IOWA NON-POINT POLLUTION CONTROL PROGRAM

Testimony by

State Senator Frosty Schwengels

2. Implementation Strategy for Green Valley Lake Clean Lakes Project

This document examines the implementation strategy for Green Valley Lake Clean Lakes Project. Sediment from the Green Valley Lake Watershed has reduced the lake area by about ten percent (10%). The document explores solutions to the non-point source pollution problems and methods for its control. The strategy development for this area is predicted to reduce sediment delivery by about ninety percent (90%).

3. Non-point Notes on 208 Implementation

This document was abstracted from Iowa's Interim Output Report. It illustrates how agricultural non-point source pollution can be evaluated.

4. Prairie Rose Lake Narrative and 1982 Annual Report

These documents give an overview of the Prairie Rose Rural Clean Water Project in Shelby County, Iowa. To date the sediment flowing into the lake has been reduced by forty-eight percent (48%).

5. Soil Conservation Incentive Programs in the North Central Region of the United States

This is a survey of the various states in the north central region and their soil conservation programs. This is an attempt to "pick the brains" of surrounding states to improve the Iowa program.

6. Chapter 467A, Iowa Code Soil Conservation Laws.

7. Chapter 467B, Flood and Erosion Control.

8. Chapter 467C, Conservancy Districts.

Iowa has an important soil conservation program known as Iowa Soil 2000, run by the state Department of Soil Conservation. This program was established in 1980. It reflects a strong emphasis on education as the most effective way to spread the news of soil conservation. The educational tool promoted in this program is the conservation folder (Chapter 467A, Iowa Code, p. 11, para 6; 467A.62). The folder offers the vital information that a farmer needs to know to assess the present extent of soil erosion on his farm, suggests remedies that would control erosion, and states the technical and financial assistance available through the local conservation district. The folders should be in the hands of most landowners and/or operators within five years, by 1988 at the latest (copies of sample folders are enclosed in the packet).

The information is to assist the farmer in making an estimate of the amount of soil losses he has sustained. He is then able to choose from extreme terracing to no-till planting. In most cases the farmer can bring soil losses in line by conservation tillage methods.

This program seems popular with farmers in Iowa counties where the pilot program is now in progress.

Iowa has had good response to the development of the non-point source pollution program for watersheds. We have had measurable improvements under this program.

Our program has had good measurable results to date with the Prairie Rose Clean Lake Project, an EPA-funded project. A second lake project, Green Valley Lake, is now in the processing

stage and data is being gathered.

Our publicly-owned lakes are also receiving state attention, and improvements in the size of fish populations has already been reported by our State Conservation Commission.

Iowa Code Chapter 467A is the part of the code which contains the 1980 update known as "Iowa Soil 2000". In addition to the farm folder the Iowa law: (1) requires a reduction of soil loss if the farm folder assessment indicates soil loss is above ten tons per acre: (2) allows county commissioners to go on land, inspect, and bring action if soil loss is causing damage on the property of others; (3) provides state legal defense in cases of suit against commissioners and provides for court action against landowners who, after repeated notice, fail to improve the property.

The law also addresses the urban non-point pollution by requiring contractors to meet the soil erosion limits on land-disturbing activity in both rural and urban areas (Iowa Code 467A.64).

As you see, Iowa has mandated activity related to soil loss. An important key to the acceptance of the program is, I believe, the fact that the State Department of Soil Conservation and the Federal Soil Conservation Service provide technical assistance and education through the use of the conservation folder, which is both an educational tool and a contract mechanism.

In addition, the mandatory provisions are in the future and tied to the ability of the districts to prepare and deliver

the folders and the availability of cost share funds.

Iowa has taken the initiative as well on the clean lakes program. Of the 8.2 million appropriated, a percentage is used (in addition to Federal EPA funds) to provide seventy-five percent (75%) cost share in the watershed of public lakes, and no new lakes can be developed unless there is a commitment by property owners of seventy-five percent (75%) of the land in the watershed to maintain soil loss limits.

The following are options for the Congress to look at:

1. Continue cost share on projects based on small watershed development. (EPA)
2. Provide tax credits for soil conservation cooperators to be taken over a period of years (five years). (EPA, SCS)
3. Establish a point system which would give a priority on some federal programs to those landowners who have substantial land at/or below soil loss limits by whatever means. (EPA, SCS)
4. Require each state that receives federal funds to establish 5, 10, 15, 20 year goals and a strategy for accomplishment that is statutory. (EPA, SCS)
6. Establish an effective task force to coordinate the non-point pollution implementation program. Include personnel from EPA, SCS, state soil conservation or natural resources departments, state legislators, and federal agencies with surface and groundwater data base responsibilities.

I thank you for allowing me to submit these points I consider worth addressing. If I can be of additional assistance, please call on me.

Forrest V. Schwengels
Iowa State Senator

FISCAL YEAR 1983 NONPOINT SOURCE POLLUTION CONTROL PROGRAM

OVERALL OBJECTIVE

The objective of the Fiscal Year 1983 nonpoint source pollution control program is to continue to develop the incentives, regulations, legislation, special projects, and public support required to implement the nonpoint source pollution control program outlined in Iowa's Statewide Water Quality Management Plan, 1979 as amended by the Five-Year Strategy Revisions adopted in August, 1982.

A. General Control Program

To work toward meeting the overall objective of nonpoint source pollution control, the Department of Soil Conservation (DSC) will be conducting the following activities in federal fiscal year 1983.

(1) Green Valley Lake Clean Lakes Project: DSC staff will continue to assist the Iowa Conservation Commission and the Union County Soil Conservation District in administering the Green Valley Clean Lakes Project. Specific activities include (1) developing annual and seasonal cost estimates for construction, (2) allocating matching state funds from the publicly owned lakes program, and (3) preparing quarterly progress reports.

(2) Publicly Owned Lakes Program: DSC will assist the Iowa Conservation Commission in developing and maintaining the list of lakes eligible for state cost-share funds under the Publicly Owned Lakes Program. An evaluation will be made of the lakes on the list to determine the feasibility of implementing soil conservation practices

in the watersheds. Recommendations will be made for retention or removal from the list. Similar evaluations will be made for proposed additions to the list. The evaluations will be coordinated with appropriate County Soil Conservation Districts.

(3) Soil Conservation Incentives: DSC will compile information on soil conservation incentive programs that have been adopted by other states located in the North Central Region of the United States (using regional boundaries established by Center for Agricultural Development, USDA). The compilation will include, but not be limited to, cost-share programs, tax incentives, and low interest loan programs. A report will be prepared summarizing the incentive programs of North Central states. The report will be distributed to appropriate state legislators and/or legislative committees.

(4) Funding for Watershed Projects: DSC will determine the availability of funds from various federal and state programs for funding nonpoint source pollution control projects in the watersheds of high priority waters. Programs to be included in the evaluation are USDA's Experimental Rural Clean Water Program, EPA's Clean Lakes Program, and Iowa's Financial Incentive Program. If the evaluation indicates that funds are available, or are likely to become available, DSC will identify appropriate projects for implementation and will develop and submit (or assist other agencies to develop and submit) applications for funding.

(5) Land Disturbing Activities: DSC will evaluate the progress made and identify problems resulting from implementation of Section 467A.64 of Iowa's Soil Conservation Laws. This section requires an affidavit be filed with a soil conservation district prior to initiating a land disturbing activity, stating that the proposed activity will not exceed established soil loss limits.

If a political subdivision has adopted an appropriate sediment control ordinance, the affidavit can be filed with the political subdivision or its authorized agency.

The evaluation will sonsider the administrative procedures utilized by soil conservation districts and other political entities, in implementing the legislation, the technical and administrative workload requirements imposed on governmental agencies as a result of the legislation, and the extent of contractor compliance with the requirements to file an affidavit and to control soil erosion at construction sites. While some aspects of the evaluation will be conducted on a statewide basis, other aspects (such as an evaluation by selected districts or other governmental agencies of contractor compliance) will be conducted by looking at the situation found in a small number of counties which are considered to be representative of the range of construction activity found in Iowa.

A report on the evaluation will be prepared. It will contain the results of the evaluation, including identification of problems encountered in implementing the legislative requirements and recommendations for correcting problems found or improving the control process.

(6) Fiscal Year 1984 Work Activity Report: DSC will develop a report outlining the nonpoint source pollution control planning and implementation activities which DSC intends to conduct in F.Y. 1984. For each activity the report will indicate the expected product(s), the schedule for completion, the level of funding required, and the funding source.

(7) Sediment and Nutrient Loading Goals for Lakes: DSC will assist the Department of Environmental Quality (DEQ) in establishing sediment and nutrient loading goals for lakes under consideration for lake restoration and/or watershed control projects and in evaluating whether proposed projects are likely to improve long-term lake water quality.

B. PUPLIC PARTICIPATION

OBJECTIVE

DSC will continue to utilize the Conservancy District Advisory Committees (CDACs) and the County Resource Coordinating Committees (CRCCs) as advisory groups on nonpoint source pollution issues. DSC work efforts will include maintaining full committee membership, distributing materials, scheduling and attending meetings, and other associated administrative functions.

Public participation activities will be coordinated with other work elements and outputs of the nonpoint source program and committee meetings will be scheduled accordingly as needed. For planning purposes, a CDAC meeting is shown to be a work output by the end of each quarter.

C. AGRICULTURAL CHEMICALS

IN F.Y. 1982, EPA prepared a report on agricultural chemicals used in Iowa. This report provides information on current and projected use levels for each chemical, availability of monitoring data, and the water quality impacts of each chemical. In F.Y. 1983, information

from the EPA report will be used to develop best management practices (BMPs) for those chemicals which have the greatest potential for polluting Iowa waters.

Based on information contained in EPA's report, those chemicals (or groups of chemicals) having the greatest potential to adversely impact Iowa water quality will be identified, the severity of the impacts assessed, and the cause(s) of the impacts identified and evaluated. Based on this evaluation, measures which can be used to reduce or eliminate the adverse water quality impacts will be developed. These measures will be evaluated in terms of effectiveness in reducing chemical movement into waters, practicality for use with normal crop production practices, and impacts on chemical effectiveness, crop yields, and production costs. A report outlining the results of these evaluations will be prepared and reviewed by the CDACs. Recommendations obtained as a result of CDAC review will be used to select those measures which will be identified as BMPs. These BMPs will then be incorporated into Iowa's Water Quality Management Plan.

Major portions of the development of BMPs for agricultural chemicals will be completed by the Iowa State University (ISU), through subcontract with DSC. ISU will evaluate the severity of water quality impacts for specific chemcials, recommend the chemicals for which BMPs should be developed, identify the causes of chemical pollution, identify and evaluate alternative control measures, and recommend which measures should be utilized as BMPs. DSC will review the ISU recommendations with the CDACs and will select the control measures which will be identified as BMPs for agricultural chemicals. DSC will coordinate this work activity with the Iowa Department of Agriculture.

D. MINING

In F.Y. 1983 DSC will review and evaluate the legislative authorities, regulations, and programs of DSC and other state agencies which pertain to regulation on non-coal mining activities in Iowa. The evaluation will be particularly concerned with the adequacy and efficiency of the regulations in protecting surface and ground waters from contamination. If it is determined from the evaluation that new or revised requirements are necessary and desirable, DSC staff will prepare such recommendations.

In completing the evaluation and in developing recommendations for changes, DSC will consult with and seek recommendations from other agencies that have responsibilities or authorities related to mining. DSC will also consult with mining industry representatives.

E. ECONOMICS OF TERRACING

Phase I of the Economics of BMPs study, which was initiated in F.Y. 1981, evaluated the economic impacts associated with implementation of alternative nonpoint source pollution control measures (BMPs) on typical farm operations for each of Iowa's major land resource areas. Both short and long range economic evaluations were conducted, including assessment of the direct costs incurred by landowners, economic impacts of land conversion necessitated by installation of control measures, effects of practices on crop yields, effects of necessary changes in farm management and operation, and long-range economic implications associated with preservation or depletion of the soil resource base.

In F.Y. 1983 an in-depth study will be conducted to further define both the short and long term economic impacts to individidual landowners of using terraces to control soil erosion and/or nonpoint source pollution. The study will determine the economic impacts of terracing for the range of soil types and soil productivity levels on which terrace construction commonly occurs in Iowa and will cover a range of terrace construction costs.

DSC will contract with the Center for Agricultural and Rural Development (Card), Iowa State University, to conduct major portions of this study.

A. PROGRAM ACTIVITIES

1.	Progress reports Green Valley Clean Lakes Project	End of each quarter
2.	Annual construction cost estimate Green Valley Clean Lakes Project	July 1, 1983
3.	Annual review of publicly owned lakes list	June 1, 1983
4.	Final report midwestern states soil conservation incentives	April 1, 1983
5.	Complete evaluation of potential funding of special watershed projects	January 1, 1983
6.	Final report on implementation of regulations for land disturbing activities	September 1, 1983
7.	Fiscal year 1984 nonpoint source pollution control program activity report	July 1, 1983

B. PUBLIC PARTICIPATION

1.	Confirmation of CDAC membership	October 1, 1982
2.	Completion of first quarter CDAC meeting	December 31, 1982
3.	Completion of second quarter CDAC meeting	March 31, 1983
4.	Completion of third quarter CDAC meeting	June 30, 1983
5.	Completion of fourth quarter CDAC meeting	September 30, 1983

C. AGRICULTURAL CHEMICALS

1.	Draft of DSC/ISU contract	October 1, 1982
2.	Final DSC/ISU contract	November 1, 1982
3.	Identify chemicals for which BMPs will be developed	January 1, 1983
4.	Draft report on alternative control measures for agricultural chemicals	May 1, 1983
5.	CDAC review	July 1, 1983
6.	Final report on selection of BMPs for Agricultural Chemicals	August 1, 1983

D. MINING

1.	Complete review of existing laws, programs, and regulations	February 1, 1983
2.	CDAC review	March 1, 1983
3.	Final report	June 1, 1983

E. ECONOMICS OF TERRACING

1.	Proposal for economics of terracing study	October 15, 1982
2.	Draft subcontract scope of work	October 30, 1982
3.	Final subcontract	December 1, 1982
4.	Draft report on economics of terracing	May 1, 1983
5.	Final study report	June 15, 1983
6.	Report on utilization of study results	August 1, 1983

IMPLEMENTATION STRATEGY FOR GREEN VALLEY LAKE CLEAN LAKES PROJECT

This implementation strategy for the Green Valley Lake Clean Lakes Project supplements the Clean Lakes Phase II Project Application that was submitted by the Iowa Conservation Commission to the Regional Administrator, U.S. Environmental Protection Agency (EPA) on May 2, 1980. The project was approved by EPA on July 8, 1980, with certain Special Grant Conditions. This implementation strategy addresses the requirements of Special Grant Conditions items 3.b., 3.c., and 3.d. and provides the basis for obtaining letters of concurrence from the participating agencies to meet the requirements of item 3.a. of the Special Grant Conditions.

SEDIMENT

The Problem

The Green Valley Lake Watershed contains approximately 5,198 acres of land. Approximately 3,757 acres (72.3 percent of the total area) of land within the watershed is cropland used to produce corn, soybeans, and forage. Sediment reaching the lake as a result of cropland erosion is significantly impacting Green Valley Lake. Since 1968, sedimentation has reduced the lake area by approximately 10 percent. It has been estimated that the lake receives 11,990 tons of sediment annually, which reduces the lake volume at a rate of about 7 acre-feet per year. In addition to reducing lake area and volume, sedimentation affects the water quality by altering the lake bottom habitat and by causing high turbidity levels in the lake following rainfall-runoff events or when winds create wave action.

Goal

It is the goal of the Green Valley Lake Clean Lakes Project to reduce sediment delivery to the lake to acceptable levels by installing best management practices on agricultural crop and pasture lands in the watershed. It has been

estimated that sediment delivery to Green Valley Lake can be reduced from 11,990 tons per year to 940 tons per year (approximately 90 percent).

Strategy

Table 1 contains an estimate of the number and amounts of best management practices that would be required in the watershed if all landowners participated and the goal of 90 percent reduction in sediment delivery to the lake were realized. Table 1 also contains the estimated costs of these practices. The practices which are actually installed will be determined by the individual landowners working in conjunction with the Union County Soil Conservation District during preparation of water quality plans for their property.

Table 1

ESTIMATED BMP COSTS FOR GREEN VALLEY LAKE CLEAN LAKES PROJECT

Practice	Amount	Recommended Cost Share Rate(%) or Pymt	Estimated Cost($)
Iowa Till (Conservation Tillage on contour)	1,640 acres	$30 per acre	49,200*
Land Conversion	200 acres	$70 per acre	14,000*
Grade Stabilization Structures	10	75	95,000
Sediment and Water Control Basins	150	75	150,000
Tile Outlet Terrace Systems	340,000 feet	75	840,000
Total BMP Cost			1,148,200
Federal BMP Cost			584,633
State BMP Cost			292,317
Landowners Direct Cost			271,250

*Total cost of these practices is unknown. The amount shown is Federal and State incentive cost only. The identified cost-share payment to the landowner will not exceed 75 percent of the total practice cost.

Federal Share 2/3 x $63,200 = $ 42,133
50% x $1,085,000 = $542,500
$584,633

Total estimated BMP costs and estimated BMP costs by practice are shown in Table 1. The federal contribution toward BMP cost would equal $584,633. These BMP cost estimates were developed by the Union County Soil Conservation District, the Soil Conservation District Conservationist working with the district, and the Department of Soil Conservation staff. Experience with the state erosion control cost-share program in Union County and comparable lake watershed projects furnished the data for these estimates. These cost estimates are based on early 1979 costs. Costs of these practices are presently increasing rapidly.

Recommended cost-share rates for this project were made by the commissioners of the Union County Soil Conservation District, in consultation with the Union County Agricultural Stabilization Committee.

Preparation of water quality management plans for forms in the watershed will begin in October, 1980. These plans will be prepared by the staff of the Union County Soil Conservation District in conjunction with the landowner. The district staff presently consists of a clerk and a conservation technician funded by the Iowa Department of Soil Conservation and a district conservationist and a conservation technician assigned to the district by the U.S. Soil Conservation Service through a memorandum of understanding.

The Department of Soil Conservation will furnish technical support to the Union County Soil Conservation District by supplying part-time personnel or engineering services as needed to complement the present USDA and state staff assigned to the district.

The water quality management plan will include an assessment of the farm's pollutant contribution to the lake. The assessment will also include an evaluation of animal feeding operations located on that farm. For farms where animal feeding operations are found to be contributing pollutants to the lake, the farm's water quality plan will include recommended best management practices

to control such pollutants. In most instances, the BMP's to control such pollutants will be chosen from the list of BMP's included in Iowa's Statewide Water Quality Management Plan. In a few instances, the BMP's may include animal waste control practices not presently included on the BMP list of Iowa's Water Quality Management Plan. For these practices, the standards and specifications of the U.S. Soil Conservation Service will be utilized.

Upon completion of a water quality plan which identifies the needed best management practices and their cost, the cooperator will prepare and submit to the district a request for cost-share assistance. Upon receiving a request for cost-share assistance the district commissioners shall handle the request in accordance with established procedures for the Iowa cost-share program, which is outlined in the Green Valley Lake Clean Lakes Project application.

The first cost-share agreements will be entered into after January 1, 1981. A five year schedule for signing contracts with landowners in the watershed is contained in Table 2.

Table 2

Project Year	Portion of Critical Areas Treated (%)
1*	10
2	30
3	60
4	85
5	100

*First full calendar year after project approval.

Table 3 shows estimates of BMP costs for the life of the project. BMP costs were allocated according to past experience with long term conservation agreements that indicated that landowners typically choose to do conservation work within three to five years after a contract is signed.

Table 3

PROJECT COST SCHEDULE FOR GREEN VALLEY WATERSHED BMPs

Project Year	Funding Cost Federal	State	Landowner
1	$ 58,463.30	$ 29,231.79	$ 27,125.00
2	116,926.60	58,463.40	54,250.00
3	175,389.90	87,695.10	81,375.00
4	146,158.25	73,079.25	67,812.50
5	87,694.95	43,847.55	40,687.50
TOTALS	$584,633.00	$292,317.00	$271,250.00

If requests for assistance should happen to exceed the funding or technical assistance capabilities a priority system will be used in scheduling installation of practices. The practices that show the greatest estimated reduction in sediment delivery to the lake per dollar spent will receive the highest priority (pounds of sediment reduction per year per dollar cost).

An evaluation of the project will be made semiannually. On the first of January and July of each year, the best management practices that were installed during the previous six month period will be identified. The effectiveness of the installed practices will be evaluated, i.e., an estimate will be made of the amount of reduction in sediment delivery that is expected to result because of the installed practices. The cumulative results of the project will be compared to the project goals. These evaluations of project accomplishments will be included in the quarterly progress reports submitted to the Environmental Protection Agency in February and August of each year.

NUTRIENTS

The Problem

All the classified water uses of Green Valley Lake are severely affected by algal blooms that occur in the lake. These algal blooms are supported by abundant nutrients which enter the lake during rainfall-runoff events either in the soluble

fraction or attached to sediment particles. The amount of phosphorus entering Green Valley Lake through sediment transport is estimated at 22.5 tons/year. Of this, it is estimated that 22.05 tons/year is trapped in the lake.

The amount of organic nitrogen entering the lake in association with sediment is estimated at 45.6 tons/year. Based on a 98 percent trapping efficiency, 44.7 tons/year remain in the impoundment. These nutrient rich bottom sediments are resuspended by wind action and further enhance the algal growth problem.

An undetermined amount of inorganic nitrogen (soluble fraction) also enters the lake during rainfall-runoff events. The source of this nitrogen is the rainfall, livestock wastes, and commercial fertilizer use.

Goal

It is the goal of the Green Valley Lake Clean Lakes Project to reduce nutrient inputs to the lake to levels that will not support nuisance-level growths of algae. This goal will be accomplished by (1) installing best management practices to control sediment associated contributions of phosphorus and organic nitrogen, (2) applying best management practices to livestock operations and related livestock waste handling, and (3) encouraging the use of best management practices in the application of commercial fertilizers. It has been estimated that organic nitrogen-N and total phosphate-P can be reduced from 45.6 to 3.6 tons/year and 22.5 to 1.8 tons/year, respectively, by installing best management practices for erosion control on the cropland in the watershed. Additional reductions in nitrogen can be realized by utilizing best management practices for livestock operations and fertilizer application.

Strategy

The reduction of total phosphate-P and organic nitrogen-N delivery to the lake is coincidental with and directly related to the reduction of sediment

delivery. The strategy for reducing sediment delivery has been presented. previously.

In the fall of 1980, the Union County Soil Conservation District will conduct a study to evaluate the nutrient contribution potential of all livestock operations located in the Green Valley watershed. An initial survey will identify the size and type of all livestock operations in the watershed. An estimate of the potential nutrient pollutant loadings from each operation will be made and recommendations will be presented for needed best management practices. The expected effectiveness of the recommended BMP's will be stated. For each BMP, the standards and specifications of the U.S. Soil Conservation Service will be utilized. A report will be prepared on the results of this study including estimates of the cost/effectiveness of the needed animal waste control practices, i.e., the estimated reduction in nutrient contribution versus dollar cost of the control practice. The district may request assistance from the Cooperative Extension Service, the Union County Agricultural Stabilization and Conservation Service, and/or the Department of Environmental Quality as needed to complete this study.

Animal waste control practices are cost-shared at a 75 percent rate in Union County under the Agricultural Conservation Program (ACP). The Union County Agricultural Stabilization and Conservation Service will provide funds for cost-sharing the installation of animal waste control facilities in the Green Valley Lake watershed. If requests for assistance should happen to exceed available funds a priority system will be used, i.e., the practices that show the greatest estimated reduction in nutrient contribution to the lake per dollar spent will receive the highest priority (pounds of nutrient reduction per year per dollar cost).

Under a contractual arrangement, Iowa State University of Science and Technology, Cooperative Extension Service in Agriculture and Home Economics

has developed information and education materials on agricultural nonpoint source pollution problems and methods for its control. The Union County Cooperative Extension Service will utilize these materials and conduct an informational meeting for the landowners in the Green Valley Lake Watershed. These efforts will emphasize nutrient and pesticide management and will be tailored to the farming operations and conditions that exist within the watershed.

On the first of January and July of each year, the best management practices that were installed during the previous six month period will be identified. The effectiveness of the installed practices will be evaluated, i.e., an estimate will be made of the reduction in nutrient delivery to the lake that is expected to result because of the installed practices. These evaluations of project accomplishments will be included in the quarterly progress reports submitted to the Environmental Protection Agency in February and August of each year.

PESTICIDES

The Problem

Pesticides have not been identified as a problem in Green Valley Lake. Concentrations of pesticides entering the lake would be expected to be similar to those found in other lakes draining agricultural watersheds. Because of the toxicity of many pesticides and the lake's use as a public water supply, pesticides in runoff to the lake should be reduced to the lowest feasible levels.

Goal

To reduce pesticides in runoff to Green Valley Lake to the lowest feasible levels.

Strategy

Best management practices installed to control sediment delivery to the lake will also control sediment associated contributions of pesticides. In addition as previously discussed, the Union County Cooperative Extension Service office will conduct a special meeting in the Green Valley Lake Watershed to inform and educate landowners and operators on pesticide management. The pesticide management recommendations will be tailored to the soil types and cropping practices found within the watershed and will thoroughly discuss integrated pest management programs and procedures.

PUBLIC PARTICIPATION

The Union County Soil Conservation District will involve the public in the Green Valley Lake Clean Lakes Project through the Union County Resource Coordinating Committee (CRCC). The CRCC is a public input forum that is sponsored by the soil conservation district. The committee as a whole is open to any and all citizens of the county that have a concern about water management and are willing to give their input at the local level. The Executive (Voting) Committee of the CRCC consists of members or designees of the Agricultural Stabilization and Conservation Service (ASCS) County Committee, officials of cities and towns, boards of supervisors, soil conservation district commissioners, county extension council, regional planning council, and the general public.

The CRCC will meet at least once annually during the life of the Green Valley Lake Clean Lakes Project. The committee will review the progress and accomplishments and provide suggestions or recommendations concerning the conduct of the project. Any recommendations of the CRCC that affect the project will be submitted to the State Policy Advisory Committee (SPAC). In addition, the CRCC will submit a report on the annual meeting to the SPAC.

Nonpoint Notes on 208 Implementation

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Nonpoint Note No. 17 November 1, 1978

Selecting Priority Areas For Implementing Agricultural Nonpoint Source Control Measures

The following information was abstracted from Iowa's Interim Output Report on Section 208 Agricultural Nonpoint Source Planning, prepared by the Iowa Department of Soil Conservation and Department of Environmental Quality in Des Moines, Iowa.

This information was selected for distribution because it is an excellent illustration of how agricultural nonpoint source pollution can be evaluated, based on its impact on receiving surface waters which are of particular importance for water quality reasons. It highlights the importance of looking at the in-stream water quality desired and the planned use of the water(s) in a particular location before evaluating agriculture's contribution to the water quality problems and setting priorities for corrective action.

Prepared by the National Association of Conservation Districts under Environmental Protection Agency Grant No. T-900-744-01 and distributed to Presidents of State Associations of Conservation Districts; Administrative Officers of State Conservation Agencies; NACD Officers, Directors, and Staff; Soil Conservation Service State Conservationists and Directors of TSCs; EPA Washington Staff; EPA Regional 208 Coordinators; EPA Regional NPS Coordinators; State Water Quality Agencies; Areawide Water Quality Management Planning Agencies; and representatives of other concerned groups and organizations.

Selecting

Priority Areas

For Implementing

Agricultural Nonpoint Source Control Measures

It has been estimated that in order to adequately control agricultural nonpoint sources of water pollution, an expenditure of approximately eight to fifteen billion dollars would be necessary. Obviously, the limited resources currently available are grossly inadequate to implement control measures nationally. Therefore, priorities must be set between areas receiving consideration for possible implementation of nonpoint source control measures. The process of prioritizing those areas must consider several factors. First, the nonpoint source pollution problems must be of a severe or significant nature. Second, water quality improvements and additional public benefits resulting from control measure implementation must be substantial.

Determining the severity of the nonpoint pollution problems of any surface water is a difficult problem. Since little quantitative data on nonpoint source pollution exists, water quality data cannot be used to prioritize nonpoint problem areas. Most past water quality monitoring efforts have concentrated on point sources. Therefore, data from these efforts do not reflect runoff or high flow conditions. Other information, such as the erosion potential of the watershed drainage areas and the impacts nonpoint pollution is having on potential beneficial water uses must also be reviewed subjectively. Likewise, the identification of potential water quality improvements must also be made subjectively, since inadequate technical data exists to clearly define the degree of water quality improvement obtainable by installation of best management practices.

In Iowa, the determination of priority areas for agricultural nonpoint source controls is based on a series of evaluation criteria and ranking systems developed in conjunction with several state agencies and subject to extensive public participation. The priority criteria is designed to address: (1) the potential value of the surface waters to the state, and (2) the most severe problems first, based on the degree of nonpoint pollution impact on the surface waters.

The first phase in the selection of priority areas was to determine the potential value of the various surface waters of the state. The Iowa Conservation Commission (ICC) utilized their expertise and knowledge of the various surface waters to evaluate approximately 4,000 lakes, impoundments, rivers, streams, and wetland on a county, regional and statewide basis. The potential value of the surface waters was classified as either high, medium or low, as indicated by Table II-1. Some of the factors considered in this ranking included size, public uses, aquatic life, aesthetics, phusical character, and uniqueness or rarity.

At the same time, as the potential value was being determined, ICC was also considering the extent of nonpoint source pollution impact on the various potential beneficial uses of the waters. The degree of this impact was classified as either insignificant, low, medium, or high, based on the definition of each given in Table II-2.

Having determined the potential value of the surface waters and the extent of nonpoint source pollution impact (per Tables II-1 and II-2), these determinations were combined and ranked based on the priority criteria shown in Table II-3. The first priority in this table is those surface waters identified as having a high potential value to the state and also a high degree of nonpoint impact. Thus, the first priority reflects those waters which have a severe nonpoint source pollution impact on waters where considerable public benefit could be realized by controlling the contributing agricultural nonpoint sources of pollution.

Since it appeared evident that a large number of surface waters would be ranked as high value - high impact, additional criteria were necessary to further refine the priority areas. To accomplish this, the criteria in Table II-4 was used to prioritize the surface waters identified as high value - high impact. Table II-4 assigns values based on the designated uses of the surface waters and gives greater importance to those with multiple uses. The designated uses utilized in Table II-4 are those classified in Iowa's Water Quality Standards. The first priority within this table is surface waters classified for primary contact uses and secondary contact uses (Classes A and B of the Water Quality Standards). Since several surface waters still remained in the top priority class, a further breakdown was made. To accomplish this, the tie-breakers or special considerations listed below Table II-4 were used. These special considerations were applied in the order shown. The first, indicating that lakes and/or reservoirs take precedence over streams, was used since lakes represent a more confined body of water which is not as readily renewed or "washed" as are rivers and streams. The second special consideration places emphasis on potable surface water supplies (Class C), ranking them ahead of waters not so classified. The last tie-breaker gives priority to those surface waters that are designated as high quality waters. This tie-breaker will probably find limited usage since most high quality waters would not be highly impacted and therefore not be listed as priority number one in Table II-3.

The priority criteria outlined in Tables II-1 through II-4 consider only the water quality aspects of assigning priorities. The value of the waters and the extent of any nonpoint pollution impacts on these waters have been utilized to prioritize the surface waters which should be investigated further to establish specific project areas. The next phase of the priority area selection process will consider the on-land conditions, specific nonpoint sources, physical conditions, contributing areas, and feasibility of implementing control measures.

Having established the priority surface waters, the next phase in selecting possible project areas considers the contributing watersheds which drain directly or indirectly into these surface waters. This portion of the ranking process considers the physical factors in the areas draining into the surface waters. While present knowledge and techniques for determining water quality benefits from various control measures are not well established, Table II-5 considers physical data which is available and

TABLE II-1

Potential Value Ranking
High Value
Medium Value
Low Value

TABLE II-2

Extent of Nonpoint Source
Pollution Impact
on
Beneficial Water Uses

Extent	Impact
Insignificant	Potential beneficial water uses are not limited by nonpoint source pollutants.
Low	Minor limitations to some potential beneficial water uses by nonpoint source pollutants.
Medium	Major limitations to some potential beneficial water uses or minor limitations to several potential beneficial water uses by nonpoint source pollutants.
High	Major limitations to most potential beneficial water uses by nonpoint source pollutants.

TABLE II-3

Potential Value
And
Degree of Nonpoint Source Impact

Priority No.	Value and Degree of Impact
1	High Value - High Impact
2	High Value - Medium Impact
3	Medium Value - High Impact
4	Medium Value - Medium Impact
5	High Value - Low Impact
6	Medium Value - Low Impact
7	Low Value - High Impact
8	Low Value - Medium Impact
9	Low Value - Low Impact

TABLE II-4

Water Use
Priorities

Priority No.	Water Designation and Use
1	Swimming and water skiing and aquatic life and secondary contact recreation (Class A and Class B)
2	Cold water aquatic life and secondary contact recreation (Class B, cold)
3	Warm water aquatic life and secondary contact recreation (Class B, warm)

Special Considerations:

Within the above priority categories, the following factors will be used to further define the assigned priority. These factors will be considered in the order presented.

1. Lakes and/or reservoirs take precedence over streams.
2. Those classified as potable water supplies (Class C) take precedence over those not so classified.
3. Waters classified as high quality waters take precedence.

quantifiable. One of the factors considered in Table II-5 is the weighted average soil loss for the watershed, in tons per acre per year. The second factor is the distance from the watershed outlet to the priority surface water of concern. As evident from the ranking in the table, the greater the weighted average soil loss, the higher the priority. Areas with the greater woil loss are considered to represent the more critical contributing areas. Also, the closer the watershed outlet is to the priority surface water, the higher the priority. High soil loss watersheds discharging directly into the surface water are considered to have a more immediate and pronounced effect on the water quality of the priority surface water. This table identifies the critical contributing watersheds, and is being used in the absence of qualitative cause-and-effect water quality data. In conjunction with Table II-5, several tiebreaking criteria are also available if needed. These are presented below Table II-5 and are based on the same philosophy as the table itself.

This final phase in the selection of priority project areas is illustrated in Table II-6. This table, or rather the process presented therein, is used to establish the implementation priorities, utilizing a stepwise process as outlined in the five columns of the table. The first column, Column 1, is a ranking of those priority watersheds as developed up to and including Table II-5. As previously mentioned, Table II-5 considered the physical factors of the watersheds contributing to the previously identified priority surface waters. Table II-6 also identifies the state agency responsible for each step in the selection of the watershed implementation priorities. These responsibilities are discussed in further detail in Section IV, Agricultural Nonpoint Source Control Strategy.

Column 2 of this stepwise selection process involves the consideration of other possible benefits, either positive or negative, which may be created in each watershed as a result of controlling the nonpoint pollution problems. Such positive benefits may include the protection of a unique or fragile soil resource and the enhancement of wildlife habitat. A negative factor may be the fact that a high priority watershed is one of several draining into the surface water and any control measures attempted in this watershed alone would not result in a significant improvement in water quality. The listing developed in Column 2 becomes Iowa's priority listing of watersheds prior to the application of any considerations required by the Rural Clean Water Program (RCWP). The RCWP selection process which follows will not alter the state priority watersheds relative to any other current or future nonpoint source control programs.

Columns 3 and 4 of Table II-6 involve listing the priority watersheds based on preliminary judgements of landowner willingness to voluntarily participate in the RCWP implementation efforts. The distinguishing factor between Columns 3 and 4 will be the level of landowner participation required under the RCWP, which is currently proposed to be seventy-five percent (75%) of the critical area or sources. Column 4 will result in those priority watersheds from Column 2 in which preliminary information indicates the required level of participation can be attained. The order of the ranked watersheds will remain the same as for Column 2. Those watersheds where preliminary information indicates the required level of participation is not likely, will fall into Column 3. These watersheds will not be carried forward to Column 5.

TABLE II-5

PHYSICAL RANKING CRITERIA FOR DEVELOPMENT OF

THE INITIAL WATERSHED PRIORITY LIST

Priority No.	TONS/AC/YR *	MILES **
1	> 16	0 - 1
2	11 - 16	0 - 1
3	> 16	1 - 5
4	11 - 16	1 - 5
5	5 - 11	0 - 1
6	> 16	5 - 10
7	5 - 11	1 - 5
8	11 - 16	5 - 10
9	5 - 11	5 - 10
10	> 16	> 10
11	11 - 16	> 10
12	< 5	0 - 1
13	5 - 11	> 10
14	< 5	1 - 5
15	< 5	5 - 10
16	< 5	> 10

* Weighted average soil loss in tons per acre per year, for each watershed as determined through the DSC assessement efforts.

