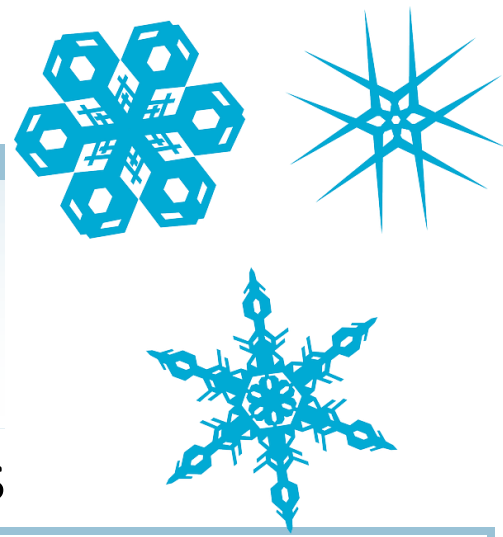


Grand Forks County Soil Conservation District Annual Report

January, 2016
Volume 28, Issue 1



2015 Highlights

January <ul style="list-style-type: none">• Approved annual work plan• Attended Legislative Day at the Capitol in Bismarck• DiSC Training for all staff	February <ul style="list-style-type: none">• Booth display at the International Crop Expo• Presented at the Annual Township meeting in Larimore• Hosted 3rd Annual Soil Health Workshop	March <ul style="list-style-type: none">• Hosted the Area 1 Conservation District Meeting• Attended Soil Health Training• Attended Tree Promotion Workshop• Hosted Shop Talk in Larimore
April <ul style="list-style-type: none">• Presented talks at UND• Seeded the demonstration plot with NDSU• Volunteered for ND Envirothon• Staking for trees began	May <ul style="list-style-type: none">• Began the summer long OLLI lectures at UND• Tree planting started• Planted no-till garden	June <ul style="list-style-type: none">• Hosted a soil health tour to Bismarck• Finished tree planting
July <ul style="list-style-type: none">• 319 funding began for the Upper Reaches of the Turtle Watershed Project• Finished fabric laying	August <ul style="list-style-type: none">• Prepped for upcoming fall events• Organized the tree shed• Began tree plan for 2016• Participated in Feds Feed America Program	September <ul style="list-style-type: none">• Hosted 604 7th grade students at Eco-Ed Camp over 8 days• Hosted a UND undergrad lab and follow-up discussion• Winterized tractors
October <ul style="list-style-type: none">• Cleaned up the city no-till garden• Attended a field day in Cass County for soil health• Crimped NDSU demo plot• Hosted a livestock workshop	November <ul style="list-style-type: none">• Presented the English Coulee Watershed Implementation Proposal to a task force in Bismarck• Attended the Annual Convention Meetings in Bismarck	December <ul style="list-style-type: none">• Yearly wrap-up• Participated in the Giving Tree

NRCS News

NRCS Announces Honey Bee Pollinators (HBP) Effort

Quality honey bee forage has declined in Midwest States (North Dakota, South Dakota, Montana, Wisconsin, Michigan, and Minnesota), which has created a problem for this pollinator's survival. From June to September this six-state region is home to more than 70 percent of the commercially managed honey bees in the country. These are critical months when bee colonies need abundant and diverse forage to store enough food for winter. Applications received on or before February 19, 2016 will be considered for funding.



Eligible Practices

Conservation Cover	Windbreak/Shelterbelt Establishment
Field Border	Fence
Riparian Herbaceous Cover	Riparian Forest Buffer
Forage Harvest Management	Mulching
Forage and Biomass Plantings	Tree/Shrub Site Preparation
Prescribed Grazing	Livestock Pipeline
Range Planting	Pumping Plant
Tree / Shrub Establishment	Integrated Pest Management
Upland Wildlife Habitat Management	Watering Facility
Early Successional Habitat Development	Water Well
Herbaceous Weed Control	Forest Stand Improvement
Conservation Crop Rotation	

EQIP Programs



Prairie Pothole Wetland & Grassland Retention Project (PPWGRP)

Funding is available to producers to protect grassland and wetlands in the Prairie Pothole Region. Eligible practices aim to improve water quality and quantity, increase grassland health and reduce soil erosion and sediment. Practices can be applied to active working lands or expiring Conservation Reserve Program (CRP) lands. Applications received by February 19, 2016 will be considered for funding.

