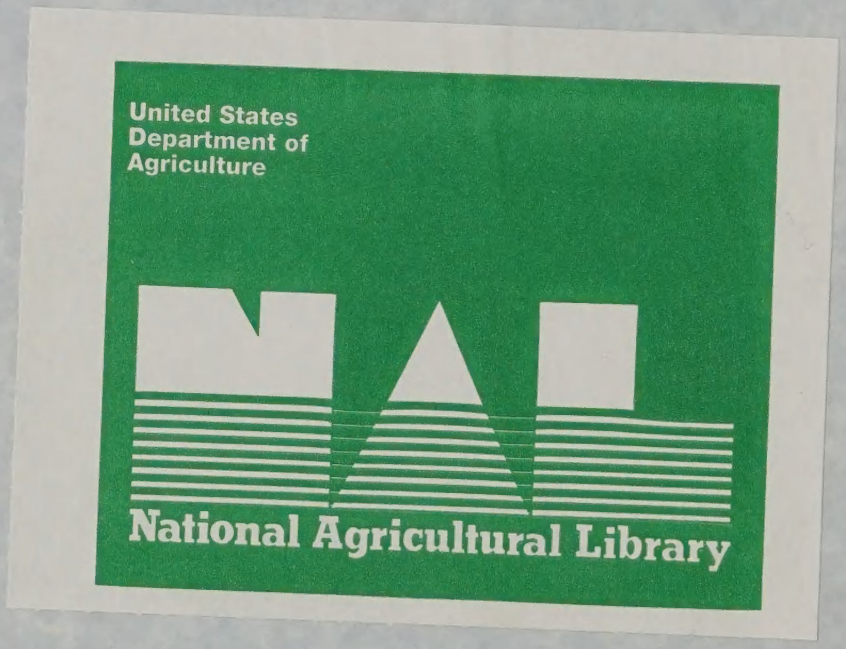
# RCA III

*Influence of Social Trends*
*on Agricultural Natural Resources*

## National and State Perspectives

*Working Paper No. 19E*

RCA III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This is part of a set of papers originally presented at the Symposium on
*Influence of Social Trends on Agricultural Natural Resources*
cosponsored by RCA and the Social Sciences Institute (NRCS)
(May 31–June 2, 1995, Washington, D.C.)
and now issued in the RCA Working Papers series

Resource analysis and assessments are ongoing functions of the Natural Resources Conservation Service. These assessments play an important role in how we keep the public and policymakers informed about emerging conservation and environmental issues, develop plans to conserve our natural resources, and design programs to provide national leadership for the conservation of natural resources on America's private lands. For additional information about this or other NRCS resource assessment publications, contact the Director of the Resource Assessment and Strategic Planning Division, USDA, Natural Resources Conservation Service, P. O. Box 2890, Washington, D.C. 20013.

Published August 1997

# Contents

*Also in this Symposium series:*

*Working Paper No. 19A*

PUBLIC ATTITUDES AND FARMERS' PERCEPTIONS
Frank Clearfield and Kim Berry, NRCS
Steven Kraft and J. Dixon Esseks, University of Southern Illinois

*Working Paper No. 19B*

COMMUNITY, SOCIAL CAPITAL, AND CONSERVATION
Cornelia Flora and Steven Padgitt, Iowa State University
John Thigpen, Curtis Beus, and Donna Adcock, Texas A&M University,
and Frank Clearfield, NRCS
Louis Swanson, University of Kentucky

*Working Paper No. 19C*

MEGATRENDS: BANKING AND FINANCE; BIOTECHNOLOGY
David Freshwater, University of Kentucky
Frederick Buttel, University of Wisconsin

*Working Paper No. 19D*

PROPERTY RIGHTS, CONSERVATION, AND ECOSYSTEM-BASED ASSISTANCE
Keith Wiebe, Abebayehu Tegene, and Nicole Ballenger, ERS
Douglas Lawrence, NRCS

*Working Paper No. 19F*

POLITICS AND THE ENVIRONMENT
Jeffrey Zinn, Congressional Resarch Service
Sandra Batie, Michigan State University
Clark Williams, Environmental Working Group
Sharon Nance, NRCS

*Working Paper No. 19G*

WATER QUALITY, SOCIAL TRENDS, AND FUTURE POLICY
Christopher Lant, University of Southern Illinois
Robert Adler, University of Utah

## Overview of the Symposium

The symposium on *Influence of Social Trends on Agricultural Natural Resources* took place on May 31–June 2, 1995. The speakers presented current trends and were challenged to forecast trends in conservation of our natural resources at two separate points in time—10 and 50 years in the future. This type of forecasting was an unusual challenge to the participants. Many of the "empirically oriented" social scientists chose to remain close to their data, while others did as they were asked and tried to act as seers. Only time will tell how close they came to predicting future scenarios. Assembling any group of scholars will lead to mixed forecasts. Rather than repeat each author's message, we have tried to emphasize some common themes in the presentations. If you want to find out what the authors themselves think, read the papers. It is well worth the effort.

Although the attitudes of the public and the agricultural community differ on some issues, support for a clean agricultural environment is almost universal. The public is concerned for the safety of food and water supplies. The public also feels that laws on threatened and endangered species and wetlands are just right or have not gone far enough in providing protection. Most farmers and ranchers, along with the public, support a federal role in agricultural conservation, especially in incentive payments to promote conservation.

Most of the public would like to see federal spending on agricultural conservation increase or remain the same. The desire of the public and agricultural communities to have an incentive-based system has been partly realized with the passage of the 1985, 1990, and 1996 Farm Bills (respectively Food Security Act of 1985; Food, Agriculture, Conservation, and Trade Act of 1990; and Federal Agriculture Improvement and Reform Act of 1996). Concurrently, the public supports regulation, fines, and withholding government benefits when voluntary conservation is not working. A majority view among presenters was that with time there would be an expanded regulatory role for all levels of government vis-à-vis production agriculture. There was some disagreement on whether this expanded regulatory role would come through the use of centralized, command-and-control regulations or through the use of market-based incentives.

When given an opportunity to voice their opinions regarding conservation compliance, most farmers with highly erodible land supported the program and did not want Congress to abolish it when crafting the 1996 Farm Bill. Furthermore, farmers with highly erodible land and conservation compliance plans believed that NRCS was more than fair in its implementation of conservation compliance planning. Over the last 5 years (the period during which farmers had to acquire their plans and have them fully implemented), farmers have been consistent in their support of the program. However, there is a troubling drop in the percentage of farmers with conservation compliance plans who believe that monitoring

and enforcement are being carried out in such a way that farmers who are out of compliance will be found out and will lose eligibility for USDA program benefits.

The environment and ecosystem management will remain important future issues for the public and agricultural producers. During the next 50 years, as the global population continues to grow, agricultural producers and agribusinesses will be challenged to expand food production and the processing and distribution systems to keep pace with population growth without endangering the ecosystems supporting production agriculture. In industrialized countries, alternative food sources will be developed, environmental monitoring will become more widespread and more precise, and new environmentally benign methods of production agriculture and food processing will be developed. Given capital limitations, resource constraints, and increasing demand for food, the poorer countries will face growing environmental challenges as they use their physical resources more intensively in the effort to feed their populations and expand their trade abroad. Sources of environmental stress will be in the energy, manufacturing, and extractive industries in addition to agriculture. The future of humanity will depend on the development and sharing of appropriate technologies and mobilizing global efforts to effectively control population, produce enough food and fiber, and protect the environment.

A number of papers underscored the structural transformation underway in the agricultural and financial sectors. Increased vertical integration and the separation of land and resource ownership for farm operations are rapidly changing the character of agriculture. For example, one author suggested that in the 1980s banking and finance became more national, if not global, as local banks and credit unions—especially in rural areas—went out of business. The cold dollars-and-cents business world of finance merges uncomfortably with the inherent instability of agriculture and the accompanying fluctuations of farm income. During the next 10 years, income in the agricultural sector may be even more volatile, due to the elimination of the farm income safety net. With the gradual removal of this safety net through the 1996 Farm Bill, farmers will face increased financial risk and greater uncertainty. A challenge for operators will be the development of strategies for shifting the increased risk from themselves to others.

