

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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Water Quality Education-- Even for the Young



Even kindergartners can learn about water quality. This class of kindergartners from Ida Grove recently saw an EnviroScape model in action, under the direction of Kristin Leu, Ida County naturalist (left) and Chris Jennings (right). Jennings is project coordinator of the Battle Creek Watershed Groundwater Protection Project. The EnviroScape is a plastic watershed model which shows water contaminants that can be produced by rural and town folks alike. Joan Nielsen of Battle Creek is the instructor for this class.

Dowsers--A Battle Creek Memory

By Gordon Marshall, Milwaukee, Wisconsin

(Marshall is a 1944 graduate of Battle Creek High School and of Iowa State University. He is retired from the U.S.D.A. Forest Service.)

Although Ida County is blessed with good water, we have to find it if we are digging a well. Given much thought to the Ida County well drillers and others who were dowsers?

Yes, they took that willow twig or another forked device and walked up and down a likely water source to see if they could feel that mystical force. Some of these well men seemed able to find a forgotten water line by dowsing.

It's a bit ironic that this overeducated son had a father, William Marshall, who witched for water. He didn't bother with a willow-forked stick. A metal coat hanger was all he needed in his large hands. He cut out the crossbar of the hanger to make a forked device. When the hook bobbed down, supposedly he had found a stream of water. He liked to try to convince the skeptical of the art of dowsing for water.

Somehow my mother's entertaining a few friends one afternoon wound up with Dad demonstrating dowsing. He even got a woman or two to hold the coat hanger jointly with him in a demonstration in our pasture eighty south of Battle Creek. One lady seemed somewhat convinced as the hanger moved in their hands.

No, Dad never converted me to a believer in dowsing. But I know that my practical father could locate a well, dowser stick or no.

Rates Increase For Cost-Share

By Lorne Miller
NRCS District Conservationist

Cost-share rates for terraces and water and sediment control structures have been raised from 65 to 75 percent. This applies only to farmland that drains into the Little Sioux Watershed Project in Ida County.

Cost-share rates for grade control structures in the Little Sioux Project remain at 65 percent.

Fifty percent cost-share is available for the construction or renovation of waterways (including tiling as a component if needed) if upland treatment requirements are met. Some restrictions may apply.

All cost-share is based on the established average cost or the actual cost, whichever is less.

Now is a good time to consider areas that might need attention. Construction must meet NRCS specifications and be maintained for a minimum of 20 years.

If you have very old terraces that need redesigning, check with us at 364-2124 to see if they qualify for cost-share.

Public Events

This Spring

Battle Creek-March 15-

Water Meeting

Holstein-March 16-Water Meeting

Ida Grove-April 17-Toxic Cleanup

Day for Ida County residents.

See Page 3

for more details.

Keep Your Eligibility

By Lorne Miller

NRCS District Conservationist

Just a reminder that you are responsible for following your conservation plan for highly-erodible land (HEL).

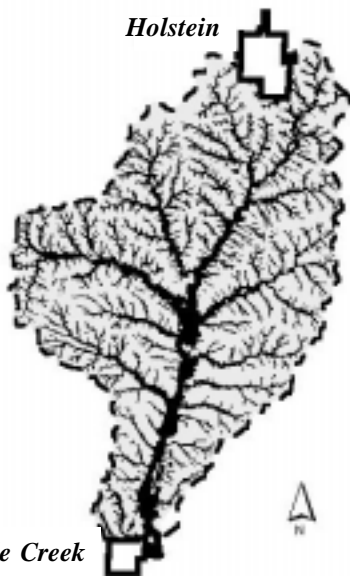
If you wish to remain eligible for the following, you are required to proceed with your conservation plan:

- Federal Crop Insurance,
- CRP annual payments,
- Production flexibility contracts,
- LDP's, and
- at least 10 more U.S.D.A. programs.

Now is the time to be reviewing your conservation plan. If you have questions, contact the Natural Resources Conservation Service (NRCS) at (712) 364-2124, or stop by the U.S.D.A. Service Center.

Annual report

Ida County Soil and Water Conservation District's annual report is included in this mailing. It profiles the SWCD's activities for the fiscal year that covers July 1997 to June 1998.



Battle Creek

Alluvium is sediment deposited by water flowing to drainageways, and in stream and river valleys. Most alluvium in Ida County is a result of erosion from loess-covered side slopes and ridgetops. Alluvial soils often are the most productive for crops, and they also provide a plentiful supply of groundwater for many Ida Countians. These "water-rich" alluvial aquifers are shallow and not protected by bedrock. Therefore, pollutants have only a short distance to travel before reaching our drinking water supply. Properly managing crop nutrients and pesticides helps protect these shallow aquifers.

