

**Forest Management Plan
Shakopee Mdewakanton Sioux Community
2015
State of Minnesota**



**Contract No. A14PX01949
June 1, 2015**



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FOREST MANAGEMENT PLAN
Shakopee Mdewakanton Sioux Community
2015

June 1, 2015

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1.0 Introduction

The SMSC is a federally recognized Indian tribe formally organized under federal reservation status in 1969. Tribal members are direct lineal descendants of Mdewakanton Dakota people who resided in villages near the banks of the lower Minnesota River. Chief Sakpe, [Shock-pay], which means “number six” in the Dakota language, was leader of a village that was located near what is today the town of Shakopee, which was named after him. The SMSC reservation is 4,112 acres all of which are located within or near the original 250-acre reservation established for the Tribe in the 1890-1891. Of that amount, 1,821 acres are held in trust by the federal government and 2,291 acres are in fee status.

OA Systems Corporation (OAS) has been contracted by the Bureau of Indian Affairs (BIA) Midwestern Regional Office to prepare a Forest Management Plan (FMP) and an associated environmental analysis for the Shakopee Mdewakanton Sioux Community (SMSC). OAS has teamed with Natural Systems Analysts, Inc. (NSA) to prepare this FMP.

This FMP meets the minimum required management standards and guidelines for Tribal Forest Lands (as defined in 53 IAM Chapter 2, Page 5, 1.7 B) and/or woodlands held in trust by the U. S. Department of the Interior for the benefit of the Tribe(s).

This plan has been developed for custodial management to provide the minimum management standards and guidelines to ensure the perpetual protection of Indian Forest resources.

This plan applies to all Indian Trust Lands with the Shakopee Mdewakanton Sioux Community (SMSC).

This FMP has been developed in accordance with the requirements of 53 Indian Affairs Manual (53 IAM) Chapter 2, Forest Management Planning, Release #15-01, May 22, 2015 for Category 4, Minimal Forest Land.

In accordance with 53 IAM Chapter 2, this FMP is non-expiring and will remain in effect until a new plan is approved. This plan should be periodically reviewed (recommended within 20 years of the plan date), and revised with changes to goals and objectives, policy, or change in the conditions of the FMP. Adaptive management strategies will enable progressive refinement of this FMP in response to new information and changing Tribal values.

The scope and objectives of forest management planning is directed by 25 CFR Section 163.3 which states:

- a) The regulations in this part are applicable to all Indian forest land except as this part may be superseded by legislation.



- b) Indian forest land management activities undertaken by the Secretary shall be designed to achieve the following objectives:
- 1) The development, maintenance and enhancement of Indian forest land in a perpetually productive state in accordance with the principles of sustained yield and with the standards and objectives set forth in forest management plans by providing effective management and protection through the application of sound silvicultural and economic principles to the harvesting of forest products, forestation, timber stand improvement and other forestry practices;
 - 2) The regulation of Indian forest land through the development and implementation, with the full and active consultation and participation of the appropriate Indian tribe, of forest management plans which are supported by written Tribal objectives;
 - 3) The regulation of Indian forest land in a manner that will ensure the use of good method and order in harvesting so as to make possible, on a sustained yield basis, continuous productivity and a perpetual forest business;
 - 4) The development of Indian forest land and associated value-added industries by Indians and Indian tribes to promote self-sustaining communities, so that Indians may receive from their Indian forest land not only stumpage value, but also the benefit of all the labor and profit that such Indian forest land is capable of yielding;
 - 5) The retention of Indian forest land in its natural state when an Indian tribe determines that the recreational, cultural, aesthetic, or traditional values of the Indian forest land represents the highest and best use of the land;
 - 6) The management and protection of forest resources to retain the beneficial effects to Indian forest land of regulating water run-off and minimizing soil erosion; and
 - 7) The maintenance and improvement of timber productivity, grazing, wildlife, fisheries, recreation, aesthetic, cultural and other traditional values.



2.0 Purpose

The purpose of this document is to serve as a FMP to ensure that the forested land on the SMSC is managed in an environmentally sensitive, sustainable, and economically viable manner. In addition, this FMP is to ensure that planning is a continuing process, responsive to changing community expectations and expanding knowledge of the forest ecosystem. To achieve this aim, this FMP proposes the use and management of the forest that will be in harmony and balance with the conservation of natural, aesthetic, and cultural values across the whole SMSC.

The SMSC's population is expanding quickly, and will require a changing emphasis on land and natural resource management into the future. FMPs are designed to be revised with changing conditions and objectives. Updates to this FMP are expected as there are changes to the forested land base in response to community needs.



3.0 Goals and Policies

3.1 Goals

Goals for the FMP include:

- Preservation and protection of existing forested areas, including commercial and non-commercial forest resources, including but not limited to timber, woody vegetation, wildlife, fish, lakes, rivers, streams, wetlands, cultural sites, spiritual sites, medicinal sites, and medicinal plants.
- Maintain overall forest quality and aesthetics
- Provide for the possibility of long term monitoring and documentation to track progress and needs
- Provide the opportunities for outreach and education to involve the community in local natural resource management.
- Maintenance of the Forest Management Plan
- Promote natural setting areas for recreational opportunities

3.2 Policy

This FMP does not contradict any existing Tribal Ordinances or Standards, and none have been adopted that affect the implementation of this FMP.

This plan follows 53 IAM, Chapter 2, Section 1.3:

“All Indian forest lands in trust or restricted status shall have a current Forest Management Plan (FMP) which satisfies 25 Code of Federal Regulations (CFR) 163.11 prior to the authorization of activities or expenditure of funds for forest management activities. FMPs shall be covered by an appropriate environmental document in accordance with the National Environmental Policy Act (NEPA).”

There are six activities that can occur on trust or restricted lands without an FMP, including the following:

- Preparation of an FMP (25 CFR 163.11)
- Emergency sale of timber on allotted lands (25 CFR 163.14(b))
- Free use cutting without permit (25 CFR 163.27)
- Fire management measures (25 CFR 163.28(a), (b) and (c))
- Trespass protection and prosecution (25 CFR 163.29)
- Insect and disease control (25 CFR 163.31(b))



In accordance with 53 IAM Chapter 2, this plan will remain current until a revision is necessary to address changes in tribal goals or management policies, or if there is a change in the condition of the forested resources.



4.0 Scoping of Issues, Concerns and Opportunities

Federal, state and Tribal coordination was not conducted for the preparation of this FMP. However, local forestry issues and concerns were provided informally by the Bureau of Indian Affairs (BIA). The SMSC does not utilize its forest resources as a saleable commodity, and as such, this FMP is custodial. This FMP addresses the remaining forest resources on the reservation as in a state of preservation versus actively managed through Silviculture. Staff from the SMSC Land and Natural Resources Department were directed to consult with the BIA contractor to provide local knowledge of forest resources and ancillary information in preparation of this FMP. Some information provided included Geographic Information Systems (GIS) data, classification and descriptions of Tribal forest ecosystems, and supporting documentation such as field guide descriptors, species lists, and survey data. These data provided the contractor with locally sourced knowledge from Biologists familiar with Tribal forest resources. All information provided to the contractor was vetted through Tribal leadership.

4.1 Issues, Concerns and Opportunities

This FMP should implement adaptive management strategies to adjust to a dynamic Tribal culture, leadership, and vision for the future. A primary issue and concern is that Tribal forest resources are highly fragmented and impacted by agricultural and development. The remaining forest resources on the reservation must be utilized with care so that future generations can enjoy them. SMSC Community members value their forest resources by the following:

- Visible forests and other natural areas in and around residential areas
- Recreational opportunities including hiking, hunting and gathering, and wildlife viewing
- Utilizing forests for sweat lodges and other cultural practices
- Pride associated with tapping Sugar Maples for syrup production; a cultural practice centuries old
- Utilizing wood and other fibers to make indigenous products
- Enhanced water quality and water resources
- Concerned about the threats that invasive species pose to native ecosystems



5.0 Regional and Forest Description

5.1 Location

The SMSC reservation is located within the municipal boundaries of Prior Lake and Shakopee, Scott County, Minnesota along the Minnesota River, approximately 27 miles southwest of the Twin Cities metropolitan area (Figure 1).

5.2 Reservation Population

According to the US Census in 2010, the total population of Scott County, MN was 129,928. The population of SMSC is 658, accounting for 0.5% of the population of Scott County (Table 1).

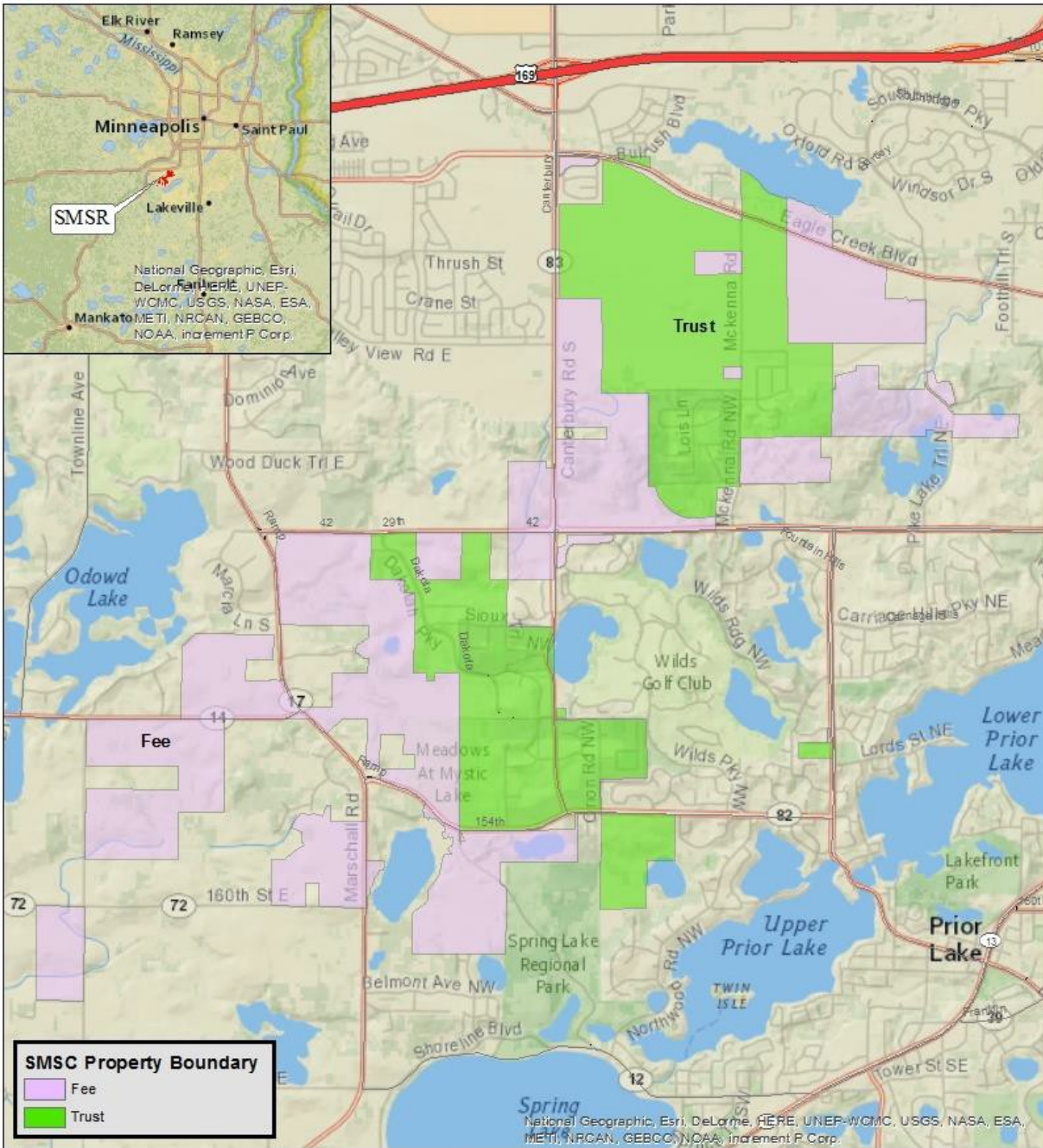
Table 1. Population of SMSC and Scott County

