

**South Dakota
W-81-D, Amendment #55**

**SOUTH DAKOTA
DEPARTMENT OF GAME, FISH AND PARKS
DIVISION OF WILDLIFE**

**STATEWIDE LAND MANAGEMENT AND DEVELOPMENT PLAN
January 1, 2009 - December 31, 2013**

Pittman-Robertson Project W-81-D Amendment # 55
January 1, 2009

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PROGRAM NARRATIVE

BACKGROUND

South Dakota faces a common problem with much of the nation, the loss of quality wildlife habitat due to expanding agricultural, industrial and domestic uses of natural resources. Growing pressure on these resources has led to a deterioration of quality habitat for waterfowl, upland game, big game and non-game wildlife species. These losses will ultimately be felt in terms of declining wildlife populations, leading to a significant impact on South Dakota's \$186 million per year hunting and fishing recreation industry. However, wildlife habitats and the populations they support are renewable resources that can be sustained and improved when appropriate measures are taken.

Because a great diversity of habitat types are found in the state, there are many different needs to be addressed if wildlife populations are able to maintain the levels that exist right now. Providing for these various needs with currently available resources is becoming increasingly difficult, with the effort ultimately requiring resources other than the state's alone. Cooperation among and between federal, state, local and private agencies, organizations and individuals is necessary to properly maintain South Dakota's wildlife resources and their associated habitats.

The South Dakota Division of Wildlife Land Management and Development Plan outlines and provides for individual habitat management based projects applied to the 719 individual Game Production and Water Access Areas covering 293,461 acres owned or leased, and managed by the Division of Wildlife.

Since 1917 when the Game and Fish Commission purchased an excavating machine, South Dakota has had an operational wildlife land management program. The excavator was used to divert excess spring run-off from creeks and rivers to nearby fishing and fowling lakes and man-made reservoirs. Another more notable era in wildlife habitat management came about in 1927 when the first public shooting area was acquired at Hedke's Pass in Day County. Today there are 719 public shooting areas or Game Production Areas owned or leased, and managed by the Division of Wildlife across South Dakota, with these areas dedicated to providing high quality wildlife habitat and hunting opportunities.

The establishment of the Federal Aid in Wildlife Restoration Program in 1937 to provide funding for wildlife restoration brought about yet another new era in wildlife habitat management in South Dakota. South Dakota's first P-R apportionment of \$13,422 in 1939 was the financial impetus behind a much needed wildlife habitat development and research program, including additional land acquisition. Soon after, in 1941, five dollars from each nonresident small game license was set aside in a fund dedicated to acquiring prime wetlands and associated habitats as public shooting areas.

These new sources of funding for wildlife resource projects created renewed incentive among private landowners and organized sportsmen, and participation by landowners and sportsmen through a strong Game, Fish and Parks Commission helped direct the land management program. Among the many federal aid projects initiated by the state following World War II was a project designed to improve winter cover and provide undisturbed nesting cover on private lands as well as the state owned lands being dedicated to wildlife.

This project was later abandoned as part of a department-wide restructuring of public services and, in lieu of a new nationwide Soil Bank Program that contained many beneficial practices for wildlife and a new pilot wetlands acquisition program being financed entirely by the U.S. Fish and Wildlife Service. The old cover development project was then replaced by project W-81-D that was designed to treat the growing and complex need for habitat maintenance and development in some 35 categories of activity.

During the 50 year history of W-81-D, public needs and land management priorities have been reevaluated many times. A formal appraisal process was started in 1944 when the Game and Fish Commission authorized the establishment of recreation areas at all permanent lakes in the state, constituting multiple-use between park users and hunters. The following year, legislative action added two more members to the Commission and changed the name of the eight member group to the Game,

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Fish and Parks Commission. Subsequently, federal aid was provided for fisheries activities (Dingle-Johnson Act, 1950) and parks activities (Land and Water Conservation Fund, 1964) to help fill the need for separate funding of necessary projects which fell outside the scope of the Pittman-Robertson Act.

DESCRIPTION OF THE ENVIRONMENT

By some standards, the more than 28 million acres of South Dakota grasslands are by no means complex. It has been estimated that more than 90 percent of the native grassland forage is composed of less than a dozen grasses and sedges. The most common tame grasses add but a few species names to the list. The major differences in native grassland types are correlated closely with precipitation. Exclusive of the Black Hills, precipitation increases from west to east, thereby creating north-south belts of grassland types. Further, there are multitudes of environmental factors, other than precipitation, that actually control the type of vegetation present in a specific locale.

The major area of tall grass prairie in South Dakota lies in the eastern one-third of the state. Moving westward, the tall grasses gradually gives way to the mixed grass prairie in the western two-thirds of South Dakota. In higher precipitation areas of the Black Hills and surrounding foothills, tracts of tall grass prairie vegetation are also found.

Soils that developed under the tall grass prairie in eastern South Dakota are very fertile, dark and deep. An absence of trees characterizes the original tall grass prairie, and although prairie fires were the primary reason for a lack of trees, summer drought was a second factor that restricted tree growth in all but the more moist locations. Vegetation of the true prairie is rather drought tolerant. When periodic late spring or early summer droughts occur, true prairie vegetation can become dormant, whereas young trees have more difficulty in weathering dry periods.

The original tall grass prairie corresponds closely to what is now the corn and soybean region of South Dakota. Because of high agricultural productivity of this area, and a rather gently sloping topography, by far the greatest portion of the tall grass prairie has been converted to farmland. Still, a number of isolated tracts can still be found in old cemeteries, railroad right-of-ways, and other relatively undisturbed places.

The mixed grass prairie of the western two-thirds of South Dakota displays a considerable uniformity, yet variation in grassland species is high. Along the eastern edge both mid and short grasses can be found intermingled with the tall grasses. Moving west, tall grass vegetation can still be found to the western edge of the state, but only in the most favorable sites. Throughout the western two-thirds of the state the environment is more suited for mixed grass species. As a result of periods of stress created by drought or overgrazing, many localized areas of this region can become dominated by short grasses. The Black Hills in extreme western South Dakota contain a variety of grassland types in open meadows and as understory of the pine forests. In the foothills, extensive expressions of the tall grass prairie and mixed grass prairie also exist.

Much of eastern South Dakota is in the prairie pothole region of North America. Areas of this glaciated landscape may contain over 100 wetlands per square mile. Western South Dakota is, for the most part, unglaciated and therefore contains very few "pothole" wetlands. However, large, well-developed drainages and riparian wetlands characterize this area. As with most of the riverine and riparian wetlands found across South Dakota, water regimes are primarily intermittent in nature.

Historically, as South Dakota was settled, wetlands were often viewed as wastelands and impediments to agricultural development. Artificial drainage of South Dakota wetlands began in the late 1800s and increased dramatically after WWII, with both financial and technical assistance from the U.S. Department of Agriculture. At the same time, the U.S. Fish & Wildlife Service recognized the importance of prairie wetlands to waterfowl and began efforts to conserve existing wetlands and restore drained wetlands. Despite the continued efforts to drain unprotected wetlands, eastern South Dakota still remains one of the most productive breeding areas for continental waterfowl populations. The combination of shallow and deep glaciated wetlands and extensive riparian wetlands makes South Dakota extremely attractive to

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waterfowl. Besides waterfowl, numerous species of fish, birds, mammals, amphibians and reptiles depend on South Dakota wetlands.

Today we know more about the functions and values of wetlands, and how they contribute to maintaining a healthy environment for humans and wildlife. Wetlands in South Dakota help to preserve biodiversity, provide flood control, recharge groundwater, stabilize stream flows, improve water quality and enhance our quality of life.

NEED

The population of South Dakota has increase from 699,999 persons in 1990 to over 782,000 persons in 2006. Along with the state's population, the desire to access various hunting opportunities is also increasing. In 2006, a total of 171,000 residents and non-residents spent 1,719,000 total days hunting in South Dakota. These hunters spent \$185,258,000 on hunting related expenses.

In the case of mule deer, white tailed deer, antelope, elk, bighorn sheep and turkey , demand for hunting certain license types already exceeds the supply. This is based on the annual number of applications for these licenses outnumbering what is available each year for these species. Likewise, demand for pheasant and waterfowl hunting opportunities currently far exceeds the supply. This is made evident by the amount of private contributions and interest in such groups as Ducks Unlimited and Pheasants Forever, the continued growth in the commercial hunting industry, and the ever-increasing demand for additional public hunting lands and access to private lands. Along with the increased demand for hunting recreation in South Dakota, hunters are faced with increasing closure of private lands to hunting and a diminishing amount of quality wildlife habitat that produces game and hunting recreation opportunities.

The number of participants in non-consumptive or wildlife watching related activities is also expected to increase considerably as people have more available leisure time. While wildlife watchers place an increased demand on wildlife resources, they are also responsible for increased spending on non-consumptive wildlife related activities. In 2006, a total of 432,000 residents and non-residents spent 1,382,000 total days in wildlife watching related activities in South Dakota. These same wildlife watchers spent \$183,304,000 on wildlife watching related expenses. And while many of these wildlife watching activities occur on Game Production Areas, these secondary uses are considered to be compatible with the primary purpose of Game Production Areas, which is game production and hunting recreation.

The South Dakota Department of Game, Fish & Parks - Division of Wildlife owns or leases, and manages, a variety of Game Production Areas across the state as wildlife habitat. The 719 Game Production Area units are comprised of 293,461 acres, or 0.6% of the total land area in South Dakota. These Game Production Area have been acquired through purchase, donation, and by temporary or long-term leases.

As per state statute, the Division of Wildlife pays the local assessed property taxes on game production or public shooting area lands owned in fee title. In 2007, the Division of Wildlife paid \$741282.01 in property taxes on 183,157.39 acres of Game Production Area owned in fee title in 58 counties of the state. This ever-increasing property tax obligation is a significant concern for the Division of Wildlife.

At one time, wildlife lands were often valued at prices below those paid for agricultural land in the same area. Recently, interest by the private sector in owning lands for the primary purpose of providing wildlife habitat and hunting opportunities has dictated both the current market price and availability of rural agricultural property. Land acquisitions by the Division of Wildlife have always been limited by the availability of funding. With land prices continuing to rise, the likelihood of significant acquisitions by the Division of Wildlife is lessened even further. Additionally, future acquisitions may be limited by the Division of Wildlife's ever increasing property tax burden and political pressures that desire to see agricultural land remain in private ownership.

The Division of Wildlife manages slightly more than one-half of one percent of the states land area. In total, there are over 9.8 million acres of state and federally owned land in South Dakota, including Indian trust lands. The area dedicated to wildlife management through the Division of Wildlife's W-81-D program

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accounts for only a fraction of the government owned lands in the state. So while a majority of wildlife related recreational opportunities will continue to occur on private land, a significantly higher density of wildlife related public use activities (hunting and wildlife watching) still takes place on Division of Wildlife owned and managed Game Production Areas.

Game Production Areas managed by the Division of Wildlife consist of approximately 30 percent wetland, 50 percent grassland, 10 percent cultivated lands and 10 percent trees and shrubs. There is a need for the Division of Wildlife to continue to expand and intensify management of these areas in order to provide the highest quality wildlife habitat and hunting recreation opportunities for sportsmen and sportswomen. Comprehensive habitat management of Game Production Areas to provide wildlife resource benefits is necessary to preventing the widening of the gap between hunting recreation demand and wildlife habitat and hunting opportunity supply.

One significant aspect of wildlife land habitat management is noxious weed control and invasive species. As is often the case with public wildlife lands, portions of the 285,804 acres of Game Production Areas have noxious weed problems. Noxious weed control efforts have always been, and will continue to be, a high management priority for the Division of Wildlife. Invasive species are also a significant management concern that will continue to be addressed as the Division of Wildlife strives to provide high quality wildlife habitat on Game Production Areas.

Notwithstanding any significant land acquisition activities elsewhere in the state, most of the anticipated future development needs on existing Game Production Areas will occur in the eastern region of the state. This area, comprised of the two eastern-most Division of Wildlife regions-the eastern 1/3 of the state, is in need of additional public land acquisition and more intense wildlife habitat management efforts. This is due primarily to the high public demand for wildlife related recreation opportunities in an area characterized by high populations of both wildlife and people.

The remaining two Division of Wildlife regions in central and western South Dakota are about equal in their comparative need for additional Game Production Areas. A large amount of existing public land, typically fewer habitat management opportunities on these lands and lower populations of both people and wildlife characteristically give this area of the state a relatively lower level of significance as related to future habitat development needs. However, across the state, it is anticipated that habitat operation, maintenance and development costs funded through the Division of Wildlife's W-81-D program are expected to increase proportionately with the amounts they have in the past.

OBJECTIVE

The objective of this project is to develop, operate and maintain 285,804 acres of habitat for wildlife and public use opportunities on 741 Game Production Areas across South Dakota, and to incorporate the development, operation and maintenance on any newly acquired Game Production Areas that may occur after January 1, 2009.

EXPECTED BENEFITS

Game Production Area management as a result of this project benefits a wide variety of wildlife species. The land and habitat management practices implemented through this project result in the highest quality wildlife habitat available on any public or private property in the state, and wildlife populations have likewise responded to these conditions. Arguably, many times non-game wildlife species benefit from Game Production Area ownership and management as much or more than traditional game species. For example, trees, planted nesting cover, native grass establishments, food habitat plots, and water developments all provide year-round benefits to numerous game and non-game wildlife species alike.

At the same time, the habitat developments and management efforts designed to benefit wildlife also provide countless hours of consumptive and non-consumptive recreational opportunities. Game Production Areas managed by the Division of Wildlife are viewed by the public as providing the highest quality hunting and wildlife viewing opportunities available in the state. The intrinsic value of Game

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Production Areas to both consumptive and non-consumptive users make the lands managed through this project worth considerably more than can be expressed monetarily through traditional means of valuing agricultural lands. However, there are currently no reliable information sources available to accurately quantify the public use opportunities or benefit provided by Game Production Areas.

APPROACH

The land management section consists of approximately 40 full time employees in the form of permanent and seasonal office and field staff. In addition, 57 wildlife conservation officers may perform land management operational functions statewide, such as completing agricultural leases and habitat contracts, performing lease and contract compliance checks, enforcing land management rules and coordinating other land management activities on Game Production Areas.

The primary goal of the Division of Wildlife's land management activities on Game Production Areas is to provide a diversity of habitat types in order to benefit a wide variety of wildlife species. On certain Game Production Areas where particular needs have been identified, species specific habitat management activities do occur. These generally involve development of certain habitat types identified as critical to a specific species, however, these habitat development and management activities generally do not result in a significant negative impact to other wildlife and their habitat needs.

The habitat management approach on existing Game Production Areas is centered on operating and maintaining existing habitat conditions, while taking advantage of every opportunity to make improvements for both wildlife and people through various development activities. On newly acquired Game Production Areas, developments and habitat improvement projects are carefully planned and implemented over an appropriate and practical period of time. Depending on current land use practices and habitat conditions at the time of purchase, these habitat developments and improvements may include continued use of agricultural fields as food plots, establishing tree plots, reestablishing grassland vegetation, implementing managed grazing and haying practices, fence construction, and any other practice approved through this project.

The following work items have been identified for this project.

Roads and Trails – This item involves the development and maintenance of roads and trails on Game Production Areas managed through this project. Roads and trails management is completed to facilitate access to and across Game Production Areas by the public and Division of Wildlife land management crews. Routine repair and maintenance of roads and trails is completed on an as needed basis, and includes grading, graveling and mowing. Grassed road shoulders are also mowed each fall as a fire prevention measure. Wildlife Division staff perform most repair, maintenance and development work, but usually in cooperation with county or township agencies or private contractors. The Division of Wildlife maintains about 300 miles of roads and trails on Game Production Areas each year.

