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[Review of Effectiveness of Land Treatment Agreements in Watershed Areas]. CED-77-13; B-114833. December 27, 1976. 10 pp. + enclosure (2 pp.).

Report to Rep. Don. H. Clausen, Ranking Minority Member, House Committee on Public Works and Transportation: Water Resources Subcommittee; by Elmer B. Staats, Comptroller General.

Issue Area: Land Use Planning and Control: Land Policy and the Environment (2302).

Contact: Community and Economic Development Div.

Budget Function: Natural Resources, Environment, and Energy: Conservation and Land Management (302).

Organization Concerned: Soil Conservation Service.

Congressional Relevance: House Committee on Public Works and Transportation: Water Resources Subcommittee.

Authority: Watershed Protection and Flood Prevention Act (1954), as amended (P.L. 83-566; 16 U.S.C. 1001-08, sec. 4(5)).

Representative Don H. Clausen requested a review to determine if the Soil Conservation Service was properly administering section 4(5) of the amended Watershed Protection and Flood Prevention Act. A pilot review of a watershed project was undertaken to determine if recommended soil conservation measures agreed to by landowners had been installed. Visits were made to about half the farms in the project which were in compliance with section 4(5) of the act to observe the soil conservation measures which had been carried out.

Findings/Conclusions: The provision of the act, requiring that not less than 50 percent of the lands above the retention reservoir be under conservation agreements as a condition to providing Federal assistance, was not met by the Service. Cooperative agreements were obtained from owners of only about 47 percent of the land in the drainage area above the reservoir. Some recommended soil conservation measures had not been implemented; however, Service officials believed the failure to implement these practices had not resulted in an adverse impact on the watershed project. The Service's handbook conflicts with requirements in the act for determining whether projects are eligible for Federal financial assistance for constructing dams and other works of improvement. Recommendations: The Secretary of Agriculture should require the Administrator of the Soil Conservation Service to: (1) revise its Administrative Services Handbook to conform to the Watershed Protection and Flood Prevention Act concerning the 50 percent requirement; and (2) emphasize to its field offices the importance of determining the exact eligible acreage under agreements in making their certifications. (Author/SW)

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COMPTROLLER GENERAL OF THE UNITED STATES

WASHINGTON, D.C. 20548



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B-114833

RELEASED

3/2/77

DEC 27 1976

The Honorable Don H. Clausen
Ranking Minority Member
Subcommittee on Water Resources
Committee on Public Works and
Transportation
House of Representatives

Dear Mr. Clausen:

In your June 30, 1976, letter, you asked us to determine if the Soil Conservation Service, Department of Agriculture, was properly administering section 4(5) of the Watershed Protection and Flood Prevention Act, as amended (16 U.S.C. 1001-1008). This section provides that the Secretary of Agriculture

"* * * require as a condition to providing Federal assistance for the installation of works of improvement that local organizations shall * * * (5) obtain agreements to carry out recommended soil conservation measures and proper farm plans from owners of not less than 50 percentum of the lands situated in the drainage area above each retention reservoir to be installed with Federal assistance, * * *."

In discussions with your office, we agreed to undertake a pilot review of a watershed project to determine if recommended soil conservation measures agreed to by landowners had been installed. We were asked to visit about half the farms in the project identified by the Service as being under conservation agreements in compliance with section 4(5) of the act and to observe the soil conservation measures which had been carried out.

We agreed also that, in our review of this project, we would find out how well the Service followed its supplemental instruction which requires that, for each structural measure included in a watershed project,

"* * * Not less than 75 percent of the effective land treatment measures must be installed, or their installation provided for, on those sediment source

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areas which, if uncontrolled, would require a material increase in the cost of construction, operation, or maintenance of the structural measure."

We made our review primarily at the Service's field office in Westminster, Carroll County, Maryland, and at the Piney Run watershed project and interviewed officials and reviewed records at the field office; the State office in College Park, Maryland; and Service headquarters in Washington, D.C. We visited selected farms in the watershed project area and compared the current status of soil conservation measures with soil conservation plans the Service prepared. The matters in this report were discussed with Service officials and their comments have been included where appropriate.

