

Building With Natural Resources

Today, millions of Americans are at odds with their environment. They breathe polluted air, drive congested roads to reach a crowded beach, turn their rivers into sewers, pay ever-rising taxes to make their water drinkable. Too often, they live with scarred landscapes in their new suburbs. Too often, their streams are flooded, their lakes filled with sediment, their air acrid, their surroundings depressing, their health threatened. In big or little ways, their lives are affected by environmental misuse that ranges from roadside litter to wholesale land and water mismanagement. If, as we tell ourselves, man is a thinking animal, then where did our reasoning powers go that we could so abuse the environment?

Material for Talk by Norman A. Berg, Associate Administrator, Soil Conservation Service, at the Ohio Planning Conference, Warren, Ohio, April 26, 1971.

This, of course, is only half the picture, although it is the more publicized half. Many parts of ^{Va.} ~~Ohio~~, and elsewhere, are beautiful examples of good land and water use in rural and urban areas. Many lands are in better shape than they were a generation or two ago, although their use today is often more intensive.

Still, there is enough wrong with our collective use of the environment that millions of people are rightfully concerned.

What marks the essential difference between Slurbtown, ^{County side U.S.A.} USA, and rural and urban America the Beautiful?

It is planning:

-- Intelligent planning by and for people, based on matching human needs to the capacity of our resource base.

-- Planning that recognizes, and plans for, all of our many needs, including the need to dispose of, or recycle, the so-called waste products we generate.

I, myself, like wilderness and seashore areas, and farm and ranch lands, and large cities. I need good food and water, good housing, clean air, adequate transportation, and convenient and attractive areas of open space and recreation. Some of these needs may seem contradictory--and they are today. But I am convinced that you, and I, and the other 200 million-plus Americans in our country can meet all of our legitimate needs if we plan for these needs on the basis of the carrying capacity of our resources.

Environment is today's headline subject. For a year or two, there has been much shouting and waving of arms and rolling of eyes. This is no doubt necessary at a certain stage. But, when the shouters are at least momentarily exhausted and the public is aroused there comes a time for lower voices and later hours of work, and solid facts with which to work. This is the time for a clear-eyed look at where we are, and where we want to go, and how to get there.

This is the time for the planner and the technical specialist.

This is your time--and my time.

And this is, basically, why we are together here today.

How can the Soil Conservation Service and conservation districts help you--and through you, the country and the countryside?

In many ways, I believe, and I'll detail them shortly.

You may consider our work agriculture-oriented. In fact, we are oriented toward good land and water use whatever and wherever the use--and as towns have moved to farmlands and become suburbs, we have stayed to help on new resource problems.

Terrace-building and gully-mending are only the tip of the soil and water conservation iceberg. Farmers and other landusers cannot effectively control erosion or undertake other conservation work without simultaneously planning for better use of their land and water. One of the first activities of a district conservationist with a new cooperator is to work with him on land-use planning.

SCS is active in rural areas, but our people also help towns and other government units solve erosion-control problems along airport runways, highways, beaches; select suitable sites for housing, parks, livestock feedlots, sanitary landfills, and a dozen other land uses; and meet a host of other land and water aims. I don't think there's a land-use problem alive and unwell today that SCS people haven't run across somewhere in their work. Our people don't know all the answers, you understand--just most of the problems! And many of the opportunities.

A major part of your work is directed toward the good use of your area's natural resources.

Working through your local conservation district, we can help you identify different land and water areas and their best possible alternative uses. Some tools for this are the National Cooperative Soil Survey, river basin studies, the Conservation Needs Inventory, and the accumulated experience and knowledge of thousands of local conservation district supervisors and SCS conservationists.

You will want to know which of your areas are prime for general or special agricultural crops; what soils can be safely used for housing, or what limitations the builders must overcome; where your good potential reservoir sites or future open spaces lie; where you can locate sanitary landfills in reference to soils and possible water pollution. SCS can help identify floodplains or poorly drained areas, and assist in planning for the sequential use of strip-mine areas to reduce pollution during mining and to aid in beneficial use afterwards.