Area	Population (2010 Census)	Percent of Total Scott County
SMSC	658	0.5%
Total Native American	1,072	0.8%
Scott County	129,928	100%

Source: 2010 US Census



**Forest Management Plan
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BIA Contract No. A14PX01949**



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PROJECT:
Forest Management Plan for the
Shakopee Mdewakanton Sioux Community

**Figure 1
Location Map
Shakopee Mdewakanton Sioux
Reservation**

NSA Project #:
665k

Data Sources:
Bureau of Indian Affairs
BISAC Environmental Department
SPCS
Minnesota Department of
Natural Resources

Revision:
December 4, 2014

Final Revision:

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Miles



5.3 Resource Assessment (Regional/Tribal Specific)

The majority of the area around SMSC land is agricultural, but is rapidly developing into residential and commercial land uses. SMSC utilizes most trust land as residential and commercial land uses. Fee land is utilized mainly for agriculture. Forestland, woodlands and undeveloped lands are located throughout the reservation and most commercial and residential infrastructure are located in the central part of the reservation.

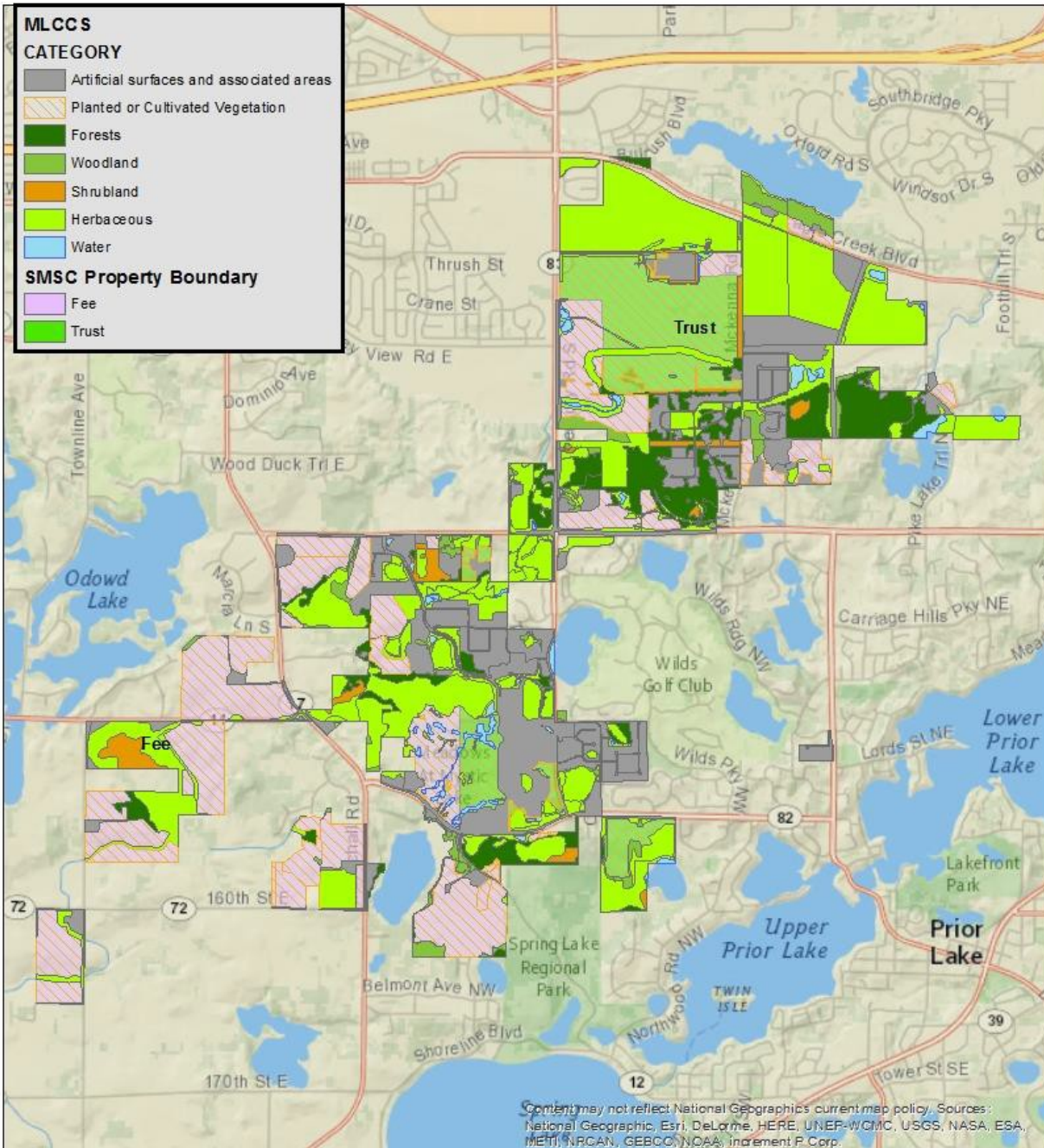
The woodlands on the SMSC have been designated as Category 4, for Forest Management purposes, as defined in IAM Part 53, Chapter 2, Section 1.7A. This definition is: Category 4 – Minimal Forest Land: comprised of an identifiable forest land or woodland area of any size, determined by the Regional Director to be of minimal commercial value at this time. Woodlands are defined by the Bureau of Indian Affairs (BIA) as: forest lands with greater than 10% tree cover comprised of an identifiable forest area of any size determined by the Regional Director to be of minimal commercial value at this time.

Of the 1,821 acres held in trust there are 145.72 acres designated/mapped as forestland and 42.12 acres designated/mapped as woodland according to the Minnesota Land Cover Classification (MLCCS) System Level 1 (Table 2, Figure 2).



Table 2. SMSC Trust Acres

Land Use	Acres	Percent of
Woodland	42.12	2%
Forest	145.72	8%
Other Land Use	1,633.16	90%
Total	1,821.00	100%

Source: MN DNR 2004



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 P.O. Box 1598 Winter Park, Florida 32790 407-622-7264	PROJECT: Forest Management Plan for the Shakopee Mdewakanton Sioux Community	NSA Project #: 605x Data Sources: Bureau of Indian Affairs USGS Environmental Department FWS Minnesota Department of Natural Resources Minnesota Land Cover Classification System	 1:60,000 0 0.25 0.5 Miles
	Figure 2 Vegetation/cover Types Shakopee Mdewakanton Sioux Community		



Pre-settlement habitat coverage was dissimilar to existing coverage. The reservation, and the nearly all of Scott County, resides in an ecological section called the Big Woods. The Big Woods were a large block of deciduous forest in south-central Minnesota. At the time of the Public Land Survey (1853-1856) Scott County consisted of upland deciduous forest, wetland, prairie, and oak openings/barrens (MN DNR 2007). According to the Public Land Survey data, the majority of Scott County was heavily forested with the exception of large swaths of prairie and oak openings/barrens mostly along the Minnesota River valley. There is a high probability that fire-dependent plant communities such as prairie and oak openings/barrens were managed locally by tribal ancestors with the use of fire. It is the only rational explanation as to why such large areas of fire-dependent communities could compete in mature deciduous forests. Furthermore, major disturbance in Big Woods forests is thought to be windthrow, not fire (MN DNR 2005).

More than 75% of the original Big Woods has been converted to agricultural prior to 1970 (MN DNR 2004). When Europeans settled in the area, they converted prairie and oak savanna to agricultural land (small grains, row crops, and grazing) and cleared the forests for fuel wood and building lumber. Later, settlers drained wetlands for more agricultural production. Fire suppression was practiced by the settlers. Therefore, prairie and oak savannas communities diminished. SMSC lands contain no oak savanna or natural prairie, partly as a result of fire suppression.

In 2005, Land Department staff asked Hannah Texler, Regional Plant Ecologist for the Minnesota Department of Natural Resources (MN DNR), to assess the floristic quality of a remnant of the Big Woods forest on the reservation. This forest type was classified as MHs39c – Sugar Maple Forest (Big Woods) in the field guide *Native Plant Communities of Minnesota – The Eastern Broadleaf Forest Province*. Hanna Texler’s forest description is as follows:

The forest canopy is dominated by sugar maple (*Acer saccharum*), often with basswood (*Tilia americana*), and less frequently with red oak (*Quercus rubra*), red elm (*Ulmus rubra*), or American elm (*Ulmus americana*). Sub-canopy species include sugar maple, basswood, bitternut hickory (*Carya cordiformis*), and hackberry (*Celtis occidentalis*). Common shrub species are red-berried elder (*Sambucus racemosa*), gooseberry (*Ribes sp.*), and chokecherry (*Prunus virginiana*). Common herbaceous species include puttyroot (*Aplectrum hyemale*), Solomon’s seal (*Polygonatum sp.*), and wood nettle (*Laportea canadensis*).



