Fiscal Year 2015 Annual Report

Division of Resource Conservation and Forestry

South Dakota Department of Agriculture

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South Dakota Department of Agriculture

The Division of Resource Conservation and Forestry

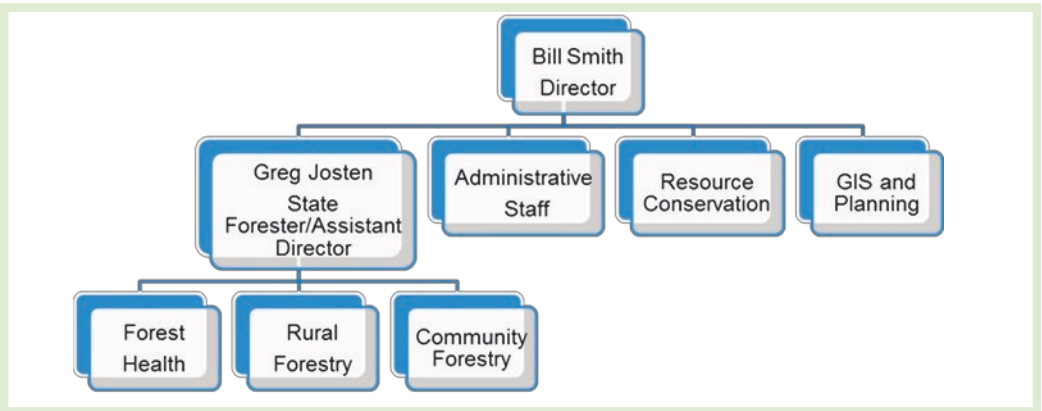
The mission of the Division of Resource Conservation and Forestry is to conserve, protect, improve, and develop the natural resources of South Dakota for its citizens.

The Division has offices in the following locations:

- Lead
- Rapid City
- Hot Springs
- Pierre
- Watertown
- Mitchell
- Sioux Falls

The Division of Resource Conservation and Forestry (division) programs are designed to help South Dakotans manage their forests and trees, and conserve our natural resources. We work with farmers, ranchers, rural home owners, urban dwellers, communities, conservation districts, and federal, state, and local agencies. This report highlights division accomplishments and special projects in fiscal year 2015 by each program.

The division operates on a program level along four core programs: community forestry, natural resources conservation (soil, water, air, etc.), forest health, and rural forestry. Each program has a team leader who reports either to Bill Smith, Division Director, or Greg Josten, State Forester. The division was re-organized during FY2015 to the following structure.



Additional copies of our annual report can be obtained by calling 605-773-3623, emailing SDRCF@state.sd.us, or the report can be downloaded from the division website at http://sdda.sd.gov/conservation-forestry/

Welcome to the Team!

The division welcomed Nicole Pyser to our Forest Health Team in FY2015. Nicole was born and raised in Gloucester, Massachusetts. She graduated from the University of Massachusetts, Amherst with a bachelor's degree in Natural Resources Conservation with a focus on forest ecology and conservation. Throughout college she was an active member of the student chapter of the Society of American Foresters (SAF). As part of a practicum, she spent one day per week shadowing two Massachusetts Service Foresters. This experience prompted her to apply to the Service Forester position in Rapid City.

SOUTH DAKOTA
Project Learning Tree

South Dakota Project Learning Tree Inc. (SD PLT) is the cornerstone of environmental education in our state and is recognized as a premier environmental education program. SD PLT provides formal and non-formal educators with the tools they need to bring the environment into their lessons with students. The activities and materials provide the youth with an understanding of how to think, not what to think, about our environment and natural resources. PLT provides opportunities to investigate environmental issues and encourages informed, responsible decisions. Our complex environment can be better understood with critical thinking skills, service-learning, and inquiry-based activities found in *Environmental Experiences for Early Childhood* guide, PLT Basic Guide (PreK through 8th grade) and the five secondary educational modules. South Dakota PLT has been active in advisory committees, editing materials, and test piloting the PLT guides. All of the guides are written by educators and professional resource managers and meet national and state academic standards.

In 2015, PLT was able to reach approximately 522 South Dakotans of all ages. They were able to train new facilitators for the first time in seven years and had their first full year with Tracy Sigdestad as the new PLT Coordinator. Sigdestad started before the beginning of the fiscal year, she has a bachelors of science in outdoor education from Black Hills State University and is working towards a graduate degree in sustainability.

Pictured below from left to right: children searching in the grass at one of the outdoor activities, A group of children during a field day at Spearfish Outdoor Learning Center, A new group of certified facilitators after their training.

The following workshops/training sessions were completed during FY2015:

- 3 workshops for pre service, k-8, and early Childhood development– 38 participants
- Black Hills State University Science Method Workshop
- Two Dakota Digital Network (DDN) Course– 24 participants
- PLT Workshop in Waubay– 21 participants
- Early Childhood Workshop– 14 participants

Other activities:

- 2015 AgFest, Pierre
- The first facilitator training since 2008, 6 new facilitators were trained in and three current ones were updated
- 2015 Early Childhood Conference, Rapid City
- PLT was involved in the Environmental Education Month held at the Outlaw Ranch in Custer, SD
- National Coordinators Conference, Saratoga Springs NY

SOUTH DAKOTA REGISTER OF BIG TREES

South Dakota's Largest Honey Locust in Elk Point

In 1980, the South Dakota Register of Big Trees was initiated. This is a list of the largest reported specimens of both native and naturalized tree species found within the state. The primary purpose of the register is to recognize big trees as a valuable natural resource worthy of conservation that may provide sources for superior seed collection and/or vegetative propagation. Through this program, uncommonly large trees of any species are located and recorded. The owners and/or locators (nominators) of such trees are recognized through news releases and special certificates.

The state register recognizes champions in 64 different species. A total of 289 trees, both champions and challengers, are currently listed on the register. South Dakota has one national champion. It is a Black Hills spruce located in the Black Hills National Forest (BHNF) which measures 9 feet 9 inches in circumference, 103 feet tall, and 30 feet in average crown spread. In FY2015 the division responded to 11 requests to measure trees for the register.

American Forests and the Davey Tree Expert Company sponsor and maintain the National Big Tree Register.

CHRISTMAS AT THE CAPITOL

2014 SOUTH DAKOTA STATE CAPITOL CHRISTMAS TREE

Every year the division is given the task of finding the perfect tree to be the crown jewel of the Christmas celebration. This tree is selected from a number of possible donations for locations throughout the state. Once chosen, the winning tree is decorated by a selected organization and placed in the Capitol Rotunda as the main display for the holiday season. To the right are the final facts about the tree that was selected for this year:

HEIGHT:
37 feet, cut to 26 feet
TREE SPECIES:
Colorado blue spruce
ORIGIN:
Brandon, SD
DONATED BY:
Gus and Joan Rysavy
DECORATED BY:
4th grade classes of South Dakota and The Statehood Celebration Committee

Community Forestry in South Dakota

Seventy-seven percent of South Dakotans live within urban areas. To serve the urban or community forestry needs of these citizens, the division has offered community forestry technical assistance to individual service organizations, non-profit groups, and communities since 1972.

