SECTION 319 NONPOINT SOURCE POLLUTION CONTROL PROGRAM

WATERSHED PROJECT FINAL REPORT

LITTLE MINNESOTA RIVER WATERSHED/BIG STONE LAKE RESTORATION/CONTINUATION PROJECT

Little Minnesota River near Browns Valley, Minnesota; Summer 2006

By

Roberts Conservation District

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Sponsor

Roberts County

February 2007

This Project was conducted in cooperation with the State of South Dakota and the United States Environmental Protection Agency, Region 8.

Grant #: 998185990

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EXECUTIVE SUMMARY

PROJECT TITLE: LITTLE MINNESOTA RIVER WATERSHED/BIG STONE LAKE RESTORATION/CONTINUATION PROJECT

PROJECT START DATE 01/03/2000 PROJECT COMPLETION DATE 02/28/2007

AMENDMENTS: 2

FUNDING:	TOTAL BUDGET	$1,701,772
	TOTAL EPA GRANT	$ 503,272
	REVISED EPA GRANT	$ 371,875
	TOTAL EXPENDITURES OF EPA FUNDS	$ 349,945
	TOTAL SECTION 319 MATCH ACCRUED	$ 375,671
	BUDGET REVISIONS	Grant Reduction
	TOTAL EXPENDITURES	$1,314,382

SUMMARY OF ACCOMPLISHMENTS:

The long-term goal of the restoration effort is to increase the recreation potential and lifespan of Big Stone Lake.

The Table 1 contains a comparison of the practices planned versus installed during this project segment. The calculated load reductions realized from the practices total approximately 57,360 lb/yr phosphorus and 21,435 tons/yr sediment, for a phosphorus reduction of approximately 14.63 percent; delivered sediment reduction 14.97. Although the milestones for the number of some practices were not reached, the projected load reductions for the project period were exceeded. Since 1995, the project sediment and phosphorus reduction goal has been “reduce loading by 56 percent”. At the completion of this project segment, the cumulative calculated load reductions realized for practices installed are approximately 45,836 tons/year of sediment; 125,252 lb/year phosphorus. The totals equate to a 32%load reduction. Further discussion of the cumulative total practices and reductions is found in Appendix B.

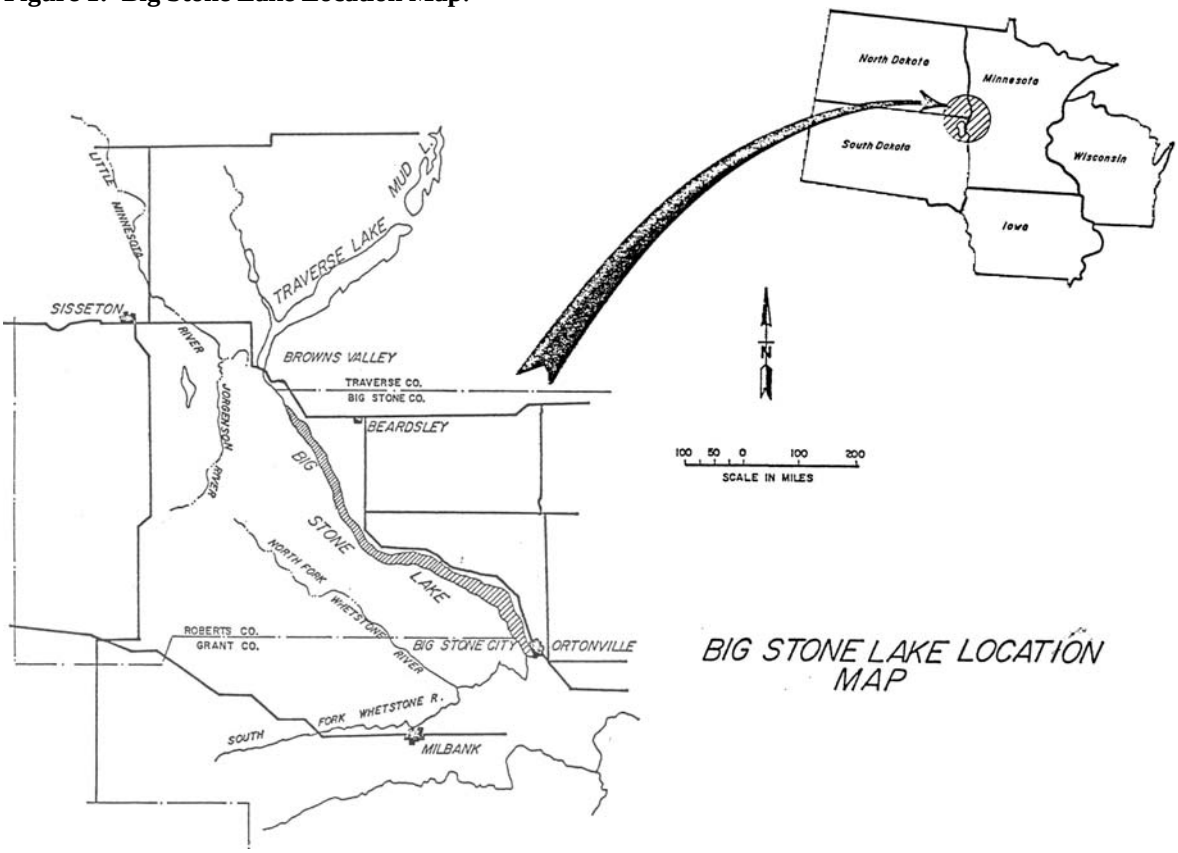
Table 1. Comparison of Planned versus Completed Product Milestones.

Products	Planned	Accomplished
Animal Waste Management Systems - Number	17	8
No-Till - Acres	8,500	11,056
Multiple Use Ponds - Number	62	59
Streambank / Riparian Demonstrations – Number	3	3
Grassed Waterways - Acres	36	39
Nutrient Management Plans - Number	30	23
Farm Show Display / Booth - Number	6	7
Audits - Number	2	1
Final Report - Number	1	1
Pasture / Hayland Seedings - Acres	0	25
Grazing Land Improvement - Acres	0	15,334
Buffers / Filter Strips (CCRP) – Acres	0	910.1

INTRODUCTION

Big Stone Lake is a 12,360-acre waterbody located along the Minnesota - South Dakota border. The lake is in the valley of a glacial river that drained Lake Agassiz (Figure 1).

Figure 1: Big Stone Lake Location Map.



The 740,157 acre watershed includes portions of Roberts, Grant and Marshall Counties in northeastern South Dakota, and Big Stone and Traverse Counties in western Minnesota. The principal tributaries to Big Stone Lake include the Whetstone River which enters the lake from the southwest near the lake's outlet, and the Little Minnesota River which lies northwest of the lake and empties into its upper end. The Little Minnesota River subwatershed at 286,414 acres is the largest of three primary subwatersheds in South Dakota. Table 2 contains a summary of the lake's physical characteristics.

Table 2: Big Stone Lake Physical Characteristics.

Characteristic	Size
Surface Area	12,360 acres
Maximum Depth	16 feet
Average Depth	8 feet
Length	26 miles
Shoreline	62 miles
Acre-feet Water Storage	98,880 acre-feet

The Little Minnesota River which originates as an intermittent stream in the Coteau Hills of Marshall County, South Dakota drops 780 feet in elevation over its 30-mile length. The northern portion of the Little Minnesota River watershed has gentle slopes with abundant wetlands. As significant sources of phosphorous or sediment were not identified in the upper portion of the Little Minnesota River watershed, it was not included in the project.

The river empties into the extreme upper end of Big Stone Lake, and therefore influences the entire length of the lake. The Little Minnesota River accounts for 90 percent of the water entering Big Stone Lake. Irrigation, wildlife propagation, livestock watering, warm water permanent fish life propagation, and limited contact recreation are the designated beneficial uses of the Little Minnesota River. Agricultural practices and the confinement of livestock in the Lower Little Minnesota River watershed have increased the amount of phosphorous and sediment transported into Big Stone Lake. Agriculture is the principal land use in the project area. Table 3 provides a breakdown of land uses in the project area by acres and percent of the area. Major crops planted on the cropland include corn, soybeans and spring wheat. Approximately 21,300 acres of Conservation Reserve Program land is also included in the cropland calculations.

Table 3: Land Uses in the Lower Little Minnesota River Watershed Project Area.

Land Use	Acres	Percent
Cropland	130,176	52.5
Rangeland	68,489	27.6
Hayland	26,900	10.9
Woodland	9,915	4.0
Other	12,393	5.0
Total	**247,873**	**100.0**

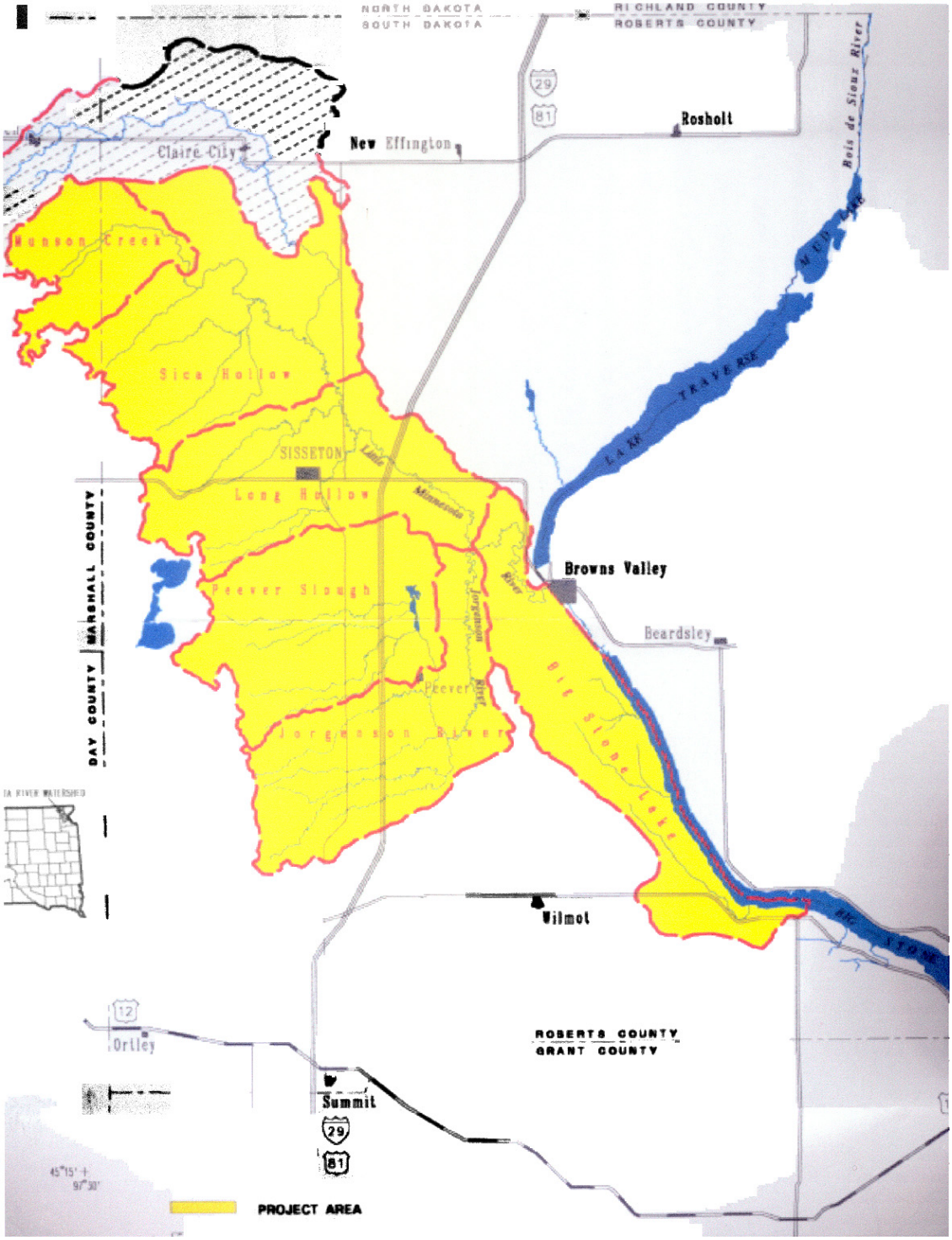
Beneficial uses of Big Stone Lake include warm water permanent fish life propagation, immersion recreation, limited contact recreation, wildlife propagation, livestock watering, and irrigation.

Since 1970, the lake has experienced an increase in rooted aquatic vegetation growth and nuisance algal blooms as a result of nutrients transported by runoff. Large sediment loads, especially from the bluffs on the western edge of the lake, have also been identified as contributing to the decline in the water quality of the lake. The loss of recreation and economic opportunities, that resulted from the deterioration, lead to public concern and initiation of the long term effort to reverse the decline.

The project area (247,873 acres) consists of the Lower Little Minnesota River watershed and the immediate drainage area on the western edge of Big Stone Lake (Figure 2). Restoration of the lake was initiated during 1983. Since that time, as noted in previous Big Stone Lake 319 Project Final Reports (#C9008522-89 and #C9008631-92), measurable improvements have been realized and the condition of the Lake has improved from hypereutrophic to eutrophic (Figure 4).

This 319 continuation project was designed to continue the restoration effort and was a technical assistance bridge to a USDA PL-566 Watershed Project.

Figure 2. Lower Little Minnesota River Watershed and Big Stone Lake Project Area.



(Roberts County 9)

PROJECT GOALS, OBJECTIVES, AND ACTIVITIES

The goal of the Big Stone Lake restoration project is:

> Increase the recreation potential and life span of the lake by decreasing sediment and phosphorous loadings by 56 percent.

The installation of conservation practices in the watershed has been the primary tool used to reduce the loads. Project staff and NRCS personnel have worked in close partnership to develop and install the practices.

USDA funds available from the Environmental Quality Incentives Program (EQIP), PL-566 Small Watershed Funds, and Continuous Sign-up Conservation Reserve Program (CCRP) have been used to assist in the installation of the practices. Additional funding assistance for practices was provided by the US Fish and Wildlife Service and South Dakota Department of Game Fish and Parks. Since 1996, Section 319 funding has been used primarily to provide technical assistance and planning funds to apply the PL-566 and EQIP funded land treatment practices.

Because the restoration of Big Stone Lake is a large undertaking, the project was developed in a step-wise manner. The purpose of this segment was to continue the activities started during the 1996 project period using the PL-566 funding as the basic mechanism to install water quality improvement practices. The best management practices (BMPs) scheduled for implementation as part of the current EPA 319 grant project include:

- animal waste management systems,
- no-till planting of cropland,
- multi-purpose ponds,
- grassed waterways,
- nutrient management plans, and
- riparian demonstration projects.

A summary of cumulative project accomplishments for all project segments can be found in Appendix B.

Additional water quality improvement practices that were cost shared with PL-566 and EQIP funding include: pasture and hayland plantings, cross-fencing grazing lands, wells, tanks, pipelines, rock stream crossings, windbreak and shelterbelt plantings. Water quality practices cost shared through Continuous sign-up Conservation Reserve Program (CCRP) include CP21 Filter Strips, CP 22 Riparian Buffers, CP 27/28 Farmed Wetland Pilot and Buffers, CP30 Marginal Pastureland Wetland Buffers.

