

Minnesota Natural Resources

Department: Environmental
Assessment Files Regarding State
Parks

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#### ENVIRONMENTAL ASSESSMENT

#### IRON SPRINGS BOG SCIENTIFIC AND NATURAL AREA

#### DESCRIPTION OF THE PROPOSED ACTION

A. <u>Purpose of the Action</u> - Iron Springs Bog Scientific and Natural Area (SNA) was nominated for acquisition by the Minnesota SNA Advisory Committee on August 19, 1976.

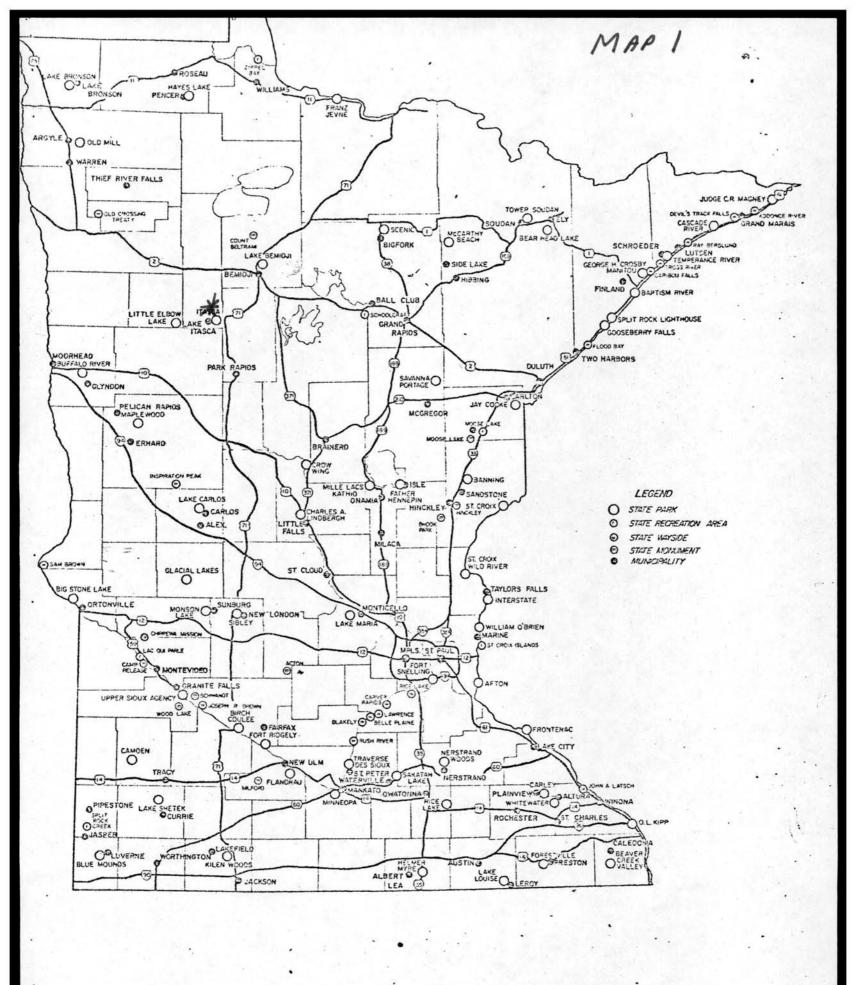
The acquisition of this parcel will insure that this area with its unique plant community and geology is preserved for outdoor educational and scientific uses.


The Federal Bureau of Outdoor Recreation as administrator of the Land and Water Conservation Fund (LAWCON) proposes to participate with the State of Minnesota in this action.


B. Location and Magnitude of the Project - Iron Springs Bog SNA is located in Clearwater County (Sec. 28, Twp. 144N, Range 36W) approximately one mile west of Lake Itasca, Minnesota (maps 1 and 2).

The project contains 320 acres of this 120 acres which are Swamp School Trust Fund land and 200 acres are tax forfeit land. The estimated cost for the 120 acres of Swamp Trust Fund land is \$6,000. The tax forfeit land is valued at \$10,000.

C. <u>Timing of the Project</u> - The SNA program presently consists of five areas containing 830.72 acres. The program's goal is 300 areas throughout the state. These areas will preserve unique







plant and animal communities which are threatened by man's activities.

To meet this objective, the program has a \$618,000 appropriation for the 1978-1979 biennium.

