

Upper Cedar Watershed (Minnesota & Iowa)

Watershed Overview

The Upper Cedar River Watershed spans an area of 1,095,020 acres (1,710 square miles) in the headwaters of the Cedar River in Minnesota and Iowa and is drained by the Cedar River and a primary tributary, the Little Cedar. Much of the Upper Cedar watershed is underlain by karst features, which contribute to complex groundwater flow paths and the formation of sinkholes that intersperse the landscape. Historically, tallgrass prairies dominated the gently rolling landscape. Today, highly productive and valuable farmlands are a signature feature of the watershed, with 77% currently in row crops. Unfortunately, several streams in the Upper Cedar Watershed have been designated as impaired, and flooding has also been a pervasive concern in the Upper Cedar watershed. This year, drought conditions have permeated the conversation.



Watershed Improvement - Partners & Initiatives

The growing interest in protecting local aquatic resources such as trout streams and building resilience to extreme weather events has led to the formation of new partnerships and projects to address the common goal of improving the Cedar River Watershed. A few of these partnerships are highlighted below.

Burr Oak – Turtle Creek Watershed Improvement

This watershed improvement project, led by the Mitchell County SWCD and funded by Iowa Department of Natural Resources (IDNR) and Department of Agriculture and Land Stewardship (IDALS), was initiated in 2005 and wrapped up in 2010. Burr Oak and Turtle Creeks are considered high priority coldwater streams by IDNR, but have had ongoing water quality problems including nutrient and sediment loading. The project proposed to address these issues by providing cost-share opportunities to local landowners to implement conservation practices and streambank stabilization techniques. The primary practices employed in the project were filterstrips through CRP, timber stand improvements to enhance the riparian corridor, N-split application (which involves timing the application of nitrogen fertilizers to maximize plant uptake), and wetland restoration in partnership with the Mitchell County Conservation Board through CRP. One major accomplishment of this project is that natural reproduction of brown trout is now being seen in the watershed.



Mississippi River Basin Initiative

The Upper Cedar Watershed was designated as a MRBI basin due to its contribution of nitrate loading to the Mississippi River. There are currently two active MRBI projects in the Upper Cedar. One is being led by the Mitchell County SWCD to address water quality in the Spring Creek watershed. To date, numerous practices are either in progress or complete, including nutrient management plans, timber stand improvement, strip till / no till, cover crops, and other structural practices. Over the 5-year project period, just over \$1 million is expected to be directed toward conservation practices. The second MRBI project is a partnership between Floyd and Chickasaw Counties. Meetings held in September 2012 had a combined attendance of 60 landowners interested in installing practices over the 3-year project period. So far in 2012, construction has begun on ponds, wetlands, and biofilters, with a number of additional structural projects being planned for 2013. Over \$470,000 is expected to be spent on implementation projects.

Wetland restoration

Due to their ability to filter nutrients, provide critical wildlife habitat, and to some extent to store water, wetland restoration has been a key component of watershed enhancement in the Upper Cedar. Through the Conservation Reserve Enhancement Program, generous cost-share is available for construction of nitrate removal wetlands strategically placed in tile-drained landscapes. The program is a partnership between IDALS, the USDA Farm Service Agency, and local Soil & Water Conservation Districts. As of 2009, a number of CREP wetlands have been constructed in several counties in the Upper Cedar Watershed.

A recent wetland restoration project in Mitchell County, funded in part by Coca-Cola and World Wildlife Fund with support from The Nature Conservancy is underway with the local County Conservation Board and Mitchell SWCD. This project seeks to restore a 180-acre wetland and is expected to provide high-quality wildlife habitat and filter pollutants from the tile drains that will in part feed the wetland. Pheasants Forever will assist with seeding the site this fall.



Charles City (urban practices)

Charles City is a great example of leadership in sustainable stormwater management. Following the 2008 floods the City reclaimed the riverfront area, putting in a whitewater kayak water feature on the Cedar River, with parklands now lining the floodplain. In addition the City has installed over 20 city blocks with permeable pavers to promote infiltration and reduce the impact on the Cedar River.

Watershed Management Authority (IA) / District (MN)

While there has been no shortage of interest in watershed improvement, a mechanism for coordinating these activities has been lacking in the Iowa portion of the basin until recently. In fall of 2011, Floyd County, in partnership with a number of other cities, counties, and SWCDs in the Iowa portion of the watershed, received a grant from IDNR and Iowa Department of Economic Development to form a 'watershed management authority' to develop an inter-governmental cooperative agreement to facilitate watershed-based planning and management. Support for the Upper Cedar Watershed Management Improvement Authority (UCWMA) has been very

strong, with a total of 23 communities choosing to become active participants in the endeavor. The UCWMIA is currently working with the Iowa Flood Center, which is operated through the University of Iowa, on a watershed demonstration project site. This project will produce a hydrologic assessment of the Iowa portion of the watershed, and may also result in additional implementation dollars to support flood mitigation projects.

This model of multi-jurisdictional cooperation is nothing new for Minnesota, where Watershed Management Districts have played an active role in planning and management for a number of years. In the Upper Cedar basin, the Cedar River Watershed District has been active in Minnesota since 2007 with the goal of reducing flows and improving water quality in a mixed urban and agricultural watershed. They conduct outreach to the local community, and implement practices to improve conditions in the watersheds using funding set aside through a local levy.

Cedar River Watershed Coalition

The CRWC formed following the floods of 2008 as a mechanism to educate about better land management practices to reduce runoff and improve water quality. The Coalition sponsors regular meetings with an educational focus, targeted to both agricultural and urban interests in order to foster communication and support for watershed improvement projects. In the fall of 2011, the Coalition sponsored a tour for local decision makers of practices in the Upper Cedar Watershed that featured bioreactors, a CREP wetland, and other conservation practices.

Basin Coordinator Network

IDNR and IDALS fund a network of Basin Coordinators across the state of Iowa to help develop new watershed projects. In December 2010, IDNR hired an Iowa-Cedar River Basin Coordinator to work on basin-scale networks and coalitions. Three Basin Coordinator positions are funded both by IDNR and IDALS, while the other two are funded solely by IDNR. These positions work with local watershed coordinators, providing technical assistance on grant writing, data collection, and other aspects of watershed planning and management.

Partners List

County SWCDs ▪ County Conservation Boards ▪ Iowa Department of Natural Resources ▪ Pheasants Forever ▪ Iowa Department of Agriculture and Land Management ▪ Trees Forever ▪ USDA Natural Resource Conservation Service ▪ Iowa Flood Center ▪ Iowa State University Extension ▪ Iowa Water Center ▪ Iowa Soybean Association ▪ Cedar River Watershed Coalition ▪ Upper Cedar Watershed Management Improvement Authority (IA) ▪ Cedar River Watershed Management District (MN) ▪ Cedar Valley RC&D ▪ USDA Farm Service Agency ▪ The Nature Conservancy ▪ World Wildlife Fund ▪ Coca-Cola ▪ Mitchell County Environmental Education Foundation ▪ Landowners and Producers