** Distance in miles from the outlet of a watershed to the priority surface water.

Tiebreaking Criteria

When a group of watersheds have equal rankings, the following steps will be followed in the order listed to break the tie:

A. For watersheds outletting directly into a priority surface water:

1. The watershed with the highest estimated soil loss will be given higher priority.

2. The watershed outletting closer to the upstream end of a priority surface water will be given higher priority.

B. For watersheds outletting upstream from a priority surface water:

1. The watershed with the highest estimated soil loss will be given higher priority.

2. The watershed outletting closest to the priority surface water will be given higher priority.

TABLE II-6

STEPS FOR NONPOINT WATERSHED IMPLEMENTATION PRIORITIES

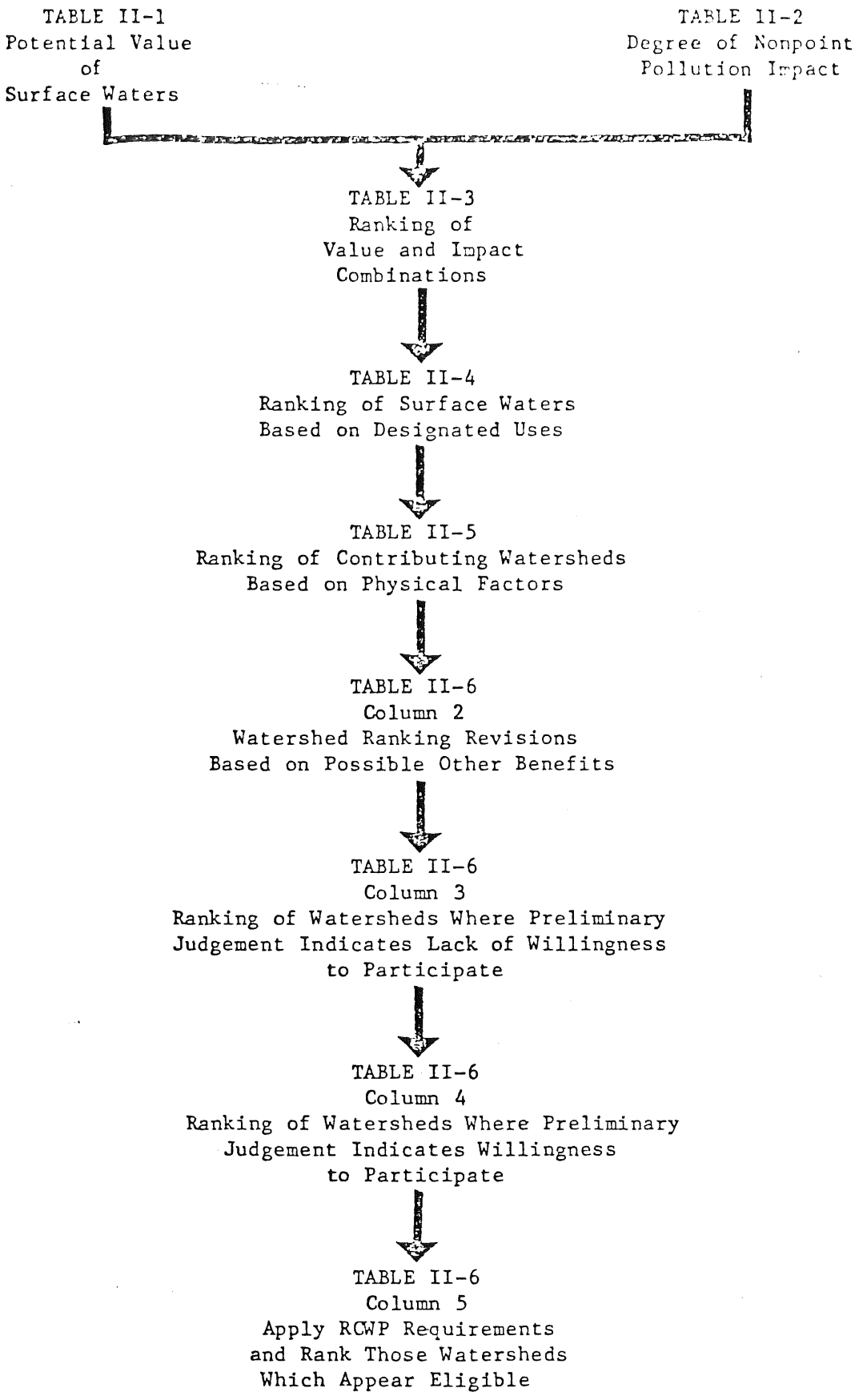
PRIORITY LISTS				IMPLEMENTATION LIST
COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	COLUMN 5
Nonpoint Pollution Potential	Water Quality Improvements Plus Other Benefits	Landowner Participation Less Than Required Level for RCWP	Landowner Participation Equal to or Greater Than Required Level for RCWP	Proposed RCWP Projects
Ranks watersheds, based on physical factors per Table II-5, in sequential order for the priority surface waters.	Rank watersheds from Column 1 by considering additional beneficial or adverse impacts that could result from water quality improvement efforts. Will break ties from Column 1 and possibly alter order of rankings.	List the watersheds from Column 2 which do not have adequate participation, in the same order as they are ranked in Column 2.	Lists the watersheds from Column 2 which have the required level of participation, in the same order as they are ranked in Column 2.	Ranking of watersheds from Column 4 based on the watershed's ability to compete pursuant to the federal requirements for the RCWP. Order from Column 4 retained.
Responsible State Agency: DSC	Responsible State Agency: Joint DSC/DEQ	Responsible State Agency: Joint DEQ/DSC	Responsible State Agency: Joint DSC/DEQ	Responsible State Agency: DSC
Nature of Variables: Physical	Nature of Variables: Physical	Nature of Variables: Preliminary Judgement of Willingness to Participate	Nature of Variables: Preliminary Judgement of Willingness to Participate	Nature of Variables: Physical and Better Determined Willingness to Participate

Column 5 is the final step in developing the list of watersheds to be submitted as project areas for the RCWP. In using Column 5, consideration will be given to the finalized requirements for project areas pursuant to the RCWP. Such factors as watershed size, ability to demonstrate water quality benefits, and cost considerations may cause some of the watersheds listed in Column 4 to be deleted or dropped from the final listing. Attempts will also be made to better determine the willingness of the involved landowners to participate in the RCWP. The watersheds remaining will retain their relative order from Column 4. Those watersheds remaining after utilizing the considerations of Column 5 will represent the final priority ranking of watersheds to be considered in applications for RCWP projects.

Figure II-1 represents a flow chart of the overall process used in the selection of priority watersheds for application for funding under the RCWP.

Appendix I contains the listings developed utilizing the first phase of this priority selection process. Table AI-1 contains the listing of priority surface waters developed pursuant to Table II-4. Figure AI-1 shows the location of priority surface waters in the state. Table AI-2 contains the priority watersheds, contributing to the top priority surface waters, based on the criteria of Table II-5. Figure AI-2 shows the location of the priority watersheds in the state.

FIGURE II-1
PROJECT SELECTION FLOW CHART



Waters of Iowa (Continued)

Overall Ranking	Water	County	Class*	Drainage Area (sq. mi.)
4	Independence Dam	Buchanan	AB	1,048
4	Black Hawk L.	Sac	AB	18.2
4	Five Island L.	Palo Alto	AB	16.7
4	N. Twin L.	Calhoun	AB	7 (approx.)
4	Don Williams L.	Boone	AB	32.3
4	Red Rock	Marion	AB	12,330
4	Coralville	Johnson	AB	3,094
4	Oakland Mills Imp.	Henry	AB	4,013 (approx.)
4	Palisades Kepler Imp.	Linn	AB	6,974
4	Lake Panorama	Guthrie	AB	434
4	Mormon Trail	Adair	AB	2 (approx.)
4	Saylorville	Polk	AB	5,710 (approx.)
5	Turkey River	Clayton	AB(c)HQ	1,684
6	Upper Iowa River	Allamakee	ABHQ	1,005
6	Upper Iowa River	Winneshiek	ABHQ	651
7	Cedar River	Floyd	AB	1,080
7	Cedar River	Bremer	AB	1,661
7	Cedar River	Chickasaw	AB	1,443

Waters of Iowa (Continued)

Overall Ranking	Water	County	Class*	Drainage Area (sq. mi.)
7	Wapsipinicon River	Buchanan	AB	1,210
7	Maquoketa River	Jackson	AB	1,879
7	Maquoketa River	Delaware	AB	526
7	Maquoketa River	Jones	AB	748
7	Des Moines River	Polk	AB	11,699
7	Wapsipinicon River	Cedar	AB	1,821
8	North Cedar	Clayton	B(c)HQ	5.91
8	Bloody Run	Clayton	B(c)HQ	37.6
8	Bear Creek	Winneshiek	B(c)HQ	19.7
8	Waterloo Creek	Allamakee	B(c)HQ	47.7
8	Catfish Creek	Dubuque	B(c)HQ	70.6
8	Coldwater Creek	Winneshiek	B(c)HQ	24.3
8	Fenchel Creek	Delaware	B(c)HQ	12.8
8	Sny Magill Creek	Clayton	B(c)HQ	35.6
9	Little Turkey R.	Delaware	B(c)	9.22
9	Hewett Creek	Clayton	B(c)	16.2
9	N. Bear Creek	Winneshiek	B(c)	33.7

Waters of Iowa (Continued)

Overall Ranking	Water	County	Class*	Drainage Area (sq. mi.)
9	French Creek	Allamakee	B(c)	24.0
9	Smith Creek	Winneshiek	B(c)	20.2
9	Trout Run	Winneshiek	B(c)	11.9
10	Old Reservoir (Corning)	Adams	BC	1 (approx.)
10	Lake Orient	Adair	BC	2 (approx.)
11	Manteno Lake	Shelby	B	28 (approx.)
11	Windmill Lake	Taylor	B	2 (approx.)
11	Wilson Lake	Taylor	B	2 (approx.)
11	Schaben Pond	Harrison	B	1
11	Willow Lake	Harrison	B	98 (approx.)
11	Slip Bluff	Decatur	B	4.9
11	Meadow Lake	Adair	B	2.5 (approx.)
11	Old Reservoir (Mt. Ayr)	Ringgold	B	2 (approx.)
11	Walnut Creek Marsh	Ringgold	B	1 (approx.)
11	Arrowhead Lake	Pottawatamie	B	2 (approx.)
11	Rutland Imp.	Humboldt	B	2,233
11	Otter Creek Marsh	Tama	B	28.4

Waters of Iowa (Continued)

Overall Ranking	Water	County	Class*	Drainage Area (sq. mi.)
11	Adel Power Dam	Dallas	B	2,281
11	Bay's Branch	Guthrie	B	14.9
11	E. Lake (Osceola)	Clarke	B	1 (approx.)
12	Iowa River	Johnson	BC	4,293
12	Cedar River	Linn	BC	6,997
12	Middle Raccoon	Guthrie	BC	484
12	Nodaway River	Page	BC	1,182
13	Yellow River	Allamakee	BHQ	241
13	Upper Iowa River	Howard	BHQ	248
14	Des Moines River	Boone	B	5,677
14	N. Raccoon River	Greene	B	2,045
14	Des Moines River	Webster	B	5,461
14	Little Sioux River	Cherokee	B	2,385
14	Des Moines River	Humboldt	B	3,656
14	W. Nishnobotna River	Shelby	B	350
14	N. Raccoon River	Dallas	B	2,298
14	Des Moines R.	Dallas	B	5,695

Waters of Iowa (Continued)

Overall Ranking	Water	County	Class*	Drainage Area (sq. mi.)
14	Cedar River	Black Hawk	B	5,814
14	Wapsipinicon	Black Hawk	B	676
14	Elk Creek	Delaware	B	26.7
15	Schley Pond	Harrison	None	?
15	Chichaqua	Polk	None	?
15	Pierce Creek	Page	None	?

* A = Primary contact water, swimming and water skiing.

B = Wildlife, aquatic life and secondary contact recreation (warm water).

B(c) = Coldwater wildlife, aquatic life and secondary contact recreation.

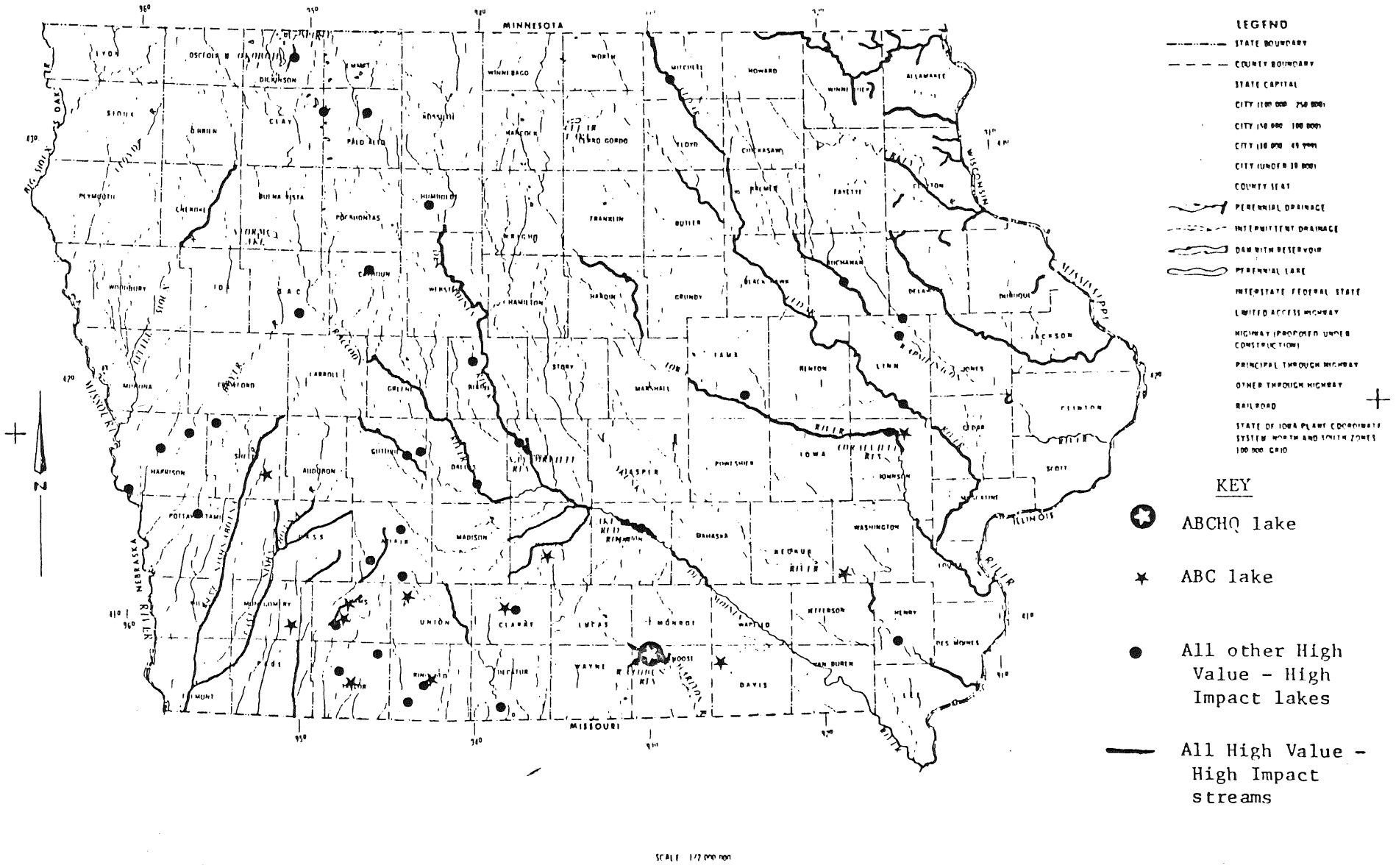
C = Potable water supply.

HQ = Waters classified as high quality waters

None = Stream segment is not classified.

FIGURE AI-1

HIGH POTENTIAL VALUE - HIGH NONPOINT POLLUTION IMPACT WATERS



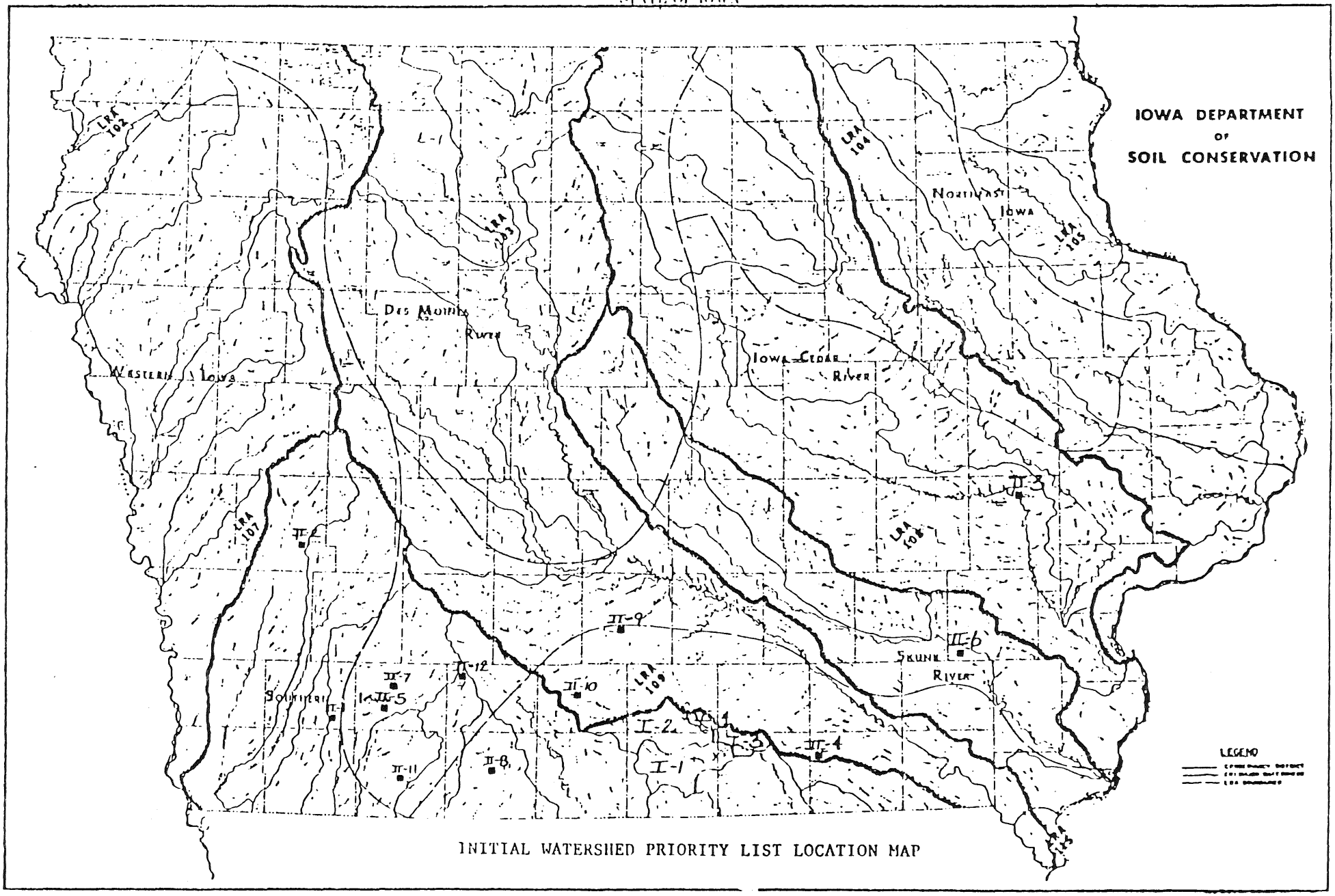
SOURCE:
1970 NATIONAL ATLAS OF THE UNITED STATES OF AMERICA AND 1974 STATE HIGHWAY MAP
ALBERS EQUAL AREA PROJECTION

TABLE AI-2
INITIAL WATERSHED PRIORITY LIST

Surface Water Priority	Watershed or Surface Water Name	Watershed I.D. No.	Priority Ranking (Physical Data)
I	Rathbun Reservoir	218007	1
		218008	2
		218006	3
		218009	4
II	Viking Lake		1
	Prairie Rose Lake		2
	Lake McBride		3
	Lake Wapello		4
	Binder Lake		5
	Lake Darling		6
	Lake Icaria		7
	Loch Ayr		8
	Lake Aquabi		9
	West Lake (Osceola)		10
	Lake of Three Fires		11
	Green Valley Lake		12

FIGURE AI-2

STATE OF IOWA



INITIAL WATERSHED PRIORITY LIST LOCATION MAP

PRAIRIE ROSE LAKE

Narrative

August 1979 --- Application by Shelby County Soil Conservation District.
February 1980 --Selected by USDA as one of thirteen projects in the Nation.

July 1980---Plan of work completed.

August 11, 1980-Start of Rural Clean Water Project with Dedication Day. Sec. of Agriculture, Bob Bergland and Senator John Culver. Five (5) contracts signed that day.

Oct. 1, 1982 Project selected by National Water Quality Evaluation project at North Carolina State, as 1 of 4 to have report submitted to USDA. Completed report not returned as of 2-7-83, according to Roger Link of State Office.

Spring 1981 -- Lake was drained to kill rough fish. Lake filled in spring of 1982 and water was clear.

Project has had a good influence both in and out of the project for additional conservation work. Thirty six acres was seeded in project area and one farmer has built terraces with state money. At least six farmers in watershed have done work on land outside of watershed.

County Road structure cost $22,862.80 with surface area of 32.2 acres and 60 acre feet of storage capacity.

COOPERATING AGENCIES
Shelby County Soil Conservation District.
Soil Conservation Service - Technical Assistance.
Agricultural Stabilization Conservation Service - Financial Assistance.
Extension Service - Education and technicial assistance on IPM & Nutrient Mgt.
Iowa Dept. of Environmental Quality - Monitoring.
Shelby Co. Road Dept. - Silt detention structure.

SOIL LOSS REDUCTION

Soil Losses have been reduced from an 80,752 tons per year to 42,933 tons per year in the project area. In addition seven (7) small and one (1) large sediment control structures were built which do not show up in soil loss calculations using the Universal Soil Loss Equation.

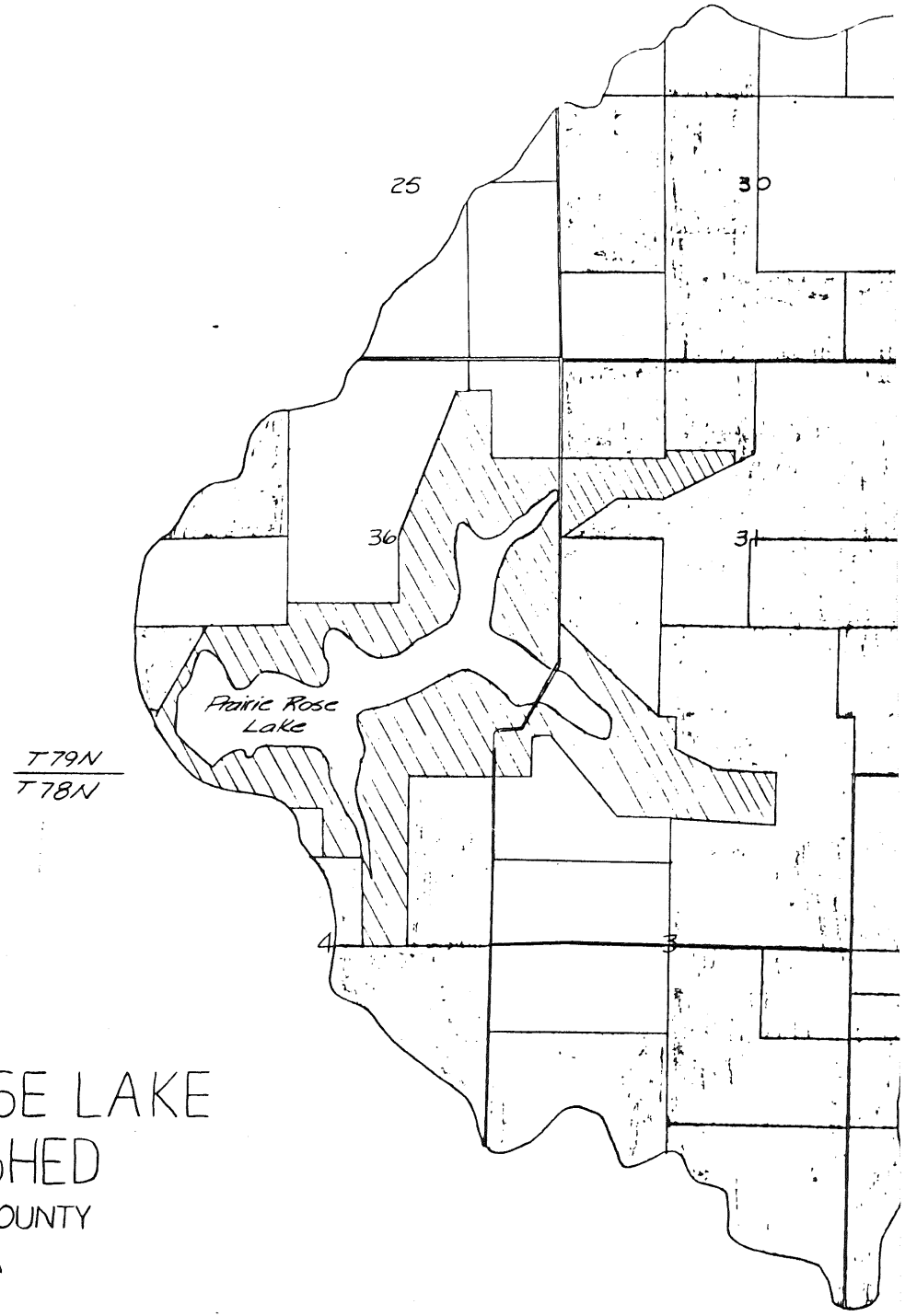
Sediment delivered to the lake (32% delivery rate assumed in plan) would be reduced from 26,330 tons per year at the start of the project to 13,738 tons; a 48% reduction. A parallel reduction in agricultural related pollutants should also occur. In addition the Nutrient and Integrated Pesticide Mgt. Programs, will also reduce these pollutant loadings. Two bar graphs (figures 2 and 3) illustrate the reducation in possible pollutants.

PRAIRIE ROSE LAKE SUMMARY
APRIL - 1983
ACCOMPLISHMENTS

		Total Need	Goal	Dec. 1980	Dec. 1981	Dec. 1982	April 30,83
Applications	No.	47	37	20	29	33	35
Application	Ac.	3920	3136	1901	2902	3137	3257
% of eligible Area				48	74	80	83
Contracts	No.	47	37	18	26	29	33
Contract	Ac.	3920	3136	1781	2441	2649	2769
% of eligible area				45	62	67	70
Pasture Seeded BMP-1		148	118	-	-	12	
Terrace Systems	Mi.	100	80				
With RCWP (BMP-4)				16.6	29.9	35.7	
Without RCWP					16.4	16.4	
Total					46.3	52.1	
Underground outlets		--	--	8977	11955	13655	
Waterways BMP-7							
Acres		30	24	7.1	8.1	8.1	
Drains		--	--	13465	13465	13955	
Conservation Tillage BMP-9		3648	2917		399	560	
Sediment Retention or Water Control structures BMP-12		8	6	1	2	8	
Nutrient Mgt. BMP-15		3796	3036	-	1633	2015	
Integrated Pest Mgt. BMP-16		3796	3036	-	1633	2015	
Contour Farming		3648	2917	-	1781	2441	
Crop Residue Use		3648	2917	-	1781	2649	
Field Borders (Not all reported)		-	-	-	1500	3900	

Additional work contracted but not completed.

Terraces	9.1 mile	Sediment Basins	3 number
Terrace Tile	6350 feet	Structures	1 number
Grass Waterways	2.2 acre	Seeding	20 acres
Waterway tile	2200 feet		



PRAIRIE ROSE LAKE WATERSHED

SHELBY COUNTY

IOWA

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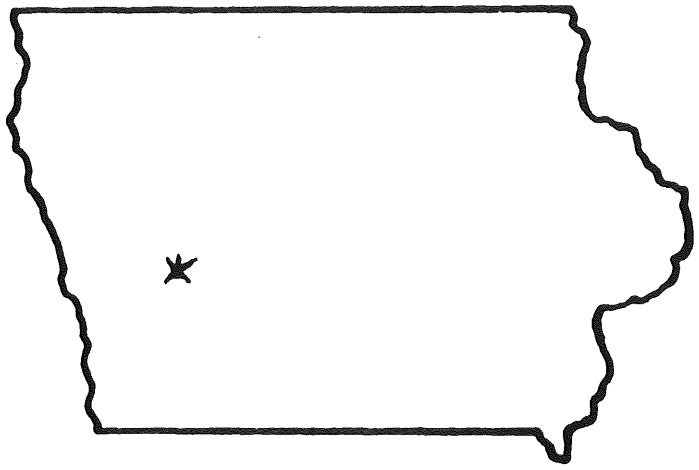
1982 ANNUAL REPORT



* Prairie Rose Rural Clean Water Project

Shelby County, Iowa

November 30, 1982

This report was prepared and submitted through a joint effort of the Local Coordinating Committee and State Coordinating Committee of the Prairie Rose RCWP.

Local Coordinating Committee

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Duane Feltz, Cooperative Extension Service
Wayne Hansen, Soil Conservation District
Lynn Kring, Environmental Protection Agency
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INTRODUCTION

The Prairie Rose Lake Rural Clean Water Program project encompasses 4,610 acres of which almost 80% is cropland. The watershed soils are mostly from the Marshall series and subject to severe erosion. Located within the watershed is Prairie Rose Lake which has had its fishing, boating, swimming and other recreational activities seriously impacted by sediment and nutrients from the surrounding areas.

Best Management Practices (BMPs) have been installed since 1980 on farms in the watershed to reduce the sedimentation and nutrient related problems. This report will summarize the results of progress made in mitigating agricultural nonpoint source (NPS) problems through the implementation of BMPs.

BACKGROUND

Prairie Rose Lake is a 215 acre man-made lake located in west-central Iowa in Shelby county. Major lake uses include camping, fishing, swimming, boating and a drinking water supply for the state owned park. Many of these uses are being impaired by agricultural activities from the surrounding 4,610 acre watershed.

The Prairie Rose Lake watershed is 4,610 acres in size, of which 648 acres is lake and park, 3,648 acres is cropland, 148 acres is pasture, and 166 acres is farmsteads,roads, and woodland. The watershed has serious erosion problems, with the average annual soil loss of the watershed area (excluding the park and lake) exceeding 20 tons per acre and erosion on 62% of the nonpark land exceeding 30 tons per acre per year. Erosion rates on the crop and pasture lands are given in Table I.

TABLE I - Watershed Erosion Rates

Cropland

Location	Annual Soil Loss Per Ac. T/A/Yr.	Acres
Sidehills	30	2,438
Hilltops	5	492
Bottomland	5	990

Pasture Land

Sidehills		5 Tons
Hilltops	Less than	1 Ton
Bottomland	Less than	1 Ton

Agricultural runoff has resulted in high sediment and nutrient loadings to the lake. Consequently, ten percent of the usable boating and fishing habitat areas as well as 19% of the lake volume has been lost between 1971 and 1980. A comparison of the 1971 and 1980 bathymetric maps shows the rapid rate that sedimentation has occurred within the lake (Appendix B). Other observable effects of sedimentation include extreme turbidity during and for extended periods after runoff events, and complaints from the general public regarding lake conditions.

A fisheries summary provided by the Iowa Conservation Commission (Prairie Rose Lake Water Quality Monitoring Report - Year 1 (1981), IDEQ, March 1982) demonstrates that a strong sport fishery was established in the lake shortly after construction. Recent lake conditions, however, have resulted in a fishery dominated by rough fish (carp, gizzard shad) and can be seen in the results of the total fisheries renovation of the lake on September 15, 1981 (Appendix C). The dominance of rough fish was due mainly to sediment reducing the quality of spawning habitat of bass, bluegill and crappie. Annual user information (Appendix D) for 1980 and 1981 reflects the fishery quality showing a drop in fishing use from 29% (1979) to 18% of the total.

Agricultural runoff also carries other pollutants into the lake. Pollutants of particular concern are nutrients and pesticides, many of which enter the lake attached to eroded soil particles. Nutrients are a concern primarily because they stimulate algal growths and accelerate euthrophication of the lake. Pesticides are of concern from a human health perspective, since the lake serves as a drinking supply source for the park and a major fishing resource in that area of the state. A more detailed discussion of the water quality problems existing in Prairie Rose Lake can be found in "Prairie Rose Lake Water Quality Monitoring Report - Year 1 (1981)," IDEQ, March 1982.

Prior to initiating the RCWP project, the sediment delivery to the lake was estimated at 26,334 tons per year. The major goals of the project are to control excessive soil erosion on at least 80% of the nonpark land area and to reduce the sediment delivery rate by 60% or to a final rate of 10,534 tons per year by implementing approved Best Management Practices (Appendix E) in the lake watershed. Calculations also show that these goals will result in a reduction to the lake in sediment-associated nutrients of approximately 59,290 pounds of phosphorus and 149,270 pounds of nitrogen per year. The nutrient and pesticide management programs being conducted by the Extension Service should also result in additional pollutant reductions.

Because of the watershed's topography and its intensive use for rowcrop agriculture the entire watershed area (excluding parkland) has been identified as a critical area (Figure 1). The critical area (Figure 1) consists of 3 types of land forms: hilltops (13%), bottomlands (25%) and sidehills (62%). The rolling topography of the area reflects a loess covered glacial till landscape with a well integrated drainage network. Slopes are commonly 200-400 feet long with a grade up to 18%. Cropland accounts for approximately 79% of this area (Appendix F), much of which is either continuous corn or corn-soybean rotations regardless of field slope; therefore, a high potential for erosion exists for most of this area. Additional information characterizing the agricultural and climatic characteristics of the watershed can be found in Appendix F.

Animal production within the watershed is non-intensive. One large cattle feedlot (less than 400 animal units) and seven smaller feedlots (less than 50 animal units each) are in the area. Priority will be given to installing runoff controls on the large feedlot because of its size and proximity to the lake.

Potential non-agricultural pollution to the lake includes the park facilities and grounds. However, adequate sewage treatment facilities have been installed as well as permanent vegetation and shoreline erosion control measures around the lake, thus eliminating these areas as sources. No municipal or industrial point sources of pollution are found in the watershed.

IMPLEMENTATION STATUS

Prior to the RCWP project approval, practices installed included the establishment of contour farming on 1000 acres, 14 conservation plans covering 2,270 acres, 15.1 miles of grassed backslope terraces protecting 528 acres and the construction of 2 erosion or sediment control structures.