Species noted during the October field visit by Hannah Texler are listed in Table 3.

Table 3: 2005 Survey Species List

Scientific Name	Common Name
Canopy Trees	
<i>Acer saccharum</i>	sugar maple
<i>Celtis occidentalis</i>	hackberry
<i>Quercus rubra</i>	red oak
<i>Tilia americana</i>	basswood
Subcanopy Trees	
<i>Acer saccharum</i>	sugar maple
<i>Carya cordiformis</i>	bitternut hickory
<i>Ostrya virginiana</i>	ironwood
<i>Prunus serotina</i>	black cherry
Shrubs	
<i>Rhamnus cathartica</i>	glossy buckthorn*
<i>Ribes cf missouriensis</i>	gooseberry
<i>Sambucus sp.</i>	elderberry
Ground Layer	
<i>Aplectrum hyemale</i>	puttyroot
<i>Athyrium felix-femina</i>	lady fern
<i>Carex pensylvanica</i>	Penn's sedge
<i>Cryptotaenia canadensis</i>	honewort
<i>Galium triflorum</i>	sweet-scented bedstraw
<i>Laportea canadensis</i>	wood nettle
<i>Menispermum canadense</i>	Canada moonseed
<i>Osmorhiza claytonii</i>	Clayton's sweet cicely
<i>Phryma leptostachya</i>	lopseed
<i>Sanicula sp.</i>	black snakeroot
<i>Smilax sp.</i>	carrion flower
<i>Solidago flexicaulis</i>	zig-zag goldenrod
<i>Thalictrum dioicum</i>	early meadow rue
<i>Viola pubescens</i>	yellow violet

Source: Texler 2005

*Glossy buckthorn is a non-native species

Staff from the SMSC Land and Natural Resources Department surveyed trees in forested areas of the reservation that meet a minimum of 15 inch diameter-at-breast-height (dbh) (SMSC Land Department, 2005). Trees meeting 15 inch dbh are generally competing for canopy dominance. The list of species that were found in the Big Woods remnant are as follows:



Basswood (*Tilia Americana*), black cherry (*Prunus serotina*), bur oak (*Quercus macrocarpa*), eastern cottonwood (*Populus deltoides*), eastern red cedar (*Juniperus virginiana*), green ash (*Fraxinus pennsylvanica*), hackberry (*Celtis occidentalis*), red oak (*Quercus rubra*), silver maple (*Acer saccharinum*), sugar maple (*Acer saccharum*), and white oak (*Quercus alba*). Other common species that occur in the sub-canopy but that did not meet the minimum 15 inch dbh include ironwood (*Ostrya virginiana*) and bitternut hickory (*Carya cordiformis*).

The regeneration species in the Sugar Maple/Basswood forest are red, white, and bur oak (white and bur to a lesser degree), bitternut hickory, black cherry, ironwood, sugar maple, basswood, green ash, hackberry, and American elm. Species found in literature, field guides, and field survey work are consistent with Sugar Maple/Basswood forest ecosystem classification.

Invasive species are an increasing threat to culturally important species in the SMSC's forests. Problematic invasive woody species include Siberian elm, common and glossy buckthorn, Amur maple and Russian olive. There are some invasive natives they try to exclude as much as possible including Eastern red cedar, boxelder, cottonwood, willow, and aspen (personal communication Shawn Kelley).

5.4 Forest Cover Types and Composition (Regional/Tribal Specific)

The MN DNR Metro Region, along with other federal, state, regional and local units of government, has developed a natural resource inventory classification system to accurately map all land cover types. The system is unique in that it categorizes urban and built-up areas strictly in land cover terms. For natural resources, the system fully incorporates the Minnesota's Native Vegetation: A Key to Natural Communities, version 1.5 developed by the MN DNR Natural Heritage and Nongame Research Program (NHGRP), and the newly developed U.S. National Vegetation Classification System (NVCS) developed in partnership with The Nature Conservancy and the nationwide state Natural Heritage programs.

The overall objective of the Minnesota Land Cover Classification System (MLCCS) is to standardize land cover identification and interpretation. Typical data needed to identify land cover using the MLCCS includes Minnesota County biological surveys, county soil surveys, National Wetland Inventory, color infrared aerial photographs, digital orthophoto quadrangles and rare features data from the Natural Heritage Information System (MN DNR 2004).

5.4.1 Forestland

Forests on SMSC trust land consist of 145.72 acres designated/mapped as forestland according to the Land and Natural Resources MLCCS data (Table 4). The 145.72 acres of forestland can be

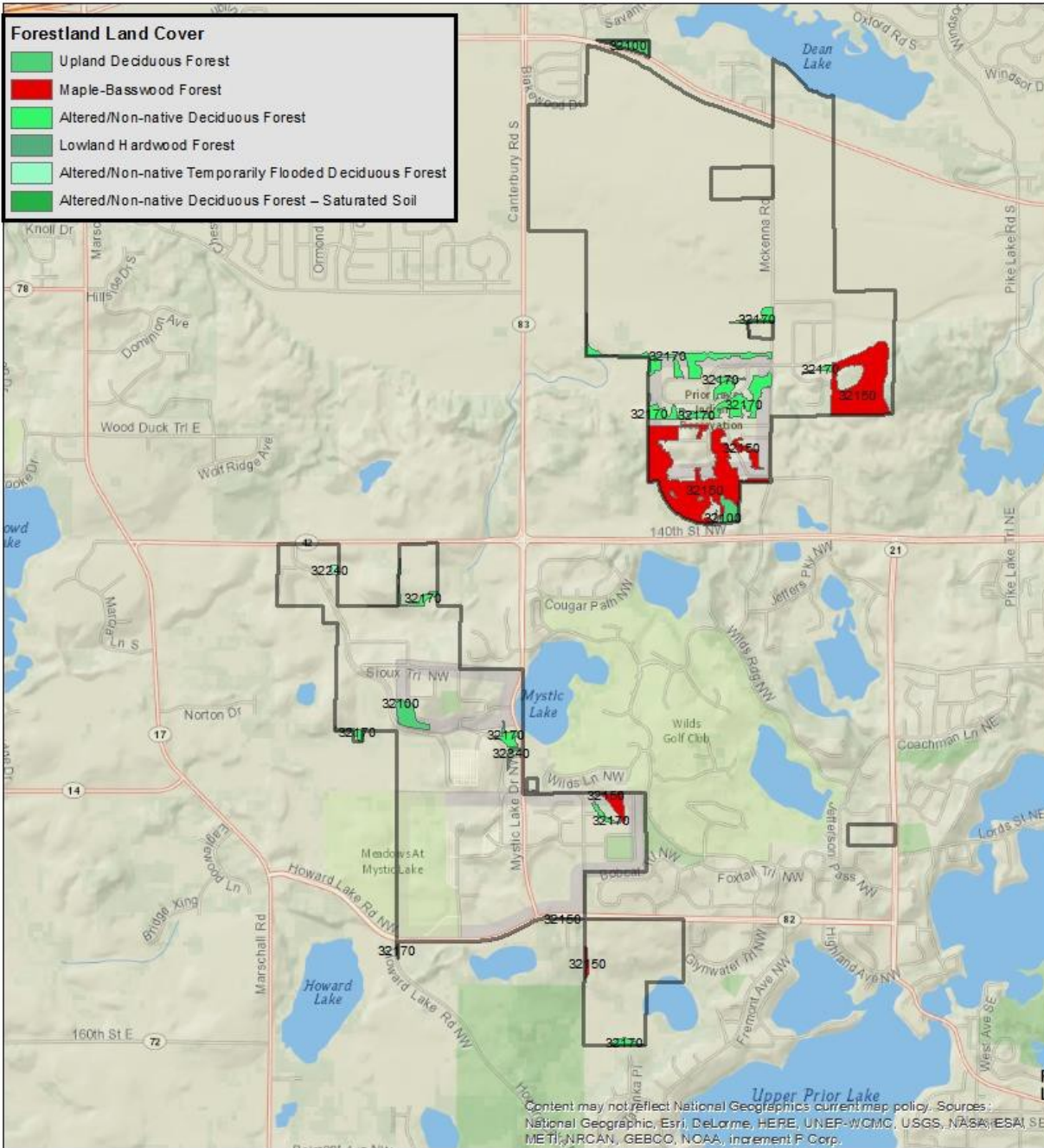


divided into six Level 5 cover types: maple-basswood, altered/non-native, deciduous upland deciduous, altered/non-native saturated soils deciduous, altered/non-native temporarily flooded deciduous, and lowland hardwood (Table 4, Figure 3).




Table 4: SMSC Level 5 Forestland Cover Types

MLCCS Code	Cnt FLD CO	MLCCS Cover Type	Total Acres
32150	6	Maple-Basswood Forest	86.53
32170	15	Altered/Non-Native Deciduous Forest	43.81
32100	3	Upland Deciduous Forest	13.59
32340	1	Altered/Non-Native Saturated Soils Deciduous Forest	0.81
32240	1	Altered/Non-Native Temporarily Flooded Deciduous Forest	0.64
32220	2	Lowland Hardwood Forest	0.34
Total			145.72

Source: MN DNR 2004



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 <p>NSA NATIONAL SYSTEMS ARCHITECTURE ENVIRONMENTAL PLANNING DEVELOPMENT AND DESIGN COMMUNITY IMPROVEMENT SERVICES</p> <p>P.O. Box 1598 Winter Park, Florida 32790 407-622-7264</p>	<p>PROJECT: Forest Management Plan for the Shakopee Mdewakanton Sioux Community</p>	<p>NSA Project #: 665x</p>	 <p>1:45,000</p>  <p>0 0.2 0.4 Miles</p>
	<p>Figure 3 Forestland Map Shakopee Mdewakanton Sioux Community</p>	<p>Date Sources: Bureau of Indian Affairs SDAC Environmental Department NRCS Minnesota Department of Natural Resources</p> <p>Revision: February 6, 2015</p> <p>Final Revision:</p>	



