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## WATERSHED MANAGEMENT IN NEW MEXICO

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Thank you for inviting me to speak on watershed management. Our agency has been working on watershed management for the past 68 years. NRCS has its roots in the Dust Bowl era and the CCC Camps of the Great Depression. In 1933, the Soil Erosion Service was formed, and in 1934 the agency's name changed to the Soil Conservation Service. Since the Dust Bowl, we have worked with more than just the soil resource, so in 1994, the Soil Conservation Service was renamed to the Natural Resources Conservation Service. This latest name change truly reflects the nature of our work, which includes all natural resources.

**Our mission:** to provide leadership in a partnership effort to help people conserve, improve, and sustain our natural resources and environment

We have always worked with landowners, land operators, and land managers to improve the land, water, air, plant, and animal resources. We have always worked toward sustainable resource conditions.

**Our vision:** harmony between people and the land

Installing conservation practices on private land is always done as a voluntary effort. Best management practices will not remain on the ground long unless the owner or operator wants the practice and is willing to maintain it.

Conservation work must help the producer meet his or her objectives, which generally means the practices must improve the quantity or quality of the producer's operation. In addition, the practices must be based on ecological principles in order to be sustainable.

## **Our Philosophy**

The NRCS is the federal agency that works hand-in-hand with the American people to conserve natural resources on private lands, and our work is based on scientific and technical expertise and our partnerships with conservation districts and others.

## **Our Partners**

Our partners in accomplishing our mission and vision are:

- Soil and Water Conservation Districts; New Mexico has 47 of these districts
- Local communities, both incorporated and unincorporated
- State and federal agencies
- NRCS Earth Team volunteers
- Agricultural and environmental groups
- Professional societies
- Resource Conservation and Development Councils; NM has 8 councils.
- Universities, conservation organizations, and agribusiness

## **Our Customers**

Typically the NRCS works one-on-one with:

- Farmers and ranchers
- Other land decision makers
- Local and state governments
- Other federal agencies
- International governments
- Resource Conservation & Development Councils
- Rural and urban communities
- Water management groups
- Other individuals, groups, and associations
- And ultimately, every water user and food consumer in the nation

## **Our Natural Resources**

### **SWAPA + H**

**S**oil, **W**ater, **A**ir, **P**lants, and **A**nimals plus the **H**uman Environment

NRCS has created an acronym for the natural resources that we work on. SWAPA represents the soil, water, air, plant, and animal resources. These are the five basic natural resources. If land managers and society take care of these five basic natural resources, then we have cared for the land, its habitat, and its ecological health. The + H represents the human context through which conservation practices are applied on the landscape.

### **Soil Conservation Service**

From 1935 to 1994, the Soil Conservation Service (SCS) assisted conservation districts, and through these districts, the SCS and the districts installed conservation on private lands. These practices have conserved, improved, and sustained the SWAPA resources. In 1994, the SCS was renamed the Natural Resources Conservation Service.

Since 1994, the Natural Resources Conservation Service (NRCS) along with conservation districts and landowners have continued to apply conservation practices on private lands.

### **Today's Natural Resource Issues**

It seems that issues and concerns affecting all citizens have grown more worrisome and complex. Today, we are concerned about water quality, *Pfisteria piscicida* outbreaks in the Gulf of Mexico, excess nutrients, toxins and oxygen depletion in runoff, and catastrophic events like flooding, drought, and wildfire. We have increasing demands for both surface and groundwater, and we are concerned about wildlife habitat restoration and development, animal waste management and storage, recreational needs, and agricultural water management (including irrigation, rural water supply, and water conservation).

### **Landowner Assistance Programs**

The NRCS administers conservation programs and cost sharing to provide society's share or stake in sustainable landscapes and healthy ecosystems. Conservation practices are installed using contracts between the land manager and the NRCS. One program is the Environmental Quality Incentive Program, or EQIP. This program spends roughly \$4.6 million in New Mexico each year. The program cost shares at

about 50-75 percent federal dollars. So this represents \$6.1 million worth of conservation applied to the land.

