JOE AHLQUIST / ARGUS LEADER

Barry Berg is watershed coordinator for the Central Big Sioux River Watershed Implementation Project. He spoke Wednesday about an enrolled pasture in the Seasonal Riparian Area Management (SRAM) program on Skunk Creek just south of Brant Lake near Chester. He was part of a tour of the different enrolled pastures in the programs, which are designed to reduce pollution runoff into Skunk Creek and the Big Sioux River. Across the road from the enrolled pasture, and closer to the lake, is a future enrolled pasture in the SRAM program.

POWER OF INCENTIVES

Landowner project pays off for river

By Peter Harriman
pharrima@argusleader.com

Water conservation officials pointed to signs of progress this week in their efforts to reduce agricultural pollution in Skunk Creek, and eventually the Big Sioux River.

Shantel Krebs of Renner, majority whip in the state Senate, and state Agriculture Secretary Lucas Lentsch received a tour Wednesday along the creek, where conservationists with the Central Big Sioux River Watershed project and other agencies noted the effect of a two-year-old pilot program aimed

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GALLERY

Check out more photos from tour
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LOCAL & STATE

Pollution: Incentive program gains converts

Continued from Page 1A

at improving water quality.

The Seasonal Riparian Area Management program pays farmers $60 an acre per year in 10- or 15-year contracts to fence livestock away from the creek's 100-year floodplain from April 1 to Sept. 30, which reduces the amount of manure that winds up in the creek.

While urban pollution sources on the lower creek degrade water quality, livestock grazing and manure runoff along the rest of the creek are a significant source of E. coli, fecal coliform and suspended solids.

Skunk Creek, which flows 58 miles from Brant Lake to its confluence with the Big Sioux River in Sioux Falls, provides the river's greatest flow through the city in summer, because much of the Big Sioux upstream is directed through the flood control diversion channel.

City and state officials have been trying to meet a goal of making the river safe for swimming, and for that to happen, Skunk Creek water quality must improve.

The money is disbursed in a one-time up-front payment. Farmers are allowed to cut hay in the riparian area but must leave a four-inch stubble. The program also pays 75 percent of the cost of providing an alternative water source for farmers who formerly used the creek to water stock.

Krebs remarked that as a legislator, landowners tell her they prefer to be led into new conservation practices and programs by seeing how such practices and programs work for their neighbors rather than being forced into adopting them by laws.

Her observations resonated with Skunk Creek watershed livestock producers whose operations were part of the tour.

"We'd rather learn from each other, not lawmakers," Rodney Vandervliet of Colton said

Eight years ago, Vandervliet built a mono-slope barn and manure storage facility to begin feeding 450 cattle, and he is working with a federal conservation program on a new $350,000 deep pit slatted floor barn. It will replace an open feedlot.

"No manure runs out of that barn — not a scoopful," Vandervliet said proudly of his existing facility.

Lloyd Siemonsma was able to fence 3 acres on the west bank of the Big Sioux River just north of Sioux Falls and 5 acres on the east bank.

He also was able to bring in water from an alternate source, which allowed him to move his cattle away from the river.

The river banks adjacent to his land now are thick with grasses, bushes and young trees.

"It took me a long time to see it," he said of the value of moving cattle away from the river. "I farmed this for 42 years."

Now, he is an enthusiastic supporter of water-quality improvement programs.

"I believe in the concept. I believe it has got to happen," Siemonsma said. He echoes Vandervliet in a desire to be a good land steward.

"I like to make a difference," Siemonsma said. "I'm getting to an age, but I think I can make a difference with something like this."

So far, 589 acres along 11.1 miles of Skunk Creek have been enrolled in the watershed conservation program in the past two years.

Another 128 acres could be enrolled next year, said Barry Berg, the South Dakota Association of Conservation Districts watershed project coordinator.

PHOTOS BY JOE AHLQUIST / ARGUS LEADER

Deron Ruesch, district conservationist with the Natural Resources Conservation Service, talks Wednesday about an enrolled pasture in the Seasonal Riparian Area Management (SRAM) program on Skunk Creek. Farmers are being paid to keep their livestock away from creeks and rivers for a stretch of the year in an effort to reduce pollution runoff.

Lloyd Siemonsma, a farmer near Sioux Falls, likes an incentive program for farmers to fence livestock away from creeks and rivers.

Within five years, Berg anticipates 1,400 acres along Skunk Creek and two of its major tributaries, Colton Creek and West Skunk Creek, will be fenced off from grazing.

Based on the results of a smaller program about 15 years ago on another Big Sioux River tributary, Bachelor Creek, Majeres confidently predicted there will be significant water quality improvements in the Skunk Creek watershed within several years.

"If we don't try to lead, society is going to push us into it," Siemonsma said of improving water quality. "We don't like to be pushed."

Paying landowners to deliver cleaner water downstream is a good investment for society at large, he figures.

"Show them we can do it. Show them we can manage it, and give them the bill."

Big Sioux River gets $4.5M to clean water

Jonathan Ellis

A project to improve water quality on the Big Sioux River was one of 115 nationally to win money under a new, competitive federal program.

The Minnehaha Conservation District — the lead partner in the project — will receive $2 million from the United States Department of Agriculture's Regional Conservation Partnership Program. The city of Sioux Falls, another partner in the project, is matching about $1.5 million from state revolving loan money.

Between federal and local dollars, the project will get about $4.5 million, money that will be used to limit agriculture waste and sediment runoff into the river.

The process of picking award winners started last year with 600 entities submitting pre-proposals. There were two cuts before the winning projects were selected.

"The competition for RCPP money was stiff," said Jeff Zimprich, the state conservationist with USDA's Natural Resources Conservation Service. "We feel blessed we were able to have this project."

The money will fund ongoing efforts to buffer Skunk Creek and the Big Sioux River with strips of vegetation. The vegetation absorbs animal waste and sediments before they can reach the water, which reduces bacteria and enhances water quality.

So far, the groups working on the project have buffered about 14.4 miles along the Big Sioux and Skunk Creek in Minnehaha County, said Barry Berg, watershed coordinator for the Big Sioux River Watershed Project. Water testing stations placed along Skunk Creek last year found significant reductions in the amount of E. coli in the water.

The new funding, which goes to producers along the waterways to create vegetation buffers, could translate to about 28 more miles of protection for the waterways, Berg estimated.

In addition, funding will be used for 13 animal waste management systems — which allow waste to be stored — and 13 comprehensive nutrient management plans.

"We're looking at about $4.5 million of good, hard cash to do watershed management and best practices projects in the watershed," Berg said.

Nationally, the new USDA Regional Conservation Partnership Program funded 115 projects in all 50 states with $370 million. Local partners are spending another $400 million.

Big Sioux Water Quality at risk, board chairman warns

As the Big Sioux River flows from Brookings to Sioux Falls, it winds through a region dotted with dozens of livestock operations too small to require special permits or inspections from the state for waste-handling procedures.

Collectively, though, these 200 or so smaller feedlots have a big effect on water pollution in the Big Sioux, primarily E. coli contamination, according to Brad Johnson, chairman of the South Dakota Board of Water and Natural Resources.

The seven-member board, appointed by the governor, is responsible for establishing a state water plan and overseeing the programs to carry it out.

The board is limited, however, because curbing pollution from these type of operations in South Dakota depends on voluntary participation, usually in exchange for payments, and federal money for such agreements has been declining.

The programs, for example, might pay ranchers to put up buffers to stop livestock from grazing in certain areas where animal waste is most likely to spill directly into a river or stream.

"If we are going to take a voluntary approach to this, we have to come up with additional sources of money to make it an effective program," Johnson said.

From 2001 to 2004, South Dakota received $3.8 million annually in federal Clean Water Act funding to manage "non-point source" pollution, the type that doesn't come from a single discharge pipe but from small trickles across a wide area.

In 2005, that funding fell to $3.2 million a year, and in 2012 it dropped again to $2.5 million, said Jim Feeney, director of the DENR's division of financial and technical assistance.

Meanwhile, Johnson argued, the state's water quality worsened. Of the 6,160 miles of rivers and streams in South Dakota assessed from 2008 to last year, only 30.6 percent were clean enough to support their intended use. That's down from 35 percent in the previous year's report, which looked at waterways assessed between 2007 and 2012.

South Dakota officials have offset some of the federal funding decline by combining it with about $500,000 a year from the state's Clean Water State Revolving Fund Program.

Legislative leaders are wary, though, about creating impediments to a livestock industry that recently has begun to expand thanks to record prices. And state officials say, counterintuitively, that water quality in the state actually might be improving.

"All of us in this business believe we are gaining," said Pete Jahraus, head of the Department of Environment and Natural Resources' nonpoint source pollution program.

"It's not put in something today and see the results tomorrow," he said. "This whole system takes so long to change over time."

Sen. Shantel Krebs, R-Renner, chairman of the state Senate Agriculture and Natural Resources Committee, said livestock producers are taking it upon themselves to learn best management practices for handling waste and implementing them.

"We don't always need a law for everything," she said. "It boils down to education. They're doing that in the water districts, sharing information. Look at how much we're improving in the Big Sioux already. We're making strides."

Sen. Jason Frerichs, D-Wilmot, the committee's ranking member, points out there is limited acreage for raising livestock. Years of robust commodities prices continue to encourage farmers to convert pastures to crop production.

"The good areas for livestock are sloped. They can't be farmed," Frerichs said. Unfortunately, slopes see increased runoff. Runoff, he notes, "flows into a river system."

Krebs and Frerichs also note that nutrients from lawns and golf courses and urban runoff that flows over concrete and asphalt directly into streams have a role in water pollution, in addition to agriculture.

Both legislators said there isn't much appetite in Pierre for tougher regulations for livestock producers to improve water quality.

"We have to be very cautious in terms of limiting producers' abilities," Frerichs agreed. "From my standpoint, I'm not a fan of increasing the hammer or stepping up enforcement."

Such sentiments don't surprise Johnson. But he is blunt about declaring what they mean for South Dakota's water quality.

"At the Board of Water and Natural Resources, we are trying to become creative in using loan and grant programs to maximize the dollars available," he said. But even augmenting federal money with state funds and with farm bill conservation programs isn't making headway.

"We're losing ground," Johnson said, "and we're going to continue to lose ground until we decide as a state and country that we're going to get serious about the issue."

VOICES

Water summit set for Thursday

Big Sioux summit takes message on road to Brookings

JOHN HULT
Have a problem or issue John Hult should look into? Contact him at 605-370-8617

Hundreds of conservationists, farmers and government officials will gather in Brookings on Thursday for the Big Sioux River Water Summit.

Topics include urban runoff control for cities, green infrastructure design for private developers, water quality goals for the Big Sioux watershed and a workshop on rain barrels and other methods homeowners can use to control storm water.

The third annual summit, organized by the city of Sioux Falls, is the first to take place at an upstream location. The move was meant to bring the conversation about the Big Sioux River to partners within the watershed.

Brookings Mayor Tim Reed is glad to see the summit reaching out. The city is home to outreach programs through South Dakota State University's agricultural experts and the East Dakota Water Development District, and city government is working to manage stormwater runoff on its own property and teach homeowners to manage it on theirs.

"It's important to bring more communities into the discussion," Reed said.

The goal of the summit is pollution control and education, with an emphasis on the efforts and studies already underway and an eye to improvements for the future.

The Big Sioux River's levels of fecal coliform and E. Coli bacteria are consistently higher than state water quality standards for total immersion recreation activities like swimming and often higher than the standard for limited contact recreation like kayaking or canoeing.

The city of Sioux Falls has pumped

See SUMMIT, Page 3C

Summit

Continued from Page 1C

millions into cleanup efforts over the years, with assistance from federal government grants and low-interest loans backing investments from it and from entities outside the city.

A 5-year plan for river improvements throughout the Central Big Sioux watershed includes investments of more than $4.5 million for cover crops, livestock management, buffer zones and more. A program designed to keep cattle out of Skunk Creek has produced promising preliminary results, some of which will be discussed at the summit.

Disease-causing bacteria is only one area of concern for the Big Sioux. One recent study from the East Dakota Development District looked at nitrate levels in the river, spurred in part by a handful of alarming readings from surrounding states.

Nitrates in a water supply can put children at risk for an ailment known as "Blue Baby Syndrome."

The city of Des Moines has spent hundreds of thousands of dollars to clean nitrates from its water supply in recent years, sparking a lawsuit against upstream counties over agricultural drainage.

Nitrates were among the water quality concerns of Minnesota Gov. Mark Dayton, who pushed for a buffer zone law for ag producers in that state.

Nitrate levels along the Big Sioux haven't reached a trouble spot yet, said East Dakota Director Jay Gilbertson, but the summer study on nitrates was an important step to address the issue before it becomes problematic.

The levels edging nearest to the EPA threshold of 10 parts per million are near wastewater treatment plants. Those levels are between 5 and 8.5 parts per million, and they drop soon afterward as the water moves downstream.

"If you wait until you get to 9.9, it's too late," Gilbertson said.

The conference's focus is largely on urban responses, but agriculture has entered the conversation, as well. Al Miron, who farms near Hartford, hosted Sioux Falls city representatives and researchers from South Dakota State University on his no-till farm Tuesday.

The farm tour on soil health was meant to highlight best practices for erosion control and soil health. Visitors were witness to several absorption tests that showed how quickly water absorbed in Miron's untilled soil, heavy with organic matter from two decades of buildup, when compared to traditional tilled ground.

Stopping the loss of productive topsoil is a major issue for producers, Miron told the Tuesday crowd. If the soil can't absorb the rain, the water runs off and carries the soil with it — into rivers and streams and away from the fields where it's needed.

"Soil health is important not only for our livelihoods, but for the livelihoods of our children, grandchildren and their children," Miron said.

The summit runs from 2 p.m. to 6 p.m. at the Days Inn of Brookings.

Central Big Sioux River Watershed Project Tour

August 6, 2014 (3:00 – 6:00pm)

Meet @ Flying J for introductions: Barry Berg, Jack Majeres, Deron Ruesch, Shantel Krebs, Lucas Lentsch and Peter Harriman

Travel east on 60th Street to first stop site #1: just north of diversion and City water intake.

- .5 acre Rip Rap site with exclusion fencing and alternative water source for livestock.

Travel north to site #2: Riparian Area Protection (RAM) on Big Sioux River.

- 3 acres on west side, 5 acres on east side.
- Alternative water grazing system.

Travel north to site #3: Conservation Reserve Program (CRP), RAM and easement on Big Sioux River.

- 23 acres CRP west side, 17 acre easement, 1.9 acres RAM and .8 acres CRP east side.
- Alternative water grazing system

Travel to site #4: Seasonal Riparian Area Protection (SRAM) and EQIP rotational grazing system.

- 82.4 acres of pastureland enrolled into SRAM.

Travel to Site #5: SRAM, CRP and RAM on oil north of Lyons.

- 589 acres SRAM interspersed with CRP and RAM on Skunk Creek.
- 11.1 miles of Skunk Creek in SRAM.
- 3 miles of Skunk Creek in CRP and RAM.
- 1 mile of Skunk Creek in the process to be enrolled into Agricultural Conservation Easement Program (ACEP).

Travel to Site #6 EQIP terrace construction on 71 acres of cropland and no-till farming.

Travel to Site#7: 319, SRF-NPS and EQIP Animal Waste Storage Facility.

- Two mono-slope barns, one manure pack and one deep pit slated floor barn.
- 5 AWMS completed in Segment 2 with 5 AWMS planned construction this fall.

Travel to Site #8: SRAM enrolled pastures and next year site next to Lake Brant.

Cleaner waters ahead: City sets lofty goals for Big Sioux River

John Hult, jhult@argusleader.com
5:46 p.m. CDT August 22, 2015

Buffer zones, upstream outreach key to Big Sioux pollution control

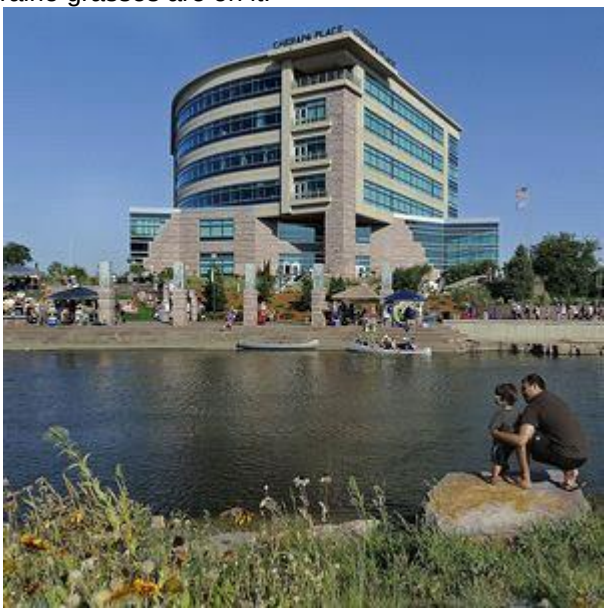
Freshly seeded natives grasses and flowers to help control water along the Big Sioux River on the northeast corner of 57th Street and Western Avenue.(Photo: Elisha Page / Argus Leader)

A rarely walked patch of Yankton Trail Park greenway that rolls off the northwest corner of the intersection at 57th Street and Western Avenue is a soggy mess.
It's supposed to be, at least for now.
City crews killed off the green, manicured meadow grass weeks ago in order to plow up the soil and hydroseed 3.9 acres of native prairie grass. Eventually, Big Bluestem, Switchgrass, Prairie June and Canada Wildrye will toss in the wind among wildflowers, as bees buzz above and rabbits scurry below.
To the passing driver, it will look like little more than an unkempt field.
But those acres connect directly to a decadeslong, multi-million dollar plan to decontaminate the centerpiece of South Dakota's largest city and a source of drinking water for its 169,000 residents: The Big Sioux River.

The grasses are the latest in a long string of small steps taken to control urban storm water runoff and stem the flow of pollutants into a river whose waters are unsafe for swimming and often unsafe for kayaking or canoeing. The millions spent on cleanup, however, are dwarfed by the millions in development envisioned for the 40-year-old River Greenway, investments that would prove more enticing on a clean river than a dirty one.

There are promising signs on the Big Sioux and success stories to aspire to, but watershed backers say it will take a sustained effort and investment, public education and a change in rural and urban attitudes if the goal of a clean river is to be realized.

There is a roadmap, and the prairie grasses are on it.



ARGUS LEADER

Schwan: Thinking bigger on the river

Dozens of new acres will be planted along the riverbanks in the coming years to create deep-rooted, water-absorbing buffer zones between the pet waste, fertilizer and sediment-heavy storm water that flows from the city into the Big Sioux River and its largest tributary, Skunk Creek.

