

WORKLOAD ANALYSIS
Albia Field Office

The Monroe County Soil Conservation District includes all of Monroe County which is located in South Central Iowa in the second tier of counties, bordered on the south by Appanoose County and on the west by Lucas County. The District encompasses 278,400 acres. The county seat is located in the town of Albia, which has a population of approximately 4,200. The total county population is approximately 9,200.

The county can be characterized as being in the midst of a population stabilization trend and an economic upturn which follows five decades of population and economic decline. These declines resulted from a combination of changing agricultural practices and economics, and the decline of a specialized economic base revolving around coal mining activities.

Agriculture is the major economic generator in the county, however some industrial firms have relocated some plants in the area, particularly in the last 15 years. The impact of Rathbun Lake on Monroe County has definitively improved its potential for economic growth, especially now that the Lake is supplying water to the rural population through the Rathbun Regional Water Association. With the advent of the rural water system the attractiveness for new business, industry and the establishment of new residences on rural acreages has significantly increased. This increase demand for these land uses could significantly affect the retention of prime ag land which presently involves approximately 48% of the total land area in Monroe County. In order to protect prime ag land from other landuse encroachment it will be necessary for county landuse regulations to be adopted. The Soil Conservation District needs to work more closely with the County Board of Supervisors in the development and adoption of county landuse regulations which will protect prime ag land from landuse conversion.

Over the last ten years cropland acres have increased by approximately 16,000 acres. However, this increase is due largely to more intensive use of existing cropland acres, than specific landuse conversions. (Other Use to Cropland).

During the same period woodland acres have decreased by 50% while pasture acres have increased by 60%.

During the past decade cattle prices reached all time highs causing farmers to increase their cattle numbers, thus creating the need for more pasture acres. Woodlands were cleared and revegetated, to meet the demands for more grass. During this period woodland acres have decreased by 50% , while pasture acres have increased by 60% . (Woodland - 20,000 ac., Pasture + 31,000 ac.)

CROPLAND

Of the 136,015 acres of cropland 107,015 acres has an erosion rate above acceptable levels. Erosion could be reduced to acceptable levels on 14,000 acres of class 2E soils by conservation tillage and contouring. 60,000 acres need more intensive treatment assuming that current farming method will continue. The 60,000 acres will need terraces along with contour farming and conservation tillage to reduce the erosion to acceptable levels. The remaining 33,015 acres need contouring farming, conservation tillage, and strip cropping to reduce the erosion to acceptable levels.

Our average soil loss per acre year on cropland is nearly 15 tons. Over the last 100 years it is estimated that we have lost 1/2 of our 12 inches of top soil on class 3E soils. At the 15 ton rate we are losing 1.2 inches of top soil every 12 years. We believe that we cannot go past 20 years without significantly effecting the productive capability of the soil under current erosion rates. There are some ^{areas} ~~areas~~ identified in the county which significantly exceed the average soil loss rate. Soil losses of over 100 tons/acre/year have been recorded.

If the 60,000 acres needing terraces had only contouring and conservation tillage applied it would reduce the average annual soil to approximately 10 tons. By applying only those measures within the next 5 years on the soils needing terraces, we could almost double the length of time the soil would retain its productive capability.

PASTURE

Of the 80,517 acres of pasture 31,014 are not adequately treated. The 31,014 acres are characterized by the lack of an adequate fertilization program, over grazing, and the lack of good quantity and quality forage during the summer cool season grass dormancy. There is a strong need for warm season grass pastures to supplement the animals during the summer months. (July-August). Switchgrass, indiangrass and big bluestem have proven effective to fill the need. The high cost of fertilizer and fencing has weakened pasture management in the area, along with the clearing and

revegetating of woodland areas too steep to properly manage with farm equipment. The District needs to promote proper management of existing pastureland and discourage the creation of new pasture at the expense of existing woodland.

WOODLAND

Of the 34,400 acres of woodland, 10,000 are not adequately treated. In the past 20 years there has been a significant reduction in woodland acres. (50%) Approximately 20,000 acres have been cleared to make way for new pasture. The majority of the land cleared is on 15% and greater slopes. Difficulty in establishing and maintaining vegetation on these steep slopes has been experienced. Many critical areas within pastures have developed because of not being able to revegetate after clearing has taken place. Approximately 7,000 acres of woodland improvement is needed. The basic needs are fencing to eliminate over grazing of woodlands and thinning, harvesting, and planting for improved timber stands. The lack of an immediate economic return from the woodland has significantly affected the retention of woodland on farms in the county.

The District needs to stress proper landuse on woodland acres through conservation planning and through promotional activities stressing it's ability for marketable timber, recreation and wildlife production!