The results of our review are summarized below and are discussed in detail in the following sections.

- Cooperative agreements were obtained from owners of only about 47 percent of the land in the drainage area above the reservoir.
- Some recommended soil conservation measures had not been implemented; however, Service officials believed the failure to implement these practices had not resulted in an adverse impact on the watershed project.
- No areas in the watershed were designated by the Service as critical sediment source areas to which its "75 percent" supplemental instruction would apply.

In another, broader, ongoing review--which covers the Midwest, Great Plains, and the Pacific Northwest areas of the United States--we are looking at the effectiveness of the Service in assisting farmers to protect the soil productivity of their cropland. As part of that review, we are addressing in greater detail the effectiveness of the cooperator agreements and conservation plans discussed herein. We will send you a copy of our report on that review when it is completed.

BACKGROUND

The Watershed Protection and Flood Prevention Act (Public Law 83-566), enacted in 1954, provides for Federal, State, and local government and landowner cooperation to protect and develop stream and river watershed areas. The

act authorizes the Secretary of Agriculture to give technical and financial help to local organizations in planning and carrying out watershed projects.

The Department of Agriculture administers the watershed program through the Soil Conservation Service which carries out its responsibilities through State, area, and field offices. Watershed projects are initiated and sponsored by local organizations. State and county government instrumentalities and local soil conservation organizations usually combine to assume the role of the sponsoring local organization. Federal, State, and local government organizations share project costs.

The Piney Run watershed project which we selected for review was approved by the Service in August 1969. It contains one retention structure--an earthen dam--which was completed in 1975. (Enclosure I contains additional background information on the Piney Run project.) Benefits expected from the project include flood prevention, water supply, and recreation. Also, the dam is expected to act as a sediment trap to help protect Baltimore Harbor.

Cooperative agreements for soil conservation measures on individual farms were entered into between farm owners and the Carroll Soil Conservation District, one of the five project sponsors. The latest version of the standard agreement used by the Carroll Soil Conservation District (see enclosure II) provides for District assistance to the farmer in carrying out a farm conservation plan. The farmer, in turn, agrees to develop such a plan, start applying one or more conservation practices, and maintain and continue the use of conservation measures put into effect.

BASIC REQUIREMENT FOR
FEDERAL ASSISTANCE NOT MET

Before receiving Federal funds for constructing watershed works of improvement, the sponsoring local organization is required to obtain cooperative agreements from owners of not less than 50 percent of the land in the drainage area above the project retention reservoir. Our review showed that this requirement was not met.

In 1968, the Service prepared the work plan for the Piney Run watershed project and identified the drainage area as being 6,678 acres. On April 2, 1973, the Service district conservationist certified to the State office that the 50-percent requirement (3,339 acres) had been met. The certification showed that "3,500+ acres" above the retention

structure were under agreement.

The Service's supportive listing of cooperators showed that 4,263 acres of land above the retention structure were under cooperative agreements with landowners. However, our calculations showed that only 2,992 acres of the listed 4,283 acres were eligible to be included in the 50-percent certification.

The 4,283-acre figure included 1,291 acres which were clearly ineligible. These included (1) farms with acreage outside the drainage area (659 acres), (2) farm acreage which was overstated in comparison to county tax maps (60 acres), (3) farmland owned by someone other than the farmer cooperator shown on the Service records, and farmland not under agreement (315 acres), and (4) farmland (257 acres) which was within the normal water level of the reservoir.

The Service told us that in calculating the number of acres in the watershed drainage area and in carrying out the 50-percent requirement, it had considered retention reservoir and retention structure to be one and the same thing and that the congressional committees approving watershed projects had not questioned this use of the terms. Implementing instructions in the Service's Administrative Services Handbook refer to cooperative agreements for the drainage area above the retention structure. However, the Watershed Protection and Flood Prevention Act refers to the drainage area above the retention reservoir.