OBJECTIVE 1: Reduce nitrogen, phosphorus and sediment loading from the watershed.

Task 1: Install Best Management Practices (BMPs) in the watershed to reduce nutrient and sediment loading from identified critical areas.

Product 1: 17 Animal Waste Management Systems (AWMS).

Expected Outcome: Phosphorus loading from AWMS reduced by 4,080 pounds/year.

Of the 17 AWMS planned for the project period, eight were constructed since FY2000. Ten others were a part of PL-566 and EQIP plans but were not constructed for a variety reasons. These include economic factors, herd reductions or dispersions, and partnership dissolutions.

One CAFO was constructed with USDA, EQIP cost share assistance and a technical service provider (TSP) retained as the engineer for design and construction oversight. Although EPA 319 funds were not used for design or construction, project staff attended technical assistance meetings with NRCS, the producer and South Dakota Department of Environment and Natural Resources (SD DENR) personnel.

Phosphorus load reductions achieved from the construction of AWMS were calculated using information from the "Michigan Department of Environmental Quality, Load Reduction Estimating Workbook". The results of the calculations are shown in Table 4. Although the number of AWMS constructed was less than planned, the calculated load reductions are four times the 4,080 lb/yr load reduction milestone.

Table 4: Calculated Load Reductions from AWMS.

FY	System	Phosphorus Load lb/yr		P Load Reduction	Cost Share Program
		Before Construction	After Construction		
2000	AFO	929	279	650	PL-566
2000	AFO	1,688	507	1,182	PL-566
2000	AFO	1,773	177	1,596	PL-566
2001	AFO	2,533	253	2,279	PL-566
2004	AFO	1,937	581	1,356	PL-566
2005	CAFO	8,864	886	7,978	EQIP
2006	AFO	1,283	128	1,155	PL-566
2006	AFO	485	49	437	PL-566
Totals		**19,492**	**2,860**	**16,633**	

*Based on methodologies developed by Michigan DEQ, Illinois EPA, and EPA (STEPL)

Product 2: 8,500 Acres of No-Till Farming.

Expected Outcome: Sheet and rill erosion on erodible cropland reduced by 5,450 tons.

During this project segment, approximately 11,055.7 acres were planted using the three no-till drills owned by the Roberts Conservation District. While there is continued interest in the use of the drills, it has declined somewhat during the last few years. Reasons for the decline include:

- Many producers have purchased their own no-till seeding systems, mostly large air-seeders that have the ability to plant no-till over large acreages in a short time.
- While most of South Dakota has experienced drought conditions during the last several years, Roberts County has for the most part, remained abnormally wet, leading some producers to till fields in order to dry them out for seeding.
- The continued escalation of farmland prices and rental rates has made some producers reluctant to change from conventional farming practices because of the possibility of yield reductions.

Increased fuel and other crop input costs along with further education may eventually cause a shift to more conservation friendly tillage practices. The Conservation Security Program (CSP) may also provide an incentive for producers to shift toward conservation tillage. CSP payments are tied to the Soil Condition Index (SCI). The use of fall tillage is detrimental to obtaining a high rating for inclusion in the program.

The Revised Universal Soil Loss Equation II (RUSLE II) was used to calculate load reductions achieved from no-till (Table 5). Yields were based on the county average; average soil loss differences were for three dominant farmland soil types in the watershed. Calculations were based on corn, soybean, spring wheat rotations with conventional tillage consisting of fall chisel plowing followed by spring disk, field cultivator and seeding versus a single no-till seeding pass over the land.

The average calculated erosion reduction rate is approximately 0.8 tons/acre with subsequent delivery rates to drainages of approximately 40 percent. Phosphorus reductions were calculated using an average soil phosphorus content of approximately 1.9 lb per ton of soil, the amount determined during the PL-566 Project planning and documentation process completed during November 1993.
The milestones for both acres and total erosion reduction were met.

Table 5: Acres Planted Using No-Till and Load Reductions Achieved.

Year	Acres Planted	Soil Erosion Reduced Tons/yr	Sediment Load Reduction Tons/yr	P Load Reduction Lbs/yr
2000	2,086.4	1,669.1	667.6	1,268.4
2001	1,764.3	1,411.4	564.6	1,072.7
2002	1,568.2	1,254.6	501.8	953.4
2003	1,797.2	1,437.8	575.1	1,092.7
2004	1,619.4	1,295.5	518.2	984.6
2005	1,271.2	1,017.0	406.8	772.9
2006	949	759.2	303.7	577.0
Total	**11,055.7**	**8,844.6**	**3,537.8**	**6,721.7**

* 2006 data to date

Task 2: Create multi-purpose ponds in the watershed to trap sediment, benefit wildlife and serve as an alternative water source for grazing management systems.

Product 1: 62 Multi-purpose Ponds.

Expected Outcome: Trap 37,200 cubic yards of sediment.

During the current project period, 59 ponds were constructed in the watershed with PL-566 and EQIP cost share assistance. An additional two ponds are slated for construction during spring 2007. Some contracts for ponds were cancelled by producers. The reasons for cancellation included cost, other water sources, and management considerations. Based on calculated values, the total sediment reduction expected from the ponds is approximately 96,909 cubic yards over the projected 20 year pond "lifespan". Using an estimated weight of 1,890 lb per cubic yard, the total sediment savings equals 91,579 tons or 4,579 tons per year; the total phosphorus reduction approximately 174,000.16 lb. or 8,700.01 lb per year on average (Table 6).

Most of the ponds were constructed primarily to provide livestock water sources that improve grazing distribution in planned grazing systems. The ponds provide benefits for wildlife and some are also used for recreation.
This was a fairly popular practice with producers. There is interest for the construction of more ponds. Funding to meet the demand may be available through area-wide and state-wide NRCS EQIP funds and USFWS funds.

Although the number of ponds constructed was fewer than the milestone, the sediment reduction milestone was exceeded.

Table 6: Ponds Installed and Reductions Achieved.

Year	Number Installed	Sediment Reduced Tons/pond lifespan	Phosphorus Reduced lb./pond lifespan	Drainage area acres
2000	13	17,392.09	33,044.97	914.4
2001	12	24,632.45	46,801.65	1,203
2002	10	16,218.39	30,814.94	1,385.4
2003	9	9,633.48	18,303.61	562
2004	7	9,343.87	17,753.35	882.7
2005	5	8,078.71	15,349.55	364
2006	3	6,280.05	11,932.09	534.5
Totals	**59**	**91,579.04**	**174,000.16**	**5,846**

Task 3: Complete Riparian Restoration Projects in the watershed to demonstrate streambank erosion control and provide benefits to wildlife.

Product 1: Three Riparian Demonstration Projects.

Expected Outcome: Bank erosion reduced by 1,999 cubic yards.

Two riverbank stabilizations were completed on the Little Minnesota River and a riparian forest buffer on a tributary in the watershed. The bank stabilizations were completed using PL-566 funding; the riparian forest buffer the Continuous Sign-up Conservation Reserve Program (CCRP).

During 2000, the first bank stabilization was completed four miles east and one half mile south of Sisseton, SD. Approximately 575 feet of severely eroded riverbank was backsloped and stabilized with geotextile fabric and natural stone rip rap according to the NRCS 580 practice standard. The stabilization resulted in a sediment delivery reduction to the river of approximately 108.9 tons/yr.

The second, similar bank stabilization was completed during 2001. Nine hundred feet of severely eroding riverbank near the South Dakota / Minnesota border, southwest of Browns Valley, MN, was stabilized. The BMPs installed resulted in a sediment delivery reduction of approximately 170.45 tons/yr.

A riparian forest buffer was installed on a tributary of the Little Minnesota River during spring 2002. The four acre buffer consisted of 354 rod rows of shrubs and 531 rod rows of trees. In addition to the trees and shrubs, a 5.4 acre filter strip consisting of native grasses was planted adjacent to the trees to reduce sediment delivery from the adjoining 59.2 acre crop field. Sediment delivery from the field was reduced by approximately 1.623 tons/acre/year for a total sediment delivery reduction of 96.08 tons/year.

Table 7: Riparian Demonstration Load Reductions.

Year	Sediment Reduction Tons/yr	Phosphorus Reduction lb/yr
2000	108.9	206.91
2001	170.45	323.85
2002	96.08	182.55
Totals	**375.43**	**713.31**

Task 4: Install Grassed Waterways in critical areas to reduce soil erosion and sediment loading in critical cropland areas.

Product 1: 36 Grassed waterways (GWW), 108 acres.

Expected Outcome: Trap and reduce soil erosion by 615 tons and phosphorus by 984 lbs.

Grassed Waterways were one of the most popular practices offered to producers during the project period. The 39 waterways installed exceeds the project milestones for number and acres installed and sediment and nutrient reductions**.**

Reductions were calculated with RUSLE II software using average values for the dominant soil types for the area. Total soil loss from the contributing waterways was reduced approximately 0.77 tons/acre/year. About 40 percent of the eroded soil would have ultimately been delivered to receiving waters. Phosphorus reductions were calculated based on a P content of 1.9 lb per ton of soil as determined by the PL-566 watershed planning team and documented in the minutes of the team's November 8, 1993 meeting.

Table 8: Grassed Waterways Installed and Load Reductions Achieved.

Year	Number GWW	Total Length Linear Feet	Total Acres GWW	Total Watershed Acres	Sediment Delivery Reduction Tons/yr	Phosphorus Reduction Lbs/yr
2000	14	25,861	38.5	3,323.0	1,023.5	1,944.65
2001	13	28,834	34.9	3,083.9	949.84	1,804.70
2002	3	4,320	5.3	213.5	65.76	124.94
2003	3	4,560	5.9	1,908.6	587.8	1,116.82
2004	1	1,530	3.1	66.8	20.6	39.14
2005	2	4,315	7.9	1,079.0	332.3	631.37
2006	3	6,611	16.3	303.1	93.4	177.46
Totals	**39**	**76,031**	**111.9**	**9,977.9**	**3,073.2**	**5,839.08**

Objective 2: Implement an Information and Education (I&E) program for landowners and lake users.

Task 1: Inform the public and agency leads about past restoration projects and future projects needed for restoring the watershed.
Product 1: 6 Year End Project Summaries and Media Updates.

Expected Outcome: Print media updates to involved agencies of project progress and media updates to promote project, to help locate volunteer landowner participants.

Year end project summaries were completed each year, published in three county newspapers, and submitted to the Roberts County Board of Commissioners. Grant Reporting and Tracking System (GRTS) reports were submitted to the South Dakota Department of Environment and Natural Resources (SD DENR) twice each year.
The project published articles in the three local newspapers two to three times each year beginning during 2000, in partnership with the conservation district. Copies of several of the news articles can be found in Appendix C of this report.

During summer and fall 2001, project signs were installed at locations in the watershed that are visited frequently by the public. The locations included, Sica Hollow State Park, Nicollet Tower and Interpretive Center, Hartford Beach State Park, and all public access areas on Big Stone Lake (Figure 3).

Figure 3: Project Awareness Sign.

During February 2002, a Grazing Workshop was sponsored in Sisseton, SD, to increase awareness of range and pasture health improvements and their environmental and economical impacts. The workshop was co-sponsored by the Roberts Conservation District, SD Cooperative Extension Service, Natural Resources Conservation Service, Lariat Gals Cattlewomen, and Farmers Feed and Supply.

During 2003, the Project presented an overview and history of the watershed and operations at the Marshall County Township Supervisor's Association annual meeting in Veblen, SD.

Citizens for Big Stone Lake invited the Project Coordinator to speak at their annual meeting during June 2005, and participate in an upper Minnesota River watershed meeting during October 2005.

During March 2006, the project provided assistance for a Grazing Workshop sponsored by the Hamlin County Conservation District. The workshop, featuring Jim Gerrish, was held in Watertown, SD. The project sent letters to many of the livestock producers in the watershed and published an article inviting all livestock producers to attend. Several producers from the watershed attended along with producers and officials from other districts and watersheds. Total attendance exceeded 300.

Product 2: Project Display/ Booth at the County Farm Show.

Expected Outcome: The booth will allow for project public exposure, the staff will be present to answer pertinent watershed questions and provide other related information.

The Roberts County Farm and Home Shows were found to be a good way to connect not only with the agricultural producers in the watershed but also the urban population and community organizations. During the two day shows, project staff was able to personally interact with hundreds of producers and other interested individuals concerning water quality issues in the watershed.

Product 3: 2 Audits.

Expected outcome: Final accounting of funds expended in accordance with program requirements.

The Roberts Conservation District board of supervisors performs an annual financial review. During 2001, the board of supervisors hired Data Management Services to perform a Formal Review of Financial records. An external audit is planned for the end of this project.

Task 2: Complete Nutrient Management plans for AWMS installed in the watershed to help producers better utilize nutrients in manure.

Product 1: 30 Nutrient Management Plans for AWMS.

Expected Outcome: Reduced nutrient loading from manure spread on fields.

Twenty-three nutrient management plans have been developed for animal waste management systems installed in the project area; an additional two are being developed. The total equals approximately 77 percent of the 30 plan milestone. Some of the existing plans and operations have undergone extensive expansion and modification while others have gone out of business or reduced livestock numbers. The current nutrient management plans apply approximately 53,100 pounds of phosphorous and 26,000 pounds of nitrogen over 14,566 acres of cropland.

The current high commercial fertilizer prices have accelerated the interest in livestock waste as a form of soil fertility and added value to manure. If the current trend continues, manure management will increase.

SUPPORTING PRACTICES.

Practices installed using PL-566, EQIP, CCRP, Local, and USFWS funds are described in this section of the report.

1. Pasture and Hayland Planting (NRCS 512 standard).

Conversion of cropland to pasture or hayland, without retiring the land from production completely as with CRP, was an option selected by some producers. The cost-share available through PL-566 to assist with seed bed preparation, seed, and seeding costs made it economically feasible for producers to convert marginal land from crop to hay and pasture. The conversion reduces sediment and phosphorus loads from the watershed. During the current project period, 25 fields, totaling approximately 856.1 acres, were seeded. The conversion to grassland is calculated to reduce total soil erosion by approximately 1,355.27 tons per year. This equates to a sediment delivery reduction to the Little Minnesota River watershed of approximately 542.1 tons per year, and a phosphorus load reduction of about 1,029.98 pounds per year (Table 9). All load reductions are based on differences between a corn, soybean, spring wheat rotation with the fall and spring tillage typical of the area and alfalfa hay. Reductions were calculated for each field with RUSLE II using the dominant soil type.

Table 9: Pasture and Hayland Plantings and Load Reductions Achieved.

