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# MINNESOTA DEPARTMENT OF NATURAL RESOURCES

## WATER ACCESS PROGRAM

## ARCHAEOLOGICAL SURVEY

## ANNUAL REPORT 1985-86

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BY: PATRICIA M. EMERSON

SUBMITTED IN ACCORDANCE WITH CONTRACT NO. 86-C1564  
BETWEEN THE DEPARTMENT OF NATURAL RESOURCES-TRAILS & WATERWAYS UNIT  
AND THE MINNESOTA HISTORICAL SOCIETY

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Consultant's Report prepared for  
Department of Natural Resources  
and Mn Historical Society

THE MINNESOTA DEPARTMENT OF NATURAL RESOURCES  
WATER ACCESS PROGRAM ARCHAEOLOGICAL SURVEY

ANNUAL REPORT  
1985-86

By the  
Minnesota Historical Society

Prepared by  
Patricia M. Emerson

April 1987

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## ABSTRACT

The Water Access Program Archaeological Survey operates through the Archaeology Department of the Minnesota Historical Society, with funding provided by the Minnesota Department of Natural Resources-Trails & Waterways Unit. This program conducts cultural resource reviews of projects initiated by the Water Access and River Recreation Programs, which operate under the mandate of Minnesota Statutes Chapter 86A, The Outdoor Recreation Act of 1975. Between November of 1985, when the program was instituted, and December of 1986, the Program Archaeologist initiated review of approximately 120 land acquisition and access development projects. Reconnaissance-level field review was completed for 43 of these projects, located in 23 different counties. In nine cases, recorded prehistoric or historic resources that would potentially be affected by proposed undertakings were identified during records review; an additional five previously unknown archaeological sites were discovered during preliminary field survey. More intensive field research directed towards evaluation of site significance was conducted during the summer and fall of 1986 at four sites; recommendations for data recovery efforts at one of these sites (21KC2) are currently being formulated. Arrangements have been made for design modification and construction restraints at three sites, and final management recommendations for six other sites await further progress in DNR's acquisition and design efforts.

This report explains the present structure and procedures of the Water Access Program Archaeological Survey, and presents specific locational and descriptive information on all projects for which review was completed during the first 14 months of the program. Summary lists of the projects discussed in the report can be found in the Appendices. These tables are organized both by DNR Region and by county, and include brief indications of review results and management recommendations. If a project was determined to have the potential to affect cultural resources, the relevant site number is provided.

## ACKNOWLEDGEMENTS

Whatever level of success has been attained during the first year of the Water Access Program Archaeological Survey has undoubtedly been due to the contributions of a number of people. Establishing and maintaining a workable system for conducting such a program cannot be accomplished without the cooperation and concern of many individuals. All of Trails & Waterways personnel, in the Regions and in the Central Office, have been most willing to adapt to a new set of concerns and procedures, and have readily provided a great deal of essential information. It is the author's hope that this cooperative relationship can be maintained in the future.

Particular thanks must go to:

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The contributions of these persons notwithstanding, any errors of commission or omission apparent in this report are solely the responsibility of the author.

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## I. INTRODUCTION

This report presents the results of the first year of the DNR Water Access Program Archaeological Survey. Because the program was instituted late in 1985, project reviews done during that year are included in this volume, as are all of the reviews done during 1986. Descriptions of individual project reviews constitute the bulk of the report; appendices provide summary lists of all projects arranged by DNR Region and Minnesota county.

### Program Background

The Trails and Waterways Unit is an administrative division of the Minnesota Department of Natural Resources (DNR). It was created by the Commissioner of the Department in 1979, in order to carry out activities mandated by Minnesota Statutes Chapter 86A, The Outdoor Recreation Act of 1975 (ORA). The statement of legislative intent for the ORA calls for

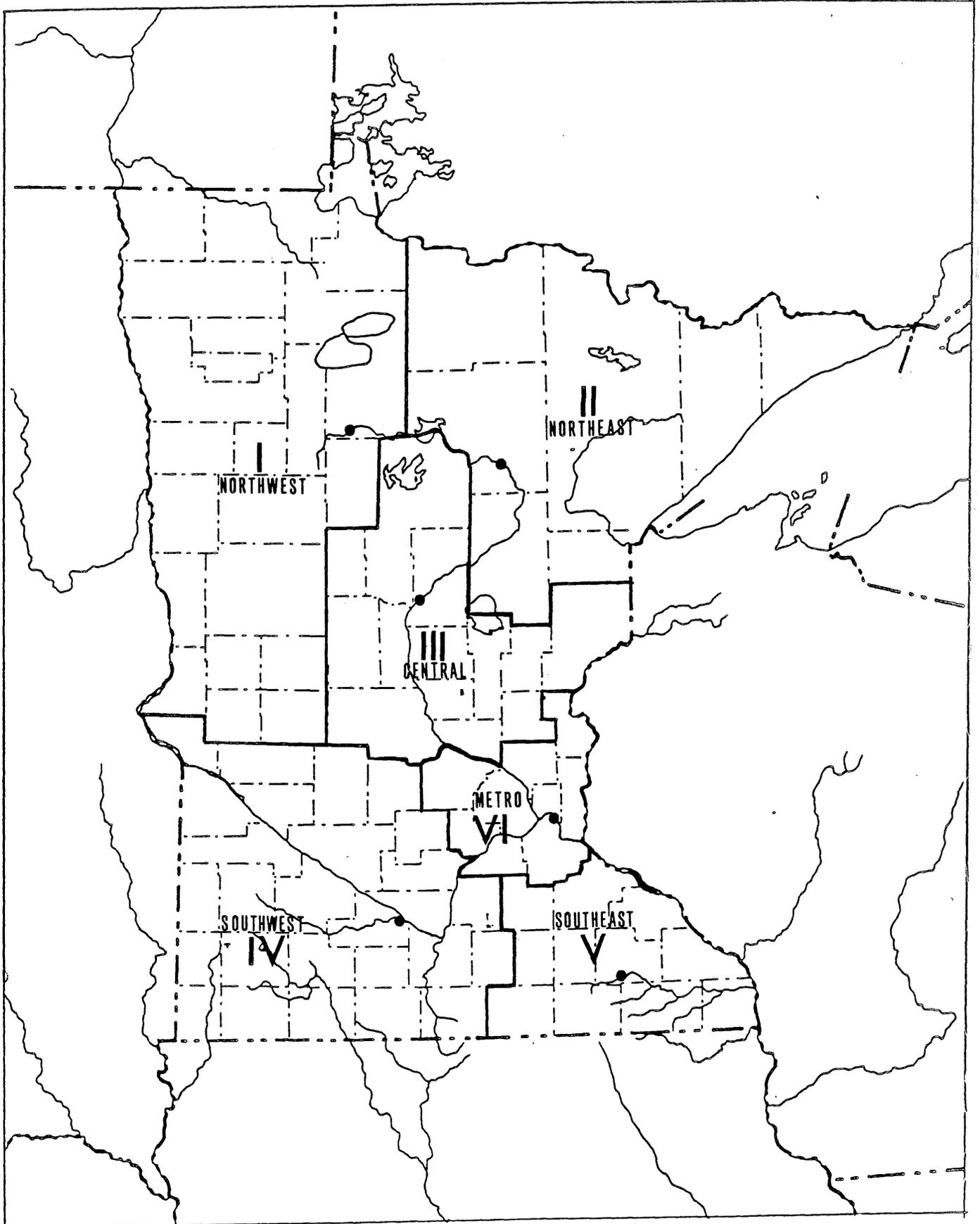
establishment of an outdoor recreational system which will 1) preserve an accurate representation of Minnesota's natural and historical heritage for public understanding and enjoyment and 2) provide an adequate supply of scenic, accessible and usable lands and waters to accommodate the outdoor recreational needs of Minnesota's citizens.

Public Water Access sites are defined as one entity within the system, established for the purpose of providing public access to lakes and rivers suitable for recreational use. A formal statement delineating objectives and policies for designation and management of state water access sites was issued by DNR in 1979. At that time, the Water Access and River Recreation Programs were established to coordinate land acquisition, site development and management of lake and river access sites and related facilities throughout the state.

Current DNR policy calls for evaluation of all of Minnesota's lakes, rivers and streams in terms of their suitability for water recreation and the adequacy of existing access facilities, and prioritization of acquisition and development targets based on the results of that evaluation. When possible, the efforts of the Water Access Program are to be coordinated with other units of government in providing 'free and adequate' public access to Minnesota's water resources. Identification of specific acquisition and development projects is, for the most part, handled in DNR's six Regional Offices (see Figure 1). Each Region has a Trails & Waterways Coordinator and additional personnel who implement the policies of the Water Access and River Recreation Programs. These individuals are responsible for establishing regional priorities and initiating projects, subject to overview and concurrence by DNR's Central Office in St. Paul.

As a division of the Department of Natural Resources, the Trails & Waterways Unit has a responsibility to consider the effect of its activities on Minnesota's cultural resources. That responsibility is made clear by the terms of the Outdoor Recreation Act, as quoted above, and regulated by the specifications of the Field Archaeology Act of 1963 (MN Statutes, Section 138.01 et seq.) and the Private Cemeteries Act (MN Statutes, Chapter 307). This legislation requires DNR to submit information about development projects to the State Historic Preservation Office and State Archaeologist's Office for review, in order to identify projects that may potentially affect cultural resources. Additionally, the use of Federal funding (from U.S. Dept. of the Interior-Fish & Wildlife Service and the U.S. Coast Guard Boating Safety Program) for many acquisition and development projects undertaken by the Trails & Waterways Unit brings it under the jurisdiction of Federal Cultural

Figure 1. DNR Administrative Regions



Resource Management (CRM) legislation, including the National Historic Preservation Act of 1966 (P.L. 89-665), The National Environmental Protection Act of 1969 (P.L. 91-190), and the Archaeological and Historic Preservation Act of 1974 (P.L. 93-291), among others.

Prior to 1985, the Trails & Waterways Unit met its responsibilities under the Field Archaeology and Private Cemeteries Acts by submitting a list of proposed development projects to the relevant agencies for review on a yearly basis. Some field review of known site locations and other development areas was done, but always on an ad hoc basis. However, recent expansion of the program, coupled with the use of Federal funding, led to a situation in which project review could not be properly conducted in such an informal manner. By definition, water access sites are situated in areas recognized both intuitively and by application of formal models as having considerable potential for location of cultural resources. The process of water access development - that is, construction of necessary facilities - certainly has the potential for disruption of such resources if they are present within a particular project area. When viewed in terms of the number of acquisition and development projects undertaken each year, these factors made a more consistent and efficient review procedure a necessity.

In order to establish adequate mechanisms for coordination of cultural resource review and compliance efforts, the Trails & Waterways Unit entered into an agreement with the Minnesota Historical Society (MHS) in 1985. The intent of the agreement was to create a program through which activities of the Water Access and River Recreation Programs could undergo cultural resource review in a consistent manner, according to State and Federal guidelines established in connection with the legislation cited above.

The agreement between DNR and MHS calls for review of "all water access or river recreation land acquisition or development projects" in terms of their potential impact on cultural resources. This constitutes a sufficiently large body of work to require the services of a full-time Program Archaeologist, who has primary responsibility for all aspects of the review process from initial compilation of project data to preparation of individual project reports and an annual technical report. The Program Archaeologist works under the direct supervision of the Head of the Archaeology Department at MHS, and also reports to the Supervisor of the Water Access Program. (Note that, while this agreement was entered into by the Trails & Waterways Unit, it specified that only Water Access and River Recreation Program projects are to be reviewed. No undertakings of DNR's Trails Program are currently included in this program.)

The initial agreement that created the DNR Water Access Program Archaeological Survey was based in outline upon several similar programs already in place: the DNR State Parks Survey, the Minnesota Trunk Highway Archaeological Reconnaissance Survey and the County-Municipal Highway Archaeological Survey. Details of coordination, information flow, project prioritization and the general scope of the survey were left more or less undefined. Thus, the first year of the Survey constituted a pilot program, during which a formalized procedure for the conduct of work was gradually generated. The objectives and structure of that procedure, as they currently stand, are explained in detail below.

#### Program Objectives

As described above, the objectives of the DNR Water Access Program Survey are delineated by a number of State and Federal laws and regulations. Thus, in the broadest sense, they overlap with the objectives of many other programs conducted in Minnesota and throughout the nation under the rubric "Cultural Resource Management":

the identification of cultural resources that may be adversely affected by proposed undertakings by public land-management agencies. Programmatic objectives follow the general outline of what has come to be known as the "Section 106 process", named for the portion of the National Historic Preservation Act that mandates cultural resource review of projects under Federal jurisdiction. In summary, they include:

- determination of presence/absence of resources within areas to be acquired and/or developed by the Water Access and River Recreation Programs (to the levels of assurance provided by standard survey methods);
- determination of the probable effect of proposed undertakings on identified resources;
- evaluation of the significance of any resource to be affected;
- formulation of recommendations for further action based on the results of the first three objectives.

Given the contractual parameters of this program, primary emphasis must be placed on the immediate concerns of DNR, which has a statutory mandate to provide Minnesota's citizens with appropriate opportunities to pursue water recreation activities. However, both the requirements of professional archaeological ethics and the spirit of existing CRM legislation point to an additional objective to be addressed: the proper management of a fragile, irreplaceable source of scientific data. Use of the term "management" implies reasoned consideration of a full range of alternative actions whenever that source of data is threatened. It also requires adherence to professional standards of responsibility for proper treatment of the resource base and the data it contains. The obligations inherent in this perspective form another set of objectives to be addressed:

- conservation and analysis of various classes of recovered data, as appropriate to the nature of each class;
- thorough documentation of research methods and results; and
- integration of the results of the work done through this program into the larger framework of archaeological research, on both empirical and theoretical levels.

The goals of this Program are, therefore, bi-directional: to facilitate DNR's pursuit of appropriate resource utilization, while still addressing the broader concerns of the scientific community and the public at large. As those involved in CRM activities are well aware, integration of such disparate goals is not accomplished through application of rote procedures, and formulating a means of addressing one objective without sacrificing the other is rarely a simple matter. In the case of the Water Access Program Survey, the procedural framework was, of necessity, built upon two existing structures: policies of the Water Access and River Recreation Programs already in place, and legal requirements of the cultural resource review and compliance process as implemented by the State Historic Preservation Office (SHPO) and State Archaeologist's Office (SAO). The procedures by which these entities discharge their respective responsibilities have to a great degree shaped the structure of this Program.

#### Program Structure

Although it is by no means yet completed, one of the major tasks undertaken by the Water Access Program Survey in its first year was the establishment of a workable approach to the compilation and evaluation of project-specific data. That approach has been based on standard procedures utilized by DNR in the Water Access and River Recreation Programs. Those procedures are delineated in DNR's Water Access Policy Statement of 1979 and related documents; they are summarized here in terms of their relationship to the general structure of the cultural resource review process.

### Classification of Projects

The types of projects undertaken by the Water Access/River Recreation Programs and therefore reviewed under the terms of this program fall into three major categories:

1) land acquisition: the process of acquiring title to a parcel of land upon which a water access facility will eventually be built. This usually involves the outright purchase of the parcel from private owners, but may also involve the granting of a long-term lease or special-use permit to DNR by another unit of government, a corporation or a non-profit organization. Negotiations for purchase are conducted by DNR's Lands Bureau, a separate administrative division. Normal procedures include procurement of a formal "Option to Purchase" that specifies a time period from two to nine months in length, during which DNR may elect to buy the property at a specified price. This option period allows time for DNR to resolve title questions, survey property boundaries, and solicit public comment on the proposed acquisition.

2) new development: construction of water access facilities in a new location, usually on a recently purchased parcel of land. Project design is handled through DNR's Engineering Division, which prepares preliminary and final plans according to a set of 'typical' facility layouts of various sizes and configurations. Standard facilities for a new access include a concrete plank ramp 12' in width, and entry/exit roads, normally 22' wide, as necessary to provide safe access to the parking and launch areas. The sizes and shapes of parking areas are quite variable, dependent on property boundaries, engineering concerns and anticipated levels of usage, but generally are based on allowance of a 12' by 50' space for each car/trailer unit, plus drive lanes. Most of the proposed construction reviewed thus far has been designed for 8 to 24 parking spaces, covering areas roughly 9,000' to 30,000 square feet in size.

3) access rehabilitation: modification or expansion of an existing water access facility, usually to upgrade its quality, reduce maintenance problems, or expand capacity. Rehabilitation projects are sometimes done in conjunction with acquisition of new land in order to expand the size of a particular water access facility, or may involve enhancement of facilities previously under the jurisdiction of another unit of government or a private organization, such as a local Sportsman's Club. Rehabilitation projects often involve as much construction as would an entirely new facility, so it cannot be assumed that they are benign in terms of potential effect on cultural resources. (For the purposes of this report, both new development and access rehabilitation are referred to as "development projects".)