Technical assistance for establishment of a tree board, development of a tree ordinance, organization of community tree inventories, identification and control of insect and disease problems, and assistance with grant preparation and administration are just a few of the services offered by the community forestry team. Educational programs on tree selection, planting, health, and maintenance are available for communities, schools, and other organizations. The community forestry team focuses its efforts on assisting communities with the development of local community forestry programs. *Pictured below are community tree planting from left to right in the State Fair grounds, New Underwood, and Pierre.*

Community Forestry Challenge Grants

Since 1991, the division has provided financial assistance to South Dakota communities and service organizations each year through a portion of the division's annual allocation of Urban and Community Forestry Assistance funds from the US Forest Service. These funds are awarded to communities and organizations in the form of Urban Forestry Challenge grants. They are used to fund projects which solve a specific community forestry problem and demonstrate the importance of trees in communities. The community or service organization must match the challenge grants on a 1-to-1 basis.

The criteria for the challenge grant require increased commitment and effort from a community. This is in place to build long-term capacity within applying communities. The criteria are listed from highest to lowest priority with their top allocation dollar amount:

1. Professional Services—$5,000
2. Tree Inventory/Assessment—$5,000
3. Existing Tree Care and Maintenance—$1,000
4. Education/Training—$5,000
5. New Tree Planting—$1,000
6. Other Activities—$5,000

Grants have a maximum limit of $5,000 per year; an applicant may receive a maximum of $1,000 per year for new tree plantings and a maximum of $1,000 per year for existing tree care and maintenance. The required match may be met through volunteer labor, donated and/or purchased supplies, or actual cash expenditures.

The grants are reviewed and awarded quarterly. Four grants totaling $14,000.00 were awarded in FY2015 (pages 33-34). These grant funds leveraged $14,145.00 in local hard dollar and in-kind match.

South Dakota Community Forestry Advisory Council

The South Dakota Community Forestry Advisory Council is made up of representatives from city governments, the US Forest Service, green industry, non-profit groups, and volunteer organizations. They advise the State Forester on community forestry issues, review and recommend grant awards, help set program goals and objectives, and help develop South Dakota's Forest Action Plan.

Pierre Arboretum

Tree Boards

At the present time there are 116 known tree boards across the state. Local tree boards provide the foundation for most of the community forestry programs in South Dakota. These boards consist of community leaders, city employees, and volunteer citizens. Tree boards are vital to the development of tree ordinances, preparation of annual work plans, tree plantings, tree maintenance, and tree removals. These tree boards provide their citizens with information, secure and administer grant funds, and conduct local Arbor Day activities.

Technical Assistance

The community forestry program targets efforts at threats and priority areas identified in the state's Forest Action Plan. Strategies used to address threats identified in the state's plan include: technical assistance, educational presentations and materials, and financial assistance. During FY2015, the division provided 219 technical assists to community governments, volunteer-service groups, and private citizens in 62 communities. These assists covered topics such as big tree measurement (see page 4), damage evaluations, tree care recommendations, and general urban forestry projects and grant applications.

Community Forestry Presentations

The Community Forestry Team lead 45 presentations and workshops. Thirty-five were presentations to school classes and civic groups about Arbor Day, Tree City USA, Smokey Bear and fire prevention, and other community forestry subjects. The division held ten workshops on tree planting, tree care, and forest health.

Arbor Day in South Dakota

In 1947, the State Legislature designated the last Friday in April as South Dakota's official Arbor Day to recognize trees for the many environmental functions and values they provide. On or around Arbor Day, division foresters provided presentations to school classes, service clubs, and other groups on the importance of trees in South Dakota.

Arbor Day Essay Contest

Matea Gordon of Whitewood, Madison Hofer of Dolton and Kennedy Mayelin of Mount Vernon are the winning essayists selected from the 1,563 entries in the 2015 Arbor Day Essay Contest.

Sponsored by South Dakota's conservation districts, McDonald's restaurants of South Dakota, and South Dakota Department of Agriculture, the contest provides fifth and sixth grade students the opportunity to write about the importance of Arbor Day and tree planting in South Dakota.

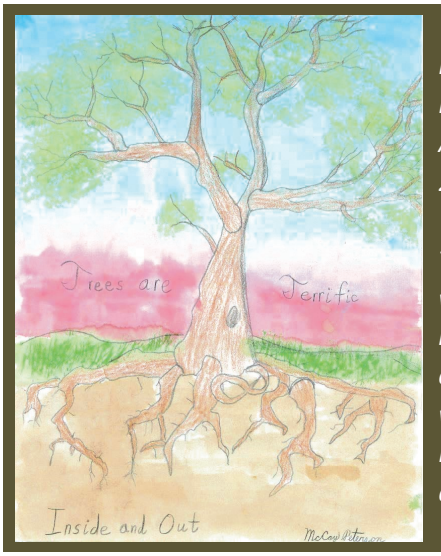
As first place winner, Gordon received a plaque, $100 in cash and a McDonald's lined jacket. Her school, Sturgis Elementary, received $150 for the purchase of supplies or equipment.

Hofer, the second place winner, received a plaque and $75 cash while Mayelin receives a plaque and $50 for her third place essay.

Learning about trees at the Pierre Indian Learning Center

Arbor Day Poster Contest

McCory Peterson of Philip, Emily Comes of Harding County in Buffalo, and Nicholas Doby of Stewart Elementary in Yankton are the winners of the 2015 Arbor Day Poster Contest.



Pictured left: McCoy Peterson's winning Arbor Day poster for 2015.

To see the other winning poster or receive an Arbor Day calendar visit our webpage or contact McKenzi Kohlnhofer at 605-773-3594

The contest is sponsored by the division, the South Dakota Arborists Association, and Dakotas Society of American Foresters. McCoy, the first place winner, received a $100 cash prize, a certificate of achievement, and her artwork featured in the South Dakota Arbor Day Poster Contest Calendar. McCoy's teacher, Lee Vaughn, received $100 for the purchase of educational supplies.

Comes, the second place winner, received $75 cash and a certificate while Doby received a certificate and a $50 cash prize for his third place poster.

Arbor Day Calendar

The Arbor Day Poster Contest Calendar is a collection of artwork of the top 12 winners from around the state. The calendar is a way to recognize the winners as well as promote and celebrate Arbor Day and the many benefits trees provide.