5.4.2 Woodland

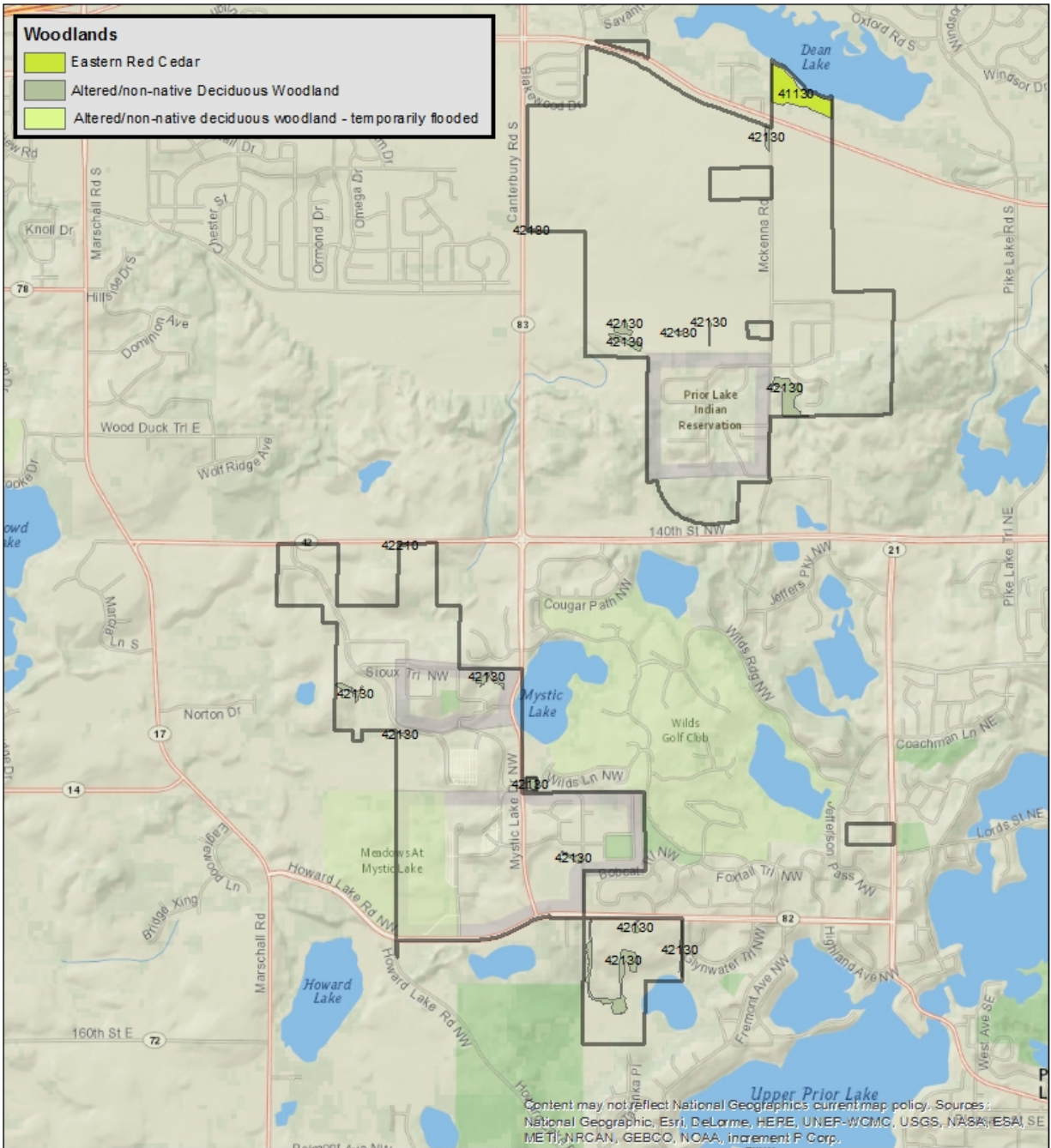
Land and Natural Resources MLCCS data mapped 42.12 acres of woodland which can be broken down into three Level 5 Cover types: altered/non- native deciduous, Eastern red cedar, and altered/non-native deciduous temporarily flooded (Table 5, Figure 4).




Table 5: SMSC Level 5 Woodland Cover Types

MLCCS Code	Cnt FLD CO	MLCCS Cover Type	Total Acres
42130	16	Altered/Non-Native Deciduous Woodlands	27.50
41130	1	Eastern Red Cedar Woodlands	14.48
42210	1	Altered/Non-Native Deciduous Woodlands Temporarily Flooded	0.14
Total			42.12

Source: MN DNR 2004

For additional detailed information on the dominant forest and woodland cover types, Appendix 3 contains excerpts from the Minnesota Land Cover Classification System User Manual for descriptions of each of the major forest and woodland cover types found on SMSC.



 <p>NSA NATURAL SCIENCE AND ENVIRONMENTAL DEPARTMENT COMMUNITY DEVELOPMENT DIVISION</p> <p>P.O. Box 1598 Winter Park, Florida 32790 407-622-7264</p>	<p>PROJECT: Forest Management Plan for the Shakopee Mdewakanton Sioux Community</p>	<p>NSA Project #: 665x</p>	 <p>1:45,000</p>  <p>0 0.2 0.4 Miles</p>
	<p align="center">Figure 4 Woodland Map Shakopee Mdewakanton Sioux Community</p>	<p>Data Sources: Bureau of Indian Affairs BISC Environmental Department NRCS Minnesota Department of Natural Resources</p>	



5.5 Climate (Regional/Tribal Specific)

The Upper Midwest in the United States has a continental-type climate. The area is subject to frequent outbreaks of continental polar air throughout the year, with occasional Arctic outbreaks during the cold season, and occasional periods of prolonged heat during summer when warm air pushes northward from the Gulf of Mexico and the southwestern US (NCDC 2015). The annual average rainfall in the Prior Lake region in Scott County, MN near Jordan is 29.2 inches. A majority of the precipitation in the area comes as snowfall between the months of October and April. The average snowfall is 30.2 inches per year. The annual average low temperature is 33.4 degrees Fahrenheit while the high is 54.6 degrees (Table 6).

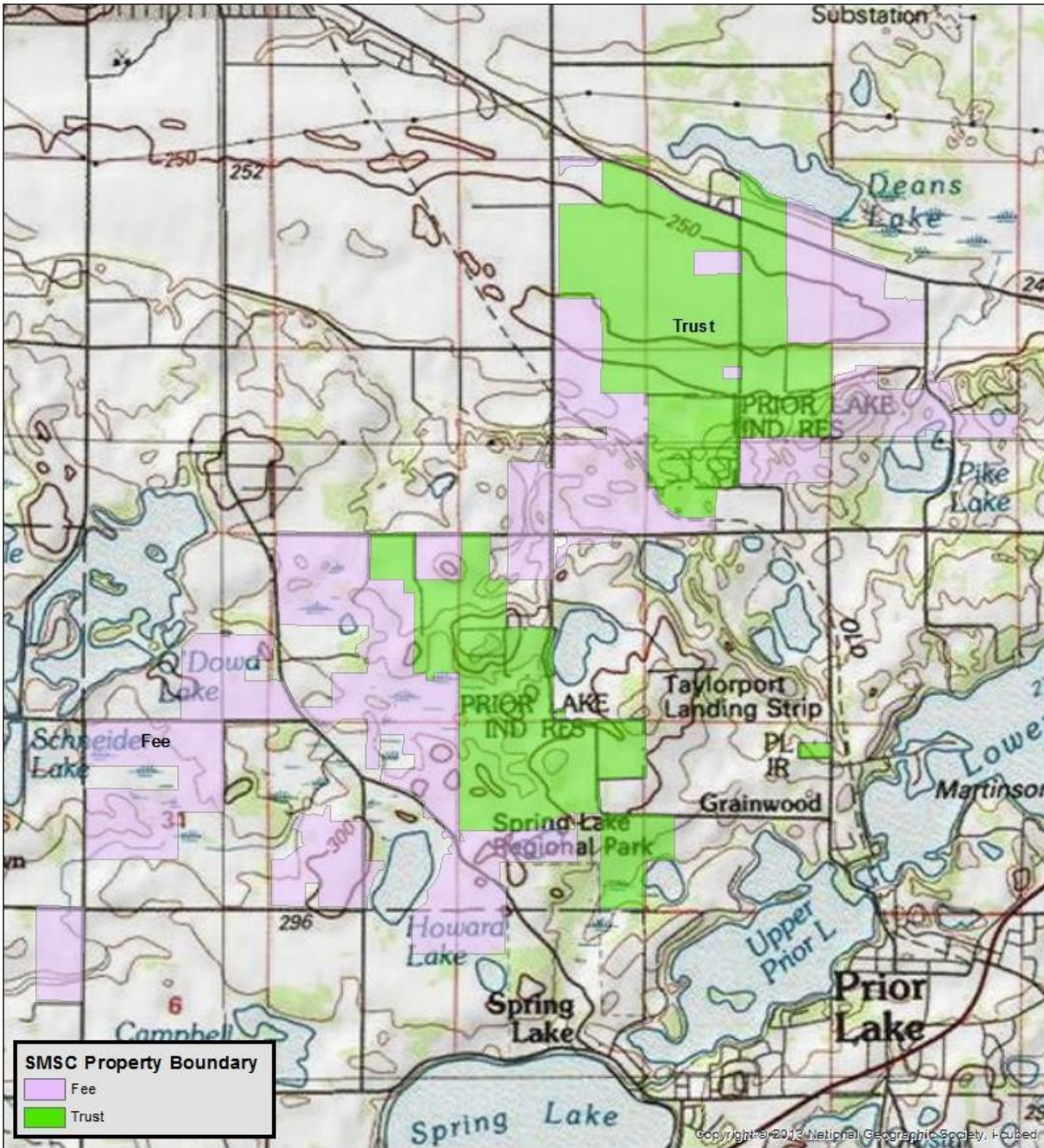
Table 6. Monthly Averages



Climate	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (°F)	22.1	27.7	39.2	57.0	69.7	78.4	82.4	79.8	71.1	59.6	41.3	27.0	54.6
Average Min. Temperature (°F)	2.7	7.9	20.4	34.1	45.7	55.2	59.6	57.2	48.0	37.3	23.5	9.3	33.4
Average Total Precipitation (in.)	0.7	0.7	1.6	2.3	3.6	4.8	4.0	4.2	3.0	1.9	1.4	0.8	29.2
Average Total SnowFall (in.)	7.4	5.2	6.5	1.4	0.0	0.0	0.0	0.0	0.0	0.2	2.8	6.7	30.2
Average Snow Depth (in.)	5.0	6.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	2.0

Source: HPRCC 2013

5.6 Topography and Natural Drainage (Regional/Tribal Specific)

The southern portion of the SMSC land base is located in a primarily hilly terrain. The SMSC’s northern parcels are flatter, then sloping more to the north to the Minnesota River valley. The dominant landscape feature includes the glacial River Warren bluffs on either side of the current Minnesota River (Figure 5). Elevations range between approximately 950-1,000 feet above mean sea level (MSL).



