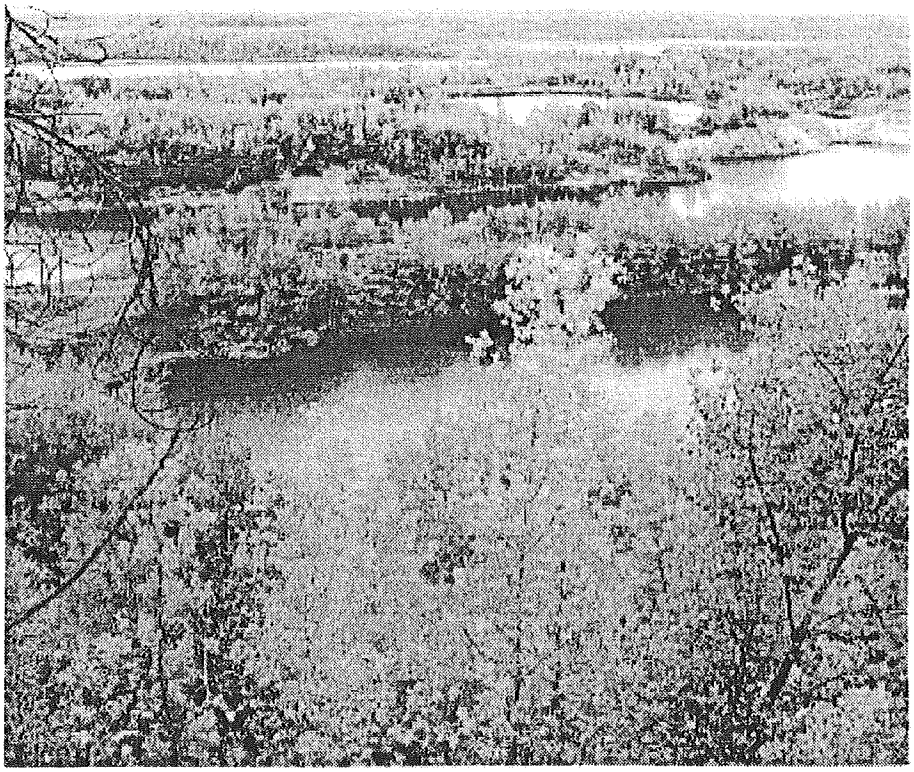

Cuyuna Country State Recreation Area Management Plan

DECEMBER 15, 1995

Minnesota Department of Natural Resources

OFFICE OF THE COMMISSIONER
500 Lafayette Road
St. Paul, Minnesota 55155-4037

RE: Department of Natural Resources Approval of Management Plan for Cuyuna Country State Recreation Area

Minnesota Statutes 86A.09 requires that a master plan be prepared for units of Minnesota's outdoor recreation system, including state parks and state recreation areas. Laws of Minnesota for 1993, Chapter 172, Section 34, established Cuyuna Country State Recreation Area, and specified further requirements for the completion of the master plan for this area.

Over the past two years, the DNR has worked in partnership with a local advisory committee to develop a management plan for this area. The management plan was approved through the DNR's CTECH/Senior Manager review process during October and November, 1995.

Rodney W. Sando, Commissioner
Minnesota Department of Natural Resources

12/15/95
Date

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List of Maps

INTRODUCTION

State Recreation Area MissionIVisionlGoals

The following statements were generated by planning process participants after reviewing the general DNR mission statement, the Division of Parks and Recreation mission statement, and the statutory definition of a State Recreation Area.

Recreation Area Mission:

To provide appropriate recreational and educational opportunities in a pleasing natural environment, while preserving and managing the area's natural, scenic, and cultural resources for present and future generations.

Recreation Area "100 - year" Vision:

- The recreation area is .accessible and provides multiple recreational uses.
- Much of the vegetation is more mature, and the current water quality has been preserved or improved.
- Through interpretation, the recreation area is an iinportant educational resource, emphasizing the historical significance of the area and its reclamation.
- The recreation area provides active and appropriate recreational uses through designated roads, trails, and other recreational developments.
- Appropriate regulations manage the use of the area, providing safe and enjoyable recreational experiences.
- The number of users is managed to protect the area from overuse.
- The recreation area provides a non-commercial atmosphere; there are no fish farms or residential developments (it is recognized some limited timber management will occur and that future mining may occur).

Recreation Area Goals:

- To provide a broad selection of outdoor recreation opportunities in a pleasing natural setting which may be used by large numbers of people.
- To provide an appropriate balance between recreational use and resource preservation.
- To protect the area's water quality and to maintain the quality of other natural and cultural resources in the area.

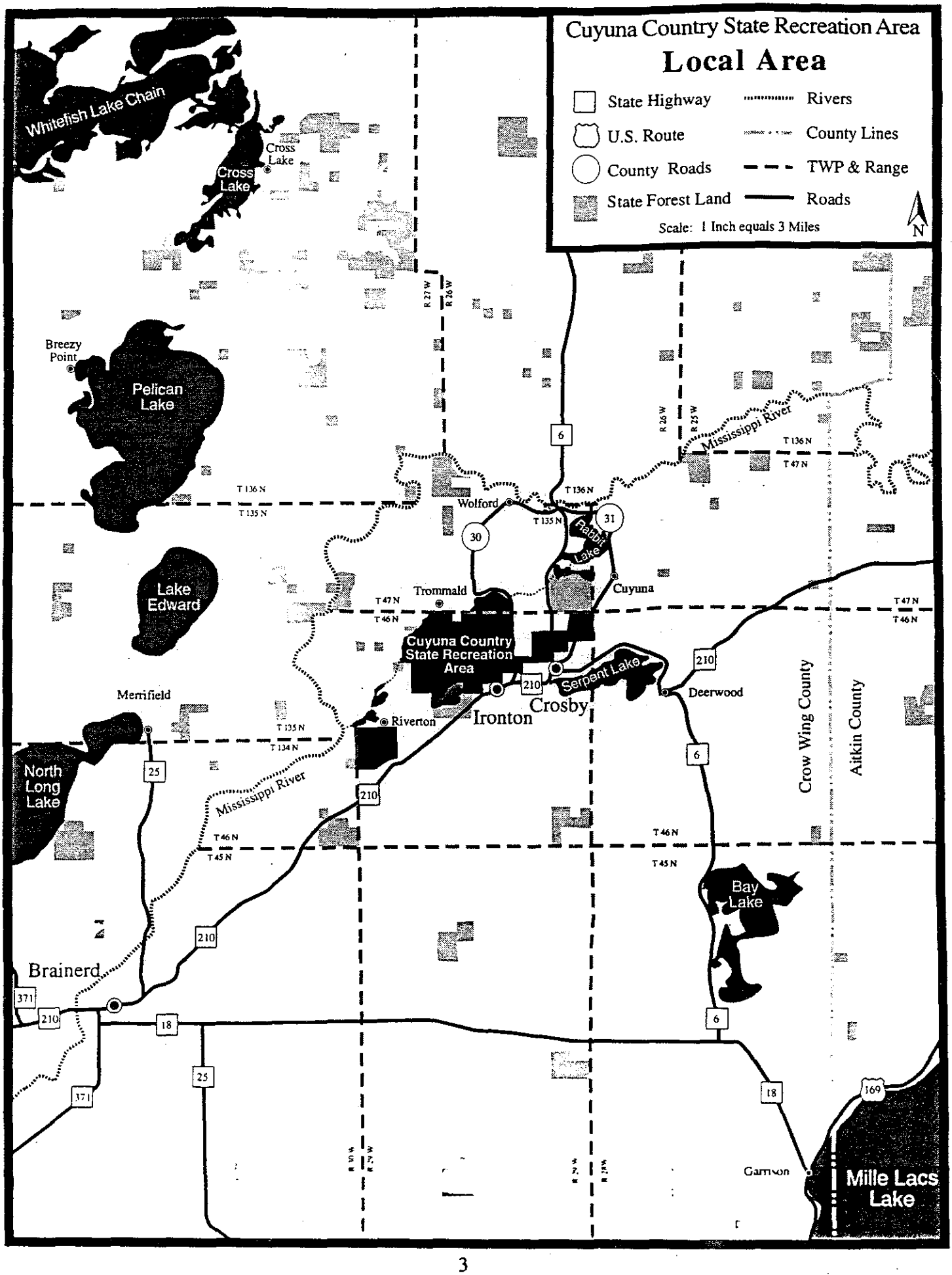
State Recreation Area Description

Cuyuna Country State Recreation Area is located in Crow Wing County, about fourteen miles northeast of Brainerd via State Highway 210. The State Recreation Area is adjacent to the cities of Crosby and Ironton (see Local Area map, page 3).

Cuyuna Country State Recreation Area is near the geographic center of both the state of Minnesota and the Cuyuna iron ore district. The Cuyuna "range was the last of Minnesota's three major iron ranges to be discovered and mined; it extends almost 70 miles from Randall in Morrison County, northeastward through Crow Wing County, and ends in central Aitkin County. Unlike other iron-bearing districts in the Lake Superior region, the Cuyuna Range is generally flat and covered by glacial drift.

The State Recreation Area covers an area of nearly 5,000 acres and has water bodies consisting of fifteen deep lakes that are former mine pits, all or parts of six natural lakes, and an extensive informal trail system. Past mining operations have significantly altered the natural environment that existed prior to mining. However, the natural and planted regeneration that has occurred following the cessation of mining offers a good setting for outdoor recreation activities. Through the efforts of the Iron Range Resources Rehabilitation Board (IRRRB), Crow Wing County, local governments, two joint powers boards, volunteer groups and the Department of Natural Resources, the area has become a substantial outdoor recreation attraction.

The presence of mining remnants and the Croft Mine Historical Park offer interpretative oppoitunities for this area. At the Historical Park, which is located within the State Recreation Area, visitors can tour a simulated underground iron ore mine. Visitors ride down a shaft cage elevator and are greeted by the sights, sounds and artifacts of a "working" iron mine. The Historical Park also includes a mining museum which exhibits thousands of mining artifacts.


Cuyuna Country State Recreation Area
Local Area
State Highway
U.S. Route
County Roads
State Forest Land
Rivers
County Lines
TWP & Range
Roads
Scale: 1 Inch equals 3 Miles
N
Whitefish Lake Chain
Cross Lake
Cross Lake
Breezy Point
Pelican Lake
Lake Edward
North Long Lake
Merrifield
Brainerd
Wolford
Trommald
Riverton
Ironton
Crosby
Cuyuna
Fleming Lake
Serpent Lake
Deerwood
Cuyuna Country State Recreation Area
Mississippi River
Mississippi River
Crow Wing County
Aitkin County
Bay Lake
Garrison
Mille Lacs Lake
R 27 W
R 26 W
R 25 W
T 136 N
T 135 N
T 134 N
T 47 N
T 46 N
T 45 N
6
25
30
31
210
371
18
169

State Recreation Area Legislation

State Recreation Area Establishment

Cuyuna is Minnesota's first State Recreation Area, established in 1993 to allow more intensive recreational use than state parks.

The highlights of the Cuyuna legislation (Laws of Minnesota for 1993, Chapter 172, Section 34) include the following main points.

- The area must be managed for multiple use recreation, including the allowance of hunting and limited timber harvesting.

- It must be recognized that mining may be conducted within the State Recreation Area in the future.

- A 12-member local area advisory committee is established to provide direction on the establishment, planning, development, and operation of the area.

- A management plan must be cooperatively developed by DNR and the advisory committee to include:
  - multiple-use recreation.
  - protection of natural resources, and.
  - allowance of hunting, snowmobiling. horse trails, forest management, interpretation of cultural and historical resources. land acquisition needs, fee structure, and road/facility development.

- No DNR fees maybe charged prior to May I, 1994.

- .. Adopt-a Recreation Area" must be used as much as possible in the development and operation of the area. This program encourages business and civic groups or individuals to assist. on a volunteer basis. in improving or maintaining recreation areas.

State Recreation Area Definition

The 1975 Outdoor Recreation Act was amended in 1993 to include State Recreation Areas, replacing the previously designated "recreational state park." The following subdivision is from the Outdoor Recreation Act (MS 86A.05).

Subd. 3. State recreation area; purpose; resource and site qualifications; administration,

(a) A state recreation area shall be established to provide a broad selection of outdoor recreation opportunities in a natural setting which may be used by large numbers of people.

(b) No unit shall be authorized as a state recreation area unless its proposed location substantially satisfies the following criteria:

(1) Contains natural or artificial resources which provide outstanding outdoor recreational opportunities that will attract visitors from beyond the local area;

(2) Contains resources which permit intensive recreational use by large numbers of people; and

(3) May be located in areas which have serious deficiencies in public outdoor recreation facilities, provided that state recreation areas should not be provided in lieu of municipal, county, or regional facilities.

(c) State recreation areas shall be administered by the commissioner of natural resources in a manner which is consistent with the purposes of this subdivision primarily to provide as broad a selection of opportunities for outdoor recreation as is consistent with maintaining a pleasing natural environment. Scenic, historic, scientific, scarce, or disappearing resources within state recreation areas shall be recommended for authorization as historic sites or designated scientific and natural areas pursuant to section 86A.08 to preserve and protect them. Physical development shall enhance and promote the use and enjoyment of the natural recreational resources of the area.

State Recreation Area Advisory Committee and Planning Process

The legislation which established Cuyuna Country State Recreation Area included the following language pertaining to an advisory committee.

Laws of Minnesota for 1993. Chapter 172. Section 34.

Subd. 4. ADVISORY COMMITTEE. (a) Alocal area advisory committee is established to provide direction on the establishment, planning, development, and operation of the Cuyuna Country State Recreation Area.

(b) Membership on the advisory committee shall include:

(I) a representative of the Cuyuna Range Mineland Recreation Area joint powers board;
(2) a representative of the Croft Mine historical park joint powers board;
(3) a designee of the Cuyuna Range Mineland Reclamation Committee who has worked as a miner in the local area;
(4) a representative of the Crow Wing county board;
(5) a state representative appointed by the speaker of the house of representatives;
(6) a state senator appointed by tlie senate committee on committees;
(7) a representative of the Brainerd regional office of the Department of Natural Resources;
(8) a designee of the Iron Range Resources and Rehabilitation board;
(9) a designee of the local business community selected by the area chambers of commerce;
(10) a designee of the local environmental community selected by the Cuyuna country conservation club;
(11) a designee of a local education organization selected by the school board; and
(12) a designee of the local tourism community selected by the Cuyuna country tourism group.

The advisory committee held meetings to discuss major planning issues on the following dates (advertised and open to the public).

November 29,1993
December 15. 1993
February 9. 1994
May II.l994
June 15. 1994
July 21,1994
August 24. 1994
September 28. 1994
November 3, 1994
December 15, 1994
February 23. 1995
June 29, 1995
October 2. 1995

In addition, public "open houses" were held on March 30 and September 7th, 1995.

The Department of Natural Resources formed an Integrated Resources Management (IRM) team to assist in the development of this plan. This technical team included area representatives from the DNR, Divisions of Forestry, Parks and Recreation, Fisheries and Wildlife, Waters, Minerals, Enforcement," and Trails and Waterways Unit. The team also included a representative from the Minnesota Pollution Control Agency and the DNR, Regional Administrator, Regional Planner, and Bureaus of Real Estate Management and Field Services. The IRM team met formally on November 22, 1993 and in 1994 on April IS and December 12. There were also several informal meetings with individuals on the team throughout the process.

The recommendations in this plan are the result of this partnership-based planning process. This plan provides a basic management direction for the recreation area and is not intended to provide specific management or development details.

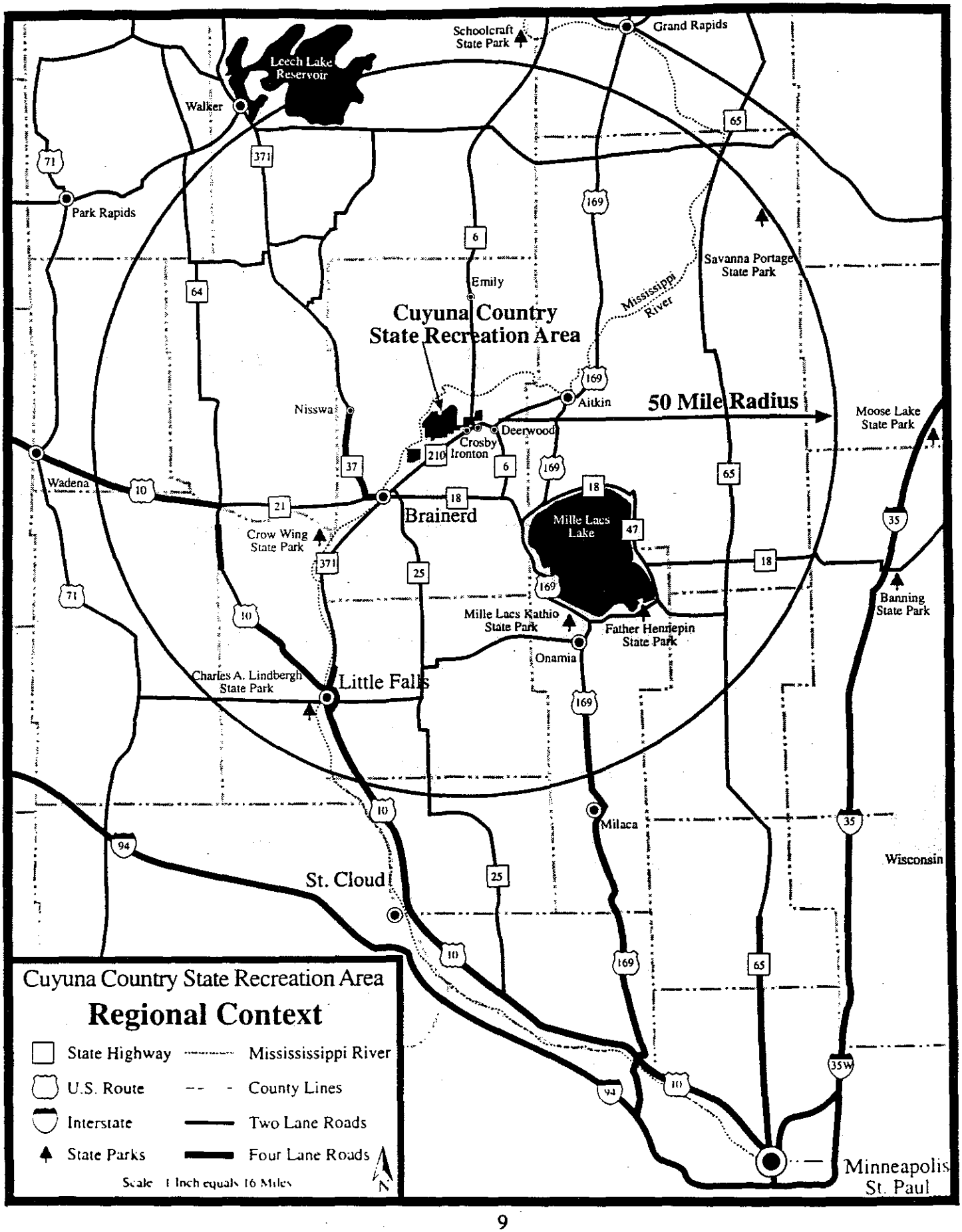
BEYOND RECREATION AREA BOUNDARIES
Regional Context and Issues

Cuyuna Country State Recreation Area is situated 14 miles northeast of Brainerd and approximately 16 miles northwest of Mille Lacs Lake (see Regional Context map, page 9). The recreation area is in the heart of central Minnesota's recreational lake district, situated between Gull Lake to the west, the Whitefish Lake chain to the north, and the Bay Lake - Mille Lacs Lake area to the southeast.

The following chapter includes sections describing the regional population, tourism and resort industry, the regional supply and demand of recreational services, and a description of the region's natural resources and landscape. Throughout this chapter, the plan will reference a 50 - mile radius for the described region surrounding Cuyuna. This distance was chosen as the area roughly within one - hour's drive of the recreation area.

Regional natural resource issues in this area include:

- Realizing "desired future conditions" where there is a balance between natural resources management and a strong local/regional economy.
- Maximizing biological diversity and protecting both groundwater and surface water resources.
- Identifying and managing unique natural and cultural resources.
- Managing hunting and fishing resources and demand.
- Appropriately managing shoreline development and wetlands preservation.
- Issues related to American Indian treaty rights.


Schoolcraft State Park
Grand Rapids
Leech Lake Reservoir
Walker
Park Rapids
Savanna Portage State Park
Emily
Cuyuna Country State Recreation Area
Mississippi River
50 Mile Radius
Aitkin
Nisswa
Deerwood
Crosby
Ironton
Moose Lake State Park
Wadena
Brainerd
Mille Lacs Lake
Crow Wing State Park
Banning State Park
Mille Lacs Kathio State Park
Father Hennepin State Park
Onamia
Charles A. Lindbergh State Park
Little Falls
Milaca
Wisconsin
St. Cloud
Minneapolis
St. Paul
Cuyuna Country State Recreation Area
Regional Context
State Highway
U.S. Route
Interstate
State Parks
Mississippi River
County Lines
Two Lane Roads
Four Lane Roads
Scale 1 Inch equals 16 Miles
N

Regional Population

Cuyuna Country State Recreation Area is located in central CroW Wing County, which had a population of 44,249 in 1990. The regional population within fifty miles ofCuyuna Country State Recreation Area was 142,250 in 1990. The cities with a population over 2,000 are shown below, along with the county populations within a fifty mile radius of Cuyuna Country State Recreation Area.

Cities over 2,000	1990 Population	% of population over 65
Brainerd	12,353	20
Little Falls	7,231	20
Wadena	4,109	22
-Princeton	3,717	19
Staples	2,357	21
Crosby **	2,073	29
Ironton **	553	25
Statewide Comparison	4,375,099	12.5

** Towns adjacent to Cuyuna.

Counties within 50 Miles	1990 Population	% of population over 65
Crow Wing	44,249	18
Morrison	29,604	16
Cass	21,791	19
Mille Lacs	18,670	17
Wadena	13,154	19
Aitkin	12,425	24
Statewide Comparison	4,375,099	12.5

The city of Brainerd is approximately fourteen miles southwest of Cuyuna, via state trunk Hwy. 2io. The towns in closest proximity to the recreation area are Crosby with a 1990 population of 2,073 and Ironton, population 553.

