



Welcome to *The Current*, the North Central Region Water Network's Speed Networking Webinar Series

Grazing, Livestock, and Water Resource Management: 2PM CT

1. Submit your questions for presenters via the chat box. The chat box is accessible via the purple collaborate panel in the lower right corner of the webinar screen.
2. There will be a dedicated Q & A session following the last presentation.
3. A phone-in option can be accessed by opening the Session menu in the upper left area of the webinar screen and selecting "Use your phone for audio".

This session will be recorded and available at northcentralwater.org and learn.extension.org.



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northcentralwater.org



Today's Presenters:

- **Sandy Smart**, Professor and Extension Rangeland Management Specialist, South Dakota State University
- **Jane Jewett**, Midwest Perennial Forage Working Group Coordinator, Green Lands Blue Waters
- **Dani Heisler-Wodill**, Regenerative Agriculture Outreach Coordinator, Valley Stewardship Network





Sandy Smart



Alexander “Sandy” Smart is a Professor and Extension Rangeland Management Specialist at South Dakota State University. He also serves as Assistant Department Head for the Department of Natural Resource Management at SDSU. In addition, Smart serves as the USDA-SARE coordinator for South Dakota and the chair-elect for the Society for Range Management Nominations Committee. His research focuses on rangeland ecology, grazing management, temperate pasture improvements, forage seedling establishment, and prescribed burning. Over the course of his career, he has published extensively and authored or coauthored 25 successful grant proposals totaling over \$5,000,000. Smart received his PhD from the University of Nebraska-Lincoln in Agronomy and Range Management in 2001 and his MS and BS from the University of Wisconsin-Madison in Agronomy and Soil Science in 1992 and 1989, respectively.



OPTIMAL PLACEMENT OF OFF-STREAM WATER SOURCES FOR EPHEMERAL STREAM RECOVERY

ALEXANDER “SANDY” SMART



**SOUTH DAKOTA
STATE UNIVERSITY**
*College of Agriculture, Food
and Environmental Sciences*















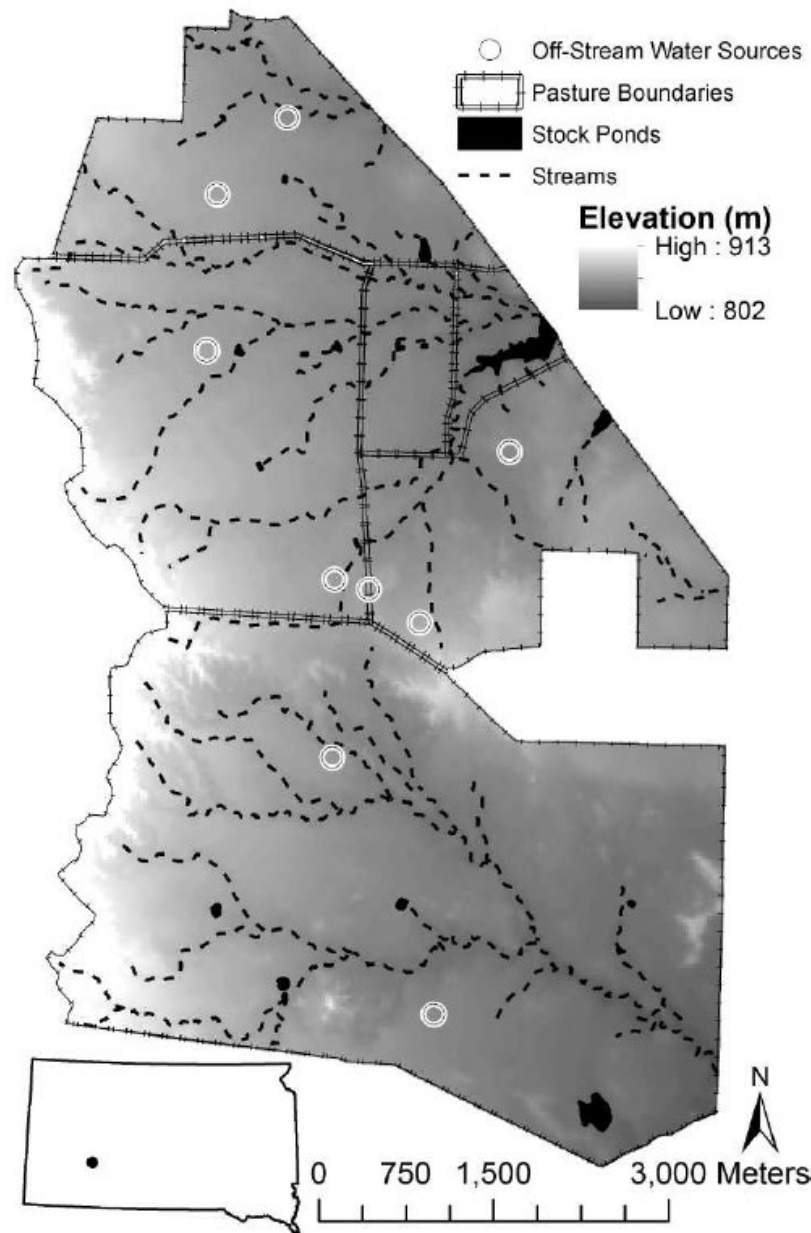


Figure 1. Study area pasture boundaries, ephemeral stream channels, stock ponds, and off-stream water practices (OSWP). Inset map shows the location of the study area in western South Dakota, USA.