 <p>NSA NATIONAL SYSTEMS ARCHITECTURE ENVIRONMENTAL PLANNING DEVELOPMENT AND DESIGN CONSULTING INTERNATIONAL SERVICES</p> <p>P.O. Box 1598 Winter Park, Florida 32790 407-622-7264</p>	PROJECT: Forest Management Plan for the Shakopee Mdewakanton Sioux Community	NSA Project #: 605x Data Sources: Bureau of Indian Affairs BISC Environmental Department ISCS Minnesota Department of Natural Resources	 1:60,000 0 0.25 0.5 Miles
	Figure 5 Topography Shakopee Mdewakanton Sioux Community		



SMSC lands are located in an undeveloped drainage network, due to landform characteristics. There is little natural drainage remaining because of the rapid urbanization of the vicinity since 1990. Drainage of the SMSC's undeveloped southern parcels goes to local natural wetlands and lakes. Drainage from the northern parcels occurs in intermittent streams that flow generally northward toward the Minnesota River. Some parcels, particularly remaining agricultural lands, drain to road ditches. It is possible that road ditch drainage may eventually flow to the southeast toward Prior Lake located approximately one-half mile away. The SMSC has a water conservation plan that captures stormwater from its developed impervious areas and then uses the captured stormwater to irrigate the SMSC's golf course.

5.7 Soils

According to the United States Department of Agriculture, Natural Resources Conservation Service's (NRCS) Web Soil Survey for Scott County, Minnesota (2014), there are many soil classifications that are present on the trust lands. The dominant soils are Dakota, Estherville, Glencoe, Hayden, Muck, Sparta, Webster, and Waukegan.

Dakota Series is a very deep, well drained soils. Generally made up of loamy alluvium and underlying sandy outwash. The soils are generally found on outwash plains, stream terraces and valleys.

Estherville Series are very deep, sometimes excessively well drained soils. They are loamy sediments over sandy and gravelly outwash. Soils are found on outwash plains, stream terraces, valleys, and moraines.

Glencoe Series is generally made up of loam that may have increased amounts of clay. The pH of this series is neutral in most layers, with only the lowermost, glacial layer being slightly alkaline. The A horizon may reach 60 centimeters in depth and is black silty clay loam. Underlying this may be a 5Y 3/1 clay loam transitional layer that extends from 60 centimeters to 89 centimeters. From 89 to 122 centimeters the sediments are 5Y 4/2 loam. The underlying sediments are 2.5Y 5/2 loam with approximately 5% gravel.

Hayden Series is the most ubiquitous soil series in the county and the project area. It is also quite variable depending on the slope of the land and on the level of erosion that has taken place. Existing erosion on the parcels ranges up to severe. Generally, the series is loamy and moderately to strongly acidic. The top five centimeters is 10YR 3/1 loam, underlain by 18 centimeters of 10YR 4/2 loam. The four layers from 23 centimeters to 109 centimeters are 40YR 5/3 to 10YR 5/4, beginning as fine sandy loam and transitioning to loam around 36 centimeters. A glacial 2.5Y 5/4 loam begins at 109 centimeters.



Muck Soils are very dark, deep, poorly drained, and organic rich sediments that form in swamps, lake plains, flood plains and other water-logged environments. Areas with these sediments may not have standing water throughout the year, and may dry out completely.

Steep Lands have a slope that is greater than 34%. Sediments in these lands range from gravels to clays.

Lester Series is predominantly loam, with some clay-rich variants, and is neutral to slightly acidic. Below 97 centimeters, however, the sediments are slightly alkaline. The top 18 centimeters are 10YR 3/2. This gives way to 79 centimeters of 10YR 4/3 to 10YR 4/4 sediments that represent two layers. From 97 centimeters to 152 centimeters the sediments are 10YR 5/4 with few gravels. Beneath this is glacial material that is 10YR 5/4.

Marsh Areas are generally wet throughout the year, though they may become dry in years of unusually low precipitation.

Sparta Series are very deep, excessively drained soils, in sandy outwash areas impacted by wind.

Webster Soils are loam with varying levels of silt and clay and are neutral in acidity. The uppermost 41 centimeters are black silty clay loam that are followed by 40 centimeters of clay loam that are 5Y 4/1, 5Y 5/2 and 5Y 6/2 in color. From 81 centimeters in depth to 102 centimeters in depth is a transitional layer that is 5Y 6/2 loam. The C horizon is a 5Y 6/2 loam with few gravels. The C horizon and the transitional layer are slightly alkaline.

Waukegan Series are very deep, well drained soils of loess or silty glacial alluvium, with sandy glacial outwash. They are found on glacial outwash plains and valleys.

5.8 Geologic Setting, Mineral and Paleontological Resources

The geology of Scott County is dominated by gently dipping sedimentary bedrock units dissected by valleys. The bedrock is overlain by glacial till with a widely variable thickness.

Bedrock geology of Scott County, MN underlying the SMSC's land base consists of lower Ordovician age dolostone, sandstone and shale of the Prairie du Chien Group. Outcropping along the Minnesota River to the north of Shakopee and underlying the Prairie du Chien Group rocks, are older, late Cambrian Rocks of the Jordan Sandstone, St. Lawrence and Franconia Formations. These rocks are characterized by sandstones and dolostones interbedded with sandstone, shale and siltstones. To the north, the Minnesota River connects a series of lakes that are remnants of ancient river Warren, a glacial river that dominated the area during periods of glaciation in the Wisconsin age. The aquifers are described in more detail in Section 5.9.1 Ground Water.



The geologic units beneath the Shakopee Reservation include thick glacial sediments over six bedrock units. The bedrock units are in descending order, the Prairie du Chien Group, the Jordan Sandstone, the St. Lawrence Formation, the Franconia Formation, the Ironton and Galesville Sandstones, and the Eau Claire Formation of Early Ordovician and Late Cambrian age.

5.9 Water Resources

Water resources and water quality is a priority for SMSC. The community has worked to construct its own Water Reclamation Facility, and utilizes a reverse osmosis system to avoid softening the water used for the community public water supply. In addition, SMSC is active in water quality monitoring and wetland restoration, and has established measures to limit potential impacts to water resources through permitting construction projects that meet or exceed federal Clean Water Act standards.

5.9.1 Ground Water

Ground water is the source of all domestic water used on the Shakopee Reservation, including water for fire protection. The SMSC is considering development to satisfy a variety of community development needs and that potential development will increase the SMSC's need for ground water or for more water reuse and conservation efforts.

The Jordan Sandstone Aquifer is the most widely used aquifer for water supply in Scott County, possibly in the entire Minneapolis-St Paul metropolitan region. The Jordan Aquifer is the source for one of two of the SMSC's water supply production systems. Rapid cumulative development in Scott County increased use of this aquifer dramatically over the past 10 to 20 years. It is the shallowest aquifer capable of producing large volumes of high quality water. Based on aquifer testing completed by the SMSC and the USGS during 1995, the Jordan Aquifer is a leaky confined unit.

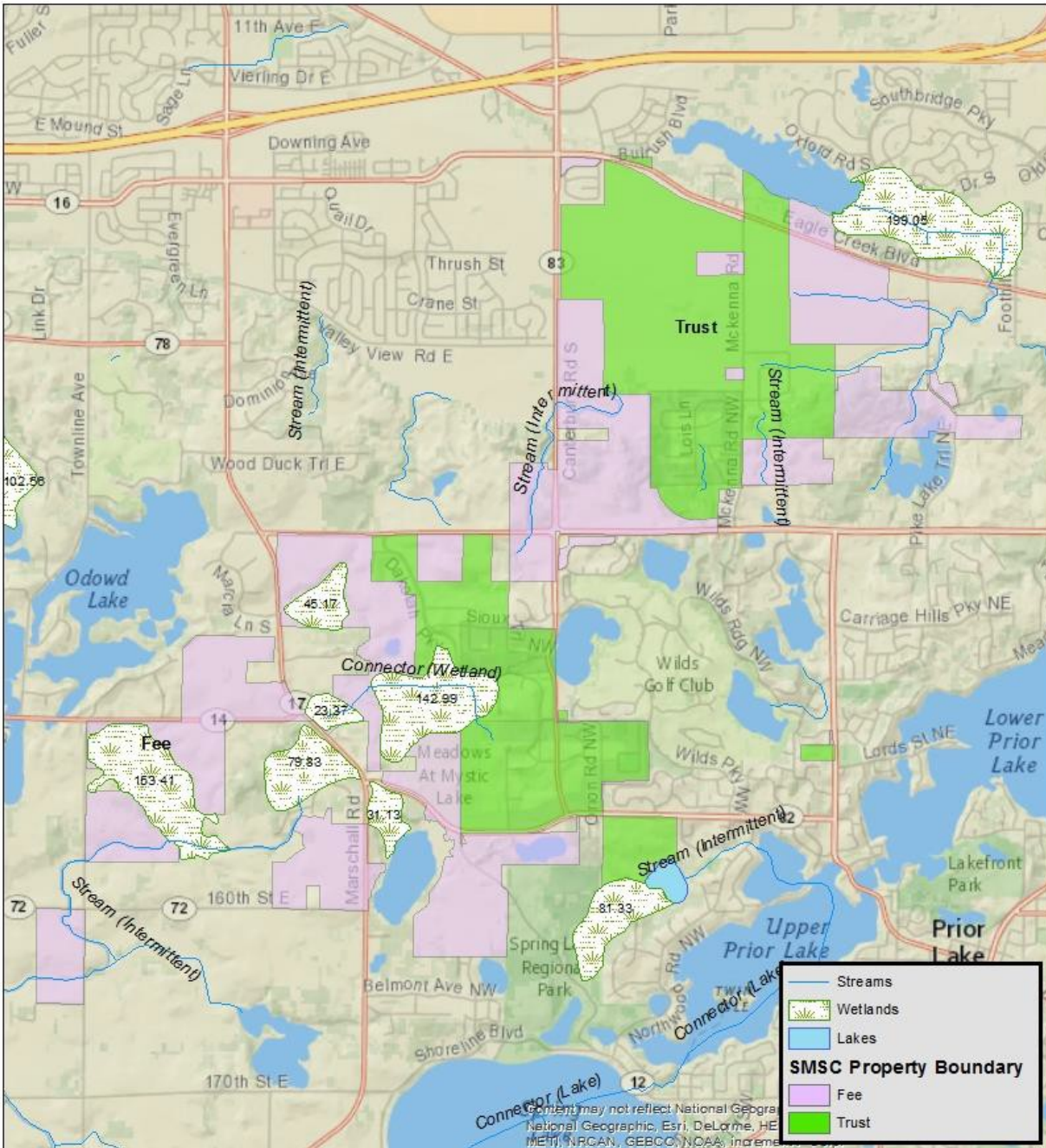
The Ironton-Galesville Aquifer is the next major aquifer below the Jordan Aquifer. It is thinner and generally produces lower volumes of water than the Jordan Aquifer, but can be an adequate water source. It is confined, with adequate protection from local contamination by vertical infiltration. Groundwater flow directions are to the north-northwest. The major risk to this aquifer results from open wells.

