evaluation of each is given. A third factor, the Water Resources Council's new Principles and Standards for Planning Water and Related Land Resources Projects will also be discussed. Other important factors which contributed to a change in program administration such as the Alcovy River Watershed controversy, Chicod Creek Watershed litigation, Congressional hearings and resolutions, and stream channelization guidelines are discussed within these three main categories.

THE CHANNELIZATION CONTROVERSY

HISTORY

Clear evidence of the growing strength of the movement on the part of game and fish officials, national wildlife organizations, sportsmen, and other preservation groups to condemn stream channelization work undertaken by resource development agencies of the Federal Government began to appear in 1969. The most critical attacks were made on the small watershed program. The opposition centered for the most part in the Southeastern states but was also evident in the North Central states.

The wildlife conservationists had previously vented their frustrations on other projects, but never had they gathered so much momentum as in 1969. "Fires" and countermeasures began to break out on several fronts almost simultaneously. This crystallization of the opposition, in addition to the factors mentioned earlier, seems to have been a result of the controversy over the Alcovy River Watershed Project in Georgia which drew national attention.

The following chronology⁶ of events for 1969 is a good indication of the magnitude of opposition that arose:

May 6, 1969 - Resolution of the Game and Fish Commission, State of Mississippi, enumerating adverse effects of watershed projects and recommending that stream channelization be discontinued as a method of attempting to drain farm lands or for any other purposes and that the building of water retention practices such as contour planting be employed for those purposes.

Certified copies of this resolution were sent to the Governor of Mississippi, U.S. Secretary of Agriculture, State Conservationist in Mississippi, Corps of Engineers in Vicksburg and Mobile, Tennessee Valley Authority, Southeast Regional Director of the U.S. Fish and Wildlife Service, and U.S. and State Congressmen.

The language used in this resolution had been noted by SCS in statements made by several state Game and Fish agencies in the Southeast, indicating it was not an isolated action.

- July 31, 1969 - Resolution of the Montgomery County Soil and Water Conservation District attempting to rebutt the Mississippi Game and Fish Commission Resolution.
- 1969 - Resolution of the Delta Council supporting joint program of Soil Conservation Service and Corps of Engineers to prevent flooding and silting.
- 1969 - Resolution of Delta Council Soil Conservation Committee and Soil Conservation Committee of Green-Leflore County Chamber of Commerce supporting cooperative effort in land and water resource development.
- July, 1969 - Article by George T. Bagby, Director, State Game and Fish Commission, in the Georgia Game and Fish magazine pointing out the detrimental effects of proposed Alcovy River Watershed Project.
- July 30, 1969 - Newspaper article in the Winder Press (local newspaper) giving the reaction of the Marbury Creek Watershed Association to the Bagby article in the Georgia Game and Fish magazine.
- August 6, 1969 - Newspaper article in the Atlanta Constitution relating to local delegations' meetings in Washington with officials of the Department of the Interior and Soil Conservation Service to discuss Alcovy River Watershed Project.

Environmental Newsletter of the Alabama Conservancy condemns the "ream the streams" plans

of the Soil Conservation Service and publicizes the Alcovy controversy.

September 18, 1969 - Two articles in the Christian Science Monitor
September 23, 1969 - giving opposing views on the Alcovy controversy.

November 1, 1969 - Two articles in the Atlanta Journal by George T. Bagby and J. Booth Williams, President of Alcovy River Watershed Association, presenting their views on the controversy.

September- - Article entitled "Open Letter to Friends of Our
October, 1969 - Outdoor Resources" in the Minnesota Conservation Volunteer raising questions and presenting answers critical of the Watershed Program nationwide, but especially in Minnesota.

October- - Editorial statement in National Wildlife (Vol.7,
November, 1969 - No.6, p.29) expressing strong displeasure with the watershed program and solicited a campaign by wildlife conservationists to express their feelings to the Secretary of Agriculture. Many stereotype letters were received which were undoubtedly prompted by this editorial.

December, 1969 - Articles in Field and Stream magazine by U.S. Congressman Benjamin B. Blackburn (Georgia) and Mr. George, Laycock, free-lance writer, took an extremely critical position on channelization work as carried out in small watershed projects.

Many of the preceding articles called for readers to get involved and stop the devastation caused by channelization. The efforts to arouse concern continued as is exhibited by the number of articles appearing in the published media. Some of the more notable titles indicate the degree to which efforts were made to appeal to emotions: "No One Fishes in SCS Ditches", "Wilderness on Wasteland? The Blights of Channelization", "The Gravediggers", "Will Your Stream Be Next: Battle for a River", "New Weapon to Fight the Stream Killers", "The Ditch Diggers Die Hard", "Waterway Wrangle", "Channelization: The Untreatable Pollutant", and "A Plague on All Your Rivers".

The intense media campaign coupled with the changed public preferences and increased representation caused the controversy to come to a head in hearings held in Congress in 1971 and 1973 by the Conservation and Natural Resources Subcommittee of the Committee on Government Operations entitled "Stream Channelization". These

hearings provided a political forum for discussion of the adverse impacts of channelization. They also tended to increase the "political capital" of the conservation and environmental interests by bringing together federal and state wildlife agencies and private environmental and conservation organizations in unified opposition to the water resources agencies on this one issue. SCS received much criticism as a result of these hearings.⁷

The appeal to emotionalism, although still strong in 1974, began to be supplemented more strongly by another approach. Article or study titles indicated that authors were trying to present information more objectively as exemplified by: Survey of Economic-Ecological Impacts of Small Watershed Development, and "Stream Channelization: The Economics of the Controversy". This objectivity also resulted in more widespread emphasis on a different tactic to try and stop the program. Instead of relying strictly on environmental issues, the opponents began attacking the program through a medium which was understood by all, the dollar. By discrediting the benefits as calculated by SCS, the benefit-cost ratio could be shown to be below unity. If this was accomplished, the project no longer met one of the requirements of the Act. At this point, the project would die.

The campaign against channelization spread to all levels of the watershed program. At the National level, the agency began to receive letter inquiries from Congressmen as well as private citizens. Preservation or wildlife oriented organizations headquartered in Washington, D.C. began to make personal contacts or telephone calls asking probing questions and generally trying to "brow-beat" the agency into terminating the program.

The one organization most involved at this level was the Natural Resources Defense Council. Various other organizations such as the Sierra Club, National Wildlife Federation, Audubon Society, Izaak Walton League, League of Women Voters, Environmental Policy Center, and Environmental Action also were involved in various degrees. The two most involved individuals who had the greatest contact with the agency were Tom Barlow and Brent Blackwelder. These two were involved in several

of the preceding organizations. They made it clear to SCS that their objective was to completely stop the watershed program.

National-level organizations gave guidance to many local or state level groups. The Natural Resources Defense Council (NRDC) developed and distributed 2000 copies of an Action Packet to alert conservationists of the environmental damages caused by channelization. In the summer of 1971 it mailed Action Packet II which contained a list of 31 questions which interested persons were to ask each SCS State Conservationist about individual projects in his state. The nature of the questions was such that many man-days would be required to respond on each project.

The guidance received from the national-level organization and the media support encouraged the controversy at the state level. The state level organizations, who by this time had formed a strong coalition, intensified their questioning of the program and its worth. This was continually reinforced by questioning of individual projects as they went through the environmental impact statement (EIS) process.

PROGRAM PROPONENTS RESPONSE

SCS became aware of the growing channelization controversy in the summer of 1969. An in-house analysis dated August 18, 1969 was made of the approved PL83-566 projects in eight of the Southeastern states (Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, and South Carolina). The purpose of this analysis was to check and see if channelization was indeed stressed as heavily in projects as the critics were saying. The analysis showed that 95.5 percent of the 265 projects planned in those eight states contained channel work and 33.2 percent, having no dams, depended mainly on channels as the main structural measure. The 253 projects included 9,278 miles of channel work which represented 52.8 percent of the total for the Nation.⁸

In view of the possible impacts of stream channelization on fish and wildlife resources the analysis included a review of planned measures to mitigate dam-

ages or preserve fish and wildlife values in project work plans. Only 55 of the 265 plans identified specific mitigation measures. Most common in plans prepared in Alabama, Arkansas, Georgia, and Mississippi were provisions for installing special drawdown devices in floodwater retarding structures (dams). Other measures most frequently identified were oxbow development, wetland preservation areas, and warm water impoundments.⁹

Few plans specifically identified the cost of mitigation. They merely indicated that such costs were included in the installation costs of other structural measures. Of the 55 plans including mitigation, 23 (42 percent) had identified costs amounting to \$581,764. This represented 0.4 percent of the cost of planned channel improvement (channelization).¹⁰ SCS recognized at this point that this was a weakness in the program.

As indicated in the preceding chronology, the proponents of the program responded quickly on the local front in 1969. However, as the momentum increased, they were not able to keep up the pace. The opponents' large public relations campaign against the program could not be negated. The sympathetic media included the wildlife and nature type magazines of national distribution and the state fish and game magazines. Newspapers like the Wall Street Journal and Washington Post also carried articles which were unfavorable. Although SCS tried to get articles printed it was unsuccessful. Even the Reader's Digest, which had in the past printed articles favoring SCS was uncooperative. During the controversy it printed articles criticizing channelization and refused to print anything which would appear to rebutt or present opposing views.

Although some magazines of statewide distribution printed both sides of the issue, the agency's propaganda dissemination was limited largely to its own publication Soil Conservation. In 1972 SCS made an effort to clarify and justify the use of channelization or defend PL83-566. It printed three articles entitled, "Channelization: The Farmer's Friend", "A Dam in Time Saves and Saves and Saves", and "The Role of Channels in Total Water Management".

The following list of advisories and memoranda exemplify the type of information and guidance the Washington Office was giving to the states during 1970 and 1971.

ADVISORIES

Date	Number	Subject Title
1-26-70	WS-1	Channel Improvement- Analysis of Blackburn and Laycock Articles
5-1-70	WS-12	Channel Improvement
12-23-70	INF-111	Positive Approach to Wildlife Difficulties
6-9-71	INF-58	June 3- Congressional Hearings on Channelization
6-17-71	INF-58	June 9,10,14- Congressional Hearings on Channelization
6-28-71	INF-62	<u>Congressional Record</u> Covering Channelization Discussion (Ruess Moratorium Amendment)

MEMORANDA

Date	Number	Subject Title
1-30-70	WS-101	Planning Fish and Wildlife Measures
5-1-70	WS-102	Policy on Mitigation of Fish and Wildlife Losses, Watershed Projects
5-1-70	WS-104	Public Information Program Concerning Individual Watershed Projects
2-4-71	WS-108	Guidelines for Planning and Review of Channel Improvements

The barrage of letters that resulted from Action Packet II had the potential of causing the commitment of many man-hours. When the Washington Office recognized what was happening, it sent out Advisory WS-5 entitled Questions and Answers on Channel Modification. The State Offices could then shorten their response time, increase efficiency, and give fairly uniform answers among states.

The House Subcommittee on Investigation and Oversight of the Committee on Public Works responded to the channelization hearings by holding their own hearings in 1971 entitled "Red Tape- Inquiring into Delays and Excessive Paperwork in Administration of Public Programs". These hearings were an attempt to counteract the adverse criticism being voiced in the channelization hearings.

