

The Soil Conservation Service--
Its Future Role in Natural Resource and
Land Use Planning

Welcome to Washington! Home of the traffic circle and the gas station line. Since we have no baseball team; we play "Simon says" in our spare time.

Gasoline seems to be the most dramatic liquid around in terms of headlines today. A little later on, flood stories will probably take over again, but with less widespread attention. Yet water management, like many other natural resource questions, is a daily problem that requires continuing attention and some decisions if we are to avoid crises.

We appreciate the continuity of concern by the Water Management Association of Ohio about the management or improvement or development of your state's water and related land resources.

The Soil Conservation Service is very active in Ohio, from individual farms or other tracts to small watersheds and the large river basin studies.

Material for talk by Norman A. Berg, Associate Administrator, Soil Conservation Service, at a meeting of the Water Management Association of Ohio, Washington, D.C., February 27, 1974.

We are accomplishing worthy things because of some pretty fine cooperation from local people, county and state agencies, and organizations such as yours.

We're finishing up the Muskingum and Southwest Ohio river basin studies, one of them in cooperation with the U.S. Army Corps of Engineers and the other with the Ohio Department of Natural Resources. We hope the information gained from them will be helpful in identifying needs and potential benefits from land and water decisions in those regions. In the Maumee study just begun last July, coordinated by the Great Lakes Basin Commission under the aegis of the Water Resources Council, we're giving special attention to sediment and water quality needs. I'm personally involved in an international study group that is looking into ways to improve water quality throughout the Great Lakes by improvements in land use and land treatment practices. In the Maumee, which has a very high sediment rate but few opportunities for detention storage in reservoirs, improvements in land-use patterns and stabilization of critical sediment-producing sites with plants seem to be the biggest opportunity. So we're looking at the Maumee with particular interest.

Many natural-resource questions have an impact on or

There is nationwide interest in developing some land-use policies as a means of avoiding crises in many parts of the environmental arena.

I'd like to spend a few minutes discussing, with the help of slides, some of the facts and issues in land use and the setting in which they are raised. Then I'll discuss some of the likely aspects of the future SCS role in water resources activities.

LIGHTS OUT SLIDE RUN BEGINS

1. Of all the nations on earth, the United States is among the richest in terms of its land and water resources, its beautiful countryside, and its tremendously favorable and varied climate.
2. The future of those resources is in the hands of millions of people who every day make decisions--good or bad--on how they are used.
3. What is the ownership of our land? Fifty-eight percent of it is in private hands--owned by individual farmers, ranchers, businessmen, and industry.
4. From this land comes most of the food, fiber, and timber we consume and export.
5. One third of the private land is forest.

8. Despite an almost 200-percent increase in U.S. population since 1900, these proportions in land use have changed very little.
9. The reasons for this are research, extension, conservation and other agriculture-related technology, and financial programs. The primary reason is private enterprise. America's crop production per acre continues an upward trend.
10. The second largest segment of land is under Federal management. This includes 34 percent of our total land area--759 million acres--half of it in Alaska and most of the remainder still west of the Mississippi. Some 187 million acres are managed by the USDA Forest Service. But the largest segment is public domain, under control of the Bureau of Land Management. Military land, national parks, and wildlife refuges add up too.
11. Some of those vast areas--more than 15 million acres--have been set aside as wilderness and primitive areas where timber is not harvested and most other uses are banned.
12. Much of the Federally owned land, however, is under multiple-use management. Recreation is a growing use of Federal and private land, when people aren't using up their leisure time waiting in gas lines.
13. Another 6 percent of land in the U.S. is in State and local ownership.
14. And 2 percent is Indian land.

