


Conservation Reserve Enhancement Program

SOUTH DAKOTA
GAME, FISH and PARKS

Mark Norton, Hunting Access and Farm Bill Coordinator

What is the Conservation Reserve Enhancement Program (CREP)?

- Partnership between USDA's Farm Service Agency and another entity to create a unique Conservation Reserve Program (CRP) initiative to target and address recognized high priority conservation objectives in a cost-effective manner.
- Requires 20-30% of the total CREP project costs to be covered by the partnering entity.

Enrollment

- Ag Producers with cropland and marginal pastureland meeting CRP enrollment eligibility and willing to allow public access work with FSA, NRCS, & Pheasants Forever Habitat Advisors to enroll.
- Complete both a CRP contract with FSA and CREP agreement with SD GFP. SD GFP CREP annual payment is based on a % of CRP weighted average soil rental rate for CRP contract.
- SD GFP posts enrolled lands with CREP signs as open to public hunting and fishing access and displays them on the public hunting atlas maps.
- Participants receive cost-share to restore grasslands and wetlands and annual payments from FSA and SD GFP for 10 to 15-year contracts.

James River Watershed CREP

- Started in 2009 with a goal to enroll 100,000 acres that would result in
  - Restoration of wetlands and grasslands to store water and serve as breeding habitat for migratory and resident wetland and grassland dependent wildlife species.
  - Improved water quality through reduced sediment, phosphorus, and nitrogen runoff from cropland
  - Additional annual production of ducks and pheasants
  - Additional areas open to public hunting and fishing access.

JRW CREP Results

- By 2014 nearly 82,000 acres were enrolled resulting in improved water quality
  - 97.9% reduction of sediment runoff totaling estimated 71,444 tons/yr.
  - 85.8% reduction of Nitrogen runoff totaling estimated 311,447 lbs./yr.
  - 95.6% reduction of Phosphorus runoff totaling estimated 105,427 lbs./yr.
  - Over 121 miles of rivers and streams buffered by 30,000 acres of adjacent cropland being enrolled.

JRW CREP Results

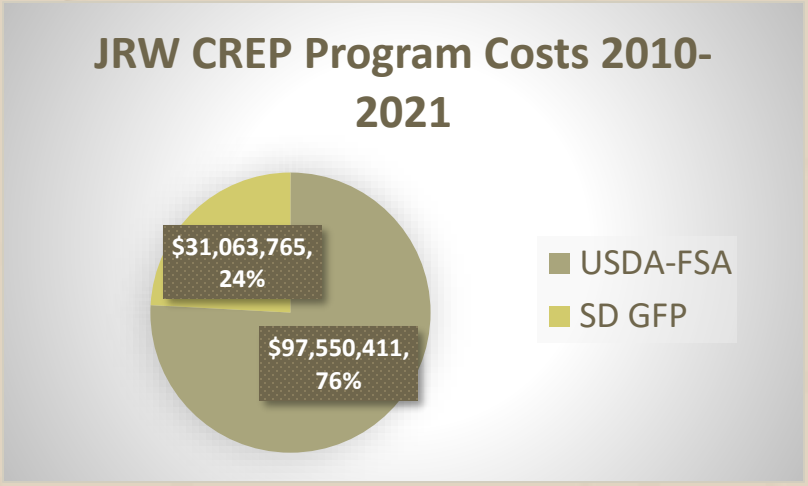
- Wildlife benefits
  - Estimated annual production of 44,600 ducks and 212,000 pheasants
  - Created breeding habitat for seven bird species of conservation concern in South Dakota; bobolink, upland sandpiper, western meadowlark, grasshopper sparrow, savannah sparrow, dickcissel, & sedge wren