With the continuation and growth of the controversy SCS slowly began to make concessions. One of its first actions was to modify its construction techniques. It began to take the comments of the Fish and Wildlife agencies more seriously. Some of the changes made included:

1. Shaping and reseeding areas promptly
2. Minimizing clearing of vegetation in right-of-ways
3. Revegetating disturbed areas with plants beneficial to wildlife
4. Limiting excavation to one bank and on alternating sides where appropriate
5. Other various techniques which varied by state.

SCS issued Conservation Planning Memorandum 15 on May 5, 1975. This strengthened the restriction on drainage of wetlands. The previous policy of not providing PL83-566 assistance to drain wetlands of Types 3,4, and 5 as defined in Fish and Wildlife Service Circular 39 was expanded to include all wetlands, except Types 1 and 2. In addition, any damages incurred to wetlands Types 3-20 in draining agricultural land had to be fully mitigated in kind. This acted as a serious impediment for projects requiring channelization in the Southeastern states. The natural drainageways which were the most logical places to excavate were usually partially in wetlands. Replacement of damaged values in kind is extremely difficult to accomplish, especially if the opposition takes a hard line.

Even though the controversy had caused much public sentiment against channelization, the practice was still a popular one and in demand by watershed proponents. SCS's adoption of less damaging construction techniques and more critical evaluation of the need and effects of channel work did not change the economic develop-

ment orientation of the Small Watershed Program. Consequently, SCS and FWS and State Fish and Game agencies were still at odds. Through the EIS process, the wild-life interests and private support organizations, the planning and installation of the program which involved channels was slowed down.

NACD realized that the continuing controversy was hampering the progress of projects. At their 30th Annual Convention in February, 1976, NACD adopted a resolution calling on key Federal agencies concerned with the channelization issue to develop mutually agreeable guidelines on the subject.¹¹ These guidelines were implemented in 1978. Although their effectiveness is yet to be proven, they are expected to significantly reduce the amount of impact of channelization to be installed in existing or future projects. Consideration is now being given to converting the guidelines to binding rules and regulations in an effort to comply with one of President Carter's water policy directives.¹²

EVALUATION

As was described in PART I, the Corps' construction of large dams and levee systems and their ignoring the needs of that faction of the population residing in the upstream areas had led to much emotionalism in the 1950's. This emotionalism and the support it generated was significant in the passage of PL83-566.

History has a tendency to repeat itself, and so it did with PL83-566. Some of the groups that had helped pass the law had needs that were ignored to a large degree. This led to conflicts which eventually intensified to the emotional media campaign that was many times greater than the one in the 1950's.

As the controversy evolved in 1969 the private groups, in consultation with the agency, were trying to match the opponents blow for blow. But they were at a disadvantage. The change in the country's attitude caused the national media to avoid any pro-channelization material.

This concern with environmental quality would have made any popular magazine or other media unpopular if it would have printed material defending a practice

which was seen as detrimental as channelization. From a general public standpoint, the main defenders of this practice were farmers. They represented about 5 percent of the population in 1970. It would have been bad business for the media to risk losing sales from a large segment of the population, when the potential for increasing sales was so low.

The Washington Office advisories and memoranda indicate that SCS was responding to the controversy. However, the changes were marginal and at the outer edges as would be expected since knowledge about the strength of the opposition was imperfect. There was no clear indication that SCS had lost its power base. On the contrary, the Ruess Amendment to the 1971 Appropriations Bill which would have placed a moratorium on PL83-566 projects containing channelization was defeated by a vote of 278 to 129, a 68 percent majority.

Overall, SCS resisted the changes which outside forces were trying to force upon it. This had largely been its usual response to pressures from the same general sources in the past. Since its attempts to resist change had worked previously, it saw no need for a different approach.

Only when the need for change reaches crisis proportions can the top executives, in a sudden burst of centralization, force the bureaucracy to make the necessary change.¹³ This crisis had apparently not occurred as of 1970 because the agency still had a client which demanded its product, had support from the legislative branch, and had not yet been ruled outside of the law by the courts. As will be discussed in the next section, from 1974 on, SCS was beginning to take positive action toward addressing environmental concerns.

NATIONAL ENVIRONMENTAL POLICY ACT

HISTORY

Just as the Employment Act of 1946 had helped set the tone for the policy of the 1950's and 1960's, the National Environmental Policy Act of 1969 (NEPA) helped set the tone for the 1970's. Section 101(a) (policies and goals) corresponds to Section 102 of the Employment Act. The language is similar in these two sections except for two main differences. NEPA recognizes 1) that activities of man have had profound impacts, and 2) that there is a need for man and nature to exist in productive harmony.

"Sec. 101(a). The Congress, recognizing the profound impact of man's activity on the interrelations of all components of the natural environment, particularly the profound influences of the population growth, high-density urbanization, industrial expansion, resource exploitation, and new and expanding technological advances and recognizing further the critical importance of restoring and maintaining environmental quality to the overall welfare and development of man, declares that it is the continuing policy of the Federal Government, in cooperation with State and local governments, and other concerned public and private organizations, to use all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans." 14

Another difference exists which reflects the changed attitude. The Employment Act states "...with the assistance and cooperation of industry, agriculture, labor and State and local governments..." while NEPA states "...in cooperation with State and local governments, and other concerned public and private organizations...". Industry, agriculture, and labor seem to have fallen from grace since most of the impacts to nature stem from their activities. The implication seems to be that the country will have to rely on other organizations to counter the activities of these sectors of the economy.

NEPA included three major elements:

1. Declaration of a National environmental policy
2. Establishment of a set of procedural requirements, including but not limited to the Environmental Impact Statement (EIS)

3. Creation of a Council on Environmental Quality (CEQ) to advise the President and oversee the implementation of the Act.

SCS got off to a slow start in the preparation of EIS's. Policies and procedures established by NEPA required considerable interpretation to translate them into operational criteria for administrative action. This task was left largely to the discretion of each agency and administrator. SCS considered the entire watershed and its several works of improvement as a single project. Each dam or channel modification was considered as an element. In fact, individual dams or channel reaches often were set aside as a construction unit. It did not consider the construction of any individual element as a major Federal action. Rather, it considered the authorization of a project as the major Federal action.¹⁵ Consequently, SCS was preparing EIS's only on plans that were not yet authorized.

At the time NEPA was passed SCS had 621 watershed projects in operation on which construction had not been completed. In addition there were an undetermined number of sub-watershed work plans in the 11 Authorized River Basin Watersheds under construction. The Act requires that an EIS be prepared when a proposed major Federal action will generate significant adverse effects on the quality of the human environment. SCS initially considered that the major Federal action had been taken when a watershed work plan was approved for operations. Therefore, no EIS would be required for individual structural elements of a project already under construction.¹⁶

This interpretation was not allowed to stand mainly as a result of litigation on Chicod Creek Watershed in North Carolina. On November 26, 1971, plaintiffs including Natural Resources Defense Council, Inc., North Carolina Wildlife Federation, Inc., Pamlico-Tar Conservation Coalition, National Wildlife Federation, and Friends of the Earth filed for an injunction to halt further construction and installation because the project had no EIS. The court ruled that an EIS was needed on this project.¹⁷ From that point on, SCS had to file either an EIS or a negative declaration with CEQ on all unconstructed portions of projects.

Since the greatest environmental controversy regarding SCS projects was directed at channel modification, initial effort at preparing EIS's was directed at those projects containing that measure. For other projects under construction environmental assessments were made, and, where it was determined that an EIS would not be made, an environmental impact appraisal was prepared to document the rationale for not preparing an EIS.¹⁸ This procedure was developing through the period 1970-1977 when various instructions, memorandums and other guidelines were being developed. The final rule, which covers not only those projects in operation at the time NEPA was passed, but all new projects, was published in the Federal Register Vol. 42, No. 152, Monday, August 8, 1977.¹⁹

These rules require that an EIS be prepared for any of the following actions:

- a. Major Federal actions which involve channel realignment or work to increase channel capacities.
- b. Watershed projects requiring Congressional action after the effective date of these rules.
- c. All other actions which are determined to be major Federal actions significantly affecting the quality of the human environment.²⁰

Between passage of the Act and April 1, 1977, the SCS had completed 201 final EIS's, 11 draft EIS's and 183 negative declarations. Of these actions 216 had been taken on PL-566 projects which were operational as of December 31, 1969. Comparable information on actions taken on sub-watersheds of the 11 Authorized River Watersheds is not readily available.²¹

AGENCY RESPONSE

SCS, originally, interpreted NEPA as a reinforcement of its previous missions and policies. For at least two years after NEPA's enactment it directed no change in the range of considerations entering into its water resource planning process.²²

SCS largely sought to move slowly on policy development to implement procedures to meet NEPA's requirements. One general policy memorandum was issued in May 1970; specific instructions were not issued until March and April 1971. These later

instructions merely restated the language of the Act without elaboration. No suggestions to improve admittedly deficient EIS's were issued nor were changes in environmental standards ordered.²³

Not until mid-1972 were important new changes issued. At that time SCS personnel were directed to perform an environmental inventory during the first pre-planning environmental reconnaissance study, to present all feasible alternatives (including objectives which differed from those of local project sponsors) in the impact statement, to conduct a public information meeting on the preliminary investigation report, and to append to the final EIS copies of all substantive letters of comment submitted on the draft statement. They were also instructed to prepare EIS's for all stream channel excavation projects that might have significant environmental impacts.²⁴

Since stream channelization projects were the main actions that aroused concern, SCS issued Watersheds Memorandum 108 in February, 1971. It called for a thorough re-evaluation of all planned channel modification work not yet installed to determine what changes in work plans or engineering design were needed to further national policy and goals for the enhancement of the environment. Some 401 PL83-566 watershed projects and 52 flood prevention sub-watersheds were studied. The projects were categorized into three groups, depending on the likely impact of the remaining channel work on the environment. The findings were: 1) 44 percent were found to have either a positive effect or only a minor adverse impact; 2) another 44 percent were found to require some modifications to avoid possible adverse impacts; and 3) only 12 percent of the projects were found to need major changes.²⁵

In the midst of the 108 review, SCS began a computer analysis of all planned and constructed channel work. The purpose of this study was to develop figures which would contradict or confirm the opponents' accusations that SCS planned to channelize 150,000 miles of streams and small rivers.²⁶ The study covered 54 pilot watersheds, 1057 PL-566 watersheds and 303 flood prevention sub-watersheds.

The findings of this study were quite interesting. The total channel work planned amounted to a little over 21,000 miles. This included work on natural streams, man-made ditches, previously modified channels, and new channels. It included perennial streams, intermittent streams, and those that flow only after heavy rains.²⁷

A further analysis of the study data showed that modification had been planned on just over 3,000 miles of natural, perennially flowing streams. This represented 14 percent of the total planned channel work of SCS. When this planned work was added to planned modification of man-made ditches and previously modified channels that had perennial flow or ponded water prior to the project, the total amounted to about 5,500 miles, or 26 percent. The remainder of the planned channel work included:

- 1,100 miles of clearing or removal of loose debris within present channels on streams and ditches with perennial flow;

- 7,000 miles of channels with intermittent flow, or involving new drainage mains or laterals;

- 7,000 miles of channels that flow only during periods of surface runoff; and

- 200 miles of streambank or grade stabilization work on any type channel.²⁸

As of December 30, 1976, the total miles of channel modification included in SCS work plans amounted to 21,778. Of this amount 9,927 miles had been constructed as of that date.²⁹ The agency saw these figures contradicting rather strongly the opponents charges.