New road and trail developments will be designed to provide for two-lane traffic in most instances, and will include road approaches and other improvements such as auto gates, culverts and gravel surfaces where needed. For new developments, two-lane roads will have a driving surface 20 feet wide with grassed shoulders varying from 0 to 3 feet, and ditch areas with a slope of 3:1. One-lane road surface will be 12 feet wide with a minimum 1 foot grassed shoulder. Because new road construction, including rebuilding and widening of existing roads, will involve disturbance of previously undisturbed soils and may have other compliance issues, they will be added as amendments to this grant.

Cattle Guards and Road Culverts - This item involves the placement of new cattle guards and culverts, and the maintenance (repair/replacement) of existing cattle guards and culverts on Game Production Area roads and trails. This activity is necessary to maintain safe and usable roads and trails for public access and management purposes. The development of new cattle guards and road culverts that involves compliance issues will be proposed as an amendment to this project. All necessary environmental and cultural resource clearances are obtained prior to conducting new developments associated with this activity.

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Fencing – This item involves the maintenance and development of boundary, interior and parking lot fences. Fence maintenance and construction is completed on Game Production Areas for the protection of wildlife habitat, to prevent vehicle trespass and to control livestock as needed for grazing management. Fence design is primarily a standard three or four strand barb wire fence supported by wood and steel posts, however periodically woven wire fence is used. Fence maintenance and construction is completed by Division of Wildlife staff, private contractors or in cooperation with agricultural leaseholder. Depending on the previous winter snow and spring runoff conditions, it is often necessary for the Division of Wildlife may maintain more or less fence that planned in a single year.

All fence maintenance and construction completed by the Division of Wildlife complies with South Dakota fencing laws. In South Dakota, a legal partition fence consists of sound wooden posts at least six and one-half feet in length and four inches in diameter, or of steel posts not less than five and one-half feet in length, all firmly set in the ground and not more than twenty feet apart. Additionally, combinations of steel and wood posts can be used in ratios of not more than three steel posts to one of wood post. Attached to each post is at least four strands of barbed fencing wire, the lower strand being no more than eighteen inches above the ground, the next, twenty-eight inches, the third, thirty-eight inches, and the fourth, forty-eight inches above the ground.

Public Use Facilities – This item involves the maintenance and improvement of parking areas to facilitate public use and access. Abandoned building sites and farmstead areas provide desirable parking areas when and where practical. Fences, guard posts and gates are also used to direct and control vehicles to and on parking areas where uncontrolled vehicle use is or may become detrimental and damaging to wildlife habitat management activities. Parking areas, including boat ramp areas are mowed and otherwise maintained, including grading and gravel placement. Additionally, vault toilets are also maintained on six areas across the state. The Division of Wildlife maintains over 350 parking areas on Game Production Areas across the state. The development of new facilities that involves compliance issues will be proposed as an amendment to this project. All necessary environmental and cultural resource clearances are obtained prior to conducting new developments associated with this activity.

Feeding & Watering Structures - This item involves operating feeding and watering structures for wildlife as well as livestock. Wildlife feeding structures are most often associated with wildlife depredation abatement activities on Game Production Areas. Additionally, operating wildlife and livestock watering facilities include existing stock tanks and dugouts.

Small Dam Maintenance - This item involves maintaining small dams and embankment ponds on Game Production Areas, including the replacement and general maintenance of existing rip-rap, water control structures and overflow pipes. All small dam maintenance activities are conducted in a manner to conform with standard engineering practices and according to applicable state laws. Wildlife Division staff perform some maintenance and repair work on small dams, but most often private contractors are utilized due to the necessity for heavy equipment to complete these projects.

Posts, Signs and Boundary Markers – This item involves the maintenance and placement of various identification and control signs on all boundary corners and at sufficient vantage points in between, to properly identify Game Production Areas. Traffic control and directional signs are also placed on roads and trails, and as needed in areas to direct the public Game Production Area locations. Where possible, boundary and control signs are placed on existing fence posts, otherwise steel signposts are used. Maintenance of boundary and control signs will take place as needed. The Division of Wildlife annually maintains signs on over 1000 miles of boundaries, on 719 Game Production Areas statewide. In general, a single mile of boundary will contain approximately 5 signs of varying information (boundary, parking area, trail markers, etc.). Maintenance generally consists of replacing faded, damaged and missing signs and replacing signposts as needed. As with fence maintenance, sign and boundary marker maintenance is measured as miles of boundaries maintained. Proper signage giving credit to the Federal Aid program is placed on all Game Production Areas in a prominent location. Federal aid credit signs are also placed on any new Game Production Area acquisitions that utilize Federal Aid as a funding source.

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Herbaceous Plantings – This item involves the planting of crops, grasses and perennial cover on previously farmed areas on Game Production Areas across the state. These plantings involve either a dense nesting cover (DNC) mixture of alfalfa, sweet clover and western, intermediate and/or tall wheatgrass, or a mixture of native warm and cool season grasses and native forbs. These plantings may also include establishing food and cover plots. Plantings activities include ground preparation, seeding and cultivating efforts. All herbaceous planting activities are conducted in accordance to standards and methods established by the Natural Resources Conservation Service for South Dakota.

This type of farming operation may involve Division of Wildlife staff and equipment when the seeded areas are located on isolated tracts where a tenant operator is unavailable. However, in most instances tenant operators are utilized to complete herbaceous seeding activities through leasing and share cropping activities. Under share cropping agreements, the Department's portions of crops are left as winter food and cover for wildlife. Tenant operators are also utilized for all or a portion of the activities necessary in establishing DNC and grassland plantings. On areas with limited cropland acres, contract farming with a local agricultural producer is utilized to prepare, establish and maintain DNC, grasses and food habitat plots.

Vegetation Control – This item involves the control of state and locally declared noxious weeds on Game Production Areas across the state as required by state law. Noxious weeds are generally defined as invasive species that are capable of decreasing land value, materially reducing the production of crops or livestock, and generally having little or no value to wildlife.

The State Weed and Pest Commission determine which weeds and pests are noxious. The commission is authorized to make rules, regulations, and orders for the execution of the powers conferred upon it and the performance of duties so as to effectuate, enforce, and carry out promptly and efficiently the prevention, suppression, control and eradication of all dangerous or noxious weeds and pests. The commission may likewise amend or repeal such rules, regulations and orders.

The following weeds have been declared state noxious by the South Dakota Weed and Pest Commission: Leafy spurge (*Euphorbia esula*), Canada thistle (*Cirsium arvense*), Perennial sow thistle (*Sonchus arvensis*), Hoary cress (*Cardaria draba*), Russian knapweed (*Centaurea repens*), Purple loosestrife (*Lythrum salicaria*), and Salt Cedar (*Tamarix aphylla*, *T. chinensis*, *T. gallica*, *T. parviflora* and *T. ramosissima*).

The following weeds have been submitted by county weed and pest boards, and designated locally noxious by the South Dakota Weed and Pest Commission: Bull thistle (*Cirsium vulgare*), Absinth wormwood (*Artemisia absinthium*), Musk thistle (*Carduus nutans*), Plumeless thistle (*Carduus acanthoides*), Field Bindweed, Puncturevine (*Tribulus terrestris*), Scotch thistle (*Onopordum acanthium*), St. Johnswort (*Hypericum perforatum*), Spotted knapweed (*Centaurea maculosa*), Chicory (*Cichorium intybus*), Common Burdock (*Arctium minus*), Common mullein (*Verbascum thapsus*), Common tansy (*Tanacetum vulgare*), Poison Hemlock (*Conium maculatum*), Dalmatian toadflax (*Linaria dalmatica*), Yellow toadflax (*Linaria vulgaris*), Houndstongue (*Cynoglossum officinale*), Diffuse knapweed (*Centaurea diffusa*), Giant Knotweed (*Polygonum sachalinense*), and Phragmites.

The Division of Wildlife annually spends considerable time and money in its efforts to eradicate noxious weeds on Game Production Areas. By immediately identifying new noxious weed infestations, and implementing control measures as soon as possible, the Division of Wildlife has made noxious weed control efforts one of its top land management priorities. The most effective and efficient noxious weed control program utilizes all appropriate control options available. While some control practices are limited due to cost, inaccessibility or environmental restrictions, the Division of Wildlife has utilized both chemical and mechanical methods in successfully controlling noxious weed infestations. Biological control agents may also be used on areas where other control practices cannot be used.

Prevention is the most economical approach to noxious weed control, and prevention includes utilizing proper land management techniques to deter new infestations. To prevent infestations, the Division of Wildlife takes steps such as using certified weed free seed for herbaceous plantings, properly cleaning

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farming and field equipment, and intensive monitoring to detect new infestations. In cropland situations, annual tillage and cultivation will generally reduce or eliminate noxious weed infestations. In range and grassland situations, haying, grazing and approved burning are used in combination with herbicide applications to reduce and eliminate noxious weeds.

Herbicide application is the most effective method of noxious weed control available for Game Production Areas. Non-selective herbicides that affect all vegetation in the treated area are generally limited in their applications on Game Production Areas. Selective herbicides are used to control noxious weeds in a variety of situations including cropland, pasture, rangeland and other non-crop areas. Herbicides are especially useful in perennial weed control programs. Post-emergence herbicides are the most widely used type, and are applied either in the spring after weed growth has begun but prior to flowering, or in the fall when sufficient regrowth has occurred. Spot treatment or application of herbicides for noxious weed control is utilized almost exclusively on Game Production Areas. The necessity of utilizing non-selective or blanket application of herbicides is very limited, and when used is confined exclusively to farmed areas in crop production.

The Division of Wildlife's approach to herbicide application for noxious weed control on Game Production Areas is never taken lightly. Land management supervisors and staff are kept well informed of the latest technology and information regarding herbicide application methods, product effectiveness and the availability of new and improved products. All herbicide applications on Game Production Areas are in accordance with the recommendations for formulations, rates and application sites provided by the South Dakota Cooperative Extension Service at South Dakota State University and in accordance to product label recommendations and restrictions. Further, all Division of Wildlife employees and contract herbicide applicators are certified commercial applicators by the South Dakota Department of Agriculture.

Range and Grassland Rehabilitation – This item involves the use of haying, grazing or inter-seeding as a range and grassland management tool on Game Production Areas. These practices are used to improve overall range and grassland conditions, and to enhance cover for wildlife. Spring grazing is the most common rangeland rehabilitation practice, and is used to reduce introduced cool season grasses and promote the development of native grasses such as western wheatgrass, big bluestem, little bluestem and green needlegrass. Interseeding of native grasses and legumes is used in areas where past management has reduced the composition and diversity of native species.

This item also includes prescribed burning. This is a preferred management tool in areas where exotics and invasive species (e.g. Kentucky bluegrass, smooth brome grass) have replaced native species resulting in a monotypic stand. However, burning is a costly management practice that requires specialized training and equipment. All Division of Wildlife employees participating in prescribed burning receive at least the minimum required training and certification by the South Dakota Department of Agriculture, Forestry Division. Other considerations include potential liability and cost effectiveness. Additionally, in Region I prescribed burning is also used to control dense stands of ponderosa pine and promote the growth of a deciduous shrub and forb understory. All necessary environmental and cultural resource clearances are obtained prior to conducting prescribed burning.

Trees and Shrub Plantings – This item involves establishing new tree and shrub plantings on Game Production Areas. Generally speaking, prepared planting requires the ground to be fallowed for a minimum of one year prior to planting, and cultivated for three to six years after planting. The use of fabric mulch will eliminate the need for cultivation and may provide faster growth and higher rates of survival. First year plots are disced once or twice to prevent weed growth and permit an accumulation of moisture in the soil. After the trees are planted, they are kept weed free by cultivating with disc, tiller, mechanical hoe, fabric weed barrier and chemicals.

Tree and shrub plantings are from twelve to twenty rows wide, with shorter denser shrub species planted on the outside. As the planting progresses to the middle, larger species of trees are used. Species used are Hanson hedge rose, caragana, American plum, cottoneaster, red cedar and other species with the same class in the first two rows. Buffalo berry, bur oak and green ash are used as the next size class of trees. Hackberry, elm, cottonwood, and willow are the largest class of trees used in the center rows of

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the belt. Scalp planting consists of species such as eastern red cedar. Scalp plantings have been reduced in recent years because of the limited success of past plantings.

The planting of new trees and shrubs that involve compliance issues will be proposed as an amendment to this project. All necessary environmental and cultural resource clearances are obtained prior to conducting new developments associated with this activity.

Dugout/Dam Creations - This item involves constructing new dugouts, small dams and embankment ponds on Game Production Areas, including the placement of rip-rap, water control structures and overflow pipes. These projects are conducted in a manner to conform with standard engineering practices and according to applicable state laws. Due to the nature of these projects, and the need for heavy equipment and professional engineering and construction management, private contractors are most often utilized to complete these projects. The development of new dam and dugouts that involve compliance issues will be proposed as an amendment to this project. All necessary environmental and cultural resource clearances are obtained prior to conducting new developments associated with this activity.

Survey of Property Boundaries - This item involves surveying Game Production Area boundaries, including locating existing and setting new property boundary pins. Licensed surveyors are contracted to conduct boundary surveys with modern survey equipment, provide GPS locations of property boundary monuments and pins, and in a manner that avoids disturbance and destruction of wildlife habitat.

Timber Management - This item involves the management, control or removal of timber and/or undesirable tree and shrub species from Game Production Areas. Certain tree and shrub species can become invasive, diminishing the wildlife habitat value of a Game Production Area. By identifying areas where timber management can improve a Game Production Area's value to wildlife, Wildlife Division staff can implement proven management and control efforts such as chemical and mechanical methods. Wildlife Division staff perform some timber management activities, but most often private contractors are utilized due to the necessity for specialized equipment to complete these projects.

Nest Structures - This item involves the erection and annual maintenance of waterfowl nesting structures in wetlands on Game Production Areas in eastern South Dakota. Structures consist of large hay bales, culverts placed on end, elevated basket structures or wood duck houses. Annual maintenance of nesting structures includes replacement of hay bales, and nesting materials in culverts, baskets and wood duck boxes.

Project Administration - This item describes the time spent by Division of Wildlife staff in project planning, accomplishment reporting, voucher processing and other general administrative support for land management work activities. The work is primarily office related and administrative in nature, and does not occur in a manner that changes existing conditions where these activities are carried out.

Custodial Functions - This item describes time spent by Division of Wildlife staff carrying out activities on Game Production Areas, such as the inspection and evaluation of operation, maintenance and development activities, and other custodial functions include agricultural tenant and lease compliance checks. This work is administrative in nature and does not occur in a manner that changes existing conditions where these activities are carried out.

PROJECT WORK ITEMS SUMMARY

For the purposes of this plan, development work item activities are defined as:

1. Construction of a new capital improvement item.
2. Construction of modifications to existing structures or improvements where a new purpose or capacity is to be served.

For the purposes of this plan, operational work item activities are defined as:

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1. All work items on former development projects that do not involve new or additional capital improvements.
2. All work items associated with annual wildlife habitat management operations.

For the purposes of this plan, maintenance work item activities are defined as:

1. Construction of replacement items.
2. Repairs and renovations to deteriorated items so as to regain or retain the items original function, purpose and capacity.