The median age of persons residing in Crow Wing County is 35.8 while 18% are 65 years of age or older. Statewide, 12.5% of all persons are 65 years of age and older. In the 50 mile region surrounding Cuyuna, 18% of the population is over 65, while 22% of the population within local cities are 65 years of age or older. These percentages reveal there is a significant retirement community in the area surrounding Cuyuna Country State Recreation Area.

Tourism, Resorts, and Marketing

Tourism

Tourism-related statistics for Crow Wing County during 1991 included the following:

- Tourism receipts totaling over $200 million dollars;
- Over 9% of the population was employed in the tourism industry;
- Tourism-related jobs employed 4,138 people, bringing in $78.65 million in gross wages; and,
- The county provided 18% of the states total Gross Sales for Resorts.

Within the 50 mile region around Cuyuna, **14.8** % of the working population was involved in the tourism industry in 1990 and 19.8% in 1991. In 1990,22.6% of the average work force in Crow Wing County was employed in the tourism industry. while 23.6% were employed in the tourism industry in 1991.

Resorts and Campgrounds

The table below summarizes private resorts and campgrounds within 50 miles of Cuyuna Country State Recreation Area. In the immediate area of Crosby, Deerwood and toward Garrison there at least eight private camping facilities with 147 unit campsites, (110 with full hookups and 37 without).

Private Resorts and Campgr01,mds within 50 miles of Cuyuna Country State Recreation Area

Cities	Resorts	Campgrounds
Brainerd	27	18
Breezy Point	I	I
Crosby	2	I
Cross Lake	7	2
Cushing	4	3
Deerwood	7	5
Emily	7	4
Fifty Lakes	I	O
Garrison	6	5
Hillman	I	I
Isle	11	13
Lake Hubert	2	O
Lake Shore	I	O
Little Falls	I	2
Merrifield	10	9
Motley	I	I
Nisswa	29	8
Onamia	10	8
Pequot Lakes	I7	7
Pine River	7	2
Princeton	O	2
Royalton	O	I
Upsala	O	I
Wahkon	3	3
Totals	155	97

Source:: Minnesota Office of Tourism. 1994.

Within 50 miles of Cuyuna there are numerous resorts. campgrounds and golf courses. The largest concentrations of facilities are located around Gull Lake and Whitefish Lake to the west and northwest of Cuyuna. Listed below are known facilities in close proximity to Cuyuna Country State Recreation Area (areas in bold are the closest).

Name	City	Lake	Camping	Room Units	Phone
Morning slde Resort	Aitkin		no	10	800-346-6166
Sunset Bay Resort	Aitkin		no	7	800-262-2691
Twin Oaks Resort	Brainerd	Nokay		7	218-764-2965
Crosby Mem. Park Camo"round	Crosby	Seroent	20 with Electric	.....	218·546-5021
Hallett House				**5 B & B**	**218-546-5433**
Hickory Lodge Resor	Crosby			yes	2185624777
Lake View Motel	**Crosby**	**Serpent**		**12**	**218-546-5924**
Moores Agate Lake Resort	**Crosby**	Agate & **Serpent**	**no**	**12**	**218-546-5435**
Portsmouth Bay	**Crosby**	**Portsmouth**	**yes**	**no**	**218-546-5898**
* Thatcher's	Crosby	Fools	Boats	only	218-546-6393
Yawkey Park·	Crosby	Yawkey Pit	15 Primitive		218·546-5021
Camp Holiday Resort	Deerwood	Turtle	40 unit 38 full	9	800-450-2495
Country Inn	Deerwood				218-534-3101
DaLois Campground	Deerwood	Bay	unit 32 full 22	—	218-678-2203
Deerwood Motel	**Deerwood**			**16**	**218-534-3163**
Hunters Bay Resort	**Deerwood**			yes	218·678.2052
Lonesome· Pine Resort and Lodge	Deerwood			ves	218-678-2874
Rutger's Bay lake lodge	Deerwood	Bay	no	164	800-450-5644
South Shore Resort	Deerwood	Serpent	4	6	218·546·6411
Hidden Haven Resort	Emily	Ruth	7 unit 20 full		218-763-2255
Little Pine R.V. Park	Emily	Emily	30 unit 30 fun		218-163-2942

* In Cuyuna CountrY State Recreation Area boundarY

Crosby Memorial Park is situated on Serpent Lake in the city of Crosby. The campground offers twenty campsites with electrical hookups, a tent camping area, showers and restrooms. Other facilities available to campers and park visitors include a boat access, a 500 foot swimming beach (with lifeguard), a picnic shelter and pavilion, volleyball and softball areas, a tennis court, and a children's playground. Crosby City hall is located adjacent to the park.

Yawkey Park is located within the Cuyuna Country State Recreation Area north of the Croft Mine Historical Park. Yawkey Park campground offers fifteen primitive drive-in campsites with a water pump, pit toilets, a carry-in boat landing and hiking trails.

The city of Crosby administers both Crosby Memorial Park and Yawkey Park.

Portsmouth Bay Campground is located on Portsmouth *mine* lake. It is a private facility offering camping through the summer months. Twenty camping sites are provided along with showers and water, four sites are available with full hookups. This campground is very popular with scuba divers, primarily because of good diving conditions in the adjacent Portsmouth *mine* lake. The campground includes a carry-in boat access and a small beach where divers can conduct shore dives.

Marketing

Marketing will be an important part of the overall operation of Cuyuna Country State Recreation Area. This area not only represents the state's first State Recreation Area; it also provides an experience very unique to the state park system. Cuyuna is the only unit of the state park system that offers a large complex of mine lakes surrounded by revegetated overlooks. In addition, this area offers several natural lakes, the Croft Mine Historical Park, and a variety of outdoor recreational opportunities. "Discover Minnesota's Newest Lakes" has been a successful marketing theme in this area. Cuyuna should be marketed as an area that provides the following "package" of opportunities:

- Scuba Diving
- Horseback Riding
- Mountain Biking
- Fishing and Boating
- Hiking Trails
- Snowmobiling
- Camping
- Canoeing
- Rock Collecting
- Mineland Reclamation and Forest Management
- Mining History Interpretation
- Mine Tours
- Cross-Country Skiing

Supply and Demand of Recreation Facilities

Supply

As part of the SCORP process, the DNR has maintained a data base of recreational facilities since the early 1970's. While the information for most of the public facilities has been updated in recent years, the private facility dat.a can be .out of date. PrIvate facility information in this plan is supplemented by mformalion from the Office of Tourism and local publications (1994). The table below shows an estimate of selected public recreational facilities within a 50 mile radius of Cuyuna.

Public Outdoor Recreation Facilities Within 50 Miles of Cuyuna Country State Recreation Area

Number of Facilities

Administrator	Cam rounds	Picnic Grounds	Boat Accesses	Beaches
Ailkin County.	4	2	13	I
Benton County	I	I	I	I
Carlton County	0	0	0	0
Cass County	0	0	I	0
Crow Wing COunlY	0	0	II	0
Hubbard County	0	I	6	0
Itasca County	0	0	4	I
Kanabec County	0	2	2	0
Mille Lacs County	0	0	0	0
Morrison County	I	I	2	I
Todd County	0	0	0	0
Wadena County	8	9	9	2
County Tolal	14	16	49	6
City Provided	3	14	37	8
DNR Fish & Wildlife	0	0	16	0
DNR Fisheries	0	0	5	0
DNR Forestry	8	10	18	7
DNR Parks & Rec	10	9	9	5 .
DNR Trails & Waterways	17 •	6	190	I
MNDOT	I	I	15	I
U.S. Army Com	7	8	10	4
U.S. Forest Service	2	3	10	2
Grand Totals	45	67	359	34

■ IndiVidual canoe campsites

Miles of Trails

Administrator	ATV	Hikin2	Horse	Skiing	Snowmobile	Mountain Bike
Aitkin COUniv	85	3	0	15	523	0
Benton County	0				4	0
Carhon Count"	0	0	0	0	6	0
Cass County	0	56	0	35	258	0
Crow Wing Countv	15	12	15	14	409	7
Hubbard County	0	0	0	0	0	0
Itasca County	0	0	0	0	72	0
Kanabec County	0	0	0	0	40	0
Mille Lacs County	22	0	0	0	82	0
Morrison County	0	0	0	0	292	0
Todd Count"	0	0	0	0	349	0
Wadena Counl"	0	4	0	0	156	0
CounlV Total	122	75	15	64	2191	7
Citv Provided	0	8	0	37	26	0
DNR Fish & Wildlife	0	10	0	0	0	0
DNR Fisheries	0	0	0	0	0	0
DNR Forestry	43 •	77	66	39	101	66
DNR Parks & Rec	0	80	27	48	85	10
DNR Trails & Waterways	0	IJ	IJ	0	14	7
MN DOT	0	0	0	0	0	0
U S Army Corp	II	II	II	0	II	II
U S Forest Service	II	89	65	IDO	0	66
Grand Totals	165 ▪	353	187	288	2417	156

Approximate miles of trails •

Boat Accesses - There are 359 public boat accesses in the 50 mile region. Over half of these are administered by the DNR, Trails and Waterways Unit.

Picnic Grounds/Beaches - There are 67 picnic grounds and 34 public beaches within the 50 mile area around Cuyuna. The city of Crosby maintains a 500 foot beach adjacent to their public campground on Serpent lake.

Campgrounds - There are at least forty public campgrounds within 50 miles of the recreation area. The majority are administered by counties and the DNR (Divisions of Parks and Recreation and Forestry, plus canoe campsites administered by the Trails and Waterways Unit). There are two campgrounds administered by the city of Crosby adjacent or within the recreation area (see page 14).

State Park	Drive • In Sites	Electric Sites	Horse Sites
Crow Wing	61	12	O
Charles Lindbergh	38	15	O
Savanna Portage	60	18	O
Mille Lacs Kathio	70	0	20
Father Hennepin	103	41	O
50 Mile Region Total	332	86	20

There are 97 known private campgrounds within 50 miles of the recreation area. Many private campgrounds are associated with private resorts (see resorts and campgrounds, page 12).

Hiking and Cross-Country Ski Trails - Cross-Country Skiing is offered at five local State Forests: Hill River, Land 0 Lakes, Savanna, Pillsbury and Foothills. All five State Parks in the area offer hiking trails but only four offer ski trails: Charles A. Lindbergh, Crow Wing, Mille Lacs Kathio, and Savanna Portage. There are 357 miles of hiking trails and 286 miles of cross-country ski trails in the 50 mile region.

Horse Trails - There are approximately 186 miles of horse trails in the 50 mile region. The majority of this mileage (131 miles) occurs on DNR State Forest and U.S. Forest Service lands. There are two major riding areas within 30 miles of Cuyuna Country State Recreation Area: Pillsbury State Forest (27 miles of horse trails. and 100 horse campsites) and Mille Lacs Kathio State Park (27 miles of horse trails and a 20 site horse campground).

Mountain Bike Trails· There are approximately 156 miles of trails open to mountain bike use within 50 miles of Cuyuna. Most of these trails are provided by the U.S. Forest Service and DNR Forestry. The great majority of mountain bike trails also allow horses on the same treadway.

Chippewa National Forest in Cass County provides 60 miles of trails / roads. The DNR, Division of Forestry provides 24 miles of trails in Huntersville State Forest, 15 miles in Washburn Lake Solitude State Forest, and 27 miles of trails in Pillsbury State Forest. Pillsbury is heavily used by horseback riders, however mountain bike use is limited at the present time. Twenty-two additional miles of trails are provided by Savanna Portage State Park, The Heartland State Trail and Wolf Lake Multiuse Area.

Snowmobile Trails - There are over 2000 miles of County-maintained Grant-In-Aid (GIA) snowmobile trails accessible within a 50 mile radius of the park. GIA trails are funded by snowmobile registrations and unrefunded gas taxes through the Minnesota DNR to local units of government who in tum distribute the funds to local snowmobile clubs for trail development and maintenance. Most of the snowmobile trails are owned and operated by the individual counties the trails are located in. Snowmobile trails are offered at five local State Forests: Hill River, Land 0 Lakes, Savanna, PiJlsbury and Foothills. Three State Parks offer snowmobile trails as well: Crow Wing, Mille Lacs Kathio, and Savanna Portage.

Shooting Ranges- A statewide survey of DNR conservation officers was recently completed pertaining to the number of shooting ranges in Minnesota. The table below summarizes known shooting ranges within the 50 mile area around Cuyuna. Gun ranges do not need to be registered, therefore there is no way to know exactly how many there are. Many of the ranges listed are private resorts which allow trap or target shooting.

The "Northwoods Education Center," based in Moose Lake, is considering the installation of a gun and archery range on public land. Moose Lake is located about 60 miles east of Cuyuna. The future range may also have a Biathlon course. An Olympic shooting range is also being planned at Sugar Hills, a former ski resort five miles south of Grand Rapids. This facility would also have an indoor archery range.

Shooting Ranges or Private Resorts which allow Shooting within 50 miles of Cuyuna Country State Recreation Area

Ackley's Resort and campground	Birchwood cabins resort
Cuyuna Scout Camp	Long Lake Conservation center
Eskesens Wildwood Resort	Moose Willow Sportsman club
Kilworry Resort	Rice Creek Hunting and Recreation
Shingwank Village Resort	Roosevelt Log Cabin Resort
Trout Lake group camp	Royal Flush Shooting Club
Wealthwood Rod and Gun Club	Thunder Lake Lodge Resort
Mille Lacs Hunting Lodge	Ski Gull Trap Club
Willeys Sport and shop range	

All- Terrain Vehicle Trails - There are two "off-road" clubs in the Cuyuna vicinity: the Pine Center Sportsmen ATV and Snowmobile Club (SE Crow Wing County), and the Central Minnesota Wheelers Association (Brainerd - Fort Ripley - Little Falls). The Central Minnesota Wheelers maintain fifteen miles of trails on public land by Fort Ripley. There are a total of 186 miles of ATV trails on public lands in the 50 mile vicinity as shown in the table below. There are about 200 miles of ATV trails within an hour's drive of Cuyuna, and about 245 miles of ATV trails within a 75 mile radius of the State Recreation Area.

ATV Trails within 75 Miles of Cuyuna Country State Recreation Area

Administrator	ATV Trail Miles	Trail NameILocation	Distance fromCuyuna
Central Wheelers / Crow Wing County	15	Camp Ripley Trail	30
DNR Forestry	23	Ben Draper Trail - Land O'Lakes State Forest	30
DNR Forestry	38	Hill River - Hill River State Forest	45
Aitkin County	11	Tamarack - Lawler ATV Trail	36
Aitkin County	1	Sao Line South - Isle to Archyde	36
Aitkin County	48	Soo Line North - Hill City to Jacobson	45
Aitkin County	25	Rabey Line - Remer to AitkinlPine border	40
Mille Lacs County	22	Soo Line Mille Lacs ATV - Bradbury to Isle	36
50 Mile Vicinity Total	183		
DNR Forestry	15	Nemadji State Forest - Eastern Pine County	74
DNR Forestry	8	General Andrews State Forest	56
Carlton County Parks	30	Soo Line East ATV Trail - Moose Lake to Wisconsin border	64
Pine County Parks	14	North Pine ATV Trail - AitkinlPine County border to Moose Lake Airport	50
75 Mile Vicinity Total	250		

Biathlon Courses - Biathlon is a combination of cross country skiing and rifle marksmanship. It has been a part of the Olympics since 1960. The appeal of biathlon is in the challenge to master two opposing skills- one that requires you to push your body to its endurance limits, and the other which requires intense concentration and very fine motor skills.

Biathlon racers ski over a set course carrying a rifle and stop periodically to shoot at metal targets 50 meters away. The penalty for missing targets is either time added onto the total, or skiing an additional 150 meter penalty loop.

There are two major biathlon courses in Minnesota. The Camp Ripley course, south of Brainerd, is open to the public on a special arrangement / lease basis. The Elk River course, in the Twin Cities Metropolitan Area, is not open to the public (open only to Team Birke Ski Education Foundation Biathlon members).

Demand

Cuyuna Country State Recreation Area is already receiving considerable levels of use. There is expressed demand for camping, fishing, boating, scuba diving, and many trail uses in this area (as well as many other activities).

There are five state parks within 50 miles of Cuyuna Country State Recreation Area. The five state parks are listed below along with their attendance in 1993. Even though these state parks offer different combinations of recreational opportunities, they are still the best indicator of existing, expressed demand for natural resource-based outdoor recreation services in the Cuyuna area.

1993 Attendance at State Parks within 50 miles of Cuyuna Country State Recreation Area

Park	Day Use	Camping	Total Visitors
Crow Wing	**31,191**	**6,210**	**37,401**
Charles Lindbergh	45,093	4,291	46,384
Savanna Portage	47,999	9,227	57,226
Mille Lacs Kathio	83,628	10,518	94,146
Father Hennepin	100,413	20,307	120,720
50 Mile Region Total	305,321	50,553	355,877

Cuyuna Country State Recreation Area will offer a unique and different experience from any other state park or recreation facility in this area. Mine lake recreation, which includes fishing. scuba diving, mining interpretation, and the other opportunities described in thi, plan. will provide a strong attraction to this area.

Regional Landscape Description

Ecological Classification System

An Ecological Classification System (ECS) is a way of separating and describing units of a landscape. This approach stresses the interrelationships and the results of interactions among components of the ecosystem. These components include climate, geology, geomorphology, parent material, soil, vegetation, hydrology, and land history. The ECS approach handles each component in relation to the others, rather than each one separately (Hargrave, 1995).

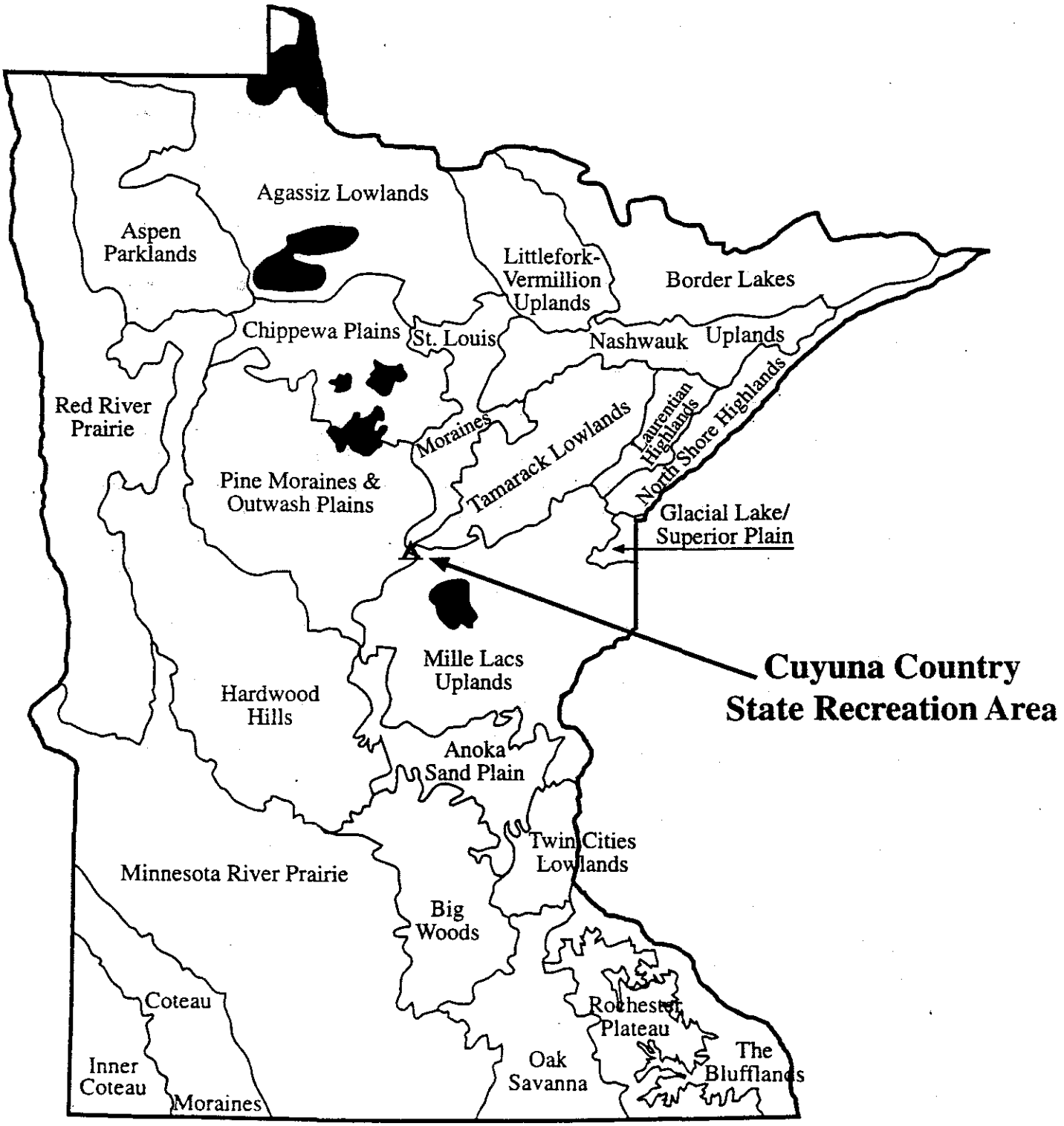
The ECS approach divides Minnesota into 23 distinct units called subsections (see map page 21). Cuyuna Country State Recreation Area is located at the southern end of the St. Louis Moraines subsection. This area was overridden by the St. Louis sublobe of the last glaciation period. Glacial drift ranges from 100 to 200 feet in depth, and presettlement vegetation was dominated by aspen-birch forests, mixed-hardwood pine forest, and northern hardwood forests. Conifer swamps were scattered throughout the area (see Presettlement Vegetation, page 37).