Year	Number of Practices	Acres	Soil Erosion Reduction tons/yr	Sediment Delivery Reduction tons/yr	Phosphorus Reduction lbs/yr
2000	12	356.4	638.63	255.45	485.35
2001	4	105.1	260.84	104.34	198.25
2002	3	162.5	249.41	99.76	189.54
2003	3	136.5	120.88	48.35	91.86
2005	3	95.6	85.51	34.2	64.98
Totals	**25**	**856.1**	**1,355.27**	**542.1**	**1,029.98**

2. Grazing Land Improvements

Grazing land improvements in the form of practices and grazing management plans have been applied to 15,334 acres by 57 producers in the watershed since 2000. Practices installed include ponds, cross-fences, wells, water tanks, pipelines, rock stream crossings for livestock, and rural water hook-ups. Most of the practices were installed as part of grazing management plans or rotational grazing systems with a goal of improving pasture and range condition and grazing distribution. Cost share funds from PL-566, EQIP, USFWS, and South Dakota Game Fish and Parks were used to install most of the practices.

Load reductions for grazing land improvements were calculated by determining the condition of the land before practices were installed or a grazing plan implemented, and again when the practices were implemented and improvements are visible. Pastures were

rated poor, fair, good, or excellent and with management separated by rotational grazing, continuous grazing or continuous over-grazing (Table 10).

Table 10: Pasture Rating Table.

Pasture Rating	Management	Species Composition	Avg. Soil Erosion Tons/Ac/Yr	Sediment Delivery Tons/Ac/Yr
Excellent	Rotational grazed	Cool / Warm	0.01	0.004
Good	Rotational grazed	Cool	0.18	0.072
Good	Continuous grazed	Cool	0.32	0.128
Fair	Continuous over-grazed	Cool	1.7	0.68
Poor	Continuous over-grazed	Cool /Invader	2.3	0.92

From these observations, data was entered into RUSLE II using grass species composition, grass production estimates, and grazing use practices as variables. Most of the grazing lands in the watershed are located on soils and slopes that are not conducive to farming with slopes ranging from nearly level to 40 percent. Calculations were based on a dominant soil for the coteau with an average slope of 7 percent and average slope length of 150 feet. Sediment delivery is estimated to be 40 percent of the total erosion rate. Results realized from improvements installed since 2000 are shown in Table 11.

Table 11: Grazing Land Improvement Load Reductions.

Pasture Rating Before Improvements	Pasture Rating After Improvements	Continuous or Rotational Grazing After Improvements	Total Acres	Total Erosion Reduction Tons/yr	Sediment Delivery Reduction Tons/yr	Phosphorus Reduction lb/yr
Poor	Fair	Continuous	740.1	444.1	177.6	337.44
Fair	Good	Continuous	4,756.0	6,563.3	2,625.3	4,988.1
Fair	Good	Rotational	9,550.9	13,554.2	5,421.7	10,301.23
Fair	Excellent	Rotational	287.1	483.3	193.3	367.27
Totals			**15,334.1**	**2,1044.9**	**8,417.9**	**15,994.04**

3. Buffers and Filter Strips – Continuous sign-up Conservation Reserve Program (CCRP).

Continuous sign-up Conservation Reserve Program buffers and filter strips are becoming one of the most popular conservation practices available to producers in the project area. The ability to take marginal croplands out of production, receive cost share for seeding the land to grass, and receiving annual rental payments for the acres enrolled make it much easier for the producer to cash flow conservation practice installation.

The primary CCRP practices used were the CP21 Filter Strip, CP22 Riparian Buffer, CP30 Marginal Pastureland Wetland Buffer, and the CP27/28 Farmed Wetland Pilot and Buffer. Of the practices, CP27/28 was the most popular with 59 contracts covering 549.7 acres. There are currently 49 CP21 contracts covering 267.6 acres, and 17 CP30 contracts covering 93 acres (Table 12). As discussed previously, there was only one

CP22 Riparian Buffer installed. Another benefit of the CP27/28 is the restoration of the farmed wetlands by plugging the ditches or tiles.

Load reduction calculations were completed with RUSLE II using land use prior to enrollment as the baseline and recalculating after the buffers and filters were installed. As RUSLE II allows a 50 foot buffer or filter strip, and the actual buffers and filters installed average 100 feet, the estimated reductions realized may be conservative.

Table 12: Load Reductions from CCRP Buffers and Filter Strips.

Practices	Number of Contracts	Total Acres	Sediment Delivery Reduction Tons/yr	Phosphorus Reduction lbs/yr
CP27/28 Farmed Wetland Pilot and Buffer	59	549.7	446.0	847.4
CP21 Filter Strip	49	267.6	434.3	825.2
CP30 Marginal Pastureland Wetland Buffer	17	93.0	29.8	56.62
Totals	**125**	**910.3**	**910.1**	**1,729.2**

EVALUATION OF GOAL ATTAINMENT

The Big Stone Lake Restoration Project is a long-term restoration effort designed to ultimately improve the water quality in Big Stone Lake and provide economic, recreational, ecological, and aesthetic benefits to both South Dakota and Minnesota. Big Stone Lake and its tributaries were extensively monitored from 1971 -1994. Data from previous assessments and project periods provided the information needed to establish a baseline from which to assess water quality problems and develop possible solutions. The implementation of best management practices continued during the current project segment (2000-2007). Timing, wet weather, and a shortage of available contractors made the installation of some practices difficult. Volatility in the markets for agricultural products led to some delays and cancellations during times of low prices.

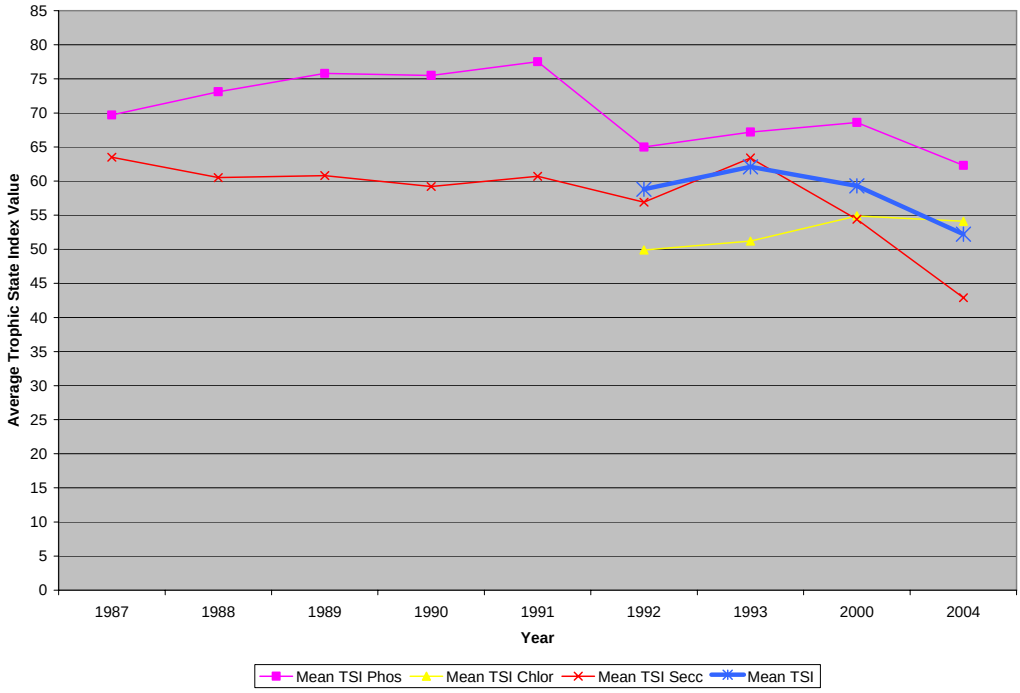
Although water sampling was not included as part of the current project, other long-term monitoring results from South Dakota Department of Environment and Natural Resources indicate that the water quality of Big Stone Lake has gradually improved from a hypereutrophic to a eutrophic condition (Figure 4).

The sediment and phosphorus reduction milestones for this continuation project segment were exceeded, even though the milestones for the number of units of some of the practices were not (Table 13).

Best Management Practices installed but not included in the EPA 319 Project Implementation Plan are approved NRCS water quality improvement practices cost shared through PL-566, EQIP and CRP. Load reductions resulting from the additional general sign-up CRP, WRP, and Flood Plain Easement lands although not calculated should have a significant impact on sediment and nutrient reductions in the watershed. The increasing acceptance of no-till and reduced tillage farming practices will have a positive impact as well.

The amount of data available as well as pre-project load calculations and vague, long term reduction goals that changed with time, project period and personnel make the evaluation difficult. During the previous EPA 319 project periods such as the 1992 Project Implementation Plan, the stated goal was simply to, “increase the recreational potential and lifespan of the lake.” Sediment load calculations completed during the assessment phase put the load from the Little Minnesota River at about 121,000 tons/year. Later NRCS calculations for the project area place the sediment load at 143,200 tons/year, the value used for the reductions in this report.

Figure 4: Average Trophic State Index Values for Big Stone Lake 1987-2004



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DENR 2006

Table 13: Calculated Load Reductions 2000-2006.

Practice	Total Erosion Reduced Tons/yr	Delivered Sediment Reduced Tons/yr	Delivered Phosphorus Reduced lb/yr
Riparian / Bank Stabilization		375.43	713.31
Pasture/hayland plantings	1,355.27	542.11	1,029.98
Ponds (378 Standard)		4,578.95	8,700.00
AWMS			16,633.00
CRP Buffers and Filter Strips		910.10	1,729.20
Grazing land improvements	21,044.9	8,417.90	15,994.04
Grassed Waterway	7,683.0	3,073.20	5,839.08
No-till Farming	8,844.6	3,537.8	6,721.70
Totals	**38,927.77**	**21,435.49**	**57,360.31**

Phosphorus budgets vary even more widely. The budgets range from 104,243 lb./year to 392,000 lb./year depending on when they were completed and by the entity making the determination. As 92,000 lb./year was used in both the 319 Project Implementation and PL-566 Watershed Plans, it was the value selected for completing load reduction calculations. The calculations for this project period indicate an approximate, sediment load reduction of 15 percent and a phosphorus load reduction of about 14.6 percent. Load reductions for the entire PL-566 project period increases the percentages to 26.4 and 23.5 percent respectively.

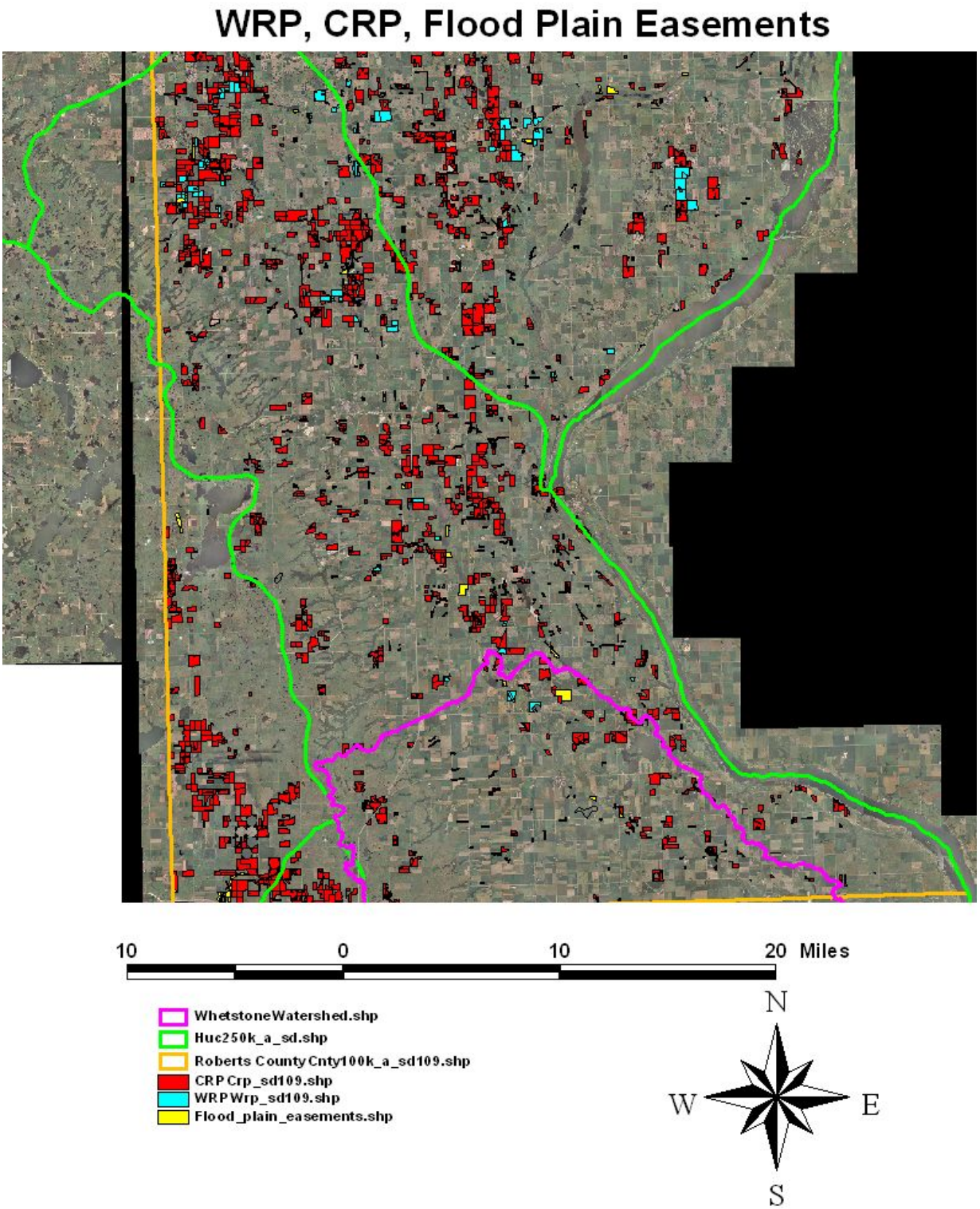
OTHER USDA PROGRAMS

Load reductions for the general sign-up Conservation Reserve Program, Flood Plain Easement Program and Wetland Reserve Program were not calculated, although the water quality impact of these programs is expected to be significant as they include conversions of cropland to grass, restricted haying and grazing use, and some wetland restorations. Other land treatment practices installed using USDA cost share funding but for which load reduction calculations were not completed include tree plantings, and well decommissioning.

Although the other USDA programs are not directly a part of the project, they do play a vital role in keeping water resources clean and abundant. These program practices, along with the Little Minnesota River / Big Stone Lake Project practices, are improving water quality in the project area.

Continuous sign-up CRP practices used in Roberts County for which load reductions were not calculated include CP23 Wetland Restoration, CP5A Field Windbreak Establishment, CP16A Shelterbelt Establishment, and CP18C Establishment of Permanent Salt Tolerant Vegetative Cover. (Figure 5)

Figure 5: Wetland Reserve, Conservation Reserve and Flood Plain Easements.



OPERATION AND MAINTENANCE REVIEW

Operation and maintenance reviews completed during the project found few problems concerning the operation and maintenance of the best management practices installed. All practices were constructed to Natural Resources Conservation Service Standards. Contracts with producers state that operation and maintenance is the responsibility of the producer. Landowners have been satisfied with the operation of their practices and are maintaining them as required, although there have been instances where minor modifications and or additions have been made to enhance or simplify operation.