Phosphorus Pollution

This article is the second 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

Last time, I discussed the importance of nitrogen in agricultural systems. Phosphorus is another nutrient that is critical to plant growth, but it can impair water quality.

While the primary source of nitrogen is the earth's atmosphere, phosphorus is found in the earth's crust, or soil, in both organic and inorganic forms. Most phosphorus in the soil comes from the weathering of rocks and minerals.

Plants use this inorganic phosphorus (also called orthophosphate) to build high-energy compounds required for cells to function and grow. Fertilizers and manure rich in phosphorus can be applied to crops to increase plant growth.

Although plants require much less phosphorus than nitrogen, phosphorus can limit plant growth in areas with poor soils. However, this is uncommon in Iowa.

Phosphorus is continually cycled

through the environment. Animals consume plants, then return organic phosphorus to the soil through waste. The waste then is broken down into phosphorus that plants can use, and the cycle is repeated.

Phosphorus differs from nitrogen in that it is very reactive with metal ions, clay and other particles. This prevents some phosphorus from dissolving in water.

Instead, phosphorus moves to lakes and streams by "hitching a ride" to soil particles. After reaching surface water, it may settle to the bottom, or it may be used by plants. Because phosphorus binds strongly to soil particles, it is not commonly found in groundwater. Nitrogen, on the other hand, is very soluble in water and not very reactive.

Large amounts of phosphorus can cause severe water quality problems. Here is a typical situation in a lake or pond. First, this "nutrient loading" or overdose of phosphorus causes algal blooms.

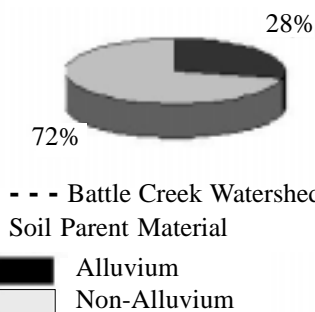
Then, as more algae grows, more algae dies, increasing the activity of bacteria that decompose plants. Most of these bacteria require oxygen to live, so the amount of oxygen in water is reduced.

When the dissolved oxygen levels are reduced enough, fish begin to die. If left unchecked, these algal blooms can cause a complete fish kill.

How can you reduce phosphorus pollution?

- Apply fertilizers at amounts the plants can utilize. Crops have limited phosphorus uptake and require smaller amounts than nitrogen. Soil test your fields.
- If applying manure, take phosphorus credits. About 70% of the phosphorus in manure is available to plants the first year.
- Conserve your soil resource by reducing your tillage, or installing terraces, waterways and filter strips. Reducing the movement of soil will reduce the movement of phosphorus.

Watershed Soils Parent Material - % Land



- - - Battle Creek Watershed Soil Parent Material

■ Alluvium
□ Non-Alluvium

Source: Ida County Soil Survey

Next time: Manure

Did you know?

The average Ida Countian uses about 100 gallons of water a day.
*Iowa Plan Survey 1994.

No Charge for Disposal of Household Hazardous Waste

Toxic Cleanup Day in Ida County will be April 17, according to Ida County Sanitarian Richard Madsen. He is the coordinator for the event, to be held at the Ida County Landfill.

This is a chance to get rid of hazardous household items such as old motor oil filters, furniture polish and butane lighters. Since the event is held by appointment only, watch for more information in the local newspapers or listen to local radio stations as the date approaches.

The Toxic Cleanup Day was last held in Ida County in 1994. It only comes every few years and is a popular event with homeowners wishing to dispose of hazardous waste. As a result, you can participate only if you have an appointment. The Sanitarian's Office will take appointments starting April 1.

Banned substances are welcome, according to the Iowa Department of Natural Resources (DNR). DNR is bringing in the special team to handle the toxic waste and haul it away. The waste will be disposed of at special hazardous waste facilities out of state. At this time, Iowa does not have any hazardous waste facilities.

See adjoining list of substances that will be accepted.

Motor oils are handled a little differ-

(clip and save)

Recycle Hazardous Wastes

Common items that will be accepted at the April Toxic Cleanup Day are:

- Lead-acid batteries and aerosol paints
- Charcoal lighter and mothballs
- Unusable gas or other car fluids
- DDT and other banned pesticides
- Animal dip, mercury and corroded drain cleaners
- Glues, adhesives and antifreeze
- Petroleum-based fertilizers
- Oven cleaner, furniture polish, spot removers, floor wax, silver polish and window cleaner.
- Brush cleaners, paint strippers, wood preservatives, paint thinner and turpentine, and
- Pesticides and fertilizers used in the garden.

ently. They should be returned to the retailer from where they were purchased. Either the retailer will take back the used oil or you will be directed to a site where it can be recycled.