- D. <u>Future Development</u> The only development on this area will be signing. The nature of this program is educational and research.
- E. Recreational Needs to be Served by the Proposal Iron Springs

  Bog SNA is located in Economic Development Region 2, a five-county

  area in north-central Minnesota (map 4). The 1974 Minnesota State

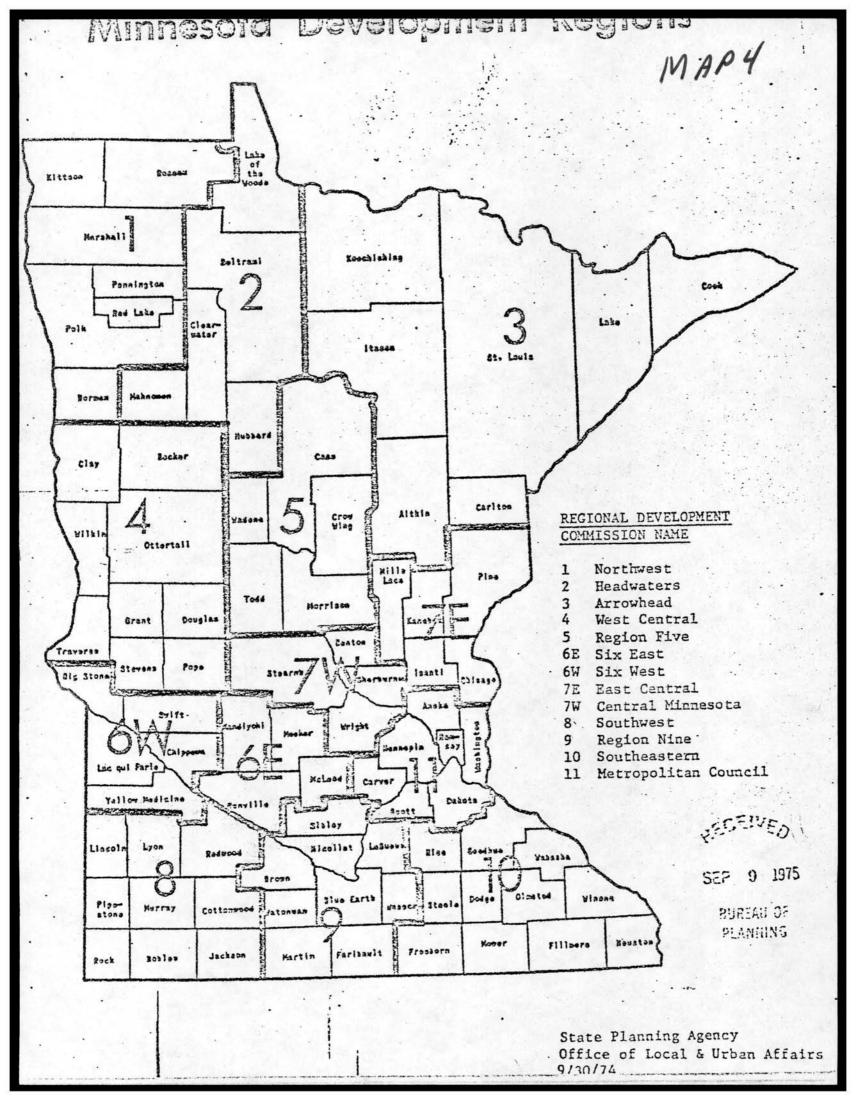
  Comprehensive Outdoor Recreation Plan (SCORP) identified nature

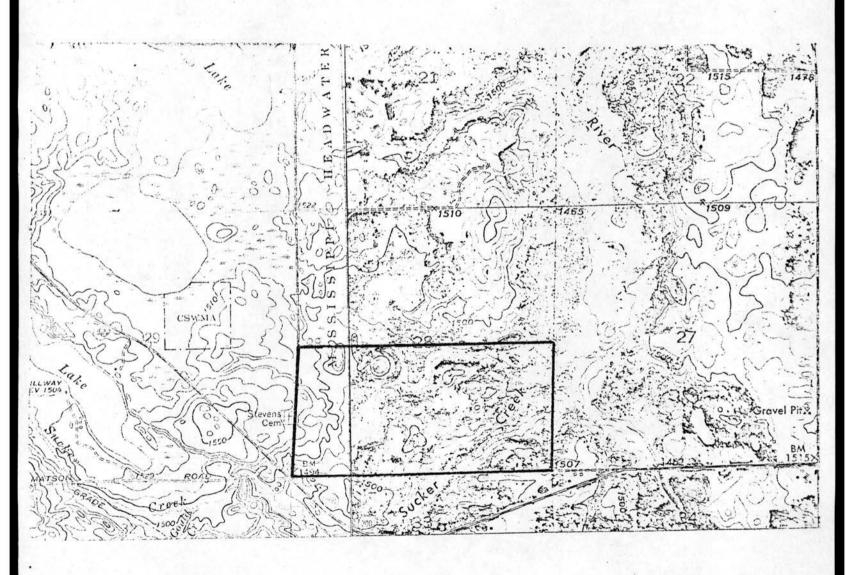
  interpretive programs as a priority need.