Another program is the Conservation Reserve Program, or CRP. This program takes marginal cropland out of production and plants native vegetation (usually grasses). In New Mexico, CRP is conserving 680,000 acres of highly erodible land using \$2.6 million per year. The Wetland Reserve Program, or WRP, restores or enhances existing wetland areas. In New Mexico, WRP is working with one landowner on about 200 acres.

### NRCS Programs - EQIP Geographic Priority Areas



Figure 1. NRCS Programs, EQIP-geographical priority areas.

#### EQIP Geographic Priority Areas

Figure 1 is a map showing the location of EQIP-Geographical Priority Areas. These areas cover one or several watersheds.

#### Watershed Program

Another program is the small watershed program. In 1954, the Watershed Protection and Flood Prevention Act (PL83-566) was passed. At that time a major political debate was occurring, and the question was whether flood control should use big dams on the main rivers or smaller dams dispersed throughout the

watershed. Several pilot projects and demonstrations were completed. It was decided that both approaches had merit, and PL83-566 was enacted to provide the upstream (or small structure) assistance.

#### Evolution of the Watershed Program

In the early 1980s, planning assistance by the NRCS shifted to meet expanded customer and sponsor needs because of increased pressure on the Nation's natural resources. Planning began to emphasize land treatment, best management practices, and non-structural solutions. The resulting projects embraced all natural resources and used all types of conservation tools and programs.

Watershed treatments had previously focused on flood prevention, but now the treatments use an integrated system to provide watershed protection. PL83-566 currently has about 2000 authorized watershed projects nationally, and about 500-600 of these are active each year. Many of these active projects are for land treatment and to install soil and water conservation practices. The program can also acquire flood plain easements. Flood plain easements permanently remove the flood plain from production agriculture and permanently control development rights. The flood plain is reserved to function as intended and modify flood events.

#### Guiding Principles

The PL83-566 program encourages broad-based local leadership, coordinates with state priorities and programs, improves environmental communities and local economies, and complements the initiatives in recent farm bills.

#### PL83-566 Project Map

Figure 2 shows the location of PL83-566 watershed projects in New Mexico. The 25 projects shown in yellow have been installed and are being operated and maintained by a local unit of government. The six project in orange are being installed through the cooperative efforts of the local unit of government and the NRCS.