### Project Prioritization and Review Coordination

Each June, the Water Access Program compiles a master list of development projects proposed for completion during the coming fiscal year (July 1 through June 30). This list is organized in order of priority within each of the six DNR regions. (River Recreation projects are prioritized separately, on a state-wide basis.) Although not often followed exactly, these regional priority lists provide a general outline of the anticipated timeframe for project completion. They therefore are used as the basis for scheduling of project review. Priority lists are modified throughout the year as necessary to accommodate funding constraints, engineering complexities and other administrative concerns.

A separate list of land acquisition priorities is also maintained, on a statewide basis. Regional personnel are responsible for initial identification of potential acquisition properties, following established priorities as much as practicable. Proposals for instituting acquisition proceedings are submitted to the Central Office for review, after which project-specific information is forwarded to the Program Archaeologist.

A great number of factors can - and generally do - influence project

priorities within each region. While many of these factors are dealt with by Regional personnel, final determinations of project status are always made in DNR's Central Office. In order to assure the most realistic response to DNR's acquisition and development timeframes, the Program Archaeologist coordinates work with a designated individual in the Trails & Waterways Unit Central Office. Information on proposed undertakings is provided to the Program Archaeologist through that individual, in the form of new project proposals, acquisition status reports, preliminary construction plans and final project designs.

While some aspects of the review procedure - such as compilation of background information - can normally be completed in a straightforward manner, others - such as field review - must be dealt with on a more flexible basis, to allow for changes in priority and scheduling. The Program Archaeologist submits regular reports to DNR's Central Office, detailing the review status of all pending projects. In addition, less formal reports are made to both Regional and Central Office personnel as necessary to deal with the exigencies of a particular project. Anticipated scheduling of field review is coordinated with the Central Office as progress is made on acquisition and design; this schedule is subject to on-going revision as necessary to respond to changing priorities and contracting procedures.

#### Review Procedures and Survey Design

Fulfillment of the general objectives of this program, as explained above, requires execution of a particular series of more specific tasks. The exact sequence followed for any one project is determined mainly by the characteristics of the proposed undertaking; in general, the review process involves four major steps, described below.

1) Project identification and description: evaluation of the physiographic and geomorphic characteristics of the project area, its present condition, land use history and the degree and nature of past disturbance. The basic information compiled about each project comes from Regional personnel: location, legal description, current condition, ownership, and the general nature of the proposed work are all described on standard information forms forwarded to the Program Archaeologist. In some cases, detailed property maps, aerial photographs, etc. are also available.

The Program Archaeologist then compiles additional data for each project area. USGS Quadrangles are used as base-line topographic maps; geomorphic designations are taken from maps prepared by the Minnesota Soil Atlas Project (an undertaking of the University of Minnesota Agricultural Experiment Station which has defined a set of discrete geomorphic regions within the state). In counties for which USDA-SCS has published detailed soil surveys, the soils classification for the project area is determined. Occasionally, another public agency has some jurisdiction over or interest in a particular project area, which may require coordination of the review procedure with other cultural resource specialists.

2) Records review: examination of existing documentation about cultural resource research in and close to the project area. This provides a frame of reference for evaluation of research results, and in some cases allows for immediate identification of resources that may be affected by a proposed undertaking.

The Water Access and River Recreation Programs most often deal with rather small, clearly delineated parcels of land, usually only an acre or two in size, although larger parcels are sometimes acquired. Cultural resources, however, cannot always be neatly delineated in terms of present-day geographic, legal and political boundaries, and must be viewed in the context of settlement and resource utilization patterns of larger scale. As a practical matter, it has been necessary to restrict

the scope of this aspect of the review process to a level consistent with the magnitude of potential effect for a typical project. Initial records review concentrates, therefore, on resources and research within approximately a 1-mile radius of each project area. The basic aims of this process are to determine, first, if there are any identified or suspected cultural resources in the vicinity of the project area, and second, if any formal cultural resource surveys have been conducted in that area. At a minimum, sources consulted include state site files (which contain data about formally designated sites, identified but unnumbered sites, and unconfirmed informant data about possible site locations), cultural resource survey report files maintained by SHPO, the checklist of Minnesota's National Register of Historic Places (NRHP) properties, and SHPO historic sites survey files. When appropriate, additional sources of information are reviewed: annual reports of the Trunk Highway and County-Municipal Highway Archaeological Survey Programs, records of the Minnesota Statewide Archaeological Survey (MnSAS), and cultural resource inventory files of public agencies such as the U.S. Forest Service and the U.S. Army Corps of Engineers. Information is frequently solicited from other archaeologists when they have a research interest in or unpublished data about a particular area.

3) Field review: generally, reconnaissance-level survey of the project area. The methods applied during this phase of investigation are based upon accepted professional practices, particularly those outlined in "Archaeological Survey Standards for Minnesota" (Council for Minnesota Archaeology, 1977). Variations in application of standard field methods are based on field conditions in each project area (documented disturbance, topographic features, etc.) and are described in the individual project discussions.

Most of the properties developed as Public Water Access locations have fairly heavy vegetative cover and have not recently been under intensive cultivation. Such conditions usually make the probability of identifying potential cultural deposits from surface manifestations very low. Therefore, reconnaissance-level survey is conducted primarily by means of shovel testing. (Although surface reconnaissance did supplement subsurface testing in some project areas, it was generally not a major source of reconnaissance-level survey data.) Tests are approximately 30 centimeters square, dug in 10 centimeter arbitrary levels. All backdirt is screened through 1/4" wire mesh, and recovered cultural materials are labeled as to provenience (in some cases, subsurface provenience can be determined to the closest 5 centimeters). Generalized soil profiles are recorded for each shovel test. A standard survey interval of 15 meters is employed unless field conditions warrant otherwise.

If a cultural deposit is identified during reconnaissance survey, an additional level of review is implemented. At this stage, two questions must be explored. First, the nature, extent and significance of the site must be evaluated, and second, the probable effect of proposed development on the site must be defined. The second topic can generally be addressed directly by reference to construction plans that identify areas of cut, fill and recontouring. The first topic, site evaluation, normally involves additional field research beyond the reconnaissance level. During site evaluation, excavation of 1 meter square units is the primary sampling strategy. These units are excavated by trowel in 5 centimeter arbitrary levels, and all backdirt is screened as described above. Horizontal provenience is normally maintained within unit quarters; that is, to the closest 50 cm square within each unit. Total area excavated and placement of individual units are determined by reference to shovel test results, construction plans and project area topography.

During both reconnaissance survey and site evaluation, test locations are mapped in the field using compass and tape. Every project area has either a

permanent benchmark (USGS or DNR) or a stable structure of some type that can be used as a datum for mapping purposes. Although complete development plans are not available for all project areas at the time of survey, locational information is transferred to final plans as they are completed by DNR Engineers. These plans are generally used as the main project maps in survey reports submitted to SHPO and SAO.

4) Curation and documentation: interpretation and description of field data, and compilation of all relevant information in a report of findings, which includes recommendations for further action when it appears that a project will affect cultural resources.

Cultural materials are accessioned into the collections of the MHS, following standard procedures. Detailed artifact catalogs are generated for each identified site. Special treatment for preservation of fragile items is applied where appropriate (using acrylic resin solutions to stabilize and consolidate friable materials). Floral and faunal materials are identified by unaided or low-magnification visual examination to the level of taxonomic detail possible. In general, the scope of this program does not allow for application of specialized analytical techniques; in some cases, samples suitable for soils or radiometric analysis were collected and are being maintained in curation for possible future analysis. All materials recovered during reconnaissance survey and site evaluation are curated at Ft. Snelling History Center, along with original field notes, maps and photographs.

Cultural resources located during project review are described and classified according to a model of prehistoric culture history based on the accumulated results of a century or so of (more or less) scientific research in Minnesota and the Upper Midwest. Although the details of the model are in constant revision as new data become available, the general outline of major trends in cultural patterns is useful for providing base-line site definitions. Under this framework, prehistoric sites are classified as belonging to one or more of four major cultural traditions:

1) Paleo-Indian - the earliest period of human occupation of Minnesota, starting just after the last retreat of Pleistocene Epoch glaciers from the region, approximately 12,000 - 7,000 years B.P. (before present). Although Paleo sites in Minnesota are extremely rare, evidence from other parts of the continent suggests a cultural complex characterized by low-density nomadic populations, a subsistence strategy focused on hunting of large game animals, and a distinctive stone tool technology.

2) Archaic - climatic changes after the end of the Pleistocene created increasingly complex ecological patterns in Minnesota and resulted in some large-scale changes in the composition of biotic communities. The cultural response to this change was a shift in resource utilization strategies to more efficient means of exploiting a wider range of resources, more emphasis on the use of plant resources as dietary staples, and development of regional distinctions in technologies and settlement patterns. Although beginning and ending dates for the Archaic period vary for different areas of the state, the general timeframe for this cultural tradition is from about 7,000 to 3,000 B.P.

3) Woodland - by the end of the Archaic, the broad climatic and vegetational patterns found in present-day Minnesota were fairly well established, although there continued to be relatively short-term, regional fluctuations in environmental character. The cultural patterns evident in Minnesota during this time period (c. 3,000 - 300 B.P.) reflect a proliferation of localized adaptive strategies, a probable increase in population densities, the appearance of ceramic manufacture as a major new technology, adaptation of mound-building as a primary burial mode, and considerable evidence for cultural interchange between the inhabitants of Minnesota and major cultural complexes in other parts of the continent. The Woodland Tradition can be subdivided into a number of phases that overlap in both time and

space, on the basis of lithic and ceramic styles, settlement patterns, procurement strategies and a host of other cultural traits.

4) Mississippian - a major influence on Woodland cultures in Minnesota was the growth, after A.D. 1000, of a complex, state-level agricultural society in the central Mississippi River Valley. The extent to which this influence appears in the archaeological record ranges from local adaptation of specific cultural traits, such as the use of shell temper in pottery, to the apparent migration of small populations from the central Mississippi Valley upstream to Southern Minnesota. Although Mississippian influence is most directly seen in cultural complexes found in the southern half of the state, it is also reflected to some degree in the technologies and subsistence strategies of Northern Minnesota.

(More detailed information about these cultural traditions can be found in Johnson 1978, The Prehistoric Peoples of Minnesota.)

Archaeological data that reflect historic-period Indian occupations or the Euro-American presence in Minnesota are also considered during the review process. Such resources can take many forms, representative of a variety of settlement patterns, subsistence activities and economic strategies employed by the state's inhabitants over the past 300 years. The potential for identifying standing structures of significance is also considered during project review, in the light of NRHP criteria for determining historic and/or architectural significance.

As the review process is completed for each project, a cultural resource review report is prepared for submission to SHPO and SAO. A standard format is used for all reconnaissance-level surveys; more detailed reports are generated to document the results of site evaluation efforts. Summaries of work completed are also provided to DNR in regular status reports. (Starting in 1987, those reports are submitted to DNR on a monthly basis.)

The individual project descriptions presented in this report follow a slightly modified version of the standard format used for individual project reports. General location maps are provided for every project area; more detailed maps are included for site areas identified during review. (Those individuals requiring additional information about particular project areas are referred to program files maintained at the offices of the MHS Archaeology Dept.) Project descriptions are grouped, first, by the nature of the project (property acquisition, Water Access Program development project or River Recreation Program development project), second, by DNR Regional designations, and third, in county order within each region.

#### Application of Procedures

Each type of project undertaken by the Water Access and River Recreation Programs presents a different challenge vis-a-vis the application of appropriate review procedures and the interpretation of research results. It is the responsibility of the Program Archaeologist to determine the proper approach and level of investigation for any particular project. Although the specifications of the individual projects reviewed during the past year have varied widely, the overall nature of the work done by the Trails & Waterways Unit is such that an assumption of potential effect must be held in every case. Therefore, field review is considered necessary for all projects, unless detailed information about the nature of proposed work or the characteristics of the project area indicates otherwise.

Because this cultural resource review process had to be integrated into an on-going development program, most of the projects reviewed in the first year of operation were on the brink of construction. In only a few cases did properties in the acquisition stage undergo the complete review procedure; most of these were projects that were of special sensitivity in terms of political considerations or

funding constraints. Ultimately, the goal of the program is to complete project reviews during the acquisition process, in order to determine the potential for adverse effect while there is sufficient time to formulate management strategies without disrupting the development process or threatening the resource base. If attainable, this approach will best serve the interests of all concerned parties.

## II. WATER ACCESS PROGRAM ACQUISITION PROJECTS

### REGION III - CENTRAL

#### Cass County

#### Sanburn Lake

##### Location

Sec. 22, T. 139N, R. 30W; NE 1/4, NW 1/4, SE 1/4, SE 1/4; Powers Township. Located on the northeast shore of the lake, adjacent to TH #87, about 2 miles east of Backus, MN (see Figure 2).

##### Geomorphic Region

Crow Wing Outwash Plain; St. Croix Moraine Complex adjoins to west (Minnesota Soil Atlas Project, Bemidji Sheet).

##### Scope of Project

Acquisition of property for development of new Public Water Access on Sanburn Lake. No development plans are available yet from DNR.

##### Description of Project Area

Level, low-lying terrace adjacent to lake and small drainageway that connects Sanburn Lake to Rainy Lake, just north of TH #87. The northern and northeastern boundaries of the property are marshy areas, beyond which a steep slope rises. A summer cabin of recent construction currently sits on the property, which is mostly residential lawn with some scattered hardwoods along the lakeshore. A small (c. 1 meter high) ice ridge is located at the water's edge.

##### Records Review

Previous surveys: none known.

Recorded sites in vicinity: 21CA137 - on the north shore of Brockway Lake, about 1 mile southeast of the project area; Blackduck and Sandy Lake habitation; recorded by Douglas Birk, 1979; disturbed by construction of Cass County Road #42.

##### Field Review

Methods: surface reconnaissance, 17 shovel tests.

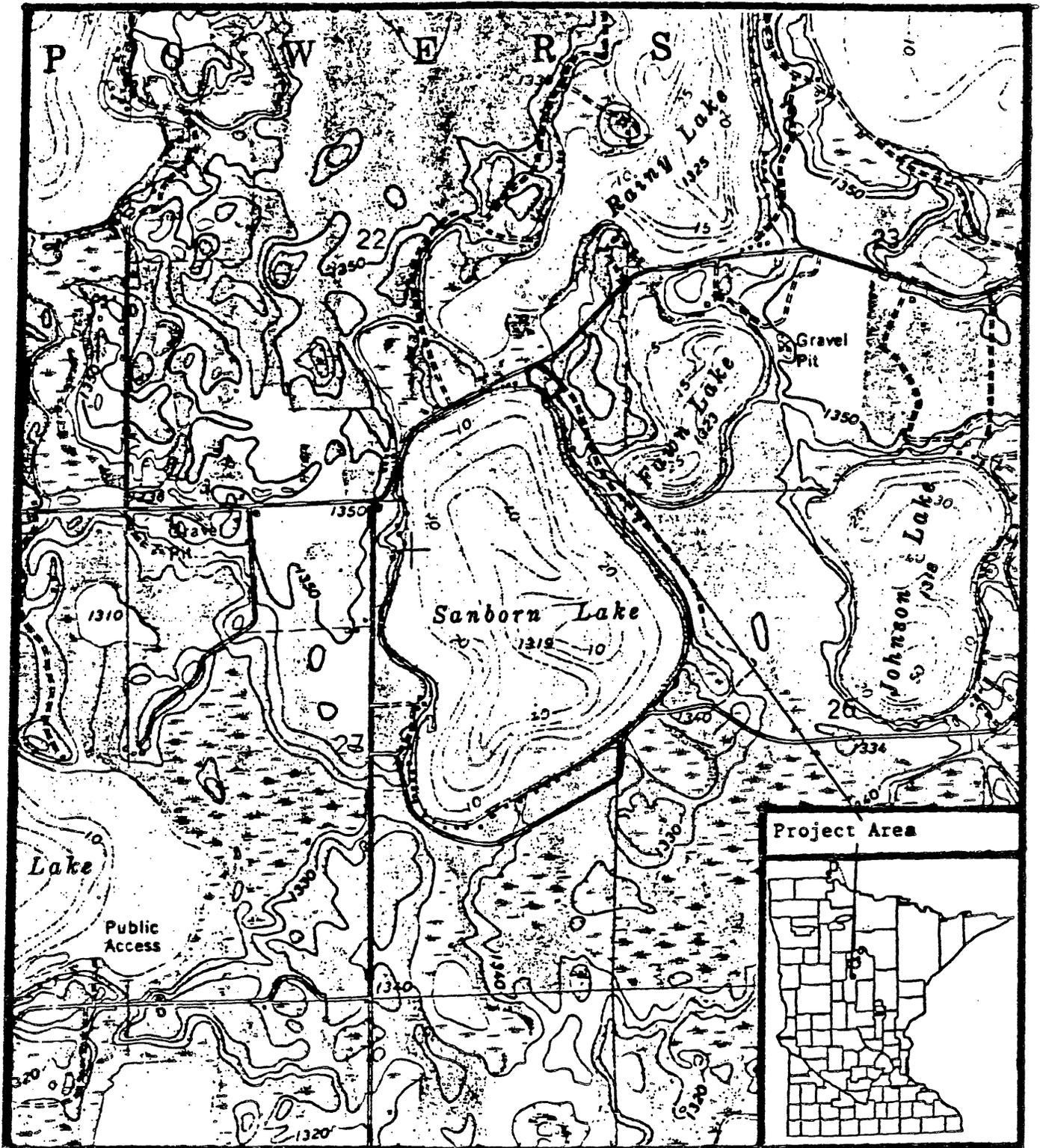
Results: Lithic and ceramic artifacts were recovered from 3 shovel tests within a 10-meter-wide corridor along the lakeshore (see Figure 3):