Watershed and Landscape Characteristics

Watersheds

The recreation area is within the Mississippi watershed, the major watershed name is Mississippi Brainerd. This major watershed drains a total of 1,084,946 acres. The subwatersheds within about six miles of the recreation area drain about 187,305 acres. The recreation area falls into three subwatersheds. The main recreation area is in the Rabbit River subwatershed which drains 13,701 acres. The Portsmouth, Yawkey, Manuel, and Armour mine lakes as well as Serpent Lake are in the Sement Creek subwatershed which drains 8,697 acres. The Sagamore area lies almost entirely within a subwatershed referred to as Creek to Mississippi River draining 4,317 acres. The flow of water within the Rabbit River subwatershed is toward the natural lakes area and also to the southwest towards the Mississippi River.

ECOLOGICAL CLASSIFICATION SYSTEM (ECS)
(Draft) Subsection Map of Minnesota



Landscape Characteristics

Cuyuna Country State Recreation Area is located at the intersection of four Landscape Regions as identified by the DNR. Division of Parks and Recreation interpretive program (1993): Mille Lacs Uplands. Pine Moraines & Outwash Plains. Tamarack Lowlands. and St. Louis Moraines.

Mille Lacs Uplands

Gently rolling till plains and drumlin fields are the dominant landforms in this region. Glacial drift ranges from 100 to 300 feet in depth over bedrock. Bedrock is locally exposed throughout the northern portion of the subsection. where depths are typically 100 feet or less. The pre-European settlement vegetation consisted of a mosaic of forest types. This subsection was a vast mix of conifer. hardwood and mixed conifer-hardwood forests. Peatland areas were inhabited by sedge-fen. black spruce sphagnum. or white cedar-black ash communities. Both fire and windthrow were important in determining the vegetation of the subsection.

Pine Moraine and Outwash Plains

The Pine Moraine and Outwash Plains subsection is characterized by white and red pine which dominated the majority of the forest communities on end moraines and till plains. Jack pine barrens and jack pine woods were found on well drained sites on the outwash plains. Black spruce. tamarack. white cedar. and black ash were prominent tree species in poorly to very poorly drained soils. Lakes are very common on the end moraines and some of the outwash plains. Pre-European vegetation included jack pine and northern pin oak as the most common species on excessively drained portions of broad outwash plains. Large areas of the other landforms were dominated by aspen-birch and pine forests (mixture of red and white pine). Red pirie-white pine forests. occupied the rolling to irregularly sloped end moraines. Mixed hardwood and pine forests. dominated by a diverse mix of northern hardwoods and white pine. were found in the most fire-protected areas at the northern and eastern edges of the subsection.

The Tamarack Lowlands

The Tamarack Lowlands area is characterized by lowland hardwoods and conifers which were the most common forest communities. Northern hardwoods and aspen-birch were common on the other portions of this subsection. Pre-European vegetation in the lowlands were dominated by lowland conifers (black spruce. tamarack. and white cedar) and lowland hardwoods (black ash). Sedge meadows were also extensive. Uplands supported aspen-birch and upland conifer forest. White pine-red pine forests were located on the ground moraine at the edges of the lake plain. but were not extensive.

St. Louis Moraines

Rolling to steep slopes characterize much of this subsection. End moraines are the dominant landform. The underlying topography was formed by the Rainy Lobe. It was later overridden by the 5t. Louis sublobe of the last glaciation period. Nonhern hardwoods were common in the southern portion of the region.

NATURAL AND CULTURAL RESOURCES

Introduction

The Natural and Cultural Resources chapter begins with sections which list and describe the resources within the recreation area. At the end of the chapter is a section which lists integrated resource management actions.

Cultural ResourceslHistory

Cultural Resources

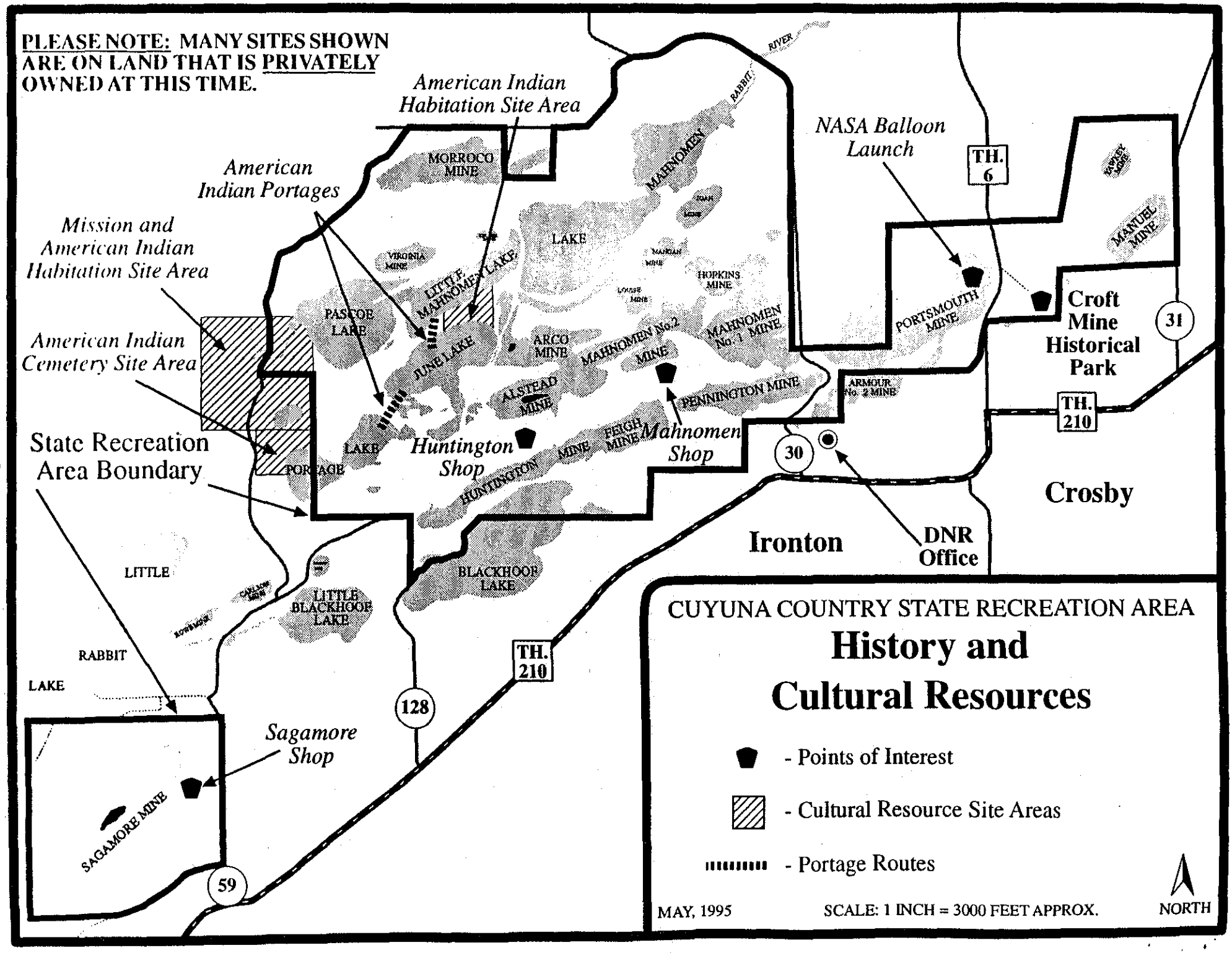
According to the records at the State Historic Preservation Office, there is one known archaeological site in the State Recreation Area boundary (see History map, page 24). This is an American Indian habitation site located on the southeast side of Little Mahnomen Lake. There are also two known cultural resource sites just outside of the State Recreation Area boundary; one is an American Indian cemetery located near Portage Lake and the other is a mission/American Indian habitation site located on the west side of Pascoe lake, (this American Indian site may actually be within the recreation area boundary).

American Indians in the Cuyuna Area

The Cuyuna area was a border area between the Dakota (Sioux) and the Ojibwe (Chippewa) Indians. The Cuyuna area also served as a long portage route from Mille Lacs Lake to the upper Mississippi River. There were many trading posts and missions in the general area. The 1870 General Land Office survey notes indicated the presence of an American Indian trail between Little Rabbit - Portage - June - Little Mahnomen Lakes. These notes also show Mahnomen and Little Mahnomen Lakes as one large lake named "Rabbit Lake." Interviews with local Ojibwe in 1951 indicated the presence of a cemetery between Little Mahnomen and June Lakes (DNR, Division of Minerals, Hibbing Office Records).

The Naming of the Cuyuna Range

Cuyler Adams homesteaded on Reno Lake in Deerwood **in** 1882. While surveying his land in 1903, he noticed great compass deflections. He noted this was probably due to the presence of iron ore beneath the surface. **In** 1903, he chartered the Orelands Mining Company and in 1904 discovered ore. The range was named using the first three letters from Cuyler. "CUY", and the three letter name of his constant companion while prospecting. his St. Bernard dog, "UNA".


PLEASE NOTE: MANY SITES SHOWN ARE ON LAND THAT IS PRIVATELY OWNED AT THIS TIME.
American Indian Habitation Site Area
American Indian Portages
Mission and American Indian Habitation Site Area
American Indian Cemetery Site Area
State Recreation Area Boundary
NASA Balloon Launch
Croft Mine Historical Park
Huntington Shop
Mahnomen Shop
Sagamore Shop
DNR Office
Ironton
Crosby
MORROCO MINE
MAHNOMEN
RABBIT RIVER
LAKE
VIRGINIA MINE
LITTLE MAHNOMEN LAKE
PASCOE LAKE
JUNE LAKE
ARCO MINE
MAHNOMEN No.2 MINE
MAHNOMEN No.1 MINE
HOPKINS MINE
PORTSMOUTH MINE
MANUEL MINE
ALSTEAD MINE
PENNINGTON MINE
ARMOUR No. 2 MINE
FEIGH MINE
HUNTINGTON MINE
BLACKHOOF LAKE
LITTLE BLACKHOOF LAKE
LITTLE RABBIT LAKE
SAGAMORE MINE
TH. 6
TH. 210
TH. 210
31
30
128
59
CUYUNA COUNTRY STATE RECREATION AREA
History and Cultural Resources
- Points of Interest
- Cultural Resource Site Areas
- Portage Routes
MAY, 1995
SCALE: 1 INCH = 3000 FEET APPROX.
NORTH

The Cities of Crosby and Deerwood

The city of Crosby is named after George H. Crosby, a Duluth financier who bought an option on a farm near Rabbit Lake in 1905. Later he bought options on other farms in the area, one of which became part of the main street in Crosby. Crosby was a fully planned city when it was platted on October 5, 1909.

In 1871 the first Railroad (Northern Pacific Railway) crossed the area through Deerwood which was originally called Withington after an official of the R.R. The name was changed to Deerwood about ten years later to avoid confusion with Worthington in southwestern Minnesota.

The First European Settlers to the Cuyuna Range

The treaty of 1837 with the Mississippi Band of Ojibwe opened the area to European settlement. The Treaty of 1855 established the Mille Lacs reservation on the southwest shore of Mille Lacs Lake.

The first European settlers to the Cuyuna Range came from over forty different countries. The men came over first, often with the idea that they would make their money and then return home. Many ended up staying for good and sending for their families once they had made enough money. Families often came to the range without any possessions. The men worked in the mines, the women worked at home, and the children went to school. Parents attended"Americanization" classes at night. Immigrants eventually became U.S. citizens. Workdays were often 10-12 hours long with pay for the day totaling $2.25. The early days of mining were very unsafe. Whenever the mine whistle blew, people knew there had been an accident. One such accident occurred at the Milford mine in 1924 when 41 people died.

Milford Mine Disaster

The Milford mine was located in Crow Wing County, three miles north of the city of Crosby. The accident occurred at approximately 3:45 P.M. on Tuesday, February 5, 1924. Forty-one men lost their lives in the disaster, thirty-five left widows or orphans. The mine openings were filled with a rush of mud in about fifteen minutes. Water rose to within 35 feet of the top of the main shaft within half an hour from when water first broke into the mine. Forty eight men were in the mine at the time of the accident, only seven were able to escape. Work began the next day to de-water the mine and Foley pond to recover the victims. The last body was recovered November 4th.

Six of the men were on the 175 foot level. They were alerted to the problem and climbed to the 135 foot level and from there to the top. One man, Emil Kainu, was on the bottom level of the mine. He was first alerted to the impending disaster when switches went out on the electric haulage feed line, he also heard a rush of air and a strange booming noise. He remarked in later testimony that other men could have escaped as well but they appeared too frightened to move.

The mine was located under a marsh close to Foley pond. An arch of earth underneath the marsh which connected to Foley pond collapsed causing the surface to cave in six or eight feet. The surface area which collapsed was covered with a heavy growth of evergreen and tamarack trees four or five inches in diameter. This was cited as evidence in an investigative report that no one could have known such a disaster might happen.

A new room (which eventually caved in) was blasted on Friday, February 1st after miners had left the mine. Between Friday evening and Tuesday afternoon, four blasts occurred which shook the ground. These should have caused the weak arch to break when the mine was empty, thus preventing such a tragedy.

A six-person investigating committee found the Whitmarsh Mining Company not liable or at fault for the disaster. Compensation required by Minnesota state law was paid to the families of the deceased.

History of Mining

1859 Strong magnetic variations are noted by government surveyors near Lookout (Cracker) Lake.
1903 First drilling by Cuyler Adams south of Deerwood near Ann Lake.
1905 Sigma was the first official mine of the area. Drilling began in September. The mine filled with water a short time later.
1907 Kennedy Mine begun
1910 Armour Mine First ore shipped 1912
1911 First shipment is made from the Cuyuna Range from the Kennedy mine near Rabbit Lake totaling 147,650 tons.
1913 First labor strike on the range. Miners demanded an eight hour work day, time and one half for overtime and paid medical leave.

1910-1968	Armour
1914-1934	Croft Mine
1915-1971	Mahnomen Mine
1915-1971	Hopkins Mine
1915-1971	Mangan and Louise Mines
1916-1963	Joan Mine
1916-196\	Feigh Mine
1918-\961	Huntington Mine

1918-1960	Portsmouth Mine
1918-1969	Sagamore Mine
1920-1959	Morroco Mine
1926-1964	Alstead, Arco, and North Hillcrest Mines
1948-1966	Virginia Mine
1952-1953	Mallen Mine
1952-1962	Manuel Mine
1954-1960	Yawkey Mine

By 1912 there were eleven mines in operation on the Cuyuna Range, and by 1913 total ore shipments had reached one million tons. Peak employment reached 2,749 minersin 1919. Peak production occurred in 1945 at 3.7 million tons annually. Most mining occurred underground for the first 25 to 30 years. During the late 1920's and 30's the predominant type of mining switched to open pit mining. As technology progressed open pit mining was usually more economical and safer than underground mining. Open pit mines often grew so large that they would encompassed other pits becoming one large pit. The first open pit operations were the Pennington and Rowe pits. Hydraulic mining occurred in the Rowe pit. There were up to thirty open mine pits operating on the Cuyuna range. Stearn shovels would dig ore and load small ore cars pulled by stearn locomotives. Later these were replaced by electric shovels and trucks which could haul up to forty tons of ore. The last underground mine in Minnesota was the Armour #2 which closed in 1967. The last operational mine on the Cuyuna range was the Zeno mine in Trommald.

Iron Ore Production by Range in Minnesota

Fillmore County	8,144,754	tons
Vermilion Range	103,750,000	tons
Cuyuna Range	106,438,000	tons
Mesabi Range	3,522,170,000	tons

NASA Balloon Launch

On August 19th, 1957, NASA launched a 280 foot plastic balloon from the 350 foot deep Portsmouth mine pit carrying Air Force Major David G. Simons. A location was needed where the balloon would not be exposed to winds while it was being prepared for launch. Major Simons was carried nineteen miles into the Stratosphere. The purpose of the launch was to study how humans reacted to high altitudes, prior to high altitude airplane flights or space travel.

History of the Croft Mine:

Pre-I 906
Property homesteaded by Hans Anderson.
M.F. Kalmbach obtains option on the land to mine and relinquishes it.

1906 George H. Crosby obtained an option, drilled and relinquished it as well.

1909 Three area businessmen take over from George Crosby, spend $27,000 drilling and relinquish their claims as well.

1914 Cuyuna Realty Co., a subsidiary of Northern Pacific Railroad, leased the site and then released it to Merrimac Mining Co. who sunk a shaft.

1914 to 191 8 A circular concrete shaft is sunk 110 feet to a solid ledge and a steel encased shaft is put down to 250 feet.

1918 The mine produces 365,000 tons of ore.

1926 to 1933 Pickands Mather Co. operates the mine until the lease expires. Total tonnage mined was 1,770,669 tons.

1978 Governor Rudy Perpich announces a program to restore the Croft Mine.

1978 State of Minnesota purchases the land which the Croft park and mine now reside on.

1979 Bids are sent out for the first phase of development.

1980 Governor Al Quie dedicates the Croft Park on May 28th opening it to the public.

1982 Croft registers its 1O,0OOth visitor.

1986 Great River Road and 1RRRB provide funds for extensive restoration and building prograrri.

1989 Croft re-opens, holds a dedication program and is visited by over 6,000 people during the summer.

1993 Croft included in the boundary of the Cuyuna Country State Recreation Area.

Historical Significance of the Croft Mine - The Croft Mine has not been evaluated for eligibility for listing on National or State Registers of Historic Places. Further documentation and research is needed prior to making this determination according to the State Historic Preservation Office in the Minnesota Historical Society.

Climate and Seasons

The temperature and precipitation information below was generated at the Brainerd weather station between 1951 and 1970.

Temperatures and precipitation

Averages for July	70.3' Fahrenheit	3.15 inches of precipitation
Averages for January	8.7° Fahrenheit	.83 inches of precipitation

In the Brainerd area, July is typically the warmest month, January the coolest, August the wettest and February the driest.

On the average, there are 131 frost free days in the Brainerd area each year.

Average date of last frost	5/16
Average date of first frost	9/24

Snow Cover Data

The mean duration of snow on the ground averaged over twenty seasons, 1959-1979, is shown below.

Days of snow cover of 1 inch or greater	120 days:
Days of snow cover of 3 inch or greater	105-110 days.
Days of snow cover of 6 inch or greater	85-90 days.
Days of snow cover of 12 inch or greater	45-50 days.
Days of snow cover of 24 inch or greater	10 days.

Average date of occurrence of the first 1 inch of snow depth November 20th.
Average date of occurrence of the last 3 inches of snow depth **March** 31st.
Average date of occurrence of the last 1 inch of snow depth April 10-15th.

Mean lake ice out in this area is April 20-25th.

For cross-country ski or snowmobile grooming, a snow depth of at least six inches is needed. In the Cuyuna area, the median snow depth is six inches or greater for approximately 85 to 90 days each year. (In comparison, the northeast comer of Minnesota may have 100 to 130 days with snow cover of six inches or more, while the southwest comer of the state may have as little as 30 such days in a winter.)

Geology and Minerals

Geology

Generally, the entire Cuyuna region is poorly drained, causing the water table to remain close to the level of the Mississippi river. As a result of this high water table, the Cuyuna mine pits filled with water when mining and pumping activities ceased in the 1950's and 60's.

The Cuyuna range is part of an early Proterozoic geologic terrain. The range is usually divided into three districts, the Emily District, the North Range and the South Range. Cuyuna Country State Recreation Area is located in the North Range, the smallest of the three ranges. The rocks of the North Range were once correlated with the Animikie Group of the Mesabi range, but now are believed to be part of an older sequence, the North Range group of Southwicka and others.

Description of the Cuyuna Range

The Cuyuna range runs Northeast to Southwest for about 65 miles varying in width from one or two miles up to twelve miles. The topography is predominantly morainic. There are large areas where the land includes numerous small hills interspersed with swampy areas and lakes. Other areas of the range are covered with extensive outwash plains. The surface of the range prior to mining was level to gently undulating. The elevation change of the range before mining was about 200 feet, beginning at a low point of 1150, the elevation of the Mississippi in the west, and rising to 1350 feet, the heights of hills in the eastern part of the range.

The rock on the Cuyuna range has been heavily folded; some beds stand nearly vertical which is a sharp contrast to the Mesabi Range where beds are at an angle. The rocks of the Cuyuna range can be classified into three general categories: "(1) iron-bearing sedimentary Cherts and Slates interbedded with metamorphosed igneous rocks; (2) intrusive igneous rock; and (3) younger sediments that lie horizontally on the eroded surfaces of the older rocks (Schwartz, 1973)". Cuyuna ore is soft and earthy, made up of red and brown iron oxides. The ore from the northern part of the range can be dark gray to almost black. These types of ore usually contain high amounts of Manganese as oxides.

Bighamite is a non-iron bearing rock occurring only on the Cuyuna range. Bighamite has a high Silica content giving it a shinny lustrous appearance making it very appealing to rock collectors. The lapidary industry also uses Bighamite in many types of jewelry.

Future Mining Potential

There are currently three resources existing in the Cuyuna Country State Recreation Area which may lead to future mining within the recreation boundary: construction rock, natural iron ore (nonmagnetic), and Manganese ore. Construction rock is the most likely resource to be mined in the next 25 years. but the remaining Manganese Ore deposits have the highest potential for long-range mining. There is also potential for exploration and mining of non-ferrous metallic minerals.

Construction Rock

The State of Minnesota owns stockpiles on four different parcels within the recreation area. These stockpiles and many other stockpiles which exist throughout the recreation area may be marketable for aggregate and other construction purposes. Little is known at the present time about the ownership of most of the stockpiles in the recreation area.