CRITICAL AREA MAP

-RCWP-
Prairie Rose Lake
Shelby County, Iowa

Critical Areas:	Annual Loss:	Acres:
Hilltops	5 T/A	2438
Sidehills	30 T/A	492
Bottomlands	5	990

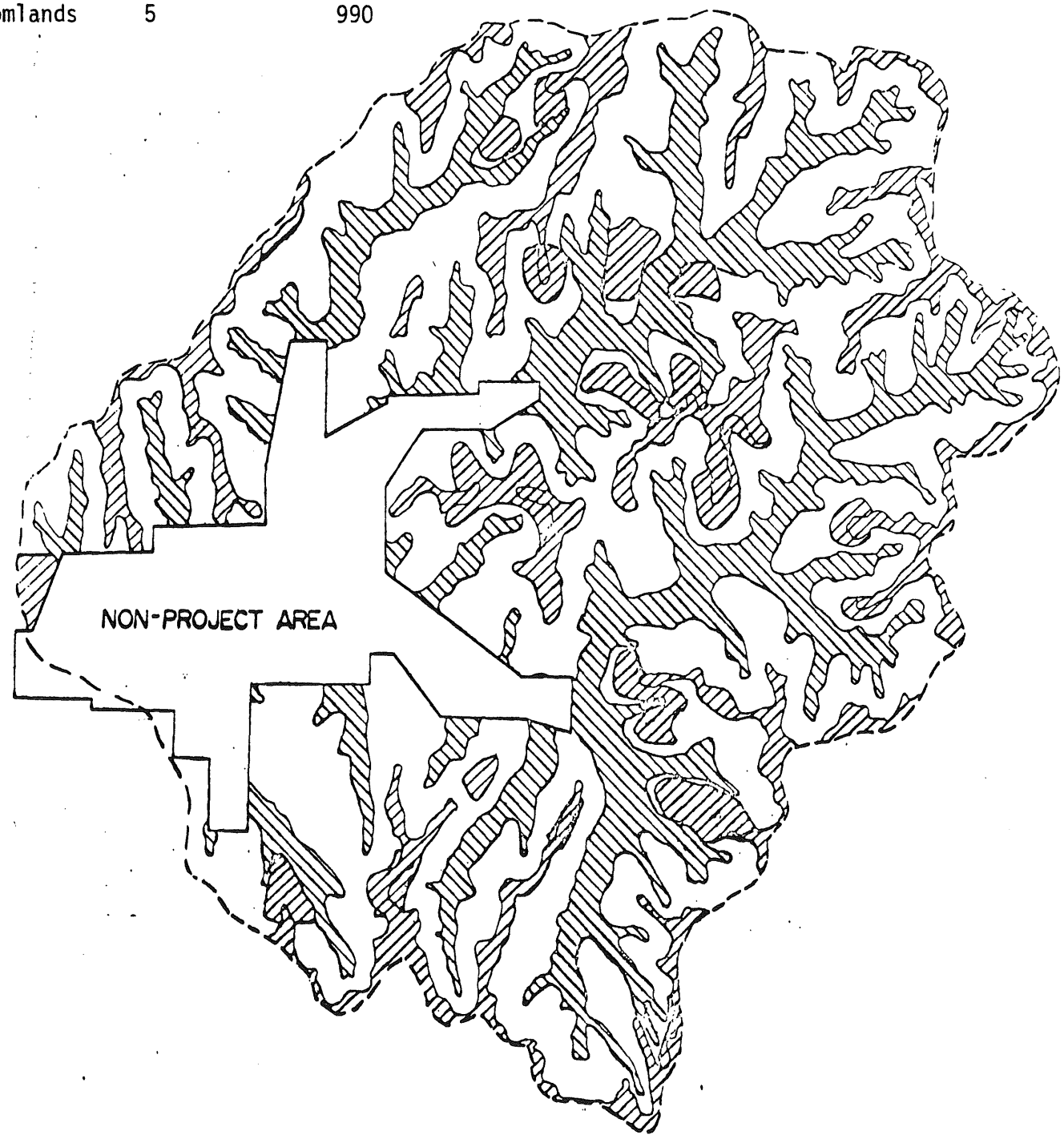


Figure 1 - Prairie Rose Lake Critical Area Map

Funds for the Prairie Rose Lake RCWP became available in August 1980 and project implementation began almost immediately. The project has been accepted by landowners in the watershed area and implementation has proceeded rapidly. The following is the extent of implementation since project initiation:

BMP-1	Pasture seeding (with RCWP funds)	12 acres
BMP-4	Terrace systems (without RCWP funds)	16.4 miles
	(built with RCWP funds)	33.6 miles
	Total Terraces	50.0 miles
	Underground outlet for terraces	9,552 feet
BMP-7	Waterway systems	8.1 Acres
BMP-9	Conservation tillage systems	560 Acres
BMP-12	Sediment retention, erosion or water control structure	8
BMP-15	Nutrient Management (23 farms)	2,086 Acres
BMP-16	Integrated Pest Management (23 farms)	2,086 Acres

Additional conservation accomplishments have occurred in the project with funds other than RCWP:

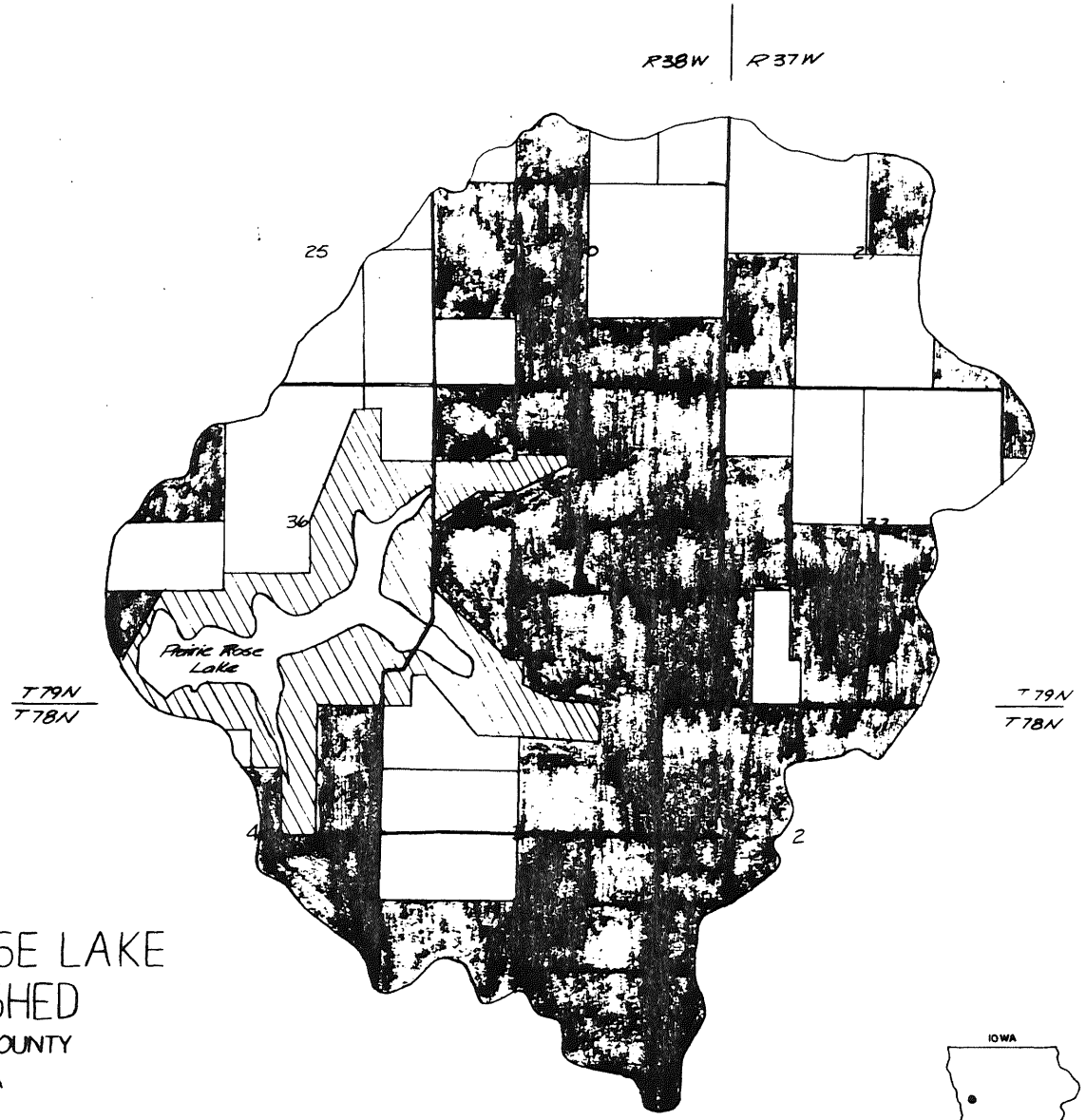
Permanent seeding (Equivalent to BMP-1)	36 Acres
Terraces (Equivalent to BMP-4)	2,940 feet

In addition to using soil erosion control practices to reduce nutrient and pesticide runoff into the lake, the Iowa State University Extension Service is conducting nutrient and pesticide runoff management programs (BMPs 15 and 16).

Under the nutrient management program, soil samples are collected from cooperating farmers' fields and analyzed at the ISU soil laboratory. Extension personnel use the soil test results to make recommendations on fertilizer application rates, methods, and timing. The recommendations are designed to assure that crop nutrient needs are being met while minimizing the potential for nutrient runoff into the lake.

The pesticide management program involves scouting of fields to determine whether weeds or pests exist, and if so, whether infestations are sufficient to justify chemical application. The results are also used to make recommendations on the pesticides to be used, application methods, and time of application. The results will ensure that crop pests are adequately controlled while minimizing the potential for pesticide runoff. A more comprehensive description of the work plan as well as the annual progress report for BMPs 15 and 16 can be found in Appendix G.

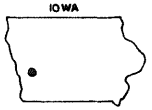
As of October 1982, 32 of the 47 landowners within the lake watershed had applied for RCWP contracts, and 28 contracts had been signed. The 32 contract applications cover 2,902 acres, or 74% of the total watershed area eligible to receive RCWP funding. The 28 signed contracts cover 2,499 acres, or 63% of the eligible watershed area. Since the goal of the Prairie Rose Lake project is to control soil erosion on 80% of the eligible watershed areas, substantial progress in bringing the needed amount of land under contract has already been made. The 28 signed contracts represent a commitment of $288,000 in RCWP funds for cost sharing of practices, out of a total cost share allocation for the project of $446,000. Lands under contract are shown in Figure 2.



PRAIRIE ROSE LAKE WATERSHED

SHELBY COUNTY

IOWA



N

0 ¼ mile ½ ¾ 1 mile

SCALE

LEGEND

- Land under contract to Apply Best Management Practices
- State of Iowa Land (Prairie Rose State Park)

RURAL CLEAN WATER PROJECT

BMP CONTRACTS - Oct 1982

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Designed — Date

Drawn J.T. Cooper

Traced

Checked

Approved by

Title

Title

Sheet No.

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of

6

To date a total of $177,000 in RCWP cost share funds has been paid for installed practices, or about 40% of the total funds available for this purpose in the Prairie Rose Project. Although federal regulations allow RCWP projects to continue for up to 15 years, the current rate of progress in the Prairie Rose project indicates this project will achieve its stated goals in 5 years or less. Additional information with regards to project needs, goals and accomplishments (RCWP-3), monthly progress report (ACP-305), fund sources and estimated costs (RCWP-5) and the RCWP status report (RCWP-7) can be found in Appendix H.

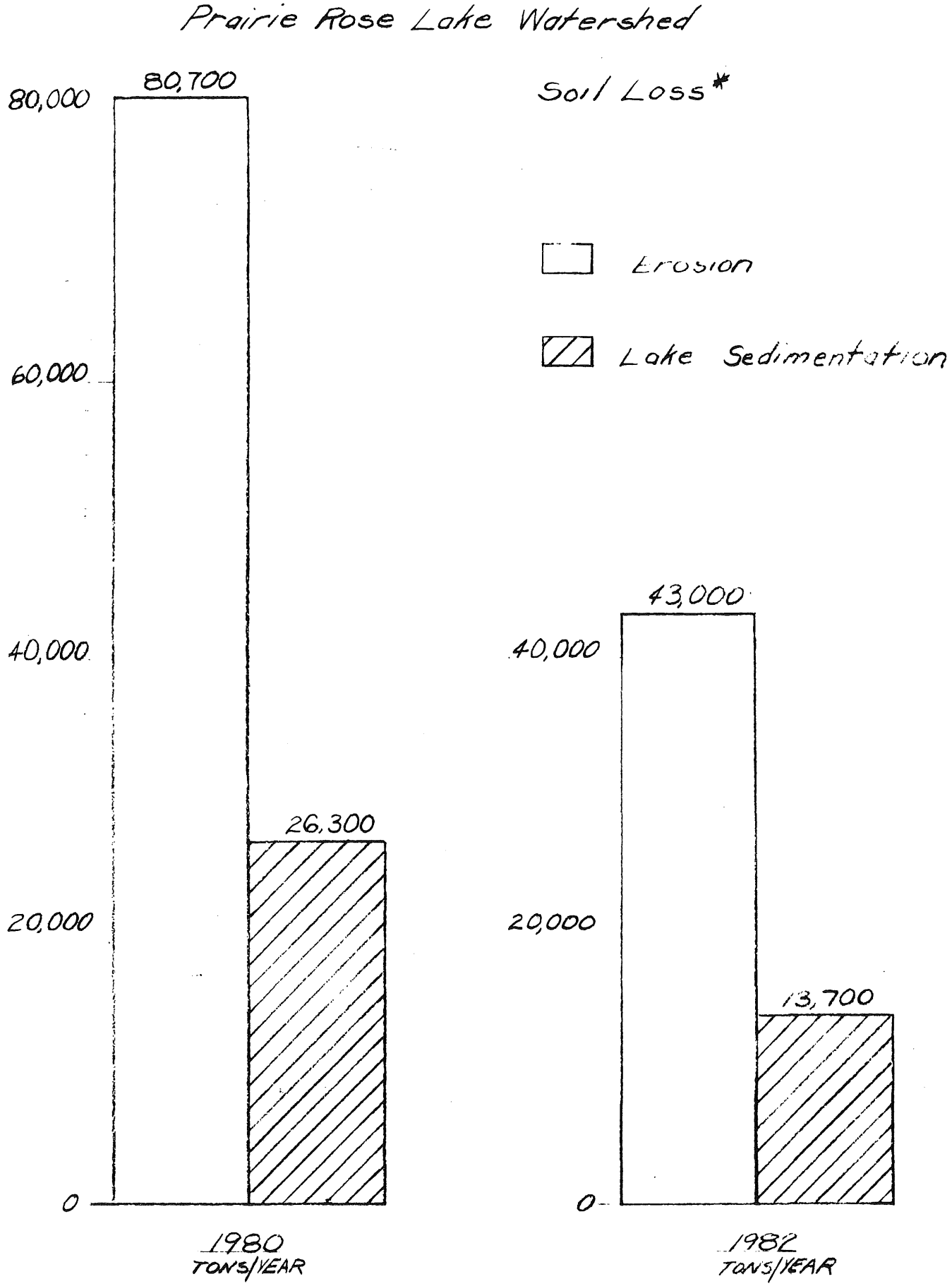
WATER QUALITY ANALYSIS

Through the implementation of the above practices and non-cost shared management practices such as crop residue use, contouring and improved field drainage (tile), soil losses have already been reduced from 80,752 tons per year to 42,933 tons per year (information provided by the Shelby County Soil Conservation District). If a 32% sediment delivery ratio (used in the work plan) is assumed, the annual rate of sediment per year delivered to the lake has been reduced from 26,330 tons to 13,738 tons or almost a 50% reduction (Figure 3). As a result of controlling soil erosion, a parallel reduction in sediment-associated nutrients and pesticides, has also been achieved. The implementation of the nutrients and integrated pesticide management programs should reduce pollutant loads even further. These programs are being accepted by area farmers and can be expected to yield future water quality benefits. Appendix I shows the increase in cooperators and acres covered as well as the decrease in average application of nitrogen fertilizer between 1981 and 1982.

In conjunction with the practices implemented under the RCWP project, several other activites have been undertaken to improve lake quality. During 1982, the Shelby County Board of Supervisors completed reconstruction of a road adjacent to the lake. As part of the reconstruction, a bridge spanning the upper arm of the lake was replaced by a box-inlet culvert. This structure will temporarily impound runoff from the sub-watershed above the road, thereby allowing soil particles to settle out before runoff enters the lake.

The Iowa Conservation Commission initiated in the fall of 1981 a complete fish renovation project to improve the lake fishing value. A fish restocking program has since been started and preliminary fish population surveys conducted in 1982 indicate success with no undesirable fish species found.

The monitoring strategy being implemented tracks both water quality and "water quality related" data. The "water quality related" information consists of lake attendance, major use activities, fish population inventories, lake bottom profile measurements, and records of the lake physical conditions. Water quality analyses are performed at five in-lake locations from May through September under diverse sampling scenarios, in addition fish and sediment analysis are being performed annually. The sampling schedule, parameters and locations are provided in Appendix J; a more complete delineation of the sampling scheme can be found in the "Prairie Rose Lake Water Quality Monitoring Report - Year 2 (1982)," IDEQ, November 1982. The cooperative agreement for monitoring the project is found in Appendix A.



Soil lost from untreated areas, land below terraces in treated areas, and an estimated one ton per acre from terrace treated areas.

Figure 3

Table 2

Summary of the 1982 Water Quality Sampling Data*

	Site 1 Surface	Site 1 Bottom	Site 2 Surface	Site 2 Bottom	Site 3 Surface	Site 3 Bottom
Field pH	N = 10 X = 8.6 S = .2 R = 8.5-9.0	N = 10 X = 8.9 S = .2 R = 8.5-9.0	N = 10 X = 8.7 S = .3 R = 8.0-9.0	N = 10 X = 8.3 S = .4 R = 7.5-9.0	N = 10 X = 8.7 S = .3 R = 8.0-9.0	N = 10 X = 8.1 S = .5 R = 7.5-9.0
Dissolved Oxygen (mg/l)	N = 10 X = 8.4 S = 1.2 R = 6.0-10.0	N = 10 X = 6.9 S = 1.7 R = 4.0-10.0	N = 10 X = 8.9 S = 1.4 R = 6.0-10.0	N = 10 X = 4.8 S = 2.3 R = 2.0-8.0	N = 10 X = 8.6 S = 1.5 R = 6.0-10.0	N = 10 X = 5.0 S = 2.0 R = 2.0-8.0
Chloro-phyll a (ug/l)	N = 10 X = 12 S = 8 R = 3-29	N = 9 X = 14 S = 7 R = 7-30	N = 9 X = 13 S = 9 R = 3-27	N = 10 X = 16 S = 13 R = 3-43	N = 9 X = 12 S = 7 R = 4-24	N = 9 X = 15 S = 8 R = 4-28
Corrected Chlorophyll a (ug/l)	N = 10 X = 11 S = 8 R = 2-29	N = 9 X = 11 S = 5 R = 7-21	N = 9 X = 12 S = 8 R = 2-26	N = 10 X = 13 S = 11 R = 3-34	N = 9 X = 10 S = 6 R = 4-18	N = 9 X = 11 S = 7 R = 3-24
Total Phosphate mg/l as PO_4	N = 4 X = .21 S = .13 R = .06-.34	N = 4 X = .25 S = .11 R = .12-.34	N = 4 X = .14 S = .09 R = .03-.21	N = 4 X = .17 S = .10 R = .04-.28	N = 4 X = .17 S = .13 R = .03-.34	N = 4 X = .34 S = .19 R = .09-.52
Soluble Phosphate mg/l as PO_4	N = 3 X = .05 S = .02 R = .03-.06	N = 2 X = .03 S = 0 R = .03	N = 2 X = .03 S = 0 R = .03	N = 1 X = .03 S = 0 R = .03	N = 3 X = .03 S = 0 R = .03	N = 2 X = .06 S = .04 R = .03-.09
Turbidity (JTU)	N = 10 X = 7.1 S = 8.8 R = 2.8-32	N = 10 X = 14.7 S = 11.0 R = 4.4-44	N = 10 X = 3.0 S = 1.2 R = 1.5-4.8	N = 10 X = 12.2 S = 6.8 R = 2.1-22	N = 10 X = 2.7 S = 1.1 R = 1.2-4.2	N = 10 X = 10.3 S = 4.6 R = 4.7-16.0
Secchi Transparency (inches)	N = 10 X = 38 S = 15 R = 8-60		N = 10 X = 60 S = 21 R = 36-96		N = 10 X = 74 S = 32 R = 36-120	
Nitrate ($NO_3 + NO_2$) mg/l as N	N = 5 X = 1.9 S = 1.1 R = 0.8-3.6	N = 5 X = 2.1 S = 0.9 R = 0.8-3.0	N = 5 X = 2.0 S = 0.9 R = 0.8-2.9	N = 5 X = 2.0 S = 0.9 R = 0.8-3.0	N = 5 X = 1.8 S = .8 R = 0.8-2.8	N = 5 X = 1.7 S = .6 R = 0.9-2.2
Total Ammonia mg/l as N	N = 4 X = .11 S = .07 R = .06-.21	N = 4 X = .16 S = .17 R = .05-.41	N = 5 X = .09 S = .06 R = .01-.19	N = 5 X = .28 S = .23 R = .02-.57	N = 5 X = .17 S = .23 R = .04-.58	N = 5 X = .34 S = .22 R = .03-.59
Un-ionized Ammonia mg/l as N	N = 4 X = .016 S = .006 R = .011-.025	N = 4 X = .032 S = .011 R = .019-.046	N = 5 X = .014 S = .013 R = .002-.035	N = 5 X = .018 S = .009 R = .005-.027	N = 5 X = .024 S = .018 R = .009-.052	N = 5 X = .012 S = .006 R = .007-.019

* less than values have been deleted in calculations

N = number of samples taken
X = mean
S = standard deviation of the mean
R = range

As a result of the control measures which have been installed, dramatic improvements have been detected in the water quality of Prairie Rose Lake. The most noticeable change in water quality in 1982 relates to water clarity. A decrease in mean surface turbidity of up to 33% and mean bottom turbidity of up to 50% of the 1981 values has been recorded. Corresponding to the decrease in turbidity, secchi transparencies have nearly tripled from those recorded in 1981.

Algal productivity was reduced in 1982 as compared to 1981. The observation of reduced algal productivity in 1982 may be contrary to what one might expect to see with the observed increase in water clarity, since increased light penetration should stimulate algal growth. The reduced levels of algal productivity may be the result of decreasing levels of phosphorus in the lake, since both the total and soluble phosphorus levels observed in 1982 were substantially less than those found in 1981.

Reductions in mean total phosphate in surface and bottom samples ranged from 29-69% of the values observed in 1981. Soluble phosphate concentrations also have shown significant reductions in 1982. Substantially higher nitrate concentrations in the lake have been observed in 1982; however, this can be related to the decrease in algal productivity. A summary of the water quality data collected in accordance with the 1982 monitoring strategy is contained in table 2. General observations regarding 1982 water quality data are provided in Appendix K. More detailed discussion of the water quality data and observed changes can be found in the "Prairie Rose Lake Water Quality Monitoring Report - Year 2 (1982)," IDEQ, October 1982.

Although direct measurement of water quality improvement due to individual BMP implementation is not possible under the present monitoring system design, soil loss calculations (Universal Soil Loss Equation estimates) for the BMP system established in the watershed appears to be correlated with the changes reported in the lake water quality data. Based on the calculated data and assuming a 32% sediment delivery rate to the lake (as assumed in the project work plan), lake loading has been reduced 48% from 26,330 tons to 13,738 tons per year (Figure 3). This would parallel the reductions observed in the sediment-associated water quality parameters. Although reported phosphorus used in the watershed increased almost 50% (from 113,900 lbs to 170,300 lbs, Appendix I) total phosphorus concentrations in the lake decreased; this indicates that sediment retention BMPs as well as proper nutrient management practices have helped eliminate excessive nutrient loss from croplands.

PROJECT STATUS

The RCWP in Shelby County is adequately funded to allow the required 75% participation of eligible producers in the project area. A sum of $446,200 has been allocated to the county for conservation practices required to achieve the water quality goal.

The cost-share rates are set at 75% of cost with producers paying the remaining 25%. The rate has encouraged participation in the project and it appears at least 75% of the producers will participate as required by the RCWP.

Farmer concern for land erosion and pollution of the lake has also encouraged participation in the program. On October 31, 1982, the county reported that $299,766 of the $446,200 available has been approved for cost-share in the area. Of this $299,766 approved for water quality practices, $177,048 of the approvals have been completed and paid to producers in the project area.

Funds are available to support the general water quality monitoring program of this project for calendar years 1983-1985. Several modifications to the monitoring program will be considered when contracts for carrying out the monitoring program are developed. These modifications are identified in "Prairie Rose Lake Monitoring RCWP Project - Year 2 (1982)," October 19, 1982, published by the Iowa Department of Environmental Quality.

APPENDIX A

Cooperative Agreement

AGREEMENT BETWEEN THE

AGRICULTURAL STABILIZATION AND CONSERVATION SERVICE

AND THE

IOWA DEPARTMENT OF ENVIRONMENTAL QUALITY

ARTICLE I. IDENTIFICATION OF PARTIES

This memorandum of agreement is entered into by and between the Agricultural Stabilization and Conservation Service of the United States Department of Agriculture (hereinafter referred to as ASCS) and the Iowa Department of Environmental Quality (hereinafter referred to as DEQ).

ARTICLE II. STATEMENT OF PURPOSE

The purpose of this memorandum of agreement is to establish DEQ's participation in assisting the ASCS in conducting a general water quality monitoring program for the Prairie Rose Lake Rural Clean Water Program (RCWP) project, as required by USDA's RCWP regulations (7 CFR Part 700.40).

ARTICLE III. AUTHORITY

The relevant legal authority is contained in the Agricultural Rural Development and Related Agencies Appropriation Act of 1980 (P. L. 96-108, 93 Stat. 821, 835), 700.40 of the RCWP Regulations, and Chapter 455B of the Code of Iowa.

ARTICLE IV. DEQ COVENANTS

4.1 DEQ will conduct a general water quality monitoring program for the Prairie Rose Lake RCWP project. This monitoring program will be conducted in accordance with the approved monitoring and evaluation plan for the project.

4.2 DEQ will, by November 1 of each year, prepare the water quality monitoring portions of the annual monitoring and evaluation report and provide these to the State ASCS and State SCS offices. The water quality monitoring portions of the report will be prepared in accordance with the requirements of 7 CFR Part 700 paragraph 700.40 and with the format for RCWP General Monitoring and Evaluation Report, as specified in Notice RCWP-17, Exhibit 1, Attachment A (dated 5-11-81).

4.3 DEQ will annually provide to North Carolina State University or to another point if designated by ASCS the water quality sampling data collected during the preceeding twelve month period.

ARTICLE V. ASCS COVENANTS

5.1 ASCS will continue to provide the administration and funding required to accomplish abatement of nonpoint pollution of Prairie Rose Lake through cost-sharing of upland treatment of the project area by installation of necessary BMP's.

5.2 ASCS will assure that RCWP is coordinated with other related conservation and farm programs.

5.3 ASCS, with the assistance of other Federal and State agencies and the Local Coordinating Committee, will be responsible for the overall evaluation of the project in improving water quality.

5.4 ASCS will provide DEQ copies of necessary regulations and handbooks for the RCWP program.

ARTICLE VI. AMENDMENT

In order to be valid, any amendment of this agreement, or change in the conditions or terms of this agreement must be in writing and signed by the officials designated in Article VIII of this agreement.

ARTICLE VII. TIME OF PERFORMANCE

7.1 This memorandum of agreement shall commence as of the date of execution by both parties and shall terminate on the date the Prairie Rose Lake RCWP project is either completed or terminated, unless this agreement is terminated prior to that date in accordance with the provisions of Articles 7.2 or 7.3.

7.2 This memorandum of agreement shall terminate 60 days after either party provides the other party with written notice of intent to terminate.

7.3 This memorandum of understanding shall terminate at the end of a federal fiscal year in the event DEQ has not received sufficient funds to continue the sample analysis and report development functions of the Prairie Rose Lake RCWP project monitoring program for the following fiscal year.

ARTICLE VIII. DESIGNATION OF OFFICIALS

8.1 ASCS - The Chairman of the State Coordinating Committee (SCC) and the Local Coordinating Committee (LCC) or their designees are the officials authorized to execute any changes in terms or conditions specified in this agreement.

8.2 DEQ - The Executive Director or his designee is the DEQ official authorized to execute any changes in the terms or conditions specified in this agreement.

ARTICLE IX. CONSIDERATION

This agreement is entered into for the benefit of both parties and no monetary consideration is herein contained. The parties acknowledge that they are entering this agreement solely on the basis of the terms and conditions herein contained and not in reliance upon any representation, statement, inducement or promise whether oral or written, not contained herein.

IN WITNESS THEREOF, the parties have executed this memorandum of agreement on the day and year last specified below.

AGRICULTURAL STABILIZATION AND CONSERVATION SERVICE

BY: George Tankel
Chairman, LCC

DATE: 6-26-81

BY: Graydon "Hoyle" Sudduth
Chairman, SCC

DATE: 6-29-81

DEPARTMENT OF ENVIRONMENTAL QUALITY

BY: Tony Clarke

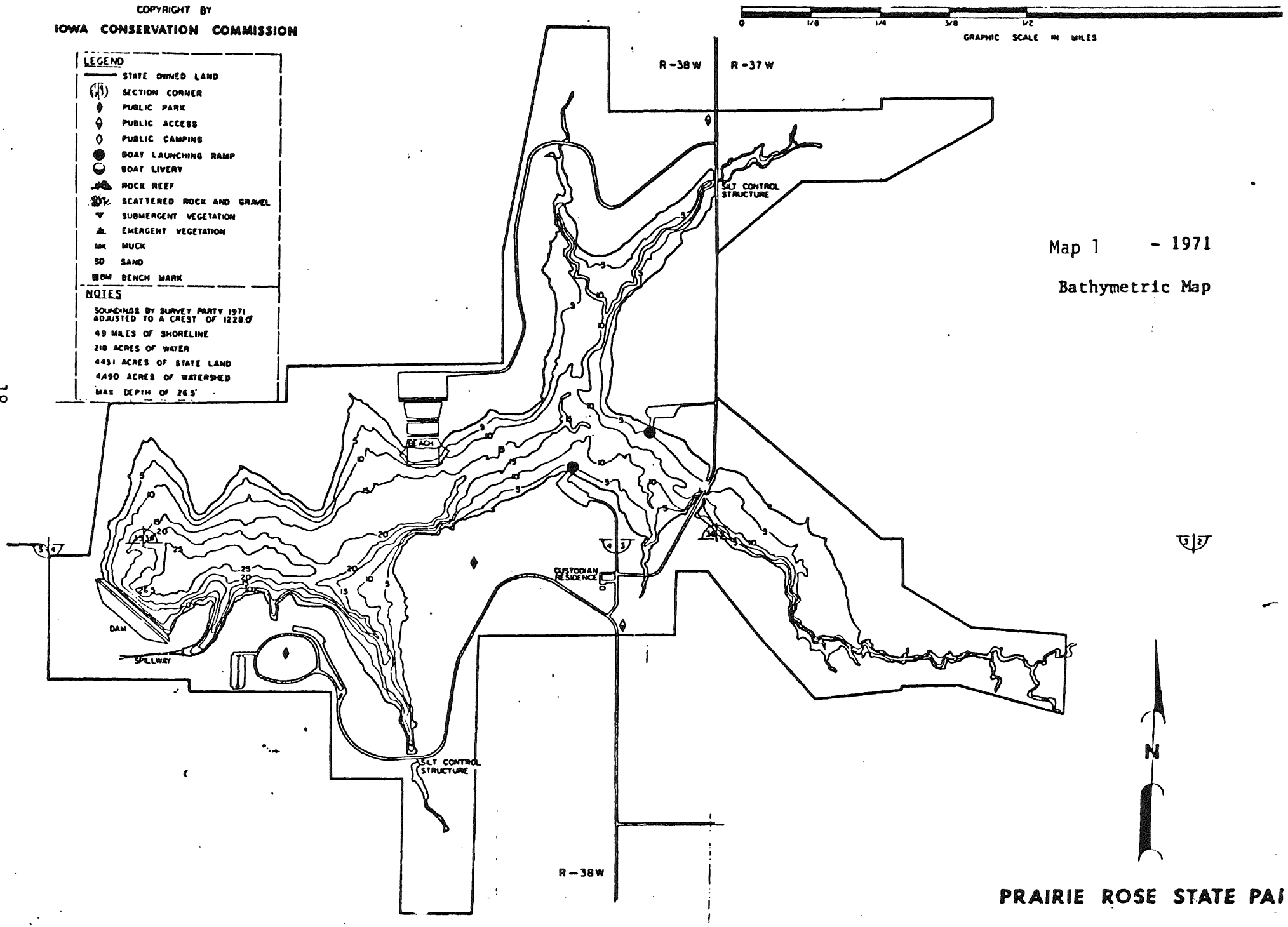
DATE: June 23, 1981

APPENDIX B

Comparison of Bathymetric Maps

Comparison of 1971 and 1980 Bathymetric Maps

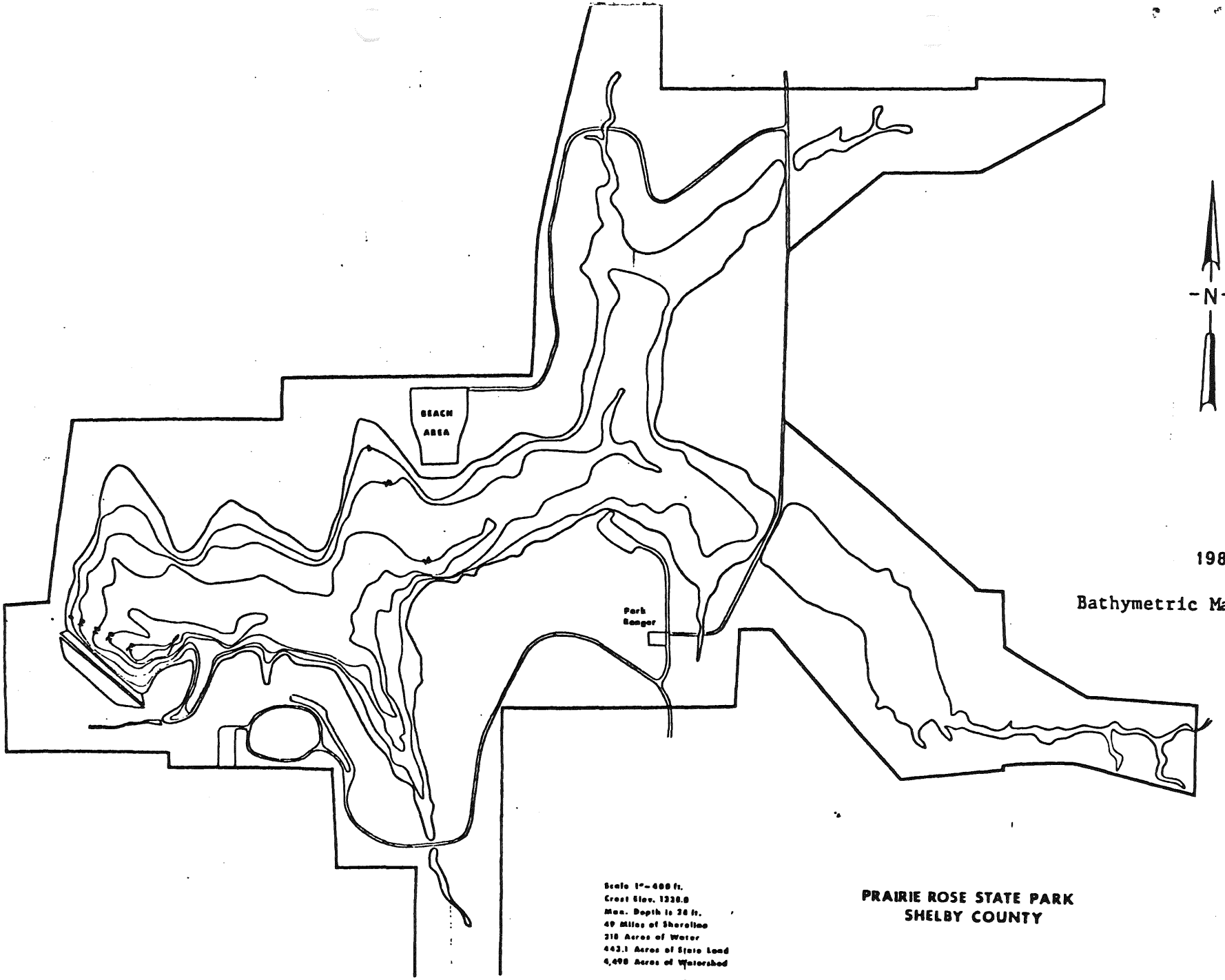
Lake Area (refer to Map 3)	1980 Characteristics	1971 Characteristics
1	depths of entire area less than 5 feet	some areas over 10 feet deep
2	all depths less than 10 feet	some areas over 10 feet deep
3	maximum depth less than 15 feet	maximum depth less than 20 feet
4	maximum depth $\leq$ 15 feet	maximum depth $\leq$ 20 feet
5	deepest site in lake is 24 feet	deepest site is 26.5 feet
5	15 foot contour line extends from the dam to the east end of the beach	15 foot contour line extends through entire area
5	20 foot contour line is limited to a small area near the dam	20 foot contour line extends from dam to the east edge of the beach
5	24 foot contour line, the deep hole of the lake, is limited to a very small area near the dam	25 foot contour line extends from dam to one-half the distance to the beach



Map 1 - 1971

Bathymetric Map

PRAIRIE ROSE STATE PAI

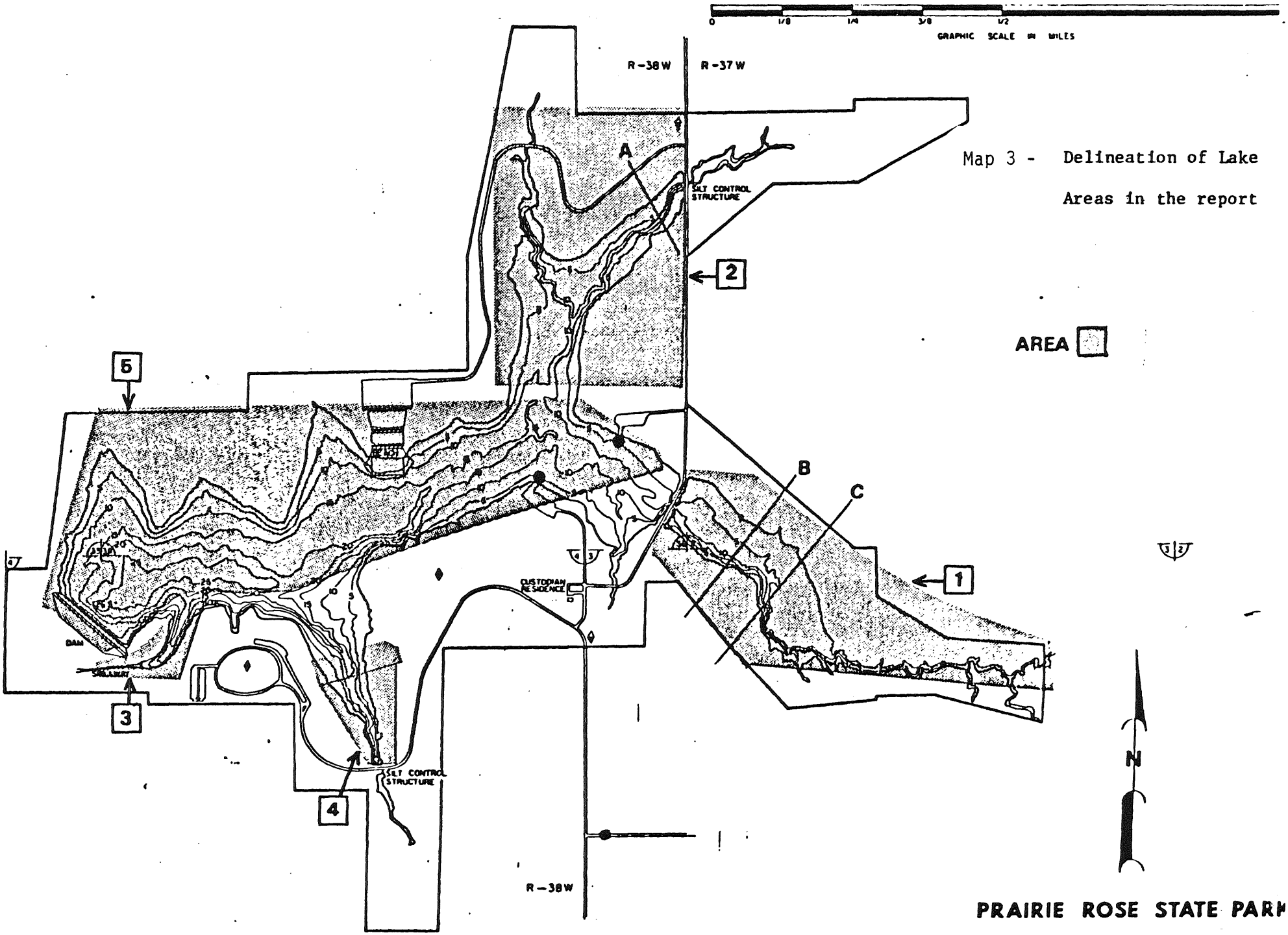


1980

Bathymetric Map

Scale 1"=400 ft.
Crest Elev. 1230.8
Max. Depth is 26 ft.
49 Miles of Shoreline
218 Acres of Water
443.1 Acres of State Land
4,498 Acres of Watershed

PRAIRIE ROSE STATE PARK
SHELBY COUNTY



Map 3 - Delineation of Lake Areas in the report

PRAIRIE ROSE STATE PARK

SHELBY COUNTY

APPENDIX C

Total Fisheries Renovation

Total Fisheries Renovation (Complete Fishkill) Prairie Rose Lake
15 September 81

Species	No.	% of Total by No.	No/Acre	$\bar{w}$ Wt (oz)	Total Weight (lbs)	% of Total by Wt.	Lbs/Acre
Gizzard Shad	936,224	87.1	4,589.3	1.8	105,325.2	72.3	516.3
Carp	25,889	2.4	126.9	12.4	20,064.0	14.0	98.4
Crappie	97,327	9.0	477.1	2.2	13,382.4	9.3	65.6
Bullhead	11,190	1.0	54.9	4.2	2,937.6	2.0	14.4
Channel Catfish	639	0.06	3.1	36.8	1,468.8	1.0	7.2
Bluegill	3,262	0.3	16.0	1.8	367.2	0.3	1.8
Largemouth Bass	397	0.04	1.9	11.5	285.6	0.2	1.4
Other (W. Amur, G. Sun., Goldfish, etc.)	284	0.03	1.4	---	40.8	0.03	0.2
	1,075,212		3,783.2		143,871.6		705.3

APPENDIX D

Annual User Information

PARK USE	1981 User totals	1982 User totals
Fishing		
from boats	6,427	875
shore or ice fishing	14,521	5,250
Swimming	55,279	70,000
Pleasure boating	815	200
Hunting	--	--
Picnicking, camping, other activities prompted by the lake presence	38,602	27,435
Snowmobiling	349	25
Ice skating and cross-country skiing	349	10

Park user figures according to the park ranger are provided for the periods from May to September 1981 and 1982. The Iowa Conservation Commission has indicated that the percentage of each user activity for the 1980 and 1981 remained basically unchanged except for the fishing which dropped from 29% of the total use to 18% in 1981. A further drop can be observed for 1982; this is due to the total fisheries (fishkill) renovation which occurred in the fall of 1981. An increase, however, in swimming use can be observed for 1982 indicating a possible improvement in lake aesthetics.

