Add a Wetland to Your Picture

By Emery F. Wiens, Civil Engineer Topeka, Kansas

If you are interested in constructing a wetland to prevent pollutants leaving a field, enhancing an existing wetland or restoring one that was previously there, creating a new wetland site, or just doing something positive with the swamp that you are tired of farming through, call your local Natural Resources Conservation Service (NRCS) Field Office and set a date to show them your idea. NRCS has a number of engineering practices that can be used for wetlands:

· Practice 658-Wetland Creation allows for designing a wetland in a location that, historically, has not been a wetland.

· Practice 659-Wetland Enhancement allows for improving the functions and values of an existing wetland.

· Practice 657-Wetland Restoration is used for returning a drained or silted-up wetland back to its original condition.

· Practice 656-Constructed Wetland is useful for catching sediments and pollutants leaving a row-crop drainage area.

Financial assistance is available for wetland practices from several different sources. One that NRCS has to offer is the Environmental Quality Incentives Program (EQIP), which is used when a landowner has a resource concern. Cooperators can sign up for EQIP anytime, and there is at least one ranking each year that disperses funds to the projects with the highest scores in each category such as water quality, wildlife, and forest land health. Last year, one wetland project was approved in northeast Kansas through EQIP. The EQIP wetlands must be maintained for the life of the practices involved, which is generally 15 years. The EQIP program is quite simple, and payment rates cover approximately 50 to 90 percent of the costs. There is a quick turnaround time once the funds are dispersed. No easements are involved.

NRCS provides technical assistance for the Farm Service Agency (FSA) on the Conservation Reserve Program (CRP). The various wetland programs offered can be signed up for at any time (continuous sign-up). Numerous CRP wetlands have been funded in northeast Kansas in the past few years. Payments are made on a per acre rental rate each year based on soil type, signup incentives, practice incentives, and rental rate incentives. The cost of construction itself is paid for by CRP at a 50 percent cost-share rate. Considering all the payouts over the life of the wetland, the sum of cost-share easily supersedes the expense of construction. Wetlands are enrolled from 10 to 15 years. If you do not like long-term easements, this is a great way to go.

NRCS also manages the Agricultural Conservation Easement Program, which has a Wetland Reserve Easements component (ACEP-WRE), having a permanent or 30-year easement enrollment option and a 30-year contract for Indian Tribes. For easement options, the enrolled area has a legal boundary survey completed, which is paid for by NRCS. A landowner receives a payment for the easement value of the land and in addition will receive cost share assistance for restoration construction. NRCS works with the landowner to address maintenance of the wetlands easement. The thoroughness of the easement program takes time, so the process takes a little longer. If you like wetlands, and know your kids and grandkids like them too, this is a great alternative to restore wetlands.

For all of these options, NRCS can provide the engineering and construction inspection. The landowner is responsible for paying taxes and for controlling noxious weeds. There are restrictions as to what you can and can't do with the wetland, and these differ by the program. Of course, you can't use them for a toxic waste dump or for building a high-rise apartment, as examples. The ACEP-WRE program has the most restrictions, but a compatible use agreement can be implemented for helpful activities such as mowing a hiking trail.

Cost share funds may also be available for wetland restoration from one or more sources such as: Kansas Alliance for Wetlands and Streams (KAWS); Kansas Watershed Restoration and Protection Strategy (WRAPS); U.S. Fish and Wildlife Service (USFWS); Kansas Department of Wildlife, Parks and Tourism (KDWPT); and conservation districts. NRCS works with these partners to provide technical assistance.

So whether you want a wetland for the enjoyment of watching wildlife, preserving a niche of our ecosystem, hunting, catching sediments to clean up a pond or reservoir, or because you cannot do anything else with that ol' bog, please contact your local NRCS office or conservation district office located at your local county U.S. Department of Agriculture (USDA) Service Center listed in the telephone book under United States Government or on the internet at offices.usda.gov. More information is also available on the Kansas Web site at www.ks.nrcs.usda.gov . Follow us on Twitter @NRCS_Kansas. USDA is an equal opportunity provider and employer.

Rain

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differing types of root structures. Grass roots are fibrous with many off shoots and are shallow in comparison to the forbs, which have long tuberous roots that can reach water and minerals further down in the soil profile. Legumes also provide needed nitrogen for plants and other microbial activity. This microbial activity breaks down the organic matter then provides mineral back to the plant.

These concepts are important for a healthy rangeland system which is a never ending ecological cycle. If you are interested in learning more about getting your rangeland "Ready for Rain," contact your local Natural Resources Conservation Service office or conservation district office located at your local county U.S. Department of Agriculture (USDA) Service Center listed in the telephone book under United States Government or on the internet at offices.usda.gov for assistance. More information is also available on the Kansas Web site at www.ks.nrcs.usda.gov. Follow us on Twitter @NRCS_Kansas. USDA is an equal opportunity provider and employer.

Weeds

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often missing when herbicides are broadcast applied. The forbs we sometimes call a "weed" are plants another critter might need.

