



Voice of the Valleys

Summer 2014 - Volume 2, Issue 2

News and Events from the Lower Iowa & Cedar Valleys Conservation Alliance

Extreme Floods Impact Local Wildlife

When flooding is not extreme, it can benefit many species. Floodwaters help plants and animals to disperse across the landscape. Seeds are moved around in floodwaters, settling in new places and allowing plants to colonize new areas. The smaller temporary ponds that are created during flooding provide breeding sites for frogs and salamanders. Flooded areas enable ducks to feed in new areas of open water. Wading birds patrol the edges of floodwater picking up small insects and worms. However, Iowa is experiencing a significant increase in the frequency, intensity, and duration of flood events. These extreme floods are devastating for wildlife as well as people.

Prolonged flooding of bottom-land forest and backwater wetlands causes many tree tip-overs, destroys native wetland plants, and gives an advantage to pest plants like Reed canary grass. The effects on wildlife populations can also be severe. Many bird species fledge fewer young due to flooded foraging areas. Herons and other fish-eating birds have difficulty hunting due to the deep fast flowing water and increased sedimentation. Increased substrate disturbance and sedimentation can cause mussels to be buried by several feet of sand. Fish that rely on sight to find their food struggle because of the increased turbidity. The endangered wood turtle (see bottom left) is a prime example of a species that is in decline, due in part to changes in flood events. In recent decades, Iowa has experienced increased rainfall, decreased late summer droughts, and an increase in days with very heavy precipitation. Flooding in Iowa now occurs commonly during the turtle's egg incubation period and most available nesting sites are subjected to this flooding.

The way lands and waters are managed causes problems for wildlife. The fact that many of our species and habitats are fragmented is a major problem during these extreme floods. In a large protected area there may be somewhere for species to take refuge that is still fairly safe. If the wetland is just a linear strip of habitat alongside the river, there is nowhere to go. Ditches that are excavated to reduce flooding will result in lower ground water levels throughout the rest of the year and may affect a wide range of plant communities and the species that depend on them. Agricultural tillage without additional conservation practices can lead to high levels of silt build up causing poor water quality. Heavy rainfall causes storm sewers to open releasing pollution that ends up in our rivers and has disastrous consequences for wildlife.

Given the increase in flooding due to increased rainfall, it makes sense to give rivers more room to flood. Wildlife can survive these floods if we give them room. Restoring wetlands and protecting wider stream corridors can reduce flood impacts downstream, improve water quality, and make wildlife populations more resilient to these extreme floods.



Left: In Iowa, the wood turtle has a patchy distribution along the upper Cedar River and its tributaries. Its distribution here is limited by the availability of sandy nest sites on islands, sandbars, and shorelines. Photo by Jeff LeClere.

Right: Deer and other mammals can be displaced from the floodplain and suffer higher mortality rates on nearby roads. Photo from nature.org



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Floods, Trends, and the Future of Floodplains

By Cathy Henry

Many of us with lands in the floodplain are coming out of a prolonged flood season. Port Louisa National Wildlife Refuge experienced flooding on lands along the Iowa and Mississippi Rivers. The Iowa River peak at Wapello was the second highest on record, exceeding the 1993 flood. The Mississippi River at New Boston was the third highest on record after 1993 and 2008. Lately, there seem to be more flood years than not. In a recent interview on Iowa Public Radio's Talk of Iowa show, a climate scientist stated that extreme rainfall has increased in frequency from 1 in 20 years to 1 in 4 years. Four of the wettest May/June periods have occurred in the last five years. Various statistics and climate models for our region point to a trend for wetter springs/early summer and drier late summers and falls. Individual rain events are becoming more intense and more frequent and extremes are increasing.

There is a lot of science to back up these trends. Our own review of water resources for the refuge shows that for the Iowa River at Wapello, typical high river pulses are not happening as often but have a longer duration, river rises for larger flood events are happening faster, and base flows have increased by roughly 9% during 1986-2006 compared to 1958-1985. These trends, combined with the effects of land uses in watersheds, may cause changes in flood frequencies and patterns over time.

Lands along some of Iowa's rivers have been put into easement programs or wildlife areas where floods can be part of a natural cycle that causes little property damage. However, that doesn't mean that these lands can be left completely to nature with no management intervention. While Iowa's rivers and streams and their floodplains are resilient, there is often too much history on the land and too much influence from the watersheds for them to sustain high quality ecological systems. We have successfully restored wetlands and grasslands in floodplains and many have recovered into beautiful floodplain habitat. But excess sediment, invasive plants, erosion from extreme events, and excess nutrients make management of floodplains difficult.



Above: Flooding at Horseshoe Bend in Port Louisa National Wildlife Refuge on the Iowa River.

