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Department of
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Natural
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Conservation
Service

NRCS

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Natural Resources Conservation Service Strategic Plan

2003 Update

UPDATE

Contents

List of Acronyms Used

AFO	Animal Feeding Operation
ARS	Agricultural Research Service, U.S. Department of Agriculture
CAFO	Concentrated Animal Feeding Operation
CEAP	Conservation Effects Assessment Project
CNMP	Comprehensive nutrient management plan
CO	Conservation Operations
CRP	Conservation Reserve Program
CSP	Conservation Security Program
CTA	Conservation Technical Assistance
DOI	U.S. Department of the Interior
DOQ	Digital orthophoto quad
eFOTG	Electronic Field Office Technical Guide
EPA	U.S. Environmental Protection Agency
EQIP	Environmental Quality Incentives Program
EWP	Emergency Watershed Protection Program
FOTG	Field Office Technical Guide
FPP	Farmland Protection Program
FRPP	Farm and Ranch Lands Protection Program
FSRIA	Farm Security and Rural Investment Act
GIS	Geographic Information System
GPEA	Government Paperwork Elimination Act
GRP	Grassland Reserve Program
NASIS	National Soil Information System
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service, U.S. Department of Agriculture
NRI	National Resources Inventory
OMB	U.S. Office of Management and Budget
OPM	U.S. Office of Personnel Management
PART	Program Assessment Rating Tool
PMA	President's Management Agenda
RC&D	Resource Conservation and Development
SCAN	Soil Climate Access Network
SCI	Soil Conditioning Index
SNOTEL	Snow Telemetry Network
USGS	U.S. Geological Survey, U.S. Department of the Interior
WHIP	Wildlife Habitat Incentives Program
WLA	Workload Analysis
WLMA	Workload Management Analysis
WRP	Wetlands Reserve Program

Natural Resources Conservation Service Strategic Plan, FY 2003 - 2008

Responsible stewardship of natural resources is fundamental to supporting agricultural production, a viable natural environment, and human health and well being. Conserving natural resources requires a commitment to stewardship on the part of individuals and communities, locally and nationally. The Natural Resources Conservation Service provides the science-based information and expertise people need to practice good stewardship. This plan describes long-term goals for conservation of soil, water, and related resources and the specific targets that the Natural Resources Conservation Service is committed to helping people achieve in the next few years.

Mission: Providing leadership in a partnership effort to help people conserve, maintain, and improve our natural resources and environment.

We help people care for the land. Private landowners and land managers are the decision makers and stewards of their land and water. Our role is to provide national leadership in addressing natural resource problems and opportunities that cannot be addressed by individuals alone or by government below the Federal level. Since the 1930s, we have helped farmers and ranchers protect the productive capacity of their soil and water resources, working directly with them on their land. Today an increasing part of our assistance is devoted to helping farmers and ranchers to meet society's requirements for environmental quality, as those requirements are enacted in local, State, or Federal laws and regulations. Because not all resource issues can be addressed by individuals working separately, we also help communities to protect their local environment and develop their shared natural resources to improve their standard of living and quality of life.

In carrying out this mission, we work to achieve four broad goals:

Goal 1: Enhance the productive capacity of soil and water resources *to enable a strong agricultural and natural resource sector.*

1.1. Maintain, restore, and enhance the productive capacity of cropland.
1.2. Maintain, restore, and enhance the productive capacity of grazing land.
1.3. Maintain, restore, and enhance the productivity of forestland.

Goal 2: Reduce unintended adverse effects of natural resources development and use *to ensure a high quality environment.*

2.1. Protect farmland from conversion to non-agricultural uses.
2.2. Promote sound urban and rural community development.
2.3. Protect water and air resources from agricultural sources of impairment.
2.4. Maintain, restore, or enhance wetland ecosystems and fish and wildlife habitat.

Goal 3: Reduce risks from drought and flooding *to protect individual and community health and safety.*

3.1. Protect upstream watersheds from flood risks.
3.2. Protect watersheds from the effects of chronic water shortages and risks from drought.

4: Deliver high quality services to the public *to enable natural resource stewardship.*

4.1. Deliver services fairly and equitably.
4.2. Develop and maintain technical infrastructure.

Background and Program Authorities

About 70 percent (1.5 billion acres) of the United States total area is non-Federal land. The vast majority of those acres are in cropland, rangeland, pastureland, and forestland (fig. 1). The rest is in other rural land uses or is urban and developed land. Millions of individuals are responsible for making decisions on the use and management of those lands.

The Natural Resources Conservation Service (NRCS) is the lead Federal agency for conservation of natural resources on non-Federal land. The Federal effort to directly assist in conserving soil resources began in the 1930s with activities conducted by USDA and the Department of the Interior. In 1935, Congress authorized a permanent Soil Conservation Service (SCS) in USDA to carry out a continuing program of soil and water conservation on the Nation's private and non-Federal land. In the next few years, the Secretary of Agriculture assigned SCS responsibility for USDA's drainage work and flood control. Over the following decades, new authorizing legislation added more responsibilities. SCS became NRCS in 1994, following enactment of the Federal Crop Insurance Reform and Department of Agriculture Reorganization Act (7 U.S.C. 6962). NRCS's responsibilities

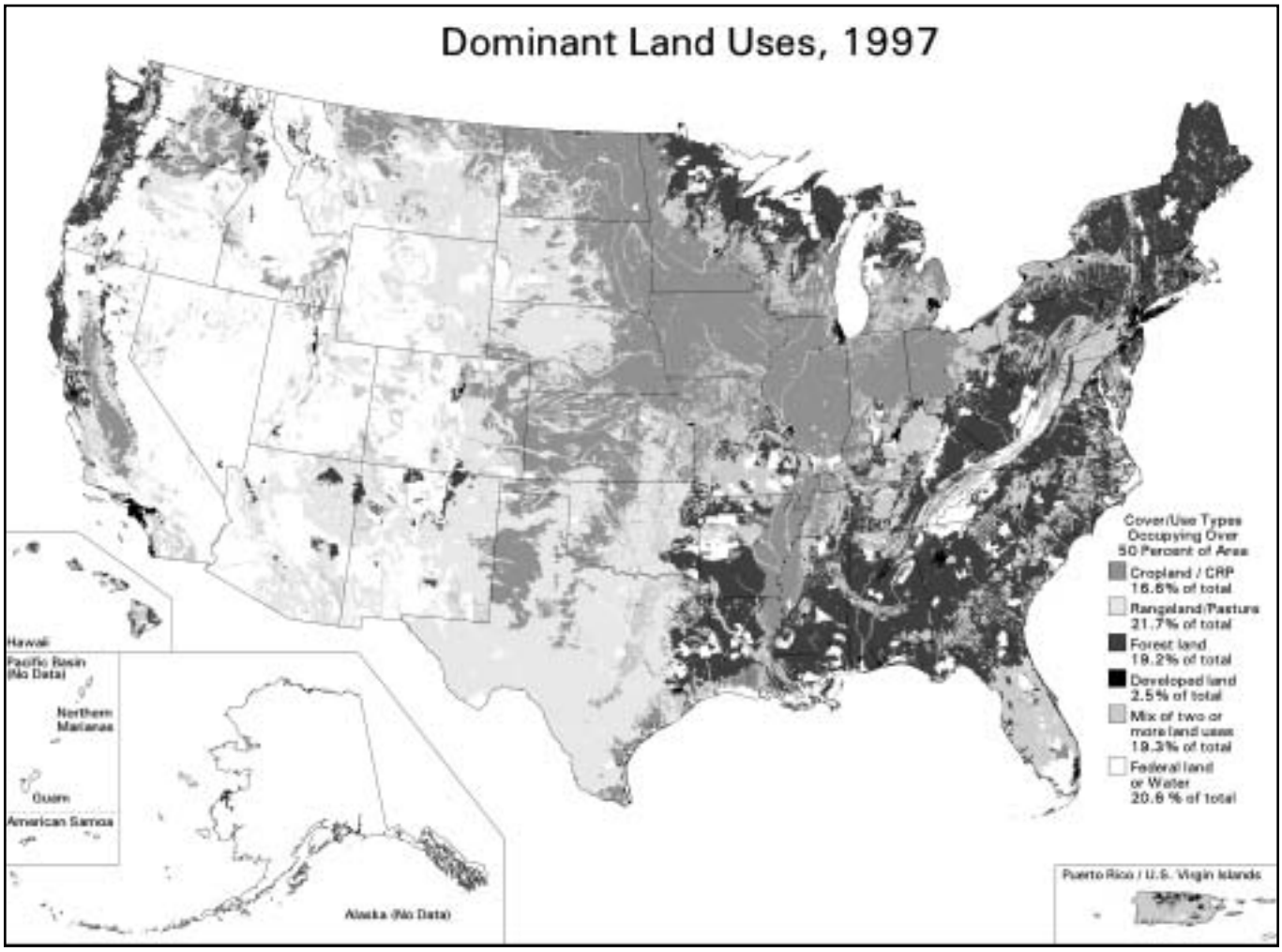


Figure 1–About 1.4 billion acres of the contiguous United States, or about 93 percent of all non-Federal land in those states, are in natural resource uses managed by millions of individuals. The decisions made each day on the care and management of these lands profoundly influence the Nation's natural resources and environment. Source: National Resources Inventory (NRI), 1997.

were expanded under the farm bills enacted in 1996 and 2002. Table 1 lists the programs through which NRCS now delivers services and the legislation that authorizes those programs.

Most of NRCS's 11,500 employees work in approximately 3,050 field offices in the 50 states, Puerto Rico, and the Pacific Basin Area (Guam, the Northern Mariana Islands, and American Samoa). There they provide information and technical assistance to farmers, ranchers, other natural resource managers, conservation districts, local and State government agencies, private sector organizations, and tribal governments.

Table 1 – Legislative Authorities for NRCS Programs

NRCS program	Authority
Conservation Operations: -Conservation Technical Assistance -Soil Survey -Snow Survey and Water Supply Forecasting -Conservation Plant Materials Centers -Grazing Lands Conservation Initiative	Federal Agriculture Improvement and Reform Act of 1996 (P.L. 104-127) Soil and Water Resources Conservation Act of 1977 (P.L. 95-192) Soil Surveys for Resource Planning and Development Act of 1966 (P.L. 89-560) Soil Conservation and Domestic Allotment Act of 1935 (P.L. 74-46) (16 U.S.C. 590a-f)(590q)
Watershed Surveys and Planning	Watershed Protection and Flood Prevention Act of 1954 (P.L. 83-566) (16 U.S.C. 2203)
Watershed and Flood Prevention Operations	Agricultural Credit Act of 1978 (P.L. 95-334, Sec. 403-405) (16 U.S.C. 2203) Watershed Protection and Flood Prevention Act of 1954 (P.L. 83-566), as amended (16 U.S.C. 1001-1009) Flood Control Act of 1944 (P.L. 78-534) (33 U.S.C. 701b-1)
Emergency Watershed Protection	Federal Agriculture Improvement and Reform Act of 1996 (P.L. 104-127, Sec.382) Agricultural Credit Act of 1978 (16 U.S.C. 2203) Emergency Operations authorization of 1950 (P.L. 81-516, Sec. 216)
Resource Conservation and Development Program	Farm Security and Rural Investment Act of 2002 (P.L. 107-171, Sec. 1528) Agriculture and Food Act of 1981 (16 U.S.C. 3451, as amended)
Wetlands Reserve Program	Farm Security and Rural Investment Act of 2002 (P.L. 107-171, Sec. 2201) Food Security Act of 1985 (16 U.S.C. 3837, et. seq.), as amended
Environmental Quality Incentives Program	Farm Security and Rural Investment Act of 2002 (P.L. 107-171, Sec. 2301) Food Security Act of 1985 (16 U.S.C. 3839), as amended
Farm and Ranch Lands Protection Program	Farm Security and Rural Investment Act of 2002 (P.L. 107-171, Sec.2503) Food Security Act of 1985 (16 U.S.C. 3839), as amended
Wildlife Habitat Incentives Program	Farm Security and Rural Investment Act of 2002 (P.L. 107-171, Sec. 2502) Food Security Act of 1985 (16 U.S.C. 3839), as amended)
Watershed Rehabilitation Program	Watershed Rehabilitation Amendments of 2000 Watershed Protection and Flood Prevention Act of 1954 (P.L. 83-566), as amended
Conservation Security Program	Farm Security and Rural Investment Act of 2002 (P.L. 107-171, Sec. 2001) Food Security Act of 1985 (16 U.S.C. 3830 et. seq.) as amended
Grasslands Reserve Program	Farm Security and Rural Investment Act of 2002 (P.L. 107-171, Sec. 2401) Food Security Act of 1985 (16 U.S.C. 3838n) as amended

Guiding Principles

Four fundamental principles guide how NRCS conducts business today and will continue to conduct business in the future.

Service

We serve, either directly or indirectly, all of the people of the Nation. Our customers are entitled to the best service we can provide. We will respect the dignity and worth of every person we work with, treat individuals fairly and equitably, listen to their views, and respond with assistance that is tailored to their needs and is technically accurate. We believe that the majority of private land users want to be good stewards of their resources and will make responsible resource management decisions when equipped with appropriate data, technical assistance, and incentives. Our appreciation of the needs of people is as important to successful conservation efforts as is our understanding of natural resources. We will continually strive to anticipate the public need and to improve our service and measure our efforts against the highest professional standards.

Partnership

We recognize that conservation can be achieved only by the cooperative effort of agencies, organizations, and individuals across the Nation. We value our relationships with other Federal, State, and local resource agencies that share common objectives, although our missions may differ. We will maintain the core conservation partnership

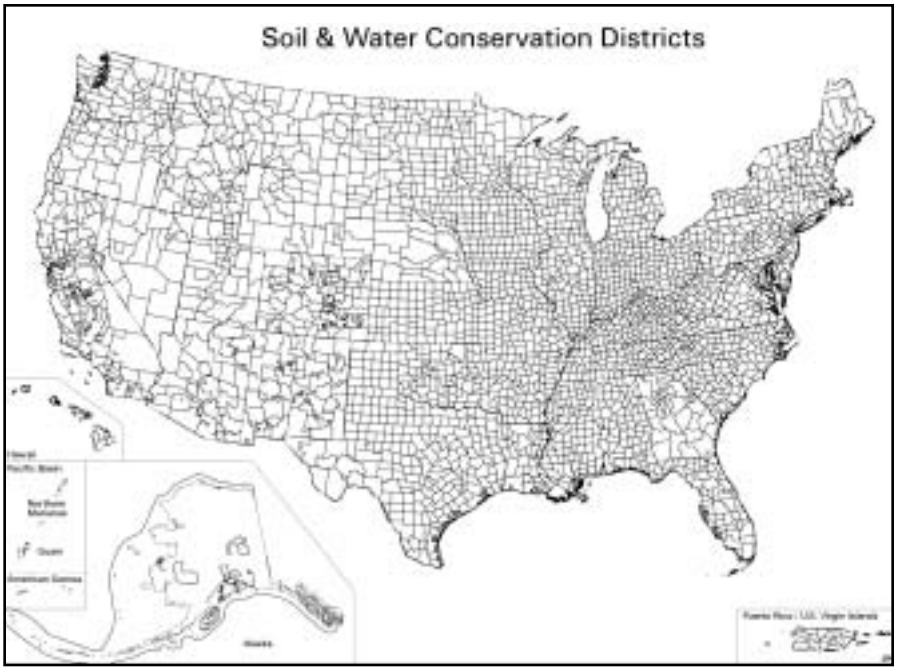


Figure 2-NRCS, conservation districts, RC&D councils, and State agencies form a core conservation partnership that covers the Nation. NRCS staff, working with conservation district staff and other partners, assist in developing conservation plans and applying conservation measures on all private land, agricultural and non-agricultural.

of NRCS, conservation districts, State agencies, and resource conservation and development councils (RC&D). We will maintain the government-to-government relationship with American Indian nations. We will strengthen partnerships by enhancing the technical capacity of tribal, local and State agencies, and conservation districts to identify their goals and implement actions to achieve them. We will bring in new partners to work toward common conservation goals.

Community Action

We believe that a locally led, watershed-based, voluntary approach to resource management on private lands is key to conserving natural resources. Local leadership and local action-–neighbors working together–form the foundation for effective land stewardship. We will foster the discussions needed to bring people together in a shared vision for their land and communities. We will help people achieve agreement based on sound science, sensible economics, appropriate technology, respect for diverse cultures, and current information.

Technical Excellence

NRCS' success depends upon the technical expertise of its employees and volunteers and upon their ability to work effectively with our diverse customer base. We will provide appropriate training in management, technical, and other disciplines to ensure that all our employees acquire the skills to be successful. We will develop and use cutting-edge, science-based technology. We will provide our workforce the best work environment possible by creating an institutional climate that welcomes diversity, encourages innovation and self-development, and rewards creativity and achievement. We will help our partners and volunteers to develop and maintain the technical skills needed to provide high-quality service, and we will ensure that private sector technical service providers who help implement our programs work to the same standards as NRCS employees.

Authorized Activities

NRCS responsibilities include five major mission functions, plus the administrative and management activities necessary to carry out those functions.

Conservation Planning

NRCS technical experts help individuals and communities take a comprehensive approach to planning the use and protection of natural resources. They help people focus on the natural systems and ecological processes that maintain the resources. This comprehensive approach, which considers all of the aspects of a site and sees the site as part of a larger landscape such as a watershed, is essential to sustainable, productive resource use. The planning assistance NRCS provides to individuals includes helping the decision-maker identify resource problems, opportunities, and objectives; collect and analyze data; review local, State, and Federal laws; and develop and evaluate alternatives. This assistance is generally "program neutral," that is, the plan identifies what needs to be done without regard for potential sources of financial assistance that might be available for implementing the needed practices. Assistance to units of government and community groups includes watershed and river basin planning, surveys, and investigations; flood protection; and community improvement.