One consequence of the consolidation within the financial sector will be the shifting of funds away from rural areas and the increased reliance of farmers on capital and operating loans coming more from commodity processors and input suppliers than from traditional banking sources. Corporations will begin to own more agricultural land, and for the land they do not own, they will contract with farmers as to what to produce and how to produce it in exchange for a guaranteed market for the commodity. In many instances, the farmers will be no more than salaried workers. One impact of these changes will be to make farmers dependent on agribusinesses. Farmers and farm managers will have a vested interest in production, not conservation. In this transformed world of agriculture, a major challenge will be the public sector's voice demanding food safety, environmental quality, and worker health and safety.

Much of the livestock industry—cattle, chickens, hogs, turkeys, and sheep—is currently controlled by a few companies. In addition to livestock conglomerates, industrial consolidations of port facilities and feed, elevator, milling, and soybean-crushing plants limit market access for individual producers. Companies that contract for agricultural products are not typically held responsible for environmental impacts, while individual producers are. Hence, while agricultural processors will increasingly specify what to produce and how to produce it, the environmental consequences of those specifications will shift to individual producers. However, the public will exert enough pressure so that environmental responsibilities will likely be pinpointed as this type of agricultural concentration increases. Not only will concentration of production and processing take place in the livestock sector, it will also occur with grain and oilseed crops, their processing, and the transportation of all agricultural commodities. Farmers, public interest groups, and government officials are just now becoming aware of the structural changes sweeping over agriculture and of the implications they hold for producers, consumers, and the environment.

Crop biotechnology is not currently and will not in the next 10 years be a significant factor in relation to environmental quality. However, some aspects of agricultural industry are more directly affected by biotechnology than others. For example, the livestock industry has been affected through the development of growth hormones and vaccines for increasing livestock production. In contrast, it is more difficult to manipulate cereal grains through bioengineering technology than was thought at first. In fact, these common grains may be easier to modify through conventional breeding techniques that improve multiple genetic (polygenic) traits than by the use of biotechnology, which focuses more easily on single genetic traits.

Crop biotechnology (e.g., herbicide- and pesticide-resistant crop varieties) is following an established technological trajectory rather than defining a new path. Some of these developments feed into existing monocultural practices (with their attendant environmental problems) and limit the use of crop rotations. Mechanization and industrialization are the present dominant trends in agriculture, and biotechnology complements these trends. Biotechnology will have mixed effects on environmental quality, and its impact depends to a great degree on how public policy is implemented in the environmental arena.

Several researchers projected that national conservation institutions over the next decade will remain in place but with reduced funding. State and local institutions will need to significantly increase resources directed toward conservation. Stronger agricultural regulations will be passed at the state and local levels. However, in general, states and local areas do not have the financial capabilities to provide full-service technical assistance and cost-sharing for conservation, nor do they have the staff capabilities to regulate the agricultural industry. In fact, one of the challenges is not only the extent to which states can pass legislation on soil and water conservation but the extent to which they can implement and administer the laws they have. Presenters recommend that state and local political institutions acquire taxing authorities so they can more directly provide staff assistance and incentives to foster natural

resource protection and enhancement at the local level. While state and local units of government could assume greater responsibility for soil and water conservation programs, an important challenge will be how much *both* the agricultural and nonagricultural communities are involved in decisionmaking, as well as how closely local concerns reflect the environmental concerns of the wider community.

The projected unit of analysis for agricultural conservation work is at the watershed level. While this unit may be very appropriate for ecosystem planning (e.g., ecological linkages across a landscape, a context for socioeconomic-political institutions), it presents a number of challenges that have to be addressed if the watershed approach is going to achieve its promise. For example, what is the spatial scale at which a watershed is defined? Is a large-scale or small-scale approach taken to delineate watersheds for planning purposes? Another question is, what criteria are used to separate watersheds: are they biological, social, or topographic in nature? How can watershed planning be reconciled with various overlapping levels of government that have to be coordinated and through which administrative control of conservation policy is exercised? And finally, how can procedural and substantive issues of the wide variety of organizational missions be addressed at a watershed level?

The idea came up repeatedly that while most farmers and ranchers use sound conservation systems, 10 to 15 percent of them are "bad actors." These producers are unaware of or choose to ignore the negative effects of their production systems on the environment. It will be extremely difficult to change the behavior of these people. Participants felt that the larger society will eventually demand that the bad actors be penalized for polluting the environment. The penalties might come as fines, stricter environmental regulation and enforcement, or more programs like conservation compliance. Two forces are at work. First, the structural changes taking place in agriculture are working to destroy the Jeffersonian image of the yeoman farmer that gives farming special status vis-à-vis environmental regulation. Second, more and clearer information about the interaction of production agriculture and environmental quality will result in stronger public demand for environmental protection. Improved resource inventories will facilitate the tracking of environmental degradation and the levying of penalties. Resource inventories will become more important in the future, based on two trends: *increased accountability* for scarce financial resources, and *advancing scientific capabilities* that increase the ability of conservation partners to assess and monitor environmental conditions.

Environmental justice was another topic discussed. Industry and agriculture have taken advantage of minorities by ignoring the effect of agricultural pollutants on minority populations and by placing chemical production, waste facilities, or concentrated farm operations in minority communities. A Presidential Executive Order on Environmental Justice (Executive Order 12898) attempts to address this issue. During the next 10 years, increased awareness of these issues in minority communities will merge with more reliable and accessible information to slow but not stop these negative impacts. The "not in my backyard"

movement, a classic middle-class movement, helps to relocate agricultural pollution to minority areas. It will take many years before this entrenched trend is offset.

The future moves erratically, with many choices that each yield unclear results. History has the advantage of being able to look back to add meaning to society's many bends in the road. The exercise of looking ahead 10 and 50 years forces researchers to rely on their basic assumptions about the nature of human beings as well as the influence that systems wield on future events. Skepticism and optimism were the yin and the yang of this symposium. Comparing the present to a future ideal is frustrating because, in some cases, the present environment is toxic to living creatures. However, at the same time, there is room for optimism. The continuing environmental movement in general has been strengthened and sculpted by the legislative and executive branches of different levels of government. This can be attributed to the public's strong support for wetlands, wise use of agrichemicals, food safety, water quality, threatened and endangered species, and safe recreational opportunities. The public also supports localized decisionmaking, which puts human and physical resources in local hands.

As we look 50 years into the future, the trend toward the industrialization of the agricultural sector is bound to accelerate. It seems conservationists are presently pushing their bandwagon down a slight grade because of the public's support. To speed up the wagon, we must institutionalize two new inputs besides the traditional inputs of land, labor, technology, and capital. These added inputs are *environmental considerations* and *fairness/equity*. As these inputs become standard costs for doing business, the agricultural sector will realize its potential to be healthy, fair, and productive.

Frank Clearfield and Steven Kraft

June 1997

# Influence of Social Trends on Agricultural Natural Resources

Norman A. Berg

**Conservation Consultant**

You have already heard about attitudes, surveys, vertical patterns in agriculture and megatrends. The next two days promise to be equally informative. My prepared text is for the record. At this time of the day you deserve a comedian.

From the higher hills of age and experience, hopefully what is said may stimulate thinking about agricultural natural resources and past and future influence of social trends. However, I confess that while preparing this talk, several options offered by your theme were not fully explored nor adequately developed, leading to a degree of frustration. What is a social trend? What motivates people? What is the role of society when those owning and operating land are asked to practice stewardship, to have a land ethic? In the Winter (1995) *American Journal of Alternative Agriculture,* Professor Molly Anderson said, "Alternative agriculture is the confluence of a research area and social movement. . . . Agriculture, like all resource management, is an interaction of people both with people and with the environment, not just the latter." She quoted D. Ludwig, who argued that "resource problems are not really environmental problems. They are human problems that we have created at many times and in many places, under a variety of political, social, and economic conditions." I refer to this later when citing an exchange of views I had in 1986 with Professor Donald Worster in regard to an alteration of our cultural values.