- |        |           |   |
|--------|-----------|---|
| ST #3, | 20-25 cm: | 1 small grit-tempered rim sherd, notched lip        |
|        | 25-30 cm: | 1 secondary flake, silica                           |
|        | 30-35 cm: | 2 secondary flakes, silica                          |
|        |           | 1 tertiary flake, silica                            |
| ST #4, | 0-5 cm:   | 1 primary flake, silica                             |
|        |           | 1 secondary flake, chert                            |
|        |           | 1 secondary flake, quartz                           |
|        |           | 1 tertiary flake, quartz                            |
| ST #7, | 0-5 cm:   | 1 grit-tempered body sherd, smoothed/cord-roughened |
|        |           | 3 grit-tempered body sherds, cord-roughened         |
|        |           | 2 ceramic crumbs                                    |
|        | 15-20 cm: | 2 grit-tempered body sherds, cord-roughened         |
|        | 25-30 cm: | 1 grit-tempered body sherd, cord-roughened          |
|        |           | 1 grit-tempered body sherd, fabric-impressed        |

A site form was submitted to the State Archaeologist's Office, which designated the site 21CA161. The rim sherd recovered from ST #3 appears to be Sandy Lake Ware.

Soils in all shovel tests were very sandy loams over medium to coarse sand and beach sediments. There did appear to have been some disturbance of the natural soil stratigraphy, which may relate to clearing of the area prior to cabin construction.

Figure 2. Sanburn Lake Project Area



USGS Mildred Quadrangle, 1970, 7.5' series  
(enlarged x 1.42 - approximately 1:17,000)

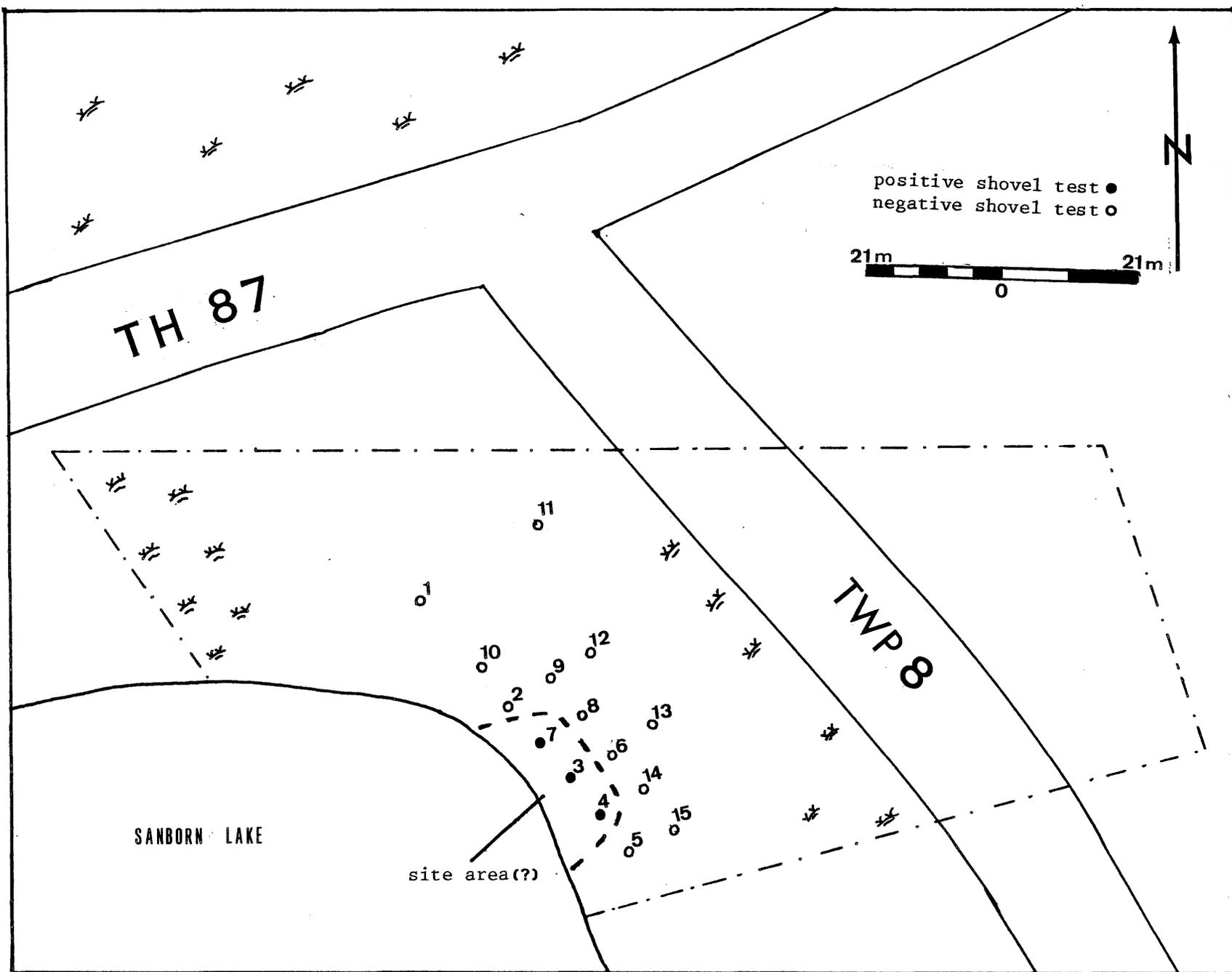


Figure 3. 21CA161 (Sanburn Lake) - Site Area

Most of the cultural materials were found in a stratum of grayish-brown loamy sand, just below the humus layer.

#### Project Status

DNR personnel were notified of the existence of the site on this property. It was indicated to them that additional field review would be necessary prior to construction, but plans for that work could not be formulated until a plan for proposed development was available. A preliminary report of findings was submitted to SHPO, with the recommendation that additional field review of this project be conducted when development plans are available.

## Stearns County

### Pearl Lake

#### Location

Sec. 3, T. 122N, R. 29W; E 1/2, NW 1/4, NW 1/4, SE 1/4; Maine Prairie Township. Located on the north shore of the lake, adjacent to County Road #146, about 6 miles north of Kimball, MN (see Figure 4).

#### Geomorphic Region

St. Croix Moraine Complex (Minnesota Soil Atlas Project, St. Cloud sheet).

#### Scope of Project

Acquisition of property for expansion of existing Public Water Access to Pearl Lake. No development plans were available at the time of survey.

#### Description of Project Area

Existing access facilities include a bituminous-surfaced entry road, dirt parking area and concrete ramp. Rehabilitation plans call for expansion of the parking area into the newly acquired property, which is to the north of the existing parking lot. Currently, the property consists of a large, mechanically-cultivated garden area and a section of maintained lawn. It is bordered on the east by Mill Creek, the outlet for Pearl Lake, and an area of marsh along the edge of the stream channel.

#### Records Review

Previous surveys: none known.

Recorded sites in vicinity: none.

#### Field Review

Methods: surface reconnaissance; 13 shovel tests.

Results: Lithic artifacts and recent historic debris were found in 3 shovel tests along the edge of the marsh, within the garden area:

ST #3, 10-20 cm: 1 tertiary flake, chalcedony

30-40 cm: 1 tertiary flake, flint

ST #6, 10-15 cm: 1 primary flake, jasper

1 clear glass fragment

ST #7, 0-10 cm: 1 tertiary flake, chert

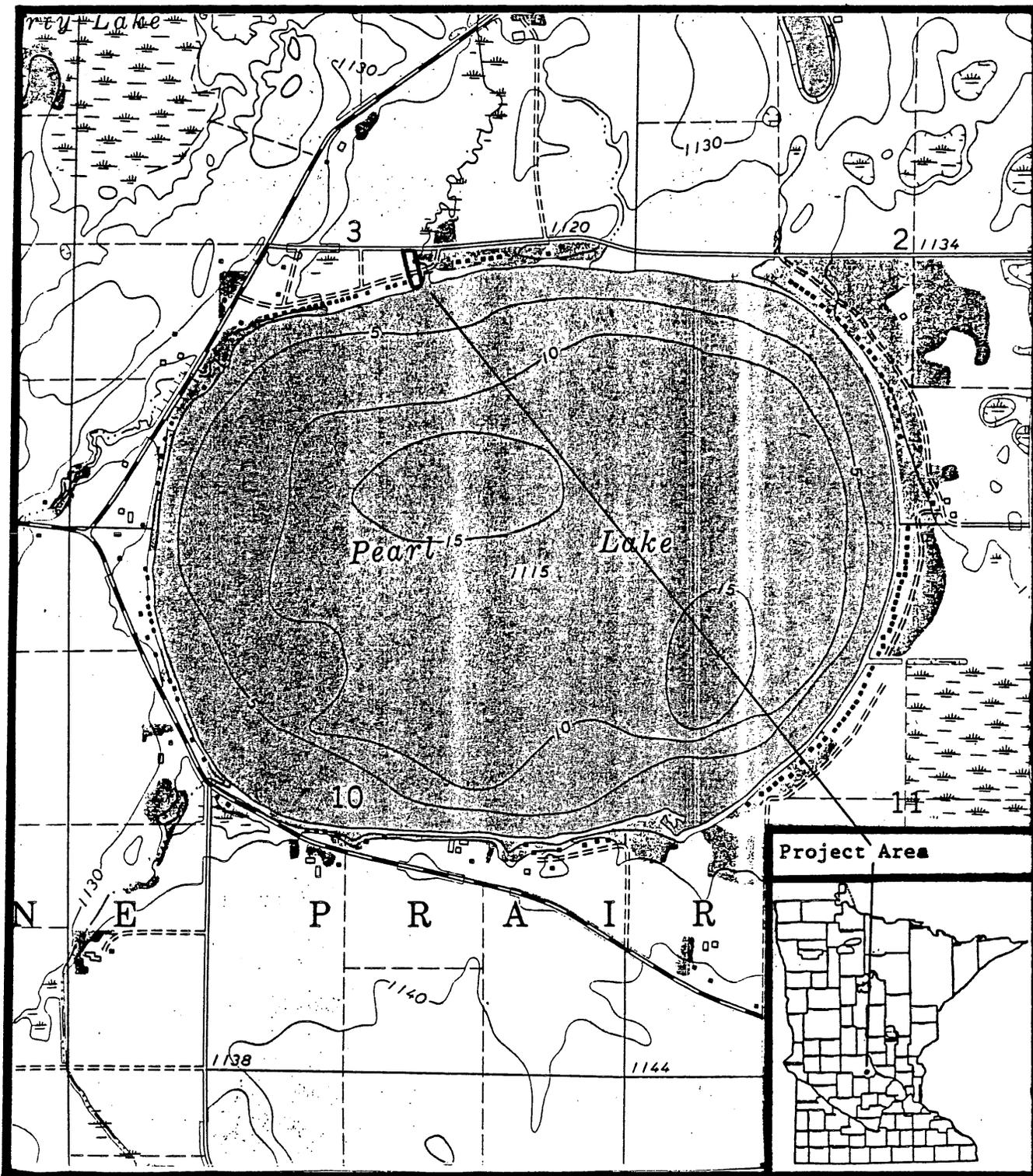
25-30 cm: 1 primary flake, jasper

The soils in which these artifacts were found are primarily composed of mixed and redeposited stream channel sediments. Old shoreline and stream bed sediments were encountered at depths ranging from 27 to 43 cm in STs #1 through 13; the upper soil strata were thoroughly mixed and included considerable amounts of sand and till. In the southern half of the project area, from 4 to 17 cm of recent fill overlay a former sandy beachline.

#### Project Status

The scarcity of cultural materials recovered during survey, their erratic distribution, and the nature of the sediments in which they were found all indicate that they were in secondary deposition due to stream channel migration. Also, the

Figure 4. Pearl Lake Project Area



USGS Rockville Quadrangle, 1967, 7.5' series  
(enlarged x 1.42 - approximately 1:17,000)

entire area within which the artifacts were found has been disturbed by repeated cultivation. It did not appear that these materials represented a cultural deposit of any integrity. A recommendation was made that the proposed development proceed with no additional field review; SHPO concurred with this recommendation (Ref. #Z-271).

## REGION VI - METRO

### Hennepin County

#### Halstead's Bay/Lake Minnetonka

##### Location

Sec. 27, T. 117N, R. 24W; E 1/2, SE 1/4, SE 1/4, NW 1/4; City of Minnetrista. Located on the western edge of Halstead's Bay, an arm of Lake Minnetonka (see Figure 5).

##### Geomorphic Region

Twin Cities Formation (Minnesota Soil Atlas Project, St. Paul sheet).

##### Scope of Project

Acquisition of property for development of a new Public Water Access to Lake Minnetonka. Although no detailed construction plans had been drawn at the time of survey, a concept plan was available which calls for an L-shaped parking area with parking spaces for 30 vehicles, and a double ramp on the eastern edge of the property.

##### Description of Project Area

Low-lying, at elevations from 3 to 5 feet above normal lake level. The area was previously under cultivation, and was also used as a disposal site for dredge spoil from a small harbor. It is currently covered with tall weeds and grasses, except along the eastern edge (adjacent to the bay) which is sparsely wooded.

##### Records Review

Previous surveys: numerous site inventories around Lake Minnetonka; no evidence of formal survey within the project area itself.

Recorded sites in vicinity: 21HE61, Baker Mound Group, 1 mile east of the project area; unnumbered find spot (lithic scatter) 1 mile west of the project area.