Between 1972 and 1974, SCS's procedural guidelines underwent sweeping revision, and by 1974 they were comparable to those of one of the more advanced agencies, the Corps. Among the changes made were requirements that collection of data for the EIS begin simultaneously with preparation of the project application; that cumulative and regional impacts be considered along with impacts on historical, social and economic values; and that SCS field offices take an active role

to ensure broad public access to planning and decision processes. In June 1973 SCS issued a lengthy advisory memorandum which commented in detail on deficiencies in earlier impact statements and recommended specific corrective measures. Then in 1974 the agency issued for trial use an "Environmental Assessment Procedure" to assist its field staff in preparing the substance of EIS's.³⁰

The changes in SCS guidelines between 1972 and 1974 represented a major shift in posture toward implementation of NEPA's procedures. SCS documents prior to 1972 reflected a desire to avoid NEPA's procedures rather than to interpret and apply them. SCS instructions from 1972 on, in contrast, demonstrated a symbolic commitment to embrace and implement these procedures. Significantly, CEQ testified in 1974 that among the impact statements produced by federal agencies, those of SCS were among the most improved.³¹

At approximately the same time, SCS inaugurated intensive and reportedly outstanding ecological training programs for staff members, projected to include more than 400 individuals from key positions throughout the organization.³² The Agency also added biologists to the watershed planning staffs. This discipline although present in SCS, had been on a different staff and underutilized in project planning. This changed as planning was modified to meet the requirements of NEPA. The improvements in SCS's environmental impact statements was in part a result of the formation of an Environmental Services Division. This new Division played an important role in developing guidelines for states to follow.

SCS's public involvement procedure to accommodate the requirements of NEPA also changed slowly. The agency required local sponsors to disseminate information to the public throughout the project planning, and beginning in mid-1972 required that a first public meeting be held at the completion of the preliminary investigation report. This meeting was to include discussion of tentative agreements reached by the sponsors and SCS concerning potential alternatives. However, SCS guidelines treated the public information provision as primarily a one-way process to be initiated after tentative agreements had been reached, rather than

as an active solicitation of public preferences and objectives. Moreover, the guidelines defined this information process as the responsibility of the sponsoring organization, not SCS. Finally, the impact statement was to be made public only at the final stage of project review formalities, after tentative agreement had been reached on a final work plan and after Washington had reviewed the plan and the EIS. Not until issuance of the 1973 and 1974 guideline revisions did SCS direct that draft impact statements be prepared and made public in the field, and that SCS officials actively seek out and involve different categories of publics in their planning and decision processes.³³

The agency in an effort to improve performance has also initiated a training program in this area. The first public involvement course was held in October 1976. Emphasis on this activity has continued. In the Spring of 1978, Executive Order 12044, "Improving Government Regulations", was issued. By autumn of that year the Secretary of Agriculture had expanded the directive by issuing Secretary's Memorandum 1955, "Improving U.S. Department of Agriculture Division and Regulations". USDA agencies, among other items, were required to:

1. Create an Office of Public Participation
2. Review current public participation activities and identify needed improvement.
3. Prepare an agency public participation plan, a public document explaining SCS participation procedures.

SCS has complied with item 1 and is in the process of complying with items 2 and 3.³⁴ Although these latter actions were not specifically aimed at the watershed activities, they will help reinforce actions previously undertaken.

EVALUATION

SCS considered itself to be the original environmentalists. The Agency had been created to prevent the depletion of one of the nation's most valuable resources, soil. However, the Agency's activities were directed at improving man's environment from a sustained use standpoint resulting in improved quality of life

in terms of higher income, better housing, more income security, recreation, and better health conditions. In reading Section 101(a) of NEPA, the Agency was able to fit all of its activities within that policy without any tradition.

SCS saw the preservationist philosophy as going beyond NEPA. From the Agency's viewpoint, they saw the environmentalist as being concerned only with critters and their natural habitat rather than man and his environment. This largely went against the values of the employees of the Agency. These were agriculturally oriented people who had experienced life as a struggle with the natural environment. The natural environment was something to be modified to better suit man's needs.

Because of their orientation and background and because of the threat posed to the Small Watershed Program, most SCS employees could not or would not accept the much broader concern which environmentalists had for mankind. The holistic concern for natural preservation to ensure survival of the human race was too far removed from SCS's direct assistance approach to be readily accepted. SCS had always been an action agency helping real people solve real problems. To ignore the immediate needs of clientele with which the Agency had on-the-ground contact for the greater good of faceless humanity was incomprehensible.

Not only would SCS's acceptance of the preservationist viewpoint in relation to NEPA have been against its values, it also would have severely hampered the program. Roughly one-third of the Agency's budget was dependent on PL-566 appropriations. Having to stop ongoing work to write EIS's on previously planned projects would have caused large disruptions and situations with which the Agency was not prepared to deal. It would also have caused a drastic decrease in the rate at which the Agency was delivering its product.

The uncertainty of the situation was also an important factor. CEQ was a new agency trying to define its role. The time lag involved in developing guidelines left the agencies much latitude for interpretations. The Chicod Creek court action was a milestone event. It clarified the meaning of NEPA and eliminated the

latitude for interpretation which SCS had previously been using to its advantage. It made SCS realize that it could not continue treating the controversies on a case by case basis, but had to begin looking at the total program. This court action made the Agency realize that the opposition, largely ignored over the years, had grown to include other organizations that had a legal expertise heretofore lacking. Through NEPA, the opposition had found the leverage needed to influence SCS decisions which they had previously lacked.

SCS's resistance to the change caused by NEPA is not atypical behavior. Morrow in his book, Public Administration, describes a bureaucratic organization's normal reaction to change. Certain agency positions regarding claimant requests are resisted or modified to conform to internal agency "cultural" norms. Such standards may vary..., but it is likely that the instinct for self-preservation would be of paramount consideration. This would be expressed by agency unwillingness to accept new programs that would result in the trauma of personnel displacement and reorganization resulting from change in an agency's mission. In an attempt to preserve its historical mission, the social ties, and job security of its subgroups, and its policy status vis-a-vis other agencies, an administrative unit resists change for essentially the same reasons that individuals question changes in personal and professional relationships.³⁵

Andrews in his analysis of agency responses to NEPA offers these criticisms of SCS actions:

"In a general sense NEPA reinforces the mission of conserving soil and water and demands precisely the sort of harmonious relationship between human activities and their biological and physical resource base that SCS was established to achieve. But in taking this policy position, SCS ignored the crucial differences between the physical conservation mission of the agency as a whole and the fundamental economic mission of its Small Watershed Program. It failed to take the position of policy leadership in implementing NEPA that might have been expected of it.

"Moreover, SCS failed to recognize conflict between policy and procedures established by NEPA and the isolated pursuit of any single mission- even soil conservation. SCS has a tradition of expertise in agricultural soil erosion and runoff, but admits to little experience in such closely related

topics as water quality, erosion and sediment transport characteristics of streams, downstream and ground water effects of stream channelization, and the effects of its actions on water quality, fish, wildlife habitat, and wetland productivity. NEPA provided an opportunity for SCS significantly to broaden the range of its concerns, but the agency chose instead to interpret the Act as a reinforcement of its normal activities." ³⁶

The actions SCS took in response to NEPA focused on NEPA's procedural requirements rather than its policy goals. ³⁷ Few substantive changes in proposed water projects were made as a consequence of NEPA. ³⁸ SCS showed virtually no signs of change in the priorities of its water resource program during 1970-1974. In fact, the Agency congratulated itself during its budget hearings each year because it was setting new records for water project construction during an era of environmental concerns. ³⁹ SCS testimony indicates deliberate avoidance of environmentally controversial projects in setting Agency priorities, but no change in traditional purposes, clients, or types of water resource activities comparable to those of the Corps. ⁴⁰

It is important to note that the reasons for this posture did not necessarily lie within the Agency. Significantly, SCS was given authority by two laws, The Water Resource Development Act of 1973 and the Rural Development Act of 1972, to broaden its program (and potentially to shift its priorities), including such activities as flood plain purchase, land use inventory and monitoring, water quality management, and other environmental enhancement activities. It still has not been delegated the authority or provided with funds to implement these activities. Several political considerations may help to explain this circumstance, but a central one appears to be the continuing commitment of the chairman of the House Agriculture Appropriation Subcommittee, who was also an author of the Small Watersheds Act, to keeping SCS's water resources program as primarily a program of technical and financial assistance to farmers. ⁴¹ Although this Congressman retired at the end of the last Congress, there has been no sign of change in this policy.

Although the stream channelization review called for by Watersheds Memorandum 108 was substantive, it contained no new criteria to reflect NEPA's purposes.

Channelization was still to be used to permit the profitable use of flood plains, though serious consideration should be given to nonstructural alternatives. No explicit relationship was established between this review and the detailed statement requirement. The purpose of the review was to group channelization projects into three categories: those with none, some, and serious environmental impacts. The categorization was to be accomplished with the participation of fish and wildlife agencies, but in practice there were significant differences of opinion between the agencies concerning appropriate classification of many projects. In some cases these classifications permitted evasion of the procedures established by NEPA. NEPA's EIS requirement could be evaded by striking bargains with fish and wildlife agencies concerning project design and mitigation measures, following which the projects could be redefined as having no significant environmental impacts and thus not requiring preparation of an impact statement. The danger in this practice was that other agencies and the public were not necessarily parties to these discussions, and thus non-fish and wildlife impacts that might be identified from an EIS might never surface.⁴²

The Soil Conservation Service was not subjected to overwhelming pressures to implement NEPA in contrast to other agencies such as the Corps. The first NEPA lawsuit was not initiated against the SCS until late 1971. While by 1974 it had been defeated on several procedural issues in that particular case involving the Chicod Creek Watershed in eastern North Carolina, it had been sued only half a dozen times and did not lose a second case until early 1975. Its only politically controversial practice, stream channelization, which various fish and wildlife agencies and several Congressional committees were attempting to stop, was a long-standing battle in which NEPA simply provided a new tactical weapon rather than a new political force. This is exemplified by a lengthy series of hearings held by the Subcommittee on Conservation and Natural Resources of the House Committee on Government Operations, chaired by Rep. Henry Reuss. Parallel hearings were held in the Senate. Even in the NEPA oversight hearings in December 1970 (Hearings on

Administration of NEPA), virtually all questioning of SCS centered on its authority to require fish and wildlife enhancement measures rather than on its implementation of NEPA per se. These hearings were held by the Subcommittee on Fisheries and Wildlife Conservation of the House Committee on Merchant Marine and Fisheries, chaired by Rep. John Dingell. This committee was the House sponsor of NEPA, but apparently was more concerned with a particular traditional battle in its questioning of the SCS.⁴³

Unlike other agencies like the Corps, SCS could point to its conservation label and to the fact that most of its activities were not environmentally controversial. Insofar as Congressional pressures were concerned, its own oversight committees were both solidly in favor of the use of channelization and powerful enough to defeat any pressure that the Conservation and fish and wildlife committees were attempting to generate. Rep. Reuss' efforts to withhold funding of channelization projects were defeated; and the red tape hearings were held by the Public Works Committee at the same time as the stream channelization hearings. They were used by the SCS Watersheds Administrator as a platform for complaints about Reuss' efforts.⁴⁴

Andrews in his evaluation of SCS's actions to NEPA gives the impression that the agency finally redefined its mission more broadly to fulfill the purposes of NEPA. Andrews states:

"In 1974 SCS guidelines for implementation of NEPA finally reinterpreted the agency's own mission to give equal weight to three related goals:

- 1) Quality in the natural resource base for sustained use;
- 2) Quality in environment to provide attractive, convenient, and satisfying places to live, work and play; and
- 3) Quality in the standard of living based on community improvement and adequate income."⁴⁵

A comparison of these goals with past SCS goals indicates little modification of the agency's mission. These goals tend to reinforce SCS's original interpretation of NEPA. Goal 1 is highly compatible with the SCS's mission since 1935. Goals 2 and 3 reflect SCS's interpretation of NEPA relating to the improvement of the en-

vironment for man rather than for nature's sake. Only the first alternative stresses natural resources. However, the connotation there is not preservation as the environmentalists would have it, but rather on sustained use under the philosophy promulgated by the traditional conservationist.