IN-CHANNEL VEGETATION

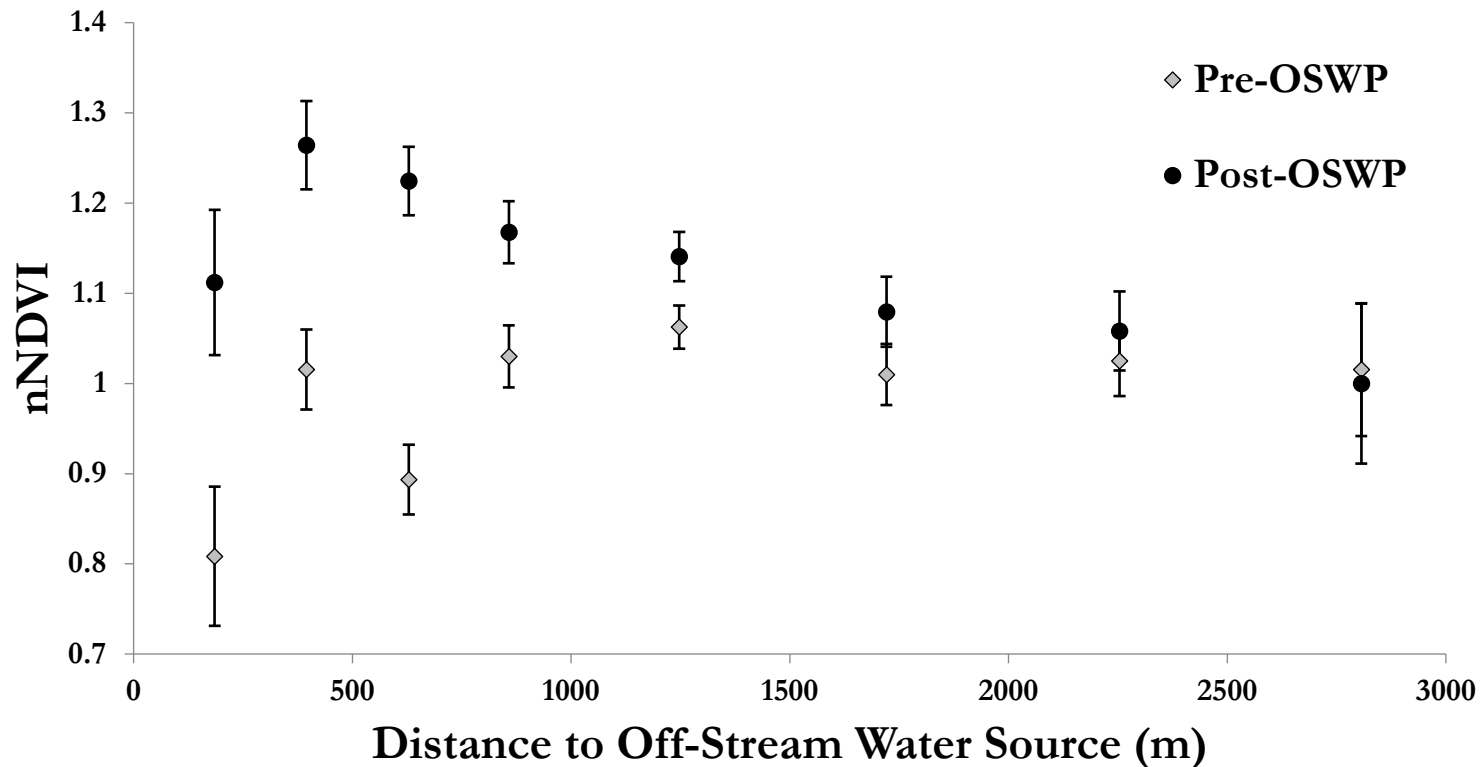


Figure 2. Mean normalized NDVI (nNDVI) and SE of in-channel areas at classified distances from off-stream water practices (OSWP) during pre-OSWP and post-OSWP periods in western South Dakota ephemeral streams. Pre-OSWP data is from 3 August and 24 August 1989 images and post-OSWP data is from 16 July and 18 August 2010 images. Distance classes marked with an asterisk indicate a significant ($P, 0.05$) difference between pre- and post-OSWP nNDVI.

