Chippewa East Mackinac Conservation Ditrict

RESOURCE ASSESSMENT 2011 - 2016

"Our Mission is to assist with land use and management through education, community projects and services."

The Chippewa East Mackinac Conservation District, Michigan's largest, covers approximately 2,400,000 acres. (Schmidt 1993). Census data from 2000 indicates that the population was 38,543 in Chippewa County and 11,943 (total) in Mackinac County. The number of persons per square mile averages 24.7 in Chippewa County and 11.7 in Mackinac County. The area is predominantly non- industrial ownership however, 99,809 acres is enrolled in the Commercial Forest Act, with mostly industrial ownership. Forests comprise approximately 1 million acres (Schmidt 1993). Maple-birch, northern white cedar, and aspen are the largest species groups. There was a 49% increase in timber production between 1984 and 1994 in Chippewa County and a 20% increase in Mackinac County (McDonough et al. 1999). There were 20,410 acres of farmland in Mackinac County and 93,924 acres in Chippewa County in 2002. Exact acreage of Native American privately owned lands is not known. The Conservation District has the highest population of Native Americans in the state. (4,654 natives in population census for 1994). Due to the change in the economic status of the Native Americans, they are becoming major landowners.

Employment figures (from McDonough et al 1999) show tourism employs 27.9% of the working populace; government employs 19.8%; other business accounts for 18.8%; construction and professional industries each utilize approximately 5% of the work force. Recent surveys indicate a major shift in land ownership patterns in our District. Between 1925 and 1992, 74,810 acres of farmland were lost, reducing farmland acres by almost one-half. Mackinac County ranks in the top category for the percent of farmland lost. Fragmentation of the land is occurring at one of the fastest rates in the state. A 1993 DNR survey found that 39% of the private land in the District is in 29 acre or smaller parcels. Climatic conditions in the District limit the choice of crops that can be produced. The frost free season varies from 90 days inland to 120 days in the southern part of the district and immediately adjacent to Lake Superior. The area is characterized by cool temperatures and lack of sunshine. (This is one of the nation's cloudiest areas.) Rainfall is adequate (33" inches annually) and well distributed.

Soils and topography are varied. There are 12 major soil resource areas in the District. The predominant soils are Ontonagon, Bergland, Pickford, Rudyard (heavy silty clay and clay loams that are level to rolling) and Bruce, Brimley, and Bohemien (nearly level to rolling sandy loams that are poorly drained to well drained.) 34% of Mackinac County and 56% of Chippewa County are comprised of soils that would indicate wetlands. The high percentage of clay soils in the District cause concentrated surface runoff that greatly impacts the 975 miles of streams and 285 miles of Great Lakes shoreline that we have in the District. The Clay Lake Plain Ecosystem project was formed to promote and enhance the Clay Lake Plain, which because of it's poorly drained soils, has a unique blend of wetland and forest communities. The International Joint Commission has listed the St. Mary's River as an area of concern due to excessive nutrients and contaminated sediments. The Nature Conservancy has identified parts of our Lake Huron shoreline as one of it's "Last Great Places" because of its high biological diversity.

The District was formed under the Conservation District Law (part 93 of Act 451 of 1994, as amended) to develop programs that provide technical help, information and awareness to assist people in the District to properly manage their natural resources. Major goals of a Conservation District and its programs are to: reduce wind and water erosion; control sedimentation in surface water; encourage conversion of all mismanaged land to a productive use; encourage use of effective methods of surface water management; facilitate land uses and land use changes based on land capabilities and user goals; enhance and protect basic ability of land to produce food and fiber; promote the maintenance of aesthetic values of land and its relayed resources; and control nonpoint sources of pollution to surface water, groundwater and air. (Taken from our directors handbook- 1999). We work closely with the United States Department of Agriculture's Natural Resources Conservation Service (NRCS) and are under the guidance and funding of the Michigan Department of Agriculture (MDA). The district programs identify and address needs based on input from customers, community, conservation partners and others. The District may also provide technical assistance to address identified resource needs.