APPENDIX E

Best Management Practices

Number and Amounts of Best Management Practices
needed in Prairie Rose Lake Watershed

PRACTICE	UNIT	TOTAL NEED AMOUNT	PROJECT GOAL AMOUNT
Conservation Tillage	Acres	3,648	3,170
Contour Farming	Acres	3,648	3,170
Pasture Management	Acres	148	118
Permanent Vegetative Cover	Acres	30	25
Diversions	Feet	5,000	3,000
Grade Stabilization Structures	Number	8	6
Grassed Waterways and Outlets	Acres	30	24
Terraces	Mile	100	80
Animal Waste Control System	Number	8	6
Nutrient & (Fertilizer)	Acres	3,648	3,170
Integrated Pesticide Management	Acres	3,648	3,170

APPENDIX F

Watershed Characterization Information

WATERSHED CHARACTERIZATION

A. Land use in project area

Land Use	Acres	%
Cropland	3,648	79
Pastureland	148	3
Prairie Rose State Park	648	14
Farmsteads	120	3
Roads	42	>1
Woodland	4	>1
	4,610	100

B. Major crops and acreages (1981)

	Prairie Rose Lake Watershed*			Shelby County*	
	Crop	Acreage	%	Acreage	%
	Corn	2,300	63	190,000	61%
	Soybeans	828	23	77,300	25%
	Small Grains	220	6	25,000	8%
	Hay	300	8	19,800	6%
Total	Cropland	3,648	100	312,100	100%

*Praire Rose figures are determined from analysis of slides. County figures are taken from Iowa Agricultural Statistics for 1981.

C. Average yields of major crops**

Year	Oats	Hay	Corn	Soybeans	Alfalfa
1981	66.4	3.4T	102.5	43.7	4.3T
1980	56.4		87.4	36.5	
1979	67.8		126.1	40.6	
1978	63.2	Estimate 3.25 Ton	118.9	43.1	3.5T
1977	63.0*		89.0*	35*	
1976	64.5		77.7	29.6	
1975	58.4		77.3	35.3	Estimate 3.75 Ton

*Estimate

**From Iowa Crop & Livestock Reporting Service

D . Quanity of N,P,& K sold, or used in project area.*

TOTAL NUTRIENTS IN WATERSHED FOR 1981 (pounds)

	NITROGEN (N)	PHOSPHORUS (P_2O_5)	POTASSIUM (K_2O)
Corn	271,400	80,500	66,700
Soybeans	107	21,528	24,012
Oats	9,020	4,180	5,500
Hay		7,500	8,400
Pasture	6,600	192	192
TOTAL	287,187	113,900	104,804

TOTAL NUTRIENTS IN WATERSHED FOR 1982 (pounds)

	NITROGEN (N)	PHOSPHORUS (P_2O_5)	POTASSIUM (K_2O)
Corn	259,900	101,200	75,900
Soybeans	3,312	45,540	43,884
Oats	13,200	11,000	9,900
Hay	600	9,600	11,400
Pasture	2,960	2,960	0
Total	279,972	170,300	141,084

*Data From Field Study by Iowa State University Extension Service

E. Climatic description

Shelby county has a humid to subhumid and continental climate with summer temperatures averaging 72.5°F and winter months averaging 22.8°F. The frost-free season is 152 days with the last killing frost occurring approximately May 4 and the first about October 4.

More than half the annual precipitation occurs during the growing season. Summer precipitation is characterized by gentle rainfalls covering large areas or short, heavy showers accompanied by thunderstorms that occur in localized areas.

In the summer, prevailing winds occur from the southwest; winter winds are northwesterly. Occasional strong winds in the winter will blow from the north and northwest and cause moderate snowstorms or blizzards.

The accompanying table provides average temperature and precipitation on a monthly and seasonal basis for the project areas.

—*Temperature and precipitation at Harlan, Shelby County, Iowa*

[Elevation, 1,200 feet]

Month	Temperature [1]			Precipitation [2]			
	Average	Absolute maximum	Absolute minimum	Average	Driest year (1894)	Wettest year (1896)	Average snowfall
	°F.	°F.	°F.	*Inches*	*Inches*	*Inches*	*Inches*
December	24.6	68	−23	0.84	1.24	0.45	4.3
January	20.3	68	−26	.78	.37	.10	8.2
February	23.4	65	−26	.91	.31	.23	5.2
Winter	22.8	68	−26	2.53	1.92	.78	17.7
March	37.4	85	−21	1.23	.62	1.01	6.8
April	50.0	90	4	2.36	4.48	8.16	1.7
May	60.5	106	27	3.59	1.03	8.06	.1
Spring	49.3	106	−21	7.18	6.13	17.23	8.6
June	69.8	107	37	4.48	2.69	4.81	[3]
July	75.0	114	42	3.56	1.31	8.05	0
August	72.7	111	38	3.92	1.63	3.82	0
Summer	72.5	114	37	11.96	5.63	16.68	[3]
September	64.6	103	25	3.82	2.94	4.62	[3]
October	52.5	91	16	2.20	2.71	3.17	.3
November	37.2	79	−16	1.46	.26	2.55	2.9
Fall	51.4	103	−16	7.48	5.91	10.34	3.2
Year	49.0	114	−26	29.15	19.59	45.03	29.5

[1] Average temperature based on a 56-year record, through 1955; maximum and minimum temperatures based on a 22-year record, through 1952.

[2] Average precipitation based on a 64-year record, through 1955; wettest and driest years based on a 64-year record, in the period 1890–1955; snowfall based on a 21-year record, through 1952.

[3] Trace.

APPENDIX G

BMP 15 and 16 Information

Iowa State University Extension Service
Plan of Work BMP 15, BMP 16 Implementation
October 1, 1982 to September 30, 1983

Rural Clean Water Program
Prairie Rose Lake, Shelby County, Iowa

Major changes in the plan of work are not anticipated for FY 83 for the Prairie Rose Lake - Rural Clean Water Program Project. Increased emphasis, however, will be given in the following areas:

1. Cooperator Contracts. Increased numbers of cooperators and acreage will be attained in FY 83 in order to help achieve the goal of 75 percent participation by 1986.

2. Pest Monitoring. Increased monitoring and analysis of continuous corn acres in order to accurately recommend reduced pesticide treatments for:

   a. Corn rootworm
   b. Black cutworm
   c. European corn borer

3. Fertilizer Management. Additional soil sampling in new cooperators' fields and follow-up sampling in past cooperators' fields with resultant specific field recommendations for fertility management in order to apply only needed amounts of nutrients.

4. Communication. Continued use of Prairie Rose Lake Newsletter for BMP 15 and 16 cooperators, twilight meetings, conservation tillage meeting, and crop production meetings for participants; introduction of the new Agricultural Infodata Service (AIDS) over public television to cooperators in order to create an awareness of current pest/weather/crop/market information in Iowa.

5. Publicity. Increased publicity in local media (newspaper and radio) showing economic benefits of implementing BMPs 15 and 16 in the Prairie Rose Lake Project.

Iowa State University Extension Service
Annual Narrative Progress Report BMP 15 and BMP 16
October 1, 1981 to September 30, 1982

Rural Clean Water Program
Prairie Rose Lake, Shelby County, Iowa

Introduction

As part of the Rural Clean Water Program (RCWP), farmers residing in the Prairie Rose Lake (PRL) watershed area in Shelby County, Iowa, have made a commitment to reduce soil, chemical and nutrient losses from their land in order to improve the overall water quality of the lake located in their watershed. Farmers in the PRL Watershed Project are crop and livestock producers attempting to both maximize their financial returns and yet fulfill their commitments to various aspects of this project.

Program Accomplishments

The following activities involving BMP 15 (fertilizer management) and BMP 16 (integrated pest management) are highlights of the accomplishments incurred in FY 82 in the PRL-RCWP Project.

1. Cooperator Participation. An increased number of contacts implementing BMPs 15 and 16 were signed for 1982. The number of cooperators rose from 18 in 1981 to 23 in 1982.

2. Acreage. An increased number of acres under BMPs 15 and 16 were realized in 1982. Acreage rose from 1,633 in 1981 to 2,015 in 1982. This represents an increase from 43 percent in 1981 to 53 percent of the 3,796 acres in the PRL watershed.

3. Soil Sampling. Soil samples were taken from cooperators' fields in the fall of 1981 and analyzed by (a) the ISU Soil Testing Laboratory and (b) an independent soil testing service in the midwest. Specific fertility recommendations were provided to each cooperator in an individual meeting. A comparison of a sample of these recommendations showed that the typical PRL cooperator saved between $16.05 - $33.75 (average $22.13) per acre by utilizing the specific Iowa State University fertility recommendations (as opposed to recommendations provided by independent soil testing laboratories).

4. Nutrient Use in PRL Watershed. The estimated total amount of nutrients (pounds P_2O_5, N, K_2O) applied in PRL watershed declined from 571, 387 pounts in 1981 to 528,860 pounds in 1982. This is a reduction of approximately 8 percent from 1981 to 1982.

Total nutrients on BMP 15 and 16 acres, however, rose from 224,224 pounds (on 1,633 acres) in 1981 to 306,479 pounds (on 2,015 acres) in 1982. This increase in nutrients applied is because (a) increased acreage from 1981 and 1982 and (b) increased (justified) use of P_2O_5 and K_2O. A decrease in nitrogen use from 118 to 113 pounds per acre, however, was realized in 1982.

Increased nutrient use, however, will help allow PRL cooperators to attain optimum yeild and maximize profits by more efficient use of fertilizers and dollar inputs. An added benefit of increased P_2O_5 and K_2O use in cooperators' fields will be increased amounts of residue after harvest.

5. Pesticide Use. Field monitoring of corn rootworm beetles in 1981 on continuous corn showed that all planting-time applications of rootworm insecticides were justified in 1982 because of economic beetle populations. Approximately 29 percent (352 acres) of the corn acres were treated with planting-time insecticides in 1982.

6. Educational Programs. The following programs were held in Shelby County in FY 82: (a) November-December, 1982 - individual PRL cooperator/extension meeting on fertility management and recommendations; (b) February, 1982 - Shelby County conservation tillage meeting; (c) February, 1982 - Shelby County crop production meeting; (d) June, 1982 - Shelby County conservation tillage tour with stops on PRL Project cooperators' fields.

7. Communication With Cooperators. A newsletter for PRL cooperators was initiated in 1982. Seven (7) mailings were made which resulted in 203 extension/client contacts.

8. Cooperator Evaluations. PRL cooperators were surveyed in October, 1982, in order to help evaluate the RCWP Project. As a result of participation in BMPs 15 and 16, over 33 percent of the cooperators indicated that they had learned more about tillage, 22 percent had learned more about better pesticide selection, and 11 percent had learned more about proper pest identification and better pesticide use patterns, such as rates, timing, etc.

   More than 55 percent of the cooperators had voluntarily checked or monitored additional fields on their own farm for pests which were being monitored in the IPM fields.

   Approximately 25 percent of the cooperators felt that the IPM Program had saved them money ($18/acre).

APPENDIX H

CEP-25R, RCWP-3, RCWP-4, RCWP-5 and RCWP-7

IOWA

PROJECT/COUNTY	CURRENT FISCAL YEAR ACTIVITY				CUMULATIVE FROM INCEPTION			
	OUTSTANDING APPROVALS	NUMBER OF CONTRACTS APPROVED	NUMBER OF REQUESTS PENDING	VALUE OF REQUESTS PENDING	ALLOCATION	TOTAL AMOUNT APPROVED	PERFORMANCE AMOUNT APPROVED	PERFORMANCE AMOUNT EARNED
	-11-	-12-	-13-	-14-	-15-	-16-	-17-	-18-
005-PRAIRIE ROSE LAKE	111,093	5	0	24,000	446,200	288,141	177,048	177,048

RCWP-3
(8-24-82)

U.S. DEPARTMENT OF AGRICULTURE
Agricultural Stabilization and Conservation Service

RCWP PROJECT NEEDS, GOALS AND ACCOMPLISHMENTS

1. PROJECT NAME: PRAIRIE ROSE LAKE

2. STATE: Iowa

3. COUNTY: Shelby

4. CRITICAL ACRES *: 3920

ACTIVITY	TOTAL NEEDS	GOALS **	FISCAL YEAR ENDING 1982 GOALS	FISCAL YEAR ENDING 1982 ACCOMPL.	CUMULATIVE ACCOMPL.	FISCAL YEAR 1983 GOALS
5	6	7	8	9	10	11
A. Treatment Needs 1) Acres needing treatment	3962	3170	329		2000 ***	
2) Sources needing treatment a) Dairies (no.)						
b) Feedlots (no.)	8	6	1	-	0	1
c) Cropland	3648	2917	317	1267	1895	-
d) Pasture	148	111	20	47	50	0
e) Farmstead	120	95	20	20	55	5
f) Roads	42	-	-	-	-	-
& Woodlands	4	4	-	-	-	-
B. RCWP Contracts Number	47	37	6	10	28	3

12. REMARKS

* Road excluded from this total.
** Goals set at 80% of need.
*** Estimate 80% of work done on contracts signed.

We have 59% of the land owners signed up for the program. They own 64% of the land in the critical area. We still believe that the project goals are attainable. The project needs to be seen to be appreciated. The BMP's applied are very visible and impressive from the lake area.

SIGNATURE (ASCS County Executive Director)	DATE	SIGNATURE (SCS District Conservationist)	DATE
Leon Brandsma	10-7-82	C Merle Lowe	10-7-82

RCWP-4
(6-24-80)

U. S. DEPARTMENT OF AGRICULTURE
Agricultural Stabilization and Conservation Service

RCWP ESTIMATED BMP COSTS

PROJECT: Prairie Rose Lake, Shelby County

STATE: Iowa

ITEM	UNIT	TOTAL BMP COSTS				BMP COST SHARES			TECHNICAL ASSISTANCE							
											SCS		FS		SEA		OTHER	
	A	NO. OF UNITS B	INSTALLATION COST PER UNIT C	TOTAL COST (Thousands) D	C/S LEVEL E	RCAP F	FARMER G	OTHER H	HOUR FACTOR I	TOTAL HOURS J	HOURS K	COST L	HOURS M	COST N	HOURS O	COST P	HOURS Q	COST R
1. RCWP Plan of Work and Annual Review	Hours																	
2. Water Quality Plans a. Development	Farms	37							20	740	740	7,680						
b. Revisions	WQ Plans	57							3.6	205	205	2,127						
c. Annual Status Review	WQ Plans	222							2	444	444	4,608						
3. CODE: a. BMP- 1	Ac.	111	30	3,330		2,497	833		4	444	444	4,608						
b. BMP- 2	No.	6	4,000	24,000		18,000	6,000		60	360	360	3,736						
c. BMP- 4	Mile	75	5,280	396,000		297,000	99,000		70	5,250	5,250	54,488						
d. BMP- 5	Ft.	2,000	90	1,800		1,350	450		0.013	26	26	270						
e. BMP- 7	Ac.	20	3,375	67,500		50,625	16,875		8	160	160	1,660						
f. BMP- 9	Ac.	2,100	20	42,000		31,500	10,500		0.15	315	315	3,269						
g. BMP- 11	Ac.	10	30	300		210	90											
h. BMP- 12	No.	6	10,000	60,000		45,000	15,000											
i. BMP- 15	Ac.	3,170				0	0		0.72	2,281					2,281	24,347		
j. BMP- 16	Ac.	3,170				0	0		0.72	2,281					2,281	24,347		
k. BMP-																		
l. BMP-																		
m. BMP-																		
n. BMP-																		
o. BMP-																		
p. BMP-																		
q. BMP-																		
r. BMP-																		
s. BMP-																		
t. BMP-																		
Project Totals				694,930		446,182	148,748		--	12,506	7,944	82,445			4,562	48,694		

RCWP-5

U.S. DEPARTMENT OF AGRICULTURE
Agricultural Stabilization and Conservation Service

FUND SOURCES AND ESTIMATED COSTS OF RCWP PROJECTS

Project: Prairie Rose, Shelby County

State: Iowa

SOURCE OF FUNDS	FARMER A	ASCS B	SEA C	SCS D	FS E	ESCS F	EPA G	STATE H	OTHER I	RCWP J	OTHER K	PROJECT L
1. BMP												
a. RCWP		446,182								446,182		
b. Other	148,748										148,748	
c. Totals	148,748	446,182										594,930
2. I & E												
a. RCWP			18,750							18,750		
b. Other												
c. Totals			18,750									18,750
3. Technical Assistance												
a. RCWP			48,694	82,446						131,140		
b. Other												
c. Totals			48,694	82,446								131,140
4. Monitoring and Eval.												
a. RCWP[1/]												
b. Other												
c. Totals												
Grand Totals	148,748	446,182	67,444	82,446						596,072	148,748	744,820

RCWP-7
(11-25-81)

U. S. DEPARTMENT OF AGRICULTURE
Agricultural Stabilization and Conservation Service

RCWP STATUS REPORT

1. STATE: IOWA
2. COUNTY NAME: Shelby
3. PROJECT NAME: Prairie Rose Lake
4. NO. IN CRITICAL AREA — A. FARMS: 44 — B. ACRES: 3920
5. BMP FUNDS APPROVED FOR PROJECT: $446,200

MONTH	NO. OF RCWP-1's FILED	NO. PRIORITIES ESTABLISHED		NO. RCWP-1's TRANSFERRED TO SCS	NO. WQ PLANS PREPARED AND RETURNED TO ASCS	NO. OF RCWP-2's APPD. BY COC	NO. CANCELLED BY ASCS		NO. RCWP-1's WITHDRAWN BY APPLICANT	CRITICAL ACRES UNDER CONTRACT		FUNDS UNDER CONTRACT	
		HIGH	LOW				RCWP-1's	RCWP-2's		ACRES	PERCENT	AMOUNT	PERCENT
6	7	8	9	10	11	12	13	14	15	16	17	18	19
Cumulative to Date	29	29		29	25	23	0	0	0	2241	57	267,593	60
OCT	2	2		2	0	2	0	0	0	120		9,623	
NOV	0	0		0	1	1	0	0	0	80		4,062	
DEC	0	0		0	1	1	0	0	0	45		3,863	
JAN	0	0		0	0	0	0	0	0	0		0	
FEB	0	0		0	0	0	0	0	0	0		0	
MAR	1	1		1	0	0	0	0	0	0		900	
APR	0	0		0	1	1	0	0	0	13		2,100	
MAY	0	0		0	0	0	0	0	0	0		0	
JUN	0	0		0	0	0	0	0	0	0		0	
JUL	0	0		0	0	0	0	0	0	0		0	
AUG	0	0		0	0	0	0	0	0	0		0	
SEP	0	0		0	0	0	0	0	0	0		0	
Total to Date	32	32		32	28	28	0	0	0	2499	64	288,141	65

20. REMARKS

21. VERIFIED AND APPROVED BY: *(Signature)* Leon Brandsma

TITLE: County Executive Director

DATE: 10-4-82

APPENDIX I

IPM and Nutrient Management Acres

TOTAL IPM AND NUTRIENT MANAGEMENT ACRES FOR 1981 (18 Cooperators)

Corn - 1039
Soybeans - 307
Oats - 102
Hay - 138
Pasture - 47
Total - 1633

	NUTRIENT TOTALS		AVERAGE LBS. USED
N	Corn	122,602	118
	Soybeans	40	.13
	Oats	4,182	41
	Hay	0	0
	Pasture	2,115	45
	Total	128,939	
P_2O_5	Corn	36,365	35
	Soybeans	7,982	26
	Oats	1,938	19
	Hay	3,450	25
	Pasture	61	1.3
	Total	49,796	
K_2O	Corn	30,131	29
	Soybeans	8,903	29
	Oats	2,550	25
	Hay	3,864	28
	Pasture	61	1.3
	Total	45,509	

TOTAL IPM AND NUTRIENT MANAGEMENT ACRES FOR 1982 (23 Cooperators)

	Acres Scouted
Corn - 1194	Corn - 807
Soybeans - 536	Soybeans - 132
Oats - 25	Oats - 18
Hay - 166	Total - 957
Pasture - 94	
Total - 2015	

NUTRIENT TOTALS			AVERAGE LBS. USED
N	Corn	134,922	113
	Soybeans	2,144	4
	Oats	1,500	60
	Hay	332	2
	Pasture	1,880	20
	Total	140,778	
P_2O_5	Corn	52,536	44
	Soybeans	29,480	55
	Oats	1,250	50
	Hay	5,312	32
	Pasture	1,880	20
	Total	90,458	
K_2O	Corn	39,402	33
	Soybeans	28,408	53
	Oats	1,125	45
	Hay	6,308	38
	Pasture	0	0
	Total	75,243	

1. 352 A. treated with insecticide, 29% of total corn acres.

2. 342.7 a.i. on these acres = .97 lbs. a.i./A average rate---
   but: ranged from .5 to 1.5 a.i./A

3. Nutrient Management: 1955 A. total
   1134 corn - 60 acres of corn IPM only.

APPENDIX J

Sampling Location, Frequency and Parameters

Fixed Schedule Summer Sampling

Sampling Location	Sampling Frequency	Sample Analysis
a) Lake surface and bottom depths at: 1 - upper reach of lake 2 - mid lake 3 - deepest point of lake (near the dam)	Biweekly from May thru September*	Turbidity, chlorophyll-a, *corrected chlorophylla-a, pH, temperature*
b) Same as a	Biweekly from June thru August	Fecal coliform
c) Same as a	Monthly from May thru September**	Total phosphate, ortho-phosphate, nitrate nitrogen, *ammonia-nitrogen, pH, temperature*

* Secchi transparency, wind speed and direction will be measured at the time samples are collected. Secchi transparency will be taken at all three sites. Cloud cover conditions will also be noted.

** Temperature and dissolved oxygen profiles will be measured at each sampling location.

Sample Collection During Periods Lake Water Quality Is Affected By Runoff Conditions*

	Sampling Location	Sampling Frequency	Sample Analysis
a)	Surface and bottom depths at drinking water intake	One rainfall event per year - sample within 24 hours of rainfall ≥ 2 inches during period May-September	Pesticides
b)	Same as a	Same as a	Arsenic, barium, copper
c)	Surface *and bottom* at swimming beach	At intervals of 24 and 48 hours following all rainfall events ≥ 1 inch during period of June-August (Maximum of 7 events will be sampled)	Fecal coliform

* Records of precipitation at lake will be maintained.

BOTTOM SEDIMENT AND FISH ANALYSIS

PARAMETERS	FREQUENCY	LOCATIONS
Pesticides (6-8 compounds including chlorinated hydrocarbons, insecticides, and pesticides)		
a. bottom sediments	annually	(1) upper reach of impoundment (2) mid lake (3) deepest part of lake (near the dam)
b. fish (one sample bottom feeders) (one sample sports fish)	annually	----------
Heavy metals (arsenic, barium, copper)		
a. bottom sediments	annually	(1) upper reach of impoundment (2) mid lake (3) deepest part of lake (near the dam)
b. fish	annually	----------

Fixed Sampling Schedule for Sites #1, #2, and #3 in 1982.

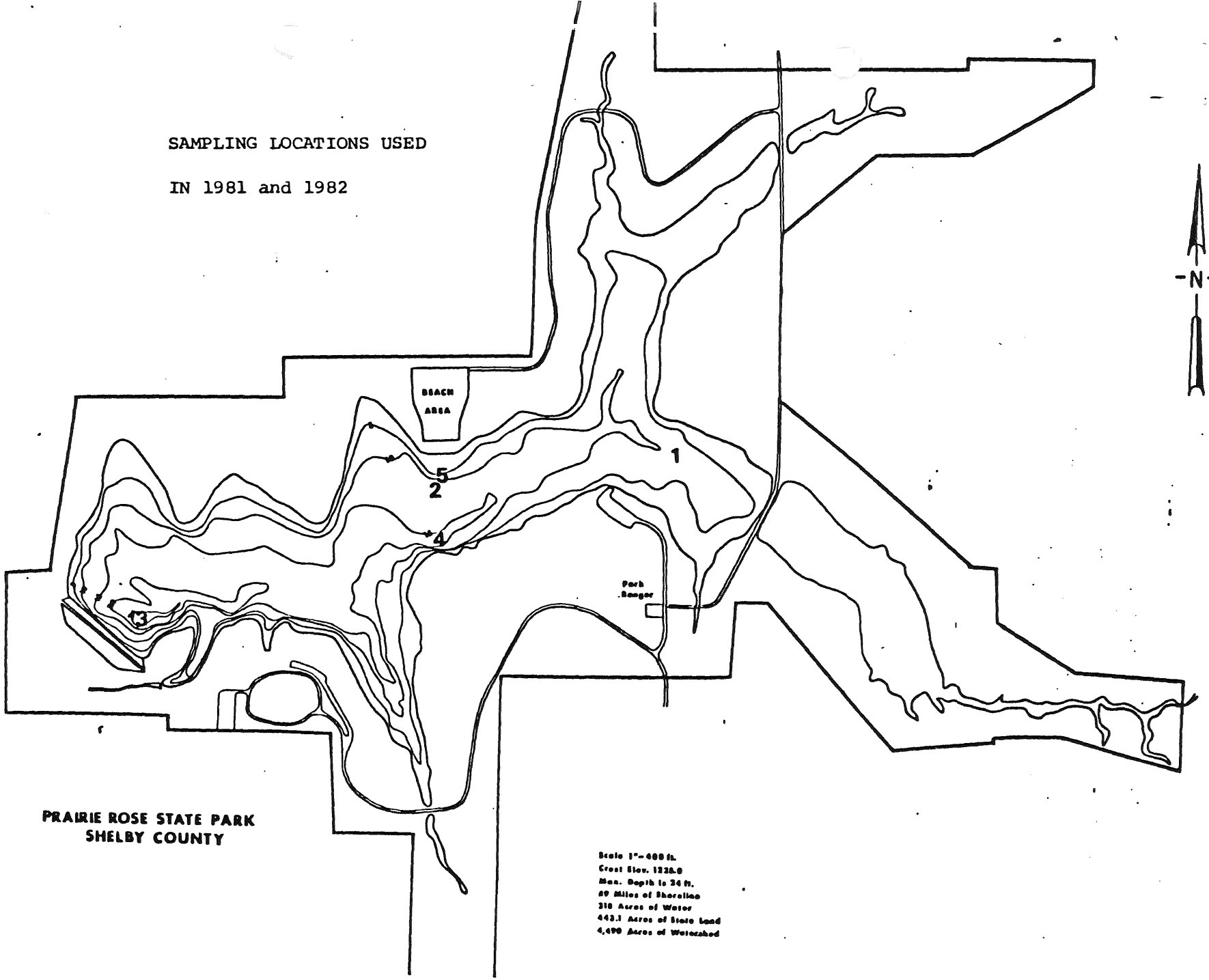
Prairie Rose Lake

May 11	Turbidity, Chlorophyll a, pH, Dissolved Oxygen (DO) and Temp.
May 24	Turbidity, Chlorophyll a, pH, P series, Ammonia and Nitrate N, DO and Temp. profile at site 3
June 14	Turbidity, Chlorophyll a, Fecal coliform (MFC), pH, DO and Temp.
June 28	Turbidity, Chlorophyll a, MFC, pH, P series[1], Ammonia and Nitrate N, DO and Temp. profile at site 3 DUPLICATE[2], BLANK[2]
July 12	Turbidity, Chlorophyll a, MFC, pH, DO and Temp.
July 26	Turbidity, Chlorophyll a, MFC, pH, P series[3], Ammonia and Nitrate N[3], DO and Temp. profile at site 3
August 9	Turbidity, Chlorophyll a, MFC, pH, DO and Temp.
August 23	Turbidity, Chlorophyll a, MFC, pH, P series, Ammonia and Nitrate N, DO and Temp. profile at site 3[4], DUPLICATE[2], BLANK[2]
September 7	Turbidity, Chlorophyll a, pH, DO and Temp.
September 20	Turbidity, Chlorophyll a, pH, P series, Ammonia and Nitrate N, DO and Temp. profile at site 3[4]

1 - not analyzed
2 - quality assurance samples
3 - performed July 12
4 - surface and bottom only

SAMPLING LOCATIONS USED

IN 1981 and 1982



APPENDIX K

General Sampling Parameters

L00580
Site #1
Upper Reach of Impoundment in Shallow Area

DATE	TIME OF DAY	DEPTH (FEET)	WATER TEMP CENT	WATER TEMP FAHN	COLLECT AGENCY CODE	WIND VELOCITY MPH	WIND DIR. FROM NORTH=0	TURB JKSN JTU	TRANSP SECCHI INCHES	DO MG/L	FIELD PH SU	LAB PH SU	ORG N N MG/L	$NH_3 + NH_4$ N TOTAL MG/L	UN-IONIZED NH_3-N MG/L	NO_3-N TOTAL MG/L	T PO4 AS PO4 MG/L	SOL PO4-TOTAL AS PO4 MG/L	FEC COLI MEM-FCBR /100 ML	CHLRPHYL A UG/L	CORR CHL A UG/L
82/05/11	0945	0000	21.0	70	60	6	0	32	8	8.0	9.0									6	5
	0950	0008	21.0	70	60	6	0	44		8.0	9.0									8	7
82/05/24	1050	0000	20.6	69	60	5	225	5.2	32	8.0	8.5			.21	.025	2.3	.34	.06		21	19
	1100	0008	20.0	68	60	5	225	7.6		6.0	8.5			.41	.046	2.2	.34	.03		18	15
82/06/14	0845	0000	21.0	70	60	8	90	3.0	54	6.0	8.5								80	3	2
	0855	0008	21.0	70	60	8	90	4.4		6.0	8.5								20	2K	2K
82/06/28	0955	0000	25.6	78	60	2	90	2.8	60	8.0	8.5			.10	.016	3.6			10K	10	7
	1005	0008	23.9	75	60	2	90	14.0		10.0	9.0			.09	.031	3.0			10K	16	11
82/07/12	0945	0000	27.2	81	60	8	225	3.7	48	10.0	8.5	8.1	.84	.06	.011	1.2	.28	.03	100	6	6
	0950	0008	26.1	79	60	8	225	16.0		8.0	9.0	8.2	.86	.05	.019	2.7	.34	.03	40	7	7
82/07/26	0845	0000	26.7	80	60	5	270	2.9	48	8.0	8.5								30	7	7
	0900	0008	27.2	81	60	5	270	14		6.0	9.0								40	9	7
82/08/09	0910	0000	23.9	75	60	6	0	4.3	36	9.0	9.0								100*	12	11
	0915	0008	24.4	76	60	6	0	9.6		8.0	9.0								300*	10	8
82/08/23	0955	0000	27.8	82	60	4	180	5.5	30	9.0	8.5	7.6		.07	.013	1.5	.15	.06	50	10	8
	1000	0008	25.6	78	60	4	180	12		6.0	9.0	7.6		.09	.033	1.6	.21	.03K	30	12	10
82/09/07	0925	0000	21.7	71	60	7	90	5.5	30	8.0	9.0									20	13
	0930	0008	22.2	72	60	7	90	8.5		7.0	8.5									19	17
82/09/20	0855	0000	16.1	61	60	10	0	6.0	30	10.0	9.0	7.9		.01K		.8	.06	.03K		29	29
	0900	0008	16.7	62	60	10	0	17.0		4.0	9.0	7.9		.01K		.8	.12	.03K		30	21

SITE #1
SEDIMENT SAMPLING

DATE	ARSENIC-SED DRY WGT mg/kg	Ba MUD DRY WGT mg/kg	Cd MUD DRY WGT mg/kg	CHROMIUM DRY WGT mg/kg	COPPER-MUD DRY WGT mg/kg	LEAD DRY WGT mg/kg	NICKEL DRY WGT mg/kg	SILVER DRY WGT mg/kg	ZINC DRY WGT mg/kg	SELENIUM DRY WGT mg/kg	MERCURY DRY WGT mg/kg	DIELDRIN DRY WGT ug/kg
82/07/20	28	280	.40	26	18	12	30	1.0K	83	1.0K	.02	3

L00589
Site #2
At Mid Lake-S of Swimming Beach

DATE	TIME OF DAY	DEPTH (FEET)	WATER TEMP CENT	WATER TEMP FAHN	COLLECT AGENCY CODE	WIND VELOCITY MPH	WIND DIR. FROM NORTH=0	TURB JKSN JTU	TRANSP SECCHI INCHES	DO MG/L	FIELD PH SU	LAB PH SU	ORG N N MG/L	NH_3 + NH_4 N TOTAL MG/L	UN-IONIZED NH_3-N MG/L	NO_3-N TOTAL MG/L	T PO4 AS PO4 MG/L	SOL PO4-TOTAL AS PO4 MG/L	FEC COLI MEM-FCBR /100 ML	CHLRPHYL A UG/L	CORR CHL A UG/L
82/05/11	1010	0000	20.0	68	60	6	0	2.0	72	8.0	9.0									5	3
	1015	0011	18.3	65	60	6	0	2.1		8.0	8.5									4	3
82/05/24	1115	0000	17.2	63	60	5	225	4.4	36	8.0	8.0			.19	.006	1.8	.21	.03		25	22
	1125	0011	15.6	60	60	5	225	8.5		6.0	8.0			.48	.013	2.7	.04	.03K		13	13
82/06/14	0910	0000	20.6	69	60	8	90	2.3	78	8.0	8.5								20	2K	2K
	0915	0011	20.0	68	60	8	90	16.0		6.0	8.0								10	3	3
82/06/28	1015	0000	29.4	85	60	2	90	1.5	96	10.0	9.0			.08	.035	2.9			10K	3	2
	1025	0011	22.2	72	60	2	90	1.3		4.0	8.0			.57	.025	2.0			70	43	34
82/07/12	1010	0000	26.7	80	60	8	225	1.9	72	10.0	8.5	7.9	1.9	.08	.014	2.9	.21	.03	230	5	5
	1015	0011	25.0	77	60	8	225	4.6		6.0	8.5	7.9	2.7	.14	.021	3.0	.28	.03	280	8	7
82/07/26	0910	0000	26.7	80	60	5	270	2.6	66	10.0	8.5								430	11	10
	0915	0011	25.6	78	60	5	270	15.0		2.0	8.0								140	21	16
82/08/09	0930	0000	25.6	78	60	6	0	3.8	42	10.0	9.0								170*	15	13
	0935	0011	24.4	76	60	6	0	22.0		2.0	7.5								1400*	14	14
82/08/23	1020	0000	27.8	82	60	4	180	2.7	66	9.0	8.5	7.9		.08	.014	1.4	.12	.03K	90	9	9
	1025	0011	23.3	74	60	4	180	12.0		3.0	8.5	7.7		.20	.027	1.3	.21	.03K	10	8	5
82/09/07	0935	0000	21.7	71	60	7	90	4.3	36	8.0	9.0									19	18
	0940	0011	22.2	72	60	7	90	7.3		3.0	8.5									13	8
82/09/20	0915	0000	16.1	61	60	10	0	4.8	36	10.0	9.0	7.9		.01	.002	.8	.03	.03K		27	26
	0925	0011	17.2	63	60	10	0	22.0		8.0	9.0	7.9		.02	.005	.8	.15	.03K		32	28

SITE #2
SEDIMENT SAMPLING

DATE	ARSENIC-SED DRY WGT mg/kg	Ba MUD DRY WGT mg/kg	Cd MUD DRY WGT mg/kg	CHROMIUM DRY WGT mg/kg	COPPER-MUD DRY WGT mg/kg	LEAD DRY WGT mg/kg	NICKEL DRY WGT mg/kg	SILVER DRY WGT mg/kg	ZINC DRY WGT mg/kg	SELENIUM DRY WGT mg/kg	MERCURY DRY WGT mg/kg	DIELDRIN DRY WGT ug/kg
82/07/20	25	360	.44	28	24	16	37	.9K	100	.9K	.06	3

