Minnesota Natural Resources Department: Environmental Assessment Files Regarding State Parks

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ENVIRONMENTAL ASSESSMENT

JAY COOKE STATE PARK

I. DESCRIPTION OF THE PROPOSED ACTION

A. Purpose of the Action - Jay Cooke State Park was created by an act of the Minnesota State Legislature in 1915.

The Minnesota Department of Natural Resources intends to provide additional recreational opportunities at Jay Cooke State Park through the acquisition and development of private lands within the park's authorized boundaries.

The Bureau of Outdoor Recreation, as the Federal administering agency for the Land and Water Conservation Fund, proposes to participate with the State of Minnesota in the acquisition of the land at Jay Cooke State Park.

B. Location and Magnitude of the Project - Jay Cooke State Park is located in northeastern Minnesota (Carlton and St. Louis counties), on the southern edge of the Duluth-Superior Metro area and the southern edge of the North Shore Landscape Region. It is bordered by several small communities; Thomson and Carlton to the northwest, Wrenshall to the southwest and Fond du Lac to the northeast. (See maps in Appendix.)

The total authorized land area of the state park is approximately 11,266 acres. Over 99 percent of this area, 8,892.34 acres, was in park ownership as of October 1, 1976. It is proposed that the remaining 2,373.66 acres be acquired with the assistance of the Land and Water Conservation Fund. The current estimated cost for acquiring the land (40 tracts), without the cost of relocating 12 owners is $513,273.

C. Timing of the Project - Within the Minnesota State Park System there

are approximately 53,000 acres of land in private ownership. The Division of Parks and Recreation has embarked upon a major acquisition program with the objective of acquiring most of these lands during the six year period of 1976-1982.

Appropriations are made on a biennial basis and it is estimated that more than $43 million will be needed to accomplish this objective. During the current biennium (1976-77) $9.5 million is available to initiate this program and acquire approximately 12,100 acres.

Although the Division of Parks and Recreation establishes its priorities for acquisition, completion of these priorities is dependent upon locating willing sellers.

If the private tracts within Jay Cooke State Park were acquired today, only 12 relocations of owners would be required. However, complete immediate acquisition is impossible. First, the Department does not have the power of eminent domain and therefore must rely on willing sellers and second, the estimated cost of $413,273 would be prohibitive within current appropriation limitations and other statewide acquisition priorities.

The acquisition within the park with highest priority is the land west of Minnesota Highway #23, excluding the land owned by the City of Duluth. This acquisition consists of 31 parcels, totaling 1,491.15 acres with 6 relocations of owners. Of this, 459.54 acres, 7 parcels, is county or trust fund land. Fourteen owners have been contacted resulting in 2 appraisals and the discovery of one nonwilling seller. The other 7 owners will be contacted in the future to see if they are willing sellers desiring an appraisal of their property. After the appraisal is made the State will inform the property owner of the

appraisal value and will begin negotiations for an option.

Very low priority has been given to the acquisition of the parcel of land owned by the City of Duluth, 170 acres. The acquisition of 12 parcels, 712.51 acres, east of T.H. 23 is also of low priority. Relocation assistance will be needed for 6 owners, all but 4 owners have been contacted. Three of these are nonwilling sellers.

D. Facilities to be Developed - An inventory of natural resources is currently underway in this unit. It is the first step of a comprehensive management planning process which will include a long term development plan for the park. This entire process, to be completed by June 30, 1977, will assess the units potential to service the recreation user's need in the park. After August 1, 1977 development will not proceed unless the management plan has been completed.

There are no plans for development of new facilities during this biennium. Future development plans involve development of new facilities and modification of existing ones. Remodeling of the present campground is needed so it will conform to state park standards. Redesign and revegetation of the area will space sites and will provide a sufficient buffer between sites to provide the experience intended in a natural park. Also, an extensive, interior loop trail system for snowmobiling, skiing and interpretation is planned. A new interpretive center may be built in conjunction with the trail system providing park users with some interpretive activities. Remote campsites and group facilities will be laid out as part of this system so that park users will have additional choices of camping types.

Development during this biennium will be implemented and coordinated with the planning staff preparing the long range management plan for the park.

Future development will follow the recommendations and alternatives studied in the management plan process for the entire park.

E. Recreation Needs to be Served by the Proposal - Attendance figures maintained by the Division of Parks and Recreation, from 1961 to 1975, indicate an overall steady growth in total park use. Park visitation figures are presented in Table 1. Campers have comprised an average of between eight and twenty percent of total park visitors. This percent has been steadily decreasing since 1965 and seems to have stabilized near seven percent. This decrease can be attributed to three circumstances.

1) This park is no longer on the main route to the north. Interstate #35 has rerouted traffic to the west and north of the park. The interstate allows northbound traffic to reach the northshore faster, making Jay Cooke an unnecessary stop on the way up.

2) The existing recreational facilities are of poor quality and there is no body of water within the park suitable for water-based recreation.

3) Recreational competition is extremely keen in this area. At one time Jay Cooke State Park was the number one recreation spot in the area. Presently, the North Shore and Spirit Mountain, located within ten miles of the park, offer good year-round recreational facilities that are not found in the park.

Carlton and St. Louis counties are part of the seven-county Planning Region 3 of the Minnesota State Comprehensive Outdoor Recreation Plan (SCORP). This plan reveals a need for more land-and water-based recreational opportunities. SCORP estimates that the following deficiencies of facilities will prevail in 1975, 1980 and 1990:

	1975	1980	1990
Picnic Tables	-340	-443	-653
Campsites	-174	-1,140	-2,767
Snowmobile Trails	-551	a	a
Water Accesses	-190	a	a

a - Not projected beyond 1975.

SCORP identifies other deficiencies which will have to be met by county

TABLE 1

PARK ATTENDANCE

	Organized Youth Camps	Tourist Camps	Day Visitors	Total Visitors	Percent Overnight Guests
1961		7,740	78,600	86,340	8.97
1962		16,930	72,270	89,200	18.98
1963		9,426	82,320	91,746	10.27
1964	426	26,410	91,050	117,886	13.92
1965		23,895	83,593	107,488	22.23
1966		31,080	166,900	197,980	15.69
1967		20,666	111,065	131,731	15.69
1968		19,802	139,400	159,202	12.43
1969		21,833	196,116	217,949	10.01
1970	24	28,112	227,892	256,028	11.98
1971		30,638	241,789	272,427	11.25
1972		28,559	225,785	254,344	11.23
1973		24,206	291,828	316,034	7.77
1974		24,723	290,195	314,918	7.85
1975		24,124	354,530	378,654	6.37

and local governments rather than state or federal. The deficiencies mentioned above, however, are capable of being reduced through acquisition and development of state park lands. The priorities for action, identified in SCORP, which are applicable to this park include the following:

- Provide at least minimal public access on all lakes suitable for water activities, wildlife or fish management.
- Preserve shore areas needed for public recreation by monitoring the implementation of the state shorelands zoning act and accelerating acquisition of high quality shorelands.
- Provide non-motorized trails where need can be demonstrated.
- Expand snowmobile trail mileage where need is demonstrated and encourage greater county participation in meeting trail deficiencies.
- Provide additional campsites when need is demonstrated.
- Provide a sufficient number of picnicking areas to meet deficiencies.
- Protect and interpret the Region's outstanding historic and natural resources.

Development proposals for Jay Cooke State Park take into consideration the above, mentioned priorities. Facilities to be developed will help meet the deficiencies recognized by SCORP.

II. DESCRIPTION OF THE ENVIRONMENT

A. Topography - Jay Cooke State Park is located at the head of the St. Louis Bay. It is one of the most rugged parks in the state system, nearly 50 percent of the land having a slope ranging from 25-60 percent. The region is characterized by an escarpment of 500 to 1,000 feet which is broken by numerous steep stream valleys. The hills are composed of very old volcanic layers which dip slightly toward Lake Superior.

Many of the outstanding features of this region occur in the gorges of the major streams which flow into Lake Superior. Spectacular cascades and waterfalls such as the St. Louis River were formed when the streams cut through volcanic flows of varying resistance. The St. Louis River has eroded a considerable gorge through glacial lake sediments and glacial drift, and into the underlying layer of slate, resulting in the very rugged terrain of the area that gives Jay Cooke its scenic beauty. This rough, rocky terrain is excellent for certain forms of recreation.

B. Soils - Jay Cooke has quite a variety of soils within its boundary. The series range from the excessively drained Cloquet, Cromwell, Emmert and Omega soils to the very poorly drained organic Dusler, Spooner, Newson, Dawson and Moose Lake soils. There are also the red clays of Campia, Ontonagon and clayey Eutrochrepts; Nemadji sands, Duluth loam, alluvial soils and rock outcrops. The clayey Eutrochrepts, Campia, Ontonagon and Omega series make up over 75 percent of the park's soils.

The clayey Eutrochrepts, with its 25-60 percent slopes, Ontonagon, alluvial, all the organic soils and all the other series, when steeply sloped, are undevelopable. The Cloquet, Cromwell, Emmert, Nemadji and the lesser sloped of Omega, Duluth and Rockland soils can support limited development. Picnic areas, campgrounds and trails may be placed on the latter mentioned soils.

One soil complex, Campia-Ontonagon, is found in the park. These soils are moderately w ll to well-drained soils.

The rock forms in Jay Cooke are very distinctive. They include the exposed slates and graywackes and the diabasic dykes and sills in the St. Louis River gorge and in the northwestern portion of the park. The resistant rock formations have become exposed as the less resistant soils eroded away. The rockforms remain as dominant features in the landscape.

C. Mineral Resources - Deposits of copper and uranium can be found in the project area but are not economically significant. These minerals have a very low mineral potential rating with a fair geologic reliability rating.

D. Water Resources - There are two artificial and five natural water bodies within Jay Cooke State Park. Silver Creek and the St. Louis River flow in and through the park. The creek has been studied and managed as a trout stream. Two inactive beaver dams on the South Branch of the creek act as barriers during low water and make navigation impossible. All sources of pollution on this creek have been cleared up.

The St. Louis River has been classified as a commercial use river. There is no data on the river as it runs through the park. Data collected on the river, just below the park, show that the fecal coliform count is above allowable limits, the dissolved oxygen is below standards, and iron levels are over allowable limits. The river often has a strong stench from commercial wastes being dumped in above the park. Two reservoirs have been created on the St. Louis to produce electricity.

Three lakes; Lost Lake, Swamp Lake, and Forbay Lake, are in the park. There is no water quality data on any of these.

Underground Hydrology - Hydrology of the park area has not been studied, and the only data available is from well logs. There are six wells in the park; two in the service area, one at the manager's residence, two at the campground and one at an abandoned cabin on the east side of the park.

The wells in the park are drilled into the bedrock and draw their water from fractures in the rock. These fractures usually contain a flowing stream of water or hold water like a reservoir. These aquifers are generally recharged by percolation from above or from where the fractured bedrock comes near the surface or has a highly permeable soil above it. Wells into bedrock usually don't produce as high a volume of water as wells in till. The well at the manager's residence is in glacial till and is recharged by percolation from the immediate area.

No water quality data is available for the park wells, but the Department of Health checks the wells annually to be sure that they are up to standards. The ground water within the park is adequate for present recreational use.

E. Flora - The original vegetation of the park area was a mixture of pines and northern hardwoods, but due to lumbering activities and the prevention of fires, the dominant forest cover today is aspen and birch regrowth. Many huge pine stumps still can be seen where the pine stands once existed.

An inventory of plant communities within the state park has been done and the following ecological communities were identified: Northern Hardwoods, Mature Pioneer Hardwood/Conifer, Pine Groves, Big Woods, Bottomland Forest, Spruce-Fir, and Conifer Bogs and Swamps.

Northern Hardwood Forests are characterized primarily by sugar maple but associates such as northern red oak, basswood, green ash, black

ash, yellow birch and elm also predominate in some areas. Scattered small clumps and individual white pine and spruce-fir also occur.

Pioneer Hardwood communities interspersed with conifers cover much of the park. These communities are second growth communities which replaced the pine logged off during the early 1900's. They are generally dominated by either aspen or paper birch pioneer hardwood species which are relatively short lived and are replaced by species which do well in shaded situations. Replacement species include white spruce, balsam fir, white pine or red pine rather than hardwoods.

Mixed hardwood and pine communities occupy dry upland soil areas. These communities probably developed after the last major fire came through the park. In areas where the large red pine survived the fire, paper birch has been reproducing under the canopies. The birch can survive in the shade where pine seedlings cannot. The mixed stands of jack pine and paper birch developed when the intense heat of fire released the jack pine seeds. When the jack pine grew and formed a shade canopy, paper birch again established itself while intolerant species remained suppressed.

Present stands of pine in the park occur on upland soils. The red and white pine stands are remnants of the original virgin timber that were not cleared in the early logging operations. Some jack pine stands exist. These stands probably originated after a post logging fire.

The dominant ground layer species common throughout the park are large-leafed aster, bunchberry, thimbleberry, wild strawberry, bracken fern, horsetail, mosses and lichen.

Vegetation in the campground and picnic area is generally suffering because of heavy human use. Some common problems are soil compaction,

breaking and cutting for firewood, nails in trees, girdling birch trees, and other human damage. Vegetation throughout the park is in need of proper management. Vegetation is mature or overmature and the pioneer hardwoods and pine grove communities are no longer reproducing but are being replaced by shade tolerant spruce-fir species. In order to maintain the scenic value of this park, measures will have to be taken to stimulate reproduction of the desired plant species.

F. Fauna - One of the most intriguing assets of any park is its resident wildlife. Jay Cooke State Park contains a fair diversity of wildlife. There are 174 species of birds that nest in or visit the park, forty-six species of mammals or signs of them that have been recorded, and sixteen species of reptiles and amphibians that exist in the park. Lists of these wildlife are in the appendix.

The only water body within the park that is managed is Silver Creek, a designated trout stream. It has very little vegetation because of the hard and shifting gravel and sand bottom. This same bottom, however, with the riffle areas and cold water, makes the stream excellent for trout. It was heavily fished in the past but receives only light to moderate pressure now. A list of fish species found in park waters is in the appendix.

There are no wildlife species within the park that is considered an endangered, threatened or rare species.

Several species found in the park are uncommon or only locally distributed. These species are of special interest since they are not presently threatened or endangered but might soon become so. Also, these species may have special public interest or their habitat may be especially vulnerable. This category includes the following:

Common Tern	Canada Lynx
Marsh Hawk	Eastern Timber Wolf
Northern Bald Eagle	Bobcat
Osprey	
Common Loon	
Great Blue Heron	Snapping Turtle
Pileated Woodpecker	Redbacked Salamander

Some wildlife species in the park are troublesome species. They are considered possible nuisances to either the natural resources of the park, park property, or visitors. These species are the following:

Species	Potential Problems
Black Bear	Nuisance and cause property damage.
Raccoon	Nuisance and cause property damage.
Porcupine	Vegetation and property damage.
Beaver	Plug culverts and cause flooding.
Snowshoe Rabbit	Vegetation damage.
White-tailed Deer	Vegetation damage.