15. For the most part, America's land is sparsely populated. Over the last 20 years, 1,500 counties lost population.
16. To find the concentrations of people, we still must look to the cities...to the metropolitan areas. Here, on 3 percent or less of our land, more than 70 percent of the population lives, works, and dies.
17. This includes land for transportation--super highways, railroads, and airports. Land for transportation is highly visible although it takes up only 1.4 percent of the total land area. And it has taken up some of America's prime agricultural land, irretrievably.
18. Here's a summary of land use in America by acreage totals. We have quite a mix of public and private, rural and urban, good and bad uses.
19. The way in which we use land in America has been, for the most part, good! Businessmen, homeowners, public land management agencies, colleges and universities, and especially farmers and ranchers have had a big hand in using land properly. Conservation districts and groups like yours have been extremely helpful.
20. But we still use land in ways that are not to our credit. Thoughtless, unplanned, uncontrolled land use practices

21. We still attempt to cultivate some land that is too steep and erosive--at least 50 million acres.
22. We still attempt to grow row crops on some land where frequent drought conditions present a high risk of crop failure and land damage.
23. We try to grow crops where wet conditions are equally troublesome.
24. We needlessly burn some forest land each year.
25. We concentrate livestock and send tons of animal waste into streams, adding to serious water pollution problems.
26. It doesn't have to be that way! The conservation districts, their cooperators and other local people with whom SCS works can testify that planned conservation practices--properly installed--greatly reduce erosion and pollution, and help assure good crops on agricultural land.
27. We create unsightly scars on millions of acres of land through surface mining, polluting streams for miles around.
28. It doesn't have to be that way! Strip-mine spoils can be reclaimed and revegetated to serve multiple uses.
29. We discard 250 million tons of solid waste each year, mostly in open dumps in rural areas where the stuff pollutes air, water, and land.

31. We tear up the land for building, leave it bare for long periods, and let it produce sediment to mess up the site itself and land and water downstream. Sediment is America's heaviest-by-volume water pollutant, and a growing proportion of it is produced on urbanizing land.
32. We pave over large areas with no provision for managing storm water. This thoughtless land-use practice and others add significantly to flooding problems.
33. Half of the annual flood damage still is suffered in small upstream watersheds.
34. It doesn't have to be that way! We can find out about land suitability and land-use hazards before any construction is started...
35. And when things are torn up, sediment can be held on site in a temporary basin just like the ponds that farmers and ranchers have been using for decades. Some of these silt traps later become attractive lakes.
36. Structures can be built to help streams safely handle the vastly increased stormwater runoff that occurs when the land is paved over.
37. We squeeze the farmer with unplanned checkerboard development and eventually someone makes him an offer

38. Here's a comparison between an area on Rock Creek in Maryland in 1937...
39. And the same area in 1957.
40. Development doesn't have to be unplanned or checkerboard. People are beginning to demand a sensible system for land-use decisions.
41. They want a high-quality environment where they vacation and where they live.
42. They want high-quality food, dependable in quantity and reasonably priced at the market place...
43. And that means that any land-use planning process or system must first and adequately consider the needs of a high-quality sustained agriculture.
44. They want space and facilities for a variety of recreation experiences.
45. They want space and habitat for fish and wildlife.
46. They want to protect and preserve our shorelines on the oceans and the Great Lakes, along with other unique or critical environmental areas.
47. They want to preserve areas of historical importance.
48. All these needs should be considered in setting national, state, and local land use policies and in making state

49. The kind of land-use planning process needed is one that would seek and use natural resource inputs, recreation needs, population density and trends, economic factors, and related data.
50. Such a process would provide for all the technical and financial assistance available from the Federal government--and would blend Federal programs with state and local objectives.
51. It would provide for interchange of data and ideas and training programs among agencies of all kinds--for example, useful new imagery from the Earth Resources Technology Satellite.
52. The process would call for exchanging information and ideas with the public, too--people will not support plans that they don't understand and that they had no hand in formulating.
53. Some of the land-use decisions that have always been totally private decisions in a free-market system...
54. May need a stronger overview in the form of regulation, control, legislative or State approval, or perhaps litigation.
55. The private landowner will need reminding that he has duties as well as rights in using and caring for land