Although SCS's mission may not have been changed to totally embrace the environmental philosophy, NEPA has been causing changes in the administration of the program. The following conclusions were reached by William Warren Hill in his study, NEPA and Federal Water Resources Planning: Effects and Effectiveness in the Corps and SCS:

1. Projects are being planned or modified to reduce or mitigate adverse environmental impacts. Projects being planned today are likely to be more "environmentally sound" than those planned prior to NEPA.
2. Environmental assessments have now become a part of the planning process. Much potentially useful information concerning the environmental impacts of water projects is being developed which could further the "state-of-the-art".
3. Environmentally oriented planning personnel which have been added to planning staffs will play a major role in seeing that traditional water projects are designed and constructed to minimize adverse environmental impacts.
4. Planning procedures have been revised to allow review and comment much earlier in the process.
5. Accessibility and accountability of the agency has increased. NEPA's EIS requirement provided the vehicle for opening agency actions up to full public scrutiny; the full disclosure provision and the threat of litigation under the Act provided the necessary "stick" to enforce agency accountability.
6. Old laws which marginally influenced the course of water resource planning prior to NEPA are now having a greater impact. Increased consideration is now being given to comments received from FWS. 46

PRINCIPLES AND STANDARDS FOR PLANNING
WATER AND RELATED LAND RESOURCES

HISTORY

Section 103 of PL89-80 directs the Council to establish "...principles and standards and procedures for Federal participants in the preparation of comprehensive regional or river basin plans and for the formulation and evaluation of Federal water and related land resource projects".

In 1968 the Council began its work on a set of Principles and Standards (P&S), using a special task force. A preliminary report, or first draft, was issued in May, 1969. A series of hearings were held in July, August, and September of that year. These were followed by a series of field tests involving 10 water resource projects of the SCS, Corps of Engineers, and Bureau of Reclamation. The tests were concluded in April, 1970. In December, 1971, the Council published its proposed Principles and Standards in the Federal Register and established a period of public review.⁴⁷

On September 10, 1973, the Council published the Principles and Standards as approved by the President in the Federal Register. These became effective October 25, 1973, and replaced the policies established by Senate Document 97 which had provided planning guidance since 1962. Changes of basic interest to SCS were the new planning objectives, the system of accounts, discount rates, plan formulation procedures, and the grandfather clause.⁴⁸

Planning Objectives

Plans for the use of the nation's water and land resources will be directed to improvement of the quality of life through contributions to the objectives of national economic development and environmental quality. These objectives are to be considered co-equal in the plan formulation process. The national economic development objective (NED) is to enhance national economic development by increasing the value of the nation's output of goods and services and improving national

economic efficiency. The environmental quality objective (EQ) is to enhance the quality of the environment through management, conservation, preservation, creation, restoration, or improvement of the quality of certain natural and cultural resources and ecological systems.⁴⁹

System of Accounts

The Principles and Standards provide for development of four accounts during the planning process: the National Economic Development account, the Environmental Quality account, the Regional Development account, and the Social Well-Being account. The purpose of these accounts is to display the beneficial and adverse effects of each alternative plan. They provide a basis for comparing alternative plans and determining the effects of trade-offs between plans. Both monetary and non-monetary effects must be revealed in the accounts.⁵⁰

Discount Rate

In December, 1968, the Council had adopted a new discount formula. This formula was based on the yield rate of long-term government certificates rather than the coupon rate. The Principles and Standards state the discount rate will be established in accordance with the cost of Federal borrowing. This would increase the rate substantially. The rate set for 1973 was 6 $\frac{7}{8}$ percent. The rate was to be raised or lowered by one-half of one percent increments annually if the actual cost of Federal borrowing changed by more than one-quarter of one percent.⁵¹

Although the 1968 formula was retained, discount rates have continued to increase and for 1979 are set at 6 $\frac{7}{8}$ percent. This contrasts with a rate of 2 $\frac{1}{2}$ percent prior to 1961 and 3 $\frac{1}{4}$ percent prior to October 15, 1968.⁵²

Plan Formulation

Under the Principles and Standards plan formulation is relatively complex. One alternative plan is formulated which will optimize the national economic de-

velopment objective. Another is formulated which emphasizes contributions to the environmental quality objective. Usually one or more additional plans are formulated which reflect significant physical, technological, legal or public policy constraints or significant trade-offs between national economic development and environmental quality objectives. With this information at hand, the decision makers make a final selection of a plan which most nearly satisfies the desire of the greatest number of people with direct interests.⁵³

In order to achieve greater uniformity in formulation of the alternative plan for national economic development, it was necessary to issue a guideline for Agricultural Price Standards. In the past some agencies had used current prices to estimate project benefits, some had used current normalized prices and some adjusted normalized prices. An adjustment period of as much as 11 years had been used in establishing adjusted normalized prices. To achieve more realistic prices and to obtain more uniform acceptance, a new formula was developed. These prices are developed for the Council from weighted averages of actual seasonal average prices over a five-year period by ERS. For continued validity a new set of current normalized prices must be developed each year.⁵⁴

Grandfather Clause

In order to reduce the cost and impact of immediate and full implementation of the Principles and Standards a phase-in procedure was adopted. Initially, plans transmitted to the Office of Management and Budget between October 30 and December 31, 1973, required only a review to ensure a favorable benefit-cost ratio under the proposed 6 7/8 percent discount rate. This proposed discount rate, however, was not permitted to stand and other problems arose with the provisions of the Grandfather Clause. Finally, on February 12, 1975, Federal Register Notice, Volume 40, Number 30, issued the specific provisions for full implementation of the Principles and Standards. Plans submitted to OMB between October 23, 1973, and June 30, 1974, required only an addendum showing benefit-cost ratios using the

appropriate discount rate. Plans submitted between July 1, 1974, and June 30, 1975, had to be accompanied by an abbreviated Environmental Quality Plan and reflect the appropriate discount rate. At that time agencies were permitted to prepare a list of partially completed plans which they expected to complete and submit to OMB between July 1, 1975, and July 1, 1976. The list was to be submitted to the Council on Environmental Quality. These plans also would have to have an abbreviated Environmental Quality Plan. Any plans not on that list and all future plans are required to comply fully with the provisions of the Principles and Standards (P&S).⁵⁵

AGENCY RESPONSE

SCS's greatest immediate concern with P&S was the requirement of having to reformulate plans that were not completed by the end of the phase-in period allowed under the grandfather clause. Consequently, the agency made a big push on getting as many plans as possible completed before the deadline. The number of plans completed (work plan agreement signed by sponsors and state conservationist) in 1974, 1975, 1976, 1977, and 1978 were 21, 33, 73, 3, and 9, respectively. The sharp reduction in plans with the end of the phase-in period indicates the degree to which SCS had committed its resources to completing plans that were formulated before 1973.

A study of the lists of advisories (Table III-1) issued by the agency which pertained to P&S from 1973 to 1979 also reflects the same decision. Between October 25, 1973 and June 30, 1976, eleven such advisories were sent to the field from the Washington Office for an average of 4.12 advisories per year. From July 1, 1976 to December 31, 1978, the Washington Office issued three advisories which pertained directly to P&S for an average of 1.20 per year.

P&S had minimal impact on the planning process during the phase-in period. The abbreviated EQ plan developed during the phase-in period was largely a paper exercise. To a large extent, these included those environmental features that

Table III-1. Advisories or Bulletins Pertaining to the Implementation of Principles and Standards for Planning Water and Related Land Resources.

Date	Advisory or Bulletin Number	Topic or Title
11/20/73	WS-40, RB-23, RC&D-26	Interim USDA Procedures for Planning Water and Related Land Resources
2/4/74	WS-5, RB-3, RC&D-2	Abbreviated Environmental Quality Plan and Display Accounts- Phase-in of Principles and Standards
5/17/74	WS-19, RB-12, RC&D-11	USDA Procedures for Planning Water and Related Land Resources (Principles and Standards)
7/12/74	WS-26, RB-22, RC&D-12	Schedule and Application of Principles and Standards to Implementation Studies in Process
8/1/74	WS-27, RB-14, RC&D-23	Schedule and Application of Principles and Standards to Implement Studies in Process
9/10/74	WS-32	Principles and Standards- Schedules for "Phase-in" Period
2/6/75	WS-5	Addenda for Watershed Plans
2/6/75	WS-6, RB-7, RC&D-4	WRC- P&S- Implementation of USDA Procedures for Planning Water and Related Land Resources
2/24/75	WS-9, RB-8, RC&D-7	Schedule and Application of WRC Principles and Standards
5/9/75	WS-19, RB-13, RC&D-15	Manual for Training in the Application of the Principles and Standards for the Water Resources Council
7/8/75	WS-23	Watershed Plans Scheduled for Completion by June 30, 1976, using P&S Phase-in Procedure
7/9/76	WS-24, RB-21, RC&D-16	Cost allocation and Plan Formulation under Principles and Standards
11/7/77	WS-29	Incremental Evaluation in Watershed Project Formulation
12/19/78	National Watershed Bulletin No. 16-9-9	Constraints on the NED Alternative in Watershed Projects

had been part of the plan originally and modification of measures which the agency was adopting as a result of the channelization controversy and NEPA. Generally, these alternatives were formulated from data which had been previously gathered and with minimal input from outside sources. No sponsor existed for this objective. As was the situation in the BUILDUP ERA, the proponents of the EQ objective were either unwilling or unable to become sponsors of projects. The traditional sponsors were also unwilling to emphasize EQ objectives.