This project is also less than two miles from Itasca State Park. Naturalists stationed in the park are expected to use this area in their programing. Also the University of Minnesota has a biology station at the park. Students and instructors are now using the area for study and will continue to do so. This project will insure the continued existence of this unique plant community and geological feature.

#### II. DESCRIPTION OF THE ENVIRONMENT

A. <u>Topography</u> - The project area is of a rolling nature, dissected by two small streams. The area has spring fed bogs on the side hills along Sucker Creek.





- B. <u>Soils</u> No detailed soil survey has been conducted on this track of land. The general soil types of this area are Nebish-Rockwood and Menahga Marquette. These soils are of a glacial origin. Their consistency runs from sand and gravel to sandy loam. In the bog areas these soils are overlaid by peat.
- C. <u>Minerals</u> There are no known mineral resources of economic significance within this project. There is a good possibility that copper, zinc, iron, nickel, lead, gold and silver could be found in the Greenstone belt which underlays this area.
- D. <u>Water Resources</u> The primary water resources on this site are Sucker Creek and a unnamed tributary, and the springs in the bog.

There is no quantitative information on the bog spring other than their existence and that they drain into Sucker Creek.

Sucker Creek is a state designated trout stream with a flow of 7.2 C.F.S. The stream averages eight feet in width.

The quality of the water is good as it holds a native population of brook trout.

The ground water resources are not known. Generally one could expect to find pockets of ground water in the glacial drift but the depth and quantity are variable.

E. <u>Flora</u> - There are two basic plant communities in the project area which are upland and bog.

The upland plant communities are a mixture of deciduous and conifer. Spruce, fir, aspen, maple and pine are intermixed with several small red pine plantation. Approximately half of the upland area has been logged. These cutover areas are invariable stages of second growth timber.

There is no information on the understory of the upland communities.

The lowland community is primarily tamarack with an understory of orchids, fungi, ferns, picture plants and Sundew Indian Pipe. The existence of this type of community on a side hill is an unusual occurrence in Minnesota.

F. Fauna - The fauna of the project area have not been inventoried.
One would expect to find deer, fox, beaver, ruffed grouse, porcupine, and skunk. One would also expect to find those small mammals and songbirds which normally are associated within the present plant communities.

No endangered species are known to exist in the project area.

G. <u>Climate</u> - The mean maximum temperature in January is 16<sup>o</sup>F and 82<sup>o</sup>F in July. The mean minimum temperature in January is -8<sup>o</sup>F and 54<sup>o</sup>F in July. The area averages 25.2 inches of precipitation per year with about nine inches falling during the winter in the form of snow.

- H. <u>Air Quality</u> No specific air quality data is available for this area. Possible sources of industrial pollution are Bemidji and Detroit Lakes. The distance of these towns from the project would minimize any effect on the area. Auto emissions would be the only local source of air pollution.
- I. <u>Historical and Archaeological Resources</u> The project area has not been surveyed for historical or archaeological resources. There are no known historical or archaeological sites on the area. There is a good chance that such sites may exist. This area is located adjacent to Itasca State Park which is rich in both historic and archaeological sites.

#### J. Transportation and Utilities

Iron Springs Bog SNA is served by state highway 200 and county road 107. There are no utilities to the site and none will be required.

- K. <u>Socio-Economic Factors</u> There will be no relocation of homes or businesses. This land is Minnesota Swamp Trust Fund (120 acres) and tax forfeit (200 acres).
- L. <u>Land Use</u> This tract of land has been partially logged. It is also used by hunters, trout fishermen, and students from the Biology Station at Itasca State Park.

#### III. ENVIRONMENTAL IMPACT OF THE PROPOSED PROJECT

A. <u>Impact on the Physical and Biological Environment</u> - The SNA program is designed to conserve the area in its natural state.

- B. Impact on Transportation and Utilities No impact is expected.
- C. <u>Impact on Socio-Economics and Land Use</u> The area will not be available for logging. The trout fishing and hunting activities will not be available within this project.

The area will be preserved in a natural state for continued study by students from the Itasca Biology Station and local schools.

- D. <u>Impact on Historical and Archaeological Resources</u> This project will have no impact on any of these resources if they exist.
- IV. MITIGATING MEASURES INCLUDED IN THE PROPOSED ACTION

  The lands which are Swamp Trust Fund will be acquired with the monies going to the Minnesota School Trust. The School Trust Fund provides monies for the state's educational system. The tax forfeit lands will also be acquired with the money being paid to the county to offset the loss of logging income (tax forfeit land is not LAWCON fundable).
- V. ADVERSE AFFECTS WHICH CANNOT BE AVOIDED SHOULD THE PROPOSAL BE IMPLEMENTED
  - The loss of lands capable of forest production.
  - The loss of trout fishing and hunting recreational opportunities within the project area.
- VI. 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.