The city also has contributed nearly $2 million to a five-year, $4.5 million watershed improvement plan that will compensate upstream ag producers for building modern barns and manure-trapping systems, creating buffer zones on cropland and fencing off livestock – and their bacteria-laden droppings – from the waters north of the city.

Mayor Mike Huether wants the city to be a statewide leader in urban water protection. Huether and the city's environmental engineers want to encourage residents and developers to become stewards of the river and put storm water control into conversations about urban planning.

The plans square with nationwide efforts to rethink runoff in cities, which were designed for years to move water as quickly as possible off of houses and lawns and into gutters.

Next door in Minnesota, a state mandate now requires cities of all sizes to submit storm water management plans. Smaller cities such as St. Cloud, Coon Rapids and Anoka are also working watershed districts to improve river quality, using some of the same measures pushed in Sioux Falls.

Minneapolis has been held to a higher storm water management standard for more than a decade, and the city has had some success. Water quality on the section of the Mississippi River that runs through the city is better than it is downstream, and some lakes have been removed from the state's list of impaired water bodies.

Preliminary bacterial testing along Skunk Creek, where the livestock management payments from the city began two years ago, show an encouraging downward trend for the Big Sioux. Those numbers will be on display as Huether takes his third annual Big Sioux River Summit on the road to Brookings next month.

Big Sioux boosters are aware of the enormous distance between hope and reality, though. Even if everything goes according to plan, flooding and most upstream pollutants are beyond the city's control.

"We're not going to solve the issue of Big Sioux River water quality during my lifetime," Huether said. "But I'll tell you one thing: We can make a real big difference. We can improve it for the next generation."

Buffer zone plan in test phase

The Yankton Trail buffer zone is the first of three planned in the initial phase of the project. Two similar zones will be planted at Dunham and Sherman parks.

The root systems of the native grasses are meant to capture and clean more of the storm runoff from the city before it hits the river, said environmental engineer Jesse Neyens. The mix of grasses and weed control measures might vary, based on locations and the results.

"This is kind of our test plot so we can learn how it's going to work and what we can do better in the

future," said Neyens.

Buy Photo

Jesse Neyens, environmental analyst for the city of Sioux Falls, shows off an area of freshly seeded natives grasses and flowers to help control water along the Big Sioux River on the northeast corner of 57th Street and Western Avenue, Aug. 13, 2015. (Photo: Elisha Page / Argus Leader)

The zones will be educational, too, as students will be able to visit and learn about native grasses and storm water management.

The idea is an outgrowth of a money-saving move. Prairie grasses and wildflowers replaced nearly 250 acres of mowed and manicured Kentucky bluegrass around the water treatment plant five years ago. That saved money, but it also reduced water flow into the plant's holding ponds.

The city stopped mowing the grasses around the drainage basin areas of the Big Sioux at the same time. Money was a factor in that decision, too, but it was also about river protection, Huether said.

The city felt pushback, but Huether said the initial hiccups – including weed problems during the dry first year and complaints about the loss of a manicured look – were worth battling through.

"We had to have the guts and the will to do it," Huether said.

Huether anticipates some pushback on the buffers, as well, but says the city has to grab as many opportunities as it can to bring riverbanks back to a more natural state.

"The larger the buffer, the better," Huether said.

Cattle payments show promise

For the past five years, the city has used federal matching funds to stabilize the banks of the Big Sioux and Skunk Creek. More recently, it's put its federal dollars into a program called Seasonal Riparian Area Management, or S-RAM. That program pays upstream farmers to fence off pastures and keep cattle – and their manure – out of Skunk Creek.

About $2 million in city funds have been marked for upstream water quality efforts, with the majority focused on S-RAM payments. The program has proven popular with landowners, who carry a share of the cost of fencing and watering systems for cattle in exchange for per-acre payments.

In three years, the program has enrolled nearly 789 acres, said Barry Berg, the watershed coordinator for the South Dakota Association of Water Conservation Districts.

Preliminary results show a drop in E. Coli and fecal coliform readings for the targeted zones along Skunk Creek. The more acres are enrolled upstream, the better the numbers look.

At the fourth test site, the nearest to Sioux Falls, E. Coli readings for the recreational season in 2014 were low enough to hit EPA safety standards for limited contact recreation like kayaking and canoeing. The same has held true so far this year, and Berg intends to say as much at the water quality summit next month.

ARGUS LEADER

Why we love the greenway

"If that same trend exists in three years, we'd be able to say that's a pretty solid correlation," said Berg.

The program got a boost in January from a new federal program called the Regional Conservation Partnership Program, which poured $2 million into the Big Sioux watershed's five-year improvement plan. In total, the plan now has nearly $5 million to work with. The plan also has money for 13 animal waste management systems and payments for buffer zones, cover crops and habitat for bees and birds.

By 2020, Berg would like to see as many as 1,700 more acres enrolled in S-RAM along Skunk Creek, the Big Sioux River and Willow Creek.

"If we could get near the goal, we'd have just about every producer along Skunk Creek that's grazing enrolled," Berg said. "It's a lofty goal, but why set a goal if it's not a big one?"

Some success possible with sustained effort

Like Huether, Berg says it will take a long and sustained effort to make the Big Sioux River clean enough to be removed from the state's list of impaired water bodies, where it was placed in 1999. The numbers have scarcely budged since then.

The numbers are daunting, but Sioux Falls is not alone in its struggle to reclaim a river. Nearly 70 percent of the state's rivers are considered at least partially impaired.

Minnesota's figures are even more daunting. That state's legislature has taken drastic measures in recent years to tackle its pollution, most recently through a law mandating buffer zones between ag land and waterways.

Two years ago, about 200 cities were ordered to develop storm water management plans, similar to but smaller in scope than those in place for Minneapolis and St. Paul. Cities were meant to submit their plans to the state in June.

Minneapolis' efforts to control storm water began decades ago. There are now massive drainage ponds near rivers and lakes, grit chambers to capture sediment and trenches in boulevards to capture storm water.

Waterways in Minnesota still face huge obstacles, but the urban efforts have made an impact, according to Lisa Cerney, the director of surface water and sewers for the city of Minneapolis Public Works.

Three years ago, amid discussions about "Total Maximum Daily Loads" for sediment and pollutants along the Mississippi, "the water quality through the city of Minneapolis was actually better than it was downstream," Cerney said.

Unlike Sioux Falls, however, that city charges a storm water utility fee to residences.

"Having a dedicated funding source definitely helps," Cerney said.

Rick Knobe, the one-time mayor of Sioux Falls who was in office when the River Greenway project first tackled the issue of pollution in the mid-1970s, is glad that the city is aiming higher.

Residents need to aim higher, too, he said. Part of Minneapolis' storm water plan involves educating residents on water management for their own properties, and it's not uncommon for that city to pour money into educational programs on rain gardens or lawn management.

Sioux Falls is doing outreach and education, as well. Knobe hopes that takes hold. He says citizens need to take as much ownership and pride in the river's water as they do in the River Greenway if the city is to truly set an example.

"People in Sioux Falls want their yards green. They want no weeds. They want the perfect garden. They do all that with chemicals," Knobe said. "The city's doing the right thing with its drainage ponds and these buffers, but the residents have got to start doing the right thing."

Q: What's wrong with the Big Sioux River?
It's been listed on the state's list of impaired water bodies since 1999.
Q: What does that mean?
A: There's too much E. Coli and fecal coliform bacteria in the river to make it safe for all its intended uses.
Q: What happens if I ingest E. Coli or fecal coliform?
A: You could be dealing with a host of digestive problems, with colitis lasting one to 12 days. The impacts are more serious for the elderly and children. A splash or two of polluted water is unlikely to cause problems for the majority of people, but swallowing it generally would.
Q: So should I swim in the river?
A: No. The bacterial readings are consistently over the state's and EPA's standard for immersion recreation.
Q: Should I kayak the river?
A. Depends on the day. Kayaking falls under a different beneficial use called limited-contact recreation (LCR). As the name implies, going fully into the water (immersion) is not anticipated, and therefore higher bacteria levels can be tolerated. The state standard for LCR is about 4 ½ times higher than for immersion, so even if swimming is not appropriate, it may be safe to paddle.
The city of Sioux Falls tests water quality twice a week at five sites along the Big Sioux and posts the results on a graph that shows the immersion recreation standard as a red line. Checking the web site can be a good indicator, but common sense goes a long way. A big rainfall can result in a spike in bacteria. The low readings usually correspond with a stretch of dry days. There's no foolproof calculation, but "There are certainly days, following rain events or before rain events, where it's a better or worse idea," said Andy Berg, an environmental engineer for the city of Sioux Falls.
Q: What about fishing? Is that okay?
A: Fishing falls under limited-contact recreation, so the water in which the fish are found may be problematic. As for the fish themselves, the river is considered impaired for warmwater semi-permanent fish life. That means the sediment load in the river is not always ideal for the fish themselves. However, this doesn't mean that they can't be found and caught.

Media Contact:
Barry Berg, Big Sioux River 319 Project Coordinator
(605)759-2650

CONSERVATION PLANNING PROVIDES ECONOMIC AND ENVIRONMENTAL BENEFITS IN SKUNK CREEK WATERSHED

By Laurie Fritsch, Freelance Agricultural Journalist

SIOUX FALLS, SD, August 24, 2015— Tony Gelderman, a young beef producer from Minnehaha County, constantly looks for better ways to manage his livestock operation. This conservationist is blazing the trail to improve the water quality in Skunk Creek near Hartford, SD. “Conservation has always appealed to me. I don’t agree with how pastures have been grazed in the past. That’s why I started to look into better ways of grazing management and conservation practices that are healthier for the soil, the water and my cattle. It eventually equates to benefiting your bottomline.”

He also rents pasture for part of his herd in north-central South Dakota, and in Moody County. The remaining cattle are grazed on pastures near his home place. Even though his herd only grazes near Skunk Creek a few weeks during the year, he stated that he wants to keep his neighbors and those downstream happy.

One of the pastures he rented recently was equipped with rural water hookups and tanks to deliver fresh water to his cows. “I weaned calves as much as 50 pounds heavier. Some of that’s probably genetics. And I don’t know that they drink more water, but what they do drink is cleaner and healthier for them. A healthier calf is always going to be a heavier calf,” he said.

Fresh water is a must

Gelderman and his wife, Ashley, farm in partnership with his parents, Don and Bonnie, also of Hartford. His father oversees the crop farming, while Tony manages the livestock. In 2011, they were faced with what to do because they didn’t have enough grass to feed their beef herd.

Don stopped by the Minnehaha County Conservation District office to see John Parker, the District Manager, to come up with a solution. After Don’s visit, Tony also got involved. As they talked about some of the options to consider, Don liked the idea of rotational grazing and seeding certain grasses for best growth at certain times of the year. And Tony was really interested in planting native grasses.

-more-

In 2012, the Gelderman's changed their management strategy. They decided to plant the first half of the fields that he planned to convert from crop to permanent pasture to native grasses. They purchased their seed and hired the District to plant the first 80 acres with a native grass mix of Little Bluestem, Big Bluestem, Side Oats and Blue Grama, and Intermediate Wheatgrass, using the District's native grass drill.

The following year Gelderman chose to convert another 65 acres of cropland to pasture. But he didn't want to carry such a financial burden on his own this time.

Parker was aware that the Department of Environment and Natural Resources (DENR) and the Natural Resources Conservation Service (NRCS) have conservation programs with financial and technical assistance to help the Gelderman's get grass established. So he looked to Barry Berg, the Watershed Coordinator of the Big Sioux River 319 Water Quality Project, and invited him to visit with Gelderman about these opportunities. Berg explained, "I was surprised that Tony was converting cropland to pasture, but cows are his passion."

It all made sense when Gelderman told Berg why he wanted to convert this crop ground to pasture. He said, "At the time I figured $7 corn wasn't going to last forever. This ground has some highly erodible hills and it's a place where we kept livestock. So I thought it would be a pretty good fit."

Since Gelderman's farm is three-quarters of a mile from Skunk Creek, Berg took time to discuss several conservation programs with Tony, including the Seasonal Riparian Area Management Program (SRAM). Shortly after their visit, Gelderman called Berg to ask more questions about SRAM. This program includes practice incentives with excellent rates for deferred grazing, fencing, and rural water hookups, rock crossings, trees and fabric, and cost share to repair damaged pasture areas and livestock trails.

After Berg's initial contact with Gelderman, he asked him if they'd be willing to meet with Chuck Lebeda, a Certified Conservation Planner for SDACD, to work on a whole-farm plan to identify and address the natural resource concerns on their farm, and they agreed. Lebeda persuaded Gelderman to think beyond seeding just one field, and move to rotational grazing, plus enroll in SRAM.

To incorporate each conservation practice of his choice, Gelderman signed up for the Environmental Quality Incentives Program (EQIP), and Lebeda drew up his whole-farm plan accordingly. Lebeda said, "A combination of the USDA programs and the 319 water quality project programs generally fit in with what you'd like to do."

Since his father had enrolled land in the Conservation Reserve Program (CRP), a cost-share and rental payment program administered by the USDA Farm Service Agency, Gelderman was well aware of the financial commitment involved. He explained, “Before this we didn’t realize there were any cost share programs for establishing grass. We were only familiar with the programs for fencing and water. Once we found out, that’s what gave us the incentive to do more.”

Lebeda began working with area landowners two years ago. To speed up momentum, Berg recently hired Brian Top, through the Regional Conservation Partnership Program (RCPP), to spread the word. Berg explained, “Their work is making an amazing difference. Now farmers are taking the initiative to come in and talk to us; some who I never guessed would work on this project with us.”

Gelderman’s plan

Here’s a summary of the conservation practices included in Gelderman’s whole-farm plan spelled out in his EQIP contract administered by NRCS: **Native grass seeding:** Geldeman hired the Minnehaha County Conservation District again to drill his second 65-acre plot of native grass seedings in 2014, which he uses for haying and grazing. In his SRAM field, a mix of Green Needle Grass, a cool season grass; and three warm season grasses including Side Oats Grama, Indian Grass and Big Blue Stem was planted. Another field that had been corn harvested for silage had a fall cover crop of Rye grain no-till planted into it. Gelderman then followed up the next spring by no-till seeding the native grass mix directly into the Rye stubble to keep the ground covered to control erosion and provide wildlife habitat.

Cross Fencing: To increase forage production and enhance the condition of the pasture through rotational grazing, he’s installing a high tensile electric fence. He plans to evenly divide pasture into multiple paddocks in two different locations on the farm. The pasture on Skunk Creek will be split in half. This eases the grazing pressure on either side until Gelderman moves the herd to another spot. Cattle don’t over graze or damage the creek banks and stream crossings. “We’ve already seen a huge difference in the way we’ve managed it with SRAM because the creek bank is healing up and there’s a lot of new vegetation growing again,” he said.

Rural water hookups, water pipelines and water tanks: Gelderman explains, “Cows prefer fresh water over creek water. That’s the biggest reason for putting it in.” His cattle will have access to fresh water in Moody County near Flandreau and back at home. Construction is underway with a deadline to finish this year. This will force the cows to graze more evenly and enrich the vegetative cover, too.

SRAM Project: Gelderman appreciates the financial incentives of SRAM, administered by the Big Sioux River 319 Water Quality Project. He uses the SRAM incentives as a guide to manage his pasture near Skunk Creek. The deferred grazing option allows him to hay this ground after June 1st, and leave it ungrazed throughout the summer. The cool season grasses get adequate time to replenish and build up an excellent feed source so his cows can come home and graze prior to fall calving.

Stream crossing: Stream crossings will be completed next year. This will give him a safe route to transport equipment and supplies, with easy access to properly manage his conservation practices. Making use of the stream crossings will also reduce sediment load and maintain and improve the water quality of Skunk Creek. It also allows cattle easier access to cross the creek without damaging the banks.

Berg added, "Gelderman's going to be busy because he's doing the majority of this work himself. If everybody did what Tony's doing, we would probably be able to delist Skunk Creek from the impaired watershed list."

No 'I' in teamwork

The work to improve water quality on the Big Sioux River has been ongoing for about three decades. In 2012, the National Water Quality Initiative (NWQI), was launched by the USDA Natural Resources Conservation Service (NRCS) to focus efforts on smaller impaired streams in South Dakota. At that time eligible producers in portions of the Skunk Creek watershed; specifically Colton Creek, Buffalo Creek, Jensen Creek, and Willow Creek, voluntarily began to install conservation practices to provide cleaner water for their neighbors and communities.

Pressure is intensifying for farmers to get involved to accelerate the conservation work in Skunk Creek, according to Berg. Recent water quality samples indicate some progress, but not enough progress for Skunk Creek to be removed from a DENR listing of impaired streams.

Jesse Neyens, an Environmental Analyst for the City of Sioux Falls, said, "A portion of the available RCPP funded by the NRCS in the 2014 Farm Bill, was recently awarded to the Big Sioux River 319 Water Quality Project. This was a big boost of money to this watershed. Producers have been pretty receptive to the available conservation programs. We think the conservation programs are a win-win for the City of Sioux Falls and the agricultural community."

Finances to do this work have a big impact on how producers operate and their cost of operations. Neyens said, "I'm hoping the Big Sioux River Project can assist them with those financial costs."

This is where the financial aid from the City comes in. When the City takes out a state-revolving loan to complete various utility projects, the loans have an established interest rate. Rather than pay the full interest rate, the state allows the City to invest a portion of the interest due into non-point source (i.e. field runoff) water conservation projects.

Other agencies involved in the Skunk Creek effort to assist landowners include: East Dakota Water Development District, and conservation districts in Lake, McCook, Minnehaha and Moody Counties.

Tips to get started

1. If you'd like to put a whole-farm plan together, contact your local conservation district or NRCS office well in advance of when you'd like to implement your plan.

2. Gelderman invites you to visit with him and other farmers already involved in work on Skunk Creek to see what they're doing.

3. Our Sioux Falls Mayor Mike Huether asks people to, "Be a good neighbor," Neyens said. "This isn't just an effort in agricultural areas. There is an urban focus as well.

4. Neyens adds, "Educate yourself. Learn what your conservation options are whether it's for Skunk Creek or the Big Sioux River in general.

5. Gelderman advised, "Go to the NRCS office and ask questions and share your ideas. If some of the stuff I'm doing doesn't fit what you'd like to do, there's probably another program that will work for you. It's not a one-size-fits all. There's a lot of programs to consider; and different programs for different management styles."

Laurie Fritsch, a freelance writer from Vermillion, SD, received her agricultural journalism degree from Iowa State University, and especially enjoys writing about production agriculture.