Application and Maintenance of Conservation Systems

Local NRCS staffs provide on-site technical assistance in applying and maintaining conservation on the land. This assistance includes advice in the design, layout, construction, management, operation, maintenance, and evaluation of the practices in a conservation plan. It includes follow-up to evaluate success and help fine-tune the practices and periodic review of conservation plans to help land users identify any needed changes. Practices may be applied entirely with private funds or with cost-share or incentive payments from USDA or other Federal, State, or local programs.

Providing Financial Incentives

NRCS administers programs that provide cost share and incentive payments to individuals and communities for the application of conservation measures. Financial incentives include:

- cost share and incentive payments to help individual producers apply costly practices that have important environmental benefits and purchase easements to maintain wetland values;
- financial assistance to local sponsors to construct watershed

protection structures; and
- financial assistance to State and local governments to purchase development rights to protect important farmland.

Program management includes all of the activities necessary to ensure that the taxpayers receive the conservation benefits the programs were intended to buy and to ensure that all applications for assistance are treated fairly. It includes developing rules; developing criteria for determining eligibility; ranking applications; assigning environmental benefits for program offers; processing disputes, claims, and modification and payment documents; and conducting spot checks of structural and management practices, dam construction, and conservation compliance. Because the 2002 Farm Bill significantly increased the financial and technical assistance available through the programs it mandated, NRCS has set a performance goal for increased efficiency in providing assistance under those programs.

Resource Assessment and Technology Development

The first step in conservation is assessing the condition of natural resources. NRCS assesses resource condition through soil surveys, snow surveys in the West, conservation needs assessments, and resource inventories. Many of these activities are conducted in cooperation with State or local governments or other Federal agencies. These activities, based on the best available science, present an accurate, unbiased look at the Nation's natural resources. This information is provided to individuals; communities; State, local, and tribal governments; and others to help them make decisions regarding land use and land management. During the period covered by this strategic plan, resource assessment activities will include a major initiative to provide scientifically-defensible information on the environmental benefits produced by the conservation practices that producers apply with NRCS assistance.

NRCS develops and maintains conservation standards, specifications, handbooks and manuals pertaining to conservation practices and systems. These technical tools ensure that conservation is based on sound and up-to-date science. Technical references include the field office technical guides, which provide guidance tailored to each local service area. NRCS technical guides are used not only by NRCS staff, but also by private consultants and engineers, conservation district staff, State agencies, and Federal agencies to ensure that conservation systems are both technically and structurally sound.

Information and Outreach

In addition to the site-specific information provided to individual land managers, NRCS develops and presents a wide range of basic conservation information to customers, stakeholders, and partners. Much of this work is done as part of the assistance to local districts that is required by NRCS' basic authority, the Soil Conservation and Domestic Allotment Act of 1935. Examples of these activities include attending meetings of conservation districts and RC&D councils and other organizations to provide information, conducting public participation or public notification activities related to agency activities, and writing articles and public service announcements for local media. Although these activities consume only a small part of employees' time, they provide important information to a very large and diverse customer base.

Partnerships and Coordination

NRCS is the key Federal member of a unique Federal, State, and local partnership dedicated to natural resource conservation. The core partners are NRCS; conservation districts, which are local units of government created under State law; and State conservation agencies. Approximately 8,700 employees of State agencies and conservation districts work jointly with NRCS field staff to address local resource issues of national concern. NRCS also works closely with local RC&D councils, which are non-profit entities whose members represent units of government and civic organizations within an identified area. In addition to these traditional partners, NRCS cooperates with flood control districts, irrigation districts, fire districts, Federal agencies, and private sector organizations. NRCS cooperates with tribal governments in government-to-government relationships.

Many Federal and State agencies rely on NRCS technical expertise to plan and implement their natural resource programs. USDA's Farm Service Agency depends on NRCS for the technical assistance that participants in its Conservation Reserve Program and Emergency Conservation

Program need to accomplish those programs' conservation goals. Examples of coordination with Federal agencies outside USDA include: the Surface Mine Control and Reclamation Programs of the Department of the Interior (DOI); the Coastal Zone Management Program of the Department of Commerce; and the Chesapeake Bay Agreement, National Estuary Program, and Clean Lakes Program of the Environmental Protection Agency (EPA). NRCS also consults with the U.S. Army Corps of Engineers on issues related to water resources and wetlands, and with DOI's Fish and Wildlife Service on wildlife habitat issues.

NRCS cooperates in many multi-state partnerships that address regional natural resource concerns. For example, NRCS works with the Great Lakes Commission to protect and improve the quality of the waters of the Great Lakes and their tributaries; partners with Lake Champlain Basin Program, contributing technical expertise in issue analysis and conservation of natural resources in the Champlain Basin; participates in the Klamath Basin Initiative to help conserve the basin's water to meet multiple needs; provides assistance as requested by the Delaware and Susquehanna River Basin commissions; and is participating in the development of a Rio Grande watershed commission.

NRCS cooperates with a wide range of agencies on inventory, research, and technology development activities under memoranda of understanding (MOU). NRCS has MOUs with USDA's Cooperative State Research, Education, and Extension Service for water quality data and training and with USDA's Agricultural Research Service for cooperation on water quality research. NRCS cooperates with EPA on non-point source pollution control and air quality research and with USGS on water quality research. NRCS is a member of the 16-agency Federal Interagency Committee for the Management of Noxious and Exotic Weeds.

NRCS is strengthening its partnerships with private sector entities through implementation of the technical service provider provision of the 2002 Farm Bill. Over the life of the 2002 Farm Bill, demand for technical services will increase sharply as financial assistance increases. The potential volume of program participants would overwhelm the assistance available through existing resources. The Farm Bill attempts to solve this problem by directing the Secretary of Agriculture to establish a system to certify and pay third-party technical service providers to assist producers participating in the conservation programs the bill authorized. NRCS is signing MOUs with certifying organizations such as the Society for Range Management and the American Society of Agronomy and with educational organizations such as the University of Tennessee Agricultural Extension Service.

General Goals

The mission goals in this plan articulate in broad terms the benefits that the Nation expects to derive from our activities. To achieve these goals, NRCS helps our customers to:

- **Maintain** good condition of the land through continued good management where adequate conservation is already in place.
- **Prevent** damage to the land where assessment of social, economic, and environmental trends indicate the potential for environmental degradation to develop.
- **Restore** the land where damage to natural resources has already occurred.

In the past, priorities for public programs have tended to focus on slowing the rate of damage where problems were occurring and restoring the damaged resources if possible. The current focus on documenting the benefits of public programs tends to support that emphasis, because it is easier to demonstrate that activities are effective when an obvious problem is abating. It may be more difficult to demonstrate conclusively that problems would have occurred, or have been more severe, had technical assistance not been available to help resource managers avoid mistakes and maintain good management over the long term. Nevertheless, prevention and maintenance are the essential foundation of sustainable use of resources. Restoring land is often very expensive, and in some cases, the damage is irreversible. Therefore, in setting multi-year performance targets, this plan focuses on providing assistance to the full range of conservation needs— both addressing problems that are causing resource damage and helping to maintain good management to prevent new problems from appearing.

The objectives for each broad goal in this plan relate to separate resource conditions that authorizing legislation directs our programs to assist in addressing. Although identifying clearly differentiated goals and objectives is essential to reaching agreement on the priorities of public programs, resources do not exist independently in the landscape. Everything is connected to everything else. Managing for sustainable use must take into consideration the natural systems and ecological processes that sustain the resources. In providing assistance to individual customers, NRCS conservation planners help the customer assess all resources—soil, water, air, plants and animals—and develop a resource management system that will fully protect the resource base and meet the customer's economic objectives.

Many of the resource issues that are of greatest concern to Americans today cannot be addressed effectively by individuals acting separately. Improvements in water quality or air quality or wildlife habitat can only be achieved by working at the proper scale—the watershed or air-shed or ecosystem. An example of the approach that is needed is the adaptive management plan for the Klamath River Basin in Oregon and California. Irrigated farms in the basin are threatened with loss of water because drought has reduced the water supply below the level needed to meet the competing needs of farmers and endangered species. The conservation districts in the basin sought NRCS assistance to meet their goal of achieving a reliable water supply for agriculture by decreasing water demand, increasing water storage, improving water quality, and developing fish and wildlife habitat. NRCS is providing sub-basin assessments that describe present conditions, identify solutions, and identify potential assistance available from NRCS programs. The plan will provide the framework within which technical and financial assistance is provided to individual farmers and ranchers. NRCS and the districts are attempting to coordinate the activities of the other Federal and State agencies and tribal governments that have responsibilities in the Klamath Basin.

Goal 1–Enhance the productive capacity of soil and water resources to enable a strong agricultural and natural resource sector.

Privately owned cropland, rangeland, pastureland, and forestland form the foundation of a substantial and vibrant agricultural economy that provides food and fiber for the Nation. The farmers and ranchers who are stewards of the Nation's agricultural lands protect the resource base against changes that would reduce their land's capacity for sustained use. Potential damage to these lands takes many forms:

- Erosion, soil compaction and crusting, decreasing soil organic

matter, and invasive species threaten cropland.
- Grazing lands – rangeland, pastureland, and grazed forest – are being diminished by land conversion, erosion, brush and weeds, invasive species, and overgrazing.
- Forestland fragmentation poses a serious threat to wildlife and plant diversity. Invasive species; wildfires; and aging, overcrowded tree stands also reduce the productivity and health of private, non-industrial forestland.

Conservation helps ensure that these important agricultural lands sustain productivity and support healthy plant, animal, and human communities. NRCS provides landowners and land managers with assistance in adopting environmentally sound management practices. We provide information on soil quality, atmospheric resource quality, water management, water quality, plant materials, resource management, and wildlife habitat, as well as providing assistance in using the data to implement sustainable production techniques and new technologies. Land managers who receive our technical assistance and information are more likely to plan, apply, and maintain conservation systems that support agricultural production and environmental quality as compatible goals.

Goal 1 sets out three objectives to help address the conservation of resources and protection of the productive capacity of agricultural lands: 1) maintaining and improving cropland, 2) maintaining and improving grazing land, and 3) maintaining and improving forestland. These objectives describe only part of the overall conservation picture, as any strategy to manage land sustainably goes beyond the immediate on-site benefits and considers the interactions between connected resources. This goal directly supports the USDA Strategic Plan Objective 5.2 – Improve Management of Private Lands.

Objective 1.1 – Maintain, restore, and enhance the productive capacity of cropland.

High quality soils can support efficient production of crops for food, fiber, and energy; provide for effective cycling of nutrients and pesticides; help sequester carbon; and contribute to improved water and air quality and wildlife habitat. Managing for soil quality focuses on maximizing the function of the soil for both agricultural and environmental benefits.

Maintaining soil quality under intensive cropland use depends on preventing excessive erosion and maintaining organic content, tilth, soil fauna, and soil chemical balance. Key indicators of the degree to which use as cropland is affecting soil quality are the erosion rate and the organic content of the soil.

Performance Goal

By 2008, 22.5 million acres of cropland will be treated each year to protect their quality and ensure long-term productive capacity.

Baseline

In 1999, 232 million acres of cropland needed conservation treatment to address resource problems degrading their quality and long-term productive capacity. To address the total need in an appropriate time frame, an estimated 22.5 million acres of cropland need to be treated each year.

Cropland Erosion, 1982-1997

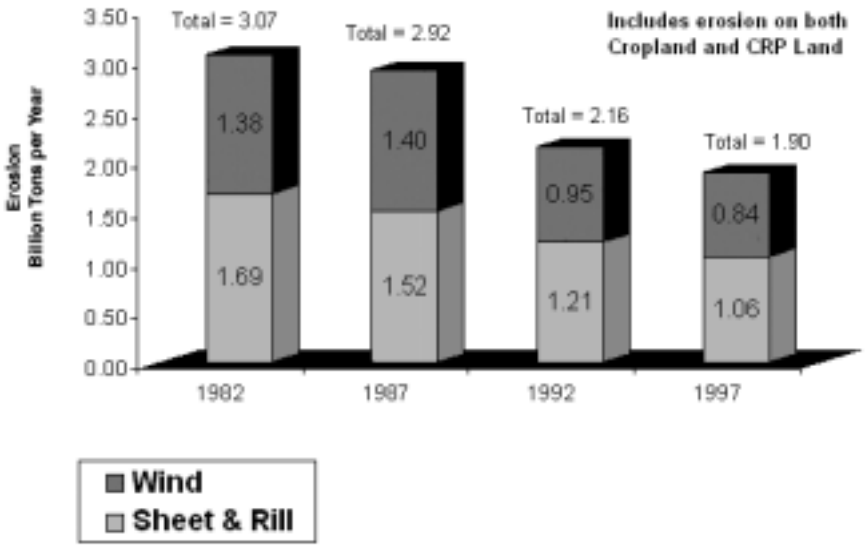


Figure 3–Between 1982 and 1992, farmers and ranchers, with help from NRCS, achieved significant reductions in total erosion on cropland. Special inventories indicate that progress in reducing erosion began to level off after 1995.
Source: NRI, 1997

From 2000–2002, NRCS and its partners provided assistance in treating an average of 13.1 million acres of cropland annually.

Strategies

- Provide conservation planning technical assistance to producers through the Conservation Technical Assistance (CTA) account and technical and financial assistance through the Environmental Quality Incentives Program (EQIP) to plan and implement conservation practices that achieve agricultural productivity and improve environmental quality.
- Through the Conservation Security Program (CSP), reward farmers who meet the highest standards of conservation stewardship on cropland.
- On fields marginally suited for cropping, help producers evaluate alternatives to crop production, such as enterprise diversification or conversion to hay or grazing. Provide assistance to producers transitioning to lower-impact activities.
- Promote the use of innovative technologies that enhance soil quality and support other environmental initiatives. These include growing crops that sequester carbon or can be used to manufacture bio-fuels, and production of crops and crop residues that can be converted into various forms of energy.
- Encourage on-farm energy efficiency by promoting advanced farming practices, such as precision farming, which can optimize the use of equipment and agricultural chemicals.

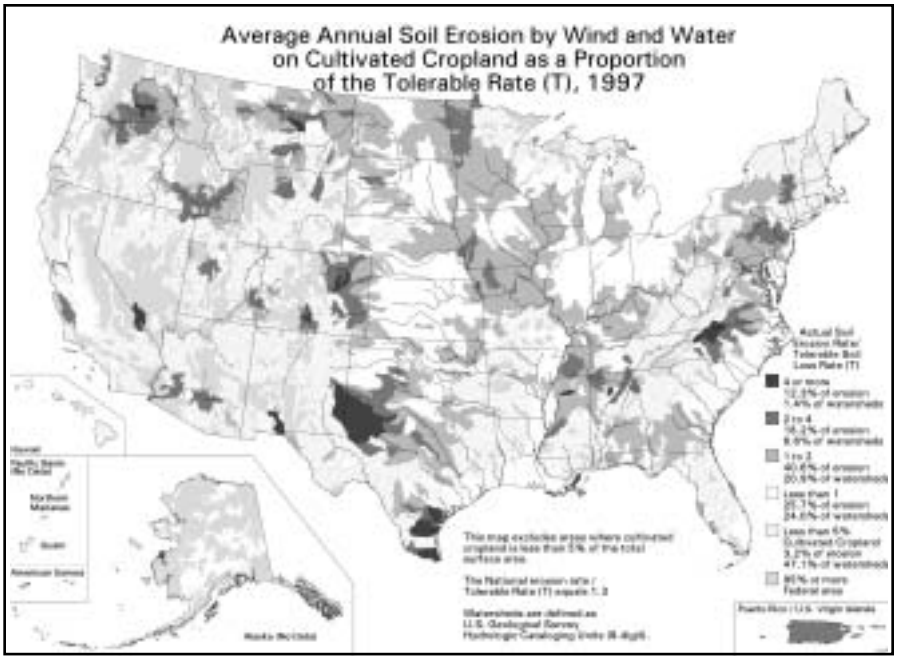


Figure 4–The maximum rate of erosion that can occur without seriously reducing the productive capacity of a soil is called the tolerance level, or "T value. In 1997, 64.7 million acres of cropland experienced sheet and rill erosion at rates greater than T, and 47.8 million acres of cropland experienced wind erosion at rates greater than T.
Source: NRI, 1997.

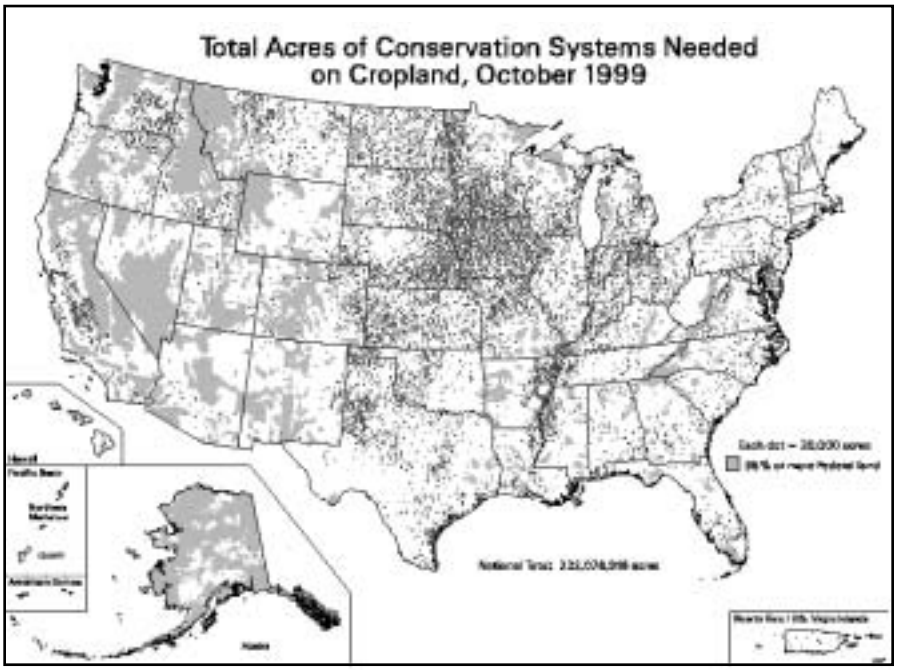


Figure 5–In 1999, an estimated 232 million acres of cropland needed conservation treatment. These acres either did not have a conservation system in place or the system in place was not being maintained. Each dot represents 20,000 acres in need of treatment. Gray shaded areas indicate that Federal land is greater or equal to 95 percent of the county.
Source: 2001 National Partnership Workload Analysis (WLA), October 1999.