Recognizing Ellsworth Air Force Base, U.S. Air Force photo by Tech. Sgt. Jerry Fleshman

According to the Arbor Day Foundation, the Tree City USA program has been greening up cities and towns across America since 1976. It is a nation-wide movement that provides the framework necessary for communities to manage and expand their public trees. More than 3,400 communities in the US have made the commitment to becoming a Tree City USA.

Tree City USA is a community improvement and national recognition program for cities and towns that meet established standards and effectively manage their public tree resources. The program is sponsored by the Arbor Day Foundation and the US Forest Service at the national level, and by the division at the state level. To qualify for Tree City USA designation, a community must meet four standards:

1. Organize a community tree board to oversee the community forestry program;
2. Establish and enforce an effective community tree ordinance;
3. Implement a community forestry program funded by a minimum of $2.00 per capita; and
4. Celebrate Arbor Day with an official proclamation and organized observance.

In South Dakota, division foresters recertified 33 Tree City USA communities and 1 Tree Campus USA in 2015.

2015 South Dakota Tree City USA Statistical Data	
Number of Tree City, USA Communities:	33
Recertification rate:	100%
Percent of population living in a Tree City, USA:	51.1%
Largest Tree City, USA community (166,700):	Sioux Falls
Smallest Tree City, USA community (69):	Wood
$ spent by communities on community forestry management:	$3,473,189.96
Average per capita spent on community forestry programs:	$7.81

Resource Conservation

The purpose of the Resource Conservation Program is to provide for the conservation of soil and water resources within the state; to prevent or control soil erosion; to prevent or minimize flood damage, and to conserve, develop, utilize, and preserve the natural resources of this state (South Dakota Codified Law § 38-7-1). In addition, the division provides administrative and technical assistance to the State Conservation Commission and conservation districts. The primary programs include: Revolving Loan Fund, conservation district programs, technical assistance, and the Coordinated Natural Resource Conservation Grant Program.

Left: Grazing implementation project in Moody County.
Right: Shelterbelt enhancement project in Hand County.

Revolving Loan Fund Program

Loans can be made to conservation districts or watershed districts for securing, by purchase or otherwise, necessary equipment, trees and other plant materials, and supplies needed to further their programs. Loans are made at three percent interest per annum.

FY2015 Loans:

Conservation District	Loan Amount	Project Description
Clark	$15,000	Grass drill
Jones	$40,000	No-till drill
Hamlin	$27,000	Land roller
Total	$82,000	-

Conservation District Assistance

In FY2015, program staff made 648 grant and loan program assists, 167 non-grant related assists.

Conservation Grants

During FY2015, 58 grant applications were received and 48 projects were funded for a total of $941,759.58 (pages 23-24).

Conservation Commission

Support to the State Conservation Commission in 2015 consisted of refining the grant application review approval process developed in FY2009; revising the grant cost-share docket; implementing the goals and objectives outlined in the Coordinated Plan for Natural Resources Conservation; and updating the commission's annual priorities and work plan. The commission met with multiple conservation agencies and groups to identify priorities and shared visions for natural resources conservation in South Dakota.

Funding

House Bill 1215, passed during the 2011 State Legislative Session, repealed the refund provisions of the motor fuel tax, and declared that $500,000 would be deposited annually into the conservation grant program fund.

General Accomplishments

Conservation program staff provided six print and radio news releases, participated in the National Association of Conservation Districts Farm Bill Task Force, participated as a "cooperating agency" for the Bureau of Land Management resource management plan revision, published newsletters to conservation districts, and conducted the state conservation speech contest.

Multi-District Projects

Thirteen projects involving 40 partnerships between conservation districts were funded in FY2015. These projects included sharing technicians, grassland and wetland improvement, and shelterbelt establishment.

Soil Conservation Award Program

The Soil Conservation Award Program was created by the 2008 State Legislature to recognize exceptional farming and ranching practices that conserve soil and other natural resources in South Dakota. Producers utilizing grassed waterways, terraces, crop rotations, sufficient crop residue to protect soil stability, no-till, grasslands managed for sustainable productivity, livestock management to limit soil and nutrient runoff, or forest lands managed according to a forest stewardship plan are eligible for the award. In FY2015, five producers nominated by four conservation districts received the award.

District Supervisor Accreditation Program

Program staff has completed the final set of training modules for an online Conservation District Supervisor Accreditation Program. Beginning in FY2010, staff has been working cooperatively with South Dakota Association of Conservation Districts to develop the online training program to make conservation district supervisors aware of the history of the conservation movement, the roles and responsibilities of district supervisors, and legal issues important to conservation districts. South Dakota State University provides the computer network for the online training program. The National Association of Conservation Districts recognized South Dakota's program at their annual conventions in 2011 to 2015. For more information, see: http://sdda.sd.gov/conservation-forestry/district-tools/supervisor-modules/. *Pictured above: pond and grazing management in Haakon County*

Ken Gillaspie awarding first place to Logan Hattervig

54th Annual Resource Conservation Speech Contest

The 54th annual State Finals of the Resource Conservation Speech Contest was held Saturday, April 25, 2015 at the state capitol in Pierre. The theme of this year's contest was "Technology: Bridging the Conservation Generation Gap." Ten high school students from across South Dakota competed at the state level. Winning first place and a $1,100 scholarship was Logan Hattervig sponsored by the Miner Conservation District. Logan was a junior at Howard High School and is the son of David and Connie Hattervig of Carthage, SD. Receiving second place and a $750 scholarship was Joanna Geffre, a sophomore at Aberdeen Central High School. She is the daughter of Jeannie Ryncarz of Aberdeen and was sponsored by the South Brown Conservation District. Receiving third place and a $450 scholarship was McKayla Carda sponsored by the South Brown Conservation District. She was a freshman at Aberdeen Central High School and is the daughter of John and Brenda Carda of Aberdeen. Scholarships totaling $2,300 for the winners were provided by Touchstone Energy Cooperatives of South Dakota. The contest is cosponsored by the South Dakota Department of Agriculture, the U.S. Fish & Wildlife Service, and the South Dakota Association of Conservation Districts.

To read the winning speeches and view pictures of the contestants, please visit:

http://sdda.sd.gov/conservation-forestry/educational-programs/resource-conservation-speech-contest/winners-announced/speechwinner2015.aspx

Next year's theme is "Why Manage Water for Conservation?" For more information, contact your local conservation district office or SDDA at (605)773-3623.

Pictured above: Conservation planting on rangeland in Bon Homme County

Photo credit: SD Department of Tourism

Rural Forestry

Established through the 1990 Farm Bill, the Forest Stewardship Program (FSP) encourages private forest landowners to manage their lands using professionally prepared forest stewardship plans. These plans consider and integrate forest resources, including timber, wildlife and fish, water, aesthetics, and all associated resources to meet landowner objectives. In South Dakota, since 1990, there have been 1,166 plans written covering 79,136 acres of forestland. Current forest stewardship plans are new, or have been revised or updated within the last 10 years. There are 172 current stewardship plans in South Dakota covering 21,827 acres of private lands.