UPLAND VEGETATION

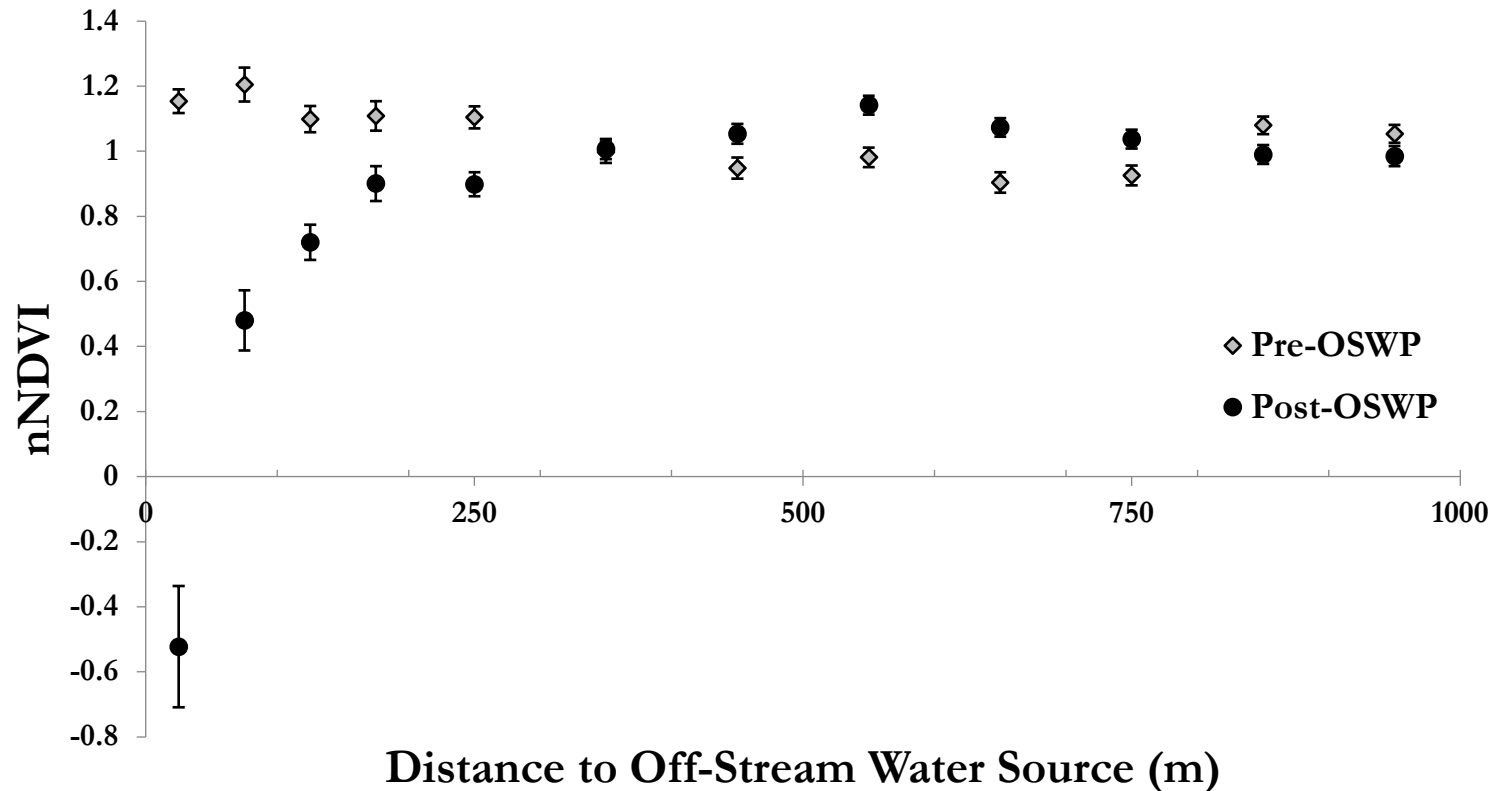
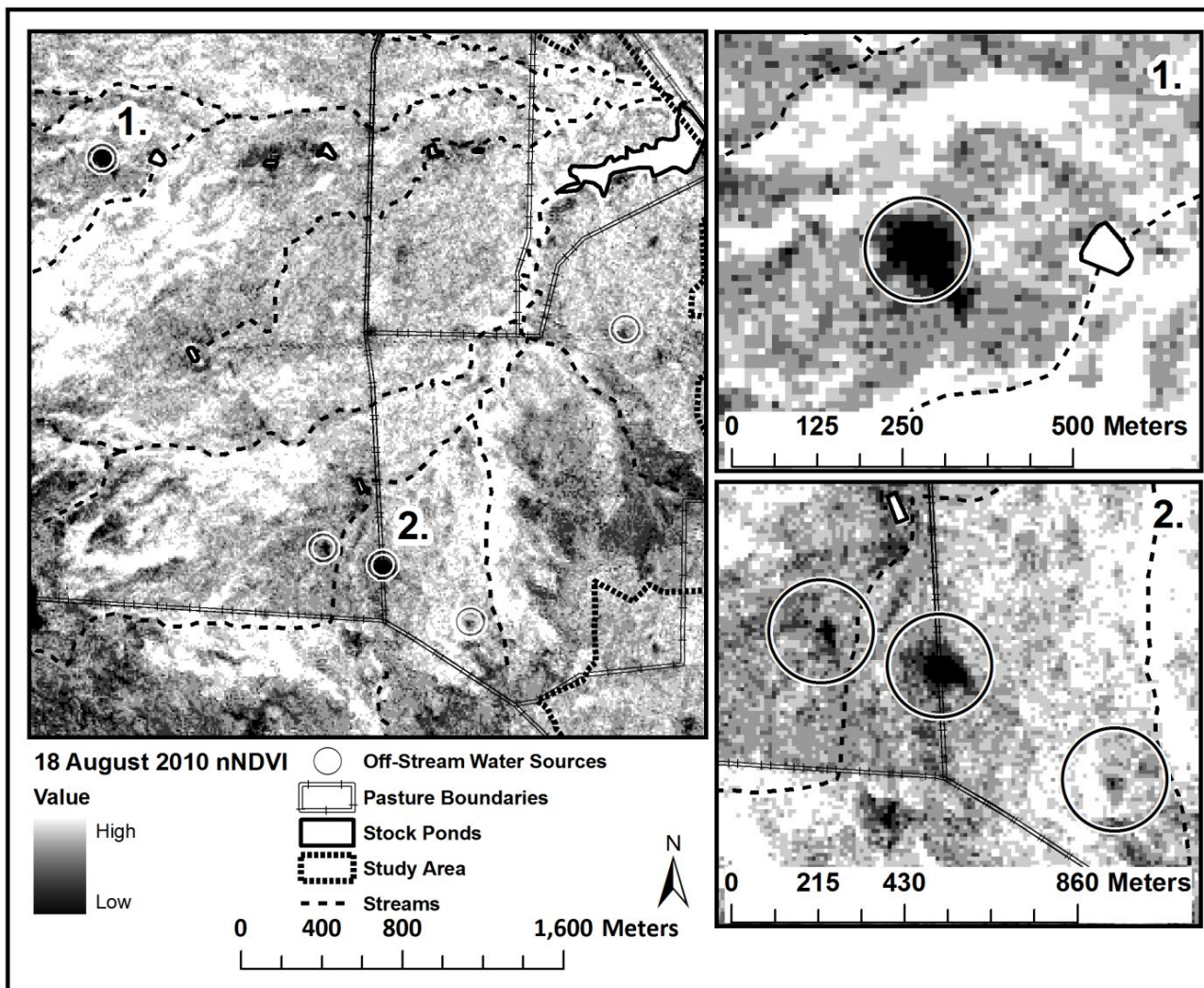


Figure 3. Effect of distance to off-stream water practices (OSWP) on the mean normalized NDVI (nNDVI) of surrounding upland vegetation in western South Dakota. Results are a pooled average of nine OSWP. Error bars are 61 SE. Distance classes marked with an asterisk indicate a significant ($P < 0.05$) difference between pre- and post-OSWP nNDVI.