COORDINATION EFFORTS

The organizations, agencies, and units of government involved with the Little Minnesota River/Big Stone Lake project, along with a brief explanation of contribution, include:

1. Roberts County: Roberts County served as the project sponsor. Most project responsibilities were delegated to the Roberts Conservation District.

2. Roberts Conservation District: The District administered the project, coordinated between agencies and hired project staff. Project staff addressed all aspects of the project including planning, information and education, and installation of BMPs.

3. South Dakota Department of Environment & Natural Resources (DENR): DENR administered the project grant and provided technical assistance.

4. Natural Resources Conservation Service (NRCS): The USDA NRCS provided cost-share funding, and technical assistance for the design and construction of BMPs.

5. NRCS Animal Waste Technical Assistance Team: The NRCS Animal Waste Technical Assistance Team provided designs for animal waste management systems.

6. Farm Service Agency (FSA): The USDA Farm Service Agency provided cost-share funds for the installation of best management practices.

7. US Fish & Wildlife Service: The US Fish and Wildlife Service provided technical assistance and cost-share funds for the construction of multiple use ponds.

8. South Dakota Department of Game Fish and Parks: SD GFP provided technical assistance and cost-share funds for wetland restoration and multiple use ponds.

9. Citizens for Big Stone Lake (CBSL): The Citizens for Big Stone Lake provided assistance with information and education activities.

SUMMARY OF PUBLIC PARTICIPATION

Conservation practices acceptable to the public in the watershed were identified through four public meetings and two mail-in surveys. The Marshall County and Roberts County Conservation Districts developed a survey for residents in each subwatershed. The survey listed practices proposed by a planning team. Participants were asked to rank the practices in order of priority for achieving a reduction in phosphorus delivered to the lake. The survey also requested that landowners and operators identify other conservation practices that they would like to implement if the project was funded. In order to reach as many people as possible, brief overviews of the project and the surveys were presented at agricultural meetings held in the watershed. Surveys were also mailed to all township board chairmen for board members to complete. Based on survey results, the top five practices ranked from the highest to lowest priority were minimum tillage, critical area treatment, grassed waterways, no-till planting, and animal waste management systems.

ASPECTS THAT DID NOT WORK WELL

During the project some challenges were encountered with the construction of grassed waterways. Timing is critical for installing this practice. Normally the landowner has to harvest the crop before construction can begin. Therefore, it was suggested that a small grain crop should be planted the year of construction. Construction during the middle to the end of August was preferred so that grass seeded could become established before winter. In some instances the seed did not take, and the waterway was washed out the following spring which necessitated re-shaping and re-seeding.

The above average precipitation received during recent years lead to operational problems with some of the AWMS evaporation ponds constructed during earlier project segments. The cost of annual dewatering had a negative economic impact on these operations and made it more difficult to convince producers to construct a system. Another practice that created some concerns was the riparian buffer strip. Most landowners are not sold on this practice because they perceived little to no direct benefit without an annual payment to compensate for the loss of use of the land. The Continuous sign-up CRP buffer and filter practices have made it much more attractive to take the marginal lands out of production and enroll them in a conservation program. The increasing popularity of private wildlife enhancements as well as commercial pheasant hunting operations is expected to increase interest in these practices.

PROJECT BUDGET AND EXPENDITURES

The original EPA 319 budget is shown below in Table 14.

Table 14: Original 319 Project Budget.

Personnel/Support Staff	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**TOTAL**
Project Cord./Salary @ 2087 hr	29,218	30,262	31,305	32,349	33,392	34,436	**190,962**
Admin Sec/Salary @ 687 hr	7,214	7,557	7,901	8,244	8,588	8,931	**48,435**
ANMT Assistance	5,000	5,000	5,000	5,000	5,000		**25,000**
Engineering & Tech Support	25,000	25,000	25,000	25,000	25,000	25,000	**150,000**
SUBTOTAL	**66,432**	**67,819**	**69,206**	**70,593**	**71,980**	**68,367**	**414,397**
ADMINISTRATION COSTS							
Health Insurance	3,500	3,500	3,800	3,800	4,100	4,100	**22,800**
Workman's Comp	750	750	750	750	750	750	**4,500**
Travel/ Meetings	300	300	300	300	300	300	**1,800**
Equipment/ Maintenance	1,700	1,700	1,700	1,700	1,700	1,700	**10,200**
Audit			3,000			3,000	**6,000**
Office Supply/ Copies	400	400	400	400	400	400	**2,400**
FICA	2700	2700	2700	2700	2700	2700	**16,200**
Telephone	900	900	900	900	900	900	**5,400**
Info & Education	1,500	1,500	1,500	1,500	1,500	1,500	**9,000**
Postage	300	300	300	325	325	325	**1,875**
Auto & Bond Insurance	300	300	300	300	300	300	**1,800**
Water & Manure Test	350	350	350	350	350	350	**2,100**
Errors & Omissions	800	800	800	800	800	800	**4,800**
SUBTOTAL	**13,500**	**13,500**	**16,800**	**13,825**	**14,125**	**17,125**	**88,875**
GRAND TOTAL	**79,932**	**81,319**	**86,006**	**84,418**	**86,105**	**85,492**	**503,272**

During January 2003, the project grant agreement was amended to extend the project period end date from 22 March 2003 to 28 February 2007.

During May 2006, the agreement was amended to reduce the EPA 319 funds awarded for the project to $371,875 when it was determined that funds would not be expended before the end of the project period. All budget categories were reduced with the exceptions of health insurance and travel/meetings. There were numerous reasons to end the project under budget including lower than expected labor and technical assistance costs, equipment costs, and utility costs. Expenses were lower than expected during 2004 and 2005 because of the coordinator's deployment to Iraq. .
Actual 319 project expenditures are shown in Table 15.

Table 15: REVISED PROJECT 319 BUDGET (ACTUAL EXPENDITURES).

	2000	2001	2002	2003	2004	2005	2006	2007	TOTAL
Project Coord./Salary @ 2087 hr	13,585.08	17,833.13	18,720.00	19,231.88	15,633.75	15,629.76	20,608.76	1,545.20	**122,787.56**
Admin Sec/Salary @ 687 hr	4,008.92	5,616.00	5,803.20	6,271.20	6,232.75	4,554.00	8,498.74	1,551.16	**42,535.97**
ANMT Assistance									
Engineering & Tech Support	36,000.00	22,500.00	22,500.00	22,500.00	18,750.00				**122,250.00**
SUBTOTAL	**53,594.00**	**45,949.13**	**47,023.20**	**48,003.08**	**40,616.50**	**20,183.76**	**29,107.50**	**3,096.36**	**287,573.53**
ADMINISTRATION COSTS									
Health Insurance	1,663.90	1,972.51	4,620.80	5,013.15	4,569.64	3,137.82	7,119.90	1,475.67	**29,573.39**
Workman's Comp		762.03	130.98	126.75	77.25	54.82	984.64		**2,136.47**
Travel/ Meetings	130.82	15.00	503.27	116.63	368.64	234.85	475.84	347.16	**2,192.21**
Equipment/ Maintenance					189.47				**189.47**
Audit			450.00					500.00	**950.00**
Office Supply/ Copies	651.46	507.05	122.14	347.57	166.15	195.63	354.71	152.34	**2,497.05**
FICA									
Telephone	377.70	333.69	357.37	335.33	368.46	295.59	492.31	81.93	**2,642.38**
Info & Education	45.00	2,379.33	124.99	56.25	236.92	79.07	180.00	63.85	**3,165.41**
Postage	99.00	220.03	153.00	170.89	173.40	174.00	87.60		**1,077.92**
Auto & Bond Insurance	162.67	112.50	112.50	112.50	112.50				**612.67**
Water & Manure Test		19.50	128.25	87.75		57.00	157.00		**449.50**
Errors & Omissions				749.29	750.00				**1,499.29**
***Payroll / unemployment tax**	1,416.29	2,144.53	2,368.97	2,461.87	1,972.90	1,917.10	2,823.50	280.19	**15,385.35**
SUBTOTAL	**4,546.84**	**8,466.17**	**9,072.27**	**9,577.98**	**8,985.33**	**6,145.88**	**12,675.50**	**2,901.14**	**62,371.11**
GRAND TOTAL	**58,140.84**	**54,415.30**	**56,095.47**	**57,581.06**	**49,601.83**	**26,329.64**	**41,783.00**	**5,997.50**	**349,944.64**

*** Line added to show payroll tax and unemployment payments**

During the project period, $375,671 nonfederal cash and inkind match was documented. The source of the matching funds include state funds, county funds, conservation district, landowner, producer, and Citizens for Big Stone Lake. This amount exceeds the 40 percent requirement of $335,515 as stated in the Grant Letter of Agreement for the project dated August 9, 1999.

Original projections for other federal fund expenditures were $810,000. Actual expenditures total $588,767 with approximately $108,600 PL-566 funded practices contracted for practices not yet completed, although several have been started and will be finished in spring and summer of 2007.

Total expenditures for the project were also less than anticipated with $1,314,382 actually expended compared to the projected $1,701,772.

Table 16: Total Project Expenditures.

	2000	2001	2002	2003	2004	2005	2006	2007	TOTAL
EPA/319	58,141	54,415	56,095	57,581	49,602	26,330	41,783	5,998	**349,945**
Producer and Local Match	111,037	75,033	55,210	29,972	36,616	36,981	15,158	15,664	**375,671**
Other Federal Funds	137,847	109,126	66,857	6,400	33,366	32,944	*180,204	22,023	**588,767**
Total	**307,025**	**238,574**	**178,162**	**93,953**	**119,584**	**96,255**	**237,145**	**43,684**	**1,314,382**

*Includes $158,763 EQIP funds for Concentrated Animal Feeding Operation (CAFO) in the watershed.

FUTURE ACTIVITY RECOMMENDATIONS

Although the restoration process has been on going the watershed for nearly two decades and there has been noticeable improvement in the river and the lake, the mission is not fully accomplished. According to "The 2006 South Dakota Integrated Report for Surface Water Quality Assessment," Big Stone Lake is fully supporting of all beneficial uses. However, the same report also states that the lake is "water impaired but has an approved TMDL." Therefore it can be concluded that there is still room for improvement and more work to be done. Considering the size of the watershed and the lake, it can be concluded that there is no quick fix. All stakeholders in the watershed must take responsibility for their area of interest and work cooperatively with other stakeholders for the long term if success is to be realized. The prudent course of action is to continue moving forward to achieve steady improvement in water quality over the long term. The Roberts Conservation District will continue to support the restoration process for the watershed at every feasible opportunity in the future.

Appendix A

Project Photographs

AWMS, Evaporation Pond.

AWMS, Sediment Basin.

AWMS, Pond and Sediment Basin.

AWMS, Storage Pond.

No-till Seeding, Soybeans on Wheat Stubble.

Streambank before stabilization.

Streambank stabilization completed (Fall 2000).

Streambank Stabilization 1.5yr after construction (2002).

Streambank Stabilization During Flood Event (Spring 2006).

Grassed Waterway Constructed and Mulched (Fall 2001).

Grassed Waterway from Above (Fall 2006).

Grassed Waterway Constructed 2003 (2006 Photo).

Pond Constructed Fall 2005.

Pond Constructed Summer 2004.

Pond Constructed Summer 2002 (2003 Photo).

Pipeline, Tank, and Cross-fences for Grazing System.

Sheet Pile Structure, Wetland Restoration 2006.

Riparian Forest Buffer Planted 2002 (2003 Photo).

Cross-Fence for Grazing Management 2006.

Cross-Fence 2006.

Native Tall Grass Planting.

CP21 Filter Strip near the Little Minnesota River.

Appendix B

Brief History and Current Status of Big Stone Lake Restoration Project

BRIEF HISTORY AND CURRENT STATUS OF THE BIG STONE LAKE Restoration PROJECT

Big Stone Lake is located on the South Dakota - Minnesota border. The lake occupies the valley of a glacial river that drained historic Lake Aggasiz. The lake's 12,360 acre surface area extends southward for 26 miles from Browns Valley, Minnesota to Ortonville, Minnesota and Big Stone City, South Dakota.

During the early 1980s, citizens of South Dakota and Minnesota requested assistance from both states and the US EPA to begin restoring Big Stone Lake. The primary concerns were poor water quality, excessive algal blooms, sedimentation, rooted aquatic vegetation, and reduced recreation potential. An EPA Section 314 grant was awarded to South Dakota to complete a Diagnostic / Feasibility Study. The study was completed during 1983. During 1984, additional EPA Section 314 grants were awarded to South Dakota and Minnesota to begin a lake and watershed restoration project. Subsequent EPA grants have been provided to both states to continue the restoration effort.

Additional funds used to install conservation practices in the earlier phases of the project came from the Agricultural Conservation Program (ACP) and Community Development Block Grants (CDBG). The primary focus of the early phases of the project was the Animal Waste Management System (AWMS), as shown in Table B1.

Table B1: Load Reductions for LMR Practices Installed 1985-1995.

Practice	Delivered Sediment Reduction Tons/year	Delivered Phosphorus. Reduction lb/year
AWMS		6,053.0
Ponds (NRCS 378 Std.)	4,105.4	2,393.0
No-till Farming	2,337.9	1,585.1
Grassed Waterway (412 Std.)	616.0	417.6
Totals	**7,059.3**	**10,448.7**

The cumulative total of the conservation practices installed in the watershed since the beginning of the project include 51 animal waste management systems, 36,515 acres of no-till farming, 115 ponds, and 59 grassed waterways.

As a result of the EPA Clean Lakes Program, sewage treatment facilities at Browns Valley and Sisseton have been improved and several feedlot retention dams were constructed. Wastewater treatment facilities in the cities of Veblen, Peever, Wilmot, and Big Stone City, SD have also been upgraded in recent years. (Table B2)

Table B2: Phosphorus Reductions from Wastewater Treatment Facilities.

City	Delivered Phosphorus. Reduction lb/year
Sisseton	4,000
Browns Valley	2,700
Veblen	no data available
Peever	no data available
Totals	**6,700**

Restoration practices implemented at the lake include access road erosion control, shoreline stabilization, and upgraded wastewater treatment. Some AWMS were constructed in the Whetstone River watershed in addition to the systems constructed in the Little Minnesota River watershed. A new lake outlet control structure and a debris barrier were constructed at the south end of the lake.

The main purpose of the barrier is diversion of the majority of flow from the Whetstone River away from Big Stone Lake. The Whetstone River was diverted into the lake during the 1930s to augment lake levels. The diversion also resulted in excessive nutrients and sediment being deposited in the lake. The new control structure diverts some of these pollutants away from the lake in accordance with the original river flow pattern. According to a report prepared by HDR Engineering, the flow management is considered less successful because of the high initial cost and the inability to handle large flows. However the structure does work in conjunction with the lake level management. (HDR 7-5).

Table B3: Whetstone River Watershed Reductions.