RESOURCES INVENTORY

The District lies within parts of 2 subsections of the Northern Lacustrine-Influenced Upper Michigan and Wisconsin ecosystem defined by Albert (1995) Most of this area is found in the Niagaran Escarpment and Lake Plain subsection. This subsection is further divided into a number of sub-subsections, of which 2 are found in the District. These are the St. Ignace sub-subsection and the Rudyard sub-subsection.

The St. Ignace sub-subsection is typified by sandy lake plain and limestone bedrock at or near the surface. Limestone bedrock is exposed along the Lake Huron shoreline in the east, especially on Drummond Island. Features include sandy dunes, embayments with complexes of parallel beach ridges and swales, and extensive conifer-dominated wetlands on sand or bedrock. The soils are quite diverse. Lacustrine sand deposits are most common, and are generally excessively drained or poorly drained. Some localized areas of ground moraine are also present, and range from loamy sands to loams; they are often stony. Climate includes a growing season of 130 to 140 days and average annual precipitation of 30 to 32 inches. Annual snowfall averages 60 to 80 inches. Presettlement land cover was diverse, and reflected local conditions.

The Rudyard sub-subsection consists of lake plain with fine-texture soils that has been more intensively managed for agriculture than other parts of the Niagaran Escarpment and Lake Plain subsection. This sub-subsection is underlain by sedimentary bedrock, mostly limestone and dolomite, capped with lacustrine clays. Almost the entire area is a broad lake plain. The soils are somewhat to poorly drained, with the more poorly drained soils found closer to the St. Mary's River. The climate includes an average growing season of 120 days in the north to 140 days in the south and an average annual precipitation of 32 to 34 inches. Annual snowfall ranges from 120 inches near Lake Superior to 80 inches inland. These conditions supported presettlement vegetation consisting of hardwood-conifer forests of balsam fir, balsam poplar, hemlock, northern white-cedar, tamarack, trembling aspen, white pine, black spruce, and white spruce. Much of the sub-subsection was cleared and drained for farming around the turn of the 20th century. Farming peaked around 1925, and has been declining since that time due to a decreasing market for agricultural products. As a result, many fields have been abandoned. Some of these fields have been maintained as grasslands, but many have reverted to willow, alder, aspen, and other early-successional species. Hay is the primary product from fields that remain in production. Beef and sheep farming are also carried out.

The Luce subsection of the Northern Lacustrine-Influenced Upper Michigan and Wisconsin ecosystem is also found in the northwestern part of the District. Two sub-subsections of this subsection are present, the Seney Sand Lake Plain and the Grand Marais Sandy End Moraine and Outwash. A very small portion of Seney Sand Lake Plain exists. This sub-subsection contains the largest expanses of wetland in the state, and it is typified by the landforms present. These landforms consist of broad, poorly drained embayments that contain beach ridges and depressions, sand spits, transverse sand dunes, and sand bars. Growing season ranges from 100-130 days. Average annual precipitation is 32 to 34 inches, and annual snowfall is between 80 and 160 inches. The soils consist of peat and poorly to excessively drained sands. Presettlement vegetation consisted of marshes, peat lands, and low productivity swamps. Jack pine dominated the droughty outwash plains, while red pine, white pine, and big-tooth aspen occupied the seasonally moist lake plains. Currently, land management is geared primarily toward timber production and wildlife. Rare plants include the round-leaved orchid, flat oat grass, slender spike-rush, Canada rice-grass, sweet coltsfoot, and dwarf bilberry. The yellow rail is a rare bird in the sub-subsection.