Post-OSWP points are fit by a logarithmic regression.

PIOSPHERES



MANAGEMENT IMPLICATIONS

- Off-stream water practices (tanks and fencing) shifts grazing pressure away from in-channel areas
- Piospheres develop around off-stream water tanks and are unavoidable
- Avoid steep and highly erodible soils for off-stream water tank placement
- Placement of OSW tanks should be within 250 -1250 meters of the stream to avoid overgrazing of streams



QUESTIONS





Jane Jewett



Jane Grimsbo Jewett is Associate Director and coordinator of the Information Exchange program at the Minnesota Institute for Sustainable Agriculture, University of Minnesota. She provides staff support for the Midwest Perennial Forage Working Group and works with Green Lands Blue Waters on matters related to grazing and integration of livestock into cropping systems. Jane has a B.S. in Agronomy and M.S. in Plant Breeding from the University of Minnesota. She owns and operates a small, diversified livestock farm near Palisade, MN and is a meat vendor at the Grand Rapids Farmers Market.





Green Lands
Blue Waters


Connecting and Supporting Grazing Educators



Green Lands
Blue Waters

**Midwest
Perennial
Forage
Working
Group**

Presented to: The Current | September 9, 2020 | Jane Grimsbo Jewett



Green Lands Blue Waters is a vision for profitable agriculture based on keeping the soil covered productively year-round: farming with **Continuous Living Cover**.



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Green Lands Blue Waters is a vision for a profitable agriculture based on keeping the soil covered productively year-round: farming with Continuous Living Cover.

greenlandsbluewaters.org

Why Continuous Living Cover?

With CLC, farmland stays in production, making good, year-round use of soil, nutrients, water, and solar resources. CLC farming introduces a greater diversity of crops and livestock. Water quality improves; stream flow is moderated; soil health improves and is sustained. Native wildlife species have more suitable habitat. New economic opportunities can develop for farmers and their communities.

With CLC practiced widely, we contend that our land, water, farms, and communities will be more environmentally and economically resilient.



- **Agroforestry**
- **Perennial Biomass**
- **Perennial Forage & Grazing**
- **Perennial Grains**
- **Winter Annuals & Rotations with Cover Crops**
- **Why Continuous Living Cover?**



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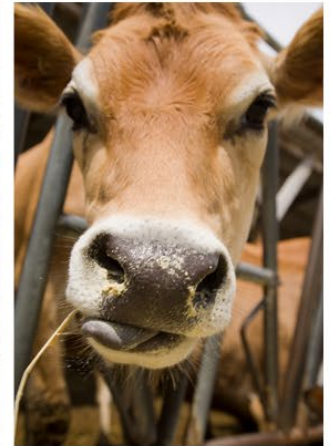
[Continuous Living Cover](#)

[Our Network](#)

[Resources](#)



Midwest Perennial Forage Working Group



<https://greenlandsbluwaters.org/midwest-perennial-forage-working-group/>

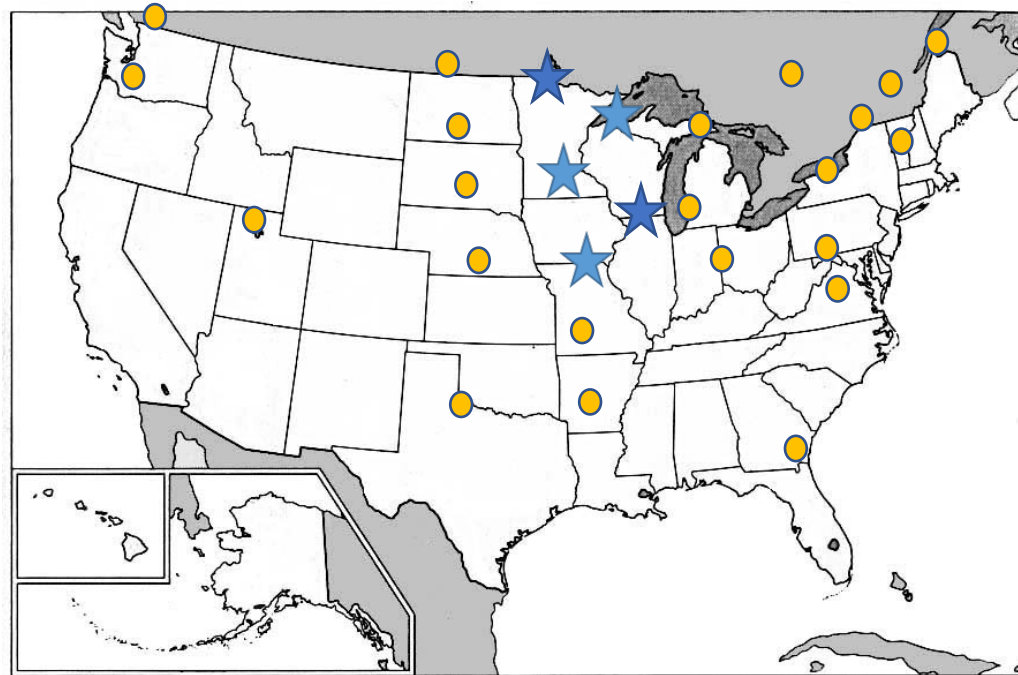


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Midwest Perennial Forage Working Group

The Midwest Perennial Forage Working Group's mission is to facilitate an increase in land used for pasture and perennial forage production in the Upper Midwest, and to improve the environmental performance of farming systems, while maintaining agricultural production and profitability.