The Service's treatment of retention structure and retention reservoir as equivalent terms allowed it, for purposes of meeting the act's 50-percent lands under agreement requirement, to include acreage covered by the reservoir. We do not believe these terms are equivalent; "reservoir" includes the area behind the dam structure where water collects, whereas "structure" means the earthen dam itself. Moreover, regardless of whether "reservoir" and "structure" are treated as equivalents, we do not believe the language of the act or its legislative history supports including the land under water behind the dam in meeting the 50-percent requirement.

The Service's 6,678-acre watershed drainage area base figure includes the reservoir area whose normal water level is 298 acres. Piney Run's 50-percent criteria is reduced from 3,339 acres to 3,190 acres when the Service's base figure is adjusted to delete the 298 acres which make up the reservoir. Even when using the reduced base figure, however,

the eligible acreage under cooperative agreements (2,992 acres) would represent only 47 percent of the land in this drainage area.

CONCLUSIONS

The provision of the Watershed Protection and Flood Prevention Act--requiring that not less than 50 percent of the lands above the retention reservoir be under conservation agreements as a condition to providing Federal assistance--was not met by the Service. Although Federal assistance was provided contrary to the legislation, we are not making any recommendation that will affect the project because the dam has already been constructed.

Also, the Service's handbook conflicts with requirements in the Watershed Protection and Flood Prevention Act for determining whether projects are eligible for Federal financial assistance for constructing dams and other works of improvement. Thus, there is a need for the Service to revise its handbook regarding the area to be considered in complying with section 4(5) of the act, and to take more care in the future in determining eligible acreage.

RECOMMENDATIONS

We recommend that the Secretary of Agriculture require the Administrator of the Soil Conservation Service to (1) revise its Administrative Services Handbook to conform to the Watershed Protection and Flood Prevention Act concerning the 50-percent requirement and (2) emphasize to its field offices the importance of determining the exact eligible acreage under agreements in making their certifications.

AGENCY COMMENTS

Service officials agreed with our conclusions and recommendations. They said they would revise their Administrative Services Handbook and other applicable instructions to require Service officials to consider the acreage above the reservoir rather than the acreage above the structure in making their 50-percent calculation. They also said they would instruct the field offices to take greater care in determining the exact eligible acreage under agreements when making their certifications.

RECOMMENDED SOIL CONSERVATION
MEASURES NOT IMPLEMENTED

The soil conservation measures that are supposed to be provided under the conservation plans developed for landowners in the Piney Run project include: conservation cropping, contour farming, stripcropping, crop residue use, sod waterway installation, pasture management, pasture planting, wildlife habitat development, critical area seeding, recreation area improvements, farm pond installation, and woodland management. Landowners can be helped in providing the soil conservation measures through technical assistance provided by the Service and through financial assistance provided by the Agricultural Stabilization and Conservation Service.

According to Service files, the Service had assisted in developing conservation plans for 28 farms located in the drainage area of the Piney Run project. We selected and visited 14 of these farms to see whether the conservation measures in the respective farm plans had been carried out. As shown in the following table, only one of the farm owners had carried out all of the conservation measures recommended in his plan. Four of the properties were no longer being worked as farms and one was not covered by a plan.

The owner of farm N, shown in the table on page 7 and listed by the Service as a cooperator, told us that he had never signed a cooperative agreement, and the Service's files did not contain a copy of a cooperative agreement for him. For those farms that were being operated by tenant farmers, we found that no agreement existed requiring the tenant to implement the measures outlined in the owner's conservation plan.

Generally, we found differences between the farm conservation plans for the nine active farms and the existing measures at the time of our inspections. Various recommended soil conservation measures had not been implemented, the most common of which were woodland management and contour farming. We noted several minor examples of soil erosion during our farm inspections and we found that one farm field which was supposed to be pastureland had been converted to crop use.