Since the end of the phase-in period, SCS is in the process of going through the normal readjustment period required after any new regulation appears. As a result, the Washington Office issued new principal policy changes on March 29, 1976 and July 21, 1978. The 1976 change added non-structural measures as a major feature.⁵⁶ The 1978 changes included:

1. Land treatment is to be coequal with nonstructural and structural measures.
2. Watershed plans which contain only land treatment are acceptable.
3. Management of the watershed program is emphasized for both planning and operations stages.
4. The list of land treatment eligible for accelerated cost-share assistance has been expanded to include additional long-term practices to reduce erosion and practices for water conservation, water quality, and fish and wildlife.
5. Long-term agreements are to be used to install most accelerated land treatment.
6. Fifty percent of the area upstream of a dam is to be adequately protected as a condition for construction of the dam.⁵⁷

On January 29, 1979, the Washington Office issued a draft two-stage authorization procedure. If this procedure is adopted it would allow for the land treatment phase of a plan to be authorized before the structural program.⁵⁸

The new planning effort in the states is generally at a lower level than during phase-in. Since plans that missed phase-in have to be reformulated, many states are using the planning staffs to conduct environmental assessments and write environ-

mental statements on projects approved for construction prior to NEPA. This is being done in an effort to eliminate the backlog of old plans, thus fulfilling previous obligations to clients and keeping the construction program going.

SCS field personnel because of the NEPA experience are also aware of the lost motion which results from the many revisions in new regulations before they are finally workable. Since the procedures to produce EIS's are more stable, this seems to be the most logical choice.

SCS being a member of the Water Resources Council worked closely with the Council staff in developing the Principles and Standards. In March 1974, SCS in cooperative with the Forest Service and Economic Research Service published the USDA Procedures for Planning Water and Related Land Resources. These Procedures were to direct agency planning activities in programs administered by the Soil Conservation Service.

SCS recognized that the Procedures were general and additional refinements would be required as implementation progressed. This is indicated in the Preface of the document:

"Experience in application of these Procedures will provide a basis for additional guidance on plan formulation, evaluation and display of plan effects. These Procedures are subject to periodic revision and will be supplemented with instructions specific to each program administered by the Soil Conservation Service. This will assist planning personnel in their uniform application." 59

In its February 6, 1975 advisory the Washington Office again reiterated its belief that changes would be made in the procedures:

"As other agencies submit their procedures to the Water Resources Council for approval, there will be an attempt to coordinate procedures between agencies. At such time, some revisions will probably be in order in our USDA procedures." 60

These anticipated revisions are now in the process of being developed as a part of President Carter's water policy initiative to improve federal water resource programs. The President's directive to the Water Resources Council was to improve the implementation of the Principles and Standards. In his address to the Congress,

the President stated,

"The basic planning objectives of the Principles and Standards- national economic development and environmental quality- should be retained and given equal emphasis. In addition, the implementation of the Principles and Standards should be improved by:

--adding water conservation as a specific component of both the economic and environmental objectives;

--requiring the explicit formulation and consideration of a primarily non-structural plan as one alternative whenever structural water projects or programs are planned;

--instituting consistent, specific procedures for calculating benefits and costs in compliance with the Principles and Standards and other applicable planning and evaluation requirements. Benefit-cost analyses have not been uniformly applied by Federal agencies, and in some cases benefits have been improperly recognized, "double-counted" or included when inconsistent with federal policy or sound economic rationale. The Water Resources Council is to prepare within 12 months a manual which ensures that benefits and costs are calculated using the best techniques and provides for consistent application of the Principles and Standards and other requirements;

--ensuring that water projects have been planned in accordance with the Principles and Standards and other planning requirements by creating, by Executive Order, a project review function located in the Water Resources Council. A professional staff will ensure an impartial review of pre-construction project plans for their consistency with established planning and benefit-cost analysis procedures and applicable requirements. They will report on compliance with these requirements to agency heads, who will include their report, together with the agency recommendations, to the Office of Management and Budget. Project reviews will be completed within 60 days, before the Cabinet officer for Budget requests to the Office of Management and Budget, but timely independent review will be provided. This review must be completed within the same budget cycle in which the Cabinet Officer intends to make Budget requests so that the process results in no delay.

--The manual, the Principles and Standards requirements and the independent review process will apply to all authorized projects (and separable project features) not yet under construction." 61

The task force established to comply with the President's directive is still on-going. An SCS employee was detailed to the Water Resources Council to lead the effort.

EVALUATION

SCS's reaction to P&S considering the conditions is logical. One of the major programs for which it had administrative responsibility had come under attack from the channelization opponents and through NEPA. These attacks were causing serious disruption and putting the agency under considerable stress as it tried to continue to deliver its products to its traditional clients.

The introduction of P&S was viewed as an additional impediment which would reinforce the disruptive effects of the channelization controversy and NEPA. The agency had struggled with NEPA for approximately 5 years before it began developing EIS's which brought favorable comment from CEQ. The introduction of the P&S procedures just as the agency was beginning to adequately comply with NEPA and resume some form of stabilized production was viewed as potentially disastrous. The agency at that time was not as concerned with implementing the new procedures efficiently, as it was with maintaining production. This type of behavior is described by Morrow:

"Theoretically, one might argue that the efficiency-economy standard need not necessarily interfere with the search for the best program, but it often does. In addition, the part administrative agencies play in those alliances previously labeled subsystems indicates that policy products, not efficiency, are foremost in the minds of those who seek to sustain, expand, or revitalize an agency through such alliances." 62

In addition to the immediate delays P&S would cause, the procedures would also have a long-term detrimental effect on the program from the SCS administrator's standpoint.

The changes brought about by P&S would increase the amount of time and effort required to develop watershed work plans, and consequently, also increase the planning cost. As discount rates would continue to increase, projects with lower capital investments, higher operation and maintenance costs, and benefits which accrue early during the project life will be the ones more easily justified economically.

In view of these impacts and the tendency of administrators to preserve their programs, the administrators used good judgement in putting forth a big effort to

get as many plans approved as possible under the grandfather clause. The extent to which these efforts will bear fruit depends on whether or not those plans approved during the phase-in period will be judged adequate should the President's last recommendation (the Principles and Standards requirements and the independent review process will apply to all authorized projects not yet under construction) becomes implemented. If judged inadequate, the phase-in plans would require additional work under the revised procedures.

Now that P&S are the official planning procedures to be used, SCS is putting forth effort in complying. However, these new planning procedures are not congruent with PL83-566. The Act was formulated and administered mainly for the purpose of economic development.

The clientele serviced under the authority of the Act are unwilling to support projects that deviate too far from that objective. Claimants which could sponsor environmental quality objectives are either financially unable or philosophically unwilling. They most commonly are advocates of the "do nothing" alternative. Consequently, the EQ plan tends to become the plan which minimizes damages of the NED alternative.

P&S seems to be better adapted to broader conceptual regional or river basin plans (Level B) than to implementation (Level C) plans. Since Level B plans are not as tightly constrained, alternative plans can be developed which stress features implementable by other agencies. However, in developing watershed work plans the agency is constrained to only plan measures for which it has authority to implement. This is viewed as a severely limiting factor since desirable environmental features may be outside of SCS's authority to plan and give cost share assistance.

In the past, projects have been cooperatively planned between SCS and other agencies. However, objectives and clientele were usually the same or highly compatible. Picket-fence federalism, triple-alliances, and local objectives are probably the main reasons why the environmentally oriented organizations do not

become cooperating agencies in implementing EQ plans. Local sponsors usually request assistance because of an economically related problem. The residents within that area are usually willing to spend money on just those features which will decrease damages or increase returns in the area. They are often only willing to include environmental features if the costs are minor or if this is the trade-off required to get the features they desire.

Under the concept of picket-fence federalism programs are kept apart rather than integrated by the different levels of government. In this way each program maintains more autonomy and is less complicated to administer. This allows easier maintenance of a clientele and helps to keep a more unified front. Consequently, SCS as well as other agencies with overlapping authorities may be somewhat unwilling to jointly plan an implementation project which has competing objectives.

Triple alliances also detract from joint planning. For example, FWS is allied with a Congressional Committee which has its own priorities and objectives. Using Dingell-Johnson or Pittman-Robertson Act funds to service a clientele which largely is identified with an agricultural agency would be low on FWS's priority and risky from an oversight standpoint.

P&S have given the wildlife interests another tool to force SCS to comply with their desires. However, because of the structure of the political system, the program may be too severely constrained under existing conditions to readily adapt to demands placed on it.

FOOTNOTES

1. Brown, op. cit., pp. 317-318.
2. Ibid., p. 318.
3. Ibid.
4. Richard N.L. Andrews: Environmental Policy and Administrative Change: The National Environmental Policy Act of 1969, 1970-1971 (Unpublished PhD. Dissertation, University of North Carolina, Chapel Hill: 1972), pp. 67-73.
5. Ibid., pp. 74-75.
6. U.S. Department of Agriculture, Soil Conservation Service (Unpublished in-house critique on Opposition to Channelization in Water Resource Projects, 1970).
7. William Warren Hill, The National Environmental Policy Act and Federal Water Resources Planning: Effects and Effectiveness in the Corps and SCS (Unpublished PhD. Dissertation, Stanford University, Stanford: 1977), p. 189.
8. U.S. Department of Agriculture, Soil Conservation Service (Unpublished report 8-18-69), p. 1-2.
9. Ibid., p. 4.
10. Ibid.
11. NACD, Correspondence from George R. Bagley, President of NACD to R.M. Davis, Administrator of SCS, March 8, 1976.
12. U.S. Department of Agriculture, Soil Conservation Service, "National Watersheds Bulletin No. 16-9-15", March 5, 1979.
13. McCurdy, op. cit., p. 95.
14. National Environmental Policy Act of 1969, 42 U.S.C. Paragraph 4321, et. seq. (1970).
15. Buie, op. cit., p. 32.
16. Ibid., p. 31.
17. U.S. Department of Agriculture, Office of the General Council, Natural Resources Division, "Natural Resources Defense Council, Inc., et al v. Grant, et al", Cases Challenging Soil Conservation Service Activities on Environmental Grounds (Unpublished Report, March 1, 1976), p. 1.
18. U.S. Department of Agriculture, Soil Conservation Service Rules and Regulations, Part 650- Compliance with NEPA, Subpart 650.3 (a)-(f), Federal Register, Vol. 42, No. 152, Monday, August 8, 1977, pp. 40115-40116.
19. Buie, op. cit., p. 31.
20. USDA, SCS, Rules and Regulations, op. cit., Subpart 650-7 (a), p. 40116.
21. Buie, op. cit., p. 31.

22. Richard N.L. Andrews, "Agency Responses to NEPA: A Comparison and Implications", Natural Resources Journal, Vol. 16, April 1976, p. 306.
23. Ibid., p. 308.
24. Ibid., pp. 308-309.
25. Buie, op. cit., p. 32.
26. Natural Resources Defense Council, Inc., Newsletter, Vol. 1, Issue 2, Summer 1971.
27. Buie, op. cit., p. 33.
28. Ibid.
29. Ibid.
30. Andrews, op. cit., p. 309.
31. Ibid.
32. Ibid., p. 307.
33. Ibid., p. 312.
34. U.S. Department of Agriculture, Soil Conservation Service, "National Agency General Bulletin No. 00-9-15", February 23, 1979.
35. Morrow, op. cit., p. 8.
36. Andrews, op. cit., p. 307.
37. Ibid., p. 312.
38. Ibid., p. 313.
39. Ibid., p. 314.
40. Ibid.
41. Ibid.
42. Ibid., pp. 310-311.
43. Ibid., p. 316.
44. Ibid., p. 317.
45. Ibid., p. 307.
46. Hill, op. cit., pp. 236-246.
47. Eugene C. Buie, "The Impact of the Principles and Standards on Water Resources Planning", Speech delivered at 29th Annual Meeting, Colorado Association of Soil Conservation Districts, Denver, Colorado, January 9, 1974, pp. 1-2.
48. Ibid., p. 2.