Geographic foci: IA, IL, MN, MO, WI; but our subscriber list goes nationwide & a bit beyond:





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Midwest Perennial Forage Working Group

Thematic Focus:

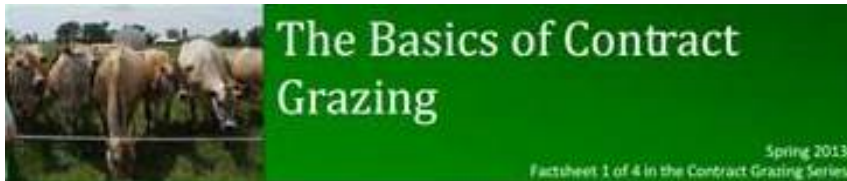
Support for grazing educators



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Midwest Perennial Forage Working Group

The group formed in 2011 with organizational support from Green Lands Blue Waters, as a way for GLBW to address the perennial forage strategy for Continuous Living Cover.



April 2013

Contract Grazing fact sheets

These are still very popular and are used by educators across the region as handouts at field days.



Midwest Perennial Forage Working Group

Teaching the Basics of
Grazing

Grass-Based Farm
Financials

Adaptive High Stock
Density Grazing

Integrating Livestock
into Cropping
Systems

Grazing for
Conservation and Soil
Health

Teaching Resources
Roundtable

Spring 2017

Slide Library
for grazing
educators,
based on
webinar
series.



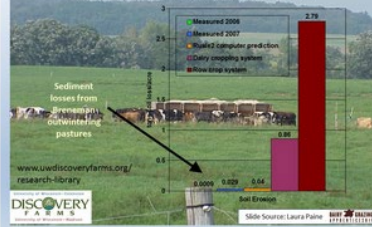
Midwest Perennial Forage Working Group

Considering grazing as a habitat management tool

- Restore something approaching natural grazing component and nutrient cycling
- Increasing cost of other management tools (mowing, burning, etc.)
- Livestock can go places where equipment cannot
- Opportunity to partner with neighboring farmers
- Other?

Midwest Perennial Forage Working Group
Laura Payne
Project Manager
Data: Grazing Management
and Soil Health
Payne@midwest.com

Pastures keep soil in place data from Breneman Discovery Farms project



Well
Rested



Over
Grazed

Rest No Rest

Slide Source: Laura Payne

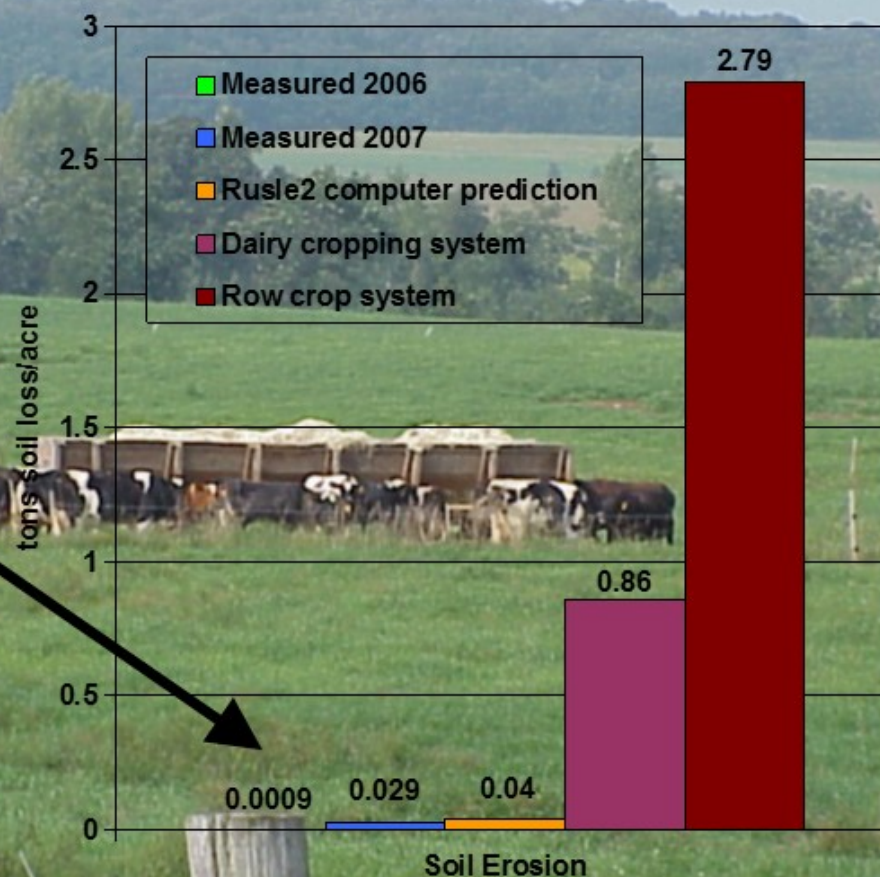
- Each slide is available for download as a PPT file.
- Proper credit is already included on each slide.
- All slides in the library are open-source; free to use in your own presentations

Pastures keep soil in place

data from Breneman Discovery Farms project

Sediment
losses from
Breneman
outwintering
pastures

[www.uwdiscoveryfarms.org/
research-library](http://www.uwdiscoveryfarms.org/research-library)