56. Government agencies and planning groups may need reminding that land-use planning begins and ends with people--because land use planning is for people.
57. The Soil Conservation Service over four decades has been in the business of helping people manage their natural resources better--helping them live better. We work through conservation districts to tell landowners and users about the technical information they need, where to get it, and how to use it.
58. We work with other State and Federal agencies to compile useful technical information, starting with soil surveys. Soil survey data now are available in some form for over 55 percent of Ohio's land.
59. We help make inventories of soil and water conservation needs, flood-hazard analyses, studies of recreation potential on private land, snow surveys, and others that provide useful facts.
60. SCS helps local groups look at flood prevention and other needs in small watersheds. The seventy-two applications for this kind of help in Ohio cover a fourth of the State. Twenty-three projects have been authorized for planning, and fourteen for installation. The completed structures

61. We work with other agencies in large river basin studies. Each one is different, but all will provide facts useful in identifying resource conditions and needs and in deciding on ways to improve resources for people.
62. We work with local organizations and other agencies in multi-county Resource Conservation and Development projects. From the Buckeye Hills to the Top of Ohio, the four RC&D projects in your state are bringing together many interests to work on environmental, social, and economic improvements.
63. All of these activities have as a central thread careful decisions about the use and management of land. The effects of planning and carrying out proper land use are widespread.
64. In an Iowa community, population increased 35 percent in 10 years.
65. Iowa City's regional planning commission relies on soils information in making land use decisions...
66. From where to put a new sanitary landfill where they can safely put the solid waste from 60,000 residents...
67. To locating critical sources of sediment in the area so they can encourage farmers to build terraces and ponds to keep sediment and other pollutants from reaching major

68. Shelby County, Alabama, is expected to double its population in the next 20 years, as people spill over from neighboring Birmingham.
69. But county officials plan to restrict development of land for housing and other needs on the basis of slope, water table, hard rock, and flood frequency.
70. Responsible builders in the area also consider environmental protection their business. They save large trees, sod the exposed land quickly, adapt other conservation practices.
71. In Birmingham, SCS helped develop an outdoor classroom at the new Huffman High School that is used by nearly every department in the school to relate textbooks to the real world.
72. In Allegheny County, Pennsylvania, a new state law requires builders with tracts of 25 acres or more to make an erosion-control plan based on soils data before they move a spadeful of earth.
73. An early cooperator was the Round Hill Farm, whose manager wanted to improve the farm without erosion, for greater enjoyment by the 300,000 people who visit this unusual kind of county park each year.
74. Soils information is used throughout the county in

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75. There are many other examples of local and state governments beginning to find and use all the natural resource information they can to incorporate in their planning process.
76. They are increasing their financial inputs to get information and assistance more quickly--almost \$2.5 million in Ohio alone last year.
77. Landowners and operators are investing heavily in conservation, too. Ohioans spent nearly \$18 million in fiscal 1972 to put conservation on the land.
78. As the amount of land Americans have per person continues to shrink--from 22 acres in 1920 to 11 acres today to perhaps 7 acres in the year 2000--we will all have to seek the information needed to make valid decisions.
79. We will all need to have the discussions required to settle community differences over land-use patterns and levels of water development.
80. We will all have to see that the decisions are made, the plans are implemented, the land is protected. The result can be the kind of America we want tomorrow.

END SLIDE RUN

LIGHTS ON

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This was a glimpse of the setting in which a wide range of land-use policy decisions are being talked about or being made. I think every Federal Department, every land-grant university, every governmental unit and every interested private organization ought to take a reading on what's coming, what's wanted, and what's needed. There probably will be national legislation. It will call for heavy State and local involvement. The staff assistance needed to meet these demands will be substantial. Farmers and ranchers will be involved, too. All of us need to get informed and help others in conservation districts, state boards and commissions, and other groups understand what's going on.