##### Field Review

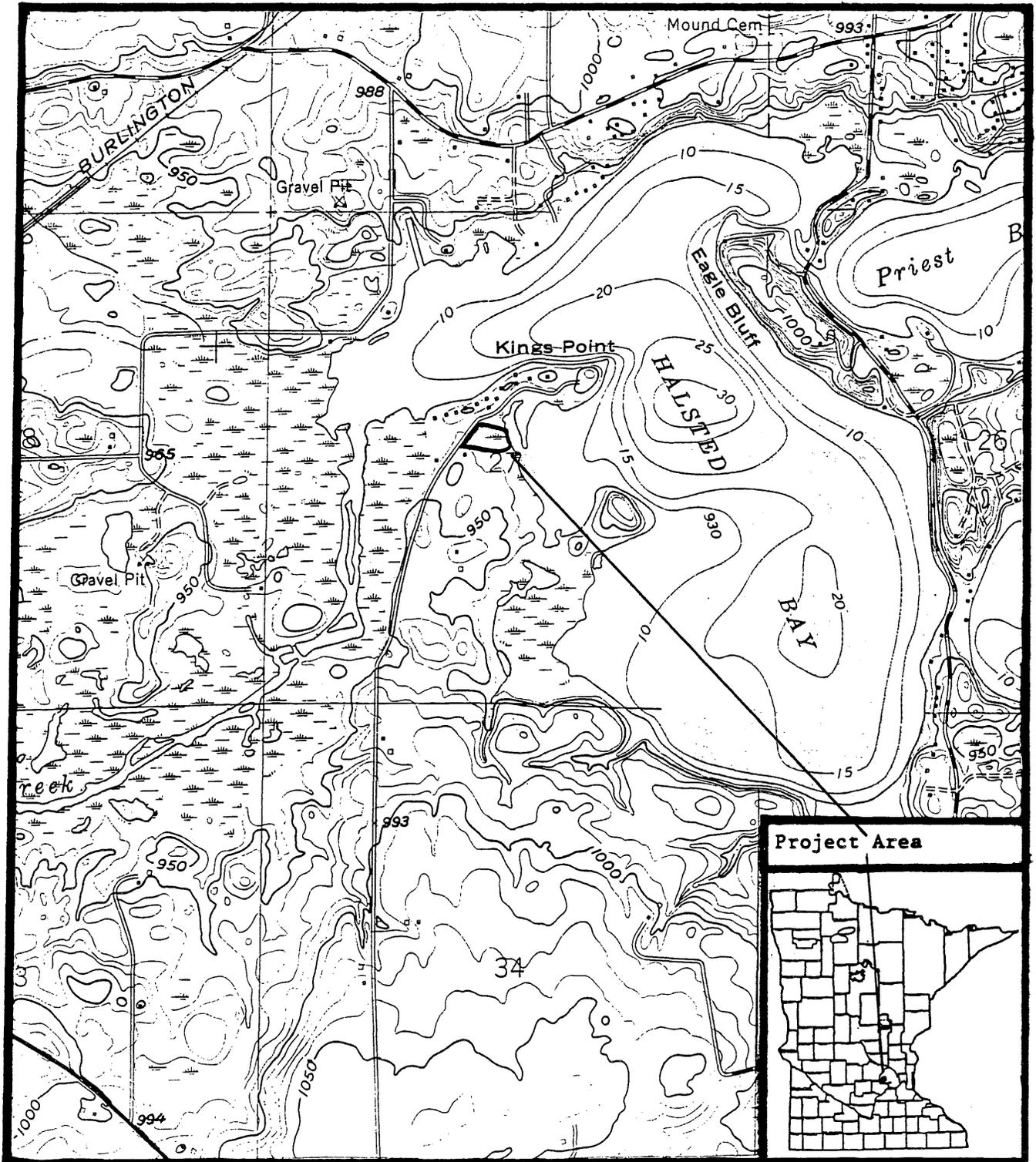
Methods: surface reconnaissance, 9 shovel tests.

Results: No cultural materials were found on surface or in shovel tests. Several indications of past disturbance were noted during survey, including a layer of gravel (crushed limestone) between 6 and 10 cm below surface close to the lakeshore, and evidence of past cultivation in shovel tests from the lakeshore south to the property line. Old lakebed sediments were present in all shovel test locations at depths ranging from 27 to 44 cm below surface.

##### Project Status

It appeared that the proposed development would not affect any historic or prehistoric resources. A recommendation was made that work proceed with no additional review; SHPO concurred (Ref. #Z-270).

Figure 5. Halstead's Bay/Lake Minnetonka Project Area



USGS Mound Quadrangle, 1958, 7.5' series  
(enlarged x 1.42 - approximately 1:17,000)

## Wright County

Ramsey Lake

## Location

Sec. 18, T. 120N, R. 26W; SE 1/4, SE 1/4, SE 1/4, NE 1/4; Maple Lake Township. Located on the east shore of the lake, adjacent to County Road 8, about 2 miles south of Maple Lake, MN (see Figure 6).

## Geomorphic Region

Waconia-Waseca Moraine (Minnesota Soil Atlas Project, Stillwater sheet).

## Scope of Project

Acquisition of property for development of a new Public Water Access. No development or concept plans were available from DNR at the time of survey.

## Description of Project Area

Former site of summer cabins; standing structures (recent construction) included two cabins, a well, a fish house/shed, and a stone fireplace. The southern edge of the property is a wooded area with a slope of approximately 12%; part of the eastern edge, adjoining the county road right-of-way, is marsh. The rest of the property was covered by residential lawn with some scattered bare areas along a driveway and on the lakeshore.

## Records Review

Previous surveys: none known.

Recorded sites in vicinity: none.

## Field Review

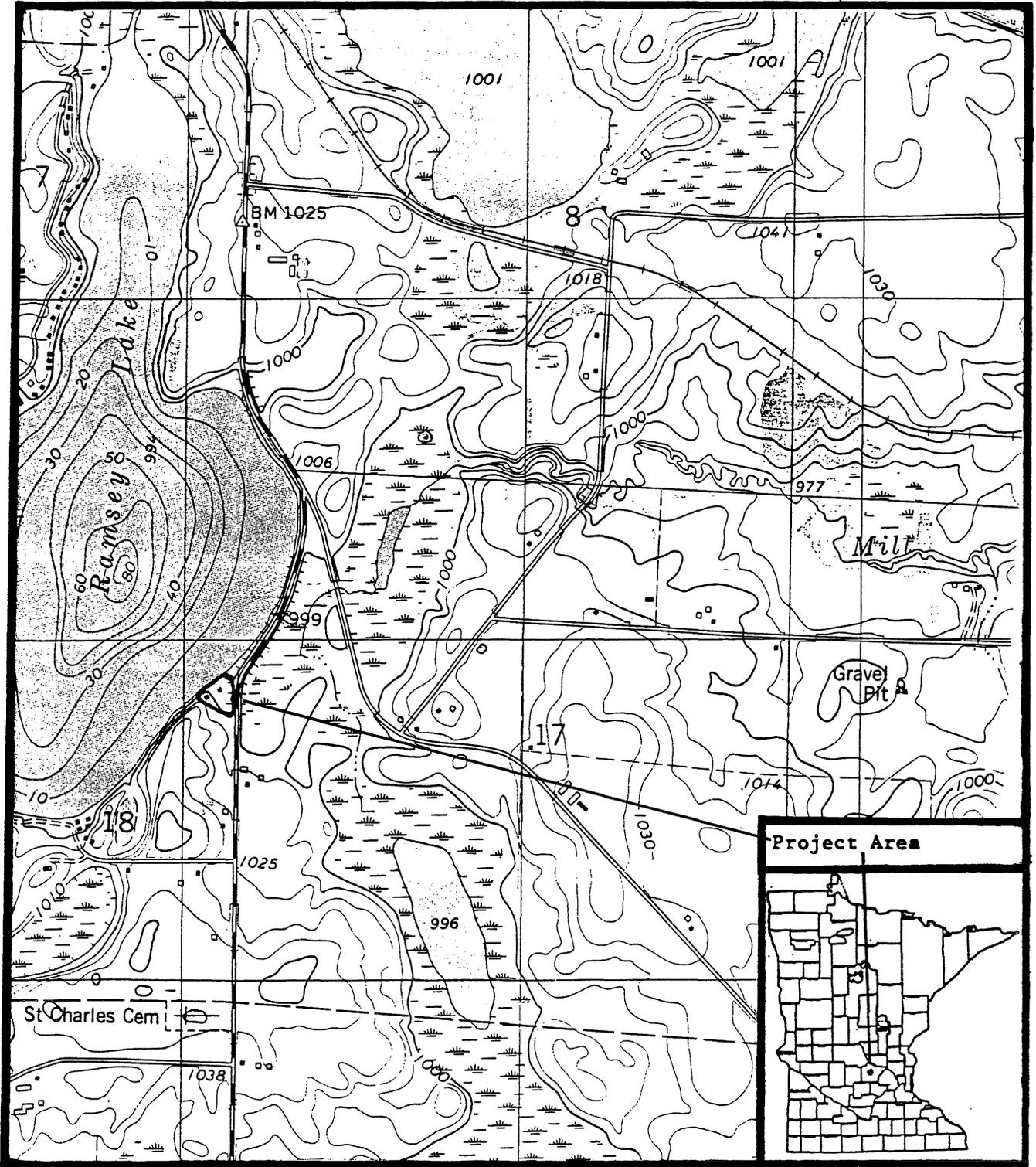
Methods: surface reconnaissance; 6 shovel tests.

Results: No cultural materials were found on surface or in shovel tests. Soils were heavy clay loams; some disturbance was apparent close to the cabins. It appears that most of the property was graded off before the existing structures were built, and the soil was used to fill part of the marshy area close to the county road.

## Project Status

The standing structures do not appear to be of any historic or architectural significance, and there is no evidence that any other cultural resources would be affected by construction. It was recommended that the project proceed with no additional review; SHPO concurred (Ref. #Z-272).

Figure 6. Ramsey Lake Project Area



USGS Buffalo West Quadrangle, 1981, 7.5' series  
(enlarged x 1.42 - approximately 1:17,000)



### III. WATER ACCESS PROGRAM DEVELOPMENT PROJECTS

#### REGION I - NORTHWEST

#### Becker County

#### Lake Sallie

##### Location

Sec. 8, T. 138N, R. 41W; SE 1/4, NW 1/4, SW 1/4, NE 1/4 & NE 1/4, SE 1/4, SW 1/4, NE 1/4; Lake View Township. Located on the north shore of the lake, 4 miles southwest of Detroit Lakes, MN (see Figure 7).

##### Geomorphic Region

Detroit Lakes Pitted Outwash Plain (Minnesota Soil Atlas Project, Bemidji Sheet).

##### Scope of Project

Rehabilitation of existing Public Water Access; work will include realignment of entry road and expansion of parking area. Most of the planned work will require placement of fill.

##### Description of Project Area

The existing Public Water Access is on land owned by DNR Division of Fisheries as part of a large fish hatching station. In-place improvements consist of a gravel-surfaced parking area and road loop adjacent to a township road that runs along the north shore of the lake. A small, north-south trending ridge has been bisected by the township road; the southern tip of the ridge lies within the road loop. The ridge is sparsely wooded, bordered on the east by hatching ponds and on the north and west by marsh.

##### Records Review

Previous surveys: Lucking 1977 (Otter Tail County Historical Society); Thompson 1979 (Moorhead State University); Michlovic 1983 (Moorhead State University).

Recorded sites in vicinity: 21BK3 - 1 mile north of project area; single mound recorded by Lewis/Winchell. 21BK32 - 1/4 mile east of project area; Woodland; recorded by Thompson, Moorhead State University, 1983; artifacts found in disturbed area near picnic shelter in County Park. 21BK33 - located within the Public Water Access on the north shore of Lake Sallie; recorded by Thompson in 1979 on the basis of surface materials (lithics and ceramics); no subsurface testing.

##### Field Review

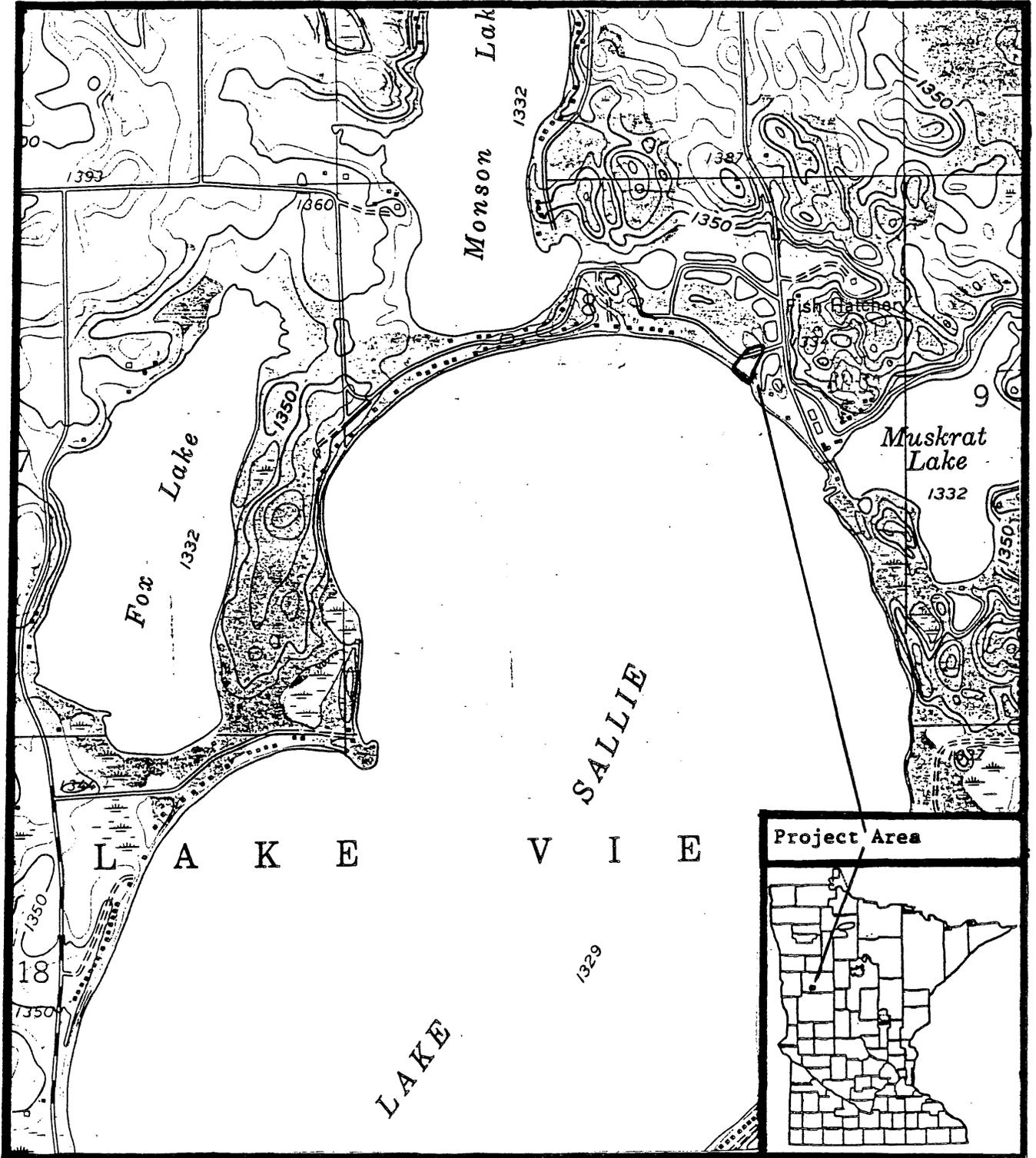
Methods: surface reconnaissance.

Results: Lithic and ceramic artifacts were found on the surface of the ridge and in the road cut that bisects the ridge (see Figure 8):

Surface, north of road: 1 tooth fragment (deer)

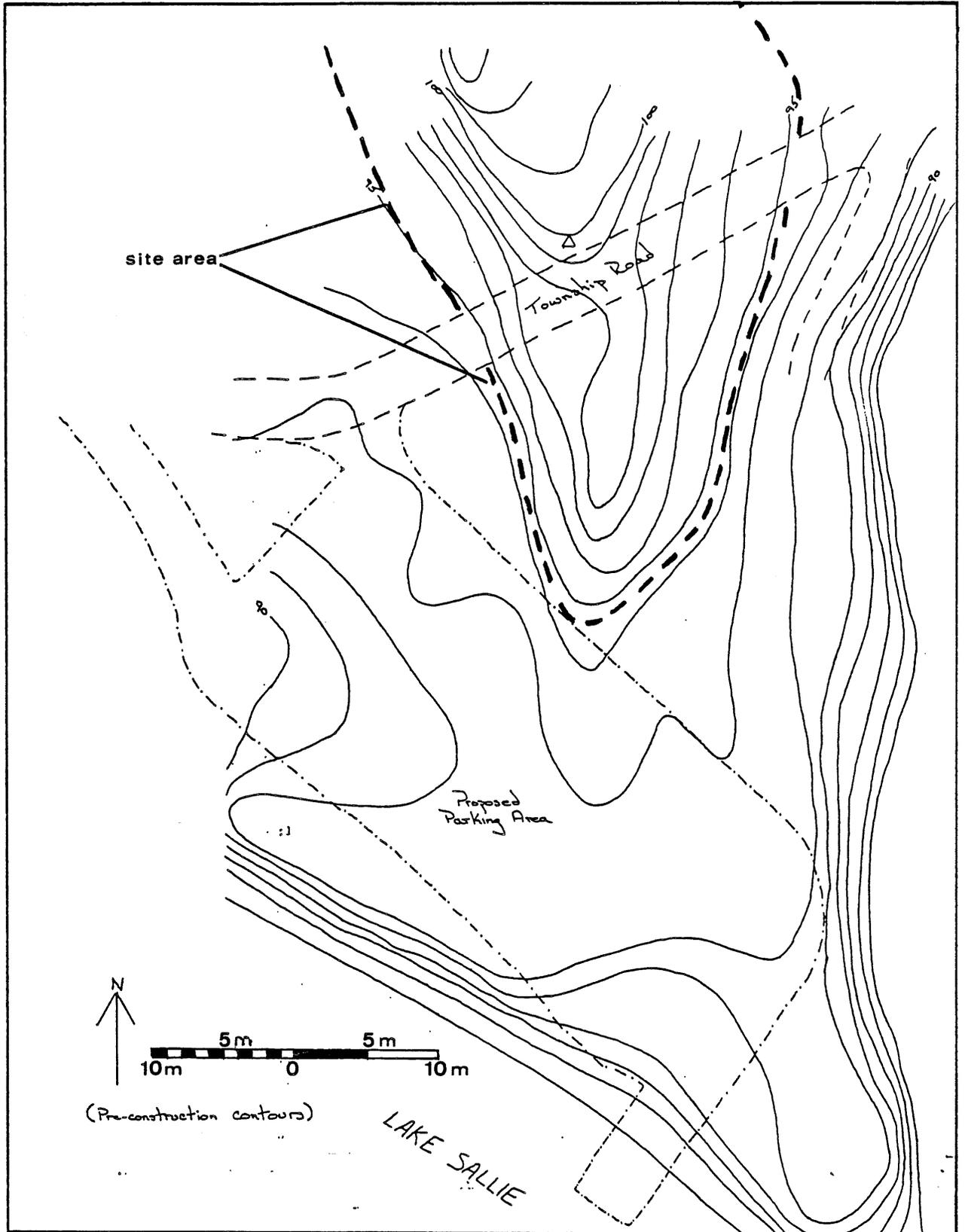
- 1 grit-tempered rim sherd - tool-impressed lip, punctate (Sandy Lake?)
- 3 grit-tempered body sherds, cord-roughened
- 1 grit-tempered body sherd, exfoliated
- 2 bone fragments (1 charred)
- 3 secondary flakes, quartzite
- 1 primary flake, flint
- 3 secondary flakes, quartz
- 1 tertiary flake, chert
- 1 tertiary flake, quartz

Figure 7. Lake Sallie Project Area



USGS Audobon Quadrangle, 1959, 7.5' series  
(enlarged x 1.42 - approximately 1:17,000)

Figure 8. 21BK33 (Lake Sallie) - Site Area



Surface, south of road: 1 grit-tempered body sherd, smooth  
 1 ceramic crumb  
 1 bone fragment  
 1 quartzite fragment  
 1 tool fragment, quartz  
 1 secondary flake, jasper

The remainder of the project area was severely disturbed by construction of the existing access parking lot and road, the township road, and DNR-Fisheries hatching ponds that are adjacent to the ridge.