Even though these native forbs are grazed by livestock, add to diversity both above and below ground in a larger community of plants, and feed the larger ecosystem, "wonderful" might still be a stretch for you. Getting better acquainted with the plants that do grow on your land is a great first step. Knowing whether they are native or invasive is also key. If you need additional information about plant identification, pollinator habitat development, or range and pasture management, please contact your local Natural Resources Conservation Service (NRCS) office. To find a service center near you, check your telephone book under "United States Government" or on the Internet at offices.usda.gov. Visit the Kansas NRCS Web site (www.ks.nrcs.usda.gov) or follow us on Twitter @NRCS_Kansas. USDA is an equal opportunity provider and employer.

Soil Conservation is an Old Time Religion

By Kelly J. Klausmeyer, NRCS Engineer Hays, Kansas

Reprinted from Our American Land: 1987 Yearbook of Agriculture. Washington, D.C. United States Department of Agriculture, 1987. Pp. 175-180. By Douglas Helms, National Historian, Soil Conservation Service

The idea that Americans should conserve soil to maintain the Nation's capacity to produce food is neither new nor outdated. Some colonial Americans knew the dangers of exhausting the land and undertook conservation measures even then. Some of the earliest conservationists increased fertility and lessened erosion by maintaining ground cover, improving soil tilth, and instituting pasture, legume, and crop rotation systems.

Though he invented neither, Thomas Mann Randolph, Thomas Jefferson's son-in-law, quickly perceived the advantages of the hillside plow and horizontal, or contour, plowing. As a convert to the idea, Jefferson believed that "In point of beauty nothing can exceed that of the waving lines and rows winding along the face of the hills and valleys."

Nicholas Sorsby combined horizontal farming with the early progenitor of the terrace-the hillside ditch-and greatly popularized "level culture" throughout the South.

The most outstanding of the pre-Civil War agricultural reformers, Edmund Ruffin, experimented to learn the effects of green manures and liming on soil conservation and soil fertility. After the Civil War, Priestly Mangum of Wake Forest, North Carolina, perfected the broadbased Mangum terrace for managing surface runoff.

Hugh Hammond Bennett, who led the soil conservation movement in the 20th century, first called for research. Largely at his prodding, the USDA appropriation act for 1929 included provisions for soil erosion and moisture conservation research stations. Bennett's first assistant at the Soil Erosion Service, Walter Lowdermilk, made seminal discoveries in the relationship of forest litter to runoff.

Education

When Hugh Hammond Bennett began his crusade for soil conservation as a soil scientist in the USDA, he proposed to use demonstration methods so that farmers would observe proven methods of soil conservation, then go forth and do likewise. He located the earliest demonstration projects near the erosion and moisture conservation experiment stations, where the results of the research could be put to use.

Sharing the Costs

Sharing the cost of conservation became a major part of agricultural programs with the passage of the Soil Conservation and Domestic Allotment Act in 1936. Spending public money on soil conservation is premised on society's having an interest in preventing erosion. It is viewed not only as a matter of equity, but also as an inducement for farmers to practice conservation.

Stewardship

According to some sources, Patrick Henry proclaimed shortly after the American Revolution, "since the achievement of our independence, he is the greatest patriot who stops the most gullies." The sentiment that conservation should be viewed not only as a matter of self-interest, but as an obligation, had, and continues to have many forms of expression. Certainly, a dispassionate case can be made for soil conservation, but like many another movement that came to be enacted into a national program by Congress, it involved emotions.

Soil conservation as a religious duty found expression in 'Soil Stewardship Week." Farm and Ranch magazine sponsored a "Soil and Soul Sunday" from 1946 until 1954. The National Association of Conservation Districts assumed responsibility in 1955 and elicits support from many denominations.

An Enduring Agriculture

When a national soil conservation program began in the 1930s, the young group of conservationists attacked their job with enthusiasm. Being optimists, and no better seers than we are today, they perhaps were unmindful of how a dynamic agriculture could undermine some of their good works.

But they did establish an objective by which to judge various conservation methods-an enduring agriculture. Enduring did not imply a static agriculture, but it held that the means to sustain agriculture, the physical integrity of the soil resource, must be maintained.

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Grassed Waterways

By Martin Gugelman, NRCS Civil Engineering Technician Scott City, Kansas

Remember when you farmed through that low spot? Where did that ditch come from that you just bounced through? As we "hopefully" receive rain to ease the drought that we have been experiencing, the water will run and form ditches.

Terraces and/or diversions will help with most of the erosion issues; however, some fields will have a drain running through them that carries foreign water or conveys water from the terrace or diversion outlets. In these situations a grassed waterway can help carry the water concentrations without causing excessive erosion and help to protect or improve water quality downstream.

A grassed waterway is a constructed channel that is shaped and graded to required dimensions and established to suitable vegetation. They can be constructed in a trapezoidal or parabolic shape. The material that is removed from the channel will be spread away from the waterway to allow drainage into the waterway. All grassed waterways should have a stable outlet that will handle the anticipated flow.

When possible, waterways will have the vegetation established prior to allowing runoff to flow through them. If the slope is gentle enough, the waterway could be annually vegetated so a crop can be harvested from it; otherwise it will be established to a permenant vegetation.

Another benefit to grassed waterways is that they provide wildlife habitat. This can be greatly enhanced with additional habitat plantings along the sides of the waterway.

A good maintenance program will need to be established to maintain the capacity, vegetative cover, and overall stability of the waterway and its outlet. If the need for a grassed waterway is present in any of your fields, your local NRCS office has the appropriate expertise to guide you through the process of installing one.