The State Forest Action Plan approved in 2010 established a set of priority areas for emphasis that include all ownerships: federal, state and private. The FSP only applies to rural private lands, and therefore focuses on a subset of the state's priority areas with stewardship potential. Private lands classified as having high stewardship potential correspond to private lands within state priority areas, but outside of municipalities. All private lands outside municipalities that are included in state priority areas are classified as high stewardship potential lands. There are 1,323,861 acres of private lands with high stewardship potential in South Dakota, of which 19,126 acres are covered by current forest stewardship plans.

Nationally the USDA Forest Service finances and administrates the FSP through the State and Private Forestry Program. In South Dakota, the division administers the program with guidance provided by the State Forest Stewardship Coordinating Committee. FSP funding from the Forest Service is matched dollar for dollar with State general funds that support the division.

In addition to forest stewardship plan preparation, the FSP is the primary source of funding for forest management technical assistance provided by the division.

Stewardship Plans: In 2015, the division prepared or approved 12 new forest stewardship plans for private landowners covering 2,851 acres. Four forest stewardship plans were updated covering 4,164 acres. Each year, approximately five percent of the current forest stewardship plans are monitored to determine if the landowner is implementing practices as recommended in his/her plan. This activity satisfies the monitoring requirements of the Forest Stewardship Program, and helps accomplish monitoring needs identified in the state's Forest Action Plan. Based on the 2015 monitoring sample, 92 percent of current plans are being implemented, and 94 percent of the acres covered by plans are managed sustainably.

Agroforestry Assistance: Assistance and planning by division service foresters resulted in the planting of 11,841 new trees and shrubs on 23.3 acres for conservation purposes. Foresters reviewed and approved 125 agroforestry tree planting plans for cost-share by South Dakota Conservation Commission grants. Tree plantings support the State Forest Action Plan strategies by expanding species diversity and providing a younger age class of trees to offset over-mature and dying trees that are rendering windbreaks ineffective.

Pictured from top to bottom: Conservation forest in the Basal area, New windbreak planting adjacent to cropland

Non-commercial Thinning: Non-commercial thinning helps private forest landowners implement their forest stewardship plans, and address the threats outlined in the State Forest Action Plan. Thinning improves the health and vigor of remaining trees. They grow faster, and are more resistant to insect attack. Treating the fuels by burning or mulching can significantly reduce the hazards of wildfire.

Non-commercial thinning with lop-and-scatter brush treatment

Division service foresters administer cost share assistance from two programs that help private forest landowners thin their non-commercial forest lands. The USDA Natural Resources Conservation Service's (NRCS) Environmental Quality Incentive Program (EQIP), and the South Dakota Conservation Commission Coordinated Natural Resources Conservation Fund Grant Fund provided funds to private forest landowners for timber stand improvement projects. The NRCS also provided funds to the division to administer the EQIP forestry practices. Technical assistance for the Conservation Commission thinning grants and projects that receive no cost share came from FSP funding. NRCS and FSP funds are matched dollar for dollar with State general funds that support division activities.

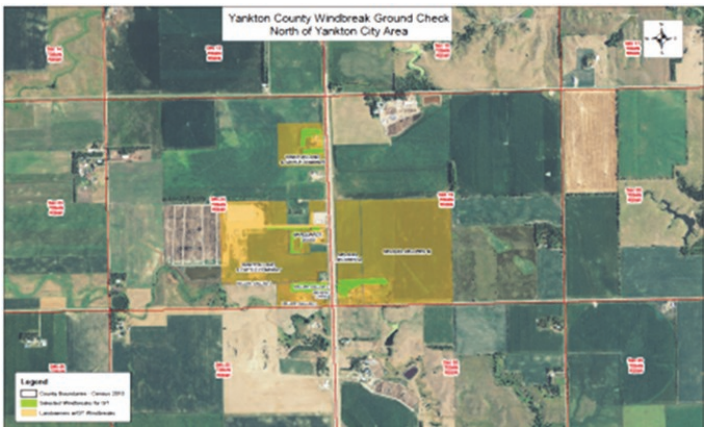
The division prepared written prescriptions for 18 non-commercial projects which resulted in the improvement of 348 acres of pine and hardwood stands. EQIP funding supported eight of the projects covering 186 acres, seven were funded by Conservation Commission grants covering 117 acres, and three projects covering 45 acres received no cost-share assistance or were cost-shared by NRCS.

Windbreak Condition Project: The Windbreak Condition Project will utilize Geographic Information System (GIS) and remote sensing techniques and field survey methods to identify windbreak locations. The division will assess the primary function and condition of the windbreaks in eight different counties in South Dakota. Sites that are small blocks of trees within maintained lawns, naturally forested riparian areas, ditch/road banks and fence lines will be excluded from this project.

The Windbreak Condition Project will include the following counties in South Dakota: Aurora, Davison, Douglas, Hanson, Hutchinson, Jerauld, Sanborn, and Yankton. The Kansas State University, Kansas Forest Service (KFS) will provide imagery from the 2014 National Agriculture Imagery Program to identify windbreak locations. The following criteria will be used to select the windbreaks for ground truthing.

- Geographic stratification
- Common vs. uncommon windbreak designs
- Minimum sample allotment and priority for substitute units
- Maps for locating sample units

The Windbreak Condition Project will sample a minimum of 30 shelterbelts per county. If there is time up to 50 shelterbelts will be sampled. Date collected will justify the need for windbreak renovation.



Area in Yankton County surveyed for the Windbreak Condition Project

SD TREE FARM COMMITTEE'S STRATEGIC PLANNING SESSION WITH AFF NATIONAL STAFF, MAY 2015.