Work Item	Development	Operations	Maintenance
Roads and Trails	Construct new public access and management roads and trails*	NA	Grade, gravel and mow existing public access and management roads and trails
Cattle Guards and Road Culverts	Install new cattle guards and culverts on existing public access and management roads and trails*	NA	Repair and replace existing cattle guards and culverts
Fences	Construct new boundary and interior fences on existing or newly acquired areas	NA	Repair and replace all or segments of existing boundary and interior fences
Public Use Facilities <ul style="list-style-type: none"> • Toilets • Parking lots • Boat ramps 	Construct or install new toilet facilities, parking lots or boat ramps existing or newly acquired areas*	NA	Repair and replace existing toilets and boat ramps; mow and gravel parking lots
Feeding and Watering Structures	NA	Prepare and operate wildlife depredation feeding areas; operate wildlife and stock watering areas	NA
Small Dam Maintenance	NA	NA	Repair and replace rip-rap, overflow pipes or water control structures on existing small dams
Post, sign and place boundary markers	Post, sign and mark boundaries on newly acquired areas	NA	Repair and replace existing GPA boundary signs and public use information signs
Herbaceous Plantings <ul style="list-style-type: none"> • DNC/Alfalfa • Legumes • Native grass • Cropped acres • Food plots • Small grains 	NA	Prepare sites and plant	NA
Vegetation Control	NA	Noxious weed control	NA
Range & Grassland <ul style="list-style-type: none"> • Mowing & haying • Controlled graze • Uncontrolled graze • Inter-seeded acres • Controlled burn 	NA	Haying operations Grazing operations Grazing operations Inter-seeding Prescribed burning*	NA

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Trees and Shrubs	New tree and shrub plantings and fabric application*	Preparing sites for tree plantings	Cultivating existing tree plantings
Dugout-Dam Creations	Construct small dams or dugouts for wildlife and livestock*	NA	NA
Survey Property Boundaries	Survey, locate and set property boundary pins	NA	NA
Timber Management	NA	Remove invasive woody species or marketable timber	NA
Nest Structures	Construct or install nest structures on existing or newly acquired areas	NA	Annual repair and replacement of existing nest structures
Project Administration	NA	Grant and program administration	NA
Custodial Functions	NA	Area inspection and evaluation	NA

*The items denoted by the asterisk are those that will be added by amendment.

PROJECT COST SUMMARY (2009 – 2013)

Region	Development	Operations	Maintenance	Total
I	\$ 28,000	\$ 1,670,451	\$ 305,000	\$ 2,003,451
II	391,482	3,204,525	394,330	3,990,337
III	153,680	3,268,123	879,725	4,301,528
IV	907,765	4,178,598	1,105,848	6,192,211
PIERRE ADMINISTRATIVE COSTS		250,000		250,000
DIRECT COSTS		\$ 1,480,927	\$ 2,684,903	\$ 16,737,527
INDIRECT COSTS				\$ 1,757,440
TOTAL PROJECT COSTS				\$ 18,494,967

Indirect costs will be charged to all eligible expenses at the rate currently in effect and as negotiated by the USDOL inspector general. That rate is currently 10.5 percent.

SCHEDULE OF WORK

January 1, 2009 through December 31, 2013.

RELATIONSHIP TO OTHER FEDERAL PROJECTS

This project is not related to any other Federal project.

HISTORICAL/CULTURAL RESOURCES

The land maintenance, operation and development activities proposed in this project renewal are covered in a Programmatic Agreement with the South Dakota State Historic Preservation Officer, South Dakota Department of Game, Fish and Parks, United States Fish and Wildlife Service and Advisory Council on Historic Preservation, last dated March 19, 2002.

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PRIME/UNIQUE FARMLANDS

The activities proposed in this grant may change the vegetation or cover types located on properties managed by our Department for wildlife production and recreation. Some farmland may, at times, be changed from crop production to native grass or tree production. These changes will not result in the conversion of these lands from agricultural purposes. They will result in changes in what the land is producing.

Since the activities proposed do not affect the conversion of farmlands to non-agricultural purposes, this project will not have any affect on prime or unique farmlands.

This project does not involve the acquisition of lands. Acquisitions will be proposed in separate grant proposals.

FLOODPLAINS/WETLANDS

The maintenance and operation activities proposed in this project will not have adverse impact on floodplains or wetlands.

Nesting structures in the form of hay bales, culverts, and/or elevated artificial structures will be placed in selected wetlands to enhance waterfowl nesting. The placement of these structures will not have an adverse impact on the wetlands. Additionally, the placement of nesting boxes for wood ducks on steel posts or trees in standing water will have no adverse impact on wetlands.

Bridge, road, trail and fence maintenance activities may at times be closely associated with wetland or floodplain areas. However, maintenance activities are normally limited to previously affected areas, and therefore in general do not have additional impacts to wetland areas. Additionally, maintenance work is usually done during dry periods, such as in the fall of the year to minimize runoff and erosion. Best management practices, including silt fencing, grading and revegetation practices are used to minimize potential affects on wetlands. In the event a maintenance activity may impact a wetland area, compliance and approval with all local, state and federal wetland laws and regulations will be obtained, and those activities will be proposed as amendments to this project.

Avoidance of wetland areas is preferred when developing new roads and trails, parking lots and other facilities. However, in development situations where impacts to wetlands are unavoidable, compliance with all local, state and federal wetland laws and regulations will be followed, including possible mitigation measures. All necessary 404 permits will be secured before any work takes place. New developments are not included in this proposal, and will be added by amendment to this project. ✓

Herbicide and pesticide use on Game Production Areas is in accordance with the recommendations for formulation, rate and application site provided by the South Dakota Cooperative Extension Service at South Dakota State University and in accordance to product label recommendations and restrictions. All Division of Wildlife employees and contract herbicide and pesticide applicators are certified commercial applicators by the South Dakota Department of Agriculture. The use of herbicides and pesticides on Game Production Areas, and specifically in wetland areas, is both limited and carefully monitored. As such, there is little or no adverse impact to wetlands anticipated by the use of herbicides or pesticides applied through this project.

THREATENED AND ENDANGERED SPECIES

Species considered: Bald eagle, whooping crane, Topeka shiner, Eskimo curlew, piping plover, interior least tern, American burying beetle, black-tailed prairie dog, gray wolf, pallid sturgeon, black-footed ferret, western prairie fringed orchid, lynx, scaleshell mussel, Dakota skipper and Ute ladies-tresses.

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Bald eagles are common transient visitors to the entire state during both spring and fall migrations, and are common winter residents along the Missouri River. They are especially associated with the open water areas below the Missouri River dams and the large flocks of wintering waterfowl where they feed on fish and waterfowl. They commonly roost in the large trees adjacent to the River. They are not known to nest on or adjacent to any of the wildlife management areas included in this project. Since this project does not include the alteration or removal of roost or nesting trees, this project will not have any impact on bald eagles.

Whooping cranes are also occasional transient visitors, especially the central portion. None of the management units included in this project have been identified as critical habitat for cranes nor are they adjacent to other critical areas, however, Game Production Area's may provide temporary roosting habitat for cranes during the migratory periods. Therefore, the activities proposed in this project statewide are not expected to have any impact on whooping cranes.

Interior least terns and piping plovers are common nesting residents on the sandbars below Gavins Point Dam on the Missouri River and are occasional nesters at other locations on the Missouri River. None of the activities proposed in this project would have any direct or indirect impact on these sandbars or the terns and plovers that frequent them.

Black-footed ferrets are generally associated with prairie dog towns in selected areas in western South Dakota. No Project lands are located in or adjacent to areas where ferrets have historically been sighted. However, that does not preclude black-footed ferrets from being located on one of our project lands. We do not expect any of the activities proposed in this project to have any impact on black-footed ferrets or black-tailed prairie dogs.

Management of black-tailed prairie dogs on Game Production Areas shall follow the South Dakota Black-tailed Prairie Dog Management and Conservation Plan (Cooper and Gabriel 2005). This plan may be found at <http://www.sdgifp.info/Wildlife/hunting/Prairiedogfinalplan.pdf>.

Cooper, J. and L. Gabriel. 2005. South Dakota black-tailed prairie dog conservation and management plan. South Dakota Department of Game, Fish and Parks and South Dakota Department of Agriculture. Pierre, SD. 68 pages.

The American burying beetle and the Dakota skipper are known to occur on project lands, and careful consideration is given to activities that will impact their potential habitats.

Scaleshell mussel, Pallid sturgeon, Topeka shiner, Eskimo curlew, gray wolf, lynx and western prairie fringed orchid are not known to exist on project lands.

If any endangered or threatened species should appear on or adjacent to a Game Production Area during development, operation or maintenance activities, all work will be stopped until potential impacts can be assessed, and mitigated if necessary.

ENVIRONMENTAL JUSTICE (EXECUTIVE ORDER 12898):

This project will have no environmental justice issues.

INVASIVE SPECIES (EXECUTIVE ORDER 13112):

This project involves land management activities that will not promote the introduction or spread of invasive species. In fact, the activities proposed in this project promote sound land management and vegetation practices that prevent noxious weeds from establishing and involve direct control of noxious weed infestations.

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ENVIRONMENTAL ASSESSMENT/NEPA COMPLIANCE

This project involves the operation, maintenance and management of existing facilities and properties. For this proposal, the only activities proposed have no site-specific compliance issues. The activities are routine, including necessary repair, replacements and improvements, to ensure that the area is functional and that it fulfills the purpose for which the area was acquired. The construction of new facilities or the addition of small structures (insofar as they are covered by categorical exclusion, such as fences or planting of vegetation) are also proposed in this amendment. Work not covered by categorical exclusion, such as new tree plantings, prescribed burns and any new roads, trails or other development structures, will be added by amendment.

In all cases, the activities proposed will result in little or no changes to the use and operation of these facilities and properties, will not result in any new soil disturbance, and therefore will have little or no negative environmental effects. Therefore, this project qualifies as a categorical exclusion from the NEPA process as described in the Department of the Interior Manual, Part 516, Chapter 8, Section 8.5, (B)1, 2, 3, 4 and 6, dated May 27, 2004.

The exceptions to the application of these categorical exclusions were considered by the Department of Game, Fish and Parks and were found to be not applicable to this project.

This proposal does not have significant adverse effects on public health or safety.

This proposal does not have significant adverse effects on such natural resources and unique geographic characteristics as historic or cultural resources; park, recreation or refuge lands; wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands (Executive Order 11990); floodplains (Executive Order 11988); national monuments; migratory birds (Executive Order 13186); and other ecologically significant or critical areas under Federal ownership or jurisdiction.

This proposal does not have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources [NEPA Section 102(2)(E)].

This proposal does not have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks.

This proposal does not have a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects.

This proposal does not have a direct relationship to other actions with individually insignificant but cumulatively significant environmental effects.

This proposal does not have significant adverse effects on properties listed or eligible for listing on the National Register of Historic Places as determined by either the bureau or office, the State Historic Preservation Officer, the Tribal Historic Preservation Officer, the Advisory Council on Historic Preservation, or a consulting party under 36 CFR 800.

This proposal does not have significant adverse effects on species listed, or proposed to be listed, on the List of Endangered or Threatened Species, or have significant adverse effects on designated Critical Habitat for these species.

This proposal does not have the possibility of violating a Federal law, or a State, local, or tribal law or requirement imposed for the protection of the environment.

This proposal does not have the possibility for a disproportionately high and adverse effect on low income or minority populations (Executive Order 12898).

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This proposal does not have the possibility to limit access to and ceremonial use of Indian sacred sites on Federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites (Executive Order 13007).

This proposal does not have the possibility to significantly contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area or actions that may promote the introduction, growth, or expansion of the range of such species (Federal Noxious Weed Control Act and Executive Order 13112).

LAND CONTROL

All of the proposed development, operation and maintenance activities included in this project are located on lands owned by the Department of Game, Fish and Parks, or under a long-term wildlife management license from a city, state or federal entity/agency. All of the lands acquired after 1970 were purchased in accordance with P.L. 91-646. Copies of all deeds and leases for each of the management areas are on file with the Division of Wildlife in Pierre.

PROGRAM INCOME

Certain management activities described in this project generate program income. Estimated annual income from these various sources is as follows:

USDA Farm Program Payments	\$ 25,000.00
Timber Sales	\$ 90,000.00
Lease fees for haying and grazing on Game Production Areas	\$ 235,000.00
Lease fees for placement of beehives on Game Production Areas	\$ 700.00
Total estimated annual program income	\$ 350,700.00

Occasionally, timber produced on Game Production Areas purchased with federal aid funds is thinned to produce enhanced wildlife habitat for wildlife. Merchantable timber, usually post and pole grade, is harvested and sold as a by-product of this management technique. Revenues generated from these operations are treated as program income, as per Policy Clarification Statement FWS/AMBS/FA/00691, dated June 6, 2002.

The actual income generated from leases varies annually depending on management needs. The program income generated from this project is strictly a by-product of desired management activities and is not the result of any planned program to produce revenue. The annual anticipated program income from each segment will be accounted for using the deductive alternative. Prior to deduction from annual program outlays, the receipts will be audited and certified by the Fiscal Officer of the Department of Game, Fish and Parks.

DEFINITIONS

Operation - Land management procedures (work items) that can be either developmental or maintainable and usually accomplished in the face of a possible emergency, or to facilitate the overall program goals.

Development - Physical change, cultural or otherwise, put into place for the first time by crewmen, or tenants, organized sportsmen, or by trade or donation.

Maintenance - The necessary care required to assure the preservation or welfare of wildlife assets, natural or man-made, including replacement.

SOUTH DAKOTA DEPARTMENT OF GAME, FISH AND PARKS



**Division of Wildlife
Federal Aid**



DATE: December 19, 2008

TO: D. Backlund

FROM: N. Kohlenberg *NK*

Re: Statewide Land Management and Development

Doug:

In compliance with the requirements of NEPA, Fish and Wildlife Coordination Act and Section 7 of the Endangered Species Act, I am providing you with a copy of the new 5-Year Statewide Land Management and Development plan. The proposed funding source for this plan is the Pittman-Robertson Wildlife Restoration funds, as facilitated by the USFWS. Your review and consideration of potential effects upon federally listed threatened and endangered species is appreciated.

Statewide Land Management & Development grant -

Management plans for land management activities on state owned and management Game Production Areas have been completed for the new 5-Year plan. The plan starts January 1, 2009, and continues through December 31, 2013. The management plan lists activities planned by the Regions.

We are aware that Dakota Skippers may be present on some of the GPAs located in the NE part of the state and that American Burying Beetles may be present on some of the GPAs located in the South Central part of the state. I am attaching a copy of the recommendations for the conservation of these species that have been used by our Regional staff.

Project Duration:

January 1, 2009 to December 31, 2013

Are there **any additional federally listed endangered species** known to occur either permanently or temporarily in the immediate vicinity of these projects? If so, could you offer some direction as to how we might proceed to minimize and avoid adverse affect or significant impact to those species.

Will any of the proposed activities have any effect on federally listed threatened or endangered species?

Are the attached recommendations adequate for the continued conservation of the Dakota Skipper and American Burying Beetle on lands being managed under the State Land Management grant?

Thanks Doug!

"No effect" This project(s) will have "no effect" on threatened, endangered, or candidate species as it involves localized disturbance. Based on current information, this project will have no effect on state listed or federally listed threatened, endangered, or candidate species and will have no significant impact on fish or wildlife resources. If threatened, endangered, or candidate species are encountered during construction, the Department of Game Fish and Parks shall initiate consultations with the U.S. Fish and Wildlife Services to determine appropriate steps to avoid any effects to these species, including cessation of construction.