Eligible Practices

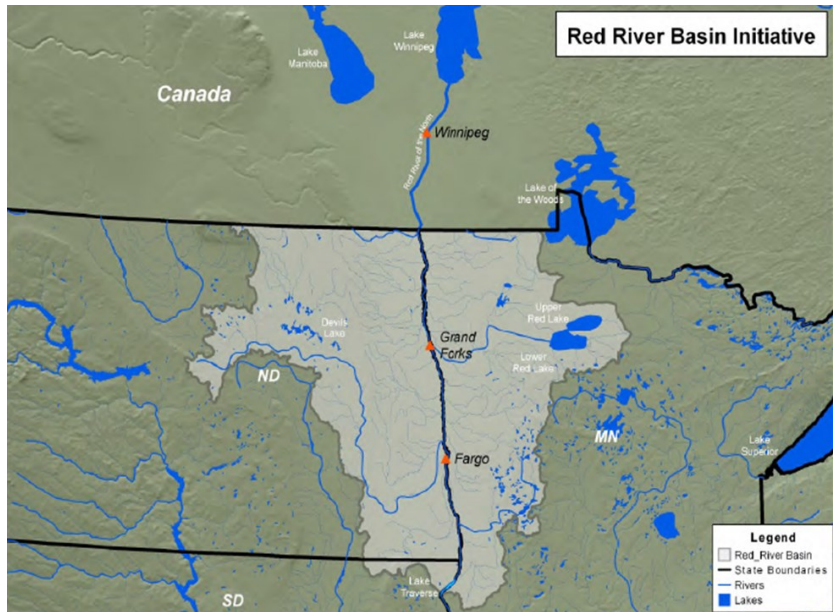
Herbaceous Weed Control	Livestock Pipeline
Conservation Cover	Pumping Plant
Conservation Crop Rotation	Range Planting
Cover Crop	Heavy Use Area Protection
Critical Area Planting	Spring Development
Pond	Stream Crossing
Fence	Nutrient Management
Firebreak	Watering Facility
Grade Stabilization Structure	Underground Outlet
Access Control	Water Well
Obstruction Removal	Structures for Wildlife
Forage Harvest Management	Wetland Restoration



NRCS News

Red River Basin Initiative (RRBI) funds available for 2016

The Red River Basin Initiative encourages the adoption of conservation practices to retain wetlands, improve water quality, reduce flooding and improve wildlife habitat. All applications received by February 19, 2016 will be ranked for funding consideration.



Eligible Practices

Conservation Cover	Grassed Waterway
Residue & Tillage Management – No Till	Irrigation Reservoir
Cover Crop	Forage & Biomass Planting
Critical Area Planting	Range Planting
Residue & Tillage Management – Reduced Till	Drainage Water Management
Dam/Diversion	Streambank & Shoreline Protection
Sediment Basin	Open Channel (2-stage ditch)
Dike	Channel Bed Stabilization
Pond	Structure for Water Control
Riparian Herbaceous Cover	Salinity & Sodic Soil Management
Riparian Forest Buffer	Water & Sediment Control Basin
Filter Strip	Wetland Restoration
Dam	Wetland Creation
Grade Stabilization Structure	

Free Soil Health Assessments

Interested to know how much precipitation your fields are able to absorb? Wondering how stable your soil is? NRCS can help!

We offer free assessments of your soil so you can make management decisions that benefit your operation and your bottom line. We will evaluate the soil function with infiltration tests, compaction measurements and soil stability analysis.

If you are interested in trying some different management practices (cover crops, reduced tillage, etc), this service can provide baseline information to help you measure changes in your soil, allowing you to track changes over time, compare problem areas in the field, and monitor trends in soil quality under different management systems.

Assessments are available on all land uses (crop, range, pasture). For help on these and any other resource questions you may have, please contact the Grand Forks Field Office at 701-772-2321 ext 3 to set up a spring site visit today!