AFF Staff: Sara Anrrich (top right) & Tom Davidson (sitting). SD Committee Members: Cory Tomovick (top left), L-R: Jim Scherrer, Doug Miller, Parks Brigman, Bill Coburn, Bill Loffer, Paul Pierson, Greg Josten, Frank Cross, Paul Schipke

Tree Farm Program

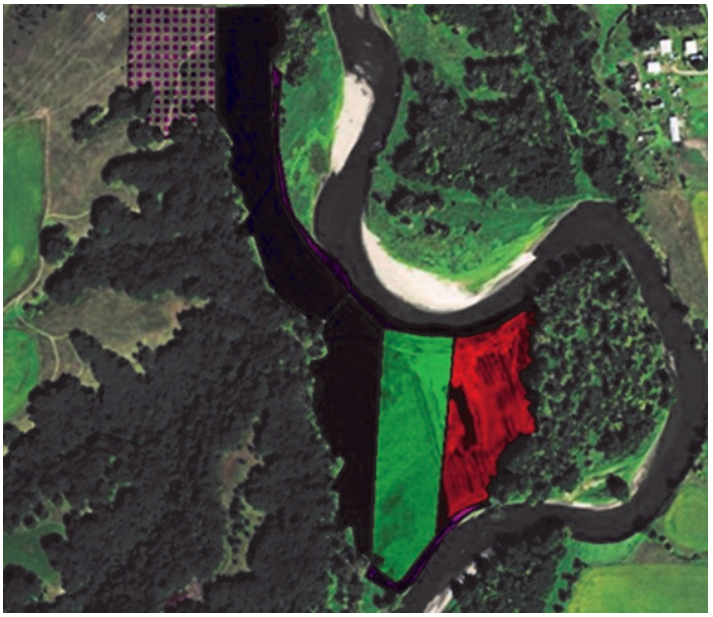
The American Tree Farm System promotes sound forest management through the certification of sustainably managed woodland Tree Farms, and recognition of well managed windbreaks. The division provides technical assistance to Tree Farmers, certification inspections, and administrative assistance to the South Dakota Tree Farm Committee (SDTFC). There are 188 Tree Farms in South Dakota covering 30,010 acres of forestland and windbreaks. There are 114 certified woodland Tree Farms covering 26,817 acres, and 74 Windbreak Tree Farms covering 3,193 acres. Division foresters completed 4 of the 12 Tree Farm inspections in FY2015 covering 1,171 acres.

The SDTFC has a program to help landowners hire consulting foresters to prepare forest stewardship plans for their property to help them become Tree Farmers. The division provided a $10,000 grant to fund the program, which was matched by Neiman Enterprises Inc. and the South Dakota Family Forest Association (FFA). Landowners are required to pay at least 25% of the cost of the plan preparation. Since the cost share program began in 2005, 32 plans were completed covering 4,451 acres. The cost of the completed plans is $24,565.

Adrian Ranch, LLC, from Hermosa, SD won the 2015 Woodland Tree Farmer of the year award. The Adrian Ranch Tree Farm property covers 847 acres in Pennington County. Division service forester, Dave Hettick, from the Hot Springs field office, nominated Adrian Ranch for the award.

In the fall of 2014, the SDTFC was faced with a decision: to proceed with Tree Farm as simply a recognition program or become a certification program. This was part of a nationwide initiative called 'State's Voice, State's Choice.' SDTFC opted to move forward with a certification program, meaning that once implemented, SD Tree Farms will be certified forests, meeting international standards for sustainability as verified by a third party. The American Tree Farm System has been endorsed by the Programme for the Endorsement of Forest Certification (PEFC). PEFC is an independent, non-profit, non-governmental organization whose endorsement provides an assurance mechanism to purchasers of wood and paper products that they are promoting the sustainable management of forests. PEFC is a global umbrella organization for the assessment of and mutual recognition of forest certification systems in various countries around the world. There are 25 PEFC endorsed forest certification systems covering more than 200 million hectares of certified forests, making PEFC the world's largest forest certification system. Affiliation with PEFC benefits certified South Dakota Tree Farmers by opening doors to certified wood and forest benefits markets.

Forest Legacy
Good Earth State Park at Blood Run



Forest Legacy Program

The Forest Legacy Program is a voluntary program that protects unique forests from conversion to nonforested uses. The program accomplishes this goal by working with state agencies or federally recognized Indian tribes to partner with other interested parties to acquire lands or interests in lands. Lands under the Forest Legacy Program may still be used for traditional forest use and outdoor recreation.

Good Earth State Park (Blood Run)

On March 27, 2014, the USDA Forest Service Forest Legacy Program provided $1.2 million along with matching funds from the South Dakota Parks and Wildlife Foundation and South Dakota Department of Game Fish & Parks to purchase the land. Officially named Good Earth State Park by the South Dakota Legislature, the property is located about one mile southeast of Sioux Falls. It is part of the Blood Run National Historic Landmark, which lies on both sides of the Big Sioux River at the mouth of Blood Run Creek and includes over 3,000 acres of land in South Dakota and Iowa. The area was an important gathering place for American Indians from 1350 to 1700 A.D.

The Blood Run project was a fee-simple acquisition of 254 acres of land. The acquisition site is unique because it is of high historical and ecological importance. Historically, the site represented an important ceremonial and trading center for many Native American cultures and early European settlements in the region. Ecologically, the site contains upland and bottomland hardwood forests which are rare in South Dakota.

In 2014, the division updated the Blood Run Stewardship and Management plan with a new prescription to address the reforestation of 32 total acres for the Forest Legacy Program. The prescription recommended that 26,303 trees be planted at an 8'X6' spacing, which would provide a density of 907 trees per acre for 28 total acres. In addition, 2,904 trees and shrubs will be planted at a 10'X6' spacing, which will provide a density of 726 trees per acre for four acres. The trees recommended are tall and mid-size trees. All of the trees recommended are native to South Dakota.

In 2015, Game Fish and Parks and the division evaluated three new sites for possible expansion of the park.

Forest in Good Earth State Park at Blood Run

Forest Health

Forest health management in South Dakota encompasses a wide array of growing conditions, management practices, and host species. The Division of Resource Conservation and Forestry provided more than 283 technical assists (not including mountain pine beetle assist through the Black Hills Forest Initiative) to private landowners, conservation districts, state parks, and cooperative extension personnel. These technical assists are targeted at threats identified in the South Dakota Forest Action Plan. Other strategies used to address identified threats include educational materials and presentations, pest surveys, and preventative pest management.

Many of these assists involved issues dealing with individual landowner trees, windbreaks, and shelterbelts. The results of diagnoses on current pest problems were directly communicated to over 1,900 individuals associated with extension services, conservation districts, the Department of Game, Fish and Parks personnel, and the general public. The weekly Pest Update located on the division's website (http://sdda.sd.gov/conservation-forestry/tree-pest-alerts/). Many people in state and out-of-state reference this information.

Pest bulletins with information on common insects and diseases and management or treatment methods continue to be updated with current information and can be found on the division's website (http://sdda.sd.gov/conservation-forestry/pests-insects-diseases/)

Gypsy Moth Trapping Project

The gypsy moth monitoring program was conducted as a cooperative effort with the USDA Animal and Plant Health Inspection Service (APHIS) and the South Dakota Cooperative Extension Service. The gypsy moth is a defoliating insect that was introduced into New England from Europe in the 1860's. It has since spread into deciduous forests throughout the eastern United States and is now established in Wisconsin and Minnesota. Traps were placed at campgrounds and rest areas.