Iron Ore Mining Potential

The majority of iron ore processing facilities in the U.S. switched from processing natural ore to processing taconite in the 1960's. The Cuyuna area is a natural ore area, which differs from the ore used to produce taconite. Within the recreation area, "lean iron ore stockpiles" may exist which contain enough natural iron ore to make removal of them profitable in 50 or more years. Any suggestion of future mining or stockpile removal is purely speculative at this time.

Manganese Mining Potential

Manganese is a critical defense-related element used as a hardening agent in the steel making process. The United States began importing large amounts of Manganese in the early 1960's and currently imports almost all Manganese used in its steel production. The Cuyuna range was a critical supplier of Manganese in W.W.! and W.W.II when foreign supplies were threatened and at times drastically reduced by wartime activities. The Cuyuna range is one of four critical reserves of Manganese within the borders of the United States.

The Cuyuna range contains a large but low grade resource of Manganese. There have been many attempts to estimate the potential deposits of Manganese remaining. The most recent estimation was done in 1981 by Beltrame. et. al. They estimated that the range contains a minimum of 170 million metric tons of Manganiferous rock with an average grade of 10.46 weight percent Manganese. The glacial till covering the Cuyuna area is generally less than 100 feet thick, however in some areas the till thickness reaches 200 feet thick.

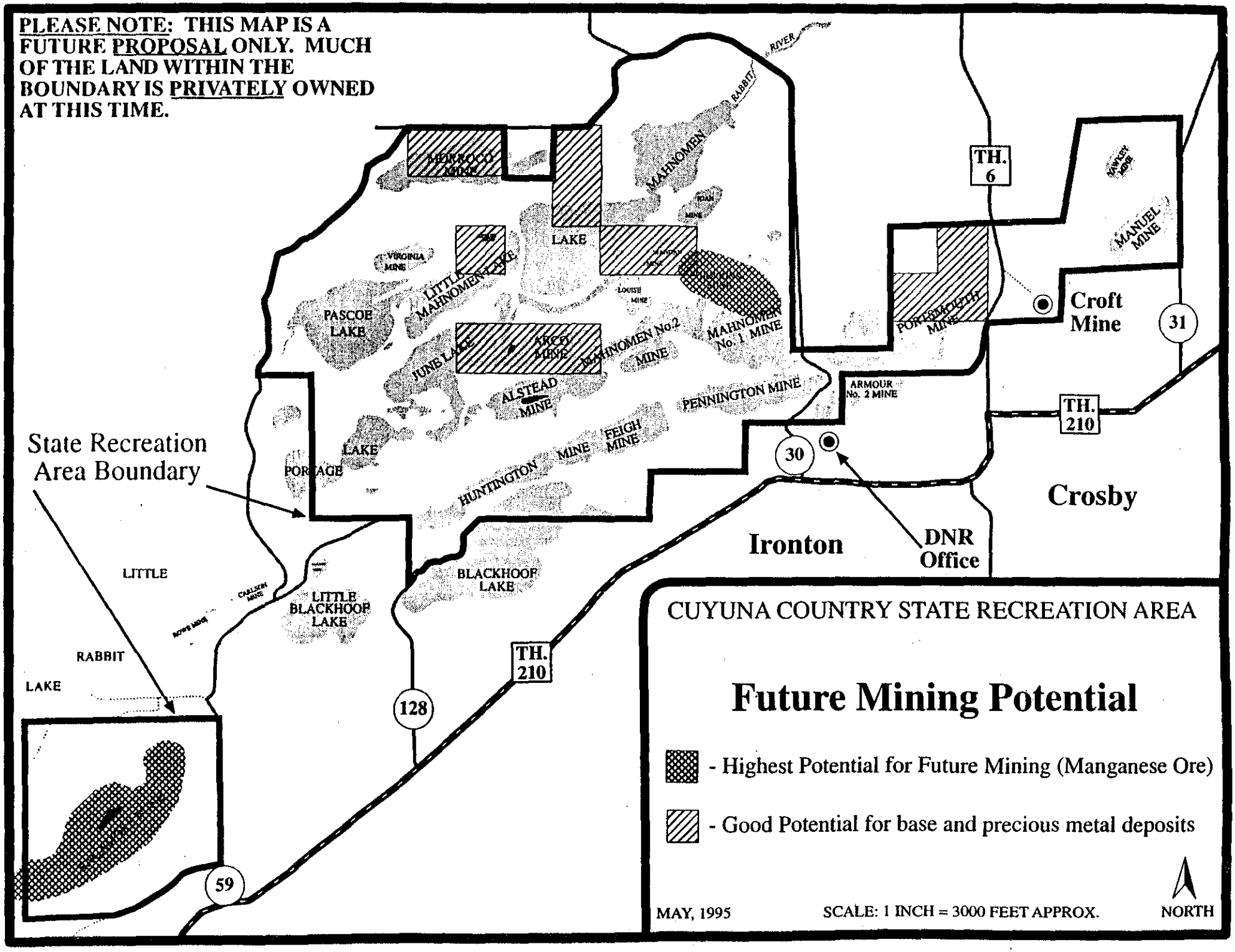
For the foreseeable future, the only reason the Cuyuna range would be put back into Manganese production would be in the event of a metallurgical breakthrough or a world crisis. In the event of a world crisis and cut-off of foreign supplies, most or all reserves of Manganese may be put back into production. Ores of the Emily District north of Cuyuna (near Emily, Minnesota) have a much higher percentage of Manganese than that which is found on the North Range, (where the recreation area is located). Within the immediate boundary of the recreation area, there are large amounts of low grade Manganese-bearing ore ranging from 3-5% Manganese (see Future Mining Potential map, page 33). High grade ore usually contains above 15% Manganese. Large stockpiles exist within the recreation area which may contain low grade ore. This material was considered waste at the time of mining during the 40's, 50's and 60·s. However, with technological advances, these stockpiles may become valuable especially in the event of a world crisis.

The Cuyuna range would be fairly easy to put back into production. Many railroad beds exist throughout the region leading directly to the large ports along Lake Superior. In the event of a national emergency, at least part if not all of the reserves of the Manganese bearing ore on the Cuyuna range may need to be put back into production. However. the range should remain dormant for the foreseeable future due to the unprofitable cost of ore extraction, and the low grade content of the ore.

The Hopkins and Sagamore mine areas would most likely be selected to be put back into production if deemed necessary. Portions of these areas include Manganese ore greater than 10%. These areas have the highest concentrations of mineable Manganese ore in the recreation area.

Other Mineral Commodities

In addition to manganese ore, there is good potential for base and precious metal deposits in the areas shown on the Future Mining Potential map, page 33.


PLEASE NOTE: THIS MAP IS A FUTURE PROPOSAL ONLY. MUCH OF THE LAND WITHIN THE BOUNDARY IS PRIVATELY OWNED AT THIS TIME.
State Recreation Area Boundary
MOROCCO MINE
MAHNOMEN
RABBIT RIVER
LAKE
VIRGINIA MINE
LITTLE MAHNOMEN LAKE
PASCOE LAKE
JUNE LAKE
LOUISE MINE
MAHNOMEN No.2 MINE
MAHNOMEN No. 1 MINE
ALSTEAD MINE
PENNINGTON MINE
ARMOUR No. 2 MINE
PORCUPINE MINE
MANUEL MINE
HUNTINGTON MINE
FEIGH MINE
LAKE PORTAGE
BLACKHOOP LAKE
LITTLE BLACKHOOP LAKE
LITTLE RABBIT LAKE
TH. 6
TH. 210
TH. 210
128
59
30
31
Croft Mine
Crosby
Ironton
DNR Office
CUYUNA COUNTRY STATE RECREATION AREA
Future Mining Potential
- Highest Potential for Future Mining (Manganese Ore)
- Good Potential for base and precious metal deposits
MAY, 1995
SCALE: 1 INCH = 3000 FEET APPROX.
NORTH

Soils

Approximately 90 % of land within the Cuyuna Country State Recreation Area boundary is shown as "Mines and Dumps" in the Crow Wing County Soil Survey (April, 1965). There is no detailed information for areas defined as "Mines and Dumps". This includes the entire main mine lakes area. The DNR, Division of Minerals has several soil borings from this area which may be helpful prior to any major proposed developments.

The natural Iakes area contains a variety of soils with the characteristics described in the Soil Limitation chart on page 35). The Planning Process File includes detailed descriptions for soils found in and around the recreation area.

Soil Limitations Chart

Cuyuna Country State Recreation Area
Development Limitations Table
Natural Lakes Area Soils

Man Unit	Description	Slone	Permeability·	Water Table	Septic Tank Absorption Fields	Sewage Lagoon Areas	Building Sites**	Local Roads & Streets	Intensive Camp Areas	Picnic Areas	Playgrounds	Paths & Trails	Lawns & Landscaping	Overall Suitability / Limitations
Soils of the Nalural Lakes Area Within CCSRA														
AD	Alluvial Lands		-		--	--	--	--	--	--		--	--	
BCA	Brainerd-Chetek Association, nearlv Level	Oto 2%	0-10"/.6-2.0	2-3';>6'	5	5	5	5	L	L	M	L	M	M
BCC	Brainerd-Chetek Association. rolling	to 18%							--	--	--	--	--	--
COA	Chetek-Onamia Association. nearly level	Ot02%	0-10"/.6-2.0	>6'	5	5	5	5	L	L	M	L	M	M
COB	Chetek-Onamia Association, undulatino	3 to 8%	0-10"/.6-2.0	>6'	5	5	5	5	L	L	M	L	M	M
COC	Chetek-Onamia Association. rolling	7 to 20%	--	>6'		-		--	-	--	--	--	--	-
MR	Marsh		-				--	--						
P	Peat	Oro 1%	0-4"/>6.0	<1'	S	5	5	5	5	5	5	5	5	5
WP	Warman-Halder-Peat Association	<1%	0-9"/.6-6.0	0-2.5'	5	S	S	S	S	S	5	5	S	5
Soils Bordering CCSRA														
BCB	Brainerd-Chetek Association, undulatino	5 to 13%	0-10"/.6-2.0	>6'	5	5	M	M	M	M	M	M	M	M
HCB	Hibbing-Chetek Association, undulation-	2 to 8%	0-8"/.6-2.0 .	>6'	5	M	5	5	L	L	M	L	L	M
HCC	Hibbing-Chetek Association. rolling	2-20%		>6'		--	--	--	--			--		
TP	Trommald-Peat Association	<1%	0-4"/>6.0	0-2.5'	5	5	5	5	5	5	5	5	5	5
	Mines and Dumns		-		-	--	--	--		--				

Chao Legend·Soils Sujtabjljry/Cha[jlcteristjcs

L - (low) Llmltallons for a stated use are minor and can be overcome easily.

M . (Moderate) Limitations for a staled use can be oven:ome by special planning. design. or intensive maintenance.

S - (Severe) Limitations for a stated use generally require a major SOil reclamation, speCial design. or intensive maintenance.

*Permeability measure in inches per hour. top - most honzon.

**Based on buildings with a basement or toundallun.

Endangered, Threatened, and Special Concern Species

The Minnesota Natural Heritage Program (MNHP) identifies and documents occurrences of endangered, threatened, or rare natural communities, plant and animal species, and geologic processes. Each occurrence is termed an "element" and is included on an official register maintained by the MNHP. The status listed in this plan represents the legal status of that species in Minnesota (there may also be a federal status for each species). The existing list of protected species is currently being revised.

Elements Within Recreation Area Boundary

Plants: There are no known plant element occurrences in the recreation area boundary.

Animals: The Natural Heritage program documented a nesting site for two adult Osprey on Mahnomen Lake in 199L The nest has not been active since that time. Snapping turtles have been documented by DNR Fisheries personnel in the natural lakes.

Osprey (Pandion haliaetus) - Status: Special Concern -
Osprey are associated with lakes, large rivers, and coastal bays.. They place their nests at the top of large living or dead trees and also on top of utility poles and other structures near water.

Snapping Turtle (Chelydra serpentina) - Status: Special Concern -
Snapping turtles occur in several aquatic habitats in Minnesota. They prefer slow-moving. quiet water with muddy bottoms and dense vegetation.

Other Element Sightings: Past lake survey crews from the DNR Section of Fisheries have documented bald eagles on June Lake in (1982), and osprey on Little Blackhoof Lake (1984).

Elements Within 12 Miles Of The Recreation Area Boundary

The species below are listed on the MNHP database as residing within 12 miles of Cuyuna. There are also colonial water bird nesting sites as well as mussel sampling sites within 12 miles of Cuyuna.

Osprey	Pandion haliaetus Currently threatened - proposed delisted
Snapping Turtle	Chelydra sementina Currently special concern - proposed delisted
Bald Eagle	Haliaetus leucocephalus Currently threatened - proposed special concern
Blandings Turtle	Emydoidea blandingi Currently threatened - proposed special concern
Red shouldered hawk	Buteo lineatus Currently Special Concern
Yellow rail	Coturnicops noveboracensis Currently Special Concern
Lake Sturgeon	Acipenser fulvescens Currently Special Concern
Triangle grapefern	Botrychium nigulosum Currently not listed - proposed threatened

Within the recreation area boundary, resource specialists should keep these species in mind as resource inventories are conducted. In addition to ospreys and baJd eagles, there may be the appropriate habitat for yellow rails (marsh) and triangle grapefem (northern hardwoods) within the recreation area.

Vegetation

Pre - European Settlement Vegetation

Public Land Survey records indicate the two main townships in the Cuyuna Country State Recreation Area were first surveyed in 1869 and 1870 by two different surveyors. The predominant pre-European settlement vegetation of the area in and around the Cuyuna Country State Recreation Area was white, red and jack pine. Aspen and birch were interspersed throughout the area, probably as early successional vegetation occurring after fire burned existing pines. Maples, bur oak, and elm were also found in some areas, as well as scattered oak brush areas.

Swamps and lakes dotted the area. Tamarack trees were common cover in the numerous swamps. The two surveyors of the area stated that some of the pines held value for lumber operations but that the land would be of little value for fanning except along stream banks or close to the Mississippi river.

In 1870, the area within the present-day recreation area boundary had the following characteristics.

Area	**Predominant Vegetation**
PortsmouthlManuellYawkey Area	Aspen-birch, interspersed with jack pine and tamarack swamps
Main Mine Lakes Area	Tamarack swamp and pines already cut over (lumber camps)
Portage-June Lake Area	Oak, elm, maple
Sagamore Area	Aspen-birch, marsh, and jack pine

Surveying was made difficult by a heavy concentration of iron ore in the marshes of the east half of the township. There was a declination of the compass needle 15.5 to 71 degrees to the East in Sections 25 and 36.

There were no major settlements at the time of the survey in 1869-1870, however logging had already occurred in the recreation area boundary. A trail used by American Indians was noted between Portage Lake and Little Rabbit Lake, and between Portage Lake and June Lake.

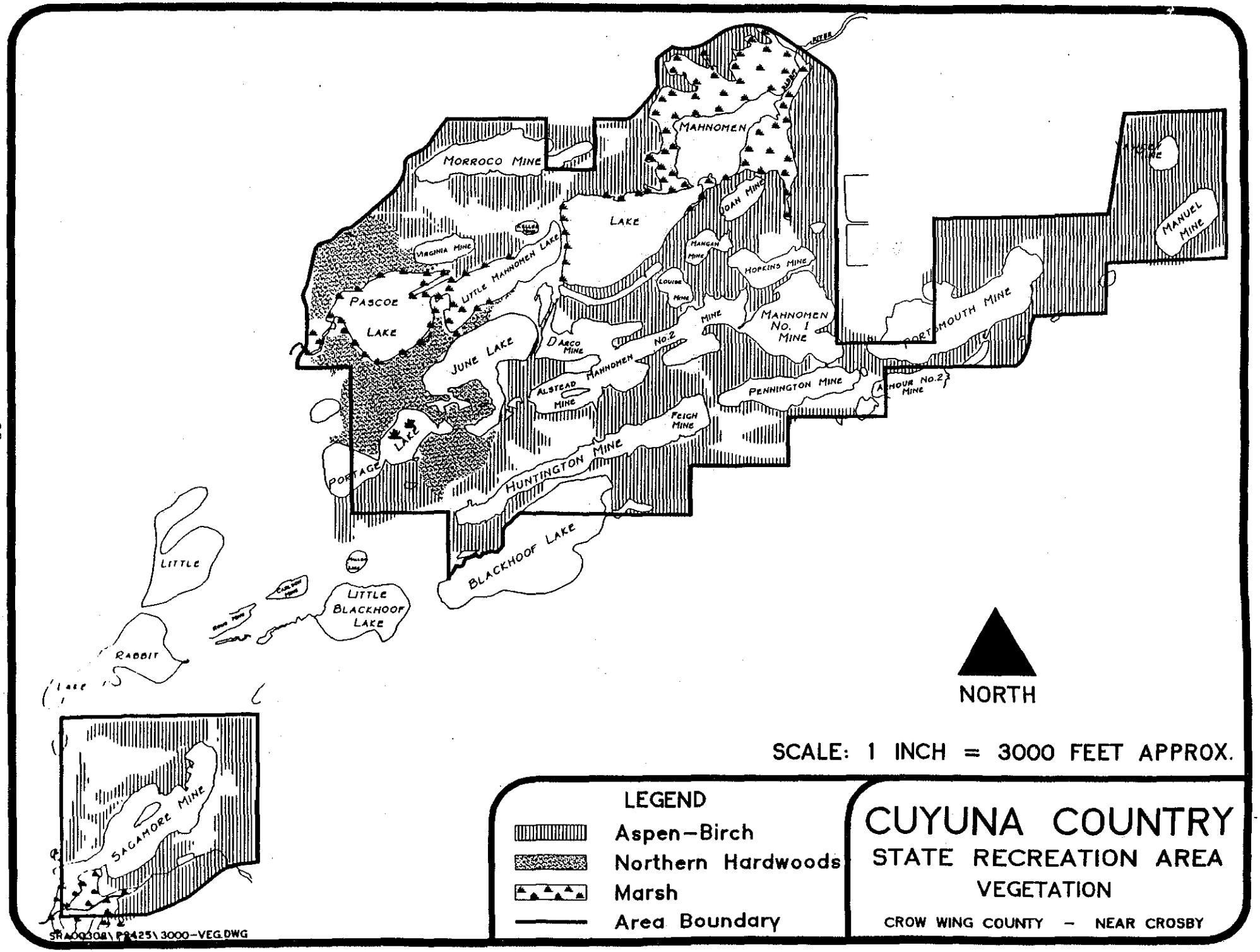
Existing Vegetation

The existing vegetation can be generally categorized into three types, as shown on the vegetation map, page 39, and briefly described below.

Aspen-birch - Dominated by trembling aspen and paper birch, this vegetation type covers most of the recreation area. Cottonwood is also common in several areas. This "pioneer" vegetation type has grown on the overburden piles and "mine dump" portions of the recreation area. The groundcover is often dominated by goldenrod, asters, and various grass species.

Northern Hardwoods - The western end of the main recreation area (includes Portage, June, and Pascoe Lakes) is covered by several northern hardwood species, including red oak, ironwood, paper birch, basswood, and big-tooth aspen. Most of these areas were last cutover during the late 1930's. Aerial photos from 1939 show the entire Northern Hardwoods area clear-cut, resulting in the even-aged forests seen today.

Marsh -Although Pascoe, Portage, and Little Mahnomen Lake have some marsh along their periphery, the largest and most significant marsh is situated on the north-east end of Mahnomen Lake. Bulrush, cattail and sedge species are the most common emergent vegetation species in the marsh areas.



CUYUNA COUNTRY
STATE RECREATION AREA
VEGETATION

CROW WING COUNTY – NEAR CROSBY

Wildlife

Introduction

Wildlife species have not been inventoried within the State Recreation Area. A County Biological Survey has not been completed in Crow Wing County. The following information on wildlife species was provided primarily by DNR Region 3 Wildlife staff.

Mammals

The planning process file include a list of approximately 50 mammal species which are likely to inhabit the recreation area. Mammals which have been sighted in the recreation area include white-tailed deer, black bear, cottontail rabbit, snowshoe hare, raccoon, red fox, gray fox, coyote, fisher, mink, muskrat, and beaver.

Birds

The planning process file includes a list of approximately 190 bird species which might be sighted in this area. Only a percentage of these species would actually nest in the State Recreation Area. Bald eagles, turkey vult\lres, American coot, sora rail, crows, woodcock, ruffed grouse, common snipe and red-tailed hawks have been sighted in the recreation area. Because of the extensive marsh and lake habitat in the recreation area, many water birds are know to nest in the recreation area including great blue herons, kingfishers, loons, and the following waterfowl species.

northern pintail	mallard	American black duck	gadwall
lesser scaup	ring-necked duck	red-breasted merganser	ruddy duck
greater scaup	bufflehead	common merganser	snow geese
redhead	wood duck	hooded merganser	Canada geese
northern shoveler	blue-wing teal	common goldeneye	
American wigeon	green-wing teal	white-fronted geese	

Reptiles and Amphibians

The planning process file includes a list of approximately 20 reptile species that are likely to be found in the recreation area. Snapping turtles have been sighted by DNR Fisheries staff on Portage, Blackhoof and Mahnomen Lakes.

Butterflies and Moths

A list of butterflies and moths which may occur in the recreation area is included in the planning process file.

WaterslFisheries

Water Resources

Groundwater Hydrology

Groundwater of the Cuyuna Range generally flows north - northwesterly toward the Mississippi River. The surficial geology is made up of outwash gravel associated with drainage from the flanks of glacial moraines.

The aquifers in the Cuyuna area can produce very high water yields, (up to 2,000 gallons per minute). Many aquifers are artesian in nature; a few are water table-based aquifers. Most aquifers range in thickness from two to fifty feet thick.

The saturated thickness of glacial till in the Cuyuna Country State Recreation Area generally ranges from around 50 to 100 feet. This condition explains why the mine pits filled with water so readily.

Portions of the water table were artificially lowered through years of mine dewatering operations. Water which naturally drained into the mines was pumped out to keep the mines operational. After mining ceased and pumping was discontinued, the water table returned to it's previous level.

