

Watersheds & Waterways

Newsletter

Winter/Spring 2020

A Note From the Program Coordinator



Thank you all for joining us for our newest edition of the Watershed Conservation newsletter. This season has been off to an interesting start not only with the insane winter weather but also with our programs. Recently we were able to introduce the first versions of two new programs as part of our National Fish and Wildlife Foundation Grant. The first of these programs is our Pollinator Flyway System. Our goal for this project is to create new wildlife habitat that connects established pollinator habitat and public land via private land. Also, we are incorporating known records of rare and endangered pollinator species into the flyways system. This program is being developed for

every county in the State of Iowa and has been fully drafted for Story, Boone and Hamilton Counties. Our second new program is a seed bank for native seeds that is free for local residents to use. Those who are interested can stop by the office with an estimated garden plot size and pick up as many seeds as they need. Currently, we have 31 species in the seed bank with plenty of room to expand.

The Prairie Rivers watersheds and waterways team has continued doing an excellent job with community outreach and new project research. We've introduced the idea

of conservation practices for nutrient reduction and wildlife habitat events like seminars, lectures, classroom lessons and many more. The next major outreach event will be the Ames Eco-Fair on April 25. The watershed team will be there to man booths and give lectures about our current programs and goals. I encourage everyone to attend the Eco-Fair and not only learn about Prairie Rivers continuing mission for watershed conservation but about all local conservation and sustainability organizations in the Ames area. The best way to stay informed on events is to follow and keep in touch with Prairie Rivers of Iowa on social media. Our Facebook, Twitter and Instagram are always updated with great information about events and important topics. Thank you all again and please enjoy our newest newsletter.

Sincerely,

David Stein,

Watersheds & Waterways Program Coordinator

Friends of Conservation

Please consider making a tax-deductible gift to Prairie Rivers of Iowa between now and May 2020 helping us launch "Friends of Conservation". You'll be listed as an inaugural member recognized on our website and in our annual report. A window decal will be sent to you as a thank you for your generosity.

Donors with gifts of \$100 or more will be invited as our guest to a special event this summer celebrating the work of improving Iowa's water quality. This event at Alluvial Brewing will feature a special beer batch made to honor the restoration of the rusty patched bumble bee in Iowa and all the work going forward at Prairie Rivers of Iowa.

Your gift will communicate that Iowa's cultural and natural resources are valuable and worthy of the attention and support needed to improve, restore and conserve.

Prairie Rivers of Iowa is a unique not-for-profit that can work with our elected officials to make educated decisions that support local efforts to improve and conserve our cultural and natural resources.



Community Native Seed Bank: History of Our Newest Program

David Stein
Watershed Coordinator

One of the first projects that I took on here at Prairie Rivers of Iowa was finding a way to not only get more habitat on the landscape here in Central Iowa but to also have local residents at the forefront of this conservation effort. In order to do this, I found

that the easiest way for this to work was to store and distribute seeds free of charge - a modification of an idea that I have been sitting on throughout my time as a graduate student and researcher at Iowa State. That is where the community seed bank came into play.



Prairie Rivers of Iowa Watershed Coordinator David Stein collecting native seeds.

This project originally started as a way to kill time during the field research season and to learn more about native plants in Iowa. I'd find dried and ripe seed heads from asters and sunflowers at my research sites and bring them back to our lab to tear them apart and look more closely at the seeds under the microscope. When I was done with the seeds, they would either go into the trash or sprinkled back into the fields where I found them. Over time, I figured instead of just fidgeting around with these seeds, I could collect and store them for other projects later down the road. This is how the first iteration of my seed bank took shape.

For the summer field season of 2018, I documented and observed what species of plants were growing and which research sites had them in high abundance. Each time I would go out to collect samples of bee pollen or sweep up some bumblebees for analysis. I would make sure to keep a separate bag available for the seed heads, pods and shells that I wanted to add to the collection. As the field season carried on, I would find and flag rarer and more finicky plants that I would monitor until just the right moment where I would grab the seeds before they either blew away or were eaten by a hungry bird or rodent. As summer turned into autumn, my focus shifted away from the field research sites and more toward the campus of Iowa State. I would take to the unkempt campus prairies, the parking lot ditches and the occasional weed on the side of the road to collect any last species that I didn't have. This even included a rare species of grass only found in two counties in the entire state of Iowa, which I found in a ditch alongside a driveway near one of the new science buildings (Iowa State then promptly demolished this patch of grass and built a parking lot over it. Nice going guys). Over time, the collection grew to 23 small glass vials full of native seeds. It was my hope that I could loan these seeds out to researchers in my department and they could be used in some

cool new studies into their growth or flowering or something. There were no takers, and the idea was more or less brushed off by my co-workers (which I am still not over by the way).

This leads into the spring and summer of 2019 when I began to work at Prairie Rivers of Iowa and decided to not only revisit the seed bank idea but expand it to be a major conservation tool. The project started out very slowly with some shy emails sent to a few native seed companies asking for donations of seed to support this new effort. Miraculously, this paid off incredibly well with two seed companies, The Prairie Nursery and Prairie Moon Nursery donating large amounts of staple native seeds including several grasses, milkweeds and coneflowers. Unsurprisingly, there were a few seed companies who were a bit skeptical about the project and let me know in some pretty direct terms.



Just a few of the native seeds available from our seed bank.



Native seed prairie planting in Story County, IA

Despite this, we were feeling pretty good about the donations and we actually had some seeds to begin to give away. The next step was to send out some formal donation letters to both new companies and those who ignored the previous donation email. In total, we sent out 39 letters to seed companies all throughout the upper Midwest. From the second call for donations, Stock Seed Farms sent us six pounds of native grass seed mixes and Shooting Star Native Seeds donated around 20 storage containers and five pounds of Showy Tick Trefoil seed.