While we're busy setting up a planning process, we will need to go ahead and make some decisions on land use... implement plans...meet energy needs...build transportation systems...save prime farmland...build new houses and parks and wildlife preserves...manage water...clean up the environment. We have a lot of resource facts--and many are using them now. But we need to accelerate.

There will be greater emphasis on land-use planning in water resource activities of the SCS. Many of the land-use decisions that will have to be made will affect water-resource

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Just as clearly, many of the individual issues that have arisen in watershed projects are indicators of a general lack of agreement in the community over what the ultimate use of the land should be. Until we can create the appropriate institutional mechanisms to determine land uses, controversy likely will continue over whether land should be farmed, urbanized, suburbanized, industrialized, channelized, or otherwise used in any given watershed.

SCS and conservation districts will step up efforts to help communities achieve a balance among all the interests involved in a watershed project. It may be that in future years, a community will be required to develop a complete land and water management plan for the watershed as a condition for installing watershed measures. Watershed works of improvement will not automatically result in the desired changes in land use. In the absence of proper controls they may in fact motivate intensive development where it should be curtailed for proper functioning of the improvements.

SCS also will step up its efforts to accomplish effective conservation land treatment in watersheds. Local sponsoring groups and the SCS always have given prime

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SCS also requires that 75 percent of the critical sediment sources above a dam be treated or be under treatment at the time the dam is constructed. These are minimum goals, as each major storm reminds us; more land should have the benefit of terraces, waterways, improved cropping practices, and other erosion control measures. These are vital for land protection, for water control, and for water quality.

There will be increased emphasis in watershed projects on designing and building effective structural measures that meet environmental standards. We're pleased with the performance of watershed structures up to now--they've stood the test of several hurricanes in the last few years very well and have helped keep regional emergencies from becoming local catastrophes.

We'd like them to be even more effective in preventing floods, and meet other environmental needs at the same time. For example, watershed projects will give increased attention to the need for maintaining desired minimum flows downstream, by water storage for streamflow augmentation during low-flow emergencies. This doesn't substitute for control of pollutants at their source; but it gives communities another helpful tool. In some projects, we'll work to keep water temperatures down for better fish habitat, or alter plans for channel modification in places where fish and wildlife values might be affected or could be improved.

With all structural measures there will be continued attention to disturbing land as little as possible during construction; establishing new vegetation quickly; and using techniques to improve esthetics and reduce maintenance needs.

More emphasis will be given in watershed projects to considering alternatives in flood-plain management. You can modify a flood-plain's susceptibility to flooding through measures such as land-use regulation, open-space acquisition, building codes, zoning, developmental policies, flood-proofing or flood forecasting. You can modify the characteristics of flooding with dams, dikes, levees, floodwalls, channel alterations and diversions, or land treatment measures. You can modify the consequences of flooding through flood hazard information, flood insurance, tax adjustments, flood fighting, recovery, and flood relief assistance. Perhaps future watershed projects will include some of each of these kinds of alternatives.

Finally, more emphasis will be given in watershed projects on helping local communities find and consider all the viable alternatives. Nearly every watershed has definite needs for improvement of some kind, or the people who live in it would not be asking for project help.

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In future years, we will work to finish the planning process whether or not the benefit-cost ratio is favorable for a structural program of flood prevention. Many watersheds will qualify for PL-566 assistance. Some would need only limited structural measures, and the cost of installation and operation would be low. In other cases, PL-566 might not be the final answer to the community's needs. Flood prevention may not turn out to be the primary objective on every fork of the creek. But the planning process still should lead to suggestions for solving the needs that have been identified.

The planning process is being continuously improved, and better projects will result. At the moment it's causing some delays, some questions about meeting commitments to local people. SCS and many other agencies are working to refine the process and minimize delays. We also are trying to help communities identify things they can work on while waiting for project approvals and funding help.

All of us need courage to tackle the immediate problems, resolve to bring the underlying issues out into the open, vision to look ahead at future needs and objectives, and a spirit of mutual respect and cooperation. Working together we can shape America's future.