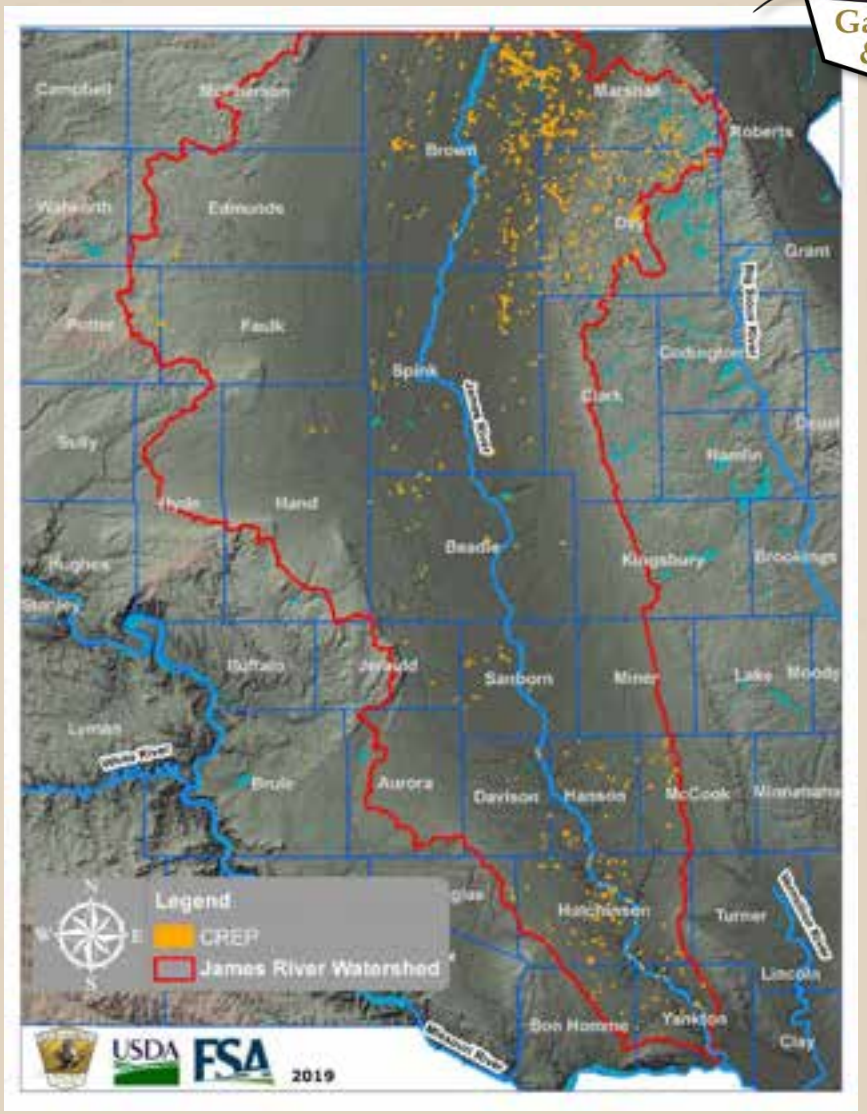
JRW CREP Results

- Public hunting and fishing access
  - Opened over 1,000 pieces of private land to public walk-in hunting and fishing access.

JRW CREP Cost

- 82,000 acres of CREP
  - Federal CRP Annual Payments - $8.9 million
  - SD GFP CREP Annual Payments - $3 million
  - TOTAL - $11.9 million



