



National Association of Conservation Districts

Testimony of

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On behalf of the

National Association of Conservation Districts

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Good Morning. I am Jim Krosch, one of five elected supervisors of the Stevens Soil and Water Conservation District located in Morris, Minnesota. Currently there are 91 Soil and Water Conservation Districts (SWCD) in Minnesota, providing 100 percent coverage of the state. There is at least one SWCD in each of the 87 counties, while a few of the larger counties have more than one. Soil and water conservation districts are established in each community, governed by local leaders and focused on the conservation of local soil and water resources. As a result, Minnesotans trust SWCDs to provide needed technology, funding and educational services for their respective communities. I am pleased to be here today on behalf of the National Association of Conservation Districts (NACD) to discuss the importance of the U.S. Department of Agriculture's (USDA) information technology systems.

Across the United States, nearly 3,000 conservation districts are helping local people to conserve land, water, forests, wildlife and related natural resources. We share a single mission: to coordinate assistance from all available sources—public and private, local, state and federal—in an effort to develop locally-driven solutions to natural resource concerns. More than 17,000 officials serve in elected or appointed positions on conservation districts' governing boards. Working directly with more than 2.3 million cooperating land managers and local communities nationwide, their efforts touch more than 1.6 billion acres of private land. We support voluntary, incentive-based programs that provide a range of options, providing both financial and technical assistance to guide landowners in the adoption of conservation practices, improving soil, air and water quality providing habitat and enhanced land.

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Established under state law, conservation districts are local units of state government charged with carrying out programs for the protection and management of natural resources at the local level. To assist in the implementation of Federal conservation programs, our members work with the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) and the Farm Service Agency (FSA), as well as other federal agencies and state and county programs.

Technical assistance is the backbone of Federal conservation programs, as well as state and local programs. Technical assistance is the individualized guidance and information that helps a landowner make a change. It could be engineering design work, assistance from an agronomist, localized information for soil types, habitat, nutrient reduction strategies and know-how for application of conservation practices and structures or the development and implementation of nutrient management plans. Whatever form the technical assistance takes, USDA information technology provides the important tools by which technical assistance is delivered.

NRCS relies on conservation districts and other partners to deliver a substantial amount of local technical services to farmers, ranchers, private landowners, and urban communities. It is vital that the NRCS data and technical tools to service landowners are available to local conservation district office employees. As full partners of the NRCS, districts use the technical tools day in, day out to support local conservation efforts.

USDA provides a wide range of information technologies and tools to users of its systems, including conservation districts. Some examples include tools or technologies to address erosion and soil quality, water quality and water conservation, nutrient and pest management, air quality, livestock management and grazing, stream restoration, hydraulics and hydrology, and energy conservation assessment.

The partnership between NRCS and conservation districts is unique. As full partners with NRCS, conservation districts make heavy use of the USDA database. Most districts have technical staff that provide technical service to landowners that want to participate in farm bill programs and develop conservation plans. These district technicians, with access to the same Federal technology that NRCS uses, are able to work with clients and provide technical assistance in partnership with NRCS. This strong partnership between NRCS and conservation districts allows districts to take on some of the local conservation workload and ensures that landowners have access to the tools needed to develop and take appropriate conservation actions.

Geographic information systems (GIS) are a core technology for conservation districts to utilize in the delivery of conservation technical assistance helping landowners address natural resource problems on the land. Every NRCS field office across the nation has GIS as part of their information technology system, which includes GIS layers such as soils, topography, roads, streams, field boundaries and other layers. Through access to NRCS information systems, conservation districts also have access to GIS data and analysis capabilities.

The two important programs that contribute to GIS are the National Agriculture Imagery Program (NAIP) and the National Digital Orthophoto Programs (NDOP). These are important components of geospatial tools used by local conservationists.

NAIP acquires much of the aerial imagery used in conservation planning and provides the base layer used in GIS. It is the foundation of GIS programs.

The National Digital Orthophoto Programs (NDOP) is a consortium of Federal agencies with the purpose of developing and maintaining national orthoimagery. This is the program that generates the GIS layers used for conservation planning and other natural resource activities by digitizing and "correcting" the aerial photography from NAIP or other sources.

As an NRCS and FSA partner and user of USDA technologies, conservation districts also have access to this imagery and orthophotography.

In our Soil and Water Conservation District in Minnesota we use this technology on a day-to-day basis. It's the vital link between us as a Conservation District and our Federal partners to work together putting conservation on the ground. Without access to these computer programs, I have no doubt that we would not be as effective as we have been over the past several years. Using the NRCS Toolkit we, along with our partners, have put over 5,400 acres into the Wetland Reserve Program (WRP) in our county alone, leveraging over \$12 million dollars of Federal and matching state funds, which in turn stimulates the local economy through the use of local contractors, seed vendors and other partners. WRP takes sensitive, marginal land out of agricultural production and puts it back into wildlife habitat and wetlands, which helps alleviate erosion and flooding. The importance of being able to effectively use programs such as WRP are even more apparent today, as we watch Fargo, North Dakota and other cities along our rivers prepare for near record flooding again this spring.

As a third generation farmer who has been actively farming for over 25 years, I can personally attest to the importance of technical assistance and access to the technology needed to design and implement sound conservation practices. In partnership with my conservation district and NRCS, I have implemented a number of different conservation practices on my farm, including nearly 100 acres of CRP, filter strips, sediment dams and grass waterways. All this was done by working with Stevens SWCD and the local NRCS office. Without this technology, I would be unable to effectively employ successful conservation practices on my land.

