Supplement to Ohio
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Soil & Water Conservation Partnership Annual Report

Thank You, Ohio Landowners!

This may seem a strange way to begin an annual report. But the fact is, we wouldn't have much to report if, year after year for more than 60 years, tens of thousands of you hadn't made a voluntary decision to conserve the natural resources under your care.

Your individual contributions to conservation have literally transformed the Ohio landscape. Since about 97% of the land in our state is privately owned, what happens on each acre of land matters. From the installation of a single grassed waterway or field of no-tilled corn to the establishment of miles of field windbreak, from thousands of acres of CREP wetlands and wildlife-friendly buffer strips to a backyard habitat of native plants, the actions of countless individuals like you have improved Ohio's land, water, air, wildlife, and forest resources dramatically for the better.

This year's Conservation Partnership annual report highlights a few examples of these improvements to Ohio's environment, rural and urban. Ohio's 88 Soil and Water Conservation Districts, ODNR's Division of Soil and Water Conservation, and USDA's Natural Resources Conservation Service and Farm Service Agency are proud of the accomplishments you – our most important conservation partner – have made in the quality of life important to all of us.

PICTURING WATER QUALITY IMPROVEMENTS,

Sugar Creek partners say "cheese"

Jarlsberg cheese is famous the world over for its distinctive sweet and nutty taste and large, round holes. It derives its name from the county in South Norway where it was invented. The only producer of this popular cheese in the United States, Alpine Cheese Company, is located in the Sugar Creek watershed in Holmes County.

Trading offers a bigger bang for public $$$

With the ever-growing popularity of Jarlsberg, Alpine Cheese began an expansion in 2004 (to be completed this year) that will result in 12 new jobs and make it possible for the plant to process about 900,000 pounds of milk per day – a quarter-million pounds more than before the expansion. All of the milk used will be Ohio-produced – much of it from within the Sugar Creek watershed.

But before they could expand, Alpine Cheese – which discharges treated wastewater containing phosphorus into Sugar Creek – needed a new NPDES (National Pollutant Discharge Elimination System) permit from the Ohio Environmental Protection Agency (Ohio EPA). Ohio EPA has established TMDLs (Total Maximum Daily Loads) to help minimize the amount of pollution (both point source, like Alpine Cheese, and nonpoint source) entering the state's rivers and streams.

The TMDL for Sugar Creek calls for a phosphorus level of one milligram per liter. Alpine's expansion would exceed their phosphorus 'allowance' without prohibitively expensive wastewater treatment.

To solve the problem, Alpine Cheese joined forces with the Ohio Agricultural Research and Development Center (OARDC), Holmes Soil and Water Conservation District, and Ohio EPA to draft the "Alpine Cheese Phosphorus Nutrient Trading Plan."

Because the company will exceed it's permitted phosphorus discharge, reductions in this pollutant (which causes excessive algal growth) must be made in other parts of the Sugar Creek watershed (specifically the Middle Fork and Indian Trail, Walnut Creek, and South Fork Headwaters). The plan calls for a watershed-wide reduction in phosphorus that will exceed the amount that will be added through Alpine Cheese's expansion, which will lead to overall water quality improvement in the watershed.

The plan will include a Water Quality Trading Credit Program administered by the Holmes SWCD. Alpine Cheese will provide about $800,000 over the next five years to manage the program and help farmers within the watershed (which is about 90 percent Amish) install best management practices (BMPs) to help reduce phosphorus runoff. Funding will also support OARDC research into the program's effectiveness.

Nutrient trading plans (or water quality trading plans) provide a much better return on public investments than traditional – and expensive – "end-of-pipe" treatment facilities. Trading results in greater investment in riparian protection and conservation practices on family

OARCD photographer Ken Chamberlain

farms. This means that water quality in the entire watershed will improve – resulting in a far bigger "bang for the buck."

While the plan is written only to address phosphorus reduction, the BMPs that will be installed will also reduce erosion, sedimentation, and nitrogen runoff, which should improve the overall aquatic biological diversity – and that's enough to make anyone smile.

Scioto River Watershed

CREP Roars Along

Over 1,400 landowners have initiated sign-up of more than 38,000 acres in the first nine months.

When Jeff Mallett heard about the incentives offered through the Scioto CREP program, he knew enrolling part of his farmland was the best business decision he could make. Even so, he admits, it's hard to quit farming some of the land his family has farmed since the 1830s. "It's some of the most fertile ground God ever made," he explains. Still, fertility doesn't translate into profitability when fields flood out repeatedly. Enrolling part of his farm in the Scioto River Watershed CREP program will let him earn income from the land while he protects it from erosion and helps keep sediment and pollutants from entering the river.

