

Storm Lake Water Quality Project

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Storm Lake Water Quality Project and Community Partnerships

Hello my name is Kimberly Proctor, and I am the Water Quality Coordinator for the Storm Lake Watershed. As the Coordinator, my job is to promote and improve conservation practices within the watershed. This project has been made possible through the EPA 319 fund and partnering agencies such as Buena Vista Soil and Water Conservation District, IDALS, DSC, and DNR. Technical assistance is provided by the Natural Resource Conservation Service. Community partnership and locally led activities regarding Storm Lake's enhancement and development have been the drive behind the watershed project. Community supporters for the project are Lake Preservation Association, Lake Improvement Commission, City of Storm Lake, Iowa State Extension, Isaac Walton League, Buena Vista University, Iowa Lakes RC&D, Pheasants Forever, Ducks Unlimited, and Rotary Club. These organizations have contributed to the project by funding support, training, advisory committee members, grant writing, and public meeting presentations to name a few. With Storm Lake residents, agencies, and community organizations support, the project activities will continue to improve water quality and conservation in the Storm Lake Watershed.

What is a Watershed?



Photo: The Storm Lake Watershed

A watershed is an area of land that drains into a body of water, such as Storm Lake. The Storm Lake Watershed is a subwatershed of the North Raccoon River Watershed. Rainfall and snow melt carry nutrient and sediment loads to Powell Creek, which deposit into Storm Lake. Conservation practices such as filter strips and grass waterways absorb nutrients and reduce soil movement. These practices also prevent stream bank erosion, provide cover for wildlife, and enhance fish habitats.

Speaker for Meetings

Promoting conservation in the Storm Lake Watershed is an important part of this project. As Coordinator, I have spoken at a variety of meetings. If your organization hosts speakers at meetings or special events, I would be happy to come share the goals and progress of the project. Adding partners in the community enhances visibility to the project goals, accomplishments, and future. Please contact Kimberly Proctor at the NRCS office, 1617 N. Lake Ave, Storm Lake, 712-732-3096 for more information.



Boulder Weirs for Powell Creek

The function of a boulder weir is not to back up water, but to slow movement to prevent down cutting in the channel. Grade control structures in the form of a series of boulder weirs can be used both to help stabilize the channel from further down-cutting and to act as a diversion for water entering wetlands placed along the channel. The weirs eliminate down-cutting of the channel by providing continuous pools and riffles and slowing the velocity of the baseflow. They also reduce bank erosion by raising the

baseflow several feet thus reducing bank height below the critical level of collapse. The boulder weirs will be only 2-3 ft high and will be placed so that water is not backed into field drain tiles. These structures reintroduce riffles and pools into the channel which not only control the energy of the water but also provide habitat for fish and the invertebrates they feed on. These are also supported by the Iowa DNR Fisheries Bureau for use in improving in-stream habitat. They are better than low-head dams because they allow fish to travel across them in all but the lowest flows. Weirs will be placed at the natural frequency of pools and riffles, that being about 5-7 times the channel width. The weirs consist of a series of crest stones that extend across the channel and are tied several feet into each bank. These crest stones provide a slight V to concentrate low flow at the center of the channel. The height at the V is between 2-2.5 ft. On the up-stream side of the weir an approach apron has a slope of 4:1 and on the down-stream side of the crest stones the apron has a 20:1. This gentle long slope on the down side of the crest dissipates energy from water moving over the crest and armors the bed against any scouring. The weirs are placed at a typical pool-riffle sequence of 5-7 times the channel width. Each down-stream weir will back water onto the apron of the adjacent up-stream weir.

Conservation Security Program

Conservation Security Program (CSP) has been announced for the North Raccoon River Watershed which includes the Storm Lake Watershed. CSP is designed to reward conservation stewardship in priority watersheds. At this point, producers need to complete a **self-assessment workbook**. These can be picked up at the **NRCS office, 1617 N. Lake Ave. in Storm Lake** or accessed online at www.nrcs.usda.gov/programs/csp/. This is the first step in the program, and will guide you to find eligible land with your current practices. Sign-up dates will be announced soon; completing the self-assessment now, will prepare you for the next step. Keep in mind that if you start the self-assessment with your entire operation and do not qualify, try individual tracts that may. There are three levels “tiers” that can be reached for annual payment. The top tier is a maximum of \$45,000 annual payment. To ensure this program is as rewarding as possible, I am available for questions at the NRCS office at 732-3096. In addition to this, I will hold an informational meeting to explain the program and eligibility soon. I will be in touch with sign-up and meeting dates.



Be Part of the Solution: Home and Lawn Care “Personal Pollution” Checklist

- Do you apply chemicals, fertilizers, and pesticides as directed on the label?
- Do you select plants requiring little water, fertilizers, and pesticides?
- Do you prevent trash, lawn clippings, leaves, and automobile fluids from entering storm drains?
- Did you know 1 quart of oil can contaminate up to 2 million gallons of drinking water?
- Do you test your soil before fertilizing your lawn or garden?
- Do you avoid applying pesticides or fertilizers before or during rain?

If you answered yes, you and your family are protecting surface and ground water from polluted runoff. If you answered no to any of these, try to incorporate a new practice this coming year. When it rains and snow melts, chemicals and pollutants on driveways, lawns, and streets wash into the storm drains. Prevent polluted runoff from entering Storm Lake through Urban Conservation.