Surface Water

The recreation area includes five natural lakes and parts of two other natural lakes. Thirteen mine lakes, two gravel pits, one lake created by a mine cave in, and portions of three other mine lakes are also included within the recreation area. These various water bodies add up to over 1,600 acres of water surface.

A chain of mine lakes occurs in the center of the recreation area. Pennington, Mahnomen #1 ,#2, #3, Arco, and Alstead pits are connected as a result of natural pit wall erosion and by digging channels. The connections allow access to 267 acres of water which can be as deep as 525 feet.

A chain of lakes which may be used by canoeists is included in the natural lakes area. From the northeast corner of the recreation area, people can paddle from Rabbit Lake through Mahnomen Lake, Little Mahnomen Lake, Pascoe Lake and the Rabbit River to the Mississippi River. Canoeists will encounter a large open water marsh on the northeast end of Mahnomen Lake. Portages are necessary between many of the natural lakes and mine lakes.

Natural lake bottoms are made up of silt. sand. and muck, while mine lake bottoms consist primarily of boulders, rock, rubble. and gravel. Mine pit walls are still unstable even after 20 or 30 years of settling. Pit walls erode due to gravity. weathering, and wave action within the pits.

There are a few uncapped. abandoned wells remaining which were used during mining operations. It is not known at this time how many there are or how deep they might be. The areas known as the "Pennington Shops" and "Huntington Shops" are likely to have abandoned wells. Old aerial photos (eg. 1939) also provide an idea of where old wells may be located.

Minnesota Lake Classification System

Natural Environment Lakes (NE) usually have less than 150 total acres and less than 60 acres per mile of shoreline, less than 3 dwellings per mile of shoreline. They may have some winter kill of fish, may have shallow, swampy shoreline, and are less than 15 feet deep. They have limited capacities for assimilating the impacts of development and recreational use. They often have adjacent lands with substantial constraints for development such as high water tables, exposed bedrock, and unsuitable soils.

Recreational Development Lakes (RD) usually have between 60 and 225 acres of water per mile of shoreline. between 3 and 25 dwellings per mile of shoreline, and are over 15 feet deep. These lakes are generally medium-sized lakes of varying depths and shapes with a variety of landform, soil, and groundwater situations on the lands. around them. They often are characterized by moderate levels of recreational use and existing development. Development consists mainly of seasonal and year-round residences and recreationally-oriented commercial uses. Many of these lakes have capacities for accommodating additional development and use.

General Development Lakes (GD) usually have greater than 225 acres of water per mile of shoreline. over 25 dwellings per mile of shoreline. and are over 15 feet deep. They are generally large, deep lakes or lakes of varying sizes and depths with high levels and mixes of existing development. They often are extensively used for recreation and, except for the very large lakes. are heavily developed around the shore. Second and third tiers of development are fairly common. The larger examples in this class can accommodate additional development and use.

Lakes Within or Adjacent to Cuyuna Country State Recreation Area

Natural Lakes	Lake Classificatio	Acre	Maximum death	otal miles of shorelin	Miles of shorelm in recreation are	Bottom Characteristics / Comments
Litt e Menomin Lake	.....	54	17	I.	A	
June Lake	GO	9	60	7	A	San 100%
Menomin La e (Mahnomen)	0	252	–	4	A	5% Iave 0% an 65% Mue
Pascoe La e	GO	113	12	1.8	A	San %Muc 50%
Portage {jversonJ Lake	N	2	31		* .45	1(40% Mue 40% and 100% Source: Kaoon nver Iron
Linle Rabbit Lake **	NE	170	33	4.1	None	Rabbit lake
Blackhoof Lake	RO	183	30	2.7	* 1.3	95% Sand 1% ravel 4% Muck
Little Blackhoof Lake **	NE	56	13	IA	None	Muck 100%
Seroen! Lake ''	GO	1057	65	8.6	None	50% Rubble 20% couloer 25' 0 Sand 5% Muck
Mine Pit Lakes						
Huntincton. Ferch fManin)	------_.- -	100	258	3.4	(All) IS. Shore .1	
IMannomen #1.#2.#.. LOUise.						and 50% KUODle JU' 0 Lag Kck 50%
Alstead.' Area	-_-·----	267	525	7.9	(All) IS. Shore .4	Muck
Monoco	---_---------	6	25		5's	an 40% u e 0% I % Muc
Virginia	--------_----				A	ot Aval a e
Manue	----------				A	to e •Rain w
ennington	---------	5		I.	1.8	an 15% u , 5% Bo er
Portsmouth	----------	121	9	2.7	•	0 .4 % rave %Ld Rck 25%
					.6	Stoc Shce
	_-_-			1	.25	Not
Sagamore	----------	.14	10	4.0	(A)IS. ore.?	rave % u , 0% Bou er 20
Ho kins	------ "_--				All	Not Available
Joan	- ---------				All	Not Available
Mangan	--- - ---				AI	Not Available
Mallen **	----- -----	5	95		None	Not Aval a Ie

* Approximate Distances
** Not Located in Cuyuna Country State Recreation Area
· Not Classified

Fisheries

In 1972 the DNR. Section of Fisheries began stocking the mine lakes with rainbow trout and continued to do so on an annual basis. In 1977 the IRRRB (Iron Range Resources and Rehabilitation Board). began to build boat accesses. The IRRRB assisted the DNR Section of Fisheries in stocking a few of the mine lakes in the Cuyuna area occasionally during the late 1970's and early 1980's. Designated trout lakes in the Cuyuna Country State Recreation Area include the Pennington (including Mahnomenl. 2. and 3. Louise. Alstead and Arco). Portsmouth. Manuel. Sagamore. and Yawkey mine lakes. The natural lakes in the area provide excellent fishing, but do not provide conditions suitable for trout.

Trout are found in most mine pits from the surface to 80 feet, most being found from 35 to 60 feet and weigh about one-half to one pound. however. some trout can weigh up to five pounds. On rare occasions. brown trout have reached 10 pounds. Northern pike range from two to 20 pounds while many range from 15 to 20 pounds. Northern pike in the mine lakes commonly feed on fingerling and yearling trout. Other types of fish in the mine lakes include black crappie. bluegill, brook trout. rainbow trout. brown trout. rock bass, smallmouth bass. largemouth bass, yellow perch, white sucker. bluntnose minnow. spottail shiner. fathead minnow and occasionally walleye. The temperature of the mine lakes is much like natural lakes except that the colder. deeper water in the hypolimnion is well oxygenated which makes mine lakes suitable for trout management. The natural lakes contain yellow perch. yellow bullhead. pumpkinseed sunfish. bluegill. northern pike. walleye. black crappie and a vast array of non-game fish species.

Resource Objectives and Integrated Resources Management

Introduction

The majority of natural community areas within Cuyuna Country State Recreation Area have been altered by past mining practices. The remaining non-mine natural resource communities in the area include about 300 acres of forested land just inside of the western area boundary, and about 125 acres of marsh on the northern end of Mahnomen Lake. On 1939 aerial photographs, these forested areas were cleared and the marsh was being filled in by overburden piles along its edges. The Cuyuna area also includes many important historical and cultural resources which need to be effectively managed and interpreted (see Cultural ResourceslHistory section, page 23).

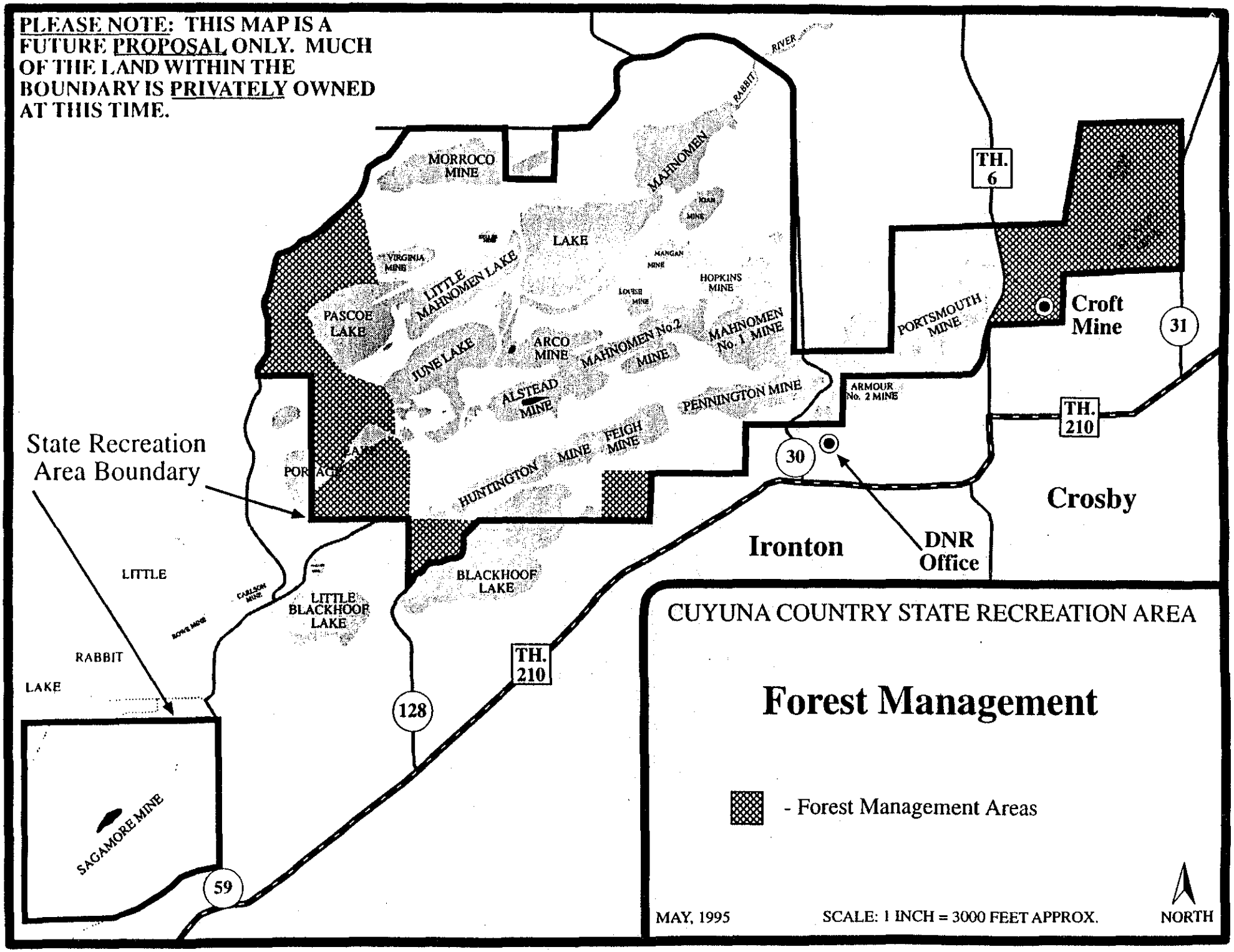
Resource Management Objectives

- Manage all altered and remaining natural resource communities to improve the health of functioning ecological systems in this area.
- Restore degraded natural cominunities and ecological systems.
- Restore minelands for safety and the integrity of their resource values.
- Identify, document, manage and interpret natural, historical, and cultural resources.
- Maintain habitats essential for declining species and identified heritage elements.

Integrated Resources Management

Topic 1, *Forest Management*

Discussion: Cuyuna legislation specifies that the recreation area will include "limited timber harvesting" and "forest management." The major areas with potential for forest management are the 300 acres of non-mine forested areas on the western boundary, two 40-acre state trust fund parcels near Blackhoof Lake, and some tracts in the Yawkey/Manuel area (see Forest Management map, page 45). Much of the reaSoning for including forest management in the legislation was to provide for educational forestry demonstrations. The Yawkey/Manuel area would work especially well for this purpose. because it is in close proximity to the Croft Mine and in a zone which will emphasize interpretation (see Interpretive chapter, page 71). Along the western boundary, some demonstration areas could also be managed.


PLEASE NOTE: THIS MAP IS A FUTURE PROPOSAL ONLY. MUCH OF THE LAND WITHIN THE BOUNDARY IS PRIVATELY OWNED AT THIS TIME.
MORROCO MINE
MAHNOMEN
RABBIT RIVER
LAKE
VIRGINIA MINE
LITTLE MAHNOMEN LAKE
MANGAN MINE
HOPKINS MINE
PASCOE LAKE
JUNE LAKE
ARCO MINE
MAHNOMEN No.2 MINE
MAHNOMEN No. 1 MINE
PORTSMOUTH MINE
ALSTEAD MINE
PENNINGTON MINE
ARMOUR No. 2 MINE
FEIGH MINE
HUNTINGTON MINE
PORTAGE LAKE
State Recreation Area Boundary
LITTLE
RABBIT
LAKE
LITTLE BLACKHOOF LAKE
BLACKHOOF LAKE
SAGAMORE MINE
TH. 6
TH. 210
TH. 210
128
59
30
31
Croft Mine
Crosby
Ironton
DNR Office
CUYUNA COUNTRY STATE RECREATION AREA
Forest Management
- Forest Management Areas
MAY, 1995
SCALE: 1 INCH = 3000 FEET APPROX.
NORTH

ACTION

Action 1. Develop a detailed resource management plan for the Cuvunaarea which includes forest management. The DNR, Division of Parks and Recreation, Region 3 Resource Specialist should coordinate the development of a detailed resource management plan for Cuyuna. A major component of this plan should be prescriptions for forest management which take into account the Generic Environmental Impact Statement for Timber Harvest and Forest Management in Minnesota (MN - Environmental Quality Board, 1994), impacts to planned recreational uses, esthetics, wildlife management, forestry demonstrations/interpretation, and the need to preserve some areas without active forest management. The plan should also address resource surveys of plant and animal species at Cuyuna, especially in non-mined areas.

Topic 2. Water Quality Management

Discussion: Water quality is very important to maintaining quality natural resources and recreational experiences at Cuyuna. Fish habitat and management depends on high water quality (see Action 3, below). Water clarity and quality are some of the major factors which attract scuba divers to Cuyuna (see Existing Recreational Uses, page 50). Several studies to monitor water quality have been and continue to be conducted at Cuyuna. The Minnesota Pollution Control Agency (MN PCA) has documented abandoned dumps in·the neighboring municipalities of Trommald, Ironton, Cuyuna and Irondale Township. In addition, the Crosby Sanitary Landfill was operated between 1977 and 1985 just north of the recreation area boundary west of State Highway 6. The MN PCA conducts post-closure groundwater sampling in the landfill vicinity. There is also the potential for water contamination from past mining activities, including underground storage tanks and mining equipment maintenance.

ACTIONS

Action 1. Work with the MN PCA and the DNR, Bureau of Field Services and Section of Fisheries to maintain and improve water quality **in** the Cuvuna area. This includes the removal of any underground storage tanks, the sealing of abandoned wells. and the cleanup of contaminated materials.

Action 2. Support groundwater and surface water quality monitoring and studies in the Cuyuna area.

Action 3. Recommend surface water use regulations which improve water quality (see Operations page 75).

Topic 3. Fish Management

Discussion: Many of the mine lakes have been stocked with trout since the 1970's, providing an excellent fishery and tourism attraction (see Fisheries, page 43). Natural lakes also provide good fishing. Fish management and stocking will continue, and all developments in the recreation area will be sited to minimize erosion, nutrient runoff. and other negative impacts to quality fish habitat.

ACTION

Action 1. Work with the DNR. Section of Fisheries to maintain appropriate stocking strategies and minimize negative impacts to the fisheries resource at Cuyuna.

Topic 4. Hunting and Wildlife Management

Discussion: Cuyuna legislation specifies "The commissioner 'must manage the area for multiple recreational use, including the allowance of hunting..." This language means general public hunting, but the DNR must manage hunting as part of "multiple recreational use." Some non-hunting use area zones or special regulations may be needed to allow general public hunting to occur within a multiple-recreational use environment. The natural lakes and non-mined forested areas (see Resources Introduction section, page 44) represent the best wildlife habitat in the recreation area, and are the areas in which general public hunting will be emphasized. These areas have historically been popular primarily for big game (forested tracts) and waterfowl hunting (marshes).

ACTIONS

Action 1. Allow general public hunting in those areas which n provide the best hunting opportunities. and. 2) do not conflict with other recreational uses.

Action"2. Avoid special hunting regulations to the extent possible.

Topic S. Historical and Cultural Resources Management

Discussion: There are many known archaeological and historical sites documented within the recreation area boundary (see Cultural ResourceslHistory section and map. pages 23-28) Historic and cultural resources should be preserved, documented, and interpreted. Historical interpretation is one of the most important components of a visitors' experience at Cuyuna.

ACTIONS

Action 1. Survey all proposed development areas for the presence of cultural resources. If significant cultural resources are discovered during the surveys. facility siting, public use, and possible archaeological mitigation will need to be reviewed to avoid or minimize impacts.

Action 2. Research. document and interpret historical and cultural resources (see Interpretive chapter, page 71).

Topic 6. Minelands Restoration and Management

Discussion: Old mining areas typically include steep slopes and other areas which need restoration efforts in order to be safe and usable by the public. The Iron Range Resources and Rehabilitation Board (IRRRB) has implemented hundreds of mine-land restoration projects throughout Minnesota's iron ranges, including several within the recreation area. The DNR should work with the IRRRB in continuing these restoration efforts. Potential projects include slope grading and revegetation, slope stabilization, and swimming beach construction (see Proposed Development Section, pages 55-65).

ACTION

Action 1. Work with the IRRRB to implement mineland restoration projects within the Cuvuna Country State Recreation Area boundary.

Topic 7. Minerals Management

Discussion: The legislation which established the recreation area stated, "The commissioner shall recognize the possibility that mining may be conducted in the future within the Cuyuna country state recreation area, and that use of portions of the surface estate and control of the flowage of water may be necessary for future mining operations."

ACTIONS

Action 1. Work with appropriate DNR disciplines to allow appropriate mineral exploration work within the area.

Action 2. Avoid major developments in areas with high mineral mining Dotential.

RECREATION RESOURCES

Recreation Management Objectives

- Provide appropriate and compatible recreational uses through designated roads, trails, and other recreational developments.
- Provide safe and enjoyable recreational experiences managed through appropriate rules and regulations.
- Preserve the scenic beauty and non-commercial atmosphere of the area.
- Provide the highest level of access practicable for persons with disabilities.
- Provide a broad selection of outdoor recreation opportunities in a pleasing natural setting which may be used by large numbers of people.
- Offer and market a package of opportunities which includes:

- scuba diving
- horseback riding
- mountain biking
- fishing and boating
- snowmobiling
- camping
- canoeing
- rock collecting
- mining history interpretation
- mine tours
- cross-country skiing
- picnicking and hiking

Existing Recreational Uses in the State Recreation Area Boundary

Camping

Camping is a popular activity in the recreation area. Campers drive their vehicles into any location they feel is suitable and set up camp. Almost all informal camping locations are separated from one another by 50 yards or more.

A developed campground owned and administered by the City of Crosby exists at the Yawkey mine lake. The Yawkey campground has 15 primitive sites with vehicle pads. picnic tables. grills. a central water pump. and two pit toilets.

Fishing and Hunting

The recreation area is heavily used by anglers. Fishing for trout is especially popular. Large trout and northern are commonly caught in several mine lakes, and the natural lakes provide good fishing for northern. walleye. black crappie. perch, and sunfish. Shore fishing is popular and there is an accessible fishing pier adjacent to the Pennington boat access.

Hunting for deer and other mammals is popular in the natural lakes area. The natural lakes area has not been mined and provides much better habitat for most animals. Waterfowl hunting is popular on Mahnomen Lake. and upland bird hunting (grouse and woodcock) also occurs in the area.

Boating and Canoeing

Boating is popular on the mine lakes, especially related to fishing. Three designated public access points exist on the mine lakes. Many informal access points exist throughout the recreation area on both the mine lakes and the natural lakes. Many of the informal access sites are in poor condition and are inaccessible to persons without adequate transportation (e.g.. 4 wheel drive).

Canoeing is also a very popular activity on many of the lakes in the recreation area. Canoeists are able to observe the many loons which are known to inhabit this area. There are many portages from lake to lake in the Cuyuna area.

Horseback Riding

Horseback riding is another existing use in the Cuyuna area. There are many informal trail connections to the nonh. east, and west of the recreation area. Riders camp in the Pennington Shop. Huntington Shop. and Sagamore Shop areas as well as the dcveloped Yawkey campground.

Snowmobiling

Snowmobiling is very popular in the Cuyuna area and is promoted very strongly in local and regional tourism material. There are approximately 2,400 miles of grant-in-aid snowmobile trails within 50 miles of Cuyuna. There are many snowmobile clubs in the local area. The railroad grades through the Cuyuna area have been popular routes for many years; the mine lakes area has also been popular for its informal snowmobile trail system.

Scuba Diving

One of the most popular activities in the mine lakes is scuba diving. The dive season is generally from April through November. Ice diving also occurs during the winter months.

During the summer months there may be 200 or more divers per week using the mine lakes. Many diving schools throughout the state and even from North and South Dakota run training trips to the mine lakes of Cuyuna. Most mine lakes have smooth hard bottoms instead of mud / silt bottoms. Because of these bottom conditions and lioulOlogical characteristics, mine lakes stay very clear, allowing visibilities of 30 to 40 feet (compared to 10 feet which is found in most other lakes of the region). The visibility in the mine lakes allows new divers to feel much more at ease. There is an informal "no wake" rule which helps to maintain the high visibility and also makes the mine lakes a much safer place to dive.

Besides the attraction of good visibility, there are many other features which are unique to the mine lakes. Underwater, divers can see forests which have been preserved by the cool water, articles left behind from the mining operations, and fish. Some fish eat from diver's hands. During night dives curious schools of 200 to 300 panfish will often gather around divers lights. Sheer rock walls inherent to the mine lakes are also very popular. Divers enjoy descending along the walls by allowing themselves to sink along the rock faces.