The Bald Eagle, Timber Wolf, Red Fox, Canada Lynx, Bobcat, and Coyote are unusually sensitive to disturbances by human activity. Disturbance during one season may result in nest or den abandonment, decrease in territorial size or shift in territorial movement the next season. Such disturbance might be detrimental to the survival of the species in a given area or may have effects over a much larger area.

G. Climate - Jay Cooke State Park is dominated by continental weather patterns that influence all of Minnesota, with a strong micro-climate influence from Lake Superior. Lake Superior's water temperature remains fairly constant throughout the year because of its massive size. This, combined with the prevailing northeast winds, causes Jay Cooke to receive warming breezes off the lake in the winter and cooling breezes in the summer. The mean minimum temperatures for the project

area are 0°F in January and 54°F in July. The mean maximum temperatures are 18°F in January and 79°F in July. The annual precipitation is 28-29" with 70-75" of snowfall. The park area is especially good for winter sports, with an excellent base of snow provided for snowshoeing, skiing, snowmobiling and is especially beautiful for winter camping and hiking. Summer sports may be fully enjoyed except for swimming and other water sports.

Air Quality - No air quality statistics are available for the project area. Possible sources of pollution are from the small communities adjacent to the park, the city of Duluth, the Wrenshall refinery and the Cloquet paper plants. Auto emissions from through-traffic on Minnesota #210 and Minnesota #23 have an impact on air quality.

H. Historical and Archaeological Resources - It is generally agreed that the Sioux Indians occupied northern Minnesota prior to 1700. This broad group extended from the lakehead of Lake Superior to the prairies of the Dakotas. The Sioux were driven westward by the Chippewa who had acquired firearms from white traders and were motivated to move westward by the fur trade business.

Development of the fur trade in Carlton and St. Louis counties came at the same time as that of the English thirteen colonies of the Atlantic seaboard. By 1634 licensed traders were dealing with the Indians at the western end of Lake Superior. There followed the era of the voyageur and the intensive exploitation of the fur resource of Minnesota.

In 1834, the harvest of fish to replace fur was begun at the Fond du Lac trading station. The era of fur trading declined rapidly thereafter.

In 1855, the lumbering interests obtained cessions from the Indians and cutting began immediately. By 1858, it was reported that small sawmills

were springing up everywhere in the vicinity of Duluth.

Away from Duluth, settlement came slowly. Logging and farming seemed to bring people in about equal numbers. There is little record of white settlers in the western half of Carlton County or the southern half of St. Louis County before 1870. Immigrants did not arrive in substantial numbers until the railroads were built in 1870. Almost every town or village existing today has a history of sawmills and log drives. A few ruins of logging camps can still be seen today.

The early settlers homesteaded almost everything. Fields were cut and cleared in the area. Due to the poor choice of farmlands and the rough terrain of the area, it was too rugged even to use as pasture, efforts to farm the land were unsuccessful. Many lands were abandoned and never returned to. Old cellars and dirt ridges from original buildings can be found and traces of old fields or pastures can be seen.

Many historical sites, from this sequent occupancy, have been discovered. The Minnesota Historical Preservation Officer has determined that only two of these sites are of historical significance.

The Old Military Road from Twin Lakes to Fond du Lac is an historic site that has been listed on the inventory of historic sites. Nominations for the National Register are taken from this list. This road, completed in 1869, was the first road into Duluth.

The St. Louis Grand Portage was listed on the National Register of Historic Places on May 24, 1973. The portage, listed as both an historic and a prehistoric site, was one of the main thoroughfares for canoe travel from Lake Superior into the interior regions to the west. This route was seven miles long, commencing near Fond du Lac and terminating at Maple Island below Scanlon. The portage was of great importance for

the fur traders, the Indians, and for prehistoric peoples, for an unknown span of time.

Several acres of land south of the river, in Section 9, has been designated a National Landmark. Its significance is that it is a Northern Hardwood Forest that is out of place, not normally found in this area.

I. Transportation and Utilities - Access to Jay Cooke State Park is provided by Minnesota Highway 210 and Minnesota Highway 23. Highway 210 is the major access corridor, leading into the main use area of the park. The highway cuts across the north part of the park, providing access from the east and west, and serving as the major link to the City of Duluth and to Interstate Highway 35. T.H. 23 is a major highway that serves eastern Minnesota and western Wisconsin. It crosses the southeastern section of the park. The western and southern portions of the park are accessable from C.S.A.H. 1 and C.S.A.H. 18. The combination of good access roads and proximity to Interstate 35, puts the park within a 2 1/2 hour drive of most of the population of Minnesota.

The above mentioned routes are all adequate to serve present and anticipated future needs.

Two Burlington Northern railroad lines pass through portions of the park. One runs the length of the western and southern boundaries, crossing into the park at several points. The other, an abandoned line, roughly parallels the northern boundary. Purchase of this line is being considered for use as part of the statewide trail system. Neither railroad is very disruptive, aesthetically or physically to the park, since they run very near the park boundaries, and are very slow moving. Commercial service by train, bus and airplane is available in Duluth. Local bus service is available from Duluth directly to the park.

The utilities servicing the use area of the park do not impair the natural features at this time. Nearly all of the private residences are along the border of the park so most utility lines serving them do not cross the park. Removal of the lines that do exist will take place subsequent to acquisition.

Five electric transmission lines cross the park, disrupting the natural and aesthetic quality. Minnesota Power and Light operates two hydro-electric power plants on the lower part of the St. Louis River. These are on the river and are so well hidden that many park users don't even know that they are there. However, two surge towers which are associated with the plants are located on the top of a nearby bluff and are visible from much of the park.

J. Socio-Economic Factors - The Minnesota Planning Agency's population projections shown below indicate an increase in population for Carlton County by the year 2,000, a decrease in population for St. Louis County and an overall decrease in population for the entire region.

	Carlton County	St. Louis County	Region 3
1970	28,100	220,700	329,600
1975	28,900	218,700	331,100
1980	29,300	217,100	330,300
1985	30,300	216,400	332,600
1990	30,900	215,000	332,400
1995	31,100	212,900	330,200
2000	30,800	210,000	325,400

The following employment and income data was found in "Minnesota Socio-Economic Characteristics," Minnesota State Planning Agency 1972.

Aggregate Average Family Income

Carlton County	$ 9,649
St. Louis County	$ 9,764
Region 3	$ 9,504
State	$11,097

Percent Employment by Industry

	Carlton County	St. Louis County	Region 3	State
Agriculture Forestry and Fisheries	4.6	1.1	2.3	7.4
Manufacturing	36.8	13.7	16.9	20.3
Mining	.3	11.4	10.4	.9
Wholesale and Retail Trade	16.1	20.5	19.7	21.1
Professional and Related Services	18.6	20.5	19.8	30.9
Other	23.9	32.8	30.9	31.4

The amount of tourist generated income is only fairly significant for Carlton County. The county ranks 59th out of 87 in tourist travel expenditures as percent of gross county sales (1.0%). Neither does the county contribute significantly to the state's total tourist travel expenditures of $996,492,000. It ranks only 46th out of 87, contributing .26 percent of the gross expenditures. Carlton County spends $90.95 per county resident on tourist-travel, ranking 51st out of 87. The state average is $254.40 per resident.

K. Land Use and Development Trends

1. Agricultural - There are 1,106 acres, 47 percent, of private land, within the project area being used for agriculture. Small grains and hay are the predominant crops harvested. The estimated value of agricultural production in 1976 for the 14 farms in the project area is $52,940.67.

Income of Crops, Based on November 5, 1976 Prices

Oats	Hay	Idle	$/acre	Value
1,106 acres			56.41	$62,389.46
	1,106 acres		55.90	61,825.40
		1,106 acres	0	0
664 acres	277 acres	165 acres		52,940.67

The productivity of Carlton County, for oats and hay is below the state's average, based on data from the Minnesota Crop Reporting Service.

	Carlton County	State	Year
Oats	35.7 bu/ac	48 bu/ac	74
Hay	1.3 tons/ac	2.4 tons/ac1	74

2. Residential - There are twelve residences located within the park boundaries. Approximately 177 acres, 7 percent, of the project area are used for residential purposes. These residences all have year-round residents who farm the land or commute to nearby towns for employment.

3. Commercial/Industrial - There are only two commercial/industrial concerns within the project area. These are two hydro-electric plants being operated by Minnesota Power and Light. MP&L owns much of the land on the St. Louis River but exact acreages are not known and are not included in the figure of the land to be acquired.

The remaining 1,090 acres of the project area are unused old field or forest land.

Jay Cooke is surrounded by a variety of land uses. The park is bordered on the north and east by the city of Duluth and Fond du Lac Park. The northern border also adjoins some rural residential development and the City of Thomson. The city of Carlton adjoins Thomson to the west and raps around the northwest corner of the park and extends south along the western border. There is some agricultural land between Carlton and Wrenshall which is on the southwest corner of the park. Forest land adjoins the park along the southern and eastern borders.

L. Existing Recreational Development - As previously stated, 8,892.34 acres or 71 percent of the state park are currently in state park ownership for recreational purposes. At present, camping, picnicking, hiking, snowmobiling, and skiing facilities have been developed.

The Civilian Conservation Corps (CCC) built a large stone building near the west end of the park. Today this building is used as a contact station, park office, snack bar, souvenir shop, enclosed picnic shelter, sanitation building and dispensary for firewood and ice. Two pit toilets, located behind this building are used after the water has been turned off for the winter.

Directly north, across trunk Highway 210, a 94-site campground has been constructed. The area is served by a modern sanitation building with hot water and showers and a vault toilet building. A dumping station for campers is located adjacent to the campground.

There are two picnic areas in the park; one near River Inn and the other at Oldenburg Point. (See maps in Appendix.) River Inn provides the sanitary facilities and shelter for the River Inn Picnic Ground. At Oldenburg Point there is a sanitation building, a set of pit toilets and an open shelter. A total of 186 picnic tables are available between the two areas.

Water within the park is currently being distributed through underground distribution lines from six wells to those areas requiring water.

The other developed facilities include 25 miles of hiking trails, 4 miles 4 cross-country ski trails, 16 miles of snowmobile trails and a scenic overlook area off of highway 23 in the southeastern part of the park.

III. ENVIRONMENTAL IMPACT OF THE PROPOSED ACTION

A. Impact on the Physical Environment - A major impact of the proposed acquisition will be a change in land use from its present residential/agricultural status to public outdoor recreational use. The lands to be acquired will be returned to their natural vegetative communities. Special management techniques will be needed to bring back, as nearly as possible, a vegetative cover similar to the endemic species and to protect and preserve the forested land. This will help control erosion and siltation and will increase habitat favorable to animal species commonly associated with the area, therefore increasing the wildlife population. This will also improve the park's aesthetic quality.

The structures acquired on property purchased, 12 houses and the buildings found on 14 farms, will be converted and utilized for park purposes where possible; otherwise they will be sold and removed. Sites where buildings are removed will be returned to natural conditions through planting, seeding, and other vegetative management techniques.

B. Impact on Historical and Archaeological Sites - The Minnesota Historical Preservation Officer has reviewed the proposed project. His comments on the effects of the known historic sites within the park can be found in the appendix. Discovery of additional sites may occur in the future. These sites will be protected from vandalism or destruction. Sites accidentally discovered during recreational development might be partially harmed or destroyed by construction. However, through the agreement with the State Historical Society (See Appendix), all construction will be stopped until the site can be surveyed and it can be determined, by the State Historical Society, how significant the site is and what should be done with it. This may involve relocating the proposed construction to a new site, removal of the archaeological

materials or continued construction in the case of nonvaluable or insignificant discovery.

C. Impact on Transportation and Utilities - Anticipated growth in the county populations is expected to bring added pressure to transportation systems, recreation and other services provided by local communities.

New roads may be needed to provide access to new developments within the park, these roads may be operated and maintained by the State. In some cases, with federal assistance, the county will choose to maintain the park roads.

All utility lines to private residences will be removed as acquisition of land eliminates their need. Utility lines to serve any new development within the park will be placed underground, except where to do so causes excessive damage to ecological systems in the area. When placed above ground, utility lines and appurtenant structures will be carefully planned and located to minimize their impact on park resources and the natural aesthetic quality. Whenever possible, utilities will be included in transportation corridors.

There will be no impact on transmission lines or power plants located in the park.

D. Impact on the Tax Base - Since acquisition will take place over an extended period of time, it is difficult to make an accurate estimate of the total tax loss. The total 1976 taxes on the 1,031.61 acres of private land is $2,955.78 and are distributed as follows:

Taxing Unit	Total Taxes	Tax Loss $	Tax Loss %
Carlton County	$2,251,041	$1,176.50	.05
Silver Brook Township	14,200	32.18	.23
Twin Lakes Township	35,000	78.69	.23
Thompson Township	85,890	105.88	.12
School District #100	357,589	918.68	.26
School District #99	574,751	643.85	.11
GRAND TOTALS	$3,318,671	$2,955.78	.09

The overall tax loss of .09 percent to the taxing units is considered to be very insignificant. None of the individual taxing units will be financially hurt by State acquisition plans. The unit losing the greatest percent of taxes is School District #100. Its loss is only .26 percent.

It is expected that the surrounding area will become more desireable for development of residential dwellings because of the proximity to a dedicated area of open space. Experience shows that the preservation of open space not only preserves but generally enhances residential values. This will increase the property tax yield, which is the major source of revenue for local governments.

E. Impact on the Economy - The proposed acquisition and subsequent development will have little impact on the local economy. The loss of agricultural income will be approximately $52,940.67 from crop production.

The benefits from recreation at Jay Cooke State Park are approximately, $600,924 annually, based on 1975 attendance rates.

Campers: 24,124 x $3.90/day* x 1.3 days** = $122,308.68
Day Users: 354,530 x $1.35/day*** = 478,615.50
TOTAL = $600,924.18

* Department of Agricultural and Applied Economics, University of Minnesota.

** Data from park camping permits.

*** Principles and Standards for Planning Water and Related Land Resources, September 19, 1973.

F. Social Impact - The proposed acquisition will result in the relocation of 12 residences. Owners are not usually forced to sell to the State. If they do, it is doubtful whether or not they suffer any financial loss, since they would be eligible for relocation and replacement housing assistance under Public Law 91-646.

Acquisition and subsequent development of the state park will provide new recreational opportunities for the residents near the park. In exchange for these future opportunities they may have to suffer some minor immediate inconveniences. Noise and dust disturbances from construction activities should be temporary and of a limited scope since development should be minimal.

Littering and noise emanating from park visitors should be confined to use areas and will not have a great social impact. Trespassing may occur, inadvertantly or purposefully, by park users, but will, hopefully, be minimal and cause little conflict. Some vandalism of private property can be expected.