Signature



12/22/008

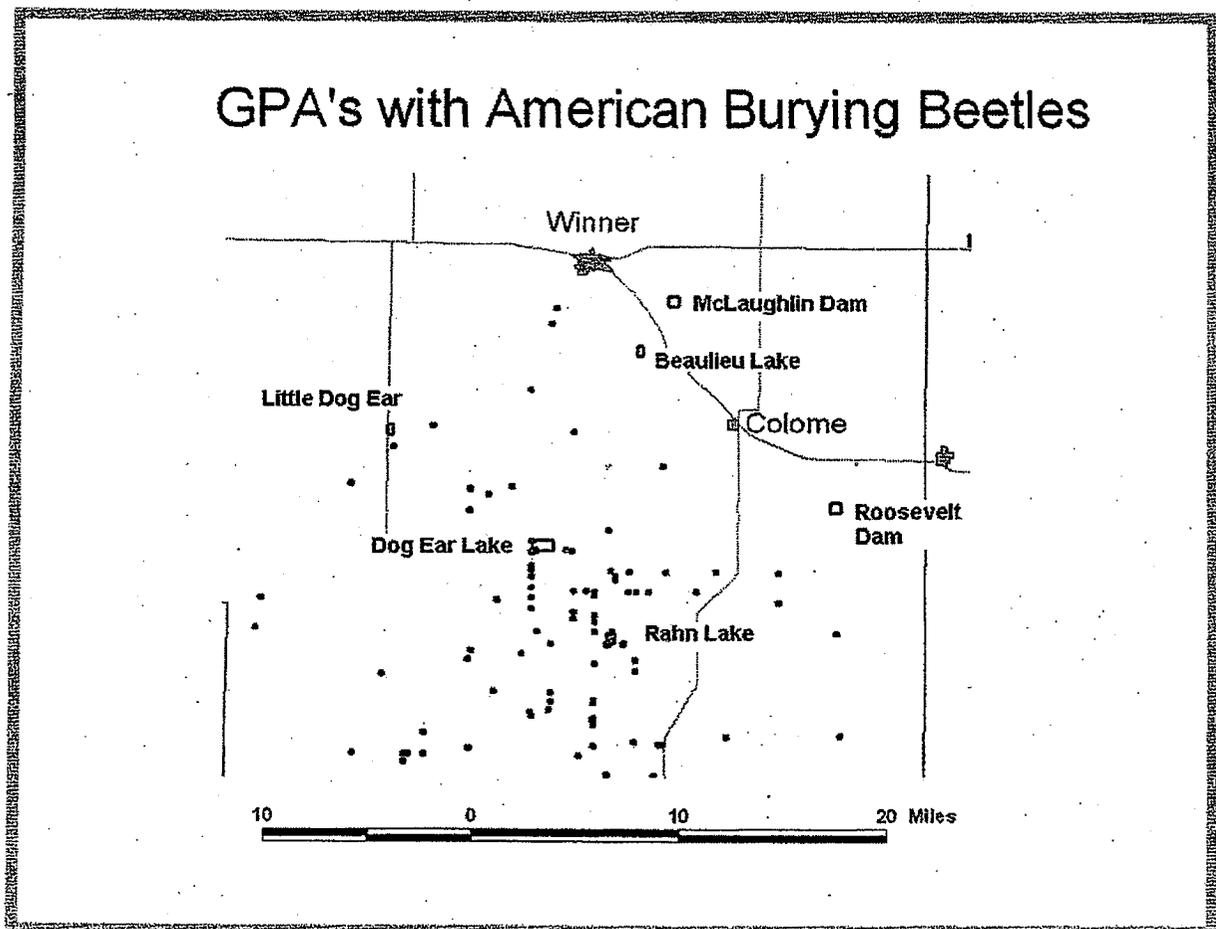
Recommendations for American Burying Beetle Conservation on South Dakota Game Fish and Parks GPA's in Tripp County, South Dakota

29 January, 2004

Prepared by Doug Backlund, Wildlife Biologist
South Dakota Natural Heritage Program

The American burying beetle (ABB), *Nicrophorus americanus*, was listed as a federally endangered species in 1989. In 1995 a large population of American burying beetles was discovered in southwest Gregory and southern Tripp counties in south central South Dakota (Backlund and Marrone, 1997). We have monitored this population annually (Backlund and Marrone, 1998; 1999; 2000; 2001; 2002; 2003) since 1998. A few ABB have been taken in extreme eastern Todd County. The core population occurs in southern Tripp County, south of Highway 18 (Figure 1). Game Production Areas (GPA) with known or potential ABB populations are located in this area.

Figure 1. Capture sites of American burying beetles from 1995-2003 (red circles) and locations of GPA's.



There is an estimated 900 square miles of potential habitat with about 500 square miles of habitat that supports a core population. Within this area there are three GPA's that are known to have ABB present: Little Dog Ear Lake, Dog Ear Lake, and Rahn Lake. ABB have not been detected at Beaulieu Lake, McLaughlin Dam, or Roosevelt Dam.

The American burying beetle is a nocturnal carrion beetle, in the family Silphidae. During our monitoring we have detected fourteen species of silphid beetles in the ABB habitat area. Some of these species are extremely abundant. ABB typically represents only one to three percent of the total number of silphids taken. While the abundance of ABB is relatively low in comparison to some silphid species, there is obviously a large population present over a large landscape. During saturation trapping at Rahn Lake we have taken as many as 10 ABB in two nights, with only one ABB recaptured (Backlund and Marrone, 2000). This is a small area of about 120 acres. Assuming a low estimate of 9 ABB per square mile and 500 square miles of high quality habitat, a conservative estimate of population size would be at least 4500 individuals. Problems associated with population estimates of ABB are discussed in Peyton, 2003. Peyton estimated a population of >3000 ABB in an area of approximately 4500 km², or about 1737 mi², using a Sequential Bayes Algorithm. Peyton conducted this research in May, June and July, when the adult population should be at the low of the year, as only the breeding adults can be detected. Our sampling occurs in August, when the population is at the annual high, containing both the breeding adults and teneral adults.

American burying beetles become active in early summer and begin searching for carrion for a food source for reproduction. Optimal food sources are carcasses of vertebrate animals weighing from 80-200 grams, but the beetles can utilize smaller or larger carcasses (Holloway and Schnell, 1997). Carcass weight is important: too small and there isn't enough food for the larvae, too large and the beetles cannot maneuver and bury the food source. The adults bury the food source and prepare it by cleaning hair, feathers, or fly eggs and coating the carrion with anal and oral secretions that contain preservative chemicals. Symbiotic mites carried by the adults feed on fly eggs thereby assisting the beetles in conserving the food supply for their offspring. Eggs are laid in the underground chamber. The female and sometimes the male remain in the chamber to protect and care for the eggs and larvae. The emerging larvae feed on the food source, pupate in the soil in the brood chamber and emerge as adults in about 48-60 days (U.S FWS, 1991). In South Dakota, teneral adults emerge in late July and early August. Adult ABB move randomly through the habitat while searching for carrion sources. Movements averaged 1.23 km per night in a study conducted in Oklahoma (Creighton and Schnell, 1998).

Little is known about the habits of ABB during the non-breeding season. It is assumed that the beetles go underground during the daylight hours and emerge at night to search for carrion. Winter is most likely spent in underground chambers. ABB adult live only one year. Emerging tenerals in the late summer are the breeding stock for the following summer.

Recommendations for Game Fish and Parks Land Management (Little Dog Ear Lake, Dog Ear Lake, and Rahn Lake)

The goal of managing land for game production is beneficial to the American burying beetle. An abundance of game birds such as turkeys, pheasants, grouse, and ducks provides a good source of vulnerable young birds in the early summer when ABB are searching for food sources for

reproduction. At some stage of growth, young game birds are within the optimal size range for ABB reproduction. High numbers of young birds naturally increases the number of dead young birds. In addition, the habitats on GPA's usually have denser vegetation and cover than the adjacent private land. GPA's provide better habitat for other vertebrate species that may provide carrion sources. Small mammal biomass has been significantly positively correlated with abundance of ABB (Holloway and Schnell, 1997). Our monitoring has detected ABB's at or in the vicinity of the three GPA's listed above in every year we have sampled there.

Spraying of insecticides would obviously be detrimental to ABB. This should be avoided. There is always a slight possibility of destroying a brood chamber or causing the accidental death of ABB when disturbing ground. Ground disturbance should be restricted to areas that are already annually disturbed, such as food plots. If significant new ground disturbance is necessary, the draft baiting away protocol or the draft trapping and relocation protocol developed by the U. S. Fish and Wildlife Service can be used to minimize the possibility of accidental mortality.

Lit. Cited

Backlund, D.C. and G.M. Marrone. 1997. New Records of the Endangered American Burying Beetle, *Nicrophorus americanus* Olivier, (Coleoptera: Silphidae) in South Dakota. The Coleopterists Bulletin 51(1): 53-58.

Backlund, D.C. and G.M. Marrone. 1998. Monitoring Surveys for the American Burying Beetle (*Nicrophorus americanus*) in Gregory, Tripp, and Todd Counties, South Dakota. Unpublished SD GFP Report.

Backlund, D.C. and G.M. Marrone. 1999. Monitoring Surveys for the American Burying Beetle (*Nicrophorus americanus*) in Tripp and Todd Counties, South Dakota and Keya Paha and Cherry Counties, Nebraska. Unpublished SD GFP Report.

Backlund, D.C. and G.M. Marrone. 2000. Monitoring Surveys for the American Burying Beetle (*Nicrophorus americanus*) in Tripp County, South Dakota. Unpublished SD GFP Report.

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Creighton, J. C. and G. D. Schnell. 1998. Short-term Movement Patterns of the Endangered American Burying Beetle *Nicrophorus americanus*. Biological Conservation 86:281-287.

Holloway, A.K. and G.D. Schnell. 1997. Relationship Between Numbers of the Endangered American Burying Beetle *Nicrophorus americanus* Olivier (Coleoptera: Silphidae) and Available Food Sources. *Biological Conservation* 81: 145-152.

Peyton, M. M. 2003. Range and Population Size of the American Burying Beetle (Coleoptera: Silphidae) in the Dissected Hills of South-central Nebraska. *Great Plains Research* 13(Spring 2003): 127-138.

U. S. Fish and Wildlife Service. 1991. American Burying Beetle (*Nicrophorus americanus*) Recovery Plan. Newton Corner, MA. 80 pp.

Dakota skipper management on Game Production Areas in northeast South Dakota

February 5, 2004

Prepared by Paul Coughlin

Occurrence

The Dakota skipper has been documented at 11 Game Production Areas in northeast South Dakota (South Dakota Natural Heritage Database 18 November 2003, Skadsen 2003). The areas are:

South Waubay Lake GPA – Day County
Bitter Lake GPA – Day County
Goose Lake GPA – Day County
Sundahl GPA – Day County
Crystal Springs GPA – Deuel County
Summit Lake GPA – Grant County
Hayse Slough GPA – Hamlin County
Black Slough GPA – Marshall County
Rock Crandall GPA – Marshall County
Roy West GPA – Marshall County
One-Road Lake GPA in Roberts County

Habitat Management Practices

In general, habitat management on Game Production Areas with documented Dakota skipper occurrences does not differ significantly from other Game Production Areas. Fall haying, prescribed burning and managed grazing are all management practices implemented periodically on Game Production Areas to improve the diversity and condition of existing native grasslands. However, on areas with documented Dakota skipper occurrences, proper planning for implementing these management practices is essential in avoiding negative impacts to this species.

The following habitat management guidelines for lessening negative impacts to Dakota skippers and their habitats were developed based on recommendations from Skadsen (2003). And while these management prescriptions may prove beneficial for most grassland situations, both true native prairie and re-established native grasslands, for purposes of Dakota skipper impact avoidance, the practice guidelines are intended specifically for true native prairie systems.

Grazing: Skadsen recommends periods (at 3-5 year intervals) of light to moderate grazing of dry-mesic native prairie in April to May prior to growth of warm season grasses and forbes. This regime serves to protect and promote warm season vegetation species that provide nectar sources for adults, vegetation for egg laying females and larval food sources. True native prairie sites located on Game Productions Areas, when scheduled for grazing treatment, are grazed in a manner consistent with that suggested by Skadsen. While this type of grazing regime is

suggested to be beneficial to Dakota skipper populations, the primary purpose for utilizing this grazing schedule is to improve the overall vigor and quality of existing true prairie on Game Production Areas.

Haying: Skadsen reports that fall hayed native prairie is known to contain the highest density of Dakota skippers. In order to protect adult food sources and prevent the removal of eggs, it is recommended that native prairie with known Dakota skipper populations be hayed only after mid August and in a manner that leaves 20 cm of stubble height. Further, haying should be limited to approximately 50% of the entire tract. True native prairie sites located on Game Production Areas, when scheduled for haying treatment, are hayed in a manner consistent with that suggested here. And while this manner of haying is beneficial to Dakota skipper populations, the primary purpose for utilizing this haying schedule on Game Production Areas is to improve the overall vigor and quality of existing true native prairie.

Burning: Research has shown that Dakota skipper populations may decline at regularly burned native prairie sites. On sites with known populations, Skadsen suggests burning be conducted on greater than 5 year intervals, and in a manner that leaves 50-75% of adjacent native prairie unburned. True native prairie sites on Game Production Areas scheduled for burning treatment are burned in a manner consistent with that suggested by Skadsen. Recognizing also that timing of burning operations and intensity of the burn are critical to larvae survival, burning operations on Game Production Areas is conducted only in early spring. While this type of burning regime is beneficial to Dakota skipper survival, the primary purpose for utilizing burning is to improve the overall vigor and quality of existing true prairie on Game Production Areas.

Weed Control: Weed control on Game Production Areas is primarily conducted through spot control methods, and always in accordance with label and extension service recommendations. Skadsen discourages broadcast herbicide application so as to avoid non-target plant species, as well as taking steps to ensure proper identification of target noxious weed species. Broadcast herbicide application is not utilized on true native prairie tracts on Game Production Areas. Additionally, all herbicide applicators utilized by the Division of Wildlife are Certified Applicators by SD Department of Agriculture.

Citations

Skadsen, Dennis R. 2003. Dakota Skipper Population Survey for CCAA Development in the State of South Dakota. South Dakota Department of Game, Fish & Parks, Wildlife Division Report 2003-20.

South Dakota Natural Heritage Database. 18 November 2003. Unpublished results of database search.

REGION ONE

FIVE YEAR LAND MANAGEMENT PLAN

January 1, 2009 to December 31, 2013

Project W-81-D
(Land Management and Development)

Mike Kintigh
Regional Supervisor
Rapid City, South Dakota

Dennis Mann
Regional Habitat Program Manager
Rapid City, South Dakota

January 2009

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REGION I NARRATIVE

LOCATION

Region I is located in the western 1/3 of South Dakota, and is comprised of 13 counties: Bennett, Butte, Custer, Fall River, Haakon, Harding, Jackson, Lawrence, Meade, Pennington, Perkins, Shannon and Ziebach.

DEMOGRAPHIC

Region I is approximately 27,000 mi² in size or about 36% of the State's land area. Livestock grazing and dryland farming are predominate land uses in most of Region I. A majority of the state's forest resources are located within the Black Hills and Custer National Forests, located entirely within Region I. Additionally the Buffalo Gap and Grand River National Grasslands also lie entirely within Region I.

Population density ranges from a low of 0.5 people per square mile in Harding County to a high of 31.9 people per square mile in Pennington County, with the highest density of people located in or near the Black Hills. Rapid City, the second largest city in the state, has a population of 60,000 and Spearfish, the second largest city in Region I, has a population of 10,000. Other urban areas that have a population over 4,000 are Belle Fourche, Ellsworth, Hot Springs and Sturgis.

Transportation in Region I is mostly highway based with Interstate 90 bisecting the region. State highways 14, 16, 18, 20, 34, 40, 63, 73, 85, 212 and 385 provide excellent access to all parts of the region. County highways, township roads and Forest Service roads provide further access in rural areas of the Region. Two rail lines also serve this Region.

TOPOGRAPHIC

The Black Hills are located in the southwestern portion of the Region. The Black Hills are a mountainous, heavily forested area with interspersed meadows and canyons. Harney Peak lies 7,242 feet above sea level and is the highest point in the state.

The remainder of the Region is characterized by rolling short to midgrass prairie bisected by riparian zones associated with the Bad, Belle Fourche, Cheyenne, Grand, Moreau and White Rivers. These rivers flow from west to east and drain into the Missouri River.

Man made reservoirs and ponds provide the majority of surface water in the Region. Angostura, Belle Fourche and Shadehill Reservoirs are the largest and are controlled by the Bureau of Reclamation. These reservoirs are managed for irrigation purposes, but Game, Fish and Parks manages portions of the adjacent land under long term agreement. Many public and private small stock ponds also dot the prairie areas providing wildlife habitat and recreation areas.