Dutch Elm Disease

Dutch elm disease was discovered in Cleveland, OH in 1930. Since then, it has continued to be a threat to the existing elm trees that remain in the communities across South Dakota. Two Dutch elm disease surveys were conducted by division personnel in the towns of Mobridge and Selby at the request of city officials. Division personnel also responded to requests for positive identification of Dutch elm disease on a case-by-case basis.

Sawmill Trapping Initiative & Community Assistance through Trapping

The division continued to place funnel traps for pine engraver beetles and mountain pine beetles at three of the larger sawmills in the Black Hills area. In addition, division Forest Health personnel hung traps throughout neighborhoods in Rapid City where thinning had occurred, and/or growing pine engraver beetle populations had been observed. Twenty one groups of traps were placed in the Skyline Wilderness Park in May, 2015 in an attempt to trap pine engraver beetles where large populations had been observed infesting piles of green ponderosa pine debris from recent thinning/fuels reduction activities.

Information and Education

The division held mountain pine beetle workshops in locations throughout the Black Hills. A total of 7 workshops were presented on mountain pine beetle by division personnel, and attracted 85 people. We continue to monitor and inform on insects and diseases that can be serious threats to our tree and forest resources in the state.

Emerald Ash Borer

Although this pest is not yet found in South Dakota, the division continued to deliver information on the threat of emerald ash borer. Information is given to campgrounds throughout the state and to the temporary campgrounds that open in the Black Hills area during the Sturgis motorcycle rally. The emerald ash borer continues to be positively identified in more counties moving west in Iowa, and has made the jump across the prairie to Boulder, Colorado reminding us that it can show up anywhere.

Pictured above: ***A forest health intern monitors pine engraver beetle traps on Skyline Wilderness Park.***

Pictured below: ***Example of one of the "Don't' Move Firewood" posters created to be distributed throughout the state.***

Mountain Pine Beetle, Photo credit to Ward Strong, Simon Fraser University

Black Hills Forest Initiative

Since 1996, the mountain pine beetle infestation has dramatically affected the ponderosa pine forest of the Black Hills. The beetle is a native insect and well adapted to the natural conditions of the region. The Black Hills experienced widespread epidemics in the 1890s, 1940s, 1970s, and the present.

Mountain Pine Beetle in the Black Hills

The mountain pine beetle epidemic continues within the Black Hills. In FY2015 areas with expanding beetle populations and subsequent tree mortality could be found throughout the central Black Hills with the largest expansion appearing in the northern Black Hills, and an area southeast of Custer, SD. There were indications that the epidemic has peaked and infested tree numbers are on the decline. It is likely we will continue to see large areas throughout the Black Hills affected but some areas are not expanding at the rate that we have seen in the previous years.

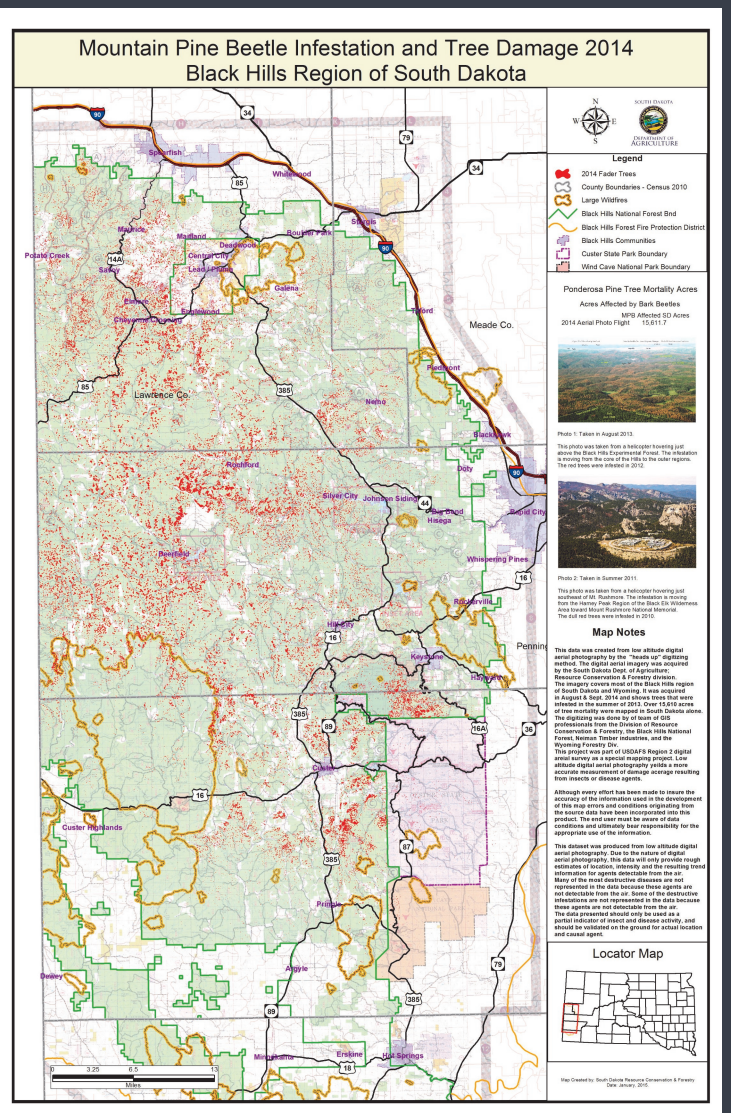
In response to the epidemic, the division and Custer State Park have jointly developed a detailed plan to aggressively manage the infestation. Harvesting infested trees and thinning to reduce stand susceptibility has been a proven means of slowing beetle populations. In addition to these traditional actions, pheromones—synthetic forms of attractants naturally produced by the beetles—were used to purposely draw beetles to specific trees. Baited trees draw many times the normal number of beetles, essentially 'soaking up' a population. Once the trees are infested, they are felled and removed, or cut into 2-foot lengths, and left to dry out. The drying wood does not provide sufficient food for the larvae and therefore most die before emerging. Pheromones are also being employed to repel beetles from specific trees in an innovative effort to protect the rare limber pine trees present in the park. For FY2015, the specific mountain pine beetle projects completed by the division on all lands in the Black Hills are include on the next page.

Spot Baiting: Trees near existing infestations within CSP were baited, and naturally infested trees were felled and harvested, or cut into 2-foot lengths and left to dry, killing most of the beetle larvae that were inside them.

Custer State Park Survey & Marking:

MPB infested trees identified and subsequently treated in FY2015 totaled 25,174 within CSP boundaries.

