

Badger Creek Lake Watershed Project

Newsletter | Fall 2018



Update from the Project Coordinator

Greetings! It's been a few years since we've sent out a newsletter for the watershed project – we've been busy!

The current watershed project began in April 2013 and I was hired as the project coordinator. However, before the current project started, our partners (below) were already working to develop a Watershed Management Plan (WMP) to provide a blueprint for how to “reduce non-point source pollution to below TMDL (Total Maximum Daily Load) levels”.

The WMP (contracted to be written by Environmental Programs & Services staff at the Iowa Soybean Association) included an assessment of the current state of the watershed and the lake (soils, land use, water quality data, estimated soil loss, etc.), and laid out goals for improving the watershed and water quality in Badger Creek Lake.

Watershed Project Goals

Reduce non-point source pollution to at or below TMDL levels while maintaining agricultural productivity.

Educate the public and partners about the importance of watershed and lake improvement activities.

Monitor and evaluate sediment and phosphorus loading reductions to Badger Creek Lake.

Project Coordinator

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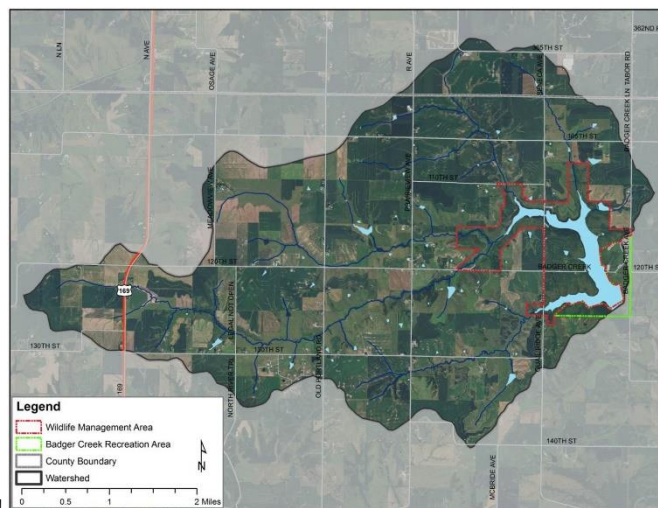
Photo by Lisa Scarbrough, ISU Extension & Outreach Women in Agriculture Program

Watershed (and water quality) improvement won't happen overnight; the WMP splits up our overall goals for sediment and phosphorus loading reductions into five phases across 20 years.

After the Watershed Management Plan was finalized in 2012, the Madison County SWCD worked with the Iowa Department of Natural Resources to submit a plan to request funding for Phase 1 from Section 319 of the Clean Water Act, administered by the U.S. Environmental Protection Agency.

The Badger Creek Lake Watershed Project was approved for three years of funding to support the project coordinator position, water monitoring, and cost share. In 2016 we submitted a request for additional Section 319 funding for Phase 1b. We were awarded two more years of funding, which started in 2017.

For *this* newsletter, we're mainly focusing on activities that took place during Phase 1a. More news from Phase 1b is coming in the next newsletter!



Watershed Project Partners

equal opportunity providers and employers



Madison County
Soil & Water Conservation District



Iowa Dept. of
Natural Resources



Section 319
of the Clean Water Act



Natural Resources
Conservation Service

Outreach

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Header Photo: The topographic flow model of Badger Creek Lake Watershed on display at the Madison County Covered Bridge Festival in 2016.

In 2014, the high school students in the Conservation Club of Winterset (CCOW) built a topographic flow model of Badger Creek Lake Watershed. Since then, it has been a valuable addition to our outreach efforts! We



1



2



3

have taken it to Ag4Kids Day for Madison County 5th Graders (1), the Madison County Fair (2), the Madison County Covered Bridge Festival (3), as well as presentations to day camps, science classes, and other educational opportunities.

Cover Crop Lunch & Learn

We partnered with Practical Farmers of Iowa and Unilever to host a Lunch & Learn event at the Winterset Pizza Ranch on March 29, 2016. The meeting focused on successfully terminating winter-hardy cover crops in the spring, and planning ahead for cover crops in the fall (considering herbicide application and seed mixes). Speakers included Project Coordinator Anna Golightly, a Farmer Panel with Jon Peterson and Dennis McLaughlin, and Midwest Cover Crops Research Coordinator Sarah Carlson.