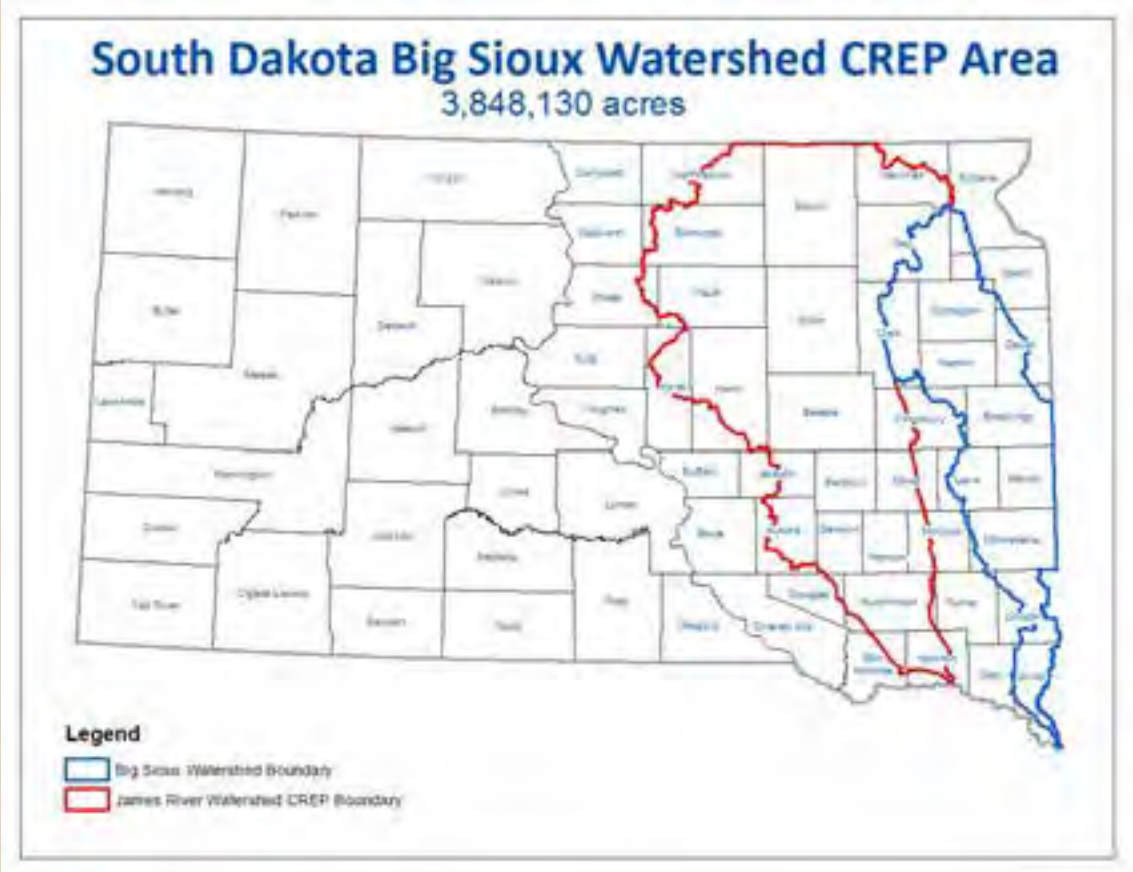


JRW CREP in 2022

- New Enrollments – thanks to additional revenue generated by the Habitat Stamp.
- Current enrollment approximately 76,000 acres due to expirations that occurred in 2020 and 2021.
  - Re-enrolled about 75-80% of expiring contracts
  - 6,400 acres of new enrollments since Jan 2021

Big Sioux River Watershed CREP

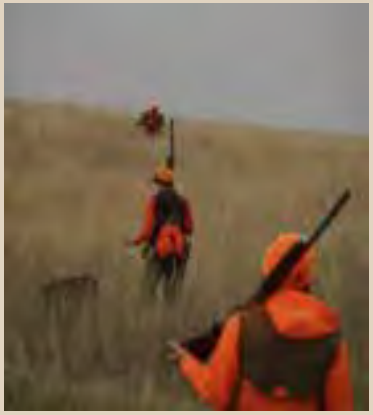
- SD GFP is working with FSA to create a second CREP project.
- Modeled after the successful JRW CREP
- 25,000 acres



Big Sioux River Watershed CREP

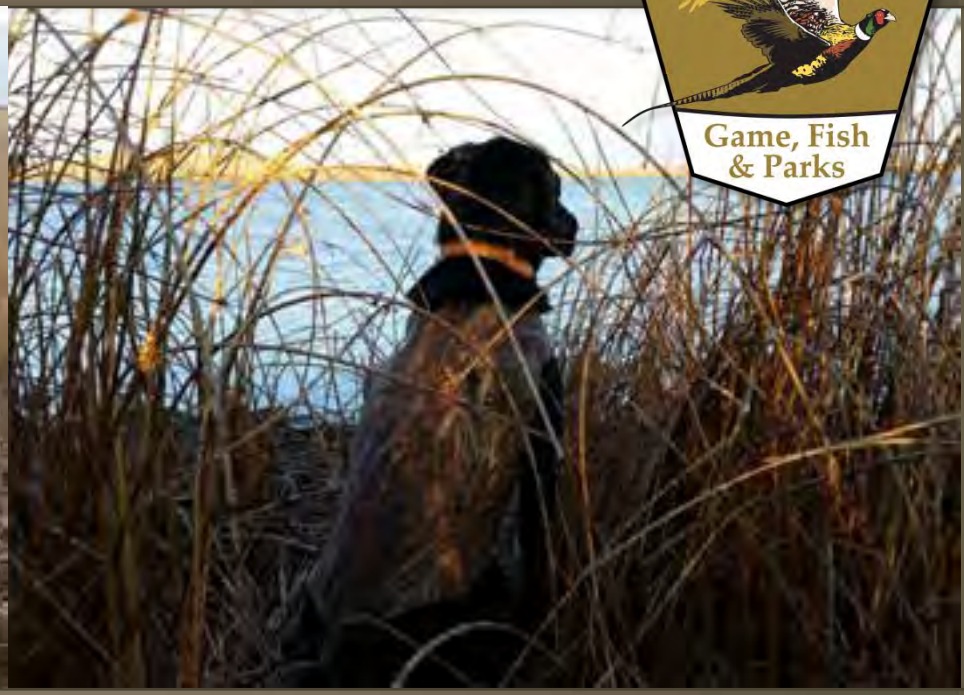
Goals

- Improve Water Quality
- Increase wildlife habitat and wildlife populations.
- Open a minimum of 250 pieces of private land to public hunting and fishing access.