#### GAINS

Preservation of 320 acres
in a natural state for educational and scientific purposes.

#### LOSSES

- Loss of trout fishing and hunting opportunities on 320 acres of public land.
- Loss of logging income to the county and school trust fund.
- VII. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

  The proposed action will result in an indefinitely irreversible commitment of approximately 320 acres of land currently used for logging, trout fishing and hunting to public educational and scientific purposes.

Section 6(f) of the Land and Water Conservation Fund Act specifically requires a commitment to open space and recreational land use before money is granted for land acquisition and development. Approval from the Secretary of Interior is necessary before a change in land use of any LAWCON acquired land can be made.

#### VIII. ALTERNATIVES TO PROPOSED ACTION

- A. <u>No Action</u> This alternative will not insure that this unique area is protected.
- B. <u>Project of a Smaller Size</u> It is felt that the uplands around the bogs must be controlled to insure the perpetuity of the bog area.

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### DEPARTMENT Natural Resources-Parks & Recreation

## Office Memorandum

TO

: Gerald Jensen, Interpretive Services/Scientific

DATE: October 12, 1977

& Natural Areas Coordinator

FROM

: Franklin H. Knoke

Environmental Review Specialist

PHONE: 296-4781

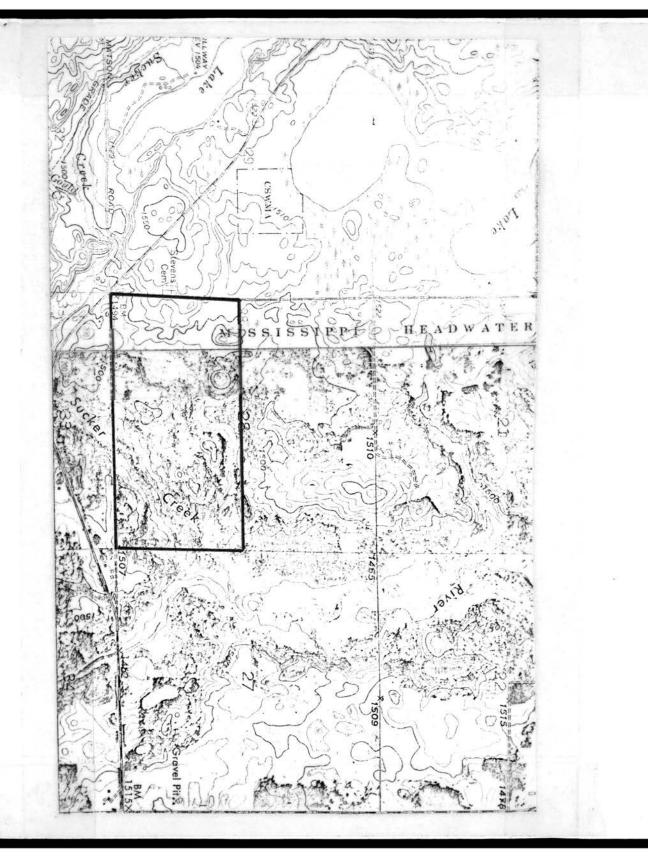
SUBJECT: Iron Springs Bog Scientific & Natural Area

Sucker Creek which flows through this proposed site is a brook trout stream. I contacted the Area Fisheries Manager for information on the stream. He did not know of the Scientific & Natural Area proposal and was concerned about its effect on his trout management program. Basically, he has a beaver problem on this stream. He intends to continue his beaver removal practices.

What effect will the Scientific & Natural Area designation have on the management of trout on this stream? Can beaver removal continue? Can in-stream structures be maintained? Will fishermen be allowed to fish this stream?

I need answers to these questions to properly assess the environmental impact of this Scientific & Natural Area.

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#### IRON SPRINGS BOG

Iron Springs Bog is actually a complex system of bogs situated on springs extending 500 meters or so on either side of Sucker Creek.

Spring bogs, as opposed to the more usual bogs associated with basins or watershed divides, are quite unusual in northern Minnesota, especially when they are perched on the side of a hill as they are here. The ones in question support a wide variety of vegetative types in a comparatively small area. These range from open forests. A wide variety of orchids and fungi are abundant there as well as pitcher plants, Sundew Indian Pipe and other unusual plants.

Approximately 50 advanced biology students from the Itasca
Biology Station use these bogs each year. In addition, Iron Springs
Bog has been the object of several published studies and is currently
under investigation by at least one University professor.

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