#### Project Status

Consultations were held with Region I Engineering personnel regarding complete avoidance of the site area during construction, and an agreement was reached that the planned rehabilitation could be done without affecting the site area proper. Final plans for the construction show the ridge as an "archaeologically sensitive area", and specify construction limits that will protect the site from any further damage. Recommendation was made that the project proceed as planned under these conditions; the recommendation is presently being reviewed by SHPO.

## Beltrami County

### Grace Lake

#### Location

Sec. 32, T. 146N, R. 32W; SW 1/4, SW 1/4, SE 1/4, SE 1/4; Frohn Township. Located on the west shore of the lake, 4 miles east-southeast of Bemidji, MN (see Figure 9).

#### Geomorphic Region

Guthrie Till Plain (Minnesota Soil Atlas Project, Bemidji Sheet).

#### Scope of Project

Construction of a new Public Water Access; facilities will include gravel entry road, 16-unit parking area and concrete plank ramp. Construction will be at or near existing grade.

#### Description of Project Area

Level, low-lying former cabin site. All structures had been demolished prior to survey; concrete block and slab foundations remained in place. The entire property was overgrown with grasses and forbs, with some reeds and marsh grasses along the lakeshore.

#### Records Review

Previous surveys: none.

Recorded sites in vicinity: none.

#### Field Survey

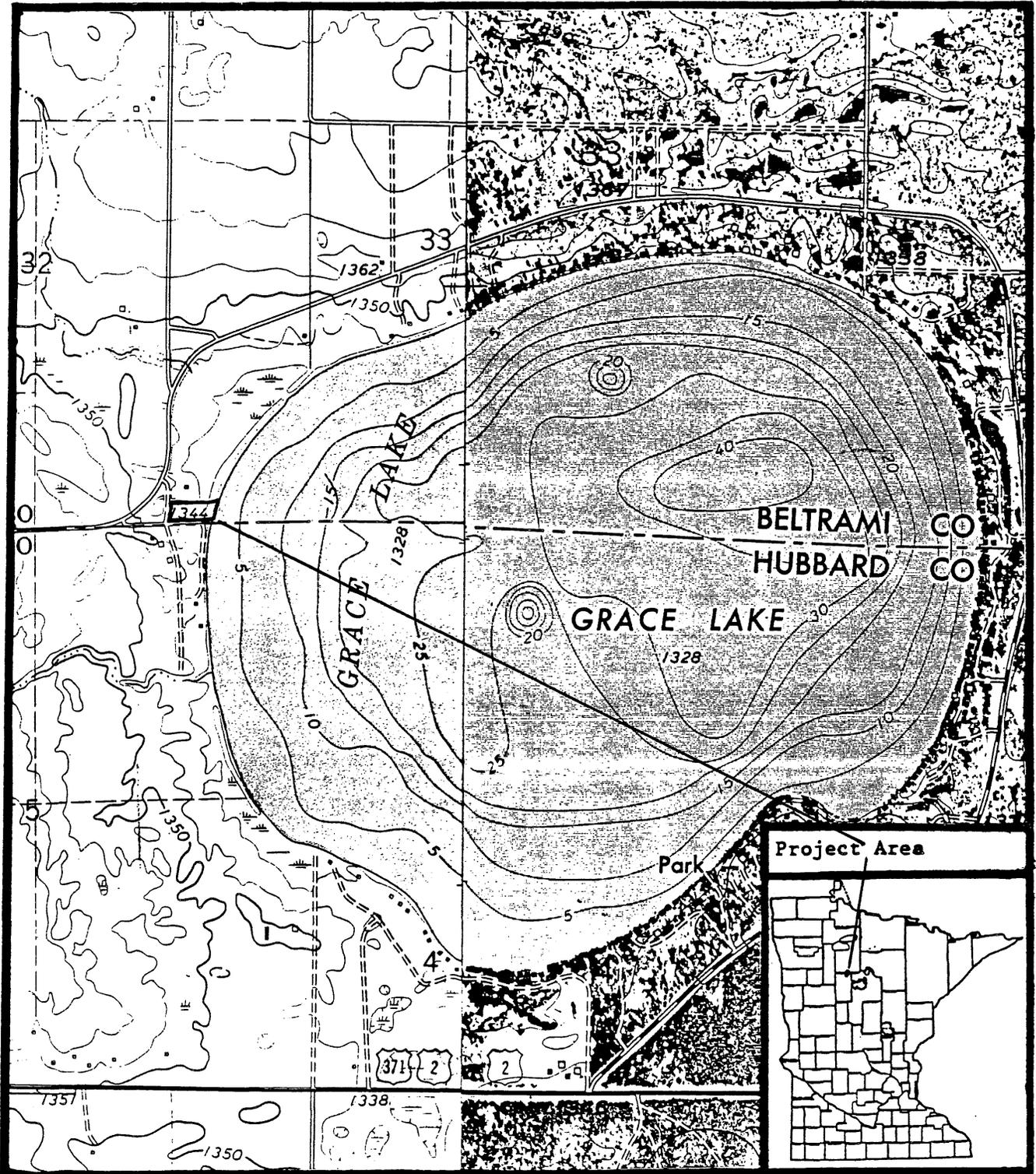
Methods: 13 shovel tests.

Results: No cultural materials were found; soils were predominantly sandy loams over coarse sand beach sediments and till. Some areas of silty clay fill were noted close to the cabin foundation; additional disturbance appears to have resulted from well and septic system excavations in that vicinity.

#### Project Status

It was recommended that construction proceed as planned with no further review; SHPO concurred with this recommendation (SHPO Ref. #DD-240).

Figure 9. Grace Lake Project Area



USGS Bemidji East Quadrangle, 1968 & Andrusia Lake Quadrangle, 1972, 7.5' series (enlarged x 1.42 - approximately 1:17,000)

## Douglas County

Lake Geneva/West

## Location

Sec. 9, T. 128N, R. 37W; SE 1/4, SW 1/4, NE 1/4, NE 1/4; Alexandria Township. Located on the northwest shore of the lake, on a narrow spit between Lake Geneva and Lake Le Homme Dieu, about 1.5 miles northeast of Alexandria, MN (see Figure 10).

## Geomorphic Region

Park Rapids-Staples Outwash Plain; Osakis Till Plain adjoins to west. (Minnesota Soil Atlas Project, Brainerd Sheet).

## Scope of Project

Construction of a new Public Water Access (Parcel A) and improved shore-fishing access (Parcel B); facilities will include bituminous entry road and 16-unit parking area on fill in Parcel A; upgraded gravel entry road and 7-unit parking area at existing grade in Parcel B.

## Description of Project Area

Parcel B includes an existing small dirt parking area for shore-fishing; the rest of the parcel is covered with tall grass and a few small trees along the lakeshore. Parcel A was the site of a summer cabin which has been demolished. Considerable amounts of recent trash and structural remnants remained on the property. The eastern edge of this area is very marshy; the entire parcel was overgrown with weeds and grasses with a few scattered fir trees.

## Records Review

Previous surveys: MN Trunk Highway Archaeological Reconnaissance Survey review of upgrade to T.H. #29 just northwest of project area (Peterson 1984); negative results.

Recorded sites in vicinity: none.

## Field Survey

Methods: surface reconnaissance, 12 shovel tests in Parcel A, 6 shovel tests in Parcel B.

Results: no cultural materials (except for recent historic debris) were found; soils in both parcels were shallow sandy loams and fill over lakebed sediments. Soil profiles were quite variable in both areas, suggesting considerable recent disturbance.

## Project Status

It appeared that the proposed development would not affect any historic or prehistoric resources. A recommendation was made that work proceed with no additional review; SHPO concurred (Ref. #DD-245).

## Hubbard County

Blue Lake

## Location

Sec. 20, T. 141N, R. 34W; NW 1/4, NE 1/4, NW 1/4, NE 1/4; Lake Emma Township. Located on the west shore of the lake, about 7 miles northeast of Park Rapids, MN (see Figure 11).

## Geomorphic Region

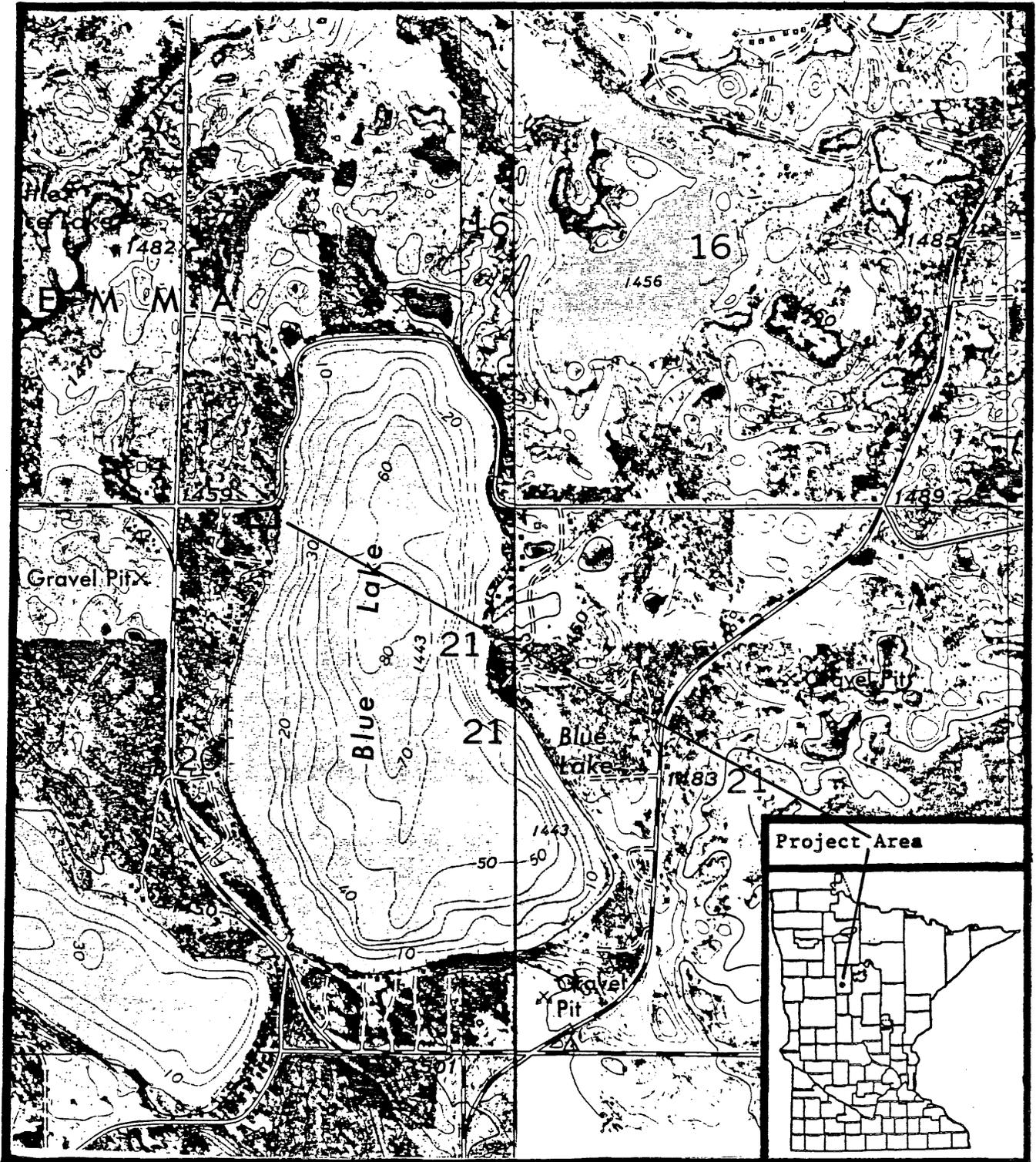
Park Rapids-Staples Outwash Plain (Minnesota Soil Atlas Project, Bemidji Sheet).

## Scope of Project

Construction of new Public Water Access; facilities will include gravel entry road and 14-unit parking area; concrete plank ramp. Project will require some cut and fill.



Figure 11. Blue Lake Project Area



USGS Skunk Lake Quadrangle, 1972 & Mantrap Lake Quadrangle, 1972, 7.5' series (enlarged x 1.42 - approximately 1:17,000)

#### Description of Project Area

Former site of summer cabin. The entire parcel is low-lying, except for a remnant ice ridge about 2 meters high that runs along the western property boundary. The old cabin had been demolished, but a concrete block foundation and slab remained. The ice ridge was wooded; the rest of the property was residential lawn.

#### Records Review

Previous surveys: none known.  
Recorded sites in vicinity: none.

#### Field Review

Methods: surface reconnaissance, 10 shovel tests.  
Results: No cultural materials were found on surface or in shovel tests. Soils were sandy loams over clean sand; one area of fill was noted near the former cabin location. The ice ridge exhibited a well-developed, intact profile of very sandy loam developed under forest vegetation.

#### Project Status

It appeared that the proposed development would not affect any historic or prehistoric resources. A recommendation was made that work proceed with no additional review; SHPO concurred (Ref. #DD-234).

### Otter Tail County

#### Lake Franklin

#### Location

Sec. 22, T. 137N, R. 42W; NW 1/4, SW 1/4, SE 1/4, SW 1/4; Dunn Township. Located on the north shore of the lake, 2 miles east-southeast of Dunvilla, MN (see Figure 12).

#### Geomorphic Region

Alexandria Moraine Complex (Minnesota Soil Atlas Project, Bemidji Sheet).

#### Scope of Project

Rehabilitation of existing Public Water Access; work will include construction of new entry road, upgrade of grassed parking area and placement of concrete plank ramp. Most of the work will be done at or above existing grade.

#### Description of Project Area

Existing unimproved access facilities consist of a dirt entry road and concrete ramp. A grassy sideslope on the western side of the property has been maintained by DNR as a parking area.

#### Records Review

Previous surveys: none known.  
Recorded sites in vicinity: none.