COMPARISON OF CONSERVATION PLANS AND CONSERVATION MEASURES
OBSERVED BY GAO FOR SELECTED FARMERS/COOPERATORS
IN PINEY RUN WATERSHED

<u>Farm</u>	<u>Acres</u>	<u>Date of:</u>		<u>Status of farm</u>	<u>Number of soil conservation measures</u>		
		<u>Agree- ment</u>	<u>Plan</u>		<u>Per plan</u>	<u>In place prior to plan</u>	<u>Ob- served</u>
A	81	1944	1971	Owner operated	7	5	6
B	283	1944	1944	Tenant and owner operated	6	(a)	3(b)
C	178	1949	1949	Development	-	-	-
D	245	1950	1950	Tenant operated	7	(a)	4
E	44	1950	1950	Development	-	-	-
F	89	1950	1950	Tenant operated	7	4	3
G	80	1951	1951	Idle	4	(a)	-
H	135	1952	1967	Tenant operated	9	0	4
I	257	1965	1969	Owner operated	11	9	9
J	61	1967	1967	Development	-	-	-
K	213	1970	1970	Tenant operated	10	2	8
L	115	1973	1973	Owner operated	4	1	4
M	70	1973	1973	Tenant operated	6	2	3
N	152	-	-	Noncooperator	-	-	-

a/Format of farm plan did not provide information regarding measures in place at time plan was designed.

b/All or portions of some fields are now in the lake which would account for one measure not being followed.

The Service prepares conservation plans for individual farms in cooperation with farmers after they sign a cooperative agreement. Most of the conservation plans we reviewed specified the year when the farm owners planned to carry out recommended conservation practices. Service officials at Piney Run did not know whether the soil conservation measures in the farm plans had been installed. We noted that some of the conservation practices that the farmers had planned to carry out 5 to 6 years earlier had not been installed at the time of our review. Neither section 4(5) of the act nor Service policy requires that the conservation plans be signed nor that the plans or the agreements be carried out within the planned time frames.

Service officials stated that some of the land treatment measures provided for in the plans, such as woodland management practices, if not carried out, would have little impact, if any, on the watershed reservoir and retention structure. However, they said these measures would have an impact on the farmland which had not been treated.

Many of the cooperative conservation agreements were signed, and the conservation plans developed, in the 1940s, and 1950s--long before the watershed project was approved in 1969. However, section 4(5) of the act does not require that conservation agreements used in meeting the 50-percent requirement give specific recognition to the proposed watershed project or provide for conservation plans designed to correct situations which might have an adverse effect on the project. Service officials stated that "good" farm conservation plans would be as pertinent to a watershed project as to an area that was not a watershed.

SEVENTY-FIVE PERCENT REQUIREMENT

The Service supplements the basic requirement for Federal assistance by further requirements relating to conservation of critical sediment source areas. Critical areas are defined in the Watershed Protection Handbook as " * * * active gullies or other seriously eroding land which are sources of excessive runoff or sediment contributing to downstream damages, or would if left untreated, adversely affect structural works of improvement included in the project."

The Service State conservation engineer told us that there were no such critical areas in the Piney Run watershed project area. The Service district conservationist in Carroll County reported in April 1973 that the 75-percent requirement was not

applicable to the Piney Run watershed project.

We could not evaluate these statements because there was no way to recreate the condition of the watershed as it was in 1973. However, during our visits to project farm sites and during our general inspections of the project area, we paid particular attention to the condition of the watershed area, viewing it with the idea of seeking out critical erosion areas within the meaning of the above definition.

We noted some situations that may have some long-range effects--the implications of which we cannot assess. For example, two farm fields adjacent to the headwaters of the reservoir were not planted in contours. At our request, the Service computed the estimated annual soil lost through erosion for the two fields and found that the loss was 12 tons per acre. According to the Service, annual soil losses of no more than 3 tons per acre can be incurred in that section of the watershed (considering soil type) without causing long-term damage to the land.