L00578
Site #3
In Lake Near Dam

DATE	TIME OF DAY	DEPTH (FEET)	WATER TEMP CENT	WATER TEMP FAHN	COLLECT AGENCY CODE	WIND VELOCITY MPH	WIND DIR. FROM NORTH=0	TURB JKSN JTU	TRANSP SECCHI INCHES	DO MG/L	FIELD PH SU	LAB PH SU	ORG N N MG/L	$NH_3 + NH_4$ N TOTAL MG/L	UN-IONIZED NH_3-N MG/L	NO_3-N TOTAL MG/L	T PO4 AS PO4 MG/L	SOL PO4-TOTAL AS PO4 MG/L	FEC COLI MEM-FCBR /100 ML	CHLRPHYL A UG/L	CORR CHL A UG/L
82/05/11	1030	0000	20.6	69	60	6	0	2.2	84	6.0	9.0									5	4
	1035	0024	18.3	65	60	6	0	4.7		8.0	8.5									8	6
82/05/24	1135	0000	16.7	62	60	5	225	4.2	36	8.0	8.5			.58	.052	1.7	.34	.03		24	18
	1150	0006	17.2	63	60	5	225			6.0	8.5										
	1155	0013	17.2	63	60	5	225			4.0	8.0										
	1145	0024	16.1	61	60	5	225	13.0		6.0	8.0			.59	.017	2.1	.46	.03K		17	14
82/06/14	0930	0000	18.9	66	60	8	90	2.0	108	6.0	8.0								10	3K	3K
	0940	0024	19.4	67	60	8	90	4.7		6.0	8.0								10	2K	2K
82/06/28	1035	0000	29.4	85	60	2	90	1.8	120	10.0	9.0			.07	.031	2.8			10K	5	4
	1040	0006	27.2	81	60	2	90			8.0	9.0										
	1045	0013	25.0	77	60	2	90			8.0	9.0										
	1050	0024	21.7	71	60	2	90	4.7		4.0	8.0			.45	.019	2.2			10K	28	24
82/07/12	1025	0000	25.0	77	60	8	225	1.2	108	10.0	8.5	8.1	1.1	.10	.015	2.5	.21	.03	120	4	4
	1030	0024	22.8	73	60	8	225	13.0		4.0	7.5	7.4	1.6	.40	.006	1.8	.52	.09	70	12	5
82/07/26	0925	0000	26.7	80	60	5	270	1.7	84	10.0	8.5								10K	10	10
	1040	0006	27.2	81	60	5	270			8.0	9.0										
	1045	0013	25.0	77	60	5	270			8.0	9.0										
	0930	0024	23.9	75	60	5	270	12.0		2.0	8.0								10K	21	14
82/08/09	0950	0000	25.0	77	60	6	0	3.7	48	9.0	8.5								50*	12	10
	0955	0024	23.9	75	60	6	0	16.0		2.0	7.5								5000*	4	3
82/08/23	1035	0000	26.7	80	60	4	180	2.6	72	9.0	8.5	7.7		.07	.012	1.4	.12	.03	60	8	6
	1040	0024	23.3	74	60	4	180	15.0		4.0	8.0	7.4		.21	.010	1.3	.30	.03	30*	8	5
82/09/07	0950	0000	21.1	70	60	7	90	3.9	42	9.0	9.0									19	16
	0955	0024	22.2	72	60	7	90	13.0		6.0	8.5									21	15
82/09/20	0935	0000	15.0	59	60	10	0	4.2	36	9.0	9.0	7.9		.04	.009	.8	.03	.03K		19	16
	0945	0024	17.2	63	60	10	0	6.4		8.0	9.0	7.9		.03	.007	.9	.09	.03K		20	17

SITE #3
SEDIMENT SAMPLING

DATE	ARSENIC-SED DRY WGT mg/kg	Ba MUD DRY WGT mg/kg	Cd MUD DRY WGT mg/kg	CHROMIUM DRY WGT mg/kg	COPPER-MUD DRY WGT mg/kg	LEAD DRY WGT mg/kg	NICKEL DRY WGT mg/kg	SILVER DRY WGT mg/kg	ZINC DRY WGT mg/kg	SELENIUM DRY WGT mg/kg	MERCURY DRY WGT mg/kg	DIELDRIN DRY WGT ug/kg
82/07/20	38	340	.42	33	22	19	39	1.1K	230	1.1K	.07	4

L00581
At Drinking Water Intake on
South Side of Lake
Site #4

DATE	DEPTH FEET	TIME OF DAY	ARSENIC As, TOT ug/l	BARIUM Ba, TOT ug/l	COPPER Cu, TOT ug/l	FEC COL1 MFM-FCBR / 100 ml	ATRAZINE WHOLE SMPL ug/l	LASSO WHOLE SMPL ug/l	CYANAZINE WHL WAT ug/l	METO-LACHLOR (DUAL) ug/l	DICAMBIA (BANVEL) ug/l
82/08/05	0000	1030	10K	100	10K	140	.58	.11	.68	.22	.08
	0011	1030	10K	100	10	30	.62	.13	.81	.21	.09

L00579
Inlake Location at Swimming Beach
North Side of Lake
Site #5

DATE	TIME OF DAY	DEPTH FEET	FEC COL1 MFM-FCBR / 100 ml	
82/05/11	1000	0000	20	Note: 1.05 inches of rainfall between 1:45 a.m. and 7:30 a.m. on May 11, 1982
		0011	10	
82/05/12	1000	0000	570	Note: Sample taken 24+ hours after the rainfall
		0011	140	
82/06/14		0000	40	Note: Time of collection not reported. .85 inches of rainfall received between 9:45 p.m. on June 14, 1982 and 2:15 a.m. on June 15, 1982
		0011	10	
82/06/16		0000	8900	Note: Sample taken 24+ hours after the rainfall
		0011	90	
82/07/06	1000	0000	10	Note: 1.6 inches of rain received between 11:45 p.m. July 5, 1982 and 8:00 a.m. July 6, 1982
		0011	40	
82/07/07	1000	0000	600	Note: Sample taken 26 hours after rainfall
		0011	160	
82/07/19	1315	0000	10K*	Note: 1.05 inches of rainfall received between 5:10 a.m. and 6:30 a.m. on July 19, 1982
	1320	0011	20*	
82/07/20		0000	120*	Note: Sample taken 24+ hours after rainfall
		0011	690	

* Bottle overfilled. Analytical determinations may be low due to poor mixing of sample bottle.
K = less than

Rainfall Intensity Recorder Results

Date	Time of Day	Rainfall Received (inches)
May 4	9:45 p.m. to 10:00 p.m.	.05
5	12:30 a.m. to 12:45 a.m.	.05
	4:45 a.m. to 5:00 a.m.	.05
	6:00 a.m. to 7:00 a.m.	.30
6	3:30 a.m. to 11:00 a.m.	.50
7	-	
8	-	
9	-	
10	-	
11	1:45 a.m. to 2:15 a.m.	.55
	2:15 a.m. to 7:30 a.m.	.50
	2:30 p.m. to	
12	10:00 a.m.	.10
	-	
13	2:15 p.m. to 3:00 p.m.	.15
	3:00 p.m. to 4:15 p.m.	.10
	8:15 p.m. to 9:15 p.m.	.12
14	5:45 a.m. to 10:00 a.m.	.12
15	1:50 p.m. to 2:00 p.m.	.10
16	-	
17	12:30 p.m. to 12:40 p.m.	.20
18	-	
19	3:30 a.m. to 7:00 a.m.	.50
20	8:00 a.m. to 9:30 a.m.	.75
21	1:30 a.m. to 8:00 a.m.	.50
	8:45 a.m. to 9:30 a.m.	.20
22	-	
23	-	
24	-	
25	6:45 a.m. to 7:15 a.m.	.10
	3:00 p.m. to 10:00 p.m.	.30
	11:55 p.m. to	
26	12:00 a.m.	.10
	1:00 a.m. to 1:20 a.m.	.25
	2:15 a.m. to 2:30 a.m.	.25
	3:00 a.m. to 4:00 a.m.	.15
	8:00 p.m. to 9:30 p.m.	.40
27	-	
28	-	
29	3:30 a.m. to 5:30 a.m.	.50
30	12:15 p.m. to 1:30 p.m.	.40
31	-	
June 1	-	
2	-	
3	-	
4	-	
5	-	
6	-	
7	11:15 a.m. to 12:00 p.m.	.15
8	-	
9	-	
10	-	
11	-	
12	-	
13	-	
14	12:45 p.m. to 1:15 p.m.	.10
	9:45 p.m. to	
15	2:15 a.m.	.85
	5:00 a.m. to 8:00 a.m.	.25
16	-	
17	-	
18	-	
19	-	
20	-	
21	-	
22	-	
23	-	
24	-	
25	-	
26	-	
27	-	
28	-	
29	-	
30	6:45 a.m. to 7:45 a.m.	.35
	7:45 a.m. to 9:00 a.m.	.15
	3:45 p.m. to 6:00 p.m.	.10
July 1	-	
2	9:40 a.m. to 10:45 a.m.	.65
3	-	
4	-	
5	11:45 p.m. to	
6	2:45 a.m.	.3
	2:45 a.m. to 4:30 a.m.	1.1
	5:30 a.m. to 8:00 a.m.	.2
7	-	
8	-	
9	8:50 p.m. to	
10	12:30 a.m.	.75
	9:00 a.m. to 10:00 a.m.	.05
	12:15 p.m. to 12:50 p.m.	.35
11	-	
12	-	

SOIL CONSERVATION INCENTIVE PROGRAMS

in the

NORTH CENTRAL REGION

of the

UNITED STATES

Prepared By

Iowa Department of Soil Conservation
Wallace State Office Building
Des Moines, Iowa 50319

March, 1983

INDEX

SOIL CONSERVATION INCENTIVES

The Department of Soil Conservation surveyed state agencies in the North Central Region of the United States that administer soil and water conservation programs. The "North Central Region", as defined for this survey, icludes Illinois, Indiana, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin, and, of course, Iowa. The purpose of the survey was to obtain information on soil conservation incentive programs that have been adopted or considered by these states. More specifically information was requested for cost-share programs, tax incentives, low-interest loans, or any other incentive program that has been adopted or considered. Information on federal and local soil conservation programs was not solicited.

The following is a compiled summary of the information received. It relates to state programs as they existed on January 1, 1983 and is based upon our interpretation of the material provided. In addition, information on certain incentive programs that have been used in some other states is included. More detailed information about some of the programs is available in the Department of Soil Conservation.

The Department is distributing this report to agencies, organizations, special interest groups, and individuals that are interested in conserving Iowa's soil. Hopefully the report will be a stimulus toward generating new and viable soil conservation incentive programs in Iowa at both the state and local level.

ILLINOIS

A cost-share plan of $500,000 was approved in 1980 by the General Assembly and the Governor in the budget of the Division of Natural Resources (DNR). The program is devoted solely to conservation tillage practices. Eligible contractors (landowners or farm operators) enter into a contract with the Division of Natural Resources and the Soil and Water Conservation District (SWCD). The contract specifies the type of conservation tillage practice being used and a schedule of payment over a three year period.

SWCDs must establish priority areas. A SWCD may describe priority areas as those in the county that are highly erosive, close to streams, in a particular watershed, etc. A prospective contractor not in an established priority area must prove to the SWCD that he has a critical erosion problem. Cost-share monies can be allocated only to those contractors who are reducing their average annual soil loss: (1) by at least 50%, (2) to the SWCD's Guidelines. or (3) to the soil loss tolerance. One of these three criteria must be met by conservation tillage practices in conjunction with enduring structures and cropping patterns to be eligible for costshare contracts. The following summarizes Illinois' experience with their cost share program.

Conservation Tillage Cost-Share Program

In FY81 Districts and the DNR initiated and implemented the first State cost-share program. Of the $500,000 allocated to the Division of Natural Resources, 48 of the 98 Soil and Water Conservation Districts were selected with cost-share budgets ranging from $5,000 to $15,000. Eligible cost-share practices were conservation tillage practices such as zero-till systems and reduced tillage systems. Payments ranged from $10 to $25 per acre depending on the amount of crop residue remaining on the soil surface after planting.

This program was used as an education tool for farmers. Those already using a successful conservation tillage program were not eligible for cost-share.

Summary of Cost-Share Program

863 farmers received a cost-share payment
26,031 acres qualified for payment
14.2 tons/acre/year was average soil loss reduction
$1.21 cost/ton of soil saved
$17.28 cost/acre

	Soil Loss Before	Soil Loss After	Saved	Acres	Average Reduction	Certified Payment	Cost/Ton
0-till	375,689.2	86,921.8	288,767.4	14,538	19.9	332,539	1.15
Reduced till	190,490.3	108,565.6	81,925.6	11,493	7.1	117,223	1.43
Total	566,180.4	195,487.4	370,693.0	26,031	14.2	449,762	1.21

Average Soil Loss

	Before	After	Saved
0-till	25.8	6.0	19.9
Reduced till	16.6	9.4	7.1
Total	21.8	7.5	14.2

Indiviual Agricultural Development Bond Program

The 1981 Illinois General Assembly created the Illinois Farm Development Authority (IFDA) on September 16, 1981. The purpose of this legislation is to assist eligible farmers in Illinois who are engaged in farming or wish to engage in farming to purchase agricultural land, agricultural improvements, and depreciable property. The powers of the IFDA are vested in and exercised by a board of seven members who are appointed by the Governor with consent of the Senate.

The "Individual Agricultural Development Bond Program - IADBP", can be used to finance the implementation of a soil or water conservation project which has been approved by the SWCD in which the farm is located. The IADBP is a tax-

exempt bond program designed to help private lenders assist farmers in the State of Illinois to acquire agricultural property. The program provides a mechanism for private lenders to receive tax-exempt interest with respect to loans made to farmers. The private lender will arrange the loan and purchase from the Illinois Farm Development Authority a tax-exempt bond in the amount of the loan and secured by the loan and its collateral; the proceeds of that bond will be lent to the farmer and that loan and its collateral will be assigned to the private lender as security for the tax-exempt bond.

If a farmer meets the eligibility requirements as set forth by the IFDA, the decision whether to enter into the Loan Agreement is between the eligible farmer and the lender. They must agree on terms of the loan such as interest rates, length of loan, down payment, and repayment schedule.

An eligible farmer is defined as an individual with a low or moderate net worth ($250,000 or less). The IADBP loans may be used to purchase depreciable property, agricultural improvements, and land. The loan maximum is $100,000 for farm land. There are no maximum amounts for depreciable property or soil conservation programs.

"Risk-Share" No-Till Program

The Illinois Association of Conservation Districts conceived a "risk-share" no-till program. The idea received legislative approval for statewide application, but failure to fund the program killed the effort. Basically it was an insurance-type program that would pay farmers the difference in yields between a no-till experimental plot and their conventionally tilled fields.

Macon County Illinois Conservation District has implemented such a to-till program. Money to fund the program comes from donations garnered from the local agricultural industries. Free seed corn was donated for the no-till plots while dealers rent out the necessary equipment. Money is targeted to areas with the worst erosion problem. A technical committee assists the farmer with the 5- to 10-acre plots. Farmers are paid the difference in yields (up to $50 per acre)

between the no-till experimental plot and their conventionally tilled fields. If there is no difference in yield, the farmer receives nothing. The program's intent is to give farmers risk-free, hands-on experience in their own field with no-till farming.

INDIANA

The 1981 Indiana General Assembly made available to the State Soil and Water Conservation Committee $400,000 of non-reverting funds to be used to initiate a conservation cost-share program in Kankakee River Basin in northwestern Indiana. This is the first endeavor on the part of the state to provide an incentive program for landowners and operators to install soil erosion control measures.

The State Committee developed rules and regulations for administering the program. The rules are so structured that a complete state-wide program could be administered.

The SWCDs play a major role in coordinating this cost-share program in their individual counties. The cost-share rate was set at 75% for practices designated by the State Committee. This is a maximum figure with the local SWCD given the flexibility to set a lower percentage cost-share rate and apply a maximum per landowner if so desired. The district is notified of the amount they are allocated. They then devise their own financial management scheme, within the State Committee's guidelines.

Indiana presently has no plans for tax incentives, low interest loans, or other soil erosion control incentive programs.

IOWA

Iowa Financial Incentive Program (IFIP) for Soil Erosion Control

In 1973 the Iowa General Assembly passed legislation that established a program through which state funds would be made available to landowners and farm operators to pay a part of the cost for the installation of soil and water conservation practices. On July 1, 1983 the state cost-share program or the Iowa Financial Incentives Program (IFIP), as it is called today, will have been funded for ten years. The overall objective of the IFIP is for the State of Iowa, through the Iowa Department of Soil Conservation (DSC) and Soil Conservation Districts (SCDs) to conserve our soil resource. The IFIP includes a number of program elements, all dealing with soil conservation. The elements of the IFIP include:

1. Voluntary Program
2. Mandatory Program
3. Publicly Owned Lakes Program
4. Iowa Till Program
5. No Till Program
6. Wind Erosion Control Incentive's Program
7. Special Watershed Projects
8. Low-Interest Loans
9. Summer Construction Incentives

The DSC has received appropriations for cost-sharing of soil conservation practices since 1973 for the Voluntary Program, the Mandatory Program, and the Publicly Owned Lakes Program. Since 1979 funds for the Iowa Till Program have also been included in the general appropriation. The Special Watershed Projects Program and Summer Construction Incentives were authorized in 1980 legislation, but no funds have been appropriated for these programs. In the 1979-81 biennium, 5 percent of the appropriation was used to provide incentives to landowners to practice conservation tillage as part of the Iowa Till Program. In the 1981-1983 biennium the SCDs were authorized to use up to 10 percent of their allocation to provide incentive payments to encourage no-till planting.

Over 41 million has been made available for cost-share since the program started in 1973. A total of $2 million was made available for each year of the 1973-75 biennium. Funding for fiscal years since has been: $2,500,000 for 1975-76; $4,000,000 for 1976-77; $4,230,000 for 1977-78; $4,720,000 for 1978-79; $5,000,000 for 1979-80; $5,979,400 for 1980-81; $5,374,348 for 1981-82; and $5,634,000 for 1982-83. In 1982-83, $69,500 is targeted for the Southeastern Iowa Conservation Tillage Research Project; $278,225 is set aside for the Mandatory Program; and $278,225 is allocated to the Publicly Owned Lakes Program. The remaining funds are allocated to the Voluntary Program.

Although the Wind Erosion Control Incentives Program is included in IFIP, it is not funded from the cost-share appropriations. State road use tax monies fund this program. Each year since 1979, $500,000 has been put into this program.

Voluntary State Cost-Share Program

Ninety percent of the state's conservation cost-share appropriation for IFIP is used to pay a portion of the cost of permanent soil conservation practice installed voluntarily by landowners. Under this program, state funds can pay not more than fifty percent of the installation cost of approved permanent soil and water conservation practices. To assure that the state cost share funds are fully utilized, DSC has established rules to allow unspent funds to be recalled from SCDs to be distributed to other SCDs which can utilize the funds.

Applications for cost-share funds are made at county SCD offices. The commissioners of the SCD review all cost share applications received and approve those which will be funded from the district's cost share allocation. A priority system adopted by the SCD is used to determine which applications will receive priority for funding in that district. Considerable variation exists between the priority systems of SCDs. Priority systems used include funding only certain practices, funding only those applications where construction is ready to proceed, and funding practices in priority watersheds of the county. The priority system adopted by each SCD can be reviewed at the SCD office.

The Department of Soil Conservation allocates these cost-share program funds to soil conservation districts by utilizing a formula based on the 1970 Conservation Needs Inventory. The allocation formula considers the percentage of the state's highly erosive acres in the district, and is contained in 780-5.51(1)e of the Iowa Administrative Code.

Mandatory Program:

Five percent of the state cost share appropriation is retained for cost-sharing with land owners or farm operators required to install soil erosion control practices by an SCD administrative order or a court order, where such order exists as a result of SCD action to abate soil erosion complaints filed under provisions of 467A.47 or 467D.23.

The rate of cost-share for permanent soil conservation practices installed as a result of an administrative court order is seventy-five percent of the total installation cost to the landowner. The rate of cost-share for temporary soil conservation practices is set by the State Soil Conservation Committee.

Any cost-share funds allocated to the mandatory program which remain unobligated at the end of a program year are reallocated to the voluntary state cost-share program.

Publicly Owned Lakes Program:

The percentage of the state cost-share appropriation which may be used for this program and the cost-share rate are specified by the legislative appropriation. Currently, five percent of the state cost-share appropriation is used to cost-share up to seventy-five percent of the approved cost of permanent soil conservation practices in watersheds above certain publicly owned lakes and reservoirs.

The cost-share funds of this program may only be used in watersheds or designated watershed areas located above those publicly owned lakes or reservoirs that are identified on a priority list established annually by the Iowa Conservation Commission.

The publicly owned lakes cost-share funds are allocated annually to the SCDs in which the priority lake and reservoir watersheds or subwatersheds are located. In making this allocation, DSC gives first priority to the funding needs of those lake watersheds where a commitment has been made to use state cost-share funds to match other public funds (i.e., Clean Lakes funds, ACP Special Project funds, etc.). For these projects, tha anticipated annual cost-share needs are determined and funds are allocated to the SCDs. Once this allocation has been made, the remaining cost-share funds are divided evenly between the remaining lakes on the priority list and allocated to the respective SCDs in which these lakes are located. To assure maximum use of these funds, DSC rules also establish procedures for recalling unspent funds and redistribution of these funds to SCDs which can use them.

As with the voluntary state cost-share funds, the responsibility for accepting and approving applications for these funds is assigned to the SCDs. In approving applications, the SCDs are to give priority to those areas of the lake watershed which are of highest importance due to soil erosion.

Iowa Tillage Program

The state cost-share appropriation for fiscal years 1979-80 and 1980-81 allows up to ten percent of the appropriation to be used for incentive payments for minimum or mulch tillage of row cropped land. The DSC established the Iowa Tillage Program to implement this provision of the appropriation bill.

In order to demonstrate the effectiveness of minimum or mulch tillage in controlling soil erosion and improving water quality, the rules governing the Iowa Tillage Program limit use of these funds to small watersheds where a substantial portion of the row cropped lands will be farmed in accordance with the Iowa Tillage Program requirements. DSC rules specify that the following criteria will be used in selecting the watersheds eligible for funding under this program: the watersheds selected by the State Soil Conservation Committee (SSCC) for

funding shall be approximately 4,000 acres in size; the watersheds shall be uniformly distributed throughout the state; priority will be given to watersheds having the highest percentage of participation by row crop acres not previously tilled by a minimum or mulch type tillage system.

Soil conservation districts may annually nominate watersheds for consideration for funding under this program. From the list of nominated watersheds, the State Soil Conservation Committee selects the watersheds to be funded and establishes the amount of funds to be allocated to each watershed. Funds are then allocated to the SCDs in which the selected watersheds are located.

The SCDs are responsible for accepting and approving applications for the Iowa Tillage Program. Landowners who participate receive a one-time incentive payment of $30 per acre for farming in accordance with the Iowa Tillage Program requirements. Participating landowners are required to continue farming in accordance with the Iowa Tillage Program for a minimum of five years.

Any unspent funds from the Iowa Tillage Program are reallocated to the voluntary state cost-share program at the end of each program year.

A total of 14 districts participated in this program and paid incentives totalling $373,082.

No Till Program

In funding years 1981-82 and 1982-83, each of Iowa's 100 soil conservation districts had the option to use up to 10 percent of their allocation to provide incentive payments to encourage no-till planting. Twenty-eight districts provided no-till incentive payments during the 1981-82 funding year.

Wind Erosion Control Incentive Program (WECIP)

Section 312.2(9) of the Iowa Code allocates $500,000 annually to DSC from the road use tax fund for cost-sharing the installation of wind erosion control practices. Cost-sharing is limited to installation of practices in locations where wind erosion is currently interfering with maintenance of highways and safe operation of vehicles.

All SCDs may participate in this program. To participate SCDs, in cooperation with DOT officials and city or county engineers, identify road segments affected by wind erosion and nominate agricultural land areas to be considered for cost-sharing under the WECIP. The DSC commits funds to the SCDs for installation of wind erosion controls on eligible lands that have been selected by the SSCC for funding. Eligible wind erosion controls include conservation tillage, planting of grass strips, and establishment of field windbreaks.

The funds allocated from the road use tax fund remain available for use in the WECIP program until spent.

Special Watershed Projects

Section 467A.7 of the Iowa Code permits DSC to cost-share up to sixty percent of the cost of a watershed conservation project including five or more contiguous farm units which have at least five hundred acres or more of farmland, and which constitute at least seventy-five percent of the agricultural land lying within the watershed or subwatershed. Although legislative authority for this program has been given, no funds have been appropriated for the program.

Low-Interest Loans

Section 175.34 of the Iowa Code established in 1982 a soil conservation loan program to facilitate the implementation of permanent soil and water conservation practices and the acquisition of conservation farm equipment. The program is administered by the Iowa Family Farm Development Authority. Loan funds are obtained from the proceeds of tax-exempt bonds issued by the Authority and purchased by participating lenders. Any financial institution or entity authorized to make mortage loans or secured loans in the state may become a participating lender. There is no minimum amount for a loan under this program. However, the maximum amount of loans an owner or operator can receive in one year pursuant to this program is $25,000. Since the funds are tax exempt, the loans carry a low rate of interest.

Summer Construction Incentives

Section 467A.7, Code of Iowa, authorizes SCD commissioners to make incentive payments of up to 60 percent of the cost of establishing permanent soil conservation practices when construction of the project commences after June 1 but before August 15 of any calendar year. Incentive payments may also compensate for production loss of the area disturbed for construction of practices. Incentive payments can be made under this program only when districts are unable to commit all their state cost-share funds in the other programs. Therefore, this program has not been used.

KANSAS

The state of Kansas presently funds two programs that provide cost-share assistance for establishing structures to control soil erosion and to develop and improve the quality and quantity of the water resources. A summary of these programs follow.

State Assistance in Construction of Watersheds

A. Special state fund for cost-sharing assistance to watersheds in construction of detention and/or grade stabilization structures. (Non P.L. 566 structures.)

B. Funds appropriated will be made available to a watershed district for a structure included in its general plan on a state-local cost-share basis at the state contribution rate not to exceed 70 percent of the construction costs of the dam.

C. Funds will also be available for actual engineering, geologic investigations and inspection costs to a watershed district for a state cost-shared structure at a rate not to exceed 10 percent of actual construction costs.

D. Permit to construct each dam must be issued by the Chief Engineer, Division of Water Resources, State Board of Agriculture.

E. There are numerous special conditions that must be addressed in the watershed districts application that are part of the Commission's policy.

F. Appropriations started in FY 1977:

1.	Total state funding including current year	$4,057,000
2.	Number of structures funded to date	125

G. Appropriation for FY83 (July 1, 1982 to June 30, 1983) 675,000

Water Resources Cost-Share Program

A. Special state fund for cost-sharing to private landowners for the establishment of enduring structures (practices) to develop and improve the quality and quantity of Kansas water resources.

B. The maximum state cost-share rate is 80%. The commission's program consists of cost-sharing on the following:

1. Animal waste control facilities
2. Grassed waterway or outlets
3. Ponds
4. Terraces and diversions
5. Permanent vegetative cover on critical areas
6. Water recovery/reuse pits
7. Irrigation pits
8. Spring development, pipeline, trough, or tank
9. Livestock wells, pipeline, trough or tank
10. Grade stabilization structure (concrete)

C. Each conservation district establishes their program from the state program and based upon their local needs and priorities. They also establish their cost-share rate, not to exceed 80%. (Districts cost-share rate varies between 50% to 80% with the average being around 65%.)

D. The state appropriation amounts set aside for each conservation district on July 1, 1982 was based upon a point system derived from three criteria:

1. The number of non-federal rural acres in each district.
2. Water quality needs - erosion in district.
3. Water quantity needs - precipitation rates and availability of surface and groundwater supplies.

E. The state appropriated $1,250,000 for FY83 (July 1, 1982 to June 30, 1983).

MICHIGAN

Michigan reported that they have not pursued cost-share incentives to any great extent and that a state cost-share program does not appear to be in the picture given Michigan's economy, policies of the Department of Agriculture, and the position of their association of districts.

Approximately 75% of Michigan's cropland is dependent upon artificial drainage. Drains become virtually non-functional in a short period of time due to upland erosion depositing sediment in the channels.

Michigan is working on proposed legislation which would revise their drain code to allow for establishment of conservation measures in drain projects. A provision in the proposed legislation would allow a farmer to earn credit toward his drain assessment by installing and maintaining upland conservation measures.

MINNESOTA

1980/1981 was Minnesota's second biennium for their cost-share program. Over $2.6 million was allocated to SWCDs for cost-sharing purposes. It is estimated that over 1200 landowners participated in the program this biennium and applied the following practices:

Erosion Control Structures	225
Stripcropping	425 acres
Terraces	325,000 feet
Field Windbreaks	750,000 feet
Animal Waste Control Systems	200
Diversions	16,000 feet
Stormwater Control Systems	180 acres
Critical Area Stabilization	125 acres

To assist Districts in the technical and administrative aspects of this program, grants were made to Districts for hiring technicians and administrative personnel. A total of $300,000 technical and $150,000 in administrative grants were provided.

The Minnesota Soil and Water Conservation Board Cost-Share Program is a District administered program. SWCDs apply to the State Board for funds. The Board then awards grants to the Districts based on the information contained on their applications and priorities identified in their long range plans. Upon receipt of the grants, District Boards are responsible for local administration. Districts are required to prepare Long Range and Annual Plans before cost-share monies can be allocated to them. Minnesota's 92 Soil and Water Conservation Districts requested nearly 13 million dollars in cost-share assistance money while only $3 million was available. The Pollution Control Agency, in their Water Quality Management Plan, and the Water Planning Board, in their Framework Water and Related Land Resources Plan, have recommended increased funding for the program.

Minnesota did not report on any other incentive programs that have been adopted or being considered.

MISSOURI

Missouri has very recently adopted a state-funded soil and water conservation cost-share program. The program is intended to provide financial incentives to landowners to install erosion control projects and practices they would not otherwise install. Only Soil and Water Conservation Districts indicating an interest in administering the cost-share program in their county will be eligible to participate. Interest is indicated by entering a Cost-Share Memorandum of Understanding between the District and the Commission. The supervisors then develop the District Soil and Water Conservation Cost-Share Program.

Funds authorized for cost-sharing on soil erosion practices through this program will be allotted to Districts in the following manner.

1. Fifty percent of the state cost-share funds will be divided equally among the participating soil and water conservation districts;

2. The remaining fifty percent of the funds will be distributed according to needs criteria developed by the commission. No funds will be physically transferred to the SWCDs. The allocations will be credited to the Districts, and will be the amount available to the Districts for obligating to landowners for conservation practices. Actual monies, however, will go directly to the landowner from the state.

A landowner may apply for and receive state cost-share assistance providing he is a cooperator with the District and has a conservation plan as approved by the District. Applications may only be made for practices included in the conservation plan and on the state eligibility list.

Cost-share rates for the state program shall not exceed:

1. Seventy-five percent (75%) of the actual approved costs of the eligible practice or of the the estimated average costs for the practice in the county, whichever is less; or,

2. The incentive rates established by the Commission for certain management practices on the eligibility list which have proven to be effective erosion control practices.

In no case shall the state cost-share rates for individual practices exceed the federally-funded cost-share rates for corresponding projects and practices at the local level.

When Missouri legislators drafted the Third State Building Fund, they felt preserving the soil was as important, to the welfare and prosperity of the state, as rebuilding roads. Constitutional Amendment #1 passed in 1982 authorized the sale of bonds, the funds from which would be used for improvements to state buildings and property, for stormwater control, for water pollution control, for transportation projects, and for soil conservation grants. A $600 million bond issue for the state of Missouri was approved by the voters in a special election on June 8, 1982. For soil conservation, the passage of the bond issue means increased funding for the state cost-share program. Constitutional Amendment #1 specifically states that a certain percentage of the bond funds (equal to $23.94 million over a five-year period) shall be appropriated to fund the cost-share program. Now, a year later, bond sales have contributed $3 million toward the newly created Missouri State Soil and Water Cost-Share Program.

The Missouri Department of Agriculture (MDA) has a Capital Improvement Loan Program for Soil Conservation Practices. The MDA sets aside $1 million of the Agriculture Emergency Fund (AEF) for the specific purpose of assisting young and beginning farmers in the practice of soil conserving measures. Due to the geographical location of County Agriculture Stabilization and Conservation Service (ASCS) offices, their ready availability to farmers and their proximity to county government offices, these offices assist MDA in their loan program for soil conservation capital improvements.

The criteria for a loan from MDA for soil conservation practices are:

Maximum age of borrower	35 years
Maximum loan to any one borrower	$15,000
Minimum loan to any one borrower	$ 2,500
Maximum term of loan	15 years
Interest rate	11 percent

Borrowers must have an approved soil conservation plan for his entire operation.

Missouri does not have any tax incentive programs that are specifically for soil conservation. They do have a sales tax exemption for farm machinery, repair parts, feed additives and fuels used directly in producing farm products. Conservation tillage equipment would be exempt from sales tax.

NEBRASKA

Nebraska initiated a cost-share program in July, 1978. Based on legislation enacted in 1977 and funded in 1978, the Nebraska Natural Resources Commission became the developer and administrator of the Nebraska Water Conservation Program. Appropriations have been as follows:

July, 1978 - $ 500,000
July, 1979 - $ 850,000
July, 1980 - $1,100,000
July, 1981 - $1,100,000 reduced to $1,067,000
July, 1982 - $1,067,000 reduced to $1,045,660

The program is limited in that only six practices are eligible for cost-sharing. They are Terrace Systems, Terrace Outlets, Impoundment Dams, Grade Stabilization Structures, Irrigation Re-Use Pits, and Diversions. Payments are made by the state directly to the landowner on the basis of 75% of average ACP costs or 75% of actual costs, whichever is less.

The Nebraska Natural Resources Commission also administers a program called the Resources Development Fund. In this program local governmental entities offer proposals and plans for cost-sharing funds to build projects that have regional impact and identifiable public benefits. The program was established by legislation in 1974. Funding to date is $14,111,800. The projects can be funded with a grant, a loan or a combination loan and grant.

A new law was enacted in 1981, Section 2-4201-4301. This law allows bond issues for the purpose of making conservation loans. The Nebraska Association of Resources Districts would be administratively responsible. No action to implement this legislation has been taken to date.

The Natural Resources Districts have designated funds for cost-sharing with landowners for conservation practices. Since 1976 they have expended $3,340,569. Their combined budget for land treatment practices in fiscal 1982-83 is $1,615,385. Natural Resource Districts generate their budgets by using their authority to levy a tax of up to one mil on the property in their area.

Through an agreement with the state's natural resource districts, the Nebraska Game and Parks Commission pays farmers 75% of the cost of establishing an SCS-approved cover crop on marginal farmland under the Nebraska Wildlife Habitat Program. The remaining 25% is covered by the resource district which also pays farmers an additional $50 per year, per acre for planting a permanent non-grazed foliage. The Nebraska Game and Parks Commission will be spending $800,000 on this program in 1983. This represents about a third of the money collected by the Nebraska Game and Parks Commission each year from their $7.50 hunting stamp.

NORTH DAKOTA

North Dakota

North Dakota has drafted legislation that would for the very first time give Soil Conservation Districts the authority to levy a tax. The proposed legislation will be introduced to the Forty-eighth Legislative Assembly of North Dakota. The bill as drafted would authorize the supervisors to make a tax levy, not exceeding two mils, for the payment of the expenses of the district, including mileage and other expenses of the supervisors, and technical, administrative, clerical, and other operating expenses. Whenever the supervisors of a soil conservation district deem it advisable to raise funds by taxation in excess of the levy provided by this section, for any purpose for which the supervisors of a district are authorized to expend moneys raised by taxes, the supervisors of the district shall submit to the qualified electors of the district the question of increasing the levy by a certain number of mils. The increase must be approved by a majority of the qualified electors of the district.

Senate Bill 160 passed by Ohio General Assembly in 1969 established a state cost-share program. The program is administered by the Ohio Soil and Water Conservation Commission and the Ohio Department of Natural Resources in cooperation with local soil and water conservation districts.

Practices that are eligible for state cost-sharing are stream channel stabilization, erosion control structures, vegetative filter strips, grassed waterways, collector tile mains paralleling the stream bank, tile outlet pipes, diversions, floodwater detention facilities, and wildlife habitat improvement.

Cost-sharing funds have been traditionally used for group projects for works of improvement on open drains. Cost-sharing ranges from 25% for tile main collectors and 40% for grade stabilization structures, to 100% for wildlife habitat improvement.

Funds are appropriated by the General Assembly every two years as part of the State's Capital Improvement Bill. No funds were appropriated for the cost-share program by the last General Assembly because of the poor financial status of the state.

State legislation enacted in 1978 established an agricultural pollution abatement cost-sharing program. The program was established to control pollution of public waters by animal wastes, sediment, and sediment associated materials. It is administered by the Division of Soil and Water, Ohio Department of Natural Resources and local Soil and Water Conservation Districts.

The State, through the Division of Soil and Water, will pay seventy-five percent (75%) of the cost of establishing eligible practices up to five thousand dollars per person. If other public funds are involved in cost-sharing an eligible practice, State funds can be used only to the extent that the combined public funds amount to seventy-five percent of the cost or five thousand dollars whichever is smaller. The five thousand dollar limit may be waived by majority vote of the Ohio Soil and Water Conservation Commission. For Division enforcement of the animal waste program by administrative order, 75% cost-sharing must be available. There is no enforcement associated with agricultural sediment.