Dirt-y Drawers / Soil-ed Pants for the 2016 Farm Progress Show

We (and a couple other watershed project coordinators) were asked to bury underwear for the **Dirt-y Drawers / Soil-ed Pants** display for the Farm Progress Show. We buried underwear on July 22 in fields with different management (conventional tillage, no-till, and no-till with cover crops), and unearthed them on August 26. The underwear buried in crop fields with healthy soils (more living organisms) were more degraded than in conventional tilled crop fields.



Dirt-y drawers on display at the Farm Progress Show

Office of Management and Budget Visit



The Office of Management and Budget (OMB) visited Iowa to learn more about how technical assistance dollars are utilized by the Natural Resources Conservation Service (NRCS). The group (representing staff from OMB, NRCS, and Conservation Districts of Iowa) made a stop at Badger Creek Wildlife Management Area on October 6, 2016. Winterset field office staff, SWCD commissioners, and representatives from the DNR had the opportunity to highlight the work being done on state land, and explain the important role that partnerships play in getting conservation on the land.



Outreach continued...

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Header Photo: Project Coordinator Anna Golightly used the topographic flow model during her presentation at the Full Moon Float event at Badger Creek Lake on May 10, 2017.

Donuts & N-Kits



We partnered with Conservation Districts of Iowa to host **Donuts & N-Kits** on March 31, 2017 in the Trinity Lutheran Church basement. We brought donuts from Hurts and retain kits (including nitrogen test strips and a booklet with instructions, pages to record N levels, and information about



conservation practices for retaining nitrogen), and invited Catherine DeLong to speak. Catherine presented a "Brief History of Nitrogen" and we showed an Iowa Learning Farms webinar presented by Dr. Mike Castellano: "How Can We Increase Nitrogen Retention and Soil Health?" Catherine explained how to use the retain kits, and then the kits were distributed to producers.

Mike Castellano's presentation is archived on the Iowa Learning Farms website – scroll down to September 21, 2016:

www.iowalearningfarms.org/page/webinars

Full Moon Float + Watershed Program and Tour



We partnered with the Madison County Conservation Board and the Madison County River Alliance to organize a Full Moon Float preceded by a watershed program and tour at Badger Creek Lake on May 10, 2017. The tour highlighted some conservation practices that benefit water quality, such as cover crops (above) and prairie strips.



Soil Health Tour Stop – NACD & CDI's Summer Forum and Tour

The National Association of Conservation Districts and Conservation Districts of Iowa visited Badger Creek Lake WMA as part of a Soil Health Tour on July 18, 2017.



The Madison County SWCD Commissioners welcomed the crowd (about 150 people!), Anna spoke about the Badger Creek PL-566 Watershed and the Badger Creek Lake Watershed Project, and ISU Extension Field Agronomist Meaghan Anderson talked about Palmer Amaranth in Iowa.



Accomplishments – Conservation Practices on Private Land

Header Photo: Recently constructed terraces in the watershed completed in fall 2017.

Practices completed and certified in Phase 1a (April 2013 – September 30, 2017):

Practice	Overall Phase 1 Goals	Phase 1a Progress
Grade Stabilization Structures	6 no.	6 no. *
Water & Sediment Control Basins	10 no.	2 no. *
Terraces	70,000 ft.	30,142 ft.
Grassed Waterways	30 ac	6.15 ac
Filter Strips	20 ac	4.7 ac
Cover Crops	100 ac	2,326 ac *
Conservation Cover (CRP)	(No goal included in Watershed Mgmt Plan)	207 ac



* Includes structures/acres on state land – see p. 5

Goals and Progress for Phase 1b and Fiscal Year 2019

Practice	Phase 1b Goals	Phase 1b Progress	FY2019 Goals
Grade Stabilization Structures	3 no.	-	2 no.
Water & Sediment Control Basin	10 no.	5 no. (1,100 ft.)	5 no.
Terraces	37,300 ft.	5,850 ft	18,650 ft.
Grassed Waterways	30 ac	2.7 ac	15 ac
Filter Strips	20 ac	-	10 ac
Cover Crops	100 ac	439 ac	400 ac
Pasture & Hayland Management/Planting	80 ac	40 ac	13 ac
Prescribed Grazing	35 ac	-	17.5 ac
Streambank Stabilization	500 ft.	-	250 ft.



Accomplishments – Conservation Practices on Public Land

Header: Prairie Strips greening up at Badger Creek Wildlife Management Area on May 16, 2018. The prairie (native, perennial, and deep-rooted) has benefits for soil, water, and wildlife!