Most of the mine lakes are used for diving. Most popular are the Portsmouth and Pennington mine lakes where the water is clear down to 90 feet. Within the "chain" of connected mine lakes that starts at the Pennington access, Mahnomen #1, Mahnomen #2. Arco, and Alstead all receive scuba use. Mine lakes which are not connected to the chain but receive scuba use include the Portsmouth, Louise, Joan,

Mangan, and Sagamore.

Other Existing Recreation Uses

There are many other types of existing recreation uses in the recreation area. Rock collecting is very popular among visitors to this area. One "treasure" sought by "rock hounds" at Cuyuna is the mineral Bighamite (see Minerals, page 30).

Swimming occurs in many locations throughout the recreation area. Many informal campsites are near popular swimming areas.

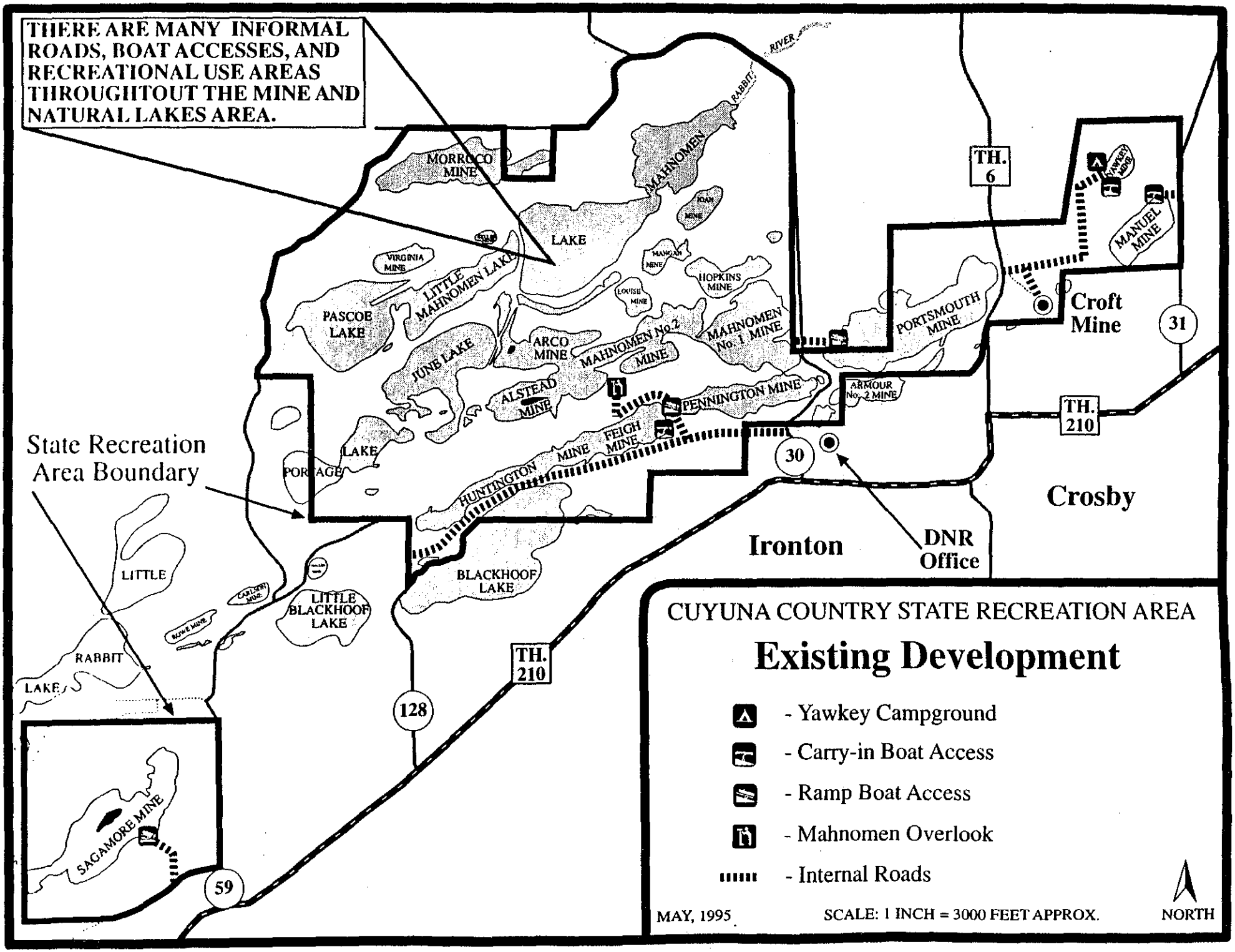
Picnicking, hiking, and sight-seeing are activities which occur throughout the recreation area. Picnicking occurs at the popular Mahnomen overlook, Croft Mine Historical Park, and Yawkey campground.

Some unauthorized uses also occur in the area.

Existing Development

Please refer to the Existing Development map on page 53 for locations of the major existing developments described below.

- **Yawkey Campground** (15 primitive sites, water pump, pit toilets)
- **Formalized Ramp Boat Accesses** on the Sagamore, Portsmouth, and Pennington mine lakes. There are also informal boat accesses in several other locations.
- **Formalized Carry-in Boat** Accesses on the Yawkey, Manuel, and Feigh mine lakes. There are also informal carry-in accesses in several other locations.
- **Major picnic areas** include the Mahnomen overlook, the Croft Mine, and the Yawkey campground area.
- **Trails and roads** which are used by motor vehicles, hikers, horses, snowmobiles, skiers, and other user groups cover the entire area.
- **The "Mahnomen overlook"** is situated 200 feet above the mine lake surface, just south of the main mine lakes chain. This is one of the most popular sites in the recreation area. Another viewing location is situated as a Trunk Highway 6 wayside on the east end of the Portsmouth mine lake.


THERE ARE MANY INFORMAL ROADS, BOAT ACCESSES, AND RECREATIONAL USE AREAS THROUGHTOUT THE MINE AND NATURAL LAKES AREA.
MORROCO MINE
MAHNOMEN
LAKE
VIRGINIA MINE
LITTLE MAHNOMEN LAKE
PASCOE LAKE
JUNE LAKE
ARCO MINE
MAHNOMEN No.2 MINE
MAHNOMEN No.1 MINE
HOPKINS MINE
PORTSMOUTH MINE
TH. 6
MANUEL MINE
Croft Mine
31
ALSTEAD MINE
PENNINGTON MINE
ARMOUR No. 2 MINE
TH. 210
FEIGH MINE
HUNTINGTON MINE
30
Crosby
Ironton
DNR Office
State Recreation Area Boundary
LITTLE BLACKHOOF LAKE
BLACKHOOF LAKE
RABBIT LAKE
128
TH. 210
SAGAMORE MINE
59
CUYUNA COUNTRY STATE RECREATION AREA
Existing Development
- Yawkey Campground
- Carry-in Boat Access
- Ramp Boat Access
- Mahnomen Overlook
- Internal Roads
MAY, 1995
SCALE: 1 INCH = 3000 FEET APPROX.
NORTH

- Croft **Mine Historical Park**

The Croft Mine Historical Park offers a simulated mine shaft ride and mine tour, museum. a typical home of early miners, various other mining artifacts, picnic sites and a playground. The park is open daily from Memorial Day through Labor Day. Great River Road funds were used to improve the original access to the Croft through the city of Crosby. The Great River Road enters Aitkin from the east and follows highway 210 to highway 6 north. It then follows a series of county roads 11, 19 and 3 as it continues onto highway 25 leading into Brainerd and then sOuth on 371. A spur off of the Great River Road to the Croft was added in 1986. A new parking lot was added in the spring of 1994 to provide access from State Highway 6.

The Croft Mine Park is often busiest on rainy days when lake enthusiasts search for other activities. The Croft registered 10,500 visitors in 1993. A full-time director, several seasonal interpreters and gift shop employees along with approximately twenty five volunteers run the Croft mine during the summer season. Funding has come in the form of grants from the IRRRB but is not guaranteed on a annual basis. The city of Crosby provides many basic serviCes to the Croft free of charge including city water. trash pickup, sales tax preparation, payroll, administration assistance and parking lot plowing and grading.

Proposed Development

The proposed development in this plan is conceptual. Site-specific, detailed development plans will be completed based on the concepts outlined in this plan. The proposed development concept map on page 63 shows the location of major proposed developments. Also, refer to the proposed summer and winter trail maps on pages 64-65.

Proposed developments outlined in this plan were generated after reviewing available information on recreation area resources. Development recommendations are made after careful consideration of the natural / cultural resources and the resource / recreation management objectives outlined in this plan.

All recommended development proposals (e.g. buildings, trails) will be contingent on a detailed site analysis prior to implementation. Development will only take place after a detailed physical analysis (e.g. soils) and resource assessment (e.g. rare plants or archaeological sites) has been conducted and considered.

Topic 1. Roads and Overall Design Concept

Discussion: The Cuyuna area has been used by virtually every major recreational user group over the past 30 years. Because of complex ownership patterns (see Ownership, page 66), most of this recreation has taken place without regulation, on lands and waters which have fractionalized ownership. As a result, there has been recreation everywhere, with very little managed use. This type of use has helped to identify many of the best sites for camping, boat accesses, and trails. But it has also demonstrated that not all recreational uses are compatible.

The recreation area is covered by roads and trails, with several major highways breaking the 5,000 acres into 4 distinct zones. During the planning process, these zones were discussed, along with the types of uses they might emphasize. It became apparent to planning participants that:

- Although we would like to accommodate all recreational uses, there is not enough area to do so. Therefore, we will have to say "no" to some uses;
- In order to manage use, avoid conflicts, reduce liability, and provide the highest quality recreation experiences possible, we will have to separate some uses (e.g. trail uses, shooting range); and,
- In order to manage the area most effectively, we need to minimize the motor vehicle entrance roads into the area. This would include one entrance into the Yawkey area, one entrance into the Sagamore area, and if possible, one entrance into the major mine/naturallakes area.

Following discussions of several possible options. the recommended design concept is shown on thc Proposed Development Concept Map. page 63.

ACTIONS

Action 1. Develop one major vehicular access road into the main recreation area. The proposed main access road follows the existing paved road from County Road 30 in Ironton to the Pennington boat access and Mahnomen overlook. Barricades may be needed along the access road in areas where steep walls drop off from the road. The proposed road continues to access recreational facilities and use areas to the west and north. A major slope failure exists along the proposed main entrance road between the main overlook and the proposed Alstead mine lake boat access. This slope must be stabilized as soon as possible to maximize the available area for the road alignment and also to contain costs (which will increase substantially as the slope continues to erode). The lRRRB should be contacted to consider this slope reclamation as a mineland reclamation project (see page 48). When this alignment is designed. a trail treadway parallel to the road should be provided if possible (for bicyclists / hikers and skiers, see Summer and Winter Trails, pages 58-61).

Action 2. Recommend to Irondale Township that the gravel road between the Blackhoof Lake camping site shown on the proposed development map (page 63) and Countv Road 128 be closed. This closure would provide additional control for the main use area (ensuring one designated entrance), make the north shore of Blackhoof Lake a functioning part of the recreation area, and restore a natural connection between Blackhoof Lake and a large wetland area. This wetland restoration will provide additional fish spawning and wildlife habitat; it will also qualify as mitigation for any wetland areas that might be affected by proposed developments.

Action 3. Establish one vehicular access road into the Yawkey-Croft Mine area between T.H. 6 and County Road 31. This zone will emphasize interpretation and include the Croft Mine, the Yawkey primitive group camp, forestry demonstration areas, and a mineland interpretive tram ride (see Interpretation, page 71). A walk-in and trail access to the Croft Mine will be provided on the southern end of the Croft Mine property (accessible from 2nd Ave. East in Crosby).

Action 4. Establish one vehicular entrance into the Sagamore area. The access road will enter this area from the south and provide access to a boat access, equestrian camping area, and general camping areas.

Action 5. Provide a park office and shop at the DNR office in Ironton. The major access to the main recreation area will be from T.H. 210 to County Road 30 (Irene Avenue in Ironton). The Ironton City Hall is on County Road 30 and the DNR building is adjacent to it. Visitors will be routed past this park office point for orientation and vehicle/camping permits. It is assumed this park office arrangement will be adequate for providing a controlled e·ntrance to the recreation area; however, if it does not provide adequate security. a new "contact station" location as visitors enter the area from County Road 30 should be considered in the future.

Topic 2. Major Day Use Areas

Discussion: Day-use areas are a very important component of the overall design and recreation services at Cuyuna. Although many areas will be available for day-use, some of the most important areas which will provide the majority of day-use experiences and access to the rest of the recreation area are discussed in the actions below.

ACTIONS

Action 1. Develop the major day·use and recreation area parking/access area in the "Mahnomen Shops" area. This area is just north of the Pennington boat access. Although day-users could access the rest of the main area by roads, the option to park and access the recreation area near its entrance will help to reduce the overall traffic flow into the main area. This day use area will provide additional Pennington boat access parking, Mahnomen scuba diving access, day-use parking for mountain biking, canoeing, hiking, and a picnic area/swimming beach (if it is feasible to construct a beach on the Mahnomen mine lake). The IRRRB has experience constructing beaches on mine pit walls; this may be considered a mineland reclamation project. This area will also serve as a winter trailhead (see wintertrails, page 60-61). A multiple-use building should eventually be constructed in this area; it should include a picnic shelter and sanitation facilities, and showers for campers.

Action 2. Improve the Mahnomen overlook just west of the "Mahnomen Shops" area described in Action 1. above. The Mahnomen overlook rises over 200 feet above the mine lakes water surface. Spectacular views of the surrounding area can be seen in most directions. Parking and.trail areas should be improved in this area.

Action 3. The Croft Mine Historical Park will continue to provide important day-use experiences (see Croft Mine Administration. page 75),

Action 4. Improve the overlook area on the east end of the Portsmouth Mine Lake. This area is accessible from T.H. 6, across from the entrance to the Croft Mine. This overlook provides a view of the Portsmouth Mine, access to the recreation area trail system, and a possible picnic location. The area should be redesigned and the existing fencing replaced.

Topic 3. Camping

Discussion: Larger campgrounds that concentrate campsites are less expensive to operate than many individual sites. The Cuyuna area has very few large, relatively flat areas which can accommodate a typical campground. However, several of the traditional camping areas could accommodate small groups of campers, and the idea of several "camping pod areas" received support from many planning participants. Camping pod areas would accommodate approximately 4 to 10 campsites with a common vault toilet. The major candidates for a "larger, major" campground would be south of June Lake and possibly a "terraced" campground above and just east of the day-u,e access area on Mahnomen mine lake (described above under Topic 2. Action I!-

The Yawkey area has an existing campground owned by the City of Crosby. The Yawkey campground should eventually be replaced with a primitive group camp. This development would fit into the interpretive theme for this area (for youth and educational groups; see Interpretation, page 71).

Several potential locations were considered for an equestrian campground. The Sagamore area received the most support for a horse campground (also see Summer Trails, Topic 4, below). The Sagamore mine lake is an important trout fishing resource, and the horse camp should be located and designed to minimize nutrient runoff from horse manure. Nutrient runoff would also occur from decomposing hay and grain left in the area.

ACTIONS

Action 1. Develop campgrounds south of June Lake and east of the Mahnomen Shops area (terraced), if possible. Also. develop several primitive camping "pod" areas throughout the area (see discussion above and proposed development map, page 63).

Action 2. Develop a primitive group camp in the Yawkey mine lake area. This development will most likely encompass the existing Crosby campground and the open area on the southern end of the Yawkey mine lake.

Action 3. Develop an equestrian campground in the Sagamore mine lake area. This development would most likely be located on the east end of the Sagamore mine lake, as shown on the proposed development map, page 63). An alternative location would be on the large overburden pile in the northwest corner of "the Sagamore section." This 40-acre overburden pile has a large flat plateau; some horseback riders stated this higher location would be too windy for ahorse camp. If this area is not used for a horse camp, it could be used for many other recreational activities, including a mountain bike scramble area (see proposed summer trails map. page 64).

Topic 4. Summer Trails

Discussion: Cuyuna legislation specified that horse trails would be provided in the recreation area, and mountain biking was discussed as a trail use that most planning participants agreed should be accommodated. The Proposed Summer Trails Map (page 64) shows a summer trail system concept which would allow approximately 12 miles of horseback/hike trails and 12 miles of mountain bikinglhiking trails. Both horses and bikes could "pass-through" the area. and still have some separated treadway within the main recreation area.

EQuestrian facilities would include a horse camp and day-use trailhead in the Sagamore area (see Topic 3. above). From this location. riders could follow the railroad righI-of way to the main use area trails and also access the informal horse trail system along Ihe Mississippi River toward Brainerd. Riders could follow the trail

the Yawkey area and beyond, connecting to tbe "Cuyuna Hills" area and a larger loop along the Mississippi River that eventually returns to the Sagamore area. Horse trails would not be provided in the vicinity of the shooting range site because of the incompatibility between most horses and gun noise. If needed, an additional day-use horse trailhead will be considered at the Yawkey or main use area (south of tbe main access road intersection south of the Feigh-Pennington mine lakes).

Mountain biking opportunities will also be provided within the recreation area. The DNR, including the Divisions of Forestry, Parks and Recreation, and Trails and Waterways Unit are experiencing an increase in demand for mountain biking. The Cuyuna area would be a good location to direct this use. Horse and mountain bike use is generally not compatible on the same treadway, unless the treadway is very wide, open, and straight (e.g. railroad right-of-ways). Some horses "spook" when bikes approach, especially if bikes come along fast and unexpected in uneven terrain. The main reason to separate these two uses in selected areas is for safety. It will also help to avoid future conflicts and provide the highest quality recreational experience possible for both user groups. Portions ofthe 12-mile bike trail system shown in our concept would also be a major part of the ski trail system, so some trails would be through varied topography to accommodate beginning to intermediate skiers and mountain bikers.

A trail connection from tbe Sagamore area to Lum Park in Brainerd would connect the recreation area to the Paul Bunyan State Trail. Cuyuna Range Economic Development, Inc. (CREDI) is also exploring the concept of a hard surface bikelhike trail from Garrison to the Paul Bunyan State Trail. This plan supports these trail connection efforts.

The summer trail system concept map does not include a trail system for all-terrain vehicles (ATV) or off-highway vehicle (OHV) use. ATV use has been an issue in this area for many years, and with the support of tbe Mineland Area Joint Powers Board, all individual local units of government in tbe Cuyuna area passed ordinances prohibiting ATV use in tbe recreation area. The advisory committee discussed the need for ATV trails at several of tbeir meetings, including tbe advantages and disadvantages'of providing this use at Cuyuna, and otber ATV opportunities in tbe region. The disadvantages of providing this use far outweighed the advantages, and included: I) noise did not provide a pleasing natural environment for other uses, 2) erosion affects re-vegetation and esthetics, 3) additional safetylliability concerns, 4) elimination and displacement of many other recreational uses, and, 5) tbe limited size of the recreation area/mined area. A regional facility analysis also shows approximately 200 miles of public ATV trail within 50 miles of the Cuyuna area.

ACTION

Action I. Provide a summer trail system which accommodates horses, mountain bikes. and hikers. as shown in concept on the proposed summer trails map. page 64).

Topic 5. *Shooting Range*

Discussion: The advisory committee spent several meetings discussing the possibility of providing a shooting range in this area. Planning participants reviewed other regional opportunities (e.g. Wealthwood Gun Club), and the advantages and disadvantages of providing this use at Cuyuna. Many persons who felt there was a need for a shooting range attended our meetings, and the advisory committee examined several potential sites for a shooting range.

This plan recommends the provision of a shooting range within the recreation area across from the sewage treatment ponds along CSAH 30 (see proposed development and summer trails maps, pages 63-64 for location), and further recommends that:

- The range will be a future development, not a first development priority.
- The land and development will be provided, but a local shooting club will be requested to lease and operate the area. Recommend that a club representative or DNR staff be present during hours of operation.
- All recreational facilities and activities will be planned and developed in such a way that will allow a future shooting range at this location (e.g., summer trail system).
- A secured, separate entrance will be provided from CSAH 30.
- Safety must be emphasized. including berminglearthwork and fencing as needed. Consider the culvert "tube range" design discussed during the planning process.
- The range would provide site-in/pistol range facilities, youth safety training, and adult hunter education.
- Consider an alternative shooting range location, inside or outside of the recreation are, if a more appropriate location can be found.

ACTION

Action I. Provide a shooting range across from the sewage treatment ponds on CSAH 30. with the recommendations and considerations outlined above.

Topic 6. *Winter Trails*

Discussion: The provision of snowmobile trails is specified in Cuyuna legislation. The other major winter trail use identified in the planning process was cross-country skiing. The Proposed Winter Trails Map, shown on page 65, identifies the areas where a separated snowmobile and ski trail system are proposed. This system provides about 11 miles of snowmobile trail and 10 miles of skiing trail. These two types of uses must be separated for safety reasons. Also. some skiers prefer to be separated from snowmobiles because of the noise associated with heavy snowmobile use. Both uses would have a common parking and warming shelter area (see Topic 2, Action 1,

page 57). Most snowmobiliers will probably access the area from connecting trail systems rather than with snowmobile trailers. However, if there is a need for more snowmobile trailer parking, it could be accommodated at the Sagamore area.

The snowmobile trail system will have access through the Sagamore area, along the railroad right-of-way to the main area, and all around the Huntington mine. This includes the unplowed recreation area access road that goes through the Huntington Shops area and to the Mahnomen overlook. The system would continue across CSAH30 and TH 6 to the Yawkey area and beyond.

The cross-country ski system will be accessed from the day-use area described above, and will be situated primarily in the main mine lakes and natural lakes area. Ideally, the crpss country ski trail system would also have a connection through the Huntington Shops area (this would provide a better return loop ski trail system). However, the topography through this area will probably only allow a snowmobile trail connection. If there is a way to provide a safe trail connection for both uses through the Huntington Shops area (or south of the Huntington-Feigh mine lake), it should be provided (but snowmobiles are the recommended priority trail if only one trail use can be accommodated).