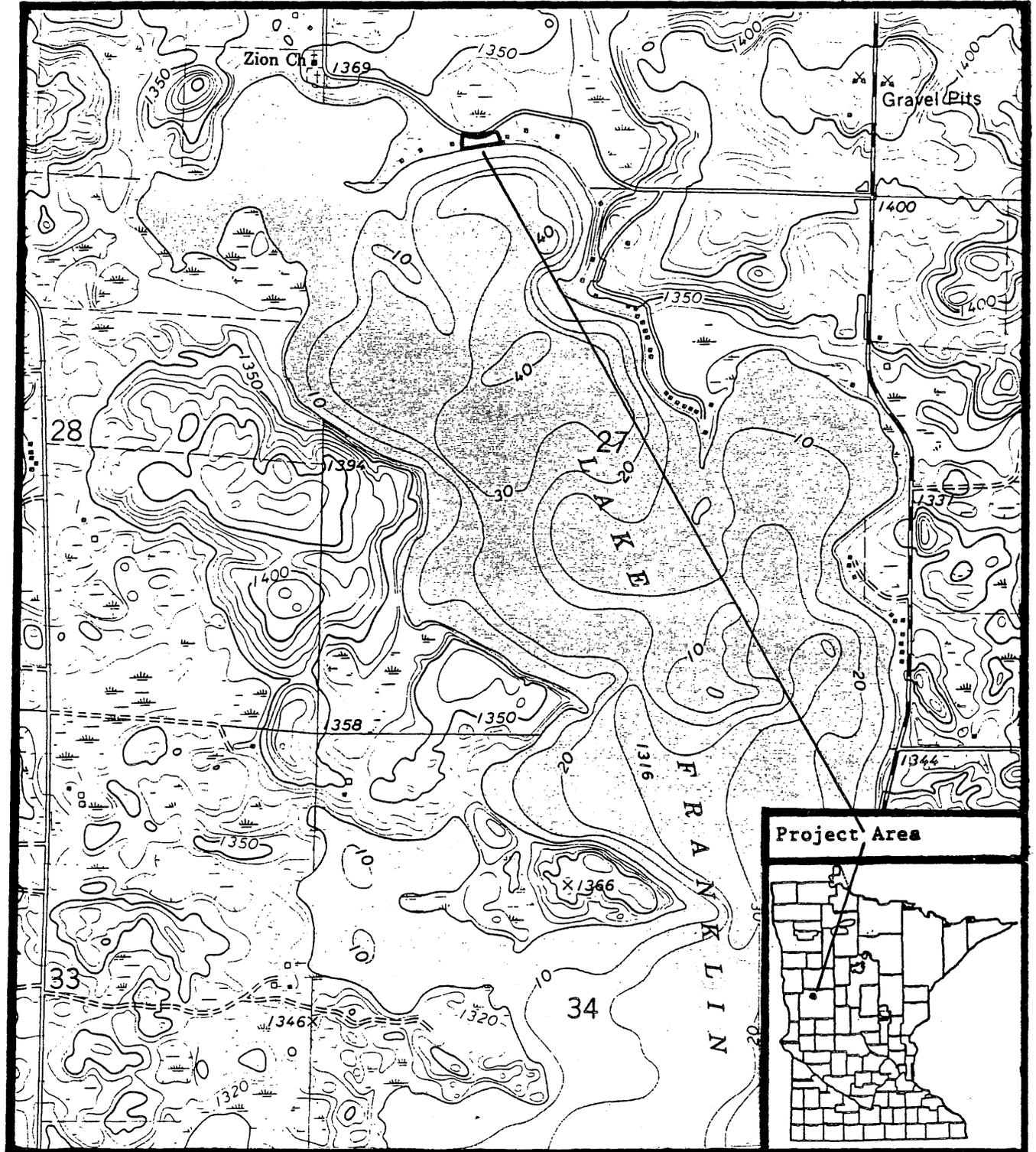
#### Field Review

Methods: surface reconnaissance; 12 shovel tests.  
Results: No cultural materials were found. A very shallow A horizon was noted in the existing parking area, probably due to leveling and downslope erosion. Close to the ramp location, soils appeared to have developed under wet conditions. It is probable that this area was part of a marsh that lies just north of the township road until road construction cut off drainage in that direction.

#### Project Status

It appeared that the proposed development would not affect any historic or prehistoric resources. A recommendation was made that work proceed with no additional review; SHPO concurred (Ref. #DD-249).

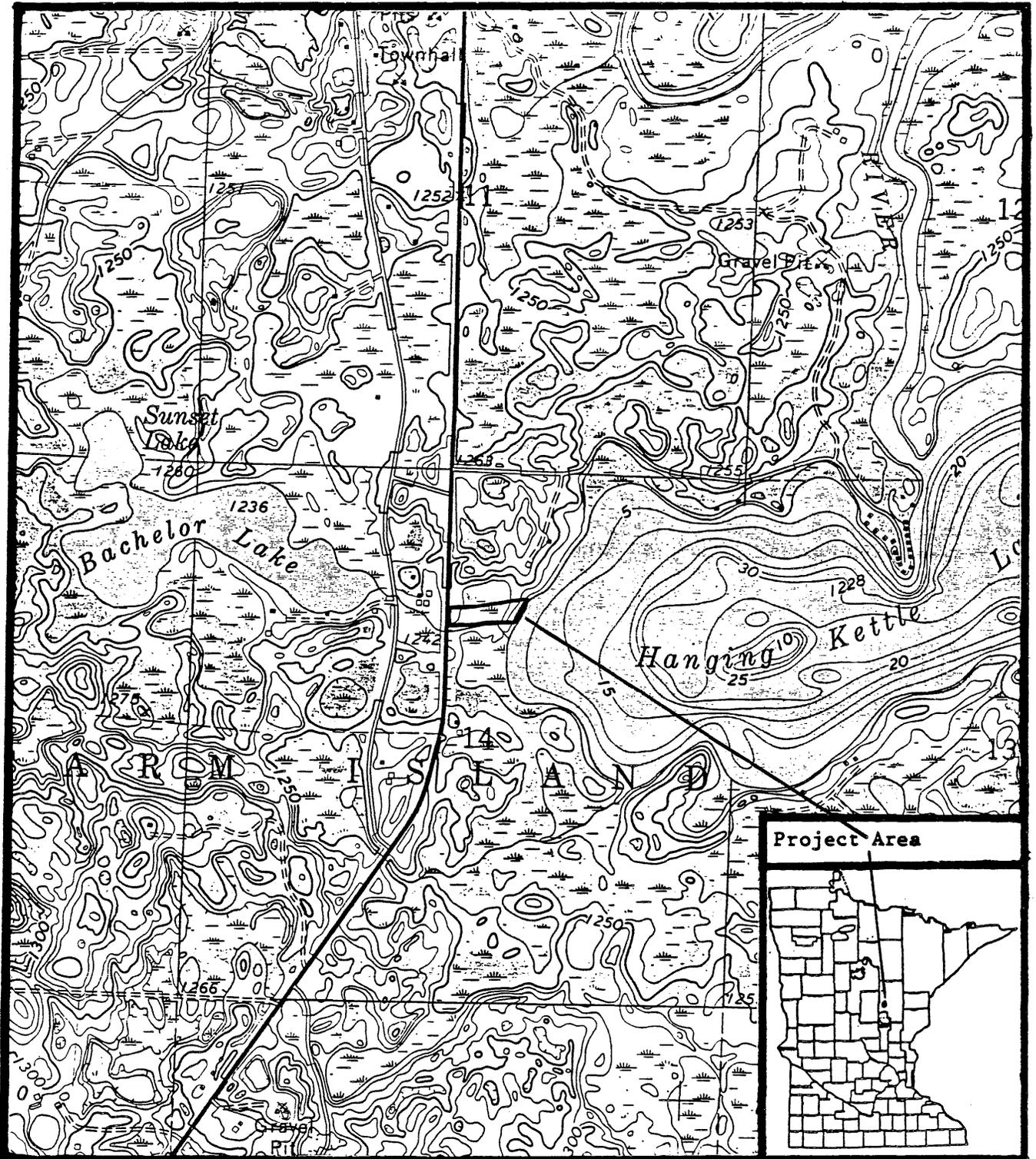
Figure 12. Lake Franklin Project Area



USGS Lake Franklin Quadrangle, 1973, 7.5' series  
(enlarged x 1.42 - approximately 1:17,000)

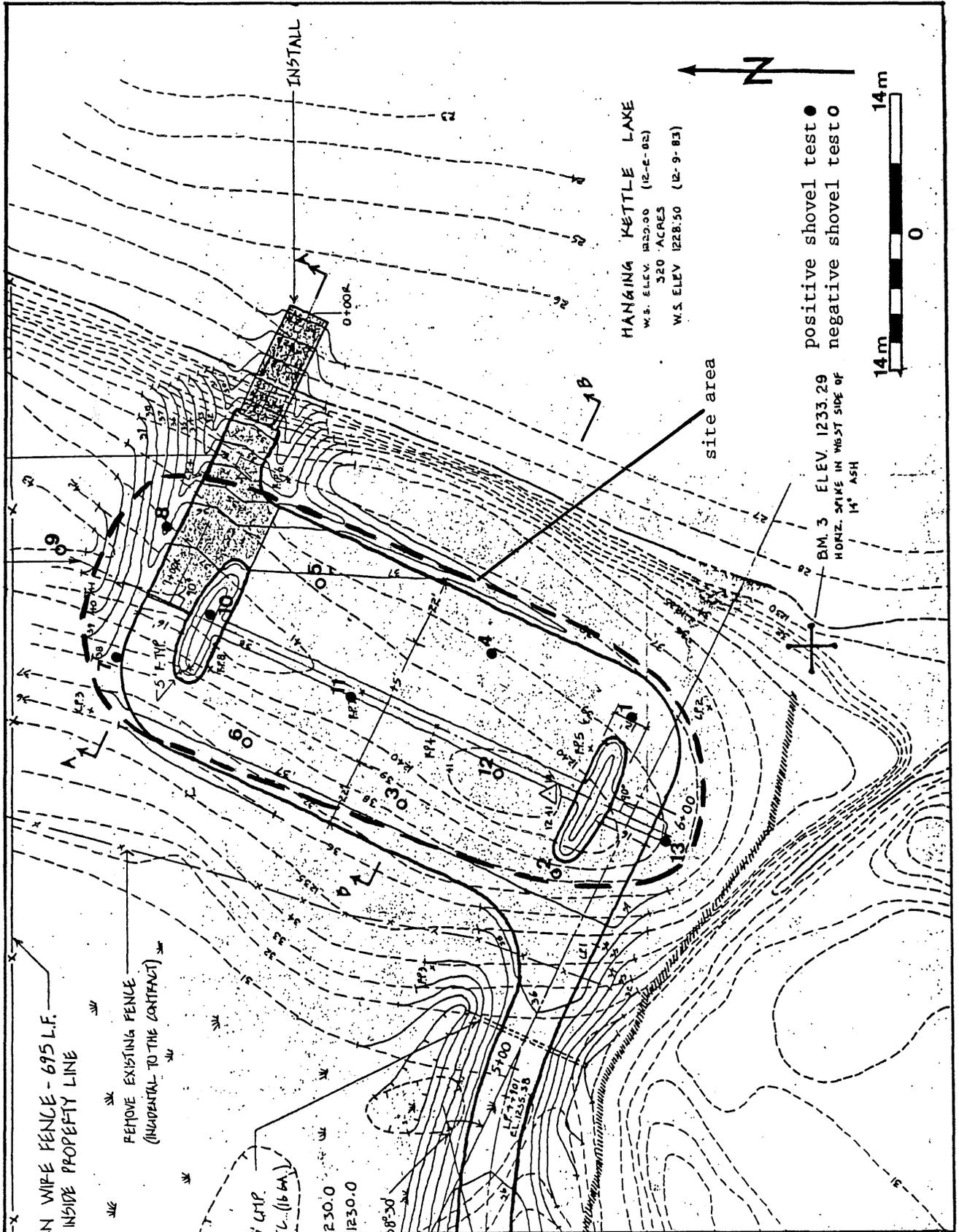


Figure 13. Hanging Kettle Lake Project Area



USGS Spirit Lake Quadrangle, 1973, 7.5' series  
(enlarged x 1.42 - approximately 1:17,000)

Figure 14. 21AK-9001 (Hanging Kettle Lake) - Site Area



## Itasca County

Sucker Lake**Location**

Sec. 33, T. 57N, R. 23W; NW 1/4, NE 1/4, NW 1/4, SE 1/4; Nashwauk Township. Located on the south shore of the lake, 5 miles west of Nashwauk, MN (see Figure 15).

**Geomorphic Region**

Nashwauk-Warba Moraine (Minnesota Soil Atlas Project, Hibbing Sheet).

**Scope of Project**

Development of new Public Water Access. The property is currently in use on an informal basis as an access to Sucker Lake. DNR plans to construct a 8-unit gravel-surfaced parking area, concrete ramp and 585 meters of new entry road.

**Description of Project Area**

The project area can be divided into two parts: property on the lakeshore, presently the site of an abandoned summer cabin (circa 1950's), and a road corridor approximately 585 meters in length that will connect the cabin site to an existing township road. The cabin property was formerly maintained lawn with scattered spruce trees; a large spoil pile from harbor dredging sits along the eastern edge of the property. The new road alignment runs through mature pine forest along a narrow east-west trending ridge and then curves down across the sideslope of the ridge to connect with the abandoned cabin entry road.

**Records Review**

Previous surveys: none known.

Recorded sites in vicinity: none.

**Field review**

Methods: surface reconnaissance; 42 shovel tests.

Results: Other than recent debris, no cultural materials were found on surface or in any shovel tests. Soils in the cabin area were shallow sandy clays over dense clay and glacial till; some recent debris was found within 10 cm of the surface near the cabin. Along the new road alignment, soils were shallow sandy loams over sandy clay and till.

**Project Status**

It appeared that the proposed development would not affect any historic or prehistoric resources. A recommendation was made that work proceed with no additional review; SHPO concurred (Ref. #DD-361).

## St. Louis County

Shagawa Lake**Location**

Sec. 27, T. 63N, R. 12W; SW 1/4, SW 1/4, NE 1/4, NW 1/4 & NW 1/4, NW 1/4, SE 1/4, NW 1/4; City of Ely. Located on the west side of Sandy Point, a bedrock ridge that extends northward from the south shore of Shagawa Lake, about 1 mile north of downtown Ely (see Figure 16).

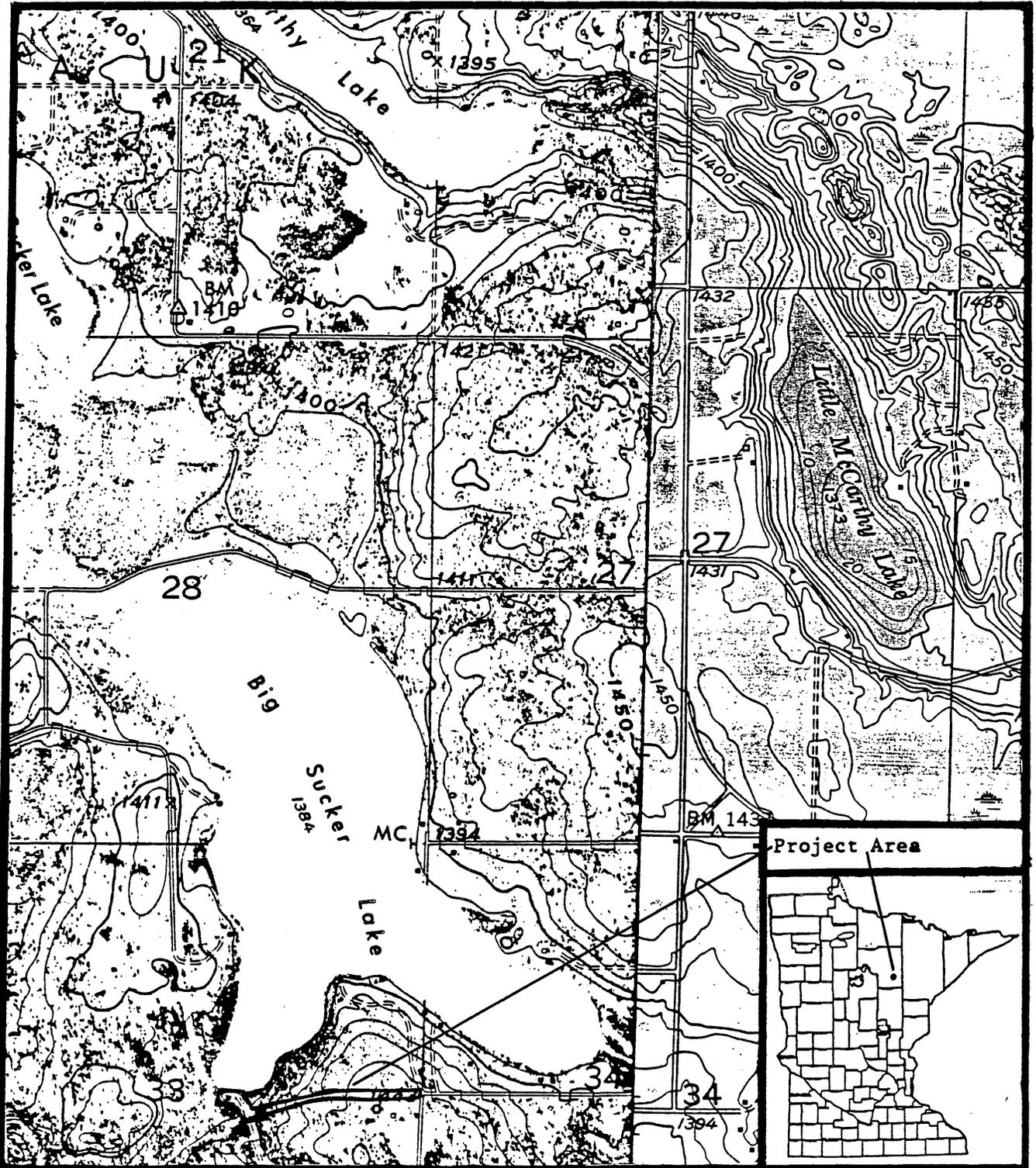
**Geomorphic Region**

Tower-Ely Glacial Drift & Bedrock Complex (Minnesota Soil Atlas Project, Two Harbors Sheet).