PHOTO CAPTIONS

Barry Berg, Watershed Coordinator of the Big Sioux River 319 Water Quality Project, and Chuck Lebeda, a Certified Conservation Planner for South Dakota Association of Conservation Districts, provide technical assistance to producers like Tony Gilderman, a beef producer from Hartford, SD. Gelderman has volunteered to participate in conservation programs geared to improve the water quality in Skunk Creek, which flows into the Big Sioux River north of Sioux Falls, SD. *(Photo by Laurie Fritsch, Freelance Ag Journalist).*

Filename: tony gelderman kneeling OR tony gelderman-standing-skunk creek
Tony Gelderman is installing multiple conservation practices this year and next, to do his part to help get Skunk Creek cleaned up. *(Photo by Laurie Fritsch, Freelance Ag Journalist).*

PRELIMINARY COST ESTIMATE - Phase I, Earthen Lot System

Project: Ag Waste Management System (AWMS)

Item	Unit	Quantity	Unit Cost	Total Cost
Earthfill for Clay Liner (Test Controlled, Class A)	yd_3	1,731	$3.50	$6,058.50
Excavation for Pond, Liner, Stripping, and Basin	yd_3	5,236	$2.25	$11,781.00
Earthfill for Dikes, Pond, and Basins (Class S)	yd_3	10,904	$2.25	$24,534.00
Proctor, Moisture, and Density Tests	lump sum	1	$1,500.00	$1,500.00
New Fence around pond (4-barb)	linear foot	1,038	$3.50	$3,633.00
Barbed Wire Fence - creek exclusion fence	linear foot	502	$2.00	$1,004.00
12" PVC Drain Tube	linear foot	227	$25.00	$5,675.00
18" PVC Drain Tube	linear foot	167	$40.00	$6,680.00
Seeding of Embankments and Construction Area	acres	5.4	$350.00	$1,890.00
Warning Signs	each	2	$40.00	$80.00
Permanent Marker	each	1	$250.00	$250.00
Trash Screen - Wooden Picket Type	each	2	$500.00	$1,000.00
Reinforced Concrete - walls	cubic yard	57.2	$300.00	$17,160.00
Reinforced Concrete - flatwork for sediment basins	cubic yard	232.2	$200.00	$46,440.00
Reinforced Concrete - flatwork for new concrete lots	cubic yard	277.8	$200.00	$55,560.00
Gravel or Fine Drainfill - subgrade for concrete	yd_3	288.0	$20.00	$5,760.00
Gravel or Rock - Road Surfacing	yd_3	338.5	$25.00	$8,462.50
Geotextile, 8 oz non-woven - for rock crossing	yd_2	76.6	$3.00	$229.80
Rock Aggregate - riprap for rock crossing	yd_3	13.4	$25.00	$335.00
Obstruction Removal	job	2.0	$2,750.00	$5,500.00
Projected AWMS Construction Cost				**$203,532.80**
Contingency				**$20,353.28**
Total Projected AWMS Construction Cost				**$223,886.08**

PROJECTED INCENTIVE PAYMENT

Practice Code	Practice Description	Units	Unit Type	Unit Payment	Total Payment
313	Waste Storage Facility - Excavated Storage Pond	342,648	Cubic Feet	$ 0.10	$34,264.80
342	Critical Area Planting	5.4	Acres	$ 83.77	$452.36
382	Fence - Protective Fence	1,038	Linear Feet	$ 1.29	$1,339.02
382	Fence - Barbed Wire	502	Linear Feet	$ 0.89	$446.78
500	Obstruction Removal - Removal and Disposal of Steel or Concrete Structures	6,688	Square Feet	$ 5.86	$39,191.68
521D	Pond Sealing or Lining - Compacted Clay Treatment, Use On Site Material	2,596	Cubic Yard	$ 3.28	$8,514.88
561	Heavy Use Area Protection - Reinforced Concrete with Sand or Gravel Foundation	55.6	Cubic Yard	$ 145.17	$8,071.45
561	Heavy Use Area Protection - Rock/Gravel	338.5	Cubic Yard	$ 11.95	$4,045.08
578	Stream Crossing - rock livestock crossing	532.0	Square Feet	$ 2.72	$1,447.04
632	Waste Separation Facility - Earthen settling structure with Concrete Bottom and Pipe Outlet	17,820.0	Cubic Feet	$ 0.46	$8,197.20
634	Waste Transfer - Pressure flow, 12" or greater diameter conduit	394.0	Linear Feet	$ 23.48	$9,251.12
Total Projected EQIP Incentive Payment ($200,000 Max)					**$115,221.41**
Total Projected 319 Payment					**$0.00**
Projected AWMS Cost to Landowner					**$108,664.68**

Notes

1) These prices are only preliminary estimates. Final costs could vary significantly from those shown.

2) The projected incentive payment is based on fiscal year 2014 incentive payment rates. Payment rates for subsquent fiscal years may vary signifcantly. Program rules may also vary and cause changes in the design and/or cost estimate to occur.

3) This estimate assumes all open lots to be abandoned are abandoned and reclaimed in Phase I.

4) This estimate assumes the new concrete lots are built as part of Phase I.

Communities downstream from Skunk Creek are encouraged to see livestock producers partner in the work to get Skunk Creek cleaned up by voluntarily installing ag waste management systems. This example is based on an actual farming scenario. It shows the components needed for this type of setup, plus the financial commitment expected by the producer and financial assistance received to make it possible. *(Graph courtesy of SDACD).*

Media Contact:
Barry Berg, Big Sioux River 319 Project Coordinator
(605)759-2650

FARMERS MAY RECEIVE CONSERVATION ASSISTANCE TO IMPROVE SKUNK CREEK WATER QUALITY

By Laurie Fritsch, Freelance Agricultural Journalist

SIOUX FALLS, SD, August 27, 2015— If you farm near Skunk Creek and hear a knock at your door, chances are it's Chuck Lebeda with the South Dakota Association of Conservation Districts (SDACD). He'd like to discuss the financial and technical help available to you if you're interested in lending a hand to improve the water quality in Skunk Creek.

He'll work with you to create a whole-farm conservation plan for your operation. It's voluntary and there's no charge. You decide which conservation practices to establish to protect and enhance the natural resources on your farm.

Lebeda said, "We're here to help farmers get started. As the word spreads hopefully neighbors will ask what they're doing and get involved. And hopefully farmers see a benefit whether it's economics or better land treatment, and continue with the process long after we're out of there."

That's not all. Mike Kuck, the 303d Water Project Coordinator, explained, "Lebeda follows up with producers after they've installed their conservation practices to see if things are working the way they're intended or to see if they're having any problems. If a farmer encounters problems, Lebeda can get the producer in touch with someone who can provide assistance so he's not left with a practice that's not working. That's why Chuck is working one-on-one with producers. We've always found this to be the best approach. This is a group effort to help everyone do a better job."

Conservation practices that producers may consider include: crop rotation, residue and tillage management, no-till, strip till, direct seeding, cover crops, filter strips, grassed waterways, stream-bank protection, nutrient management and waste storage facilities.

Barry Berg, the Big Sioux River 319 Project Coordinator, works with Lebeda, a Certified Conservation Planner, to identify area landowners interested in conservation work. To speed up momentum, Berg recently hired Brian Top, through the Regional Conservation Partnership Program (RCPP), to spread the word. "Their work is making an amazing difference. Now farmers are taking the initiative to come in and talk to us; some who I never guessed would work on this project with us," Berg said.

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Partners involved

The work to improve water quality on the Big Sioux River has been ongoing for about three decades. In 2012, the National Water Quality Initiative (NWQI), was launched by the USDA Natural Resources Conservation Service (NRCS) to focus efforts on smaller impaired streams in South Dakota. At that time eligible producers in portions of the Skunk Creek watershed; specifically Colton Creek, Buffalo Creek, Jensen Creek, and Willow Creek, voluntarily began to install conservation practices to provide cleaner water for their neighbors and communities.

Pressure is intensifying for farmers to get involved to accelerate the conservation work in Skunk Creek, according to Berg. Recent water quality samples indicate some progress, but not enough progress for Skunk Creek to be removed from a South Dakota Department of Environment and Natural Resources (DENR) listing of impaired streams.

Jesse Neyens, an Environmental Analyst for the City of Sioux Falls, said, "A portion of the available funding through the RCPP which was funded by the NRCS in the 2014 Farm Bill, was recently awarded to the Big Sioux River 319 Water Quality Project. This was a big boost of money to this watershed. Producers have been pretty receptive to the available conservation programs. We think the conservation programs are a win-win for the City of Sioux Falls and the agricultural community."

Neyens emphasized, "We want people to realize this is a watershed problem. It's not an agricultural producer problem. It's not a city discharge problem. It's everybody that's contributing and we need everybody to help us get to where we need and want to be. We don't want to point the finger at anybody and say, 'It's your fault.' We're all part of the problem. Hopefully we'll all be a part of the solution."

Organizations partnering with NRCS, DENR and the City of Sioux Falls, to assist landowners include: East Dakota Water Development District, and conservation districts in Lake, McCook, Minnehaha and Moody Counties.

Checkout all options

Your conservation plan is likely to include assistance from more than one agency, and open the door to several outstanding conservation programs.

If you've got problems with feedlot runoff, find your cows standing in Skunk Creek, or have a gully that runs through a field on your farm, Deron Ruesch, district conservationist for Minnehaha County NRCS, said, "This is a great opportunity to address these issues. We'll help identify any resource concerns on your farm and give you alternatives. Hopefully you'll make that decision that leads to implementation of sound conservation practices."

Financial assistance can be offered to offset the installation costs of conservation practices. For example, through the NRCS Environmental Quality Incentives Program (EQIP) a producer may be eligible for as much as $250,000 for grassed waterways, terraces, rotational grazing, fencing, water tanks, rural water hookups, grass seedings, and stream crossings. If he installs an animal waste facility along with other conservation practices, he may be eligible for as much as $450,000.

If producers don't qualify for EQIP, they may look at the Big Sioux River's 319 Water Quality Project's Seasonal Riparian Area Management Program (SRAM). There's several conservation practices that help to improve water quality, soil health and animal health. A couple grazing options come with financial assistance, as well as monetary perks to establish an alternative water source or install fencing. Other SRAM options offer 75 percent cost share for rural water hookups, wells (i.e. if applicable), pipelines, tanks, and rock crossings.

If a landowner is qualified but their application doesn't rank high enough to be selected, Ruesch said, "They've got three choices: we try to obtain more dollars for the program, they implement the plan themselves without any financial assistance, or they wait until next year and try again."

It's a good investment

Financial assistance is available at the state and federal level, in addition to the City of Sioux Falls through the Big Sioux River 319 Project. Kuck explained, "Most farmers will incur a substantial financial investment, but Lebeda and Top can identify where producers can find additional assistance."

Interested producers need to contact their local conservation district manager or NRCS field office located at the USDA Service Center or visit www.nrcs.usda.gov. Berg said, "Talk with the district conservationist and manager of the conservation district. This allows them to find out what your concerns are. They may have ideas about what conservation practices you should consider."

Laurie Fritsch, a freelance writer from Vermillion, SD, received her agricultural journalism degree from Iowa State University, and especially enjoys writing about production agriculture.

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SIDEBAR
5 Steps to Assistance

Courtesy of USDA Natural Resources Conservation Service

Do you farm or ranch and want to make improvements to the land that you own or lease? NRCS offers technical and financial assistance to help farmers and ranchers. Here's how you can get started with NRCS:

1. Planning
To get started with NRCS, we recommend you stop by your local NRCS field office. We'll discuss your vision for your land.

NRCS provides farmers and ranchers, with free technical assistance or advice for their land. Common technical assistance includes: resource assessment, practice design and resource monitoring. Your conservation planner will help you determine if financial assistance is right for you. Technical assistance is also available online through Conservation Client Gateway.

Technical Assistance
2. Application
They will walk you through the application process. To get started on applying for financial assistance, you will need:

- To fill out form AD-1026 which ensures a conservation plan is in place before lands with highly erodible soils are formed. It also ensures that identified wetland areas are protected. This aids you in meeting conservation compliance provisions.

- To meet other eligibility certifications.

- Once complete, they will work with you on the application, or CPA 1200. If you're entity is interested in Agricultural Land Easements then the application will be CPA-41 and CPA-41A.

Applications for most programs are accepted on a continuous basis, but they're considered for funding only during ranking periods. Be sure to ask your local NRCS district conservationist about the deadline for the ranking period to ensure you turn in your application on time. You can also apply for financial assistance and manage applications, contracts and conservation plans online through Conservation Client Gateway.

Financial Assistance

3. Eligibility

As part of the application process, we'll check to see if you are eligible. To do this, you'll need to bring:

- An official tax ID (i.e. Social Security number or an employer ID)
  If you are applying under an employer ID number, then a DUNS number and current CCR registration are required.

- A property deed or lease agreement to show you have control of the property; and

- A land tract number.

If you don't have a land tract number, you can get one from USDA's Farm Service Agency (FSA). Typically, the local FSA office is located in the same building as the local NRCS office. You only need a land tract number if you're interested in financial assistance.

4. Ranking

NRCS will take a look at the applications and rank them according to: A) Local resource concerns, B) The amount of conservation benefits the work will provide, and C) The needs of applicants.

5. Implementing

If you're selected, you can choose whether to sign the contract for the work to be done. Once you sign the contract, you'll be provided standards and specifications for completing the practice or practices, and then you will have a specified amount of time to implement your plan. Once the work is implemented and inspected, you'll be paid the rate of compensation for the work if it meets NRCS standards and specifications.

PHOTO CAPTIONS

Filename: chuck lebeda with tony gelderman
Chuck Lebeda, a Certified Conservation Planner for the South Dakota Association of Conservation Districts, stopped by Tony Gelderman's farm, Hartford, SD, to assess the progress of a native grass seeding planted by the Minnehaha County Conservation District in 2014. The mix includes Green Needle Grass, Sideoats Grama, Indian Grass and Big Blue Stem. Gelderman uses this pasture for haying, as well as a place to graze his beef cattle. This ground cover serves as wildlife habitat, and is helping to improve the water quality of Skunk Creek because it controls erosion. *(Photo by Laurie Fritsch, Freelance Ag Journalist).*

Filename: agwaste system example
Communities downstream from Skunk Creek are encouraged to see livestock producers partner in the work to get Skunk Creek cleaned up by voluntarily installing ag waste management systems. This example is based on an actual farming scenario. It shows the components needed for this type of setup, plus the financial commitment expected by the producer and financial assistance received to make it possible. *(Chart courtesy of SDACD)*

Filename: before after picture
This SRAM pasture in Minnehaha County is once again growing healthy vegetation because it was given est from continual grazing. *(Photo courtesy of SDACD)*

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HEALTHY RIPARIAN AREAS IMPROVE WATER QUALITY

By Barry Berg, SD Association of Conservation Districts

What exactly is a riparian area? A riparian area is simply the transitional zone between land and water environments. A healthy riparian area is extremely important to water quality as it will reduce sediment, nutrients, pesticides, and other materials in surface and shallow subsurface runoff. Examples of riparian areas include floodplains, streambanks, lakeshores, and wetlands.

Livestock overgrazing in riparian areas can have negative impacts and may accelerate erosion and sedimentation, change stream fl w, increase nutrient and bacteria loading (such as Escherichia coli), and destroy aquatic habitats. While total exclusion is typically the preferred option for streambank protection, it may not always be the best solution in every situation.

SRAM allows producers to change how they manage riparian grassland acres along certain stream segments in order to improve water quality while still keeping those acres in production.

A relatively new program called Seasonal Riparian Area Management (SRAM) allows producers to change how they manage riparian grassland acres along certain stream segments in order to improve water quality while still keeping those acres in production. The SRAM program is essentially a 6 month deferred grazing program for those portions of a pasture that lie within a 100-year floodplain of a stream. The program is currently only available to producers within the Big Sioux Watershed Project but may soon be opened to other watershed projects within the state.

Main Program Guidelines

- Pasture acres within the 100-year floodplain of a stream eligible for SRAM enrollment (20 foot minimum for enrollment);
- Choice of 10 or 15 year contract;
- Rental rates for enrolled acres determined through the Big Sioux Watershed Project, with payment to be made in-full during the 1st year of participation (currently $60 per acre year) (e.g. 25 acres enrolled for 10 years = $15,000);

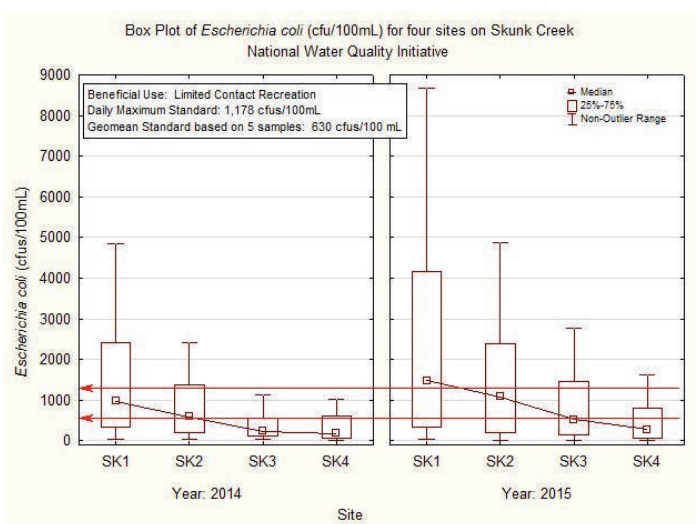
■ No grazing allowed on enrolled acres from April 1st – September 30th, however, those acres can be hayed after June 1st while maintaining a minimum vegetative cover of 4 inches;

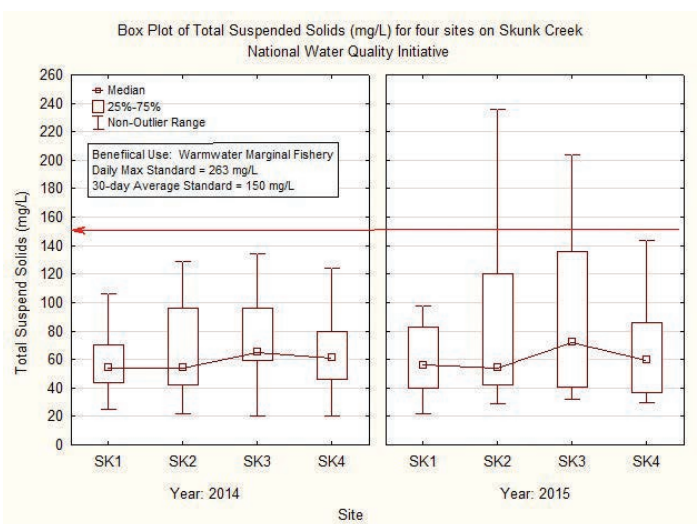
■ Acres under contract can be fall grazed after September 30th if a minimum vegetative cover of 4 to 6 inches is maintained. However, an alternative water source is required to reduce impacts on the riparian area;

■ Technical and financial assistance for conservation planning, fencing, alternative water development, cattle crossings, etc. available through the Big Sioux River Watershed Project.

