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
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.
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.
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 ±1 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
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.
Connecting and Supporting Grazing Educators
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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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.
Midwest Perennial Forage Working Group

https://greenlandsbluewaters.org/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:
Thematic Focus:

Support for grazing educators
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.
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<th>Teaching the Basics of Grazing</th>
<th>Integrating Livestock into Cropping Systems</th>
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<td>Grass-Based Farm Financials</td>
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Spring 2017

Slide Library for grazing educators, based on webinar series.
• 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

_Slide Source: Laura Paine_
2017-2018: Grazing Dairies project funded by an RMA grant
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*
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 Ag 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
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:
Perennial Forage is just one piece of a comprehensive strategy for Continuous Living Cover on agricultural lands.
Thank you!

jewet006@umn.edu
greenlandsbluewaters.org
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
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
Project Partners

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
Over 250 participants learned about soil health, grazing and cover crops.
VSN serves to:

- Support on-farm conservation and regenerative practices to:
  - Reduce Erosion
  - Reduce Phosphorus and Sediment runoff
  - 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

550 acres conversion of cropland
2860 acres of grazed cover crops
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 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
Thank you for participating in today’s *The Current*!

Visit our website, northcentralwater.org, to access the recording and our webinar archive!