**Scope of Project**

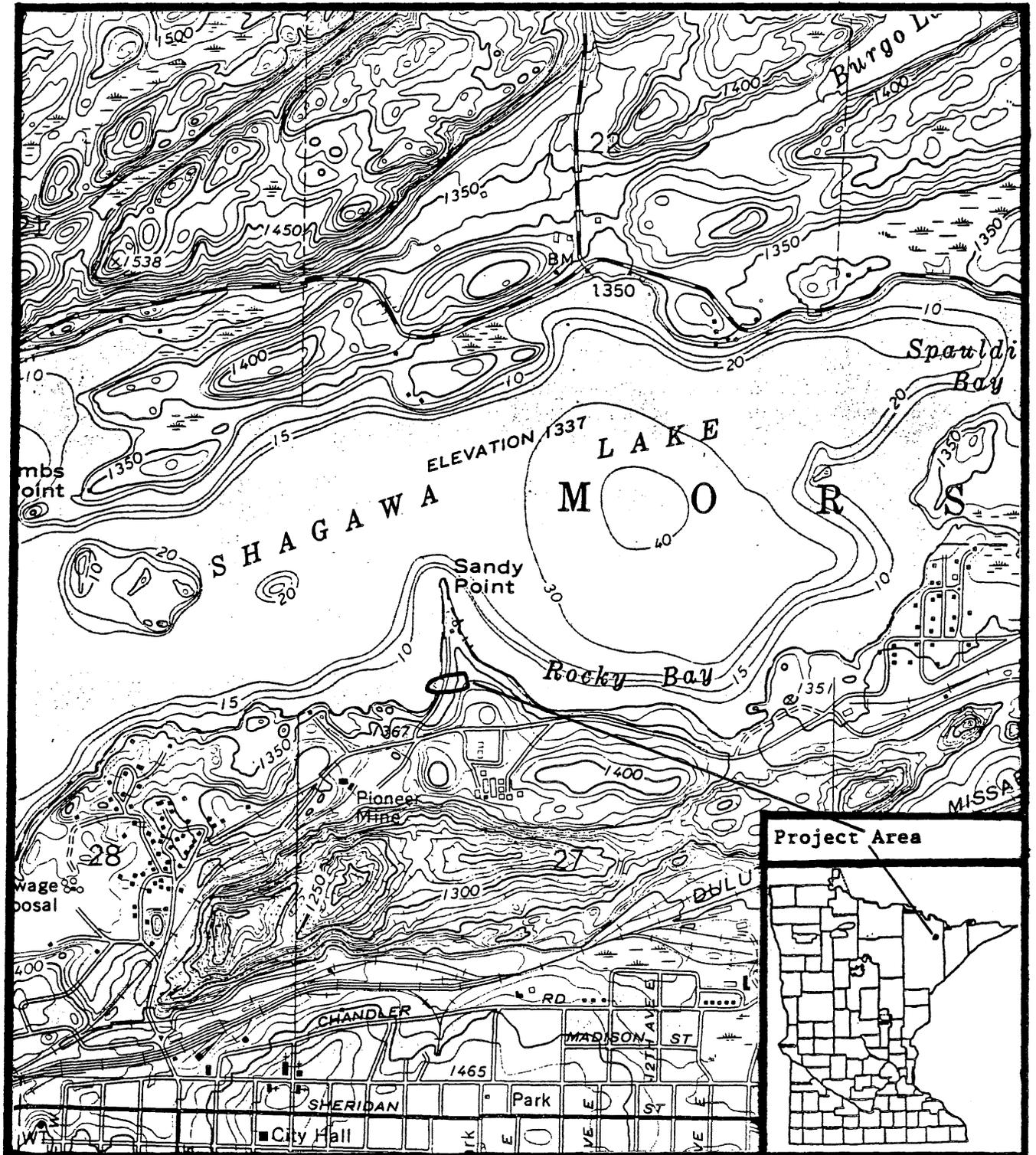
Development of new Public Water Access. Development plans call for construction of a gravel-surfaced entry road, 25-unit parking area and concrete ramp.

Figure 15. Sucker Lake Project Area



USGS Lawrence Lake East Quadrangle, 1971 & Nashauk Quadrangle, 1969, 7.5' series (enlarged x 1.42 - approximately 1:17,000)

Figure 16. Shagawa Lake Project Area



USGS Ely Quadrangle, 1965, 7.5' series  
(enlarged x 1.42 - approximately 1:17,000)

### Description of Project Area

Sandy Point is a narrow ridge of bedrock covered with a sparse growth of tamarack and birch trees. It has been used in the past as a park and picnic grounds and, most recently, as the site of a commercial seaplane base. The property that DNR is developing lies on the western side of the point, and consists of bedrock outcrops, and a concave swale area to the east of the existing access road, which has cut off drainage to the lake.

#### Records Review

Previous surveys: U.S. Forest Service survey of seaplane landing strip, 1/2 mile west of project area, negative results.

Recorded sites in vicinity: none.

#### Field review

Methods: surface reconnaissance, 6 shovel tests.

Results: No cultural materials were found on surface or in shovel tests. At the time of survey, the contractor had already cleared the parking area, which had caused considerable disruption of soil strata in the swale. Surface visibility was excellent in this area; it was examined at a 10-meter transect interval, as were the bedrock surface and lakeshore at the proposed ramp location. In addition, 6 shovel tests were done down the center of the proposed parking area. Soils were very mucky silt and clay loams, and appeared to be mostly slopewash sediments over bedrock.

#### Project Status

It appeared that the proposed development would not affect any historic or prehistoric resources. A recommendation was made that work proceed with no additional review; SHPO concurred (Ref. #AA-924).

## White Iron Lake

### Location

Sec. 31, T. 63N, R. 11W; SW 1/4, NE 1/4, NE 1/4, SW 1/4. Located on the northwest shore of the lake, about 2 miles east-southeast of Ely, MN (see Figure 17).

### Geomorphic Region

Tower-Ely Glacial Drift & Bedrock Complex (Minnesota Soil Atlas Project, Two Harbors Sheet).

### Description of Project Area

The project area is an existing unimproved access, consisting of a small rock breakwater, concrete ramp and dirt parking area adjacent to a township road. The property to the west of the road is mostly bedrock outcrop bordered by marsh.

### Scope of Project

Rehabilitation and expansion of existing Public Water Access; work will include construction of a new parking area and ramp replacement. Plans for upgrading the access call for ramp replacement and construction of a small parking area west of the road. In order to reduce the cost of removing bedrock outcrops, the parking lot will be built into a wooded sideslope and on fill over a marshy area that borders a small stream.

#### Records Review

Previous surveys: U.S. Forest Service cultural resource inventory of Superior National Forest holdings.

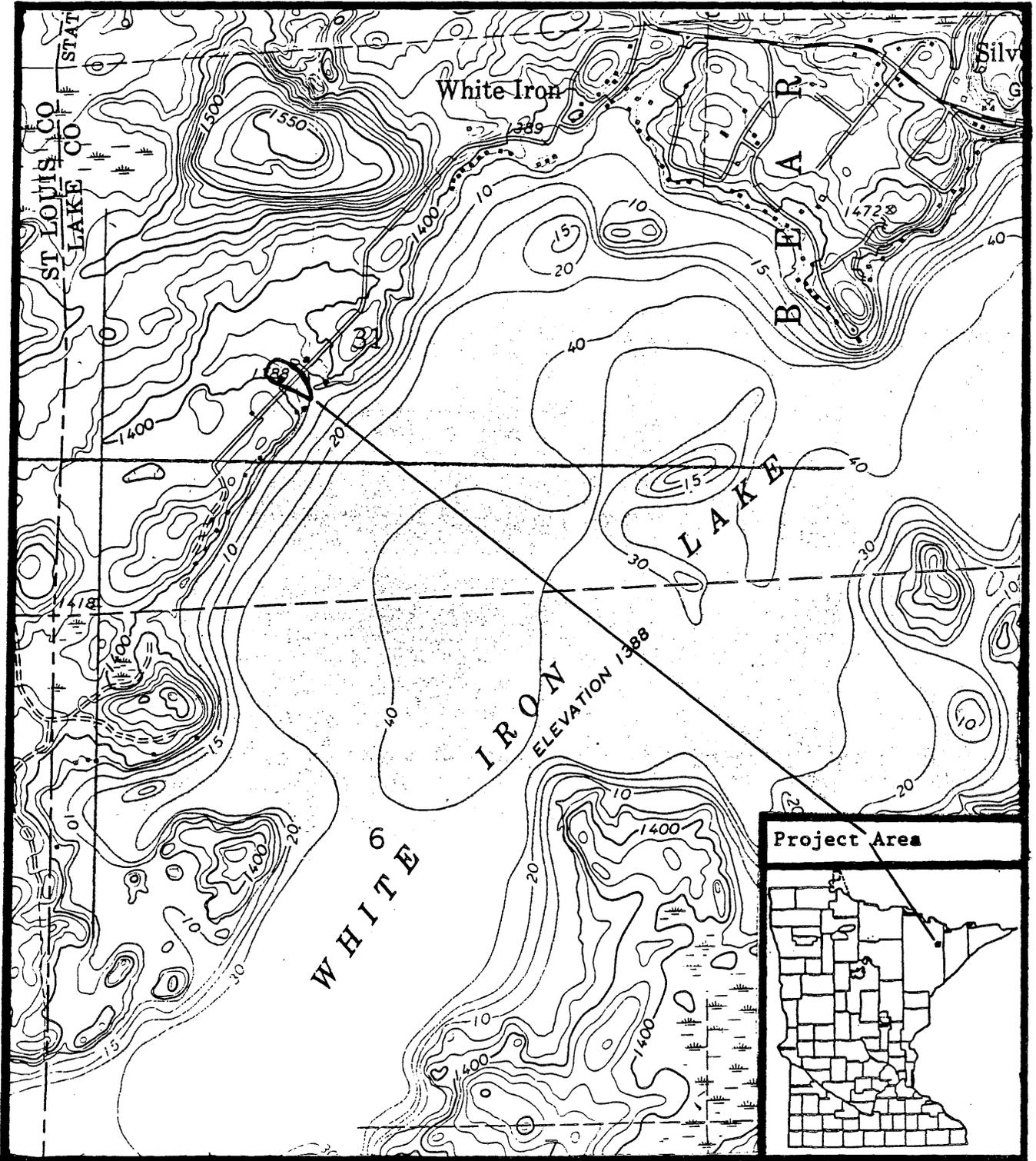
Recorded sites in vicinity: possible Archaic site (unnumbered) on an island in Fall Lake, about 4 miles north of the project area; located by U.S. Forest Service Archaeologist.

#### Field review

Methods: surface reconnaissance, soil probes, 4 shovel tests.

Results: No cultural materials were found on surface or in shovel tests. Shovel test placement was determined by the location of bedrock exposures that comprise most of the southern half of the proposed new parking area. A soil probe

Figure 17. White Iron Lake Project Area



USGS Ely Quadrangle, 1965, 7.5' series  
(enlarged x 1.42 - approximately 1:17,000)

was used to check soil depth at approximately a 10-meter interval over the entire upper part of the construction area. Nowhere was there more than about 7 cm of soil above the bedrock. In all shovel tests, soil profiles were very poorly developed and consisted mostly of moss and other organic material.

#### Project Status

It appeared that the proposed development would not affect any historic or prehistoric resources. A recommendation was made that work proceed with no additional review; SHPO is currently reviewing this recommendation.

### REGION III - CENTRAL

#### Cass County

#### Boy Lake

##### Location

Sec. 25, T. 142N, R. 28W; SE 1/4, SE 1/4, NE 1/4, SE 1/4 and NE 1/4, NE 1/4, SE 1/4, SE 1/4; Boy Lake Township. Located on the west shore of the lake, about 7 miles northeast of Longville, MN (see Figure 18). (Note: this property is within the boundaries of the Leech Lake Indian Reservation. Field review was done under the terms of Reservation Archaeological Permit #86-1.)

##### Geomorphic Region

Sugar Hills Moraine Complex; adjoins Swatara Plain to west and Itasca Moraine Complex to south (Minnesota Soil Atlas Project, Bemidji Sheet).

##### Scope of Project

Development of new Public Water Access; although no construction plans have been drawn yet, a regional concept plan indicates that facilities will include a gravel entry road, 8-unit parking area and concrete plank ramp. Construction will probably be done at or above existing grade.

##### Description of Project Area

The property was formerly the site of a small summer resort; a lodge building, which burnt down in 1981 and several other small structures stood on a low terrace close to the lakeshore. The western half of the property is a slightly higher (c. 1 meter) level terrace. At the time of survey, the entire property was covered with a dense growth of grasses and weeds.

##### Records Review

Previous surveys: U.S. Forest Service inventory of Chippewa National Forest properties.

Recorded sites in vicinity: USFS #03050198, Jasmer School, 1916, 1 mile south of project area.

##### Field Review

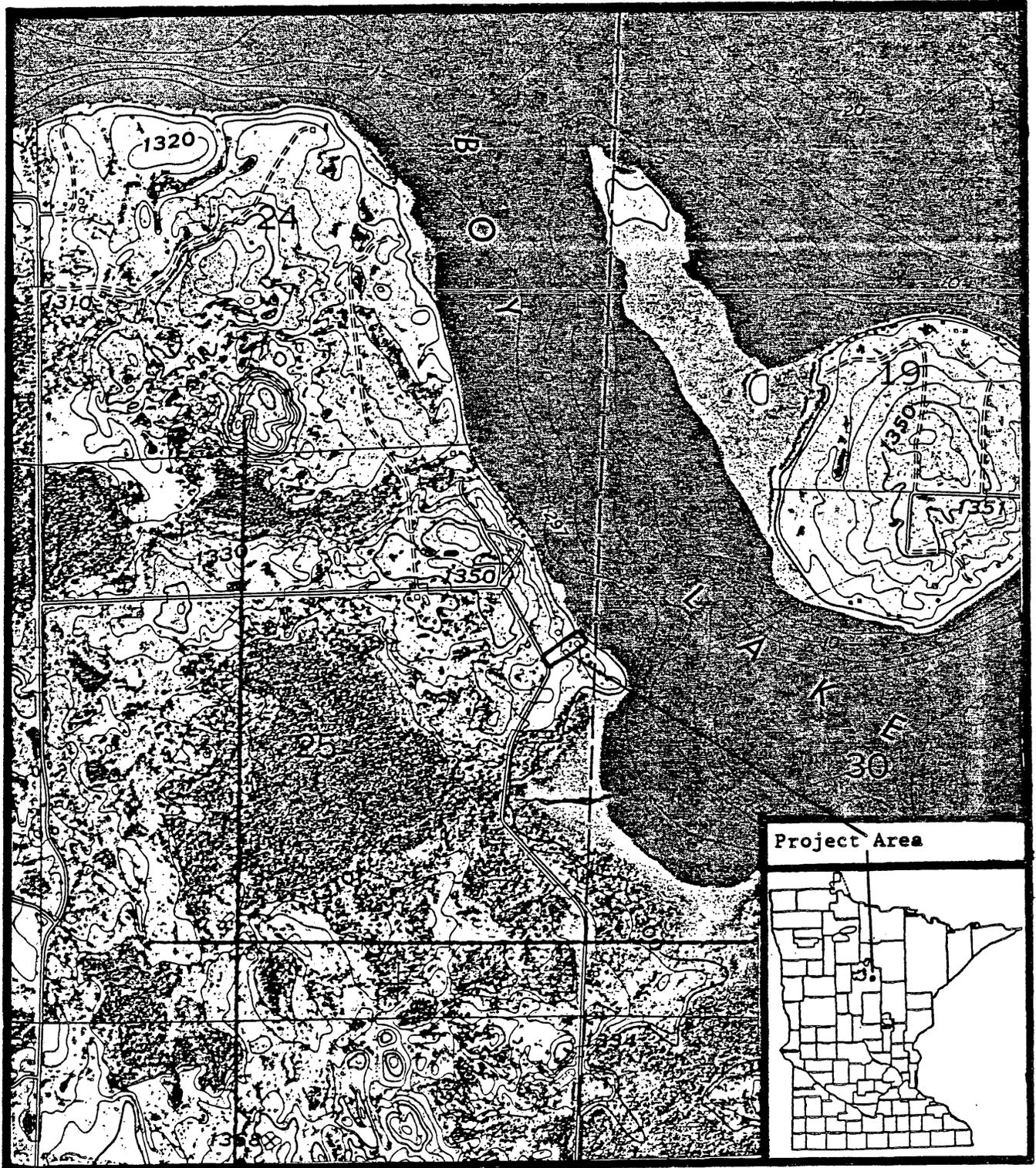
Methods: 18 shovel tests.