The late and, in my opinion, great Adlai E. Stevenson said, "The knowledge one has acquired with age is not knowledge of formulas, or forms of words, but of people, places, actions—a knowledge not gained by words, but by touch, sight, sound, victories, failures, sleeplessness, devotion, love—the human experience and emotions of this earth and of one's self and others. Perhaps, too, a little faith, a little reverence for things you cannot see." A reminder: he was a Democrat.

### *Fact One—*

I accepted the invitation when asked for my views because previous RCA efforts did affect farm legislation. Also, I'm involved in studying issues for the current farm bill. A more daunting request is to think about some future trends of our natural resources at two separate junctures—10 and 50 years in the future. It's an honor to participate in this RCA Symposium, and to engage in a dialogue tonight.

### *What's Old?*

The first RCA bill was vetoed. Later, Public Law 95-192, the Soil and Water Conservation Act of 1977 (RCA), was enacted because the U. S. Congress was concerned about the condition of the Nation's basic nonfederal natural resources. Congress over four decades earlier established the Soil Conservation Service in the U.S. Department of Agriculture (USDA), after the Soil Erosion Service had been created in the U.S. Department of the Interior in 1933, by an Executive Order. Thus the Nation, by law, has recognized the importance of conserving soil, water, and related resources on our nonfederal lands, mostly privately owned and operated, for over sixty years. RCA had asked the Secretary of Agriculture three basic questions:

What are the resource problems?

How do you propose to solve these problems?

What are the expected results of your solutions?

The United States had, because of a rapid increase of agricultural exports, and fence-row-to-fence-row planting encouraged by USDA, "busted sod." Many marginal soils were being used as cropland, including large acreages previously in the Soil Bank, increasing soil loss. The Department, in response to the Act, has done Appraisals and submitted to Congress National Conservation Programs and the 1988–97 NCP Update. I'll relate the impact of that work on prior Farm Bills later. Future RCA efforts, i.e., Appraisal III and another National Conservation Program, will relate to 2000 and beyond. Also, P.L. 99-198 and P.L. 103-354 amended the Soil and Water Resources Conservation Act of 1977. The continued recognition of the Act by Congress is good news.

### *Fact Two—*

If you will indulge one who as a U.S. Marine was close to events of 50 years ago now in the news, i.e., FDR's death, use of the Atomic Bomb to end World War II, and the beginning of President Harry Truman's terms, post-W.W. II, I'll try relating history to the theme: *Influence of Social Trends on Agricultural Natural Resources.* Our lives evolve through three time-zones: past, present, and an unknown future. My life, except for the duty demanded during W.W. II, has been associated with agriculture. My family had a small farm in the 1920's. We were only one of over six million. Rubber tires for tractors and other agricultural machinery were introduced, permitting greater speed between farmstead and fields, and extending the life of the equipment. Hi-Bred corn was developed and sold by the Henry Wallace people in Iowa. We farmed north of the Twin Cities, but were able to obtain Canary Grass seed from Iowa State University. A major socioeconomic event, the Great Depression, led in 1933 to a national government dedicated to solving problems. The "New Deal" led to Rural Electrification, the Tennessee Valley Authority, the Agricultural Adjustment Act, Farm Security, Social Security, and the Soil Conservation Service (SCS). Hugh Hammond Bennett's crusade proved timely.

In 1934 those wind-borne soils from the Dakotas darkened our sky. The newly created Soil Erosion Service made a reconnaissance survey. It was done on 1.9 billion acres, representing the total area of the Nation, exclusive of urban and water territory. That survey indicated that on nearly 600 million acres, in nearly all parts of our country, there was little or no erosion of any kind. However, on over 850 million acres, that survey found sheet erosion was generally prevalent in degrees ranging from slight damage to complete destruction. Wind erosion had also affected nearly 323 million acres, principally in the Midwestern States. This aggregate included 80 million acres seriously damaged or practically ruined for productive use. Gully erosion caused severe damage on about 337 million acres. This data, coupled with the Great Depression and "Dust Bowl" conditions, led the U.S. Congress to create in USDA the Soil Conservation Service on April 27, 1935, after the SES had been moved from the Department of the Interior to USDA.

### *Fact Three—*

As I said at the USDA Agricultural Outlook Forum: Agriculture, since its beginning many centuries ago, by its very nature, has changed our Earth's natural environment. This will continue. Socioeconomic conditions, spanning over four centuries, have caused several actions impacting the "original" or "primeval" natural resource condition of the Nation's landscape:

1. The clearing of forested land,
2. The plowing of grassland for planting of crops,
3. The draining of wetlands for agricultural use,
4. The irrigation of drylands,
5. The grazing of rangelands by livestock,
6. Strip-mining for minerals,
7. Growth of metropolitan areas, and associated highways, airports, and other facilities, and conversion of prime soils,
8. Damming of streams and rivers, and
9. Accelerated pollution of waters by sediment from soil erosion.

While the natural resources were being modified by humans, there were changes in the populations of existing animals:

1. Reduction, and in some cases extermination, of animals considered dangerous to the human species (bears, lions),
2. Reduction in numbers of certain big-game animals (buffalo),
3. Extermination or reduction of certain rare or endangered species,
4. Increases in populations of certain birds and mammals, and
5. Changes in invertebrate populations that have been from slight to cataclysmic, but most need more study to know what has happened to a wide variety of creatures, e.g. earthworms.

There has also been the introduction of plants and animals from other parts of the world, including

1. Common weeds (ragweed, morning glory, dandelions),
2. Insects (Japanese beetle, cotton boll weevil),
3. Virus, bacterial, and fungus diseases (Dutch elm disease),
4. Trees and shrubs (kudzu, Scotch broom),
5. Game and song birds (English sparrow, pheasant, starling),
6. Game animals (European boar), and
7. Other animals (nutria, mongoose, rats).

The socioeconomic events impacting natural resources were also causing major actions and laws that included

| | |
|---|---|
| The Declaration of Independence | in 1776, |
| The Emancipation Proclamation | in 1863, |
| The Nineteenth Amendment | in 1920, |
| The Indian Citizenship Act | in 1924, |
| The Soil Conservation Act | in 1935, |
| The Fair Labor Standards Act | in 1938, |
| The Civil Rights Act | in 1938, |
| The National Environmental Policy Act | in 1970, |
| The Endangered Species Act | in 1973, and |
| The Food Security Act of 1985 | in 1985. |

The social trends following WW II supported large families, the move to the suburbs, every family with a green lawn, the Interstate Highway System, and "no limit on growth" thinking. During my tenure in SCS, Congress added several authorities: the Watershed Protection and Flood Prevention Program, the Great Plains Conservation Program, the Resource Conservation and Development Program, the NRI, and the RCA. Also, SCS was assigned a role in the Agricultural Conservation Program, leadership for the Cooperative Soil Survey, the River Basin activities, establishment of over twenty Plant Material Centers, and encouraged the creation and governing of 3,000 Conservation Districts. Because of early RCA efforts the 1981 Farm Bill emphasized targeting, and the legal use of many volunteers. Because of continued confidence and trust in the agency's ability to deliver, the Conservation Titles of the 1985 and 1990 Farm Bills, and P.L.103-354 (USDA Reorganization Act of 1994) all generated additional duties for the SCS, renamed the Natural Resources Conservation Service (NRCS).

### *Fact Four—*

The 1977 National Resources Inventory (NRI) played a key role in Appraisal I and the first NCP. That survey revealed that a very large share of the Nation's soil erosion occurred on a relatively small portion of U.S. land. This observation was found to be true of the major types of erosion—wind, sheet, and rill—and applied to all land uses (crop,

range, pasture, and forest lands). In 1977, about 38 million acres of nonirrigated cropland—11 percent of the total, eroding in excess of 15 tons per acre annually—accounted for 1.328 billion tons of soil erosion, or about 53 percent of the total wind, sheet, and rill erosion on nonirrigated cropland. In 1977, twenty-five million acres, just 6 percent of total cropland, accounted for 43 percent of the total tonnage of cropland sheet and rill erosion (828 million tons per year). I cite this data because by the early 1980's, after the 1981 Farm Bill, the Nation became aware of the need for the significant action taken in the 1985 Farm Bill.