Practices eligible for cost-sharing are limited to those requiring a capital investment which provides primarily public benefit and little, if any, benefits to the landowner. Specific practices that qualify for state cost-sharing are animal waste facilities, terraces, contour strip cropping, grassed waterways and outlets, field windbreaks, critical erosion area stabilization, diversions, grade stabilization structures, and buffer strips.

The program is funded through the state general fund at $225,000 per year for this biennium.

SOUTH DAKOTA

South Dakota does not have a state cost-share program.

South Dakota's conservation district law established a revolving loan fund of $125,000 which is used by the districts to purchase equipment and, in some cases, trees. Loans from this fund are administered by the State Conservation Commission and are interest-free.

The South Dakota Department of Agriculture has just initiated a special loan program to districts through their Rural Development Program. These loans to districts are intended to help districts purchase minimum-till or no-till equipment for rental to district cooperators. The idea is that cooperators will be more willing to invest in the equipment after they have had an opportunity to try it out. No loans have been granted, but several applications are being prepared. The districts will be charged interest on the loans (the Division of Conservation believes the interest rate will be ten percent).

WISCONSIN

The Department of Agriculture, Trade and Consumer Protection (DATCP) is the central agency of the state for setting and implementing state soil and water conservation policies and administering the state's soil and water conservation programs. The DATCP is advised by the Land Conservation Board in setting policies and carrying out programs; however, the department alone has the final responsibility and authority for these programs. In conducting programs, the DATPC must coordinate its activities with the state's nonpoint source water pollution abatement program, the inland lake protection and rehabilitation program and other related programs administered by the Department of Natural Resources. This administrative arrangement is based on Wisconsin's new soil and water conservation law that became effective July 1, 1982.

State cost-share funds administered by DATCP can be used for personnel and associated costs; for materials and associated costs necessary in the planning, application, repair or maintenance of conservation measures; for equipment; and for educational materials. Cost-sharing is authorized for any rate up to 75% of the total cost of the proposed project. The current appropriation for this fund is $464,600 for the 1982-1983 fiscal year. $688,000 is requested for fiscal year 1983-1984. By state board policy these funds require a 50% match for counties to use and are limited to personnel only because of the small amount.

For fiscal year 1983-84, the DATCP is requesting $180,000 for up to 75% state match for counties to conduct erosion control planning. In addition, $600,000 has been requested for implementation of county erosion control plans at the 75% state cost-sharing. These progrsms were not funded during fiscal year 1982-83.

The Department of Natural Resources administers the non-point source pollution abatement program. They currently receive $200,000 for the department to plan and administer the program, $135,000 for counties to administer the

programs locally and $3,800,000 for cost-sharing with landowners for approved practices basically at the ACP cost-share rate.

Wisconsin has a farmland preservation program administered by DATCP which provides about $20 million in tax relief for farmers but the conservation component is weak. Counties can require conservation on such farms at county option. This program has a complicated formula to determine property tax credits which a farmer files from state income tax forms.

OTHER INCENTIVE PROGRAMS

Kentucky's Equipment Revolving Fund Program

Kentucky's "Equipment Revolving Fund Program" was established by the 1948 General Assembly to provide loans to Kentucky's conservation districts for heavy earth-moving equipment to do conservation work. The districts, through a loan-lease agreement with local contractors, pay off the individual loans over a period of time not more than 36 months. As revenues from loan payments are received new loans are made.

The program had an initial appropriation of $400,000 and has received three additional appropriations by the General Assembly for a total appropriation of $1,850,000. Over the 34 years that the loan program has been in existence, 1,075 loans have been made totalling $28,145,113.64. To date the total loan fund is $2,579,922.39, including accumulated interest.

The equipment revolving fund has meant a great deal to Kentucky's farming and conservation programs. It has enabled conservation districts to obtain the equipment necessary to construct proper conservation measures when needed.

Montana District No-Interest Loan Program

Montana's Rosebud Conservation District will initiate a no-interest loan program next year to help finance county soil and water conservation projects. The district's program will be the first county conservation loan program in the state. By January 1983, the district supervisors will have the program guidelines finalized and will begin taking loan applications.

The supervisors now plan to offer $10,000 or $20,000 loans with a five- and ten-year pay back, respectively. While there will be no interest on the loans, the district plans to have a 3% closing and administration charge. The Rosebud CD will offer about $100,000 in 1983. The district is funded by a one and one-half mill tax on real property, land, and building improvements within the county. The one and one-half mill levy is the maximum Montana conservation

districts are allowed to receive under state law. Once the loan reaches $500,000, the supervisors intend to reduce the funding request from the county to one-quarter to one-half mill.

Agricultural producers in the district who have conservation plans will be eligible for the no-interest loans. The district supervisors will determine whether an individual will receive loan funds based on a need and feasibility determination by the Soil Conservation Service. The Rosebud CD is expected to use the loan program as one way to achieve the priorities listed in their long range plan. These include conversion of open ditches to pipelines to increase irrigation efficiencies and reduce weed problems, erosion problems, and reduction of canal and supply ditch seepage.

DEPARTMENT OF SOIL CONSERVATION
STATE OF IOWA

Soil Conservation Laws
Code of Iowa 1981

(Chapters 467A, 467B, 467C and 467D, printed on this and the following pages, are exact reproductions of the Code of Iowa 1981.)

CHAPTER 467A
SOIL CONSERVATION

Referred to in §467C.5

Watersheds above lakes—priorities; 67GA, ch 1004, §14

Special provisions in 1978 fiscal year for soil conservation practices; 67GA, ch 1004, §15(6)

Limitations on appropriations; 67GA, ch 1009, §1, 3, 5, 6, 7

467A.1 Short title. This chapter may be known and cited as the "Soil Conservation Districts Law". [C39,§2603.02; C46,§160.1; C50, 54, 58, 62, 66, 71, 73, 75, 77, 79,§467A.1]

467A.2 Declaration of policy. It is hereby declared to be the policy of the legislature to provide for the restoration and conservation of the soil and soil resources of this state and for the control and prevention of soil erosion and for the prevention of erosion, floodwater, and sediment damages, and thereby to preserve natural resources, control floods, prevent impairment of dams and reservoirs, assist and maintain the navigability of rivers and harbors, preserve wild life, protect the tax base, protect public lands and promote the health, safety and public welfare of the people of this state. [C39,§2603.03; C46,§160.2; C50, 54, 58, 62, 66, 71, 73, 75, 77, 79,§467A.2]
Referred to in §467A.7(3)

467A.3 Definitions. Wherever used or referred to in this chapter, unless a different meaning clearly appears from the context:

1. *"District"* or *"soil conservation district"* means a governmental subdivision of this state, and a public body corporate and politic, organized for the purposes, with the powers, and subject to the restrictions hereinafter set forth.

2. *"Commissioner"* means one of the members of the governing body of a district, elected or appointed in accordance with the provisions of this chapter.

3. *"Department"* or *"department of soil conservation"* means the agency created by section 467A.4.

4. *"Committee"* or *"state soil conservation committee"* means the committee established by section 467A.4.

5. *"Petition"* means a petition filed under the provisions of subsection 1 of section 467A.5 for the creation of a district.

6. *"Nominating petition"* means a petition filed under the provisions of section 467A.5 to nominate candidates for the office of commissioner of a soil conservation district.

7. *"State"* means the state of Iowa.

8. *"Agency of this state"* includes the government of this state and any subdivision, agency, or instrumentality, corporate or otherwise, of the government of this state.

9. *"United States"* or *"agencies of the United States"* includes the United States of America, the soil conservation service of the United States department of agriculture, and any other agency or instrumentality, corporate or otherwise, of the United States.

10. *"Government"* or *"governmental"* includes the government of this state, the government of the United States, and any subdivision, agency or instrumentality, corporate or otherwise, or either of them.

11. *"Landowner"* includes any person, firm, or corporation or any federal agency, this state or any of its political subdivisions, who shall hold title to land lying within a proposed district or a district organized under the provisions of this chapter.

12. *"Due notice"* means notice published at least twice, with an interval of at least six days between the two publication dates, in a newspaper or other publication of general circulation within the appropriate area; or, if no such publication of general circulation be available, by posting at a reasonable number of conspicuous places within the appropriate area, such posting to include, where possible, posting at public places where it may be customary to post notices concerning county or municipal affairs generally. At any hearing held pursuant to such notice, at the time and place designated in such notice, adjournment may be made from time to time without the necessity of renewing such notice for such adjourned dates.

13. *"Conservancy district"* means one of the six conservancy districts established by section 467D.3.

14. *"Board"* means the body designated by section 467D.4 to administer each of the conservancy districts.

15. *"Council"* means the Iowa natural resources council. [C39,§2603.04; C46,§160.3; C50, 54, 58, 62, 66, 71, 73, 75, 77, 79,§467A.3]
Referred to in §25A.2, 467A.42, 613A.1

467A.4 State soil conservation committee.

1. There is hereby established, to serve as an agency of the state and to perform the functions conferred upon it in this chapter, the department of soil conservation. The department shall be administered in accordance with the policies of the state soil conservation committee, which shall approve administrative rules proposed by the department before the rules are promulgated pursuant to chapter 17A. The state soil conservation committee shall consist of a chairperson and twelve members. The following shall serve as ex officio nonvoting members of the committee: The director of the state agricultural extension service, or the director's designee, the secretary of agriculture, or the secretary's designee, the director of the state conservation commission or the director's designee, and the director of the Iowa natural resources council or the director's designee. Eight voting members shall be appointed by the governor subject to confirmation by the senate. Six of the appointive members shall be persons engaged in actual farming operations, one of whom shall be a resident of each of the six conservancy districts established by section 467D.3, and no more than one of whom shall be a resident of any one county. The seventh and eighth appointive members shall be chosen by the governor from the state at large with one appointed to be a representative of cities and one appointed to be a representative of the mining industry. The committee may invite the secretary of agriculture of the United States to appoint one person to serve with the above-mentioned members, and the president of the Iowa county engineers association may designate a member of the association to serve in the same manner, but these persons shall have no vote and shall serve in an advisory capacity only. The director of the department of environmental quality shall be an ex officio nonvoting member. The committee shall adopt a seal, which seal shall be judicially noticed, and may perform acts, hold public hearings, and promulgate rules as provided in chapter 17A as necessary for the execution of its functions under this chapter.

2. The state soil conservation committee may employ an administrative officer and such other agents and employees, permanent and temporary, as it may require, and shall determine their qualifications, duties and compensation. The committee or department may call upon the attorney general of the state for such legal services as either may require. The committee shall have authority to delegate to its chairman, to one or more of its members, or to one or more agents or employees, such powers and duties as it may deem proper. Upon request of the committee, for the purpose of carrying out any of the functions assigned the committee or the department by law, the supervising officer of any state agency, or of any

state institution of learning shall, insofar as may be possible under available appropriations, and having due regard to the needs of the agency to which the request is directed, assign or detail to the department members of the staff or personnel of such agency or institution of learning, and make such special reports, surveys, or studies as the committee may request.

3. The committee shall designate its chairperson, and may change such designation. The members appointed by the governor shall serve for a period of six years. Members shall be appointed in each odd-numbered year to succeed members whose terms expire as provided by section 69.19. Appointments may be made at other times and for other periods as are necessary to fill vacancies on the committee. Members shall not be appointed to serve more than two complete six-year terms. Members designated to represent the secretary of agriculture, director of the state conservation commission, or the director of the Iowa natural resources council shall serve at the pleasure of the officer making the designation. A majority of the voting members of the committee constitutes a quorum, and the concurrence of a majority of the voting members of the committee in any matter within their duties shall be required for its determination. The chairperson and members of the committee, not otherwise in the employ of the state, or any political subdivision, shall receive forty dollars per diem as compensation for their services in the discharge of their duties as members of the committee. The committee shall determine the number of days for which any committee member may draw per diem compensation, but the total number of days for which per diem compensation is allowed for the entire committee shall not exceed four hundred days per year. They shall also be entitled to expenses, including traveling expenses, necessarily incurred in the discharge of their duties as members of the committee. The per diem and expenses paid to the committee members shall be paid from funds appropriated to the committee. The committee shall provide for the execution of surety bonds for all employees and officers who shall be entrusted with funds or property, shall provide for the keeping of a full and accurate record of all proceedings and of all resolutions, regulations, and orders issued or adopted, and shall provide for an annual audit of the accounts of receipts and disbursements.

4. In addition to the duties and powers hereinafter conferred upon the department of soil conservation, it shall have the following duties and powers:

a. To offer such assistance as may be appropriate to the commissioners of soil conservation districts in carrying out any of their powers and programs.

b. To keep the commissioners of each of the several districts informed of the activities and experience of all other districts and to facilitate an interchange of advice and experience between such districts and co-operation between them.

c. To co-ordinate the programs of the several soil conservation districts so far as this may be done by advice and consultation.

d. To secure the co-operation and assistance of the United States and any of its agencies, and of agencies of this state, in the work of such districts.

e. To disseminate information throughout the state concerning the activities and program of the soil conservation districts.

f. To render financial aid and assistance to soil conservation districts for the purpose of carrying out the policy stated in this chapter.

g. To offer such assistance as may be appropriate to the conservancy districts established by section 467D.3, and in the carrying out of any of their powers and programs.

h. Review, amend, and give final approval to the plan of each of the conservancy districts, and to any subsequent changes therein, in the manner provided by chapter 467D.

i. Maintain files of such proceedings, rules, and orders, of each of the conservancy districts in the state as the department may request from the conservancy districts pursuant to section 467D.6, subsection 11.

j. To keep the boards of each of the six conservancy districts established by section 467D.3 informed of the activities and experience of the other conservancy districts and to facilitate an interchange of advice and experience between conservancy districts and co-operation between them.

k. To co-ordinate the programs of the conservancy districts so far as this may be done by advice and consultation.

l. To disseminate information throughout the state concerning the activities and programs of the conservancy districts established by section 467D.3.

m. To render financial aid and assistance to the six conservancy districts established by section 467D.3 for the purpose of carrying out the policy stated in chapter 467D.

n. To establish and maintain an interagency co-ordinating committee for the purpose of preparing and disseminating recommendations for co-ordinated efforts to deal with water and soil management problems, including but not necessarily limited to the flow of water into, across and from public roads and roadside ditches, that are the common concern of two or more of the agencies or groups represented on the committee. The committee shall meet at the call of the chairperson or upon the written request of any three members, to execute the functions assigned it by this section. The co-ordinating committee shall consist of:

(1) The director of the department of soil conservation or the director's designee, who shall act as chairperson of the co-ordinating committee.

(2) A representative of the state department of agriculture, designated by the secretary of agriculture.

(3) A representative of the department of environmental quality, designated by the executive director of that department.

(4) A representative of the department of transportation, designated by the director of that department.

(5) A representative of the Iowa natural resources council, designated by the council's director.

(6) A representative of county boards of supervisors, designated by the county supervisors association affiliated with the Iowa state association of counties.

(7) A representative of county engineers, designated by the county engineers association affiliated with the Iowa state association of counties.

(8) A representative of soil conservation district commissioners, designated by the Iowa association of soil conservation district commissioners.

(9) A member of the state soil conservation committee.

(10) The state conservationist of the United States soil conservation service, or that officer's designee. [C39,§2603.05; C46,§160.4; C50, 54, 58, 62, 66, 71,§467A.4; C73,§455A.40(3), 467A.4; C75, 77, 79,§467A.4; 68GA, ch 1010,§71, ch 1153,§1, 2]

Referred to in §467A.3(3, 4), 467D.2, 467D.4
Confirmation, §2.32
Initial terms, see 64GA, ch 227, §27(3)

467A.5 Soil conservation districts.

1. The one hundred soil conservation districts established in the manner which was prescribed by law prior to July 1, 1975 shall continue in existence with the boundaries and the names in effect on July 1, 1975. If the existence of any district so established is discontinued pursuant to section 467A.10, a petition for re-establishment of the district or for annexation of the former district's territory to any other abutting district may be submitted to, and shall be acted upon by, the state soil conservation committee in substantially the manner provided by section 467A.5, Code 1975.

2. The governing body of each district shall consist of five commissioners elected on a nonpartisan basis for staggered six-year terms commencing on the first day of January that is not a Sunday or holiday following their election. Any eligible elector residing in the district is eligible to the office of commissioner, except that no more than one commissioner shall at any one time be a resident of any one township. A vacancy is created in the office of any commissioner who changes his residence into a township where another commissioner then resides. A vacancy in the office of commissioner shall be filled by appointment of the state soil conservation committee until the next succeeding general election, at which time the balance of the unexpired term shall be filled as provided by section 69.12.

3. At each general election a successor shall be chosen for each commissioner whose term will expire in the succeeding January. Nomination of candidates for the office of commissioner shall be made by petition in accordance with chapter 45, except that each candidate's nominating petition shall be signed by at least twenty-five eligible electors of the district. The petition form shall be furnished by the county commissioner of elections. Every candidate shall file with the nomination papers an affidavit stating his name, his residence, that he is a candidate and is eligible for the office of commissioner, and that if elected he will qualify for the office. An eligible elector shall not in any one year sign the nominating petitions of a number of candidates greater than the number of commissioners to be elected in that year. The signed petitions shall be filed with the county commissioner of elections not later than five o'clock p.m. on the fifty-fifth day prior to the general election. The votes for the office of district commissioner shall be canvassed in the same manner as the votes for county officers, and the returns shall be certified to the commissioners of the district. A plurality shall be sufficient to elect commissioners, and no primary election for the office shall be held. If the canvass shows that the two candidates receiving the highest and the second highest number of votes for the office of district commissioner are both residents of the same township, the board shall certify as elected the candidate who received the highest number of votes for the office and the candidate receiving the next highest number of votes for the office who is not a resident of the same township as the candidate receiving the highest number of votes.

4. This subsection shall apply during the period of transition from the former method of electing district commissioners to that prescribed by 66GA, ch 229, which is the period from July 1, 1975 until December 31, 1982, and the subsection shall not appear in any edition of the Code published after July 1, 1982.

a. Each commissioner elected to office for a term of six years which commenced after January 1, 1975, or who is serving a term which, except for 66GA, ch 229, would have expired after July 1, 1975 but not later than December 31, 1976 shall hold office until noon on the first day of January, 1977 that is not a Sunday or holiday, and a successor shall be elected at the general election in 1976. However, if a commissioner elected for a term of six years which commenced after January 1, 1975 certifies in writing to the state soil conservation committee that he is willing and anticipates being able to serve until noon on the first day of January, 1983 that is not a Sunday or holiday, his term shall be extended to that date and a successor shall be elected at the general election in 1982.

b. Each commissioner serving a term which, except for 66GA, ch 229, would have expired after January 1, 1977 but not later than December 31, 1978 shall hold office until noon on the first day of January, 1979 that is not a Sunday or holiday, and a successor shall be elected at the general election in 1978.

c. Each commissioner serving a term which, except for 66GA, ch 229, would have expired after January 1, 1979 but not later than December 31, 1980 shall hold office until noon on the first day of January, 1981 that is not a Sunday or holiday, and a successor shall be elected at the general election in 1980. [C39,§2603.06; C46,§160.5; C50, 54, 58, 62, 66, 71, 73, 75, 77, 79,§467A.5]

Referred to in §39.21, 467A.3(5, 6), 467A.15
Subsection 4 hereof shall not appear in any edition of the Code published after July 1, 1982; 66GA, ch 229, §3(4)

467A.6 Appointment, qualifications and tenure of commissioners. The commissioners of each soil conservation district shall convene on the first day of January that is not a Sunday or holiday in each odd-numbered year. Those commissioners whose term of office begins on that day shall take the oath of office prescribed by section 63.10. The commissioners shall then organize by election of a chairman and a vice chairman.

The commissioners of the respective districts shall submit to the department such statements, estimates, budgets, and other information at such times and in such manner as the department may require.

A commissioner shall receive no compensation for his services but he may be paid expenses, including traveling expenses, necessarily incurred in the discharge of his duties, if funds are available for that purpose.

The commissioners may call upon the attorney general of the state for such legal services as they may require. The commissioners may delegate to their chairman, to one or more commissioners or to one or more agents, or employees, such powers and duties as they may deem proper. The commissioners shall furnish to the department of soil conservation, upon request, copies of such ordinances, rules, regulations, orders, contracts, forms, and other documents as they shall adopt or employ, and such other information concerning their activities as it may require in the performance of its duties under this chapter.

The commissioners shall provide for the execution of surety bonds for all employees and officers who

shall be entrusted with funds or property; shall provide for the keeping of a full and accurate record of all proceedings and of all resolutions, regulations, and orders issued or adopted; and shall provide for a biennial audit of the accounts of receipts and disbursements.

The commissioners may invite the legislative body of any municipality or county located near the territory comprised within the district to designate a representative to advise and consult with the commissioners of the district on all questions of program and policy which may affect the property, water supply, or other interests of such municipality or county. [C39,§2603.08; C46,§160.6; C50, 54, 58, 62, 66, 71, 73, 75, 77, 79,§467A.6]

467A.7 Powers of districts and commissioners. A soil conservation district organized under the provisions of this chapter shall have the following powers, in addition to others granted in other sections of this chapter:

1. To conduct surveys, investigations, and research relating to the character of soil erosion and erosion, floodwater, and sediment damages, and the preventive and control measures needed, to publish the results of such surveys, investigations or research, and to disseminate information concerning such preventive and control measures; provided, however, that in order to avoid duplication of research activities, no district shall initiate any research program except in co-operation with the Iowa agricultural experiment station located at Ames, Iowa, and pursuant to a co-operative agreement entered into between the Iowa agricultural experiment station and such district.

2. To conduct demonstrational projects within the district on lands owned or controlled by this state or any of its agencies, with the consent and co-operation of the agency administering and having jurisdiction thereof, and on any other lands within the district upon obtaining the consent of the owner or occupier of such lands or the necessary rights or interests in such lands, in order to demonstrate by example the means, methods, and measures by which soil and soil resources may be conserved, and soil erosion in the form of soil blowing and soil washing may be prevented and controlled; provided, however, that in order to avoid duplication of agricultural extension activities, no district shall initiate any demonstrational projects, except in co-operation with the Iowa agricultural extension service whose offices are located at Ames, Iowa, and pursuant to a co-operative agreement entered into between the Iowa agricultural extension service and such district.

3. To carry out preventive and control measures within the district, including, but not limited to, crop rotations, engineering operations, methods of cultivation, the growing of vegetation, changes in use of land, and the measures listed in section 467A.2, on lands owned or controlled by this state or any of its agencies, with the consent and co-operation of the agency administering and having jurisdiction thereof, and on any other lands within the district, upon obtaining the consent of the owner or occupier of such lands or the necessary rights or interests in such lands. Any approval or permits from the council required under other provisions of law shall be obtained by the district prior to initiation of any construction activity.

4. To co-operate, or enter into agreements with, and within the limits of appropriations duly made available to it by law, to furnish financial or other aid to any agency, governmental or otherwise, or any owner or occupier of lands within the district, in the carrying on of erosion-control and watershed protection and flood prevention operations within the district, subject to such conditions as the commissioners may deem necessary to advance the purposes of this chapter.

5. To obtain options upon and to acquire, by purchase, exchange, lease, gift, grant, bequest, devise or otherwise, any property, real or personal, or rights or interests therein; to maintain, administer, and improve any properties acquired, to receive income from such properties and to expend such income in carrying out the purposes and provisions of this chapter; and to sell, lease or otherwise dispose of any of its property or interests therein in furtherance of the purposes and provisions of this chapter.

6. To make available on such terms as it shall prescribe, to landowners or occupiers within the district, agricultural and engineering machinery and equipment, fertilizer, lime, and such other material or equipment as will assist such landowners or occupiers to carry on operations upon their lands for the conservation of soil resources and for the prevention and control of soil erosion and for the prevention of erosion, floodwater, and sediment damages.

7. To construct, improve, and maintain such structures as may be necessary or convenient for the performance of any of the operations authorized in this chapter. Any approval or permits from the council required under other provisions of law shall be obtained by the district prior to initiation of any construction activity.

8. To develop comprehensive plans for the conservation of soil resources and for the control and prevention of soil erosion and for the prevention of erosion, floodwater, and sediment damages within the district, which plans shall specify in such detail as may be possible, the acts, procedures, performances, and avoidances which are necessary or desirable for the effectuation of such plans, including the specification of engineering operations, methods of cultivation, the growing of vegetation, cropping programs, tillage practices, and changes in use of land; and to publish such plans and information and bring them to the attention of owners and occupiers of lands within the district.

9. To sue and be sued in the name of the district; to have a seal, which seal shall be judicially noticed; to have perpetual succession unless terminated as hereinafter provided; to make and execute contracts and other instruments, necessary or convenient to the exercise of its powers; to make, and from time to time amend and repeal, rules not inconsistent with this chapter, to carry into effect its purposes and powers.

10. To accept donations, gifts, and contributions in money, services, materials, or otherwise, from the United States or any of its agencies, or from this state or any of its agencies, and to use or expend such moneys, services, materials, or other contributions in carrying on its operations.

11. As a condition to the extending of any benefits under this chapter to, or the performance of work upon, any lands not owned or controlled by this state or any of its agencies, the commissioners may require contributions in money, services, materials, or otherwise to any operations conferring such benefits, and may require landowners or occupiers to enter into and perform such agreements or covenants as to the permanent use of such lands as will tend to prevent or control erosion thereon.

12. No provisions with respect to the acquisition, operation, or disposition of property by other public bodies shall be applicable to a district organized hereunder unless the legislature shall specifically so state.

13. After the formation of any district under the provisions of this chapter, all participation hereunder shall be purely voluntary, except as specifically stated herein.

14. Subject to the approval of the state soil conservation committee, to change the name of such soil conservation district.

15. To take notice of the conservancy district plan, and conform to the duly promulgated rules of the conservancy district or conservancy districts in which the soil conservation district is located; provided that this subsection shall not be construed to grant any authority not otherwise granted by law to the commissioners of soil conservation districts.

16. The commissioners shall, as a condition for the receipt of any state cost-sharing funds for permanent soil conservation practices, require the owner of the land on which the practices are to be established to covenant and file, in the office of the soil conservation district of the county in which the land is located, an agreement identifying the particular lands upon which the practices for which state cost-sharing funds are to be received will be established and providing that if the project is removed, altered, or modified so as to lessen its effectiveness without the consent of the commissioners, obtained in advance and based on guidelines drawn up by the state soil conservation committee, for a period of twenty years after the date of receiving payment, the owner of the land on which the practices have been so removed, altered or modified shall refund to the department of soil conservation the state cost-sharing funds used for the project, or for the portion of the project which has been removed, altered or modified so as to lessen its effectiveness. Such refunds shall be computed on a pro rata basis in accordance with guidelines drawn up by the state soil conservation committee in accordance with the age and anticipated remaining useful life of the project, and shall be reallocated to the district from which they were refunded to be used for conservation cost sharing. The commissioners shall assist the state soil conservation committee in the enforcement of this subsection. The agreement to refund shall not create a lien on the land, but shall be a charge personally against the owner of the land at the time of removal, alteration or modification which gives rise to the need for a refund. Each soil conservation district which has entered into agreements under this subsection shall file in the office of the county recorder a statement that there are in effect in that county certain agreements covenanted under this subsection which place upon owners of agricultural land the obligation to maintain permanent soil conservation practices established with public cost-sharing money, and that failure to do so may result in an obligation to refund a portion of the public cost-sharing money used to establish the practices. A seller of agricultural land with respect to which an agreement covenanted under this subsection is in effect, and who is not currently in violation of that agreement, shall upon request to the commissioners be furnished with a written statement that, as of the date of the statement, the seller has incurred no obligation to refund to the department of soil conservation the state cost-sharing funds obtained pursuant to the agreement.

17. To enter into special funding agreements which, notwithstanding subsection 4, provide for cost sharing up to sixty percent of the cost of a project including five or more contiguous farm units which have at least five hundred or more acres of farmland and which constitute at least seventy-five percent of the agricultural land lying within a watershed or subwatershed, where the owners jointly agree to a watershed conservation plan in conjunction with their respective farm unit soil conservation plans.

18. To encourage local school districts to provide instruction in the importance of and in some of the basic methods of soil conservation, as a part of the course work relating to conservation of natural resources and environmental awareness required pursuant to section 257.25, subsections 3 and 4, and to offer technical assistance to schools in developing such instructional programs.

19. To make incentive payments to encourage summer construction of permanent soil and water conservation practices, provided that the commissioners of a soil conservation district shall not use state cost-sharing funds to pay such incentives in any fiscal year when requests which seek cost sharing for eligible permanent soil and water conservation practices, but which do not seek incentive payments under this subsection, are sufficient to use all of the state cost-sharing funds made available to the district for that year. Incentive payments made under this subsection may, notwithstanding subsection 4, provide for cost sharing up to sixty percent of the cost of establishing any permanent soil and water conservation practice where the establishment of that practice involves a construction project which begins after June 1 but before August 15 of any calendar year. Incentive payments under this subsection may also include, or may be limited to a pro rata amount, in accordance with rules of the department, to compensate for production loss on the area disturbed for construction of practices. [C39,§2603.09; C46,§160.7; C50, 54, 58, 62, 66, 71, 73, 75, 77, 79,§467A.7; 68GA, ch 1153,§3, 4]

467A.8 Co-operation between districts. The commissioners of any two or more districts organized under the provisions of this chapter may co-operate with one another in the exercise of any or all powers conferred in this chapter. [C39,§2603.10; C46,§160.8; C50, 54, 58, 62, 66, 71, 73, 75, 77, 79,§467A.8]

467A.9 State agencies to co-operate. Agencies of this state which shall have jurisdiction over, or be charged with the administration of, any state-owned lands, and of any county, or other governmental subdivision of the state, which shall have jurisdiction over, or be charged with the administration of, any county-owned or other publicly owned lands, lying within the boundaries of any district organized hereunder, may co-operate to the fullest extent with the commissioners of such districts in the effectuation of programs and operations undertaken by the commissioners under the provisions of this chapter. [C39, §2603.11; C46,§160.9; C50, 54, 58, 62, 66, 71, 73, 75, 77, 79,§467A.9]

467A.10 Discontinuance of districts. At any time after five years after the organization of a district under the provisions of this chapter, any twenty-five owners of land lying within the boundaries of such district, but in no case less than twenty percent of the owners of land lying within such district, may file a petition with the state soil conservation committee praying that the operations of the district be terminated and the existence of the district discontinued.

The committee may conduct such public meetings and public hearings upon such petition as may be necessary to assist in the consideration thereof. Within sixty days after such a petition has been received by the committee, the department shall give due notice of the holding of a referendum, and shall supervise such referendum, and issue appropriate regulations governing the conduct thereof, the question to be submitted by ballots upon which the words "For terminating the existence of the ..... (name of the soil conservation district to be here inserted)" and "Against terminating the existence of the ..... (name of the soil conservation district to be here inserted)" shall be printed, with a square before each proposition and a direction to insert an × mark in the square before one or the other of said propositions as the voter may favor or oppose discontinuance of such district. All owners of lands lying within the boundaries of the district shall be eligible to vote in such referendum. Only such landowners shall be eligible to vote. No informalities in the conduct of such referendum or in any matters relating thereto shall invalidate said referendum or the result thereof if notice thereof shall have been given substantially as herein provided and said referendum shall have been fairly conducted.

When sixty-five percent of the landowners vote to terminate the existence of such district, the state soil conservation committee shall advise the commissioners to terminate the affairs of the district. The commissioners shall dispose of all property belonging to the district at public auction and shall pay over the proceeds of such sale to be covered into the state treasury. The commissioners shall thereupon file an application, duly verified, with the secretary of state for the discontinuance of such district, and shall transmit with such application the certificate of the state soil conservation committee setting forth the determination of the committee that the continued operation of such district is not administratively practicable and feasible. The application shall recite that the property of the district has been disposed of and the proceeds paid over as in this section provided, and shall set forth a full accounting of such properties and proceeds of the sale. The secretary of state shall issue to the commissioners a certificate of dissolution and shall record such certificate in an appropriate book of record in his office.

Upon issuance of a certificate of dissolution under the provisions of this section, all ordinances and regulations theretofore adopted and in force within such districts shall be of no further force and effect. All contracts theretofore entered into, to which the district or commissioners are parties, shall remain in force and effect for the period provided in such contracts. The state soil conservation committee shall be substituted for the district or commissioners as party to such contracts. The committee shall be entitled to all benefits and subject to all liabilities under such contracts and shall have the same right and liability to perform, to require performance, and sue and be sued thereon, and to modify or terminate such contracts by mutual consent or otherwise, as the commissioners of the district would have had.

The state soil conservation committee shall not entertain petitions for the discontinuance of any district nor conduct referenda upon such petitions nor make determinations pursuant to such petitions in accordance with the provisions of this chapter, more often than once in five years. [C39,§2603.12; C46,§160.10; C50, 54, 58, 62, 66, 71, 73, 75, 77, 79,§467A.10]

Referred to in §467A.5

467A.11 Report to governor. The committee shall submit to the governor, no later than January 1 next preceding each biennial legislative session, a report which shall state the following: The number and acreage of districts in existence or in process of organization, together with an estimate of the number and probable acreage of the districts which may be organized during the ensuing biennial fiscal period; a statement of the balances of funds, if any, available to the committee as to the sums needed for its administrative and other expenses, and for allocation among the several districts during the ensuing biennial fiscal period. [C46,§160.11; C50, 54, 58, 62, 66, 71, 73, 75, 77, 79,§467A.11]

Biennial report, §17.3

467A.12 Statement to comptroller. On or before September 1 next preceding each biennial legislative session, the state soil conservation committee shall submit to the state comptroller, on official estimate blanks furnished for such purposes, statements and estimates of the expenditure requirements for each fiscal year of the ensuing biennium, and a statement of the balance of funds, if any, available to the committee, and the estimates of the committee as to the sums needed for the administrative and other expenses of the committee and department. [C46,§160.12; C50, 54, 58, 62, 66, 71, 73, 75, 77, 79,§467A.12]

SUBDISTRICTS

467A.13 Purpose of subdistricts. Subdistricts of a soil conservation district may be formed as hereinafter provided for the purposes of co-operating with conservancy districts and of carrying out watershed protection and flood prevention programs within the subdistrict but may not be formed solely for the purpose of establishing or taking over the operation of an existing drainage district. [C58, 62, 66, 71, 73, 75, 77, 79,§467A.13; 68GA, ch 1154,§17]

467A.14 Petition to form. When the landowners in a proposed subdistrict desire that a subdistrict be organized, they shall file a petition with the commissioners of the soil conservation district. The area must be contiguous and in the same watershed but in no event shall it include any area located within the boundaries of an incorporated city. The petition shall set forth an intelligible description by congressional subdivision, or otherwise, of the land suggested for inclusion in the subdistrict and shall state whether the special annual tax or special benefit assessments will be used, or whether the use of both is contemplated. The petition shall contain a brief statement giving the reasons for organization, requesting that the proposed area be organized as a subdistrict and must be signed by sixty-five percent of the landowners in the proposed subdistrict. Land already in one subdistrict cannot be included in another. The soil conservation district commissioners shall review such petition and if found adequate shall arrange for a hearing thereon. [C58, 62, 66, 71, 73, 75, 77, 79,§467A.14]

467A.15 Notice and hearing. Within thirty days after such petition has been filed with the soil district commissioners, they shall fix a date, hour, and place for a hearing thereon and direct the secretary to cause notice to be given to the owners of each tract of land, or lot, within the proposed subdistrict as shown by the transfer books of the auditor's office, and to each lienholder, or encumbrancer, of any such lands as shown by the county records, and to all other per-

sons whom it may concern, and without naming individuals all actual occupants of land in the proposed subdistrict, of the pendency and prayer of said petition and that all objections to establishment of said subdistrict for any reason must be made in writing and filed with the secretary of the soil conservation district at, or before, the time set for hearing. The soil conservation district commissioners shall consider and determine whether the operation of the subdistrict within the defined boundaries as proposed is desirable, practicable, feasible, and of necessity in the interest of health, safety, and public welfare. All interested parties shall have a right to attend such hearing and to be heard. The soil district commissioners may for good cause adjourn the hearing to a day certain which shall be announced at the time of adjournment and made a matter of record. If the soil district commissioners determine that the petition meets the requirements set forth herein and in section 467A.5, they shall declare that the subdistrict is duly organized and shall record such action in their official minutes together with an appropriate official name, or designation for the subdistrict. [C58, 62, 66, 71, 73, 75, 77, 79,§467A.15]

467A.16 Publication of notice. The notice of hearing on the formation of a subdistrict shall be by publication once each week for two consecutive weeks in some newspaper of general circulation published in the county (or district) the last of which shall be not less than ten days prior to the day set for the hearing on the petition. Proof of such service shall be made by affidavit of the publisher, and be on file with [the] secretary of the district at the time the hearing begins. [C58, 62, 66, 71, 73, 75, 77, 79,§467A.16]

467A.17 Subdistrict in more than one district. If the proposed subdistrict lies in more than one soil conservation district, the petition may be presented to the commissioners of any one of such districts, and the commissioners of all such districts shall act jointly as a board of commissioners with respect to all matters concerning such subdistrict, including its formation. They shall organize as a single board for such purposes and shall designate its chairman, vice chairman, and secretary-treasurer to serve for terms of one year. Such a subdistrict shall be formed in the same manner and shall have the same powers and duties as a subdistrict formed in one soil conservation district. [C58, 62, 66, 71, 73, 75, 77, 79,§467A.17]

467A.18 Authentication. Following the entry in the official minutes of the soil district commissioners of the creation of the subdistrict, the commissioners shall certify this fact on a separate form, authentic copies of which shall be recorded with the county recorder of each county in which any portion of the subdistrict lies, and with the department of soil conservation. [C58, 62, 66, 71, 73, 75, 77, 79,§467A.18]

467A.19 Governing body. The commissioners of a soil conservation district in which the subdistrict is formed shall be the governing body of the subdistrict. When a subdistrict lies in more than one soil conservation district, the combined board of commissioners shall be the governing body. The governing body of the subdistrict shall appoint three trustees living within the subdistrict to assist with the administration of the subdistrict. [C58, 62, 66, 71, 73, 75, 77, 79,§467A.19]

467A.20 Special annual tax. After obtaining agreements to carry out recommended soil conservation measures and proper farm plans from owners of not less than fifty percent of the lands situated in the subdistrict, a subdistrict shall have the authority to impose a special annual tax, the proceeds of which shall be used for the repayment of actual and necessary expenses incurred to organize the subdistrict, to acquire land or rights or interests therein by purchase or condemnation, repair, alteration, maintenance and operation of the present and future works of improvement within its boundaries.