SITUATIONS CONCERNING DEVELOPMENT

Division of Wildlife lands in Region I include lands leased from federal agencies and lands owned by the Game, Fish & Parks. The opportunities are numerous for wildlife habitat management and development on the 40 Game Production and Water Access Areas covering 32,312 acres that the Division of Wildlife manages in Region I. However, when compared to the approximately 18 million acres in Region I, the impact of this management is nonetheless small. Regardless, management of these lands by the Division of Wildlife still provides a significant wildlife habitat component for numerous species and offers unlimited recreational opportunities for numerous users.

**South Dakota
W-81-D, Amendment #55**

REGION 1 GAME PRODUCTION AND WATER ACCESS AREAS

<u>GPA/WAA Name</u>	<u>County</u>	<u>Classification</u>	<u>Acres</u>
Todd Gpa	Bennett	Game Production Area	2,740.19
Little White River	Bennett	Game Production Area	160.08
Belle Fourche Dam Mitigation	Butte	Game Production Area	162.03
Newell Lake	Butte	GPA / WA	797.65
Spring Valley	Custer	Game Production Area	770.50
Pleasant Valley Elk Area	Custer	Game Production Area	500.50
Sherbarth	Fall River	Game Production Area	659.81
Oral	Fall River	Game Production Area	641.99
Battle Mountain	Fall River	Game Production Area	3,072.71
Buffalo Gap	Fall River	Game Production Area	160.78
Friendshuh GPA	Fall River	Game Production Area	4,634.33
Romey	Fall River	Game Production Area	924.81
Williams Dam	Fall River	GPA / WA	43.04
Angostora Reservoir	Fall River	Lease Area	9.29
Angostora Reservoir	Fall River	Lease Area	1,418.89
Billsburg	Haakon	Game Production Area	80.31
Cheyenne	Haakon	Game Production Area	914.78
Bad River Waa	Haakon	Water Access Area	9.33
Mallula	Harding	Game Production Area	902.55
Gardner Lake	Harding	GPA / WA	320.94
Beilage Hepler	Lawrence	Game Production Area	990.97
Coxes-mirror Lakes	Lawrence	Game Production Area	1,037.17
Harrison-badger-trucano	Lawrence	Game Production Area	2,154.50
Iron Creek Lake	Lawrence	Water Access Area	35.87
Whitewood Creek	Lawrence	Water Access Area	144.06
Rouseau Lake	Lawrence	Water Access Area	41.33
Marcotte	Meade	Game Production Area	562.46
Opal Lake	Meade	Game Production Area	200.36
Curlew Lake	Meade	Game Production Area	440.26
Tisdale Lake	Meade	Game Production Area	159.18
Spring Creek	Pennington	Game Production Area	107.49
Sunday Gulch	Pennington	Game Production Area	82.84
Wicksville Dam	Pennington	Lease Area	38.33
New Underwood Dam	Pennington	Water Access Area	156.48
New Wall	Pennington	Water Access Area	66.73
Shadehill	Perkins	Game Production Area	6,187.61
Sorum Dam	Perkins	Game Production Area	317.06
Lemmon Lake	Perkins	Water Access Area	280.81
Owens Lake	Perkins	Water Access Area	277.28
Vobejda Dam	Perkins	Water Access Area	106.46
		Total	32,311.76

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**REGION TWO
FIVE YEAR LAND MANAGEMENT PLAN**

January 1, 2009 to December 31, 2013

Project W-81-D
(Land Management and Development)

Cliff Stone
Regional Supervisor
Chamberlain, South Dakota

Jack Freidel
Regional Habitat Program Manager
Chamberlain, South Dakota

Dan McCormick
Regional Habitat Program Manager
Pierre, South Dakota

January 2009

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REGION II NARRATIVE

LOCATION

Region II is located in central South Dakota and is comprised of 20 counties: Corson, Campbell, Dewey, Walworth, Potter, Sully, Hughes, Hyde, Hand, Jones, Mellette, Stanley, Lyman, Buffalo, Brule, Todd, Tripp, Gregory, Douglas, and Charles Mix.

DEMOGRAPHIC

Region II is approximately 23,000 mi² in size or about 30% of the State's land area. Livestock grazing and farming are the predominant land uses in Region II. Population density range from a low of 1.2 people per square mile in Jones County to a high of 22.2 people per square mile in Hughes County. Distribution of people throughout the region is fairly even with the northern portion being the least densely populated. Only Pierre, the State's Capitol, has a population in excess of 5,000 people at approximately 13,000. Other urban areas with a population in excess of 2,000 people are Winner, Mobridge and Chamberlain.

Transportation in the region is primarily highway based. Two major rail companies serve the region. Interstate, State and County highways provide access to all parts of the region. Township roads provide further access in rural areas. Air transportation is provided in and out of Pierre only.

TOPOGRAPHIC

The Missouri River is the primary landscape major element in Region II, and divides the region in east and west halves. In general, the area of Region II located west of the Missouri River consists primarily of cattle ranches and wheat farms. The largest concentration of agricultural cropland in Region II is located east of the Missouri River. The Missouri River forms a portion of the border on 15 of the 20 counties in the region, with all of the land in Region II draining to the Missouri River. There are seven major rivers that empty into the Missouri River in Region II; the Bad, Grand, Moreau, Cheyenne, White, Little White and Keya Paha.

The area west of the Missouri River is well drained and contains few natural lakes and marshes. The eastern portion of the Region II is topographically flatter and contains several natural lakes, Lake Andes in Charles Mix County being the largest at 4,016 surface acres. Others natural lakes with surface areas greater than 2,000 acres include Red Lake in Brule County and Swan Lake in Walworth County.

Three major dams on the Missouri River form large reservoirs on the Missouri River. Lake Oahe, formed by the Oahe Dam near Pierre, is the largest with 375,000 surface acres. Lake Oahe is 230 miles long and 210 feet deep. Lake Sharpe, formed by the Big Bend Dam near Fort Thompson, is 80 miles long and 80 feet deep. Lake Francis Case, formed by the Fort Randall Dam near Pickstown, is 107 miles long and 140 feet deep.

SITUATIONS CONCERNING DEVELOPMENT

Division of Wildlife lands in Region II include lands held in trust (meandered and public waters), lands owned by Game, Fish & Parks and lands leased from state and federal agencies. The opportunities are numerous for wildlife habitat management and development on the 153 Game Production and Water Access Areas covering 119,624 acres that the Division of Wildlife manages in Region II. Game Production Areas located adjacent to private lands, where economic pressures cause intensive farming and over utilization of grassland, provide a significant wildlife habitat component for numerous species and offer unlimited recreational opportunities.

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**South Dakota
W-81-D, Amendment #55**

REGION 2 GAME PRODUCTION AND WATER ACCESS AREAS

GPA/WAA Name	County	Classification	Acres
Boyer	Brule	Game Production Area	2,023.54
Burning Brule	Brule	Game Production Area	892.71
Chain Lake (holoubek)	Brule	Game Production Area	915.34
Chamberlain	Brule	Game Production Area	411.29
Hoover	Brule	Game Production Area	839.62
Kimball	Brule	Game Production Area	43.81
Lake Sixteen	Brule	Game Production Area	67.63
Red Lake	Brule	Game Production Area	62.29
Brule Bottom	Brule	Game Production Area	2,135.37
Elm Creek	Brule	Game Production Area	1,216.99
Jorgensen	Brule	Refuge Area	104.06
Red Lake Waa	Brule	Water Access Area	1.86
Pease GPA	Buffalo	Game Production Area	291.31
American Game Association	Campbell	Game Production Area	476.65
Salt Lake	Campbell	Game Production Area	1,001.40
Vander Vorste Bay	Campbell	Game Production Area	828.44
Pocasse	Campbell	Game Production Area	637.88
Vander Laan Bay	Campbell	Game Production Area	681.26
Hanson	Campbell	Game Production Area	1,095.06
Rorgo Bay	Campbell	Game Production Area	873.27
Sand Lake	Campbell	Refuge Area	162.55
Bovee Lake	Charles Mix	Game Production Area	321.99
Center Platte	Charles Mix	Game Production Area	243.14
Center Charles Mix	Charles Mix	Game Production Area	1,122.84
Gray Area	Charles Mix	Game Production Area	2,245.88
Lake George	Charles Mix	Game Production Area	78.55
North Wheeler	Charles Mix	Game Production Area	1,251.91
Paulson	Charles Mix	Game Production Area	1,636.94
Red Lake	Charles Mix	Game Production Area	849.43
Turgeon	Charles Mix	Game Production Area	1,089.22
West Platte	Charles Mix	Game Production Area	834.20
Pickstown	Charles Mix	Game Production Area	597.61
Academy Lake	Charles Mix	Game Production Area	76.92
Williamson	Charles Mix	Game Production Area	38.29
White Swan	Charles Mix	Game Production Area	1,762.26
Lake Andes East Waa	Charles Mix	Water Access Area	5.93
Dante Lake	Charles Mix	GPA / WA	79.52
Lake Andes Units	Charles Mix	GPA / WA	55.13
C. C. Lee	Corson	Game Production Area	316.30
Pudwell Dam Waa	Corson	Water Access Area	3.34
Mcintosh	Corson	Water Access Area	1.77
Firesteel Dam	Dewey	Game Production Area	79.98
Isabel Lake	Dewey	Game Production Area	639.39
Little Moreau	Dewey	Game Production Area	2,973.17
Buryanek	Gregory	Game Production Area	5,572.88
Dixon Dam	Gregory	Game Production Area	308.02
Landing Creek	Gregory	Game Production Area	2,462.43
Southern Gregory	Gregory	Game Production Area	1,255.12
Scalp Creek	Gregory	Game Production Area	1,466.75
Whetstone	Gregory	Game Production Area	1,393.23
Central Gregory	Gregory	Game Production Area	708.89
Fairfax Lake	Gregory	Water Access Area	52.78
Herrick Lake	Gregory	GPA / WA	158.06

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Collins	Hand	Game Production Area	949.78
Curtis	Hand	Game Production Area	480.44
Dakota	Hand	Game Production Area	158.75
Hawkins	Hand	Game Production Area	1,278.91
Lake Louise	Hand	Game Production Area	988.42
West Pearl	Hand	Game Production Area	155.85
East Pearl	Hand	Game Production Area	80.45
Reinhardt	Hand	Game Production Area	157.20
Spring Lake	Hand	Game Production Area	203.92
Wall Lake	Hand	Game Production Area	80.01
Lechtenberg	Hand	Game Production Area	319.88
Rosehill	Hand	Water Access Area	19.91
Jones Lake	Hand	GPA / WA	122.44
Arikara	Hughes	Game Production Area	1,104.80
Cowan	Hughes	Game Production Area	228.23
North Big Bend	Hughes	Game Production Area	160.70
Woodruff Lake Area	Hughes	Game Production Area	129.44
Peoria Flats	Hughes	Game Production Area	1,454.32
Valley 7	Hughes	Game Production Area	513.50
Gutenkauf	Hughes	Game Production Area	408.40
West Big Bend	Hughes	Game Production Area	331.94
Canning 22	Hughes	Game Production Area	23.81
Dry Run 27	Hughes	Game Production Area	33.24
Dry Run 20	Hughes	Game Production Area	47.64
Buckeye 10	Hughes	Game Production Area	64.53
DeGrey	Hughes	Game Production Area	548.40
West Degrey	Hughes	Game Production Area	60.74
Sand Creek	Hughes	Game Production Area	186.30
Rousseau	Hughes	Game Production Area	402.04
East Shore	Hughes	Lease Area	385.00
Rezac Lake	Hyde	Game Production Area	570.70
Rice Lake	Hyde	Game Production Area	875.48
Highmore GPA	Hyde	Game Production Area	164.90
Chapelle	Hyde	Water Access Area	192.95
Buxcel GPA	Jones	Game Production Area	620.66
Brakke	Lyman	Game Production Area	207.78
Carpenter	Lyman	Game Production Area	1,916.86
Fate Dam	Lyman	Game Production Area	321.58
Lindley	Lyman	Game Production Area	1,547.72
Neugebauer	Lyman	Game Production Area	1,747.76
Kiowa	Lyman	Game Production Area	2,454.91
Byre Bottom	Lyman	Game Production Area	632.90
Reis Bottom	Lyman	Game Production Area	432.64
Oacoma	Lyman	Game Production Area	195.17
Bull Creek	Lyman	Game Production Area	917.20
Iona	Lyman	Game Production Area	2,116.88
Green Lake	Potter	Game Production Area	40.17
Siebrasse Area (dot)	Potter	Game Production Area	1,725.87
Dodge Draw	Potter	Game Production Area	939.24
Whitlocks Bay	Potter	Game Production Area	1,292.15
Forest City	Potter	Lease Area	925.76
Potts Dam	Potter	Water Access Area	350.98
Antelope Creek	Stanley	Game Production Area	599.89
Ft. George	Stanley	Game Production Area	177.49
Schomer Draw	Stanley	Game Production Area	674.61
Chantier Creek	Stanley	Game Production Area	5,111.44

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Brush Creek	Stanley	Game Production Area	6,006.99
Minneconjou	Stanley	Game Production Area	3,885.52
West Tailrace	Stanley	Lease Area	1,194.00
Hayes Lake	Stanley	GPA / WA	73.00
Cottonwood Lake	Sully	Game Production Area	1,053.67
Hofer	Sully	Game Production Area	97.81
Onida	Sully	Game Production Area	80.36
Stone Lake	Sully	Game Production Area	1,112.37
Sutton	Sully	Game Production Area	2,702.99
Lambrecht	Sully	Game Production Area	153.95
Medicine Knoll Creek	Sully	Game Production Area	3,750.92
Koenig Area	Sully	Game Production Area	647.09
Lake 36	Sully	Game Production Area	158.87
Lake 17	Sully	Game Production Area	170.92
Lake 2	Sully	Game Production Area	159.03
Elk 6	Sully	Game Production Area	322.87
Pleasant 8	Sully	Game Production Area	160.00
Pleasant 9	Sully	Game Production Area	67.00
Little Bend	Sully	Game Production Area	5,493.24
Mail Shack	Sully	Game Production Area	1,175.19
Ft. Sully	Sully	Game Production Area	722.87
Okobojo Creek	Sully	Game Production Area	1,263.41
Spring Creek	Sully	Game Production Area	196.19
Sully Lake	Sully	Water Access Area	5.25
Roosevelt Lake	Tripp	Game Production Area	156.59
Covey Dam	Tripp	Game Production Area	80.94
Little Dog Ear Lake	Tripp	Game Production Area	77.13
Mclaughlin	Tripp	Game Production Area	158.63
Rahn Lake	Tripp	Game Production Area	119.32
Brown	Tripp	Game Production Area	156.89
King Dam	Tripp	Game Production Area	158.73
Ideal Wetland GPA	Tripp	Lease Area	228.18
Dog Ear Lake	Tripp	GPA / WA	315.34
Beaulieu Lake	Tripp	GPA / WA	80.30
Snow Dam	Tripp	GPA / WA	272.90
Blue Blanket Lake	Walworth	Game Production Area	489.15
Spring Lake	Walworth	Game Production Area	325.29
Steidler Memorial	Walworth	Game Production Area	39.72
Swan Lake	Walworth	Game Production Area	565.87
Ellas Maxima	Walworth	Game Production Area	319.30
Oahe Blue Blanket	Walworth	Game Production Area	910.81
Walth Bay	Walworth	Game Production Area	615.92
Swan Creek	Walworth	Game Production Area	1,464.85
Bednor Lake	Ziebach	Game Production Area	158.66
		Total	119,624.91

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REGION THREE

FIVE YEAR LAND MANAGEMENT PLAN

January 1, 2009 to December 31, 2013

Project W-81-D
(Land Management and Development)

Arden Petersen
Regional Supervisor
Sioux Falls, South Dakota

Steve VanderBeek
Regional Habitat Program Manager
Sioux Falls, South Dakota

January 2009

REGION III NARRATIVE

LOCATION

Region III is located in southeastern South Dakota, and is composed of 20 counties: Aurora, Beadle, Bon Homme, Brookings, Clay, Davison, Hanson, Hutchinson, Jerauld, Kingsbury, Lake, Lincoln, McCook, Miner, Minnehaha, Moody, Sanborn, Turner, Union, and Yankton.