RECREATION AND WILDLIFE

There are sufficient recreation areas within the county to satisfy current county needs. However the close proximity of Rathbun Lake has tremendously increased the counties potential for new recreation development. The Rathbun area draws 1 million plus in visitation annually. Surrounding counties such as Monroe have helped to alleviate some of the user pressure, but at times cannot handle the overflow. There is one water based camping area in the county. (Miami Lake). The county could only make use of two more areas of similar size to alleviate some of the pressure. The District needs to work closely within the RC&D board, the County Conservation Board, and the Iowa Conservation Commission to encourage and assist in the development of more water based recreation areas in the county. Along with the recreation potential the county offers good wildlife populations and ranks as one of the highest counties in the state as far as diversification of game species. The main concern of the District again is to work closely with the County Board of Supervisors in the development and adoption of

landuse regulations to protect existing and prime recreation and wildlife areas from degradation.

WATERSHEDS (Flood Control and Grade Stabilization)

Monroe County is divided into 15 major watershed areas. Each of these has flooding problems on major streams and gully erosion problems on side branches. Approximately 1,600 Erosion Control Structures and 1,000 sediment control structures are needed to solve the gully erosion problems. Only one watershed (Soap Creek) is eligible for the PL 566 Watershed program which will control flooding on Soap Creek. The remaining watershed areas are not eligible for flood protection under current PL 566 guidelines. The ratio of bottomland acreage vs. upland acreage does not compare favorably for economic justification on the remaining 14 watersheds. However, the flooding continues and is a problem not only to the farmer, but also the counties secondary road system. The District needs to assess the flooding and gully erosion problem and devise a means for solving the problem, through the RC&D program, local drainage district organizations or the group approach.

DISTRICT PROGRAM ACCELERATION

(STAFFING) The current staffing for the Albia SCS field office and District Office includes: 1 District Conservationist, one Soil Conservation Technician, one District Clerk and one part-time WAE. The District also employs one Conservation Aid through the CETA program. This program has been helpful to the District, however its continuation depends on annual legislative action.

(COST-SHARING AND PRACTICE APPLICATION) The District cost-share program and the ASCS cost-share program annually amounts to an average of \$100,000. for Soil Conservation work in the county. With the above mentioned staffing and this amount of 50% cost-share funding available, landowners in the county are applying on the average, the following amounts of eligible Soil Conservation practices annually:

Tile-Outlet-Terraces	70,000'
Grade Stabilization Structures	13
Grassed Waterways	5.8 ac.
Minimum tillage	250 ac.
Diversions	6700 ft.
Tile for terraces	120,000'

At the current rate of application the District needs to accelerate the program, not only to retain the productive capability of class 2E and 3E soils, but reduce sediment damage and improve and maintain water quality. For example, the District has a need for treating approximately 60,000 acres with terraces. This amounts to 17,400,000 feet of terrace. At the current rate of application of 70,000 feet of terrace/year, it would take 249 years to complete the terrace work. If the program were accelerated to 20 years for completion, 870,000 feet of terrace would have to be installed annually. This amount is more than 12.4 times the annual application rate. If the ~~accelerated~~ rate were to be accomplished, the current cost-share program allocations would have to be increased 6.5 times. ($\$1.50 \times 870,000 = \$1,305,000 \div 50\% = \$652,500$) Assuming that terrace application is increased by 12.4 ($12.4 \times 70,000 \text{ ft.} = 870,000 \text{ ft.}$) to meet the 20 year goal we must also recognize that staffing requirements for planning and engineering would increase. Projected staffing needs for the accelerated rate are as follows: 3 conservation planners, 6 conservation technicians, 6 conservation aids, and 3 clerical assistants. Along with additional staffing requirements conservation contractors and materials would have to be increased proportionate to the accelerated rate of application. Assuming 5 contractors spend 50% of their time on terrace construction or 2.5 full time contractors to build 70,000 feet of terrace per year, it would take 31 contractors to meet the accelerated rate. ($2.5 \text{ contractors} \times 12.4 \text{ accelerated rate} = 31$)

Although a 20 year accelerated program would be the most beneficial for Soil Conservation and Water Quality, it is not realistic at this point in view of past legislative trends. The Culver Amendment funding, will however, provide an increase in cost-share funding for water quality and Soil Conservation purposes. In order for the District to accelerate their program with current resources, it needs to promote conservation tillage which can reduce soil losses by 50% with a limited amount of technical assistance and no construction costs.

LONG RANGE OBJECTIVES:

The major long range objectives of the District are:

1. Reduce erosion on all land to acceptable levels, by promoting conservation tillage, terraces and Erosion Control Structures.
2. Cooperate and assist city and county government in the development

and adoption of landuse regulations for the protection of prime agricultural, forest and wildlife land.

3. Develope and carry out an effective soil conservation education program.

4. Promote the use of warm season grasses for increased forage production during the summer months.