Armed with appraisal data, analysis of resource conditions, the results of evaluating existing programs, and the opinions from public participation work, the first national plan suggested several options. Programs should move away from the "cafeteria" or "first come, first served" approach of traditional programs. The preferred program established clear national priorities. The highest was reduction of soil erosion to maintain the long-term productivity of agricultural land. Reduction of upstream flood damage, water conservation and quality, fish and wildlife habitat improvement, and community-related conservation problems were also high priorities. One option was the requirement that landowners have a conservation plan to be eligible for Farmers Home Administration loans ( a forecast of the need for even broader conservation compliance). That first NCP would strengthen partnerships, provide block grants, add to the voluntary-incentive-driven approach, and minimize conflict among USDA programs. Areas were recommended for targeting of limited technical and financial resources, with mixed results.

The social trends that began with the environmental movement, as celebrated by a quarter century since "Earth Day," played a key role in the 1985 Farm Bill. A surplus of crops, citizens concerned about wetlands, and the breaking out of good grass and tree land for cropland, all were background noise for change. The Conservation Title in 1985 changed the USDA, and primarily one agency's agenda, priorities, and method of working with the owners and operators of cropland. I left the Soil Conservation Service in early April, 1982. My concern about conservation did not diminish. Work as a consultant to non-profit conservation organizations, and lessons learned from long-term RCA activity have had an impact on prior farm bills, and may influence some of the current farm bill decisions. The importance of having conservation coalitions agreeing on principles to be stressed during the formulation of policies was apparent to many.

Is the past still prologue? Some now say the future will be so different as to make the past irrelevant. Who is right? If social trends during the past 60 years influenced the history of conservation in USDA, will those trends continue? If social trends have influence, how and in what ways?

### *Fact Five—*

In 1986, a nationally acclaimed historian, then at Brandeis University, explored the root causes of America's inability to overcome soil erosion problems. He focused his critique

on the SCS, but his criticism of ineffective federal programs and poor farm practices extended beyond one agency to the Nation's cultural and economic values. He argued that the SCS, created in response to the economic and resource crisis of the Great Depression, soon became entrapped by the value system that was responsible for soil erosion problems in the first place. As a result, SCS officials began to offer technological solutions to political and cultural problems. He asked, "If these programs have been around for so long, why do the problems still persist?" Is it not time, he wrote in 1986, to search for alternative solutions? I was asked to respond. His article was entitled *A Sense of Soil: Agricultural Conservation and American Culture*. Mine was *Playing by the Rules*. First I argued that the SCS had done a remarkable job, and pointed with pride to the agency's environmental record. Then I contended that the public institutions, if they are to be effective, must work within the political boundaries set by a society's enduring principles, and in this case those principles are the individual pursuit of wealth, and the sanctity of private property. I discussed the 1985 FSA with the land use incentive (CRP) and disincentives of that new law. He had the last word: "I am pleased to have the comments of a thoughtful, loyal public servant. Of course, the SCS has done some good and, of course, it is not the major source of our land problems. My point is that it has not provided much of a solution either. The reason for the lack of progress is cultural: we continue to put individual wealth and immediate satisfaction—whether farmers or urban consumers—ahead of the health of the land or the well being of future generations. Obviously, Mr. Berg does not quite believe what he implies." That dialogue in full is in Volume One, Number One, Spring 1986 of TVA's publication, *Forum for Applied Research and Public Policy.*

***The question all of us have to ponder is, which of these social goals—personal wealth or social sustainability—is more important?*** Is it more realistic to accept the widely held assumption that in the U.S.A. both have high priority? The President's Council on Sustainable Development may address this issue when they make their studies known.

At my age hindsight seems to be more relevant than foresight. In the November-December, 1968, issue of the *Journal of Soil and Water Conservation* I wrote of the requirements of the Soil Conservationist of tomorrow. He or she will continue to need training in agriculture and in soil, plant, and animal sciences. In addition, however, I suggested the need for

- — A greater knowledge of economics related to resource work,
- — Undergraduate courses in the social and political sciences that relate to the use of renewable natural resources,
- — Training that places more emphasis on the ecological aspects and consequences of manipulating the natural environment,
- — An appreciation of aesthetic and intangible values, as well as knowledge of how to make sound benefit-cost evaluations,

— Skills in the art and science of working with people to assist local leadership and obtain maximum participation,
— A better understanding of the planning process, and
— Above all, the skills needed in the "Management of Change."

I went on to say, "The soil conservationist of tomorrow must fully understand the extent and character of all resource activities, both governmental and nongovernmental. He or she must be able to articulate fairly sophisticated recommendations for action in the public arena for conservation policies and programs. For this, one's education, training, and experience must above all equip one fully as a leader in conservation thought and action in a highly competitive world." Most of those recommendations are still valid. However, I did not foresee the great influence of the computer and the skills needed for use of that technology.

### *What's New?*

Has the agricultural conservation movement, after 60 years of legal and financial support, finally come of age? If the consensus is yes, does age make adoption of change difficult?

Question: Have conservation agencies, who are increasingly preoccupied with internal, intraagency and program administration issues, been listening and observing what is on the agenda of their clients? Will the need for a national soil conservation program, funded with federal funds and staffed with federal civil servants to serve private landowners and users, continue to be supported? Why a national presence? Why isn't this primarily a State and/or local problem? As the Nation seeks deficit reduction, and further downsizing of the federal government, what responsible action will be required from the private sector on all issues? I have heard that the present Speaker of the House has directed the majority members of the House to ask eight questions of every federally funded activity. If answers are negative (and I haven't seen the questions) the program is in trouble. In the natural resource conservation field the future will include several critical resource and environmental issues that are already well known. These are threats to the resource base through accelerated soil loss, degradation of soil and water quality, loss of biological diversity, potential contamination of our food supply and both surface water and groundwater by chemicals, and the conversion of prime and unique agricultural land to nonagricultural uses. Most of the above have also been problems in the past. What social trends will influence favorable decisions?

Emerging from a productive, if turbulent, half-century of change, America's agriculture now faces a future that appears to increasingly link agricultural sustainability with the quality of the environment. The quality of soils, the quality of waters, the quality of habitat for wildlife, link science and policy as documented in the Soil and Water Conservation Society's three forums on the *State of the Science* on these concerns. The potential blueprint for the 1995 Farm Bill may find the dozen principles developed by SWCB useful along with the "Regional Listening Forums" conducted for USDA in

mid-1994. The recent SWCS Farm Bill Conference endorsed the move beyond the focus on only highly erodible croplands into a holistic public policy. Resource protection, and programs to increase yields and strengthen America's competitive position in the world markets, are interrelated issues for legislation and for implementation. The next farm bill, with any new conservation provisions, will need to be more market-oriented. Although the current review of regulations impacting all industries is underway, recent polls say the public will not tolerate the irresponsible use of land and other natural resources. Landowners and land users, most of whom are good stewards, deserve the freedom to plan and manage their land. However, they must also consider how their use of their land impacts their neighbor and their community. Compensation for perceived loss of value if land is identified as having benefits to society will, in my opinion, continue to be a contentious matter. The majority of landowners do support conservation compliance and will support common-sense sanctions for those few in violation.

Legislation in the future should search for the constraints that decrease environmental quality. Agriculture, if encouraged by society, will produce and maintain not only food and fiber, but nonmarketable products, i.e., open space, wildlife habitat, watershed protection, and the beauty of a conservation landscape. Compensation, defined in several "green payment" scenarios, has promise of Congressional support, if funding can be found. There will be pressure to have a better reason for public support of "farm policy." Rewarding stewardship by land users would appear to be more rational than that used in the past.