DEMOGRAPHIC

Region III is approximately 13,000 mi² in size or about 17% of the State's land area. Region III is the second smallest region geographically, but by far the largest in population. The population density of Minnehaha County is the highest in the state at 183.3 people per square mile. Six of the state's 10 largest cities are located in Region III: Sioux Falls, Brookings, Mitchell, Huron, Yankton, and Vermillion.

Two interstate highways intersect Region III. I-90 runs east-west through the center of the Region and I-29 runs north-south through the eastern tier of counties. State highways 50, 46, 18, 44, 38, and 14 carry east-west traffic and highways 19, 81, 37, and 281 run north-south providing excellent access to all parts of the Region. There are also many excellent county road systems throughout the Region.

TOPOGRAPHIC

The Big Sioux and James Rivers meander through the Region III from north to south to their terminus in the Missouri River. Other main watershed systems in the Region include Split Rock Creek, Brule Creek, Skunk Creek, Wolf Creek, Redstone Creek, Rock Creek, Clay Creek, Sand Creek, Firesteel Creek, Emanuel Creek, Cain Creek, Pearl Creek, and the Vermillion River, all of which drain into the Missouri River. Because of its gently rolling topography, adequate rainfall and fertile soils, the primary land use in Region III is crop production agriculture.

The Region has a large number of artificial and natural lakes, with a majority of the natural lakes located in the northern part of the Region. Lake Thompson is the largest natural lake at 20,000 surface acres, and is located in the northern part of the Region. Lake Mitchell is the largest artificial lake within the Region outside of Lewis and Clark Lake on the Missouri River.

SITUATIONS CONCERNING DEVELOPMENT

Division of Wildlife lands in Region III include lands held in trust (meandered and public waters), and lands owned by Game, Fish & Parks. The opportunities are numerous for wildlife habitat management and development on the 209 Game Production and Water Access Areas covering 51,791 acres that the Division of Wildlife manages in Region III. Historically, Game Production Areas supported wildlife populations with habitat that was supplemental to that provided on private property. Additionally, by far the majority of game harvest also took place on private land. However, due to the ever-increasing efficiency of modern farming practices the habitat situation has changed. In many areas of Region III, the only significant wildlife habitat available on the landscape is found on Game Production Areas. As a consequence, a much larger percentage of hunting now takes place on Game Production areas and other public lands, with both wildlife and hunters becoming increasingly dependent on public lands.

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REGION 3 GAME PRODUCTION AND WATER ACCESS AREAS

GPA/WAA Name	County	Classification	Acres
Fish Lake	Aurora	Game Production Area	394.57
Hanson Lake	Aurora	Game Production Area	73.85
Humphries Slough	Aurora	Game Production Area	252.98
Kramer Slough	Aurora	Game Production Area	153.85
Nelson Lake	Aurora	Game Production Area	158.05
Stickney Lake	Aurora	Game Production Area	78.31
Pebble	Aurora	Game Production Area	39.56
Pleasant Lake	Aurora	Game Production Area	632.41
Wilmarth Lake	Aurora	Game Production Area	318.96
Crystal Lake	Aurora	Game Production Area	156.42
Tielebein	Aurora	Game Production Area	76.49
Brecken Slough	Beadle	Game Production Area	299.42
Cavour Lake	Beadle	Game Production Area	671.89
Lake Byron Hogsback	Beadle	Game Production Area	194.38
Mallard Slough	Beadle	Game Production Area	78.19
Mud Lake	Beadle	Game Production Area	198.60
Pheasant Country	Beadle	Game Production Area	198.31
Norwegian/Borden GPA	Beadle	Game Production Area	965.54
South James River	Beadle	Game Production Area	13.29
Upper Cain Creek	Beadle	Game Production Area	153.28
Sand Creek	Beadle	Game Production Area	160.07
North Byron Waa	Beadle	Water Access Area	10.42
South Byron Waa	Beadle	Water Access Area	3.43
Third Street Dam Waa	Beadle	Water Access Area	1.51
Staum Dam	Beadle	GPA / WA	158.68
North Bon Homme	Bon Homme	Game Production Area	78.44
Running Water	Bon Homme	Game Production Area	4,768.38
South Bon Homme	Bon Homme	Game Production Area	118.93
Mach	Bon Homme	Game Production Area	77.17
Snatch Creek	Bon Homme	Game Production Area	240.44
Emilies Acres	Bon Homme	Game Production Area	148.95
Sorenson GPA	Bon Homme	Game Production Area	386.05
Long Spur Gpa	Bon Homme	Game Production Area	163.86
Lake Henry Waa	Bon Homme	Water Access Area	1.77
Lake Henry Waa	Bon Homme	Water Access Area	272.89
Beck	Brookings	Game Production Area	161.42
Black Slough	Brookings	Game Production Area	225.03
Cheever Slough	Brookings	Game Production Area	195.27
Kvernmoie Slough	Brookings	Game Production Area	197.39
Mehegan	Brookings	Game Production Area	49.11
Nelson GPA	Brookings	Game Production Area	31.33
Moe Slough	Brookings	Game Production Area	934.08
Pederson Slough	Brookings	Game Production Area	62.78
Winter Haven	Brookings	Game Production Area	117.84
Lake Sinai N.	Brookings	Game Production Area	90.02
Brookings County Prop	Brookings	Game Production Area	5.69
Oakwood Lake	Brookings	Game Production Area	500.00
Interstate Lake	Brookings	Water Access Area	36.14
Lake Sinai	Brookings	Water Access Area	35.22
Oak Lake Waa	Brookings	Water Access Area	1.20
Lake Hendricks Waa	Brookings	Water Access Area	19.32
Lake Hendricks 2 Waa	Brookings	Water Access Area	2.82
Lake Campbell	Brookings	GPA / WA	13.46

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Cunningham	Clay	Game Production Area	106.44
Frost Wilderness	Clay	Game Production Area	355.70
Myron Grove	Clay	Game Production Area	89.18
Donnelly	Clay	Game Production Area	75.62
Bluestem Gpa	Davison	Game Production Area	272.68
Hubbard Slough	Davison	Game Production Area	83.51
Tjomsland	Davison	Game Production Area	80.69
Long Lake 1	Hanson	Game Production Area	225.86
Spencer	Hanson	Game Production Area	315.61
Lake Eli	Hanson	Game Production Area	39.46
Freeman	Hutchinson	Game Production Area	58.32
Hogrefe	Hutchinson	Game Production Area	321.70
Knodel Gpa	Hutchinson	Game Production Area	526.45
Mogck Slough	Hutchinson	Game Production Area	104.02
Solay	Hutchinson	Game Production Area	80.08
Weiger Slough	Hutchinson	Game Production Area	209.76
Walz	Hutchinson	Game Production Area	377.47
Rolling Hills GPA	Hutchinson	Game Production Area	345.91
Brandt	Hutchinson	Water Access Area	28.90
Lake Menno	Hutchinson	Water Access Area	7.04
Crow Lake	Jerauld	Game Production Area	883.11
Harmony School	Jerauld	Game Production Area	119.16
Horseshoe Lake	Jerauld	Game Production Area	193.24
Long Lake 4	Jerauld	Game Production Area	357.42
Twin Lakes	Jerauld	Game Production Area	188.41
Albrecht	Kingsbury	Game Production Area	87.06
Apland	Kingsbury	Game Production Area	40.11
Arnold	Kingsbury	Game Production Area	80.34
Boll	Kingsbury	Game Production Area	86.51
Converse	Kingsbury	Game Production Area	91.26
Desmet Forest Gpa	Kingsbury	Game Production Area	148.77
Iroquois	Kingsbury	Game Production Area	156.92
Kopperud	Kingsbury	Game Production Area	40.37
Lake Carthage	Kingsbury	Game Production Area	156.41
Lake Osceola	Kingsbury	Game Production Area	41.56
Lake Thompson Northeast	Kingsbury	Game Production Area	1,655.19
Lake Thompson South	Kingsbury	Game Production Area	2,385.31
Lake Thompson (Jadozi Tract)	Kingsbury	Game Production Area	804.94
Lake Thompson West	Kingsbury	Game Production Area	744.49
Lake Whitewood	Kingsbury	Game Production Area	16.07
Mud Lake	Kingsbury	Game Production Area	72.71
Tenneboe	Kingsbury	Game Production Area	77.83
Whitewood Slough	Kingsbury	Game Production Area	1,994.20
Lake Agnew	Kingsbury	Water Access Area	44.15
Lake Albert East	Kingsbury	Water Access Area	4.11
Gruenhagen	Kingsbury	Water Access Area	9.51
Lake Albert Hogsback	Kingsbury	GPA / WA	112.66
Bourne Slough Gpa	Lake	Game Production Area	20.68
Buffalo Slough	Lake	Game Production Area	662.92
Davis Slough	Lake	Game Production Area	152.32
Dooley	Lake	Game Production Area	53.71
Fods Slough	Lake	Game Production Area	112.16
Green	Lake	Game Production Area	224.23
Lake Henry	Lake	Game Production Area	158.11
Reynolds Slough	Lake	Game Production Area	891.10
Swartz	Lake	Game Production Area	123.04

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Floyd Gaarder Gpa	Lake	Game Production Area	558.00
Wentworth	Lake	Game Production Area	684.16
Zimmerman	Lake	Game Production Area	42.42
Townswick	Lake	Game Production Area	78.10
Brant Lake West	Lake	Water Access Area	51.77
Johnson Point	Lake	Water Access Area	32.03
Lake Herman West	Lake	Water Access Area	14.60
Payne access	Lake	Water Access Area	7.02
Bourne Slough Waa	Lake	Water Access Area	94.40
Brandt Lake East	Lake	Water Access Area	3.03
Brandt Lake South	Lake	Water Access Area	11.62
Stratton	Lake	GPA / WA	18.33
Fish	Lincoln	Game Production Area	218.70
Johnson	Lincoln	Game Production Area	152.03
Mckee	Lincoln	Game Production Area	262.08
Nine Mile Creek	Lincoln	Game Production Area	215.89
Oak Ridge	Lincoln	Game Production Area	575.42
Worthing	Lincoln	Game Production Area	120.20
Rolling	Lincoln	Game Production Area	42.69
Klondike	Lincoln	Water Access Area	25.49
Watershed Lake WAA	Lincoln	Water Access Area	78.11
Lake Alvin	Lincoln	GPA / WA	177.04
Pattee Creek	Lincoln	GPA / WA	382.87
East Vermillion Lake	McCook	Game Production Area	1,443.55
Ediger	McCook	Game Production Area	76.46
Forsch Lake	McCook	Game Production Area	242.32
Gross Lake	McCook	Game Production Area	188.01
Healy	McCook	Game Production Area	155.19
Island Lake	McCook	Game Production Area	176.24
Lehrman Slough	McCook	Game Production Area	82.92
Schultz	McCook	Game Production Area	27.02
Tschetter	McCook	Game Production Area	75.45
Tuschen Lake	McCook	Game Production Area	143.92
Ponderosa	McCook	Game Production Area	237.76
Chip Allen	Miner	Game Production Area	2,272.98
Bitter Lake	Miner	Game Production Area	205.27
Burke	Miner	Game Production Area	624.52
Fischer	Miner	Game Production Area	81.13
Hageman Slough	Miner	Game Production Area	181.88
Lake Carthage	Miner	Game Production Area	486.12
Lake Thompson (longville tract)	Miner	Game Production Area	169.04
Lake Thompson (pester Tract)	Miner	Game Production Area	178.46
Lewis Lake	Miner	Game Production Area	61.39
Morris Lake	Miner	Game Production Area	365.72
Twin Lakes	Miner	Game Production Area	323.79
Eimers	Miner	Game Production Area	84.82
Buffalo Lake	Minnehaha	Game Production Area	59.86
Diamond Lake	Minnehaha	Game Production Area	264.74
Grass Lake	Minnehaha	Game Production Area	368.74
Huntimer	Minnehaha	Game Production Area	11.55
Island Lake	Minnehaha	Game Production Area	130.55
Loss Lake	Minnehaha	Game Production Area	46.01
Loss Lake	Minnehaha	Game Production Area	58.96
Pederson	Minnehaha	Game Production Area	162.69
Scott Lake	Minnehaha	Game Production Area	351.52
Stofferahn	Minnehaha	Game Production Area	109.16

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Twin Lakes	Minnehaha	Game Production Area	256.06
Weisensee	Minnehaha	Game Production Area	491.08
Horsted Gpa	Minnehaha	Game Production Area	230.90
Beaver	Minnehaha	Water Access Area	4.90
Clear Lake	Minnehaha	GPA / WA	13.69
Anderson Slough	Moody	Game Production Area	147.17
Boles Slough	Moody	Game Production Area	161.56
Kamp	Moody	Game Production Area	150.07
Olson Lake	Moody	Game Production Area	28.41
Hazels Haven	Moody	Water Access Area	73.38
Forestburg	Sanborn	Game Production Area	32.07
Horrigan	Sanborn	Game Production Area	156.33
Long Lake 2	Sanborn	Game Production Area	142.86
Mccooy Lake	Sanborn	Game Production Area	158.30
Sanborn North	Sanborn	Game Production Area	54.82
Redstone	Sanborn	Game Production Area	157.00
Rifle-calahan	Sanborn	Game Production Area	1,510.92
Twin Lakes	Sanborn	Game Production Area	45.44
Looby School	Sanborn	Game Production Area	197.11
Christensen Slough	Turner	Game Production Area	18.47
Crosley-Shaeffer	Turner	Game Production Area	794.78
Hanson	Turner	Game Production Area	95.60
Lake Charles	Turner	Game Production Area	78.78
Swan Lake	Turner	Game Production Area	44.58
Schartner Ditch	Turner	GPA / WA	14.20
Bolton	Union	Game Production Area	91.98
Cusick	Union	Game Production Area	105.26
Warren Wilderness	Union	Game Production Area	160.93
Bent River	Union	Game Production Area	29.77
Petry/Harmelink	Union	Game Production Area	309.34
Ryan	Union	Game Production Area	146.44
cut off bend	Union	Game Production Area	72.76
Petry-Conway	Union	Game Production Area	48.06
Rosenbaum	Union	Water Access Area	10.14
Willow Run	Union	GPA / WA	81.43
Dulcie Thompson	Yankton	Game Production Area	40.33
Huff Lake	Yankton	Game Production Area	24.31
Marindahl Lake	Yankton	Game Production Area	586.97
Ulmer Wilderness	Yankton	Game Production Area	37.22
Volin-clay	Yankton	Game Production Area	318.50
Storm Break	Yankton	Game Production Area	81.12
Schramm River Access	Yankton	Water Access Area	17.50
Beaver Lake	Yankton	GPA / WA	196.70
Kellys Cove	Yankton	GPA / WA	8.45
		Total	<u>51,791.38</u>

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**REGION FOUR
FIVE YEAR LAND MANAGEMENT PLAN**

January 1, 2009 to December 31, 2013

Project W-81-D
(Land Management and Development)

Doug Alvine
Regional Supervisor
Watertown, South Dakota

Mary Clawson
Regional Habitat Program Manager
Aberdeen, South Dakota

January 2009

REGION IV NARRATIVE

LOCATION

Region IV is located in the northeastern portion of South Dakota and is comprised of 13 counties: Brown, Clark, Codington, Day, Deuel, Edmunds, Faulk, Grant, Hamlin, McPherson, Marshall, Roberts and Spink.