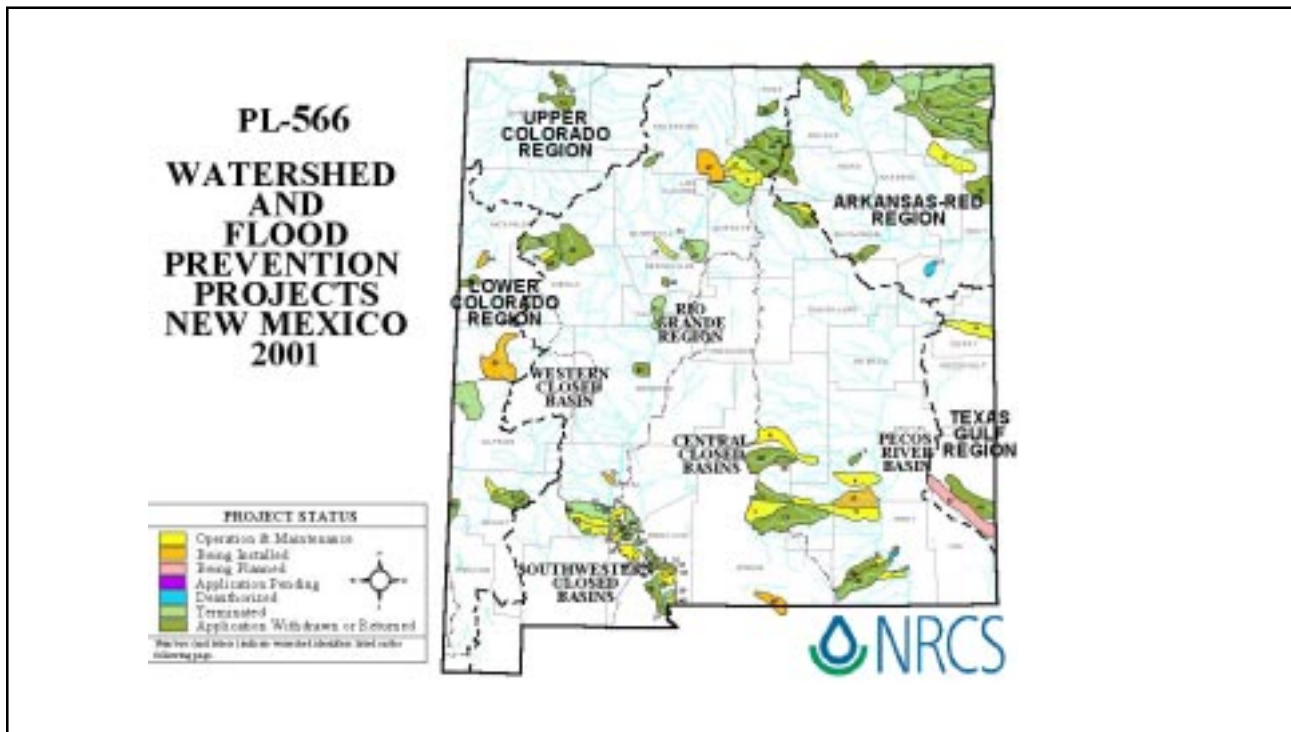


Figure 2. PL83-566 Watershed and flood prevention projects, New Mexico 2001.

**New Mexico PL83-566 Projects**

These projects are public-private partnerships to install and maintain on-the-ground conservation practices and to construct and maintain flood control structures. Two New Mexico projects are the Santa Cruz River Watershed and the Hackberry Draw Watershed.

**Have NRCS Watershed Efforts Been Successful?**

Just go to any project, and the proof is all around you!

**PL83-566 Small Watershed Program Appropriations**

Figure 3 shows program appropriations for the Nation.



Figure 3. National PL-566 appropriations.

The chart in Figure 4 shows program appropriations in New Mexico. In 1982, the Jobs Bill accelerated the program in New Mexico. In 1988, New Mexico received a large appropriation to construct the Montoyas Channel in Corrales. In 1995, the construction contract for Eagle-Tumbleweed, Site 2B, was signed. The Eagle-Tumbleweed dam is west of Artesia.



Figure 4. New Mexico PL-566 appropriations.

**Investments and Returns**

The program has invested \$14 billion in infrastructure nationwide, and \$125 million in New Mexico's infrastructure. In the Nation, \$8.5 billion was federal funding and over \$6 billion came from local sources.

**Benefits from PL83-566 Projects during FY 1997**

National benefits from PL-566 during FY 1997 included over \$800 million dollars as follows:

- Non-Ag benefits \$204,000,000
- Ag benefits \$192,000,000
- Ag flood damage reduction \$159,000,000
- Non-Ag flood damage reduction \$251,000,000

Estimates for 1999 show that nationally, watershed projects provide almost \$1 billion in benefits each year.

**Benefits from New Mexico Projects during FY 2001**

Estimated benefits from New Mexico PL83-566 projects for 2001 come to \$11 million. Since these projects cost about \$125 million, they are paying for themselves every 11½-years.

- Non-Ag flood damage reduction \$8,398,000
- Ag flood damage reduction \$2,919,000

**Bridge to the Future**

The road to follow in treating watersheds is before us. The NRCS, along with our partners and customers, is ready to move along that road. Watershed Management is the future of conservation work because what occurs upstream affects all downstream users and resources.