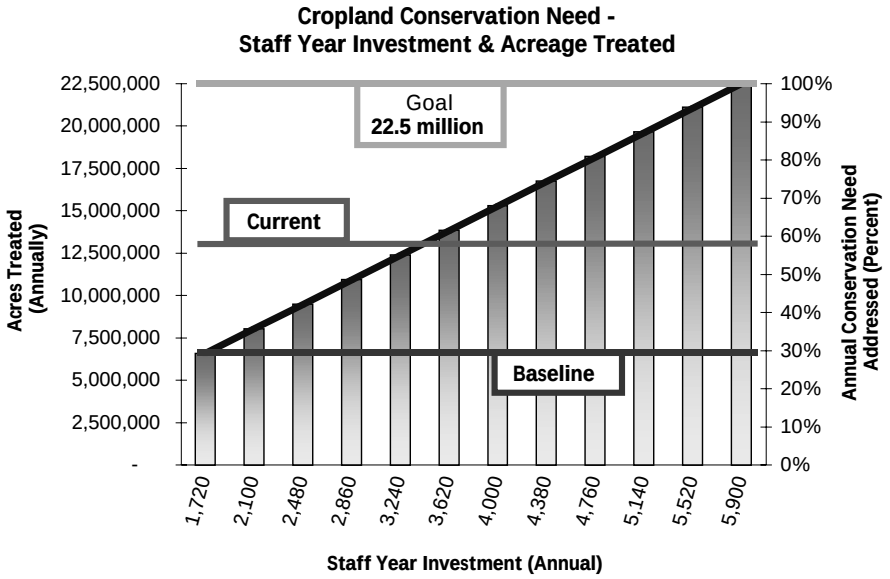


Figure 6–This graph shows the 2000 baseline, the 2002 level of performance and staffing, and the annual staff years needed to reach the strategic goal of meeting the full annual conservation need on cropland. The annual conservation need reflects best local estimates of the number of acres needing treatment each year in order to address conservation problems and maintain the resource.
Source: 2001 WLA, October 1999 and Workload Management Analysis (WLMA), July 2000.

- Assist producer groups and communities to develop watershed-scale plans that address concerns that extend beyond a single farm (e.g., noxious weed infestations).
- Provide appropriate assistance to beginning operators, women operators, members of minority groups, Tribes, and operators of small or limited resource enterprises to enable these customers to maintain the quality and productivity of their cropland and soil.
- Tailor new tools, such as the Soil Conditioning Index (SCI), to meet the needs of cropping regions across the country. Improve technical capacity at the field level to implement use of the SCI, to help producers evaluate and improve soil health.
- Further develop and expand our assistance on emission-abatement technologies for improved air quality.
- Further develop and expand our assistance on renewable energy production and the offsetting of green house gas emissions.

Objective 1.2–Maintain, restore, and enhance the productive capacity of grazing lands.

Private grazing land–rangeland, pastureland, and grazed forest–is the foundation of a productive and profitable livestock sector. In 1995, animal agriculture accounted for nearly 47 percent of the total cash receipts from agricultural products and for two of the Nation's top six agricultural exports. Invasive weeds and brush degrade nearly 70 million acres of western rangeland. In much of the West and Southwest, private grazing land is intermingled with areas of public land administered by the Federal land management agencies. Because livestock operations typically include both private and public land, decisions on the use of public grazing land may affect how privately owned lands are used. In many areas of the country, close proximity of grazing land to non-agricultural communities or activities increases the range of concerns that must be considered in managing grazing land.

Performance Goal

By 2008, 34.2 million acres of rangeland will be treated each year to protect their quality and ensure long-term productive capacity.

Baseline

In 1999, 280 million acres of rangeland needed conservation treatment to address resource problems degrading their quality and long-term productive capacity. To address the total conservation need in an appropriate time frame, treatment needs to be applied on 34.2 million acres of rangeland annually. From 2000–2002, NRCS and its partners provided assistance in treating an average of 13.8 million acres of rangeland annually.

Performance Goal

By 2008, 8 million acres of pastureland will be treated each year to protect their quality and ensure long-term productive capacity.

Baseline

In 1999, 75 million acres of pastureland needed conservation treatment to address resource problems degrading their quality and long-term productivity. To address the total conservation need in an appropriate time frame, treatment needs to be applied on 8 million acres of pastureland annually. From 2000–2002, NRCS and its partners provided

assistance in treating an average of 2.3 million acres of pastureland annually.

Strategies

- Provide basic conservation technical assistance and information to help farmers and ranchers plan and implement conservation to manage grazing lands and utilize new technology to achieve environmental and production benefits.
- Implement the Grasslands Reserve Program (GRP) to restore or improve natural grassland, rangeland and pastureland, including prairie.
- Provide technical assistance to producers through the Conservation Technical Assistance (CTA) program and provide technical and financial assistance to producers through the Environmental Quality Incentives Program (EQIP) to plan and implement conservation practices that achieve agricultural productivity and environmental quality on grazing lands.
- Provide appropriate assistance to beginning operators, women operators, members of minority groups, Tribes, and operators of small or limited resource enterprises.
- Measure and monitor grazing land health for all Major Land Resource Areas. This information will provide a foundation for conservation planning based on current science and an accurate assessment of the status and condition of grazing land resources.

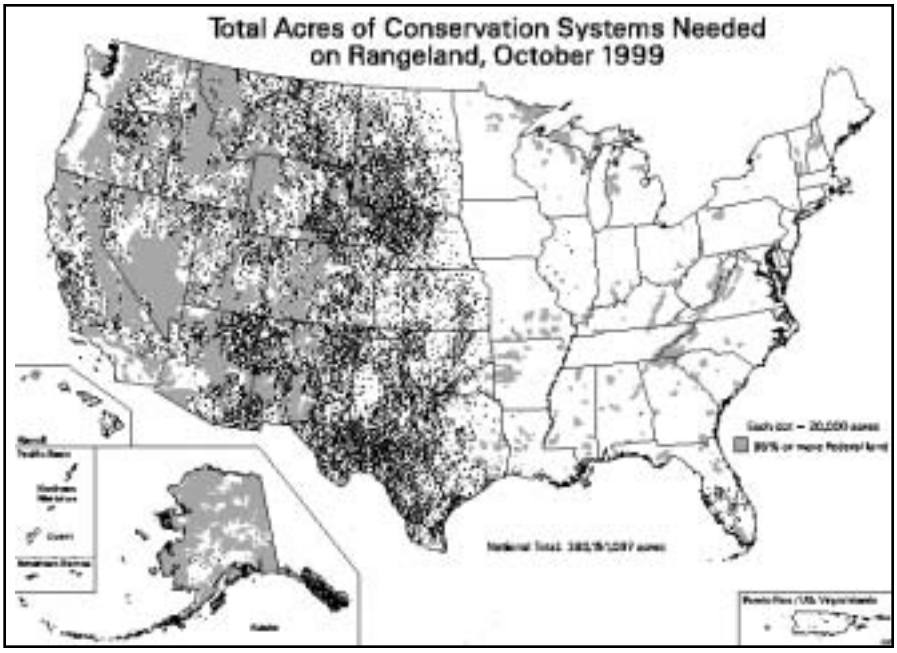


Figure 7–In 1999, an estimated 280 million acres of rangeland needed conservation treatment. These acres either do not have a conservation system in place or the system in place is not being maintained. Each dot represents 20,000 acres in need of treatment. Gray shaded areas indicate Federal land is greater or equal to 95 percent of the county.
Source: 2001 WLA, October 1999.

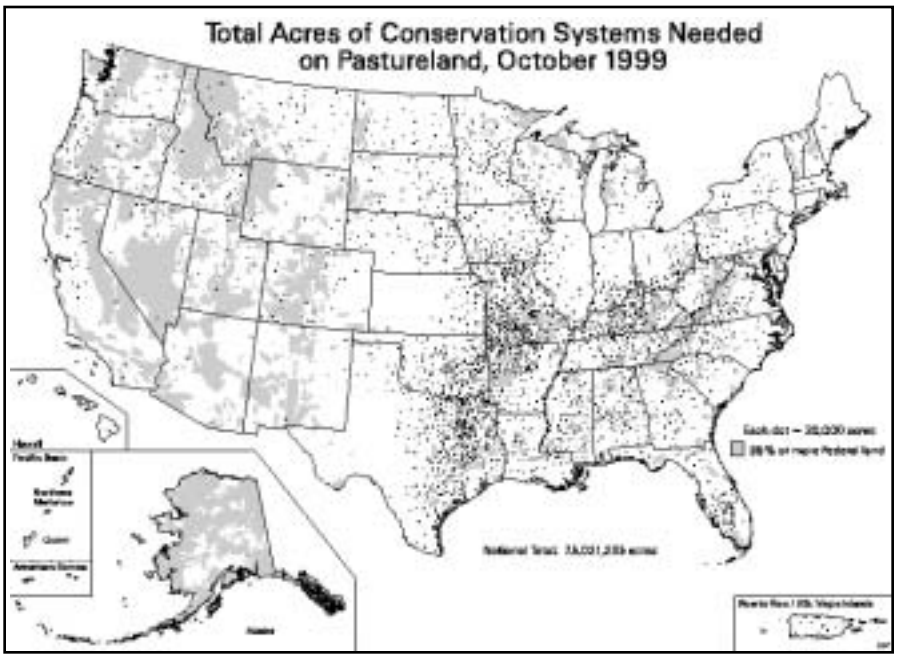
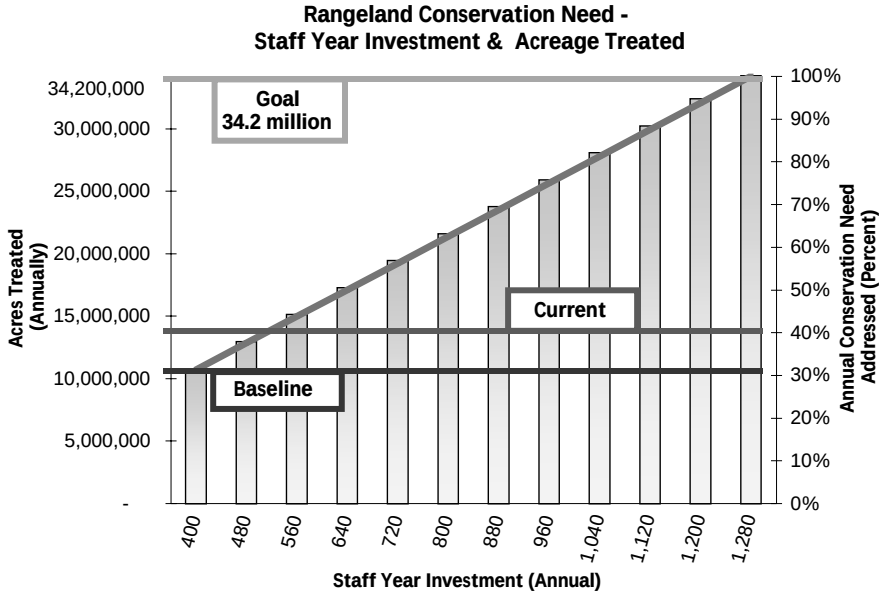
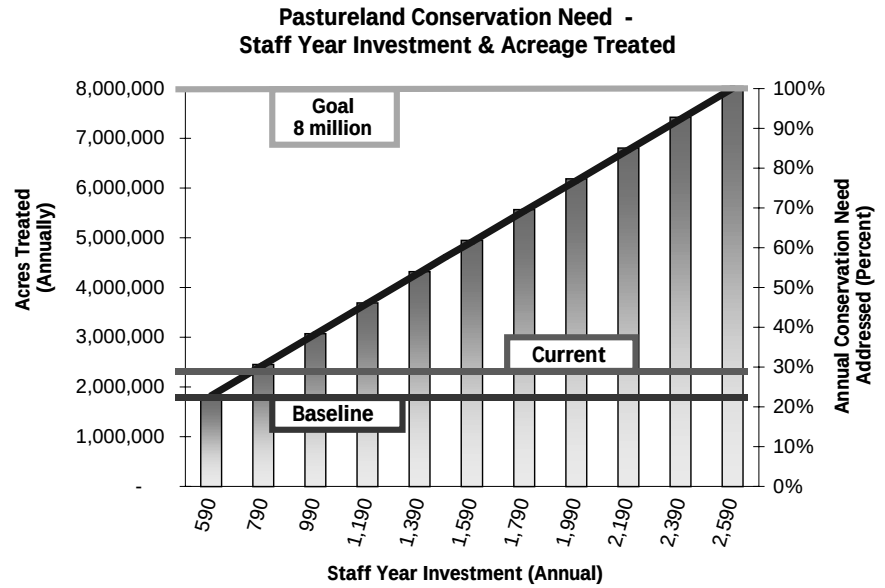


Figure 8–In 1999, an estimated 75 million acres of pastureland needed conservation treatment. These acres either do not have a conservation system in place or the system in place is not being maintained. Each dot represents 20,000 acres in need of treatment. Gray shaded areas indicate Federal land is greater or equal to 95 percent of the county.
Source: 2001 WLA, October 1999.





Figures 9 & 10–These graphs show the 2000 baseline, the 2002 level of performance and staffing, and the annual staff years needed to reach the strategic goal of meeting the full annual conservation need on rangeland (above) and pastureland (below). The annual conservation need reflects best local estimates of the number of acres needing treatment each year in order to address conservation problems and maintain the resource.
Source: 2001 WLA, October 1999;WLMA, July 2000.

- Develop approaches for suppression and reduction in density of noxious and invasive species. Fully utilize the expertise from the plant material centers to address conservation issues on grazing land, such as restoring deteriorated grazing land, selecting native plants, and protecting threatened and endangered species.

Objective 1.3–Maintain, restore, and enhance the productive capacity of forestland.

Private, non-industrial forestland accounts for nearly two-thirds of the Nation's total timber supply. Although there has been little change in overall forestland acreage in recent years, fragmentation is increasing, which threatens long-term use and the multiple benefits forest systems provide. Problems that are reducing forest condition in some areas include fuel loading, the build-up of flammable materials, which can increase the potential for wildfires; and invasive and non-indigenous species, which can rapidly affect the health of large areas of forest. An epidemic of insects and forest disease is ravaging many forests, particularly in the Southeast, where pine beetle epidemics are killing thousands of acres of trees.

Performance Goal

By 2008, 12.3 million acres of forestland will be treated annually to protect their quality and ensure long-term productive capacity.

Baseline

In 1999, 173 million acres of private, non-industrial forestland needed conservation treatment to address resource problems degrading their quality and long-term productive capacity. To address the total conservation need in an appropriate time frame, treatment needs to be applied on 12.3 million acres of private, non-industrial forestland annually. From 2000–2002, NRCS and its partners provided assistance in treating an average of 0.5 million acres of private, non-industrial forestland annually.

Strategies

- Provide basic conservation technical assistance and information through the Conservation Technical Assistance (CTA) program to help forest landowners plan and implement strategies to manage private, non-industrial forestland to achieve multiple benefits, such as maintaining the yield of forest products while protecting watersheds to ensure clean water and wildlife habitat.
- Participate in cooperative watershed or regional approaches to forestland conservation to control noxious and invasive species and manage other concerns. Expand technical assistance and undertake studies on suppression of noxious and invasive species.
- Provide appropriate assistance to beginning operators, women operators, members of minority groups, tribes, and operators of small or limited resource enterprises.
- Strengthen inventory and assessment capabilities to improve the ability to determine the status and condition of forestland. Work with partners to develop and apply forestland health indicators that can be used to validate trends in resource condition.