On or before January 10 of each year its governing body shall make an estimate of the amount it deems necessary to be raised by such special tax for the ensuing year and transmit said estimate in dollars to the board of supervisors of the county in which the subdistrict lies.

If portions of the subdistrict are in more than one county, then the governing body, as hereinbefore designated in such event, after arriving at the estimate in dollars deemed necessary for the entire subdistrict shall ratably apportion such amount between the counties and transmit and certify the prorated portion to the respective boards of supervisors of each of the counties.

The board or boards of supervisors shall upon receipt of certification from the governing body of the district make the necessary levy on the assessed valuation of all real estate within the boundaries of the subdistrict lying within their respective county to raise said amounts, but in no event to exceed one dollar and eight cents per thousand dollars of assessed value.

The special tax so levied shall be collected in the same manner as other taxes with like penalty for delinquency, with the proceeds therefrom to be kept in a separate account by the appropriate county treasurer or treasurers identified by the official name of the subdistrict and expenditures therefrom shall be made on requisition of the chairman and secretary of the governing body of the subdistrict. [C58, 62, 66, 71, 73, 75, 77, 79,§467A.20]

Referred to in §467A.22, 467A.41

467A.21 Condemnation by subdistrict. A subdistrict of a soil conservation district may condemn land or rights or interests therein to carry out the authorized purposes of the subdistrict. [C62, 66, 71, 73, 75, 77, 79,§467A.21]

467A.22 General powers applicable—warrants or bonds. A subdistrict organized under the provisions of this chapter shall have all of the powers of a soil conservation district in addition to other powers granted to the subdistrict in other sections of this chapter.

The governing body of the subdistrict, upon determination that benefits from works of improvement as set forth in the watershed work plan to be installed will exceed costs thereof, and that funds needed for purposes of the subdistrict require levy of a special benefit assessment as provided in section 467A.23, in lieu of the special annual tax as provided in section 467A.20, shall record its decision to use said taxing authority and shall have authority, upon majority vote of said governing body and with the approval of the state soil conservation committee, to issue warrants or bonds payable in not more than forty semiannual installments in connection therewith, and to pledge and assign the proceeds of the special benefit assessment and other revenues of the subdistrict as security therefor. Such warrants and bonds of indebtedness shall be general obligations of the subdistrict, exempt from all taxes, state and local, and in no

event shall such warrants and bonds constitute an indebtedness of the soil conservation district or the state of Iowa. [C62, 66, 71, 73, 75, 77, 79,§467A.22]

ALTERNATE METHOD OF TAXATION FOR WATERSHED PROTECTION AND FLOOD PREVENTION

467A.23 Agreement by fifty percent of landowners. After obtaining agreements to carry out recommended soil conservation measures and proper farm plans from owners of not less than fifty percent of the lands situated in the subdistrict, the governing body of the subdistrict shall have the authority to establish a special tax for the purpose of organization, construction, repair, alteration, enlargement, extension and operation of present and future works of improvement within the boundaries of said subdistrict. The governing body shall appoint three appraisers to assess benefits and classify the land affected by such improvements. One of such appraisers shall be a competent registered professional engineer and two of them shall be resident landowners of the county or counties in which the subdistrict is located but not living within nor owning or operating any lands included in said subdistrict.

The appraisers shall take and subscribe an oath of their qualifications and to perform the duties of classification of said lands, fix the percentages, benefits and apportion and assess the costs and expenses of construction of the said improvement according to law and their best judgment, skill, and ability. If said appraisers or any of them fail or neglect to act or perform the duties in the time and as required of them by law, the governing body of the subdistrict shall appoint others with like qualifications to take their places and perform said duties. [C62, 66, 71, 73, 75, 77, 79,§467A.23]

Referred to in §467A.22, 467A.38, 467A.41

467A.24 Assessment for improvements. At the time of appointing said appraisers, the governing body shall fix the time within which said assessment, classification, and apportionment shall be made, which may be extended for good cause shown. Within twenty days after their appointment, they shall begin to inspect and classify all the lands within said district, or any change, extension, enlargement, or relocation thereof in tracts of forty acres or less according to the legal or recognized subdivisions, in a graduated scale of benefits to be numbered according to the benefit to be received by each of such tracts from such improvement, and pursue said work continuously until completed and, when completed, shall make a full, accurate, and detailed report thereof and file the same with the governing body. The lands receiving the greatest benefit shall be marked on a scale of one hundred, and those benefited in a less degree with such percentage of one hundred as the benefits received bear in proportion thereto.

The amount of benefit appraised to each forty acres of land within the subdistrict shall be determined by the improvements within said subdistrict based upon the work plan as agreed upon by the subdistrict. [C62, 66, 71, 73, 75, 77, 79,§467A.24; 68GA, ch 1154,§18]

Referred to in §467A.41

467A.25 Report of appraisers. In the report of the appraisers so appointed they shall specify each tract of land by proper description, and the ownership thereof, as the same appears on the transfer books in the auditor's office. [C62, 66, 71, 73, 75, 77, 79,§467A.25]

Referred to in §467A.41

467A.26 Hearing. The governing body shall fix a time for a hearing within sixty days upon receiving the report of the appraisers, and the governing body shall cause notice to be served upon each person not less than ten days before said hearing whose name appears as owner, naming him, and also upon the person or persons in actual occupancy of any tract of land without naming him of the day and hour of such hearing, which notice shall be for the same time and served in the same manner as is provided for the establishment of a subdistrict, and shall state the amount of assessment of costs and expenses of organizing and construction apportioned to each owner upon each forty-acre tract or less, and that all objections thereto must be in writing and filed with the governing body at or before the time set for such hearing. [C62, 66, 71, 73, 75, 77, 79,§467A.26]

Referred to in §467A.41

467A.27 Determination by board. At the time fixed or at an adjourned hearing, the governing body shall hear and determine all objections filed to said report and shall fully consider the said report, and may affirm, increase, or diminish the percentage of benefits or the apportionment of costs and expenses made in said report against any body or tract of land in said subdistrict as may appear to the board to be just and equitable. [C62, 66, 71, 73, 75, 77, 79,§467A.27]

Referred to in §467A.41

467A.28 Appeal. Any person aggrieved may appeal from any final action of the governing body in relation to any matter involving his rights, to the district court of the county in which the proceeding was held. [C62, 66, 71, 73, 75, 77, 79,§467A.28]

Referred to in §467A.41

467A.29 Intercounty subdistricts. In subdistricts extending into two or more counties, appeals from final orders resulting from the joint action of the several governing bodies of such subdistrict may be taken to the district court of any county into which the district extends. [C62, 66, 71, 73, 75, 77, 79,§467A.29]

Referred to in §467A.41

467A.30 Notice of appeal. All appeals shall be taken within twenty days after the date of final action or order of the governing body from which such appeal is taken by filing with the auditor a notice of appeal, designating the court to which the appeal is taken, the order or action appealed from, and stating that the appeal will come on for hearing thirty days following perfection of the appeal with allowances of additional time for good cause shown. This notice shall be accompanied by an appeal bond with sureties to be approved by the auditor conditioned to pay all costs adjudged against the appellant and to abide the orders of the court. [C62, 66, 71, 73, 75, 77, 79,§467A.30]

Referred to in §467A.41

467A.31 Petition filed. Within twenty days after perfection of notice, the appellant shall file a petition setting forth the order or final action of the governing body appealed from and the grounds of his objections and his complaint, with a copy of his claim for damages or objections filed by him with the auditor. He shall pay to the clerk the filing fee as provided by law in other cases. A failure to pay the filing fee or to file such petition shall be deemed a waiver of the appeal and in such case the court shall dismiss the same. [C62, 66, 71, 73, 75, 77, 79,§467A.31]

Referred to in §467A.41

467A.32 Assessment certified. When the board or boards of supervisors shall receive a certification from the governing body of the district to make the necessary assessment on the real estate within the boundaries of the subdistrict lying within their respective county, this shall be construed as final action by the governing body. [C62, 66, 71, 73, 75, 77, 79,§467A.32]
Referred to in §467A.41

467A.33 Assessments transmitted. The governing body upon receiving the reports from three appointed appraisers and after holding the hearings shall transmit and certify the amounts of assessments to the respective boards of supervisors which upon receipt of certification from the governing body of the district, make the necessary levy of such assessments as fixed by the governing body upon the land within such subdistrict and all assessments shall be levied at that time as a tax and shall bear interest at a rate not exceeding that permitted by chapter 74A from that date payable annually except as hereafter provided as to cash payments therefor within a specified time. The assessment so levied shall be kept in a separate account by the appropriate county treasurer or treasurers, identified by the official name of the subdistrict and expenditures therefrom shall be made on requisition of the chairman and secretary of the governing body of the subdistrict.

At no time will an assessment be made where the benefits accrued to the subdistrict do not exceed the cost of the improvements within the said subdistrict. [C62, 66, 71, 73, 75, 77, 79,§467A.33; 68GA, ch 1025,§75]
Referred to in §467A.41

467A.34 Payment to county treasurer. All assessments for benefits shall be levied at one time against the property benefited and when levied and certified by the board or boards of supervisors shall be paid at the office of the county treasurer. Each person or corporation shall have the right within twenty days after the levy of assessments to pay his or its assessment in full without interest.

If any levy of assessments is not sufficient to meet the cost and expenses of organizing and construction apportioned to each owner upon each forty-acre tract or less, additional assessments may be made on the same classification as the previous ones. [C62, 66, 71, 73, 75, 77, 79,§467A.34]
Referred to in §467A.41

467A.35 Installments. If the owner of any premises against which a levy exceeding twenty dollars has been made and certified shall, within thirty days from the date of such levy, agree in writing in a separate agreement, that in consideration of having a right to pay his assessment in installments, he will not make any objection as to the legality of his assessment for benefit, or the levy of the taxes against his property, then such owner shall have the following options:

1. To pay one half of the amount of such assessment at the time of filing such agreement and the remaining one half shall become due and payable one year from the date of filing such agreement. All such installments shall be without interest if paid at said times, otherwise said assessments shall bear interest from the date of the levy at a rate fixed by the governing body of the subdistrict, but not exceeding that permitted by chapter 74A, payable annually, and be collected as other taxes on real estate, with like penalty for delinquency.

2. To pay such assessments in not less than ten nor more than forty equal installments, the number to be fixed by the governing body of the subdistrict and interest at the rate fixed by the governing body of the subdistrict, not exceeding that permitted by chapter 74A. The first installment of each assessment shall become due and payable at the October semiannual tax paying date after the date of filing such agreement, unless the agreement is filed with the county auditor less than thirty days prior to such October semiannual tax paying date, in that event, the first installment shall become due and payable at the next succeeding October semiannual tax paying date. The second and each subsequent installment shall become due and payable at the October semiannual tax paying date each year thereafter. All such installments shall be collected with interest accrued on the unpaid balance to the October semiannual tax paying date and as other taxes on real estate, with like penalty for delinquency. [C62, 66, 71, 73, 75, 77, 79,§467A.35; 68GA, ch 1025,§76]
Referred to in §467A.41

467A.36 Option by appellant. When an owner takes an appeal from the assessment against any of his land, the option to pay in installments whatever assessment is finally established against such land in said appeal shall continue, if within twenty days after the final determination of said appeal he shall file in the office of the auditor his written election to pay in installments, and within said period pay such installments as would have matured prior to that time if no appeal had been taken, together with all accrued interest on said assessment to the last preceding interest-paying date. [C62, 66, 71, 73, 75, 77, 79,§467A.36]
Referred to in §467A.41

467A.37 Status of classification. A classification of land for watershed purposes, when finally adopted, shall remain the basis of all future assessments for the purpose of said subdistrict, except as provided in section 467A.38. [C62, 66, 71, 73, 75, 77, 79,§467A.37]
Referred to in §467A.41

467A.38 New classification. After a subdistrict has been established and the improvements thereof constructed and put in operation, if the governing body shall find that the original assessments are not equitable as a basis for the expenses of any enlargement or extension thereof which may have become necessary, they shall order a new classification of all lands in said subdistrict by resolution, and appoint three appraisers, which shall meet the same requirements as set forth in section 467A.23.

Upon the completion of the reclassification, those affected by such reclassification shall have the right to appeal as hereinabove set forth. [C62, 66, 71, 73, 75, 77, 79,§467A.38]
Referred to in §467A.37, 467A.41

467A.39 Benefit of whole subdistrict. Assessments for repair, alteration, enlargement, extension, and operation of works of improvement within the watershed district shall be a benefit to the entire subdistrict and levied as such. [C62, 66, 71, 73, 75, 77, 79,§467A.39]
Referred to in §467A.41

467A.40 Compensation of appraisers. Persons appointed to appraise and make classifications of lands shall receive such compensation as the governing body may fix and in addition thereto, the necessary expenses of transportation of said persons while engaged in their work; such compensation and expenses

shall be construed as part of the cost of the subdistrict which shall be included when considering classifications of lands within a subdistrict. [C62, 66, 71, 73, 75, 77, 79,§467A.40]
Referred to in §467A.41

467A.41 Election of taxing methods. Subdistricts organized under the provisions of this chapter shall designate in the petition which of the taxing methods will be used or may stipulate that both methods are contemplated for use. Should the governing body of the subdistrict find it desirable to change from a special annual tax to special benefit assessments it may elect to do so and shall institute proceedings described in sections 467A.23 through 467A.40 and may divert any moneys already collected under section 467A.20, for the purposes authorized in this chapter. [C62, 66, 71, 73, 75, 77, 79,§467A.41]

467A.42 Soil and water conservation practices. In addition to the definitions established by section 467A.3, as used in sections 467A.43 to 467A.53 and sections 467A.61 to 467A.66, unless the context otherwise requires:

1. *"Soil loss limit"* means the maximum amount of soil loss due to erosion by water or wind, expressed in terms of tons per acre per year, which the commissioners of the respective soil conservation districts shall determine is acceptable in order to meet the objectives expressed in section 467D.1.

2. *"Soil and water conservation practices"* means any of the practices designated in or pursuant to this subsection which serve to prevent erosion of soil by wind or water, in excess of applicable soil loss limits, from land used for agricultural or horticultural purposes only.

a. "Permanent soil and water conservation practices" means planting of perennial grasses, legumes, shrubs, or trees, the establishment of grassed waterways, and the construction of terraces, or other permanent soil and water practices approved by the state soil conservation committee.

b. "Temporary soil and water conservation practices" means planting of annual or biennial crops, use of strip-cropping, contour planting, minimum or mulch tillage, and any other cultural practices approved by the state soil conservation committee.

3. *"Erosion control practices"* means:

a. The construction or installation, and maintenance, of such structures or devices as are necessary to carry to a suitable outlet from the site of any building housing four or more residential units, any commercial or industrial development or any publicly or privately owned recreational or service facility of any kind, not served by a central storm sewer system, any water which:

(1) Would otherwise cause erosion in excess of the applicable soil loss limit; and

(2) Does not carry nor constitute sewage, industrial waste, or other waste as defined by section 455B.2.

b. The employment of temporary devices or structures, temporary seeding, fibre mats, plastic, straw, or other measures adequate to prevent erosion in excess of the applicable soil loss limits from the site of, or land directly affected by, the construction of any public or private street, road or highway, any residential, commercial, or industrial building or development, or any publicly or privately owned recreational or service facility of any kind, at all times prior to completion of such construction.

c. The establishment and maintenance of vegetation upon the right of way of any completed portion of any public street, road, or highway, or the construction or installation thereon of structures or devices, or other measures adequate to prevent erosion from the right of way in excess of the applicable soil loss limits.

4. *"Agricultural land"* has the meaning assigned that term by section 172C.1.

5. *"Farm unit"* means a single contiguous tract of agricultural land, or two or more adjacent tracts of agricultural land, located within a single soil conservation district, upon which farming operations are being conducted by a person who owns or is purchasing or renting all of such land, or by his or her tenant or tenants. If a landowner has multiple farm tenants, the land on which farming operations are being conducted by each tenant shall constitute a separate farm unit. This definition does not prohibit land which is within a single soil conservation district and is owned or being purchased by the same person, or is being rented by the same tenant, from being treated as two or more farm units if the commissioners of the soil conservation district deem it preferable to do so.

6. *"Conservation folder"* means compiled information concerning the topography, soil composition, natural or artificial drainage characteristics and other pertinent factors concerning a particular farm unit, which are necessary to the preparation of a sound and equitable conservation agreement for that farm unit. The specific items to be contained in a conservation folder shall be prescribed by administrative rules of the department of soil conservation. The department shall provide by rule that an updated farm plan prepared for a particular farm unit within ten years prior to the effective date of this subsection shall be considered an adequate replacement for the conservation folder for that farm unit.

7. *"Farm unit soil conservation plan"* means a plan jointly developed by the owner and, if appropriate, the operator of a farm unit and the commissioners of the soil conservation district within which that farm unit is located, based on the conservation folder for that farm unit and identifying those permanent soil and water conservation practices and temporary soil and water conservation practices the use of which may be expected to prevent soil loss by erosion from that farm unit in excess of the applicable soil loss limit or limits. The plan shall if practicable identify alternative practices by which this objective may be attained.

8. *"Conservation agreement"* means a commitment by the owner or operator of a farm unit to implement a farm unit soil conservation plan or, with the approval of the commissioners of the soil conservation district within which the farm unit is located, a portion of a farm unit soil conservation plan. The commitment shall be conditioned on the furnishing by the soil conservation district of such technical or planning assistance in the establishment of, and cost sharing or other financial assistance for establishment and maintenance of the soil and water conservation practices necessary to implement the plan, or a portion of the plan. [C73, 75, 77, 79,§467A.42; 68GA, ch 1153,§5, 6]
Referred to in §467A.44

467A.43 Duty of property owners. To conserve the fertility, general usefulness, and value of the soil and soil resources of this state, and to prevent the injurious effects of soil erosion, it is hereby made the duty of the owners of real property in this state to establish and maintain soil and water conservation

practices or erosion control practices, as required by the regulations of the commissioners of the respective soil conservation districts. As used in this section, "owners of real property in this state" includes each state government agency, each political subdivision of the state and each agency of such a political subdivision which has under its control publicly owned land, including but not limited to agricultural land, forests, parks, the grounds of state educational, penal and human service institutions, public highways, roads and streets, and other public rights of way. [C73, 75, 77, 79,§467A.43; 68GA, ch 1153,§7]
Referred to in §467A.42, 467A.48

467A.44 Rules by commissioners—scope. The commissioners of each soil conservation district shall, with approval of and within time limits set by administrative order of the state soil conservation committee, adopt such reasonable regulations as are deemed necessary to establish a soil loss limit or limits for the district and provide for the implementation of the limit or limits, and may subsequently amend or repeal their regulations as they deem necessary. The state soil conservation committee shall review the soil loss limit regulations adopted by the soil conservation districts at least once every five years, and shall recommend any changes in the regulations of any soil conservation district which the state committee deems necessary to assure that the district's soil loss limits are reasonable and attainable. The commissioners may:

1. Classify land in the district on the basis of topography, soil characteristics, current use, and other factors affecting propensity to soil erosion.

2. Establish different soil loss limits for different classes of land in the district if in their judgment and that of the state soil conservation committee a lower soil loss limit should be applied to some land than can reasonably be applied to other land in the district, it being the intent of the general assembly that no land in the state be assigned a soil loss limit that cannot reasonably be applied to such land.

3. Require the owners of real property in the district to employ either soil and water conservation practices or erosion control practices, and:

a. May not specify the particular practices to be employed so long as such owners voluntarily comply with the applicable soil loss limits established for the district.

b. May specify two or more approved soil and water conservation practices or erosion control practices, one of which shall be employed by the landowner to bring erosion from land under his control within the applicable soil loss limit of the district when an administrative order is issued to the landowner.

c. In no case may the commissioners require:

(1) The employment of erosion control practices as defined in section 467A.42, subsection 3, on land used in good faith for agricultural or horticultural purposes only.

(2) The employment of soil and water conservation practices or erosion control practices on that portion of any public street, road or highway completed or under construction within the corporate limits of any city, which is or will become the traveled or surfaced portion of such street, road, or highway.

(3) That any owner or operator of agricultural land refrain from fall plowing of land on which he intends to raise a crop during the next succeeding growing season, however on those lands which are prone to excessive wind erosion the commissioners may require that reasonable temporary measures be taken to minimize the likelihood of wind erosion so long as such measures do not unduly increase the cost of operation of the farm on which the land is located. However, fall plowing of soil which is commonly known as gumbo shall always be permitted. [C73, 75, 77, 79,§467A.44; 68GA, ch 1153,§8]
Referred to in §467A.42, 467A.48, 467A.51
See 68GA, ch 1153, §16

467A.45 Submission of rules to committee—hearing. Regulations which the commissioners propose to adopt, amend, or repeal shall be submitted to the state soil conservation committee, in such form as the committee shall prescribe, for its approval. The committee may approve the regulations as submitted, or with such amendments as it deems necessary. The commissioners shall thereafter publish notice of hearing on the proposed regulations, as approved, in a newspaper of general circulation in the district, setting a date and time not less than ten nor more than thirty days after such publication when a hearing on the proposed regulations will be held at a specified place. The notice shall include the full text of the proposed regulations or shall state that the proposed regulations are on file and available for review at the office of the affected soil conservation district. [C73, 75, 77, 79,§467A.45]
Referred to in §467A.42, 467A.48

467A.46 Conduct of hearing. At the hearing, the commissioners or their designees shall explain, in reasonable detail, the reasons why adoption, amendment, or repeal of the regulations is deemed necessary or advisable. Any landowner, or any occupant of land who would be affected by the regulations, shall be afforded an opportunity to be heard for or against the proposed regulations. At the conclusion of the hearing, the commissioners shall announce and enter of record their decision whether to adopt or modify the proposed regulations. Any modification must be approved by the state soil conservation committee, which may at its discretion order the commissioners to republish the regulations and hold another hearing in the manner prescribed by this chapter. [C73, 75, 77, 79,§467A.46]
Referred to in §467A.42, 467A.48

467A.47 Inspection of land on complaint. The commissioners of any soil conservation district shall inspect or cause to be inspected any land within the district, upon receipt of a written and signed complaint, from an owner or occupant of land being damaged by sediment, that soil erosion is occurring thereon in excess of the limits established by the district's soil erosion control regulations. If they find that sediment damages are occurring to property owned or occupied by the person filing the complaint and that such excess soil erosion is so occurring on the land inspected, they shall issue an administrative order to the landowner or landowners of record, and to the occupant of the land if known to the commissioners, describing said land and stating as nearly as possible the extent to which soil erosion thereon exceeds the limits established by the district's regulations. The order shall be delivered either by personal service or by restricted certified mail to each of the persons to whom it is directed, and shall:

1. In the case of erosion occurring on the site of any construction project or similar undertaking involving the removal of all or a major portion of the vegetation or other natural or man-made cover, exposing bare soil directly to water or wind, state a

time not more than five days after service or mailing of the notice of the order when work necessary to establish or maintain erosion control practices must be commenced, and a time not more than thirty days after service or mailing of the notice of the order when the work is to be satisfactorily completed.

2. In all other cases, state a time not more than six months after service or mailing of the notice of the order, by which work needed to establish or maintain the necessary soil and water conservation practices or erosion control measures must be commenced, and a time not more than one year after the service or mailing of the notice of the order when the work is to be satisfactorily completed, unless the requirements of the order are superseded by the provisions of section 467A.48. [C73, 75, 77, 79,§467A.47]

Referred to in §467A.42, 467A.48, 467A.49, 467A.52, 467A.61, 467A.64, 467A.66

467A.48 Application for public cost-sharing funds. No owner or occupant of land in this state shall be required to establish any new permanent or temporary soil and water conservation practice unless public or other cost-sharing funds have been specifically approved for such land and actually made available to the owner or occupant in an amount equal to at least seventy-five percent of the cost of any permanent soil and water conservation practice, or an amount set by the state soil conservation committee for any temporary soil and water conservation practice, except as otherwise provided by law with respect to land classified as agricultural land under conservation cover. The state soil conservation committee shall review these requirements once each year, and may authorize soil conservation district commissioners to make the mandatory establishment of any specified soil and water conservation practice in any particular case conditional on a higher proportion of public cost sharing than is required by this section. When the commissioners have been so authorized, they shall, in determining the amount of cost-sharing for establishment of a specified soil and water conservation practice to comply with an administrative order issued pursuant to section 467A.47, consider the extent to which the practice will contribute benefits to the public in relation to the benefits that will accrue to the individual owner or occupant of the land on which the practice is to be established. Evidence that an application for public or other cost-sharing funds, from a source or sources having authority to pay a portion of the cost of work needed to comply with an administrative order issued pursuant to section 467A.47, has been submitted to the proper officer or agency shall constitute commencement of such work within the meaning of sections 467A.43 to 467A.53. Upon receiving evidence of the submission of such application, the commissioners shall forward to the officer or agency to which the application was made a written request to receive notification of the disposition of such application. When notified of the approval of such application, the commissioners shall issue to the same parties who received the original administrative order, or their successors in interest, a supplementary order, to be delivered in the same manner as provided by sections 467A.43 to 467A.53 for delivery of original administrative orders. The supplementary order shall state a time, not more than six months after approval of the application for public cost-sharing funds, by which the work needed to comply with the original administrative order shall actually be commenced, and a time thereafter when such work is to be satisfactorily completed. If feasible, that time shall be within one year after the date of the supplementary order, but the owner of land on which a soil and water conservation practice is being established under this section shall not be required to incur a cost therefor in any one calendar year which exceeds ten dollars per acre for each acre of land belonging to that owner and located in the county containing the land on which the required practice is being established or in counties contiguous thereto. [C73, 75, 77, 79,§467A.48; 68GA, ch 115,§1, ch 1153,§9]

Referred to in §467A.42, 467A.47, 467A.49, 467A.61, 467D.23

467A.49 Petition for court order. The commissioners shall petition the district court for a court order requiring immediate compliance with an administrative order previously issued by the commissioners as provided in section 467A.47, if:

1. The work necessary to comply with the administrative order is not commenced on or before the date specified in such order, or in any supplementary order subsequently issued as provided in section 467A.48, unless in the judgment of the commissioners the failure to commence or complete the work as required by the administrative order is due to factors beyond the control of the person or persons to whom such order is directed and the person or persons can be relied upon to commence and complete the necessary work at the earliest possible time.

2. Such work is not being performed with due diligence, or is not satisfactorily completed by the date specified in the administrative order, or when completed does not reduce soil erosion from such land below the limits established by the soil conservation district's regulations.

3. The person or persons to whom the administrative order is directed advise the commissioners that they do not intend to commence or complete such work. [C73, 75, 77, 79,§467A.49]

Referred to in §467A.42, 467A.48, 467A.50

467A.50 Burden—court order. In any action brought under section 467A.49, the burden of proof shall be upon the commissioners to show that soil erosion is in fact occurring in excess of the applicable soil loss limits and that the defendant has not established or maintained soil and water conservation practices or erosion control practices in compliance with the soil conservation district's regulations. With respect to construction, repair, or maintenance of any public street, road, or highway, evidence that soil erosion control standards equivalent to or in excess of those currently imposed by the United States government on the project or like projects involving use of federal funds shall create a presumption of compliance with the applicable soil loss limit. Upon receiving satisfactory proof, the court shall issue an order directing the landowner or landowners to comply with the administrative order previously issued by the commissioners. The court may modify such administrative order if deemed necessary. Notice of the court order shall be given either by personal service or by restricted certified mail to each of the persons to whom the order is directed, who may within thirty days from the date of the court order appeal to the supreme court. Any person who fails to comply with a court order issued pursuant to this section within the time specified in such order, unless the order has been stayed pending an appeal, shall be deemed in contempt of court and may be punished accordingly. [C73, 75, 77, 79,§467A.50]

Referred to in §467A.42, 467A.48

467A.51 Entering on land. The commissioners and their authorized agents or employees may enter upon any private or public property, except private dwellings, at any reasonable time to classify land by soil sampling or other appropriate methods or to determine whether soil erosion is occurring on the property in violation of the district's regulations.

1. If the owner or occupant of any property refuses admittance, or if prior to such refusal the commissioners demonstrate the need for a warrant, the commissioners may make an application under oath or affirmation to the district court of the county in which the property is located for the issuance of a search warrant.

2. In the application the commissioners shall state that entry on the premises is mandated by the laws of this state or that entry is needed to conduct soil sampling necessary to classify soil in the district as specified in section 467A.44, subsection 1, or to determine whether soil erosion is occurring on the property in violation of the district's regulations. The application shall describe the area or premises, give the date of the last known investigation or sampling, give the date and time of the proposed inspection, declare the need for such inspection, recite that notice of desire to make an inspection has been given to affected persons and that admission was refused if that be the fact, and state that the inspection has no purpose other than to carry out the purpose of the statute, ordinance or regulation pursuant to which the inspection is to be made.

3. The court may issue a search warrant, after examination of the applicant and any witnesses, if the court is satisfied that there is probable cause to believe the existence of the allegations in the application.

4. In soil sampling and making investigations pursuant to a warrant, the commissioners must execute the warrant in a reasonable manner within the time period specified in the warrant. [C73, 75, 77, 79,§467A.51]

Referred to in §467A.42, 467A.48

467A.52 Information on siltation by district board. When the board of any conservancy district informs the commissioners of a soil conservation district that the conservancy district is unable to proceed with construction of a planned internal improvement, because it has been found that the internal improvement would not be adequately protected against siltation due entirely or partially to failure to establish or maintain soil and water conservation practices or erosion control practices within the soil conservation district, the commissioners of the soil conservation district shall determine as far as possible the particular lands where soil erosion which prevents the conservancy district from constructing the internal improvement is occurring and proceed in the same manner as when a complaint is received under section 467A.47. If after six months, the commissioners of the soil conservation district fail or refuse to control the soil erosion which prevents the conservancy district from constructing the internal improvement, the conservancy district directors may petition the district court of the county in which such soil conservation district is located for a court order directing the commissioners to proceed at once to control such erosion. The court shall afford the commissioners or their representative an opportunity to appear and show cause why such order should not be issued. [C73, 75, 77, 79,§467A.52]

Referred to in §467A.42, 467A.48

467A.53 Co-operation with other agencies. Soil conservation districts are hereby authorized to enter into agreements with the federal government or any agency thereof, as provided by state law, or with the state of Iowa or any agency thereof, any other soil conservation district or conservancy district, or other political subdivision of this state, for co-operation in preventing, controlling, or attempting to prevent or control, soil erosion. Soil conservation districts may accept, as provided by state law, any money disbursed for soil erosion control purposes by the federal government or any agency thereof, and expend such money for the purposes for which it was received. [C73, 75, 77, 79,§467A.53]

Referred to in §467A.42, 467A.48

467A.54 to 467A.60 Reserved.

467A.61 Discretionary inspection by commissioners—actions upon certain findings.

1. In addition to the authority granted by section 467A.47, the commissioners of any soil conservation district may inspect or cause to be inspected any land within the district on which they have reasonable grounds to believe that soil erosion is occurring in excess of the limits established by the district's soil erosion control regulations. If the commissioners find from an inspection conducted under authority of either section 467A.47 or this section that soil erosion is occurring on that land in excess of the applicable soil loss limits established by the district's soil erosion control regulations, they shall send notice of that finding to the landowner or landowners of record, and to the occupant of the land if known to the commissioners. The notice shall describe the land affected and shall state as nearly as possible the extent to which soil erosion from that land exceeds the applicable soil loss limits.

a. If the commissioners find that the excessive erosion described in the notice is not causing sediment damage to property owned or occupied by any person other than the owner or occupant of the land on which the excessive soil erosion is occurring, and that the rate of the excessive erosion is less than twice the applicable soil loss limit, the notice required by this subsection shall include or be accompanied by information regarding financial or other assistance which the commissioners are able to make available to the owner or occupant of the land to aid in achieving compliance with the applicable soil loss limits.

b. If the commissioners find that the excessive soil erosion described in the notice is not causing sediment damage to property owned or occupied by any person other than the owner or occupant of the land on which it is occurring, but that the erosion is occurring at a rate equal to or greater than twice the applicable soil loss limit, the notice shall so state, shall include or be accompanied by the information required by paragraph *"a"* of this subsection, and shall be delivered by personal service or by restricted certified mail to each of the persons to whom the notice is directed. A notice given under this paragraph shall also include or be accompanied by information explaining the provisions of subsection 2.

2. Beginning January 1, 1985, or five years after the completion of the conservation folder for a particular farm unit pursuant to this section, whichever date is later, the commissioners of the soil conservation district in which that farm unit is located may petition the district court for an appropriate order with respect to that farm unit if its owner or occupant has been sent a notice by the commissioners under subsection 1, paragraph *"b"* for three or more

consecutive years. The commissioners' petition shall seek a court order which states a time not more than six months after the date of the order when the owner or occupant must commence, and a time when he or she must complete the steps necessary to comply with the order. The time allowed to complete the establishment of any temporary soil and water conservation practice employed to comply or advance toward compliance with the court's order shall be not more than one year after the date of that order, and the time allowed to complete the establishment of any permanent soil and water conservation practice employed to comply with the court's order shall be not more than five years after the date of that order. The provisions of section 467A.48 shall apply to a court order issued under this subsection. The steps required of the farm unit owner or operator by the court order shall be those which are necessary to do one of the following:

a. Bring the farm unit which is the subject of the order into compliance with its farm unit soil conservation plan, if such a plan had been agreed upon prior to the time the commissioners petitioned for the order.

b. Bring the farm unit which is the subject of the order into compliance with a plan developed for that farm unit by the commissioners, in accordance with guidelines established by the department of soil conservation, and presented to the court as a part of the commissioners' petition, if a farm unit soil conservation plan has not previously been agreed upon for that farm unit. A plan presented to the court by the commissioners under this paragraph shall specify as many alternative approved soil and water conservation practices as feasible, among which the owner or occupant of the farm unit may choose in taking the steps necessary to comply with the court's order.

c. Bring the farm unit which is the subject of the order into compliance with a soil conservation plan developed by the owner or occupant of that farm unit as an alternative to the proposed soil conservation plan developed by the commissioners, if the owner or occupant so petitions the court and the court finds that the owner or occupant's plan will bring the farm unit into conformity with the applicable soil loss limits of the district. [68GA, ch 1153,§10]

Referred to in §467A.42

467A.62 Duties of commissioners and of owners and occupants of agricultural land—restrictions on use of cost-sharing funds.

1. The commissioners of each soil conservation district shall seek to implement or to assist in implementing the following requirements:

a. Each farm unit shall be furnished a conservation folder by the department of soil conservation, acting through the soil conservation district in which the farm unit is located, not later than January 1, 1985, or as soon thereafter as adequate funding is available to permit completion of a conservation folder for every farm unit in the state. The department shall provide by rule that an updated farm plan prepared for a particular farm unit within ten years prior to the effective date of this subsection shall be considered an adequate replacement for the conservation folder for that farm unit. Upon completion of the conservation folder for a particular farm unit, the district shall send the owner of that farm unit, and also the operator of the farm unit if known by the commissioners to be other than the owner, a letter offering that person or those persons a copy of the folder. The district shall keep a record of the date the folder is completed and the letter is sent. The folder shall be updated from time to time by the district as it deems necessary.

b. The commissioners of each soil conservation district shall complete preparation of a farm unit soil conservation plan for each farm unit within the district, not later than January 1, 1985 or five years after completion of the conservation folder for that farm unit, whichever date is later, or as soon thereafter as adequate funding is available to permit compliance with this requirement. The commissioners shall make every reasonable effort to consult with the owner and, if appropriate, with the operator of that farm unit, and to prepare the plan in a form which is acceptable to that person or those persons. The plan shall be drawn up and completed without expense to the owner or operator of the farm unit, except that the owner or operator shall not be reimbursed for the value of his or her own time devoted to participation in the preparation of the plan. If the commissioners' plan is unacceptable to the owner or operator of the farm unit, that person or those persons may prepare an alternative farm unit soil conservation plan identifying permanent or temporary soil and water conservation practices which may be expected to achieve compliance with the soil loss limit or limits applicable to that farm unit, and submit that plan to the soil conservation district commissioners for their review.

c. Within one year after completion of a farm unit soil conservation plan for a particular farm unit which is acceptable both to the commissioners of the soil conservation district within which the farm unit is located and to the owner and, if appropriate, to the operator of that farm unit, the commissioners shall offer to enter into a soil conservation agreement with the owner, and also with the operator if appropriate, based on the mutually acceptable farm unit soil conservation plan.