49. Ibid., p. 3.
50. Ibid., p. 4.
51. Ibid.
52. U.S. Department of Agriculture, Soil Conservation Service, "National Economics Bulletin No. 39-9-4", December 5, 1978, pp. 1-2.
53. Buie, op. cit., p. 5.
54. Water Resources Council, "Agricultural Price Standards", Guideline 2, October 1976.
55. Buie: A History of U.S. Department of Agriculture Water Resource Activities, op. cit., p. 105-106.
56. U.S. Department of Agriculture, Soil Conservation Service, "Watershed Protection Handbook Notice- 34", March 29, 1976.
57. U.S. Department of Agriculture, Soil Conservation Service, "Watershed Protection Handbook Notice- 42", July 21, 1978.
58. U.S. Department of Agriculture, Soil Conservation Service, "National Watersheds Bulletin No. 16-9-13", January 29, 1979.
59. U.S. Department of Agriculture, Economic Research Service, Forest Service, Soil Conservation Service, USDA Procedures for Planning Water and Related Land Resources, March 1974, p.i.
60. U.S. Department of Agriculture, Soil Conservation Service, Advisory WS-6, RB-7, RC&D-4, Re: WRC-P&S- Implementation of the USDA Procedures for Planning Water and Related Land Resources, February 6, 1975.
61. The White House, Office of the White House Press Secretary, Press Release, June 6, 1978.
62. Morrow, op. cit., p. 17.

CONCLUSIONS AND IMPLICATIONS

The channelization controversy could not have been avoided within the context of administrative theory. The agency's decisions were rational, given the conditions under which the Small Watershed Program had to be administered. Although the bills which were to become PL83-566 were supported predominantly by conservationists during the Congressional hearings in 1953-54, a strong developmental interest influenced this original intent. The emphasis on economic development in the nation as a whole, the agricultural crisis, and other factors as described in PART II reinforced the development of the program following the developmental philosophy.

SCS's resistance to demands of fish and wildlife interests, even after the surge of opposition from the Environmental Movement and passage of NEPA, was also rational behavior. Identification of the public's will is a difficult task for public administrators and SCS had no clear indication in the early years of the Environmental Era that the will had changed sufficiently for it to alter its approach. This point may best be illustrated by asking and answering three questions:

1. Who was the public? The public was those agencies, organizations, and individuals who had an interest in the program, whether from the position of proponent or opponent. SCS knew who these were and the ones whose objectives would reinforce the program were involved with SCS in effective subgovernments.

2. What was the public's will? Although each different public may have a different will, the composite will is that which evolves from the pluralistic process. This study's findings indicate that the dominant will of public was for SCS to administer the program stressing economic development, and partially accomplishing this through the use of channelization.

3. How does an administrator know he is executing the public's will? Until enough power can be mustered by the opposition to begin to affect program direction, the administrator has little basis to substantiate that he is doing anything other than executing the public's will. An attempt to direct the program away from the desires of the dominant power structure would be unsuccessful since an adequate base

of support would be lacking. In the case of the Small Watershed Program, the power structure was sufficiently strong to resist any efforts to change it, short of a major crisis.

The channelization controversy and NEPA complemented each other in causing the crisis conditions to become reality. NEPA's provision for public involvement and its providing opportunities for litigation gave the opponents of channelization a means to attack the program. Conversely, without interest groups, NEPA would probably have been interpreted differently or less rigorously and would have had less impact. These two factors, were also reinforced by the Water Resources Council's new Principles and Standards for Planning Water and Related Land Resources (P&S).

In the long run, P&S may have broader impacts on PL83-566 than either the channelization controversy or NEPA. The latter two caused environmental constraints to be placed on the program to make projects more environmentally sound. However, the changes made were more of a procedural nature rather than substantive. The channelization controversy and NEPA did not diminish the intensity of the economic object of PL83-566, although it may have detracted from it. P&S clearly state that environmental quality is an objective equal to economic development.

With environmental quality as a co-equal objective, the attitude of traditional project sponsors will have to change correspondingly. EQ features will have to be stressed more and more in the time continuum to appease the EQ interests. Otherwise, the conflict will intensify and the program will be further hampered.

Concern for the environment is not a passing fad. The preservationist philosophy of earlier times has broadened its horizons and come of age. Consequently, SCS may need to open itself more and allow more of the claimants to become clients. This may be somewhat difficult to accomplish since the legislative members of the triple alliance are still agriculturally oriented. Until members of proponent Congressional committees become more amenable to environmental objectives, SCS will have difficulty in servicing new clientele, should it adopt them.

The agency should take positive action in working with key Congressmen to show them the opportunities which the program provides to meet EQ objectives. Good opportunities exist for adopting watershed plans to complement section 208 of PL92-500 and the Clean Water Act of 1977. The land treatment measures which stress conservation fit very closely to the best management practices recommended by EPA.

Procedures should also be developed for compensating landowners which preserve wetlands. Limited funds have been made available for such purposes through the Water Bank Act.

PL83-566 projects, especially those including dams will become increasingly difficult to justify because of high initial investment and rising interest rates. Channelization more closely fits into the changing economic constraints since it would require less initial capital outlay. However, this measure will continue to experience difficulty since it is viewed as being highly damaging to the environment. Consequently, projects will begin to stress measures with shorter life spans and more immediate benefits. Land treatment measures emphasizing conservation should begin receiving more emphasis since they have a short life and are effective soon after installation.

Nonstructural measures seem to offer a new avenue for the program to change direction. However, Congress has to this time refused to fund this activity under PL83-566.

The Small Watershed Program will continue to be modified incrementally until a better mix of the EQ and NED objectives is achieved. Future projects will place more emphasis on land treatment and non-structural measures. The program will diminish in areas where economic development remains the primary concern and erosion and agricultural pollution are not severe.

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APPENDICES

Appendix - Table 1. Summarization of Hearings on Conservation and Watershed Programs before the Committee on Agriculture, House of Representatives, Eighty-Third Congress, First Session, April 28, 29, 30, May 1, 5, 6, 7, 8, and 11, 1953

Name and Title of Actor	Organization Represented	Policy Thrust ¹		Comments ²		Statement ³		Pertinent Comments and Significant Key Phrases
		Dev. Prog.	Conser.	Fav. Un.Fav.	P.A. Writ.	Dev. Prog.	Conser.	
J. Earl Coke, Assistant Secretary	U.S. Department of Agriculture	X		X		X	X	Questioning after prepared statement centered mainly around the need to establish criteria which would clearly delineate Corps and SCS responsibilities in flood control and flood prevention and eliminate conflicts between the two agencies. (p. 9-14)
Robert M. Salter, Chief	Soil Conservation Service	X		X		X	X	Statement pertains mainly to overall conservation program. However, he does attempt to show the potential and need for watershed projects and the need to simplify authorization procedures. (p. 21-22). Questions about SCS and CES relationships at county levels seemed to be aimed at showing that agencies were working effectively and thus no need to reorganize. (p. 37-41)
Webb Embrey, Agricultural Agent	St. Joseph Chamber of Commerce, Missouri	X				X	X	Presented study which indicated that conservation program of SCS and PMA was substantially less effective than CES educational efforts. One of his four recommendations was to transfer SCS to CES. (p. 67-68)

¹ Policy Thrusts is the push, drive, or strong continual pressure over time of political actors to maintain a policy state or bring about a policy change. Dev., Prog., and Conserv. represent the Developmental, Progressive, and Conservationist Thrusts, respectively. The abbreviations M.U.-S.Y. and Prev. represent subdivisions of the Conservationist Thrust. In cases where thrust was not clear in testimony, judgement was made by author. In cases where testimony pertained to technical matters which exhibited no thrust value, space was left blank.

² Comments were either Fav. (Favorable) or Unfav. (Unfavorable).

³ Statement was presented in person (P.A. denotes Personal Attendance) or in writing (Writ.) or by both forms.

Source: House of Representatives, Committee on Agriculture, Conservation and Watershed Programs, Hearings April 28 to May 11, 1953 (Washington: U.S. Government Printing Office. 1953).

Name and Title of Actor	Organization Represented	Policy Thrust ¹		Comments ²		Statement ³		Pertinent Comments and Significant Key Phrases
		Dev. Prog. Conser.	M.U.-S.Y. Prev.	Fav. Un.Fav.	P.A. Writ.	Fav. Un.Fav.	P.A. Writ.	
Charles H. Collison, Director	National Wildlife Federation	X		X		X		Critical of Corps downstream flood prevention program and advocated flood prevention and conservation measures which would improve wildlife habitat. (p. 92-95)
Joseph F. Kaylor	Association of State Foresters	X			X	X		He stated opposition to H.R. 599 because it gave authority only to SCS. H.R. 4877 gave authority to Secretary of Agriculture and this he approved if the word "forest" was added following the word "soil", and comma, line 8, page 1, and line 10, page 2. Also recommended leaving existing flood-control activities as they affect cooperative programs under the existing Federal-State authorities. (p.95-96)
Angus McDonald, Assistant Legislative Representative	National Farmers Union	X			X	X	X	Written statement of James G. Patton, National President was presented. Largely critical of Corps. and Bureau of Reclamation's large flood prevention projects. Endorsed small watershed flood prevention approach. However, both are needed to do complete flood control job. (p. 97-108)
John C. Lynn, Legislative Director	American Farm Bureau Federation	X			X		X	Exhibited concern with effectiveness of Corps program. Would like more consideration given to upstream treatment but would like to see more studies to prove effectiveness of joint upstream and downstream programs. Recommended against new programs until progress made toward correlation and decentralization of conservation programs. (p. 108-112)

Name and Title of Actor	Organization Represented	Policy Thrust ¹		Comments ²		Statement ³		Pertinent Comments and Significant Key Phrases
		Dev. Prog. Conser.	M.U.-S.Y. Prev.	Fav. Un.Fav.	P.A. Writ.			
J.T. Sanders, Legislative Counsel	National Grange	X		X	X	X	X	Wanted to see more balanced appropriation between upstream and downstream programs and wanted SCS to be retained and expanded. (p.126)
Carl T. Curtis, U.S. Congressman	First District of Nebraska	X		X	X	X	X	"I am in accord with the objective of the bill before the committee, H.R. 4877"
Raymond A. McConnell, Jr., Editor of the Lincoln (Nebraska) Journal	The National Informed Citizens Committee on Watershed Conservation	X		X	X	X	X	"Our committee has discussed this matter and the gist of my testimony is to lend the strongest possible support to legislation such as H.R. 4877." (p.136)
Fred Seaton, Publisher	Hastings (Nebr.) Tribune (also involved in National Informed Citizens Committee on W/S Conservation)	X		X	X	X	X	Presented a written statement which should be translated by legislation and otherwise into National policy. Stressed need for both upstream and downstream control and local ownership of project works. (p. 137-139)
Bright McConnell, Secretary-Treasurer	Savannah River Soil Conser- vation Districts Assoc.	X		X	X	X	X	Stated needs for soil protection but his thrust was mainly developmental as exemplified by one of his statements "...the area has enormous potential for increased production to meet the needs of a rapidly growing national population." (p. 140)
Claire P. Guess, Jr.	South Carolina Citizen involved with Soil and Water Conservation Dist.	X		X	X	X	X	Local people need assistance from Federal government.. "in developing a system whereby the waters which frequently just run to the sea unimpeded can be developed into one of the best national resources for equal utilization by municipalities, industrial interests, and agriculture." (p. 142)