IV. MITIGATING MEASURES INCLUDED IN THE PROPOSED ACTION

Land owners, willing sellers in nearly all cases, are eligible for relocation assistance under Public Law 91-646, the Uniform Relocation Assistance and Real Property Acquisition Policies Act. This generally covers any economic hardship caused by the relocation of a home or business. In limited cases, the State will offer retired landowners a life tenure on up to ten acres of land surrounding his buildings for residential purposes. Relocation costs are avoided by allowing the owner and spouse the privilege to live out their lives in their home at no cost.

When agricultural practices are taking place before the State acquires the land, it is a common practice to allow a lease arrangement with the farm owner for a period of one or two years following purchase of the land. This allows the lessee to plant the same crop that was planted the year in which the land was acquired, but he must dispense with the use of any chemical herbicides that year. Immediately following harvest of the crop, the land must be throughly disked, dragged and seeded with June grass, perennial rye and fescues. The following year, the lessee has the right to harvest a hay crop. This arrangement avoids the furrowed texture of the land surface often left from row crops and converts croplands to grasslands efficiently and quickly. It also allows the farmer time to reduce his stock of farming equipment should he decide not to continue in agriculture. The lessee is not required to pay any monetary consideration in lieu of his services and costs rendered in reestablishing the grasslands.

If the owner has planted a crop on the land which will not be harvested prior to filing of the deed to the State, provisions are made for the owner to harvest that crop at no additional expense to him.

Future development will be carried out in such a manner as to assure that the integrity of the natural resources will be maintained and protected to the fullest extent possible. Tree planting will be used to speed up revegetation of former croplands. Soil erosion will be lessened by planting of vegetation on areas disturbed by development. Soil limitations will be taken into account in the site location and design of new developments.

A substantial increase in park visitors could overtax the existing water supply. The park wells operate at a very low volume since they are drilled into a low recharge aquifer. If a greater quantity of water is needed in the future, it is possible that the park water system could be hooked up to the Carlton or Cloquet water system.

Because of lack of intensive site surveys, site testing and excavation new historical/archaeological sites may be discovered. All park personnel and private contractors engaged in construction for the state park system are required to watch for archaeological materials. If any artifacts are unearthed, work is to halt and the findings are to be reported to the state archaeologist immediately. Work will not commence again until confirmation is received from the Minnesota State Historical Society. The Historical Society will determine specific action to be taken to protect valuable archaeological material.

The tax loss to the local taxing units will occur gradually. The tax loss of less than .09 percent overall will be partially mitigated to the county and townships by a reduction in services such as roads, fire protection and police protection within the park. These duties will be assumed by the park manager and his staff and will only require outside assistance in extreme circumstances. The tax loss to the school district will be mitigated by increased state school aid.

V. ADVERSE EFFECTS WHICH CANNOT BE AVOIDED SHOULD THE PROPOSAL BE IMPLEMENTED

- Loss of agricultural land to recreational use.
- Loss of residential land to recreational use.
- Loss of $52,950.07, to the local economy, from crop production.
- Loss of $2,955.78 of tax revenue to local taxing units.

VI. RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Short-term uses of the environment in relationship to maintenance and enhancement of long-term productivity is considered not in terms of years, but rather in terms of what must be sacrificed to gain certain benefits.

	Gains	Losses
1.	Preservation in perpetuity of about 11,266 acres of open space to provide a variety of outdoor recreational opportunities to approximately 378,000 visitors annually.	Loss of 1,106 acres of cropland, 14 farms and 12 residences.
2.	Reversion to a natural condition, of 1,106 acres currently in row crops or pasture.	Relocation of 12 families.
3.	Improved wildlife habitat and subsequent increase in number of wildlife species.	Expenditures of $413,273.36 of public funds for acquisition of private lands.
4.	Control of erosion and reduction of siltation resulting in improved water quality.	Loss of $2,955.78 of tax to local taxing units; .05 percent loss to Carlton County, a .23 percent loss to Silver Brook Township, a .23 percent loss to Twin Lakes Township, a .12 percent loss to Thomson Township, a .26 percent loss to School District #100 and a .11 percent loss to School District #99.
5.	Preservation and possible restoration of historical and archaeological resources.	

VII. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

The acquisition and development of the project area would result in the permanent conversion of present private land uses into park and recreation purposes in perpetuity for Minnesota residents for which the park was originally established.

A secondary commitment to recreation and open space is required by participation in the Land and Water Conservation Fund program. Section 6(f) of the Land and Water Conservation Fund Act, (as amended) states that "approval by the Secretary of the Interior must be granted before a change in use of any fund associated lands can be made". LWCF monies are received on a cost sharing basis for acquisition and development of Minnesota park areas.

VIII. ALTERNATIVES TO THE PROPOSED ACTION

Jay Cooke State Park was established by law in 1915. At present, 8,892.34 acres have been acquired within the statutory boundaries of the park. Both state and federal money has been spent in acquiring land and developing the public use facilities within the park. With these facts in mind, no alternative site for the park can be considered.

A. No Action - No action would eliminate any possibility of acquiring lands which are still relatively undeveloped and obtainable. It would not help remedy the need for additional outdoor recreatioanl facilities in the region, as pointed out in the State Comprehensive Outdoor Recreatiion Plan of 1968. (Refer to Section I.E.)

Continued private ownership would mean retention of an additional 2,373.66 acres on the tax rolls. However, the possibility of private lands being put to incompatible uses which would effect the park's use and its enjoyment by the public would exist. The full value and use of

some of the parcels already acquired would be lost.

No action on this project proposal would do nothing to alleviate the administrative problems in the southeast corner of the park where Highway #23 cuts off a corner of the park.

B. Acquisition with no Development - This alternative involves the acquisition of the remaining private lands within the park boundaries with no further recreational development. The existing facilities are adequate to serve the number of users at this time. However, if park attendance increases, overcrowding of existing facilities may occur. Without regulation, newly acquired lands could suffer environmental deterioration from indiscriminate use.

C. Project of a Smaller Scope - It is possible that the land east of Minnesota Highway #23 will be deleted from the park boundaries. This land, approximately 7,120 acres, may be given to the Division of Forestry for administration and management. After making this deletion T.H. #23 will become a convenient physical boundary to the park, instead of being an uncontrollable access to the park and a physical intrusion upon park lands.

D. Project of a Larger Scope - There are no plans for an expansion of park boundaries for Jay Cooke State Park.

All proposals involving deletions or expansions of the park boundaries will require legislative approval.

Observed Fish Species in the Park

Silver Lamprey
Lake Sturgeon
Brook Trout
Rainbow Trout
Brown Trout
Rainbow Smelt
Central Mudminnow
Northern Pike
Carp
Blacknose Dace
Longnose Dace
Horneyhead Chub
Creek Chub
Pearl Dace
Northern Redbelly Dace
Finescale Dace
Fathead Minnow
Common Shiner
Northern Redhorse
White Sucker
Channel Catfish
Black Bullhead
Tadpole Madtom
Smallmouth Bass
Yellow Perch
Walleye
Johnny Darter
Slimy Sculpin

Birds Found in the Park

Abundant

Pied-billed Grebe
Mallard
Blue-winged Teal
Wood Duck
Ring-necked Duck
Greater Scaup
Lesser Scaup
Common Goldeneye
Bufflehead
Common Merganser
Ruffed Grouse
American Coot
Kildeer
Herring Gull
Common Tern
Black Tern
Rock Dove
Mourning Dove
Blue Jay
Red-eyed Vireo
Red-winged Blackbird
Common Grackle

Common

Common Loon
Black Duck
Pintail
Gadwall
American Widgeon
Shoveler
Green-winged Teal
Redhead
Canvasback
Bufflehead
Red-breasted Merganser
Hooded Merganser
Goshawk
Sharp-skinned Hawk
Marsh Hawk
Rough-legged Hawk
Red-tailed Hawk
Broad-winged Hawk
Sparrow Hawk
Great Blue Heron
American Bittern
Sora Rail
Spotted Sandpiper
American Woodcock
Common Snipe
Ring Billed Gull
Great Horned Owl
Whip-poor-will
Common Nighthawk
Ruby-throated Humming Bird
Belted Kingfisher
Yellow Shafted Common Flicker
Yellow-bellied Sapsucker
Hairy Woodpecker
Downy Woodpecker
Eastern Phoebe
Thraill's Flycatcher
Eastern Wood Pewee
Olive-sided Flycatcher
Barn Swallow

Common (cont.)

Tree Swallow
Bank Swallow
Purple Martin
Gray Jay
Common Raven
Common Crow
Black-capped Chickadee
White-breasted Nuthatch
House Wren
Wood Thrush
Veery
Golden Crowned Kinglet
Cedar Waxwing
Tennessee Warbler
Orange Crowned Warbler
Nashville Warbler
Parula Warbler
Yellow Warbler
Yellow-rumped Warbler
Chestnut Sided Warbler
Ovenbird
Yellowthroat
American Redstart
House Sparrow
Brown-headed Cowbird
Baltimore Oriole
Scarlet Tanager
Rose-breasted Grosbeak
Evening Grosbeak
Purple Finch
Pine Grosbeak
Pine Siskin
American Goldfinch
Red Crossbill
White-winged Crossbill
Slate-colored Junio
Chipping Sparrow
White Throated Sparrow
Song Sparrow
Snow Bunting

Mammals Found in Park

Abundant

Least Chipmunk
Red Squirrel
Beaver
Muskrat
Norway Rat
Snowshoe Hare

Common

Shorttail Shrew
Little Brown Bat
Black Bear
Raccoon
Porcupine
Eastern Cottontail

Reptiles and Amphibians Found in Park

Common Snapping Turtle
Western Painted Turtle
Northern Red-bellied Snake
Eastern Garter Snake
Mudpuppy
Jefferson Salamander
Red-backed Salamander
Dakota Toad
American Toad
Northern Spring Peeper
Eastern Gray Treefrog
Boreal Chorus Frog
Mink Frog
Northern Leopard Frog
Green Frog
Wood Frog

JAY COOKE STATE PARK

Addendum to Environmental Assessment Submitted 11-22-76

I. Description of the Proposed Action - Jay Cooke State Park was created by an act of the Minnesota State Legislature in 1915. The Minnesota Department of Natural Resources intends to provide additional recreational opportunities at Jay Cooke State Park through the acquisition and development of private land within the park's authorized boundaries.

The Bureau of Outdoor Recreation, as the Federal Administrating Agency of Land and Water Conservation Fund, proposes to participate with the State of Minnesota in a series of development projects within the statutory boundaries of Jay Cooke State Park for outdoor recreation purposes.

The development project includes the following actions: trail development, bridge development, erosion control work on trails, vegetation management and cultural and vegetation research.

The anticipated time frame for completion of all items in this proposal is two construction seasons.

Jay Cooke State Park is located in Northeastern Minnesota (Carlton County), west of Duluth, Minnesota. Further information is available in the environmental assessment submitted 11-22-76

II. Description of the Environment - The description of the environment in Jay Cooke State Park is as described in the environmental assessment submitted 11-22-76

III. Environmental Impact of the Proposed Action - Impacts of the proposed action will be reviewed in three sections: The first will deal with trail development, the second will deal with vegetation management and the third will deal with cultural and vegetation research.

Trail development will be undertaken in two phases: trail rehabilitation and trail development. The rehabilitation projects will disrupt minor amounts of vegetation along the trails where rehabilitation work needs to be completed. This work will prevent further erosion and will have less impact in the long run. Phase two deals with the development of new trails in the park. This proposed action will affect the flora and fauna along the corridor which is being developed. All woody vegetation will be removed over a four foot treadway. The goal of this new development is to prevent the re-establishment of this woody vegetation, all of the herbaceous material will be left. The overall impact on vegetation, soils, and other features will return to near pre-development levels after the project is finished.

The overall management goal for the vegetation in Jay Cooke State Park is to recreate some of the original vegetation types. This program is designed to work in areas of the park which show signs of decay and possible cover type changes which will reduce the amount of diversity in the park's plant communities. This management action will cause the vegetation in specific areas to change.

The third phase is a cultural survey and vegetation research. These projects will be used to identify areas that have special need of protection. The environmental impact of this project will have minimal affects.

All areas where the soils will be distributed should have a cultural survey.

IV. Mitigating Measures Included in the Proposed Action - The development and rehabilitation projects will be carried out in such a manner as to assure that the integrity of the Natural Resources will be maintained and protected to the fullest possible extent. All new developments or actions will be undertaken in a manner that will help to re-establish the cover and prevent erosion on the sites. The work will be done on the project at times when conflicts with the park users will be minimal.

V. Adverse Environmental Effects Which Cannot Be Avoided Should the Proposal be Implemented - Adverse environmental effects will consist of the disruption of flora & fauna resources; increased park use levels will bring increased noise levels and littering. Even with all necessary precautions taken, disruption of the physical environment is unavoidable as recreational development and use occur.

VI. Relationship Between Local Short-Term Uses of Man's Environment and the Maintenance & Enhancement of Long-Term Productivity - Short term use of the environment in relationship to maintenance and enhancement of long term productivity are considered not in terms of years but rather in terms of what must be sacrificed to gain certain benefits or trade offs.

GAINS	LOSSES
1. Better & safer trails.	1. Local loss of some flora.
2. Thriftier vegetation stands.	2. Some local losses of specific types of flora.
3. Increase in visitor useage and capacities to meet present and future demands.	3. Expenditures of approximately $134,000 of public funds.

VII. Irreversible & Irretrievable Commitments of Resources - The manpower, fuel, materials and funds involved in the planning, engineering, and development of the proposed project will be irretrievably committed.

VIII. Alternative to the Proposed Action - The major alternatives to the proposed action are: 1) no action 2) project with a larger scope. A) No action - This alternative is not realistic because the present demand for trails in the area is very high. If no vegetation management is undertaken, a portion of the park may change its cover type to upland brush. B) Project with a larger scope - A project with a larger scope than that proposed is not required at this time.

ENVIRONMENTAL ASSESSMENT
JAY COOKE STATE PARK

I. DESCRIPTION OF THE PROPOSED ACTION

A. Purpose of the Action - Jay Cooke State Park was created by an act of the Minnesota State Legislature in 1915.

The Minnesota Department of Natural Resources intends to provide additional recreational opportunities at Jay Cooke State Park through the acquisition and development of private lands within the park's authorized boundaries.

The Bureau of Outdoor Recreation, as the Federal administering agency for the Land and Water Conservation Fund, proposes to participate with the State of Minnesota in the acquisition of the land at Jay Cooke State Park.

B. Location and Magnitude of the Project - Jay Cooke State Park is located in northeastern Minnesota (Carlton and St. Louis Counties), on the southern edge of the Duluth-Superior Metro area and the southern edge of the North Shore Landscape Region. It is bordered by several small communities; Thomson and Carlton to the northwest, Wrenshall to the south~~east~~ west and Fond du Lac to the northeast.

The total authorized land area of the state park is approximately ~~11,323~~ 11,266 acres. Over ~~91~~ 99 percent of this area, ~~9,513~~ 8,892.34 acres, was in ~~public~~ park ownership as of October 1, 1976. It is proposed that the remaining ~~1,810~~ 2,373.66 acres be acquired with the assistance of the Land and Water Conservation Fund. The current estimated cost for acquiring the land (40 tracts), without the cost of relocating 12 owners is $413,273.36.

