

**JOINT STATEMENT OF THE  
NATURAL RESOURCES CONSERVATION SERVICE  
AND THE  
FARM SERVICE AGENCY  
U.S. DEPARTMENT OF AGRICULTURE  
BEFORE THE  
U.S. HOUSE OF REPRESENTATIVES  
COMMITTEE ON NATURAL RESOURCES  
SUBCOMMITTEE ON WATER AND POWER**

**PRESENTED BY ALLEN GREEN, STATE CONSERVATIONIST, COLORADO**

Ms. Chairwoman and Members of the Subcommittee, thank you for the opportunity to appear before you to discuss water management activities of the USDA Natural Resources Conservation Service (NRCS) and the Farm Service Agency (FSA). My name is Allen Green and I am the NRCS Colorado State Conservationist; also with me today is Trudy Kareus, Colorado FSA Executive Director.

**Natural Resources Conservation Service**

Within its mission of “Helping people help the land,” NRCS works with private land owners and operators on a voluntary basis to protect natural resources while maintaining productive agriculture operations. The fundamental goal of the Agency is to help farmers and ranchers meet the increasing need for food and fiber production while managing for the sustainable use of natural resources. In Colorado specifically and the West generally, one of the most critical and limiting resources is water. Without an adequate supply of clean water, available when crops need it, it would not be possible for agriculture in Colorado to continue to provide the crop and livestock production that supports many of its residents.

NRCS offers programs, authorized or extended under the Food, Conservation and Energy Act of 2008 (2008 Farm Bill), that provide financial and technical assistance to eligible producers for implementation of approved conservation practices on private agricultural lands, non-industrial forest lands, and tribal lands. NRCS also works under authorities granted first in 1935, providing technical assistance to landowners and managers to protect soil health and related natural resources. NRCS conducts the Soil Survey and the Snow Survey and Water Supply Forecasting programs, reports on trends in U.S. land use through the National Resources Inventory, and utilizes the information from these programs to assist agricultural producers in implementing conservation practices that improve natural resources. NRCS data help local communities prioritize natural resource concerns, and help local, State, and other Federal government agencies implement programs.

NRCS is currently implementing the 2008 Farm Bill, which accounts for the majority of the work our employees conduct across the country. Under the Farm Bill authorities, NRCS financial assistance programs include the Environmental Quality Incentives Program (EQIP), the Wildlife Habitat Incentive Program (WHIP), the Agricultural Management Assistance (AMA) Program, the Conservation Security Program (CSP), and the Conservation Stewardship Program. These efforts include Conservation Innovation Grants (CIG), the Cooperative Conservation Partnership Initiative (CCPI), the Agricultural Water Enhancement Program (AWEP), the Organic Program Initiative, and the Air Quality Initiative. In addition to financial assistance programs, NRCS also has easement programs, including the Farm and Ranch Lands Protection Program (FRPP), the Grassland Reserve Program (GRP), the Wetlands Reserve Program (WRP), the Wetland Reserve Enhancement Program (WREP) and the Healthy Forests Reserve Program

(HFRP). These programs provide eligible farmers, ranchers, and non-industrial private forest landowners with both financial and technical assistance to install voluntary conservation practices to protect the natural resources on the land they own or manage. Several Farm Bill conservation programs provide specific assistance to address water conservation and efficiency that I will outline today.

One of the oldest and most well known of the financial assistance programs is EQIP, which provides assistance to producers to install and maintain conservation practices that sustain food, fiber, and energy production while enhancing soil, water, and related natural resources. The Chief of NRCS has authority to manage program purposes and direct funding and technical resources to address issues, including those related to irrigation and water conservation.

Throughout the Nation and especially in the West, where water is scarce, NRCS has a long and successful history of assisting producers in planning and managing scarce water supply to meet agricultural needs while conserving water for wildlife and other uses. With the authority provided through EQIP, NRCS offers financial assistance to producers to plan and implement practices to conserve and manage water. Depending upon the kind of agricultural operation, conservation practices may include replacement of aging water pumps and engines on existing irrigation systems to reduce water consumption and save energy, installation of ponds and reservoirs to capture and retain water, and use of soil and water conserving cover crops. To assist ranchers, NRCS may develop new reliable water sources for livestock operations and design and plan for fence installation to enhance grazing management for livestock in water-short areas. Additionally, NRCS works with producers, industry, universities, agencies, and others to improve or develop new innovative conservation practices to address the challenges that agriculture faces. EQIP is uniquely focused on helping producers address issues associated

with environmental regulation and natural resource problems such as drought and water shortages. EQIP also addresses the unique challenges of small farm operations and organic and specialty crop growers.