Some planning process participants expressed an interest in the provision of a biathlon course at Cuyuna. The proposed design concept could allow this use, because the shooting range site is adjacent to the ski trail system. Biathlon would be provided on a special use permit basis.

If possible, 12-foot (minimum) box culvert crossings should be provided underneath CSAH 30 and TH 6 to provide a separate grade crossing for all trail uses (summer and winter). Because of the expense involved, it is most likely these crossings would be installed at the time the roads are under reconstruction.

ACTION

Action 1. Provide a winter trail system with snowmobiling and cross-country skiing trails as described above and shown on the proposed winter trails map, page 65.'

Topic 7. Boat Accesses and Portage Routes

Discussion: The existing development section (page 52) describes the designated boat ramp and carry-in access points which already exist within the recreation area. There are also many informal boat access points in the area. Boat ramp accesses on the Sagamore. Portsmouth and Pennington mine lakes will remain at their present locations. unless future conditions dictate better sites, The Pennington access will need additional parking space in the future. and this will be provided as part of the main day use area development (see Topic 2. Action I. page 57). As shown on the proposed development map. additional ramp accesses are proposed on the Huntington. Alstead, and Morroco mine lakes. as well as June. Mahnomen. and Little Mahnomen Lakes. Carry-in accesses are proposed on those lakes which will be managed

for electric motors only (see Operations, page 75): Yawkey. Manuel. Joan, Mangan. Hopkins, Louise. Keller. and Virginia mine lakes. Informal ramp and carry-in accesses already exist on most of these mine and natural lakes.

ACTION

Actions 1. Provide boat ramp and carry-in accesses at the locations described above and shown on the proposed development map, page 63, Provide shore fishing piers in appropriate locations.

Actions 2. Provide canoe portage site designation and signs for canoeists that want to portage between several lakes.

Topic 8, *Scuba Diving*

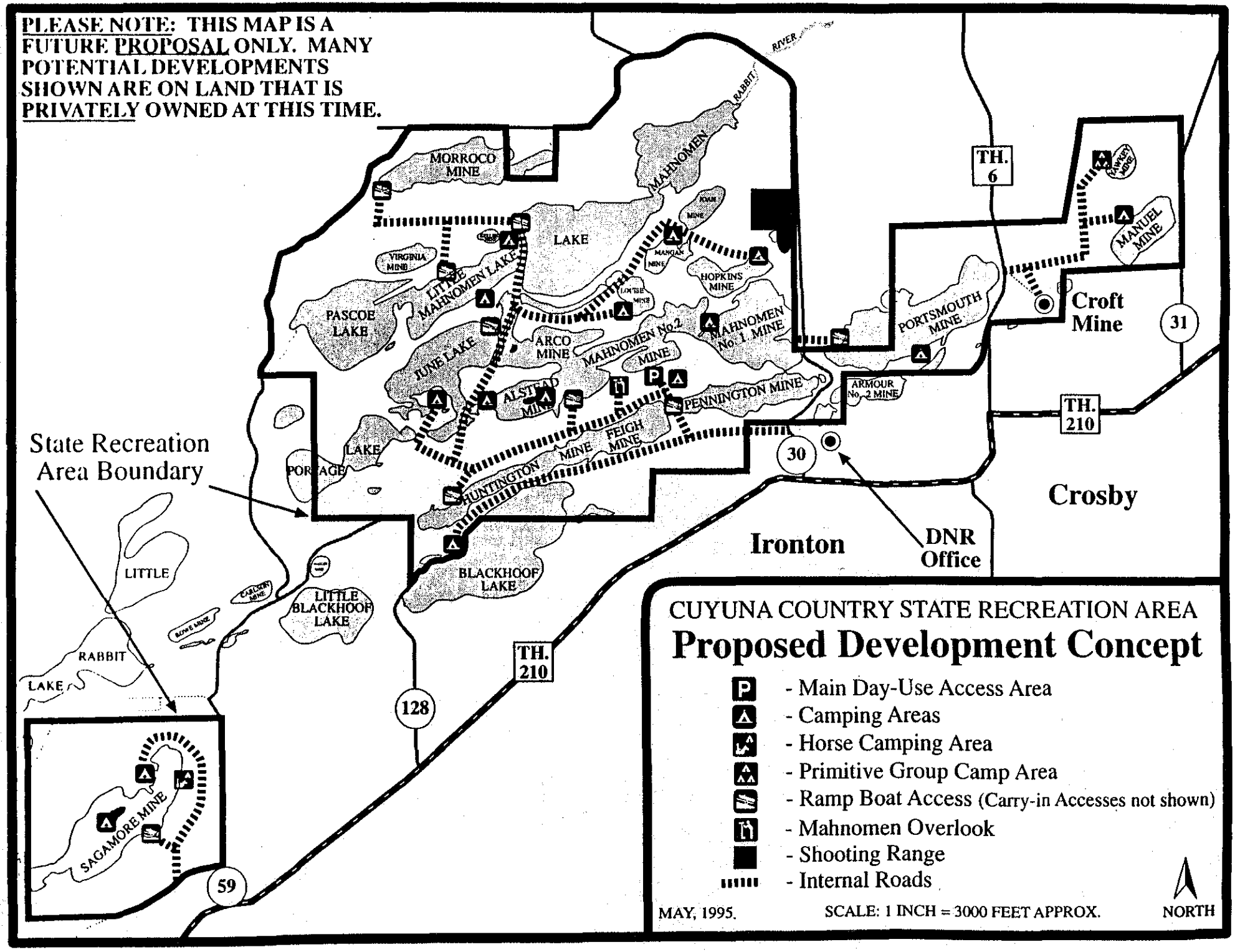
Discussion: Scuba diving is one of the most important existing recreational uses in the Cuyuna area (see existing uses, page 51). Much of the proposed recreational management and development in this plan was generated based on the needs of scuba divers. For example, proposed water surface use regulations (see page 76) will help to provide better diving experiences. and the overall proposed development concept (see page 63) will provide diving access at popular diving locations.

Although divers can access many areas for diving. some of the important spots which should be developed to meet diver access needs include the main day use area (see topic 2. action I. page 57), the Alstead mine lake. boat ramp access, and development in the ManganILouise/Hopkins/Joan mine lakes area. The DNR will work with divers to proVide access to shoreline diving locations. If the recreation area boundary is expanded to include the northwest corner of the Portsmouth mine lake (the current Portsmouth Bay Campground· see proposed boundary, page 69), this area will continue to be an important diving access area.

The chain of mine lakes which starts at the Pennington access is an important scuba diving resource. At times, there can be conflicts at boat ramp accesses between boaters and divers because of space limitations. Both the Pennington and Alstead ramp accesses should be open to both uses when the recreation area is initially opened. However, if conflicts between boaters and divers dictate. the Pennington access should be designated as a boat access and the Alstead access should be designated as a diver access.

ACTION

Action I. Provide developments and recreation management which meet the needs of scuba divers, as discussed above.


PLEASE NOTE: THIS MAP IS A FUTURE PROPOSAL ONLY. MANY POTENTIAL DEVELOPMENTS SHOWN ARE ON LAND THAT IS PRIVATELY OWNED AT THIS TIME.
MORROCO MINE
MAHNOMEN
RABBIT
RIVER
LAKE
VIRGINIA MINE
LITTLE MAHNOMEN LAKE
MANGAN MINE
HOPKINS MINE
PASCOE LAKE
JUNE LAKE
ARCO MINE
MAHNOMEN No.2 MINE
MAHNOMEN No. 1 MINE
PORTSMOUTH MINE
ALSTEAD MINE
PENNINGTON MINE
ARMOUR No. 2 MINE
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LITTLE BLACKHOOF LAKE
LITTLE
RABBIT LAKE
SAGAMORE MINE
TH. 6
TH. 210
TH. 210
128
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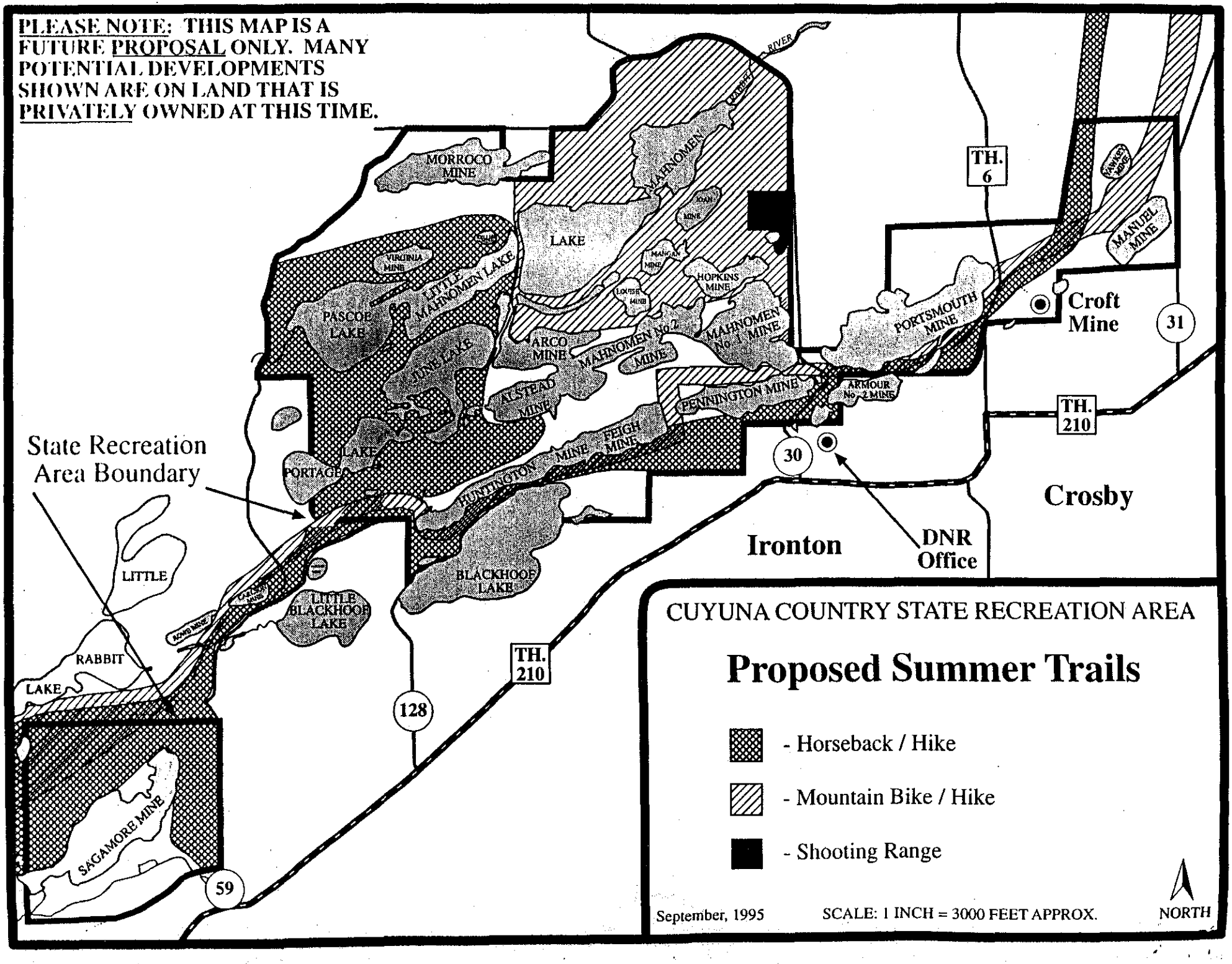
31
Croft Mine
Crosby
Ironton
DNR Office
State Recreation Area Boundary
CUYUNA COUNTRY STATE RECREATION AREA
Proposed Development Concept
- Main Day-Use Access Area
- Camping Areas
- Horse Camping Area
- Primitive Group Camp Area
- Ramp Boat Access (Carry-in Accesses not shown)
- Mahnomen Overlook
- Shooting Range
- Internal Roads
MAY, 1995.
SCALE: 1 INCH = 3000 FEET APPROX.
NORTH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MAHNOMEN
LAKE
VIRGINIA MINE
LITTLE MAHNOMEN LAKE
PASCOE LAKE
TIME LAKE
ARCO MINE
MAHNOMEN No. 2 MINE
MAHNOMEN No. 1 MINE
HOPKINS MINE
PORTSMOUTH MINE
MANUEL MINE
TH. 6
Croft Mine
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ALSTEAD MINE
PENNINGTON MINE
ARMOUR No. 2 MINE
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Crosby
Ironton
DNR Office
State Recreation Area Boundary
PORTAGE LAKE
HUNTINGTON MINE
FEIGH MINE
BLACKHOOF LAKE
LITTLE BLACKHOOF LAKE
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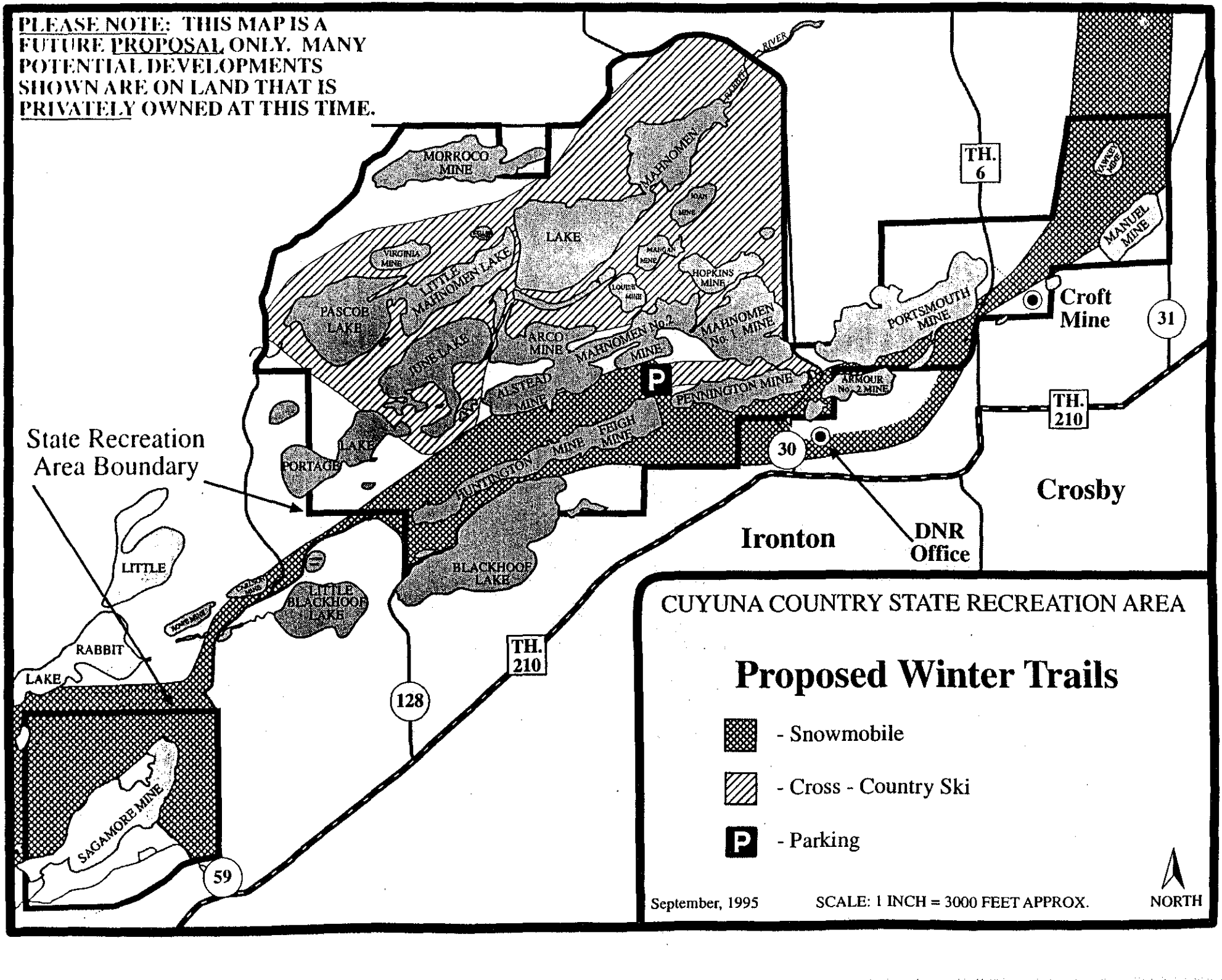
RABBIT LAKE
TH. 210
128
SAGAMORE MINE
59
CUYUNA COUNTRY STATE RECREATION AREA
Proposed Summer Trails
- Horseback / Hike
- Mountain Bike / Hike
- Shooting Range
September, 1995
SCALE: 1 INCH = 3000 FEET APPROX.
NORTH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MAHNOMEN
LAKE
VIRGINIA MINE
LITTLE MAHNOMEN LAKE
PASCOE LAKE
JUNE LAKE
ARCO MINE
MAHNOMEN No. 2 MINE
MAHNOMEN No. 1 MINE
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PORTSMOUTH MINE
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State Recreation Area Boundary
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CUYUNA COUNTRY STATE RECREATION AREA
Proposed Winter Trails
- Snowmobile
- Cross - Country Ski
P - Parking
September, 1995
SCALE: 1 INCH = 3000 FEET APPROX.
NORTH

OWNERSHIP, ACQUISITION, AND PROPOSED BOUNDARY

Ownership

The existing Cuyuna Country State Recreation Area boundary includes approximately 5000 acres of land and surface water. Because of the mining history associated with this area, ownership patterns are complex. For example, one aspect of ownership in this area is that there can actually be three separate "layers" of ownership - surface ownership, mineral right ownership, and stockpile ownership. For the purposes of this plan, we will concentrate on surface ownership (see acquisition section, below).

Several divisions of DNR (Parks and Recreation, Engineering, Minerals, and the Bureau of Real Estate Management) have been working in partnership with Crow Wing County, the Mineland Joint Powers Board, and local volunteers to identify and document ownership in this area. The most extensive recent effort to describe ownership can be referenced in the DNR, Division of Minerals report, Cuyuna Country State Recreation Area: Summary of Land Ownership (March, 1994). This report examines and documents the owners of Torrens property (about half of the recreation area ownership) from research conducted at the Crow Wing County Courthouse.

Surface ownership can be broken down into three types: 100% private land, 100% public land. and "undivided interest" lands which have at least some percentage of public ownership. Undivided interest lands occur when there are multiple owners of a single piece of property. At Cuyuna, there are many acres in undivided ownership because of the mining history associated with the land. The Ownership and Proposed Boundary Map on page 68 shows our current estimate of ownership in the three categories described above. This is based on the March, 1994 report referenced above and Crow Wing County recorded information as of October, 1995. It is important to note that as private owners forfeit their ownership (through non-payment of property taxes), more public land (or undivided interest public land) is created. For this reason, ownership in this area is relatively dynamic.

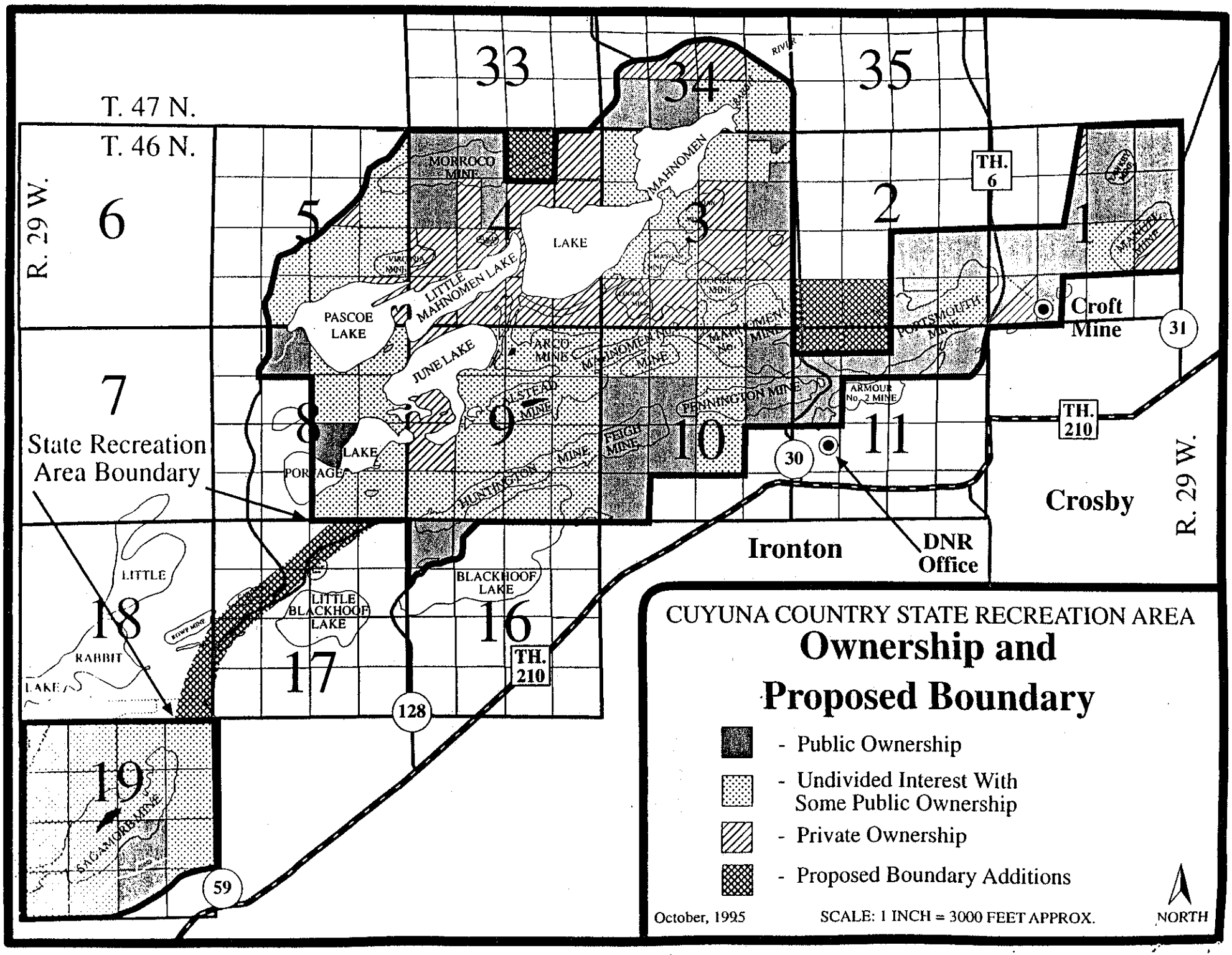
Estimates of current surface ownership within the State Recreation Area boundary are:

860 acres - 100% Private Land
1,840 acres - 100% Public Land 0,340 land acres* and 500 natural lake acres)
2,300 acres - Undivided interest with some public ownership

5,000 acres total

* 1,340 acres of public land ownership includes:

100% tax forfeited	740 acres
City of Crosby	360 acres
Mineland Joint Powers Board	120 acres
State of Minnesota	120 acres
total	1340 acres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T. 46 N.
R. 29 W.
R. 29 W.
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LAKE
MAHNOMEN
LITTLE MAHNOMEN LAKE
PASCOE LAKE
JUNE LAKE
PORTAGE LAKE
LITTLE BLACKHOOF LAKE
BLACKHOOF LAKE
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CUYUNA COUNTRY STATE RECREATION AREA
Ownership and Proposed Boundary
- Public Ownership
- Undivided Interest With Some Public Ownership
- Private Ownership
- Proposed Boundary Additions
October, 1995
SCALE: 1 INCH = 3000 FEET APPROX.
NORTH

ACTIONS

Action 1. Rectify the ownership of the Croft Mine Historical Park. Ownership of the Croft Mine area is unclear and should be rectified. The State of Minnesota, through the Iron Range Resources and Rehabilitation Board (IRRRB) acquired the land known as the Croft Mine Historical Park (about 20 acres) prior to 1987. In 1987, the State Of Minnesota transferred the ownership of the Historical Park to the Croft Mine Joint Powers Board by quit claim deed. Although a copy of the fully executed quit claim deed is available. the original was never recorded at the Crow Wing County Courthouse. At their meeting on April 24, 1994, and since that time in the planning process for Cuyuna. the Croft Mine Joint Powers Board has indicated they would prefer that the State of Minnesota retain ownership of the Croft Mine Park land. In order to establish the clear owner of this property as the State of Minnesota, the Croft Mine Joint Powers Board should consider issuing a quit claim deed (or other legal method) recognizing the 1987 transaction and "non-recording", and releasing any and all interest the Joint Powers Board had as a result of that transaction back to the State of Minnesota.