Fast forward to today and things are continuing to look up for this project. We just received a grant from Walmart totaling \$500 for use in re-stocking and expanding the selection of seeds in the seed bank. By using free online advertising like Craigslist and Facebook, we have been able to distribute seeds to 15 landowners throughout Central Iowa and enhance and create around 13 acres of native habitat. Those landowners also came in with their own donations for more seeds averaging around \$15 each enhancing our little seed bank even more. For a project that started out small and ignored, as a byproduct of field research, the community native seed bank is only getting bigger, better and more influential for our conservation efforts.

Prairie Rivers of Iowa Small Landowner Project in Support of Iowa's Nutrient Reduction Strategy Completed

Dan Haug
Watershed Educator

Prairie Rivers of Iowa recently completed a project to support the Iowa Nutrient Reduction Strategy by providing education and technical assistance to a group of rural landowners near the city limits of Ames that, owing to the small size of their holdings or non-traditional nature of their operations, are sometimes overlooked.

Through the project, funded by a grant from the Iowa Natural Resource and Conservation Service (NRCS), we were able to increase awareness of conservation practices by hosting five field days and share information at least ten other gatherings. Technical assistance was provided one-on-one with 47 landowners helping assess resource concerns and conservation opportunities on 2,119 acres of land.



Prairie Rivers of Iowa Forestry and Land Management Specialist Mike Brandrup introducing Iowa nutrient reduction options to small landowners.

The project was part of a larger nutrient reduction effort in the Squaw Creek watershed but focused on landowners of 10-100 acres within 5 miles of Ames city limits. Some landowners had a farming background and some did not. Some owners of farmland were involved in crop production and others rented out the land. In addition to row crop production, the land included pasture, forest, natural areas and specialty crops.

Compared to large-scale corn and soybean farmers, we assumed that this group would:

1. Be more receptive to conservation practices that take land out of production.
2. Be less familiar with the NRCS and with Farm Bill conservation programs.
3. Adopt conservation practices at higher rates that can support the Iowa Nutrient Reduction Strategy.



Former Story County Conservation Natural Resource Specialist Amy Yoakum sharing conservation techniques with landowners.

Assumption one is likely true. Many of the people we spoke to had a strong land ethic and were interested in maintaining part of their property as prairie, woodland or wetland. For most, cost-share was not the deciding factor in their land management decisions. Focusing on these landowners could have outside benefits for initiatives concerned with wildlife habitat or riparian corridors.

Assumption two appears to be false. Eighty-three percent of the 18 respondents in our post-participation evaluation had previously worked with NRCS for conservation projects on their land and all who were eligible had some land enrolled in the Conservation Resource Program (CRP).

Assumption three appears to be false. While we documented one bioreactor and 200 acres of cover crops among urban fringe landowners of 10 - 100 acres, this represents a small reduction in nitrogen and phosphorus compared to the 1529 acres of cover crops and 2300 acres we helped install in the larger watershed in 2018. We assisted with management, enrollment or re-enrollment of 580 acres of CRP. However, only 264 acres were in the watershed. While our nutrient reduction goals cannot be met if existing conservation lands are degraded or put back into production, only a net increase in CRP acres will lead to measurable nutrient reductions relative to the baseline.

The most common conservation program discussed was CRP. Land retirement is a key practice in the nutrient reduction strategy, reducing nitrogen load by 85% and phosphorus load by 75%. Rental payments are more important than planting costs for most of the people we spoke with. We provided technical assistance for landowners interested in enrolling, re-enrolling, or managing 580 acres of CRP, 264 acres of which was within our project area. Other practices discussed with landowners were tiling, cover crops, native seeding, stream bank erosion, grazing, riparian forest management, windbreaks, pollinator planting, water runoff diversion and drainage.

Prairie Rivers of Iowa Kicked Off 2020 with Watershed Education for Both Young and Old



Over four sessions in January and February, Prairie Rivers of Iowa Watershed Educator Dan Haug spoke with 20 retirees for an Osher Institute for Lifelong Learning (OLLI) class at the Iowa State University Alumni Center. In addition to unpacking difficult topics like the Clean Water Act and water monitoring, Dan introduced the class to online resources he uses to find out about water quality in local rivers and lakes and about land use and soils in their watersheds. The class brought back examples and asked questions about rivers, lakes, and drinking water in their home towns and vacation spots, giving us all a better picture of water quality issues and solutions around the state.

On February 7-9, high school students from Iowa, Minnesota, Illinois, Missouri and Oklahoma attended a training on the Iowa State University campus for the 4-H Ag Innovators Experience sponsored by Bayer and the National 4-H Council. By training teenage facilitators to lead activities at their 4-H clubs, schools or community events, the program has helped over 5000 youth learn about monarch butterflies and native bees in previous years. This year, the focus is on ecosystem services, water quality, nitrogen and engineered conservation

practices. The youth will be learning about bioreactors, saturated buffers, bioswales and rain gardens. Watershed Educator Dan Haug helped the planning team at ISU Extension create a hands-on activity to show how rain gardens can soak up runoff, as well as creating maps that the youth will use for a simulated watershed planning exercise. At the training, Dan shared his experience working with real-life watershed management authorities and worked with the teen leaders in the computer lab to track down information on their own watersheds. This is a far-reaching project with input from a great group of educators and water experts. We were happy to be a part of it!

Watershed and Waterways Program Team



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