



Conservation Insights

Supporting Water Quality Improvements
and Soil Conservation in Ida County, Iowa

A quarterly publication of the Ida County Soil and Water Conservation District (SWCD)
and the Battle Creek Watershed Groundwater Protection Project

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FIND THE ABANDONED WELL. Can you locate the abandoned well on this property? At first glance, it appears to be among the mound of concrete rubble, in front of the barn. However, it actually is in the foreground of this picture, under the plants, and it is level with the ground. The danger of abandoned wells is not always apparent on a farmstead. Hunters this fall should keep an eye out for these sites.

Watch for Abandoned Wells and Cisterns

If you are a farmer or hunter, fall is the season to be aware of abandoned wells or cisterns on the property you are crossing.

As Iowa farms get larger, farmsteads are abandoned, leaving unused wells around the state. Most of the abandoned wells and cisterns in rural Ida County are not marked by windmills or old hand pumps. Too often, they are overgrown by weeds. Only a sunken spot in the ground marks their existence.

Back in 1900, Ida County had an estimated 2,000 wells on farmsteads and in farm fields, according to Richard Madsen, Ida County sanitarian. Only 192 have been plugged since 1989.

When you subtract the number of active wells still in use, that leaves hundreds of abandoned wells that can be a danger to people and animals.

Even urban areas have abandoned wells and cisterns. Recently, a six-year-old boy was rescued from a cistern in Sioux City. He was saved with a garden hose and received minor abrasions.

Also, the abandoned wells are a threat to the groundwater, the source for all of Ida County's drinking water. Soil and rock naturally filter out bacteria and some chemicals.

When open holes are drilled through these protective layers of soil, contaminants can directly enter groundwater. Contaminants can enter wells that are missing protective caps or have leaky casings.

Once contaminated, wells can affect the quality of groundwater and nearby

CRP Begins General Sign-Up

By Lorne Miller, Ida County district conservationist

The next sign-up period for the general Conservation Reserve Program (CRP) started Oct. 26 and goes through Dec. 11. This sign-up will be similar to the previous general sign-ups.

Annual rental payments are made based on the rental value of the three predominant soils. Cost-share assistance is available in the amount equal to but not more than 50 percent of the participant's cost in establishing approved practices.

Eligible land must be:

1) Cropland that has been planted or considered planted to an ag commodity two of the five crop years from 1994 to 1998. This cropland also must be physically and legally capable of being planted in a normal manner to an ag commodity.

2) Considered highly erodible land, according to the conservation compliance provision or have a weighted average Erosion Index of 8 or higher. Generally speaking, that is land that has a slope of five percent or greater (C-slope).

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Conservation Compliance

By Lorne Miller
NRCS District Conservationist

Farm producers are urged to keep up their conservation practices.

Compliance has been emphasized so strongly for many years that it is natural that some of its effect wears off over time.

In Ida County, we have seen a large decline in new conservation practices being applied to the land.

The message that we want to deliver to our farmers is “Keep your options open” and “Keep up the practices that you have in place.” Also, it is good business for every producer to think through the reasons for the actions they take on the farm this fall or at any time.

We know that there are good reasons for no fall tilling a lot of the farmland in Ida County. One is keeping your options open for next spring. Another is protecting your soil and water resources.

Crop residue left on the soil surface is one of the most important environmental benefits to improve water quality. It’s obvious most farm producers are not aware of that yet.

No matter what programs are in place in Ida County, one fact remains constant: You have to protect your natural resources and your farmland for the future.

Nitrogen – Friend and Foe

This article is the first in a series which will describe various pollutants, their sources, and ways to prevent pollution.

By Chris Jennings,
Battle Creek Watershed
Groundwater Protection
project coordinator

Pollutants are substances that degrade or impair the quality of a natural resource. Pollutants come in many forms, but they can be classified as physical, chemical, or biological.

Nitrogen makes up 78 percent of the air we breathe, and it is necessary for plant growth. Plant cells require proteins to function, and nitrogen is used to make amino acids, building blocks of protein.