C. Timing of the Project - Within the Minnesota State Park System there are approximately 53,000 acres of land in private ownership. The Division of Parks and Recreation has embarked upon a major acquisition program with the objective of acquiring most of these lands during the six year period of 1976-1982.

Appropriations are made on a biennial basis and it is estimated that more than $43 million will be needed to accomplish this objective. During the current biennium (1976-77) $9.5 million is available to initiate this program and acquire approximately 12,100 acres.

Although the Division of Parks and Recreation establishes its priorities for acquisition, completion of these priorities is dependent upon locating willing sellers.

If the private tracts within Jay Cooke State Park were acquired today, only 12 relocations of owners would be required. However, complete immediate acquisition is impossible. First, the Department does not have the power of eminent domain and therefore must rely on willing sellers and second, the estimated cost of #413,273.36 would be prohibitive within current appropriation limitations and other statewide acquisition priorities.

The acquisition within the park with highest priority is the land west of Minnesota Highway #23, excluding the land owned by the City of Duluth. This acquisition consists of 31 ~~25~~ parcels, totaling 1,491.15 ~~1,702.97~~ acres with 6 relocations of owners. Of this, 459.54 ~~498.79~~ acres, 7 parcels, is county or trust fund land. Fourteen owners have been contacted resulting in 2 appraisals and the discovery of one nonwilling seller. The other 7 owners will be contacted in the future to see if they are willing sellers desiring an appraisal of their property. After the

appraisal is made the State will inform the property owner of the appraisal value and will begin negotiations for an option.

Very low priority has been given to the acquisition of the parcel of land, 170 acres, owned by the City of Duluth. The acquisition of ~~the~~ 12 ~~IX~~ parcels, ~~1,043.28~~ 712.51 acres, east of T.H. 23 is also of low priority. Relocation assistance will be needed for 6 owners, all but 4 owners have been contacted. Three of these are ~~not~~ non willing sellers.

D. Facilities to be Developed - An inventory of natural resources is currently underway in this unit. It is the first step of a comprehensive management planning process which will include a long term development plan for the park. This entire process, to be completed by June 30,1977, will assess the unit's potential to service the recreation user's need in the park. After August 1, 1977 development will not proceed unless the management plan has been completed.

There are no plans for development of new facilities during this biennium. Future development plans involve development of new facilities and modification of existing ones. Remodeling of the present campground is needed to provide more privacy to individual sites. A new layout design and revegetation of the area will provide sufficient buffer areas. Also, an extensive, interior loop trail system is planned for this park. The trail will be for hiking, skiing and interpretation. A new interpretive center will be built in conjunction with the trail system. Primitive backpacking campsites will be laid out as part of this system.

Development during this biennium will be implemented and coordinated with the planning staff preparing the long range management plan for the park. Future development will follow the recommendations and alternatives studied in the management plan process for the entire park.

E. Recreation Needs to be Served by the Proposal - Attendance figures maintained by the Division of Parks and Recreation since 1961 indicate an overall steady growth in total park use. Park visitation figures are presented in Table 1. Campers have comprised an average of between eight and twenty percent of total park visitors between 1961 and 1975. This percent has been steadily decreasing since 1965 and seems to have stabilized near seven percent. This decrease can be attributed to three circumstances.

1) This park is no longer on the main route to the north. Interstate #35 has rerouted traffic to the west and north of the park.

2) The existing recreational facilities are of poor quality and there is no body of water within the park suitable for water-based recreation.

3) Recreational competition is extremely keen in this area. At one time Jay Cooke State Park was the number one recreation spot in the area. Presently, the North Shore and Spirit Mountain, located within ten miles of the park, offer good year-round recreational facilities that are not found in the park.

Carlton and St. Louis Counties are part of the seven-county Planning Region 3 of the Minnesota State Comprehensive Outdoor Recreation Plan (SCORP). This plan reveals a need for more land-and water-based recreational opportunities. SCORP estimates that the following deficiencies of facilities will prevail in 1975, 1980 and 1990:

	1975	1980	1990
Picnic Tables	-340	-443	-653
Campsites	-174	-1,140	-2,767
~~Hiking Trails~~	~~+1~~	~~a~~	~~a~~
Snowmobile Trails	-551	a	a
Water Accesses	-190	a	a

a - Not projected beyond 1975.

SCORP identifies other deficiencies which will have to be met by county and local governments rather than state or federal. The deficiencies mentioned above, however, are capable of being reduced through acquisition and development of state park lands. The priorities for action, identified in SCORP, which are applicable to this park include the

TABLE 1

PARK ATTENDANCE

	Organized Youth Camps	Tourist Camps	Day Visitors	Total Visitors	Percent Overnight Guests
1961		7,740	78,600	86,340	8.97
1962		16,930	72,270	89,200	18.98
1963		9,426	82,320	91,746	10.27
1964	426	26,410	91,050	117,886	13.92
1965		23,895	83,593	107,488	22.23
1966		31,080	166,900	197,980	15.69
1967		20,666	111,065	131,731	15.69
1968		19,802	139,400	159,202	12.43
1969		21,833	196,116	217,949	10.01
1970	24	28,112	227,892	256,028	11.98
1971		30,638	241,789	272,427	11.25
1972		28,559	225,785	254,344	11.23
1973		24,206	291,828	316,034	7.77
1974		24,723	290,195	314,918	7.85
1975		24,124	354,530	378,654	6.37

following:

- Provide at least minimal public access on all lakes suitable for water activities, wildlife or fish management.
- Preserve shore areas needed for public recreation by monitoring the implementation of the state shorelands zoning act and accelerating acquisition of high quality shorelands.
- Provide non-motorized trails where need can be demonstrated.
- Expand snowmobile trail mileage where need is demonstrated and encourage greater county participation in meeting trail deficiencies.
- Provide additional campsites when need is demonstrated.
- Provide a sufficient number of picnicking areas to meet deficiencies.
- Protect and interpret the Region's outstanding historic and natural resources.

Development proposals for Jay Cooke State Park take into consideration the above, mentioned priorities. Facilities to be developed will help meet the deficiencies recognized by SCORP.

II. DESCRIPTION OF THE ENVIRONMENT

A. Topography - Jay Cooke State Park is located at the head of the St. Louis Bay. It is one of the most rugged parks in the state system, nearly 50 percent of the land having a slope ranging from 25-60 percent. The region is characterized by an escarpment of 500 to 1,000 feet which is broken by numerous steep stream valleys. The hills are composed of very old volcanic layers which dip slightly toward Lake Superior.

During the Ice Age the basin was scoured, the cliffs were sheared off and parts of the upland areas were covered by glacial deposits. This area now has very little or no glacial cover and thus directly exhibits the bedrock control in its landform. This results in the very rugged terrain of the area that gives Jay Cooke its scenic beauty. The rough, rocky terrain is excellent for recreation.

Many of the outstanding features of this region occur in the gorges of the major streams which flow into Lake Superior. Spectacular cascades and waterfalls such as the St. Louis River were formed when the streams cut through volcanic flows of varying resistance.

The St. Louis River has eroded a considerable gorge through glacial lake sediments and glacial drift, and into the underlying layer of slate.

B. Soils - Jay Cooke has quite a variety of soils within its boundaries. The series range from the excessively drained Cloquet, Cromwell, Emmert and Omego soils to the very poorly drained organic Dusler, Spooner, Newson, Dawson and Moose Lake soils. There are also the red clays of Campia, Ontonagon and Clayey Eutrochrepts, Nemadji sands, Duluth loam, Alluvial soils and rock outcrops. The clayey Eutrochrepts, Campia, Ontonagon and Omega series make up over 75 percent of the park's soils.

The clayey Eutrochrepts, with its 25-60 percent slopes, Ontonegon, alluvial, all the organic soils and all the other series when steeply sloped, are undevelopable. The Cloquet, Cromwell, Emmert, Nemadji and the lesser sloped of Omega, Duluth and Rockland soils can support limited development. Picnic areas, campgrounds and trails may be placed on the latter mentioned soils.

One soil complex, Campria-Ontenagon, is found in the park. These soils are moderately well to well-drained soils.

The rock forms in Jay Cooke are very distinctive. They include the exposed slates and gray wackes and the diabasic dykes and sills in the St. Louis River gorge and in the northwestern portion of the park. The resistant rock formations have become exposed as the less resistant soils eroded away. The rockforms remain as dominant features in the landscape.

C. Mineral Resources - Deposits of copper and uranium can be found in the project area but are not economically significant. These minerals have a very low mineral potential rating with a fair geologic reliability rating.

D. Water Resources

Surficial Hydrology - There ~~is~~ are ~~one~~ two artificial and ~~four~~ five natural water bodies of any importance within Jay Cooke State Park. Silver Creek and the St. Louis River flow in and through the park. ~~Lost Lake is hi~~

Two reservoirs have been created from the St. Louis River. There is no data available on this river. The two reservoirs have been developed to produce electricity and no data is available on the quality of their water.

Lost Lake is hidden in the central part of the park. It is so remote that no statistics are available on it either. Two other lakes, Forbay and Swamp, are within the park boundaries.

Some water quality data is available for the St. Louis River just below the park. The river is classified as a commercial use river. The fecal coliform count is above allowable limits and the dissolved oxygen was below standards. Iron levels were over allowable limits. Therefore, the river has been categorized Class I (Human Consumption), generally more restrictive than the commercial class. The river often has a strong stench from commercial wastes being dumped in above the park.

Underground Hydrology - The hydrology of the park area has not been studied. The only data available is from well logs. There are ~~five~~ six

D.

part of the park ~~and~~ Two reservoirs have been created from the St. Louis ~~R~~river. ~~There is no data available on this river as it runs through the park.~~ ~~Lost Lake~~ It is so remote that no statistics are available ~~on it either. The two reservoirs have been developed to produce electricity and no data is available on the quality of their water.~~

Silver Creek has been studied and managed as a trout stream. There are two inactive beaver dams in the South Branch of the river which act as barriers ~~to the water~~ during low water. The stream is not navigable by any craft. No sources of pollution have been found on this creek.

Some water quality data is available for the St. Louis River just below the park. The river is classified as a commercial use river. The fecal coliform count is above allowable limits and the dissolved oxygen was below standards. Iron levels were over allowable limits. Therefore, the river has been categorized Class I (Human Consumption), generally more restrictive than the commercial class. The river often has a strong stench from commercial wastes being dumped in above the park.

Underground Hydrology - The hydrology of the park area has not been studied. The only data available is from well logs. There are ~~five~~ six

wells in the park; two in the service area, one at the manager's residence, ~~one~~ two at the campground. and one at the naturalist center.

The ~~two~~ wells in the ~~service area~~ park are drilled into the bedrock and draw their water from fractures in the rock. These fractures usually contain a flowing stream of water or hold water like a reservoir. These aquifers are generally recharged some by percolation from above or from where the fractured bedrock comes near the surface ~~of~~ or has a highly permeable soil above it. Wells into bedrock usually don't produce as high a volume of water as wells in till. The well at the manager's residence has glacial till for an aquifer and is recharged by percolation from the immediate area. ~~There is no data available on the other two wells.~~

No water quality data is available for the park wells. The Department of Health checks the wells annually to be sure that they are up to standards. The ground water within the park is adequate for present and future recreational use.

E. Flora - The original vegetation of the park area was a mixture of pines and northern hardwoods. Due to lumbering activities and the prevention of fires, the dominant forest cover today is aspen and birch regrowth. Many huge pine stumps still can be seen where the pine stands once existed.

An inventory of plant communities within the state park has been done and the following ecological communities were identified: Northern Hardwoods, Mature Pioneer Hardwood/Conifer, Pine Groves, Big Woods, Bottomland Forest, Spruce-Fir, and Conifer Bogs and Swamps.

Northern Hardwood Forests are characterized primarily by sugar maple but associates such as northern red oak, basswood, green ash, black

and yellow birch and elm also predominate in some areas. Scattered small clumps and individual white pine and spruce-fir also occur.

Pioneer Hardwood communities interspersed with conifers cover much of the park. These communities are second growth communities which replaced the pine logged off during the early 1900's. They are generally dominated by either aspen or paper birch, pioneer hardwood species which are relatively short lived and are replaced by species which do well in shaded situations. Replacement species include white spruce, balsam fir, white pine or red pine rather than hardwoods.

Mixed hardwood and pine communities occupy dry upland soil areas. These communities probably developed after the last major fire came through the park. In acres where the large red pine survived the fire, paper birch has been reproducing under the canopies. The birch can survive in the shade where pine seedlings cannot. The mixed stands of jack pine and paper birch developed when the intense heat of fire released the jack pine seeds. When the jack pine grew and formed a shade canopy, paper birch again established itself while intolerant species remained suppressed.

Present stands of pine in the park occur on upland soils. The red and white pine stands are remnants of the original virgin timber that were not cleared in the early logging operations. Some jack pine stands exist. These stands probably originated after a post logging fire.

The dominant ground layer species common throughout the park are large-leafed astor, bunchberry, thimbleberry, wild strawberry, bracken fern, horsetail, mosses and lichen.

Vegetation in the campground and picnic area is generally suffering because of heavy human use. Some common problems are soil compaction, breaking and cutting for firewood, nails in trees, girdling birch trees etc. Vegetation throughout the park is in need of proper management. Vegetation is mature or overmature and the pioneer hardwoods and pine grove communities are no longer reproducing but are being replaced by shade tolerant spruce-fir species. In order to maintain the scenic value of this park, measures will have to be taken to stimulate reproduction of the desired pine species.

F. Fauna - One of the most intriguing assets of any park is its resident wildlife. Jay Cooke State Park contains a fair diversity of wildlife. There are 174 species of birds that nest in or visit the park. Forty-six species of mammals or signs of them are recorded to be in the park. Finally, sixteen species of reptiles and amphibians exist in the park. Lists of these wildlife are in the appendix.

The only water body within the park that is managed is Silver Creek. The creek has been designated a trout stream. It has very little vegetation because of the hard and shifting gravel and sand bottom. This same bottom, however, with the riffle areas and cold water, makes the stream excellent for trout spawning. Silver Creek is stocked regularly with brook trout. It was heavily fished in the past but receives only light to moderate pressure now. A list of fish species found in park waters is in the appendix.

There is no wildlife species within the park that is considered an endangered, threatened or rare species.

Several species found in the park are uncommon or only locally distributed. These species are of special interest since they are not pre-

sently threatened or endangered but might soon become so. Also, these species may have special public interest or their habitat may be especially vulnerable. This category includes the following:

Common Tern
Marsh Hawk
Northern Bald Eagle
Osprey
Common Loon
Great Blue Heron
Pileated Woodpecker
Canada Lynx
Eastern Timber Wolf
Bobcat
Snapping Turtle
Redbacked Salamander

Some wildlife species in the park are troublesome species. They are considered possible nuisances to either the natural resources of the park, park property, or visitors. These species are the following:

Species	Potential Problems
Black Bear	Nuisance and cause property damage.
Raccoon	Nuisance and cause property damage.
Porcupine	Vegetation and property damage.
Beaver	Plug culverts and cause flooding.
Snowshoe Rabbit	Vegetation damage.
White-tailed Deer	Vegetation damage.