Floods are an important part of river cycles and many of us are adapted to them. However, the prolonged and frequent nature lately makes us think about the best way to manage wildlife habitats and natural resources in floodplains. We may need to think about different strategies to maintain desired conditions and strategize where the best places are for restoration or placement of certain habitats or land uses. In some cases, we will need to be innovative in determining what that land can sustain. Watershed planning is occurring in more and more parts of the state and becoming increasingly important. Adapting to changes in flood patterns should involve everyone in the watershed. Find out about planning efforts in your area and be part of the discussion.

To stay up to date on how flooding is impacting Port Louisa National Wildlife Refuge please visit:

www.fws.gov/refuge/port_louisa

Flooding in Iowa Project

The Iowa State University Extension, with support from the Iowa DNR, recently launched the Flooding in Iowa Project. Flooding in Iowa is a series of web-based videos designed to educate local officials and the general public about floodplains, flood risks, and basic floodplain management principles. The videos are divided into five categories: Introduction to the NFIP, Understanding Flooding, Floodplain Mapping, Floodplain Regulation, and Flood Insurance. A website has also been developed, where the videos and participant materials can all be found.

To learn more about flooding in Iowa, and how communities can respond and prepare for flooding, visit:

<http://www.extension.iastate.edu/floodinginiowa/>.

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Extension and Outreach

Upcoming Events

Resilient Agriculture: Adapting to a Changing Climate

This event is August 5-7 at the Gateway Conference Center in Ames. This conference is designed for farmers, giving them the chance to talk with other farmers, scientists, and industry employees who are exploring ways to make corn/soybean-based cropping systems more resilient to the changing climatic conditions. Find further details at: sustainablecorn.org/conf-pages/2014NationalConference.html.

Getting to Know Our Mussels

On Saturday, August 9th from 10 am – 12 pm, the Iowa River Friends will host an educational event about the Iowa River's mussels. While river mussels may seem rather unassuming, they can tell us a rich story of the river's history and current health. Hear information on the unique biology and ecology of these animals, and if weather and river conditions permit, enjoy a short field trip to investigate mussels in their native habitat. Meet at Johnson County Extension Office (3109 Old Highway 218 S., Iowa City, IA 52246).

Raptors of Iowa

Come learn about the raptors of Iowa and meet some live raptors! This free event will be held at the Saulsbury Lodge in the Saulsbury Bridge Recreation Area (2007 Saulsbury Rd, Muscatine, IA 52761) on August 30 at 10 am.

Land Trust Volunteer Day

This event will be on September 6 at 9 am at the Turkey Creek Nature Preserve (near Iowa City) 2545 Sugar Bottom Rd. Solon, IA 52333. The Nature Conservancy, Bur Oak Land Trust, Whiterock Conservancy, Four Mounds Foundation and the Iowa Natural Heritage Foundation will host a volunteer day to eradicate invasive species and take back the land! Complimentary lunch and live music to follow! Registration preferred. With questions or to RSVP, contact Jake Hart at jake@jcht.org or phone at (319) 338.7030 by August 25.

Running Wild

Enjoy a unique opportunity to run at Port Louisa National Wildlife Refuge on September 6! The 3 and 5-mile courses loop past wetlands and other wildlife habitat, ending close to the starting line. While runners will enjoy the course (and prizes), this is an ideal event for walkers- the scenic beauty is best enjoyed at a slower pace. The event begins at 8:30 with many other activities throughout the day. For more information or to register please email lccb@lccb.org or call (319)-523-8381. Race day registration also available.

Marvelous Monarchs

Come to the Environmental Learning Center at Discovery Park (3300 Cedar St., Muscatine, IA 52761) on September 13 at 10 am to learn about marvelous migrating monarch butterflies. This free program will demonstrate tagging monarchs, then head outside to the prairie and try our luck at catching monarchs to tag.

Mississippi River Conference

The 2014 Conference will be held October 15-17 in the Quad Cities. The keynote speaker will be Dan Klinkenberg, who has traveled 120,000 miles up and down the Great River Road writing extensively about the people and places along the Mississippi River. Topics include: recreation, education, pollution, restoration, infrastructure, and more. More information will be posted soon at www.riveraction.org/mrc/.

Port Louisa Open House

Port Louisa National Wildlife Refuge new headquarters is open. A Grand Opening and Open House will take place on October 16 with the Friends of Port Louisa NWR. Open house will be from 2-8 with a ribbon cutting ceremony at 3 pm. A presentation entitled Aldo Leopold: Roots of the Land Ethic will take place at 6:30 pm. The address is 10728 County Rd. X61, Wapello, IA Phone 319-523-6982 for more information.

Upper Midwest Invasive Species Conference

The 2014 Conference will be held October 20-22 in Duluth, MN. The goal is to strengthen management of invasive species, especially prevention, control, and containment. Expected audience includes: researchers, land managers, landscape and nursery professionals, agriculture and forestry employees, land owners, and anyone interested in managing the spread of invasive species in the Upper Midwest. Please visit www.umisc2014.org/ for more information.