Practice	Delivered Sediment Reduction Tons/year	Delivered Phosphorus Reduction lb/year
AWMS		3,407.0
Lake Farley Dam	945.0	1,795.5
Diversion and Flow Management	8.1	1,790.0
Totals	**953.1**	**6,992.5**

EPA Section 319 grant funding has been provided for the Big Stone Lake Project since 1989, with the most recent 319 grants being awarded during 1996 and 1999. In addition, a USDA PL-566 grant was awarded to Roberts County (SD) and Roberts Conservation District for the period of 1996-2005 to assist with continuation of the project by providing financial and technical assistance to put water quality improvement practices on the ground. (Tables B4 and B5)

Table B4: LMR / BSL Load Reductions 1996-1999.

Practice	Delivered Sediment Reduction Tons/year	Delivered Phosphorus. Reduction lb/year
Pasture/hay planting (512 Std.)	291.6	554.0
Ponds (NRCS 378 Std.)	2,790.0	5,301.0
AWMS		3,597.0
Grazing land improvements	580.2	1,102.4
Grassed Waterway (412 Std.)	4,582.0	8,705.8
No till Farming	8,144.0	15,473.6
Totals	**16,387.8**	**34,733.8**

Table B5: LMR / BSL Load Reductions 2000-2007.

Practice	Delivered Sediment Reduction Tons/year	Delivered Phosphorus. Reduction lb/year
Bank Stabilization	375.43	713.31
Pasture/hay planting (512 Std.)	542.11	1,029.98
Ponds (NRCS 378 Std.)	4,578.95	8,700.00
AWMS		16,633.00
Continuous Sign-up CRP	910.10	1,729.20
Grazing land improvements	8,417.90	15,994.04
Grassed Waterway (412 Std.)	3,073.20	5,839.08
No till Farming	3,537.80	6,721.70
Totals	**21,435.49**	**57,360.31**

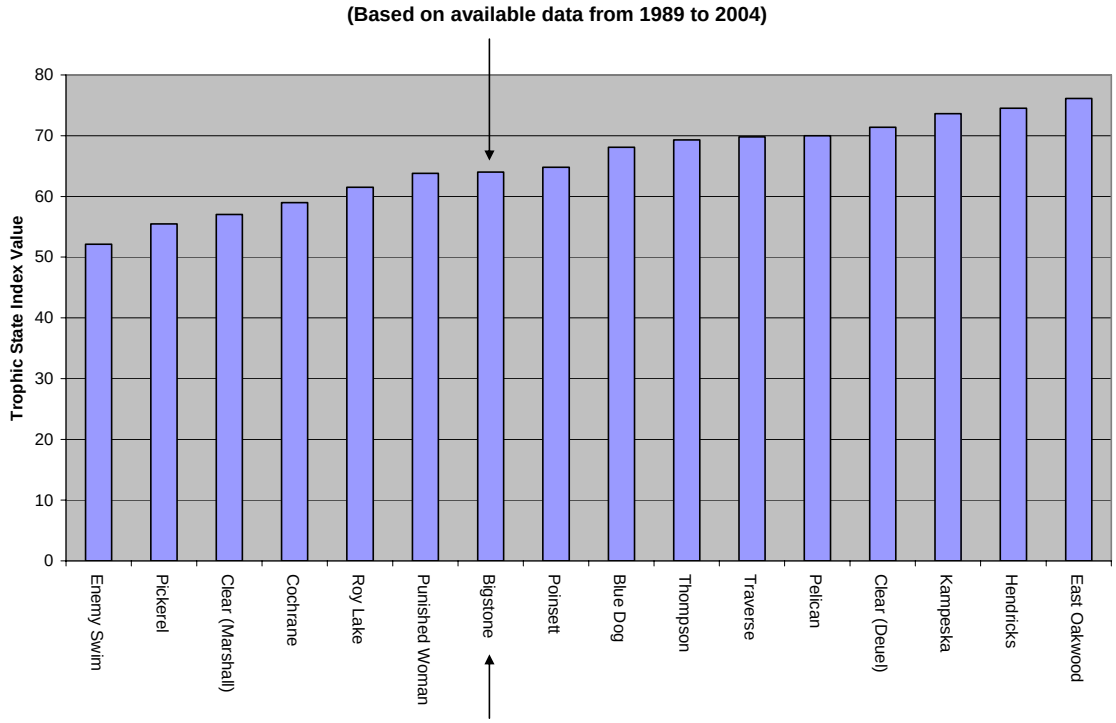
The results of the Big Stone Lake Restoration Project are beginning to be realized in improved water quality. Periodic water analyses by SD DENR show a gradual trend in water quality improvement during recent years which brings the trophic status of Big Stone Lake more in line with other lakes in northeast South Dakota. This has resulted in less extensive and shorter duration algal blooms (Figure 6).

In addition, the fisheries of the lake have improved to the point that a national walleye circuit fishing tournament is held annually at Big Stone Lake. Attendance records at Big Stone Lake State Park on the Minnesota side and Hartford Beach State Park on the South Dakota side have documented a trend of substantial increases in recreational use of the lake. Comments by lake residents indicate appreciation of the water quality improvement that has occurred. The key partners in the Big Stone Lake Restoration Project have included watershed land owners; lake residents; local counties, conservation districts, and municipalities; Upper Minnesota River Watershed District; Citizens For Big Stone Lake; South Dakota Department of Environment and Natural Resources; Minnesota Pollution Control Agency; US EPA; USDA; and US Fish and Wildlife Service. Additional information on state park usage and the lake fisheries is provided below.

STATE PARK INFORMATION (personal communications with park managers, 2006)

The following table summarizes visitor days at the two state parks on Big Stone Lake during recent years. Although there hasn't been a steady increase in park usage there definitely is a trend toward higher lake usage.

Figure 6: Long-term Cumulative Average Trophic State.



Northeast South Dakota Lakes **SD DENR 2006**

Table B6: Park Visitation.

	Big Stone Lake State Park (MN)	Hartford Beach State Park (SD)
Year	**Attendance**	**Attendance**
1986 to 1993 (ave.)	11,000 to 13,000	57,000 to 59,000
1994	15,500	*55,000
1995	18,500	66,336
1996	25,000	61,944
1997	28,500	66,375
1998	33,700	72,000
1999	36,559	77,229
2000	35,268	68,901
2001	23,772	75,390
2002	32,545	88,410
2003	52,444	84,009
2004	52,946	**66,154 ---***84,813
2005	55,707	**68,605 ---***87,995

*Hartford Beach campground under construction / renovation.
**Visitation calculation formula changed from 3/vehicle to 2.34/vehicle.
***Visitation using old formula for comparison purposes.

FISHERIES INFORMATION

Big Stone Lake and its fishery provide one of the main attractions for Big Stone Lake State Park, Hartford Beach State Park, and several resorts, as well as an important recreational attraction for Ortonville, Big Stone City and surrounding communities. The fishery of the lake has the potential to contribute substantially to local and state economies. Creel surveys conducted during open water and ice fishing seasons estimated the impacts during several time frames in the cumulative project period (Table B7). The most recent creel survey, conducted during 2002-2003, shows not only a reduction in angler trips and angler hours, but also a reduction in walleye catch rates for the summer fishing. These rates were higher than the 1987-1988 levels but below the 1993-1994, 1994-1995, and 2001-2002 (Domeier, 10).

Table B7: Fishery Information.

Creel Survey	Angler Trips	Angler Hours	Economic Value
1987-88	60,575	195,446	$1,272,075
1993-94	73,981	287,306	$2,737,297
1994-95	95,334	329,633	$3,908,694
2001-02	54,088	198,621	$3,324,433
2002-03	35,818	122,818	$2,256,534

Data from: MN DNR

PAST MANAGEMENT (excerpts from Lake Management Plan, Minnesota Department of Natural Resources, 5/29/96, and Minnesota DNR website 2006)

The fishery of Big Stone Lake has historically been managed primarily for walleye, with a secondary emphasis on yellow perch, bluegill, black crappie, northern pike, largemouth bass and channel catfish.

During the years between 2000 and 2005 the walleye fry stocking in Big Stone Lake ranged from 3 million to 6 million per year with the exception of 2001 when no fish were stocked.

Walleye sampling completed during 2005 yielded an average of 40.6 fish per net versus a typical catch rate of 3.2-15.3 fish per net for lakes with similar physical and chemical characteristics.

Perch sampling data for 2005 indicates an average catch rate of 63.5 fish per net as opposed to a typical catch rate of 3.0-22.5 fish per net in lakes with similar physical and chemical characteristics.

PRESENT LIMITING FACTORS

Agricultural, domestic, and municipal pollution have degraded fisheries habitat, reduced recreational appeal and aesthetic quality of the lake, and increased the likelihood of more direct effects to the fisheries in the form of fish kills. Drainage and land use changes in the lake's watershed have contributed to increased sediment and nutrient loading, changes in tributary flows, increases in water level fluctuations, and direct destruction of aquatic

habitats (particularly streams and wetlands). It is projected that sediment and nutrient loading have probably degraded water quality, and altered physical habitat. Vegetation and bottom composition may have changed to become less conducive for desirable fish species.

Appendix C

Newspaper Articles

Conservation Concerns

Roberts Conservation District would like to remind area farmers to observe the importance of good conservation practices, not only for the environment, but also to maintain the vigor and health of your farm for future success. The 20th Conservation Reserve Program (CRP) sign-up is January 18, 2000 to February 18, 2000. Take advantage of this opportunity to conserve the soil in your field, water quality in your watershed and help restore and improve habitat for wildlife.

Ag Waste Management Systems (AWMS) are another important part of our promotional practices. This is a planned system in which all necessary components are installed for controlling and managing liquid and solid plant and animal waste, including runoff from concentrated waste areas, in a manner that does not degrade air, soil, or water resources. Estimates show that AWMS will have an efficiency gain in annual operation costs of approximately $7,647.00/year/200 head of cattle, in fertilizer costs, animal health and weight gain. It's an easy, fast and efficient storage for manure and/or milk parlor waste. It also saves on everyday wear and tear of a tractor and other machinery used in the spreading method of manure.

A Nutrient Management Plan is then incorporated into the operation. This will help the producer better utilize the valuable resource we have controlled and contained. Research has shown that using this system to fertilize your crops you can retain up to 98% of nitrogen, where normally it has an 80% loss.

Funding is available in the Little Minnesota River Watershed and areas adjacent to Big Stone Lake for a limited time this spring. The AWMS is cost-shared at 65% paid by the Little Minnesota River/Big Stone Lake project, 10% by Roberts Conservation District and 25% by the producer. The cost-share goes toward the construction of the system, fencing, and any critical area planting needed. The following, are just a few of the many practices that are also under the cost-share program if included with the AWMS:

*Multipurpose Dams-Livestock Watering Facilities

*Deferred Grazing and Management-Cross Fencing

*Stream Bank Stabilization-Riparian Restoration

*Grassed Waterways

If you have any questions concerning these or any other conservation practice, please contact us at 605-698-3923/7431, stop in at the Roberts Conservation Office, East Hwy 10, Sisseton, SD, or you may stop at our booth at the Roberts County Farm and Home Show on Jan. 19-20.

Project Coordinator
Jason A. Rehn

Courier 1-18-00

FARMING, FISHING
District Watershed Pr
watershed project he
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01

BY: JANICE OLSON
EXTENSION EDUCATOR/FCS
October 29, 2001

NOVEMBER IS DIABETES **MONTH**

lovember is Diabetes Month but it's an illness that needs to be thought about e than one month a year.

Diabetes caused blood sugar levels to be too high. Over time, high levels of od sugar can harm your nerves, eyes, kidneys, heart and blood vessels. It can se you to go blind, suffer from kidney failure, or loss a foot or toe. Diabetes also lead to gum disease.

Here are some things you can do to help prevent foot problems:

* Inspect your feet every day. Use a mirror to check for cuts, sores, scratch- not spots, color changes, swelling, cracks, blisters, calluses, reddened areas, ns or ingrown toenails. Call your doctor immediately if you find any of these.
* Wash your feet every day using water and a mild soap. Dry your feet well n a soft towel, making sure to dry between toes.
* Cut your toenails straight across and then around the corners using a card- rd emery board.
* Wear clean soaks every day. White cotton or wool socks are the best.
* Always wear shoes or slippers to protect your feet, even when inside.
* Use lotion to keep your feet soft but avoid using lotion between your toes.
* Ask your doctor to check your feet at each visit. Take off your shoes and ks as a reminder.
* Check the inside of your shoes for rough surfaces, nails, or other objects should not be there.
* Wear leather shoes which allow feet to "breathe".
* Buy shoes late in the day when your feet are a bit larger, so shoes will fit er. Allow 1/2" toe room at the tip of the shoe.
* See your doctor regularly for diabetes care.
* Test and record your blood glucose regularly so that your doctor, dietitian, diabetes nurse can assist you with your diabetes management.
* Follow your meal plan, which should be low in fat (saturated fat and cho- erol), sweets and salt.
* Reach and maintain a healthy weight.
* Exercise regularly. If you are just starting to exercise, be sure to check with ir doctor before you start an exercise program.

TES TO REMEMBER:

November 9-- Behavior Management - 10 a.m.- Veblen Headstart
November 15-- Toy Lending Library - 6 p.m.- 4-H Center
November 15--Training Session on Blocks 7 p.m.- 4-H Center

COUNTY AGENT NEWS

BY: LES HANSEN
EXTENSION EDUCATOR
605-698-7627

IS **LIFE** FAIR?

Is life fair and equal? Is the answer so obvious as to make you laugh? What our immediate response? In *Fitting at Fairness*, authors Myra and David lker suggest that our educational system throughout the nation unfairly treats dents as they pursue their goals. Often, the differences are so subtle as to be icult to observe to the untrained eye. Even professional educators aware of studies were unable to identify many of these unfair practices. However, once y had some training, favoritism became all too evident.

Studies indicated that the favored were given more time to come up with onses, more detailed explanations were given to the favored, and the favored e encouraged to explore options. Yes, we know these inequities are there. Are y necessary? Are students discouraged from developing their full potential? he upcoming week, some SHS students will be receiving training in Character ants. Of the six pillars of character stressed here, one of them is fairness. This prompted me identify some activities and expand my horizons in regard to thing called fairness.

A number of years ago, bowling became one of my leisure activities. ring the two seasons of league, we had an enjoyable time. One of the major ntributing factors was the fact that the handicap, which we were all handicap wlers, evened the playing field immensely. What do we do in life to even the ying field for youth? What about this fairness issue? Formulas can be used olve many problems. Applying them to human activity and function is not te so cut and dried. Nonetheless, we need be cognizant and educated to the t that these fairness issues are addressed to the best of our ability.

Some fairness issues deal with playing by the same rules, giving everyone same chance to become winners, doing the right thing even if it may result in sonal loss, and using the same rules for everyone in the same situation. derstanding fairness, addressing fairness concerns in a manner resulting in fair

DISTRICT NEWS

Riparian Management Benefits

Riparian areas are simply "green zones" of vegetation, especially trees, along rivers, streams, waterways, lakes, dams or springs. Riparian areas act as buffers to the surface waters by reducing the amount of nutrients, sediment and pesticides that reach the water. The buffering action can also work the opposite way in helping to protect adjoining farmland by stabilizing the stream bank and buffering some of the most destructive forces of water during a flood. Vegetation not only slows the flow of floodwaters; it also stabilizes the bank to keep the stream more narrow and deep, which in turn maintains a supply of water for a longer time into dry periods.