The SRAM program is diffe ent from other buffer initiatives such as the Conservation Reserve Program (CRP). Landowners are still able to utilize the grass near streams for hay after June 1st and throughout the growing season. The allowance for fall grazing after September 30th is also a major diffe ence between the two programs. Producers can manage the SRAM acres by fall grazing but are required to have an alternative water source available to reduce impacts on the riparian area.

As of August 2015, the SRAM program had enrolled roughly 790 acres within the Big Sioux watershed with the majority of those acres along Skunk Creek that is a tributary to the Big Sioux River. The goal is to enroll an additional 1,700 acres in an attempt to improve water quality on the Big Sioux and its tributaries north of Sioux Falls by 2020. For more information on the SRAM program, contact Barry Berg, Watershed Coordinator at 605.759.2650.





Big Sioux River Selected For USDA 'High-Impact' Project

January 15, 2015, 5:56 AM

File Photo

SIOUX FALLS, SD -

The United States Department of Agriculture has selected a project dedicated to improving water quality in the Big Sioux River as one of its "high-impact" projects for 2015.

The USDA says the 115 projects in the Regional Conservation Partnership Program will receive more than $370 million in total. Community partners nationwide will also contribute an estimated $400 million.

The department says the biggest concern of the Central Big Sioux Water Quality Project is the degradation of surface water quality from bacteria, nutrients and sediment. The project will assist land owners and producers with improving water quality by avoiding, controlling and trapping nutrient and sediment runoff.

The funding will also go toward installing 13 Animal Waste Management Systems.


USDA
United States Department of Agriculture
CITY OF SIOUX FALLS

New group focuses on Big Sioux water quality

 Joe Sneve, jsneve@argusleader.com 1:01 a.m. CDT May 14, 2015

John Crazy Horse sits Wednesday at Fawick Park near the Big Sioux River, which is scheduled for a cleanup.(Photo: Emily Spartz Weerheim / Argus Leader)

A new group wants to encourage Sioux Falls and other watershed communities to do more to clean up the Big Sioux River.

Friends of the Big Sioux River (FBSR), a collective of local environmentalists, conservationists and business leaders, will formally launch at a press conference Thursday morning. The group wants to convince communities along the Big Sioux that South Dakota's dirtiest river is worth caring about.

Matt McLarty, a policy advocate with the Environmental Law and Policy Center, said despite millions of dollars' worth of investment along the river from Sioux Falls and the ag industry, there's been little progress to improve the quality of the water that flows between the banks of the Big Sioux.

"The city has invested quite a bit in the shores of the Big Sioux. But it's really time to pull the focus back to the waterway itself," he said.

The Big Sioux River is thirteenth on the U.S. Environmental Protection Agency's list of most polluted rivers. The first step toward improving its status is making people aware just how polluted it is, McLarty said.

The group will have an arm for citizen outreach to provide pointers about what homeowners can do to keep contaminants out of the river water. It also hopes business leaders will be receptive to sustainability recommendations without having to be compelled by new rules and regulations, said Greg Veerman, a marketing professional and member of the group.

"In the environmental movement, historically you've had regulation as the solution to perceived ills when it comes to the environmental management," he said. "And maybe that needs to happen, but what we really want first is for people to recognize we've got an opportunity here to create something special in the health of this water way."

Making more strides to clean up the Big Sioux in urban areas will also give local environmentalist more leverage when engaging the agricultural community, Veerman said.

"Let's … earn the right to go reach out to farmers so we can say, 'Look, we're trying to do our part. Let's work together,'" he said.

Friends of the Big Sioux River will coordinate with the city of Sioux Falls to build on ongoing efforts to improve water quality. Sioux Falls Environmental Analyst Jesse Neyens said city staff has attended some of the group's meetings and looks forward to partnering with them.

"They're looking at what we're doing and hopefully, maybe, they can do things that we can't," he said. "I'm happy to see them, both as a city employee and personally, … lead the way on a community-wide basis."

The city already has a hand in efforts to better Big Sioux water quality. As a part of a regional Big Sioux River watershed group, Sioux Falls has supported successful efforts to identify non-point pollution sources along the river and Skunk Creek and to get farmers to build animal confinement systems that keep livestock out of the river.

"We also do the annual Mayor's Big Sioux River Summit, a conference to bring together local and regional people to come in and educate everyone on water quality and tell everybody about what's going on with our watershed," Neyens said.

Where Friends of the Big Sioux River can further aid those efforts, he said, is in public engagement.

"I consider them a community information and outreach group," Neyens said.

IF YOU GO

No till, cover crops help producers minimize erosion, surface runoff

Tuesday, May 19, 2015

These pastures show the difference between rotational grazing on the left and continuous grazing on the right. *(Photo courtesy of Barry Berg, South Dakota Association of Conservation Districts)*

Keeping soil and fertilizers where they belong—in the field—benefits producers and the environment.

No-till farming, cover crops and rotational grazing will help producers reduce surface runoff to improve soil and water quality, according to assistant professor Sandeep Kumar of the plant science department.

Through a $60,000 subcontract from a U.S. Department of Agriculture National Institute of Food and Agriculture grant, Kumar and graduate student Sagar Gautam used computer modeling to determine which farm management methods will produce the best reduction in surface runoff.

Their work is part of a three-year, $482,000 research project led by Distinguished Professor Rattan Lal of the Ohio State School of Environment and Natural Resources. The goal is to determine which farm-management practices will improve soil and water quality on sloped land.

Adjusting model for South Dakota

Kumar and Gautam used the Agricultural Policy/Environmental eXtender (APEX) computational model developed using 40 years of data from the North Appalachian Experimental Watershed near Coshocton, Ohio.

The rolling Ohio landscape provides an ideal platform to study the long-term impact of crops and farm management techniques on the water quality of streams and rivers, according to Kumar, who contributed to the USDA proposal as a postdoctoral researcher at Ohio State.

In 1935, the USDA established the 1,050-acre watershed to determine which farming methods are appropriate for sloped lands. USDA Agricultural Research Service scientists have conducted soil water conservation studies on the watersheds since 1937.

Kumar and Gautam customized the

This filter strip helps keep soil and fertilizer from running off into Union Creek in southeastern South Dakota. *(Photo courtesy of Barry Berg, South Dakota Association of Conservation Districts)*

model for South Dakota with soil conditions, management information and weather data from the last 10 years. South Dakota gets half the amount of precipitation that Ohio does, according to Kumar. However, he noted, "this model is universal—it works everywhere."

Gautam said, "Once the model is ready, you can use different crops and then compare which one gives you more reduction in runoff." The researchers looked at small plots of approximately 2.5 acres, a nearly 20-acre field and even a large-scale model of approximately 27 sections of land to determine the impact of management practices up to 50 years from now.

Recommending management techniques

The computational model confirmed the value of using no-till in the Midwest to retain water and limit nutrient run-off, explained Kumar. "It improves water infiltration."

In a soybean-corn rotation, the use of cover crops, such as winter wheat or oats that can be harvested early, will reduce erosion, Kumar noted. "If there is more cover on the ground, this will minimize water losses."

The researchers also looked at management of orchard grass pastures on a 10 percent slope.

Rotational grazing is beneficial, Kumar explained, pointing out the soil must be properly managed. “When there is a lot of compaction, we are getting more runoff,” Gautam noted.

Kumar recommended using perennial grasses, such as switch grass and big blue stem, to reduce runoff. In particular, strips of perennial grasses left ungrazed on the borders between pastureland and waterways provide a buffer to help control runoff and subsequently improve the water quality of streams and rivers.

These findings agree with other studies, Kumar pointed out. However, the next step will be to determine the size and number of strips that are needed based on the slope and size of the grazing lands.

Considering climate change, Kumar and Gautam found that increased precipitation has a direct influence on runoff at a field scale, while increasing or decreasing temperatures have no significant impact.

When considering climate change impacts on a larger watershed scale, Kumar said, “It will take longer to get a better answer, and research is still on-going.

SD0121

NEWZ GROUP

Brookings Register

Publication Date: 12/14/2015 Page Number: 1

Title: Survey probes past, future grassland conversions

Author:

Size: 68.2 square inch

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Survey probes past, future grassland conversions

BROOKINGS – Prairie Pothole Region farmers who added converted North and South Dakota grasslands into their cropland base in the past decade report that the new acreage represented a sizable share of their total acreage in 2014.

That was one of the major findings from a survey mailed to producers in spring 2015.

South Dakota State University, North Dakota State University and Iowa State University researchers created the survey to study the impact of farmland-use decisions in the Dakotas. It was completed by 1,026 producers in 57 counties (37 South Dakota, 20 North Dakota).

Among those producers, 40 percent converted at least some grassland to crop-

See **GRASSLAND**, page 2

GRASSLAND: Decreases reported

Continued from page 1

land. Within that 40 percent group, they reported that 14 percent of their 2014 cropland acreage was grassland in the past 10 years.

The USDA reports that during the six-year period of 2006-11 cropland enrolled in the Conservation Reserve Program in North and South Dakota decreased from 5.0 million to 3.8 million acres with most of the tracts returned to cropland. This includes all producers, not just those participating in the survey.

In North Dakota, most of the new cropland came from acres leaving the CRP program. South Dakota farmers were more likely to put grasslands into production that had never been enrolled in CRP.

Overall, 14.4 percent of responding farmers that had converted acres into cropland did so with native grasslands; another 16.2 percent said they put tame grasslands into cultivation.

Land-use decisions haven't strictly been in the direction of more tillable land. Among respondents, 14 percent reported converting grassland to cropland as well as cropland to grassland in the past decade. Another 14 percent converted only cropland to grassland.

However, the acreages were much smaller than grassland to cropland (28,000 to 85,000 according to data provided by participants).

Land going back to grass was primarily due to new CRP or Wetland Reserve Program sign-ups (a combined 23.3 percent). Only 7 percent of respondents turned CRP land into grass or hay acres.

Corn, bean acreages increases

As would be expected, 75 percent of responding farmers who converted grass to cropland used the new ground to plant corn or soybeans. There were 30 percent that planted wheat on the new cropland.

Larry Janssen, an ag economics professor at SDSU and one of the survey authors, said that mirrors current producer output.

"Nearly 90 percent of respondent producers raised corn and/or soybeans in the past 10 years. Nearly half of North Dakota respondents raised wheat each year compared to 28 percent of South Dakota respondents. Very few respondents in either state increased their wheat acreage in comparison to other crops," Janssen said.

"Even among those who didn't convert grassland, the majority reported grassland decreases and increased soybean and corn acres within five miles of their farm headquarters," Janssen said.

Change driven by crop prices

Not surprisingly, improving commodity prices was the No. 1 reason for taking land out of grassland. It was listed as the most important factor by 50.3 percent of respondents. Other choices for "most important factor" were changing input prices for seed, fertilizer, chemicals, etc., 15.2 percent; and improved crop yields (10.8 percent).

Highest among a tier of seven lower choices was changing weather/climate (6.9 percent).

The survey, which had a 36 percent response rate, also found that those most likely to have converted grassland were those who:

- expanded their land operation in the past 10 years;
- operate more than 2,000 acres with annual gross farm sales of $500,000 or more; and
- are currently under 50 years of age.

Future to be more stable

As to the future, the study finds in the coming decade that:

- More producers plan to convert cropland to pasture or grassland (12.6 percentage) than those who plan to convert native grassland (2.6 percent) or tame grassland (6.5 percent) to cropland.
- More than two-thirds (68 percent) expect no major changes in grassland acres. A major change was defined as greater than 5 percent. Meanwhile, 26 percent predicted continued decline in grasslands. Six percent predicted increased grassland acreage.
- Most producers (61 percent) also predicted stable acreage for corn and soybeans. An increase of 5 to 10 percent was foreseen by 22 percent of respondents while 5 percent expected increases to be more than 10 percent. Soybean and corn acreage reduction of more

SD0121

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than 5 percent was predicted by 12 percent.

"Overall, producers project more land use stability in the next 10 years than in the past 10 years," Janssen said.

"This result is partly due to uncertainty about future crop and livestock prices, farm program provisions, renewable energy policies, agricultural technology changes and other factors that affect land-use decision making," Janssen said.

A more detailed summary of the study is available at www.sdstate.edu/econ/commentator/index.cfm.

– From SDSU Marketing & Communications

SDSU photo

A rise in commodity prices and the restructuring of the Conservation Reserve Program turned more than a million acres of grassland into cropland in the Dakota in the past decade. Prices have since fallen and a survey of ag producers finds that most expect stable land-use decisions in the coming decade.

South Dakota State Senator Shantel Krebs, left, talks with Barry Berg, right, watershed coordinator for the Central Big Sioux River Watershed Implementation Project, as Lucas Lentsch, secretary of agriculture with the South Dakota Department of Agriculture, looks on in an enrolled pasture in the Seasonal Riparian Area Management (SRAM) progam on Skunk Creek near Colton, S.D., on Wednesday, Aug. 6, 2014, during a tour of the different enrolled pastures in the SRAM and Riparian Area Management programs on Skunk Creek and the Big Sioux River. Joe Ahlquist / Argus Leader

Barry Berg, watershed coordinator for the Central Big Sioux River Watershed Implementation Project, talks about an enrolled pasture in the Seasonal Riparian Area Management (SRAM) program on Skunk Creek near Chester, S.D., on Wednesday, Aug. 6, 2014, during a tour of the different enrolled pastures in the SRAM and Riparian Area Management programs on Skunk Creek and the Big Sioux River. Joe Ahlquist / Argus Leader

South Dakota State Senator Shantel Krebs, left, talks with Barry Berg, second from left, watershed coordinator for the Central Big Sioux River Watershed Implementation Project, as Lucas Lentsch, second from right, secretary of agriculture with the South Dakota Department of Agriculture, and Jack Majeres, district chairman with the Moody County Conservation District and a farmer, stand by at an enrolled pasture in the Seasonal Riparian Area Management (SRAM) program on Skunk Creek just south of Brant Lake, the Skunk Creek headwaters, near Chester, S.D., on Wednesday, Aug. 6, 2014, during a tour of the different enrolled pastures in the SRAM and Riparian Area Management programs on Skunk Creek and the Big Sioux River. Joe Ahlquist / Argus Leader

Barry Berg, watershed coordinator for the Central Big Sioux River Watershed Implementation Project, talks about an enrolled pasture in the Seasonal Riparian Area Management (SRAM) program on Skunk Creek just south of Brant Lake, the Skunk Creek headwaters, near Chester, S.D., on Wednesday, Aug. 6, 2014, during a tour of the different enrolled pastures in the SRAM and Riparian Area Management programs on Skunk Creek and the Big Sioux River. Across the road from the enrolled pasture, and closer to the lake, is a future enrolled pasture in the SRAM program. Joe Ahlquist / Argus Leader

Barry Berg, center, watershed coordinator for the Central Big Sioux River Watershed Implementation Project, talks with Lucas Lentsch, left, secretary of agriculture with the South Dakota Department of Agriculture, and South Dakota State Senator Shantel Krebs, in front of a future enrolled pasture in the Seasonal Riparian Area Management (SRAM) program on Skunk Creek just south of Brant Lake, the Skunk Creek headwaters, near Chester, S.D., on Wednesday, Aug. 6, 2014, during a tour of the different enrolled pastures in the SRAM and Riparian Area Management programs on Skunk Creek and the Big Sioux River. Just across the road from the future enrolled pasture is an enrolled pasture in the SRAM program. Joe Ahlquist / Argus Leader

Lloyd Siemonsma, a farmer near Sioux Falls, talks about his experience with the the Riparian Area Management (RAM) program on the Big Sioux River with Barry Berg, right, watershed coordinator for the Central Big Sioux River Watershed Implementation Project, as Lucas Lentsch, secretary of agriculture with the South Dakota Department of Agriculture, on his farm near Sioux Falls, S.D., on Wednesday, Aug. 6, 2014, during a tour of the different enrolled pastures in the Seasonal Riparian Area Management (SRAM) and RAM programs on Skunk Creek and the Big Sioux River. Joe Ahlquist / Argus Leader

Barry Berg, left, watershed coordinator for the Central Big Sioux River Watershed Implementation Project, talks with Lucas Lentsch, secretary of agriculture with the South Dakota Department of Agriculture, in an enrolled pasture in the Seasonal Riparian Area Management (SRAM) program on the Skunk Creek near Colton, S.D., on Wednesday, Aug. 6, 2014, during a tour of the different enrolled pastures in the SRAM and Riparian Area Management (RAM) programs on Skunk Creek and the Big Sioux River. Joe Ahlquist / Argus Leader

Rod VanDerVliet, right, a farmer near Colton, S.D., who is building a deep pit barn, which helps with contaminated water runoff, talks as Barry Berg, watershed coordinator for the Central Big Sioux River Watershed Implementation Project, on his farm near Colton, S.D., on Wednesday, Aug. 6, 2014, during a tour of the different enrolled pastures in the Seasonal Riparian Area Management (SRAM) and Riparian Area Management programs on Skunk Creek and the Big Sioux River. Joe Ahlquist / Argus Leader

Deron Ruesch, district conservationist with the Natural Resources Conservation Service, talks about an enrolled pasture in the Seasonal Riparian Area Management (SRAM) program on Skunk Creek near Sioux Falls, S.D., on Wednesday, Aug. 6, 2014, during a tour of the different enrolled pastures in the SRAM and Riparian Area Management programs on Skunk Creek and the Big Sioux River. Joe Ahlquist / Argus Leader

Rod VanDerVliet, a farmer near Colton, S.D., who is building a deep pit barn, which helps with contaminated water runoff, talks with Lucas Lentsch, left, secretary of agriculture with the South Dakota Department of Agriculture, and South Dakota State Senator Shantel Krebs on his farm near Colton, S.D., on Wednesday, Aug. 6, 2014, during a tour of the different enrolled pastures in the Seasonal Riparian Area Management (SRAM) and Riparian Area Management programs on Skunk Creek and the Big Sioux River. Joe Ahlquist / Argus Leader

South Dakota State Senator Shantel Krebs talks with Rod VanDerVliet, a farmer near Colton, S.D., who is building a deep pit barn, which helps with contaminated water runoff, on VanDerVliet's farm near Colton, S.D., on Wednesday, Aug. 6, 2014, during a tour of the different enrolled pastures in the Seasonal Riparian Area Management (SRAM) and Riparian Area Management programs on Skunk Creek and the Big Sioux River. Joe Ahlquist / Argus Leader