Action 2. Continue to research, update. and monitor ownership information. Because of the dynamic nature of ownership in this area, the partners identified in the ownership discussion above should continue to monitor changing ownerships. This action will help to acquire land as it becomes available.

Acquisition

In any state park or recreation area, iotal acquisition within a boundary can take many decades, and in some cases, much longer. Even with "normal" ownerships, the owners must be willing to sell at the.time that the state has acquisition funds available. At Cuyuna, total ownership is many years away, but it will eventually be attainable.

ACTIONS

Action 1. Acquire surface ownership according to the following priorities.

1. Critical private lands as they are offered for sale. including railroad right-of-ways.
   These lands are the highest priority because of their critical nature and the fact that they are not protected by some level of public ownership. Critical lands are needed for access roads, recreational facility development, and important natural or cultural resources.

2. Accept tax forfeit interest and other public land interests into StatelDNR ownership and administration.

3. Work to acquire critical undivided interest lands. Contact other private owners to donate their interest, sign a management agreement (includ ing boundary posting) . or to sell their interest. Consider "quiet title" acquisition through Crow Wing County.

4. Acquire remaining railroad right-of-ways, lower priority undivided interest lands and private lands.

Generally, acquisition priorities should attempt to build a "block" of contiguous, manageable land in the southern half of the main recreation area boundary. This block would extend from the Yawkey area on the east to the June Lake area on the west.

Action 2. Acquire mineral ownership whenever possible.

Review mineral right ownership as surface ownership is acquired. Acquire severed mineral rights whenever possible.

Action 3. Determine stockpile ownerships and consider acquiring interest in them.

Stockpile ownership information is limited and difficult to obtain. Some piles are overburden which has minimal value, and some piles are lean ore piles which have a higher value.

In some cases, consider purchasing title insurance which would place the burden of proving ownership on unknown stockpile owners, and cover the state's liability in this area. Also, review similar cases on the Mesabi Range, and determine our best legal options pertaining to stockpiles and overburden piles.

Proposed Boundary

When privately-owned land is within a statutory boundary, it is important to understand that this means the state can negotiate to purchase that land from a willing seller. Any other type of acquisition would require specific legislative action. Outside of statutory boundaries, the state cannot purchase lands. All boundaries are legally described in Minnesota Statutes.

Boundary modifications are considered during all state park or recreation area planning processes. Although this plan can recommend boundary changes, only the legislature can change statutory boundaries. When an addition to a state park or recreation area is considered, the DNR, Division of Parks and Recreation will contact private landowners that would be within a proposed boundary and ask for their documented support. Appropriate local units of government will also be contacted for their support; without the support of the community, the Division of Parks and Recreation will not request boundary changes from the Minnesota Legislature.

As described above, the existing statutory boundary includes approximately *5000* acres. The existing boundary includes a complex pattern of ownership that will take many years to be resolved and acquired by the state. The proposed modifications outlined below are those which are essential to the long-range success of the recreation area.

ACTION

Action 1. Modify the Recreation Area boundary to include three additional areas.

This plan recommends that the three areas shown on the Proposed Boundary map, page 68, and described below, eventually be included in the statutory boundary of Cuyuna Country State Recreation Area.

- 40 acres on the east end of the Morroco Mine - This area was excluded from the original boundary because the owner does not wish to be inside of the boundary. If at some time the property is owned by someone who does not object to being included, the boundary should be amended to include it. If eventually acquired, this area would allow complete shoreline ownership of the Morroco and additional trail opportunities (complete a large trail loop around the mine).

- 120 acres on the west end of the Portsmouth Mine· This area is south of the municipal sewage ponds, includes the privately owned Portsmouth Bay Campground, and has several other owners. Eventual acquisition would add a significant camping and diving area to the recreation area and allow additional trail opportunities (complete a large trail loop around the mine).

- Railroad Right-of-Way between the Sagamore Mine and the Main Recreation Area· This linear corridor is an essential physical trail connection between the Sagamore Mine and main recreation area. It is especially important for providing horseback riding, mountain biking, and snowmobiling opportunities.

Future consideration should also be given to adding the Milford Mine area to the Cuyuna Country State Recreation Area boundary. The Milford mine is the site of the worst mining accident in the history of Minnesota (see History section, page 23). The Milford Mine is approximately three miles north of Crosby and would not be connected to the main recreation area.

INTERPRETIVE SERVICES

The Croft Mine Historical Park has served as the focus of interpretive programming for the Cuyuna area. The park offers simulated mine tours (with a tour guide), a museum with mining artifacts and gift shop, and an outdoor park which includes a variety of interpretive buildings and outdoor mining artifacts.

In addition to the Croft Mine facilities, the overlooks above the main recreation area and on the east end of the Portsmouth mine offer major interpretive opportunities. A kiosk with the story of the NASA balloon launch is currently located at the Portsmouth overlook.

As the State Recreation Area is established, there are many new interpretive opportunities and challenges. These are summarized in the chapter which follows, which includes an examination of interpretive clientele, interpretive themes, existing interpretive services, and interpretive services recommendations.

Interpretive Clientele

The Croft Mine Historical Park attracts a variety of visitors each year. Generally, a visitor profile of the Croft Mine includes:

- vacationers enjoying the "Brainerd Lakes" area;
- other visitors to the area, including those coming to the Mille Lacs Casino;
- schools, clubs, and other organized groups;
- family gatherings or reunions; and,
- local residents interested in their heritage and ancestry.

The "Regional Population" section of this plan, found on page 10, describes population characteristics within a 50-mile region surrounding the State Recreation Area. This information reveals there is a significant retirement community in this area. Interpretive services should take this and other demographic information into consideration.

Visitors to the mineland recreation area include campers. hikers, scuba divers, boaters, anglers, game hunters, rock hunters, horseback riders, snowmobiliers, and skiers. Interpretive services should be developed to meet the needs of all recreational users.

Interpretive Themes

Following are examples of potential interpretive themes.

1. The Croft Mine Historical Park gives visitors insight into mining life and activities.

2. Although most of the Cuyuna area was disturbed from past mining activities, it has become a very important recreational resource.

3. Cuyuna Country State Recreation Area is a multiple-use area, allowing as many appropriate activities as possible while still preserving this resource for future generations.

4. A variety of mineland reclamation projects have been implemented at Cuyuna that make the area safer and more usable.

5. An important message for users at Cuyuna is to stay on designated trails and in designated use areas. Safety messages should be incorporated in literature and on recreation area signage.

6. Forest Management at Cuyuna includes timber stand improvement and reclamation demonstration areas.

7. The Mahnomen Lake marsh and forested tracts on the west end of the main recreation area are significant natural communities with minimal mining disturbance.

8. American Indians llsed this area as a portage route from the Mississippi River to Mille Lacs Lake. Significant archaeological sites exist within and adjacent to the recreation area.

9. Fish management and stocking of mineland area lakes provides good fishing opportunities.

10. Wildlife management and hunter safety / education is an important part of resource management in areas like Cuyuna Country State Recreation Area.

11. The underwater environment of mine lakes offer a unique perspective on this area (consider underwater interpretive programs).

Summary of Existing Interpretive Services

Croft Mine Historical Park- The Croft Mine Historical Park is operated by the Croft Mine Joint Powers Board with operating assistance from the Iron Range Resources Rehabilitation Board, the City of Crosby, and local volunteers (see Operations section, page 75). The Croft Mine has an annual attendance of approximately 10,000 visitors. The Croft Mine's mission is to educate visitors on the mining history and rich heritage of this area. Tours of the simulated underground mine are conducted every 45 minutes between 10 a.m. and 6 p.m., Memorial Day through Labor Day, or by appointment year-around. Administrators of the Croft Mine indicate rainy days can be their busiest time, because lakes area vacationers are looking for indoor activities and attractions.

Mineland Area Non-personal Interpretation - Throughout the mineland area, the Iron Range Resources and Rehabilitation Board has constructed signs and kiosks, usually built with a steel foundation or backdrop. These signs inform visitors of historical events (e.g. NASA balloon launch) and interpret mining history. In addition, a number of publications have been produced over the years, including the Croft Mine Historical Park brochure, the IRRRB "Discover Minnesota's Newest Lakes" booklet, and annual local tourism flyers (in a short "newspaper" format).

Special Events· There are two major special events associated with the recreation area annually, "Cuyler Adams Day," and the "Heritage Days Art Fair.". These events draw visitors from throughout the region and beyond.

Interpretive Services Recommendations

The following interpretive services recommendations should be considered within the context of the administrative recommendations outlined in the Operations section. page 75.

Personal Programming Recommendations

Action 1. Continue Croft Mine Tours. The DNR and IRRRB will be involved in recommendations related to Croft Mine tours.

Action 2. Consider expanding personal programming to include hikes and tours of the mineland area.

Action 3. Provide an interpretive tram ride based out of the Croft Mine to the Yawkev and Manuel Mines.

Non-personal Programming Recommendations

Action 1. Expand Signage and kiosks which include safety-related messages and rules. Evaluate and upgrade existing signage.

Action 2. Develop brochures which include up-to-date area maps. safety messages and rules. natural history of the area. and operational guidelines/rules.

Action 3. Expand self-guiding trails and tours.

OPERATIONS, STAFFING, AND COSTS

Operations.

Fees and Rules

As a state recreation area with specific legislative direction and somewhat "atypical" services, Cuyuna may have some fees and rules which differ from state parks. However, planning process discussions generally embraced both the state park fee structures and operational rules. Current state park rules do in fact specifically include state recreation areas. There may be some minor variations in fees (e.g. Croft Mine Tours) and rules (e.g. allowing non-commercial rock collecting) at Cuyuna. Recreation Area rules will be enforced by DNR, Parks and Enforcement personnel, however, municipal and county enforcement staff will be involved as appropriate on a case - by case basis.

Liability Issues

The recreation area includes many steep slopes from overburden and stockpiles, as well as deep mine lakes with steep dropoffs along the shore. We will be inviting the public to use an area that has some dangerous elements. For this reason, the area must be designed to minimize dangerous conditions, a liability assessment will need to be conducted which is well documented, and extra efforts related to signage, fencing, brochures and overall management will be needed. In portions or all of the recreation area, it may be advisable to require that all trail users (including hikers) stay on designated trails.

Local Partnerships

Cuyuna legislation specifies that "Adopt-a-Recreation Area", as described under MS85.045, be used as much as possible in the development and operation of the recreation area. This program encourages business and civic groups or individuals to assist, on a volunteer basis, in improving and maintaining the recreation area. Examples of local partnerships include local clean-up efforts, the administration of the Croft Mine (see below), and the extensive efforts and donations from the Mineland Joint Powers Board. The Mineland Joint Powers Board has solicited cash and land donations, purchased major tracts of land, and contacted many landowners to request donations of land. The DNR will also work with local vendors in providing recreational equipment rentals (canoes, bicycles, etc.).

Croft Mine Administration

The Cuyuna area represents one of the most important mining areas in the state and includes a very rich historical component. The Croft Mine Historical Park is operated by the Crosby-Ironton (or Croft Mine) Joint Powers Board, which is funded primarily by the Iron RJnge Resources and RehJbilitation Board. The Croft Mine is included in the StJ!e Recreation Area boundary. The Croft Mine and "Yawkey Zone" between County Road 31 and TH 6 will emphasize interpretation. and will include such

features as forestry demonstration areas, a primitive group camp that provides facilities for educational groups, and interpretive "tram rides" around the Yawkey and Manuel mine lakes (based out of the Croft Mine). Consideration will be given to incorporating the Milford Mine area into the interpretive program at Cuyuna; future consideration should also be given to adding the Milford Mine to the Cuyuna Country State Recreation Area boundary.

The advisory committee discussed future operational options for the Croft Mine, taking into consideration the position of the Croft Mine Joint Powers Board. This plan supports the concept of state ownership with joint administration by the IRRRB, DNR, and Croft Mine Joint Powers Board. This may result in a partnership where the overall operational budget is covered by the three partners noted above, with the Croft Mine Joint Powers Board contributing user fees, donations, and volunteers. It must be emphasized that the DNR has no operating funds available for the Croft Mine at this time, but will be seeking funds from the Minnesota Legislature for overall state recreation area operations.

General Operation

As a state recreation area, Cuyuna operations may differ from-operations in a typical state park. For example, the DNR office in Ironton will serve as the initial operational headquarters for the area rather than a typical.state park contact station within the area boundary. This management plan attempts to minimize the operational costs of the area. and maximize (to the extent which is practicable), local partnerships in operating and managing the area.

Visitors to the recreation area can visit the park office or Croft Mine for orientation. It may be possible to sell firewood from the park office, and visitors may be asked to remove their own trash in order to reduce operating costs. This type of operational detail will be determined when the recreation area is staffed and open for recreational use.

Water Surface Use Regulations

Surface water use is critical to the success of Cuyuna, and affects many other uses in the area. After many options and considerations, surface water use recommendations are to require "no-wake" surface water use throughout the area, and to designate several small mine lakes as open to non-motorized boats and those with electric motors only (Yawkey, Manuel, Joan, Mangan, Hopkins, Louise, Keller, Virginia). These regulations will help to protect mine walls from erosion (protecting water quality / clarity and providing safer conditions) and benefit scuba diving, a major attraction and use in the Cuyuna area. They would also continue to support fishing, canoeing, and pontoon boat uses within the area. Surface use regulations can be enacted by action of the county board or, if a lake's shoreline is in total public ownership.

The Louise mine lake is in the process of becoming part of the larger Mahnomen chain due to natural erosion. When this connection has taken placc, Louise mine lake will be subject to the same regulations as thc main mine lake area.

Staffing And Operational Costs

Cuyuna legislation envisioned the provision of a multiple-use recreation area at a lower operational cost than a typical state park. In order to accomplish this, operations will have to rely more on local partnerships (see "Local Partnerships" section above) and developments may have to be more limited and efficient. One of the paradoxes associated with the stated intent to provide this area at a lower cost involves the anticipated intensive use levels. Generally, there is a positive correlation between use levels and costs; the more use accommodated, the higher the operational cost.

The anticipated annual operating budget for Cuyuna Country State Recreation Area is approximately $150,000. This figure can only be realized if significant local partnerships and very efficient operations are realized. A typical state park of this size, fully developed and offering the intensive use envisioned, would have an annual operating budget of approximately $300,000.

The annual operating cost estimate of $I50,000 includes the following:

- Recreation Area Manager
- Assistant Managerrrechnician (seasonal)
- Croft Mine Administration Supplement (see "Operations" section, above)
- Seasonal Maintenance (assumes local partnership supplements)
- Operating Expenses and Supplies

The planning process file includes a detailed estimate of anticipated operational costs.

Development Costs

The following list represents those actions which have development cost implications. The list is not in priority order. The total cost to implement these actions is estimated at $ 2.0 million (in 1995 dollars). This estimate was generated as part of the planning process and has a significant margin of error because a variety of assumptions were made related to unknown variables (e.g. site specific soil conditions, septic system selection, distance to electrical service).

I. Develop a major access road into the "main area" past the Pennington boat access and Mahnomen overlook.

2. Remove a portion of the gravel road on the northwest corner of Blackhoof Lake.

3. Develop the major day-use and parking area in the "Mahnomen Shops" area.

4. Improve the Mahnomen overlook.

5. Improve the Portsmouth overlook at T.H. 6.

6. Develop June Lake and Mahnomen Shops campgrounds, if possible.

7. Develop several "camping pod" areas.

8. Develop a primitive group camp in the Yawkey mine lake area.

9. Develop an equestrian campground in the Sagamore mine lake area.

10. Develop a summer trail system that includes horseback, mountain biking, and hiking trails.

II Develop a shooting range along CSAH 30.

12. Develop a winter trail system with trails for snowmobiles and cross-country skiers.

13. Develop and improve ramp boat accesses, fishing piers, and carry-in accesses.

PLAN MODIFICATION PROCESS

State Park and Recreation Area Management Plans document a partnership-based planning process and the recommended actions resulting from that process. These comprehensive plans recognize that all aspects of park management are interrelated, and that management recommendations should also be interrelated.

Over time. however, conditions change that affect some of the plan recommendations (or, in extreme cases, an entire plan). Plans need to recognize changing conditions and be flexible enough to allow for modifications as needed.

For the purpose of this plan we wiJ] differentiate between less controversial plan revisions and major plan amendments. Minor plan revisions can generally be made within the Division of Parks and Recreation. If a proposed change to a management plan meets any of the criteria below, it must follow the Plan Amendment Process. To maintain consistency among the plans and processes, *all* revisions and amendments should be coordinated through the Division of Parks and Recreation planning section. Requests for modifications should be directed to the Division of Parks and Recreation Planning Manager at the central office.

Major Plan Amendments

Proposed Plan Change Amendment Process Criteria

If a proposed change meets any of the following criteria, it must be approved through the amendment process below.

The proposed change:

1. alters the park mission, vision, goals, or specific management objectives outlined in the plan; or
2. is controversial among elected officials and boards, park user groups, the .public, other DNR divisions or state agencies.

Management Plan Amendment Process

I. Djvision of Parks and Recreation Initial Step: Review plan amendment at park and regional level. Determine which stakeholders potentially have a major concern and how those concerns should be addressed. If the major concerns are within the Division of Parks and Recreation, the issue should be resolved within the division. Review proposed approach with central office managers.

2. If the proposed change issue is between DNR Divisions, the issue should be resolved by staff and approved by the Division Directors. This may require one or two area/regional integrated resources management team meetings. The Division Directors will determine whether the proposed change should go through the departmental (CTECHISenior Manager) review process.

3. If the proposed change issue is between state agencies, the issue should be resolved by staff from both agencies and approved by the Division of Parks Director.

4. If the proposed change is potentially controversial among elected boards. park user groups. or the public, the park advisory committee should discuss the proposed change and attend an open house forum which is advertised in the local and regional area. Following the open house, the Division of Parks Director will determine whether the proposed change should be reviewed by the department.

5. All plan amendments should be coordinated. documented. and distributed by the Division of Parks planning staff.

Plan Revisions

If a plan change is recommended that does not meet the amendment criteria above and generally follows the intent of the park management plan (through mission, vision, goals, and objectives), the Division of Parks has the discretion to modify the plan without a major planning process.

Revisions related to Physical Development Constraints and Resource Protection

Detailed engineering and design work may not allow the developnent exactly as it is outlined in the plan. A relatively minor modification, such as mO'/ing a proposed building site to accommodate various physical concerns, is not uncommon. Plans should outline a general direction and document general "areas" for development rather than specific locations. For the most part, plans are conceptual, not detail-oriented. Prior to development, proposed development sites are examined for the presence of protected Minnesota Natural Heritage Program elements (see page 36) and historical/archaeological artifacts (see pages 23). If any are found, the planned project may have to be revised to accommodate the protection of these resources.

Program Chapter Revisions

The resource management section (Resource Objectives and Integrated Management, page 44) and Interpretive Services chapter (page 71) should be updated periodically as needed. Division of Parks and Recreation Resource Management and Interpretive staff will determine when an update is needed and coordinate the revision with the park planning sectIOn. Program chapters should be rewritten in a format consistent with the plan as onginally approved by the DNR. To retain consistency. park planning staff should be im'olved in chapter revision rev·iew. editing. and distribution.

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