In all of its programs, NRCS begins with a planning process to help producers determine the types, amounts, specifications, and scheduling of various options to address the natural resource concerns. This conservation planning process not only helps lay out a road map for how a producer can meet their resource goals, but also provides for direct advice and consultation. In Colorado, NRCS has used conservation programs effectively to help agricultural producers sustain and improve their natural resources, including water resources. Our field staff provides information, consultation, and planning services—what we refer to as technical assistance—along with financial assistance to help offset the cost of installing conservation measures.

Through EQIP, NRCS can offer program participants cost share payments of up to 75 percent, 90 percent in the case of socially disadvantaged and limited resource farmers and ranchers. From 2002 through 2009, NRCS provided over \$61 million in EQIP funds to agricultural producers to improve water quality and water conservation in Colorado. Using these funds, producers installed projects that have improved irrigation efficiency, reduced water loss and sedimentation, and increased residue on cropland. Specific practices benefitting water quality and water conservation in the West include pest and nutrient management systems; irrigation water control structures such as river diversion, mutual irrigation system and individual farm head gates;

irrigation water delivery pipelines, and advanced sprinkler and micro jet and drip irrigation systems. These EQIP contracts have provided benefits for over 370,000 irrigated acres on private working farms and ranches.

In order to provide agricultural producers with information based on the best science and technology available, Colorado NRCS has invested in several Mobile Irrigation Labs that are fully equipped to do on-site evaluation and analysis for precise water management and on-site salinity mapping. We have also increased dedicated irrigation water management staff at the field level to provide additional knowledge, expertise, and training in water conservation.

The Agricultural Water Enhancement Program (AWEP), a part of EQIP newly established in the 2008 Farm Bill, provides specific authority to provide financial assistance to producers for water enhancement activities that target key water quality and quantity issues. The program is designed to leverage Federal financial and technical assistance along with resources of non-federal partners.

An example of a successful AWEP project in Colorado is the Republican River Water Conservation District partnership project, which leverages local, State and Federal technical and financial resources to support the conservation district and the State of Colorado in addressing interstate water compact agreements among Colorado, Kansas, and Nebraska. The AWEP project facilitates voluntary conversion of irrigated lands to sustainable nonirrigated cropping systems, grazing lands, and wildlife habitat; the local Republican River Water Conservation District matches the conservation payment available to agricultural producers through AWEP as an incentive to voluntarily switch from irrigation to dryland agriculture and wildlife land uses

conversion, and supports interstate water agreements. This project is an extension of a successful EQIP Ground and Surface Water Conservation Program implemented by NRCS and the Republican River Conservation District through the 2002 Farm Bill.

NRCS actively solicits for the next generation of conservation practices through the Conservation Innovation Grants (CIG) Program. Authorized as part of EQIP, CIG stimulates the development and adoption of innovative conservation approaches and technologies. In Colorado, \$3 million of CIG grants has been provided to over 60 projects addressing a variety of resource issues in the state. The NRCS Colorado CIG, “Advancing Deficit Irrigation Management Systems in the High Plains Aquifer Region: Improvements by Advanced Tillage Systems and Irrigation Schemes,” funded the Irrigation Research Foundation in Northeastern Colorado to promote the sustainable utilization of limited Ogallala Aquifer ground water and other surface irrigation waters in maximizing the crop production and conservation benefits of under scenarios of limited irrigation water availability. Studies and field days for farmers, industry, agency, and university professionals were held to demonstrate results, and a professional technical guidance document was issued summarizing the best management practices documented by the project. This project was conducted in coordination with NRCS Colorado technical specialists, Colorado State University, the USDA Agricultural Research Service, and industry professionals.

Other examples of Colorado CIG projects related to water quality and water quantity are: “Installation and Demonstration of a Supervisory Control and Data Acquisition (SCADA) System and Actuated Gates as Operational Improvements for Managing Surface Water

Deliveries to Irrigators,” “Innovative Active Remote Sensing and Site-specific Management Zones for Enhancing Nutrient Use Efficiency, Water Quality, While Sustaining and Improving Productivity,” “Sustainable Cropping Systems for Transition from Full Irrigation to Limited Irrigation and Dryland,” and “Monitoring Deep Percolation Beneath Irrigated Fields in Northern Colorado.”