### *What's Cool?*

The RCA III Working Papers and Issue Briefs scheduled for publication in 1995, including Sociological, among the over thirty documents should provide details needed for any realistic assessment of both a short-term and a long-term future. The studies that I have been part of this past year include

— The Keystone Dialogue on Agricultural Management Systems and the Environment,

— The National Center for Food and Agricultural Policy and the Humphrey Institute of Public Policy (six Farm Bill Working Groups, including Land Use and the Environment, and Price and Income Stability),

— The World Resources Institute's report, *Growing Green,* and *The Agricultural Policy Reform Proposals for the 1995 Farm Bill* of the American Farmland Trust.

In addition I served on the Program Committees for National Programs on the Future of the Conservation Reserve Program, the State of the Science Forums, and the Agriculture and the Environment issues and options for the 1995 Farm Bill meeting. This past year I've participated in Workshops on Ecosystem Management by the Congressional Research Service and another by the National Academy of Sciences. I have testified before

legislative and appropriation Committees, and I'm monitoring the conservation-related activities of the 104th Congress.

Is it time for a quiet revolution in the Nation's farm policy? Soil and water conservation has received substantial support including research, education, technical and financial, for six decades. However, severe problems remain. Sandra E. Batie, the Elton R. Smith Professor of Food and Agricultural Policy at Michigan State University, gave an excellent paper at the 49th Annual NACD Meeting. She said, "The period 1910 to 1970 was a time when agriculture was seen as a solution for America's problems. Post-1970's began seeing agriculture as the problem. Now, we have moved from the age of conservation to environmentalism, away from conflict toward compromise, from Federal predominance and funding to state/local predominance with less funding. We are moving from mechanical technologies toward information-based technologies."

*A Moment on the Earth: The Coming Age of Environmental Optimism*, by Gregg Easterbrook, says the environmental news is getting better, not worse. His book is being compared to Rachel Carson's *Silent Spring* (1962), not for its revelations, certainly not for its grace, but for its potential influence on public discourse.

Some in the 104th Congress see REGULATION as what the Devil has printed on his T-shirt. Former Wisconsin Governor and U.S. Senator Gaylord Nelson, the person who founded Earth Day, says, "There are good environmentalists who see too much red tape and too many mandates, and they think it can be improved and they're right. The environmentalists have failed on this. They haven't fought to ensure environmental laws were effective without being excessive. They haven't done a damn thing about that." The present politics of devolution and deregulation involves ideas and rhetoric that will not, I'm convinced, stand the test of public scrutiny. But changes will be tried.

Finally, I return to personal views, tempered by age and long experience, about the short- and long-term future for those engaged in natural resource conservation and protection. We heard from your clients at the July–August, 1994, "Listening Forums" words that in many ways were a forecast of the last election. The trends were already apparent, and to the credit of USDA's long-term method of operating programs, acceptable. Over 1,000 participants in the eight regional forums were a cross-section of the conservation and environmental sector of the U.S. economy. They identified 12 primary issues:

— A majority seek reform of agricultural commodity programs;
— Conservation compliance supported, but want more flexibility;
— Continue the CRP with more targeting for fragile acres;
— Concern about conversion of good land to nonfarm uses;
— Balance between property rights and environmental protection;
— More technical assistance is needed at the field level;
— Nonpoint source pollution is an important issue;
— More recognition of the risks inherent in agriculture;

— Urban voters have little knowledge of agriculture;
— Wetlands conservation is supported, but is causing concern;
— More linkage of policies, i.e., taxes, commodity, credit; and
— More emphasis on the "market-driven" approach to farm policy.

The SWCS publication, *Agriculture and the Environment: Listening to the Grass Roots,* is recommended for more details.

Recent public discourse, and the rush to diminish government and reduce burdensome regulations, have ignored or deliberately camouflaged the Nation's strong and continued commitment to environmental protection. I'll say it again: The politics of devolution and deregulation involves ideas and rhetoric that will not, I am convinced, stand the test of long-term public scrutiny. It is important to note that the message has been consistent in poll after poll, for three decades: the American public *does* endorse "quality of life" issues. The January 1995 Gallup poll for NRCS found strong support for conservation. An AFT survey of over 1,000 farmers participating in the federal farm programs strongly supported continuation of conservation compliance requirements. There are others that probe views of the public on environmental issues. Of course, concerns over deficits, taxes, and other major issues, also dominate answers. We live and work in a complex society. There are no simple, on-line solutions to problems, including soil, water, and watershed conservation issues. The quest for solutions is, in many cases, more satisfying than the solution itself. That is why we leave options for the next generation, comparable to that left to us by those who have gone on before, for we are standing on their shoulders and their accomplishments and failures. Social trends here and abroad will, in my opinion, continue to have an influence on agricultural natural resources. The challenge is to understand the trends and their potential impact on policy. The present thrust to reduce the annual federal deficit and early in the next century to achieve a "balanced budget" will change, even eliminate, some programs. Coupled with a possible reform of the federal tax system and further reduction of the people in the natural resource agencies, it may result in the past 60 years of traditional conservation work being viewed as the "golden age."

A long-term outlook, as the world's population doubles and the state of the natural resource sciences improves, would suggest that need for natural resource conservation and protection will continue. A preventive strategy is less costly to society than correcting resource problems caused by the unwise use of land and water for agricultural production. Hopefully, several of the more promising conservation concepts that are now available from dedicated people will be taken seriously by the Administration and the Congress in the 1995 Farm Bill. Actions resulting from the last decade of new conservation policy will be reviewed. The RCA process should strengthen a vision of America as a productive nation in harmony with a healthy land and a quality environment.

# Agricultural Conservation — Now and in the Future

Ernest C. Shea

Executive Vice President
National Association of Conservation Districts

Good afternoon, fellow conservationists and friends. Thank you for asking me to join you today.

As you all know, agriculture's impact on the environment is the focus of a lot of debate these days. The House of Representatives just passed a Clean Water Act bill that will likely have a significant impact on agriculture. Both the House and Senate have begun debate on the 1995 Farm Bill, which will be the guiding force behind agricultural conservation over the next few years. And we're fighting a budget battle trying to keep conservation funding intact in the midst of efforts to radically cut federal spending.

To say the least, there are formidable challenges ahead. Of course, that's nothing new for us. We just went through a battle on USDA reorganization that could have compromised the identity and programs of NRCS and, because of our combined strength and fortitude, came out of the fracas stronger than ever.

As all of you know, forecasting the future is no easy task, especially when there are as many variables and challenges as we face today. I've often found, however, that clues to the future can be found in our roots, and for that reason, a brief recap of the evolution of agricultural conservation policy and programs is in order.

## A Look Back — The Early Years

Both SCS and conservation districts were born in turbulent times. The country was in the midst of the Great Depression and America's breadbasket was literally called the Dust Bowl when our partnership was conceived. Yet, coming out of this troubled era, we have developed what has become the envy of many: a conservation delivery system that reaches right down to the land itself.

As our country has changed over these past sixty years, districts and SCS evolved to meet the conservation challenges posed by an increasingly mechanized, high-input agriculture and a population that has shifted from rural to urban in just a few decades.

Early on, we focused largely on soil erosion and our principal mission was to ensure that our agricultural resource base was replenished and nurtured. While that goal is still central to our task, we now speak in terms of watershed management, ecosystem-based assistance and holistic resource planning. We're concerned with water quality, wetlands protection, fish and wildlife habitat and just about anything else dealing with the land and water. In

fact, it's almost impossible to name an environmental issue in which we're not involved in some way.

### The New Environmental Movement

The "environmental revolution" of the early 1970s signaled an explosion of activity on the conservation front. The Environmental Protection Agency was created as the nation's environmental police force. Congress passed the Clean Water Act, the Safe Drinking Water Act and other environmental laws that sparked a 20-plus year battle against industrial polluters.