DEMOGRAPHIC

Region IV is approximately 13,000 mi² in size or about 17% of the State's land area. Urban areas in Region IV with populations exceeding 5,000 include the cities of Aberdeen and Watertown.

TOPOGRAPHIC

The James and Big Sioux Rivers traverse Region IV from north to south, with the Minnesota River located along the northeast boundary of the Region. The Coteau de Prairie is a landform of rolling hills, dotted with thousands of lake and wetlands. This area averages sixty miles wide and covers most of the central portion of Region IV. The Big Sioux River originates in the Coteau de Prairie and drains south. Because of its mix of rolling topography, adequate rainfall and fertile soils, both livestock grazing and farming are predominant land uses in Region IV.

Big Stone Lake and Lake Traverse are artificial impoundments on located in extreme northeast South Dakota, and are the geographic location of the north/south Continental Divide, with Big Stone Lake draining to the Gulf of Mexico and Lake Traverse to Hudson Bay in the north. The wetlands that cover most of Region IV are among the Continent's most important waterfowl production habitat. In the wet cycle of the late 1990's, most of the marshes became lakes. For example Waubay Lake in Day County changed from a shallow marsh to a lake, with a maximum depth of 31 feet, covering over 16,000 acres, and Bitter Lake changed from a shallow marsh to a lake, with a maximum depth of 22 feet. Across the region, the volume of water increased dramatically, from lakes to very small type temporary and seasonal wetland, where almost every closed basin depression held water. In the early 2000's, the wet cycle abated, and many of the smaller wetlands dried out, allowing an increase in farmable acres.

SITUATIONS CONCERNING DEVELOPMENT

Division of Wildlife lands in Region IV include lands held in trust (meandered and public waters), lands leased from city and private entities, and lands owned by Game, Fish & Parks. The opportunities are numerous for wildlife habitat management and development on the 317 Game Production and Water Access Areas covering 89,733 acres that the Division of Wildlife manages in Region IV. Game Production Areas in Region IV are located in an area where economic pressures cause intensive farming and grassland utilization by private landowners. Game Production Areas provide a significant wildlife habitat component for numerous species and offer unlimited recreational opportunities.

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REGION 4 GAME PRODUCTION AND WATER ACCESS AREAS

<u>GPA/WAA Name</u>	<u>County</u>	<u>Classification</u>	<u>Acres</u>
Columbia	Brown	Game Production Area	82.21
Diagonal Trees	Brown	Game Production Area	66.56
East Hecla	Brown	Game Production Area	154.89
Elm Lake	Brown	Game Production Area	158.83
Hart Quarter	Brown	Game Production Area	68.54
Hecla Controlled	Brown	Game Production Area	496.04
Hecla Managed	Brown	Game Production Area	637.91
North Sand Lake	Brown	Game Production Area	154.59
Putney #1	Brown	Game Production Area	163.96
Putney #3	Brown	Game Production Area	990.77
Renziehausen	Brown	Game Production Area	1,661.42
Wanttie	Brown	Game Production Area	80.05
West Hecla	Brown	Game Production Area	157.43
Zabrasha	Brown	Game Production Area	1,119.88
Hansen Preserve (Stratford Sl)	Brown	Game Production Area	700.05
Casanova	Brown	Game Production Area	642.56
Jilek - Dahme	Brown	Game Production Area	54.28
Willow Dam	Brown	Game Production Area	1,210.93
Putney Slough	Brown	Game Production Area	2,770.03
Erickson	Brown	Game Production Area	158.09
Pigors Lake	Brown	GPA / WA	118.93
Richmond Dam & N Richmond	Brown	GPA / WA	166.79
Naples	Clark	Game Production Area	79.25
Alexander	Clark	Game Production Area	40.88
Begeman	Clark	Game Production Area	79.31
Bradley	Clark	Game Production Area	81.65
Cherry Lake	Clark	Game Production Area	202.12
Christopherson	Clark	Game Production Area	160.61
Cottonwood Lake	Clark	Game Production Area	161.96
Crocker	Clark	Game Production Area	75.58
Dry Lake #1 & N Dry Lake	Clark	Game Production Area	1,016.08
Dry Lake #2	Clark	Game Production Area	3,730.60
Dudley	Clark	Game Production Area	99.25
Dybvig	Clark	Game Production Area	77.41
Faehn	Clark	Game Production Area	127.41
Faiferlick	Clark	Game Production Area	434.20
Fordham	Clark	Game Production Area	635.31
Foxton	Clark	Game Production Area	40.16
Hamre	Clark	Game Production Area	130.71
Lynbye	Clark	Game Production Area	121.33
McPeek	Clark	Game Production Area	40.39
Spring Valley	Clark	Game Production Area	80.90
Stadem Slough	Clark	Game Production Area	72.86
Stairs Slough	Clark	Game Production Area	545.42
Stewart	Clark	Game Production Area	206.86
Swan Lake	Clark	Game Production Area	1,229.53
Valberg-Lamb	Clark	Game Production Area	364.77
Wagner	Clark	Game Production Area	80.57
Helgeson	Clark	Game Production Area	230.27
Sherwood	Clark	GPA / WA	396.11
Bailey Lake	Clark	GPA / WA	35.80
Willow Lake	Clark	GPA / WA	80.05
American Game	Codington	Game Production Area	573.68

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Andrisen & W. Punished Woman	Codington	Game Production Area	391.87
Bach	Codington	Game Production Area	112.52
Terry Redlin	Codington	Game Production Area	1,225.45
Blythe	Codington	Game Production Area	943.52
Christopherson	Codington	Game Production Area	157.40
Clarksean	Codington	Game Production Area	38.35
Cotton Slough & Ellis 80	Codington	Game Production Area	606.24
Curley Slough	Codington	Game Production Area	81.07
Donnelly	Codington	Game Production Area	116.12
Eckman	Codington	Game Production Area	31.86
Elmore	Codington	Game Production Area	115.05
Gilbert	Codington	Game Production Area	235.97
Goose Lake	Codington	Game Production Area	1,146.61
Hansen	Codington	Game Production Area	63.49
Hanten	Codington	Game Production Area	40.20
Horseshoe	Codington	Game Production Area	55.64
Larson	Codington	Game Production Area	135.76
Long Lake 3	Codington	Game Production Area	1,060.01
McKillican Lake	Codington	Game Production Area	172.72
Nichols	Codington	Game Production Area	158.26
North Nichols	Codington	Game Production Area	142.70
Pelican Lake	Codington	Game Production Area	121.87
Redhead Pass	Codington	Game Production Area	11.52
School Quarter	Codington	Game Production Area	163.07
Scott	Codington	Game Production Area	162.91
Spencer	Codington	Game Production Area	44.93
Stover Ranch	Codington	Game Production Area	81.65
Bob Hodgins - Warner Lake	Codington	Game Production Area	279.51
Wolf Slough	Codington	Game Production Area	79.68
Henning	Codington	Game Production Area	276.37
Lynnwood	Codington	Water Access Area	6.98
Dayton	Codington	Water Access Area	2.97
Sailboat Landing WAA	Codington	Water Access Area	1.56
Benn	Codington	GPA / WA	20.99
Punished Woman, South	Codington	GPA / WA	21.35
Arneson	Day	Game Production Area	235.36
Batie (Buchner)	Day	Game Production Area	217.51
Bitter Lake	Day	Game Production Area	2,909.07
Block	Day	Game Production Area	35.88
Foldager	Day	Game Production Area	236.48
Grovard	Day	Game Production Area	40.67
Hauge Marsh	Day	Game Production Area	234.80
Haugen	Day	Game Production Area	41.05
Hazelden Springs	Day	Game Production Area	169.78
Hedman	Day	Game Production Area	376.63
Holmquist	Day	Game Production Area	166.65
Ingvold	Day	Game Production Area	122.41
Krause Farm	Day	Game Production Area	365.56
Lardy - Dakter	Day	Game Production Area	161.88
Lewno	Day	Game Production Area	150.41
Lily	Day	Game Production Area	490.89
Lohner - Vincent	Day	Game Production Area	253.82
Mydland Pass	Day	Game Production Area	1,733.59
Nelson - Johnson	Day	Game Production Area	203.27
Owens Creek	Day	Game Production Area	251.67
Redetzke	Day	Game Production Area	327.72

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Redhead Slough	Day	Game Production Area	92.42
South Waubay Lake	Day	Game Production Area	65.73
Stianson Liberty Hemmah Krause	Day	Game Production Area	244.85
Wheatland	Day	Game Production Area	41.12
Aasved	Day	Game Production Area	39.30
Ninke	Day	Game Production Area	79.74
Hedtke-Breske-Helwig-Waubay	Day	Game Production Area	687.85
Goose Lake	Day	Game Production Area	341.26
Sunnybrook	Day	Game Production Area	167.12
Sundahl	Day	Game Production Area	228.61
Bitter Lake WAA	Day	Water Access Area	11.46
Pickereel Lake - Slinden WAA	Day	Water Access Area	3.88
Minnewasta	Day	Water Access Area	28.77
Enemy Swim	Day	Water Access Area	25.50
Grenville	Day	Water Access Area	10.78
Kanago WAA (Sports Haven)	Day	Water Access Area	6.80
North Pickereel Lake WAA	Day	Water Access Area	26.36
Dale	Day	GPA / WA	80.39
Hemmingway - Zubke	Day	GPA / WA	105.47
Horseshoe Lake	Day	GPA / WA	96.99
Pickereel (Okroi & Mondry)	Day	GPA / WA	131.42
Altamont	Deuel	Game Production Area	201.62
Astoria	Deuel	Game Production Area	38.52
Briggs Lake	Deuel	Game Production Area	127.65
Cole	Deuel	Game Production Area	77.27
Cornell Slough	Deuel	Game Production Area	30.22
Crystal Springs	Deuel	Game Production Area	517.08
Fox Lake	Deuel	Game Production Area	121.76
Lake Ketchum	Deuel	Game Production Area	255.08
Lake Francis	Deuel	Game Production Area	245.57
Lone Tree	Deuel	Game Production Area	59.51
Mud Lake	Deuel	Game Production Area	643.54
Nelson	Deuel	Game Production Area	82.24
Rome	Deuel	Game Production Area	78.56
Round - Bullhead	Deuel	Game Production Area	1,148.20
Runge Slough	Deuel	Game Production Area	40.28
Rush Lake	Deuel	Game Production Area	319.72
Sharp	Deuel	Game Production Area	80.32
Singsaas	Deuel	Game Production Area	120.45
Coteau Lakes GPA	Deuel	Game Production Area	685.09
Lake Sutton	Deuel	Game Production Area	40.38
Lake Oliver - Bostic	Deuel	Game Production Area	71.98
Marquardt	Deuel	Game Production Area	38.17
Bjerke Access	Deuel	Water Access Area	121.76
Severson	Deuel	Water Access Area	38.88
Lake Alice WAA	Deuel	Water Access Area	8.02
Gary Gulch	Deuel	GPA / WA	116.96
Mitchell	Deuel	GPA / WA	241.55
Bowdle - Hosmer	Edmunds	Game Production Area	176.91
Heilman	Edmunds	Game Production Area	146.96
Hosmer	Edmunds	Game Production Area	80.23
Losee	Edmunds	Game Production Area	201.93
Rosette	Edmunds	Game Production Area	81.88
Schaber	Edmunds	Game Production Area	161.82
Shaner	Edmunds	Game Production Area	313.35
Steigelmier	Edmunds	Game Production Area	325.39

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North Scatterwood + Diversion	Edmunds	Game Production Area	238.54
Light	Edmunds	Game Production Area	155.27
Loyalton	Edmunds	Water Access Area	37.02
North Scatterwood WAA	Edmunds	Water Access Area	0.80
Mina	Edmunds	GPA / WA	72.05
Gerken Refuge & GPA	Faulk	Game Production Area	952.38
Ingalls	Faulk	Game Production Area	81.11
Lake Faulkton	Faulk	Game Production Area	169.78
South Scatterwood	Faulk	Game Production Area	956.08
Sprague	Faulk	Game Production Area	163.91
Holtquist Slough	Grant	Game Production Area	73.84
Markve (Lonesome Lake)	Grant	Game Production Area	181.66
Mazeppa	Grant	Game Production Area	399.74
Mud Lake	Grant	Game Production Area	160.39
Troy Lake	Grant	Game Production Area	117.84
Big Stone Power Plant GPA	Grant	Lease Area	807.59
Eye Refuge	Grant	Refuge Area	9.14
Hunter Granite	Grant	Water Access Area	13.09
Kolb WAA	Grant	Water Access Area	3.91
Summit Lake	Grant	GPA / WA	723.75
Baxter Slough	Hamlin	Game Production Area	400.21
Bochek	Hamlin	Game Production Area	270.77
Dixon	Hamlin	Game Production Area	40.01
Eidsness	Hamlin	Game Production Area	156.68
Gertson	Hamlin	Game Production Area	103.65
Halde Outlet	Hamlin	Game Production Area	22.42
Harju	Hamlin	Game Production Area	366.23
Hayes Slough	Hamlin	Game Production Area	318.78
Johnson Slough	Hamlin	Game Production Area	383.71
Lake John	Hamlin	Game Production Area	54.49
McShane	Hamlin	Game Production Area	79.45
North Lake Marsh	Hamlin	Game Production Area	366.46
Opdahl	Hamlin	Game Production Area	523.60
Preston Slough	Hamlin	Game Production Area	20.78
Rasmussen	Hamlin	Game Production Area	285.54
Sioux Poinsett	Hamlin	Game Production Area	2,338.02
South Lake Marsh	Hamlin	Game Production Area	160.20
West Lake Marsh	Hamlin	Game Production Area	432.77
West Lake Poinsett	Hamlin	Game Production Area	41.40
Izaak Walton	Hamlin	Game Production Area	76.12
Mickelson	Hamlin	Game Production Area	1,678.85
Almos and Outlet Addition	Hamlin	Water Access Area	102.75
Sorenson WAA	Hamlin	Water Access Area	15.76
Saaranen Beach	Hamlin	Water Access Area	31.39
Prestrude WAA	Hamlin	Water Access Area	3.08
Aspen Slough	Marshall	Game Production Area	131.55
Black Slough	Marshall	Game Production Area	797.97
Bonham Area	Marshall	Game Production Area	996.22
S Buffalo Lake, west	Marshall	Game Production Area	47.57
Cattail	Marshall	Game Production Area	1,492.75
Chokecherry Island	Marshall	Game Production Area	75.80
Church	Marshall	Game Production Area	38.71
Clear Lake	Marshall	Game Production Area	570.81
Douglas	Marshall	Game Production Area	363.93
Eden E & W	Marshall	Game Production Area	79.10
Flat Lake	Marshall	Game Production Area	40.76