The Grand Marais sandy end moraine is characterized by sandy ridges of end moraine and pitted outwash. The average growing season ranges from 140 days very close to Lake Superior to less than 100 days farther inland. Average annual precipitation is between 32 and 34 inches. Annual snowfall may be as high as around 180 inches. Presettlement vegetation consisted of wetland and upland communities. Excessively drained, fire-prone areas supported jack pine and red pine-jack pine. Extensive complexes of beach ridges and swales occurred on the sandy lake plain along Lake Superior. Coarse-textured moraines supported northern hardwoods, often with significant amounts of hemlock. Red pine and white pine were also common. Depressions and low areas were often composed of tamarack, white cedar, and spruce. The dominant use of this sub-subsection in recent years has been for commercial timber production. Rare plants include acute-leaved moonwort, prairie moonwort, American dune wild-rye, black crowberry, American shore-grass, and alga pondweed. Rare animals include the piping plover, Peregrine falcon, common loon, bald eagle, grey wolf, marten, osprey, common tern, and secretive locust.

The natural features inventory for the district includes: 25 animals, 6 invertebrates, 69 plants, and 27 communities. There are 48 state threatened and 11 state endangered species. Nine of these species are federally listed: the piping plover, Hines's emerald and Michigan monkey-flower are listed as endangered; hart's-tongue fern, pitcher's thistle, dwarf lake iris, and Houghton's goldenrod are threatened; and the gray wolf and bald eagle have partial status. The agricultural land and associated young aspen and other deciduous species coupled with the lowland conifer swamps provide excellent habitat for many species. White-tailed deer utilize the resources in upland sites during the

warmer months, and move to conifer swamp deer yards during the winter where they receive some protection from the deep snows and cold winds. Young aspen and alder commonly found near agriculture fields also provide good habitat for American woodcock and ruffed grouse. Hunting for both of these birds is popular. Snowshoe hare are common in places with thick under story and ground cover. Moose and wolves are also important species. Moose are thought to cross into the eastern Upper Peninsula from Ontario.

The eastern Upper Peninsula has a number of extensive grassland habitats that were created when portions of the land were cleared for farming. These grasslands provide habitat for sharp-tailed grouse, sand hill crane, eastern bluebirds, and other grassland species. Local populations of sharp-tailed grouse have increased in recent years. Winter use of the open country is important to many species of birds including snowy owl, northern hawk owl, gyrfalcon, rough-legged hawk, and northern shrike This is also part of a major flyway for migratory birds. Duck and goose hunting are very popular. Many sites have poorly drained clay soils that are suitable for constructing shallow floodings. A number of floodings have been constructed to provide additional habitat for waterfowl and various other wildlife species.

The District manages two tracts of land - the Sand Ridge Forest and the Waiska River Farm. The District's "sand ridge" property is a 40-acre parcel located east of Pickford in Raber Township. This location is part of the Nipissing Moraine Complex land type association (LTA), which is mostly agricultural land, wet hardwood/conifer mixed stands, northern hardwoods and aspen/birch stands. Historically, this LTA was vegetated with white pine and spruce/fir. The district property, however, was originally within a band of sugar maple-hemlock forest. North and east of this forest was a mixed conifer swamp, and south and west of the band was a spruce fir-cedar forest. This LTA consists of two disjunctive units of mixed sandy moraine, ground moraine, wet sandy and organic soils, sand and clay lakebeds. The units lie above glacial Lake Nipissing shores and probably received partial washing and deposition during glacial Lake Algonquin. Suspected remnants of the glacial lake shore can be seen to the north east of the property as a distinct line of elevation running northwest to south east, paralleling the remaining water course approximately 7 to 8 miles to the east, the St. Mary's River. The property lies within the Gogomain River watershed, which flows into the St. Mary's River at Munuscong Lake. An important component of the LTA and the district property is the soil composition. There are three different soil types on the property, dominated by both Kalkaska Sand and Kalkaska stony as well as Rousseau (dark subsoil-Alcona complex). Since these soils are characteristically very well drained, success of CEMCD's forest management directives must consider measures that conserve moisture during dry periods, especially maintenance of surface organic matter as well as tree and shrub species selection for silviculture and wildlife management.