State Land Projects Update

The watershed project partners have been planning projects for the state land at Badger Creek Wildlife Management Area (WMA) since 2013. Finally, we can show off some of the accomplishments - we have made a lot of progress in the last couple of years!

Grade Stabilization Structures (3) & Sediment Basins (2)

One of the biggest projects was the planning and construction of grade stabilization structures and basins to treat two gullies (and the sediment and phosphorus being delivered to the lake). These photos show the pond indicated by the yellow arrow on the map.



Before
November 2013



Construction
June 8, 2017



Construction
June 16, 2017



Post-Construction
July 19, 2017



November 15, 2017



July 24, 2018



August 31, 2018

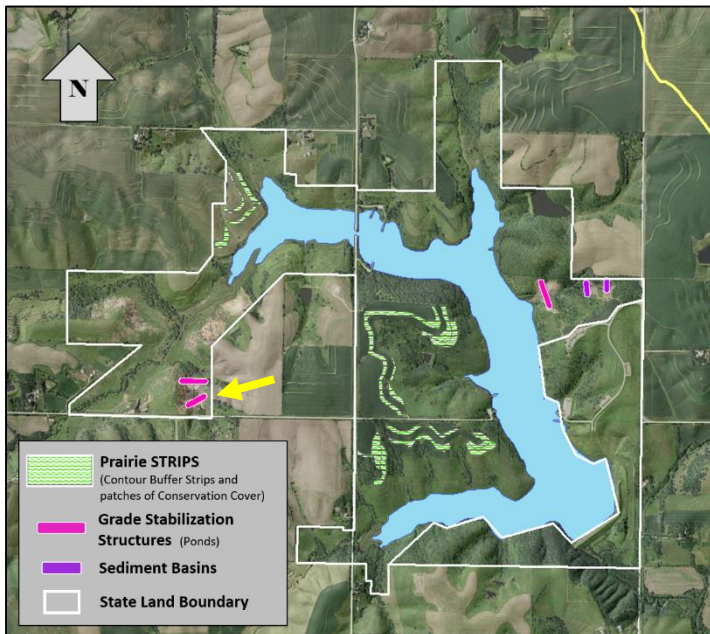
Brush Management (257 ac)

The shelterbelts in crop fields that were dominated by invasive Tartarian honeysuckle were removed (right), and brush clearing was done in other WMA fields with woody encroachment.



Prairie Strips (17 ac)

Shelterbelts were converted to prairie strips. The DNR seeded the contour buffer strips with a diverse, native prairie mix in April 2017 (right).



Awards & Milestones

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Header Photo: The 2017 Iowa Farm Environmental Leader Award Ceremony at the Iowa State Fair. Dignitaries included Governor Kim Reynolds, Acting Lieutenant Governor Adam Gregg, Secretary of Agriculture Bill Northey, DNR Director Chuck Gipp, with Co-Emcees Bob Quinn of WHO Radio's "The Big Show" and Deputy Secretary of Agriculture Mike Naig.

Badger Creek Lake Watershed: [Home to Award-Winning Farmers and Landowners!](#)

2016 Iowa Farm Environmental Leader Awards



Darrell & Joyce Jamison



Jim & Margaret Koch



Mike & Cindy Koch

Lifetime Conservation Achievement Award 2017 Madison County SWCD Conservation Awards Banquet



Jim & Margaret Koch (with Jeff & Diane Koch)

2017 Iowa Farm Environmental Leader Awards

Did you know...

Anyone can submit nominations for the Iowa Farm Environmental Leader Award!

www.iowaagriculture.gov/environmentalleader.asp



Frederick Martens

Madison County SWCD's 75th Anniversary Celebration



Madison County SWCD celebrated 75 years of conservation on October 5, 2017. The celebration at the Jackson Building included a meal provided by the Cattlemen and Pork Producers, SWCD displays, Iowa Learning Farms/Water Rocks! exhibits and activities, entertainment by The Hargroves, a presentation by guest speaker Dr. Lee Burras, and comments and recognition by dignitaries.