The Bald Eagle, Timber Wolf, Red Fox, Canada Lynx, Bobcat, and Coyote are unusually sensitive to disturbances by human activity. Disturbance during one season may result in nest or den abandonment, decrease in territorial size or shift in territorial movement the next season. Such disturbance might be detrimental to the survival of the species in a given area or may have effects over a much larger area.

G. Climate ~~and Air Quality~~ - Jay Cooke State Park is dominated by continental weather patterns that influence all of Minnesota, with a strong micro-climate influence from Lake Superior. Lake Superior's water

temperature remains fairly constant throughout the year because of its massive size. This, combined with the prevailing northeast winds, causes Jay Cooke to receive warming breezes off the lake in the winter and cooling breezes in the summer. The mean minimum temperatures for the project area are 0°F in January and 54°F in July. The mean maximum temperatures are 18°F in January and 79°F in July. The average annual precipitation is 28"-29" with 70"-75" of snowfall. The park area is especially good for winter sports. An excellent base of snow is provided for snowshoeing, skiing and snowmobiling. This area also, is especially beautiful for winter camping and hiking. Summer sports may be fully enjoyed except for swimming. The air and water is usually somewhat cool for comfortable swimming or water skiing.

Air Quality - No air quality statistics are available for the project area. Possible sources of pollution are from the small communities adjacent to the park, the city of Duluth and the Wrenshall refinery. Auto emissions from through traffic on Minnesota #210 and Minnesota #23 have a fair impact on air quality.

H. Historical and Archaeological Resources

I. Transportation and Utilities - Access to Jay Cooke State Park is provided by Minnesota Highway 210 and Minnesota Highway 23. Highway 210 is the major access corridor, leading into the main use area of the park. The highway cuts across the north part of the park, providing access from the east and west, and serving as the major link to the City of Duluth and to Interstate Highway 35. T.H. 23 is a major highway that serves eastern Minnesota and western Wisconsin. It crosses the southeastern section of the park. The western and southern portions of the park are accessible from C.S.A.H. 1 and C.S.A.H. 18. The combination of good access roads and proximity to Interstate 35, puts the park within a 2 1/2 mile hour drive of most of the population of Minnesota.

The above mentioned routes are all adequate to serve present and anticipated future needs.

Two Northern Pacific railroad lines pass through portions of the park. One runs the length of the western and southern boundaries, crossing into the park at several points. The other roughly parallels the northern boundary, entering the park only once for a distance of approximately 1/2 mile. Neither railroad is very disruptive, aesthetically or physically, to the park since they lie so close to the park boundaries.

Passenger service by train and airplane is available to Duluth. Bus service is available from there directly to the park.

The utilities servicing the use area of the park do not impair the natural features at this time. Nearly all of the private residences are along the border of the park so that utility lines serving them do not cross the park. Removal of the lines that do exist will take place subsequent to acquisition.

Five powerlines cross the park, disrupting the natural and aesthetic qualityof the park. Minnesota Power and Light operate two hydro-electric power plants on the lower part of the St. Louis River. These are along the river and are so well hidden that many ~~townsites~~ tourists don't even know that they are there. However, two towers which are associated with the plants are located on the top of a nearby bluff and are quite visible.

Water within the park is currently being distributed through underground distribution lines from six wells to those areas requiring water.

The sewage disposal system is a soil absorption system.

K.J Socio-Economic Factors - The Minnesota State Planning Agency's population projections shown below indicate a steady growth for Carlton County and for Region 3, and a steady loss in population for St. Louis County, to the year 2000. By the year 2000 there is also expected to be a loss in population for the entire region.

	Carlton ~~Cty~~ County	St. Louis ~~Cty~~ County	Region 3
1970	28,100	220,700	329,600
1975	28,900	218,700	331,100
1980	29,300	217,100	330,300
1985	30,300	216,400	332,600
1990	30,900	215,000	332,400
1995	31,100	212,900	330,200
2000	30,800	210,000	325,400

The following employment and income data was found in "Minnesota Socio-Economic Characteristics," Minnesota State Planning Agency, 1972.

Aggregate Average Family Income

Carlton County	$ 9,649
St. Louis County	$ 9,764
Region 3	$ 9,504
State	$11,097

Percent Employment by Industry

	Carlton ~~Cty~~ County	St. Louis ~~Cty~~ County	Region 3	State
Agriculture Forestry and Fisheries	4.6	1.1	2.3	7.4
Manufacturing	36.8	13.7	16.9	20.3
Mining	.3	11.4	10.4	.9
Wholesale and Retail Trade	16.1	20.5	19.7	21.1

K. Land Use and Development Trends

1. Agricultural - There are 1,106 acres, 47 percent, of agricultural land within the project area. Small grains, hay and oats are the predominant crops harvested. The estimated value of agricultural production in 1976 for the 14 farms in the project area is $52,940.67.

Income of Crops, Based on November 5, 1976 Prices

Oats	Hay	Idle	$/acre	Value
1,106 acres			56.41	$62,389.46
	1,106 acres		55.90	$61,825.40
		1,106 acres	0	0
664 acres	277 acres	165 acres		$52,940.67

The productivity for Carlton County, for oats and hay is below the state's average, based on data from the Minnesota Crop Reporting Service.

	Carlton County	State	Year
Oats	35.7 bu/ac	48 bu/ac	74
Hay	1.3 tons/ac	2.4 tons/ac	74

2. Residential - There are twelve residences located within the park boundaries. Approximately 177 acres, 7 percent, of the project area are used for residential purposes. These residences all have year-round residents who farm the land or commute to nearby towns for employment.

3. Commercial/Industrial - There are only two commercial/industrial concerns within the project area. These are two hydro-electric plants being operated by Minnesota Power and Light.

The remaining 1,090 acres of the project area are unused old field or forest land.

Jay Cooke is surrounded by a variety of land uses. The park is bordered on the north and east by the city of Duluth, including

Fond du Lac Park. The northern border also consists of some rural residential development and the City of Thomson. The city of Carlton adjoins Thomson and raps around the northwest corner of the park and extends along the western border. There is some agricultural land between Carlton and Wrenshall which is on the southwest corner of the park. Forest land lies along the southern and eastern borders.

Outside the corporate limits of the cities, all the land adjacent to the park is in private ownership. Future land use will continue to be residential/agricultural with pressure being exerted towards residential development.

X. L. Existing Recreational Development - As previously stated, ~~9,593~~ 8,892.34 acres or ~~84~~ 79 percent of the state park is currently in ~~public~~ state park ownership for recreational purposes. At present camping, picnicking, hiking, snowmobiling, and skiing facilities have been developed.

The Civilian Conservation Corps (CCC) built a large stone building near the west end of the park. Today this building is used as a contact station, park office, snack bar, souvenir shop, enclosed picnic shelter, sanitation building and dispensary for firewood and ice. Two pit toilets, located behind this building are used after the water has been turned off for the winter.

Directly north, across trunk highway 210, a 94-site campground has been constructed. The area is serviced by a sanitation building with hot water and showers and a seperate vault toilet building. A dumping station for campers is adjacent to the campground.

There are two picnic areas in Jay Cooke. One is behind the contact station, along the St. Louis River. The contact station provides the sanitary facilities and shelter for this area. The other is at Oldenburg Point, off of highway 210, near the river. This area includes a sanitation building, a set of pit toilets and an open shelter. A total of 186 picnic tables are available between the two areas.

The other developed facilities include 25 miles of hiking trails, 4 miles of cross-country ski trails, 16 miles of snowmobile trails and a scenic overlook area off of highway 23 in the southeastern part of the park.

III. ENVIRONMENTAL IMPACT OF THE PROPOSED ACTION

A. Impact on the Physical Environment - A major impact of the proposed acquisition will be a change in land use from its present residential/ agricultural status to public outdoor recreational use. The lands to be acquired will be allowed to revert back ot their natural character. Special management techniques will be needed to bring back a vegetation cover as nearly as possible to the endemic species and to protect and preserve the forested land. This will help control erosion and siltation and will have the effect of increasing the habitat favorable for the animals commonly associated with the area, therefore increasing the wildlife population. This will also improve the park's aesthetic quality.

The structures acquired on property purchased, 12 houses and the buildings found on 14 farms, will be converted and utilized for park purposes where possible; otherwise they will be sold and removed. Sites where buildings are removed will be returned to natural conditions through plantings and seedings.

B. Impact on Historical and Archaeological Sites - No impact on existing historic sites is foreseen. Discovery of additional sites may occur in the future. These will be protected from possible vandalism of destruction. Sites may be discovered through recreational development might be partially harmed or destroyed by construction. However, through the agreement with the State Historical Society (See Appendix), all construction will be stopped until the site can be surveyed and the Minnesota Historical Preservation Officer has determined how significant the site is and what should be done with it.

Include Mgmt. Section from Project 80.

C. Impact on Transportation and Utilities - Anticipated growth in the county is expected to bring added pressure to transportation systems, recreation and other services provided by local communities.

New lengths of road may be needed to provide access to new developments within the park. These roads will be operated and maintained by the State.

All utility lines to private residences will be removed as acquisition of land eliminates their need. Utility lines to serve any new development within the park will be placed underground except where to do so causes excessive damage to the natural ecological associations of the area. When placed above ground, utility lines and appurtenant structures will be carefully planned and located to minimize their impact on park resources and the natural aesthetic quality. Whenever possible, utilities will be included in the transportation corridor.

There will be no impact on the power lines or power plants located in the park. The powerlines will be allowed to remain above ground.

D. Impact on Tax Base - Since acquisition will take place over an extended period of time, it is difficult to make an accurate estimate of the total tax loss. The total 1976 taxes on the 1,031.61 acres of private lnad is $2,955.78 and are distributed as follows:

Taxing Unit	Total Taxes	Tax Loss	
		$	%
Carlton County	$2,251,041	$1,176.50	.05
Silver Brook Township	14,200	32.18	.23
Twin Lakes Township	35,000	78.69	.23
Thompson Township	85,890	105.88	.12
School District #100	357,589	918.68	.26
School District #99	574,751	643.85	.11
GRAND TOTALS	$3,318,671	$2,955.78	.09

The overall tax loss of .09 percent to the taxing units is considered to be very insignificant. None of the individual taxing units will be

financially hurt by State acquisition plans. The unit losing the greatest percent of taxes is School District #100. Its loss is only .26 percent.

It is expected that the surrounding area will become more desireable for development of residential dwellings because of the proximity to a dedicated area of open space. Experience shows that the preservation of open space not only preserves but generally enhances residential values. This increases the property tax yield, which is the major source of revenue for local governments.

E. Impact on the Economy - The proposed acquisition and subsequent development will have little impact on the local economy. The loss of agricultural income will be approximately $52,940.67 from crop production.

The benefits from recreation at Jay Cooke State Park are approximately, $600,924 annually, based on 1975 attendance rates.

Campers:	24,124 x $3.90/day* x 1.3 days**	= $122,308.68
Day Users:	354,530 x $1.35/day***	= 478,615.50
	TOTAL	= $600,924.18

* Department of Agricultural and Applied Economics, University of Minnesota.

** Data from park camping permits.

*** Principles and Standards for Planning Water and Related Land Resources, September 19,1973.

F. Social Impact - The proposed acquisition will result in the relocation of 12 residences. Owners are not forced to sell to the State. If they do, it is doubtful whether or not they suffer any financial loss, since they would be eligible for relocation and replacement housing assistance under Public Law 91-646.

Acquisition and subsequent development of the state park will provide new recreational opportunities for the residents near the park. In exchange for these future opportunities they may have to suffer some minor immediate inconveniences. Noise and dust disturbances from construction activities should be temporary and of a limited scope since development should be minimal.

Littering and noise emanating from park visitors should be confined to use areas and will not have a great social impact. Trespsssing may occur, inadvertantly or purposefully, by park users. This will, hopefully, be minimal and cause little conflict. Some vandalism of private property can be expected.

IV. MITIGATING MEASURES INCLUDED IN THE PROPOSED ACTION

Land owners, willing sellers in nearly all cases, are eligible for relocation assistance under Public Law 91-646, the Uniform Relocation Assistance and Real Property Acquisition Policies Act. This generally covers any economic hardship caused by the relocation of a home or business. In limited cases, the State will offer retired landowners a life tenure on up to ten acres of land surrounding his buildings for residential purposes. Relocation costs are avoided by allowing the owner and spouse the privilege to live out their lives in their home at no cost.

When agricultural practices are taking place before the State acquires the land, it is advantageous to allow a lease arrangement with the farm owner for a period of one or two years following purcahse of the land. This allows the lessee to plant the same crop that was planted the year in which the land was acquired, but he must dispense with the use of any chemical herbicides that year. Immediately following harvest of the crop, the land must be thoroughly disked, dragged and seeded with

June grass, perennial rye and fescues. The following year, the lessee has the right to harvest a hay crop. This arrangement avoids the furrowed texture of the land surface often left from row crops and converts croplands to grasslands efficiently and quickly. It also allows the farmer time to reduce his stock of farming equipment should he decide not to continue in agriculture. The lessee is not required to pay any monetary consideration in lieu of his services and costs rendered in reestablishing the grasslands.

If the owner has planted a crop on the land which will not be harvested prior to filing of the deed to the State, provisions are made for the owner to harvest that crop at no additional expense to him.

Future development will be carried out in such a manner as to assure that the integrity of the natural resources will be maintained and protected to the fullest extent possible. Tree plantings will be used to speed up revegetation of former croplands. Soil erosion will be lessened by plantings of vegetation on areas disturbed by development. Soil limitations will be taken into account in the site location and design of new developments.

A substantial increase in park visitors could overtax the existing water supply. The park wells operate at a very low volume since they are drilled into a low recharge aquifer. If a greater quantity of water is needed in the future it is possible that the park water system could be hooked up to the Cloquet water system.

Because of lack of intensive site surveys, site testing and excavation, new historical/archaeological sites may be discovered. All park personnel and private contractors engaged in construction for the state park system are required to watch for archaeological materials. If any artifacts are unearthed, work is to halt and the findings are to be

reported to the state archaeologist immediately. Work will not commence again until confirmation is received from the Minnesota State Historical Society. The Historical Society will determine specific action to be taken to protect valuable archaeological material. This may involve relocating the proposed construction to a new site, removal of the archaeological materials or continued construction in the case of non-valuable or insignificant discovery.

The tax loss to the local taxing units will occur gradually. The tax loss of less than .09 percent overall will be partially mitigated to the county and townships by a reduction in services such as roads, fire protection and police protection within the park. These duties will be assumed by the park manager and his staff and will only require outside assistance in extreme circumstances. The tax loss to the school district will be mitigated by increased state school aid.