Big Sioux River Watershed CREP

- Estimated Cost to enroll 25,000 acres for 15 years
  - Federal $86.5 million
  - SD GFP– $22.2 million



SOUTH DAKOTA
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Questions?

Conservation Reserve Enhancement Program


SOUTH DAKOTA
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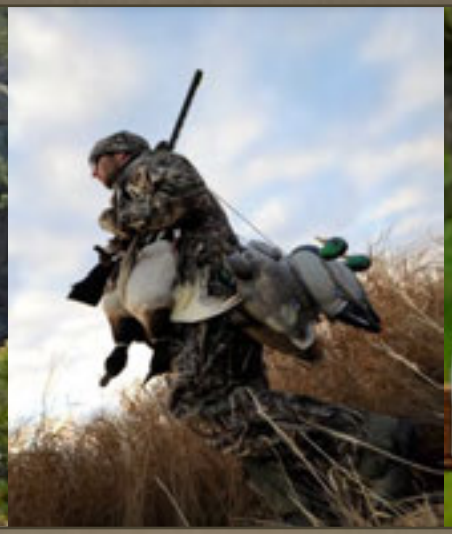
& Parks

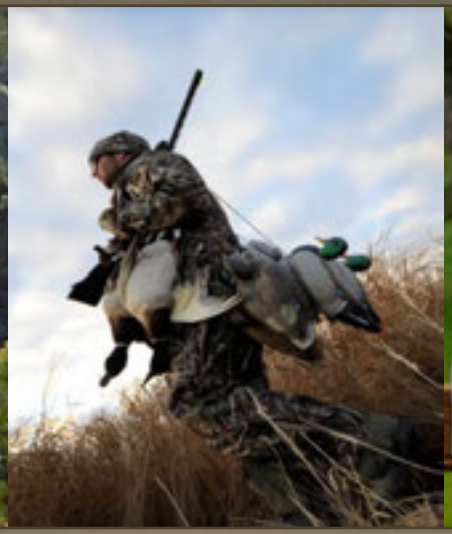





SOUTH DAKOTA

GAME, FISH and PARKS





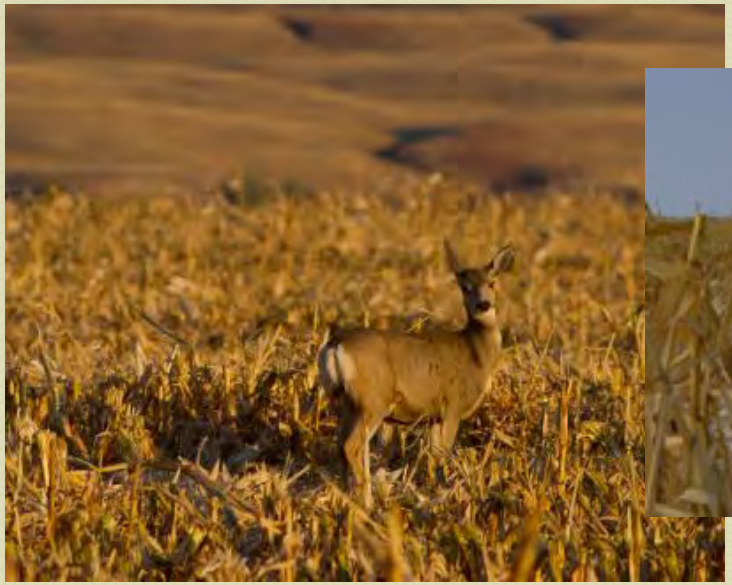

Ryan Persoon,
District 13 Park Supervisor

Habitat and Food Plot Management In Rec Areas

Ryan Persoon
District Park Supervisor

Habitat & Food Plots in Parks

- Why?
- How?
- What?
- When?
- Where?