The property is used for hunting, timber production, and education demonstrations. The property currently supports 25 acres of red pine, scotch pine, and white spruce that was planted during the 1950's. The main management strategy for these 25 acres is timber production. A young 15-acre deciduous mix dominates the east side of the property. This area supports habitat for a myriad of wildlife, including common game animals like White tailed Deer, Ruffed Grouse, and Snowshoe Hare. The sand ridge property provides CEMCD with an opportunity for sustainable revenue from timber management, as well as quality habitat for wildlife management. Most importantly, CEMCD can utilize the property and management activity to educate landowners in these forest management strategies, which continues the mission of the Conservation District.

The Waiska River Farm is an eighty acre parcel that lies five miles southwest of Sault Ste. Marie in Chippewa County. The property is just within the south boundary of the Waiska Bay land type association where wet sandy soils to the north meet clay soils to the south. The soils on the property are typically silt loam in the surface layer underlain by clay. The topography is rolling to nearly level and soils range from moderately well drained to somewhat poorly drained. The presettlement vegetation would have been a mixture of conifers and hardwoods with conifers predominating. White pine and red maple would have been the common species.

The property is former farm land that is reverting to shrubs and trees in some areas but that also has a large component of open grasslands. The South Branch of the East Branch of the Waiska River runs to the north through the property and along with several intermittent streams provides improved drainage. Fairly steep slopes along drainages make for a rolling topography. Extensive woodlands lie to the west, actively farmed land to the east and a mixture of field and forest to the north and south. Most of the active fields are devoted to hay production and pasture. The District has implemented a number of conservation practices that serve as demonstration projects and aids in environmental education. Allowing alder and other pioneer species to continue regenerating some of the more inaccessible parts of the property will produce woodlands that are currently lacking on the land. Alder stands will provide cover for deer and cover and feeding areas for grouse and woodcock. Planting a variety of trees and shrubs will provide benefits to non-game and game species alike. Planting native grasses and wildflowers will be aesthetically pleasing and will provide habitat for grassland species. Maintaining these grasslands will be increasingly important as surrounding

ownerships continue to convert to woodlands. Wildlife food plots would benefit primarily deer but would also add some diversity to the grasslands. Nest boxes would be very important additions since the few trees present are not mature enough to provide nesting cavities. An unusual color phase of the savannah sparrow occurs here in the breeding season and snowy owls are frequently found here in the winter.

The Chippewa/East Mackinac Conservation District is committed to protecting water quality in the Eastern Upper Peninsula of Michigan. The district approaches water quality protection on a watershed scale. The District can be separated into five major watersheds (St. Mary's River, Tahquamenon River, Waiska River, the Carp River, and the Pine River) with several sub-watersheds within them. The District assists landowners with land use strategies within those watersheds in order to protect existing water bodies.

There are currently two major watershed projects established in the District, including the Les Cheneaux Watershed Implementation Project and the Sault Ste. Marie Area Watershed Planning Project. The Les Cheneaux Watershed Project is focused on implementing water quality protection strategies developed in the Les Cheneaux Watershed Management Plan, a Clean Michigan Initiative (CMI) and Section 319 (Clean Water Act) approved plan. CEMCD is partnering with the Les Cheneaux Watershed Council to reduce several priority pollutants. The Sault Planning Project is a partnership with several local stakeholders in which a water quality management plan is being drafted to improve water quality in the Sault Ste. Marie area. Resource concerns within this watershed are consistent with typical urban settings. CEMCD has worked closely with Lake Superior State University to assess the chemical, biological, and geomorphological characteristics of area water bodies and will use that information to prescribe remedial action. Upon the completion of the Sault management plan in October 2006, CEMCD and partners will begin working on the action plan to improve water quality.

CEMCD is also involved with other regional resource concerns including bacteria contamination at the Sugar Island Township Park, nutrient and sediment pollution of the Munuscong, Charlotte, Pine, Tahquamenon, and Carp Rivers, as well as contamination stemming from the Whitefish Township Office in Paradise. CEMCD will continue to work with communities within these watersheds through the *Water Guardians* program assess the severity of these resource concerns and to formulate watershed management plans for improving and protecting water quality. The Cooperative Extension Service has just completed a long range vision plan. They held public meetings and asked for input from the community and other agencies. Goal 4 in this plan states "*Water is an essential component of our life, heritage, commerce, transportation, and recreation. Chippewa County is surrounded by water with Whitefish Bay to the north and the St. Mary's River that empties Lake Superior south to the rest of the Great Lakes. The St. Mary's River has seen tremendous change over the last 400 years. Needs for our ground and surface water increase daily. Our goal is to provide educational programs to landowners, businesses, and farms on ways to protect and preserve our ground and surface waters*." This is a close partner for the District and we work cooperatively on many projects. This is a goal we can share.