Although the enactment of state erosion and sediment control laws around that same time put some muscle in our conservation programs, agriculture was still largely left to tend to its own house where the environment was concerned. In fact, many of the state sediment control laws exempted agriculture from regulation. In cases where agriculture was not exempted, states often provided cost-share funds, low-interest loans, tax breaks or other incentives to help landowners comply with conservation requirements.

Agriculture wasn't under the gun from the new environmental laws simply because, from the beginning, we relied on incentives and voluntary compliance to encourage environmentally sound production practices. It was an approach that had always worked. Why? Because with proper technical assistance and sometimes funds to help, most producers were willing to "do the right thing" in the first place.

That attitude—leaving agriculture to take care of itself—began to change in the late 1970s and early 1980s. And the primary reasons for such an attitude change were twofold: wetlands and water quality.

Up until the early 1980s, wetlands were often considered nuisances. Government programs encouraged farmers to drain wetlands and even paid for part of the costs to do so. When the public began to recognize the importance of wetlands as prime fish and wildlife habitat and their role in water quality and flood protection, that began to change. Fair or not, farmers came to be seen as the culprits.

In another vein, implementation of the 1972 Clean Water Act proved dramatically successful in cleaning up industrial and municipal water pollution. However, as those sources were cleaned up, pollution from other sources became much more visible. Agriculture, in particular, was singled out since runoff from cropland and animal operations contained not only soil, but nutrients and pesticides. Again, farmers were seen as the culprits.

Coupled with this, high grain prices in the early 1970s had already led to the conversion for grain production of thousands of acres of fragile grasslands in the Great Plains States. The fragile soils in these areas cannot retain enough moisture to support cropping year after year and the land deteriorates rapidly. As the productivity of the land declined, erosion increased dramatically. Since many producers in this region received commodity and price

support payments, it appeared that the government was literally paying them to abuse the land.

In a few short years the perception of farmers as stewards of the land changed to: "Farmers are the problem."

### The Farm Bills

The world of agricultural conservation changed forever on December 23, 1985. That was the day when the 1985 Food Security Act (FSA) was signed into law by President Reagan. The act's passage marked a tremendous shift in agricultural conservation policy: It linked conservation behavior to eligibility for most USDA farm program benefits. Specifically, farmers could not farm highly erodible cropland without an approved conservation plan. Nor could they convert wetlands for agricultural production. To do either would result in a complete loss of program benefits.

This move from a voluntary, incentives-based approach to a compliance-based framework marked a turning point in many ways. Program resources were shifted from so-called low-priority areas and concentrated in commodity production regions. Producers could no longer count on getting technical assistance to service their priorities. Rather than viewing natural resources holistically, the new programs refocused federal program efforts on cropland erosion control and wetlands protection.

In one sense—linking support payments to conservation behavior—the 1985 act was a step forward. In another sense, however, it was a step backwards. Instead of whole-farm planning, which had become the norm, the new focus was on erosion control plans.

The 1990 Farm Bill changed compliance and swampbuster by providing some needed flexibility, but their focus was still on penalizing producers for "bad" behavior. The 1990 act also added the Wetlands Reserve Program (WRP), Water Quality Incentives Program, Integrated Farm Management Option and Environmental Easements Program. While these new programs were incentives oriented, they were not the central feature of the Farm Bill. In fact, the WRP was the only one of the new programs that was funded, and it turned out to be extremely popular and successful.

There's no doubt that the 1985 and 1990 Farm Bills have achieved significant environmental gains. Producers have developed more than a million-and-a-half conservation plans protecting nearly 150 million acres of highly erodible cropland. The Conservation Reserve Program has retired 36.5 million acres of sensitive cropland, and together, these two programs save nearly a billion-and-a-half tons of topsoil a year. Swampbuster has significantly reduced the net rate of wetlands converted to agriculture, and the WRP will be actively restoring some 250,000 acres of wetlands by the end of this year.

Despite their successes, however, these programs have their shortcomings. They target a relatively narrow scope of natural resource issues—highly erodible cropland and wetlands. Their effect is limited mostly to producers who participate in commodity or other USDA farm benefit programs. And, because they were independently authorized and administered,

they've been relatively labor-intensive, significantly increasing the technical and planning assistance needs in these focused areas while taking assistance away from the basic conservation program needs of agriculture in general. For example, although California is the largest agricultural state in the country, high-value cropland there received little priority for technical assistance since it didn't produce commodity crops. Millions of acres of grazing lands, including valuable riparian corridors, have also been neglected since that wasn't a Farm Bill priority either.

## Emerging Trends

If that brief recap is an accurate assessment of our evolution and current state, it might give us some insight as to where we're heading over the next ten to fifty years. Although no one can say for certain where that will be, there are a number of emerging trends that may give us some clues about our future.

After last fall's elections, I think it became clear that the public is sending some clear signals about its expectation of government. We want a healthy environment and a productive economy, but we don't want unnecessary government intrusion in our lives. We're being asked to do more, but to do it with less money and less bureaucracy. People want to be involved in the decisions that affect their lives and they want practical, common-sense solutions to problems.

In the future we should expect less support from the federal government, more direction and control from the state level, and more competition from the private sector. As federal dollars continue to dwindle, volunteerism will become an even more important factor in filling the gap left by fading government support.

Information technology will be a big factor in changing the shape of our work environment in the future, too. Already, we can see the effects of the computer age changing how we work: people are working out of their homes instead of going to the office; distance means almost nothing when a fax machine or modem can make information transfer virtually instantaneous.

Geographic Information Systems are radically changing the way we address conservation planning, on both a local and regional basis.

Computers are revolutionizing the workplace and greatly increasing efficiency, but they're also generating additional training and skills requirements. We need to keep in mind that, even though technology is changing the way we work, people are still going to be the key. The condition of the federal budget will determine a lot about how things look in the future. As you well know, Congress is in the middle of a budget debate that proposes the most serious deficit reduction program we've seen. The proposal currently being debated would slash the budget for NRCS by $944 million over the next seven years. That kind of hit could cripple our field delivery system and would certainly have a tremendous impact on what we'd look like in ten years.

By the way, NACD and conservation districts are doing everything we can to convince Congress that cutting the NRCS budget by that much would undermine the system that can deliver the very types of programs it says it wants to see—voluntary, incentives-based and with local control.

While the federal budget will dictate some changes, there are other forces that will be equally important in shaping the face of agriculture. Public support for commodity and other USDA benefits programs is rapidly waning. The Uruguay Round of the General Agreement on Tariffs and Trade and the North American Free Trade Agreement may hasten the disappearance of agricultural subsidies. If agriculture moves into the free market and commodity prices go up, pressure may mount to bring sensitive or marginal land into production. If this scenario does in fact come about, it will require us to craft new incentives to protect sensitive lands since conservation compliance and swampbuster will be of little use if there are no farm program benefits to take away.

We're also seeing a trend toward what I'll call regulatory targeting. Through the late 1970s and 1980s the emphasis was on regulating industry and agriculture to achieve our environmental goals. We're now seeing the pendulum swing away from the regulatory approach as Congress develops new proposals for environmental programs. What I think we'll see when all this settles out is a more balanced approach that regulates large commercial operations while focusing incentives-based options on smaller and limited-resource producers.

Just as we're seeing business and industry downsizing and the federal government becoming more streamlined, I think conservation districts will be significantly restructured in the future, as well. Several states are already looking at reorganizing districts along watershed boundaries. If this pattern does emerge, I think we'll see fewer districts, but perhaps with more authorities and responsibilities to fill in the gaps left by a shrinking federal presence.

## Toward a Sustainable Future

All of these factors will come together as the driving force behind what we'll look like and how we'll operate in the future. Rather than the piecemeal approach of the past, in the future we'll have to focus on an integrated, holistic process and recognize the interrelatedness of all natural resources.

Fortunately for all of us, I think that's the direction we're headed in. For example, most of the proposals I've seen for the 1995 Farm Bill have a renewed focus on working with people and that's going to be the real key to our success. If you give people—in this case, farmers—the right tools and the knowledge to use those tools, they'll most likely do the right thing.