Name and Title of Actor	Organization Represented	Policy Thrust ¹		Comments ²		Statement ³		Pertinent Comments and Significant Key Phrases
		Dev. Prog. Conser.	M.U.-S.Y. Prev.	Fav. Uh.Fav. P.A. Writ.	M.U.-S.Y. Prev.	Dev. Prog. Conser.	M.U.-S.Y. Prev.	
J.T. Graham, President	Yadkin-PeeDee Soil Conservation and Flood Control Association, North Carolina Association of Soil Conservation District Supervisors	X	X	X	X	X	X	"Personally, I am against building big dams, unless they can be located where the impounded water does not cover valuable farm land, thus destroying it forever for farm production, and where the breaking up of old established farm communities forces all the people to move out of the reservoir area. I say let's try the upstream approach..."Also presented an act from N. Carolina creating a drainage district and requested financial assistance. (p. 143-145)
Irving Hill, President	Lawrence Paper Co. Lawrence, Kansas	X		X	X	X		General statement pertaining to general need and support for natural resources and more specifically watershed management. He had no specific recommendation other than to suggest that USDA was the only source of expertise needed to manage watersheds. (p. 145-147)
W.B. Tuttle, Chairman	San Antonio River Authority Texas	X		X	X	X	X	Requested money to implement a watershed project around San Antonio. This relates to the \$5 million appropriated in 1953 (PL-83-156). (p. 147-150)
Truett Smith	East Fork Association, Trinity River (Pilot Watershed)	X		X	X	X		"We favor the type of legislation proposed in the Hope bill...It is a splendid program. It will work. It just needs to work faster. If the upstream program in this area could be completed 75 percent of this flood damage could be prevented. Agriculture production could be increased by over 20 percent." (p. 150-151)

Appendix - Table 1.

Name and Title of Actor	Organization Represented	Policy Thrust ¹		Comments ²		Statement ³		Pertinent Comments and Significant Key Phrases
		Dev. Prog. Conser.	M.U.-S.Y. Prev.	Fav. Un.Fav.	P.A. Writ.			
Don Anderson, Chairman	Water Management Committee, X National Association of Soil Conservation Districts	X		X		X	X	"I am sure that the proposed watershed development program is one of the key foundation stones in a long-range program for protection and development of our land and water resources." He advocated that ACP funds be used for permanent type land treatment measures. (p. 151-155)
Harry D. Strunk, President	Republican Valley Conservation Association	X		X		X	X	Statement relating to long history of floods on the Republican River and need for assistance. Recognized SCS as third party with Corps and Bureau of Reclamation. Advocated upstream treatment, but made no detracting remarks about Corps or Bureau work.
Robert M. Salter, Chief	Soil Conservation Service	X		X		X	X	Explained the difference between district activities where normal conservation program is being administered and one where a watershed project was active. (p. 159-174)
E.R. Cotton, President	American Watershed Council, X Inc.					X	X	Statement very similar to views expressed by the National Informed Citizens Committee on Watershed Conservation.

Name and Title of Actor	Organization Represented	Policy Thrust ¹		Comments ²		Statement ³		Pertinent Comments and Significant Key Phrases
		Dev. Prog. Conser.	M.U.-S.Y. Prev.	Fav. Un.Fav.	P.A. Writ.			
R.W. Eschmeyer, Executive Vice President	Sport Fishing Institute	X		X		X		"I should like to propose that the committee include another section in the bill which would provide for the Secretary of Agriculture to initiate and carry out flood-control measures where the lands involved are either predominantly or exclusively Federally owned and under the jurisdiction of the Secretary of Agriculture.
George D. Riley, Member	National Legislative Committee of the American Federation of Labor	X		X		X		Recommended that bill allow for installation on flood prevention in upper mountainous areas of watersheds. USDA should be allowed to do this without request of local people. Upstream treatment needs more attention although this would not eliminate need for big dam. (p. 208-209)
Richard E. McArdle, Chief	Forest Service	X		X		X		Made big pitch for future legislation to have provision for upper upstream areas which are not cultivated but are in forest. Submitted suggested wording for new section in H.R. 4877 which would accomplish this. (p. 209-215)
Henry O. Talle, U.S. Congressman	State of Iowa	X		X		X		"I urge that some provision be made in H.R. 4877 to authorize the Secretary of Agriculture to initiate flood-control measures on the public lands under his administration. (p. 218-219)

Name and Title of Actor	Organization Represented	Policy Thrust ¹		Comments ²		Statement ³		Pertinent Comments and Significant Key Phrases
		Dev. Prog. Conser.	M.U.-S.Y. Prev.	Fav. Un.Fav.	P.A. Writ.			
Howard S. Miller, U.S. Congressman	State of Kansas	X		X		X		"...I have carefully studied H.R.4877 and fully approve of its provisions." He also stated further that he favored H.R. 3376 because expenses incurred in soil conservation practices would be deductible from farm income for income tax purposes. He was in favor of ACP payments going for permanent practices rather than temporary. (p. 220-231)
Evvrett P. Schivner, U.S. Congressman	State of Kansas	X		X		X		Quoted from Missouri River Interagency report. Recognized need for flood control, flood prevention, and soil conservation, but stated that upstream treatment would have minor impact on downstream flooding. Implication was that Kansas City needed big dams to protect it. (p. 231-236)
Charles B. Deane, U.S. Congressman	State of North Carolina	X		X		X		He believes that combined effort of upstream treatment and downstream dams are needed.
Clarence R. Miles	Chamber of Commerce of United States		X		X		X	The National Chamber strongly supports H.R.4877. (p.240)
Phil M. Landrum U.S. Congressman	State of Georgia			X		X	X	Full agreement with H.R.4877 but would like to see provisions for the Secretary to initiate any needed flood-control on the national forests. (p. 241)

Name and Title of Actor	Organization Represented	Policy Thrust ¹	Comments ²	Statement ³	Pertinent Comments and Significant Key Phrases
		Dev. Prog. Conser. M.U.-S.Y. Prev.	Fav. Un.Fav. P.A. Writ.		
C.N. Granger	The American Forestry Association		X		H.R. 4877 should be amended so that work might be undertaken on Federally owned land with requirement that the initiative be taken by local community groups (p. 242-243)
A. Oakley Hunter, U.S. Congressman	State of California	X	X	X	Provision should be made for applying benefits of this bill to the national forests and other Federal lands without approval of local communities or other local authorities. (p. 243-244)
T.W. Ferguson, Director	Yadkin-PeeDee Soil Conservation and Flood Control Association		X	X	Of every \$100 appropriated for flood prevention, Corps gets \$96 while SCS gets \$4. Protect the hillside or mountain and river bottom will automatically be protected. Although big dams may be needed, need to be much more selective and reduce government ownership of land (p. 244-247)
F.L. German, Vice-President	Yadkin Valley-PeeDee Soil Conservation and Flood Control Assoc.	X	X	X	Generally not in favor of big dams because if reservoirs created inundate some of the best farm lands. (p.246)
Anthony W. Smith, General Council	Congress of Industrial Organization (CIO)	X	X	X	Do not believe that Tuttle Creek Dam as proposed by Corps is solution to flooding problem in Kansas City. Support legislation as proposed by Hope and Poage. (p. 247-248)

Name and Title of Actor	Organization Represented	Policy Thrust ¹		Comments ²		Statement ³		Pertinent Comments and Significant Key Phrases
		Dev. Prog.	Conser.	Fav. Un.	Fav. P.A.	Writ.		
W. I. Boone, Vice President	Kansas Farm Bureau	X			X		X	Want to see a coordinated program between big dams and upstream treatment. Do not want to take anything away from cities because interested in industrial and economic development. (p. 249-250)
Claud Brey, Chairman	Delaware River Watershed Association, Kansas		X		X		X	Interested in flood control, but more vitally interested in flood prevention. Strong advocate of watershed program. Kansas adopted watershed enabling act which enables districts to levy taxes and has the power of eminent domain. (p. 251-271).
Lloyd Tueck, Director and Vice-Chairman	Delaware River Watershed Association, Kansas		X		X		X	Questions and answers centered on how conservation would be applied under new state law. (p. 271-277)
Mrs. Harold Rohrer	Clark's Creek Watershed Kansas		X		X		X	Spoke against Corps program and for small watershed treatment. (p. 277-278)
J. W. Farmer	Greenwood County Soil Conservation District Toronto Flood Control Association Eureka (Kansas) Chamber of Commerce		X		X		X	Presented material showing (1) high cost and waste in trying to prevent floods by big dams and (2) more water can be stored more economically on the watershed to provide water supplies and flood prevention for entire valleys. (p. 279-287)
Howard K. Woodbury	Upper Maris des Cygnes Valley Watershed Association (Kansas)		X		X		X	In favor of small watershed treatment. Some discussion about beneficiary and who would bear cost of work.

Name and Title of Actor	Organization Represented	Policy Thrust ¹			Comments ²		Statement ³		Pertinent Comments and Significant Key Phrases
		Dev. Prog.	Conser.	M.U.-S.Y. Prev.	Fav. Un.Fav.	P.A. Writ.			
Walter B. Bryant, Treasurer	Kansas Watershed Association, CIO, and Citizens of Topeka Kansas	X			X			X	Spoke favorably of watershed treatment and used example of small dams City of Topeka had built for flood prevention.
Glen Stockwell, Vice President	Drew River Watershed Association of Kansas	X			X			X	Although he did not condone subsidy payments, he did believe that legislation was needed to coordinate broader problems too big for one individual. (p. 292-294)
George Ramskill, Treasurer	Upper Marais des Cygnes Watershed Association Burlingame Chamber of Commerce	X			X			X	"...I wish to enter my wholehearted approval of H.R.4877. (p. 295)

Appendix - Table 2. Summarization of Hearings before the Committee on Agriculture and Forestry, United States Senate, Eighty-Third Congress, Second Session, on S.2549, January 14, 15, and February 15, 1954.