The deeper Mt. Simon-Hinckley Aquifer is not heavily used in Scott County. It is confined and well protected from surface contamination. Groundwater flow directions are to the north-northwest. In State of Minnesota jurisdictions, this aquifer is reserved for future use and as an emergency water supply by statutory declaration. The SMSC has respected this policy to date and does not intend to tap this aquifer unless there are no feasible alternatives.



5.9.2 Wetlands and Surface Waters

Wetlands and other Surface Waters: The SMSC’s land base is located in the Lower Minnesota River Watershed. Intermittent and year-rounds streams drain the SMSC lands. The SMSC land base contains a wide variety wetlands. Where possible, the SMSC is working to restore wetlands on its lands, including wetlands drained historically for agriculture. Refer to the SMSC Wetland Management Plan for details. Figure 6 illustrates the wetlands and surface waters found on SMSC.




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PROJECT:
 Forest Management Plan for the
 Shakopee Mdewakanton Sioux Community

**Figure 6
 Water Resources
 Wetlands (acres), Streams, & Lakes
 Shakopee Mdewakanton Sioux
 Community**

NSA Project #:
 605x

Data Sources:
 Bureau of Indian Affairs
 USGS Environmental Department
 USDA
 Minnesota Department of
 Natural Resources
 Minnesota Land Cover Classification System

Revision:
 February 6, 2015

Final Revision:



1:60,000



Miles



5.10 Wildlife and Threatened/Endangered Species

The SMSC Land and Natural Resources Department staff conducted presence/absence studies for birds, mammals, amphibian, and reptiles on SMSC land from 2003 - 2008. During the surveys, 252 species were found on or suspected to occur on SMSC lands. In accordance with Section 7(c) of the Endangered Species Act, a current list of threatened or endangered species from the US Fish Wildlife Service (FWS) Midwest Region's Minnesota County Distribution of Federally Listed Endangered, Threatened, Proposed and Candidate Species was consulted. The only species listed by the FWS that is known or suspected to occur in Scott County is the northern long eared bat. No occurrences of the northern long eared bat, or any other listed species are known at SMSC.

Table 7. Protected Species found on the SMSC

Category	Species	Status*
Mammal	Northern Long Eared Bat (<i>Myotis septentrionalis</i>)	T

* T- Threatened, E- Endangered, C- Candidate

Source: www.fws.gov/midwest/endangered/mammals/nlba

Under the limited actions available in a custodial FMP, there is little concern for impacts to threatened and endangered species. If actions are proposed as a result of this FMP that may have impacts to individuals or habitat for species listed with the FWS, an interdisciplinary planning process will be initiated, and consultation consistent with Section 7 of the Endangered Species Act will be completed as necessary.

5.11 Land Use (Regional/Tribal Specific)

The Tribal government has a specific land use plan that projects future planning. This plan has detailed information regarding the Tribe's vision toward their future. Refer to the Tribal Land Use plan for further detail.

5.12 Culture and History

Bolton and Menk, SMSC's engineering contractor, prepared a main report for a number of properties in the SMSC's land base, plus individual Site Reports for specific parcels in the SMSC land base.

Traditional Cultural Properties: SMSC staff stated there are no known Traditional Cultural Properties (TCP's) on the subject property. The closest TCP is Maka Yusota, a surface water feature also known as Boiling Springs. It is located approximately 3.2 miles northeast of the subject property.



Section 106 Consultation Process: To help prevent potential adverse impacts to cultural resources from federal actions, Congress created Section 106 of the National Historic Preservation Act (NHPA) 106 U.S.C. 470, as amended, directs federal agencies like BIA to integrate preservation of valuable cultural and historic properties into federal land-use decisions.

The term “historic property” has a specific meaning for purposes of Section 106 compliance. The NHPA created the National Register of Historic Places (National Register), a list of sites which satisfy specific eligibility criteria. NHPA defines historic properties as those cultural resources that are listed, or eligible to be listed, on the National Register. Historic properties can include traditional cultural properties, as well as religious and archeological resources that meet the NHPA eligibility criteria.

Under a custodial FMP, few actions are approved. However when these actions are initiated, interdisciplinary review will include the cultural resources specialist or Regional Archeologist to incorporate consultation with the Tribal Historic Preservation Officer or State Historic Preservation Officer as necessary.



6.0 Forest Protection

6.1 *Ordinances, Standards and Specific Objectives for Forest Protection*

The Forest Management Plan will cover all aspects of forest protections comply with Tribal Ordinances and Standards that pertain to the management of these resources.

6.2 *Other Federal Mandates*

Applicable Federal mandates:

- *National Indian Forest Resources Management Act (NIFRMA)*
- *National Environmental Policy Act (NEPA)*
- *Clean Air Act*
- *Clean Water Act* (see Section 5.9.2)
- *Endangered Species Act* (see Section 5.10)
- *National Historic Preservation Act* (see Section 5.12)
- *Archaeological Resources Protection Act*
- *Native American Graves Protection and Repatriation Act*
- *Pollution Prevention Act.*

6.3 *Fire Protection*

This plan references the current Fire Management Plan document: Shakopee Mdewakanton Sioux Community Wildfire Management Plan FY 2001 - FY 2011.

Wildfire can have a significant influence on the natural and human environment. Over the last 100 years, wildland fire has been excluded from SMSC and prescribed burning has been limited. The Fire Management Plan plan outlines goals and objectives for suppressing wildfire on SMSC land, and introduces prescribed burning as a habitat management tool under controlled conditions. This plan is designed to meet Tribal habitat management goals. This approved plan also details management options, and enables the Shakopee Mdewakanton Sioux Community (SMSC) to apply for federal funding to implement wildfire management treatments.

The critical issues are:

- Suppress fire to protect life, property and traditional and cultural resources.
- Promote fire prevention to better protect residents and property.
- Introduce prescribed fire to restore and manage prairie and oak savanna ecosystems
- Provide the ability to acquire national funding to support Tribal wildfire management goals.



The plan provides general direction for the use of wildfire as a management tool. Before using fire, each individual project or treatment will have a detailed action plan (burn plans or treatment proposals) approved by the Business Council and funded on an individual basis. All projects will be National Environmental Policy Act (NEPA) compliant prior to implementation.

The Fire Management Plan will be amended as needed to address the needs of the SMSC (SMSC 2001-2011).

6.4 Emergency Rehabilitation

In the event of a wildfire on Tribal land, the Regional Office and/or the appropriate regional or agency Branch of Forestry and Wildland Fire Management will determine if a DOI Burned Area Emergency Stabilization and Rehabilitation Plan should be developed for the burned area. Guidelines for such plans are covered in 90 IAM Chapters 3.2.C and in the DOI Burned Area Emergency Stabilization and Rehabilitation Handbook.

6.5 Insect and Disease Protection

The Tribe and BIA will cooperate with State and Federal efforts to monitor the health of the forest, which includes monitoring the outbreak and spread of diseases and damaging insect populations. BIA foresters will report any insect and disease problems to the Federal or State Forest Pest Management Specialist.

6.6 Trespass

Fire trespass can be divided into three types: 1) accidental or unintentional, 2) out of control brush fire burning or 3) negligent and willful arson. Timber trespass can be divided into three general types: innocent, inadvertent, and willful. The agency forester is responsible for reporting trespass and all trespass incidents should be reported directly to the local sheriff.

The Regions and Agencies will follow the guidance and standards that pertain directly to the protection of these resources, P.L. 83-280, 53 IAM Chapter 7, and the Indian Forest Management Handbook Volume 7 which provides the Tribe with the means to prosecute trespass cases.

6.7 Documentation, Monitoring and Records

Documentation and records for all timber sales, commercial permits, free-use permits, and forest development activities are kept by BIA. Copies of these documents and records are sent to the USBIA Midwest Regional Office.



7.0 Forest Land Management

7.1 Ordinances, Standards, and Specific Objectives

The statutory authority for management of Indian Forest units is 25 United States Code (USC), Parts 2, 5, 9, 13, 406, 407, 413, 415, 466, and 3101-3120. The BIA is committed to the principles of sustained yield management, as required by Part 163, Subpart B 163.11, *Forest Management Planning and Sustained Yield Management*, of the General Forest Regulations in Title 25, Code of Federal Regulations.



8.0 Planning, Coordination and Communication

8.1 Annual Allowable Cut and Harvest Schedule

Because this is a Custodial plan, an Annual Allowable Cut (AAC) is not necessary at this time. Both AAC and Harvest Schedules may be developed at a later date. A forest inventory is required prior to thinning, commercial harvest, or certain other management actions. No harvest schedule will be required under this plan.

8.2 Forest Development

Traditional Forest Development actions are not typically consistent with a custodial forest management plan. There may be some instances where it is applicable, such as in association with forest management actions to address insect and disease control. In such instances, a forest development program may be undertaken on a case-by-case basis to deal with the changing composition of the reservation forest.

If the need for additional Forest Development arises from a change in the goals and objectives, the Forest Management Plan can be revised to include the updated needs.

8.3 Environmental Assessment

A Categorical Exclusion (CE) may be developed for this FMP. “Categorical exclusion” means the development of this FMP does not individually or cumulatively have a significant effect on the human environment and have been found to have no such effect in procedures adopted by a Federal agency. Therefore, neither an Environmental Assessment nor an Environmental Impact Statement is required (40 CFR 1508.4).

Given that no extraordinary circumstances apply, this FMP is considered under the environmental analysis for Department of Interior category 40 CFR 46.210(f) for routine and continuing government business. This FMP is for custodial management of SMSC trust lands. All actions proposed with this FMP are already allowed under 53 IAM Chapter 2, section 1.6(c).