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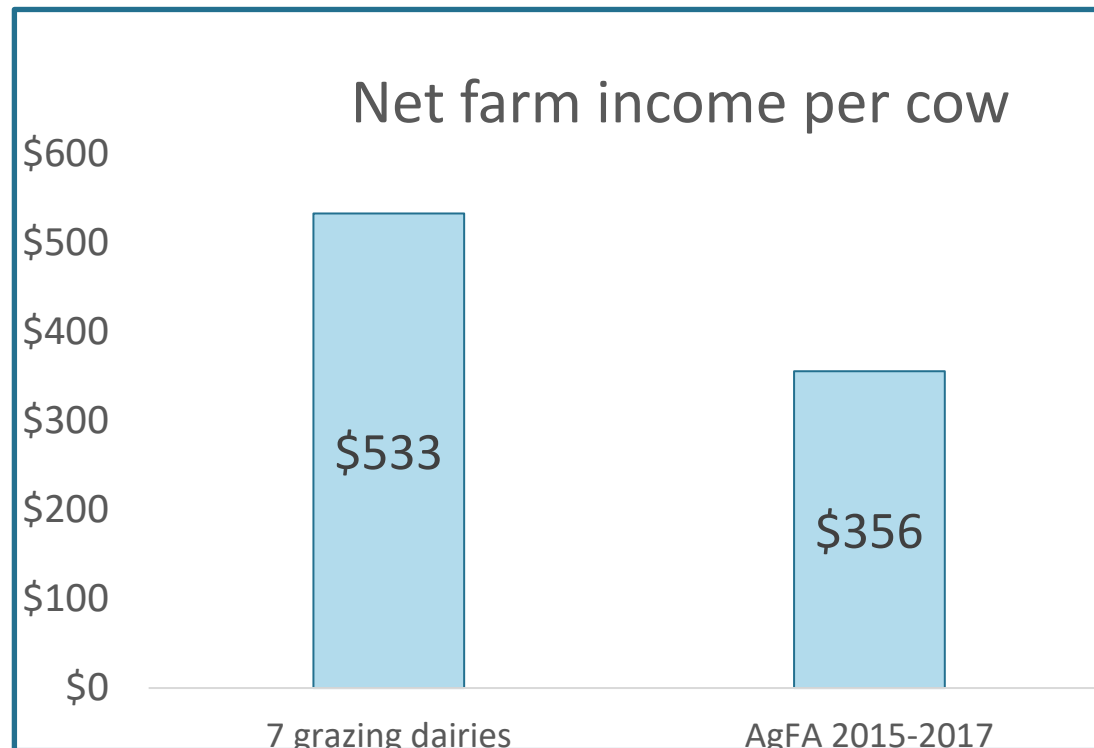
managed grazing for dairy profits

2017-2018:

Grazing Dairies
project funded by
an RMA grant



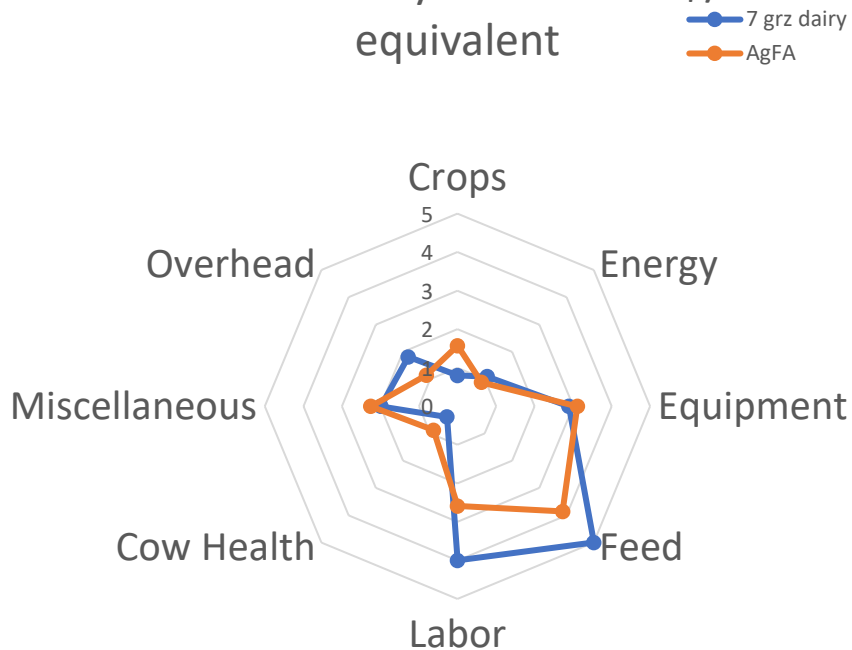
Midwest Perennial Forage Working Group



Data sources: 1) Profitability Centers on Managed Grazing Dairies. 2018. *Managed Grazing for Dairy Profits*, Midwest Perennial Forage Working Group, Green Lands Blue Waters.

www.greenlandsbluwaters.net/dairy.html. Study conducted with funding from USDA-Risk Management Agency. 2) AgFA benchmark data from 2015-2017, Center for Dairy Profitability, University of Wisconsin-Madison.

Patterns of Dairy Farm Costs: \$/cwt-equivalent



Data sources: 1) Profitability Centers on Managed Grazing Dairies. 2018. *Managed Grazing for Dairy Profits*, Midwest Perennial Forage Working Group, Green Lands Blue Waters. www.greenlandsbluewaters.net/dairy.html. Study conducted with funding from USDA-Risk Management Agency. 2) AgFA benchmark data from 2015-2017, Center for Dairy Profitability, University of Wisconsin-Madison.