Speaker Spotlight

Donald C. Reicosky is a retired Soil Scientist with the USDA-ARS, North Central Soil Conservation Research Laboratory, in Morris, MN. His research deals with describing crop response and water use on conventional till, strip till and no-till systems. Current research focuses on carbon cycling, tillage and residue management with emphasis on carbon sequestration.

Excerpt from *Celebrating 2015, the International Year of Soils*, (Morris Sun Tribune, May 2, 2015):

Today I salute the soil and hope you will too. During the International Year of Soils, and on Earth Day 2015, we have lots to celebrate along with the Soil Science Society of America (SSSA) and other organizations worldwide. The objective is to shine a global spotlight on the vital role of our diverse soils, and on the task of safeguarding them and returning them to good health. Soils are the fundamental foundation of our food security, thus, they must be respected and protected. In 1937, Franklin Roosevelt stated, "The nation that destroys its soil destroys itself."

History over the last 10,000 years has been an excellent teacher with examples of several civilizations lost due to soil abuse. However, these critical lessons are often ignored. Humankind has been building on the ruins of the old tillage and monoculture concepts at our peril. Soil is being lost between 10 and 40 times the rate at which it can be made by nature.

For farmers, soil health is a key component of good production and the simple slogan "healthy soil, healthy plants and animals, healthy people" is often used to describe good conservation practices. So, be good to your soil!

David Montgomery has authored several books including *Dirt: The Erosion of Civilizations*. His most recent book, released in November 2015, is titled *The Hidden Half of Nature: The Microbial Roots of Life and Health*, details the importance of cultivating healthy soil.

Excerpt from "Dirt: The Erosion of Civilization":

Normally we don't think too much about the ground that supports our feet, houses, cities, and farms. Yet even if we usually take it for granted, we know that good soil is not just dirt. When you dig into rich, fresh earth, you can feel the life in it. Fertile soil crumbles and slides right off a shovel. Look closely and you find a whole world of life eating life. Healthy soil has an enticing and wholesome aroma—the smell of life itself.

Yet what is dirt? We try to keep it out of sight, out of mind, and outside. We spit on it, denigrate it, and kick it off of our shoes. But in the end, what's more important? Everything comes from it, and everything returns to it. If that doesn't earn dirt a little respect, consider how profoundly soil fertility and soil erosion shaped the course of history.

At the dawn of agricultural civilizations, the 98 percent of people who worked the land supported a small ruling class that oversaw the distribution of food and resources. Today, the less than 1 percent of the U.S. population still working the land feeds the rest of us. Although most people realize how dependent we are on their small cadre of modern farmers, few recognize the fundamental importance of how we treat our dirt for securing the future of our civilization.

Jonathan Lundgren is an agroecologist, CEO for Blue Dasher Farm and a former Research Entomologist with USDA-ARS Brookings. Dr. Lundgren's ecological research focuses heavily on conserving healthy biological communities within agroecosystems by reducing disturbance and increasing biodiversity within cropland.

Excerpt from Blue Dasher Farm Blog (<http://bluedasher.farm/>): *Insects as the Solution Instead of the Problem*:

If insecticides were the answer to pest problems, then why didn't we eradicate pests 60 years ago? Insect pests are not the problem. Insect pests are a symptom of the problem. When faced with a pest problem, many entomologists and crop consultants quickly advise a spray recommendation based on economic injury levels of the pest. In contrast, when I see a farm field with a perpetual insect pest problem, the first question that I ask is "what is out of whack in this field to produce such an outbreak?" If all we are doing is solving symptoms with a quick pesticide application, and ignoring the problem, then we will continuously battle pest outbreaks.

Innovative farmers are leading the scientists in developing food production systems that regenerate the soil. These processes are based on encouraging biodiversity and reducing disturbances to their cropland (especially tillage). The first line of evidence that diversity is a key driver of pest outbreaks is that farmers that are regenerating soil health through biodiversity are abandoning their insecticide inputs. They no longer need them.

It took decades to degrade soils to their current state, and it will take years to fully restore the range of ecological functions that soil can provide. But what an exciting opportunity to document these changes as they happen in your operation.