"We took our highest risk land and put it in the program," Mallett explains. "It's the best thing we could have done for the land and for the river and for the people downstream."

Mallet, who farms in Marion County, was one of the first to enroll in the Scioto River Watershed Conservation Reserve Enhancement Program. Sign-ups started just last spring, but already local SWCDs and Farm Service Agency offices have received enough interest from landowners to reach more than halfway to the program's acreage goal of 70,000 acres, notes Rob Hamilton, resource management specialist with the Ohio Department of Natural Resources Division of Soil and Water Conservation. So far, he estimates, conservation offices have received inquiries about enrolling 38,000 acres and contracts have already been signed for 13,000 acres.

The Scioto CREP is Ohio's third Conservation Reserve Enhancement

Program, following successful programs conducted in the Lake Erie and Big Walnut Watersheds. Like those programs, the Scioto CREP involves partners from local, state and federal agencies as well as various organizations with an interest in conservation. This cooperation makes it possible to offer landowners the financial incentives and technical help they need to commit their land to the program. "It really is a partnership effort," Hamilton explains.

By working together, the landowners, agencies and organizations can all meet their conservation goals, he adds. For instance, landowners can control erosion and runoff while maintaining

Scioto Watershed CREP involves 31 counties.

income from their land, wildlife agencies and organizations enhance habitat for wildlife, and municipalities protect their drinking water sources. The effects even extend to the Gulf of Mexico by reducing the nutrient load of water flowing from the Scioto Watershed into the Ohio and Mississippi Rivers.

Landowners who voluntarily enroll in the 15-year CREP receive annual payments of 175 or 200 percent of the annual soil rental rate set by local Farm Service Agency committees. Enrolled landowners also receive cost share funding for establishing grass filter strips, planting trees for riparian corridors or restoring wetlands.

The Scioto River Watershed includes land in 31 central and southern Ohio counties. The program is available to landowners with cropland along the Scioto River or its tributaries. Some marginal pastureland is also eligible.

Landowners can choose from 19 different conservation practices in four major categories—tree plantings, cool season grasses, warm season grasses or wetlands. Enrolled landowners work with their local Soil and Water Conservation Districts and Natural Resources Conservation Service staffs to pick the practices that best suit their own goals and the site characteristics, explains Hamilton.

Gail Keck

The warm season grasses planted last spring on the Lust family's CREP land are already protecting soil from erosion, filtering runoff and providing wildlife habitat, says Darrel Lust.

Native warm season grasses have been particularly popular with participants who have signed up so far, Hamilton says. The Ohio Department of Natural Resources Division of Wildlife offers extra incentives for establishing warm season grasses because they provide such good wildlife habitat, he explains. That's one reason the Lust family chose to plant warm season grasses on their CREP ground. Brothers Merrel and Darrel Lust, who farm with Merrel's son, Joel, and Darrel's son, Tom, had already established 60-foot-wide switch grass filter strips eight years ago to protect stream banks on their Marion County farm. They've been impressed with how well the eight-foot-tall grass prevents erosion and filters runoff, Darrel says. "We wanted to add to it." The CREP gave them a way to do so without losing the income from the land they enrolled.

More information on the Scioto River Watershed CREP is available through local SWCD and Farm Service Agency offices.

How SWEET it is!

Take one part drinking water, add a little cash, mix it with a concern for resource protection, pour the contents into a ground water model, and what do you have? SWEETs, naturally!

73% of Ohioans surveyed are "very concerned" about ground water quality.

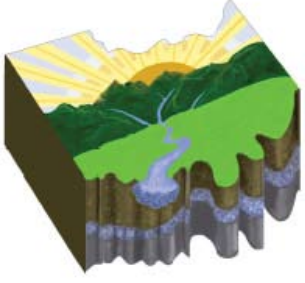
Ohioans care about the quality of their drinking water. A 1998 survey conducted by the Ohio Water Resources Council found that 73% of 889 randomly selected adult Ohio residents were "very concerned" about protecting the quality of ground water and the majority stated that drinking water quality and water pollution in general were the most important water related issues facing their portion of the state.

With this in mind, the Ohio Environmental Protection Agency's Division of Drinking and Ground Waters approached the Division of Soil and Water Conservation in late 2003 with an idea to increase public awareness and understanding of ground water information. Together, the two agencies crafted a grant request to the Ohio Environmental Education Fund to plan and carry out a program to educate Ohioans about source water protection and encourage Ohio's water resources partners to collaborate in their public education and outreach efforts.