What's New

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Header Photo: Winterset Field Office staff on June 6, 2018 (left to right): Anna Golightly, Project Coordinator (SWCD); Joe Moore, District Technician (SWCD); Megan Sutton, Conservation Assistant (IDALS-DSCWQ); Julie McMichael, State Technician (IDALS-DSCWQ); Lance Porter, Soil Conservationist (USDA-NRCS); Seth Spire, Acting District Conservationist (USDA-NRCS); Josh Heims, Pathways Intern (USDA-NRCS). Not pictured: Kelsey Fleming, Farm Bill Wildlife Biologist (PF).

Staff Updates

There have been a lot of changes in the Winterset Field Office over the last couple of years! Our federal technician George Jensen accepted a position in another office in fall 2015 (and that position has been vacant since then). Diane Fitch, our long-time secretary (that position has been retitled "Conservation Assistant") retired in May 2017. A few months later, District Conservationist Wayne Shafer (who had also worked in Madison County for over 20 years) accepted a new position as the DC in Wayne and Lucas Counties in September 2017. Then this past February, our state technician Barb McDonald accepted another position. Our office was staffed by a skeleton crew (with a lot of help from staff in surrounding counties) for several months!

However, this May, we welcomed three new staff members! Joe Moore was hired by the Madison County SWCD as a District Technician, Julie McMichael joined the staff as our new state technician (a position shared between Madison and Warren Counties), and Josh Heims was assigned to Madison County to continue his NRCS Pathways Internship.

There are have been, and will be several more staffing changes happening in the field office yet this fall. Stay tuned for more updates in the next newsletter.

Partners in the Field Office

Customers visiting the USDA Service Center in Winterset usually think of our office as the NRCS, but there are actually several agencies and organizations working together for conservation! Here are the ones currently represented in Madison County:

USDA-NRCS (federal)

United States Department of Agriculture – Natural Resources Conservation Service

IDALS-DSCWQ (state)

Iowa Department of Agriculture and Land Stewardship – Division of Soil Conservation and Water Quality

SWCD (local)

Madison County Soil and Water Conservation District

PF = Pheasants Forever

(PF's Iowa Farm Bill Biologist Program has 12 staff working in field offices across the state)

What's Biting at Badger Creek Lake?



2017 Fish Sampling Results

Based on data collected during electrofishing and fyke net sampling:

Crappies: 8-10"

Bluegills: 6-8"

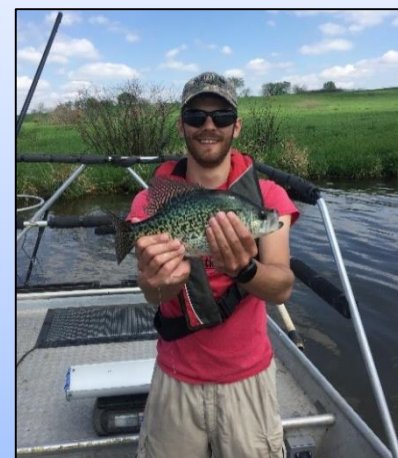
Redear Sunfish: 9-11"

Largemouth Bass (moderate): mostly 14-16"

Wipers* (few): 16-18"

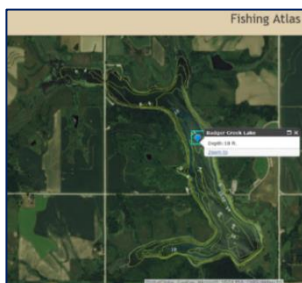
The 14-inch crappie in these photos was caught during an electrofishing survey this spring!

* Wipers = White Bass x Striped Bass



More Fishing Information

Badger Creek Lake is part of the Mount Ayr Fisheries Management District. They publish a District Fishing Newsletter every spring and fall, which you can find on the Iowa Department of Natural Resources' website: www.iowadnr.gov/About-DNR/DNR-Staff-Offices/Fisheries-Management



Fishing Atlas

The Iowa DNR released a new online fishing atlas in 2015 which provides information on over 130 Iowa lakes, including Badger Creek Lake. Visit www.iowadnr.gov/fishing and click on the "Fishing Maps" link in the column on the left side of the webpage.



**BADGER
CREEK
LAKE**
WATERSHED
PROJECT

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Learn more... visit our webpage!

Read about the background and goals of the watershed project, archived newsletters, and check out the list of links to websites of interest.

www.madison-swcd.org/badger_creek_lake.html



@BadgerCreekLakeWatershed



@BadgerCreekLake

We have cost share available!



Check out the list on page 4 for conservation practices that can help **reduce sediment and phosphorus runoff**. Let us know if we can help you reach your goals for your land with any of these practices!