4th Annual Soil Health Workshop

March 3rd, 2016

Alerus Center, Grand Forks, ND

Please join us for the 4th Annual Soil Health Workshop on March 3, 2016.

This workshop is free and open to the public!

Pre-registration is requested to get a correct luncheon head count.

Tentative Agenda

8:00 am	Registration/Breakfast
8:30 am	Welcome
8:45 am	<u>Dr. Don Reicosky</u>
10:00 am	Break
10:15 am	<u>Dr. David Montgomery</u>
12:00 pm	Lunch
1:00 pm	<u>Dr. Jonathan Lundgren</u>
2:15 pm	Producer Panel
3:00 pm	Closing Comments

Sponsored by:

Grand Forks County Soil Conservation District

Natural Resources Conservation Service

ND State Department of Health—319 Grant

ND Natural Resources Trust



NORTH DAKOTA
DEPARTMENT of HEALTH

- Workshop is **FREE & open to the public.**
- Materials and lunch will be provided with pre-registration.
- Please register by **February 26, 2016.**



Contact Us!

Grand Forks County Soil Conservation District

4775 Technology Circle, Ste 1C,
Grand Forks, ND 58203

701-772-2321 ext 3
kristine.larson@nd.nacdnet.net

Field Office Numbers

2015 Tree Season Tally

Here are the tree totals for the 2015 season! We had a pretty cooperative spring this year, beginning May 13th compared to the last two, but we would always love the opportunity to start earlier. This year was the most trees I have ordered since I started working here in 2012. We also had almost 70 tree planting sites to do this year. We typically average in the low 40's for planting sites each year. This means we had our hands full and decided to run two crews in order to get all the trees in by June 1st. We hired 6 seasonal employees to run the two tree planting crews and kept 5 on after for fabric installation. Overall, I think 2015 was a good season for planting trees and numbers. Thanks to all who have ordered and support the District over the years.

Here are the statistics from the 2015 tree season:

Trees Ordered – 30,280

Mechanically Planted Trees - 15,743

Tree Stock Sold - ~8558

Tree Plantings - ~146,464 linear feet (27.73 miles)

Outdoor Heritage Grant – 45,581 linear feet

Fabric Installed - 75,595 linear feet

Tree Tubes - 1,389

Grass/ Crops Seeded - roughly 25 acres

Weed Badgering - 71 hours operated

Fabric Mats – 244

Hand Plantings- 605



Watershed Review

The Upper Reaches of the Turtle River-North and South Branch Watersheds Project received 319 funds beginning on July 1, 2015, with a total budget of \$491,392.00 over the next 4.5 years. These funds are geared toward Best Management Practices (BMPs) that will improve water quality within the watershed. Two BMPs were implemented in 2015.

Funding for the English Coulee Watershed Project was requested in 2015, and a final decision will be made in the upcoming months. This, too, will use BMPs to improve water quality within that watershed.

319 funding provides 60% cost-share rates for BMPs that are implemented. There is no application or ranking process associated with these funds. All BMPs must follow NRCS specs.

If you have resource concerns and would like more information about BMPs or the watershed project(s), please contact Kristine Lofgren at the office.

NRCS Report

This past year was full of many positive experiences with our partners and producers of Grand Forks County. Looking across the farm fields as we make our way from here to there, it is easy to see that the numerous meetings, articles, and program incentives are making a push towards soil health. The most obvious change we have seen is the amount of “green” that was observed in the fields this past fall. No, I am not talking about John Deere tractors pulling tillage equipment behind them one last time. I am referring to cover crops! We at the field office are certainly not going to take all the credit for this, but we do take pride in knowing that we have made a positive impact in the amount of acres applied in 2015 and upcoming years.

Conservation Reserve Program (CRP) - Interest in the Continuous CRP program has been consistent. With the price of commodities decreasing, the rental rates offered for CRP is becoming more and more appealing to landowners/producers across our area. Last year, NRCS wrote 148 new plans covering 3,178 acres.