The Cooperative Conservation Partnership Initiative (CCPI) reauthorized in the 2008 Farm Bill. Eligible producers, who participate in a project area identified in an approved partner agreement, may apply for program assistance. Eligible programs funded through CCPI include EQIP, WHIP, and the Conservation Stewardship Program. Partnership efforts in Colorado have included riparian corridor improvement, shared funding for support of conversion from irrigated to non-irrigated cropland, invasive species control, and alternative water delivery conversions.

Easement programs, as mentioned earlier, also provide an opportunity for NRCS to work with landowners and positively impact water conservation. Two excellent examples of NRCS Easement Program efforts in Colorado are the Wetlands Reserve Program easement networks along the South Platte River in Eastern Colorado and the Farm and Ranch Land Protection Program success in the Saguache Creek corridor in the Central Rockies. Along the South Platte River near Sterling, Colorado there are over a dozen Wetlands Reserve Program easements restoring natural high plains river bottom hydrology and wetlands and wildlife functions and values along miles of river bottom. In the Saguache Creek valley corridor of the Central Colorado mountains a network of prime working agricultural ranches have been preserved in

perpetuity through voluntary partnerships with the ranchers, the Colorado Cattlemen's Land Trust, the NRCS Farm and Ranch Land Protection Program and others including the Great Outdoors Colorado program. Colorado has restored nearly 17,000 acres of wetlands and protected more than 64,000 acres of critical farm and ranch lands through easement programs.

NRCS Colorado has also used the Small Watershed Program successfully to work with multiple land users to achieve water quality and quantity benefits. One example of this is the Beaver Creek Watershed near Fort Morgan that has been accelerated with the benefit of American Recovery and Reinvestment Act (ARRA) funds. This watershed project is helping landowners improve their management strategies and irrigation systems on cropland and adjacent properties located within the Beaver Creek Watershed along the South Platte River in northeastern Colorado. When the project is complete, the 1,200 residents, as well as the floodplain along the South Platte River, will benefit through the reduction in on-farm seasonal water use and soil erosion; reduction of nitrates and pesticides in water sources; improved fish and wildlife habitat; and protection of irrigated agriculture and the local economy.

NRCS also administers part of the AMA program that is authorized under the Agricultural Risk Protection Act of 2000 and recently amended by the 2008 Farm Bill. AMA provides for financial assistance to producers to construct or improve water management structures or irrigation structures. AMA is focused on helping those small farm operators, which includes organic and specialty crop producers to develop and install irrigation and water management structures to reduce the risk associated with the production of small acreage high value crops.

These identified groups of producers in most cases do not meet the eligibility requirements for participation in EQIP. AMA is available in 16 states designated by the Secretary of Agriculture: Connecticut, Delaware, Hawaii, Maine, Maryland, Massachusetts, Nevada, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Utah, Vermont, West Virginia, and Wyoming.

The Agency is responsible for a broad range of technical assessments and surveys that are used by USDA to implement Farm Bill programs, but also used extensively by other Federal government agencies and state and local government and nongovernmental organizations in the private sector. These include the snow survey, the soil survey, the RCA assessment and the Natural Resources Inventory. For the western states, the snow survey is an important assessment.

Approximately 80% of the water used for agriculture comes from snow fall in the mountains. The NRCS Snow Survey and Water Supply Forecasting Program provide a valuable service by measuring snow pack, available water, and in predicting stream flows for the upcoming year. This information is used by water users to make critical decisions as to when and how much water will be available. As everyone knows, the use of water in Colorado involves more than just the growing of agriculture crops. The increase in demands from other uses such as a growing population, the impacts of frequent droughts, requirements to meet cross state compliance, and the desire to have a clean and adequate supply for all needs requires cooperation and coordination with a variety of agencies, organizations, producer groups, water user groups, and other interests. In Colorado, the data generated from these surveys is used by a range of

interests including the Bureau of Reclamation who operate the largest dam on the Colorado River (Lake Powell and Mead); along with those who utilize this data to make hydro power generation decisions; to some of the smallest farm and ranchlands operations in Colorado who need to know what crops they can plan to grow each summer; and most municipalities such as Denver Water; recreationists; and the general public. (NRCS testified before this subcommittee last fall regarding our Snow Survey and Water Supply Forecasting Program).