[About](#) [Continuous Living Cover](#) [Our Network](#) [Resources](#)

2019 Conference

Over, Under, Through to CLC

***Strong partners, new allies, and fresh perspectives
moving continuous living cover (CLC) farming forward.***

**Tuesday, November 19 – Wednesday, November 20, 2019
Graduate Hotel, Minneapolis**



Midwest Perennial Forage Working Group

Green Lands Blue Waters Conference Sessions in 2019:

Valuing Soil, Water and Climate:

- **The Grass is Greener: The Potential of Generating Ecosystem Services Revenue Streams from Well-Managed Pasture**

- Jon Winsten - Winrock International, Senior Agriculture Economist

Post-conference Session: Grazing and Ecosystem Services Markets

Midwest Perennial Forage Working Group

2019 Green Lands Blue Waters Conference

November 19-20; Minneapolis, MN




Green Lands
Blue Waters

Midwest Perennial Forage Working Group

New Activities in 2020:





- Regenerative Grazing article led by Pasture Project
- Midwest Grazing Exchange
- Infographic: perennial forage to protect road & bridge infrastructure and drinking water sources
- Survey of beef producers

Minnesota's Grazing Exchange:

 **DEPARTMENT OF
AGRICULTURE**

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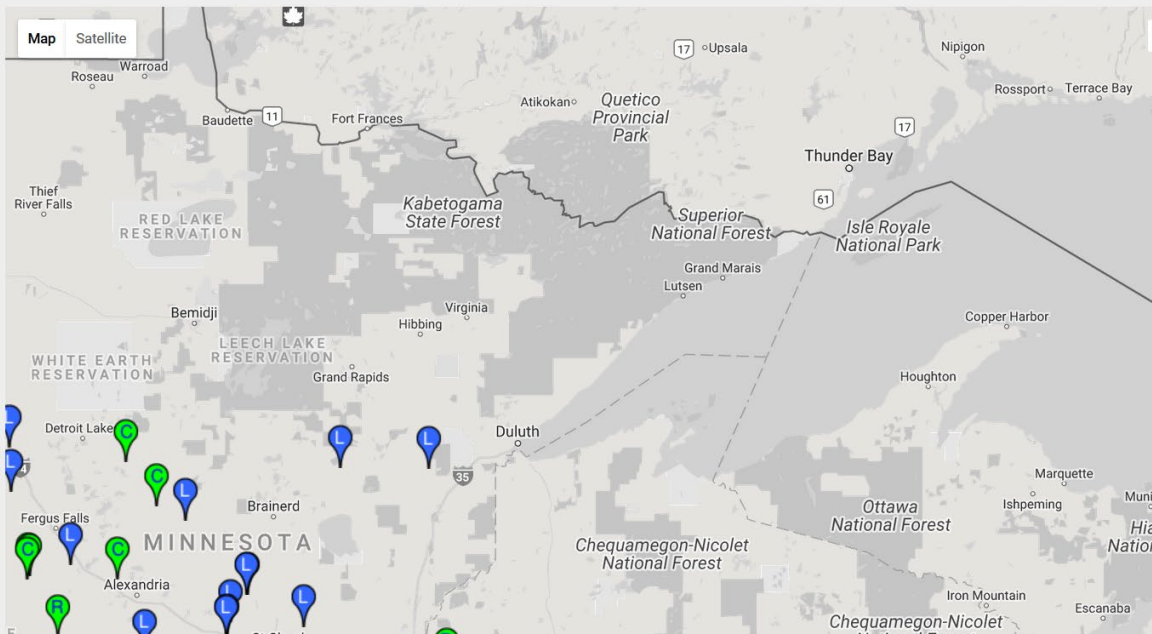
New Users, create an account by clicking the "Enroll" button below. All information is required, however, personal information will only be shared if you choose to list land for grazing or livestock for crop management.

[Enroll](#)

Search

Legend

Map Satellite



Perennial Forage is
just one piece of a
comprehensive
strategy for
Continuous Living
Cover on
agricultural lands.



- › **Agroforestry**
- › **Perennial Biomass**
- › **Perennial Forage & Grazing**
- › **Perennial Grains**
- › **Winter Annuals & Rotations with Cover Crops**
- › **Why Continuous Living Cover?**



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Thank you!

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greenlandsbluwaters.org



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**Midwest
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Forage
Working
Group**

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Dani Heisler-Wodill



Dani has had a life-long interest in production agriculture and its relationship to the environment. She credits her passion in agricultural diversity to her and her family's life work as farmers and ranchers. From a young age, Dani had the opportunities to understand and assist in Beef, Dairy, Poultry, Crop and Vegetable Production, including Peppermint and Spearmint. Dani attended University of Wisconsin-River Falls, earning a Bachelor of Science degree focused on Animal Science, Agronomy, and Food Science. Dani has had the opportunities to work across conventional, organic, large and small-scale farming operations of all types and species, with career focus on livestock nutrition, ranch management, organic farm transitions, emerging agri-technologies, sales and marketing. In 2014, she and her husband moved to the Viroqua area where they live, farm and enjoy all the recreational benefits the Tainter Creek Watershed has to offer.



TAINTER CREEK WATERSHED REGENERATIVE PRACTICES



Dani Heisler-Wodill

Regenerative Agriculture Outreach
Coordinator, Valley Stewardship Network

Valley Stewardship Network



Since 2000, in the Kickapoo and neighboring watersheds, Valley Stewardship Network protects our land and waters through research, education, and community empowerment.