A doubling of the speed at which a stream flows allows it to erode up to four times as much and increases the ability to carry sediment and other materials sixty four times. As the root mass and vegetation on a stream bank increases, erosion decreases. A two inch root mat will resist erosion up to 20,000 times better than bare soil stream banks.

The primary land uses that impact riparian areas in South Dakota are cropland, grazing land and urban lands. In cropland areas the primary concern is to minimize the runoff of nutrients or fertilizers and pesticides designed for weed and insect control from entering the stream. A riparian buffer in an effective way to filter a large portion of the chemicals and nutrients out before they reach the stream. Managing a riparian area on grazing land is generally more difficult. Grazing practices designed to maximize forage use and production may not be the same as practices used to promote a healthy riparian area. Continuous, season long grazing is the most detrimental to a riparian area. The best case scenario for a riparian area in grazing land would consist of an exclusion fence to limit the livestock use of the area to spring and early summer. Then allowing access to stream water only in certain areas, or even alternative water sources in upland areas for the remainder of the grazing season. Other management tools that may be used include rock crossings installed in the streams to encourage the livestock to use certain areas for crossing and watering purposes, and alternative watering systems such as nosepumps, which allow the livestock to get higher quality water away from the stream itself.

The local NRCS office has cost share programs that can help fund many of these practices on grazing land as well as designing and assisting in the installation of riparian buffer strips on cropland edges and marginal pasture land. New riparian buffers can also be eligible for continuous CRP

growth for SD

By Joel Dykstra, CEO
South Dakota Ag Producer Ventures

The recent announcement of the construction of a new cheese processing plant near Lake Norden illustrates just one of the ways in which value-added agriculture can mean major economic development benefit for our state. The investment by Davisco—and Land O Lakes—shows solid belief in South Dakota as a strong dairy state. The companies involved in this venture—one of the largest dollar value investments in one site in South Dakota history—admit that more milk production will be necessary to fuel this world-class cheese facility.

Dairy experts have conducted studies which brought some key statistical data to light. Among those facts:

-- Demand for milk and milk products is growing nationwide.

--Milk production will continue to be profitable.

--Milk production per cow has increased for each of the past ten years.

--The US consumes most of the milk it produces, with no excess supply capacity.

-Despite this information, milk production in South Dakota has risen only slightly during the past two years—and cow numbers have dropped by almost 40% since 1970. South Dakota ranks 21st nationally in cow numbers, in spite of research showing that areas of South Dakota are the best place in the United States to raise dairy cattle! In fact, South Dakota is one of the best states nationally for the dairy industry, boasting readily available land, water and high quality feed, including an ation development.

District Crop Impro

BROOKINGS, S.D. -- District Crop Improvement Association meetings are set for six South Dakota cities in November, Executive Director Robert **Pollmann** of the South Dakota Crop Improvement Association said.

The meetings all begin at 10 a.m. and end at 3 p.m.

Here are the dates and locations:

• Tuesday, Nov. 13: The North Central District meets at the Brown County Courthouse, Aberdeen.

• Wednesday, Nov. 14: The Northwest District meets at the Community Center in Timber Lake.

• Thursday, Nov. 15: The Southwest District meets at the West River Ag Center, 1905 Plaza Blvd., Rapid City.

• Friday, Nov. 16: The South Central and Central districts hold a combined meeting at Al's Oasis, Oacoma.

• Monday, Nov. 19: The Northeast District meets at the Dacotah State Bank (formerly Security State Bank) in Webster.

• Tuesday, Nov. 20: The Southeast and East Central districts hold a combined meeting at the Lake County Extension Center, 1000 S. Egan Ave., Madison.

The meetings are planned for Crop Improvement Association members and certified seed growers, but anyone interested in new varieties and crop production in general is welcome to attend, Pollmann said.

Jack Ingemansen, manager of Foundation Seed Stocks at South Dakota State University, will discuss

Reinart Brothers Well Drilling
PUMPS ~ REPAIR ~ WELL SEALING
COMPLETE WATER SYSTEMS
Bus. Ph. - (320) 563-8386
Joe Reinart - (320) 695-2419
Jerry Reinart - (320) 563-4096
Greg Reinart - (320) 695-2333
Hwy. 27 E.
Wheaton, MN
56296

Sisseton Livestock Auction, Inc.

COMING UP

MONDAY, NOVEMBER 5 . . . 250-300 horses . . . sale time 12 noon
THURSDAY, NOVEMBER 7 . . . 1500-1800 calves. . . a feature is fe ing **cow/calf** pairs . . . 14 black and **hereford** cross and 15 **mixed cow all with** calves at side . . . and 200 yearling steers . . . RInas Ranch-v *green/off grass* . . . and more . . .

FRIDAY, NOVEMBER 8 . . . 1800-2000 calves . . . sale time 11 a.m. 100 black angus steers and heifers and 200 black and red angus-nat feds-550 lbs among many others of very high reputation . . .

- Big Stone Restoration Project -

The Little Minnesota River/Big Stone Lake Restoration Project had another active year in 2001, with many accomplishments as well as several changes. The Roberts Conservation District accepted the resignation of Project Coordinator Jason Rehn and hired a new coordinator Mike Jensen who started in July 2001. The Global Positioning System (GPS) is being used to record the geographic coordinates of all conservation practices completed. This information is integrated into a local as well as state wide Geographic Information System (GIS) that helps to track watershed improvements through digital mapping. The Roberts Conservation District is using the GIS software not only to track improvements, but also for large scale, high resolution, planning and soils maps.

The Big Stone Lake Project had a busy year of planning and implementing conservation practices aimed at reducing the amount of phosphorus and sediment entering the Little Minnesota River and Big Stone Lake. The reduction of nutrients and sediment into the lake will not only help to increase the recreation potential of the lake but also increase the life span of the lake. Although the practices implemented to date have caused a measurable reduction in phosphorus in the lake there continues to be large algae blooms each summer. We have to realize that as little as 0.10 parts per million (PPM) of phosphorus in solution can result in a large algae bloom.

New coordinator for the Big Stone Lake Restoration Project **Michael Jensen.** Mike started working for the District July 1, 2001. He replaced Jason Rehn.

One of the most popular conservation practices implemented in 2001 was the grassed waterway. The 13 grassed waterways installed in the watershed have the potential to significantly reduce soil erosion and filter out sediment and nutrients from the fields where they were installed. The District is continuing to encourage mulching the seeded waterways with old hay to help with erosion control until the seeded grass is established.

Earthen ponds, which include both dugouts and dams continue to an extremely popular practice also. In **2001** there were also **13** of these practices completed for livestock water, wildlife, and recreational purposes. These ponds will prevent huge amounts of sediment and nutrients from washing downstream.

There was one Animal Waste Management System (AWMS) constructed in the watershed. This practice has been an instrumental part of the conservation process in this project. They prevent manure and precipitation from running off of the lots and going into the watershed in confined livestock operations.

Other conservation practices that have been implemented to improve water quality and reduce soil erosion include, streambank **stabilization,** cross fencing with a grazing management plan, stream rock crossing, riparian buffers, no-till farming, tree plantings, and **pasture/hayland** plantings. These practices continue to improve not only our water quality but also the health and diversity of plant and animal species on the area farms and ranches.

If you have an questions or comments on any of these conservation practices please call or stop **by** the Roberts Conservation **District/NRCS** office for information on the practices and cost share programs. We are currently budgeting and planning practices for **2002.** It is on a first come, first served basis, so **hurry** before the money is **gone.**

Roberts Conservation District and Natural Resources Conservation Service does not discriminate on the basis of race, color, religion, gender, national origin, or **age.**

Cody Hanson and Calvin Thompson 2001 Soil and Moisture contest winners. Cody and Calvin will be attending the Soil & Moisture Clinic Januaw 27 through 29 held at SDSU in Brookings.

	5,692.45
Supervisors Expense	5,825.34
Wages and Benefits	70,167.50
Memberships & Dues	2,359.45
Ads and Promotions	2,240.52
Tree and Fabric Stock	69,714.36
Tree Planting Expense	4,657.79
Drill Expense	7,079.15
Seed	8,666.69
Total Expenses	$177,818.57

Big Stone Lake Project

INCOME	
EPA 319 Drawdowns	52,726.61
C/S for Projects	28,013.55
Roberts County	30,000.00
Interest	3,472.77
Miscellaneous	162.50
Total Income	$114,375.43
EXPENSES	
Office	5,226.94
Wages and Benefits	37,285.72
Technical Assistance	30,000.00
CIS for Earthwork projects	40,004.82
CIS for special projects	2,361.52
Insurance	1,050.00
Miscellaneousexpense	539.64
Total Expense	$116,468.64

the Registered Holders of Brothers Mortgage Securities Nw Century Asset-Backed Flo Certificates Series 1998-NC5,
Plaintiff,
-vs-
Robert W. Schaller; Evelyn J. Karen Grinde; Credit Bu Watertown Inc.; University Dakota; and any person in posses
Defendants.

THE STATE OF SOUTH D **SENDS** GREETINGS TO THE NAMED DEFENDANTS:

You are hereby summoned and defend against the Complai action, which is herewith serv you, by serving upon the unde **copy** of an answer or other response within thirty (30) days service of this Summons upon yo sive of the day of service. If you so, judgment by default will against you for the relief demanc Complaint. The original Complai with the Clerk of the Circuit Co County in which this action menced.

This action relates to the forec a mortgage upon the following c real property in the County of State of South Dakota:

Lots 13, 14, 15, and the **N1/2** c of Block **64** in the Town of S Roberts County, South Dakota, a 8th Ave. E., Sisseton, SD 57262.

The Plaintiff is not seeking a **judgment** against the above Defendants.

Dated December 2
MACKOFF KELLOGG LA\
Attorneys for
PO B
Dickinson, ND 586
Tel: 701-2
SD BAR I
By: Glen R. Bruhschwein. A

THIS IS AN ATTEMPT TO LECT THE REFERENCED DEB ANY **INFORMATION OBT** WILL BE USED FOR THAT PU THIS **COMMUNICATION** IS FF DEBT COLLECTOR.

(4 weeks. 1/29-2/19)

2

*NARFE (National Association of Retired Federal Employees), second Monday of the month (except December, January, February), 12 noon, 4-H building.

*Horse & Buggy Days, last Monday of the month, Anderson Park House, 7 to 9 p.m.

*Sisseton Chamber of Commerce, first Thursday of the month. CDP Board Room, 11:30 a.m. Everyone is welcome to attend.

*Sisseton Lions, fourth Tuesday of the month, Roberts County Mutual (back office), 12:00 noon.

*Sisseton Kiwanis, every Monday at the Coteau des Prairies Hospital Board Room, 12 noon.

*Whist, Senior Citizens Center, 7:30 p.m., third Monday of each month.

*Women's Circle Support Group, every Wednesday afternoon, 3:00 to 4:00 p.m., for information call 698-4129. Come in, have a cup of coffee and watch a short video from our library: domestic violence, sexual assault, dating violence, child abuse. Most are less than a half hour (bring your lunch, we'll provide coffee or juice). Community Education and Outreach: homebound, shut-ins, if you can't come to us, we'll come to you. Call us, arrange a time.

*Monthly Dinner, Senior Citizens Center, 11:45 a.m., third Saturday of each month.

*Knights of Columbus, first Tuesday of the month, Senior. Citizens Building, Sisseton, 8 p.m.

*American Legion and Auxiliary, second Wednesday of the month, 8 p.m.

*Order of the Eastern Star, third Monday of the month, Masonic Temple, 8 p.m.

*VFW & Auxiliary, second Monday of the month, Post Home, 8 p.m.

If your club or organization has a weekly or monthly meeting you would like listed, please call the Sisseton Courier, 698-7642.

Cemetery Site. Part 6

Claire City Cemetery Association history

by Hardy and Ileane Hiiestad

To copy a quote from the Claire City-New Effington history book, "It was a hot day at 10:00 a.m.--the 15th of August 1913 when a group of excit-

filed a Certificate of Declaration to the state of South Dakota to form the Claire City Cemetery Association in 1924. Give credit to Hans Hillestad, Harry Tisch and Ervin Tisch for mow-

July 26, 1947 at the Wist Parsonage. To this union two children were born. The family lived in Aberdeen, SD for ten years. They returned to live at their summer home near Buffalo Lake, SD in 1961. Myrtle was a charter member of the Hope Lutheran Church, and she was very active in the Hope Lutheran Church where she taught Sunday School, was the church secretary, and also secretary of the Hope Lutheran Women's Missionary Federation. Edwin passed away on February 16, 1976. Myrtle continued to live near Buffalo Lake until she moved into Sisseton, SD. Myrtle loved her family and enjoyed get togethers with family and friends, especially 4th of July family reunions which she hosted for 40 years. She enjoyed flower gardening, sewing club and breakfast club at Mabel's Cafe, and the Eden Widow's Club. Myrtle was a good cook and her families favorites were dressing, Norwegian lefse, klub, and her famous homemade donuts. She was a fun loving person who enjoyed a good cup of coffee with cream and a visit with anyone. She will be greatly missed. Until October of last year she kept a daily diary and never missed reading from Our Daily Bread devotional. She was ready to go home to heaven where we will meet her some day. Myrtle passed away suddenly on February 16, 2002 at the Tekakwitha Nursing Center in Sisseton, SD.

Myrtle is survived by two children, Randy Almos of Eden, SD; and Diane and husband Rev. Wes Brooks of Plymouth, MN; one sister, Esther and husband Burdette Nerland of Roslyn, SD; two brothers, George and wife Shirley Bakke of Aberdeen, SD; and Lloyd and wife Janet Bakke of Sisseton, SD; four grandchildren, Jason and Justin Brooks, Chris Bard and April Jackson and one great-granddaughter Julianna Winters.

Myrtle was preceded in death by her parents, husband, three brothers, Olaf, Elmer and Peter Bakke, and two sisters, Ann Palm and Agnes Fordahl.

SHS VOLLEYBALL "C" TEAM--Members of the 2001-2002 "C" Team volleyball program include (front row, left to right) Rainelle St. John, Shelly Kuschel, Kelly Bredvik, Brenna Oey, (back row) Marissa McCleerey, Amanda Reyelts, Laura Gamber, Carrie Borgheiinck, and Coach Pat !

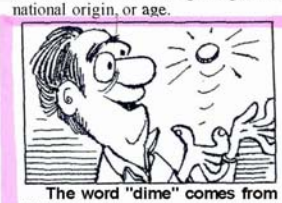
Grazing Workshop scheduled for Feb. 27 at 4-H Center

The Little Minnesota River/Big Stone Lake Restoration Project will have approximately $18,000 of new cost-share money to allocate for 2002 through the PL-566 Small Watershed Project. This money will augment existing money from PL-566, Environmental Quality Incentives Program (EQIP), and EPA Section 319. These funds are available to cost share Animal Waste Systems, dams for livestock and wildlife, grassed waterways for erosion control and nutrient retention, riparian buffer strips, riparian forest buffers, streambank stabilization, stream sock crossings, cross-fencing with a grazing plan, and tree plantings. as well as others. Along with the cost-share money, there is technical assistance for planning, engineering/design, and implementation of the practices.