STAKE HOLDER INTERVIEWS

The list of stakeholders surveyed for input into this resource assessment are listed in the Appendix A. One on one interviews was the method used to survey the concerns of the landowners and associated agencies within the District boundaries. These interviews were conducted in person or by telephone. A tabulated form with the responses is found at the end of this report.

When stakeholders were asked what they believe the Chippewa/East Mackinac Conservation District's purpose was the majority of responses identified: assisting landowners by providing direction and education in natural resource management and educating everyone in conservation and watershed management.

When asked to list the resource management issues they saw emerging in the next 5 years, they included: continued fragmentation of large tracts of land, improper management of forests, greater need for alternative energy sources, more water quality preservation, mining/sewage contamination, increased constraints and pressures on agriculture degrading our farm community, emerging wildlife issues and protection/ conservation of natural areas.

Stakeholders were also asked to identify trends in government regulation/policy at the federal, state and local level that will impact on resource management during the next 5 years. They cited: conversion of farmland to wetlands, stricter regulation and lack of enforcement, improper/lack of funding in government programs and agencies, economics negatively impacting the environment, zoning issues including passive zoning laws, retirement/resort zoning, water removal laws, agricultural subsidies cut, MAEAP enforcement, overregulation of renewable wood resources, downward trend and lack of interest in environmental issues on all levels.

These issues and concerns are further identified in the following lists along with possible action items for the district. A rough draft of this document was submitted to several of the stakeholders for comment. The Board of

directors then met to review and comment on the draft. Items listed as concerns were prioritized based on the number of times they were addressed in either the interviews or during the board review.

RESOURCE CONCERNS

Agricultural Concerns -

17. Non sustainability of agriculture. There is a need for more organically and locally produced foodstuffs for local markets. Extension has set the following action items in their long range vision *"Continue working on ways to develop a diverse agricultural base in Chippewa County. Demand for locally produced foods exceeds local production….. Return to locally produced and delivered milk and cheese."* This coincides with the district's goal to keep agricultural local and sustainable.

20. More government regulation and declining economic viability for small farms are contributing to the death of the family farm. These farms can only survive with government subsidies particularly cost share dollars to help farmers reach new regulated levels (example: MAEAP certification)

23. There is a growing awareness of the need for alternative fuels. Farmers have the opportunity to produce crops for the production of biofuels. Technical assistance, cost share programs, grants and workshops are all needed to help the farmer move into this new market.

Climatic Concerns -

19. Poor survival rates on tree plantings

32. Disaster years with lower than average crop yields

33. Record high average temperatures

34. Lower than normal rainfall and snow accumulations.

Ecological Concerns-

The ecology of the area has been affected by agriculture, logging, fire suppression, and urban development. Forests within the eastern portion were cleared historically for agricultural production. Ditching caused vast alterations in original drainage patterns. In recent years, farming has become less profitable. As a result, many agricultural lands have been taken out of production. Some of these areas provide excellent habitat for various grassland species. Some agricultural lands that were once part of relatively large parcels are being subdivided into smaller lots and sold. Some land has been enrolled in conservation practices. Approximately 5,000 acres of wetland have been restored, and now provide habitat for various species.

8. Parcelization of land has had and will continue to have ecological impacts as habitats become fragmented.

2. Few landowners consider their land's role in the surrounding landscape. Landowners need to be informed about ecosystem-based management and how their property fits into the surrounding landscape.