We can point out the special qualities of various soils-- heavy clay that won't take up water readily; deep peat that may oxidize and settle; soils that shrink and swell; or positively speaking, good sand and gravel locations. We can flag soils that won't handle sewage effluent--so builders and homeowners can avoid unanticipated problems. Our local conservationists know your areas of heavy erosion and sediment production, and how you can minimize difficulties, especially during heavy building periods.

SCS people can help you select attractive trees and plants to control a hillside or attract wildlife or provide a tough cover for your new school playground. And, if your community chooses to sponsor a small watershed project or Resource Conservation and Development project, we can work with you and others on flood prevention, recreation, water supply, or other community aims.

That's quite a range of interests that you and SCS and your conservation districts share. We cannot do your job-- and we don't want to. We have quite enough in our own backyard. Our job is to provide the planner and farmer and developer and government official with the best possible information and technical assistance that we can. Our budget is limited and our people are stretched thin in many places, but to the limits of SCS money and manpower we go all out to assist groups and individuals who farm, develop, plan or legislate for land and water use. We mean the "Service" in Soil Conservation Service to be just that.

In a very few areas, SCS men work directly with planning groups. One of our men is a soil and water consultant to planners with the 9-county O.K.I. Planning Authority--Ohio, Kentucky, Indiana. But most of our assistance is provided through local conservation districts. I sincerely hope you are working with your local district, which is chartered under state law to concern itself with resource problems and which, in Ohio, is normally organized on a county basis. I know that at least 50 Ohio cities or counties do have memorandums of understanding with their local conservation district.

Districts work with both individuals and groups. A district in Virginia, for example, worked with officials of Dulles International Airport outside Washington, D. C. In addition to soils information for the 10,000 acres, they helped Dulles officials plan silt basins for the construction period, build a flood-prevention dam at the edge of the jetport to protect a downstream urban valley, and plant three million trees to beautify, muffle sound, and stabilize the land. Dulles would have had some mighty unhappy neighbors without these measures.

I've mentioned soil surveys as a basic source of information. These are cooperative products. Here in Ohio, the State Department of Natural Resources' Division of Lands and Soils is a major participant.

Currently, 45 out of 88 Ohio counties have been soil mapped, or are being surveyed. Other counties have scattered areas of survey data. In these places you will have access to information on soil types suitable for different uses, as well as on such soil qualities as bearing strength and permeability.

Surveys do not substitute for detailed, on-site investigations. But they alert you to the best general area for your planning purposes, and they warn of the existence of specific soil limitations.

I'd like to give a few examples of soil survey uses:

-- Many Massachusetts communities use them to locate sanitary landfills.

-- Iowa and other states use them to help provide fair local tax assessments.

-- Mining states request them for strip-mine planning.

-- A Canfield, Ohio, ordinance requires builders to consult soil maps before they get a building permit.

-- The Maine Environmental Improvement Commission uses surveys to help assess the impact of large new developments on the environment.

-- Many, many landusers request information for site evaluations, as did developers of the new towns of Reston, Virginia; Columbia, Maryland; and Jonathan, Minnesota.

Choice of soils can make a significant difference in the price a community pays for its utilities. A Michigan town wasted several hundred thousand dollars when its new water main was built across a 600-foot-wide area of deep peat soils. The main could have gone through normal mineral soils nearby.

A New York town paid \$235,000 more than it had budgeted for its sewer system, because engineers ran into more than twice as much rock as they anticipated from faulty test borings. The county soil survey, which was collecting dust on a nearby shelf, showed the area soils were less than 20 inches deep over bedrock.

In Ohio, you have drainage problems and a rather high percentage of shrink-swell soils, which are tough on foundations, and heavy soils, which cause drainage problems. Officials here in Trumbull County have asked us to soil survey a 35,000-acre tract going into urban uses. The mapping will be completed this year.

To end on a happy note, officials in one Illinois county prevented a potential bill of over \$800,000 when they discovered a strip of land under consideration for a highway had very poor soils for building. By choosing an alternate route, they saved \$2,400 an acre on excavation and construction costs.

Soil surveys are only one land-use tool. The Conservation Needs Inventory, or CNI, is a detailed look, once a decade, at the Nation's private agricultural lands and their conservation needs. It provides basic data for any large-scale planning.