WFAN Annual Conference

Join Women, Food and Agriculture Network for the 2014 annual conference on November 14-15 at the Fairfield Arts and Convention Center. This year's theme is Women Doing Democracy: Building Grassroots Coalitions to Grow Healthy Food and Farming in Your Community. For more information please visit: wfan.org/2014-wfan-annual-conference/.



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Emerald Ash Borer Found in Muscatine

A larva collected from a residential tree in Muscatine has been positively identified as the Emerald Ash Borer by the Iowa EAB Team. The Iowa EAB Team provides assistance to landowners and includes partners from Iowa Department of Agriculture and Land Stewardship, Iowa State University Extension and Outreach, the Iowa Department of Natural Resources, USDA Animal Plant Health Inspection Service and the USDA Forest Service.

The Iowa EAB Team strongly cautions Iowans not to transport firewood across county or state lines, since the movement of firewood throughout Iowa or to other states increases the risk of spreading EAB infestations. Most EAB infestations in the United States have been started by people unknowingly transporting infested firewood, nursery plants or sawmill logs. A statewide quarantine restricting the movement of hardwood firewood, ash logs, wood chips and ash tree nursery stock out of Iowa into non-quarantined areas of other states was issued earlier this year and remains in place.

The State of Iowa will continue to track the movement of EAB on a county-by-county basis. Before a county can be officially recognized as infested, proof of a reproducing population is needed and an EAB must be collected and verified by USDA entomologists.

For more information about EAB and other pests that are threatening Iowa's trees visit www.IowaTreePests.com.



[ISU Extension Workshops](#)

Tree Pests

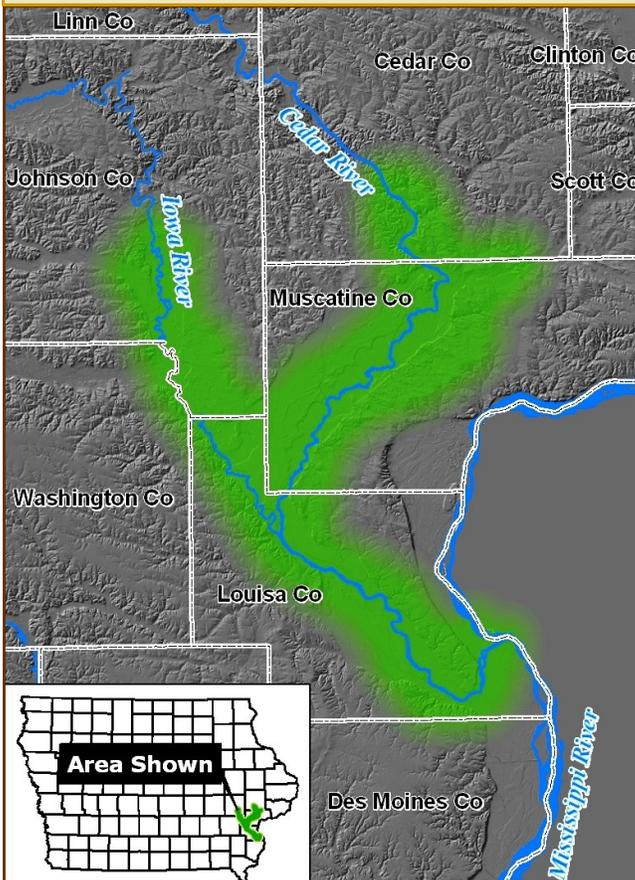
Entomologists will discuss tree pests such as the emerald ash borer and their impacts on Iowa. This event will be on August 14 at 6:30 pm at the Scott County Extension office.

Ash Alternatives

Specialists will speak on alternative tree species to consider planting. This event will be on September 4 at 6:30 pm at the Scott County Extension office.

Please contact Amanda Heitz to register for these events at 563-359-7577.

The Alliance



The Lower Iowa & Cedar Valleys Conservation Alliance is a collaboration of the Natural Resources Conservation Service, US Fish and Wildlife Service, Iowa Department of Natural Resources, Johnson County Conservation Board, Louisa County Conservation Board, Muscatine County Conservation Board, and The Nature Conservancy in Iowa.

The mission of the Alliance is to improve the ability of people to care for the lands and waters in the Lower Iowa & Cedar Valleys. The Lower Iowa and Cedar Valleys feature extensive and diverse natural areas including a wealth of unique woodlands, wetlands, and prairies. Conservation organizations in Iowa generally agree that this area comprises the most biologically diverse landscape in the state.

The Alliance hopes to distribute this newsletter entirely through e-mail in effort to save printing and postage costs. Please help us achieve this by contacting Josh Spies at (563) 370-9165 or jspies@tnc.org to receive the newsletter through e-mail.

Left: *Approximate geographic area of the Lower Iowa & Cedar Valleys*