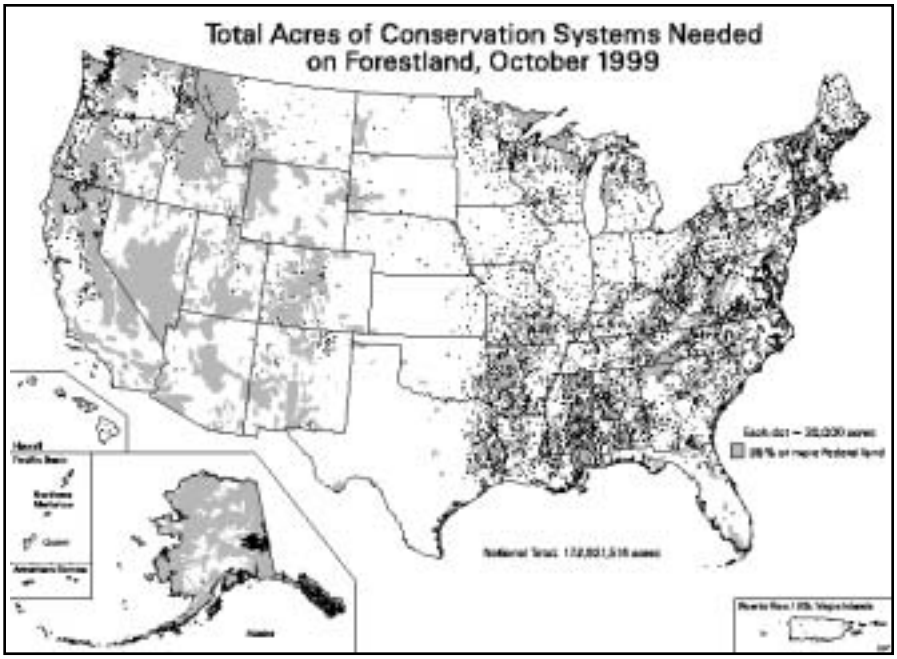


Figure 11–In 1999, an estimated 222 million acres of forestland needed conservation treatment with assistance from the conservation partnership. The acres identified as needing treatment are those where the conservation partnership would have a role in providing technical assistance, and the acreage either does not have a conservation system in place or the system is not being maintained. The acreage presented here does not include forestland acres that are the responsibility of agencies outside the conservation partnership. Each dot represents 20,000 acres in need of treatment. Gray shaded areas indicate Federal land is greater or equal to 95 percent of the county.
Source: 2001 WLA, October 1999; and WLMA, July 2000.

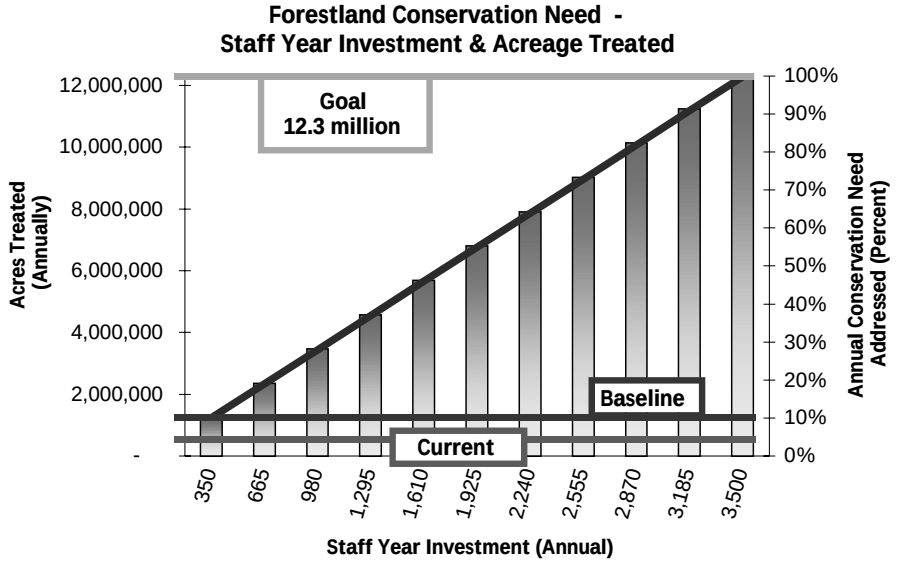


Figure 12–This graph shows the 2000 baseline, the 2002 level of performance and staffing, and the annual staff years needed to reach the strategic goal of meeting the full annual conservation need on forestland. The annual conservation need reflects best local estimates of the number of acres needing treatment each year in order to address conservation problems and maintain the resource.
Source: 2001 WLA, October 1999; and WLMA, July 2000.

Goal 2–Reduce unintended adverse effects of natural resource development and use to ensure a high quality environment.

Productive use of natural resources and protection of the environment are compatible and mutually supportive goals. Achieving these goals, however, requires good management. Development of land for non-agricultural uses can limit economic opportunities and quality of life if resource capability is not considered in planning development. Some agricultural operations have the potential to cause damage to the environment if not well managed. Potential problems related to agricultural and non-agricultural activities include:

- Rapid development and sprawl affects environmental quality in many parts of the country. In drought-prone western states, development is exerting pressure on limited, seasonally variable water supplies. A growing portion of the population continues to concentrate in coastal areas where conservation challenges are great.
- Runoff from agricultural operations can carry sediment, bacteria, nutrients, and pesticides into the Nation's streams, lakes, and estuaries. The most extensive threat to water quality from agricultural activities is sediment. The greatest current concern, however, is the risk that excess nutrients and pathogens might enter water from poorly managed animal agriculture facilities, especially in areas of concentrated livestock production.
- Emissions from agricultural operations also have the potential to impair both stratospheric and tropospheric air quality if not well managed. Eroded soil particles and cropping operations may generate fugitive dust; agricultural operations and prescribed burning generate ozone precursors and particulates; and livestock operations emit fine particulate precursors and potentially offensive odors. Concerns about potential health risks posed by emissions from agriculture focus on these emissions. Animal feeding operations contribute to emissions of methane and cropping operations can contribute to emissions of nitrous oxide, both green house gases, into the atmosphere.
- Although wetland losses continue to decline, agricultural wetlands remain among the most vulnerable wetlands for conversion. Wetland functional condition–the ability of a wetland to provide ecosystem-level functions, such as maintenance of surface water storage, that generate benefits to individuals and society–can be impaired due to land use practices in the surrounding landscape.
- Both development and intensive farming operations can result in alteration of habitat for fish and wildlife. The extent and quality of habitat have a substantial impact on the distribution and abundance of wildlife. Many threatened and endangered species are listed at least in part because of habitat loss or alteration.

NRCS helps State and local planning entities plan the use and development of natural resources to meet the needs of the varied interests in communities. We help agricultural producers understand agricultural production and environmental quality as compatible and mutually supportive goals and manage their operations in ways that achieve both goals.

To address the most pressing concerns that threaten a high quality environment, NRCS will work to: 1) protect farmland from conversion, 2) promote sound rural and urban community development, 3) protect air and water resources from non-point sources of impairment, and 4) maintain, restore, and enhance wetlands and fish and wildlife habitat. This goal directly supports the USDA Strategic Plan Goal 5–Protect and enhance the Nation's natural resource base and environment and Objective 5.2–Improve management of private lands.

Objective 2.1–Protect farmland from conversion to non-agricultural uses.

Some of our most valuable and important farmlands are diminishing as they are converted to non-agricultural uses. Fragmentation of agricultural lands, particularly in rapidly developing areas, often results from pressures that outstrip the economic value of land for agriculture. According to USDA's National Resources Inventory, urban and built-up areas increased from 65.3 million acres in 1992 to 79 million acres in 1997. Much of the agricultural land being lost is prime, unique, or important farmland located near cities. Nearly

one-fifth of the Nation's 250 million acres of prime agricultural land can be considered at risk for development because it is within 50 miles of the Nation's 100 largest cities.

In rapidly developing areas, natural resource problems can be prevented through locally developed strategies that use natural resource, social, economic, and other data to guide development to meet community needs while protecting desired community characteristics. NRCS works closely with local conservation districts, RC&D councils, tribal governments, communities, and other local entities to help plan and implement natural resources management plans that meet local needs.

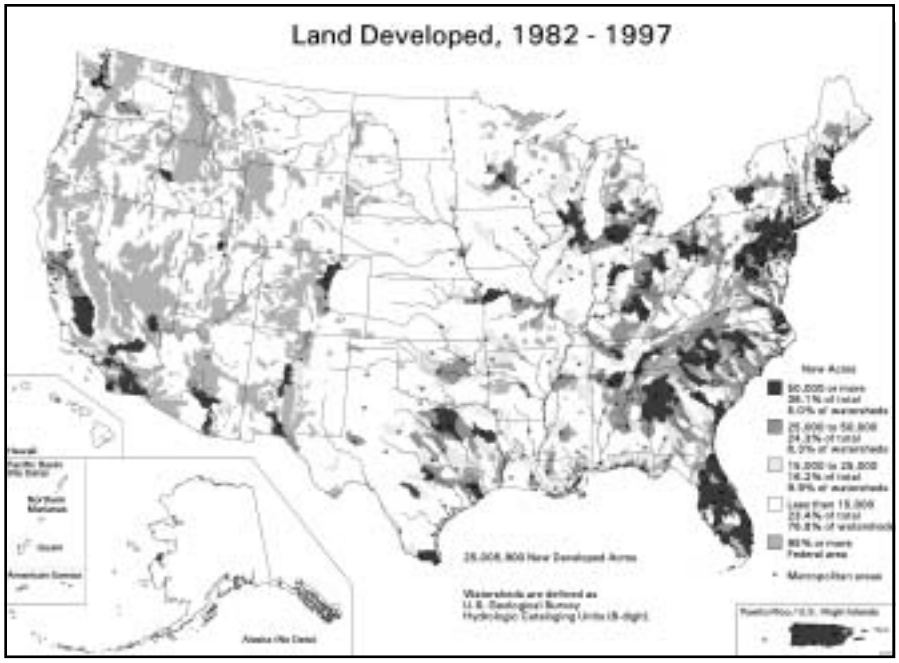


Figure 13–Development and sprawl are major concerns in many parts of the country. Between 1982 and 1997, more than 25 million acres were converted to developed uses. Presently, 19 states have enacted laws and appropriated funds to protect prime and unique agricultural lands from conversion to non-agricultural uses. Source: NRI, 1997.

Performance Goal

By 2008, 1.2 million acres of farm and ranch land will be protected from conversion to non-agricultural uses through the Farm and Ranchland Protection Program.

Baseline:

As of September 30, 2002, a total of 170,000 acres of farm and ranch land have been protected from conversion to non-agricultural uses through the Farm and Ranchland Protection Program.

Strategies

- Provide to local, State, and tribal governments and non-government organizations the technical assistance and information on natural resource and environmental issues they need to guide balanced growth. Support regional planning efforts to balance growth (economic and developed uses of land) with natural resource conservation and social objectives of the area.
- Provide training and support to relevant agencies to undertake site assessments in accordance with the Farmland Protection Policy Act requirements.
- Increase technical assistance in rapidly developing areas.
- Assist tribal, State, and local governments; non-government organizations; communities; and others to protect their locally important lands through a portfolio of approaches, including easements, zoning, and other growth management strategies. Through the Farm and Ranch Lands Protection Program, assist in purchase of conservation easements to protect prime, unique, and important farm and ranch land from conversion to non-agricultural uses.
- Complete automation and implementation of the Computer Aided Land Evaluation System tool and the Farmland Protection Policy Act on-line Farmland Conversion Impact Rating tool to provide tools for Federal agencies, units of local government, tribes, and others to determine the quality of land for agricultural uses and assess sites or land areas for their agricultural economic potential.

Objective 2.2–Promote sound urban and rural community development.

Three-fourths of the people in the United States live on 16 percent of the land. These developed areas face many challenges to environmental quality; these include sedimentation, soil compaction, increased runoff, flooding, water pollution, loss of open space, loss of wetlands, and disruption of plant and animal habitat. Runoff from streets and highways, parking lots, landfills, junkyards, and septic systems carries a broad range of pollutants. Increased peak flows result in increased runoff from urbanized areas, damaging streambanks and accelerating the siltation of lakes, bays, and wetlands. An increasing and diverse population contributes to a need for new and often very different approaches to providing conservation technical assistance and information to support locally-led resource development and conservation.

Performance Goal
By 2008, 700 group and area-wide plans will be developed that address resource concerns related to development of the area.

Baseline
In FY 2002, 569 group and area-wide plans addressing these concerns were developed.

Performance Goal
By 2008, all 368 RC&D councils will have area plans that are 5 years old or less that address land conservation, land management, community development and water management issues in their communities.

Baseline
In FY 2002, 279 RC&D council area plans are 5 years old or less.

Performance Goal
By 2008, achieve a leveraging ratio of 6:1 for NRCS spending on RC&D projects, as an expression of tangible local support for RC&D projects.

Baseline
In FY 2002, the leveraging ratio for RC&D funds was 5:1.

Strategies
- Assist urban and suburban areas, particularly newly developing areas, to undertake comprehensive watershed planning that addresses the potential off-site effects of development.
- Provide technical assistance to communities on erosion control, land use planning, engineering support, open space conservation, floodplain protection, stormwater management, soil survey, and natural resource inventories.
- Extend coverage of RC&D areas nationwide.
- Work with long-standing and new partners to promote technologies and improved practice standards for reducing runoff of nutrients, pesticides, and sediment from rural and urban residential and community facility sites. Intensify efforts to reduce non-point sources of contamination in coastal areas and estuaries of national significance.
- Provide assistance to address air quality problems in non-attainment areas.

Objective 2.3–Protect water and air resources from agricultural sources of impairment.

Agriculture is one potential source of pollutants in the Nation's waters—both surface streams, lakes, and estuaries and groundwater aquifers. Cropland can be a source of sediment, nutrients, bacteria, pesticides, and salinity. Nutrients applied to farm fields may reach water sources through runoff–either dissolved in runoff water or attached to eroded soil particles. Nutrients may also reach groundwater by leaching through the soil. Poorly managed irrigation water can carry dissolved mineral salts and agricultural chemicals to surface water or groundwater. Animal agriculture operations can be the source of silt, nutrients, organic matter, and pathogens. Concentrated animal feeding operations (CAFOs) may pose the greatest potential risks because of the magnitude of the waste management task. These operations are regulated under the National Pollutant Discharge Elimination System (NPDES). Small operations also may pose risks to the environment, but on a lesser scale. Where many operations are concentrated within a single watershed, the cumulative effects become of greater concern.

Agricultural operations can contribute particulates, low-level ozone, greenhouse gases (nitrous oxides, etc.), and noxious odors that degrade air quality. State health agencies and the U.S. Environmental Protection Agency have identified air quality non-attainment zones across the country where specific pollutants exceed acceptable levels. Eroded

soil particles may contribute to fugitive dust, and burning of vegetation may contribute coarse and fine particulates to air resources.

Good management of agricultural operations can reduce the potential for agricultural operations to result in damage to water or air. Efforts to protect water and air are most effective when taken as part of a landscape-scale plan—encompassing an entire watershed or air-shed. Key practices protecting both water and air are conservation buffers, which reduce the movement of soil particles and agricultural chemicals offsite. Since 2001, NRCS has been assisting AFO owners and operators to develop and implement comprehensive nutrient management plans (CNMPs) to improve their operations' environmental performance and meet economic objectives

Performance Goal
By 2008, an additional 500,000 miles of buffers will be installed to help reduce the movement of potential pollutants into water and air resources.

Baseline
In the period 1997 through FY 2002, NRCS assisted individuals in installing 1,331,104 miles of conservation buffers to protect water and air quality.

Performance Goal
By 2007, a total of 91,000 owners and operators of animal feeding operations will have initiated implementation of comprehensive nutrient management plans to manage manure, wastewater, and by-products properly.

Baseline
An estimated 257,200 AFOs need

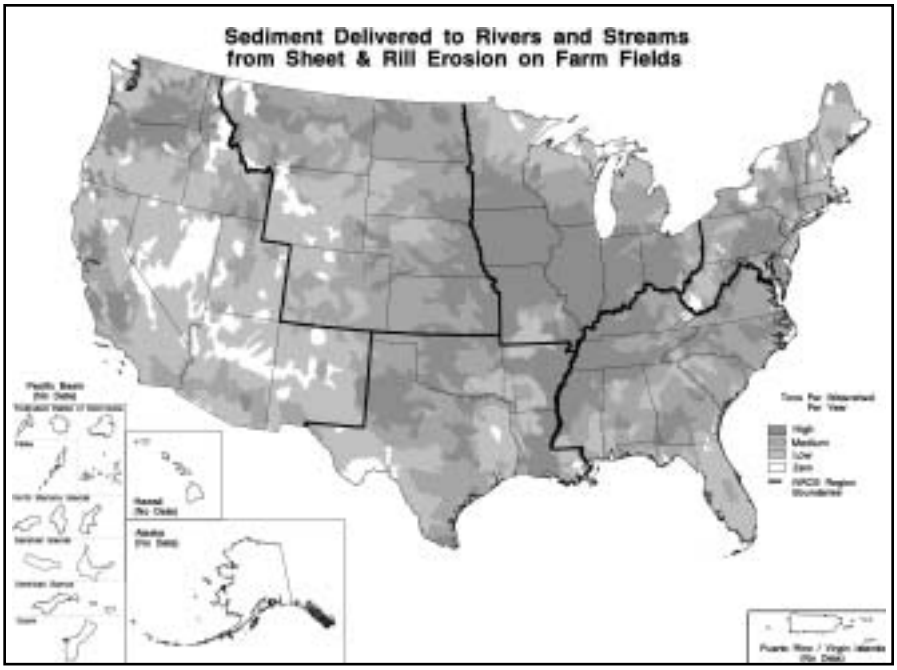


Figure 14–This map shows estimates of sediment delivered to rivers and streams by watershed for the contiguous United States. The watersheds shown in darkest gray are those identified by the model as having the potential for delivering the greatest amount of sediment to streams each year. The Universal Soil Loss Equation was used to estimate sheet and rill erosion; other erosion processes are not included in this estimate.
Source: NRCS, 1997.