Anti-aggregation Phermone Use on Limber Pine: A relic stand of limber pine in the Cathedral Spires of CSP has received National Natural Landmark status from the National Park Service. Limber pine is a preferred host to the mountain pine beetle and there is concern that South Dakota could lose this unique stand. Anti-aggregation pheromones that repel mountain pine beetles from limber pine trees were placed on individual trees. In FY2015, a few of the limber pine were infested. The beetles were unable to produce offspring in these trees, and died beneath the bark. The beetles did infect the trees with the blue-stain fungus, which subsequently killed the trees. This year, experimental new verbenone bubble pouches were hung on some ponderosa pines near water sources, where preventative spraying was not an option. The results were variable, as verbenone has not been shown to be an effective pheromone to repel MPB from ponderosa pine in past experiments.



FY2015 Fader Analysis showing trees infested by MPB during 2014

Private Land Surveys: : FY2015 marked the fourth year of survey and marking efforts to help private landowners suppress the mountain pine beetle (MPB) epidemic. This year was basically an extension of Governor Daugaard's Black Hills Initiative, with some new direction to include adjacent federal lands and pursue an "all-lands approach." Implementation included the purchase and analysis of high resolution aerial photography to monitor expansion of the epidemic and help planning efforts, landowner workshops, technical assistance in the form of locating and marking infested trees, cost share for tree removal or on-site treatment of infested trees, on-site treatment of infested trees found on National Forest land and quality control. Survey and marking resulted in 21,677 private acres surveyed; 671 landowners; 40,148 infested trees marked on private; and 12,610 acres surveyed; 65,218 infested trees marked of BHNF lands.

Above, a mountain pine beetle survey and marking crew in the Black Hills

County MPB Suppression: Remaining funds from the $2 million dollars passed by the legislature for FY2014 for a county mountain pine beetle initiative were used to help continue efforts toward mitigating the impacts of the current epidemic. The division administered the program and trained county personnel on proper infested tree identification. The funds were distributed as a 2:1 grant, and the counties used up all of the funds by the end of FY2015.

Monitoring: Division personnel will continue to monitor the park and the Black Hills region for the progression of the epidemic.

Cooperation: The Mountain Pine Beetle Working Group does not have plans to request more funding from the legislature for work on the MPB epidemic. The group plans to revise its strategy and name to reflect the declining beetle numbers witnessed in the Hills, and move towards promoting forest resiliency through proactive management.

Future Needs: The MPB epidemic has seen reductions in the numbers of new infested trees. However, Custer State Park, Mt. Rushmore National Memorial, and private lands may still be at risk from unchecked infestations on the surrounding BHNF. It is estimated that approximately 50% of the timber stands in the Black Hills are still at high risk for mountain pine beetle infestation. A continued proactive approach to management will reduce the risk of mountain pine beetle and provide a barrier for the ongoing spread of beetle populations. These management strategies will help to ensure that Custer State Park, and surrounding lands remain a place of beauty and biodiversity in the Black Hills of South Dakota.

2014-2015 County Accomplishments

	GREEN INFESTED		DEAD	
COUNTY	MARKED	TREATED	MARKED	TREATED
Custer	2,372	2,372	1,034	1,034
Lawrence	19,232	12,356	1,126	0
Meade	7,487	6,021	142	132
Pennington	7,909	7,055	8,539	1,774
Totals	37,000	27,804	10,841	2,940

Forest Inventory and Analysis (FIA) Program 2015

Forest Inventory and Analysis (FIA) is a USDA Forest Service program that collects, analyzes, and reports information on the status and trends of America's forests. FIA consists of three components: an inventory of the nation's forests; a national woodland owner survey; and a timber product output study. Information is collected on the amount of forested area, who owns it, how it is changing, how trees and other vegetation is growing, how much has died and/or been removed, and what happens to the trees that are removed.

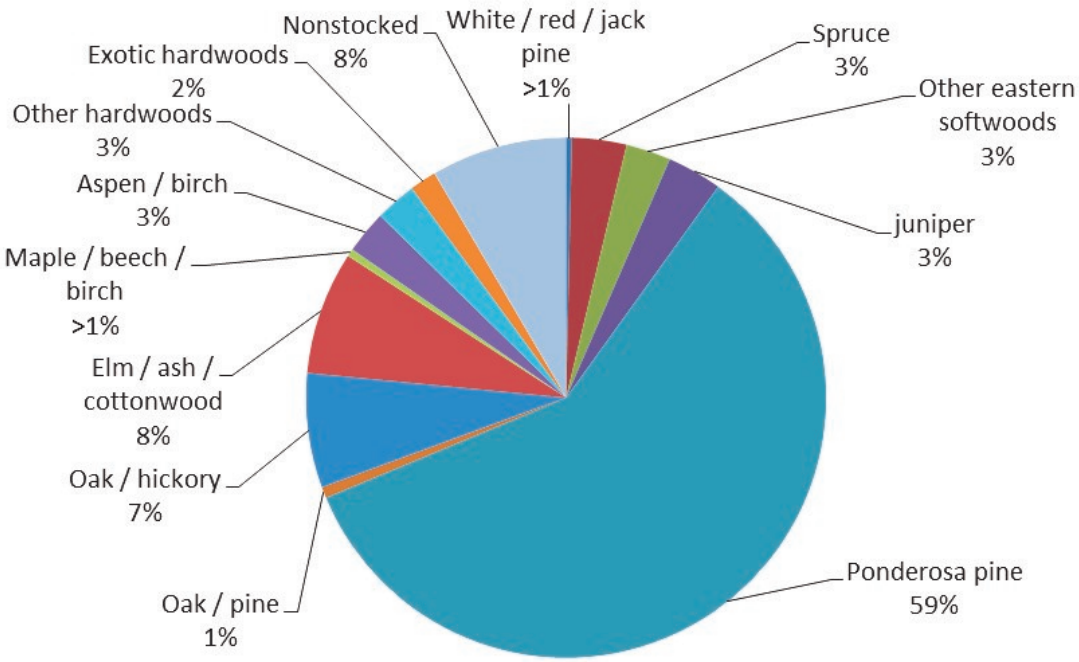
This information can be used in evaluating wildlife habitat conditions, assessing the sustainability of ecosystem management practices, and supporting planning and decision-making activities undertaken by public and private enterprises.

The FIA program combines this information with related data on insects, diseases, and other types of forest damaging agents and stresses. This is done to assess the health, condition, and potential future risks to forests. This information is essential for evaluating whether current forest management practices are sustainable in the long run and whether current policies will allow future generations to benefit from the many uses that America's forests provide.

The most recent five year report on the annualized inventory in South Dakota is titled *South Dakota's Forests, 2010* and can be found at: www.nrs.fs.fed.us/pubs/43896.

The most recent annual report on the annualized inventory in South Dakota is titled *South Dakota's Forest Resources, 2014* and can be found at: http://www.nrs.fs.fed.us/pubs/47981.

Collecting, Analyzing, & Reporting South Dakota's Forests



South Dakota Forest Land by Species Groups

Wednesday February 24th 10:23 p.m. Forest Inventory Data Online web-application version: FIDO 1.5.1.05c St. Paul, MN: U.S. Department of Agriculture, Forest Service, Northern Research Station. (NRS) [Available only on internet: http://apps.fs.fed.us/fia/fido/customrpt/app.html]

Financial Assistance to Local Organizations

County	Grant Recipient	Program	Awarded	Local Match	Total Project Costs
Aurora	Aurora Conservation District	CSW	$3,000.00	$3,500.00	$6,500.00
	Aurora Conservation District	CSW	$23,000.00	$49,031.00	$72,031.00
Beadle	Beadle Conservation District	CSW	$35,000.00	$104,635.00	$139,635.00
	Beadle Conservation District	CSW	$25,000.00	$24,936.00	$49,936.00
Bennett	Bennett Conservation District	CSW	$5,000.00	$5,843.00	$10,843.00
	Bennett Conservation District	CSW	$10,000.00	$11,364.00	$21,364.00
Bon Homme	Bon Homme Conservation District	CSW	$17,000.00	$46,600.00	$63,600.00
Brown	City of Aberdeen	UCF	$1,000.00	$1,000.00	$2,000.00
Brule-Buffalo	Brule-Buffalo Conservation District	CSW	$30,095.00	$44,755.00	$74,850.00
Butte	Belle Fourche River Watershed	SPC	$10,000.00	$10,000.00	$20,000.00
	Butte Conservation District	CSW	$5,000.00	$9,000.00	$14,000.00
	Butte Conservation District	CSW	$35,000.00	$98,000.00	$133,000.00
Custer	Custer Conservation District	CSW	$20,250.00	$20,250.00	$40,500.00
	Custer County	MPB	$60,000.00	$30,000.00	$90,000.00
	Custer State Park	SPC	$70,000.00	$70,000.00	$140,000.00
	Custer State Park	WPC	$50,000.00	$76,075.00	$126,075.00
Davison	Davison Conservation District	CSW	$11,500.00	$10,000.00	$21,500.00
	Davison Conservation District	CSW	$14,500.00	$13,460.77	$27,960.77
	Davison Conservation District	CSW	$24,000.00	$29,258.00	$53,258.00
Day	Day Conservation District	CSW	$19,177.08	$23,325.00	$42,502.08
	Day Conservation District	CSW	$43,460.00	$579,814.00	$623,274.00
	Day Conservation District	CSW	$19,000.00	$32,336.00	$51,336.00
	Day Conservation District	CSW	$75,000.00	$108,537.00	$183,537.00
East Pennington	East Pennington Conservation District	CSW	$7,500.00	$11,990.00	$19,490.00
Gregory	Gregory Conservation District	CSW	$6,975.00	$6,975.00	$13,950.00
	Gregory Conservation District	CSW	$35,000.00	$75,000.00	$110,000.00
Haakon	Haakon Conservation District	CSW	$41,000.00	$42,500.00	$83,500.00
Hamlin	Hamlin Co Conservation District	CRP	$820.39	$0.00	$820.39
	Hamlin Conservation District	CSW	$13,000.00	$13,000.00	$26,000.00
	Hamlin Conservation District	CSW	$17,594.00	$33,807.00	$51,401.00
Hanson	Hanson Conservation District	CSW	$4,635.00	$5,562.50	$10,197.50
Jerauld	City of Wessington Springs	SPC	$10,000.00	$10,000.00	$20,000.00
Jones	Jones Conservation District	CSW	$19,176.50	$47,621.00	$66,797.50
Kingsbury	Kingsbury Conservation District	CSW	$14,000.00	$24,944.83	$38,944.83
	Kingsbury Conservation District	CSW	$8,350.00	$8,325.00	$16,675.00

County	Grant Recipient	Program	Awarded	Local Match	Total Project Costs
Lawrence	Keep South Dakota Green	SPC	$1,210.00	$1,450.00	$2,660.00
	City of Whitewood	UCF	$1,000.00	$1,000.00	$2,000.00
Marshall	Marshall Conservation District	CSW	$4,144.00	$4,144.00	$8,288.00
	Marshall County Conservation District	CRP	$1,343.91	$0.00	$1,343.91
Meade	Tri-County Conservation District	CSW	$36,000.00	$36,000.00	$72,000.00
Mellette	Mellette Conservation District	CSW	$1,300.00	$3,020.00	$4,320.00
	Mellette Conservation District	CSW	$25,990.00	$25,990.00	$51,980.00
	Mellette Conservation District	CSW	$18,500.00	$117,430.00	$135,930.00
Miner	Miner Conservation District	CSW	$9,500.00	$12,000.00	$21,500.00
	Miner Conservation District	CSW	$16,695.00	$16,695.00	$33,390.00
	Miner Conservation District	CSW	$8,450.00	$17,590.00	$26,040.00
	Miner Conservation District	CSW	$7,400.00	$7,400.00	$14,800.00
	Miner Conservation District	CRP	$369.91	$0.00	$369.91
Minnehaha	Minnehaha Conservation District	CSW	$21,248.00	$32,700.00	$53,948.00
	Minnehaha Conservation District	CRP	$217.75	$0.00	$217.75
Moody	Moody Conservation District	CSW	$10,000.00	$30,000.00	$40,000.00
Perkins	Perkins Conservation District	CSW	$35,000.00	$47,368.00	$82,368.00
	Perkins Conservation District	CSW	$50,000.00	$61,631.00	$111,631.00
Roberts	Roberts Conservation District	CSW	$5,784.00	$7,675.00	$13,459.00
	Roberts Conservation District	CSW	$23,036.00	$25,021.00	$48,057.00
Sanborn	Sanborn Conservation District	CSW	$25,000.00	$25,400.00	$50,400.00
Stanley	City of Fort Pierre	UCF	$2,000.00	$2,000.00	$4,000.00
Todd	Todd Conservation District	CSW	$15,000.00	$18,350.00	$33,350.00
	Todd Conservation District	CSW	$5,000.00	$23,500.00	$28,500.00
Turner	Turner Conservation District	CSW	$29,000.00	$30,954.00	$59,954.00
Yankton	Yankton Conservation District	CSW	$12,500.00	$28,404.21	$40,904.21
Totals:			**$1,149,721.54**	**$2,257,167.31**	**$3,406,888.85**

Programs Guide:

CSW | Coordinated Natural Resources Conservation Grant

CRP | Conservation Reserve Program Grant

MPB | Mountain Pine Beetle Grant

SPC | Special Project Grant

UCF | Urban and Community Forestry

WPC | Weed and Pest County Grant

For additional copies of this report contact the division office in Pierre at:

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