Environmental Quality Incentive Program (EQIP) - Grand Forks County saw 9 applications turn into contracts this past year. EQIP showed again that competition remains high. Practices to be implemented for these contracts include nutrient/pest management, grassland retention and monitoring, reduced tillage and the installation of a couple of high tunnels to extend the growing season for specialty crops.

Conservation Stewardship Program (CSP) - 14 new contracts were obligated with a total of just over 16,600 acres. Through these contracts we will be seeing a reduction in fertilizer and pesticide application rates, conservation of irrigation water, increased wildlife habitat and a few steps made towards improving the health of our soils. We have a large list of applicants from 2015 that were not funded. It will be interesting to see how things play out in 2016. Producers can expect the CSP program to look entirely different for the 2017 crop year so stayed tuned! The Grand Forks Field Office looks forward to a new year of promoting land stewardship. Many fields, as I have mentioned earlier, have either been left untilled or planted to cover crops (or both). This means that we have a lot of follow-up to do this spring during planting time and throughout the growing season. I have a feeling we will be pleasantly surprised with what we encounter. Overall, 2015 was one that left us with much hope for the future of our farms and the protection of our fragile resources.



Tree Order Form 2016

\$2 each #	Shrubs (Minimum 5 per variety)		\$2 ea. #	Shrubs (Minimum 5 per variety)		\$2 ea. #	Med. to Lg. Trees (Minimum 5 per variety)
	Buffaloberry			Rose (Woods)			Birch (Paper)
	Caragana			Silverberry			Boxelder
	Cherry (Nanking)			Sumac (Smooth)			Buckeye (Ohio)
	Cherry (Sand)			Willow (Sandbar)			Cottonwood (Native)
	Chokeberry (Black)			Winterberry, Euonymus			Cottonwood (Male)
	Chokecherry (Common)						Cottonwood (Siouxland)
	Cotoneaster		\$2 ea. #	Small Trees (Minimum 5 per variety)			Green Ash
	Cranberry (Highbush)			Apricot (Hardy)			Elm (Siberian)
	Currant (Golden)			Crabapple (Red Splendor)			Hackberry (Common)
	Dogwood (Redosier)			Crabapple (Siberian)			Linden (American)
	Elderberry			Hawthorn (Arnold)			Linden (Littleleaf)
	False Indigo			Maple (Amur)			Maple (Freeman)
	Honeysuckle (Freedom)			Olive (Russian)			Maple (Silver)
	Juneberry			Pear (Ussurian)			Maple (Red)
	Lilac (Common)			Plum (Native)			Oak (Bur)
	Lilac (Late)						Poplar (Hybrid)
							Walnut (Black)
							Willow (Golden)
							Willow (Laurel)
\$2 each #	Conifers/Evergreens (Minimum 5 per variety)		\$2 ea #	Conifers/Evergreens (Minimum 5 per variety)		\$5 each (Minimum 5 per variety)	
	Cedar (Eastern Red)			Spruce (Black Hills)			Princeton Elm
	Juniper (Rocky Mountain)			Spruce (Colorado Blue)			Boyne Raspberry
	Pine (Ponderosa)			Spruce (Meyers)			
	Pine (Scotch)						
Quantity					Deadline for tree orders is February 12, 2016.		
	Regular stock trees	x	\$ 2.00	\$ -			
	Raspberry/Princeton Elm	x	\$ 5.00	\$ -	The Grand Forks County SCD has no warranty on the trees or shrubs they sell or plant. No refunds will be issued.		
	Special Orders	x		\$ -			
	3'x3' Fabric Mat	x	\$ 2.00	\$ -	FOR OFFICE USE ONLY		
	4' Tree Tubes	x	\$ 3.50	\$ -			
	Stakes	x	\$ 1.00	\$ -	Date Paid _____		
	Fabric per LF	x	\$ 1.00	\$ -			
	1 qt. Plantskydd	x	\$ 22.00	\$ -	Check # _____		
	1.32 gallon Plantskydd	x	\$ 55.00	\$ -			
	1 lb Plantskydd concentrate	x	\$ 25.00	\$ -	Credit Card - Visa MC Discover		
	2.2 lb Plantskydd concentrate	x	\$ 40.00	\$ -			
	Plantskydd-Granular for gardens	x	\$ 15.00	\$ -			
Bundle subtotal (# of bundles x \$35.00)					Home/Cell#		
Subtotal (NOT including bundle subtotal)							
Total (bundle subtotal + subtotal)					Work #		
Sales Tax (Total x .0675)							
Balance Due (100% required on orders < \$500.00)							
Deposit (50% required on orders ≥ \$500.00)							
Balance Due							
(Enter Last name below)					(Enter First name below)		
Address		City		ST	Zip		
				ND			