V. ADVERSE EFFECTS WHICH CANNOT BE AVOIDED SHOULD THE PROPOSAL BE IMPLEMENTED

- Loss of agricultural land to recreational use.
- Loss of residential land to recreational use.
- Loss of $52,940.07, to the local economy, from crop production.
- Loss of $2,955.78 of tax revenue to local taxing units.

VI. RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY.

Short-term uses of the environment in relationship to maintenance and enhancement of long-term productivity is considered not in terms of years, but rather in terms of what must be sacrificed to gain certain benefits.

	Gains	Losses
1.	Preservation in perpetuity of about 11,266 acres of open space to provide a variety of outdoor recreational opportunities to approximately 378,000 visitors annually.	Loss of 1,106 acres of cropland, 14 farms and 12 residences.
2.	Reversion to a natural condition, of acres currently in row crops or pasture.	Relocation of 12 families.
3.	Improved wildlife habitat and subsequent increase in number of wildlife species.	Expenditures of $413,273.36 of public funds for acquisition of private lands.
4.	Control of erosion and reduction of siltation resulting in improved water quality.	Loss of $2,955.78 of tax to local taxing units; .05 percent loss to Carlton County, a .23 percent loss to Silver Brook Township, a .23 percent loss to Twin Lakes Township, a .12 percent loss to Thomson Township, a .26 percent loss to School District #100 and a .11 percent loss to School District #99.
5.	Preservation and possible restoration of historical and archaeological resources.	

VII. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

The acquisition and development of the project area would result in the permanent conversion of present private land uses into park and recreation purposes in perpetuity for Minnesota residents for which the park was originally established by actions.

A secondary commitment to recreation and open space is required by participation in the Land and Water Conservation Fund program. Section 6(f) of the Land and Water Conservation Fund Act, (as amended) states

that approval by the Secretary of the Interior must be granted before a change in use of any fund associated lands can be made. LSCF monies are received on a cost sharing basis for acquisition and development of Minnesota park areas.

VIII. ALTERNATIVES TO THE PROPOSED ACTION

Jay Cooke State Park was established by law in 1915. At present, 8,892.34 acres have been acquired within the statutory boundaries of the park. Both state and federal money has been spent in acquiring land and developing the public use facilities within the park. With these facts in mind, no alternative site for the park can be considered.

A. No Action - No action would eliminate any possibility of acquiring lands which are still relatively undeveloped and obtainable. It would not help remedy the need for additional outdoor recreational facilities in the region, as pointed out in the State Comprehensive Outdoor Recreation Plan of 1968. (Refer to I.E.)

Continued private ownership would mean retention of an additional 2,373.66 acres on the tax rolls. However, the possibility of private lands being put to incompatible uses which would effect the park's use and its enjoyment by the public would exist. The full value and use of some of the parcels already acquired would be lost.

No action on this project proposal would do nothing to alleviate the administrative problems in the southeast corner of the park where Highway #23 cuts off a corner of the park.

B. Acquisition with no Development - This alternative involves the acquisition of the remaining private lands within the park boundaries with no further recreational development. The existing facilities are adequate to serve the number of users at this time. However, if park attendance

increases, overcrowding of existing facilities may occur. Without regulation, newly acquired lands could suffer environmental deterioration from indiscriminate use.

C. Project of a Smaller Scope - It is highly probable that the land east of Minnesota Highway #23 will be deleted from the park boundaries. This land, approximately 7120 acres, will be given to the Division of Forestry for administration and management. After making this deletion T.H. #23 will become a convenient physical boundary to the park, instead of being an uncontrollable access to the park and a physical intrusion upon park lands.

D. Project of a Larger Scope - There are no plans for an expansion of park boundaries for Jay Cooke State Park.

All proposals involving deletions or expansions of the park boundaries will require legislative approval.

Birds Found in the Park

Abundant

Pied-billed Grebe
Mallard
Blue-winged Teal
Wood Duck
Ring-necked Duck
Greater Scaup
Lesser Scaup
Common Goldeneye
Common Merganser
Ruffed Grouse
American Coot
Kildeer
Herring Gull
Common Tern
Black Tern
Rock Dove
Mourning Dove
Blue Jay
Robin
Red-eyed Vireo
Red-winged Blackbird
Common Grackle

Common

Common Loon
Black Duck
Pintail
Gadwall
American Widgeon
Shoveler
Green-winged Teal
Redhead
Canvasback
Bufflehead
Red-breasted Merganser
Hooded Merganser
Goshawk
Sharp-skinned hawk
Marsh Hawk
Rough-legged Hawk
Red-tailed Hawk
Broad-winged Hawk
Sparrow Hawk
Great Blue Heron
Green Heron
American Bittern
Sora Rail
Spotted Sandpiper
American Woodcock
Common Snipe
Ring-billed Gull
Black-billed Cuckoo
Great Horned Owl
Whip-poor-will
Common Nighthawk
Ruby-throated Humming Bird
Belted Kingfisher
Yellow-shafted Common Flicker
Yellow-bellied Sapsucker
Hairy woodpecker
Downy Woodpecker
Eastern Phoebe
Yellow-bellied Flycatcher
Eastern Wood Pewee
Olive-sided Flycatcher
Barn Swallow
Tree Swallow
Bank Swallow
Purple Martin
Common Raven
Common Crow
Black-capped Chickadee
White-breasted Nuthatch
Red-breasted Nuthatch
House wren
Wood Thrush
Veery
Golden Crowned Kinglet
Cedar Waxwing
Tennessee Warbler
Orange-crowned Warbler
Nashville Warbler
Parula Warbler
Yellow Warbler
Yellow-rumped Warbler
Chestnut-sided Warbler
Ovenbird
Yellowthroat
American Redstart
House Sparrow
Brown-headed Cowbird
Baltimore Oriole
Scarlet Tanager
Rose-breasted Grosbeak
Evening grosbeak
Purple Finch
Pine Grosbeak
Pine Siskin

Common (cont.)

American Goldfinch
Red Crossbill
White-winged Crossbill
Slate-colored Junco
Chipping Sparrow
White-throated Sparrow
Song Sparrow
Snow Bunting

Uncommon

Horned Grebe
Canada Goose
Ruddy Duck
Turkey Vulture
Bald Eagle
Osprey
Solitary Sandpiper
Lesser Yellowlegs
Greater Yellowlegs
Black-billed Cuckoo
Screech Owl
Snowy Owl
Barred Owl
Chimney Swift
Pileated Woodpecker
Red Headed Woodpecker
Eastern Kingbird
Great Crested Flycatcher
Traill's Flycatcher
Least Flycatcher
Horned Lark
Cliff Swallow
Red-breasted Nuthatch
Brown Creeper
Winter Wren
Catbird
Brown Thrasher
Hermit Thrush
Eastern Bluebird
Ruby-crowned Kinglet
Northern Shrike
Solitary Vireo
Yellow-throated Vireo
Philadelphia Vireo
Warbling Vireo
Black and White Warbler
Magnolia Warbler
Cape May Warbler
Black-throated Green Warbler
Black-throated Blue Warbler
Blackburnian Warbler
Bay-breasted Warbler
Blackpoll Warbler
Pine Warbler
Palm Warbler
Mourning Warbler
Connecticut Warbler
Wilsons Warbler
Canada Warbler
Eastern Meadowlark
Rusty Blackbird
Brewers Blackbird
Indigo Bunting
Hoary Redpoll
Common Redpoll
Rufous-sided Towhee
Savannah Sparrow
Grasshopper Sparrow
Vesper Sparrow
Tree Sparrow
Clay-colored Sparrow
White-crowned Sparrow
Fox Sparrow
Swamp Sparrow

Rare

Golden Eagle
Whistling Swan
Mute Swan

Wildlife Found in Park

Abundant

Least Chipmunk
Red Squirrel
Beaver
Muskrat
Norway Rat
Snowshoe Hare
Whitetail Deer
Western Painted Turtle
Dakota Toad
American Toad
Northern Spring Peeper

Common

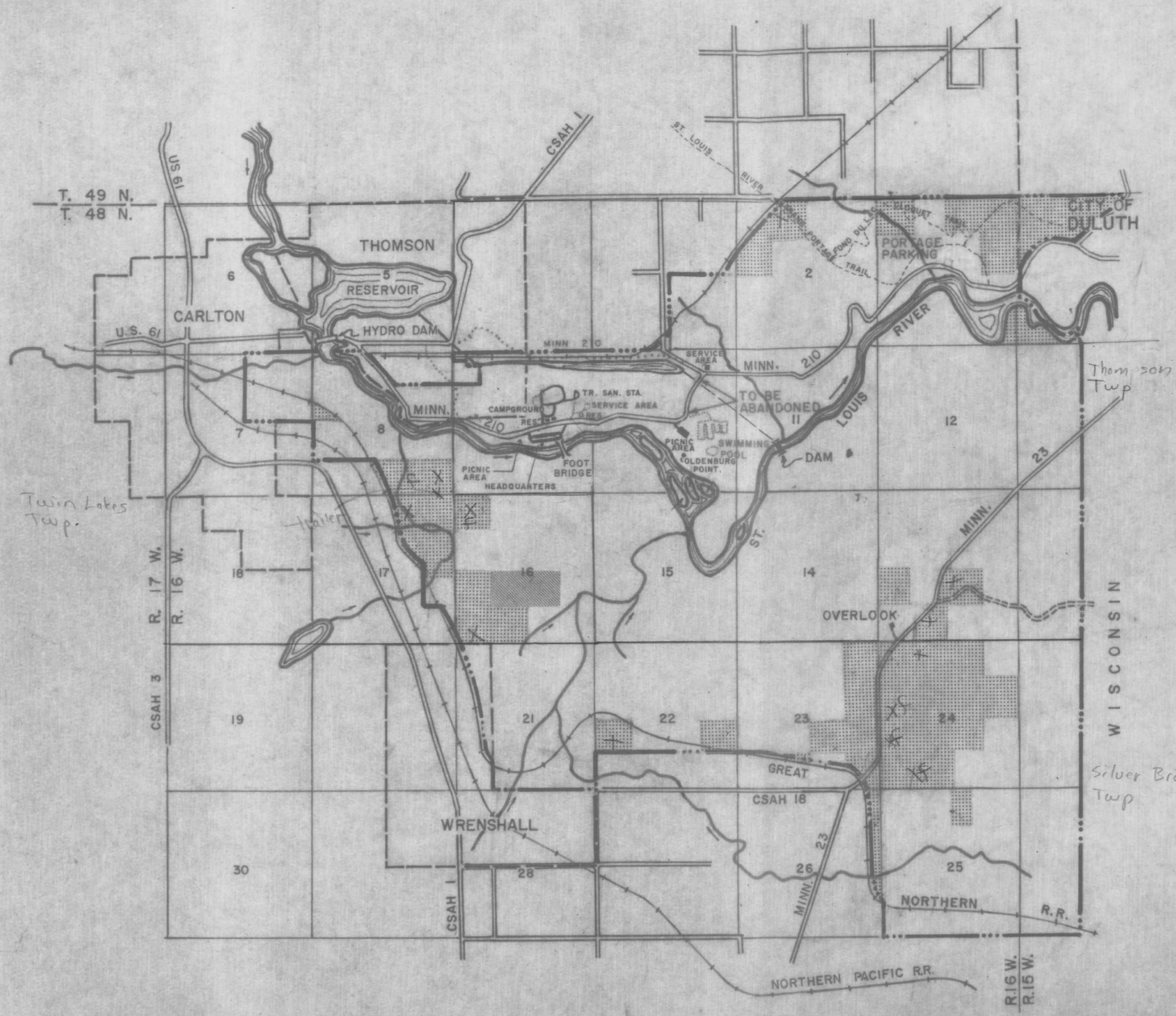
Shorttail Shrew
Little Brown Bat
Black Bear
Raccoon
Woodland Jumping Mouse
Eastern Cottontail
Common Snapping Turtle
Northern Red-bellied Snake
Eastern Garter Snake
Mudpuppy
Central Newt
Red-backed Salamander

Rare

Timber Wolf

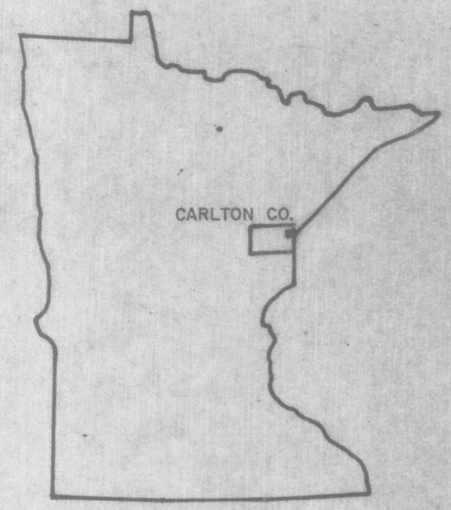
Observed Fish Species

Silver Lamprey
Lake Sturgeon
Brook Trout
Rainbow Trout
Brown Trout
Rainbow Smelt
Central Mudminnow
Northern Pike
Carp
Blacknose Dace
Longnose Dace
Horneyhead Chub
Creek Chub
Pearl Dace
Northern Redbelly Dace
Finescale Dace
Fathead Minnow
Common Shiner
Northern Redhorse
White Sucker
Longnose Sucker
Channel Catfish
Black Bullhead
Tadpole Madtom
Smallmouth Bass
Yellow Perch
Walleye
Johnny Darter
Slimy Sculpin



KEY

- STATE LAND
- TRUST FUND LAND
- PRIVATE LAND
- EXISTING DEVELOPMENT
- PROPOSED DEVELOPMENT



OCT 25 1976

SCALE : 1" = 4000' (APPROX.)
STATUTORY BOUNDARY 11323 ACRES (APPROX.)

MINNESOTA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF PARKS AND RECREATION

STATE PARK SITE

JAY COOKE STATE PARK

CARLTON CO. - NR. DULUTH

	T. 48 N.	R.15,16 W.	4TH P.M.
DRAWN DTC 2-2-64	BUREAU OF ENGINEERING		SURVEY
CHECKED AFR 2-26-64			DATUM
REVISED LDS 10-17-75	3-23-77 CHIEF ENGINEER		

REQ.	SHEET	FILE
60-35	15	P.022.00.01

X. Land Use and Development Trends

1. Agricultural

Approximately 364 acres, 35 percent, of the park land is currently ~~agricultural~~ used for agricultural purposes. The field crops are predominately corn and soybean - 200 acres of corn, 100 acres of soybeans, and 64 acres are idle. The estimated value of agricultural production in 1975 for the 10 farms, average size of 36 acres, was _____. The productivity near the park is slightly above the state averages based on data from the Minnesota Crop Reporting Service.

	Steele	Dodge	State
Corn	77.7 bu/acre	70.1 bu/acre	70 bu/acre
Soybeans	26.2 bu/acre	30.9 bu/ac	26 bu/acre

Income of Crops Based on October 7, 1976 Prices

Corn	Soybeans	#/acre	Value
364 acres		189.19	68,865.16
	364 acres	146.25	53,235
200 acres	100 acres		52,463 *

* Ratio of crop production in project area.