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APPENDICES



***Appendix 1 - 1999 Assistant Secretary Memorandum
FPM's***



JUN-27-2008 FRI 01:48 PM
JUN-27-99 FRI 14:22 FAX

FAX NO.

--- BOFRP

P. 03/16
002



United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

APR 9 1999

Memorandum

To: All Area Directors

From: ACTING Assistant Secretary - Indian Affairs

Subject: Forest Management Plans

In view of the attached Solicitor's opinion and recognizing the loss of staff and corporate memory brought on by the 1995-1996 reduction-in-force, it is prudent to revisit the 1991 initiative to finalize forest management plans on all forested reservations.

Beginning immediately, line officers having the non-delegable authority to authorize forest product sales for all entities including compact and contract tribal operations will:

1. Once again advise each tribe and agency, with forest lands, of its specific planning objectives and current status toward meeting those objectives. P.L. 101-630, Section 305 (b)(2) defines the Secretary's management objective as developing and implementing forest management plans for regulation of Indian forest lands.
2. Meet with each of the tribes and agencies that do not have approved plans to discuss the importance of this initiative and assist in completion of all segments of the forest management plan where feasible.
3. Where completion of a new forest management plan is not eminent, an interim plan will be developed or approval of an extension of an existing plan will be sought immediately.
4. Require implementation of forest management plans on an interim basis in instances where a forest management plan has been prepared, but not approved because integrated resource management planning activities have not been completed.
5. Strongly encourage prioritized scheduling of all funds (including forest management deductions) to produce an approved interim forest management plan and ultimately a final management plan as soon as possible.



6. The development of an interim plan should be the initial emphasis where a plan does not exist. An interim plan will be an abbreviated basic forest management plan based on available data and information. At a minimum this will include a harvest schedule or qualified cutting level, special mitigation factors, discussion of environmental compliance adherence, approval signatures and expiration date. In no case will the present annual allowable cut increase without an approved recent analysis indicating same.

7. Provide the Central Office (BOFRP) with copies of interim and final forest management plans as soon as completed.

8. All line officer approval of any contract involving harvest of trust forest products will be contingent on an approved plan or BIA/Tribal jointly signed interim plan leading to completion of the final forest management plan by a specific realistic date. Area Offices will be responsible for assuring this compliance.

We all have been attempting to achieve this management objective for years and that effort and diligence is recognized. But, as emphasized by this opinion, we must redouble our efforts and reverse the documented downward trend in management plan completion. I am requesting you make this one of your highest priorities in Indian forest management.

Attachment



***Appendix 2- BIA Forest Management Plans Memo Solicitor's Opinion
1999***



OCT-30-2001 14:07

BIA-EAO

703 235 4353 P.04/09



IN REPLY REFER TO:

United States Department of the Interior

OFFICE OF THE SOLICITOR
Washington, D.C. 20240

APR 02 01 20 30

Mail Stop 6456

APR 7 1999

Memorandum

To: Director, Office of Trust Responsibilities

From: Associate Solicitor - Division of Indian Affairs *David Jordan*

Subject: Bureau of Indian Affairs - Forest Management Plans

This is in response to your request of January 20, 1999, asking our opinion concerning Forest Management. Specifically, you inquired into whether this office concurs with the opinion of the Office of the Solicitor, Pacific Northwest Region, dated November 13, 1998 (BIA.PN.3526); and whether the same standards for forest management plans (FMP's) imposed on the Bureau must be imposed on self-governance tribes. We will answer these questions in turn.

1) *Must an approved FMP be in place before the harvesting of Indian trust timber?*

As the Office of the Regional Solicitor correctly determined, an approved FMP must be established for Indian trust timber. Under 25 C.F.R. § 163.11(a), an appropriate FMP "shall be prepared and revised as needed for all Indian forest lands." Use of the word "shall" indicates a mandatory duty, requiring the preparation of a FMP for all Indian forest lands.

Also under 25 C.F.R. § 163.11(a), FMP's "shall be based on the principle of sustained yield management and objectives established by the tribe and will require approval by the Secretary." Under § 163.11(c), the harvest of forest products will be accomplished using these principles of "sustained yield management" set forth in a FMP as required by § 163.11(a). Thus, the Office of the Regional Solicitor was correct in determining that an approved FMP is a prerequisite to the harvest of Indian trust timber.

However, while completion of a FMP is mandatory, failing to harvest and sell timber because such a plan has not been completed may be inconsistent with the BIA's trust responsibility. The BIA has both a statutory responsibility to prepare the plans, whether it manages a forest for a tribe, or contracts or compacts with a tribe for forestry management, as well as a trust responsibility to harvest timber at the appropriate time to maximize the return from the trust resource. The BIA has the authority and the responsibility to ensure that FMP's are actually completed and implemented.

#6270 P.004

BIA E&M BOPRR

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BIA-EAO

703 235 4353 P.05/09

Although the absence of an FMP is not a reason not to harvest when appropriate, the longer the BIA continues to harvest without an FMP, the more risk it runs of either harvesting in a manner that does not achieve sustained yield, or in a manner that is too conservative. Therefore, the adoption of FMP's should be a high priority.

2) *Should the FMP standards and objectives as set forth in section 3104(b) be required of Self-Governance tribes as this is a statutory mandate for managing trust forest lands imposed by P.L. 101-630?*

The FMP standards and objectives for managing trust forest lands as set forth in the National Indian Forest Resources Management Act (NIFRMA), 25 U.S.C. § 3101 *et seq.*, are statutorily mandated in a manner to be consistent with the Secretary's trust responsibilities and cannot be redesigned by a Tribe under a self-determination contract or self-governance compact. See 25 U.S.C. §§ 3101(2), 3102(1), 3120. The Secretary may decline a self-determination contract proposal or refuse to enter into a self-governance compact if the FMP standards and objectives are not assured. 25 U.S.C. §§ 450f(a)(2)(B), 458cc(a), 458cc(b)(9), 458ff(b).

It is our opinion that from the language of the statute, the purpose of the statute, the legislative history and the continued trust obligations of the United States, the statutory FMP standards as set forth in section 3104(b) are required by Tribes when they undertake forest management activities through a self-determination contract or self-governance compact. See *Nat'l Labor Relations v. Lion Oil*, 352 U.S. 282, 288 (1957). ("In expounding a statute, we must not be guided by a single sentence or member of a sentence, but look to the provisions of the whole law, and to its object and policy.")

NIFRMA provides that the Secretary "shall undertake forest land management activities on Indian forest land, either directly or through contracts, cooperative agreements, or grants under the Indian Self-Determination Act." 25 U.S.C. § 3104(a). It further provides that "forest land management activities undertaken by the Secretary shall be designed" to achieve certain objectives. *Id.* at 3104(b) (emphasis added). One of the objectives is to develop, maintain and enhance Indian forest land in accordance with the principles of sustained yield and the standards and objectives as set forth in forest management plans. *Id.* at 3104(b)(1). The definition of forest management plan is set forth in section 3103(5).

The language of NIFRMA indicates that Tribes are to undertake management activities using the same statutory standards as when the Secretary undertakes management activities. Section 3104(a) says the "Secretary shall undertake forest land management activities on Indian forest land, either directly or through contracts...." Section 3104(b) says "activities undertaken by the Secretary shall" be in accordance with the standards and objectives in the FMP. Reading the two sections together, it is clear that the word "undertaken" includes when the Secretary does it directly or through contract and compacts. See *Sullivan v. Everhart*, 494 U.S. 83, 89 (1990) (statutory provisions must be read together as a whole). Congress could have easily exempted

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contractors from the requirements set forth in section 3104(b), because they were explicitly mentioned in section 3104(a), but it did not.

Moreover, NIFRMA is very clear that the United States has a trust responsibility toward Indian forest land. 25 U.S.C. § 3101(2). The Act does not relieve the Secretary of his responsibility once a tribe contracts or compacts for the activities. To the contrary, it specifically states "[n]othing in this...[Act] shall be construed to diminish or expand the trust responsibility of the United States towards Indian forest lands, or any legal obligation or remedy therefrom." 25 U.S.C. § 3120. Congress made a specific finding that "existing federal laws do not sufficiently assure the adequate and necessary trust management of Indian forest lands." 25 U.S.C. § 3101(3). Thus, NIFRMA was passed to improve the assurances necessary for the United States to meet its trust obligations. In order for the Secretary to assure adequate protection of the trust resource, the FMP standards as set forth in the Act apply to Tribes when they undertake the management activities themselves.

The legislative history confirms this reading. "Subsection (b) sets forth the specific objectives which are to guide Federal *and tribal management* of Indian forest lands..." H. Rept. No. 101-835, 101st Congr., 2nd Sess. (1990) (*emphasis added*).

In addition, we can look to the Indian Self-Determination Act (ISDA) itself to decide whether NIFRMA applies to tribes and tribal organizations. There is no explicit provision in the ISDA that exempts contractors from complying with NIFRMA.¹ In fact, section 105(j) states that a tribe or tribal organization may propose to redesign a program, "including any *non-statutory* program standard." 25 U.S.C. § 450j(j) (*emphasis added*). A plain reading of this provision

¹ It could be argued that section 105(a) of the ISDEA exempts tribes and tribal organizations from NIFRMA. Section 105(a) states:

Notwithstanding any other provision of law, subject to paragraph (3), the contracts and cooperative agreements entered into with tribal organizations pursuant to section 102 shall not be subject to Federal contracting or cooperative agreement laws (including any regulations), except to the extent that such laws expressly apply to Indian tribes.

25 U.S.C. § 450j(a). However, the legislative history makes clear that "federal contracting laws" does not include social, economic or environmental laws. Instead, section 105(a) restricts the applicability of FAR and other acquisition laws in the construction context in an effort to remove the administrative and procedural burdens imposed by the federal acquisition process. 103rd Congr., 2d Sess., 140 C.R. H11143, October 6, 1994. It is our opinion that section 105(a) does not restrict the application of the NIFRMA to tribes and tribal organizations operating under a self-determination contract or self-governance compact because NIFRMA qualifies as an environmental or economic law.



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indicates that statutorily based program standards, such as the FMP in section 3104(b) of NIFRMA, are not subject to redesign. Further, the ISDA specifically states that "[n]othing in this Act shall be construed to diminish the Federal trust responsibility to Indian tribes, or Indians with trust allotments." 25 U.S.C. § 458ff(b). See also *id.* at 450k(d), 450n(2).