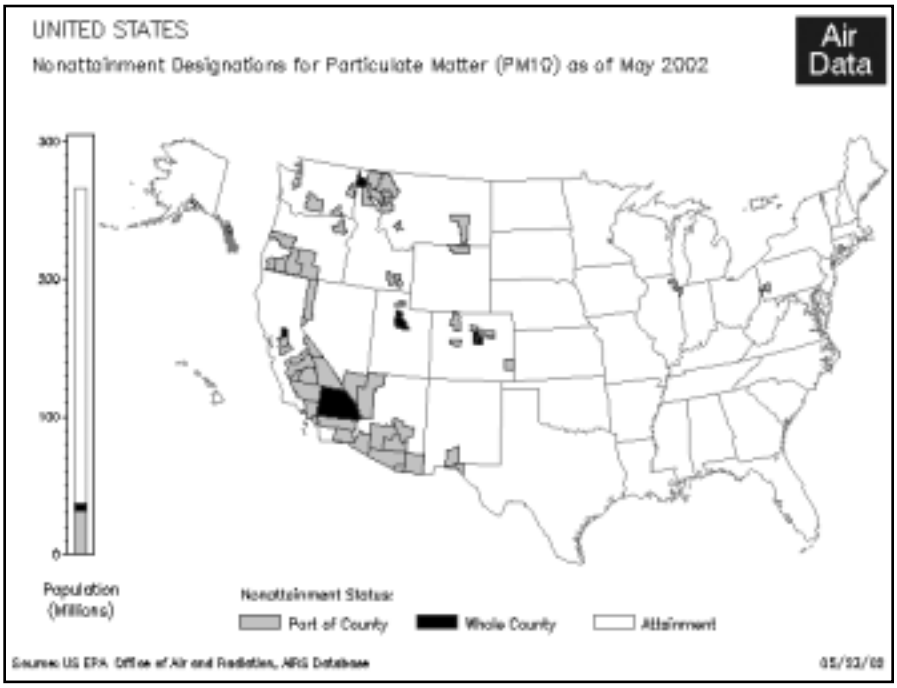


Figure 15–Almost 30 million citizens across the country live in areas where particulate matter (PM)-10 standards are exceeded. Both coarse (PM-10) and fine particles (PM-2.5) are health concerns. In 1997, PM-2.5 standards were developed by EPA. Beginning in 2002, EPA will designate nonattainment areas based on the PM-2.5 standard.
Source: EPA, 2002.

assistance to develop and implement CNMPs. This estimate is based on USDA analysis using the 1997 Census of Agriculture data. The long-term expectation is that all of these operations will be applying CNMPs by 2018.

Strategies

- Promote innovative watershed-level or air-shed approaches such as environmental credit trading and other market-based approaches to address identified problems.
- Continue to participate in the National Conservation Buffer Initiative to help reduce movement of eroded soil and attached chemicals into waterways.
- In areas where animal waste is a key concern, encourage approaches that include centralized nutrient accounting, storage and distribution of manure nutrients, and other approaches that can link nutrient-rich and nutrient-poor areas.
- Foster greater private sector capacity to develop and implement technology for animal waste management. Encourage integrator-supported cooperative efforts for waste management and utilization where production is concentrated.
- To support environmental credit trading, identify and validate environmental credits for agriculture and forest conservation practices that contribute to water quality improvement, carbon sequestration, and other environmental enhancements.
- Develop economical methods and practices to control erosion and mitigate greenhouse gas emissions on a wide variety of parcel sizes and for landowners and land managers with limited financial resources.

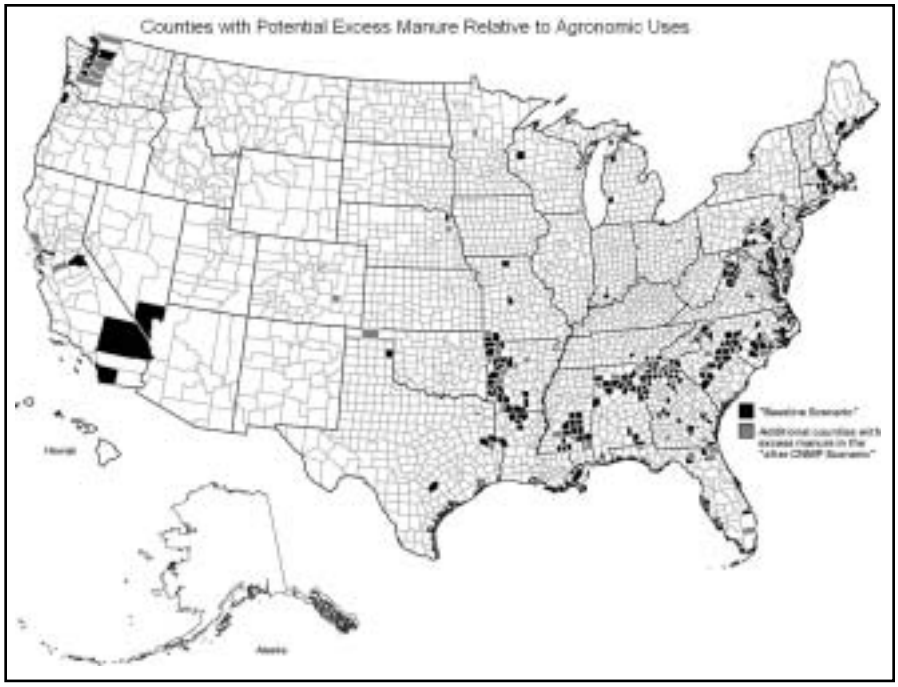


Figure 16–This map shows the 248 counties with potential excess manure relative to the potential agronomic uses within the county. The baseline scenario counties represent those counties with manure excesses under assumed current application rates. The after CNMP scenario counties represent those additional counties that would have manure excesses when manure nutrients are applied based on the most limiting nutrient, phosphorus or nitrogen.
Source: Based on 1997 Census of Agriculture data as modified with algorithms developed by NRCS.

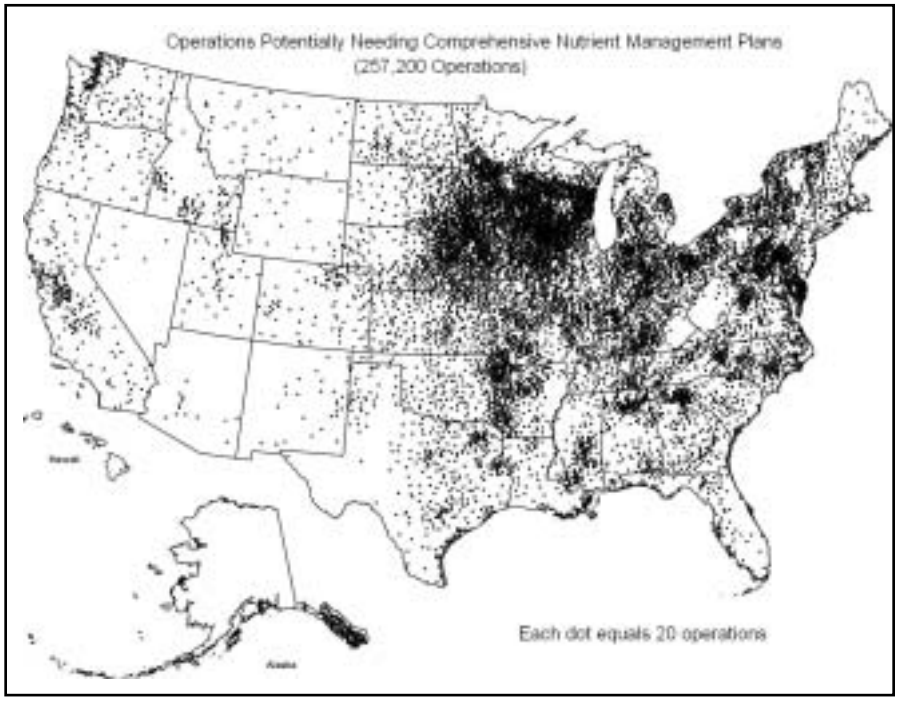


Figure 17–This map shows the distribution of the estimated 257,200 operations potentially needing assistance to develop and implement comprehensive nutrient management plans.
Source: Based on 1997 Census of Agriculture data as modified with algorithms developed by NRCS.

Objective 2.4–Maintain, restore, or enhance wetland ecosystems and fish and wildlife habitat.

For more than a century, wetlands on private lands have been modified or eliminated to grow crops, raise livestock, harvest timber, build infrastructure, support development, and, in recent times, farm fish. Federal, State, and local government agencies and public and private organizations have worked together over the last several decades to reverse the decline of wetland acreage. Although wetland losses have slowed, continued efforts are needed to maintain or increase the amount and quality of wetlands on private lands. Studies relating wetland condition with activities in surrounding areas have concluded that if wetlands are to provide benefits at an optimum level, activities beyond the wetland boundary also must be considered and be part of the management approach.

Habitat fragmentation, particularly in forests and wetland ecosystems, is a major factor affecting wildlife populations. Agriculture, timber harvest, and land conversion have all been factors in wetland and wildlife declines. Agriculture has the potential to help maintain wildlife popula-

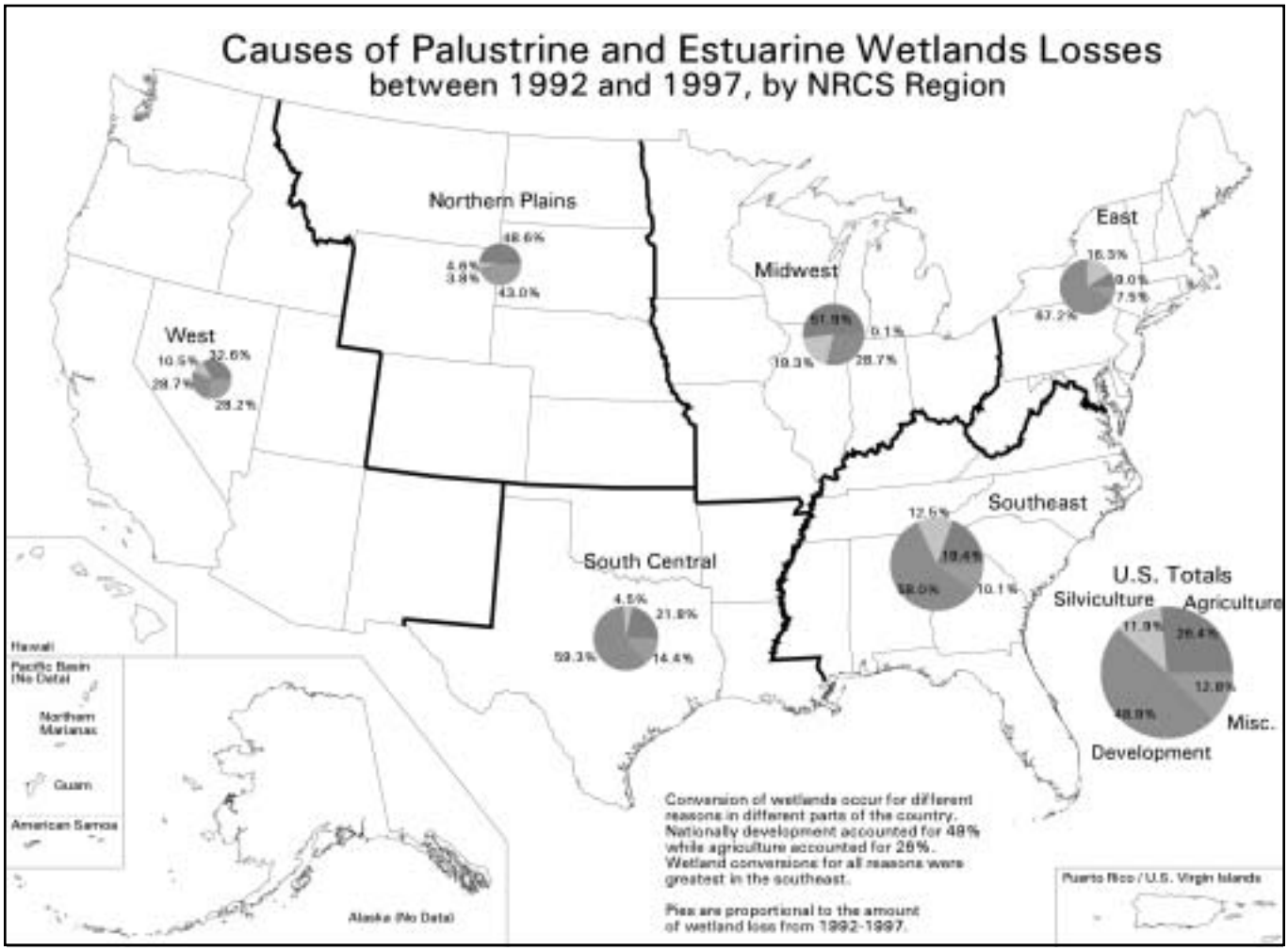


Figure 18–Between 1992 and 1997, a total of 506,000 acres of wetlands were lost and 343,000 acres were gained. About 49 percent of the total loss was attributed to development, 26 percent to agriculture, 12 percent to silviculture practices, and 13 percent to miscellaneous causes.
Source: NRI 1997

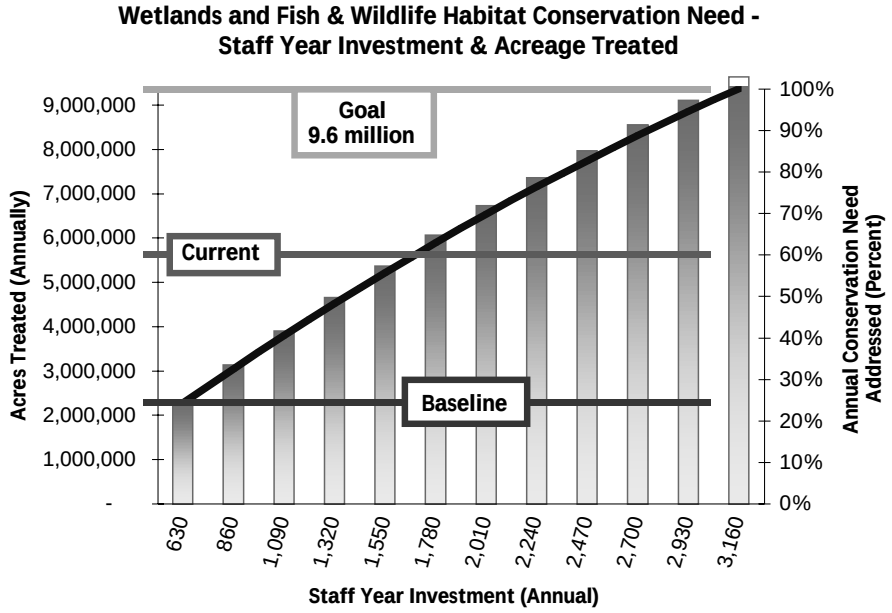


Figure 19–This graph shows the 2000 baseline, the 2002 level of performance and staffing, and the annual staff years needed to reach the strategic goal of meeting the full annual conservation need to protect wetlands and fish and wildlife habitat. The annual conservation need reflects best local estimates of the number of acres of primary wildlife habitat management needed each year in order to address conservation problems and maintain the resource.
Source: 2001 WLA, October 1999; WLMA, July 2000.

tions. Achieving targets for soil and water conservation can produce significant benefits for wildlife, but many practices sufficient to conserve soil or water may fall short of the need for high quality habitat. Contiguity of habitat, for example, is a key factor in maintaining wildlife populations. Locally-led planning, where communities work together to identify and address concerns on a watershed scale, can help identify opportunities to fit wildlife and wetland conservation into the landscape.

Performance Goal
By 2007, 9.6 million acres will be treated annually to maintain or enhance habitat for locally and regionally important fish and wildlife populations.

Baseline
In 2002, NRCS and its partners provided assistance in treating 5.8 million acres of land with wildlife habitat management as the primary resource concern. An additional 6.8 million acres received conservation treatment where wildlife habitat management was a secondary resource concern.

Performance Goal
By 2007, achieve "no net loss" of wetland acres due to agriculture.

Baseline
Between 1992 and 1997, gross wetland losses averaged 101,200 acres annually, and gross wetland gains averaged 68,600 acres annually, resulting in an average annual net loss of 32,600 acres of wetlands. Conversion of wetlands to agriculture accounted for 26 percent of the gross wetland losses. In 2002, NRCS and its partners provided assistance to create or restore 260,000 acres of wetlands. Data on the acreage of wetlands lost on agricultural land during this period are not yet available.

Strategies
- Provide coordinated assistance in watersheds with important wildlife populations. Integrate wildlife conservation with other conservation priorities such as water quality goals and wetland conservation.
- Work with partners, State agencies, other Federal agencies, and private conservation organizations to identify and protect priority wetlands.
- Work through the locally-led process to identify community goals for fish and wildlife and wetland conservation.
- Provide technical assistance for delineation of wetland areas and ensure continued compliance with Swampbuster requirements.
- Work with partners and private groups to enhance habitat for important game species.
- Develop and use adapted native plant materials for wetland restoration and improved wildlife habitat.
- Conduct functional assessments on wetlands before and after conservation treatment to validate conservation practice effects in support of outcome measurement.

Goal 3–Reduce risks from drought and flooding to protect individual and community health and safety.

Each year, droughts and floods adversely affect public health and safety, causing extensive and expensive damage to farms, ranches, and communities.

To help protect human health and safety, NRCS has provided watershed-based technical and financial assistance to local sponsors in the development of water resources since the 1940s. Nearly 2,000 projects covering 160 million acres, including a network of 11,000 flood control dams, have been constructed to prevent and mitigate flooding. These projects also have contributed to improving water quality and supplies, creating wildlife habitat, and providing recreational opportunities. Today, the ability of this infrastructure to continue providing desired benefits is threatened by:

1) aging structures in need of rehabilitation,
2) development that has placed individuals and communities at risk in case of structure failure, and
3) sediment buildup in reservoirs, threatening water-storage capacity and affecting water quality.