Another Inventory function the agency carries out is the Soil Survey. Consideration of soil characteristics is a critical component of planning for crop production and water management. Recently, NRCS Colorado completed the first phase of soil mapping on non Federal and Tribal lands. Soil information is still needed on many federal lands in Colorado and other western states. Our current efforts are to improve the existing soil surveys in Colorado by providing new soil interpretations, improving the consistency of the soil survey and completing the mapping on federal lands in partnership with other federal agencies. The information provided through the Soil Survey is available to a variety of customers ranging from engineering and environmental consultants; land developers; oil and gas permittees; university academia; students; teachers; home buyers; and other Federal land agencies and NRCS conservation planners and the landowners they service.

To help deliver conservation programs, Colorado NRCS uses an assessment approach called Rapid Watershed Assessments to identify resource needs for over 90 hydrologic (watershed) units in the state. Rapid watershed assessments provide initial estimates of where conservation investments would best address the concerns of landowners, conservation districts, and other

community organizations and stakeholders. These assessments help land-owners and local leaders set priorities and determine the best actions to achieve their goals.

NRCS conducts these RWAs using watershed planning teams that travel through each watershed, meeting with landowners and conservation groups, inventorying agricultural areas, identifying current levels of resource management and conservation opportunities, and estimating impacts of these opportunities on the local priority resource concerns.

NRCS in Colorado has been working with these interests to assure that our programs and services are working with off farm interests to be a part of the solution to water use in the state. Helping to assure that we have a sustainable, productive agriculture is dependent on a sustainable and adequate supply of clean water. While this can be a complicated process, there are a number of valuable programs and services that can assist with the overall function and health of water in the most efficient means possible. NRCS is committed to working in partnership with local leaders to improve the quality of local water resources and Helping People Help the Land.

### **Farm Service Agency**

The Farm Service Agency delivers conservation, commodity, credit, energy, and emergency disaster programs, including certain water and irrigation conservation practices, via its network of more than 2,200 county and state offices across the United States. The 2008 Farm Bill re-authorized two water-related, FSA-administered conservation programs: the Conservation Reserve Program (CRP) and the Grassroots Source Water Protection Program; additionally, FSA

implements the Emergency Conservation Program, a non-Farm Bill program which also provides water conservation benefits.

CRP conserves and improves soil, water and wildlife resources through 10-15 year contracts that provide annual rental payments and cost-share assistance to farmers and ranchers. This program has been in effect since 1985, and as of April 30, 2010 has 31.3 million acres under contract. In Colorado, there are over 2.0 million acres enrolled on over 5,700 farms in CRP. These enrolled acres, which fall largely in the eastern half of the state, represent 17 percent of the 11.5 million total acres of Colorado cropland. The CRP acres were formerly cropped, mostly in dry land wheat, and are now planted in long-term grass cover. In Fiscal Year 2009 Colorado producers received about \$78 million. In September 2010, contracts for 451,000 CRP acres are set to expire in the state, with contract for an additional 345,000 acres set to expire in September 2011. The 2008 Farm Bill capped CRP enrollment nationwide at a total 32 million acres. Secretary Vilsack has stated his intent to maintain CRP enrollment at or as close to that cap as possible, and on February 27, 2010, Secretary Vilsack announced that USDA will hold a general signup for CRP in 2010.

The Grassroots Source Water Protection Program uses on-site technical assistance capabilities of State rural water associations to prevent source water pollution. Collaborative teams create operating plans that identify priority areas where local pollution prevention efforts are most needed, and work to develop voluntary measures that producers can install. These voluntary measures range from producers storing herbicides and pesticides in more secure containers, to relocating waste lagoons. Currently, 43 states – including Colorado – participate in this program.

As of December 2009, 77 public drinking water sources in Colorado had implemented protection practices, developed in concert with technical assistance teams; 25 additional practices are in the source water protection planning process.

In addition to these programs FSA administers the long-standing Emergency Conservation Program (ECP). ECP provides emergency funding and technical assistance for farmers and ranchers to rehabilitate farmland damaged by natural disasters and for carrying out emergency water conservation measures in periods of severe drought. Funding for ECP is appropriated by Congress. Locally-elected county committees are authorized to implement ECP for all disasters except drought, which is authorized at the national office of FSA.

In FY2010, Colorado has received \$283,000 under ECP to repair or replace flood-damaged irrigation ditches in Garfield County. In FY2009, Colorado received \$157,000 to replace flood-damaged hillside ditches with pipeline in Garfield, Pitkin and Eagle Counties.

In summary, the USDA, through its collaborative approach with local leaders, has been able to successfully provide water management activities in the Colorado region that have led to benefits such as improved water quality and reduced soil erosion.

Thank you again Ms. Chairwoman for the opportunity to appear before you today. Trudy Kareus and I would be happy to respond to any questions.