County soil and water conservation districts (SWCDs) would be the vehicle for organizing their local water resource partners (e.g., local health department staff, public water system operators, watershed coordinators, OSU Extension staff) into county-based **Source Water Environmental Education Teams (SWEETs).** New user-friendly ground water simulation models, drinking water source assessment reports, protection area maps, and other resource materials would be provided to interested SWCDs and their SWEET partners on a cost-share basis to stretch the $35,000 in grant funds to reach as many districts as possible. Forty-five SWCDs formed 38 single- or multi-county SWEETs.

Participating SWEETs have committed to conducting at least three source water protection education outreach events within the next year. Contact Jeanne Russell, ODNR Division of Soil and Water Conservation's nonpoint source education coordinator at (614) 265-6682 to find out if a SWEET presentation can be planned for your community!

Training session demonstrates how to effectively address local water resource issues.

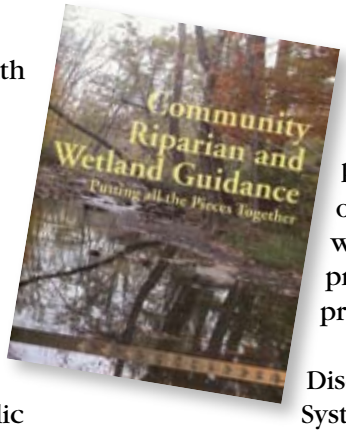


Protecting Ohio's Drinking Water Sources

Protecting Streams, Protecting Property

Soil and Water Conservation and the City

People have a love-hate relationship with rivers and streams. Who doesn't like a shaded, babbling brook, a quiet relaxing place to fish or walk or just take it easy? And who wouldn't like a home on the banks of an idyllic little stream? Until, that is, the little stream becomes a raging torrent and eats half of your back yard or floods your basement.



As Ohio communities push into previously rural areas, more and more homeowners run into problems with flooding and erosion as floodplains are developed and impervious surfaces (roofs, driveways, parking lots) cover areas formerly occupied by farms or woodlots.

The rivers themselves haven't fared well, either. With the loss of tree cover, their waters warm. Deprived of their floodplains and fed by increased runoff, stream banks erode and channels fill with mud, degrading fish and wildlife habitat.

One effective solution that provides multiple payoffs is stream setbacks (also known as stream ways or riparian buffer areas), which both minimize property damage and protect water quality.

The National Pollution Discharge Elimination System (NPDES) Phase II requires 547 Ohio communities with storm sewer systems to develop extensive storm water management programs and implement storm water control measures. Soil and Water Conservation Districts (SWCD) throughout Ohio are assisting communities in meeting these requirements.

"We enacted wetland and riparian setback legislation in Broadview Heights for several reasons," says city engineer Dennis Seifert. "Obviously the water quality issues were an important factor and another benefit noted by many was the preservation of additional green space in our city."

In addition to Broadview Heights, the Cuyahoga SWCD has been working with the cities of Parma, North Royalton, Berea, Independence, and the Village of Bratenahl in implementing their codified riparian and wetland setback ordinances. According to Todd Houser, Cuyahoga SWCD storm water program manager, a number of other communities in the county are currently reviewing the Northeast Ohio Regional Storm Water Ordinance "Controlling Riparian Setbacks and Wetlands Setbacks" to begin the process of community natural resources protection.

Parma, Ohio's 7th largest city, was the first Ohio city to codify local regulations for the establishment of riparian setbacks (including headwater streams with watersheds smaller than ½ square mile) and wetland setbacks (including isolated wetlands). "That's a big step forward in natural resources protection for a big Ohio city," says Houser.

The City of Broadview Heights has worked with Cuyahoga SWCD on the preparation of legislation, technical aspects of site plan reviews, and field inspections related to storm water pollution prevention. "The district is also assisting us in our goal of educating our employees, developers, contractors, and the general public," says Seifert.

Other Ohio SWCDs (including Summit, Lake, Hamilton, Franklin, Geauga, and Medina) are actively working with communities to promote and craft similar riparian and wetland protection guidelines.

New emphasis on

Meeting Rural Drainage Needs and Environmental Stewardship

Nature isn't naturally disposed to straight lines; people, however, love them. After all, a straight line is the shortest distance between two points. So it isn't surprising that one of the principles of water management has always been to move the largest amount across the shortest distance in the least amount of time possible. Efficient, but not without problems. And generally not permanent.

For several years the Division of Soil and Water Conservation has been supporting stream restoration, including research and development of techniques to support restoration efforts – recognizing that poor physical form is one of the leading causes of low water quality and aquatic habitat in Ohio.