Let me use a couple of examples from our work at Stevens SWCD.

When a landowner comes in with an idea for a particular piece of property, he will sit down with our technicians and discuss his or her plan. The landowner may be interested in putting a buffer or filter strip along a river, stream or ditch, or perhaps something as simple as dealing with an area in a field that is perpetually wet and floods out his or her crop year after year. This initial interview gives our technician the basic groundwork for what the producer is looking for. The next step is pulling up the aerial photo of the producer's field. The convenient thing about

Toolkit is that it provides a one-stop-shop, if you will, of everything the technician will need to determine if the area the farmer is looking at is eligible for any of the programs currently available. This includes the aerial photo, common land units (CLU), soils maps, national wetlands inventory (NWI), highly erodible land (HEL), hydric rating, as well as other layers that delineate where sensitive State and Federal lands are located. The technician takes all these factors into account when they draw out the proposed areas that the producer would like to enroll. These maps are stored in a Toolkit database under the producer's name or farm name along with all related information for their operation. Having access to this technology gives our technicians the ability to get an accurate feel for the producer's land, so we can help him or her make the best conservation choices for his or her operation, perhaps even a program he or she hadn't thought of.

As I stated before, SWCD use this technology on a daily basis for all programs. It has been and continues to be a successful tool when dealing with the Conservation Reserve Program (CRP) or the Wetland Reserve Program (WRP). Another example is a producer who has a stream running through his or her property. The landowner may want to provide a buffer strip along the stream to improve water quality or create habitat for wildlife. Again, we can use the aerial photo to lay out the approximate location, calculate the area, and check the size of the remaining fields to ensure that the producer is investing in a practice that makes sense for him or her and the purpose(s) that he or she wants to achieve.

A third example is using the GIS and design software to lay out a series of strips or terraces for water control and for the purpose of helping a producer farm a more erosion-sensitive field in a way in which he or she can still protect the soil while raising a profitable crop. We use this approach to be able to help the landowner plan and figure what the costs would be as well as to make the field sizes and shapes configure to the kind of equipment that is used on the farm.

It is also very beneficial to use the aerial photos and GIS capability for multi-farm projects on a watershed or habitat basis. This allows us to sit down with a group of landowners interested in the same objective and design a joint plan to accomplish their specific goals.

Toolkit enables us to work with local, township and county road officials to plot out drainage from farm fields and road ditches so the system is as efficient as possible without causing undo problems downstream.

These are just a few examples of how valuable this technology is to landowners and local conservation districts. As an elected district supervisor, I cannot stress enough the importance of this technology to effectively serve producers and landowners in our district. This technology provides my constituents with an excellent and invaluable service. Landowners and local units of government expect conservation district and NRCS offices to be able to obtain maps and detailed imagery of their farm or land area during their office visit. This technology can assist both large and small landowners and units of government in planning and implementing natural resource conservation practices. This service and technology provides the American tax payer with excellent value.

An example of this type of service and the importance of access to detailed and accurate maps is what a local conservation district and the NRCS developed for the local drainage boards in Acadia Parish in Louisiana. Using USDA's technology, the local conservation district was able to provide maps of each drainage district, showing not only the natural drainage, but also providing the locations of all major water control structures, erosion control structures and recreational areas. This allowed for installation of conservation practices and projects on a watershed basis rather than just an individual landowner basis. The local drainage boards had never had such a complete picture of their area of responsibility. Similar examples can be found across the country.

The system isn't perfect and has had some issues with speed of use, but USDA IT staff is constantly working on it to keep it updated and running as smoothly as possible. Of course there are always things that could be done to improve the system. There are times when it seems the machines are not able to download as fast as we would like and of course this slows down our customer service, but I understand the next upgrade or generation will help us on this front. We are especially excited about the improved aerial imagery that is slowly becoming available.

The most promising new technology to enable the gathering and availability of elevation data is Light Detection and Ranging or LIDAR. LIDAR makes possible the collection and analysis of elevation data over large areas at a scale that has not been feasible to do in the past. LIDAR can be used to develop digital elevation models that are accurate to within one meter. Conservation districts and NRCS can take advantage of very accurate, high resolution data to analyze small differences, as little as one to two feet. This allows conservation district offices and NRCS to create very accurate soil maps which allow the district technician to determine where conservation practices have been or need to be installed before they go to the field. It also allows NRCS soil scientists to more efficiently do pre-mapping with increased accuracy based on elevation and spend less time in the field collecting elevation data. Many states are involved in efforts to acquire statewide LIDAR coverage. However, we need to make sure this exciting technology is available in all states to assist conservation efforts.

Without the continued upgrading of software, maintenance of the system and full access for conservation districts to information and technical tools through USDA's IT system, the seamless and efficient delivery of conservation technical assistance by our conservation districts would be severely reduced. Ultimately, America's food, fiber, feed and fuel producers would suffer due to diminished access to quality technical assistance to help them protect their natural resources. We encourage you to continue to provide quality information technology support for the agencies. The better the technology we have, the better we can serve our producers, and in the end achieve our goal of putting conservation on the ground.

Thank you for the opportunity to testify today on behalf of conservation districts across the country.