South Dakota State Senator Shantel Krebs looks out over an enrolled pasture in the Seasonal Riparian Area Management (SRAM) program on Skunk Creek near Colton, S.D., on Wednesday, Aug. 6, 2014, during a tour of the different enrolled pastures in the SRAM and Riparian Area Management programs on Skunk Creek and the Big Sioux River. Joe Ahlquist / Argus Leader

Lloyd Siemonsma, a farmer near Sioux Falls, talks about his experience with the Riparian Area Management (RAM) program on the Big Sioux River on his farm near Sioux Falls, S.D., on Wednesday, Aug. 6, 2014, during a tour of the different enrolled pastures in the Seasonal Riparian Area Management (SRAM) and RAM programs on Skunk Creek and the Big Sioux River. Joe Ahlquist / Argus Leader

South Dakota State Senator Shantel Krebs, left, talks as Jack Majeres, center, district chairman with the Moody County Conservation District and a farmer, and Barry Berg, watershed coordinator for the Central Big Sioux River Watershed Implementation Project, stand by in an enrolled pasture in the Seasonal Riparian Area Management (SRAM) program on Skunk Creek near Colton, S.D., on Wednesday, Aug. 6, 2014, during a tour of the different enrolled pastures in the SRAM and Riparian Area Management programs on Skunk Creek and the Big Sioux River. Joe Ahlquist / Argus Leader

South Dakota State Senator Shantel Krebs, left, and Lucas Lentsch, center, secretary of agriculture with the South Dakota Department of Agriculture, look on as Barry Berg, watershed coordinator for the Central Big Sioux River Watershed Implementation Project, talks in an enrolled pasture in the Seasonal Riparian Area Management (SRAM) program on Skunk Creek near Colton, S.D., on Wednesday, Aug. 6, 2014, during a tour of the different enrolled pastures in the SRAM and Riparian Area Management programs on Skunk Creek and the Big Sioux River. Joe Ahlquist / Argus Leader

South Dakota State Senator Shantel Krebs, left, talks with Barry Berg, right, watershed coordinator for the Central Big Sioux River Watershed Implementation Project, as Lucas Lentsch, secretary of agriculture with the South Dakota Department of Agriculture, looks on in an enrolled pasture in the Seasonal Riparian Area Management (SRAM) program on Skunk Creek near Colton, S.D., on Wednesday, Aug. 6, 2014, during a tour of the different enrolled pastures in the SRAM and Riparian Area Management programs on Skunk Creek and the Big Sioux River. Joe Ahlquist / Argus Leader

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South Dakota State Senator Shantel Krebs, left, talks as Jack Majeres, district chairman with the Moody County Conservation District and a farmer, while looking at an enrolled pasture in the Seasonal Riparian Area Management (SRAM) program on Skunk Creek near Sioux Falls, S.D., on Wednesday, Aug. 6, 2014, during a tour of the different enrolled pastures in the SRAM and Riparian Area Management programs on Skunk Creek and the Big Sioux River. Joe Ahlquist / Argus Leader

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Lloyd Siemonsma, right, a farmer near Sioux Falls, talks about his experience with the the Riparian Area Management (RAM) program on the Big Sioux River with Barry Berg, left, watershed coordinator for the Central Big Sioux River Watershed Implementation Project, and Lucas Lentsch, back, secretary of agriculture with the South Dakota Department of Agriculture, on his farm near Sioux Falls, S.D., on Wednesday, Aug. 6, 2014, during a tour of the different enrolled pastures in the Seasonal Riparian Area Management (SRAM) and RAM programs on Skunk Creek and the Big Sioux River. Joe Ahlquist / Argus Leader

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Jack Majeres, district chairman with the Moody County Conservation District and a farmer, walks through an enrolled pasture in the Seasonal Riparian Area Management (SRAM) program on Skunk Creek near Colton, S.D., on Wednesday, Aug. 6, 2014, during a tour of the different enrolled pastures in the Seasonal Riparian Area Management (SRAM) and Riparian Area Management programs on Skunk Creek and the Big Sioux River. Joe Ahlquist / Argus Leader

Lucas Lentsch, center, secretary of agriculture with the South Dakota Department of Agriculture, looks on as Barry Berg, left, watershed coordinator for the Central Big Sioux River Watershed Implementation Project, talks about an enrolled pasture in the Seasonal Riparian Area Management (SRAM) program on Skunk Creek near Sioux Falls, S.D., on Wednesday, Aug. 6, 2014, during a tour of the different enrolled pastures in the SRAM and Riparian Area Management programs on Skunk Creek and the Big Sioux River. Joe Ahlquist / Argus Leader

South Dakota State Senator Shantel Krebs talks with Rod VanDerVliet, a farmer near Colton, S.D., who is building a deep pit barn, which helps with contaminated water runoff, on VanDerVliet's farm near Colton, S.D., on Wednesday, Aug. 6, 2014, during a tour of the different enrolled pastures in the Seasonal Riparian Area Management (SRAM) and Riparian Area Management programs on Skunk Creek and the Big Sioux River. Joe Ahlquist / Argus Leader

Lawmaker Reaction to Skunk Creek Pollution Stinks-June29, 2014

The Skunk Creek winds its way from the lake country northwest of Sioux Falls through the pastures and cropland upon which our ancestors invested the very measure of their being.

It is blessedly fertile ground that continues to support our health, wealth and posterity.

The Skunk snakes into Minnehaha County, past Colton and Hartford, before entering Sioux Falls proper somewhere around Ellis. Along the way, it consumes whatever man can mix into it until it's slurry of natural and manmade compounds well beyond the two parts hydrogen, one part oxygen that forms its base.

Once in the city, the creek is lined with scrub oak and ash trees and underbrush, creating a green corridor meandering through neighborhoods and parks before hooking up with its brother Big Sioux in the midst of the country clubs and commercial development, contributing to a massive bend of river that shapes the core of our city.

Here's your chance to clean up the Big Sioux River

Big Sioux River: Improved, but more can be done

The modest Skunk Creek feeds a miles-long corridor, a green magnet of recreation on the west side.

Every day that weather allows, the fishermen come with their poles and buckets.

There are bikers and runners, dog walkers and romantic strolls in the coming dusk.

There are softball games and football practice, sand volleyball and makeshift cricket.

And on the warm days of summer, when the current slows and the waters of the Skunk form calmer pools, the children living along its banks, from the working class collection of manufactured and modest housing, come to the water to play.

I see them often in my ventures along the recreational trail through Legacy and Dunham parks.

They scramble through the tangle of bush and trees, down the slippery shores of Skunk Creek to enjoy a simple pleasure shared by their parents and grandparents, often in different corners of the globe but with a common sense of purpose, the splashing, frolicking freedom of a summer dip in a cool river.

I watch them and shudder, and wonder into what chemically imbalanced slush they are so innocently leaping.

I would not swim in the Skunk or the Big Sioux.

I would not eat the fish caught there.

When I paddle along in my kayak, I limit my contact with the actual water.

That's not how it should be.

We should not have to fear the river that shapes our city. Yet that's where we're stuck.

We have known for generations that the activity in which we engage to feed ourselves, raising livestock and treating cropland, comes with a price.

We know the byproducts of animal waste and chemicals are potentially harmful.

And we know how best to handle them. We have the technology.

Yet in South Dakota, we continue to pretend that we're doing the best we can while all the while the evidence suggests otherwise.

Two Argus Leader Media stories in recent weeks highlighted this reality. The first pointed out that attaining the goal of allowing actual recreation on the Big Sioux River isn't possible without also cleaning up Skunk Creek, which because of our flood control system is the major feeder of our urban waterway.

The second relayed a fundamental flaw in our efforts to clean up our lakes and rivers in eastern South Dakota. There are about 200 feedlots along the Big Sioux River between Brookings and Sioux Falls that are too small to require special permits but contribute to the overall contamination of the water.

There is very little the state can do under its current laws and budget restraints to fix the problem, according to Brad Johnson, chairman of the South Dakota Board of Water and Natural Resources.

Johnson of Watertown has been involved in water quality issues for several years. In his spare time, he chairs the water and natural resources board, which is responsible for developing and enforcing the state water plan.

Those are two very separate missions, however. It's one thing to set up a plan; it's quite another to enforce it.

In a story reported by the Argus Leader's Peter Harriman, and a subsequent appearance on "100 Eyes," the daily Internet talk show I host at argusleader.com, Johnson's frustration with accomplishing the latter of the two missions came through.

To be sure, there are efforts underway to reduce the pollution. But it's not enough.

"We're losing ground," Johnson said, "and we're going to continue to lose ground until we decide as a state and country that we're going to get serious about the issue."

Perhaps it's not surprising that the citizen head of a state board with a passion for conservation of natural resources would be concerned about the responsiveness of an agriculture sector and state bureaucracy seemingly bent on maintaining the status quo.

That is not the disturbing part of this tale.

The rather difficult bit to stomach is the reaction from the lawmakers whose job it is to guard our natural resources, in this case Sens. Shantel Krebs of Renner and Jason Frerichs of Wilmot. They represent their parties as the top managers of the Senate Agriculture and Natural Resources Committee.

And their message, as relayed by Harriman's reporting, was clear: "Everything is fine."

Both said they see no need for further regulation.

Both also pointed to urban run-off and lawn chemicals as a contributor to pollution. It's true, that's a point of discussion, but it ignores the larger issue.

One might suggest that lawmakers have their head in the sand when it comes to continued degradation of our key waterways.

An antidote to this blissful ignorance might be to take stroll through Dunham Park on the west side of the Best Little City in America, slip through the brambles down to the bank, where the eddies collect and the fireflies dance in a quickening twilight. Grab hold of an outcropping of long grass to steady yourself.

Dip that same head into the welcoming embrace of the Skunk Creek and all she has collected, from the pastures and feedlots upstream.

Hold your breath.

Close your eyes.

Everything is fine.

Patrick Lalley is managing editor of Argus Leader Media. Reach him at plalley@argusleader.com or 605-331-2291.

kansascity.com

THE KANSAS CITY STAR.

Health & Science News

Effort fences off ag areas along Sioux Falls creek

By PETER HARRIMAN

Updated: 2014-05-25T21:21:02Z

May 26

By PETER HARRIMAN

Argus Leader

SIOUX FALLS, S.D. — The stretch of the Big Sioux River that flows through Sioux Falls should be safe for swimming, without fear that diving below the surface would require a visit to a hospital emergency room and a course of antibiotics.

This is called immersion recreation, and it is the South Dakota Department of Environment and Natural Resources' goal for the river, based on standards established in the federal Clean Water Act.

The DENR also has set a lesser goal for Skunk Creek to become a stream suitable for fishing and limited contact, such as wading.

Skunk Creek, though, provides most of the river's flow through the city in summer, because much of the Big Sioux upstream is directed to the flood-control diversion channel.

Sioux Falls recently completed extensive recreational and public entertainment improvements to the River Greenway through downtown, and planning has begun for the third phase of that project, Mayor Mike Huether said. It is an effort to enhance the Big Sioux as a valued amenity, and if the river ever does reach the immersion recreation standard, its value to the community will skyrocket, said Teri Schmidt, executive director of the Sioux Falls Convention and Visitors Bureau.

"That would be just another plus about Sioux Falls and the river and the Falls Park area," she said. "People love water, and a lot of people that travel are looking for areas with water that they can enjoy for recreational activities. One of those is being able to put your foot in it.

"If it ever became the case where it was completely safe for people to swim and we started marketing that, I have a feeling there would be people excited about it."

While the city's major use of the river is for drinking water, Huether said, its recreational potential is inviting.

"The goal is to make it look good, second, to be able to float on top of it in canoes and kayaks. But wouldn't it be wonderful if we could actually tube down that river and swim in that river?" he asked.

But for that to happen, Skunk Creek needs to change.

The levels of E. coli and fecal coliform bacteria and total suspended solids in Skunk Creek don't magically drop to immersion recreation standards — a maximum 235 E. coli colonies per 100 milliliters of water on any specific day and no more than an average 126 colonies per 100 ml in a 30-day period. So when the water passes beneath the Interstate 29 bridge on its short transit to the confluence with the river, for the Big Sioux to meet its target, Skunk Creek must exceed its own.

At this point, though, the DENR goals for both the Big Sioux and its tributary, Skunk Creek, are theoretical. DENR monitoring from May and August last year showed Skunk Creek actually had lower E. coli and fecal coliform levels than did the Big Sioux. However, the river and creek both are considered impaired streams, too polluted for their suggested use.

Now, a consortium of city, area and state agencies are trying to reduce the influence of a major source of E. coli — livestock — on Skunk Creek and significantly improve its water quality. The Seasonal Riparian Area Management (SRAM) program is a pilot program in the Central Big Sioux River Watershed project.

In the past, agencies have spent hundreds of thousands of dollars to design and build manure-handling facilities for feedlots near Skunk Creek in an effort to lower E. coli levels in the stream.

This time, though, the answer to cleaner water during the recreation season might be as simple as a fence.

SRAM will pay farmers to fence livestock away from Skunk Creek's 100-year floodplain from April 1 to Sept. 30.

Payments are $60 an acre, per year, for 10- or 15-year contracts. The money is disbursed in a one-time, up-front payment. Farmers will be allowed to cut hay in the riparian area as long as they leave at least four inches of stubble, and SRAM also will pay for 75 percent of the cost of alternative water sources for farmers who relied on the creek to water livestock.

Barry Berg, South Dakota Association of Conservation Districts watershed project coordinator, pulled together the funding sources to develop SRAM. He said the program might be more attractive to farmers than another federal set-aside program, the Conservation Reserve Program, because SRAM is more generous in setbacks from the stream than is CRP.

The maximum riparian buffer CRP will allow is 120 feet, Berg said.

"That doesn't get a lot of producers interested. The floodplain can be a quarter-mile. At 120 feet, they would constantly be replacing fences," he said. Fences at the floodplain borders won't be swept away.

Also, because much of the foliage along the creek are cool season grasses such as bluegrass, it can be mowed for hay in the summer and still experience a burst of new growth in fall when weather cools. Farmers can put livestock back out on that pasture in October. Such haying and grazing are not approved uses for acres set aside in CRP.

With SRAM, "they get the best of both worlds," Berg said. "They can use the hay and graze it after the deferment period."

Ron Alverson of Wentworth enrolled a pasture of about 25 acres near Skunk Creek's headwaters in the SRAM program.

"In our instance, it worked really nice with this piece of property with Skunk Creek running through it," he said.

It's a narrow pasture, and because of that Alverson keeps stocking rates on it low.

"It generates very little income." SRAM "is a nice way to get some income off it and protect the water that goes through it."

"All us landowners have a moral obligation to do the best we can do so any activities on our land doesn't affect downstream neighbors," Alverson said. "I'm thrilled this program exists to help us."

Overall, the Central Big Sioux River Watershed project has $2 million for water-quality improvement projects, including SRAM. The money comes directly from the Environmental Protection Agency and U.S. Department of Agriculture's Natural Resource Conservation Service, and from EPA money passed through the DENR and city of Sioux Falls.

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The Central Big Sioux project area of the river and its tributaries contains more than 1.2 million acres and includes 65 of the 12-digit Hydrologic Unit Codes.

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Season-long monitoring will help determine the effect on water quality of fencing livestock away from Skunk Creek. The East Dakota Water Development District has a contract to do water-quality monitoring from April through September this year and next. Development district personnel took water samples the first week in May for baseline data. Those samples still are being processed. The staff will monitor a

four-mile stretch of the creek south of Colton twice a week and a longer stretch that extends as far south as Marion Road, just above the confluence, biweekly through the end of September.

Jahraus, though, said monitoring should continue beyond two years. Jay Gilbertson, water development district manager, agreed that multiple years of data from high and low flow summers would provide a representive view of SRAM effects.

Two years of data, however, will show a notable improvement in water quality, Jack Majeres predicts. He is chairman of the Moody County Conservation District board of supervisors. The organization is the SRAM Skunk Creek project lead.

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But you've got to start somewhere, Jahraus maintains. "We've got to work where we've got problems and willing landowners."

Even if unmanaged grazing dilutes SRAM's benefits somewhat, Sioux Falls environmental analyst Jesse Neyens contends the program will have a positive effect on water quality in the Big Sioux in Sioux Falls.

"It will certainly help what goes over the falls," he said. "We don't have control of everything. But the more we can put in the program, the more water quality should improve."

The signal success of a pilot program, after all, is to demonstrate that it should be continued on a grander scale.

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He insisted the Big Sioux can be made suitable for immersion recreation.

"It's doable, but there's a lot of work to do yet. We're in the initial stages of the water quality initiative in the city."

Gilbertson remembers the years when agencies spent money to improve feedlot manure-handling facilities in an effort to improve Skunk Creek's water quality.

"It's ferociously expensive," he said, "and unless the creek runs through your feedlot, short of a catastrophic failure or a 500-year rain, very little of what left your place was going to end up in the creek.

"Dollar for dollar, this is the most effective way to reduce loading in decades," Gilbertson said of offering farmers SRAM payments to fence livestock away from the creek.

"I'm looking forward to it. This is the kind of thing we should have started doing a long time ago."

Information from: Argus Leader, http://www.argusleader.com

Effort fences off ag areas along creek for river's sake

Peter Harriman | pharrima@argusleader.com, | pharrima@argusleader.com; *11:29 p.m. CDT May 17, 2014*

(Photo: Elisha Page / Argus Leader)

The stretch of the Big Sioux River that flows through Sioux Falls should be safe for swimming, without fear that diving below the surface would require a visit to a hospital emergency room and a course of antibiotics.

This is called immersion recreation, and it is the South Dakota Department of Environment and Natural Resources' goal for the river, based on standards established in the federal Clean Water Act.

The DENR also has set a lesser goal for Skunk Creek to become a stream suitable for fishing and limited contact, such as wading.
Skunk Creek, though, provides most of the river's flow through the city in summer, because much of the Big Sioux upstream is directed to the flood-control diversion channel.

Sioux Falls recently completed extensive recreational and public entertainment improvements to the River Greenway through downtown, and planning has begun for the third phase of that project, Mayor Mike Huether said. It is an effort to enhance the Big Sioux as a valued amenity, and if the river ever does reach the immersion recreation standard, its value to the community will skyrocket, said Teri Schmidt, executive director of the Sioux Falls Convention and Visitors Bureau.

“That would be just another plus about Sioux Falls and the river and the Falls Park area,” she said. “People love water, and a lot of people that travel are looking for areas with water that they can enjoy for recreational activities. One of those is being able to put your foot in it.

“If it ever became the case where it was completely safe for people to swim and we started marketing that, I have a feeling there would be people excited about it.”