Bundle discount is offered on all trees except Princeton Elm and Boyne Raspberry. By ordering in quantities of 25 (25, 50, 75, 100, etc) of the same tree, you get a discounted price of 35\$ per bundle, saving 15\$ for those 25 trees. (Address: 4775 Technology Circle, STE 1C, Grand Forks, ND 58203)

Did You Know?

60% of all the world's nutrients applied to fields never make it to the plants. That is an astonishing number considering the cost of fertilizers. It is also worrisome considering that phosphorus is expected to run out in the next few decades, and nitrogen is not too far behind. So what is happening?

Plants need biology in the soil to do its job before they can do theirs. Bacteria and fungi need to be present in soils to break down these valuable nutrients and convert them to a form the plants can uptake. It is the roots of the plants that provide the habitat for these microorganisms to live. Disturbing the root systems disturbs the biology. They literally starve to death without constant organic matter throughout the entire year. Diversity in the biology allows for resistance and resilience in the plants.

Different plants also have different nutrient needs. Grass crops such as wheat, barley, and corn contain high amounts of carbon, but they require more nitrogen. Other plants fix nitrogen well such as broadleaf species like beans, peas, and vetches. These different species contain microorganisms that are generalists (can be found living in lots of different species) as well as specialists (can only be found on specific species). Generalists and specialists all play key roles in the different nutrient cycles.

So where are all the nutrients going? A recent survey of over 2,000 rivers and streams throughout the United States conducted by the Environmental Protection Agency found that 55% of them were in poor condition and a threat to aquatic habitat. Elevated levels of nutrients in these systems from farming practices, urban runoff, and other human factors have caused eutrophication. Eutrophication leads to algae blooms that increase the water temperatures and lower the levels of dissolved oxygen. This is when we get fish kills. Eutrophication has increased so much that the Gulf of Mexico now has a "dead zone".

Soil biology can help us with these issues. The microbes are able to convert the nutrients to make them available for plants, but they are also able to convert them to an immobile form. This immobile form ties up the nutrients in the soil instead of being leached into our waterways and acts as a reserve nutrient source if needed.

Any amount of disturbance disrupts the habitat of the biology living in our soils. A no-till system lessens this disturbance while leaving organic matter for it to feed. Incorporating cover crops provides diverse, living root systems for those generalists and specialists to harness and convert our precious nutrients.

We spend a lot of money trying to increase yields and produce high quality food, but we do not have to. Nature figured this out a long time ago, and she does it for free if we will allow her. People need to set the stage, and let plants and soil do what they are meant to do.

Vendors Needed!

We are looking for available people who want to be on the list for services. The Grand Forks NRCS Field Office is working to update our current list for services such as custom mowing, custom grass seeding, heavy harrowing, light disking in CRP for maintenance, as well as those who can assist with custom fencing and well drilling. If you would like to be put on this list, please give our office a call at 701-772-2321 ext 3.

Grand Forks County SCD
4775 Technology Circle, Suite
1C,
Grand Forks, ND 58203

www.gfscd.org
701-772-2321 ext 3



Like us on
Facebook!

Mission

To provide local leadership in the conservation of soil, water, and related natural resources through partnerships with individuals, businesses, organizations and government.

GF County SCD programs are available to all residence of Grand Forks County regardless of race, color, religion, sex, national origin, age, sexual orientation, mental or physical handicap. "The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion sexual orientation, genetic information, political beliefs, reprisal , or because all or part of an individual's income is derived from any public assistance pro-gram. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795- 3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer."