

DIVISION OF RESOURCE CONSERVATION AND FORESTRY



FISCAL YEAR 2004 ANNUAL REPORT

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Introduction

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 continues to implement its mission through the active implementation of the strategic plan. The plan is reviewed on an annual basis to make sure that it is relevant.

This year we continue to receive Forest Health Program grants funds to address the growing beetle epidemic in the Black Hills. This epidemic shows no sign of collapse, and, even though the devastation has occurred predominantly on federal lands, it threatens to move onto private forestlands in the near future. We continue to attack the problem on state and private lands in an aggressive manner. Our efforts are hindered by huge areas of infestation on adjacent federal lands.

The Forest Land Enhancement Program was created and funded by Congress in the 2002 Farm Bill. The division received some funding under this program Which was used to provide cost/share to private forest landowners.

The division, as part of our strategic plan, has implemented an urban tree inventory system that will provide us with needed information on the makeup and health of our urban forest resources. A preliminary report summarizing the inventory results that have been collected over the past few years will be published in the near future. This report will be updated as more communities are added to the inventory.

The division administers a wide range of programs in order to accomplish our goals and objectives. The following pages briefly describe our accomplishments in each of the division's many programs during the state fiscal year 2004. Each program is designed to provide quality technical assistance and, in some cases, financial assistance to our citizens and cooperators.

A summary of the grants awarded to our cooperators during the year can be found in the back of this report.



South Dakota's Forest Resources

This section provides a summary of South Dakota's forest resources as described in the publication "*South Dakota's Forest Resources Outside the Black Hills National Forest, 1996*" unless otherwise noted. South Dakota has 1.6 million acres of traditional forest land, representing only 3.2 percent of its land area of 49.3 million acres. To portray the distribution of forest land, the state is divided into five river basin areas (Figure 1). The state's forests are dominated by western ponderosa pine timberland that occupies 1.1 million acres, or 69 percent of the forested area. The pine forest occurs in the Black Hills, the Short Pines and the Slim Buttes areas of the Cheyenne and Belle Fourche-Grand Moreau River basins, and on or near the Pine Ridge and Rosebud Indian Reservations of the White-Niobrara River basin.

The Black Hills region, located in the far western part of South Dakota and in northeastern Wyoming, is recognized as a national geologic landmark. This isolated, mountainous island of granite, limestone and metamorphic rock is roughly 100 miles long and 60 miles wide and rises from the surrounding plains to an elevation of 7,242 feet at the top of Harney Peak.

The remaining forest lands are found in the plains portion of the state and are primarily associated with lakes and waterways. The majority of these forested areas are located along the Missouri River and its major tributaries such as the Cheyenne, Grand, Moreau, White and Bad Rivers in the west, and the Vermillion, James and Big Sioux Rivers in the east. Other areas of forest land are found along the Minnesota River and in the Coteau area of northeastern South Dakota. Forest lands in the eastern river basins comprise only about one percent of the total land area, and about 9 percent of the total forest area in the state. They consist primarily of tree species associated with eastern hardwoods such as ash, basswood (linden), bur oak, hackberry, honeylocust, elm, cottonwood and willow.

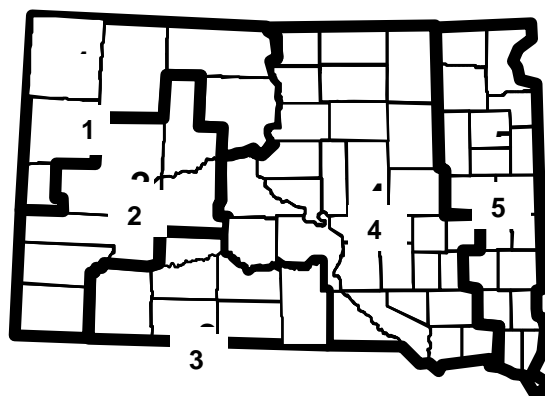


Figure 1: Forest Basin Areas.
1 - Belle Fourche-Grand Moreau
2 - Cheyenne
3 - White-Niobrara
4 - Bad-Missouri-Coteau-James
5 - Minnesota-Big Sioux-Coteau

South Dakota's native woodlands and forests are predominately publicly owned. Only 35 percent (566,000 acres) are privately owned. Approximately 82 percent of the publicly owned forest land is administered by the Black Hills National Forest. The remaining 18 percent is owned by the Custer National Forest, the National Park Service, the Bureau of Land Management (BLM) and the State of South Dakota. Most of the state-owned forest is within Custer State Park. Most forest land located east of Rapid City in the plains portion of the state is privately owned.

South Dakota has an additional 1.3 million acres of non-forest land with trees. Non-forest land with trees includes narrow wooded strips and windbreaks, wooded pasture, urban forests, and other land with trees. Seventy-three percent of the non-forest land with trees is pasture. In past years eastern red cedar and Rocky Mountain juniper have encroached into pastures. The result has been a loss of forage production and livestock handling problems. On the positive side, the trees offer shelter against wind and control soil erosion.

There are an estimated 205,000 acres of narrow wooded strips and windbreaks in South Dakota that make up the state's agroforestry resource. Located almost entirely on private

land, these areas include native woody vegetation found along streams and rivers, and narrow tree and shrub plantings adjacent to homes, farm buildings, roads, crop lands, livestock feeding areas, and other developments. There are about 95,000 acres of narrow wooded strips and 105,000 acres of windbreaks. These trees conserve natural resources, increase crop and livestock production, act as living carbon sinks and atmosphere scrubbers, protect water quality by holding soil and filtering nutrients, protect public right-of-ways from drifting snow, provide valuable wildlife habitat and otherwise improve human environments.

Conservation tree planting began in earnest with the Prairie States Forestry Project of 1935-1942. Since 1943 an average of 5,336 acres of windbreaks and shelterbelts have been planted each year in South Dakota (NRCS data). This equates to over three million tree and shrub seedlings annually. Each year, on the average, over 500 acres of older, deteriorating windbreaks are being restored to workable condition using silvicultural (forestry) practices, including replanting and supplemental planting.

Urban and community forests are gaining more attention as important forest resources in need of proper care and



management. The urban forest consists of the trees and other woody vegetation that grow within the limits of our cities and towns. According to the *2000 Census of Population and Housing* <http://quickfacts.census.gov/qfd/>), there are 308,800 acres of urban and developing lands in South Dakota. There are 309 incorporated communities ranging in population from 3 in Hillsview to 123,975 in Sioux Falls. In addition, there are many unincorporated communities and housing developments, especially on tribal lands.

While the urban and development acreage represents only 0.6 percent of the total land area in the state, approximately 535,939 people, or 66 percent of the state's population, live within our communities and housing developments, whether incorporated or not.

South Dakota's forest lands, woodlands, windbreaks, shelterbelts and urban forests provide a wide range of multiple benefits to our citizens. The benefits include wildlife habitat, recreational opportunities, quality water, energy savings, an aesthetically pleasing environment, increased crop and livestock production and forest products, in addition to the jobs that forest industry creates. As our state's population increases and shifts from rural to urban, our relationship with forest resources becomes increasingly complex. More demands are being placed on private woodlands and agroforestry areas to provide a multitude of economic and environmental benefits. Biodiversity and ecosystem management are becoming important considerations when managing our forest resources. Along with increased demand comes the need to practice good forest stewardship to ensure the sustainability of our forests for future generations.



Service Forestry Programs

Forest Stewardship Program (FSP)

The Forest Stewardship Program (FSP) is the division's primary source of funding for forest management technical assistance. Technical assistance is based on landowner objectives, health and composition of the existing forest, capability of the site and stewardship principles. Detailed forest stewardship plans are prepared based on forest land examinations. Planting designs are prepared for tree and shrub plantings for windbreaks, living snow fences, wildlife habitat, Christmas trees, fuelwood, reforestation and other purposes. Assistance is also offered in preparing pre-commercial and commercial timber stand improvement recommendations, identifying and offering solutions to forest insect and disease problems and other forest resource management related assistance as appropriate.

The FSP is financed and administered nationally by the USDA Forest Service. The program takes a multi-disciplinary approach to forest land management involving many agencies with the Resource Conservation and Forestry Division as the lead agency. The Forest Stewardship Coordinating Committee (FSCC) advises the State Forester on how FSP should be implemented in South Dakota.

The FSCC is made up of representatives from the following organizations:

- USDA Forest Service, Black Hills National Forest
- USDA Natural Resource Conservation Service

- USDA Farm Services Agency
- USDI Fish & Wildlife Service
- SD Dept. of Game, Fish & Parks
- SD Dept. of Environment & Natural Resources
- SD Cooperative Extension Service
- SD Association of Conservation Districts
- SD Conservation Commission
- United Sioux Tribes
- Black Hills Forest Resource Association
- Rosebud Sioux Tribe
- SD Tree Farm Committee
- Keep South Dakota Green
- Pheasants Forever
- Consulting Foresters
- Industry Foresters
- Forest Stewards

Fiscal Year 2003 was the final year of new funding for the Stewardship Incentive Program (SIP). A grant was obtained from the USDA Forest Service that allowed cost share incentives for forest health practices that addressed specific insect pests.

The USDA Natural Resources Conservation Service administers the Forestry Incentive Program (FIP). Responsibility for FIP technical assistance is delegated to the state agencies through the USDA Forest Service Cooperative Forestry program. The program provided 65% cost-share for timber stand improvement and reforestation work on eligible non-industrial private forest-lands in the state. FIP was discontinued with passage of the 2002 Farm

Bill; however, a few FIP contracts were still administered in SD during FY 2004.

The Forest Land Enhancement Program (FLEP) was created and funded by Congress in the 2002 Farm Bill. It was designed to adopt the best characteristics of the SIP and FIP programs, and replace them. South Dakota received \$100,000 to implement FLEP in FY 2004 – the first year of funding for the program.

The division continued to operate under the last year of a forest health grant from the USDA Forest Service to combat growing bark beetle populations in the Black Hills. The division provided up to 50% cost-share to landowners for thinning to improve forest health.

FY 2004 Accomplishments

The South Dakota Forest Stewardship Plan was revised in FY 2002 to reflect current forest resource conditions and provide direction to the division over the next five years. Emphasis areas include forest health; continuing education in forest ecology, silviculture and BMPs for loggers, landowners, and resource professionals; an expanded role in the Forest Inventory Analysis; development of a programmatic agreement with the State Historical Preservation Office to facilitate protection of cultural resources; and coordinated implementation of the Forest Land Enhancement Program.

The Resource Conservation and Forestry Division provided 646 forest management and prairie forestry technical assists to private landowners, organizations and government agencies across the state in FY 2004. Forest stewardship plans were written and approved for 17 private landowners covering 4301 acres and 32 forest management plans covering 495 acres. Consultants completed plans for 2

private landowners covering 162 acres as a result of cost-share assistance from FLEP.

Stewardship Incentive Program (SIP) funding was limited to forest health related practices. The pest problems targeted with the funds included mountain pine beetle, Ips beetle, elm bark beetle, and rodents. Five SIP cost-shared practices were completed on 210 acres of land. That includes 3 non-commercial thinning practices covering 203 acres, and 2 windbreaks covering 7 acres.

Under the Forestry Incentive Program (FIP), 32 acres of pre-commercial thinning were completed in FY 2004.

The division also participated in an audit of timber sales to determine compliance with State Best Management Practices for protecting water quality. Seven timber sales were audited on State, private, USDA Forest Service, and USDI Bureau of Land Management lands.

Windbreak and Shelterbelt Plantations

Assistance and planning by division service foresters resulted in the planting of 174,050 new trees and shrubs on 265 acres for conservation purposes. Restoration was completed in 18 existing shelterbelts and windbreaks covering 25 acres. Division service foresters assisted with the establishment of 30 new shelterbelts, windbreaks, and living snow fences covering 73 acres, resulting in the planting of 31,021 trees and shrubs. Wildlife plantings received the most attention from service foresters who designed 55 plantings for 167 acres involving 135,446 trees and shrubs. Most landowners utilized one or more of the cost-share incentive programs that are available. Only a few relied totally upon their own resources to get their trees planted. A breakdown of assistance provided by cost-share program use is as follows:



Windbreak in Custer County

FY 2004 Tree Planting Accomplishments

Assistance Program	Projects	Acres Planted	Trees Planted
Stewardship Incentive Program	1	2	512
Conservation Reserve Program (CRP) Only			
New Establishment	4	13	13633
CRP and GF&P			
New Establishment	10	27	34413
Total CRP	14	40	48046
Department of Transportation Living Snowfence			
New Establishment	13	50	20326
Environmental Quality Incentive Program (EQIP) only			
Renovation	1	1	421
EQIP and GF&P			
Renovation	1	3	575
Total EQIP	2	4	996
Wildlife Habitat Improvement Program (WHIP) only			
New Establishment	1	6	4455
WHIP and GF&P			
New Establishment	5	16	39462
Total WHIP	6	22	43917

Forest Land Enhancement Program (FLEP) only			
New Establishment	7	13	5521
Renovation	7	8	2306
FLEP and GF&P			
New Establishment	3	9	3402
Total FLEP	17	30	11229
Other cost share program (Other) only			
New Establishment	2	2	918
Other and GF&P			
New Establishment	3	24	9699
Renovation	2	3	1151
Total Other	7	27	10850
Game Fish & Parks Only			
New Establishment	32	77	33071
Renovation	5	7	2038
Total GF&P Only	37	84	35109
Total Game Fish & Parks and Other Programs	61	166	123811
No Cost-Share Program			
New Establishment	5	3	1567
Renovation	1	1	580
Total No Cost-Share	6	4	2147
Total Establishment New	85	240	166467
Total Renovation	18	25	7583
Grand Total	103	265	174050

Urban & Community Forestry (UCF)

The South Dakota Division of Resource Conservation and Forestry (RC&F) offers urban and community forestry (U&CF) technical assistance to individuals, service organizations, non-profit groups and communities. The division provides technical assistance for establishing tree boards, developing tree ordinances, organizing street tree inventories, tree planting and maintenance, identifying and controlling insects and disease problems and grant preparation and administration. The division also provides training in all aspects of urban forestry and arboriculture (the care and maintenance of trees). Technical assistance is provided by one full time U&CF Coordinator, eight service foresters located throughout the state and Dr. John Ball, Associate Professor of Arboriculture and Forestry at South Dakota State University. Dr. Ball also acts as "Volunteer Coordinator" for U&CF programs across the state of South Dakota.

The Division of Resource Conservation and Forestry directs its effort on assisting communities with the development of local community forestry programs. Local tree boards, which are a very important part of any community forestry program, provide the foundation for most of the community forestry programs in South Dakota. These volunteer tree boards perform a wide variety of functions, including development of local tree ordinances, preparation of annual work plans, planning and implementing planting, pruning, and removal projects. They also provide information and education to local citizens, secure and administrate grant funds and conduct Arbor Day activities. At the present time there are 59 known tree boards across the state.

During FY 2004 service foresters provided 99 technical assists to 50 different communities in South Dakota. Another 232 tree planting and care assists were provided to individuals, organizations, and agencies around the state. As of the end of fiscal year 2004, 115 of South Dakota's 313 incorporated, and other active communities can be classified in one of four levels of urban & community forestry involvement: project, formative, developmental, or sustained. A **project** level community is receiving assistance with project activity only. In **formative** level communities, discussions or networking with community leaders about beginning a program have begun. A new tree board or tree ordinance may be in place or an initial community forest assessment conducted. **Developmental** programs have policies and ordinances developed or revised with tree inventories conducted and management plans in place. **Sustained** communities have an organized community forestry program and are functioning on their own with ongoing funding and management.



**FY 2004 Community
Developmental Levels**

**Total South Dakota
Communities Assisted**

**South Dakota
Communities Classified**

Project	6	62
Formative	10	20
Developmental	8	8
Sustained	<u>18</u>	<u>28</u>
Total =	42	118

The division continues to work to provide much needed outreach assistance to the Native American communities in the state. Plans are being formed for a cost-share project on the Sisseton/Wahpeton Indian Reservation. This project will help raise homeowner awareness along with creating a nature area for recreation and educational purposes.

The summer of 2004 was particularly hard on some of South Dakota's small communities. Tornadoes and strong storms did damage to private and public properties and resources including trees. Among the hardest hit was the town of Parker. The tree planting phase of the Division's Parker re-greening project was completed in FY 2004. A variety of bare – root trees were planted along the streets of Parker. The community of Parker continues to maintain the newly planted trees and is also considering becoming a Tree City USA.

Also, interest in establishing multi-purpose community windbreaks, or greenbelts, has been very strong. The division is working with communities, the State Department of Transportation, South Dakota State University, local county highway departments, local conservation districts and Planning & Development Districts to see that as many of these tree plantings as possible and feasible are installed.

Also included are measurements of big trees and their nominations to the South Dakota Register of Big Trees in cooperation with the National Big Tree Program administered by the American Forests organization of Washington, DC. A total of 275 trees of 60 different species are recorded on the Big Tree Register.

South Dakota continues to maintain two trees recognized as national champions: a Russian-olive located near Rapid City and a Black Hills spruce (our state tree) near Lead. However, the largest tree in South Dakota is a large cottonwood located near Yankton in Yankton County. The tree is 26'5" in circumference with a height of 145 feet, a crown spread of 102 feet, and a point score of 487.5.

Dr. John Ball, South Dakota State University, Brookings, made 20 presentations in South Dakota on various aspects of tree management. Topics at other conferences and events included tree and shrub selection, identification and care, animal damage, and tree risk management. These presentations drew 1,220 people and over 3,000 seat hours. In addition, over 10 Public Television presentations drew TV audiences interested in tree care, sweating nursery stock, Dutch elm disease management, transplanting with a tree spade and tree pest management.

Dr. Ball's workshops and presentations are broken down as follows:

<u>Conference/Event</u>	<u>Location</u>	<u>Topic</u>	<u>No. of Participants</u>
Today's Ag TV Presentations	Brookings	6 Segments	Public TV
Garden Line TV Presentations	Brookings	15 Segments	Public TV
SD Hwy. Dept. Workshops	Pierre	Tree Appraisal	29
SD Conservation District Annual Conference	Chamberlain	Emerald Ash Borer	112
SD Arborists Workshop	Pierre	Felling	27
SD Arborist/Nursery Conference	Sioux Falls	Forest Pest Update	78
SD Weed and Pest Board Conference	Mitchell	Emerald Ash Borer	85
Master Gardener Training	Mitchell/Aberdeen/Eagle Butte	Tree Care & Selection	69
South Dakota State Fair	Huron	Trees for South Dakota	24
Pesticide Applicators Recert.	5 Locations	Tree Insects and Mites	322
Logger Education	Spearfish/Hill City	Mountain Pine Beetle update/BMPs	134
Utility Arborist Workshop	Pierre	Safety	52
Lincoln Co. Conservation Dist.	Tea	Shelterbelt Trees	43
Codington Co. Conservation Dist	Watertown	Shelterbelt Trees	22
Beadle Co. Ext. Workshop	Huron	Emerald Ash Borer	23
Brown Co. Ext. Workshop	Aberdeen	Pruning	45
Marshall Co. Ext. Workshop	Britton	Tree Selection	22
Physical Plant Directors Annual Conference	Brookings	Tree Care	56
Urban Forestry Workshop	Rapid City	Trees for the Black Hills	79
Tree Care Workshop	Pierre	Tree Selection	28



U&CF Challenge/Sub-Grant Program

Through the Urban & Community Forestry Program, the division provides technical and financial assistance to our communities. A portion of the division's annual allocation of Urban and Community Forestry Assistance funds is awarded to local governments and community volunteer service organizations in the form of focused cost-share grants.

The grants are used to fund tree planting projects which provide benefits to the general public, solve a specific urban and community forestry problem, demonstrate the importance of trees in our communities, and challenge other organizations to plan and implement similar projects. The community or service organization must match the grant funds on a 50-50 basis. This has traditionally been accomplished through the volunteer labor and donated supplies that are needed to properly plant, mulch, and otherwise maintain the trees until they are established. In 2002, the South Dakota Urban and Community Forestry Council made the decision to target sub-grant funding toward specific projects that would advance the missions of the South Dakota and federal urban and community forestry programs. In FY 2004, twenty communities received grant funds for various urban forestry projects.



Forest/Timber Management

Resource Conservation and Forestry Division service foresters wrote or approved 49 forest management plans in FY 2004 covering 4,796 acres. Forest Stewardship Plans made up 17 of those plans covering 4301 acres. The other 30 plans were less detailed Forest Management plans.

Service foresters provided 318 forest management assists to various landowners, businesses and other agencies. Written prescriptions for 34 timber stand improvement projects were prepared, and when completed, will result in the improvement of 1,063 acres of timber and hardwoods. Fieldwork was completed in preparation for 24 non-commercial timber stand improvement projects covering 787 acres. Three of the projects, covering 270 acres, were approved for cost-share assistance through the Stewardship Incentives Program (SIP), two projects covering 31 acres have applied for cost-share through the Forest Land Enhancement Program (FLEP), and 15 projects covering 360 acres applied for cost-share through the bark beetle program.

Pre-commercial thinning was completed on 15 projects involving 281 acres of forestland: three projects covering 32 acres received cost-share under FIP, and 2 projects covering 123 acres were cost-shared by SIP. Thinning under the bark beetle cost-share program was completed on 10 projects covering 126 acres.

Field work was completed for three timber sale on 465 acres of private land. Timber sales were completed on two private properties covering 25 acres and including 58 thousand board feet of timber. Division staff reviewed and approved appraisals for the Flynn Creek timber sale in Custer State Park.

The division provided technical assistance for two reforestation tree plantings that were completed on 25 acres of forest land. Division service foresters referred 7 requests for assistance to consulting foresters.



Overstocked Stand prior to thinning



Thinned stand

Forest Health Management



Forest health management in South Dakota encompasses a wide array of growing conditions, management practices, and host species. Insect and disease pressures and priorities differ among commercial forest, agroforestry (windbreaks and shelterbelts) and the urban and community forests. Service foresters, along with the Forest Health Specialists, provided more than 400 assists to private landowners. The Forest Health Specialists, along with service foresters, provided another 800 assists to cooperative extension educators and conservation district personnel. The level of assistance was very high for some problems, particularly bark beetle infestations in the Black Hills

and twolined chestnut borer in the south central part of the state, where extensive sampling was required to delineate infested pockets of trees. In other cases, services consisted of a disease or insect problem diagnosis and management recommendation for landowners.

The FY 2004 gypsy moth monitoring program was, as in past years, 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 1860s. It has spread since then into deciduous forests throughout eastern United States and is now established in Wisconsin and Minnesota. The feeding by the insect can become a contributing factor in tree decline. The large masses of moth caterpillar also become a nuisance to campers and result in reduced park and campground visitation. There were 507 traps retrieved and these yielded 5 adult gypsy moths captured in 5 traps. The gypsy moths were collected from campgrounds in the Black Hills as well as a nursery in eastern South Dakota.

The gypsy moth is not the only invasive insect that the Division has assisted in monitoring. The banded elm bark beetle, an Asian borer that feeds in elms and may be a vector for Dutch elm disease, was first identified in the United States in April 2004. The insect has been collected from traps in Rapid City, from elm logs in Brookings and in declining Siberian elms in Shadehill and Interior. It is most likely present throughout South Dakota, as well as the other Great Plains states.

The Division is also alerting nurseries, conservation districts, campground owners, communities and landowners about the potential threat of another recently introduced insect, the emerald ash borer. This Asian insect has infested thousands of acres of forests, resulting in the loss of more than 8 million ash trees, in southeastern Michigan and northern Ohio and has been detected in several other locations. The emerald ash borer appears to be a primary insect on all ash species native to North America, including green ash. Since many of South Dakota's windbreaks are planted in green ash and this same species is the most common city street tree in the state, the potential damage from an infestation of this insect is very high. The Division will educate the public on identifying this pest as well as cooperate with APHIS in monitoring incoming stock to prevent the accidental introduction of this pest to our state. While movement of infested nursery stock from Michigan has been responsible for some infestations in eastern United States, the most likely threat for South Dakota is from the accidental introduction of this pest through infested firewood. The movement of infested firewood has been responsible for the spread of the insect in Michigan and also into Indiana. The adult emerald ash borer emerges from infested wood during the summer months so its emergence is timed perfectly with high campground use from visitors from other states including Michigan. There were at least 180 campground visitors in 2004 from areas of Michigan where the insect is present. The Division is developing an effort to educate campground owners and visitors of the possibility of moving this insect

and the need to dispose of any firewood brought in from outside the state. While the alert could be limited to ash wood from certain counties in Michigan, Indiana and Ohio, there are other insects such as the banded elm bark beetle, that can be transported into our state from other regions of the country and on other species so a general alert to dispose of any firewood brought into the state is a valuable means of reducing the possibility of an number of exotic insects from entering our state.

The mountain pine beetle program, in response to the epidemic in the Black Hills region of South Dakota, continues to yield positive results. A comprehensive, long-term plan is being developed to protect private lands adjacent to National Forest land and those forests that have been affected by fire. The epidemic, now in its 8th year shows no signs of decreasing. The number of trees killed now exceeds the annual losses of the 1970s epidemic, more than 450,000 trees. The pine engraver beetle has also been a major concern of landowners this year. The population is reaching near epidemic proportions in some parts of the Black Hills due to a number of factors including snow and wind damage, hail and fires. The Division conducted a mass-trapping program of two mills, Pope & Talbot and Rushmore Products, to reduce the potential for pine engraver beetles emerging from infested logs and infesting trees outside of the mills. The trapping program was very successful with more than 200,000 beetles captured in traps placed around each mill. Another successful mass trapping program was conducted at the Belle Fourche Country Club. The club had removed many infested trees during last winter but had not disposed of the slash. The slash makes an excellent breeding ground for the engraver beetles that then can spread to infest nearby healthy trees. The Division conducted a mass trapping on the club to reduce the spread of the insects from the slash to the trees. The program captured more than 30,000 beetles in traps during the 2004 season. The project was highly successful with the tree losses reduced to four and the beetles trapped in 2004 reduced to less than 1,000, despite their increased population in the Black Hills.

A major and continuing concern was drought. Many areas of the state are on their second and third year of drought conditions, which is beginning to show in the trees. There has been an increase in tree mortality in oaks, primarily in the south-central region of the state but also occurring East River and the northern Black Hills. The mortality is due to drought stressed trees becoming infested by twolined chestnut borer, a native insects, that has a population increase during droughts when trees are most vulnerable to attack. The Division is developing a plan to assist landowners in conducting salvage and sanitation operations to reduce the impact of this pest.

Forest Inventory Analysis (FIA) Program

The FIA program collects, analyzes, and reports information on the status and trends of America's forests. Information is collected on how much forest exists, who owns it and how it is changing, as well as how the trees and other forest vegetation are growing and how much has died or has been removed in recent years. 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. The program also projects what the forests may be like in 10 to 50 years under various scenarios. 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.

There are five primary FIA regions across the lower 48 states. South Dakota is part of the 11 state North Central Region administered by the North Central Field Station located in St. Paul, MN. South Dakota chose to conduct their own inventory, and contracted the work to a private timber management consulting firm.

In 2001 the State of South Dakota received \$77,183.00 from the USDA Forest Service, North Central Research Station Forest Inventory Analysis Unit, to inventory a total of 88 FIA plots. This includes 79 P2 (forest inventory) plots and 9 P3 (forest health) plots. Approximately 60% of these plots are located in the Black Hills region. The state contracted out the fieldwork to a private forestry consultant. The field crews completed the inventory in early Nov. 2001. The data was analyzed and processed in the fall of 2002. North Central Research Station released the report for the 2001 inventory in January 2003.

In 2002 the State of South Dakota received \$94,242.00 from the USDA Forest Service, North Central Research Station Forest Inventory Analysis Unit, to inventory a total of 117 inventory plots. This includes 100 P2 (forest inventory) plots 5 P3 (forest health & inventory) plots and 12 Ozone (sampling region) plots. Approximately 60% of these plots are located in the Black Hills region.

The state again contracted out the fieldwork to a private forestry consultant. The consultant's field crews completed the inventory in October 2002. The data was analyzed and processed in the summer of 2003. A preliminary report was issued for comments on Sept. 2003 and the final report was released by February 2004.

In 2003 the State of South Dakota received \$86,363.00 from the USDA Forest Service, North Central Research Station Forest Inventory Analysis Unit, to inventory a total of 104 inventory plots. This includes 85 P2 (forest inventory) plots 7 P3 (forest health & inventory) plots and 12 Ozone (sampling region) plots. Approximately 60% of these plots are located in the Black Hills region.

The state again contracted out the fieldwork to a private forestry consultant. As of Oct. 2003 the consultant completed the field inventory. The data was analyzed and processed by North Central during the spring of 2004. Preliminary reports were issued for comments to the State in July and Sept. 2004. Comments were returned to North Central by Oct. 2004 and the final report should be released by North Central by Jan. 2005.

In 2004 the State of South Dakota received \$75,128.00 from the USDA Forest Service, North Central Research Station Forest Inventory Analysis Unit, to inventory a total of 76 P2 forest inventory plots and 12 Ozone sampling plots. Approximately 66% of these plots are located in the Black Hills region. New for this inventory cycle was the addition of 25 QAQC P1 non-forest plots. The purpose for these QAQC plots is for quality control purposes to verify that the North Central Research Stations photo lab is making the correct call on non-forest land use classification.

This season the State created two contract zones, the Black Hills region and the great plains region. The state had to separate contracts for fieldwork, one contract for the Black Hills region and one contract for the great plains region. In addition a separate contract was created for sampling the 12 Ozone plots and a separate contract was created for inventorying the 25 QAQC P1 plots. All contracts were awarded to private forestry consultants. This year North Central Research Station was solely responsible for collecting data for the P3 (forest health) plots. There is only one P3 plot in this year's inventory cycle that was inventoried.

As of Oct. 1st 2004 the consultants completed the inventory for all of the P2 plots and the Ozone plots. As of Nov. 1st 2004 the consultant completed the QAQC plot work. North Central performed various QA field checks of the consultant's work from July to Sept. of 2004. All plot data has been sent to North Central as of Nov. 16th 2004.

For the 2005 field season the State of South Dakota plans contracting the fieldwork to a private consultant. This will be the final year for the current five year inventory cycle. There will be 79 P2 (forest inventory) plots, and 12 ozone plots. Again the state will be broken up into two separate contracting zones. The state plans to contract out the P2 work to private consultants but perform the 12 Ozone plot work in house. It is not known if there will be any QAQC plot work this year. North Central has tentatively agreed to inventory the P3 (Forest Health) plots this season. There will be 4 P3 plots to be inventoried.

Economic Action Program



Economic Action Program

The Economic Action Program (EAP) provides the opportunity to help businesses and communities realize the economic potential of under utilized and unutilized wood, wood waste, and non-traditional forest products. EAP National Fire Plan funding encourages utilization of small diameter material to reduce the threat of catastrophic fire.

In FY 2004, division activities focused on technical assistance for utilization of eastern red cedar in south central South Dakota. A contractor completed an inventory of forest land in Gregory County. Technical assistance for utilization of small diameter wood has been focused on this area and the landowners who are trying to find markets for products made from small diameter wood.

Black Hills National Forest Phase II Amendment

The Black Hills National Forest is developing a major Amendment to its 1997 Revised Land and Resource Management Plan. The State of South Dakota has obtained Cooperating Agency Status to provide technical expertise in the development of this amendment. The Department of Agriculture is playing the lead role with Secretary Gabriel as the principle liaison in this endeavor. The Secretary has delegated the coordination of the cooperating agency process to the Resource Conservation and Forestry Division.

Other state agencies that have taken an active role in the process include the Departments of Game, Fish, and Parks, Environment and Natural Resources, Labor, Tourism, and Transportation..

The State has invited County Governments and Conservation Districts in the area of the Black Hills National Forest to join the process as cooperating partners. Cooperating Agency Status was accepted by County Commissioners in Lawrence, Meade, Pennington, Custer, and Fall River Counties and Lawrence, Pennington, Custer, Elk Creek, and Fall River Conservation Districts.

The cooperating agencies provided extensive input into the preparation of the Draft Environmental Impact Statement during FY 2004.

Conservation Programs

Coordinated Soil and Water Conservation (CSWC) Grants

During the 1992 legislative session, the South Dakota Coordinated Soil and Water Conservation Plan was adopted. One provision of the plan was the establishment of a grant fund to be used by conservation districts to address local natural resource needs.

During FY 2004, 58 grant applications were received. The 5 conservation districts that received funding are listed below:

<u>District</u>	<u>Grant Award</u>	<u>Match</u>	<u>Project Objective</u>
Aurora	\$13,440	\$8,000	CAFO, engineering design
Beadle	\$13,440	\$8,000	CAFO, engineering design
Brookings	\$13,440	\$8,000	CAFO, engineering design
Butte	\$26,880	\$16,000	CAFO, engineering design
Charles Mix	\$26,880	\$16,000	CAFO, engineering design
Clark	\$13,440	\$8,000	CAFO, engineering design
Fall River	\$13,440	\$8,000	CAFO, engineering design
Faulk	\$40,320	\$24,000	CAFO, engineering design
Clearfield- Keyapaha	\$13,440	\$8,000	CAFO, engineering design
Hanson	\$13,440	\$8,000	CAFO, engineering design
Hutchinson	\$13,440	\$8,000	CAFO, engineering design
Kingsbury	\$40,320	\$24,000	CAFO, engineering design
Marshall	\$13,440	\$8,000	CAFO, engineering design
Minnehaha	\$26,880	\$16,000	CAFO, engineering design
Moody	\$13,440	\$8,000	CAFO, engineering design
Perkins	\$13,440	\$8,000	CAFO, engineering design
Spink	\$53,760	\$32,000	CAFO, engineering design
Yankton	\$13,440	\$8,000	CAFO, engineering design
Yankton	\$13,440	\$8,000	CAFO, engineering design (2 nd grant)
Fall River	\$10,000	\$560,200	Upper Cheyenne River Watershed Assessment
Edmunds	\$13,440	\$8,000	CAFO, engineering design
Union	\$13,440	\$8,000	CAFO, engineering design
Deuel	\$5,000	\$28,335	Clear Lake Watershed Restoration
Miner	\$26,880	\$16,000	CAFO, engineering design
Butte	\$43,250	\$108,000	Ponds and Grazing Management Outreach
Sanborn	\$13,440	\$8,000	CAFO, engineering design
Lincoln	\$13,440	\$8,000	CAFO, engineering design
McPherson	\$13,440	\$8,000	CAFO, engineering design
South Brown	\$26,880	\$16,000	CAFO, engineering design

<u>District</u>	<u>Grant Award</u>	<u>Match</u>	<u>Project Objective</u>
Minnehaha	\$26,880	\$16,000	CAFO, engineering design
Marshall	\$13,440	\$8,000	CAFO, engineering design
Hutchinson	\$13,440	\$8,000	CAFO, engineering design
Brule-Buffalo	\$40,320	\$24,000	CAFO, engineering design
American Creek	\$13,440	\$8,000	CAFO, engineering design
Charles Mix	\$26,880	\$16,000	CAFO, engineering design
East Pennington	\$13,440	\$8,000	CAFO, engineering design
Haakon	\$13,440	\$8,000	CAFO, engineering design
Hamill	\$53,760	\$32,000	CAFO, engineering design
Jackson	\$45,000	\$71,600	Dam/dugout Clean-out
Faulk	\$22,500	\$139,202	Lake Faulkton
Faulk	\$80,000	\$510,300	Upper Snake Creek
Davison	\$14,000	\$66,000	Davison County Tree Planting
Marshall	\$32,000	\$73,940	Shelterbelt Renovation & Establishment
Todd	\$40,000	\$63,371	Multi-Purpose Ponds
Aurora	\$14,000	\$76,300	Multi-purpose Shelterbelts
American Creek	\$105,300	\$89,000	Lyman/Stanley/Hughes Water Development
Hanson	\$10,500	\$7,000	Lake Hanson/Pierre Creek Restoration
Hanson	\$14,000	\$64,300	Hanson County Shelterbelts
Bon Homme	\$30,000	\$93,500	Bon Homme Conservation District Conservation Enhancement
Sanborn	\$11,050	\$9,366	Groundwater Quality Protection
Hutchinson	\$20,000	\$64,300	Multi-Purpose Shelterbelts
TOTAL	\$1,222,360	\$2,456,714	

Conservation District Revolving Loan Fund

The Conservation District Revolving Loan fund was established by the South Dakota Legislature during 1949. 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 3 percent interest per annum. Loans made in FY 2004 were:

<u>Conservation District</u>	<u>Loan Amount</u>	<u>Purpose</u>
Deuel	\$ 14,600	Pickup
Deuel	\$ 5,600	Rotary Tiller
Total	\$ 20,200	

Range Management



The purpose of the Prairie Rangeland Conservationist position is to provide technical assistance to producers for range monitoring, grazing plans, range development and other conservation planning.

The Prairie Range Conservationist is assigned to the south central part of the state, but provides technical assistance statewide as needed. As well as working with individual producers and landowners, the Rangeland Conservationist works with other agencies

and organizations in conservation planning and projects. The Prairie Range Conservationist serves as a consultant on the board of the SD Grasslands Coalition assisting with project planning and implementation. An example of this is the Management Intensive Grazing Demonstration Project funded by a Conservation Commission grant. Six demonstration sites are completed and being maintained on 6352 acres of rangeland. In addition assistance is provided to SD DENR 319 projects aimed at long term water quality projects such as the 319 Technical Assistance Project that provides technical and planning assistance to landowners to improve rangeland conditions in local watersheds.

The Rangeland Specialist conducts outreach and educational projects. This includes the Society for Range Management's Youth Range Camp serving 50-60 young people interested in rangeland judging and plant identification. SD Rangeland Days, an educational program hosted by local Conservation Districts around the State, is another area where planning and implementation assistance is provided. Other educational outreach in school programs have addressed rangeland plants and conservation to local 4-H groups, local grade schools, Environmental Fairs, Kid's Fairs, and after-school programs serving 250 to 300 children in grades K-Six in 2004.

Type of Assistance 2004	Affected Acres 2004
Rangeland Inventories	1200
Conservation Planning Maps	1500
Grazing Assistance	1300
Rangeland Monitoring	1000
Planning Assistance	6105
Total Acres	11105

Wetlands Program

In FY 2004 the division received an EPA grant in the amount of \$45,791, which is being used to demonstrate the environmental and social benefits of adding grass and woody buffers adjacent to wetlands. Wetland buffer demonstration sites have been installed at three locations near Brookings, SD and Sioux Falls, SD. Landowners are excited about installing the buffers and having their land used for wetland education purposes. We are also working with NRCS, SDSU and several farm organizations to explore the development of a wetland hydrology model for accurately identifying wetlands in the field.

Assistance to Conservation Districts

The division is currently providing the following conservation program services:

- Administration of Coordinated Soil and Water Conservation Grants
- Administration of Conservation District Revolving Loan Fund
- Forestry technical assistance to districts statewide
- Range Specialist assigned to SCACD Prairie Area
- Monitor supervisor elections and maintain supervisory history
- State Resource Conservation Speech Contest
- Respond to requests for assistance (legal questions, accounting and financial record keeping, grant and loan information, tree planting and personnel issues)
- Maintain a conservation district supervisor and employee telephone directory
- Special projects
- Provide training when requested (QuickBooks, grant management and planning)
- Participate at district and SDACD functions (area meetings, annual convention, board meetings, advisor on SCACD committees, SCACDE board advisor, etc.)

Maintain district records, reports and history (financial, election, minutes, progress, grants and loans, etc.)

CAFO Engineering Design Assistance Grants

The US Environmental Protection Agency set a deadline of September 2005 for Concentrated Animal Feeding Operations, CAFOs in South Dakota to comply with state and federal water pollution control laws and become permitted.



The immediate need at these facilities was for engineering designs to determine the best management practices for each individual feeding site. In order to help meet this need, DENR and the SD Department of Agriculture teamed up to provide nearly 1.3 million dollars in matching grants during the last year. This has enabled livestock producers to hire licensed professional engineers to complete the designs for their manure management systems. This initiative pays up to 60%, with a maximum of \$12,000 in grant funding per design. By the end of this year, these grants will help nearly 100 CAFOs complete engineering designs and construction plans.

Producers with an approved design will be in a better position to receive construction funding through federal programs such as Environmental Quality Incentive Program (EQIP). This program will pay up to 75%, with a cap of \$150,000, for construction costs.

The number one benefit of this project will be protected or improved water quality for the citizens of South Dakota. It also keeps our livestock industry strong and helps to promote agriculture development as envisioned in Governor Rounds' 2010 Initiative.

BEFORE



AFTER



Information and Educational Activities

Smokey Bear and Wildland Fire Prevention

A total of 14 fire prevention and Smokey Bear programs were presented by service foresters to school classes, service organizations and other groups around the state, including appearances by Smokey during State Fire School and at various events. Smokey Bear fire prevention materials valued at approximately \$5,000 were distributed by service foresters to schools, service organizations, fire departments, and many others who can use and learn from them. Materials were also distributed at the South Dakota State Fair in Huron, Dakota Fest in Mitchell and other major public events.

Smokey Bear and Woodsy Owl Poster Contest 2004 Winners

The 2004 Woodsy Owl Poster Contest was co-sponsored by the Keep South Dakota Green Association (KSDG) and the South Dakota Federation of Garden Clubs (SDFGC). Entries were accepted in five competition divisions. First place winners received \$25 and certificates of achievement; second place winners received \$15 and certificates of achievement; third place winners received \$10 and certificates of achievement; honorable mentions received certificates of achievement. The winners selected by representative judges from the SD Dept. of Agriculture, Resource Conservation & Forestry Division, KSDG and SDFGC are:

First Grade Competition Division

First Place: Sydney Cowan, Highmore, SD
Second Place: Lindsey Langdeau, Lower Brule, SD
Third Place: Kaitlin O'neil, Groton, SD
Honorable Mention: Lauren Esser, Custer, SD
Honorable Mention: Mary Reed, Highmore, SD
Honorable Mention: Josey Aasby, Holobird, SD

Second Grade Competition Division

First Place: Camille Sippel, Groton, SD
Second Place: Riley Helmer, Andover, SD
Third Place: Micaela Frank, Bonesteel, SD
Honorable Mention: Joellen Gonsoir, Groton, SD

Third Grade Competition Division

First Place: Zach Franks, Custer, SD
Second Place: Jill McNulty, Keystone, SD
Third Place: Erica Schueter, Groton, SD
Honorable Mention: Ally Spring, Custer, SD

Fourth Grade Competition Division

First Place: Rachel Day, Highmore, SD
Second Place: Gabe Dendinger, Hill City, SD
Third Place: Drew Dohman, Groton, SD
Honorable Mention: Rachel Raysby, Chancellor, SD

Fifth Grade Competition Division

First Place: Tess Wentworth, Custer, SD
Second Place: Haley Clark, Howard, SD
Third Place: Corey Muilenburg,
Honorable Mention: Kara Baloun, Highmore, SD
Honorable Mention: Stephanie Fey, Groton, SD

Honorable Mention: Ally Klock, Chancellor, SD



Cash awards were provided courtesy of the KSDG association & the SDFGC.

Urban and Community Forestry

In FY 2004 service foresters and the urban forestry specialist made 245 presentations to school classes and civic groups on Arbor Day, Tree City USA, and other urban forestry subjects. 3 workshops on tree planting and care were presented. There were 4 interviews with Dakota Farm Talk Radio Program and 17 TV, radio and newspaper spots on Arbor Day, tree planting and care were also produced.



Gregory, SD Tree Workshop

Arbor Day

The last Friday in April was established by the 1947 State Legislature as South Dakota's official Arbor Day. The law was repealed in 1995 as part of an omnibus elimination of laws that restrict or pertain to state education, but re-established by the 1998 Legislature. Arbor Day traditionally falls on the last Friday in April. In FY 2004, that day was April 30th. It is the one day set aside each year to commemorate and plant trees for the many benefits they provide and the impact they have on our environment. On or around that date, division service foresters provided a total of 61 presentations to school classes, service clubs and other groups on the importance of planting and properly caring for our rural and urban trees, and of celebrating Arbor Day.

The Division of Resource Conservation and Forestry, in cooperation with the McDonald's Restaurants of South Dakota, the Keep South Dakota Green Association, and the South Dakota Association of Conservation Districts sponsored the 2004 Arbor Day Essay Contest. This was the 27th annual competition that is open to 5th and 6th grade students. A total of 2076 essays were entered from 46 of 69 conservation districts. The first place state winner, **Amy Beth Ekroth**, a sixth grader from Burke, SD in Gregory County Conservation District, received a cash award of \$100 and a handsome engraved plaque. In addition, Ekroth's school, **Burke Middle School**, received \$150 to purchase educational supplies or equipment. The second place winner, **Jeremy Bowers**, a fifth grade student from Clark Elementary in Clark County Conservation District was awarded \$75 and an engraved plaque. **Alexis Glen**, a sixth grader and the third place winner from Sisseton in Roberts County Conservation District was awarded \$50 and an engraved plaque. Courtesy of Keep South Dakota

Green Association, every student who entered the contest received a packet of honeylocust tree seeds and instructions on how to grow their own trees.

The division also cooperated with the National Arbor Day Foundation to sponsor the Eleventh annual Arbor Day Poster Contest, open to fifth grade students. Also cooperating at the local level and providing the prize money was the South Dakota Arborists Association and the Dakota Society of American Foresters. The theme of the 2004 contest was "Trees Are Terrific...In Cities and Towns" in celebration of the 132nd anniversary of the founding of Arbor Day. The first place winner, **Allison Fejfar** who attends classes at Beadle Elementary School in Yankton, was awarded \$100 and an attractive certificate of achievement. **Brendon Hoellein**, the second place winner from O.M. Tiffany Elementary School in Aberdeen, received a \$75 cash award and a certificate of achievement. Third place winner, **Marius Sotelo** of Lakeview Elementary School in Crookston, was awarded \$50 and a certificate. Allison's first place poster was forwarded to national competition, but was not selected as the national winner.



2004 Arbor Day Poster Winner

Tree City USA

Tree City USA is a community improvement and national recognition program for towns and cities that meet established standards and effectively manage their public tree resources. The program is sponsored by the National Arbor Day Foundation and the US Forest Service at the national level, and by the South Dakota Division of Resource Conservation and Forestry 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 urban & 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
4. Celebrate Arbor Day with an official proclamation and organized observance

South Dakota Division of Resource Conservation and Forestry foresters re-certified 33 active Tree City USA communities for work done in 2003. South Dakota's 2003-2004 Tree City USA communities with first year of recognition, population, 2003 forestry budgets, and per capita spending are as follows:

Tree City USA	Year First Recognized	Population	Urban Forestry Budget (2003)	Per Capita Spending
Aberdeen	1980	28,000	\$ 261,275	\$ 9.33
Andover	1986	106	\$ 417	\$ 3.93
Baltic	2003	811	\$ 11,250	\$ 13.87
Belle Fourche	1991	4,565	\$ 24,472	\$ 5.36
Brookings	1982	18,700	\$ 268,835	\$ 14.38
Burke	1982	676	\$ 1,800	\$ 2.66
Clark	1981	1,285	\$ 46,698	\$ 36.34
Deadwood	1992	1,840	\$ 174,560	\$ 94.87
Dell Rapids	1984	3,020	\$ 13,105	\$ 4.34
Desmet	1997	1,164	\$ 2,454	\$ 2.11
Ellsworth Air Force Base	1999	8,640	\$ 206,859	\$ 23.94
Freeman	2003	1,317	\$ 2,650	\$ 2.01
Gregory	1984	1,432	\$ 3,000	\$ 2.09
Hartford	1992	1,844	\$ 6,566	\$ 3.56
Henry	2002	275	\$ 3,168	\$ 11.52
Huron	1982	11,893	\$ 31,536	\$ 2.65
Lead	1987	3,027	\$ 73,162	\$ 24.17
Madison	1980	6,540	\$ 26,271	\$ 4.02
Mitchell	1980	14,500	\$ 102,534	\$ 7.07
Pierre	1983	13,876	\$ 59,817	\$ 4.31
Platte	1995	1,367	\$ 2,814	\$ 2.06
Rapid City	1980	60,441	\$ 185,732	\$ 3.07
Redfield	1990	2,510	\$ 6,634	\$ 2.64
Sinai	2003	130	\$ 16,019	\$ 123.22
Sioux Falls	1980	134,600	\$ 690,000	\$ 5.13
Sisseton	1982	2,572	\$ 5,680	\$ 2.21
Spearfish	1984	9,000	\$ 21,000	\$ 2.33
Spencer	1999	160	\$ 458	\$ 2.86
Sturgis	1983	7,000	\$ 47,902	\$ 6.84
Vermillion	1984	9,765	\$ 25,160	\$ 2.58
Watertown	1982	19,000	\$ 168,098	\$ 8.85
Winner	1984	3,137	\$ 12,883	\$ 4.11
Yankton	1983	13,969	\$ 68,085	\$ 4.87

Average Per Capita Spending: \$13.43

2003 South Dakota Census Est. 770,883

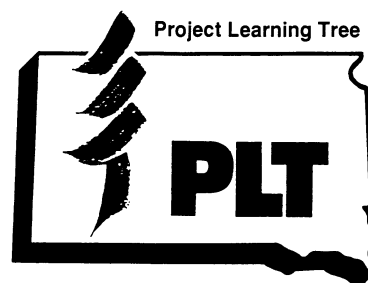
51% of S.D. Population live in TCUSA

* indicates new TCUSA

Project Learning Tree (PLT)

Project Learning Tree (PLT) is an award-winning environmental education program designed primarily for teachers and other educators working with students in pre-kindergarten through grade eight. Special modules, or teaching units, are available for high school level teachers. PLT uses the forest as a “window” into the natural world, helping young people gain an awareness and knowledge of the world around them, as well as their place within it. Children learn **how to think** -- rather than what to think -- about our complex environment, and they have fun learning as they and their teachers work with any of the 93 action-oriented activities described in the *Environmental Education Pre K-8 Activity Guide*.

During FY 2004, one part-time PLT Coordinator, Dianne Miller, planned and coordinated workshops, classroom presentations, events and three Walk in the Forest Days to promote the PLT effort statewide. Dianne devoted an average of 25 hours per week (half time) to the PLT program. A total of 7 educator and facilitator workshops in South Dakota resulted in the training of 170 educators:



<u>Location</u>	<u>Type of Workshop</u>	<u>Instructor</u>	<u># of People Trained</u>
Spearfish, BHSU Pre Services Class	Basic Educator	Hickenbotham, Miller, Gray	78
Outdoor Campus	Advanced PLT	Gannon, Ulvestad, Jackson	8
Sioux Falls	Basic Educator	Gannon, Ulvestad, Jackson	53
Sioux Falls	Advanced Fire & Forestry	Miller, Gray, Coburn	Canceled
Sioux Falls	Facilitators Training Workshop	Miller	17
Sioux Falls	Early Childhood	Miller, Root	14
Total Trained			170

The Project Learning Tree exhibit/table top display was featured at the South Dakota Retail Lumberman’s Association Convention in Sioux Falls, a legislative social in Pierre sponsored by the Society of American Foresters, 2004 Math and Science Teacher’s Association meeting in Huron, Kids Fair in Rapid City, Haakon County Fair, SDEA convention, Fun in Park event for kids in Spearfish, and various other sites promoting PLT.

The PLT Coordinator, service foresters and other facilitators hosted PLT activities at several Water Festivals to fourth grade students and their teachers. The Water Festivals were sponsored by the Department of Environment and Natural Resources and were held at Brookings, Rapid City, Pierre, Sioux Falls, Huron, Watertown and Vermillion. Educational displays for hands on activities were also held at the Boy Scouts Day Camp, two Girl Scout Jams, and an afternoon program for Spearfish third graders. An event with great success is the Kids Fair held in Rapid City where over 1,000 young children visit our booth filled with hands on activities for them. We demonstrate an educational

computer forestry game, visit with them about forest and fire. They leave with their own tree cookie and a paper bag they stamped with leaves and trees. The bag is filled with coloring books, stickers and more educational materials to share at home. A fun morning was spent with preschoolers and six classroom visits were made to first and second grades presenting education forestry materials.

Three very successful Walk in the Forests events were held this past year. Over 605 fifth and sixth grade students walked in the forest to different stations to learn about natural resources, stations focused on forest ecology and trees species and learn more about the job as a Forester.

SD PLT provided lessons and activities for Outdoor Education majors at BHSU to present for Arbor Day in Black Hills area schools. Across SD several schools hosted Arbor Day Events which included PLT activities including, Tree Factory, Adopt a Tree and Tree poetry.

SD PLT is a proud tradition with a bright and promising future in SD. Their mission is to spread a well balanced environmental education program.

Tree Farm



The Resource Conservation and Forestry Division also participates in the American Tree Farm System. The South Dakota Tree Farm Committee is sponsored in part by the Keep South Dakota Green Association. Fifty Tree Farms were inspected that cover 10048 acres of forestland and windbreaks; division service foresters completed 42 of the inspections. There were twenty-one inspections of new Tree Farms. There are currently 182 Tree Farms in South Dakota covering 24975 acres. The Medicine Mountain Scout Ranch of Rapid City was chosen as the 2004 Outstanding Woodland

Tree Farmers of the Year. Jim and Emily Stiegelmeier of Selby were chosen as the 2004 Windbreak Tree Farmer of the Year. Service foresters from the division nominated both award winners for the awards. The division also provides secretarial, and database administration services for the Tree Farm Committee.

Logger Education



The Central Rockies Sustainable Forestry Education Program (CRSFEP) is an organization made up of professionals representing loggers, forest products industry, state forestry agencies, forest landowners, and natural resource educators from South Dakota, Wyoming, and Colorado. The mission of the organization is to develop, support, and provide a course curriculum to improve the knowledge and implementation of forestry practices. Currently, the division is providing leadership to the organization by occupying the role of President.

Logger Education in South Dakota is a cooperative effort involving the Resource Conservation and Forestry Division, South Dakota Extension Service, Black Hills Women in Timber, the Black Hills Forest Resource Association, and the Black Hills National Forest. Workshops cover a wide range of forestry related topics including silviculture and forest ecology.

The division co-sponsored a Best Management Practices for Protecting Water Quality in Timber Harvests training in FY 2004. The training provided four hours of classroom and three hours of field instruction to loggers, foresters, and landowners. The training was offered in two locations in the Black Hills area. The Spearfish workshop attracted 64 people, and the Hill City workshop attracted 52.

Resource Conservation Speech Contest



Each year for the last 43 years the division has sponsored a Resource Conservation Speech Contest in cooperation with the South Dakota Association of Conservation Districts (SDACD) and East River Electric who provided \$1,200 in scholarships.

Any South Dakota student in grades 9-12, is eligible to compete. In 2004, the scholarships were raised to \$2,300. The scholarships will be contributed by South Dakota Rural Electric Association, East River Electric Power Cooperative and Rushmore Electric Power Cooperative. Five place winners are selected each year. The scholarships are paid to any college, university or accredited vocational

technical school in the state of South Dakota chosen by the winners.

The theme for the 2004 contest was "Clean Water – America's Lifeline." All contestants participated in a local contest coordinated by the local conservation district. Stage two was an area contest held at seven locations around the state, corresponding to the South Dakota Association of Conservation Districts areas. The last stage was the State Final contest that was held in Pierre April 3, 2004.

Winning first place and a \$1,100 scholarship was Holly Marshall, a junior at Redfield High School, sponsored by the Spink County Conservation District. She is the daughter of Vince and Ellen Kay Marshall of Redfield.

The second place winner, Rebeccah Lutz, a senior at Selby Area High School in Selby, was awarded a \$750 scholarship. She is the daughter of Larry and Deb Lutz of Selby and was sponsored by the Walworth County Conservation District.

Placing third and receiving a \$450 scholarship was Pam Wilson, a sophomore at Wall High School, sponsored by the East Pennington Conservation District in Wall. Pam is the daughter of Philip and Mary Kay Wilson of Elm Springs.

Resource Conservation & Forestry Fire Assistance



RC&F FIRE ASSISTANCE – FY 2004

FY 2004 was an average to below average year for wildfires across the West. RC&F provided technical support and assistance in the suppression of some of these fires. In addition, RC&F sent personnel to assist with fires outside South Dakota. The following is a list of fires that RC&F personnel worked:

- Red Point – Dispatch Recorder
- Pine Ridge Complex – Dispatch Recorder
- Merchen – Dispatch Recorder
- Parm – Dispatch Recorder
- Davis Fire (Oregon) – Information Officer
- Link Fire (Oregon) – Information Officer
- Wedge Canyon Fire (Montana) – Information Officer
- Nels/Cookstone Prescribed fire – Information Officer
- Peppin Fire (New Mexico) – Informational Officer

Financial Assistance to Local Organizations

Summary of Grants Awarded by County, Program and Amount During State Fiscal Year 2004

U&CF = Urban & Community Forestry Sub-Grants, See Pages 11-12
CSWC = Coordinated Soil & Water Conservation Grants, See Page 17

<u>County</u>	<u>Grant Recipient</u>	<u>Program</u>	<u>Amount Awarded</u>	<u>Local Match</u>	<u>Total Project Cost</u>
Aurora	Aurora Conservation District	CSWC	\$13,440	\$8,000	\$21,440
	Aurora Conservation District	CSWC	\$14,000	\$76,300	\$121,800
Beadle	Beadle Conservation District	CSWC	\$13,440	\$8,000	\$21,440
Bennett					
Bon Homme	Bon Homme Conservation Dist.	CSWC	\$30,000	\$93,500	\$188,500
Brookings	Brookings Conservation District.	CSWC	\$13,440	\$ 8,000	\$21,440
	City of Aberdeen Arboretum	U&CF	\$1,000	\$1,000	\$2,000
	City of Aberdeen	U&CF	\$4,000	\$4,000	\$8,000
Brown	South Brown Conservation Dist.	CSWC	\$26,880	\$16,000	\$42,880
Brule	Brule-Buffalo Conserv. Dist.	CSWC	\$40,320	\$24,000	\$64,320
	City of Chamberlain	U&CF	\$1,000	\$1,000	\$2,000
Buffalo					
Butte	Butte Conservation District	CSWC	\$26,880	\$16,000	\$42,880
	Butte Conservation District	CSWC	\$43,250	\$108,000	\$194,500
Campbell					
Charles Mix	Charles Mix Conservation Dist.	CSWC	\$26,880	\$16,000	\$42,880
	Charles Mix Conservation Dist.	CSWC	\$26,880	\$16,000	\$42,880
Clark	Clark Conservation District	CSWC	\$13,440	\$8,000	\$21,440
Clay					
Codington					
Corson					
Custer					
Davison	Davison Conservation District	CSWC	\$14,000	\$66,000	\$165,000
Day					
Deuel	Deuel Conservation District	CSWC	\$5,000	\$28,335	\$33,335
Dewey					
Douglas					
Edmunds	Edmunds Conservation District	CSWC	\$13,440	\$8,000	\$21,440
Fall River	Fall River Conservation District	CSWC	\$13,440	\$8,000	\$21,440
	Fall River Conservation District	CSWC	\$10,000	\$560,200	\$570,200
Faulk	Faulk Conservation District	CSWC	\$40,320	\$24,000	\$64,320
	Faulk Conservation District	CSWC	\$22,500	\$139,202	\$574,327
	Faulk Conservation District	CSWC	\$80,000	\$510,300	\$1,673,200
Grant					
Gregory					
Haakon	Haakon Conservation District	CSWC	\$13,440	\$8,000	\$21,440
Hamlin					
Hand					
Hanson	Hanson Conservation District	CSWC	\$13,440	\$8,000	\$21,440
	Hanson Conservation District	CSWC	\$10,500	\$7,000	\$80,500
	Hanson Conservation District	CSWC	\$14,000	\$64,300	\$181,800
Harding					
Hughes	City of Pierre	U&CF	\$1,000	\$1,000	\$2,000
	City of Pierre	U&CF	\$1,320	\$1,320	\$2,640

<u>County</u>	<u>Grant Recipient</u>	<u>Program</u>	<u>Amount Awarded</u>	<u>Local Match</u>	<u>Total Project Cost</u>
Hutchinson	Hutchinson Conservation Dist.	CSWC	\$13,440	\$8,000	\$21,440
	Hutchinson Conservation Dist.	CSWC	\$20,000	\$64,300	\$127,800
	Hutchinson Conservation Dist.	CSWC	\$13,440	\$8,000	\$21,440
Hyde					
Jackson	Jackson Conservation District	CSWC	\$45,000	\$71,600	\$136,500
	City of Kadoka	U&CF	\$1,000	\$1,000	\$2,000
Jerauld					
Jones					
Kingsbury	Kingsbury Conservation District	CSWC	\$40,320	\$24,000	\$64,320
	Lake				
Lawrence	City of Spearfish	U&CF	\$1,000	\$1,000	\$2,000
Lincoln	Lincoln Conservation District	CSWC	\$13,440	\$8,000	\$21,440
Lyman	American Creek Conserv. Dist.	CSWC	\$13,440	\$8,000	\$21,440
	American Creek Conserv. Dist.	CSWC	\$105,300	\$89,000	\$334,600
McCook					
McPherson	McPherson Conservation Dist.	CSWC	\$13,440	\$8,000	\$21,440
Marshall	Marshall Conservation District	CSWC	\$13,440	\$8,000	\$21,440
	Marshall Conservation District	CSWC	\$32,000	\$73,940	\$200,590
	Marshall Conservation District	CSWC	\$13,440	\$8,000	\$21,440
Meade	City of Sturgis	U&CF	\$5,000	\$5,000	\$10,000
Mellette					
Miner	Miner Conservation District	CSWC	\$26,880	\$16,000	\$42,880
Minnehaha	Minnehaha Conservation Dist.	CSWC	\$26,880	\$16,000	\$42,880
	Minnehaha Conservation Dist.	CSWC	\$26,880	\$16,000	\$42,880
	City of Baltic	U&CF	\$10,000	\$10,000	\$20,000
Moody	Moody Conservation District	CSWC	\$13,440	\$8,000	\$21,440
Pennington	East Pennington Conserv. Dist.	CSWC	\$13,440	\$8,000	\$21,440
	City of Rapid City	U&CF	\$4,500	\$4,500	\$9,000
	Journey Museum Arboretum	U&CF	\$1,000	\$1,000	\$2,000
	Perkins Conservation District	CSWC	\$13,440	\$8,000	\$21,440
Perkins					
Potter					
Roberts					
Sanborn	Sanborn Conservation District	CSWC	\$13,440	\$8,000	\$21,440
	Sanborn Conservation District	CSWC	\$11,050	\$9,366	\$32,916
Shannon					
Spink	Spink Conservation District	CSWC	\$53,760	\$32,000	\$85,760
Stanley					
Sully					
Todd	Todd Conservation District	CSWC	\$40,000	\$63,371	\$254,371
Tripp	Clearfield-Keyapaha Cons. Dist.	CSWC	\$13,440	\$8,000	\$21,440
	Hamill Conservation District	CSWC	\$53,760	\$32,000	\$85,760
Turner					
Union	Union Conservation District	CSWC	\$13,440	\$8,000	\$21,440
Walworth					
Yankton	Yankton Conservation District	CSWC	\$13,440	\$8,000	\$21,440
	Yankton Conservation District	CSWC	\$13,440	\$8,000	\$21,440
	City of Yankton	U&CF	\$1,000	\$1,000	\$2,000
Ziebach					
TOTALS			\$1,254,180	\$2,488,543	\$6,091,339