Although naturally present in soils, nitrogen is added to increase crop production. It is usually added to soils by applying fertilizer and manure and by growing legumes, such as soybeans or alfalfa.

Nitrogen also is present in lakes and streams at low levels (less than 0.3mg/l). However, nitrogen also can be a pollutant in water when present at high levels.

In water, the most common forms of nitrogen pollutants are **ammonia-nitrogen** and **nitrate-nitrogen**.

Ammonia is produced when plants and animals decay, and it also is found at high

levels in animal waste. Nitrogen frequently is applied to crops in the form of ammonia because plants easily can use this form. During heavy rains, ammonia can move to streams and lakes, where it can be toxic to fish.

Nitrate also is found in commercial fertilizer. After a plant absorbs nitrate, it uses energy to convert nitrate to ammonia. Nitrate mixes easily with water and can quickly flow through the soil into the groundwater. At high levels, nitrate can have serious health effects on infants and livestock. The health advisory limit for **nitrate-nitrogen** in drinking water is 10mg/l. If you are concerned about nitrate in your drinking water, the county sanitarian will test your rural water at no charge.

How can we reduce nitrogen pollution?

- Apply fertilizers at amounts the plants can utilize. Crops have limited nitrogen uptake, and the nitrogen that is not used will travel with rainwater into groundwater. This applies to both town residents who fertilize their lawns and to farmers who fertilize their crops.

- Incorporate manure into the soil. Incorporation not only reduces the risk of pollution, but it reduces the amount of ammonia lost to the atmosphere.

Next time: Phosphorus

Backyard (and Farm) Conservation

Phyllis Hagemeyer of Ida Grove is the new Ida County coordinator of Backyard Conservation. This program is sponsored by the Natural Resources Conservation Service (NRCS) and focuses on helping homeowners improve their backyard.

A free, 28-page booklet is available that describes how farmers and townspeople can care for their natural resources. For example, the “nutrient management” section encourages soil tests before fertilizing either a backyard or a farm field.

For more information, contact the NRCS office at (712) 364-2124.

Also, the Battle Creek Watershed Groundwater Protection Project offers classes to farmers on how to manage nutrients and pests on their farm fields. Chris Jennings, project coordinator, and Chris Clark, crop consultant, are leading these classes for farmers living in the watershed.

Save Crop Residues this fall!



U.S.D.A. Natural Resources Conservation Service

Watch for Abandoned Wells

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drinking water wells.

Plugging abandoned wells is a focus of the Battle Creek Watershed Groundwater Protection Project. A demonstration of a well plugging is planned for the public as a part of the five-year project.

Rural Ida County residents may be eligible to receive up to 80 percent of the cost to plug an old well or cistern (with a \$200 maximum). Depending upon the

dollars are provided to Ida County by the Grants-to-Counties program through the Iowa Department of Natural Resources.

Those interested in closing an old well or cistern should contact the Ida County sanitarian's office at (712) 364-2533 before the closing takes place. A well-closure application must be filed, and the sanitarian's staff will inspect the well to make sure it is properly plugged.

Most shallow, large-diameter wells in Ida County can be closed by landowners following guidelines. However, deep, small-diameter wells must be closed by a registered well contractor, according to Iowa State University Extension.

Deep well plugging calls for experience with construction materials and methods, knowledge of geology of the area, and special tools and pumps.

Two publications are available at the Ida County Extension Office: "Abandoned Wells Pose Safety Hazards," Pm-1563f; and "Successfully Plugging Your Abandoned Well," Pm-1328.

For more information, contact the Ida County sanitarian's office, Ida County Courthouse, or call (712) 364-2533.

'Receive up to 80 percent of cost to close old, abandoned well.'

Nancy Rydberg

Ida County environmental technician

work required, plugging could cost from \$140 to \$600, according to Nancy Rydberg, environmental technician with the sanitarian's office.