Severe drought can threaten individual and community livelihoods, damage the environment, contribute to widespread wildfires, and result in millions of dollars of damages. The National Drought Policy Commission stressed the need for drought preparedness—especially drought planning, plan implementation, and proactive mitigation. USDA is one of three Federal entities with the greatest responsibilities related to drought (with the Bureau of Reclamation and the U.S. Army Corps of Engineers).

NRCS has a major role in assisting individuals, tribes, and communities to undertake comprehensive water resources planning and implementation. Individual landowners and land managers can improve the resiliency of their lands by applying conservation systems and lessen the potential impact of water shortages by increasing soil moisture, promoting aquifer recharge, improving water use efficiency, and enhancing use of available water. Communities can mitigate drought through watershed planning that balances supply and demand and development of nonstructural and structural approaches to manage their water resources as a whole.

This goal lays out two objectives to address the risks posed by flooding and drought: 1) flood protection in upstream watersheds, and 2) protection from chronic water shortages and drought. This goal directly supports the USDA Strategic Plan Goal 5–Protect and enhance the Nation's natural resource base and environment and its Objective 5.2–Improve management of private lands.

Objective 3.1–Protect upstream watersheds from flood risks.

The need for watershed protection continues to grow as increases in population and changes in land use in watersheds affect the hydrology and increase the risks of flooding in many areas. Development in areas prone to flooding continues, increasing the number of individuals and communities at risk. Increases in impervious surfaces promote runoff and reduce infiltration and aquifer recharge. Time is taking its toll on aging dams. Components to some of the dams are deteriorating, and reservoirs are filling with sediment. If action is not taken, the integrity of the dams will be threatened. That will result in additional risk to people and property downstream from the dam.

NRCS is authorized to provide technical and financial assistance to local sponsors to help them design, construct, operate, and maintain projects for water management and use. Prevention of flooding is more economical than post-flood recovery and clean up. In FY 2002, annual benefits from existing flood protection infrastructure exceeded $1.6 billion.

Many of the structures presently in place to protect individuals and communities from flood risks are nearing the end of their design life. Local entities responsible for the structures may not have technical assistance or funding strategies developed to undertake the major repair, rehabilitation, or decommissioning that will be needed.

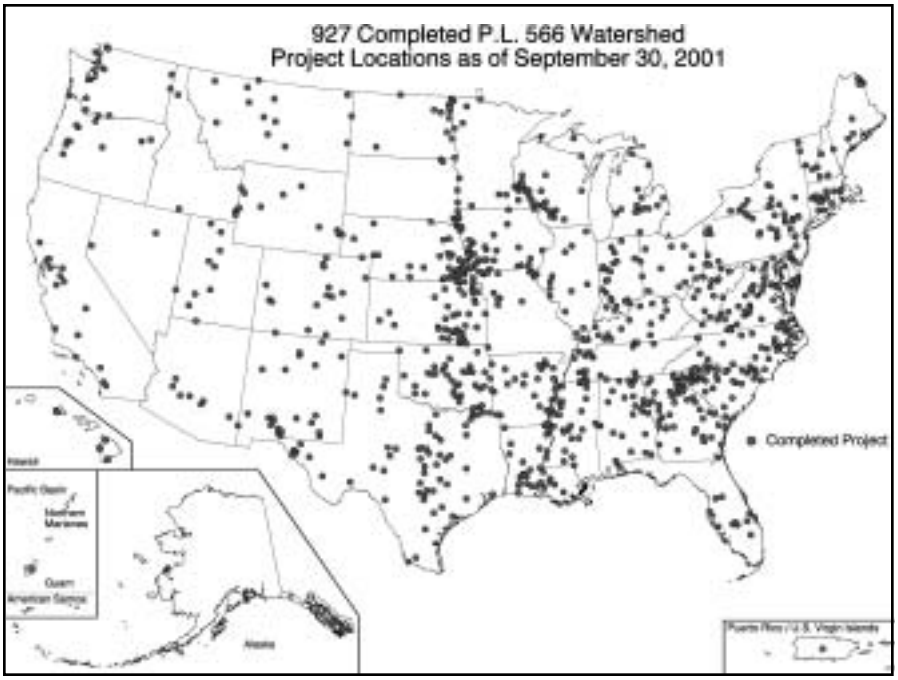


Figure 20–Some 11,000 small watershed structures have been installed through 2,000 watershed projects across the Nation. About 2,200 of these structures are nearing the end of their design life and are in need of evaluation and rehabilitation or decommissioning to protect communities and ensure continued benefits from the Federal investment.
Source: NRCS, Report to Congress on Aging Watershed Infrastructure, 2000

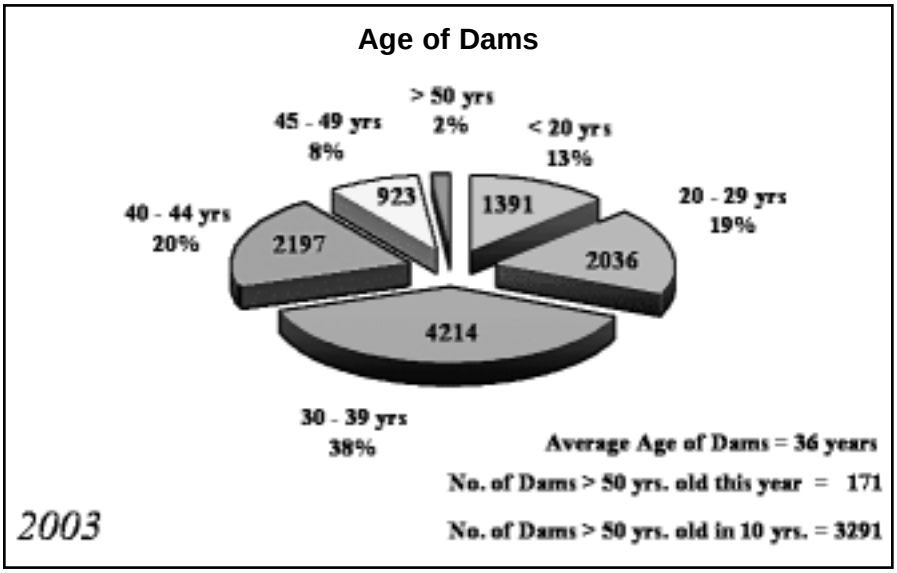


Figure 21–More than two-thirds of the NRCS-assisted flood control dams constructed to-date are more than 30 years old. Two hundred sixty four dams have reached the end of their design life and more than 1,000 will do the same within five years. More than 3,000 dams will reach the end of their design life span within the next decade.
Source: NRCS, Report to Congress on Aging Watershed Infrastructure, June 2000

Performance Goals

By 2010, assessments will be completed on 1,500 dams to determine rehabilitation needs and threats to public health and safety.

By 2010, plans will be developed to begin rehabilitation or decommission dams within 750 watershed projects.

By 2010, a total of 500 of the highest priority dams will be rehabilitated or decommissioned.

Baseline

In 2003, 264 flood control dams will have reached the end of their design life. This number will increase to 3,300 by 2013. In 2003, only 15 of these dams have been rehabilitated to function for another 50 – 100 years.

Strategies

- Address flood prevention in the context of comprehensive watershed planning designed to protect or restore water quality and quantity. Multiple purpose planning can help communities develop upstream flood prevention plans that consider water conservation, along with flood control, to meet their long-term needs.
- Help watershed project sponsors to assess the need to repair, upgrade, or decommission watershed structures.
- Assist watershed project sponsors with the planning and implementation of watershed rehabilitation projects.
- Provide the information and tools communities need so that watershed project sponsors can guide development to reduce potential damages from natural

disasters (e.g., easements on floodplains, floodwater retention structures) and develop strategies to mitigate effects. Utilize Geographic Information System (GIS) technology to complete risk assessments for communities.

- Enhance the Emergency Watershed Protection Program (EWP) to improve its ability to address natural disasters.
- Increase snow data collection and the use of water supply forecasting information to reduce potential damages from flooding or drought. The Snow Telemetry Network (SNOTEL) and Soil Climate Access Network (SCAN) will be expanded across the Nation to increase the availability of weather condition information.

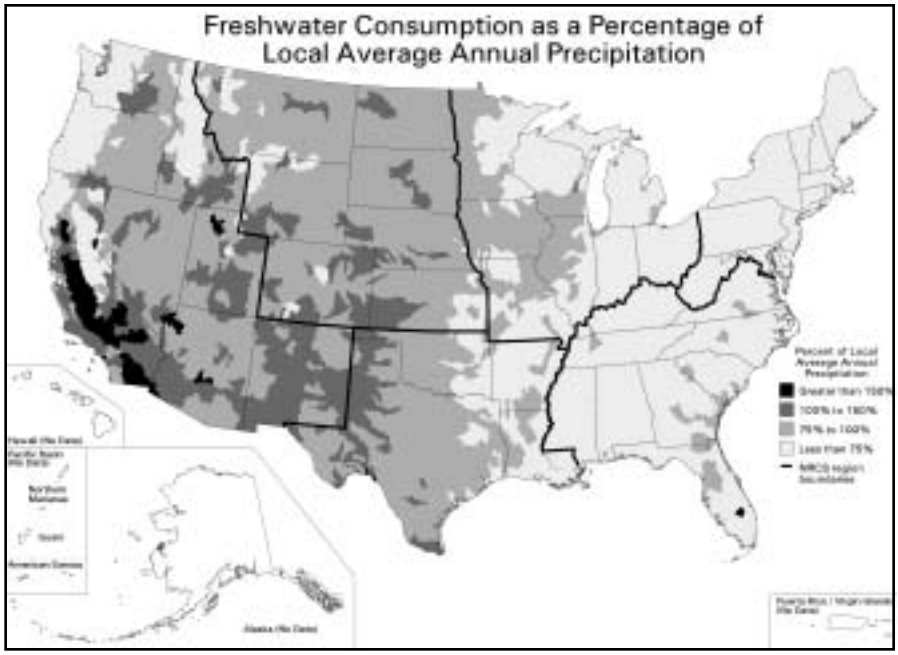


Figure 22–Water availability may be the most significant national water issue in the coming decade. Some areas of the country already use more than 100 percent of their annual average precipitation and depend on groundwater mining or imports from other areas. Water-use debates also are emerging in water-rich areas where demand is increasing. Drought heightens these challenges across the country.
Source: NRCS, 1997

Objective 3.2–Protect watersheds from the effects of chronic water shortages and risks from drought.

The availability of adequate supplies of usable water is the major resource concern in many areas. Competing demands for water among municipal, industrial, agricultural, and instream uses (e.g., endangered species) are increasing. The potential for water shortages is increasing in some areas, as populations grow in areas already experiencing limited water supplies. Areas with previously plentiful water supplies are now beginning to experience shortages because of rising demand. Finding solutions to balance the increasing demands for water and the limited supply is made more difficult by the severe and prolonged drought that has affected wide areas in recent years.

Figure 23–Natural disaster is a constant, yet unpredictable, threat to America's farmers and ranchers. Drought costs an average of $6 billion annually in loss of income to farmers and ranchers across the nation. The map shows the primary (dark gray) counties and contiguous (light gray) counties designated as disasters due to losses from drought.
Source: USDA Drought Information Web Page, http://drought.fsa.usda.gov/designations.asp

Agriculture accounts for nearly 80 percent of all water consumption nationwide. The major agricultural use of water is for irrigation. Inadequate management of irrigation water can increase costs of irrigation and cause degradation of soil and water resources.

Developing watershed plans that address water shortages and incorporate practices that minimize the effects of drought is critical to long term watershed health. The National Drought Policy Commission found that the Nation's vulnerability to the impacts of drought, and thus the need for emergency relief, could be reduced by making preparedness the cornerstone of national drought policy. Planning that mitigates the effects of drought is hampered by the absence of information about local climate and drought conditions and predictions. Without this critical information, landowners and land managers cannot make timely production decisions nor can communities and individuals implement proactive mitigation strategies. Lack of information can be a substantial problem on American Indian and Native Alaskan lands. Some tribal lands lack soil survey, stream flow, and range condition information, which are critical to planning.

Performance Goal

By 2008, 7.2 million acres will be treated each year to apply irrigation water management to improve water use and protect soil and water quality.

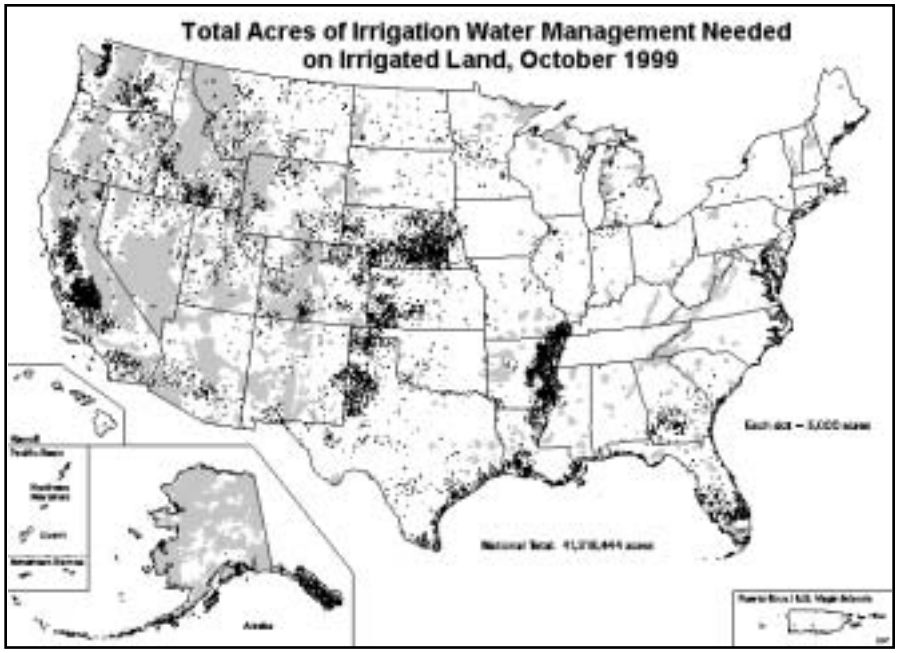


Figure 24–In 1999, an estimated 41 million acres of irrigated land needed irrigation water management to help ensure water use efficiency, minimize soil erosion, and protect water quality. Each dot represents 5,000 acres in need of irrigation water management. Gray shaded areas indicate Federal land is greater or equal to 95 percent of the county.
Source: 2001 WLA, October 1999.

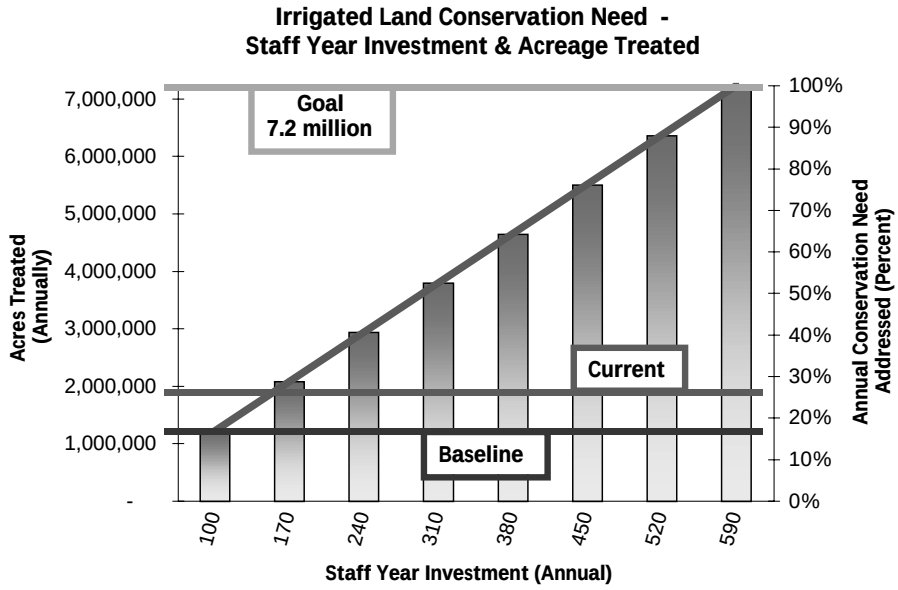


Figure 25–This graph shows the 2000 baseline, the 2002 level of performance and staffing, and the annual staff years needed to reach the strategic goal of meeting the full annual conservation need on irrigated land. The annual conservation need reflects best local estimates of the number of acres needing treatment each year in order to address conservation problems and maintain the resource.
Source: 2001 WLA, October 1999; WLMA, July 2000.

Baseline
In 1999, 41 million acres needed irrigation water management to manage and control the moisture environment of the plants, promote desired response, minimize soil erosion and loss of nutrients or pesticides, control undesirable water loss, and protect water quality. To address the total need in an appropriate time frame, irrigation water management needs to be applied on 7.2 million acres of irrigated land each year. In 2002, NRCS and its partners provided assistance on about 1.9 million acres of irrigated land.

Performance Goals
- By 2008, the conservation partnership will assist 700 communities each year to develop, revise, or implement group or area plans that address water supply concerns to help with drought preparedness.
- By 2008, the conservation partnership will provide drought risk information on a regular basis, education, and decision support assistance to private land owners and managers in 700 drought prone areas, including Indian reservations.

Baseline
Baseline to be established for FY 2003.