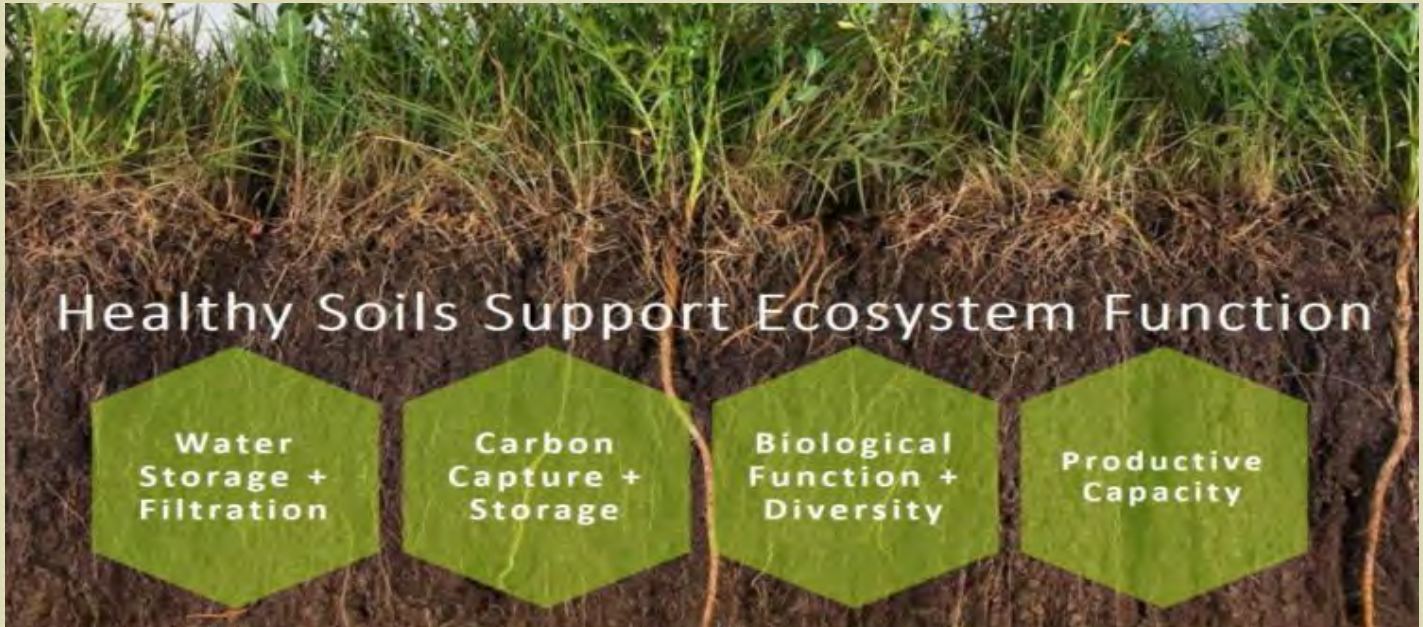


Enhance What Habitat is There

- Prescribed Burns
  - Prevents Brush and Trees
  - Eliminates Vegetation Build Up
  - Increases Plant Diversity
  - Discourages Weeds
  - Recycles Nutrients
  - Reduce Unwanted Insects
- Mob/Intensive Grazing
  - Remove Cool Season Grasses
  - Breaks Soil Crust
  - Lay Old Plant Material Down
  - Prevents Erosion
  - Plant Seeds Deeper
  - Provides Nutrients

Why Plant Food Plots

- Outdoor Opportunities
- Influence Animal Behavior
- Bridge Nutritional Gaps
- Attract Insects - Pollinators
- Forage Seeds for Birds
- Provide Cover
- Control the Unwanted
- Prepare Soil Foundation
- Aesthetics
- Biodiversity
- Soil Health
- Atmosphere Health



How Should You Plant

- Prepare Planting Location
  - Late Summer – Mow, Hay, or Graze
  - Early Fall – Spray Before Ground Freezes
    - Blanket (Sulfentrazone), 4oz/acre, Preemergent for Broadleaf Control
    - Banvil, 4oz/acre, Existing Broadleaf Control
    - Roundup, 48oz/acre if Grasses are Green – If not, Wait till Spring
  - Respray in the spring, no later than June 15.
    - Roundup, 48oz/acre
    - Grasses, such as Smooth Brome, are hard to kill and take time!
  - Plant around 10 days after spraying

- By Whatever Means Available
  - In-house equipment
  - Contact DOW Land Manager
  - Local NRCS or PF
  - Local Producer Partnership

How Should You Plant

- No-Till Drill is Preferred Method
- Limit Tillage or Cutting and Leveling
- Be Creative, if necessary!
  - Disc and Broadcast
  - Stomp it in!