While the city’s major use of the river is for drinking water, Huether said, its recreational potential is inviting.

“The goal is to make it look good, second, to be able to float on top of it in canoes and kayaks. But wouldn’t it be wonderful if we could actually tube down that river and swim in that river?” he asks.

But for that to happen, Skunk Creek needs to change.

The levels of E. coli and fecal coliform bacteria and total suspended solids in Skunk Creek don’t magically drop to immersion recreation standards — a maximum 235 E. coli colonies per 100 milliliters of water on any specific day and no more than an average 126 colonies per 100 ml in a 30-day period. So when the water passes beneath the Interstate 29 bridge on its short transit to the confluence with the river, for the Big Sioux to meet its target, Skunk Creek must exceed its own.

At this point, though, the DENR goals for both the Big Sioux and its tributary, Skunk Creek, are theoretical. DENR monitoring from May and August last year showed Skunk Creek actually had lower E. coli and fecal coliform levels than did the Big Sioux. However, the river and creek both are considered impaired streams, too polluted for their suggested use.

Paying farmersto fence livestock

Now, a consortium of city, area and state agencies are trying to reduce the influence of a major source of E. coli — livestock — on Skunk Creek and significantly improve its water quality. The Seasonal Riparian Area Management (SRAM) program is a pilot program in the Central Big Sioux River Watershed project.

In the past, agencies have spent hundreds of thousands of dollars to design and build manure-handling facilities for feedlots near Skunk Creek in an effort to lower E. coli levels in the stream.

This time, though, the answer to cleaner water during the recreation season might be as simple as a fence.

SRAM will pay farmers to fence livestock away from Skunk Creek's 100-year floodplain from April 1 to Sept. 30.

Payments are $60 an acre, per year, for 10- or 15-year contracts. The money is disbursed in a one-time, up-front payment. Farmers will be allowed to cut hay in the riparian area as long as they leave at least four inches of stubble, and SRAM also will pay for 75 percent of the cost of alternative water sources for farmers who relied on the creek to water livestock.

More inviting to farmers than CRP

Barry Berg, South Dakota Association of Conservation Districts watershed project coordinator, pulled together the funding sources to develop SRAM. He said the program might be more attractive to farmers than another federal set-aside program, the Conservation Reserve Program, because SRAM is more generous in setbacks from the stream than is CRP.

The maximum riparian buffer CRP will allow is 120 feet, Berg said.

"That doesn't get a lot of producers interested. The floodplain can be a quarter-mile. At 120 feet, they would constantly be replacing fences," he said. Fences at the floodplain borders won't be swept away.

Also, because much of the foliage along the creek are cool season grasses such as bluegrass, it can be mowed for hay in the summer and still experience a burst of new growth in fall when weather cools. Farmers can put livestock back out on that pasture in October. Such haying and grazing are not approved uses for acres set aside in CRP.

With SRAM, "they get the best of both worlds," Berg said. "They can use the hay and graze it after the deferment period."

Ron Alverson of Wentworth enrolled a pasture of about 25 acres near Skunk Creek's headwaters in the SRAM program.

"In our instance, it worked really nice with this piece of property with Skunk Creek running through it," he said.

It's a narrow pasture, and because of that Alverson keeps stocking rates on it low.

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Using EPA moneyfor water quality

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Encouraging results from Bachelor Creek

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Bacterial Levels

E.Coli
(per 100 mililiters of water)

	SKUNK CREEK	BIG SIOUX RIVER
MAY 2013	6.3 organisms	31.8 organisms
AUGUST 2013	33.6 organisms	533 organisms*

Fecal Coliform
(per 100 mililiters of water)

	SKUNK CREEK	BIG SIOUX RIVER
MAY 2013	no detectable coliforms	20 organisms
AUGUST 2013	no detectable coliforms	440 organisms*

* These sample results are higher than the water quality standards established for the Big Sioux River.

Volunteers needed for Big Sioux River cleanup Saturday

Argus Leader staff 1:22 p.m. CDT May 14, 2015

 Buy Photo

Trash at Lien Park on the north side of the Big Sioux River. Join the Argus Leader cleanup May 16 from 8 a.m. to 11 a.m. Other parks along the river will also be hosting cleanups.(Photo: Argus Leader)Buy Photo

Argus Leader Media is partnering up with other companies and the city of Sioux Falls to clean up the Big Sioux River on Saturday morning, and you can help.

Argus Leader Media and reporters Joe Sneve and Jill Callison will be at Lien Park on the north side of the Big Sioux on Cliff Avenue.

When: Stop by any park from 8 a.m. to 11 a.m. Saturday. Gloves are provided, but volunteers should wear appropriate clothing. Volunteer scan show up at any time.

Where: In addition to Lien Park, other companies will be hosting cleanups at: Sanford Sports Complex, Elmwood Park, Elmen Park Trailhead on W. 12th Street; Legacy Park; Dunham Park,

Park Maintenance Shop at 2401 W. 49th Street; Yankton Trail; Pasley Park; Spencer Park; Riverdale Park; Fawick Park; Falls Park and at Feeding South Dakota at 3511 N. 1st Avenue. Those attending at Feeding South Dakota are asked to bring canned food items to donate.

In 2014, 180 volunteers picked up 4,000 pounds of trash. If parks have too many volunteers Saturday morning, people will be asked to go to different parks.

The Argus Leader will provide a light breakfast at Lien Park for the first volunteers who arrive in the morning.

Photos: Trash at Lien park

Argus Leader reporter Joe Sneve will be cleaning up Lien Park from 8 a.m. to 11 a.m. May 16. Join him there or join other teams at parks along the river to clean up the river greenway. (Photo: Argus Leader)
Buy Photo Fullscreen

Written by
J.L. Atyeo

- Filed Under
- News
- Mike Huether

Sep. 9, 2013

Water summit targets a cleaner Big Sioux

Mayor's initiative shines spotlight on river quality

The Big Sioux River is one of the nation's dirtiest water bodies by one measure, and while cleanup efforts are getting more attention, the Big Sioux has a ways to go.

"I certainly wouldn't let my grandson swim in it," said Jay Gilbertson, manager of the East Dakota Water Development District based in Brookings.

When it comes to swimming, water in the Big Sioux exceeds the standard level for E. coli bacteria, which comes from feces. Watershed groups are monitoring those levels monthly. Levels have been fairly consistent in recent years, barring any big rain events that can throw off results as they tend to wash manure from livestock and droppings from wildlife into the river.

"That's the nature of life in the Big Sioux basin," Gilbertson said. "Short of fencing off huge chunks of the river and excluding livestock, swimming in the Big Sioux might be a bit problematic."

Calling attention to what has been accomplished in the watershed, Sioux Falls Mayor Mike Huether is host to the city's first Big Sioux River Water Summit, from 3 to 7 p.m. today at the Orpheum Theater. Twelve speakers will discuss work in conservation, flood control and recreation, among other topics.

There's another water quality event scheduled next month in Brookings.

Moving from talk to defined improvements is a complex task, however.

The river as it runs through Sioux Falls heading toward the Iowa border is held to a different water quality standard than it is upstream. As it runs through the city, the river is supposed to be swimmable and open for recreation. On its journey from its headwaters north of Watertown, though, the river runs through farmland and has to meet a lower standard for water quality.

“That little block of water moves downstream, and suddenly (bacteria) is three times the allowable limit,” Gilbertson said. “The water hasn’t changed; it’s just we use a different criteria.”

One tributary in particular, Skunk Creek, has been the major focus for improving upstream water quality. It contributes about half of the bacteria contamination in the river as it flows through Sioux Falls. The other half comes mostly from the city’s storm water system, and a small percentage comes from further upstream.

Skunk Creek, which flows south from Madison, is surrounded by agricultural land. It is also on the list of impaired water bodies, in part for the amount of sedimentation and partly for E. coli.

The Natural Resources Conservation Service, through a national water quality initiative program, began focusing last year on Skunk Creek cleanup. Conservationists are working with producers on handling manure and keeping cattle away from the creek. To improve sediment levels, they are encouraging farmers to plant cover crops and keep from tilling their land before planting season.

Producers have been receptive to the ideas, state conservationist Jeff Zimprich said. Starting with a $750,000 budget in the first year of the program, there was so much interest that the conservation service added federal dollars and ended up spending $1.1 million.

Zimprich said it will be a few years before their efforts start to show any noticeable improvements in the river.

The Central Big Sioux Watershed Implementation Project, led by the Moody County Conservation District, implemented a pilot program called seasonal riparian area

management or S-RAM. It allows producers to hay along Skunk Creek throughout the summer and use that grass for livestock.

This fall, if there are four to six inches of vegetation there, producers may put cattle there through the winter. Leaving the grass buffer helps filter out bacteria and reduces sediment.

The pilot program also works with farmers to put in alternative water sources so cattle don't have to use the stream.

Watershed coordinator Barry Berg also said it's too early to see any improvements in water quality from the monitoring end of it, but he's noticed good signs.

"When I'm out on the land and traveling around in the watershed," he said, "I've actually noticed a lot of the stream has healed up."

Berg is optimistic about where the river is headed with so many partners working toward a better Big Sioux. He said this week's Water Summit is an opportunity to bring urban and rural interests together and he's hoping it will bring up some good discussions.

"Everybody has an impact on water quality," he said. "It's not just the rural. There's impact from the urban population."

While Gilbertson doesn't hold out hope for being able to swim in the river anytime soon, he said they're already making great strides in improving the water quality.

"It doesn't mean we don't try," he said.

If you go

WHAT: Mayor's Big Sioux River Water Summit; includes presentations on water quality, water resources and conservation, urban, rural and government watershed partnerships, flood control, fisheries and recreation. Open to the public.
WHEN: 3 to 7 p.m. today
WHERE: Orpheum Theater, 315 N. Phillips Ave.
NEXT: Eastern South Dakota Water Conference; 8 a.m. to 5 p.m. Oct. 30 at the University Student Union at South Dakota State University, Brookings

Administration
224 West Ninth Street
P.O. Box 7402
Sioux Falls, SD 57117-7402
T: 605-367-8600 F: 367-8114

Engineering/Real Estate
224 West Ninth Street
P.O. Box 7402
Sioux Falls, SD 57117-7402
T: 605-367-8601 F: 367-4310

Environmental
1017 East Chambers Street
Sioux Falls, SD 57104-7200
T: 605-367-8276 F: 367-4886

Fleet Management
1000 East Chambers Street
P.O. Box 7402
Sioux Falls, SD 57117-7402
T: 605-367-8240 F: 367-8239

GIS
132 North Dakota Avenue
P.O. Box 7402
Sioux Falls, SD 57117-7402
T: 605-367-8651 F: 367-8113

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P.O. Box 7402
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T: 605-367-8162 F: 367-8167

Light
2000 North Minnesota Avenue
P.O. Box 7402
Sioux Falls, SD 57117-7402
T: 605-373-6979 F: 373-6974

Street
1000 East Chambers Street
P.O. Box 7402
Sioux Falls, SD 57117-7402
T: 605-367-8255 F: 367-8200

Utility Billing
1201 North Western Avenue
P.O. Box 7401
Sioux Falls, SD 57117-7401
T: 605-367-8131 F: 367-7341

Water Maintenance
668 West Algonquin Street
P.O. Box 7402
Sioux Falls, SD 57117-7402
T: 605-367-8810 F: 367-7883

Water Purification
2100 North Minnesota Avenue
P.O. Box 7402
Sioux Falls, SD 57117-7402
T: 605-373-6940 F: 373-6941

Water Reclamation
4500 North Sycamore Avenue
Sioux Falls, SD 57104-9612
T: 605-367-8188 F: 367-8484

NEWS RELEASE

For Immediate Release

Release Date: August 13, 2013

Contact: Bob Kappel, Environmental Manager

Phone: 605-367-8276

Mayor's Big Sioux River Water Summit: "We Need the River and the River Needs Us!"

Sioux Falls, South Dakota: Sioux Falls Mayor Mike Huether will host the first "Mayor's Big Sioux River Water Summit" on Monday, September 9, 2013. The summit is an opportunity for the public to become more knowledgeable and engaged in a critical natural resource, the Big Sioux River.

"The Big Sioux River is one of the many things that make our city so beautiful and vibrant," says Mayor Huether. "However, it needs our help, and it needs it now! Improvements can be made to water quality, drainage, resource management and recreational opportunities."

The summit will include multiple presentations in the following general areas:

- Water quality
- Water resource and conservation
- Urban, rural and government watershed partnerships
- Flood control—FEMA
- Fisheries and recreation

The Mayor also will facilitate a question-and-answer session with other watershed professionals and stakeholders to listen to and understand the public's concerns.

Save the Date
Mayor's Big Sioux River Water Summit
Monday, September 9, 2013
3 to 7 p.m.
Orpheum Theater
315 North Phillips Avenue, Sioux Falls

The summit is open to the public. Residents are encouraged to participate and help the City and water professionals maintain and improve this important water resource. Look for more information about the event in the coming weeks.

# # #

Programs created to further improve Big Sioux River

Mar. 21, 2014 |

Mark Cotter, director of Public Works, speaks during a Water Quality News Conference on Thursday, March 20, 2014, at the City of Sioux Falls Public Works Environmental Center in Sioux Falls. The city of Sioux Falls has announced it is intensifying its efforts to improve water quality of the Big Sioux River.

Show Caption

View Thumbs

PURCHASE IMAGE
1 of 7

Joe Ahlquist - Argus Leader

Written by
Nick Lowrey

- Filed Under
- News

Purchase ImageZOOM

Mary Wright and Justin Grass Rope, both of Lower Brule, take in the sights and sounds of the Big Sioux River on Thursday at Falls Park in Sioux Falls. The city of Sioux Falls has announced it is intensifying its efforts to improve water quality of the Big Sioux River. / Joe Ahlquist / Argus Leader

The Big Sioux River has gotten cleaner in recent years, but Sioux Falls city officials are not satisfied.

The city announced a series of programs Thursday to improve the river's water quality, from educating pet owners about animal waste to paying farmers to stop polluting Skunk Creek.

"We as the city of Sioux Falls know that we have not been perfect," Environmental Manager Bob Kappel said at a news conference. "We have not lived up to our responsibilities fully over the years."

The new strategies include educating pet owners about cleaning up pet waste, monitoring storm sewer outflows, adding water quality efforts to the city's flood management plan, restarting an annual river greenway cleanup event, expanding waterway adoption programs and growing the mayor's Big Sioux Water Summit.

"We really need to make sure that the quality of the Big Sioux River and Skunk Creek continue to improve," Public Works Director Mark Cotter said. "It's so essential to the environment, ecology and quality of life of Sioux Falls."

Kappel said the city has succeeded in reducing the levels of ammonia, dissolved oxygen and iron in the river. The state Department of Environment and Natural Resources no longer lists those pollutants as impairments on the Sioux Falls section of the river.

“Sometimes, people get the idea that the Sioux River is a polluted river,” Kappel said. “That’s not really a true picture of the river. It is impaired, but it has improved dramatically.”

The river as it flows through the city still struggles with sediment and bacteria, however. The amount of E. coli bacteria in the river has been especially difficult to control and has led to restrictions on the river’s uses, most notably swimming.

“That’s what we’re trying to do — bring the river into compliance for those designated uses,” Kappel said.

To that end, the city is working with the Central Big Sioux River Coalition and several other conservation organizations on a set of aggressive programs to take the fight against E. coli to the next level.

Programs created to further improve Big Sioux River

Besides educating its citizens, the city will help pay livestock producers and farmers to keep animal waste out of Skunk Creek, which a recent study backed by the city found was the source of 48 percent of the Big Sioux River’s E. coli. Producers would get up to $60 per acre to create a riparian buffer zone around Skunk Creek to reduce bacteria runoff. Farmers also will be encouraged to stop using the creek to water their livestock and will be connected with programs to help them pay for alternative sources.

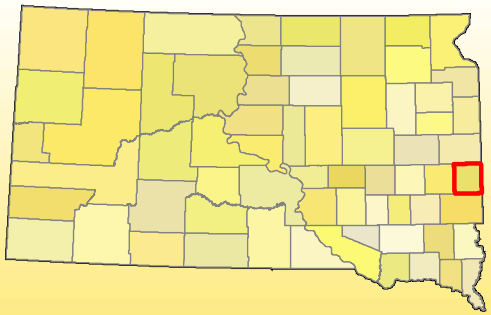
“Their main concern is it’s a change in their land management, it’s a change in how they’ve managed their operations successfully for years,” said Barry Berg of the South Dakota Association of Conservation Districts, who already has begun working with farmers on water quality issues.

Sioux Falls’ efforts to curb the sediment in the river also have seen success. So far, $6 million has been spent to create stilling ponds for storm runoff that allow brake dust and sand to settle out before the water hits the river. Another $1.2 million has been spent to upgrade the city’s flood control ponds.

Improving water quality has been a major priority for the East River Group of the South Dakota Sierra Club, and the city's efforts to make the river cleaner all have been positive, said the group's president, Dana Loeske

"You've got to be optimistic," Loeske said. "When you look at other cities in the Midwest, we are head and shoulders above any other city in investing in water quality."

Moody County



Priority Riparian Areas were based on beneficial uses for streams as defined in the South Dakota Administrative Rule 74:51:03:02. Zone A includes waters designated for the uses of domestic water supply, warm water semi-permanent fish life propagation, and immersion recreation. Zone B includes waters designated for the uses of warm-water marginal fish life propagation and limited-contact recreation. Zone C uses include fish and wildlife propagation, recreation, stock watering, and irrigation. The buffer widths are related to Water Quality Standard Criteria as defined in Chapter 74:51:01 of the South Dakota Administrative rules. Pollutants of concern are sediment, nitrates, and bacteria. Waters with higher standards for pollutants have been assigned wider riparian buffers. The Zone A buffer is 120-feet, the Zone B Buffer is 60-feet, and the Zone C buffer is 30-feet.