Strategies
- Help communities conduct watershed-level assessments of conditions and needs and develop plans to prepare for and minimize the effects of drought.
- Increase assistance to tribal governments to protect their lands and manage water resources to meet reservation needs.
- Provide technical assistance to producers in the development and implementation of on-farm water conservation/drought plans.
- Acquire, develop, and transfer technology on plant species that can survive drought and mitigate its impact.
- Provide accurate, timely information on current water supply and reliable predictions of future supplies through SNOTEL data (for the 13 western states) and the Soil Climate Analysis Network (SCAN) nationwide. Fully automate the Snow Survey Program to bring real-time information to water supply forecasters.
- Complete soil survey work on all non-Federal lands to support water supply and drought mitigation planning.
- Work with tribal, State, and Federal entities to develop market-based water banks to assist producers interested in voluntarily idling production on irrigated lands in drought years in return for payment.
- Provide appropriate assistance to beginning operators, women operators, members of minority groups, tribes, and operators of small or limited resource enterprises.
- Provide training to help irrigation equipment suppliers and contractors in planning equipment installation and provide services to help operators increase efficiencies in irrigation water delivery and application systems conforming to NRCS standards.

Goal 4–Deliver high quality services to the public to enable natural resource stewardship.

Modern American agriculture includes a highly diverse set of farms and ranches, applying unique technological possibilities to respond to a new array of increasingly well articulated consumer demands in a global food system. Enterprises vary widely in size, production practices, level of technology applied, and commodities produced. Even the degree to which operators depend on farming for their income varies greatly. Adding to the complexity is the increasing diversity of rural America. As communities become more diverse, locally-led conservation involves a broader array of stakeholders–groups with markedly different perceptions and knowledge and goals. Over the period of this strategic plan, NRCS must continue to provide high quality services to traditional customers while reaching out to nontraditional and underserved customers and providing new services to customers who need very different kinds of information and technology.

NRCS, local conservation districts, State conservation agencies, and RC&D councils form a network that can respond to the conservation needs of individuals, tribes, and communities across the country. This partnership has the flexibility and authority to develop and implement conservation solutions based on local conditions. Ensuring the availability of up-to-date and effective science-based conservation technology and

resource information is essential to achieving our mission. These tools are the basis for enabling good land stewardship.

This goal lays out two objectives that describe NRCS's commitment to: 1) fair and equitable delivery of services and 2) development and maintenance of technical infrastructure.

Objective 4.1–Deliver services fairly and equitably.

NRCS is committed to providing equivalent service to all customers, regardless of race, color, national origin, gender, religion, age, disability, sexual orientation, marital or family status, political beliefs, parental status, or protected genetic information. As public servants, we cannot be effective without being fair. We cannot be responsive without being respectful. We cannot deliver programs and services effectively without being sensitive to the human issues that are so much a part of our work.

NRCS is responsible for delivering its programs to all citizens in this country, and that responsibility flows through agreements and contracts to everywhere Federal dollars are involved. NRCS and all of its partners must live up to this responsibility in everything we do, from meetings with landowners to delivery of services.

Our use of technical service providers to help implement the Farm Bill will be the largest effort in our history to rely on the expertise of others, rather than working directly on-site ourselves. We must be sure we have a diversity of technical service providers, and we must be sure our technical service providers do a good job of serving all farmers and ranchers.

Performance Goal
By 2008, 467,000 members of minority, underserved, and nontraditional groups will receive NRCS conservation assistance annually to help them plan and apply conservation on their lands and the lands that they manage.

Baseline
In fiscal year 2002, a total of 418,991 minority customers were served.

Performance Goal
By 2008, 150,000 women who are primary operators of an agricultural operation will receive technical assistance in planning or applying conservation on their operations.

Baseline
In fiscal year 2002, a total of 144,271 women who were primary operators of an agricultural operation were served.

Strategies
- Recognize the multilingual and multicultural needs of our customers. Ensure that agency information, tools, and technologies are in formats that can be used effectively by minority, underserved, and nontraditional groups. Produce communications materials, such as multilingual publications, specifically targeted to reach underserved groups.
- Strengthen ties with minority serving academic institutions and community based organizations to develop and deliver services to meet the needs of minority, underserved, and nontraditional customers (e.g., Historically Black Colleges and Universities, Hispanic Association of Colleges and Universities, 1994 Institutions, Native Alaskan, people with disabilities, and others).
- Work with tribal governments to establish offices and assistance delivery approaches that meet their needs.
- Broaden and strengthen the conservation partnership. Conduct active outreach programs to inform all underserved groups of the availability of services.
- Increase program flexibility to allow innovative strategies using existing authorities to reach historically underserved landowners and land managers, and seek new authorities.
- Incorporate environmental justice issues and equal delivery of services into annual plans of operation.
- Continuously review all agency activities, including program requirements, to ensure that discriminatory aspects do not exist.

Objective 4.2–Develop and maintain technical infrastructure.

Effective stewardship depends on having science-based information and technology that are up-to-date with current conditions, easily accessible, and designed to meet user needs. NRCS meets a broad range of technology and information needs – from conservation "how-to" for the homeowner to technical standards and tools for conservation professionals. We design conservation practices that help private land owners to achieve personal conservation and production goals and to meet their community's environmental expectations. NRCS technical standards

for soil science and soil surveys, conservation engineering, and other specialties are recognized world-wide, and we share our expertise around the globe through personal exchanges and through the reach of the Internet.

Our National Resources Inventory and Soil Survey databases help scientists and policy makers to track natural resource conditions and trends, information that is essential to conservation policy and program development.

The Internet allows NRCS to provide digital data more efficiently, to present technical information in new and creative ways, and to reach many more clients around the clock. As we make use of the Internet, we are guided by recent Federal initiatives – the President's e-Government initiative, "Section 508" website-accessibility requirements, and guidelines on information quality and security established by USDA and the Office of Management and Budget.

All data and information disseminated by NRCS will meet the following criteria for excellence:

- Objectivity: Information disseminated will be substantively accurate, reliable, and unbiased and presented in an accurate, clear, complete, and unbiased manner.
- Source: To the extent possible, consistent with confidentiality protections, NRCS will identify the source of the information so that the public can assess whether the information is objective.
- Utility and accessibility:
  - Usefulness will be assured.
  - Transparency.
  - Accessibility: Disseminated information will be accessible to all persons pursuant to the requirements of Sec. 508 of the Rehabilitation Act.
- Integrity:
  - Protection: All information will be protected from unauthorized access or revision, corruption or falsification.
  - Security: All information will be secured per the Government Information Security Reform Act.
  - Integrity: The integrity of confidential data and information will be maintained.
- Timeliness of the data

Table 2: NRCS Information and Technology Resources

Field Office Technical Guide	This compilation of resource information, about soil, water, air, plant, animal, and socio-economic resources guides local conservation planning assistance by NRCS and its partners. Tailored to local conditions, it is available online as the "eFOTG."	
Ecological Science and Engineering	Agronomic/ conservation practices Aquatic and terrestrial ecosystem management Cultural resources Ecological climatology/air quality Forestry and Agroforestry Nutrient management Pest management Plant materials Range and grazing land ecology Wildlife management	Hydraulic engineering Irrigation and water management Snow surveys and water supply forecasting Animal waste management Stream restoration Watershed protection Dam site analysis
Soils	Soil survey maps and data Standards for soil surveys Soil quality assessment Soil use and management guides World soil geography expertise	
National Resources Inventory	Summary reports Statistical design information Data access	
Analysis	Natural resource status, condition, and trend analysis based on the NRI and other data Program data analysis Special analyses on nutrients and pesticides	

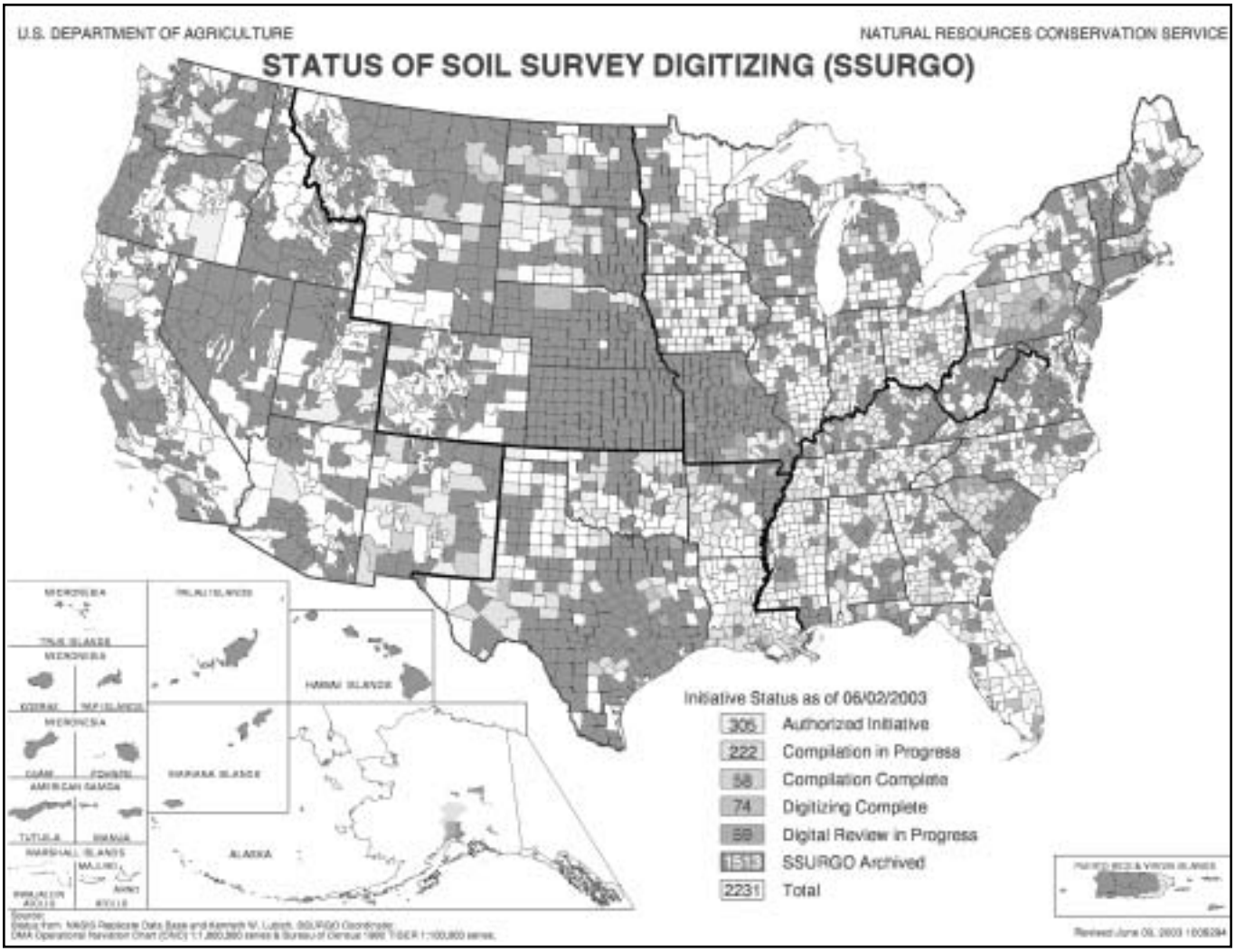


Figure 26–This map shows the status of soil survey digitization for the Soil Survey Geographic (SSURGO) database. Digitized soil surveys make detailed soil data available for use in geographic information systems (GIS) and other computer-assisted systems for natural resource planning and management.
Source: NCGC, SSURGO Status map, December 2002

Performance Goal
By 2008, a total of 2,800 soil surveys will be available in digital form, making interpretations of soil survey information easily accessible to customers, partners, and other users.

Baseline
At the end of FY 2002, a total of 1,368 soil surveys were available in digital form.

Performance Goal
By 2008, appropriate, available electronic technology will be incorporated into the electronic Field Office Technical Guide (eFOTG) delivery format, to increase the availability and accessibility of the technical information.

Baseline
In 2002, Field Office Technical Guides (FOTGs) were migrated to the internet, easily web accessible by employees and the public.

Performance Goal
By 2008, all Field Office Technical Guides (FOTGs) will be reviewed and revised according to the schedule set in NRCS technology policy.

Baseline
In 2001, technology policy was revised, establishing a procedure for reviewing and revising, if necessary, the content of all FOTGs every 5 years.

Strategies

- Conduct the Conservation Effects Assessment Project (CEAP), which is a 7-year, inter-agency effort that will provide the data and analytical models to produce a scientifically-defensible national assessment of the environmental benefits of the conservation provisions of the 2002 Farm Bill. By the end of 2005, CEAP will deliver an analytical system capable of estimating the effects of conservation practices on cropland health and on movement of sediment, nitrogen, and phosphorus from agricultural operations.
- Lead the National Cooperative Soil Survey, establishing and maintaining standards and procedures for soil surveys that all Federal agencies follow. Complete, update, and maintain soil surveys for all private and non-Federal lands. Complete the production of soils information in digital form. Ensure easy access to the data with state-of-the-art information systems that are increasingly used by our customers and partners. Support and maintain the National Soil Information System, accessible through the Soil Data Warehouse.
- Cooperate with other Federal agencies in joint inventory activities and data management agreements to ensure compatibility and consistency of resource information. Integrate data collected by NRCS with data collected by other Federal agencies, State and local governments, agribusiness, and customers.
- Provide field staff the needed technology, tools, and additional technical support to deliver conservation. Make digital orthophoto quads (DOQs) available at the field level for use as a basic conservation planning tool with land users.
- Develop planning and resource assessment tools and data collection systems. Develop field and analytical methods and techniques for assessing soils and landscapes. Develop methods and indicators for assessing and monitoring the status of natural resources, watersheds, and landscapes.

Management Strategies

Good management of internal business processes and agency resources is essential to efficient program operations that provide high-quality customer service and effective use of the taxpayers' money. Over the next few years, we will focus on implementing the management strategies that the President's Management Agenda (PMA) has identified as key to improving the effectiveness and accountability of the Federal government as a whole. We have developed detailed, long-range action plans to meet the criteria for excellence for each of the five components of the PMA - human capital, competitive sourcing, electronic government, financial management, and budget and performance integration. Major tasks in these plans are included in the agency's annual business plan and in annual operating plans at all levels. Implementation of these tasks will enable us to:

- Maintain an efficient, high-performing, diverse agency workforce, aligned with mission priorities and working cooperatively with our partners and the private sector.
- Make effective use of electronic information management systems to minimize the administrative workload of employees and enable them to provide better service to customers.
- Improve accountability and performance reporting processes within the agency.
- Improve financial management and link budget decisions more closely with program performance, providing managers and policy makers with timely

information on the full cost and the benefits of activities.

Human capital management

This strategic plan includes critical human capital initiatives necessary for NRCS to effectively recruit, manage and maintain a workforce that is highly motivated, skilled, flexible, and technologically adept.

Strategies for human capital management in the period of this strategic plan respond to two overriding trends:

- Over the life of the 2002 Farm Bill, the conservation workload will greatly exceed the capacity of the existing agency and partnership workforce.
- Over the same period, the agency could experience a serious loss of knowledge, experience, and institutional memory as employees reach retirement age and are replaced with less-experienced newly hired employees.

Increasing non-Federal capability

NRCS employees work with the employees of non-Federal agencies, volunteers, non-profit organizations, and private sector technical service providers in a delivery system that carries out the Nation's conservation agenda on private land. At the field level, the workforce of the conservation delivery system already includes as many State and local employees as Federal, although the Federal segment includes a higher proportion of highly trained technical specialists. The demand for technical assistance will increase as financial assistance increases over the life of the 2002 Farm Bill. The potential volume of program participants may overwhelm the assistance available through existing sources. Meeting the demand for services will require that we:

- Rely increasingly on private-sector, governmental, and non-governmental providers of technical services to supply most of the increased technical assistance needed to implement the expanded conservation programs. We will establish processes to certify individual service providers and enter into agreements with governmental and non-governmental entities to provide services. We will ensure the technical service provider process works effectively, with good quality control and fair prices.
- Focus our employees on the core Federal functions and look for the most cost-effective source of every function. We will increase the use of competitive sourcing in cases where the private sector can provide equal quality at less cost. By FY 2006, we will complete the competitive sourcing process for 50 percent of the agency positions considered not inherently governmental.

Sustaining Agency Capability

NRCS's primary corporate asset is the knowledge, skills, and dedication of its employees. That will remain true even as the agency's role changes somewhat over the next few years. The core Federal technical workforce must continue to possess technical expertise in a wide range of disciplines to provide guidance to the array of new non-Federal service providers. Our need for leadership and management skills will increase as we work to bring a wider range of interests and partners together to get conservation on the land. Maintaining excellence in the range of needed disciplines may be difficult in the next few years because almost 50 percent of the NRCS field-level workforce and 83 percent of senior executives will be eligible to retire in 5 years.

Over the past several years, we have taken a number of steps to prepare for this change in personnel. These steps meet criteria for key elements of the President's Management Agenda for strategic management of human capital and are consistent with the Office of Personnel Management's (OPM) human capital balanced scorecard. For example, we have implemented a strategic workforce planning initiative with supporting automated performance and administrative systems. Our activities have been recognized by the National Academy of Public Administration and OPM as examples of successful workforce planning programs. To sustain the capability of the Federal workforce, we will:

- Implement a comprehensive national recruitment strategy and outreach plan that will allow us to:
  - Recruit highly qualified employees from a variety of agriculture-related and diverse organizations.
  - Engage partners, organizations, under-served communities, and Indian Nations in the recruitment process.
  - Utilize recruitment incentives and hiring flexibilities to increase or retain the current workforce.
  - Market the agency's positive mission and family-friendly work environment.

- Develop and maintain a skills database to capture information, such as education, training history, special skills and certifications in order to:
  - Assess the agency's technical capabilities.
  - Generate proficiency models, core curriculum, and training needs inventories to fully develop the agency's workforce to meet strategic objectives.
  - Identify skills and competencies required by each position, to be used for recruitment/staffing and training purposes.
  - Respond to congressional inquiries.
- Maintain established employee development programs, such as:
  - A multi-level leadership program.
  - The Administrative and Information Technology Trainee Program.
  - A mentoring policy.