- Don’t plant too thick, go by seed chart recommendations
- Plant everything 1” deep, if you have a large/small seed mix.
  - Big seeds will pave a way for the small seeds.
  - Otherwise, follow seed depth recommendation for planting.
  - Plant Small Seed Batches and Refill Often

What Should You Plant

- What's Your Goal?
- Warm and Cool Season Plants
- Plant What is Available to You
- Diversify with Seed Mixtures
- Consider Flowering Cycles/Timeframes
- What Will Benefit the Soil and Future Seed Bed

- 1st Year, Stay Away From Grasses
  - Releases Toxins that Stunts Roots of New Grasses
  - Brassicas, Flax, Barley, Kahle, Peas, Sunflowers
- 2nd Year – Increase Grasses up to 50%
  - Sudan grass, Oats, Millet, Rye or Forage Sorghum
- 3rd Year – Can Begin Planting Native Grasses and Flowers

What Should You Plant

- Options are Endless
  - Annual or Perennial?
- NRCS Standard Cover Crop Requirements
- Utilize Local Seed Sale Resources
- Contact Specialized Seed Companies
- Consult with Precision Ag Producers

USDA United States Department of Agriculture
Natural Resources Conservation Service

Cover Crop Table 1

Table 1: Cover Crop - Common Species and Properties

Cover Crop	Full seeding rate lbs/acre	Seeding depth, inches	Reduce erosion	Increase soil organic matter	Scavenge nutrients	Promote biological nitrogen fixation	Suppress weeds	Provide supplemental hay	Provide supplemental grazing	Rooting depth/Plant water use	Minimize/Reduce surface soil compaction	Minimize/Reduce subsoil compaction	Seed size (Large or Fine)	Crop type	Winter Survival	Salinity Tolerance	C:N Ratio	Mycorrhizal fungi association	Seeds/lb	Shade Tolerance
Alfalfa	6.5	.25 - .75	G	G	G	Y	G	G	F	DH	G	G	F	CB	Y	P	L	M	210,000	F
Barley	50	.75 - 2.0	G	G	G	N	G	G	G	MM	G	F	L	CG	N	G	M	M	14,000	F
Brassica hybrids	7	.25 - .5	F	F	G	N	G	F	G	MM	G	G	F	CB	N	G	L	N	180,000	P
Buckwheat	50	.5 - 1.5	P	P	F	N	F	P	P	SL	F	P	L	WB	N	P	L	N	19,000	G
Cabbage, African	5	.25 - .75	F	F	G	N	F	F	F	MM	G	G	F	CB	N	G	L	N	180,000	F
Camelina, Winter	3	.25 - .5	F	F	F	N	P	P	P	ML	P	F	F	CB	S	P	L	N	400,000	P
Canola	5	.25 - .75	F	F	G	N	G	F	F	MM	G	G	F	CB	S	G	L	N	140,000	F
Clover, Balansa	5	.25 - .75	F	P	F	Y	P	P	F	SL	P	P	F	CB	N	P	L	M	500,000	F
Clover, Crimson	15	.25 - .75	F	F	F	Y	P	F	F	SM	P	P	F	CB	S	P	L	M	150,000	F
Clover, Red	5	.25 - .75	G	F	F	Y	F	F	F	SL	F	F	F	CB	Y	P	L	M	275,000	G
Clover, Sweet	4	.25 - 1.0	G	G	F	Y	G	F	F	MM	G	G	F	CB	Y	F	L	M	260,000	G
Collards or Kale	5	.25 - .5	F	F	G	N	G	F	G	MM	G	G	F	CB	N	G	L	N	175,000	F
Corn	12	1 - 1.5	G	G	G	N	G	F	G	DH	G	G	L	WG	N	P	H	H	2,500	F
Cowpeas or Dry Beans	30	1 - 1.5	P	F	F	Y	P	P	F	SL	F	F	L	WB	N	P	L	M	4,000	F
Fava beans	75	1 - 1.5	F	F	F	Y	F	G	G	DM	F	F	L	CB	N	F	L	P	2,500	P
Flax	30	.25 - .75	F	F	F	N	P	P	P	SM	F	P	F	CB	N	P	H	H	80,000	P
Lentils	30	1 - 1.5	P	P	P	Y	P	P	P	SL	P	P	F	CB	N	P	L	M	20,000	P
Millet, hay	15	.5 - 1.0	G	G	G	N	G	G	G	SL	G	F	F	WG	N	P	M	H	180,000	P

Planting – First Year

- Plant Mostly Broadleaf Mix
- Excellent Pollinator Blend
- Seed Late June

Cover crop	Seeding Rate	% fo mix	# in mix	C:N Ratio	
Buckwheat	48	5%	2.4	L	pollinator
Flax	50	10%	5	H	pollinator
Foarge Peas	70	20%	14	L	pollinator
Sunflower	4	15%	0.6	M	pollinator
Kale	3	5%	0.15	L	Crude Protein 30%
Turnip	4	10%	0.4	L	Crude Protein 30%
Collards	3	5%	0.15	L	Large leaf good grazer
Forage Sorghum	25	10%	2.5	H	grass some diversity
Corn	25	20%	5	H	grass some diversity
		100%	30.2		