Latex (or water-based) paints often can be disposed of in the home. Empty or dry paint cans can be sent to the landfill along with other household trash. If only a small amount is left, the can should be opened so the paint evaporates in a well-ventilated area. Keep children and pets away as it

Watch for Toxic Cleanup Day in April

dries out. Leave the lid off so the waste hauler knows the can is empty.

If you have too much latex-based paint to evaporate, the sanitarian's office can give advice on its disposal. Paint that has been frozen usually is not good.

Lead-based paints were phased out in 1979 but if you have these cans, call the sanitarian's office for advice.

The Toxic Cleanup Day is funded by an annual \$25 permit fee. Retailers who sell household hazardous materials pay this fee. Ida County also is contributing funds toward this countywide activity.

If you have questions about any of these items, call the Ida County Sanitarian's Office at (712) 364-2533.



New Commissioner For Soil, Water District

Marc Johnson of Battle Creek is the newest commissioner of the Ida County Soil and Water Conservation District. He replaces Rod Jensen of Ida Grove.

Other members of the board are Alan Van Houten, Battle Creek; Dennis Lindgren, Ida Grove; Wally Johnson, Washta; and Lloyd Rickers of Kiron.

Town Meetings Coming in March

Battle Creek and Holstein will be the sites of town meetings in March for the Battle Creek Watershed Groundwater Protection Project.

Battle Creek town and rural residents are invited to the meeting on Monday, March 15, at the community hall, at 7 p.m.

Holstein farmers and city residents will be the focus of the Tuesday, March 16, meeting at the Lohff-Schumann Memorial Community Center at 8 p.m.

Aerial slides of the Battle Creek and computerized maps will be displayed. The public is welcome to attend this discussion of water in Ida County. The focus will be on water quality in the watershed.

Ida Conservation Insights

The **Ida Conservation Insights** newsletter is published by the Ida County Soil and Water Conservation District, in cooperation with the Natural Resources Conservation Service, Iowa State University Extension and the Battle Creek Watershed Groundwater Protection Project. The publication of this document has been funded in part by the Division of Soil Conservation, Iowa Department of Agriculture & Land Stewardship, and by the Iowa Department of Natural Resources through a grant from the U.S. Environmental Protection Agency under the Federal Nonpoint Source Management Program (Section 319 of the Clean Water Act).

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: xlp@exnet.iastate.edu.

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 Ida County Farm Service Agency. Iowa Farm Bureau Federation.
 ABC Ag, crop consulting. AG PLUS Consulting.
 Cities of Battle Creek and Holstein. Ida Co. Pheasants Forever
 U.S. Department of Agriculture, Natural Resources Conservation Service.

1999 Status Reviews This Spring

By Lorne Miller
NRCS District Conservationist

Conservation Reserve Program (CRP) participants are reminded that our office will conduct an annual status review on your new seedings this spring.

We will make recommendations on what needs to be done to maintain an adequate seeding cover. If you get one of these notices in the mail, you will need to sign it and return it to our office.

Also, we will be conducting status reviews (spot-checking) a randomly-pulled list of tracts for conservation compliance.

These will be conducted as soon as possible after the crop is planted. Please contact the Natural Resources Conservation Service office at (712) 364-2124 if you have any questions about your plan!

We Will Show You the Money.... If You Put in a Grass Filterstrip

By Barb Knudsen

If you are willing to put in a grass filterstrip along a stream, the government is willing to pay you a financial incentive for it. These buffers between your fields and the water will protect water quality by filtering out contaminants.

All landowners in Ida County who have crop ground along streams, rivers or dams can qualify for the continuous Conservation Reserve Program (CRP).

These grass filterstrips can vary from 66 feet to 99 feet wide and can be enrolled for 10 or 15 years.

Grass filterstrips provide many benefits to the landowner. They provide food and habitat for wildlife, help the quality of

both groundwater and surface water and keep equipment safely away from areas that are subject to sloughing. Filters also can be designed to help eliminate some short rows.

The Ida County Farm Service Agency (FSA) will provide cost-share for establishment up to 50 percent of the total cost. The Ida County Pheasants Forever will pay \$30 per acre up to \$1,000 per project for the establishment of switchgrass.

Stop by the U.S.D.A. Service Center and check out the soil rental rate for qualifying areas on your farm. What are you waiting for?

See Carol or Barb at the Ida County NRCS office for all your CRP needs.

IOWA STATE UNIVERSITY University Extension

Ames, Iowa

....and justice for all

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Share Your Recollections About Battle Creek

Do you have a story about growing up along the Battle Creek in Ida County? Peggy Peters, editor of this newsletter, is looking for articles about your experiences in the Battle Creek Watershed area. The memory on Page 1 of this issue is an example of what Peters is seeking. Call (712) 364-2124 or write Ida Conservation Insights, Box 237, Ida Grove, Iowa 51445.

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