At the same time, the division and SWCDs have for years assisted farmers and other local groups with traditional water management practices – namely, managed drainageways.

Agriculture in Ohio requires drainage – both surface and subsurface tile. In many areas, Ohio soils have poor internal drainage, and much of Ohio's best agricultural land has little topography. Given our abundant precipitation, farmers need to be able to drain water from their fields if they are to have any chance of producing financially viable crops.

Agricultural drainage (and much urban drainage, for that matter) has historically been achieved with long, arrow-straight ditches. Many ditches were the result of straightening and deepening smaller streams. When these ditches were first established, there was less understanding of ecology or stream dynamics. Deprived of riffles and curves and plant life, ditches make for poor ecological value and provide little in the way of watershed services like self-purification.

So what happens when there are competing local priorities for biological and water quality improvement, adequate drainage for agricultural fields, residential flood protection, or economic development?

The division is developing viable alternatives that accommodate – even improve – practical drainage needs but address environmental considerations in the process. In mid-2005 Chief David Hanselmann instructed staff to form a work team to address these challenges, with particular emphasis on rural maintained drainageways and ditches. The team is charged with developing recommendations and technical guidance with input from a broad range of stakeholders by September 2006.

Although work has just begun, encouraging results are emerging on a new channel design commonly called an "over-wide" or "2-stage" channel. This approach requires about a 20% to 30% increase in width over traditionally designed drainageways. The extra width actually increases water flow and potentially reduces maintenance. Ecological benefits may be realized as a small channel and floodplain form. This channel has the potential to exhibit natural stream characteristics, better water quality and healthier aquatic life populations – while still providing for drainage outlets.

Wider-bottomed channel

One year later

This is just one of a number of issues the rural managed drainageway initiative will tackle. The initiative is also exploring ways to support more local drainage projects and better and more widespread maintenance – meeting both Ohio's rural drainage and environmental needs.

Conservation on the Land
PAYS DIVIDENDS

Dave Mathew, Van Wert SWCD

Tom Bauer is one farmer with a file full of Conservation Plans. "They go back fifty years," he says.

If *all* he had to show were a file full of those blue folders, this wouldn't be much of a story.

"My dad was a cooperator with the Van Wert Soil and Water Conservation District when I was just a kid," says Tom, who now farms the land in partnership with his son, Dan. "I pretty much grew up with conservation right along with farming."

Thanks to the fact that the conservation plans in that file cabinet were implemented over the years, the Bauer farm was one of the first in Van Wert County to qualify for the Natural Resources Conservation Service's Auglaize Watershed Conservation Security Program – one of the first CSP watersheds in the country.

"Planting filter strips along our ditches was a no brainer for me."

Unlike most federal farm conservation programs designed to address resource problems, CSP is intended to recognize farmers who have already applied a full conservation system that addresses soil and water quality to meet program criteria. In short, CSP farmers are not conservation "Johnnies come lately."

The Bauers, for instance, were planting filter strips along their ditches before there were cost share incentives. "It was a no-brainer for me," says Tom. He also talked to several of the landlords he was renting from and convinced them that the rows of crops sacrificed for the buffers were worth it in terms of soil saved and reduced ditch maintenance.

No-till has been another important component of their overall conservation program for nearly 20 years.

"I was on the Soil and Water Conservation District board in the '80s when the big push for no-till came. We planted two 80-acre no-till bean fields and I worried sick about them till they were harvested," he says. Today, all of the Bauer's corn and soybean acres are in no-till.

"The soil is just so much better," he marvels.

Tom knows the soils on his farm and tests by type every other year and applies amendments accordingly. Since beginning no-till, "I've seen the calcium content of the ground increase. And there is much better water infiltration than there was under conventional tillage."

Tom credits much of his success to his affiliation with the Van Wert SWCD over the years. "It's my feeling that every farmer should serve a term or two on the SWCD board. It's a tremendous learning experience."

Thank you for taking time to read our report on some of the 2005 program achievements of the Ohio Soil and Water Conservation Partnership.

As we noted on the cover of this year's report, most of what has been accomplished in natural resource conservation in our state over the years would not have happened without the active involvement of literally millions of individual landowners. This spirit of private lands conservation is alive and well in Ohio today, as the articles in this report help to illustrate.

We at the Ohio Department of Natural Resources and Ohio's 88 Soil and Water Conservation Districts understand and appreciate that you are the most important "partner" in our conservation partnership. Thank you for caring enough to install, maintain and manage the conservation practices that benefit us all.

David Hanselmann, Chief,
ODNR Division of Soil and Water Conservation