Some of you may know of USDA's assistance in Resource Conservation and Development projects. These are an umbrella-type effort to unite many local groups working for better resource use. The program is a complex one, and rather than taking the time to discuss it now I'll simply suggest that you check with SCS offices here in Ohio for information about projects in this state.

Let's jump now from land to water problems, which may include flooding, poor drainage, insufficient municipal water, lack of local water-based recreation, and others.

A number of communities find the small watershed program a major help with any or all of these problems. These locally sponsored projects combine engineering and conservation work on the surrounding land. Almost all of them include flood prevention, and they may include providing municipal or industrial water supply, or other purposes for which local sponsors are willing to share the cost.

One example is the West Fork Dutch Creek watershed project in southeast Ohio. One of its lakes is in a new state-operated park, and provides flood prevention, good swimming and fishing, and a boost to the local economy through the influx of tourists.

We also help on much smaller water problems. Farmers have built more than a million ponds, and today urban developers and planners are receiving similar help. A large housing development inside Milwaukee is being built around three beautiful manmade lakes. Local SCS people added flood prevention measures that reduce peak floodwater discharge by an estimated 75 percent.

Landscaping, small lakes, and other housing development amenities often can do a conservation and pollution control job as well. We will see more designing of beauty spots for multiple purposes in the coming years.

I think we also will see more attention paid to the Nation's number-one water pollutant--in volume--sediment. The National Association of Counties Research Foundation prepared this soil erosion and sediment control guidebook last year. I recommend it, especially to those of you in areas of rapid urbanization, where sediment production is often very high.

Maryland, South Carolina, and the Virgin Islands have particularly serious sediment problems, and this is reflected in statewide laws that require builders to prepare sediment control plans, and have them approved by local officials, before construction work begins.

Another book I highly recommend is this new one called "Planning and Zoning for Better Resource Use." It's published by the Soil Conservation Society of America and can be purchased from SCSA headquarters at Ankeny, Iowa.

The book points out that we have enough land if we use it wisely. This pre-supposes planning and some zoning--in that order, of course. I urge your communities to zone positively, for what you want and for what is occurring, rather than only for what you want to avoid. This would mean rational zoning for prime farm areas, industry, recreation areas and homesites--including mobile homesites.

One further point: I strongly urge you to remember, in planning, the importance of identification and retention of good farmland. We have enough land if it's wisely used. In the absence of controls, however, too many builders follow the path of least resistance. New homes go up on the most fertile agricultural land, while land that is less fertile, but as good or better for homes is readily available nearby.

The kind of "thinking ahead" that reserves prime cropland cannot be done by individuals. It must be done by planners and officials-- or it will not be done at all.

The basic needs for all of us are good food and clean water. So, a very basic job of planners is to help preserve good agricultural and water-supply areas for present and future needs-- and I'm thinking here of needs 25 to 50 years ahead. It's easy to cover fertile soils with concrete and blacktop. It is extremely difficult--and expensive--to return those areas to good cropland.

Finally, I hope we all will look forward to a better use of natural resources, rather than backward to some nostalgic era when, presumably, seldom was heard a discouraging word and the skies were not cloudy all day.

In many older cities and urban areas across the country, land and water problems are so numerous and advanced it is difficult and costly to correct them.

We cannot blame our predecessors for all of these mistakes. The art and science of planning for land and water uses was not well developed a century ago.

But this is not true today. In 1971 there is extensive physical, social, and economic information available. Our generation can be blamed if we fail in our treatment of the environment. We do not have the excuse of ignorance.

The word "ecology" is much in fashion now, and means, literally, "the study of the home." Our home is this planet... our Nation...state...local community. As the dominant species, man has the power to radically alter his natural world for better or worse. We are, as one writer put it, rulers of the earth who never learned the rules. Perhaps, now, we should learn.

As planners, you exemplify those rulers of the earth who do understand what we deal with. You face problems--technical, human, and economic. You face conflicts.

You are in the front lines of a growing movement toward putting our ecological knowledge to work. The front lines are a great place to see the action, but also the first spot to catch the flak.

I wish you well. I cannot imagine any more important work. We in the Soil Conservation Service stand ready to help you and your communities work to build a better America.

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