Land Use

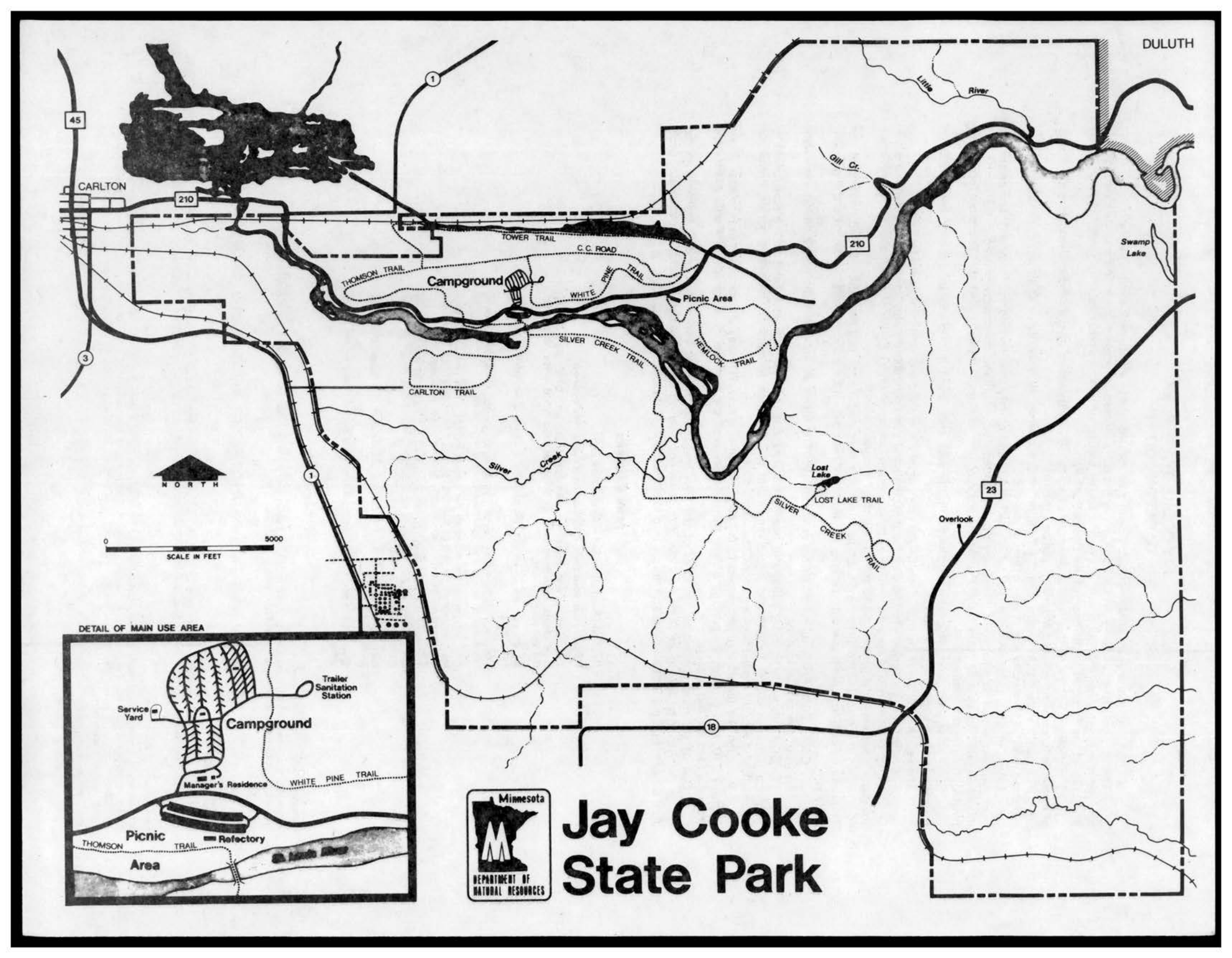
	Carlton	S.L.
Forest	66%	76%
Cropland	16%	9%
Pasture	6%	4%
Residential	6%	5%
Non-productive forest (bog, non-meandered lakes, streams)	6%	6%

Proposed Development

- Swimming pool + picnic area
- Service area + future manager's residence
- Interpretive center
- Pioneer camps
- Trailer center
- Secondary service area

70 hay
30 oats

1.4 hu/ac


DULUTH
Little River
Gill Cr.
45
CARLTON
210
1
TOWER TRAIL
C.C. ROAD
THOMSON TRAIL
Campground
WHITE PINE TRAIL
Picnic Area
Swamp Lake
SILVER CREEK TRAIL
HEMLOCK TRAIL
CARLTON TRAIL
3
Silver Creek
Lost Lake
LOST LAKE TRAIL
SILVER CREEK TRAIL
23
Overlook
NORTH
0
5000
SCALE IN FEET
18
DETAIL OF MAIN USE AREA
Trailer Sanitation Station
Service Yard
Campground
Manager's Residence
WHITE PINE TRAIL
Picnic Area
Refectory
THOMSON TRAIL
Minnesota
DEPARTMENT OF NATURAL RESOURCES
Jay Cooke State Park

JAY COOKE STATE PARK
CARLTON COUNTY

Almost two billion years of Minnesota's violent past are laid bare in a state park south of Duluth.

The St. Louis River in northeast Carlton County has cut a spectacular gorge through layers of rock dating back to when the North American continent was only a barren mound of rock in a great sea. This stretch of river, called the Dalles of the St. Louis, is the heart of Jay Cooke State Park.

The geologic history of this park is the story of volcanoes, earthquakes, glaciers and erosion. Here the effects of awesome forces which shaped Minnesota can be explored.

The park's violent story begins almost 1.7 billion years ago when the only life on earth was a primitive form of algae and most of Minnesota was at the bottom of the sea.

Layers of slate and graywacke rock which had slowly and quietly been formed from clay and sand on the sea floor where the park is now, were thrust upward and folded into mountains by upheavals deep in the earth. This mountain-building episode, called the Penokean Orogeny, left the rock layers, called the Thomson formation, twisted, titled and fractured.

Soon after, lava from volcanoes, exploded in the east and oozed into cracks in the rock layers, leaving formations of dark gabbro, called dikes.

Then earth in this area lay quiet for a billion years while life evolved and continents were formed.

Following the rest period which ended about 50 thousand years ago, glaciers plowed their way down the north like gigantic bulldozers and buried the ruins of the Thomson formation under a layer of gravel and dirt. Evidence of the glaciers passing is the gouged and scratched into the Thomson bedrock.

When the glaciers retreated the St. Louis River was born and it soon laid bare the mangled remains of the Thomson formation. Like a saw with pebbles for teeth the river cut into the ancient rock. Today, it is still grinding away at it.

Jay Cooke State Park's turbulent past is now exposed. The forces at work over the past 2 billion years were the creators of spectacular scenery.

The St. Louis valley is wide, rolling and heavily forested, but the river, still young and wild, is now forced to follow a torturous course through the jagged remains of the Thomson formation. Steep-sided gorges, numerous waterfalls and weirdly eroded boulders crowd the river's course.

Although the terrain is rugged, access to the park's facilities is easy. Highway 39, accessible to Interstate 35 via highway 210, runs through the park parallel to the river. Some of the best scenes in the park are only a few steps from the road and picnic areas.

One of the most spectacular stretches of the river is spanned by a suspension foot bridge. Standing on the bridge the visitor to Jay Cooke State Park can gaze down not only on the river gorge but also across eons of time. And beneath him the St. Louis digs still deeper into Minnesota's violent past.

PARK MANNERS

Read and heed all posted rules and park signs.

Help protect your park. Preservation is everyone's business.

Take pictures and memories; leave only footprints. Don't dig trenches, pick plants, molest animals, or scavenge dead wood — it's needed for the soil environment.

Be considerate of others. Maintaining a clean, quiet park is best for everybody.

The use of firearms, explosives, air guns, slingshots, traps, seines, nets, bows and arrows and all other weapons is prohibited.

Pets are prohibited from all park areas except when restrained on a leash measuring six feet or less. Pets may not enter buildings. Horses are permitted only on trails specifically designated for such use.

The park is closed from 10:00 p.m. until 8:00 a.m. of the following day, except in campgrounds or in cabin areas. Loud noises or other disturbances are prohibited after 10:00 p.m.

Park permits are required for every vehicle and can be purchased at park headquarters.

Motor bikes and other licensed vehicles are allowed only on the motor vehicle roads — not on the trails.

FACILITIES

Camping, Picnicking and Hiking

Campsites are provided with water and toilet facilities. Tables and parking areas are available for picnicking. Trails provide diverse opportunities to experience the park and participate in nature.

Water Sports

Where appropriate, boat launching and swimming facilities have been developed. Activities should be confined to designated areas. Fishing subject to state law.

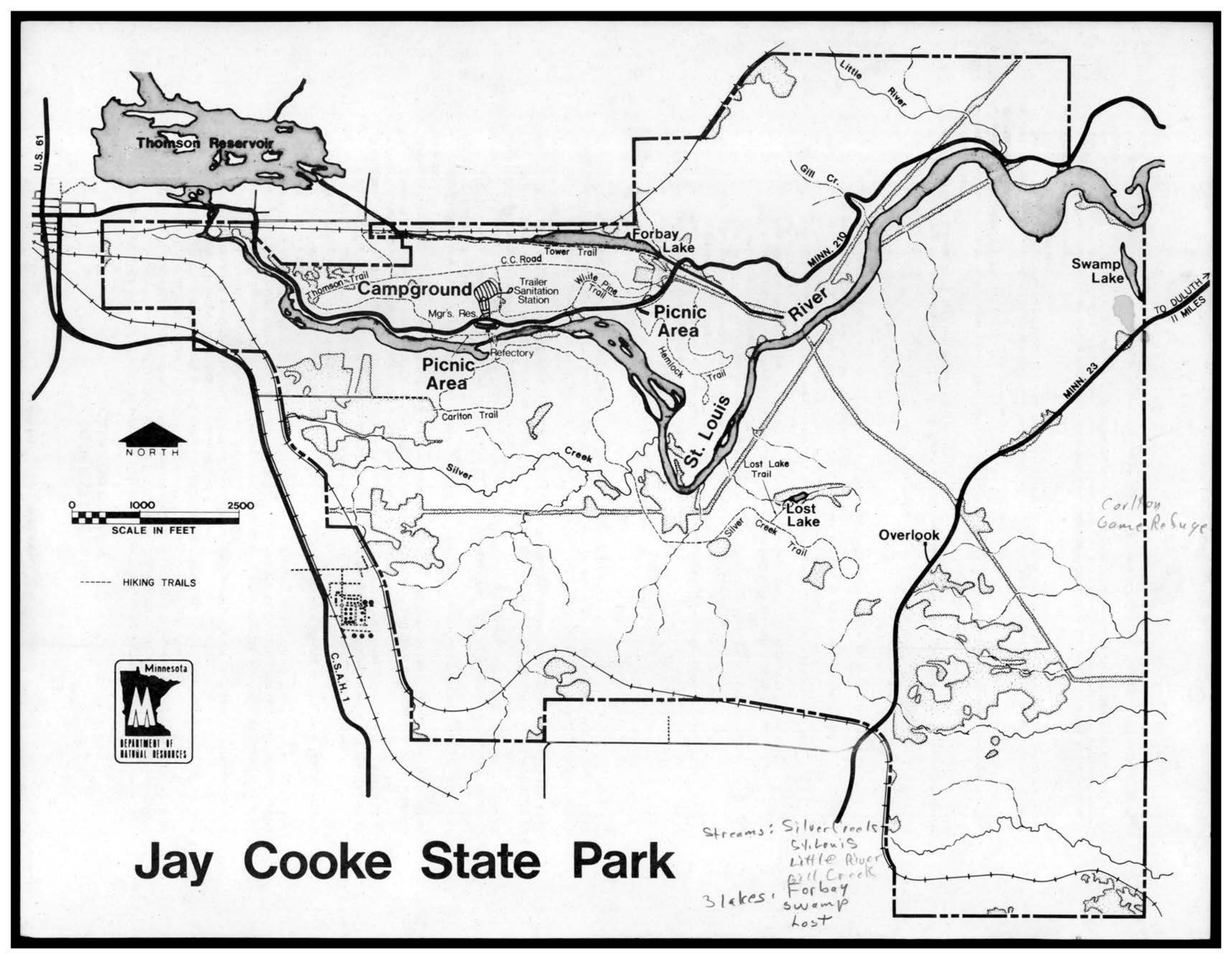
Winter Sports

Ski touring and snowshoeing are encouraged in all state parks and are not confined to marked trails unless specifically restricted. Snowmobiling is permitted only in designated areas and posted trails under conditions considered adequate for park protection by the park ranger or manager.

Environmental Education

Schools and conservation-oriented groups aren't the only ones that can benefit from outdoor learning experiences. Make the most of your recreational experience here by using it to get closer to natural laws that bind us to one another and to the living environment that sustains us. Your state parks are unique and precious resources for building values and life styles necessary for the survival of a healthy biotic community.

This park is managed by the Minn. Dept. of Natural Resources, Division of Parks & Recreation, Centennial Office Bldg., St. Paul, Minn. 55155.