Planting – Second Year

- Add More Grasses to the Mix
  - Builds a Better All-Around Food Plot
  - Plant Around June 5 - 10. Spray As Needed – Banvil, Roundup

Cover crop	Seeding Rate	% fo mix	# in mix	C:N Ratio
Corn	25	15%	3.75	H
Flax	30	7%	2.1	H
Kale	3	8%	0.24	L
Oats	60	20%	12	H
Foarge Peas	70	15%	10.5	L
Foage Sorghum	25	10%	2.5	H
Sunflower	4	15%	0.6	M
Turnip	4	10%	0.4	L
Piper	25	10%	2.5	H
		110%	34.59	


Grazing Corn
Buckwheat
Oats
Kale
Flax
Forage Barley
Forage Peas

Where Should You Plant

- What's Your Goal?
- Plant Problem Areas
- Plant near Wooded Cover
- Plant Small Plots
- Plant Large Plots
- Plant Visible Areas
- Plant Hidden Areas
- No Right or Wrong Place

Milpa Garden Plot

- “Chaos Garden”
- Seed Donated by SD Soil Health Coalition
- Traditional Intercropping System
- Developed by Mayans in Central America

Soil Health School

COST

$150 per person, $75 for each additional person from the same operation

*Fee includes session materials, meals and the following year's membership to the coalition

Make Checks Payable to:
South Dakota Soil Health Coalition

ACCOMMODATIONS

Participants are responsible for lodging. A block of rooms has been reserved at the following hotel for $98.19 per night. Please call to make your reservations.

Quality Inn
1105 N Splitrock Blvd.
Brandon, SD 57005
605-582-5777

FOR MORE INFORMATION:
sdsoilhealth@gmail.com
(605) 280-4190

Photo Credit: USDA-NRCS South Dakota

South Dakota Soil Health Coalition

(605) 280-4190 | 43968 139th St, Webster, SD, 57274
sdsoilhealth@gmail.com

www.sdsoilhealthcoalition.org

The South Dakota Soil Health Coalition is proud to announce the South Dakota Soil Health School, which will be held Aug. 31-Sept. 2, 2022, near Garretson, SD.

Classroom and field demonstrations will be held at the farms of Bruce Carlson and Anthony Bly near Garretson, SD.

The Soil Health School is designed for agricultural producers as well as anyone with an interest in learning how to manage soils for resiliency and profit.

The agenda features classroom style presentations from producers and technical experts from across the state and region, as well as hands-on experiences in the field. Area producers will share their challenges and successes with various methods for improving soil health.

Space is limited.

Early registration is encouraged to participate.

First session starts at 8:00 AM Wednesday.

Final session will end at 1:00 PM Friday.

REGISTRATION FORM

Name _____

Operation _____

Affiliation _____

Address _____

_____

Phone _____

Email _____

Number of People Attending from your operation _____

Amount Enclosed _____
($150 first person from your operation, $75 each additional)

Legal description of your operation:

_____

Send Completed Registration to
SD Soil Health Coalition | Cindy Zenk
43968 139th Street | Webster, SD 57274


SOUTH DAKOTA
Game, Fish
& Parks

Current AFWA science and research priorities, MLI identified conservation challenges and ongoing MLI activities.

AFWA Research Priorities	MLI Identified Conservation Challenges in the MAFWA Region	Ongoing MLI Activities
Weather and Climate Water availability (too much/too little) Impacts on native species habitat range Cold water fisheries MAFWA only – renewable energy **Wildlife Health** CWD WNS Grab bag of regional concerns (bighorn pneumonia, winter ticks, brain worm) **Invasive Species** Feral vertebrates (mainly pigs) Asian carp Cheat grass Honeysuckle Note: NEAFWA and Canadians identify overabundant WT deer and WT deer range expansions as invasive species concerns. **OVER-ARCHING** **Technology** RTQuIC CWD methods eDNA methodologies – aquatic and terrestrial. **Cross-Jurisdictional Cooperation** Disease management Species management (mainly to mitigate declines) Invasive Species	**Climate Change** Extreme weather events/Shifting disturbance regimes Novel ecosystems/changing habitats Habitat connectivity **Wildlife Health and Disease** Challenges with detection and rapid response Lack of authority of conservation agencies Zoonotic diseases and human health **Invasive Species** Loss of degradation of native habitats Magnitude of cost – requires being selective Loss or degradation of native species **MAFWA SPECIFIC** **Modern Agriculture** Land conversion/habitat destruction Nutrient loading Pesticides **OVER-ARCHING** **Land use** Habitat degradation Habitat loss/fragmentation Disturbance regimes (fire, grazing) **Agency Structure/ Relevancy/ Authority** Limited funding model Public distrust of institutions and science Politicization of agency leadership	**At-Risk Species Working Group** RSGCN - Identified Regional Species of Greatest Conservation Need across the Midwest. Identifying actions to address highest-priority RSGCN species, habitats, and threats. **Habitat Working Group.** Priority Habitats - Identify and spatially depict priority habitats for the Midwest region as it relates to SWAPs and RSGCN. **Midwest SWAPs and Landscapes Team.** Regional coordination around SWAP elements and dashboard viewer tool for SWAP data in all MAFWA states. **Midwest Conservation Blueprint** - Depicts high priority areas for conservation that are reflective of the MLI Goals and Indicators **Wind Working Group** - Government-only group developing a BMP/Mitigation inventory, a wind resources mapping framework, and are currently developing a permitting practices crosswalk **Governance Working Group** Inform the governance and structure of MLI as a model for cross-jurisdictional collaboration **Communications and Engagement** Communicate the mission and products of the MLI to partners