Service officials believed that the soil loss would not have an adverse effect on the reservoir. However, based on results of the soil test, the Service district conservationist told us that he had told sponsoring local organization officials to take steps to correct the situation.

We also noted several gullies on county-owned land caused by water flowing from large drainage pipes into the upper reaches of the reservoir. Service and local sponsors had recognized the situation as a problem area and stated that they intend to deal with it but have not yet reached agreement on the best approach.

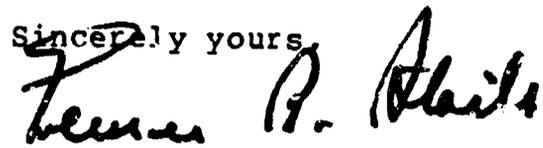
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This report contains recommendations to the Secretary of Agriculture. As you know, section 236 of the Legislative Reorganization Act of 1970 requires the head of a Federal agency to submit a written statement on actions taken on our recommendations to the House and Senate Committees on Government Operations not later than 60 days after the date of the report and to the House and Senate Committees on Appropriations with the agency's first request for appropriations made more than 60 days after the date of the report.

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We will be in touch with your office in the near future to arrange for release of the report so that the requirements of section 236 can be set in motion.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Thomas P. Blais". The signature is written in a cursive style with a large initial 'T'.

Comptroller General
of the United States

Enclosures - 2

FACT SHEETPINEY RUN WATERSHEDCARROLL COUNTY, MARYLAND

Work plan date	May 1968
Project approval	Aug. 1969
Project agreement with sponsors	Apr. 1973
Estimated cost (July 1976)	
Federal share (under Public Law 566, 83d Congress)	\$ 913,315
Local sponsor's share	\$2,350,000
Project area	11,700 acres
Drainage area as stated by the Service	6,678 acres
Drainage area as recalcultated by GAO	6,380 acres
Number of farms in project	53

Number and Date of Farm Conservation Plans

<u>Prior to watershed work plan</u>	<u>Total plans</u>	<u>Plans in drainage area</u>
1944 to 1958	20	15
1950 to 1967	<u> </u>	<u> 4</u>
Subtotal	<u>26</u>	<u>19</u>
<u>After watershed work plan</u>		
1968	2	-
1969	2	1
1970	4	4
1971	-	-
1972	-	-
1973	<u> 4</u>	<u> 4</u>
Subtotal	<u>12</u>	<u> 9</u>
Total	<u>38</u>	<u>28</u>

Sponsoring local organizations: Carroll Soil Conservation District, Carroll County Commissioners, Carroll County Park and Recreation Board, Carroll County Sanitary Commission, Maryland Water Resources Administration.



Carroll Soil Conservation District

Farmer-District Cooperative Agreement

This agreement is entered into by the Carroll Soil Conservation District, referred to hereinafter as the "District", and

referred to hereinafter as the "Farmer".

THE DISTRICT AGREES TO:

Assist in carrying out a conservation plan by furnishing to the Farmer such (1) information, (2) technical assistance and supervision, and (3) other assistance as it may have available at the time the work is to be done.

THE FARMER AGREES TO:

1. Use his land within its capabilities.
2. Treat his land in keeping with its needs.
3. Develop as rapidly as feasible a conservation plan for his entire farm.
4. Start applying one or more conservation practices in keeping with these objectives and the technical standards of the District.
5. Maintain all structures established in an effective condition, and to continue the use of all other conservation measures put into effect.
6. Use any materials or equipment made available to him by the District for the purpose and in the manner provided for it.

IT IS FURTHER AGREED THAT:

1. This agreement will become effective on the date of the last signature and may be terminated or modified by mutual agreement of parties hereto.
2. The provisions of this agreement are understood by the Farmer and the District and neither shall be liable for damage to the other's property resulting from carrying out this agreement unless such damage is caused by negligence or misconduct.

WITNESS THE FOLLOWING SIGNATURES:

(Witness)

(Date)

(Owner)

CARROLL SOIL CONSERVATION DISTRICT

By _____

Date _____