Keep in mind that we are nearing the end of the project period in 2004 with probable reductions in funding throughout the remainder of the project. This is a voluntary program designed to help the producer reduce soil erosion and improve nutrient retention, which in turn aids the goal of improved surface water quality. If you have land in the watershed and have any problem areas or are interested in applying some of the practices listed above, don't hesitate to call us at 698-3923 or stop in and talk to us about it at the office on east Highway #10 in Sisseton.

Livestock producers in the area should also be aware that there is a Grazing Workshop scheduled for Wednesday, Feb. 27 from 10:00 a.m. to 3:00 p.m. at the 4-H building in Sisseton. Topics covered will include profitable grazing strategies, NRCS cost share practices and applications to grazing land, pasture nutrition and supplements, and weed and pest control on grazing lands. The featured speaker will be Dr. Barry Dunn, Range Livestock Production Specialist from SDSU. Lunch will be served by the Lariat Gals Cattlewomen. There is no charge and it is open to all area livestock producers with grazing operations.

Roberts Conservation District and Natural Resources Conservation Service does not discriminate on the basis of race, color, religion, gender, national origin, or age.



The word "dime" comes from the Latin word decimus meaning "tenth."

Grand Prize Nig
AT DAKOTA CONNECTION CA
Monday, March

FARM & HOME NEWS & VIEWS

Keeping Area Farmers, Ranchers & Homemakers Up-To-Date

The SISSETON Courier
TUESDAY, NOVEMBER 12, 2002
A-7

Roberts Conservation District

Once again it is the season to order trees for next years planting. Roberts Conservation District will soon have to order stock to plant in the spring. This year was a record setting year for tree planting by Conservation Districts in South Dakota with 10,233 acres planted at an average rate of 400 trees per acre for a total of over 4 million trees.

There are several cost share programs that may be available to help landowners with installation costs such as Wildlife Habitat Improvement Program (WHIP), Environmental Quality Improvement Program (EQIP), Continuous Conservation Reserve Program (CCRP), PL-566, State Woody Shrub Program, Living Snow Fence Program, and Pheasants Forever.

Now is the time to call or stop in to discuss your options and get a tree plan in the works for spring.

This is also the time of year to start the planning process for future conservation practices such as grazing plans, dams, dugouts, animal waste systems, cross fences, exclusion fences, grassed waterways, buffer strips and pipeline/tank systems to name a few. We can put together conservation plans and apply for cost share of certain practices through WHIP, EQIP, and PL-566 at any time.

For more information please call the Roberts Conservation District and Natural Resources Conservation Service office at 605-698-3923, or stop in the office on East Highway 10 in Sisseton.

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In politics there is no such thing as an enemy—only someone disagree with you today.

2002 Friend of Ethanol Awards presented to local legislators

The American Coalition for Ethanol (ACE) and the South Dakota Corn Growers Association (SDCGA) are pleased to announce the winners of the 2002 Friend of Ethanol Award. Throughout the month of September, ACE and the SDCGA held town hall meetings in seven communities across South Dakota. At those meetings, ACE and the SDCGA gave updates on the growth of the ethanol industry in South Dakota and presented awards to state legislators in recognition of their support and dedication to South Dakota's growing ethanol industry.

Ethanol town hall meetings were held in Yankton, Rapid City, Onconta, Brookings, Aberdeen, Sioux Falls and Watertown. The town hall meetings were jointly hosted by ACE and the SDCGA as well as the South Dakota Farm Bureau, the South Dakota Farmers Union and all of the state's ethanol plants. The South Dakota chapter of the American Lung Association also participated in the meetings through explaining the health benefits of ethanol. About 40 legislators were able to attend the meetings to receive their awards in person. Certificates were mailed to those legislators who were unable to attend.

Darrin Ihnene, a corn grower from Hurley and president of the South Dakota Corn Growers Association, said "The ethanol industry is going through a tremendous growth phase in South Dakota right now and much of the credit goes to the state legislature, which has really created a positive climate for the growth of the ethanol industry in South Dakota."

Ethanol is a renewable fuel that is produced mainly from corn. Many benefits are provided through the use of ethanol including the proven fact that ethanol is good for the environment due to fact that auto emissions are reduced when ethanol is blended with gasoline. Ethanol production also benefits our rural economy by creating jobs in rural areas as well as increased markets for agricultural

There are currently seven ethanol plants operating in South Dakota (Scotland, Aberdeen, Huron, Wentworth, Milbank and Rosholt) producing over 163 million gallons of ethanol each year. Currently two ethanol plants are under construction, one in Chancellor and one in Groton which are being constructed to produce 40 million gallons each per year. In addition, there are also two more ethanol plant projects in development in the communities of Platte and Aurora.

"The ethanol industry is the largest economic development activity going on in the state right now," said ACE Executive Director Trevor Guthmiller. "The ethanol industry has already invested over $300 million in capital and construction costs in South Dakota, and more will be spent developing in the state at a wage nearly double the state's annual average wage."

Just as important as the new jobs that are being created at ethanol plants, according to Lisa Richardson, executive director of the South Dakota Corn Growers Association, is the opportunity for farmers to participate in value-added ag processing. "Over 5,000 farm families are invested in one or more of the state's ethanol plants," Richardson said, "and within two years, one in every four rows of corn grown in the state will be used to make ethanol."

Garry Duffy, a corn producer from Oldham and president of the South Dakota Corn Utilization Council, said that the growth in the ethanol industry in South Dakota would also have other benefits. "While most of the focus is on ethanol production, ethanol plants also produce a high quality feed by-product called distillers grain. Having a good, economically priced supply of distillers grain available will hopefully spurring increased dairy production."

Ihnen, Guthmiller, Richardson and Duffy all believe that one of the most important things that the South

South Dakota Farm Bureau Annual Meeting to be held in Sioux Falls

"Farm Bureau - Positive Performance" is the theme for the 85th Annual Meeting of the South Dakota Farm Bureau Federation to be held Nov. 18-20 in Sioux Falls. Several hundred Farm Bureau leaders representing 47 county Farm Bureaus will gather for information sessions and to conduct the business of the general farm and ranch organization.

Monday after noon sessions will include Mike Kuck, SD NRCS with a presentation on Conservation Programs for South Dakota Farmers and Ranchers, and Steve Cutler, Director SD Farm Service Agency, with a 2002 Farm Bill update.

On Tuesday morning, Terry Gilbert, American Farm Bureau Women's Committee Chair, will speak at the Partner's in Ag Breakfast. Joe Richardson, President and CEO of Harnessing Dakota Winds, will present information on the development of wind energy in South Dakota.

SD Farm Bureau President Richard Kjerstad, a cattle and grain producer from Wall, will give his President's Report at the All Time High Membership Luncheon. In 2002, there are over 11,400 dues paying Farm Bureau members, an all time high achievement.

John Rademacher, American Farm Bureau General Counsel, will report on Farm Bureau Efforts in the Legal System, followed by Dr. David Day, University of South Dakota Law Professor with an update on efforts to declare SD Constitutional Amendment E unconstitutional.

Long time Nebraska Farm Bureau President Bryce Niedig will be the speaker at the Farm Family Awards Banquet.

Farm Bureau delegates will adopt policies and elect board members and officers.

South Dakota Corn Growers host Secretary of Energy

South Dakota's corn, soybean and ethanol producers had the opportunity recently to meet with the Secretary of Energy Spencer Abraham to impress on him the importance of making renewable fuels a part of our nation's energy policy.

During a round table discussion the state ag and ethanol leaders discussed how the energy bill could be used to facilitate the continued growth of the ethanol, bio-diesel and wind industries in the state. Secretary Abraham highlighted that renewable energies must play a large role in meeting our challenging future energy needs and reducing our dependence on foreign oil.

"For every improvement in renewable energy technology we develop, for every new megawatt of electricity or gallon of alternative fuel that is produced, we make our nation a little more secure, Secretary Abraham said.

"In an agriculture state you would expect to have the Secretary of Ag visit corn and soybean producers, with the evolution of ag to energy, the Secretary of Energy plays a vital role in corn and soybeans producers bottom line," said Bill Paulsen, general manager of Heartland Grain Fuels.

South Dakota has over 8000 SD farm families invested in ethanol productions across South Dakota. South Dakota Corn Growers work to promote corn and to improve corn profitability, influence public policy and legislative efforts and increase corn usage through livestock feeding and new domestic products to improve the quality of live in a changing world.

U.S. Secretary of Energy Spencer Abraham

FCS America makes change for future

Farm Credit Services (America's (FCS America) Board of Directors will cut its size from 32 to 16 members in an effort to strengthen the corporate governance and position the company for the future. The transition to the new Board will be completed by January 2004.

Board Chairman, Lyndon Limberg, indicated this restructuring will create a smaller Board that is better equipped to constructively discuss issues that require firm decisions. "We're a visionary company in a constantly changing industry," said Limberg. "We need a dynamic Board that can make quick, efficient decisions, while effectively leading the company."

The Board will be reduced by eight members by Jan. 1, 2003 and another eight by Jan. 1, 2004. The Board will then consist of 15 elected members and one appointed director by Jan. 1, 2004. Stockholders will determine the Board representation through a two-year election process, which will begin this year -- allowing the Board to maintain representation of its stockholders.

Farm Credit Services of America proudly celebrates its 85th year of service in agriculture.

Sisseton Livestock
Office 698-4343
Blaine 698-4224
LeRoy 698-3838
Lawrence 698-7967

Office Staff, left to right, (seated): June Helgeson, John Schaunaman, Mike Jensen; (standing) Marcia Deneke, Lorne Aadfand. Kent Duerre, Beaver Bartelson

- Big Stone Restoration Project -

The Little Minnesota River/Big Stone Lake Restoration Project had another active year in 2002, with many accomplishments as well as several changes. The day to day conservation planning and contracting is rapidly moving into the computer age with the use of Garmin Global Positioning Systems (GPS), ARCVIEW Geographic Information Systems (GIS) and Customer Service Toolkit software. This information is integrated into a local as well as state wide Geographic Information System (GIS) that helps to track watershed improvements through digital mapping.

The Big Stone Lake Project had a busy year of planning and implementing conservation practices aimed at reducing the amount of phosphorus and sediment entering the Little Minnesota River and Big Stone Lake. The reduction of nutrients and sediment into the lake will help to increase the recreation potential of the lake and also increase the life span of the lake. Although the practices implemented to date have caused a measurable reduction in phosphorus in the lake, there continues to be large algae blooms each summer. We have to understand that each pound of phosphorus in solution has the potential to produce up to 500 pounds of algae.

Earthen ponds were the single most popular conservation practice applied in the project area. In 2002 there were 13 of these practices completed for livestock water, wildlife, and recreational purposes. These ponds will prevent huge amounts of sediment and nutrients from washing downstream.

Grassed waterways continue to be installed in the watershed although a smaller number were done in 2002 than in previous years with only 3 completed for the year. The Grassed waterway is a buffer that reduces pollution from sediment, nutrients, and pesticides while providing cover and food for wildlife and reducing run off velocity from storm events and spring thaw.

There were no Animal Waste Management Systems (AWMS) constructed in the watershed in the past year. Dry weather and low cattle prices for a large portion of 2002 along with changes in design of some systems have slowed the implementation of the practice. The AWMS has been an instrumental part of the conservation process in this project. They prevent manure and precipitation from running off of the lots and going into the watershed from confined livestock operations.

Other conservation practices that have been implemented to improve water quality and reduce soil erosion include, streambank stabilization, cross fencing with a grazing management plan, stream rock crossings, riparian buffers, no-till farming, tree plantings, and pasture/hayland plantings. These practices continue to improve not only our water quality but also the health and diversity of plant and animal species on the area farms and ranches.

If you have any questions or comments on any of these conservation practices please call or stop by the Roberts Conservation District/NRCS office for information on the practices and cost share programs. The Project is scheduled to end 30 September 2005and we are currently budgeting and planning practices for 2003. It is on a first come, first served basis, so hurry before the money is gone.

Roberts Conservation District and Natural, Resources Conservation Service does not discriminate on the basis of race, color, religion, gender, national origin, or age.

Insurance	3,687.23
Supervisor Expense	6,459.32
Wages and Benefits	67,757.12
Memberships & Dues	2,265.50
Ads and Promotions	6,565.13
Tree and Fabric Stock	53,918.46
Tree Planting Expense	3,161.46
Drill Expense	6,833.72
Seed	2,197.18
Total Expenses	$156,196.85

Big Stone Lake Project

INCOME	
EPA 319 Drawdowns	60,256.48
CIS for Projects	26,823.42
Roberts County	20,000.00
Interest	1,470.81
Miscellaneous	1,188.44
Total Income	$109,739.15
EXPENSES	
Office	2,897.28
Wages and Benefits	42,917.37
Technical Assistance	30,000.00
C/S for Earthwork projects	26,099.66
C/S for special projects	9,090.61
Insurance	1,299.64
Miscellaneous expense	1,786.09
Total Expense	$114,090.65

Kama Konda was selected as the winner of the Arbor Day Essay Contest

Roberts Conservation District

The Little Minnesota River/Big Stone Lake Watershed Restoration Project is nearing completion with just a bit over 2 years left before the project funding runs out. Any agricultural producers in the watershed that have been thinking of installing any water quality or quantity improvements on their operations should contact us in the near future to insure that there is funding allocated before the project expires.

The PL-566 funding provides 65% cost share for approved best management practices, which include Animal Waste Management Systems (AWMS), dams, grassed waterways, dugouts, pasture and hayland plantings, and spring developments. There is also cost share funding for wells, pipelines, tanks, and crossfencing on grazing land for livestock use. Additionally, certain high priority practices including AWMS, dams, grassed waterways and dugouts are eligible for an additional 10% cost share. Other practices eligible for cost share that may be included in a watershed plan in conjunction with a water quality practice include shelterbelts, field windbreaks, and exclusion fences.

Agricultural landowners or operators with resource concerns or, an interest in installing any of the practices listed above should contact our office between now and June 20,2003 in order to make sure that the funding can be allocated to cost share your projects.

In December of 2002 the Environmental Protection Agency (EPA) published their final rule concerning Concentrated Animal Feeding Operations (CAFOs). I would invite all livestock producers with feeding operations to review this ruling and decide if their operation falls into the category of a CAFO. The PL-566, funding we currently have can be used to install most of the best management practices to bring the feeding operation to the level needed for a State General Permit. The Final Rule can be viewed at: **http:llcfpub.epa.govlnpdesl afo/cafofinalrule.cfm**

If you have any questions or concerns please stop by our office on east Highway 10 in Sisseton, e-mail mikejensen@sd.nacdnet.org or call us at 605-698-7639.

Natural Resources Conservation Service and Roberts Conservation District does not discriminate on the basis of race, color, religion, gender, national origin, or age.