This is where a new paradigm must be engineered—an incentives-driven, voluntary approach that rewards good behavior instead of just punishing the bad. Some of this framework is already in place with initiatives like the Conservation and Wetlands Reserve

Programs. But we need to expand on these programs through efforts like environmental credits that offer incentives for good stewardship.

As we shift from a government-centered and government-funded mentality, we will need to focus more on building partnerships with the private sector. Such partnerships will be important because, while the government can be a facilitator, it's the private sector—the landowners and land managers—that will be doing the work on the ground.

I'm also talking about partnerships with private industry. Many private companies, through their distributors' field network, have frequent, direct contact with farmers and ranchers. Information goes back and forth daily through these contacts and we need to be in on that loop.

We just finished a project in which we partnered with a number of agribusinesses to promote crop residue management. I'm pleased to tell you it was an extremely successful effort and helped a number individuals meet their conservation compliance deadlines. I think these types of partnerships are going to be very significant in the future, especially if the federal government scales back its efforts as may be the case.

I believe the 1995 Farm Bill, and the Clean Water Act, too, are likely to change the way we do business in the next century. Earlier I mentioned how the 1985 and 1990 programs, while being effective in achieving focused objectives, are fragmented. Both the new Farm Bill and Clean Water Act, however, will very likely revolve around watershed-based, incentives-driven approaches. This return to whole-farm planning and holistic resource management is, in a way, a return to our roots.

We started at the local level, helping farmers and ranchers find innovative solutions to resource management issues. In fact, that's why conservation districts were conceived—to put the local spin on the federal government's conservation program. We shifted to a federally driven approach in the 1970s and 1980s; and now we're headed back in the direction of more local control and integrated resource management.

Personally and professionally, I think this is a great trend. If you go back and review the various speeches our officers and directors have given over the last decade, or look at our Tuesday Letter editorials or statements to Congress, you'll see that this is exactly the message we've been sending. I can't speak for NRCS, but I can't help but think you agree.

In my experience, I believe that about ten percent of people are ahead of the curve. Those are the ones that are out there creating innovative solutions and figuring out how to overcome the obstacles in their paths. Then there's about 80 percent of the people who will follow that ten percent if given the chance, the tools and a little help. That's where we need to target our efforts in the future—helping that large part of the population that's ready and willing.

Of course, there's that remaining ten percent who are either lagging behind, or simply recalcitrant and not willing to cooperate. Those are the people that should be targeted with the compliance side of our programs. Basically, what I'm saying is that farmers aren't the problem after all—they're the solution.

### Fifty Years from Now

NACD will celebrate its 50th anniversary next year. NRCS is celebrating its 60th this year and districts will ring in their 60th soon, as well. Who can say what we'll look like or where we'll be in another 50 or 60 years? But one thing I do know is: Our entire history has been a period of transition—responding and adapting to changes from the very beginning.

In closing I would like to leave you with this thought: I believe the principles of democracy and self-government that our nation is based upon are woven throughout the fabric of our conservation partnership. Two hundred years ago our Founding Fathers had the vision and insight to know our Constitution couldn't be a static document—it had to be a living and changing legacy that would suit a nation that was constantly evolving. The early pioneers of our movement shared some of that vision in crafting a system that could be just as viable in 1995 as in 1935. Districts and NRCS in the year 2045 will likely be far different from today, and we'll still be changing to meet changing times. But I believe the core of our philosophy will be as strong then as now: conservation, development and self-government.

Thank you for letting me share a few thoughts with you.

# New Ideas and State Laws

Dayle Williamson

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**President, National Association of State Conservation Agencies**

How do we prepare for tomorrow?

One could say, "Put on your strategic thinking cap and get ready." And I feel that is an excellent idea as many of our state laws relating to soil and water conservation activities are decades old. And what a wonderful time to have an "in-depth" discussion of *NEW IDEAS AND STATE LAWS*, as we are in the midst of a major USDA re-engineering process, the 1995 Farm Bill will emerge soon, and strong forces are in play to reduce the federal deficit during the next seven years.

And you certainly don't need a crystal ball to determine the impact all of these things will have on states and local government. The trends are visible, the new century is likely to be a tough but exciting time. The major changes taking place at the federal level will have a compound effect on state programs and their ability to serve constituents. Strategic management and quality management principles will be essential elements as we look forward for the next 10 years and with even more determination and strategic thinking for 50 years in the future.

## A Look at the 21st Century

It has been over 500 years since Columbus discovered the New World. How will the so-called "New World" look as we move into the next millennium? Let me suggest four things—there are of course many more:

- Leaner structures will emerge in government and business. Grass-roots participation will increase.
- More partnerships will emerge. Information sharing will be a must. Even erstwhile adversaries will work more subtly to achieve desired outcomes.
- Greater personal skills will be required. Education will be recognized as the Nation's most important investment. Lifelong learning will be here to stay.
- Preservation of the environment will become an overriding concern, not only in the "New World" but internationally. Exploding populations will continue to deplete resources to the danger level.

Consideration of these four items will help focus on ideas we must generate for the next 10 as well as the next 50 years to keep the conservation program on track.

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## The Effort of the Past

A bit of history seems essential at this point. The intensified effort to apply soil and water conservation practices has been underway for the past 60 years. Even 60 years ago the struggle for greater involvement in conservation activities did not come easy, as at that point soil conservation was mostly a federal effort. With a coalition of State Extension Services and the Farm Bureau, a strong effort was made to handle the soil conservation program largely through Extension. Secretary of Agriculture Henry Wallace however did not follow that recommendation; instead he took ideas from Philip M. Glick, Chief of the Land Policy Division in the USDA's Solicitor's office. Glick's draft of a standard state act for creating soil conservation districts was submitted in October of 1935. After a year and a half of discussions, President Roosevelt sent the governors of the states a copy of the Standard State Districts Act and a letter that stated, "To supplement the Federal programs, and safeguard their results, state legislation is needed."

States began to move rather quickly to pass legislation. With remarkable speed, within a week after President Roosevelt's letter reached the Governors, Arkansas had enacted legislation. By the end of 1938, 27 states had passed enabling legislation and 10 more states passed legislation in 1939. An integral part of the Standard Enabling Act was the creation of a state agency to oversee the establishment and operation of districts. The Enabling Act called the agency a "State Soil Conservation Committee," and many states adopted that name.

## The Conservation Phases

That is a "bare bones" history. Even though the act was "standard," many adaptations were made to fit conditions in different states. What can be termed Phase I of the soil conservation effort was most effective. That phase lasted from the late 1930's until the mid-1960's. By then conditions began changing and many ideas began emerging on other environmental issues. Indeed, state legislation had to be broadened to accommodate issues that had little if anything to do with soil erosion.

Thus we began Phase II as we moved to the decade of environmental concerns in the 1970's. Many things changed during this phase. More regulations came about. The Clean Water Act had a great impact on conservation programs. Those familiar with single-purpose programs now found themselves confronted by agencies such as the Environmental Protection Agency and the Corps of Engineers. States also created environmental protection agencies or strengthened existing natural resources agencies to carry out the demands of changing times.

## Are We Moving Away from the Voluntary Approach?

During Phase II the innovative 1985 and 1990 Farm Bills came into being. Never before had sanctions been imposed on farmers for not properly managing highly erodible lands or for draining a wetland. Never before in our conservation history have we targeted so much environmentally sensitive land through a Conservation Reserve Program and never before have we reduced soil erosion manyfold in a short period of time. Never before have we moved toward a more regulatory approach for conservation practices while still maintaining a voluntary status for participation in all farm programs.