- Zone A: 120 Foot Buffer
- Zone A:Impared Stream
- Zone B: 60 Foot Buffer
- Zone B:Impared Stream
- Zone C: 30 Foot Buffer
- High Priority Drainage Area
- High Priority Sections
- Lakes

N W E S

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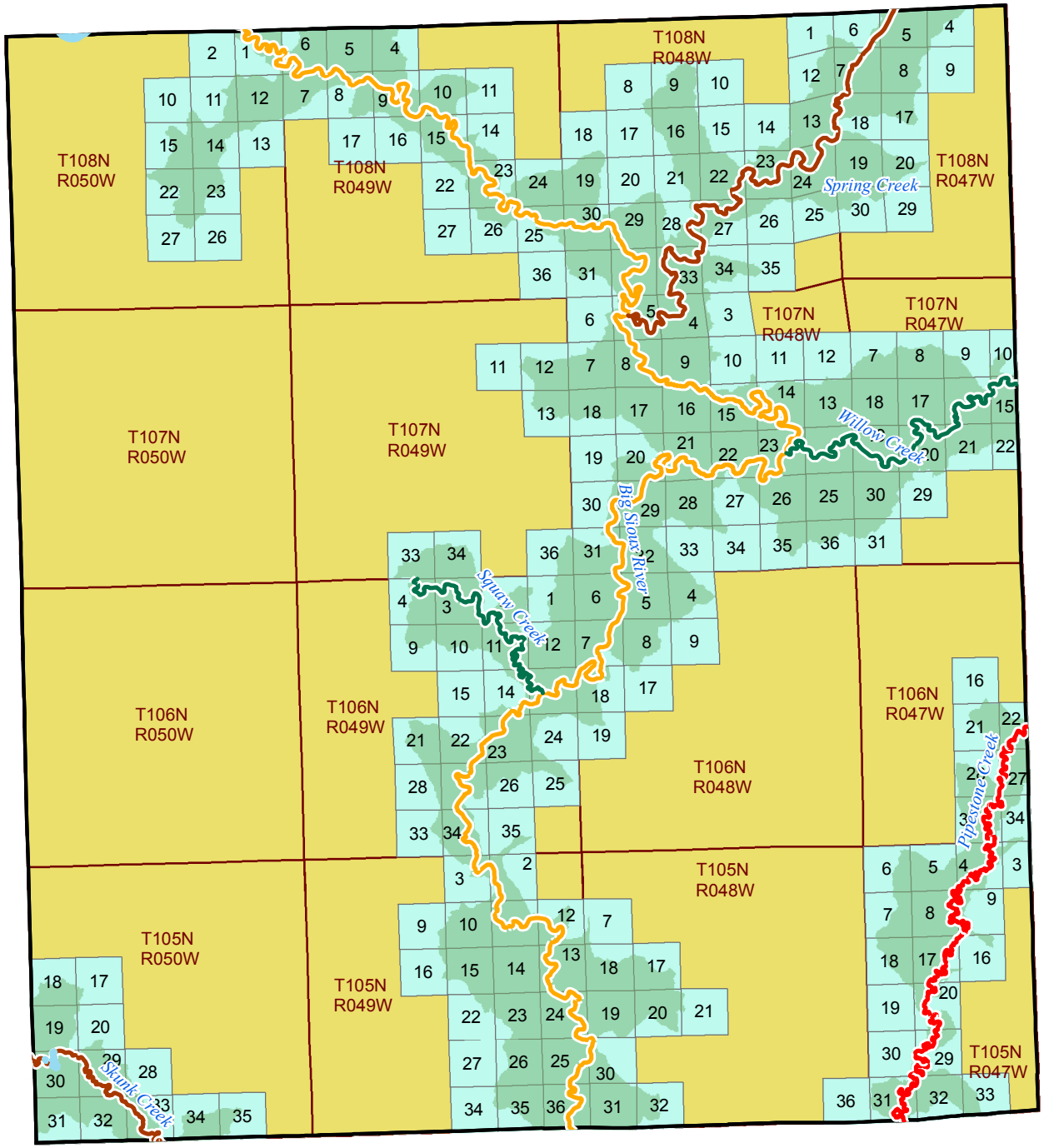
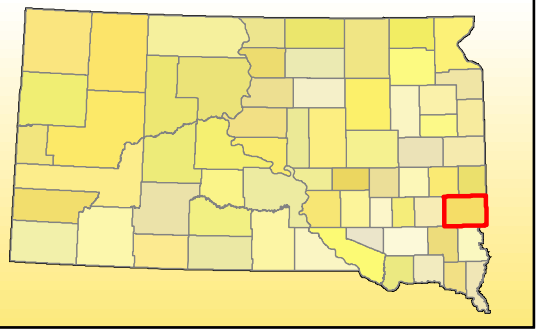


Minnehaha County

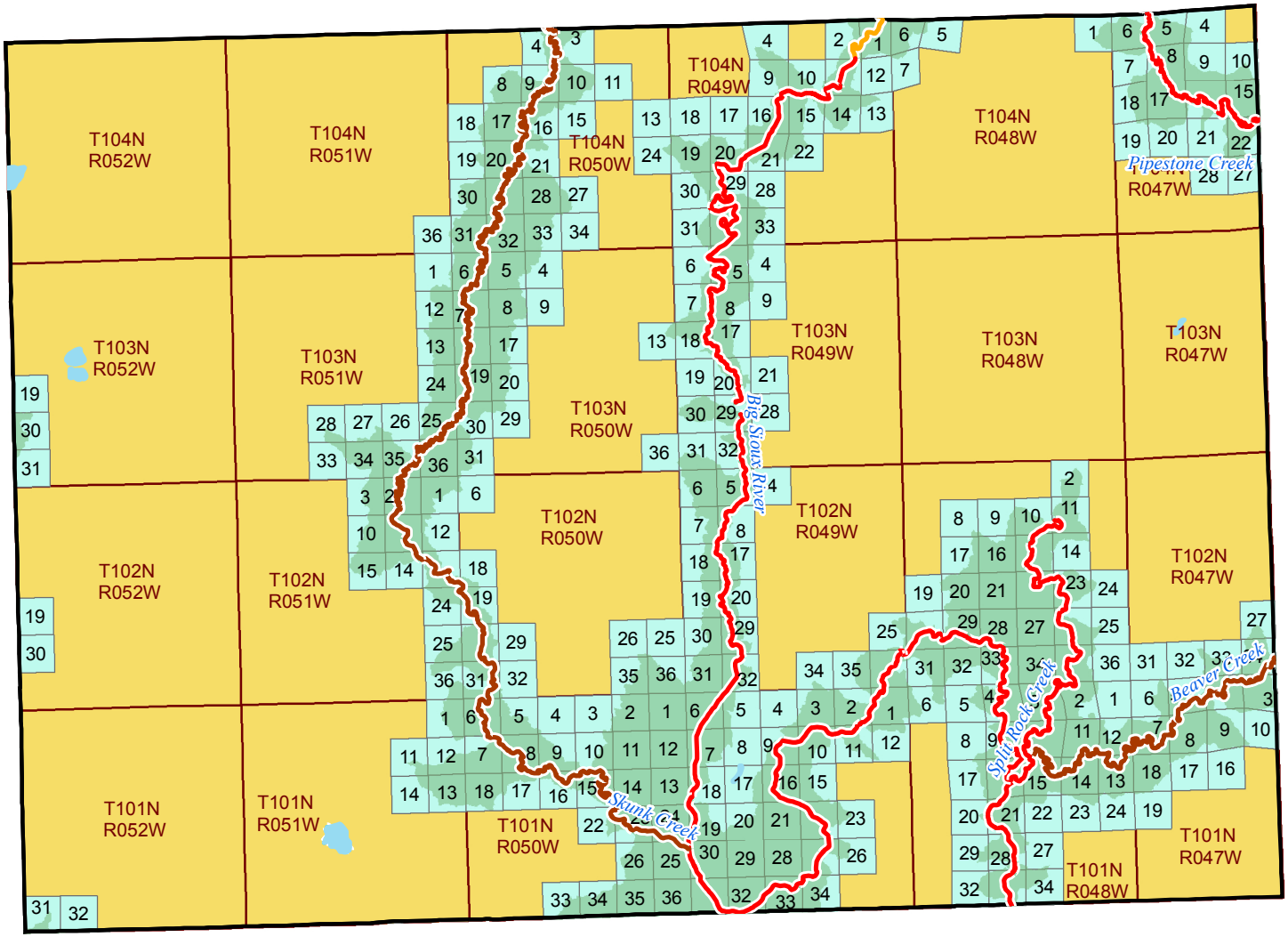
South Dakota Department of Environment & Natural Resources
Protecting SD's Tomorrow... Today



Priority Riparian Areas were based on beneficial uses for streams as defined in the South Dakota Administrative Rule 74:51:03:02. Zone A includes waters designated for the uses of domestic water supply, warm water semi-permanent fish life propagation, and immersion recreation. Zone B includes waters designated for the uses of warm-water marginal fish life propagation and limited-contact recreation. Zone C uses include fish and wildlife propagation, recreation, stock watering, and irrigation. The buffer widths are related to Water Quality Standard Criteria as defined in Chapter 74:51:01 of the South Dakota Administrative rules. Pollutants of concern are sediment, nitrates, and bacteria. Waters with higher standards for pollutants have been assigned wider riparian buffers. The Zone A buffer is 120-feet, the Zone B Buffer is 60-feet, and the Zone C buffer is 30-feet.

- Zone A: 120 Foot Buffer
- Zone A:Impared Stream
- Zone B: 60 Foot Buffer
- Zone B:Impared Stream
- Zone C: 30 Foot Buffer
- High Priority Drainage Area
- High Priority Sections
- Lakes

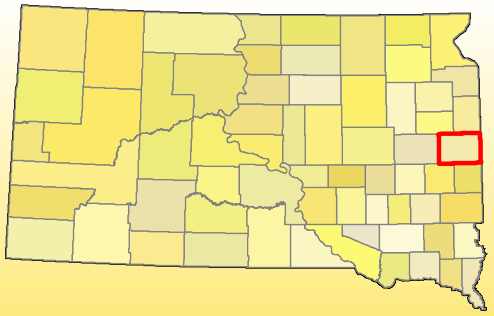
N W E S



1:291,680

01/02/2013

Brookings County



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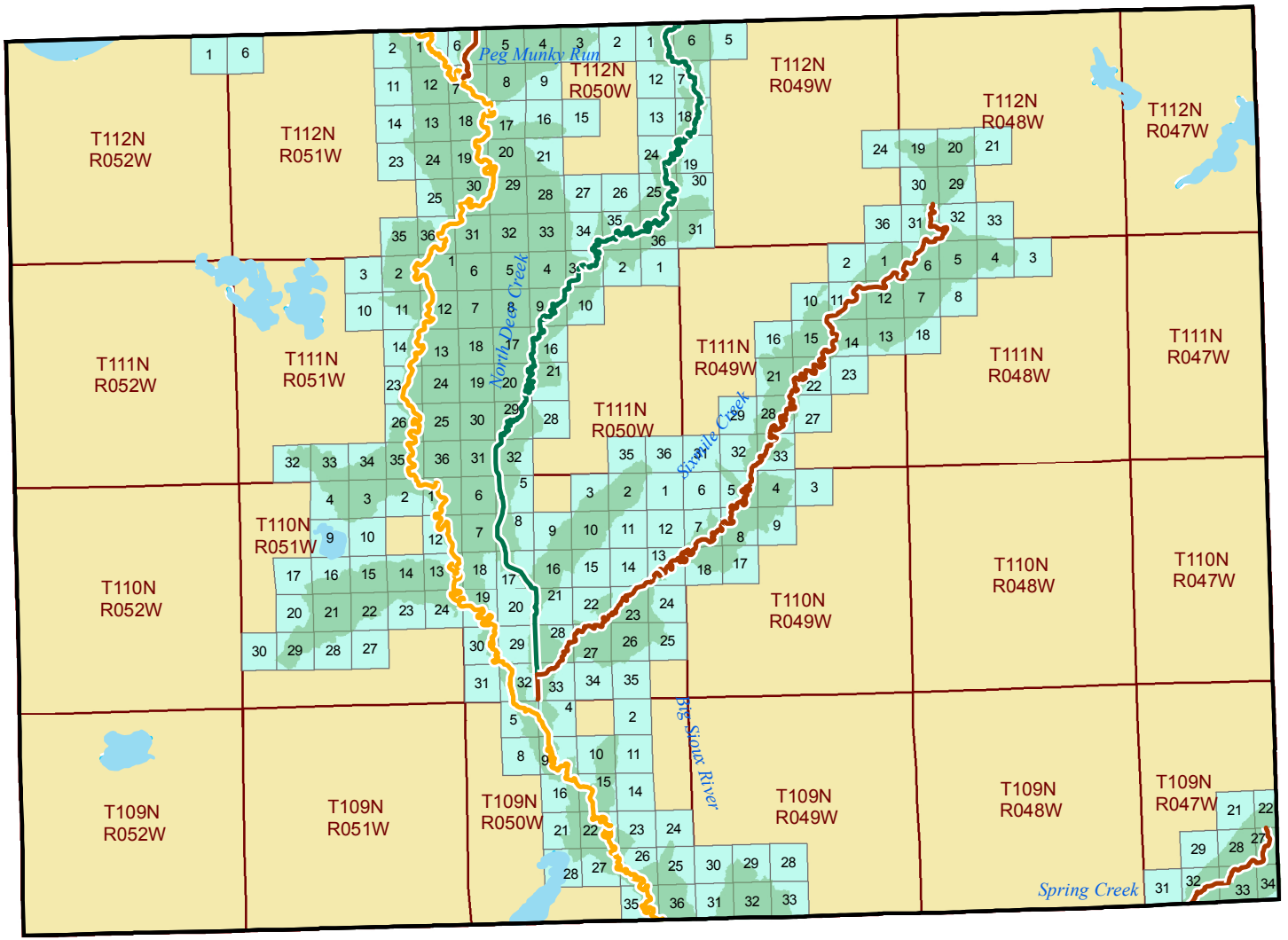
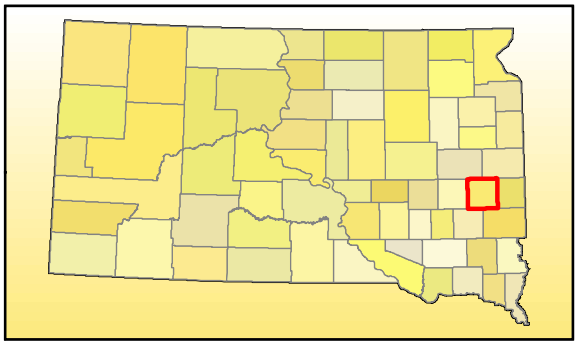
N W E S

1:288,124

12/31/2012



Lake County



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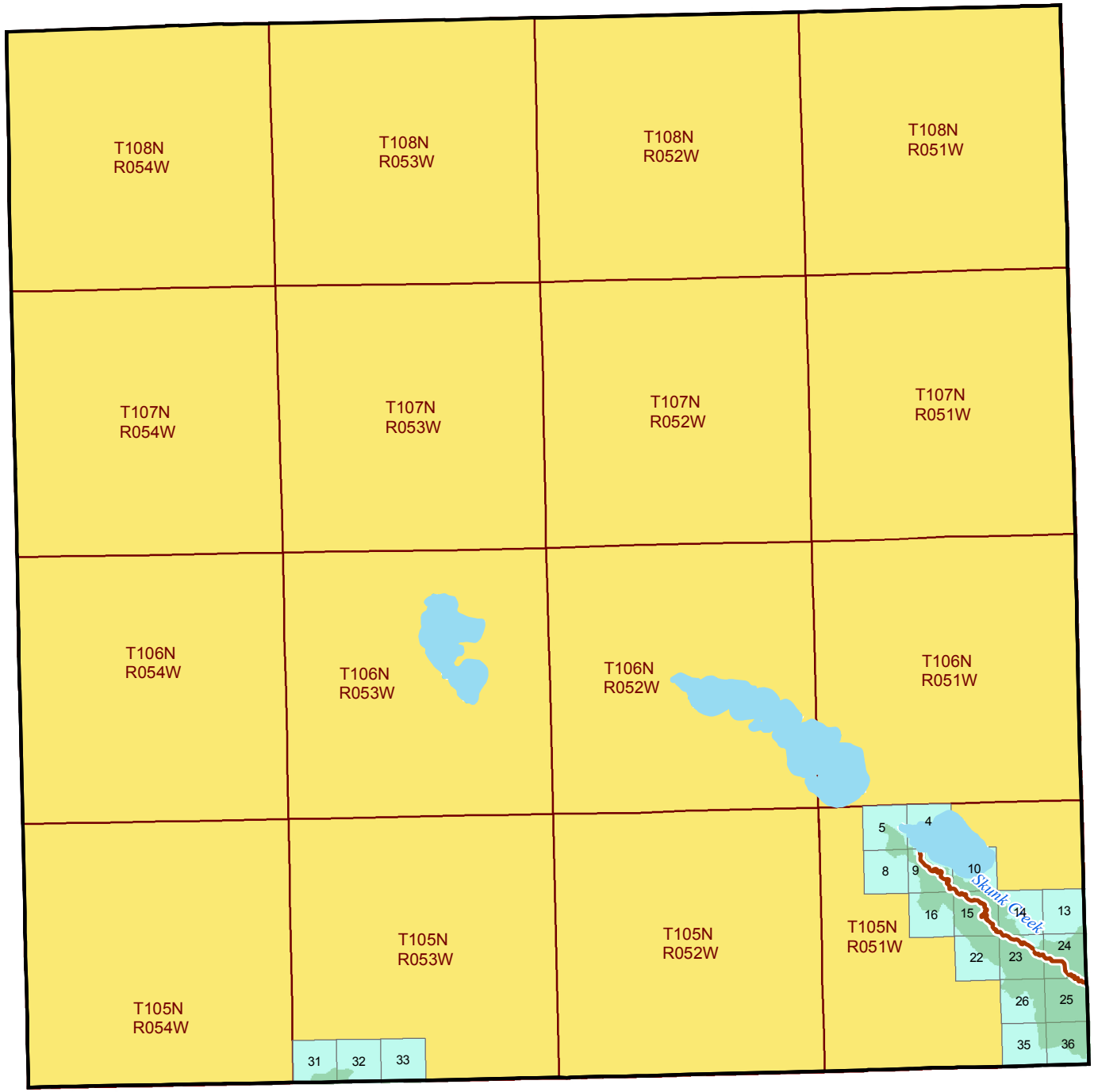
N W E S

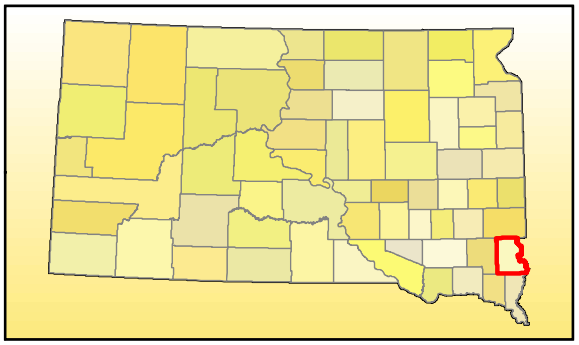
1:217,850

12/31/2012

SouthDakota
Department of Environment & Natural Resources
Protecting SD's Tomorrow... Today