Thomson Reservoir
U.S. 61
Little River
Gill Cr.
Forbay Lake
Tower Trail
C.C. Road
Thomson Trail
Campground
Trailer Sanitation Station
White Pine Trail
Mgr's. Res.
Refectory
Picnic Area
Picnic Area
MINN. 210
River
Swamp Lake
TO DULUTH 11 MILES
Hemlock Trail
St. Louis
MINN. 23
Carlton Trail
Silver Creek
Lost Lake Trail
Lost Lake
Silver Creek Trail
Overlook
NORTH
0 1000 2500
SCALE IN FEET
HIKING TRAILS
C.S.A.H. 1
Minnesota
DEPARTMENT OF NATURAL RESOURCES
Jay Cooke State Park
Streams: Silver Creek
St. Louis
Little River
Gill Creek
3 lakes: Forbay
Swamp
Lost

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Dale- ~~[illegible]~~

Carlton County Courthouse: 218-384-4281

Mill Rates

Carlton County: 30.13

S.D. #100 Silver Brook Town: 2.24

S.D. #100 Twin Lakes Town: 6.04

S.D. #99 Thompson Town: 9.10

School District #100:	Non Ag	40.33	T.L. 39.39 – 7.90 –	52.71 –
			S.B. 41.44 – 3.08 –	55.48
	Ag 10m	30.33	T.L. 45.31 – 9.08 –	45.61
			S.B. 48.05 – 3.57 –	48.38
	Ag 12m	28.33	T.L. 46.7 – 9.36 –	43.94
			S.B. 49.64 – 3.69 –	46.67
School District #99:	Non Ag	61.30	29.97 – 9.05 –	60.98
	Ag 10m	51.30	33.28 – 10.05 –	56.67
	Ag 12m	49.30	34.03 – 10.28 –	55.69

~~HHL~~ ~~HHL~~||||

Ag: 1114.59
Res: 177.18
Other: ~~212.56~~ 853.05

1121.59

1282.77

14 ~~91~~ (810).15
459.54
1031.61

36.94
7.46
47

5-homes

Thompson Township.		County	Town	School District
#1 Frank Conley NAg	20 ac	5.90	1.78	12.00 T=#19.68
#2 Veronica Streeter H-Ag	7.20ac	.93	.28	1.59 T=#2.80
#3 Judith Tribby Nag	7ac	2.40	.72	4.88 T=#8.00
#4 Fred Randle H-ag	120 ac	28.72	8.68	47.00 T=#84.40
#5 Vern Green H-Ag	109.70ac	94.48	28.53	160.89 T=#283.90
#6. William Conley H-Ag	257.68 .54/ac	47.45	14.34	77.65 T=#139.44
#7 Jerry Conley N-Ag	21 ac	22.62	6.83	46.03 T=#75.48
#8 Rudolph Andersen	50ac	25.70	7.76	52.28 T=#85.74

Thompson Township		County	Town	School District
#9. Edward Martin Nag	30ac	9.21	2.78	18.73 T=#30.72
#10. Charles Willcox H	10 ac	69.24	20.91	140.89 T=#231.04
#11 George Orescanin Ag	38.08ac	5.01	1.51	8.52 T=#15.04
#16. George Hazzard H-Ag	8.8ac	17.57	5.31	29.92 T=#52.8
#17 James Jensen H	.90	1.20	.36	2.44 T=#4.00
#18 Harold Biskey H	.30ac	.36	.11	.73 T=#1.20
#19. R.B. Leahy (?) H	34.81	11.80	3.56	24.00 T=#39.36
#20 Louis Gallup H NAg	38.12ac	8.01	2.42	16.30 T=26.72
TOTAL:	783.59	350.59	105.88 1206.2	$643.85 T=1100.32

3-home

Silver Brook Twp		County	Town	School District
#12 Clarence Dourville	40 ac	80.71	6	81.29
H				T=#168.00
#13 Leon Line	51.85	46.35	3.43	46.66
H-Ag	1.86/ac			T=96.44
#14 John Stromquist	40 ac	10.30	.77	13.79
NAg				T=#24.86
#15 Frederick Sears	39.06	16.58	1.23	22.19
NAg				T=#40.00
#27 Floyd Rudy	2.95 ac	.12	.01	.17
NAg				T=#.30
#28 Charles Lehto	43.80 ac	25.26	1.88	25.42
H-Ag				T=#52.56
#29 Isaac Mento	12.50 ac	9.61	.71	9.68
H-Ag				T=#20.00
#30 Carl Peterson		237.04	17.61	317.35
H	40.05 ac			T=#572

Silver Birch Township	County	Town	School District
#31 Ora G. Bailey Trust - Co 80ac	7.27	.54	7.33
			T = 15.14
TOTALS: 350.21	4133.24	32.18	523.188
			T = 989.3

3 homes

Twins Lakes Twp.		County	Town	School District
#25 Leon S. + Joe W. Ellesin		18.578	3.72	18.70
H-Ag	84.35ac			T=#41.00
#26 John H. Murray	3.32ac	1.31	.26	1.33
H-Ag (Trailer)				T=#2.90
#32 Albert Ule				
	5-2.55ac			T= 5
#22 Clinton Veilleux		154.17	30.89	145.06
H-Ag	122.63			T=#330.12
#23 Albert J. Holm	119.88	158.17	31.70	148.83
H-ag				T=338.20
#24 Terry + Susan Cody	54.80	60.44	12.12	80.88
H-Ag				T=153.44
TOTALS:	437.53	392.67	78.69	394.81
				T=866.16

JAY COOKE STATUS Oct 8, 1976

TR	NAME	ACRES	SEC-TWP-RGE	REMARKS
* 1.	FRANK CONLEY	317 15th Ave, NE Apt 1 Mpls 55413 20 Ac X	25-48-16	NOT ADDRESS CONTACTED
* 2.	VERONICA STREETER	Wrenshall X	26-48-16	ADDRESS ?
3.	JUDITH ANN TRIBBY		26-48-16	CONTACTED 8/4/76
* 4.	FRED BANDLE	X Wrenshall 120 Ac X	24-48-16	ADDRESS
5.	VERN GREER		23 & 24-48-16	CONTACTED 8/3/76
* 6.	WILLIAM A CONLEY	Box 32 X Wrenshall X	23 & 24-48-16	ADDRESS
* 7.	JERRY CONLEY	X Wrenshall X	23 & 24-48-16	ADDRESS
8.	RUDOLPH J. ANDERSON	80	23-48-16	CONTACTED 8/5/76
* 9.	EDWARD A. MARTIN ?	30	24-48-16	
10	CHARLES R. WILLCOX	10	24-48-16	BACHMAN CONTACTED 7/76
* 11.	GEORGE ORESCANIN	38.08	24-48-16	LETTER SENT 10/26
12.	CLARENCE M. DOUVILLE		13-48-16	BACHMAN CONTACTED 7/76
13	LEON LINE		13-48-16	BACHMAN CONTACTED 7/76
14	JOHN STROMQUIST	40.00	13 & 48-16	CONTACTED 8/5/76
* 15	FREDRCK LEWIS	40.00 (1/2 INTEREST)	13-48-16	5030 LONDON RD 218 528-3149
16	GEORGE HAZZARD		23-48-16	CONTACTED 8/3/76
17	JAMES JENSEN		23-48-16	CONTACTED 8/3/76
* 18	HAROLD H. BISKEY	Rt. 1, Box 25 X Wrenshall 55797	23-48-16	ADDRESS.
* 19	R.B. LEEROY N.A. ?	X	22-48-16	TREASURER DID NOT HAVE ADDRESS - HAS NOT PAID TAXES
20	LOUIS GALLUP		22-48-16	CONTACTED 8/3/76
* 21	INTERNATIONAL REFINERIES ?		21-48-16	BOUNDARY ABE/MAE CHANGE? APPRAISAL ASSIGNMENT MADE
22	CLINTON VEILLEUX		16 & 17-48-16	CONTACTED 8/2/76
23	ALBERT J. HOLM		16 & 17-48-16	CONTACTED 8/2/76
24	TERRI J & SUSAN E COADY		17-48-16	CONTACTED 8/2/76
25	LEON S & JOE W. ELLISON		8-48-16	CONTACTED 8/2/76
26	JOHN G. MURRAY	3.32	8-48-16	APPRAISAL ASSIGNMENT MADE
27	FLOYD RUDY		3-48-16	BACKED DOWN FROM APPRAISAL
28	CHARLES F. LEHTO		3 & 2-48-16	CONTACTED 8/3/76
29	ISAAC MORTO		2-48-16	ADDRESS.
* 30	CARL PETERSON	X	2-48-16	C/O NORTHERN CITY NAT'L BANK DULUTH 1322 W MORRIS AVE CHICAGO ILL
31	ORA G BAILEY TRUST C&D	(CONTACTED) - BEING APP (5/12 INTEREST)	2-48-16	
32	HUBERT ULE (1/2 INTEREST)	(CONTACTED) - ATTORNEY INFORMED	2-48-15	

IR	NAME	ACREAGE	SEC TWP-RGE	REMARKS
33	CARLTON COUNTY			
34	TRUST FUND	80		
35	CITY OF DULUTH			
36	CARLTON COUNTY			
37	"	"		
38	"	"		
39	"	"		
40	"	"		
41	MINNESOTA POWER & LIGHT CO			CONTACTED 7/30/76
42	BURLINGTON NORTHERN INC			CONTACTED 8/2/76

Twin Lakes – T. Sec. 8, 17, 16

JAY COOKE STATE PARK

ACQUIRED

Tr. No.	Name	Acreage	Opt.	EP.	Acq.	Co.	Sec-Twp-Rge	Remarks
S-1	ST LOUIS RIVER WATER POWER CO.							
S-2	ELIZA K RICHARDS	10.00					9-48-16	
S-3	BOSTON AND DULUTH FARMLAND CO.	77.07					3-48-16	
S-4	PHILIP L. RAY	240.11					2,10,11,14-48-16	
S-5	WILLIAM HARRISON						11-48-16	
S-6	DEAN R. MORGAN	20.00					9-48-16	
S-7	CONRAD F. PIRRUNG							
	MARY E. KIRBY	186.18					9+10-48-16	
	EDWARD S. CRAW							
S-7a	MARY E. KIRBY	68.92					3-48-16	
S-8	GLOBE INVESTMENT CO	80.00					2-48-16	1/2 INTEREST
	ROBERT B. WHITESIDE							1/2 INTEREST
S-9	FRANCIS W. SULLIVAN	40.00					2-48-16	
S-10	EDWARD S. CRAW, ET AL	19.93					10-48-16	
S-11	THEODORE T. HUDSON, ET AL	80.00					1-48-16	
S-12	TOWNSEND W. HOOPES	32.07					8-48-16	
S-13	ALFRED MERRITT	35.32					8-48-16	
S-14	CONRAD LARSON	10.00					9-48-16	
S-15	JOHN D. STRYKER						11-48-16	
S-16	MELGAARD R. PAETZNICK						13-48-16	
S-17	EDITH S. SCOVELL	9.00					10-48-16	
S-18	CARLTON COUNTY	4428.91 40.00						+ 80 Ac outside (not included in Acres)
S-19	" "	72.55					7-48-15	1/10 INTEREST
S-20	" "	40.75					2-48-16	3/3 INTEREST
S-21	" "	80.00					2-48-16	1/2 INTEREST

P.022.00.01

ACQUIRED

Tr. No.	Name	Acreage	Opt.	EP.	Acq.	Co.	Sec-Twp-Rge	Remarks
S-22	CARLTON COUNTY	80.00					14-48-16	20/24 INTEREST
S-23	HELEN DOROTHY HORNBY	560.00					15+16-48-16	
S-24	MINNESOTA POWER + LIGHT CO.						15-48-16	
S-25	A. WILSON TORRANCE	40.00					16-48-16	
S-26	CARLTON COUNTY	55.00					13+23-48-16	
S-27	" "	39.06					13-48-16	1/2 INTEREST
S-28	MINNESOTA HIGHWAY DEPT.	10.95					13-48-16	

P037 08 01

G. N. Railroad 8.65 ac 8 65/100 ac on S side SW1/4 SW1/4 section 25 — 9.88

MPL —

PRIVATE

	Tr. No.	Name	Acreage	Opt.	EP.	Acq.	Co.	Sec-Twp-Rge	Remarks
EAST OF 23	1	FRANK CONLEY	20.00					25-48-16	$19.68
EAST OF 23	2 H Ag	VERONICA STREETER	33.80'					R6-48-16	$13.22
EAST OF 23	3	JUDITH ANN TRIBBY ET MAR CARLTON COUNTY BANK	28.94					26-48-16	31.90
EAST OF 23	4 H Ag	FRED BANDLE 39.77+40+40	120.00					24-48-16	$9.48+17.68+17.24
BOTH SIDES	5 H	VERN GREER.	34.18+	40.00	37.74			23+24-48-16	$22.14+29.30
BOTH SIDES #23	6 H Ag	WILLIAM A CONLEY 37.68	38.30 38.30 40.00	16.19 37.36		40.00		23+24-48-16	32.46 $16.30+16.96 $17.36+15.10 18.96 12.82+60.90
BOTH SIDES #23	7 H	JERRY F. CONLEY TWO TRACTS	8.14ac + 15.40					23+24-48-16	399-8234 SUPE PETERSON ROAD
WEST #23	8	CHECK ABSTRACT TWIN CITIES RUDOLPH J. ANDERSEN NOT ELEC LINE ELEC CO	80.00					23-48-16	394-4471 1225 TOWER A 525 4935 DULUTH
EAST #23	9	EDWARD A. MARTIN	30.00					24-48-16	
EAST #23	10 H	CHARLES R. WILLCOX Not Willing	10.00					24-48-16	$231.04
EAST NOT #23	11 A	GEORGE ORESCANIN, ET AL	38.08					24-48-16	15.04
BOTH SIDES	12 H	CLARENCE M. DOUVILLE Not Willing	28.00	4.29/ac				13-48-16	116.74
EAST OF 23	13 H Ag	LEON LINE Not Willing	32.83+	30				13-48-16	99.86+13.64 24.86
WEST	14	JOHN W. STROMQUIST	40.00					13-48-16	32.32
	15	FREDRICK LEWIS	31.32 40.00					13-48-16	½ INTEREST
WEST	16 H Ag	GEORGE J HAZZARD	33.76					23-48-16	202.44
WEST	17 H	JAMES JENSEN	9.13					23-48-16	$44.22
WEST	18 H	HAROLD H. BISKEY	16.27					23-48-16	$191.18
WEST	19	R.B. LEEROY	40 ac					22-48-16	$39.36
WEST	20	LOUIS GALLUP (Wrensall)	38.12					22-48-16	26.72
WEST	21	INTERNATIONAL REFINERIES						21-48-16	
WEST	22	CLINTON VEILLEUX	119.30	2.70/ac				16+17-48-16	$320.12+20
WEST No	23 H	ALBERT J. HOLM	40.00 40		2.82/ac			16+17-48-16	214.08+11.82= $225.90+ 112.8= 338.70
WEST	24	TERRY J + SUSAN E CODY						17-48-16	
WEST	25 H	LEON S. + JOE W. ELLISON	3+40 36.68 79.68		50/ac			18-48-16	2.10+$7.30 29.36=38.76 2.25 41.00 4.00

#8 35.37± ac. 40 #46.38+#39.36

PRIVATE

	Tr. No.	Name	Acreage	Opt.	EP.	Acq.	Co.	Sec - Twp - Rge	Remarks
WEST Trailer	26	JOHN G. MURRAY	3.32					18-48-16	12.90
WEST	27	FLOYD RUDY	35.62					13-48-16	43.08
WEST	28	CHARLES F. LEHTO	38.32					13+2-48-16	45.56
WEST	29	ISAAC MORTO	12.50+	22.63				12-48-16	18.56+32.89
WEST	30	CARL PETERSON	39.86					12-48-16	572.00
	31	ORA G BAILEY TRUST C+D	40					12-48-16	15.14 5/12 INTEREST
WEST	32	ALBERT ULE						17-48-15	1/2 INTEREST
WEST	33	CARLTON COUNTY						11-48-16	
WEST	34	TRUST FUND	80.00					16-48-16	
	41	MINNESOTA POWER & LIGHT CO.							
EAST	42	BURLINGTON NORTHERN INC.	35.13					Sec. 2	4.50
WEST	35	CITY OF DULUTH	170.					16-48-15	
EAST OF 33	36	CARLTON COUNTY						1,8,26-48-16	TAX FORFIET
	37	" "						2-48-16	1/3 INTEREST
	38	" "						14-48-16	4/24 INTEREST
	39	" "						7-48-15	4/10 INTEREST
	40	" "						7-48-15	9/10 "