If two statutes can coexist, courts are bound to find them both effective. *Morton v. Mancari*, 94 S.Ct. 2474 (1974). The Supreme Court in *Mancari* stated "the courts are not at liberty to pick and choose among congressional enactments, and when two statutes are capable of coexistence, it is the duty of the courts, absent clearly expressed congressional intention to the contrary, to regard each as effective." *Id.* at 2483. It is our opinion the ISDA and NIFRMA do not directly conflict, are capable of coexistence and each must be read as effective.

It is our opinion that the regulations promulgated under NIFRMA, and set forth in 25 C.F.R. Part 163, cannot be waived because it is prohibited by federal law.

As a general matter, regulations that are applicable to the Secretary when he administers programs, services, functions and activities (PFSA's) are also applicable to tribes and tribal organizations when they assume the administration of the PFSA's under a self-determination contract, grant, or self-governance compact.² However, the Secretary has general authority to waive all regulations under Chapter I of Title 25 of the C.F.R. where permitted by law and if he finds that such waiver or exception is in the best interest of the Indians. 25 C.F.R. § 1.2. For self-governance tribes, the Secretary can deny a waiver request only upon a specific finding by the Secretary that such waiver is prohibited by federal law. 25 U.S.C. § 458cc(i)(2).

Because the FMP statutory standards set forth in NIFRMA apply to Tribes undertaking forest management activities under a self-determination or self-governance compact and because the standards are necessary to ensure the Secretary's trust obligations, it is our opinion that a waiver is prohibited by federal law.³

If we can be of any further assistance, please do not hesitate to contact us at (202) 208-4388.

² Some federal statutes and regulations, however, are explicitly exempt from being applicable to P.L. 93-638 contracts, grants, and compacts. See 25 U.S.C. § 450j(a)(3). Also, internal policies, guidelines or manuals, such as the Interior Departmental Manual, are statutorily inapplicable to P.L. 93-638 contractors. *Id.* at Section I, 450f(b)(11)(model agreement). None of the statutory exemptions are relevant to this opinion.

³ An additional reason for not waiving the regulations under Title I is that it would not be in the Tribes' best interest since the trust assets are protected using the principles of sustained yield management and the standards and objectives set forth the FMP.



Appendix 3

Minnesota Land Cover Classification System Descriptions for Dominant Forest and Woodland Cover Types at SMSC

32150 Maple-Basswood Forest

Key-based definition: An upland deciduous forest where sugar maples, basswoods, and elms dominate the canopy or where they dominate along with oaks (with <60% oak cover). Conifer trees and club mosses are absent, yellow birches are rare, and spring ephemerals are common.

MN DNR Natural Heritage description: Maple-Basswood Forest is a mesic community of the deciduous forest-woodland zone, especially the portion from southeastern to west-central Minnesota. It also occurs occasionally in the conifer-hardwood forest zone and as isolated stands in the prairie zone on sites well protected from fire.

The tree canopy of Maple-Basswood Forests is dominated mostly by basswoods, sugar maples, and (formerly) American elms. Other mesic trees, such as slippery elms, northern red oaks, bur oaks, white ashes, and green ashes, are sometimes dominant locally. The canopy is very dense, with tall, straight, relatively narrow-crowned trees. The understory is multi-layered and patchy. It is composed of saplings and seedlings of the canopy species (especially sugar maple), along with American hornbeam, ironwood, bitternut hickory, pagoda dogwood, and leatherwood.

Because the tree canopy permits so little light to reach the forest floor during the summer, Maple-Basswood Forests have a suite of forb species that bloom, produce seeds, and die back in May and early June before tree leaves are fully developed. These species--the spring ephemerals and the winter annuals--include spring beauties (*Claytonia spp.*), Dutchman's breeches (*Dicentra cucullaria*), trout-lilies (*Erythronium spp.*), and cleavers (*Galium aparine*). Other herbs, such as the sedge *Carex pedunculata*, bottlebrush grass (*Hystrix patula*), and bearded short-husk (*Brachyelytrum erectum*), are commonly present in the groundlayer but usually not abundant.

Maple-Basswood Forest occurs only on protected sites, where catastrophic forest crown fires were historically rare. Across most of its range, the community develops most commonly on well-drained loamy soils that lack mottling or other evidence of water-table levels within the tree-rooting zone. In north-central Minnesota, Maple-Basswood Forests develop on soils with fine-textured subsurface layers that slow the downward movement of water and nutrients.

Maple-Basswood Forest is a late-successional community, tending to succeed Mixed Oak Forest (and other forest types) on mesic sites. It is self-perpetuating in the absence of catastrophic disturbance and climate change because the dominant tree species readily reproduce by gap-phase replacement. The very shade-tolerant sugar maple seedlings and saplings, especially, may exist in a suppressed state in the understory for many years until the death of a mature tree when one or a few grow rapidly into the canopy gap. Maple-Basswood Forests often develop into old-growth forests, because catastrophic disturbances are rare in the community and because the dominant tree species are long-lived (> 250 years). The trend in most stands of Maple-Basswood Forest is toward greater dominance by sugar maple.



Maple-Basswood Forest grades into Oak Forest where the frequency of fire increases in the landscape. It grades into Lowland Hardwood Forest in low areas where elms and ashes become more abundant and where the water table is at least seasonally within the tree rooting zone. Conifers are absent or uncommon in most of the range of Maple-Basswood Forest, but grow with sugar maple, basswood, and other mesic species in northeastern and southeastern Minnesota. The mixed stands in northeastern Minnesota are classified as Northern Hardwood Forest. In southeastern Minnesota they are classified as White-Pine Hardwood forest.

Undisturbed stands of Maple-Basswood Forest are rare. The soils on which the forest grows are suitable for cultivation so much of the community has been cleared for cropland.

Remaining stands have often been grazed or selectively cut for lumber or fuelwood. Heavy grazing causes compaction of the soils and the almost complete destruction of the understory, resulting in even-aged woodlots with large mature trees in the canopy, little reproduction, and few native shrubs and herbs. Selective logging of the less shade-tolerant species (northern red oak, white oak, bitternut hickory, and walnut) has been common since European settlement, and has hastened dominance by sugar maple and basswood in many stands. The composition of the community has also been altered throughout its range by Dutch elm disease, which has killed most of the mature elm trees, and in many stands by the loss of interior groundlayer species following forest fragmentation. Common buckthorn and Tartarian honeysuckle sometimes invade stands of Maple-Basswood Forest, but rarely attain the high densities they may have in Oak Forest. Maple-sugaring is one human activity associated with Maple-Basswood forests that appears to have little impact on the structure and composition of the community, as some of the best remaining tracts of Maple-Basswood Forest have long histories of maple sugar production.

There are five recognized sections of Maple-Basswood Forest (Southeast, Big Woods, East Central, West Central, and Northern). Subtypes likely will be recognized along a moisture gradient, following analysis of plot data.

32170 Altered/Non-Native Deciduous Forest

Key-based definition: This upland deciduous forest is not dominated by oaks, aspens, balsam poplars, paper birches, yellow birches, sugar maples, or basswoods. Boxelder, green ash, and cottonwood are typical canopy dominants, sometimes together and sometimes singly. Elms are common associates. Hackberries, aspens, oaks, and basswoods may also be present. The shrub layer is often dominated by buckthorn and Tartarian honeysuckle, but gooseberries and elderberries can also be common. The ground layer is also dominated by species tolerant of disturbances, including white snakeroot, motherwort, and garlic mustard. Occasionally, when higher quality forests are nearby, the understory can be more diverse.

32100 Upland Deciduous Forest

Key-based definition: Cold-deciduous forest and broadleaf forests of the Midwest. In NVCS nomenclature, also called Lowland or submontane.



MN DNR Natural Heritage description: Deciduous Forests occur primarily in the deciduous forest-woodland zone; they are less common in the prairie zone and the conifer-hardwood forest zone. On dry sites, the most common canopy dominants of Deciduous Forests are oak, aspen, and birch trees. Sugar maple, basswood, elm, and ash trees are common dominants on moist sites. Pines, especially white pine, sometimes form a minor part of the forest canopy. Where the forest canopy is broken or interrupted (typically in oak-dominated forests) there is usually a dense layer of tall shrubs, including hazelnuts, dogwoods, prickly ashes, and cherries. Beneath the denser canopies formed by mesic tree species such as sugar maple, the shrub layer is sparse or absent.

The canopy tree species of Deciduous Forests occur in combinations determined primarily by environmental features (including soil texture, parent material, presence of hardpans and firebreaks, depth to the water table, topography, aspect, and local climate) that affect soil moisture and the local fire regime. These features produce a gradient of Deciduous Forest types from dry, fire-prone forests composed of fire-adapted species, to mesic forests composed of fire-sensitive species.

Many of the dry Deciduous Forests in the deciduous forest-woodland and prairie zones appear to have succeeded from deciduous brushland and savanna in the past 100 to 125 years following widespread forest fragmentation and fire suppression. Mesic Deciduous Forests in these zones occur in areas protected from fire, especially areas of rough topography and along bodies of water. In the conifer-hardwood forest zone, mesic Deciduous Forests occur on sites with impeded drainage (having impermeable banding or textural pans in the soils) and in areas of locally high precipitation or humidity, such as along the shore of Lake Superior. The dry deciduous forests of the conifer-hardwood zone, especially Aspen, Aspen-Birch, and Paper Birch forests, occur on fire-prone sites and are considered early successional communities.

42130 Altered/Non-Native Deciduous Woodlands

Key-based definition: This upland vegetation has 10-70% tree cover, of which <25% is by conifers. Aspens comprise <70% of tree cover, and oaks comprise <30%. Herbaceous species comprise <30% of the non-tree cover. Boxelder, green ash, and cottonwood are typical canopy dominants, sometimes together and sometimes singly. Elms are common associates.

Hackberries, aspens, oaks, and basswoods may also be present. The shrub layer is often dominated by buckthorn and Tartarian honeysuckle, but sumacs, gooseberries and elderberries can also be common. The ground layer is also dominated by species tolerant of disturbances, including white snakeroot, motherwort, and garlic mustard. Occasionally, when higher quality forests are nearby, the understory can be more diverse.

41130 Eastern Red Cedar Woodlands



Key-based definition: Upland vegetation with >10% tree cover, of which >75% is by conifers, mostly red cedars. Herbaceous species contribute <30% of the non-tree cover. Red cedars sometimes form a nearly pure canopy in these communities, creating so much shade that few other plants are present. Aspens, oaks, and paper birches are sometimes mixed in with the cedars, allowing enough light for prickly ash, buckthorn, and Tartarian honeysuckle.