Lincoln County



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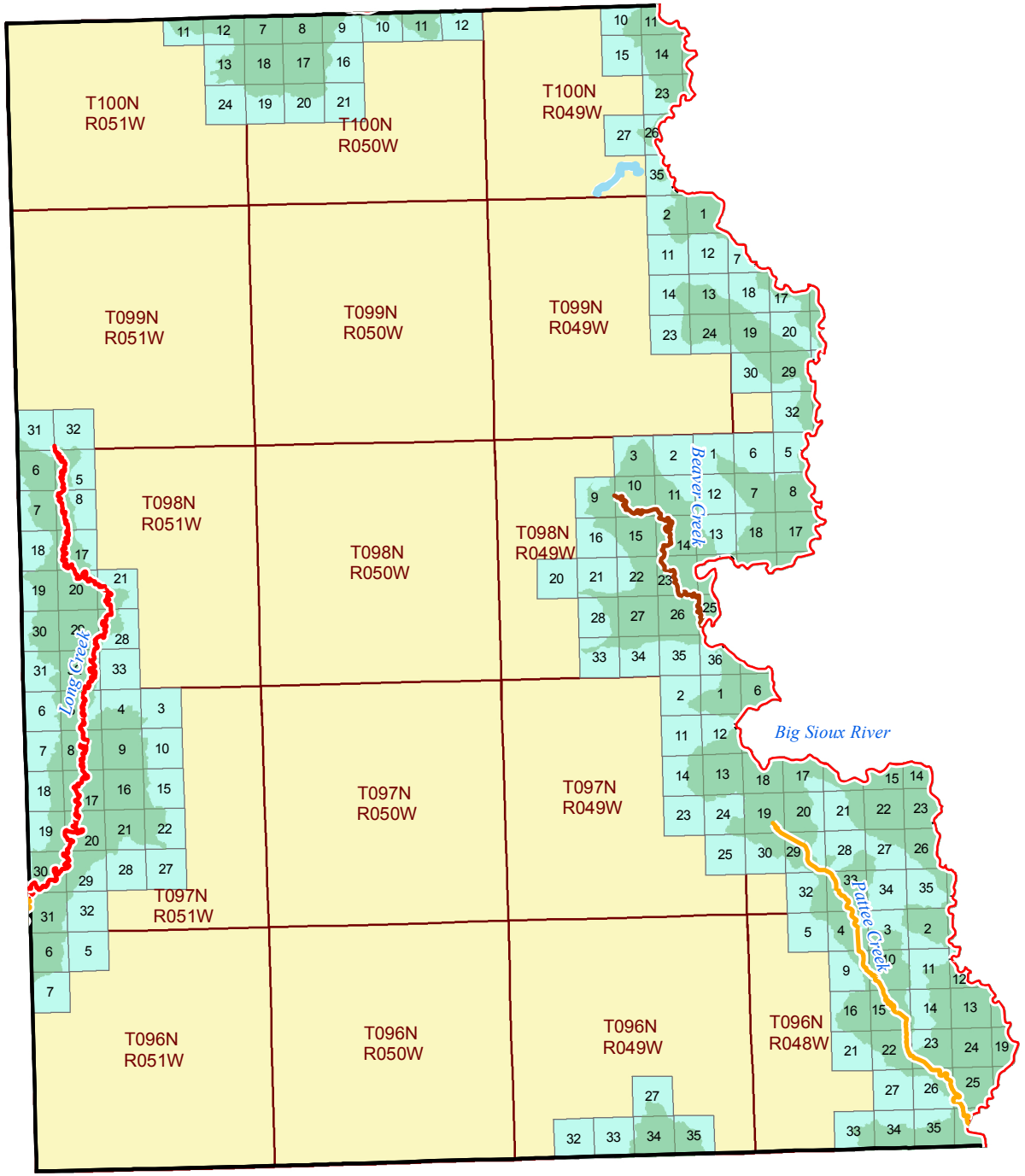
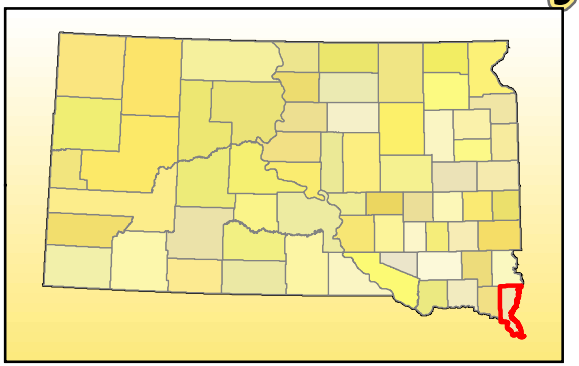
N W E S

1:259,390

01/02/2013



Union County



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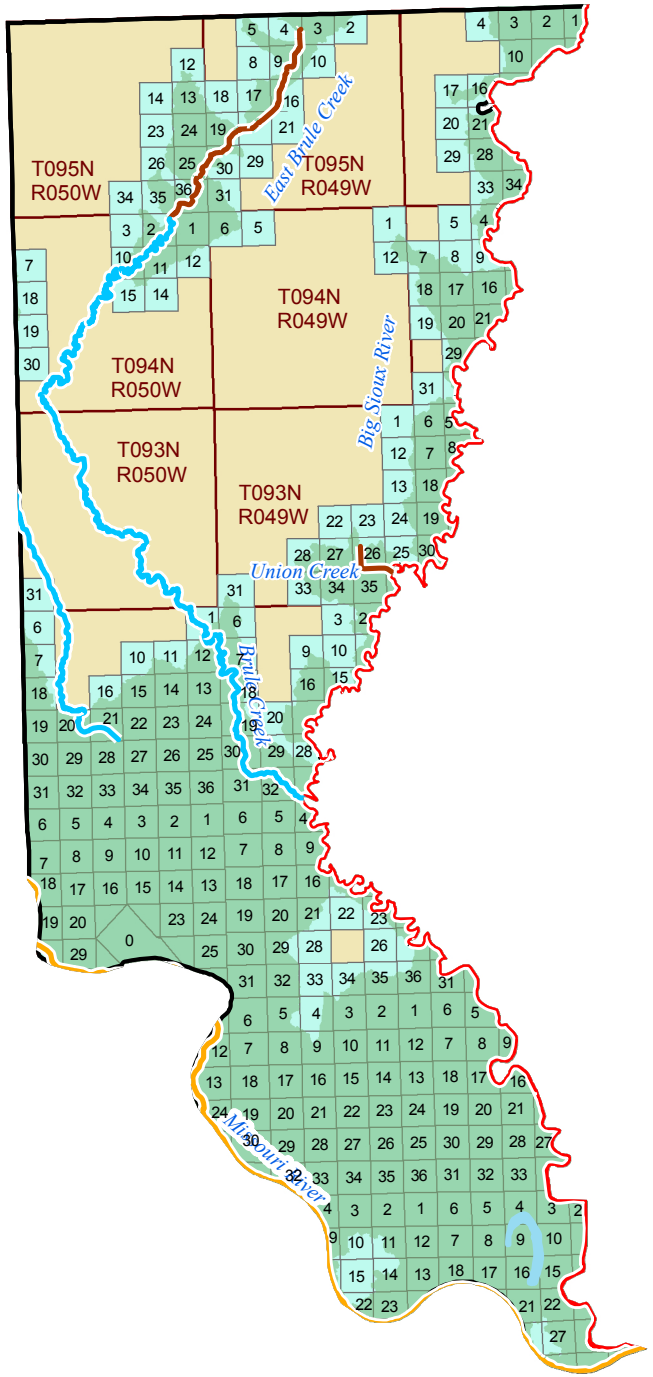
N W E S

1:370,760

01/02/2013

South Dakota Department of Environment & Natural Resources
Protecting SD's Tomorrow... Today



CENTRAL BIG SIOUX RIVER WATER QUALITY
STATE OF SOUTH DAKOTA
JOINT POWER AGREEMENT

AGREEMENT made and entered into by and between Moody County Conservation District, 202 East 3rd Ave, Flandreau, SD 57028, (hereinafter "Moody"), and the City of Sioux Falls, 224 W. Ninth St, Sioux Falls, SD 57117-7402, (hereinafter "Sioux Falls"), to implement the Central Big Sioux River Watershed Project Implementation Plan (hereinafter "CBSRW PIP").

I
GENERAL PROVISIONS

Moody hereby enters into this Agreement for services with Sioux Falls in consideration of and pursuant to the terms and conditions set forth herein.

1. Moody and Sioux Falls will perform those services described in the CBSRW PIP, attachment A and by this reference incorporated herein. The Brookings County Conservation District, Lake County Conservation District, Minnehaha County Conservation District and East Dakota Water Development District have tasks that are referenced in the CBSRW PIP. Moody and Sioux Falls will work toward having the other entities enter into Joint Powers Agreements for the benefit of Moody, Sioux Falls and the other Conservation Districts and the East Dakota Water Development District but this agreement is being entered into by Moody and Sioux Falls to allow both entities to proceed on their joint goal of improving the water quality in the Central Big Sioux Watershed "CBSRW".

2. Moody and Sioux Falls services under this Agreement shall commence upon signing and end on October 2, 2016, unless sooner terminated pursuant to the terms hereof.

3. In order to improve water quality in the CBSRW Moody, and Sioux Falls agree to collectively work together to promote and provide assistance to landowners and operators in planning and installing recommended soil and water conservation Best Management Practices "BMP". These BMPs will assist in addressing the water quality concerns in the watershed and attempt to achieve the established total maximum daily load quantities that have been adopted to protect and enhance the beneficial uses of that portion of the Big Sioux River between the Hamlin County and Brookings County line to North Sioux City, SD.

4. Moody will be responsible for their own equipment, human resources, insurance, billing, accounting and other administrative costs when doing work in other counties. Sioux Falls will be responsible for their own equipment, human resources, insurance, billing, accounting and other administrative costs when carrying out the duties in this agreement.

5. It is agreed that the two parties will support a BMP implementation project “Project” to improve the water quality of the Big Sioux River, located in eastern South Dakota. The primary purpose of the BMP implementation measures is to reduce bacteria and sediment loading to the Big Sioux River and its named tributaries between Brookings/Hamlin County boundary and North Sioux City, South Dakota, by offering incentives to producers (hereinafter referred to as the “Producer”).

6. The activities, budget, and milestones involved in the Project are described in the attached CBSRW PIP (Attachment A). The CBSRW PIP, budget and projected timeline may be modified with written approval of the South Dakota Department of Environment and Natural Resources (SDDENR).

7. It is understood that the two parties will provide funds and/or support for the implementation and completion of the CBSRW PIP in accordance with the schedule presented in the Attachment to this agreement. It is understood that Moody will provide funding to the landowners involved with the BMP installation identified in Attachment A and that Moody will submit proper paperwork to Sioux Falls for reimbursement of these BMPs through State Revolving Fund (SRF) Non-Point Source (NPS) funding. It is understood that the agents or representatives of the parties to this agreement cannot commit to an increase of the funding levels established in the attached CBSRW PIP without first obtaining an amendment to the CBSRW PIP.

8. Moody will be responsible for any liability or claims that may arise resultant to its activities undertaken in the completion of its Project responsibilities (Attachment A) and will maintain adequate liability, workers’ compensation, professional liability, and other necessary insurance during the period which this Agreement is in effect.

9. Sioux Falls will be responsible for any liability or claims that arise resultant to its activities undertaken in the completion of its Project responsibilities (Attachment A) and will maintain adequate liability, workers’ compensation, professional liability, and other necessary insurance during the period which this Agreement is in effect.

10. Moody and Sioux Falls agree to report any event encountered in the course of performance of this Agreement which results in injury to the person or property of third parties, or which may otherwise subject either party to liability. The above shall report any such event to the other parties in this agreement immediately upon discovery. The above cooperators’ obligation under this section shall only be to report the occurrence of any event to the other party and to make any other report provided for by their duties or applicable law. The obligation to

report shall not require disclosure of any information subject to privilege or confidentiality under law (e.g., attorney-client communications). Reporting to the other party under this section shall not excuse or satisfy an obligation of either party to report any event to law enforcement or other entities under the requirements of any applicable law.

11. This Agreement may be terminated by the above parties hereto upon thirty (30) days written notice. In the event that either party breaches any of the terms or conditions hereof, this Agreement may be terminated by the other at any time with or without notice. If termination for such a default is effected by either party, any payments due to the other party at the time of termination may be adjusted to cover any additional costs to a party because of the other party's default.

12. This Agreement depends upon the continued availability of funds. If funds become unavailable by operation of law or federal, state or local funds reductions, this Agreement is considered automatically terminated without further required notice. Termination for lack of funds is not a default by any party nor does it give rise to a claim against any party.

13. This Agreement may not be assigned without the express prior written consent of Moody and Sioux Falls. This Agreement may not be amended except in writing, which writing shall be expressly identified as a part hereof, and be signed by an authorized representative of each of the parties hereto.

14. This Agreement shall be governed by and construed in accordance with the laws of South Dakota. Any lawsuit pertaining to or affecting this Agreement shall be venued in Circuit Court, Second Judicial Circuit, Minnehaha County, South Dakota.

15. The parties to this agreement will comply with all federal, state and local laws, regulations, ordinances, guidelines, permits and requirements applicable to providing services pursuant to this Agreement, and will be solely responsible for obtaining current information on such requirements.

16. The parties to this agreement will include provisions in any subcontracts requiring its subcontractors to comply with the applicable provisions of this Agreement, to indemnify the other party in this agreement, and to provide insurance coverage for the benefit of the other party in this agreement in a manner consistent with this Agreement. The parties to this agreement will cause any subcontractors, agents, and employees to comply, with applicable federal, state and local laws, regulations, ordinances, guidelines, permits and requirements and will adopt such review and inspection procedures as are necessary to assure such compliance.

17. Any notice or other communication required under this Agreement shall be in writing and sent to the address set forth above. Notices shall be given by and to Jack Majeres on behalf of Moody, and Robert J. Kappel or Andy Berg on behalf of

Sioux Falls, or such authorized designees as either party may from time to time designate in writing. Notices or communications to or between the parties shall be deemed to have been delivered when mailed by first class mail, provided that notice of default or termination shall be sent by registered or certified mail, or, if personally delivered, when received by such party.

18. In the event that any court of competent jurisdiction shall hold any provision of this Agreement unenforceable or invalid, such holding shall not invalidate or render unenforceable any other provision hereof.

19. All other prior discussions, communications and representations concerning the subject matter of this Agreement are superseded by the terms of this Agreement, and except as specifically provided herein, this Agreement constitutes the entire Agreement with respect to the subject matter hereof.

II.
JOINT POWERS

Moody and Sioux Falls agree to the following provisions pursuant to the Joint Powers Act (SDCL 1-24):

1. This Agreement does not establish a separate legal entity as contemplated by SDCL 1-24-5. The cooperative undertaking described herein will be financed and conducted under the provisions of this agreement by Moody and Sioux Falls. Each party has responsibilities under the terms of this Agreement as specified in the CBSRW PIP. Purchase and maintenance of equipment used to fulfill the agreement will be undertaken by the respective agencies as described herein. No real property will be purchased and retained by Moody and Sioux Falls to use for this Agreement. However structures may be purchased for landowners as part of the BMPs that are developed in this process. Easements may also be obtained from landowners as a part of this agreement. The easements shall be retained by Northern Prairies Land Trust, Moody and/or Sioux Falls after the complete or partial termination of this agreement.

2. The parties to the Agreement hereby commit themselves to work cooperatively to implement and successfully complete the Project.

3. Moody will be the lead cooperating agency responsible for overall Project management and completing the CBSRW PIP elements and activities involved in the Project as described in Attachment A, except those activities designated for Sioux Falls in the CBSRW PIP and Section 7 of this Part of the Agreement. Responsibilities include an accounting of the use and disbursement of all Project funds, and both parties will keep records of all financial matters using generally accepted accounting practices.

4. Moody will keep complete records of all funds (cash and in-kind assistance) to be credited to this Project and will make available such records to Sioux Falls so that all such services may be credited to the Project.

5. Moody agrees to fund a portion of the Water Quality Master Plan for the CBSRW. Sioux Falls will contract with a consultant for the entire project and will invoice Moody for $50,000 for the master plan and $25,000 for developing a pilot water quality trading program. Moody will use State 319 funds for these projects.

6. Moody will be responsible for promoting the programs offered through the Project. Moody will be responsible for making decisions to fund individual projects (BMP installations) and will use best judgment to determine where Project funds are to be spent. Moody will request from SDDENR pre-approval on all projects before actual funds are expended. Moody will disburse payments to the Producer for installed BMP's and will submit reimbursement requests to Sioux Falls in a timely manner. Moody will ensure all projects and expenditures using SRF NPS resources will meet appropriate federal and state conditions, requirements and limitations on this funding source.

7. Sioux Falls will directly contract the following specific item and tasks of the CBSRW PIP. Funds for these items will be SRF NPS funds, City funds, and State 319 funds.

a. Bank stabilization item of the Riparian Area Protection Task.

b. Develop Master Plan & Pilot Water Quality Trading Program Task.

c. Agricultural Research Services Design Criteria & Citing Bank Toe Protection Task.

8. Sioux Falls will be responsible for approving pay requests submitted by Moody in a timely manner. Sioux Falls agrees to submit pay requests to SDDENR for approval and reimbursement to Moody for Project funds (through the SRF NPS Program) expended on BMPs identified in Attachment A within the Project Area provided that Sioux Falls shall have the right as its election to require consultation and pre-approval before any funds are committed on its behalf.

9. A copy of this Agreement will be filed by Moody, with the Attorney General and the Legislative Research Council not more than 14 days after execution as required by SDCL 1-24-6.1.

10. Financing required by this agreement will come from budgets as identified in the CBSRW PIP.

11. This agreement may be terminated by any party upon thirty (30) days written notice without cause.

12. All parties must comply with Title VI of the Civil Rights Act of 1964 (P.L. 88-352, 42 U.S.C. 2000d) and, in accordance with Title VI of that act, no person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which the applicant receives Federal financial assistance and will immediately take any measures necessary to effectuate this agreement.

13. Nothing in this Agreement shall be construed as an indemnification by one party of the other for liabilities of a party or third person for property loss, or damage, or death, or personal injury arising out of the performance of this Agreement. Any liabilities or claims for property loss, or death, or personal injury by a party or its agents, employees, contractors or assigns or by third persons, arising out of and during this agreement shall be determined according to applicable law.

By their signatures affixed below, each participating entity acknowledges their acceptance and approval of this agreement.

_____

MAYOR, City of Sioux Falls

_____

Chairman, Board of Supervisors
Moody County Conservation District
Federal ID Tax No. _____

ATTEST:

_____

City Clerk