Office located in Viroqua, WI



VSN Programs



Water Quality Research

Applied to understand and support land stewardship practices

Stewardship Assistance

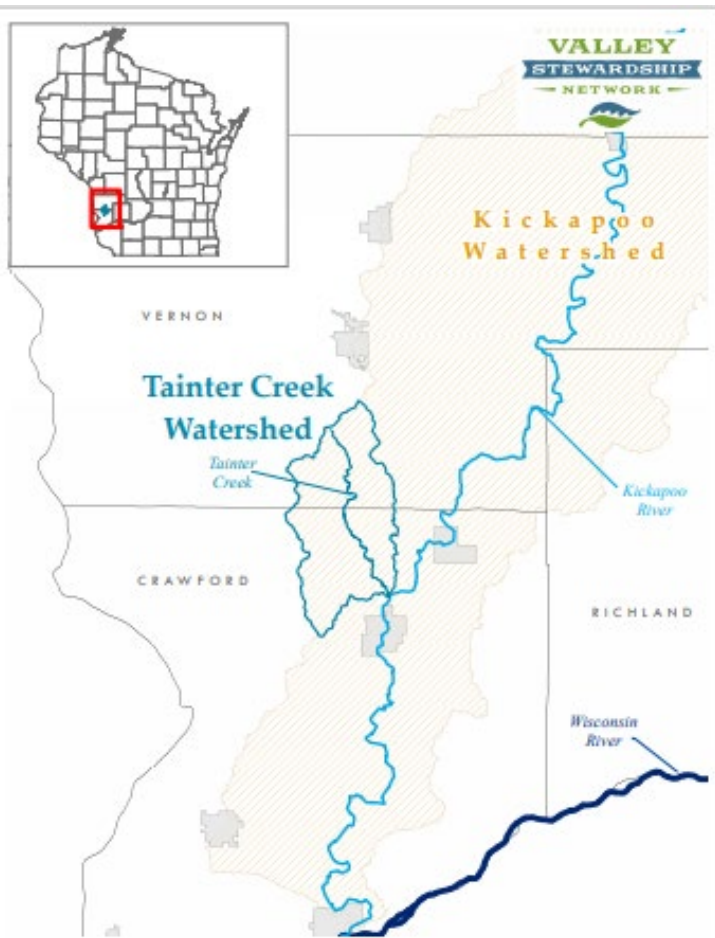
Hub of access and collaboration with conservation, farmer, and landowner organizations

Regenerative Agriculture Outreach Coordinator

Youth and Community Outreach and Education

Resources to share what's unique about the Kickapoo and surrounding watersheds





Kickapoo Watershed

HUC 10

Tainter Creek Watershed

HUC 12



Project Partners



Pasture Project

AT THE WALLACE CENTER

Vernon County

Land and Water Conservation

DATCP

Producer-Led Watershed Program

Tainter Creek Farmer-led Watershed Council



A farmer-led organization established in 2016, connecting to share innovative approaches to conservation and regenerative Agriculture; protecting the soil and water within the Tainter Creek Watershed.

In the past three years...

- 24 meetings
- Average 20 attendees
- Represent ~15% of watershed
- 2019 DATCP Watershed Grant
 - Cover Crop Funding
 - WQ Monitoring/Well Water Testing
 - 38 Wells Tested (70 total tested)
 - Field Days/Farmer to Farmer Learning
- Awarded 2020 DATCP funding



Tainter Creek Farmer-Led Watershed Council – Gabe Brown



October 2019
Gabe Brown
presentations



Over 250 participants
learned about soil health,
grazing and cover crops.

Tainter Creek Farmer-Led Watershed Council



VSN serves to:

- **Support on-farm conservation and regenerative practices to:**
 - Reduce Erosion
 - Reduce Phosphorus and Sediment run-off
 - Increase Soil Fertility
 - Manage water and soil quality
- **Facilitate water quality assessments, developing a baseline to tie regenerative practices to water quality impact**



Science & Stewardship in Partnership with Farmers



VSN *Water Quality Assessment* will determine water quality impact of conservation grazing BMPs that reduce nutrient and sediment loads in the Tainter Creek Watershed.

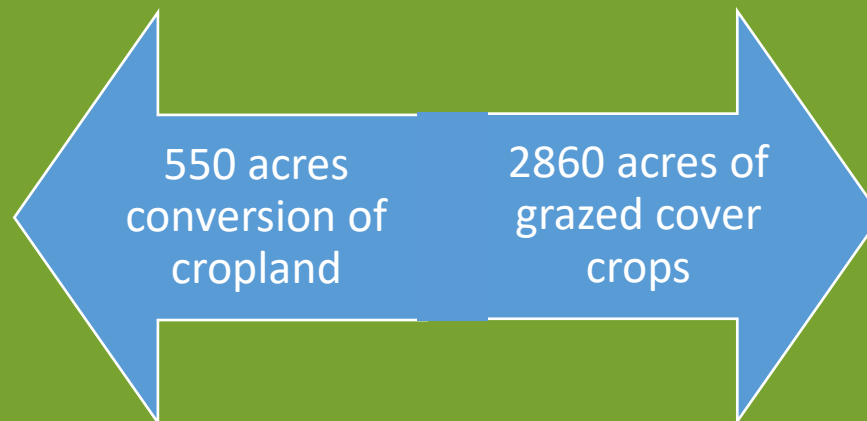


Tainter Creek Water Quality Goal



Project goal to reduce phosphorus load and sediment by 5%

- Reduce by ~1700 lbs of total phosphorus
- Reduce by ~940 tons of sediment



Increasing Regenerative Practices

Through Support for:

Technical Assistance

**Whole Farm Assessments
Grazing Plans**

Meetings and Trainings

**Producer-Led Pasture Walks
Hosting Industry Professionals
Practical Field Days**

Sharing Producer Stories

**Engaging Producers of all Ages
and Experience**

**Cost-Share for Regenerative
Practice Implementation**

Water Quality Assessments

**Surface
Well Water**

Implementing Conservation

Farming Practices

**Cover Crops
Native Plantings
Converting Cropland to Pasture
Enhancing Current Grazing
Practices**



Thank You



Thank you for your time and interest today.

Dani Heisler-Wodill

dani@valleystewardshipnetwork.org

Regenerative Agriculture Outreach

Coordinator

Valley Stewardship Network





Question and Answer Session

We will draw initial questions and comments from those submitted via the chat box during the presentations.

Today's Speakers

Sandy Smart – Alexander.Smart@sdstate.edu

Jane Jewett – jewet006@umn.edu

Dani Heisler-Wodill – dani@valleystewardshipnetwork.org





NORTH CENTRAL REGION
WATER NETWORK



Thank you for participating in today's *The Current*!

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