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South Red Iron - Betsy Hoop	Marshall	Game Production Area	674.95
Ft. Sisseton + 40	Marshall	Game Production Area	483.56
Hamilton Township	Marshall	Game Production Area	39.81
Holman	Marshall	Game Production Area	384.98
Horseshoe	Marshall	Game Production Area	54.09
Larsons Slough	Marshall	Game Production Area	358.93
Lost Lake	Marshall	Game Production Area	40.70
North Church GPA	Marshall	Game Production Area	40.93
North Red Iron	Marshall	Game Production Area	52.19
Rock Crandall	Marshall	Game Production Area	286.96
Roy Lake	Marshall	Game Production Area	1,406.40
Sisseton Township	Marshall	Game Production Area	41.03
West Stink Lake	Marshall	Game Production Area	5.97
White Lake	Marshall	Game Production Area	630.04
Willianson Slough	Marshall	Game Production Area	363.08
Little Cottonwood	Marshall	Game Production Area	80.48
4 Mile - Clubhouse - Barretts	Marshall	Game Production Area	1,502.55
S Buffalo Lake, east	Marshall	Game Production Area	61.94
Christensen-Schlosser	Marshall	Game Production Area	308.44
Abraham	Marshall	Water Access Area	12.24
Nine Mile	Marshall	Water Access Area	152.85
S Buffalo Lake WAA	Marshall	Water Access Area	9.44
Ivory Tower WAA	Marshall	Water Access Area	11.87
North Buffalo WAA	Marshall	Water Access Area	27.55
Cottonwood Lake GPA & WAA	Marshall	GPA / WA	78.56
Sorbell	Marshall	GPA / WA	53.83
Turtlefoot 80 + Access	Marshall	GPA / WA	104.19
Six Mile Lake	Marshall	GPA / WA	11.33
Hickman Dam	Marshall	GPA / WA	26.50
Highway 10	McPherson	Game Production Area	38.26
Leola Roadside Park	McPherson	Game Production Area	11.98
Morlock	McPherson	Game Production Area	79.81
Moscow	McPherson	Game Production Area	288.05
North Jackson	McPherson	Game Production Area	53.31
Odessa 1	McPherson	Game Production Area	472.15
Odessa 2	McPherson	Game Production Area	40.86
Pfeifle Neuharth	McPherson	Game Production Area	404.10
Rath	McPherson	Game Production Area	88.68
Rau	McPherson	Game Production Area	78.30
Rosenthal	McPherson	Game Production Area	136.25
Schock	McPherson	Game Production Area	88.71
School #2	McPherson	Game Production Area	166.05
School #3	McPherson	Game Production Area	87.34
Schumacher	McPherson	Game Production Area	549.56
South Jackson	McPherson	Game Production Area	119.13
Wacker	McPherson	Game Production Area	210.31
Wageman	McPherson	Game Production Area	153.81
Simpson	McPherson	Game Production Area	468.75
Stout	McPherson	Game Production Area	693.16
Elm Lake	McPherson	Game Production Area	158.85
Long Lake WAA	McPherson	Water Access Area	4.00
Big Stone Lake	Roberts	Game Production Area	36.00
Big Stone Ponds	Roberts	Game Production Area	52.98
Braaten	Roberts	Game Production Area	37.06
Crawford	Roberts	Game Production Area	234.42
Diamond	Roberts	Game Production Area	102.26

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Dobberstein	Roberts	Game Production Area	78.19
Knutson	Roberts	Game Production Area	80.70
Harmon	Roberts	Game Production Area	273.16
Eastman	Roberts	Game Production Area	328.85
Knebel Slough	Roberts	Game Production Area	38.71
Mud Lake	Roberts	Game Production Area	154.16
One-Road Lake	Roberts	Game Production Area	74.86
Ortley	Roberts	Game Production Area	271.40
Osterloh	Roberts	Game Production Area	89.56
Peever Slough + 40	Roberts	Game Production Area	521.11
Sather Slough	Roberts	Game Production Area	190.44
Shepard	Roberts	Game Production Area	77.77
Smith	Roberts	Game Production Area	112.44
Spink	Roberts	Game Production Area	76.78
Summit GPA	Roberts	Game Production Area	370.81
Traverse	Roberts	Game Production Area	51.72
Victor	Roberts	Game Production Area	120.12
White Rock	Roberts	Game Production Area	2,932.99
Bde Saka	Roberts	Game Production Area	240.72
Dunn	Roberts	Game Production Area	77.79
Kasuske WAA	Roberts	Water Access Area	13.17
Waldo	Roberts	Water Access Area	26.64
Jensens Addition	Roberts	Water Access Area	3.81
Hiawatha	Roberts	Water Access Area	6.02
North Drywood	Roberts	GPA / WA	58.62
South Drywood	Roberts	GPA / WA	22.75
Bald Mountain	Spink	Game Production Area	124.54
Bodi	Spink	Game Production Area	366.93
Cottonwood	Spink	Game Production Area	549.89
Mansfield	Spink	Game Production Area	500.13
Mirage	Spink	Game Production Area	501.59
Price Lake	Spink	Game Production Area	83.94
Spink Co. Dam	Spink	Game Production Area	48.49
Twin Lakes + Diversion Ditch	Spink	Game Production Area	902.73
Wollman	Spink	Game Production Area	30.85
Wagner	Spink	Game Production Area	118.10
Cottonwood (Hatchery)	Spink	Refuge Area	154.82
Cottonwood WAA	Spink	Water Access Area	0.59
Frankfort	Spink	Water Access Area	14.75
Bierman Pits	Spink	Water Access Area	24.44
		Total	89,732.50

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REGION I
SUMMARY OF SCHEDULED DEVELOPMENTS 2009 - 2013

Work Item Description	Grant Period Totals			Estimated Annual Totals				
	No. of Sites	Quantity	Units	Total Cost	No. of Sites	Quantity	Units	Annual Cost
Road & Trail Development	1	1.25	Miles	10,000	1	1.25	Miles	2,000
Fence Development	1	1	Miles	8,000	1	1	Miles	1,600
Public Use Facilities	1	1	Each	10,000	1	1	Each	2,000
Total Costs				\$28,000				\$5,600

Reflects five years of work from January 1, 2009 through December 31, 2013.

REGION II
SUMMARY OF SCHEDULED DEVELOPMENTS 2009 - 2013

Work Item Description	Grant Period Totals			Estimated Annual Totals				
	No. of Sites	Quantity	Units	Total Cost	No. of Sites	Quantity	Units	Annual Cost
Fence Development	10	8.25	Miles	66,000	2	2	Miles	13,200
Post & Sign Boundaries	30	170.5	Miles	51,150	6	34	Miles	10,230
Trees - Fabric Application	12	36.6	Acres	98,847	3	8	Acres	19,800
Tree Planting	39	117	Acres	175,485	8	24	Acres	35,000
Total Costs				\$391,482				\$78,230

Reflects five years of work from January 1, 2009 through December 31, 2013.

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REGION III
SUMMARY OF SCHEDULED DEVELOPMENTS 2009 - 2013

Work Item Description	Grant Period Totals			Estimated Annual Totals				
	No. of Sites	Quantity	Units	Total Cost	No. of Sites	Quantity	Units	Annual Cost
Dugout-Dam Creation	1	1	Each	10,000	1	1	Each	2,000
Fence Development	10	8.75	Miles	70,000	2	1.5	Miles	14,000
Post & Sign Boundaries	4	3.5	Miles	1,050	1	1	Miles	200
Public Use Facilities	3	3	Each	30,000	1	1	Each	6,000
Tree Planting	10	29	Acres	42,630	2	6	Acres	8,600
Total Costs				\$153,680				\$30,800

Reflects five years of work from January 1, 2009 through December 31, 2013.

REGION IV
SUMMARY OF SCHEDULED DEVELOPMENTS 2009 - 2013

Work Item Description	Grant Period Totals			Estimated Annual Totals				
	No. of Sites	Quantity	Units	Total Cost	No. of Sites	Quantity	Units	Annual Cost
Cattle Guards/Culverts	3	3	Each	12,000	1	1	Each	2,400
Dugout-Dam Creation	1	1	Each	10,000	1	1	Each	2,000
Fence Development	30	58	Miles	464,000	6	11.5	Miles	92,800
Post & Sign Boundaries	1	0.75	Miles	225	1	1	Miles	45
Public Use Facilities	17	17	Each	170,000	4	4	Each	34,000
Road & Trail Development	20	13	Miles	104,000	4	3	Miles	20,800
Survey Property Boundaries	8	33.6	Miles	33,600	2	7	Miles	6,720
Trees - Fabric Application	13	38.2	Acres	103,140	3	9	Acres	20,628
Tree Planting	1	2.5	Acres	3,750	1	1	Acres	750
Tree Scalp Planting	1	4.7	Acres	7,050	1	1	Acres	1,410
Total Costs				\$907,765				\$181,553

Reflects six years of work from January 1, 2009 through December 31, 2013.

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REGION I
SUMMARY OF SCHEDULED MAINTENANCE AND OPERATIONS WORK 2009 - 2013

Work Item Description	Quantity		Units	Unit Cost	Total Cost	
	Estimated Annual	Grant Total			Estimated Annual	Grant Total
Fence Maintenance	22.75	113.75	Miles	200	4,550	22,750
Post & Sign Maintenance	30.2	151	Miles	100	3,020	15,100
Public Use Facilities	50.8	254	Each	500	25,400	127,000
Road & Trail Maintenance	24.06	120.3	Miles	500	12,030	60,150
Small Dam Maintenance	8	40	Each	2,000	16,000	80,000
Total Maintenance Costs					\$61,000	\$305,000

Work Item Description	Quantity		Units	Unit Cost	Total Cost	
	Estimated Annual	Grant Total			Estimated Annual	Grant Total
Feeding & Watering Structures	16	80	Each	500	8,000	40,000
Herbaceous Plantings	632.73	3,163.65	Acres	50	31,637	158,183
- Small Grains Acres	1	5	Acres	50	50	250
- Legume Acres	284	1,420.05	Acres	150	42,600	213,008
- Food Plot Acres	647.32	3,236.6	Acres	0	0	0
- Crop Acres	40	200	Acres	300	12,000	60,000
- Native Grass Acres	1,213.1	6,065.5	Acres	80	97,048	485,240
Vegetation Control						
Range & Grassland Rehab	231.3	1,156.5	Acres	20	4,626	23,130
- Mowed & Hayed Acres	342.8	1,714	Acres	10	3,428	17,140
- Controlled Burn	12,334.63	61,673.15	Acres	0	0	0
- Controlled Graze	100	500	Acres	0	0	0
- Uncontrolled Graze						
Timber Management	118	590	Acres	400	47,200	236,000
Project Administration	350	1,750	Days	125	43,750	218,750
Custodial Functions	350	1,750	Days	125	43,750	218,750
Total Operation Costs					\$334,089	\$1,670,451
Total O&M Costs					\$395,089	\$1,975,451

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REGION II
SUMMARY OF SCHEDULED MAINTENANCE AND OPERATIONS WORK 2009 - 2013

Work Item Description	Quantity		Units	Unit Cost	Total Cost	
	Estimated Annual	Grant Total			Estimated Annual	Grant Total
Fence Maintenance	5.13	25.65	Miles	200	1,026	5,130
Post & Sign Maintenance	22.4	112	Miles	100	2,240	11,200
Public Use Facilities	99.6	498	Each	500	49,800	249,000
Road & Trail Maintenance	45.2	226	Miles	500	22,600	113,000
Tree Cultivation	16	80	Acres	200	3,200	16,000
Total Maintenance Costs					\$78,866	\$394,330

Work Item Description	Quantity		Units	Unit Cost	Total Cost	
	Estimated Annual	Grant Total			Estimated Annual	Grant Total
Herbaceous Plantings	1,270.03	6,350.16	Acres	150	190,505	952,524
- Food Plot Acres	346.06	1,730.32	Acres	0	0	0
- Crop Acres	69.26	346.32	Acres	100	693	3,463
- DNC/Alfalfa Acres	119.72	598.6	Acres	300	35,916	179,580
- Native Grass Acres	3,525.62	17,628.1	Acres	80	282,050	1,410,248
Vegetation Control						
Range & Grassland Rehab						
- Controlled Graze	5,252.6	26,263	Acres	0	0	0
- Mowed & Hayed Acres	736.02	3,680.09	Acres	20	14,720	73,600
- Inter-seeded Acres	15	75	Acres	200	3,000	15,000
- Controlled Burn	152.2	761	Acres	10	1,522	7,610
- Uncontrolled Graze	11,254	56,270	Acres	0	0	0
Project Administration	450	2,250	Days	125	56,250	281,250
Custodial Functions	450	2,250	Days	125	56,250	281,250
Total Operation Costs					\$640,906	\$3,204,525
Total O&M Costs					\$719,772	\$3,598,855

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REGION III
SUMMARY OF SCHEDULED MAINTENANCE AND OPERATIONS WORK 2009 - 2013

Work Item Description	Quantity		Units	Unit Cost	Total Cost	
	Estimated Annual	Grant Total			Estimated Annual	Grant Total
Fence Maintenance	2.5	12.5	Miles	200	500	2,500
Nest Structures	1	5	Each	25	25	125
Post & Sign Maintenance	77.35	386.75	Miles	100	7,735	38,675
Public Use Facilities	221	1,105	Each	500	110,500	552,500
Road & Trail Maintenance	108.75	543.75	Miles	500	54,375	271,875
Tree Cultivation	14.05	70.25	Acres	200	2,810	14,050
Total Maintenance Costs					\$175,945	\$879,725

Work Item Description	Quantity		Units	Unit Cost	Total Cost	
	Estimated Annual	Grant Total			Estimated Annual	Grant Total
Herbaceous Plantings	88.47	442.35	Acres	300	26,541	132,705
- Native Grass Acres	1,767.22	8,836.10	Acres	150	265,083	1,325,415
- Food Plot Acres	43.25	216.25	Acres	0	0	0
- Crop Acres	3,352.4	16,762	Acres	80	268,192	1,340,960
Vegetation Control						
Range & Grassland Rehab	1,437.39	7,186.93	Acres	0	0	0
- Controlled Graze	310.17	1,550.87	Acres	20	6,203	31,017
- Mowed & Hayed Acres	10.51	52.55	Acres	10	105	526
- Controlled Burn	350	1,750	Days	125	43,750	218,750
Project Administration	350	1,750	Days	125	43,750	218,750
Custodial Functions						
Total Operation Costs					\$653,624	\$3,268,123
Total O&M Costs					\$829,569	\$4,147,848

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**REGION IV
SUMMARY OF SCHEDULED MAINTENANCE AND OPERATIONS WORK 2009-2013**

Work Item Description	Quantity		Units	Unit Cost	Total Cost	
	Estimated Annual	Grant Total			Estimated Annual	Grant Total
Fence Maintenance	34.63	173.15	Miles	200	6,926	34,630
Nest Structures	294	1,470	Each	25	7,350	36,750
Post & Sign Maintenance	120	600	Miles	100	12,000	60,000
Public Use Facilities	260.2	1301	Each	500	130,100	650,500
Road & Trail Maintenance	128.09	640.44	Miles	500	64,045	320,220
Tree Cultivation	3.75	18.74	Acres	200	750	3,748
Total Maintenance Costs					\$221,171	\$1,105,848

Work Item Description	Quantity		Units	Unit Cost	Total Cost	
	Estimated Annual	Grant Total			Estimated Annual	Grant Total
Feeding & Watering Structures	27	135	Each	500	13,500	67,500
Herbaceous Plantings	5.1	25.5	Acres	50	255	1,275
- Small Grains Acres	1.65	8.25	Acres	50	83	413
- Legume Acres	981.69	4,908.47	Acres	150	147,254	736,271
- Food Plot Acres	1,100.48	5,502.4	Acres	0	0	0
- Crop Acres	6.42	32.11	Acres	100	642	3,211
- DNC/Alfalfa Acres	606.2	3,030.98	Acres	300	181,860	909,294
- Native Grass Acres	4,242.4	21,212	Acres	80	339,392	1,696,960
Vegetation Control						
Range & Grassland Rehab						
- Controlled Graze	8,216.17	41,080.83	Acres	0	0	0
- Mowed & Hayed Acres	615.2	3,075.99	Acres	20	12,304	61,520
- Controlled Burn	1,175.83	5,879.13	Acres	10	11,758	58,791
- Uncontrolled Graze	41.84	209.2	Acres	0	0	0
Timber Management	33.69	168.47	Acres	400	13,476	67,388
Trees - Site Prep	5.39	26.95	Acres	500	2,695	13,475
Project Administration	450	2,250	Days	125	56,250	281,250
Custodial Functions	450	2,250	Days	125	56,250	281,250
Total Operation Costs					\$835,719	\$4,178,598
Total O&M Costs					\$1,056,890	\$5,284,446

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