Factors that affect the plugging cost are well depth, diameter, and geology of the area. Recently, in Ida County, 12 out of 20 rural wells that were closed qualified for the full \$200 cost-sharing grant. Grant

Put Soil Survey to Use

Farmers can now use a free and new tool (the Ida County soil survey) to map their fields. These detailed soil maps can be the base for their 1999 cropping plans.

The soil survey indicates the types of soil for each acre of land in Ida County. Interpretations include corn suitability ratings and expected yields under a high level of management for commonly-grown crops. It also states which lands are subject to flooding.

Other areas of the soil survey describe which soils support specific trees, good wildlife habitats, and are suitable for building sites.

The Ida County soil survey is free to any rural landowner or farm operator. Contact the Ida County Natural Resources Conservation district office at (712) 364-2124 or visit the U.S.D.A. office on Hwy. 175 east of Ida Grove for more information.

Ida Conservation Insights

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This newsletter is free of charge. To get on the mailing list, send name and address to: Peggy Peters, Battle Creek Watershed Project, Box 237, Ida Grove, IA 51445; phone (712) 364-2124; or e-mail: x1peg@exnet.iastate.edu.

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CRP General Sign-Up

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Offers will continue to be evaluated and ranked using an environmental benefits index (EBI), based on environmental benefits expected to develop if land is enrolled.

To determine what you need to do to increase your chances of getting accepted into the program, NRCS will rank the field you are offering. Planting a mixture of native grasses (such as switchgrass, big bluestem, Indiangrass, etc.) or trees and/or shrubs on the land to be enrolled will increase your EBI points.

If your land is coming out of CRP, you should be thinking about changing part of the cover crop. Most land coming out of CRP is bromegrass or bromegrass/legume mixes.

This bromegrass does provide a lot of habitat. But it does not do very well as a winter habitat for wildlife. That's why you need to establish some native grasses on your land. Native grasses will provide a much better winter habitat than does bromegrass.

If you have questions about the CRP, feel free to call the Ida County Natural Resources Conservation Service (NRCS) office at (712) 364-2124.

Web site offers resources for farmers

Farmers who want more information about how to address economic issues can zoom in on a Web site designed by Iowa State University's Extension Service. Go to: www.exnet.iastate.edu/Pages/communications/farm98/. Help is provided in a variety of topics, including financial planning, marketing, and reducing production costs.

Manure Demonstration Plot Results Announced

Enclosed in this newsletter is a summary of the manure demonstration plot on the Brian Cronin farm near Holstein. This plot was under the direction of Chris Clark, crop consultant from Ida Grove, and Chris Jennings, project coordinator of the Battle Creek Watershed Groundwater Protection Project.

The plot focused on the effects of manure and commercial fertilizer on a field of corn. The watershed project helps farmers protect their groundwater and rural well water. One of its activities is to show farmers how they can use their livestock manure as a nutrient on their cropland. It teaches them to credit the manure as a source of fertilizer, possibly decreasing their use of commercial fertilizer. This can help the groundwater and help the farmers minimize costs.

Did You Know?

The U.S. receives about one pound of nitrogen per acre per year through rainfall. This is just one of the sources of nitrogen that our crops use for growth. However, according to Chris Jennings, project coordinator with the Battle Creek Watershed Groundwater Protection Project, this is not significant enough to take credit in a crop nutrient plan.

*"Limnology," Robert Wetzel, 1983.

From Kiron

Lloyd Rickers Earns Conservation Award



Lloyd L. Rickers of rural Kiron is the outstanding Region 1 Soil and Water Conservation District (SWCD) winner for 1998.

Rickers (pictured at left with his wife Shirley) was nominated by the Ida County SWCD. He won over 50 other commissioners and assistant commissioners in nine northwest Iowa counties. He was honored at the annual Conservation Districts of Iowa conference awards ceremony in Des Moines on Sept. 3.

Rickers and his wife farm in Hayes Township in southern Ida County.

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...and justice for all

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