Ongoing MLI Activities and Emphasis Aligned to AFWA Science and Research Priorities

1. To date, reflecting a desire to position the MLI to address special challenges at the habitat scale (versus a single species approach), MLI has organized around the following focal areas: At-Risk Species, impacts of wind development on wildlife, Habitat Inventory and Assessment systems and products, its governance and durability, and communications and engagement. These initial focal areas will be evaluated in the coming year. Activities of the current work groups reflect and incorporate the AFWA-identified science priorities and align with the MLI-identified focal areas as follows:

    a. At-Risk: The At-Risk Species working group spearheaded the development of a Midwest Regional Species of Greatest Conservation Need list and database. This project includes identification of primary threats to the RSGCN species, which align with many of the AFWA science and research priorities as well as the top challenges identified in the WMI report. These threats are summarized in the graphic below:

	RSGCN Species	Habitat Availability	Habitat Condition	Habitat Connectivity	Habitat Management	Climate Change	Invasive Species	Disease	Genetics	Pollution	Predation	Harvest/Take	Competition
Mammals	**16**	88%	38%	.	6%	13%	.	81%	6%	50%	.	50%	.
Birds	**30**	93%	70%	27%	83%	47%	10%	3%	13%	27%	27%	43%	10%
Amphibians	**12**	83%	92%	50%	42%	67%	25%	58%	17%	58%	58%	50%	17%
Reptiles	**16**	81%	69%	31%	63%	38%	6%	44%	19%	19%	19%	44%	.
Fishes	**35**	57%	80%	54%	6%	29%	3%	6%	40%	71%	37%	17%	29%
Crayfishes	**18**	39%	50%	17%	.	17%	.	.	11%	39%	.	.	61%
Mussels	**47**	40%	85%	60%	17%	4%	36%	.	30%	72%	9%	19%	4%
Dragonflies	**14**	36%	93%	21%	.	43%	.	.	7%	7%	14%	7%	.
Butterflies	**49**	92%	80%	90%	76%	12%	88%	4%	16%	33%	.	.	.
Bees	**13**	77%	92%	54%	46%	46%	38%	31%	46%	46%	8%	.	.

    b. Habitat: The Habitat Working Group is synthesizing multiple spatial data layers into a Midwest Conservation Blueprint to guide voluntary action and investment across the region – a number of layers highlight areas to prioritize for conservation relative to Table 1 (e.g., climate resilient lands, climate migration, aquatic connectivity and invasive species management, working lands in conservation).

Take-Aways:

- The Midwest Landscape Initiative (MLI) was established to address concerns shared by Midwest Association of Fish and Wildlife Association (MAFWA) member states, the U.S. Fish and Wildlife Service (FWS), and the U.S. Geological Survey.

  The MLI is not a science-provider but a forum that supports resource managers by developing support tools and expanding partnerships.

- Current AFWA research priority concerns are wildlife disease, climate change, invasive species, cross-jurisdictional cooperation and emerging technologies were identified as priority categories.

- MAFWA research priority concerns (collected by the Wildlife Management Institute under contract to MAFWA) are very similar to those identified by AFWA (i.e., climate change, wildlife disease, invasive species, modern agriculture, land use, agency structure/relevance/authorities).

- Regional Species of Greatest Conservation Need (RSGCN) are a management concern shared by MAFWA states, FWS and USGS. The MLI is prioritizing at-risk species across the MAFWA region and identifies related habitats and threats.

- MLI is approaching this shared concern with the conservation of at-risk species with emphasis placed on climate change, invasive species impacts, and implications of wildlife disease.