Name and Title of Actor	Organization Represented	Policy Thrust ¹			Statement ³	Pertinent Comments and Significant Key Phrases
		Dev. Prog. Conser	Comments ² Fav. Un.Fav.	M.U.-S.Y. Prev.		
Dwight D. Eisenhower, President	United States of America	X	X	X	X	...our major problem is to carry forward a tradition of improvement and conservation of our natural resources... ...", "We must build a balanced program for the use and development of all our natural resources." (p.5)
E.T. Benson, Secretary	U.S. Department of Agriculture	X	X	X	X	Summarized pertinent points of bill
Rowland Hughes, Acting Director	Bureau of the Budget		X	X	X	... "S.2549 would be consistent with the view of the President.. "we should move ahead in the construction of works of improvement and the installation of land-treatment measures as rapidly as possible consistent with a sound overall fiscal program." (p.7)
James G. Patton, President	National Farmers Union	X	X	X	X	... "a large gap has existed in our efforts between the flood-control efforts downstream and our soil-conservation efforts on the land." (p.9)
William Voight, Jr., Executive Director	Izzak Walton League of America, Inc., Chicago, Illinois	X	X	X	X	... "organization devoted to the principles of sound and appropriate use of... renewable natural resources..." "...we have paid too much attention to downstream flood control..." (p.9)

¹ Policy Thrusts is the push, drive, or strong continual pressure over time of political actors to maintain a policy state or bring about a policy change. Dev., Prog., and Conser. represent the Developmental, Progressive, and Conservationist Thrusts, respectively. The abbreviations M.U.-S.Y. and Prev. represent subdivisions of the Conservationist Thrust. In cases where thrust was not clear in testimony, judgement was made by author. In cases where testimony pertained to technical matters which exhibited no thrust value, space was left blank.

² Comments were either Fav. (Favorable) or Unfav. (Unfavorable).

³ Statement was presented in person (P.A. denotes Personal Attendance) or in writing (Writ.) or by both forms.

Source: United States Senate, Agriculture and Forestry Committee, Cooperative Soil Conservation and Flood Prevention Projects, Hearings January 14-February 15, 1954 (Washington: U.S. Government Printing Office, 1954).

Appendix - Table 2

Name and Title of Actor	Organization Represented	Policy Thrust ¹		Comments ²		Statement ³		Pertinent Comments and Significant Key Phrases
		Dev. Prog. Conser.	M.U.-S.Y. Prev.	Fav. Un.Fav.	P.A. Writ.			
Homer L. Brinkley, Executive Vice President	National Council of Farmer Cooperatives, Washington, D.C.	X		X			X	...we endorse the principles and purposes of S.2549...to encourage farmers to provide themselves with needed water conservation facilities... with increased responsibility in the hands of the local conservation districts."
Frank Carlson, U.S. Senator	State of Kansas	X		X			X	...anyone who opposes this would probably be willing to publicly come out in favor of sin." (p.12)
J. Earl Coke, Assist. Secretary of Agriculture	U.S. Department of Agriculture	X		X			X	Reiterated the administration's support for the bill. (p.12-15)
Gladwin E. Young, Deputy Administrator	Soil Conservation Service	X		X			X	Explained type of damages using the Salt-Wahoo Creek Watershed, Nebraska. During this testimony Senator Mundt of South Dakota stated that the bill be revised to bring State government at the initiation of studies. (p.16-33)
Edward F. Mynatt, Associate for Forestry and General Legal Service	Office of the Solicitor U.S. Department of Agriculture						X	Offered legal clarification of some points of the bill. (p. 27,28)

Appendix - Table 2.

Name and Title of Actor	Organization Represented	Policy Thrust ¹		Comments ²		Statement ³		Pertinent Comments and Significant Key Phrases
		Dev. Prog. Conser.	M.U.-S.Y. Prev.	Fav. Un.Fav. P.A. Writ.				
Hugh Butler	Nebraska				X		X	1952 letter to then Secretary of Agriculture Brannan expressing slow review of Missouri River Basin Report. They wanted to see report submitted for Congressional action. (This report generated much support for small watershed philosophy). (p.34)
Fred A. Seaton	Nebraska				X		X	
James A. Kem	Missouri							
Thomas C. Hennings, Jr.	Missouri							
Andrew F. Schoeppel	Kansas (U.S. Senator on Committee)							
Edwin C. Johnson	Colorado							
Eugene D. Millikin	Colorado							Expressed concern about 250,000 acre limitation and belief that section 2 would allow several areas of such size could be planned in combination. Also expressed concern about local cost sharing when works of improvement are to be on Federal land. (p. 34-38)
Richard E. McArdle, Chief	U.S. Forest Service	X			X		X	
Matt Triggs, Legislative Director	American Farm Bureau Federation	X			X		X	... "supports the general principles and purposes of S.2549..." Recommended the following amendments (1) non-federal contributions shall be at least 50 percent of total cost (2) locals acquire all land, easements, and rights of way and (3) acquire or provide assurance that landowners have acquired, such water rights pursuant to State law as may be needed. (p. 38-39)
Lowell Besley, Executive Director	American Forestry Association	X			X		X	"A careful study of S.2549... indicates that this is a measure to further the conservation of water and the prevention of soil erosion and floods by concentrating... on small upstream watersheds." (p.42-43)

Name and Title of Actor	Organization Represented	Policy Thrust ¹			Comments ²		Statement ³		Pertinent Comments and Significant Key Phrases
		Dev. Prog.	Conser.	M.U.-S.Y. Prev.	Fav. Un.Fav.	P.A. Writ.			
C.R. Gutermuth, Vice President	Wildlife Management Institute	X			X		X	X	"Under the concept of multiple purpose... .. Flood control has been used as an excuse to gain for favored communities federally subsidized power and irrigation." (p.43-44)
Charles H. Callison, Conservation Director	National Wildlife Federation	X			X		X	X	"Former Federal flood policies have hitched the cart before the horse..." "...trying to cure a tuberculosis patient by feeding him cough syrup and rubbing rouge on his cheeks." (p.44-45)
Michael Hudoba, Washington Editor	Sports Afield Magazine	X			X			X	"We think it is one of the most important long-range proposals that will come before this session of Congress." Also expressed endorsement of Outdoor Writers Association. (p. 46)
Dr. J.T. Sanders, Legislative Council	National Grange	X			X		X	X	Long statement explaining what he thinks is wrong with existing system and how it ought to be changed. He made two significant recommendations in reference to the bill, (1)..."providing for a unified planning, or combination of the plans of, a number of such small watersheds is an indispensable provision..."(2)..."emphasized the importance of retaining the provision of obtaining easements...Federal ownership should be avoided...." (p. 47-59)

Name and Title of Actor	Organization Represented	Policy Thrust ¹	Comments ²	Statement ³	Pertinent Comments and Significant Key Phrases
		Dev. Prog. Conser. M.U.-S.Y. Prev.	Fav. Un.Fav. P.A. Writ.		
A.S. Mike Monroney, U.S. Senator	State of Oklahoma	X	X	X	Comment by Chairman Aiken... "made it a point to see that Senator Monroney got on this bill...", "...only reason we do not have two-thirds of Senate sponsoring bill is because it was a physical impossibility. (p.62)
R.C. Longmire, President and Also representing	Washita Valley Flood Control Council Oklahoma Association of Soil Conservation Districts National Association of Soil Conservation Districts	X	X	X	Statement along with statistics showing effectiveness of Double Creek Pilot Watershed Project. (p.66-68)
William E. Welsh, Secretary-Manager	National Reclamation Association	X	X	X	Statement includes letters and telegrams from Texas State Board of Water Engineers and Texas Water Conservation Association. Proposed two amendments which would be beneficial to the West (1) require compliance with State laws and (2) the limitation on the size of the area eligible to receive "land treatment measures" should be removed. (p. 69-74).
J.W. Penfold, Western Representative	Izaak Walton League of America, Inc.	X	X	X	Letter supplementing Voigt's statement. (p. 81)
Joe A. Barkley, President	Pennsylvania Federation of Sportsmen's Clubs	X	X	X	"A series of small dams will hold more water and at less cost...will also create more places for recreation and the multiple uses of the public than a large dam. (p. 81)

Name and Title of Actor	Organization Represented	Policy Thrust ¹ Dev. Prog. Conser. M.U.-S.Y. Prev.	Comments ² Fav. Un.Fav. P.A. Writ.	Statement ³	Pertinent Comments and Significant Key Phrases
Clarence R. Miles, Legislative Department	Chamber of Commerce of the United States	X	X	X	Made two recommendations: (1) section 5 page 4- beginning with line 19 change wording to "as set forth in section 4, the Secretary is authorized to assist such local organization in undertaking the works of improvement pursuant to the conditions set forth in section 3 of this act: <u>Provided</u> " and (2) addition of a new paragraph in section 5, page 5 beginning on line 4 that would eliminate the need for examination of projects, contemplated under this act by the Secretary of the Army. (p. 82)
Robert S. Kerr, U.S. Senator	Committee on Public Works	X	X	X	Two suggestions: (1) add to section 4 the following subsection: "(4) Conform to State laws relating to water rights and (2)"That before retention reservoirs are constructed, a minimum of 50 percent of the drainage area above these reservoirs be required to be under agreement to carry out recommended soil-conservation measures and proper farm plans." He also issued a caution that Congress has not been willing under existing authorities to appropriate adequate funds to construct the Washita project at a reasonable rate. (p. 83-84)

Appendix - Table 2.

Name and Title of Actor	Organization Represented	Policy Thrust ¹	Comments ²	Statement ³	Pertinent Comments and Significant Key Phrases
		Dev. Prog. Conser. M.U.-S.Y. Prev.	Fav. Un.Fav. P.A. Writ.		
Walter Gumbel, Soil Conservationist	Monongahela Power Co.	X	X	X	"The term 'flood prevention' consists of special conservation methods designed to hold the raindrop where it falls and to protect the soil from erosion. Flood control and flood prevention in our opinion are not in conflict." ... "The local people under the proposed watershed protection bill should not be expected to be responsible for the actual construction of large structures. (p. 85)
D.T. Paugh, Chairman and Clarence W. Jackson, Chairman	Upper Monongahela Valley Association Tri-District Committee	X	X	X	"...our committees feel that here is an effective mechanism under which the Federal, State and local governments can work in team work with the local urban and rural people to find answers to our pressing water and land problems." (p. 85-86)
Noel T. Tweet, Executive Director	Missouri-Arkansas Basins Flood Control Association	X	X	X	"We firmly believe that Senator Carlson (Republican, Kansas) is right when he said, 'Flood protection and soil conservation require a combination of watershed programs and big dams to be effective. One cannot substitute for the other.'" (p. 86)

Name and Title of Actor	Organization Represented	Policy Thrust ¹			Comments ²		Statement ³		Pertinent Comments and Significant Key Phrases
		Dev. Prog.	Conser.	M.U.-S.Y. Prev.	Fav. Un.Fav.	P.A. Writ.			
Robert T. Stevens, Secretary	U.S. Department of the Army	X			X			X	Letter transmitting Army's views on bill: (1) bill not for soil but to build large flood control dams, (2) promote competition and duplication of work between Federal agencies. Agrees that soil conservation is needed but recommends limiting size of reservoirs to 500 acre feet rather than 5,000 and non-federal contributions be 50% of each structure rather than total project. (p. 87-88)
Major General S.P. Sturgis, Chief of Engineers	U.S. Department of the Army	X			X			X	Reiterated in greater detail concerns identified by Secretary Stevens. Several line of questioning followed centering mainly around size of dam. Questions asked tried to establish a definite size limitation with some of the Senators implying by their comments that 5,000 acre feet was not too large. Also concern about projects authorized without Congressional approval. The General indicated that flood prevention was a misnomer. Senator Anderson was in strong disagreement with this. The General also stated that small upstream structures could affect the economic feasibility of larger downstream dams. Senator Anderson also took issue with this. The General was also concerned that the bill would give SCS approval to proceed on projects without Congressional approval. (p. 89-120)