Forestry Concerns-

7. Windbreaks along highways for safety and at homesteads for energy savings.

16. Fuel loading in forests continues to increase because fires have been suppressed. Timber harvests and other activities are used to mimic the disturbances caused by fire. Fire is often frowned upon as a management tool for a number of reasons. Fire can be difficult to control and is very destructive. The use of fire as a management tool is not supported well publicly.

11. There are several current forest health issues. Beech bark disease has recently been found in an adjacent county . This disease affects stands of American beech, particularly those stocked with mature trees.

28. Intermittent outbreaks of forest tent caterpillars cause defoliation on many of the aspen and oak stands. Populations run in cycles, where the population peaks for about 3 years followed by 10 years of lower population levels.

26. Jack pine budworm infestations have occurred west of Raco and near Paradise.

27. The emerald ash borer has been found in the Chippewa County.

14. Many landowners are not aware of various forest practices and their purpose. As a result, many forests have not been managed properly. Landowners need to be informed about forest ecology and silvicultural practices.

Grassland Concerns -

6 Noxious weeds are invading our fields and wetlands. Because they are not a part of the local food chain, they have no natural predators. They choke out native species and upset the balance of nature. Specific examples include leafy spurge, garlic mustard, spotted knapweed, and purple loosestrife. Communities need coordinated education and eradication programs.

31. Bring idle grasslands back into production and convert marginal lands to wetlands.

13. Our open spaces are in danger due to development and an uninformed populace.

12. Sources for native grasses and wildflowers are limited. Educating the public to choose these species over invasives is ineffective if sources are not available.

Social and Economic Concerns-

1. Most landowners are not aware of the natural resource services available to them. Outreach is needed to inform landowners of the Conservation District especially in underserved areas. These include the islands, Mackinac County and the western part of Chippewa County.

2. The area has a large tourist based economy. These tourists are focused on our pristine natural resources. Degradation of said resources will have an ultimate effect on the tourist industry. Development (more motels, more marinas) also draws more tourists. There is a fragile balance that must be maintained.

9. Policies and regulations make getting conservation on the land very complicated. There are numerous agencies and programs available but the task of understanding and working within the different frameworks is daunting. Good partnerships and consistent networking makes us more efficient and eliminates duplicate efforts. It will then be more affordable to put conservation practices so the land.

21. Communication is not strong enough between landowners, other government bodies (including the tribes), private agencies and the District. There is not adequate training for staff in enforcement, lobbying, politicking.

Water Concerns-

CEMCD recognizes several water quality concerns, specifically water pollutants, sources, and causes within the watersheds of Chippewa and eastern Mackinac Counties.

24. Pathogen contamination from improperly treated wastewater from both municipal wastewater discharge and failing onsite septic systems.

5. Altered hydrology of our creeks, streams and rivers from loss of wetlands and increased storm water runoff, all due to poor land use practices.

3. Sediment loading to area water bodies. Typical sources and causes include, but are not limited to eroding soils at poorly designed road/stream crossings, building sites, agriculture operations, and naturally eroding stream banks and shorelines.

4. Excess nutrients (phosphorous and nitrogen) alter water quality, accelerating eutrophication (water body aging) increasing turbidity and toxicity. Sources include wastewater from municipal and onsite septic system wastewater, as well as fertilizers from golf courses, manicured lawns, and agricultural operations.

18. Threats from hazardous wastes including oils, salts, and other toxic substances. Sources include petroleum contamination sites, general residential use of hazardous waste, and salts from road maintenance.

29. Small township dumps have been abandoned and there is little regulation and monitoring of thee sites.

Wildlife Concerns-

15. This area is on a major migration route for raptors, waterfowl, and neo tropical birds. Sharp tailed grouse, moose and wolf are other species unique to this area as well as many grassland species.

30. One threat to moose that has received a considerable amount of attention is the brain worm parasite. This parasite is prevalent in deer, but does not seem to be very problematic for them. However, infections in moose lead to death. The high deer population poses a threat to moose, particularly where habitats that support these species overlap.