For Your Spraying Needs
Pastures, Cropland and CRP

prior to close or the CRP signup pe od. There are limited exceptions this rule. Eligible land must be cro land that was planted or consider planted to an ag commodity 4 of t previous 6 crop years from 1996 2001 and which was physically ar legally capable of being planted to a agricultural commodity. Land th was enrolled in the Water Bar

Showplot program to feature 18 cooperators across the state

The South Dakota Corn Grower Association (SDCGA) it will featur eighteen showplot cooperators acros the state as part of its 2003 Showplo Program. The goal of the program is t provide fair, accurate, and unbiase information to the state's corn produc ers, seed companies, and agricultur industry representatives.

SDCGA Showplot Committea Chairman, Bill Chase said the Showplot Program allows producer: to see how various corn hybrids perform side-by-side under growing conditions unique to their areas of the state. "A producer receives good information on the latest hybrids and witnesses the results firsthand. It also gives agribusiness representatives a chance to meet producers face-to-face and get feedback from the hybrids planted."

Participants in the program follow specific rules regarding design, harvest, and general showplot entry rules. Publication of results occurs at the end of harvest and is compiled by the SDCGA.

This year's 2003 Showplot Cooperator's include the following individuals: Darrin Ihnen (Hurley), Ric Morren (Beresford), Jake Volkers (Brookings), John Kittelson (Henry), Reid Jensen (Burbank), Mark Garber (Pierre), Lauren Anderson (Dell Rapids) David Gillen (White Lake)

Conservation Reserve Program continuous sign up was responsible for a majority of the tree planting in the spring of 2003.

EPA 319 and county funds provided office and field personnel needed to assist farmers and ranchers with installation of best management practices.

District activities through the year were: District board meetings held the second Wednesday of each month, sponsor a geology tour, a booth at the Annual Winter Show and hold an awards banquet to honor local contest winners.

Contests sponsored by the District in 2003 were: Arbor Day Webster and Aberdeen. District supervisors and office staff attended the Coteau Area Legislative Dinner.

Kate Moen and Jason Biel were the recipients of the memorial scholarships offered by the District These scholarships are for Roberts County High School Seniors considering going into a conservation/ag related field at the college or university or vocational school of their choice.

The District through a partnership with NRCS, Roberts County, Farm Service Agency, SD Department of Environment and Natural Resources, U.S. Fish & Wildlife, Conservation Commission,

~ Big Stone Restoration Project ~

The Little Minnesota River/Big Stone Lake Restoration Project had another active year in 2003, with many accomplishments as well as several changes. The day to day conservation planning and contracting is rapidly moving in the computer age with the use of Garmin Global Positioning Systems (GPS), ARCHVIEW Geographic Information System (GIS) and Customer Service Toolkit software. This information is integrated into a local as well as state wide GIS that helps to track watershed improvements through digital mapping.

The Big Stone Lake Project had a busy year of planning and implementing conservation practices aimed at reducing the amount of phosphorus and sediment entering the Little Minnesota River and Big Stone Lake. The reduction of nutrients and sediment into the lake will help to increase the recreation potential of the lake. Although the practices implemented to date have caused a measurable reduction in phosphorus in the lake, there continues to be large algae blooms each summer. We have to understand that each pound of phosphorus in solution has the potential to produce up to 500 pounds of algae.

Earthen ponds, constructed for livestock water; wildlife and recreation, continued to be a popular conservation practice applied in the project area. These ponds will prevent huge amounts of sediment and nutrients from washing downstream.

Grassed waterways continue to be installed in the watershed with a larger number constructed in 2003 than in the previous year. A grassed waterway is a buffer that reduces pollution from sediment, nutrients, and pesticides while providing cover and food for wildlife and reducing runoff velocity from storm events and spring thaw.

There were no Animal Waste Management Systems (AWMS) constructed in the watershed in the past year. Five Nutrient Management Plans were completed on previously constructed systems. The AWMS has been an instrumental part of the conservation process in this project. They prevent manure and precipitation from running off lots and going into the watershed from confined livestock operations.

Other conservation practices that have been implemented to improve water quality and reduce soil erosion include stream bank stabilization, cross fencing with a grazing management plan, stream rock crossings, riparian buffers, no-till farming, tree plantings, and pasturelhayland plant-ings. These practices continue to improve not only our water quality but also the health and diversity of plant and animal species on the area farms and ranches.

If you have any questions or comments on any of these conservation

Accomplishments for 2003

Tree Planting.....75.2 acres
Tree Planting (SWST).....10.0 acres
Riparian Buffer Strips.....1.3 acres
Sod Waterways #6.....6.5 acres
Nutrient Management Plans 5
Clean Water Diversion..... 1 number
Ponds .....11 number
Dugouts (SWST).....6 number
No-till.....2,166 acres
Continuous CRP..... 239.5 acres
Saline Seep #10.....38.5 acres
Farmed Wetland Pilot #8
.....106.4 acres
EQIP Plans..... 1 number
PL-566 Plans.....8 number
Conservation Compliance Plans
..... 30 number
Conservation Reserve Program
.....97.6 acres
Native Grass seedings.....500 acres
Filter strip.....8.4 acres
Cross Fencing..... 2.3 miles
Well sealing..... 1 number
Hayland Planting.....45.9 acres
Rock Crossings.....7 number
Pipeline.: .....1 number
Tank.....3 number
Floodplain Easement.....1 number
Minorities assisted with
conservation.....40 number

The above list of accomplishments would not have been possible without assistance from the following groups, organizations, individuals and agencies: Natural Resources Conservation Service, Roberts County Commissioners, Farm

THOU SHALL

Roberts Conservation District Board of Supervisors left to right: Calvin Thompson, Leon Palmer, Lynn Nigg, Eugene Sebek, Duane Schneider, and Cody Hanson. Not pictured, Robert Osborne.

~ 2003 Financial Report ~

Roberts Conservation District General Fund

INCOME	
Roberts County	15,000.00
Tree Planting	124,405.74
Drill Rental	21,137.83
Miscellaneous	2,701.70
Interest	1,304.82
Signs & Flags	682.50
Total Income	$165,232.59
EXPENSES	
Office Expenses	1,641.50
Insurance	6,165.60
Supervisor Expense	5,720.00
Mileage, Meals & Lodging	292.53
Wages and Benefits	65,480.24
Memberships & Dues	2,698.50
Ads and Promotions	6,0223
Tree and Fabric Stock	62,2918 0
Tree Planting Expense	4,590.90
Drill Expense	8,648.51
Signs	655.00
Total Expenses	$166,837.65

Big Stone Luke Project

INCOME	
EPA 319 Drawdowns	55,412.47
C/S for Projects	13,042.96
Roberts County	30,000.00
Interest	2,330.16
Total Income	$100,785.59
EXPENSES	

October 2005

Another beautiful fall season in Roberts County, the Sisseton Field Office of NRCS and the Conservation District is completing fiscal year 2005 activities and starting to work on activities for fiscal year 2006. The field office recently completed a Quality Assurance Review conducted by State NRCS officials in which all aspect. of field office operations were reviewed. The overall consensus was that the field office is technically sound.

Offers for Continuous sign-up Conservation Reserve Program (CCRP) are still coming in and being worked on. Some of the more popular practices include Field and Farmstead Windbreaks, Farmable Wetland Pilot-Wetlands, Farmable Wetland Pilot-Buffers, Riparian Buffers, and Filter Strips. The field office was also notified of a proposal to increase CRP rental rates for 2006. If anyone is interested in utilizing CCRP for a Field or Farmstead Windbreak tree planting, please contact us this fall to determine if there is the required crop history on the land, get the plan in progress and the trees ordered. If you wait until spring there may not be trees available. On the same note, Chairman Schneider signed an extension for the District's Shelterbelt Renovation Grant from the state. The grant is for cost share of renovating existing but aging shelterbelts. There are many old shelterbelts in the area consisting largely of elms that are either dead or dying. Again, time is of the essence since most trees will need to be ordered by December.

Applications for the 2006 Environmental Quality Incentive Program (EQIP) must be completed and submitted by Nov. 10. If you are interested in putting some conservation practices on the ground, please contact us soon.

The monthly District board meeting was held at the field office on the evening of Oct. 12. Some activitiep reported to the board by office personnel included working on conservation plans and contracts, surveying and planning for construction of grassed waterways and dams, measuring and staking future tree planting sites, and construction checks on installed practices. It was reported that there have been 7 Comprehensive Nutrient Management Plans applied in the county in FY 2005 which include, soil tests, manure tests, manure spreader calibrations, field maps, and planning/application worksheets completed. Dollar values of the manure at today's fertilizer prices has been surprising. Other activities in the last month included judging contest in Roslyn, attending meetings of the Citizens for Big Stone Lake in Big Stone City, the Clear Lake Association near Lake City. The Conservation District also worked on field surveys for potential watershed projects in the Lake Traverse watershed and the Whetstone River watershed. Supervisor Palmer also gave a report on his attendance at the South Dakota Association of Conservation Districts annual convention.

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2005 SDSU *Beef* Report available

South Dakota State University's 2005 Beef Report is now available online and hard copies will be available soon.

Bob Thaler, interim head of SDSU's Department of Animal and Range Sciences, said individual studies included in the report can be downloaded at this Web site: http://ars.sdstate.edu/extbeef/2005_Beef_Report.htm.

The document is nearly 100 pages long and discusses 26 SDSU projects about beef cattle management, meats, nutrition, range, and reproduction.

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spend time together. No matter the issue families shou spend time together because people who are linked to a f ier, both mentally and physically.

What makes a family strong? Although there is not a se there are commonalities that strong families possess. Fam the time to explore their needs and strengths, because all need to be nurtured and strengthened.

According to North Carolina Cooperative Extensio family strengths relating to strengthening family bonds h fied by researchers:

--Open Commun Sharing beliefs and emotions er. Emphasis is on how family members exchange inform with each other. Communication is the key element of fam Spend time talking about small, trivial things as well as th

--Time Together- Strong families spend time with ea time in large quantities. This gives members a sense of together may include: family meals, chores, special and/or routine activities.

--Listening- Careful listening does not happen by accid is a skill that can be learned. Think about your family's list ways they can be improved.

--Play and Humor- Humor is a way to relieve tension bers closer together.

--Table Time Conversation- Make meal time pleasant positive conversation.

--Shared Leisure- Spending leisure time with the fa work and play time together in positive ways, instead of s over time".

November is National Family Month and encourages ships that focus on developing healthy, confident kids wh home, trust, love, freedom and hope. These themes will be following four weeks, along with promotional ideas to do family.

This week's focus is on the home because there is no p goal is to give kids a safe and secure environment to gro One way to accomplish this goal is to sit down to a family munication to one another. The University of Hawaii has fo less of income, family structure or child gender, frequently is associated with doing well in school, developing healtt and reducing risk for delinquent behavior and drug use.

Involving children in the process of mealtime is a grea Finding age appropriate ways for them to help gives them ership in the outcome. A toddler may tear up lettuce for a sa kids on the table, while an older child may help with sho and setting the table.

Remember to keep it simple and the conversation lig does not have to be a holiday dinner, but a simple meal may enjoyable experience for all. Make and adhere to the rule t cussions are not to be held at the dinner table. If dinner ten time for family members, they will not want to attend.

Turn off the television. Television distracts family men and will minimize the kind of conversation you hope to h may also be a way to bring families together to watch m together, but do not go overboard. Board games, reading physical activity can be done without a TV.

SOURCE: Diede, Amanda, SDSU Cooperative Extension Service, Nati Focuses on Home

Health Tip: Consider your health and those around yo tobacco products today. Call the South Dakota Toll Free 866-737-8487.

Sisseton Livestock Auction, Inc.
Office 698-43
Blaine 698-348
LeRoy 698-383
Lawrence 698-79
Jerry Lesnar (605) 48
J.C. Christensen (605)

COMING UP

Thursday, Nov. 3: 1500-2000 cattle . . .featuring calves . . . Kuchera 120 weighing 600 lbs, Stalberger 50 weighing 500, Metelak 30 weighing 600 lbs, W. Hanson 160 weighing 525 lbs, G and P Hanson 100 weighing 550 lbs, Jeliski 100 weighing 500 lbs, Synder 60 weighing 575 lbs, Gmve 60 weighing 500 lbs, Perrin 35 weighing 475 lbs, Jasners 75

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Saturdays -

2-27-06

HOME NEWS

Roberts Conservation District News

Roberts Conservation District will be co-sponsoring the Coteau Grazing Conference scheduled for Mar. 21 from 8:30 a.m. – 3:00 p.m. at the Elks Lodge; 600 West Kemp Ave. Watertown, SD. The Conservation District is seeking those interested in Management Intensive Grazing to attend this worthwhile conference. Please RSVP to our office by March 9, (605) 698-3923:.

The featured speaker at the conference will be Jim Gerrish a world renowned grazing specialist and founder of American Grazinglands Services. Mr. Gerrish is currently a grazing and ranch management consultant based out of east-central Idaho, specializing in grazing land management on both private arid. public lands across the US. Past experience includes 22 years on the faculty of the University of Missouri as well as 20 years of commercial cattle and sheep production on his family farm in northern Missouri. His research and outreach efforts have been recognized with awards from organizations and producer groups across the nation. It should be a great conference for anyone serious about management intensive grazing systems.

With spring fast approaching the interest in trees and planting is up. If anyone needs field or shelterbelts planted in the coming year they need to come in and see June as soon as possible. We also have tree order forms available for anyone interested in getting trees to handplant this spring.

Roberts conservation District is once again carrying Plateau® herbicide for sale to producers, applicators, and other governmental agencies, for control of leafy spurge in a fall application and also as a cool season grass suppressant. Since it can only be purchased through a governmental agency, Roberts Conservation District has decided to provide this service.

On a final note, the District is attempting to procure funding for a watershed improvement implementation project in the Lake Traverse watershed. This is a result of an assessment project conducted in 2004 and 2005. If successful the funds will be available on a cost share basis for certain agricultural land improvements in the watershed aimed at reducing soil erosion and improving water quality. Any input or participation from watershed residents and producers will be appreciated. .

Roberts Conservation District and Natural Resources Conservation Service does not discriminate on the basis of race, color, religion, gender, national origin, or age.

50 CHAROLAIS

HOME EXTENSION NEWS

BY TRACEY LEHRKE ~ EXTENSION EDUCATOR/FCS

MAKING THE MOST OF MEETINGS

It seems like everybody's busy schedules involves going to meetings. Attending meetings maybe part of your job responsibilities or because you volunteer with a local organization. It does not matter if you are getting paid for attending the meeting or not, nobody wants to go to "a meeting that will never end." Nothing can be more frustrating than sitting a non-productive meeting. Time is too precious. There are too many other things we could be accomplishing than wasting time at a meeting that is accomplishing nothing.

So how can we avoid being part of such a meeting? First of all if you are the coordinator for a meeting ask yourself, "Why am I having the meeting?" By having a meeting will it use everyone's time in the best way possible? Instead can your objective for holding the meeting be done via phone, memo, fax, or email? Is your routine meeting really worth having each time? Take a long look at it. Is it really necessary? If people do not have enough to say then start rethinking the meeting.

Does everyone need to come to every meeting? If someone is not absolutely essential for this month's meeting let them know that they do not have to come. Chances are they will not be insulted. They will be glad

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