## State Programs Must Be Improved

As we approach Phase III, the time of greater partnering, imaginative new ways will have to be found to accomplish conservation work. My ideas are not backed up by detailed research, but have simply been gained from years of observation. The following points are made to begin a colloquium about the necessity for strengthening state agencies either by law or executive action in the next 10 years. And with the massive restructuring of federal agencies now underway, many state changes can be anticipated early in the period. Here are my observations:

- Many state conservation agencies still maintain the structure suggested in the 1937 Enabling Act. Underfinanced, understaffed conservation agencies are commonplace. Some state agencies are not capable of "partnering" at the level required.
- Additional Executive Branch authority must be considered. State agencies managed by a Committee or Commission are not focused on the broad array of current customer needs. Greater demands for quick and efficient action will be an emerging public ingredient.
- Conservation programs will become more complex. States must be able to address a wide array of problems.
- Cost-sharing will be essential. States without matching money will have serious problems.
- Highly trained staff members will be essential.
- Ways to work with adversaries must be designed. Lengthy delays to solve conservation problems will not be tolerated.
- States must take a "hard look" at their Soil and Water Conservation Districts. Districts established for conservation programs designed in the 1940's and 1950's will not be able to compete. Fewer districts, focused on watershed areas rather than county boundaries, must be considered.

## States Have a Vital Role in Conservation Programs

This is by no means an "all-inclusive" list. Conditions vary greatly across the country. Some states have many of the things in place that have just been described. Others are still struggling with the tenet offered by President Roosevelt nearly 60 years ago when he wrote, "***To supplement the Federal programs, and safeguard their results, state legislation is needed.***" We are at a point now where we not only must supplement, but states must complement, and in many cases carry out, selected conservation activities because federal funding and programs are not available. We have truly reached the age of greater "partnering" and states must accelerate their efforts to serve in this role.

## The Next 50 Years

Now to the last issue, 50 years in the future. Without a doubt, those dedicated individuals working on the conservation effort 50 years ago had high hopes that we would be much further along with conservation programs than we are today. It would have been hard to envision some of the environmental problems that we have today and to discover ways to avoid them. Likewise, it would have been very difficult to design a commodity program to provide economic benefits to farmers just recovering from the Great Depression. At that time, little did anyone realize that the basic structure of the commodity programs would cause conflicts with conservation programs, and many times offset the gains made.

## Are We Getting Our Money's Worth?

Discussions about conservation programs today and for the future reveal that work should be targeted to environmentally sensitive areas. According to a study conducted by the World Resources Institute, the United States has not gotten its money's worth from its fiscal investment in the farm programs. The study goes on to reveal that: "The programs do not support the incomes of farmers who need the most help, they do not contribute significantly to rural development, and they retard environmental progress."

Issues like this are causing immediate concern as Congress addresses a balanced budget while hopefully not forgetting that preservation of the environment will continue to be an overriding concern. I could have added this issue as one to be solved in the next 10 years, but a policy shift will no doubt take much longer. Also, it is not directly a state issue, but it does have a great impact on states.

## New and Imaginative Ways to Accomplish Work

Some final thoughts: states along with their partners must find imaginative new ways to accomplish work as we move into the next half-century. While conditions have changed greatly, the ways we accomplish our tasks at hand have not changed a great deal. When we

deal with federal agencies as well as local agencies, we sometimes consider things as "their" work, and other things as "our" work. We have not progressed to the place where we willingly share data bases or for that matter have interactive data bases between partners. We do some things for the second and third time because of the lack of coordination and future planning. The information superhighway has caused considerable rethinking in this area.

## Greater Customer Demands

Like any other business, our customers will demand more convenience. We get "uptight" about closing offices around the Nation, but we must recognize that we have to offer services by other means, rather than asking our customers to stand in long lines at government offices at certain times of the year for program sign-up. Teleconferencing and satellite broadcasts could well provide greater attendance at meetings and provide key information to a greater number of people.

## Adoption of New Technology and Strategic Planning

Geographic Information Systems will play a major role for conservation decision-makers of the future. Accurate information overlays will enhance the decision-making process. Information will be updated more readily and will be available to more people. As we look at the accelerating pace of change, state conservation agencies will have increased responsibility in the "conservation triad" role. We must have a firm grip on conservation problems and provide solutions to those problems at a more rapid rate. Sound strategic thinking is a necessity. Put on your cap, you are going to need it!

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# Fish Creek Project Overview

Larry Clemens

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Fish Creek, in extreme northeastern Indiana and northwestern Ohio, occupies a 110-square-mile agricultural watershed and drains part of the south-central region of the Great Lakes basin. Fish Creek is one of the best remaining examples of the unique conditions associated with the Great Lakes and the watershed. A diverse assemblage of aquatic species, characterized by both Ohio River Valley and Great Lakes community components, survives only in Fish Creek. Some 31 species of mussels and 43 of fish currently reside in Fish Creek. Three of the mussel species—the white cat's paw pearly mussel, the northern riffle shell, and the clubshell—are federally endangered species. Fish Creek supports the last remaining population of the white cat's paw pearly mussel.

Although Fish Creek has long been recognized as a high-quality creek, it was not until 1988, when a study of the freshwater mussels was conducted, that it stood out as a gem. The study generated interest from both the Indiana and Ohio Departments of Natural Resources, the U.S. Fish and Wildlife Service, and The Nature Conservancy. At that time a partnership began to form to protect the creek's water quality. This core partnership realized they alone would not have the financial or technical expertise to begin protecting Fish Creek. New partnerships were formed with local Soil and Water Conservation Districts, the Natural Resources Conservation Service (formerly the Soil Conservation Service), Purdue University, county surveyors, and others. Each partner brought to the group different goals and agendas, but all the partners were focused on one mission: maintaining and improving the water quality to create a sustainable ecosystem.

It became apparent that to really succeed, the partners needed a local presence to begin working with local citizens. In 1992 a project manager was hired and a project office was established using a Section 319 grant. At that time the local advisory group was formed, using local citizens and project partners. The advisory group's role would be to develop protection strategies and be local advocates for the project. This group worked with the project manager to develop reforestation and conservation tillage programs.

The advisory group helped the project partners overcome obstacles with the local community, such as concerns over regulations involving endangered species, property rights issues, and distrust of government and environmental organizations.

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The local advisory group members essentially became representatives for the project at local churches, coffee shops, and events involving the local citizens. The advisory group was just one component of the partners' strategy to work in the community.

Another outreach component was meeting landowners one-on-one on their farms and other properties. This work was completed by the project manager. The goals were to develop relationships with individuals, become familiar with the landscape, and identify potential protection projects with the landowners. During a six-month period nearly all landowners with land next to Fish Creek in the lower half of the watershed were contacted. These contacts have proved to be the foundation of the work completed at Fish Creek.

Since the beginning of the project the partners have agreed to focus their work in the lower 35,000 acres of the watershed. Accomplishments include the following:

- Reforesting 190 acres of riparian corridor
- Reforesting 200 acres of upland forest
- Assisting farmers to purchase 14 pieces of conservation tillage equipment, involving 4000+ acres and saving an estimated 31,000 tons of soil annually
- Restoring 17 acres of wetlands
- Excluding livestock from the creek
- Acquiring 360 acres of old-growth forest, farmland and corridor
- Assisting the only wastewater treatment plant in the watershed to convert from a chlorine-based system to an ultraviolet light system
- Installing 20,000 feet of grass filter strips

These accomplishments were completed through involvement of local citizens in program development and implementation. Protection of this valuable resource will depend on the local citizens carrying the project partners' mission of environmental protection through compatible land use into the future. The landowners will be the deciding factor in whether Fish Creek will be a sustainable ecosystem.

## Studies for Further Reference

Lovejoy, Stephen B. Fish Creek watershed project CRP study: final report. Prepared for The Nature Conservancy, Fish Creek Project Office. "The information in the report was obtained by surveying all Conservation Reserve Program contract holders in the entire watershed." April 1995. Photocopy.

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Watters, G. Thomas. A survey of the freshwater mussels of the St. Joseph River system, with emphasis on the federally endangered white cat's paw pearly mussel. Prepared for Indiana Department of Natural Resources, Division of Fish and Wildlife. December 1988. Photocopy.

Watters, G. Thomas. 1996 survey of the mussels of the Fish Creek drainage. Final report to the Indiana Chapter of The Nature Conservancy. December 1996. Photocopy.

United States Department of Agriculture
**Natural Resources Conservation Service**

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