Business processes and systems

To perform at their best, employees need to have access to efficient, reliable electronic systems to manage information and streamline repetitive tasks. In the past few years, we have re-engineered most of our mission-critical information systems. At the same time, our computing and network infrastructure has been upgraded through participation in USDA's Service Center common computing environment initiative. Field offices have access to the Internet and local area networks, modern workstations and laptops, and GPS units.

Over the period of this strategic plan, we will continue to:

- Design, develop, and implement a Technical Service Provider Registry to address the requirements of the 2002 Farm Bill.
- Implement the My.NRCS Portal.
- Meet Government Paperwork Elimination Act (GPEA) mandates by having all required NRCS forms on-line and accessible by the October 2003 deadline.

We have established a performance goal for increasing efficiency through improved business processes and information management technology. This goal is to reduce by 5 percent from the baseline of FY 2002 the average annual technical assistance cost for each active participant in the mandatory programs authorized by the 2002 Farm Bill.

Accountability

The Nation made a massive commitment to conservation in the 2002 Farm Bill. NRCS must manage the taxpayers' money well and be able to document how the funds have been spent and what they have produced. That will require better planning, budgeting, and reporting, both within NRCS and by partner organizations who help us deliver the programs.

Efforts to improve performance and financial management, integrate performance management systems, and integrate financial and operations management have already been taken. Over the past four years, NRCS has developed an Integrated Accountability System to provide more timely budget and performance information. The agency has been recognized as a leader in natural resource performance measurement by performance management organizations. For the period of this strategic plan, we will:

- Develop processes to better record obligations and improve the accuracy and timeliness of our financial information. We will ensure that the full budgetary cost of activities can be tracked and charged to the appropriate budget account so that the information on the cost of outputs and programs can be integrated with information on benefits produced by the programs.
- Develop methodologies to show how program outputs affect desired outcomes.
- Improve some of the ways NRCS works with – and tracks its work with – all of its partners. We will make use of more rigorous cooperative agreements, renegotiated more frequently, and make greater use of the more formal Request For Proposals process for cooperative ventures.
- Continue the upgrading of the existing automated applications for tracking and managing records that is underway. The enhancements will incorporate greater tracking capability for a wider range of services rendered.

Resources Needed

The outcome-related goals identified in this strategic plan are based on the total conservation need. The National Partnership Workload Analysis, completed in October 1999, provided data on the extent of the conservation need, as determined by technical specialists in field offices across the country. Based on these data and the work processes in general use in 1999, an estimated 41,300 conservationists would be needed at the local level on a continuing basis to provide technical assistance to landowners and managers, communities, and government entities.

The 2002 Farm Bill substantially increased Federal funding for financial and technical assistance for conservation to help meet this identified need. In order to ensure that a larger cadre of conservation experts would be available to provide increased assistance, the Farm Bill also authorized creation of a system to certify and pay third-party technical service providers to assist producers participating in conservation programs. NRCS will depend on these non-Federal technical service providers to meet most of the increased technical assistance need associated with Farm Bill programs. NRCS is also continuing development and implementation of streamlining initiatives and enhanced information technology to increase efficiency. Continuing investment in electronic communication and information management technology will be needed to support streamlined business processes.

Key External Factors

The drivers of change in society at large—fundamental changes in family structure and the workforce, globalization of markets and culture, advances in information and biological and other technologies—are at work in agriculture as well. These factors affect the services customers need from NRCS and the internal processes and resources available to the agency to deliver the needed services. Goals and strategies in this plan are based on analysis of the external environment and are designed to respond effectively within the context of the current conditions. Nevertheless, some factors beyond the control of NRCS may strongly influence our ability to achieve our goals. The most influential of these uncontrollable external factors include:

- **Economic forces affecting agriculture.** Agricultural producers now operate in a global, technologically advanced, rapidly diversifying, highly competitive business environment that is driven by increasingly sophisticated consumers. Economic forces such as global and domestic market fluctuations, competition, and economies of scale affect profitability, product-mix decisions, advances in technology, and complexity of operations. These forces have contributed to shifts in the location of production, changes in the size of production units, and the vertical integration of livestock production and other industries. American agriculture today includes a small number of large farms and larger numbers of mid-size and small operations. Operators of large farms and ranches are sensitive to the fluctuations of global markets. The smaller operations depend on non-farm income to maintain viability and are, therefore, closely bound to other parts of the rural economy. Regardless of scale, farmers' ability to implement conservation practices is strongly affected by their immediate economic situation and their expectations for economic conditions in the near future.
- **Demographic pressures driving use of natural resources. Global population continues to increase exponentially.** A growing and increasingly mobile world population results in greater ethnic and racial diversity in this Nation's communities. Nearly 80 percent of Americans live in urban and suburban areas. Nearly 75 percent live within 2 hours of a coast. Rates of population growth in the past few years have been high in the West, where water supplies are generally limited and many ecosystems are fragile. Greater population densities exert greater pressures on the environment, creating a need for increased effort to minimize the impacts. Continuing demand for new sites for homes and industries, transportation, and recreation results in conversion of agricultural land to non-agricultural uses and fragmentation of open space. As the landscape increasingly becomes a mosaic of developed areas scattered within agricultural land, the need for conservation increases while the options available to producers

may be constrained. Demographic changes also have implications for the delivery of appropriate conservation assistance to an increasingly diverse customer base that is no longer primarily rural. Effectively protecting resources and the environment in this diverse landscape requires the joint effort of many entities across wide areas of the landscape. Activities in parts of an area outside USDA influence can offset the effects of improved management of agricultural land, so that the watershed or ecosystem as a whole may fail to show the expected improvement.

- **Dependence on external sources for conservation technology.** Advances in agricultural production technology can have both beneficial and adverse effects on the environment. Research on the possible environmental impacts of new technology and development of effective ways to address existing and emerging problems are of critical importance. NRCS depends heavily on conservation technology developed by other agencies, land grant institutions, and the private sector. These entities' continued investment in research and development for conservation technology is essential for this agency's success. If development of new conservation technology does not keep pace with changes in environmental and agricultural conditions, we may be poorly equipped to meet emerging needs and achieve conservation targets identified in this plan.
- **Unusual or prolonged adverse environmental conditions.** Weather extremes always have posed a challenge to agriculture and conservation. Recent episodic events such as drought, flooding, hurricanes, and major wildfires have caused substantial damage to soil, water, and related natural resources. If these events occur on a large scale, or are unusually frequent during the next 5 years, it will be extremely difficult to achieve the natural resource improvements envisioned in this plan.
- **Limited financial resources available to the conservation partnership.** In recent decades, the roles of members of the conservation partnership have changed, as has the nature and extent of the resources each contributes to conservation activities. Programs and personnel funded by States have increased, while the NRCS workforce has decreased. The 2002 Farm Bill authorized increased Federal funding for conservation, but will not significantly increase the NRCS workforce. Given the severe budget constraints that many State governments face, State and local funding for conservation in the next few years is not likely to increase to ensure an adequate cadre of technical experts is available to assist producers. The 2002 Farm Bill authorizes payment of conservation program funds to private sector technical service providers, but the number of such providers currently is small.

Relationship to Annual Goals

Performance plans provide the link between the long-term goals established through strategic planning and the day-to-day activities of agency personnel. Performance planning is the tool for setting annual targets that help move the organization toward achieving its mission.

The performance measures and targets in the strategic plan form the basis for developing annual performance goals. Annual performance measures are indicators of progress that relate directly to a long-term strategic goal and can be measured annually. The annual performance plan presents the anticipated results of the proposed expenditure of agency funds. In NRCS, performance plans are developed at the national, State, and county levels. The national performance plan provides the framework for the development of state and county performance plans. Initial goals to accompany the President's budget are developed for the national plan based on past performance data reported at the field level and adjusted to reflect program priorities and funding decisions in the President's budget. After the budget is enacted, the initial goals are revised at the state and county levels to reflect actual funding.

For this updated plan, long-term performance targets envision meeting the total conservation need to ensure that natural resources are adequately protected to remain productive over the long term. Related annual measures quantify specific activities that contribute to achieving the long-

term improvement. For example, progress toward the long-term goal for rangeland adequately treated is tracked annually through goals for the extent of rangeland on which complete conservation systems (resource management systems) will be applied in a fiscal year. Data are also collected for activities for which targets are not set; for example, data are reported for conservation systems planned on rangeland and for prescribed grazing applied. The annual measures are, or are directly related to, activities that can be associated with a specific program.

The current strategic performance targets cannot be directly tied to measurable changes in resource condition. For example, we cannot say how much cleaner surface waters will be if we meet our goals for acres of cropland and grazing land treated and number of animal feeding operations assisted in 2008. The 2002 Farm Bill requires that we report on the environmental effects of the programs authorized in the bill, and the President is requiring all Federal agencies to identify outcome-related strategic goals for all programs. We are accelerating activities to work with USDA research agencies and other Federal agencies that have natural resources responsibilities to develop environmental performance measures that can be tied to the activities of agency programs and used to set strategic goals in future planning cycles.

In general, annual measures even then will continue to be activity based. Annual measurement of change in environmental condition can be costly, and external factors may exaggerate or mask the effects of management practices applied. By monitoring annual indicators of changes in resource management, however, we can make a judgment as to how well we are progressing toward our strategic objectives. Outcomes–the impact of these activities on the condition of the resource–will be determined through the use of National Resources Inventory data on resource condition and trends, workload analysis estimates of conservation needs, other appropriate inventory and monitoring data, and models currently under development. The results of these annual progress reports and outcome evaluations will feed into the strategic planning process and will be used to adjust or improve goals and targets.

Program Evaluations

Periodic evaluations of the implementation and accomplishments of individual conservation programs administered by NRCS are a critical element of overall performance measurement. Findings of periodic and annual evaluations are used to refine agency strategic objectives and guide agency strategic planning. Program evaluations are routinely conducted within NRCS through a variety of methods:

- Program managers complete programmatic reviews, which assess the propriety of implementation at the field level.
- The Oversight and Evaluation Staff completes independent reviews of various programs to ascertain compliance with existing laws, executive orders, regulations, policies, and procedures. Procedures utilized include surveys, comprehensive reviews, and quick response reviews depending on the issue, scope, and depth of review needed.
- State offices are responsible for compliance reviews of the individual programmatic activities and for operational reviews within their jurisdictions.

Evaluation schedules are prepared a year in advance and are included in the agency's business plan for that year. Programs are evaluated to assess how effectively each contributes to achieving the desired outcomes and to estimate the benefits achieved, the cost effectiveness, and the extent to which customer needs and congressional intent are met.

Since 1997, evaluations have been conducted to determine the adequacy of operation and maintenance on NRCS-assisted project dams, technical and administrative activities related to wetland protection, and ability to meet the expectation for planning and implementation assistance called for in the Joint Unified National Strategy for Animal Feeding Operations. These evaluations were instrumental in updating this strategic plan and have led to development of new objectives and refinement of performance targets. In addition, results of these evaluations have led to additional management actions to improve performance.

NRCS currently is strengthening its quality assurance policy, which details the process and roles and responsibilities for implementation of the policy. The quality assurance process is used to ensure that all agency conservation planning and application and program implementation and delivery activities are conducted in compliance with agency policy and procedures and program guidelines. Each State also has a quality assurance plan, which is the principal vehicle for implementation of the quality assurance process.

A Program Assessment Rating Tool (PART) review has been completed on the Farmland Protection Program (FPP), Wetlands Habitat Incentives Program (WHIP) and the Conservation Operations (CO) program. The results of these assessments will be utilized to strengthen the program activities.

The Accountability System has undergone a thorough review by the Oversight and Evaluation staff and is being revised to provide for more transparent data harvesting from electronic conservation planning and contracting information technology systems. Geo-referencing of conservation practices installed on the land will provide better data for use in modeling environmental outcomes.

During the period covered by the strategic plan, NRCS will conduct or assist in conducting several major evaluations and studies, which are shown in the following table. Several of these are necessary to respond to the requirements of the 2002 Farm Bill.

Table 3: Major Program Evaluations and Studies

Evaluations/Analyses	General Scope	End date
Assessment of conservation programs, called for by the 2002 Farm Security and Rural Investment Act (FSRIA)	USDA evaluation to identify strategies to coordinate programs for land retirement and conservation of agricultural working lands to eliminate redundancy, streamline delivery, and improve services to agricultural producers.	2005
State of the Land assessment	Agency effort to appraise the status, condition, and trend of soil, water, and related resources on non-Federal land.	2004
Evaluation of the Resource Conservation and Development Program, called for by the 2002 FSRIA	Agency evaluation, in consultation with RC&D Councils, to determine effectiveness of the program and develop recommendations for improvements.	2005
National Conservation Partnership Workload Assessment	Develop revised estimates of the time, by technical discipline, required to produce each of the partnership's core work products and of the fiscal year and long-term workload for selected products.	2004
Review of the operation of agricultural and natural resource programs available to farmers and ranchers operating on tribal and trust land, required by the 2002 FSRIA	USDA evaluation, in consultation with Dept. of Interior, to develop strategies for increasing tribal participation in agricultural commodity programs and conservation programs and describe actions to be taken to implement program improvements.	2003
Assessment of the environmental benefits of Farm Bill conservation programs	Agency effort to develop capacity to report in quantitative terms the annual soil quality improvements, water quality improvements, and carbon sequestration gains resulting from application of conservation under the Farm Bill programs.	2008

Role of External Entities

This plan was prepared by NRCS employees. No contractors were involved in activities directly related to preparation of the plan.

Appendix A-Strategic Planning in NRCS

Strategic planning in NRCS involves all levels of the agency; partners; local, State, and tribal governments; Federal agencies; and other stakeholders. It is a continuing process by which the agency envisions its future and identifies the procedures, operations, and resources necessary to achieve that future. Activities are conducted in accordance with the Soil and Water Resources Conservation Act of 1977, the Government Performance and Results Act of 1993, and USDA guidelines.

The NRCS strategic planning process includes:

Inventories and Assessments. Information on the status, condition, and trends of the Nation's natural resources, as well as workload, performance, and workforce data, is gathered and assessed to determine resource concerns and approaches to address identified needs. Information is gathered at all levels of the agency, from national level assessments to locally identified priorities.

Identifying and Analyzing Alternatives. Alternative strategies for addressing identified resource concerns are developed and analyzed. Science-based resource analyses project the impact on resource conditions and workload analyses define costs.

Consultation and Reaching Consensus. Consultation with stakeholders, partners, government agencies, tribes, and interest groups helps define general goals, objectives, and performance targets.

Communication and Evaluation of Draft Documents. Planning documents are developed and the plan, with the associated goals and performance targets, is communicated to all levels of the agency and to all stakeholders. Review and evaluation identify new information and analytical needs, leading into the next planning cycle.

Updating and Revising the Plan for 2003-2008

NRCS' initial strategic plan for 2000-2005 was based on data on resource conditions, conservation workload, and agency performance that were available for analysis in 1999, before Secretary Veneman had issued policy guidance and before passage of the 2002 Farm Bill. The plan reflected input from stakeholders gathered through listening sessions conducted during the conservation community's discussion of Farm Bill options. This update addresses the 5 year 2003 – 2008 span and incorporates newer NRI data, the Secretary's policy, the new authorities enacted by the Farm Bill, and the President's management agenda. It reflects stakeholder input on implementation of new programs and provisions of the Farm Bill. It also reflects a review of the current plan by agency managers.

The next step in strategic planning is a thorough revision of the goals, objectives, and performance targets of the plan. The full revision will be based on more extensive analysis of current data on resource condition and conservation needs. It will also be based on extensive consultation with partners, customers, and other stakeholders. This process will be completed by the end of 2003.

Appendix B-Data on Conservation Needs

The estimates for conservation need were gathered through the 2001 National Partnership Workload Analysis (WLA) and are based on the total resource need in the parish/county for each core work product. Data were gathered at NRCS field offices across the country and were based on the following guidance:

Total Conservation Need: Estimates should be based on resource information provided by the State office, soil conservation district's annual work plans, and other published resource assessments recently completed for the county/parish. The amount reported should be equal to the number of acres for the respective land use, minus the acres where conservation systems have been applied and are being maintained.

Source of Data: The 1992 National Resources Inventory (NRI) data should be used to determine the total acres of the land use, unless another credible data source is available locally.

Local Adjustments: Field offices should subtract the acres of conservation systems currently meeting the field office technical guide (FOTG) criteria from the acreage of the land use to determine the total conservation need for the core work product. Use NRI treatment needs data, local resource assessment reports, and cumulative progress data to estimate the acreage meeting FOTG criteria. In the case of forestland, local staff were directed to make an additional adjustment in acres considered in order to exclude forestland acres where NRCS would not have authority or responsibility for providing technical assistance. Thus, the estimates for forestland in need of conservation treatment are not comprehensive.

[Note: NRI treatment needs data are based on the judgment of a qualified specialist as guided by the local field office technical guide, the prevailing agricultural operations, and the guides used in development of conservation plans. If conservation practices or systems are necessary and feasible to arrest or prevent deterioration or enhance the productive capacity of the soil, water, plant, or animal resources, the land is reported as needing conservation treatment.]

Quality Control: If the total acres of conservation need for a land use exceed the total acres for that land use in the county/parish as reported in the 1992 NRI data tables, the reasons for the difference were to be documented and made available on request.

Updating the Conservation Needs Assessment

Conservation needs for major land uses are scheduled to be reassessed in 2004 in conjunction with an updated National Partnership Workload Analysis. Conservation needs will be determined, using the same guidance as the previous assessment, but with the latest NRI and Agricultural Census data.

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