10. More efforts are needed to promote wildlife habitat and discourage habitat fragmentation.

22. Deer management is a hot topic. There is a division in the District between landowners wanting to feed and thereby see deer in close proximity to farmers who suffer crop damage to hunters who want the big buck and are opposed to doe hunts.

Resources accessed: Chippewa County Soils Survey, Mackinac County Soils Survey, Clay Lake Plains Ecosystem Plan, CRMI Resource Assessment 1999, District Resource Assessment 1968, District Organization Document 1959, Sault Ste. Marie Area 319 grant application, The Rapid Watershed Assessment Grant application, Albert, D. A. 1995. Regional landscape ecosystems of Michigan, Minnesota, and Wisconsin: Schmidt, T. L. 1993. Forest statistics for Michigan's Eastern Upper Peninsula , McDonough, M., J. Fried, K. Potter-Witter, J. Stevens, and D. Stynes. 1999. "The role of natural resources in community and regional economic stability in the eastern Upper Peninsula."

Prioritized Resource Concerns

1 Most landowners are not aware of the natural resource services available to them. Outreach is needed to inform landowners of the Conservation District especially in underserved areas.
2 Few landowners consider their land's role in the surrounding landscape. Landowners need to be informed about ecosystem-based management and how their property fits into the surrounding landscape.
3 Sediment loading to area water bodies.
4 Excess nutrients (phosphorous and nitrogen) alter water quality, accelerating eutrophication (water body aging) increasing turbidity and toxicity.
5 Altered hydrology of our creeks, streams and rivers from loss of wetlands and increased storm water runoff, all due to poor land use practices.
6 Noxious weeds are invading our fields and wetlands
7 Windbreaks along highways for safety and at homesteads for energy savings.
8 Parcelization of land has had and will continue to have ecological impacts as habitats become fragmented.
9 Policies and regulations make getting conservation on the land very complicated. Good partnerships and consistent networking makes us more efficient and eliminates duplicate effort
10 More efforts are needed to promote wildlife habitat and discourage habitat fragmentation.
11 There are several current forest health issues. Beech bark disease has recently been found in an adjacent county
12 Sources for native grasses and wildflowers are limited. Educating the public to choose these species over invasives is ineffective if sources are not available.
13 Our open spaces are in danger due to development and an uninformed populace.
14 Many landowners are not aware of various forest practices and their purpose. As a result, many forests have not been managed properly. Landowners need to be informed about forest ecology and silvicultural practices.
15 This area is on a major migration route for raptors, waterfowl, and neo tropical birds. Sharp tailed grouse, moose and wolf are other species unique to this area as well as many grassland species.
16 Fuel loading in forests continues to increase because fires have been suppressed
17 Non sustainability of agriculture.
18 Threats from hazardous wastes:oils, salts, and other toxic substances. Sources include petroleum contamination sites, general residential use of hazardous waste, and salts from road maintenance.
19 Poor survival rates on tree plantings
20 More government regulation and declining economic viability are contributing to the death of the family farm.
21 Communication is not strong enough between landowners, government bodies (including the tribes), private agencies and the District. There is not adequate training for staff in enforcement, lobbying, politicking.
22 Deer management is a hot topic.
23 There is a growing awareness of the need for alternative fuels.
24 Pathogen contamination from improperly treated wastewater from both municipal wastewater discharge and failing onsite septic systems.
25 The area has a large tourist based economy. There is a fragile balance that must be maintained
26 Jack pine budworm infestations have occurred west of Raco and near Paradise.
27 The emerald ash borer has been found in the Chippewa County.
28 Intermittent outbreaks of forest tent caterpillars cause defoliation on many of the aspen and oak stands.
29 Small township dumps have been abandoned and there is little regulation and monitoring of thee sites.
30 One threat to moose that has received a considerable amount of attention is the brain worm parasite. This parasite is prevalent in deer, but does not seem to be very problematic for them.
31 Bring idle grasslands back into production and convert marginal lands to wetlands.
32 Disaster years with lower than average crop yields
33 Record high average temperatures
34 Lower than normal rainfall and snow accumulations.