2. State cost-sharing funds shall not be made available for use on a farm unit with respect to which no conservation agreement is in effect by January 1, 1986, or one year after the completion of the farm unit soil conservation plan for that farm unit by the soil conservation district, whichever date is later. The restriction imposed by this subsection shall not apply to any farm unit with respect to which an administrative order or a court order to comply with applicable soil loss limits has been issued as provided by this chapter. [68GA, ch 1153,§11]

Referred to in §467A.42

467A.63 Right of purchaser of agricultural land to obtain information. A prospective purchaser of an interest in agricultural land located in this state is entitled to obtain from the seller, or from the office of the soil conservation district in which the land is located, a copy of the most recently updated conservation folder and of any farm unit soil conservation plan, developed pursuant to section 467A.62, subsection 1, paragraph "*b*", which are applicable to the agricultural land proposed to be purchased. A prospective purchaser of an interest in agricultural land located in this state shall be entitled to obtain additional copies of either or both of the documents referred to in this subsection from the office of the soil conservation district in which the land is located, promptly upon request, at a fee not to exceed the cost of reproducing them. Each person who identifies himself or herself to the commissioners or staff of a soil conservation district as a prospective purchaser of agricultural land in the district shall be given information, prepared in accordance with rules of the depart-

ment of soil conservation, which clearly explains the provisions of section 467A.65. [68GA, ch 1153,§12]
Referred to in §467A.42

467A.64 Erosion control plans required for certain projects.

1. When a land disturbing activity is to occur as a part of a project for which a permit is required by a political subdivision which has adopted a building code pursuant to chapter 103A or zoning ordinances pursuant to chapter 358A or 414, the required permit for the project causing the land disturbing activity shall not be issued unless there is on file with the permit issuing authority a soil erosion control plan which covers the proposed project and is approved by the soil conservation district commissioners.

2. For the purposes of this section, "land disturbing activity" means a land change such as the tilling, clearing, grading, excavating, transporting or filling of land which may result in soil erosion from water or wind and the movement of sediment and sediment related pollutants into the waters of the state or onto lands in the state but does not include the following:

a. Tilling, planting or harvesting of agricultural, horticultural or forest crops.

b. Preparation for single-family residences separately built unless in conjunction with multiple construction in subdivision development.

c. Minor activities such as home gardens, landscaping, repairs and maintenance work.

d. Surface or deep mining.

e. Installation of public utility lines and connections, fence posts, sign posts, telephone poles, electric poles and other kinds of posts or poles.

f. Septic tanks and drainage fields unless they are to serve a building whose construction is a land disturbing activity.

g. Construction and repair of the tracks, right of way, bridges, communication facilities and other related structures of a railroad.

h. Emergency work to protect life or property.

i. Disturbed land areas of less than ten thousand square feet unless a political subdivision by ordinance establishes a smaller exception or establishes conditions for this exception.

j. The construction, relocation, alteration or maintenance of public roads.

3. If the permit issuing authority determines that a land disturbing activity is not being conducted in compliance with the soil erosion control plan, the permit issuing authority shall file a written and signed complaint with the soil conservation district commissioners. The complaint shall have the same effect and validity as a complaint filed by an owner or occupant of land being damaged by sediment pursuant to section 467A.47. The soil conservation district commissioners may issue an administrative order as provided in that section to the person conducting the land disturbing activity. [68GA, ch 1153,§13]
Referred to in §467A.42

467A.65 Cost sharing for certain lands restricted.

1. It is the intent of this Act* that, effective January 1, 1981, each tract of agricultural land which has not been plowed or used for growing row crops at any time within fifteen years prior to that date, shall for purposes of this section be considered classified as agricultural land under conservation cover. If any tract of land so classified is thereafter plowed or used for growing row crops, the commissioners of the soil conservation district in which the land is located shall not approve use of state cost-sharing funds for establishing permanent or temporary soil and water conservation practices on that tract of land in an amount greater than one-half the amount of cost-sharing funds which would be available for that land if it were not considered classified as agricultural land under conservation cover. The restriction imposed by this section shall apply even if an administrative order or court order has been issued requiring establishment of soil and water conservation practices on that land. The commissioners may waive the restriction imposed by this section if they determine in advance that the purpose of plowing or row cropping land classified as land under conservation cover is to revitalize permanent pasture and that the land will revert to permanent pasture within two years after it is plowed.

2. When receiving an application for state cost-sharing funds to pay a part of the cost of establishing a permanent or temporary soil and water conservation practice, the commissioners of the soil conservation district to which the application is submitted shall require the applicant to state in writing whether, to the best of the applicant's knowledge, the land on which the proposed practice will be established is land considered to be classified as agricultural land under conservation cover, as defined in subsection 1. An applicant who knowingly makes a false statement of material facts or who falsely denies knowledge of material facts in completing the written statement required by this subsection commits a simple misdemeanor and, in addition to the penalty prescribed therefor by law, shall be required to repay to the department of soil conservation any cost-sharing funds made available to the applicant in reliance on the false statement or false denial. [68GA, ch 1153,§14]
Referred to in §467A.42, 467A.63
*68GA, ch 1153
See 68GA, ch 1153, §17 for published notice

467A.66 Procedure when commissioner is complainant. A soil conservation district commissioner who is an owner or occupant of land being damaged by sediment has the same right as any other person in like circumstances to file a complaint under section 467A.47, however a commissioner who is the complainant shall not vote on the question whether, on the basis of the inspection made pursuant to the complaint, the commissioners shall issue an administrative order under section 467A.47. [68GA, ch 1153,§15]
Referred to in §467A.42

CHAPTER 467B

FLOOD AND EROSION CONTROL

Referred to in §471.4

467B.1 Authority of board. Whenever any county, soil conservation district, subdistrict of a soil conservation district, conservancy district, political subdivision of the state, or other local agency shall engage or participate in any project for flood or erosion control, flood prevention, or the conservation, development, utilization, and disposal of water, in co-operation with the federal government, or any department or agency thereof, the counties in which said project shall be carried on shall have the jurisdiction, power, and authority through the board of supervisors to construct, operate and maintain said project on lands under the control or jurisdiction of the county whenever dedicated to county use, or to furnish financial and other assistance in connection with said projects. Such flood, soil erosion control, and watershed improvement projects shall be presumed to be for the protection of the tax base of the county, for the protection of public roads and lands, and for the protection of the public health, sanitation, safety, and general welfare. [C50, 54, 58, 62, 66, 71, 73, 75, 77, 79,§467B.1]

467B.2 Federal aid. Any county may, in accordance with provisions of this chapter, accept federal funds for aid in any project for flood or soil erosion control, flood prevention, or the conservation, development, utilization, and disposal of water, and may co-operate with the federal government or any department or agency thereof, soil conservation districts, subdistrict of a soil conservation district, conservancy district, political subdivision of the state, or other local agency, and the county may assume such proportion of the cost of the project as deemed appropriate, and may assume the maintenance cost of the same on lands under the control or jurisdiction of the county as will not be discharged by federal aid or grant. [C50, 54, 58, 62, 66, 71, 73, 75, 77, 79,§467B.2]

See also §467B.12

467B.3 Co-operation. The counties and soil conservation districts, subdistricts of soil conservation districts concerned, and conservancy districts, shall advise and consult with each other, upon the request of any of them or any affected landowners, and shall be authorized to co-operate with each other or with other state subdivisions, or instrumentalities, and affected landowners, as well as with the federal government or any department or agency thereof, to construct, operate, and maintain suitable projects for flood or soil erosion control, flood prevention, or the conservation, development, utilization, and disposal of water on public roads or other public lands or other land granted county use. [C50, 54, 58, 62, 66, 71, 73, 75, 77, 79,§467B.3]

467B.4 Structures or levees. When structures or levees necessary for flood or soil erosion control, flood prevention, or the conservation, development, utilization, and disposal of water, are constructed on county roads, the cost in total or in part shall be considered a part of the cost of road construction. [C50, 54, 58, 62, 66, 71, 73, 75, 77, 79,§467B.4]

467B.5 Maintenance cost. Where construction of projects has been completed by the soil conservation district, subdistricts of soil conservation districts, conservancy districts, political subdivisions of the state, or other local agencies, or the federal government, or any department or agency thereof on private lands under the easement granted to the county, only the cost of maintenance may be assumed by the county. [C50, 54, 58, 62, 66, 71, 73, 75, 77, 79,§467B.5]

467B.6 Estimate. In the proceedings to establish such a project the government engineer shall set forth in his report separately from other items, the amount of the cost of construction on county property and on private lands, and his estimate of the cost of the maintenance of the same.

If the plan is approved by all co-operating agencies and the project established as a flood or erosion control project the board of supervisors shall make a written record of any such co-operative arrangement and may use such part of the funds of the county now authorized by law and by this chapter as may be necessary to pay the amount agreed upon toward the construction, maintenance and cost of such project. [C50, 54, 58, 62, 66, 71, 73, 75, 77, 79,§467B.6]

467B.7 Projects on private land. Any flood or soil erosion control, flood prevention, or the conservation, development, utilization, and disposal of water, projects built on private land with federal or other funds when dedicated to the county use, shall be maintained in the same manner as its own county-owned or controlled property. [C50, 54, 58, 62, 66, 71, 73, 75, 77, 79,§467B.7]

467B.8 Conservation commissioners. In counties where soil conservation districts exist the commissioners in said county shall be responsible for the inspection of all flood and erosion control structures built on private land under easement to the county; shall furnish such technical assistance as they may have available in making estimates of needed repairs without cost to the county, and shall report any needed repair and the nature thereof to the county board of supervisors. [C50, 54, 58, 62, 66, 71, 73, 75, 77, 79,§467B.8]

467B.9 Tax. The county board of supervisors may annually levy a tax not to exceed six and three-fourths cents per thousand dollars of assessed value of all agricultural lands in the county, the same to be

used to acquire land or rights or interests therein by purchase or condemnation, and for repair, alteration, maintenance, and operation of the present and future works of improvement built on lands under the control or jurisdiction of the county, as provided for in this chapter. [C50, 54, 58, 62, 66, 71, 73, 75, 77, 79,§467B.9]
Referred to in §24.37

467B.10 Assumption of obligations. This chapter contemplates that actual direction of the project, or projects, and the actual work done in connection therewith, will be assumed by the soil conservation district, subdistrict of a soil conservation district, conservancy district, or by the federal government and that the county or other state subdivisions or instrumentalities jointly will meet the obligation required for federal co-operation and may make proper commitment for the care and maintenance of the project after its completion for the general welfare of the public and residents of the respective counties. [C50, 54, 58, 62, 66, 71, 73, 75, 77, 79,§467B.10]

467B.11 Highway law applicable. The counties in maintaining the structures or improvements made under such a project shall do so in a like manner and under like procedure as that used in the maintenance of its highways. Any co-operative agreements with other state subdivisions or instrumentalities shall conform with such an agreement as to the proportion of maintenance cost. [C50, 54, 58, 62, 66, 71, 73, 75, 77, 79,§467B.11]
Constitutionality, 52GA, ch 102, §12

467B.12 Payments from federal government. Whenever there shall be payable by the federal government to counties or school districts of the state any sums of money because of the fact that such school districts or counties are entitled to a share of the receipts from the operation of the federal government of flood control projects within any county of the state, such payments shall be payable to the county treasurer of any county in which such payments become due. [C50, 54, 58, 62, 66, 71, 73, 75, 77, 79,§467B.12]
See also §467B.2

467B.13 Allocation to secondary road funds. Upon receipt of any such payments or payment by the county treasurer twenty-five percent of such amount shall be credited to the secondary road funds of the counties which are principally affected by the construction of such federal flood control projects, and the board of supervisors shall determine which roads of the county are deemed to be principally affected and the amounts which shall be expended from these funds derived from the federal government on such roads. [C50, 54, 58, 62, 66, 71, 73, 75, 77, 79,§467B.13]

467B.14 Allocation. Sixty-five percent of any such payments or payment received from the federal government shall be distributed to the general fund of the school districts of the county after the county auditor has determined the districts which are principally affected by the federal flood control project involved in an amount deemed to be the equitable share of each such district and the amount allocated to each school district shall be paid over to the treasurer of such school district.

The county auditor shall certify to the executive council of the state the amounts allocated to each school district in the previous year, on January 2 of the following year. The executive council of the state shall deduct this amount from any tax free land reimbursement claim filed that year under section 284.4*; except that in no case shall the deduction result in an amount less than the total of the tax free land reimbursement plus any benefits payable to the school district other than the amounts specified in this paragraph. The remaining ten percent of any such payment received by the county treasurer from the federal government, or so much thereof as may be deemed necessary by the board of supervisors, shall be allocated to the local fire departments of the unincorporated villages, townships and cities of the county which are principally affected by the federal flood control project involved, to be paid and prorated among them as determined by the board of supervisors. If the funds prorated to local fire departments in any county are less than ten percent of the total county share of such federal payments for any year, the amount which exceeds such prorations shall revert back to and be divided equally between the secondary road fund and the local school district fund. [C50, 54, 58, 62, 66, 71, 73, 75, 77, 79,§467B.14]
*Ch 284, Code 1973, repealed by 65GA, ch 258, §16

467B.15 Taxes canceled. The treasurer of any county wherein is situated any land acquired by the federal government for flood control projects is hereby authorized to cancel any taxes or tax assessments against any such land so acquired where the tax has been extended but has not become a lien thereon at the time of the acquisition thereof. [C58, 62, 66, 71, 73, 75, 77, 79,§467B.15]

CHAPTER 467C

SOIL CONSERVATION AND FLOOD CONTROL DISTRICTS

Referred to in §111A.4(9), 455.22

467C.1 Presumption of benefit. The conservation of the soil resources of the state of Iowa, the proper control of water resources of the state and the prevention of damage to property and lands through the control of floods, the drainage of surface waters or the protection of lands from overflow shall be presumed to be a public benefit and conducive to the public health, convenience and welfare and essential to the economic well-being of the state. [C50, 54, 58, 62, 66, 71, 73, 75, 77, 79,§467C.1]

467C.2 Board of supervisors to establish districts—strip coal mining. The board of supervisors of any county shall have jurisdiction, power and authority at any regular, special or adjourned session to establish, subject to the provisions of this chapter, districts having for their purpose soil conservation and the control of flood waters and to cause to be constructed as hereinafter provided, such improvements and facilities as shall be deemed essential for the accomplishment of the purpose of soil conservation and flood control. Such board shall also have jurisdiction, power and authority at any regular, special or adjourned session to establish, in the same manner that the districts hereinabove referred to are established, districts having for their purpose soil conservation in mining areas within the county, and provide that anyone engaged in removing the surface soil over any bed or strata of coal in such district for the purpose of obtaining such coal shall replace the surface soil as nearly as practicable to its original position, and provide that, upon abandonment of such removal operation, all surface soil shall be so replaced. This section shall apply only to surface soil so removed after July 4, 1949, and then only if it is essential for the accomplishment of the purpose of soil conservation and flood control within the purview of this chapter. [C50, 54, 58, 62, 66, 71, 73, 75, 77, 79,§467C.2]

467C.3 Combination of functions. Such districts shall have the power to combine in their functions activities affecting soil conservation, flood control and drainage, or any of these objects, singly or in combination with another. [C50, 54, 58, 62, 66, 71, 73, 75, 77, 79,§467C.3]

467C.4 Old districts combined. If any levee or drainage district or improvement established either by legal proceedings or by private parties shall desire to include in the activities of such district soil conservation or flood control projects, the board upon petition, as for the establishment of an original levee or drainage district, shall establish a new district covering and including such old district and improvement together with any additional lands deemed necessary. All outstanding indebtedness of the old levee or drainage district shall be assessed only against the lands included therein. [C50, 54, 58, 62, 66, 71, 73, 75, 77, 79,§467C.4]

467C.5 Approval of commissioners. No district shall be established by any board of supervisors under this chapter unless the organization of such district is approved by the commissioners of any soil conservation district established under the provisions of chapter 467A and which is included all or in part within such district, nor shall any such district be established without the approval of the state conservation commission and the Iowa natural resources council. [C50, 54, 58, 62, 66, 71, 73, 75, 77, 79,§467C.5]

467C.6 Chapters made applicable. In the organization, operation and financing of districts established under this chapter, the provisions of chapters 455 and 456 to 467 shall apply.

Wherever any of the provisions of said chapters refer to the word "drainage", the word shall be deemed to include in its meaning soil erosion and flood control or any combination of drainage, flood control and soil erosion control. The term "drainage district" shall be considered to include districts having as their purpose soil conservancy or flood control or any combination thereof, and the words "drainage certificates" or "drainage bonds" shall be deemed to include certificates or bonds issued in behalf of any district organized under the provisions of this chapter; and any procedure provided by these chapters in connection with the organization, financing and operation of any drainage district shall be applicable to the organization, financing and operation of districts organized under this chapter. [C50, 54, 58, 62, 66, 71, 73, 75, 77, 79,§467C.6]

Constitutionality, 53GA, ch 204, §13

CHAPTER 467D

CONSERVANCY DISTRICTS

Referred to in §455A.40, 467A.4

467D.1 Policy. It is hereby declared to be the policy of the state of Iowa and the objectives of this chapter to preserve and protect the public interest in the soil and water resources of this state for future generations, and for this purpose to encourage, promote, facilitate, and where such public interest requires, to mandate the conservation and proper control and use of the soil and water resources of this state, by measures including but not limited to the control of floods, the control of erosion by water or by wind, the preservation of the quantity and quality of water for its optimum use for agricultural, irrigation, recreational, industrial, and domestic purposes, all of which shall be presumed conducive to the public health, convenience and welfare, both present and prospective. [C73, 75, 77, 79,§467D.1]

Referred to in §467A.42, 467D.3, 467D.6

467D.2 Definitions. As used in this chapter, unless the context otherwise requires:

1. *"Conservancy district"* means one of the six conservancy districts established by section 467D.3.
2. *"Board"* means the body designated by section 467D.4 to administer each of the conservancy districts.
3. *"Council"* means the Iowa natural resources council.
4. *"Internal improvement"* includes, but it is not limited to, dams or other water impoundment structures, levees, ditches, or other artificial watercourses, tile lines, or any other physical structure constructed or improved by a conservancy district in furtherance of the objectives of this chapter.
5. *"Department"* or *"department of soil conservation"* means the agency established by section 467A.4.
6. *"Committee"* or *"state soil conservation committee"* means the committee established by section 467A.4. [C73, 75, 77, 79,§467D.2]

467D.3 Districts established.* In furtherance of the policy set forth in section 467D.1, the entire area of the state of Iowa shall be divided into six conservancy districts, and the same are hereby established as political subdivisions of the state of Iowa, as follows:

1. The northeast Iowa conservancy district shall include all of Allamakee, Winneshiek, Howard, Fayette, Clayton, Delaware, Dubuque, Jackson, and Clinton counties, and the designated portions of each of the following counties:

467D.4 Governing body. The governing body of each conservancy district shall be one of the following:

1. The state soil conservation committee established by section 467A.4.

2. A board of not less than five nor more than nine members elected from conservancy district wards established under section 467D.5. Conservancy district board members so elected shall be reimbursed for travel and other actual and necessary expenses incurred in performing their duties. The member of the state soil conservation committee appointed from that conservancy district is an ex officio nonvoting member of the district board of directors. [C73, 75, 77, 79,§467D.4; 68GA, ch 1154,§1]

Referred to in §467A.3, 467D.2, 467D.5

467D.5 Election of conservancy district board.

1. The state soil conservation committee acting in its capacity as a conservancy district board may propose division of a conservancy district, currently being governed by the state soil conservation committee under subsection 1 of section 467D.4, into not less than five nor more than nine wards. Ward boundaries shall coincide with county boundaries, except that each ward shall lie entirely within the conservancy district of which it is a part. Each ward shall be composed of contiguous territory and shall be drawn with equality of population as an objective, insofar as that objective can reasonably be implemented while meeting the other requirements of this subsection.

2. The board of directors of a conservancy district which has been divided into wards under subsection 1 shall consist of one director from each ward so established, who shall be elected as provided by subsection 3. Each director shall serve a term of three years beginning on the first day of January, following that director's election, which is not a Sunday or a holiday. When a proposal for establishment of wards in a conservancy district has been approved by the state soil conservation committee, the members of the first elected board shall be chosen as provided by subsection 3 except that the election shall be held not more than one hundred eighty days after the date of approval of the proposal for establishment of wards. The first elected board of directors shall take office on a day specified by the state soil conservation committee, which shall be not more than thirty days after election of the directors is completed. Upon taking office, the first elected board shall divide itself by lot into three classes as nearly equal in size as possible. Thereafter, successors to members of the first class shall be elected in the first succeeding calendar year, successors to members of the second class shall be elected in the second succeeding calendar year, and successors to members of the third class shall be elected in the third succeeding calendar year after the year in which the first elected board takes office.

3. Each member of a conservancy district board of directors shall be elected at a ward convention attended by delegates chosen by and from among the commissioners of the respective soil conservation districts located entirely or partially within that ward.

a. A convention shall be held for each ward not earlier than October 1 nor later than November 30 of each year in which a director is to be elected from that ward. Each ward convention shall be called and its location shall be determined by the board of directors of the conservancy district of which the ward is a part. The conventions shall be held within the boundaries of the respective wards, and may be held in conjunction with other meetings attended by soil conservation district commissioners where doing so will avoid or reduce expense for travel and for use of convention sites. Notice of the time, date and place of a ward convention shall be published by the conservancy district board of directors, at least thirty days prior to the convention date, in at least one newspaper of general circulation in the ward. The cost of publication shall be paid by the conservancy district.

b. The commissioners of each separate soil conservation district located entirely or partially within a conservancy district ward shall jointly cast a single, weighted vote for director of the conservancy district from that ward. The weight of the vote cast by the commissioners of each soil conservation district shall be based upon the ratio that the population of the soil conservation district, or portion of the district, bears to that of the entire ward. The population of each soil conservation district, or portion of a district, shall be certified by the department of soil conservation.

c. A candidate for election to the conservancy district board from a ward may file a statement of candidacy with the secretary of the conservancy district board at least ten days before the date of that ward's convention. The statement of candidacy shall state the candidate's name and address and shall indicate the soil conservation district within which the candidate resides. The list of candidates in each ward where an election is to occur shall be sent by ordinary mail to the commissioners of each soil conservation district located entirely or partially within the ward, immediately after the last day for filing. The filing of a statement of candidacy shall not be a prerequisite for election as a conservancy district director. A delegate to a ward convention shall not be bound by the soil conservation district commissioners to pledge his or her vote to any candidate prior to the date of the convention.

4. Any eligible elector as defined in section 39.3 residing in a conservancy district ward is eligible to be elected to represent that ward on the board. A conservancy district board member need not be a soil conservation district commissioner, but the same individual may hold both offices concurrently. A person shall be elected to the board for no more than two consecutive terms. A vacancy is created when a member of the board removes his or her residence from the ward he or she was elected to represent. A vacancy shall be filled by appointment of the state soil conservation committee from a list of nominees submitted by the remaining members of the board, for the period until the next regular election under subsection 3. At that election, a board member shall be elected for the remaining balance of the unexpired term. [68GA, ch 1154,§2]

Referred to in §465D.4, 465D.8

Section 467D.5, Code 1979, repealed by 68GA, ch 1154, §2; see §467D.7

467D.6 Powers and duties of board. The board of each conservancy district shall:

1. Exercise such supervision over the water resources of the conservancy district, including water in any basin, watercourse, or other body of water in the conservancy district, and have authority to promulgate and repeal, with approval of the department, and enforce such rules, except those rules relating to water resources under the authority of the council and the department of environmental quality, as necessary to achieve the objectives of this chapter as set forth in section 467D.1.

2. Have authority to employ, appoint, or retain attorneys, engineers, other professional and technical employees, and such other personnel as are deemed necessary, and approve bonds of conservancy district employees.

3. Prepare, adopt, and implement a plan, and review and revise the same, in the manner prescribed by this chapter.

4. Encourage, foster, and promote establishment, enlargement, or consolidation of drainage, levee, soil conservation, flood control, and sanitation districts where desirable, provided that this subsection shall not be construed to vest the board with authority to directly establish, enlarge, or consolidate any such districts by any procedure not otherwise prescribed by law.

5. Review the plans and co-ordinate the programs and activities between counties, cities and any of the entities listed in subsection 4 of this section, and otherwise advise and assist the governing bodies of such entities in any appropriate manner, in all cases which relate to any matter within the jurisdiction of the conservancy district, provided that the board shall have only advisory and consultative powers with respect to any such entities except as otherwise specifically provided in this chapter.

6. Have authority to enter into binding agreements, with respect to any matter within the jurisdiction of the conservancy district, with:

a. Any person, firm, corporation or association, the state of Iowa, or any of its political subdivisions.

b. The federal government, or any of the agencies thereof.

c. Other states or agencies or subdivisions thereof comparable in purpose to the district, provided all such agreements are entered into jointly with the department in accordance with other provisions of law.

7. Have authority to expend funds outside the state of Iowa, or in adjoining conservancy districts, pursuant to agreements made under subsection 6 of this section, where necessary in order to more effectively or efficiently achieve the objectives of this chapter, and to receive funds from other states for expenditure in Iowa, or from other conservancy districts for expenditure in the district receiving such funds.

8. Have authority to acquire by gift, lease, purchase, grant, or inheritance any property, real or personal, in fee or a lesser interest, needed to achieve the objectives of this chapter, and to sell and convey property owned but no longer needed by the conservancy district. The board shall also have authority to acquire by condemnation proceedings any real property, in fee or a lesser interest, needed to achieve the objectives of this chapter, but no condemnation proceedings shall be instituted by the board less than fifteen days after a letter has been sent by restricted certified mail to the owner or owners of the property sought, setting forth in detail the reasons why the property is needed and the board's best offer for the property.

9. Construct, operate, maintain, repair, enlarge, and make such internal improvements as are necessary to implement the conservancy district's overall plan.

10. Have authority to sue and be sued in the name of the conservancy district, and bring action to abate soil erosion nuisances in the manner prescribed by section 467D.23.

11. Maintain at its office a record of all the conservancy district's proceedings, rules and orders, and furnish copies thereof to the department and the council upon request.

12. Establish, administer and direct various advisory committees as authorized by this chapter. [C73, 75, 77, 79,§467D.6; 68GA, ch 1148,§82, ch 1154,§3]

Referred to in §467A.4

467D.7 Administration of conservancy districts by state committee.

1. When officially conducting the business of a conservancy district, the committee shall formally convene as the board of that conservancy district and shall keep minutes as such. The chairperson of the committee shall be the chairperson of the board of each conservancy district that it administers.

2. The state soil conservation committee, serving in its capacity as the board of a conservancy district, shall appoint a secretary and a treasurer for the conservancy district, and may appoint the same individual as secretary for two or more conservancy districts, or as the treasurer for two or more conservancy districts. However, a person shall not simultaneously serve as both a board secretary and a board treasurer, either for the same conservancy district or for differenct conservancy districts. A person appointed by the committee as secretary or treasurer of one or more conservancy districts, who is not otherwise employed by the state or any of its political subdivisions, shall receive compensation as the committee determines. [C73, 75, 77, 79,§467D.5, 467D.7–467D.9; 68GA, ch 1154,§4]

467D.8 Administration of conservancy districts by elected board.

1. The board of each conservancy district which is administered by an elected board shall hold an annual meeting in January and shall meet at least once each quarter. The chairperson of the board shall schedule a special meeting within five days on the request of any two board members. An action of the board requires the affirmative votes of at least a majority of the elected members.

2. At the first meeting after election of the initial board, at the annual meeting in the following calendar year, and at each succeeding annual meeting, the board shall organize by electing a chairperson and a vice chairperson. Upon completing its organization, the initial elected board of a conservancy district shall so notify the state soil conservation committee in writing. The committee shall transfer the powers, duties and records of the board of that conservancy district to the elected board within thirty days after receiving the notice.

3. At its first meeting after election of the initial board pursuant to section 467D.5, and at each succeeding annual meeting, the board of each conservancy district administered by an elected board shall appoint a secretary and a treasurer for the conservancy district. However, a person shall not simultaneously serve as both a board secretary and a board treasurer, either for the same conservancy district or for different conservancy districts. The secretary and treasurer may be either full-time or part-time employees of the conservancy district, at the board's discretion. The secretary and the treasurer shall each qualify by filing with the board, within ten days after being appointed, a bond in an amount designated by the board, but not less than one thousand dollars, conditioned on the faithful performance of their respective duties. The reasonable cost of the secretary's and the treasurer's bonds may be paid from the funds of the conservancy district. [68GA, ch 1154,§5]

Section 467D.8, Code 1979, repealed by 68GA, ch 1154, §5; see §467D.7

467D.9 Repealed by 68GA, ch 1154, §19; see §467D.7.

467D.10 Duties. The secretary of each conservancy district shall:

1. Keep a complete record of the proceedings at each meeting of the board.

2. File and preserve copies of all rules promulgated and all orders adopted by the board, and of all correspondence and other papers transmitted to him pertaining to the business of the conservancy district.

3. Keep an accurate account of the conservancy district's funds with the treasurer, charge him with all warrants and drafts drawn in his favor, and credit him with all orders drawn on the conservancy district's funds.

4. Keep an accurate account of all expenses incurred by the conservancy district, and present all claims to the board for audit and payment.

5. Perform other duties as directed by the board. [C78, 75, 77, 79,§467D.10; 68GA, ch 1154,§6]

467D.11 Verified claims. Conservancy district funds shall not be expended, other than for salaries and administrative expenses, except upon verified claims submitted to and approved by the board. Warrants drawn on conservancy district funds shall be signed by the board chairman and the secretary. [C73, 75, 77, 79,§467D.11]

467D.12 Budget. In each even-numbered year the board shall prepare a budget for the biennium beginning July 1 of the succeeding calendar year, setting forth all proposed expenditures by the conservancy district during such biennium, and stating the amounts which it is anticipated will be available to the conservancy district during such biennium from sources other than state appropriations. The board shall submit its budget to the state soil conservation committee on or before August 1 of each even-numbered year. [C73, 75, 77, 79,§467D.12]

467D.13 Review by state committee. The committee shall review the proposed biennial budget of each of the conservancy districts, and may revise any such budget. The committee shall prepare a consolidated list of the appropriations requested for administration, operation, and maintenance of each conservancy district for each year of the ensuing biennium, and of capital appropriations requested, if any, for each conservancy district, and shall forward the consolidated list to the state comptroller as a part of the committee's estimates of expenditure requirements submitted pursuant to section 8.23. [C73, 75, 77, 79,§467D.13]

467D.14 Other funds accepted. In addition to funds appropriated to the conservancy district by the general assembly, the board shall be authorized to receive and expend:

1. Federal funds available to the conservancy district for such purposes as may be provided by federal laws, rules, and regulations, to the extent consistent with the laws of this state.

2. Donations and gifts, which may be accepted by the board and expended in accordance with the terms of the gift. [C73, 75, 77, 79,§467D.14]

Referred to in §467D.15

467D.15 Budget law applicable. The conservancy districts shall be subject to chapter 8, but expenditure by a conservancy district of funds available to it as provided in section 467D.14, subsections 1 and 2, shall not be deemed a violation of section 8.38. [C73, 75, 77, 79,§467D.15]

467D.16 Plan—priorities—aid. The board shall prepare a plan for accomplishment of the objectives of this chapter within the conservancy district. For this purpose the board may request and shall obtain from any state agency or political subdivision information which the agency or subdivision may have already collected which is pertinent to preparation of the plan, and may conduct such hearings as it deems necessary. The plan shall establish an order of priorities for carrying out projects necessary to accomplish the objectives of this chapter, shall conform as nearly as practicable to the comprehensive state-wide water resources plan established by the council pursuant to section 455A.17 and shall reflect the following general policies:

1. First consideration shall be given to work needed at or near the source of the streams in the district, and on or along the tributaries thereto, to the greatest extent practicable.

2. Conservancy district funds shall not be expended for functions or improvements which are:

a. The responsibility of other political subdivisions and are within their abilities, reasonable consideration being given to their other duties and obligations.

b. Constructed or implemented, or planned for construction or implementation, on one or more tracts of privately owned land and primarily benefit those lands rather than other lands in the conservancy district. [C73, 75, 77, 79,§467D.16]

467D.17 Plan presented to department and council. The board shall tentatively adopt the plan by resolution and shall present the plan to the department and the council for review. The council shall within ninety days review the plan as presented and make such recommendations as, in its discretion, it deems necessary to bring the conservancy district's plan into conformity with the comprehensive state-wide water resources plan established by the council pursuant to section 455A.17. The department shall review the plan as presented and, with such amendments as are necessary to bring the plan into conformity with the state-wide water resources plan, give final approval within one hundred twenty days. [C73, 75, 77, 79,§467D.17]

467D.18 Working program. The plan and the order of priorities established thereby shall constitute the working program of the conservancy district. The plan shall be reviewed from time to time and shall be changed as deemed necessary as the result of experience gained in construction and maintenance of internal improvements by the conservancy district, and in operation of the conservancy district, or as the result of changed conditions. The board may initiate changes in the conservancy district plan on its own motion or at the direction of the department. [C73, 75, 77, 79,§467D.18]

467D.19 Implementation. After final approval of the plan, the board shall begin to implement the plan as expeditiously as possible, within the limitations of available appropriations and other financial resources. When implementation of the plan involves construction or improvement of any internal improvement by the conservancy district, the board may order the preparation of detailed plans and specifications, and a refined cost estimate. Upon completion of such plans, specifications and cost estimate to their satisfaction, the board shall adopt the same, subject to the approval of the department, and shall let the contract or contracts therefor in accordance with section 467D.20. Any approval or permits from the council required under other provisions of law shall be obtained by the conservancy district prior to initiation of any construction activity. [C78, 75, 77, 79,§467D.19]

467D.20 Bids on work. When the estimated total cost of construction, enlargement, alteration or repair of any internal improvement exceeds five thousand dollars, the conservancy district shall advertise for bids on the proposed improvement by two publications in at least one newspaper of general circulation in the conservancy district, the first of which shall be not less than fifteen days prior to the date set for receiving bids, and shall let the work to the lowest responsible bidder submitting a sealed proposal; provided that if, in the judgment of the board, the bids received are not acceptable, all bids may be rejected and new bids requested. All bids must be accompanied, in a separate envelope, by a deposit of money or certified check, in an amount to be named in the advertisement for bids, as security that the bidder will enter into a contract in accordance with the terms of his bid. The board shall fix the bid security in an amount equal to at least five percent, but not more than ten percent of the estimated total cost of the work. The checks or deposits of money of the unsuccessful bidders shall be returned as soon as the successful bidder is determined, and the check or deposit of money of the successful bidder shall be returned upon execution of the contract documents. [C73, 75, 77, 79,§467D.20]

Referred to in §467D.19

467D.21 Protection against siltation. Any other provision of this chapter notwithstanding, no conservancy district shall let a contract for any internal improvement of any kind unless its engineer shall recommend, and the board shall find, that the proposed internal improvement would be adequately protected against siltation by soil and water conservation practices existing within the watershed of the internal improvement, or which would be developed as a part of the internal improvement, or that the nature of the internal improvement precludes the probability of damage due to siltation. [C73, 75, 77, 79,§467D.21]

467D.22 Procedure after finding. When the conservancy district's plan calls for an internal improvement which cannot be undertaken due to a finding that the internal improvement would not be adequately protected against siltation, the board shall undertake to effect the development of the needed soil and water conservation practices in the watershed of the proposed internal improvement by:

1. Consultation and co-operation with, and appropriate assistance to, the commissioners of any soil conservation district in the state.

2. Securing the establishment of, or repair or maintenance within, a subdistrict of a soil conservation district, a soil conservation and flood control district, a drainage district, a levee district, a sanitary district, or other appropriate special district, in the manner prescribed by law. [C73, 75, 77, 79,§467D.22]

467D.23 Erosion as nuisance—injunction. Soil erosion resulting in or contributing to damage by siltation to any internal improvement of a conservancy district, or resulting in or contributing to damage to property not owned by the owner or occupant of the land on which such erosion is occurring, is hereby declared to be a nuisance. The board of the conservancy district whose internal improvement is so damaged, the commissioners of the soil conservation district within which such erosion is occurring, or the owner or owners of any property so damaged, may bring action to enjoin and abate any such nuisance as provided by chapter 657. It shall be an adequate defense to such an action that any defendant, prior to the time the cause of action arose, had submitted application for public cost-sharing funds pursuant to section 467A.48, or had established or maintained soil and water conservation practices or erosion control practices approved by the commissioners of the soil conservation district in which the erosion complained of occurred, or had taken other reasonable and prudent measures to prevent excessive soil erosion, and that the erosion complained of was an isolated occurrence caused by a single prolonged or unusually heavy rainfall, unusually rapid melting of accumulated snow, severe windstorm, or other similar event beyond the control of the defendant. The remedy for any soil erosion which constitutes a nuisance under this section shall be limited to requiring that the owner or occupant of the land on which the erosion is occurring take such measures as are necessary to comply with the regulations of the soil conservation district in which the land is located, and the fine and jail sentence provided by section 657.3 shall not apply in any action arising under this section. [C73, 75, 77, 79,§467D.23]

Referred to in §467D.6(10), 467D.24

467D.24 Surveys—soundings—drillings. The board, the commissioners of a soil conservation district, or an engineer or any other authorized person employed by the board or commissioners, may after thirty days' written notice by restricted certified mail addressed to the owner and also to the occupant, enter upon private land for the purpose of making surveys, soundings, drillings, appraisals, and examinations as deemed appropriate or necessary to determine the advisability or practicability of locating an internal improvement on said land or part thereof, or to determine whether soil erosion is occurring thereon which constitutes a nuisance under section 467D.23 or is in violation of the soil conservation district's regulations; provided, no soundings or drillings shall be made within twenty rods of the dwelling house or buildings on said land without the written consent of the owner. Such entry, after notice, shall not be deemed a trespass, and the board or commissioners may be aided by injunction to insure peaceful entry. The board shall pay actual damages caused by such entry, surveys, soundings, drillings, appraisals, or examinations. The amount of such damages, if any, shall be determined by agreement or in the manner provided for the award of damages in condemnation of land for conservancy district purposes. [C73, 75, 77, 79,§467D.24]