Results: no cultural materials were found except for recent debris (glass fragments, metal scraps, roofing material, burned wood siding) in several shovel tests down to depths of 30 cm. Soils were silty clay loams over clay; recent disturbance due to construction and demolition of resort buildings that previously stood on the property was apparent in most shovel test.

##### Project Status

It appeared that the proposed development would not affect any historic or prehistoric resources. A recommendation was made that work proceed with no additional review; SHPO concurred (Ref. #DD-239).

Figure 18. Boy Lake Project Area



USGS Town Line Lake Quadrangle, 1971, 7.5' series  
(enlarged x 1.42 - approximately 1:17,000)

## Lake Inguadona

### Location

Sec. 8, T. 140N, R. 27W; N 1/2, NE 1/4, SE 1/4, NW 1/4; Trelipe Township. Located on the east shore of the lake, 7 miles east-southeast of Longville, MN (see Figure 19).

### Geomorphic Region

St. Croix Moraine Complex (Minnesota Soil Atlas Project, Bemidji Sheet).

### Scope of Project

Development of a new Public Water Access; work will include rehabilitation of an existing dirt entry road and construction of a 14-unit parking area. The parking area will be built on fill over filter fabric.

### Description of Project Area

The project area is bounded on the north and south by private property, and on the east by a township road that provides access to summer residences on the lake. The eastern part of DNR's property is an old road alignment, now partly overgrown, that runs along the crest of a long, narrow ridge bordered by steep-sided gullies. The ridge slopes down to a level, low-lying area at the lakeshore, which is covered with lowland brush and some scattered white cedar trees. A summer residence (mobile home) had previously been located on the property; recent trash apparently associated with that occupation was scattered throughout the project area. At the time of survey, at least half of the lower portion of the property was covered with standing water.

### Records Review

Previous surveys: none known.

Recorded sites in vicinity: none.

### Field Review

Methods: surface reconnaissance, 12 shovel tests.

Results: no cultural materials were found except for a small amount of recent trash on surface. Soils were very sandy loams and loamy sand along the road alignment, and appeared to have been somewhat disrupted by road construction. In the proposed parking area, the water table was encountered in shovel tests at depths of 10 cm or less below surface, under very mucky silt loams.

### Project Status

It appeared that the proposed development would not affect any historic or prehistoric resources. A recommendation was made that work proceed with no additional review; SHPO concurred (Ref. #DD-362).

## Crow Wing County

## Borden Lake

### Location

Sec. 11, T. 44N, R. 28W; center, SW 1/4, SE 1/4, NE 1/4; Garrison Township. Located on the east shore of the lake, adjacent to TH #18, 1 mile north of Garrison, MN (see Figure 20).

### Geomorphic Region

Mille Lacs Moraine Complex; Brainerd-Automba Drumlin Complex adjoins to west (Minnesota Soil Atlas Project, Brainerd Sheet).

### Scope of Project

Development of new Public Water Access. Facilities will include a new entry road, 24-unit bituminous parking area and concrete ramp. Construction will require leveling of an ice ridge along the lakeshore; the ridge will provide fill for the parking area between the lakeshore and the highway.





### Description of Project Area

The project area was the site of a summer resort when purchased by DNR; at that time, five structures stood on the property: four small cabins along the ice ridge, and a residence/office which was located in the northeastern corner of the parcel, just off TH #18. The structures were demolished after the land was purchased by the State, and gravel was brought in to bury one cabin foundation and four septic tanks. Portions of other concrete block and slab foundations, septic vents and well fittings were still visible on the property at the time of survey. The property has been used in recent years as a 'casual' carry-in access to Borden Lake, due to the presence of a small harbor that was dredged by the resort owner.

Topographically, the property can be divided into two distinct parts: a low-lying, marshy area with sandy organic soils over sandy outwash sediments and clay, which lies adjacent to the highway right-of-way, and a prominent ice ridge with a well-developed sandy loam soil over coarse glacial deposits, which immediately borders the lakeshore.

### Records Review

Previous surveys: numerous surveys of burial and habitation areas around Mille Lacs Lake, including Lewis, Brower, Wilford, MnSAS; no indication was found that the project area proper had ever been formally surveyed.

Recorded sites in vicinity: 21CW5 - Garrison Creek Mound Group; described by Winchell (1911:324) as 37 mounds north of Garrison Creek on the northwest shore of Mille Lacs Lake; sketched by Brower (1901) as extending from west shore of Mille Lacs to east shore of Borden Lake; fieldcheck by MnSAS crew in 1978 showed some mounds plowed down and others still intact in woods. 21CW9 - Scott Site; recorded by Spector, 1974 (site form specifies Section 1, but map shows site in Section 11); artifact scatter collected by local informant. Brower (1901:51) also notes that "village sites and earthworks extended [from Mille Lacs Lake] through to Borden Lake by way of Garrison Creek.....large camping grounds were maintained on the north and south shores of Borden Lake, and an extensive village was occupied at the mouth of Garrison Creek".

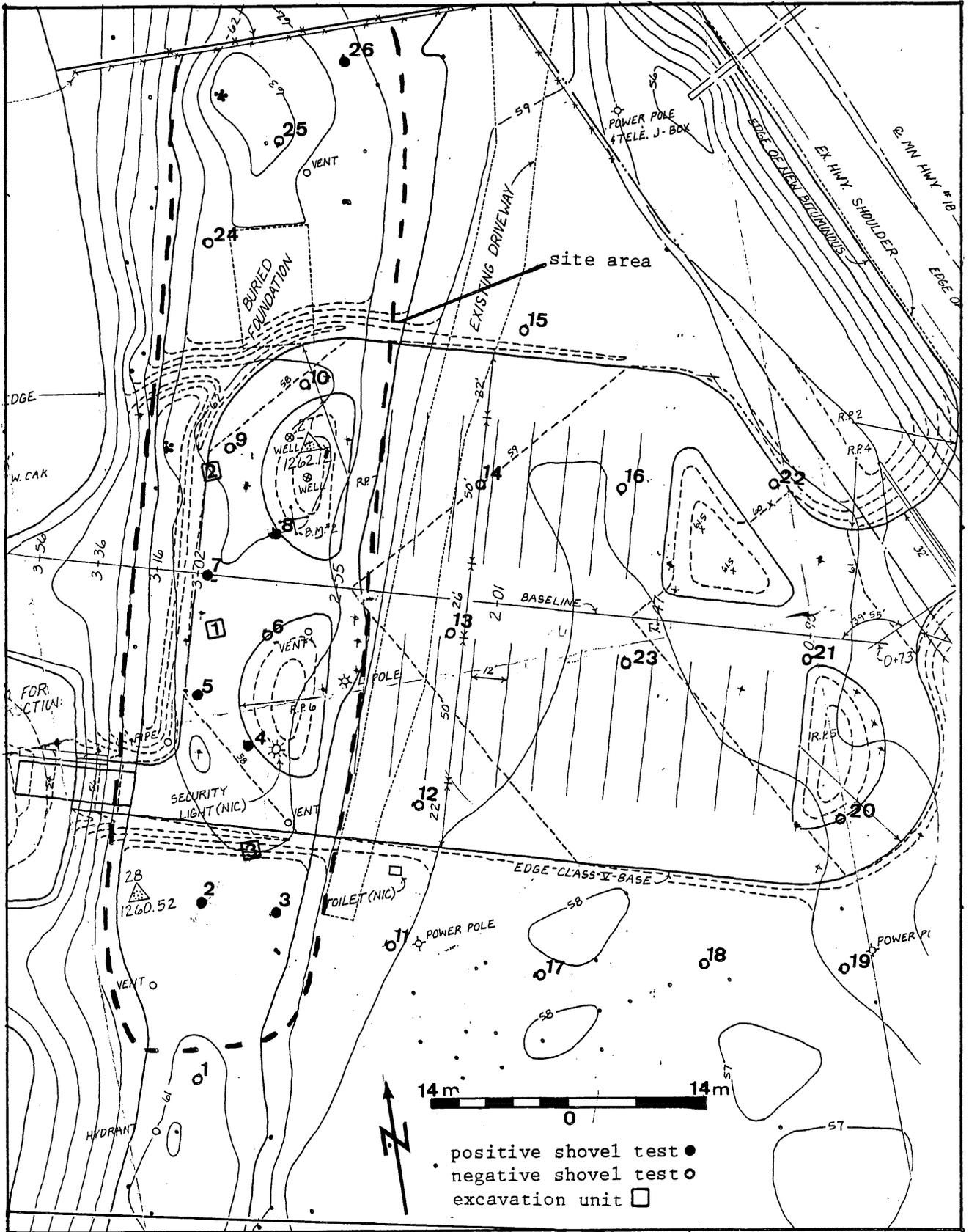
### Field Review

Methods: surface reconnaissance, 26 shovel tests, 3 excavation units.

Results: Cultural materials were found on the surface and eastern sideslope of the ice ridge, and in several shovel tests on the top of the ridge (see Figure 21). A site form was submitted to the State Archaeologist's Office, which designated this site 21CW101. The cultural deposit was clearly confined to the ridge; although some disturbance from recent construction was apparent, the extent of disruption could not be fully determined on the basis of shovel test results. Although a number of lithic artifacts were found in open areas on the surface and sides of the ridge, their association with this particular site is open to some question, since they were found in the fill that DNR brought in to bury structural remnants on the ridge. Information obtained from DNR Engineering personnel indicated that the fill came from a gravel pit that may be another site area. None of the surface materials have therefore been used to assign temporal or functional designations to this site.

Because DNR's development plans require removal of a large part of the ridge and use of the resultant fill in the proposed parking area, the potential for adverse effect to this site was clear. Discussions with Regional Engineering personnel indicated that it would not be possible to redesign the project in such a way as to significantly reduce or eliminate damage to the cultural deposit while fulfilling DNR's objective of providing appropriate water access facilities. Accordingly, a recommendation was made that additional testing of the site be done prior to construction. The purposes of this work were to better define the boundaries of the site area (horizontally and vertically), to determine the extent to which the cultural deposit has been disturbed, and to recover data upon which an evaluation of the site's eligibility for nomination to the NRHP could be based.

Figure 21. 21CW101 (Borden Lake) - Site Area



Site evaluation at 21CW101 was conducted in September and October of 1986. Three 1x1 meter excavation units were placed along the ice ridge within the area of subsurface artifact concentrations. These units yielded lithic and ceramic artifacts in a relatively sparse deposit from the surface down to a maximum depth of about one meter (see Figure 22). In all three units, the greatest concentration of artifacts was noted from the surface to a depth of about 40 cm; artifact frequencies declined rapidly below this level, although some cultural materials were found at greater depths. Soils in all three units were very sandy loams over fine to medium-grained sand. Contrasts in color and texture among soil horizons made it relatively easy to trace aberrations in the profiles.

Several sources of disturbance to the original cultural deposit were noted during excavation. Numerous rodent burrows were readily identifiable in the light-colored subsoil; this activity may account in part for the few isolated artifacts found below the main concentration. Larger-scale disturbance has resulted from recent human activities at the site: excavations for cabin foundations, wells and septic systems have caused distortion of artifact distributions in vertical and horizontal dimensions, and the addition of fill by DNR has probably introduced artifactual materials not originally part of the cultural deposit. It also appeared that the surface of the ridge was leveled at some time in the past, probably when the resort was built, which may have entirely removed part of the cultural deposit or, at least, distorted its original configuration.

Only a few indications of cultural affiliation were recovered from 21CW101 during reconnaissance survey and site evaluation. The ceramic assemblage includes cord-roughened body sherds, a few small cord-wrapped-stick-impressed sherds, and one small section of rim. This rim sherd has faint cord-wrapped-stick impressions applied obliquely on the lip and several horizontal rows of stick impressions immediately below that. Rim form, decoration and surface treatment are consistent with the typological designation Kathio, which is commonly found in the vicinity of Mille Lacs Lake. In general, the ceramics suggest a Late Woodland temporal classification for this site. (One corner-notched projectile point was also recovered at the site, but it was found on the surface of the ridge in a layer of fill gravel. It cannot, therefore, be reliably associated with the subsurface deposit.)

#### Project Status

The results of the site evaluation indicate that 21CW101 has suffered considerable disturbance since the time of prehistoric occupation. Overall, the cultural deposit appears to be composed primarily of non-diagnostic materials that commonly occur at sites in the vicinity; no features or well-preserved organic materials that are definitely part of the prehistoric cultural deposit were found. The site does not appear to hold any particular potential for yielding significant archaeological data, and clearly does not qualify to be considered for nomination to the NRHP. Based on the work completed thus far, it does not seem that additional field research would be of sufficient value to justify further delay of DNR's proposed development. Arrangements have been made with Regional personnel for the Program Archaeologist to monitor cutting of the ridge, in case additional diagnostic materials are uncovered during that activity. If at that time it appears that a significant cultural deposit does remain intact within the construction area, further work will be suspended until an evaluation of that deposit is done and a revised determination of effect can be obtained from SHPO. It was recommended that the proposed construction be allowed to proceed under these conditions; SHPO is currently reviewing this recommendation (Ref. #AA-841).

## Figure 22. 21CW101 - Artifact Summary

Surface: 1 projectile point, corner-notched (chert)  
 2 tool fragments (chert, jasper)  
 1 blade flake, utilized (chalcedony)  
 20 core fragments (15 quartz, 2 chalcedony, 1 agate, 1 jasper)  
 8 primary flakes (4 quartz, 3 quartzite, 1 jasper)  
 64 secondary flakes (47 quartz, 7 silica, 5 shist, 3 chalcedony, 2 chert)  
 11 retouch flakes (quartz)

## Shovel Tests:

ST 2, 0-10 cm: 1 secondary flake (quartz)	ST 7, 0-10 cm: 1 core fragment (silica)
ST 3, 10-20 cm: 1 secondary flake (quartz)	1 secondary flake (silica)
20-30 cm: 3 fire-cracked rock fragments	10-20 cm: 2 secondary flakes (quartz)
3 secondary flakes (quartz, chert, jasper)	1 retouch flake (chert)
ST 4, 0-10 cm: 1 secondary flake (quartz)	20-30 cm: 4 secondary flakes (1 quartz, 2 silica,
10-20 cm: 1 fire-cracked-rock fragment	1 shist)
2 secondary flakes (quartz)	4 retouch flakes (2 silica, 2 chert)
ST 5, 10-20 cm: 2 primary flakes (quartz)	ST 8, 10-20 cm: 1 primary flake (silica)
4 secondary flakes (quartz)	4 secondary flakes (3 silica, 1 chert)
3 retouch flakes (2 quartz, 1 chert)	20-30 cm: 1 secondary flake (silica)
20-30 cm: 3 fire-cracked rock fragments	ST 26, 30-40 cm: 1 primary flake (flint)
2 core fragments (quartz)	1 secondary flake (quartz)
5 secondary flakes (quartz)	1 retouch flake (quartz)
3 retouch flakes (quartz)	50-60 cm: 1 secondary flake (quartz)
30-40 cm: 4 core fragments (3 quartz, 1 silica)	
1 secondary flake (quartz)	

## Unit 1:

0-5 cm: 2 core fragments (quartz)	30-35 cm: 1 core fragment (agate)
8 secondary flakes (4 quartz, 2 chert, 2 jasper)	4 primary flakes (2 agate, 1 quartz, 1 flint)
1 retouch flake (quartz)	28 secondary flakes (10 quartz, 9 shist,
5-10 cm: 1 grit body sherd, cr	6 jasper, 2 chert, 1 silica)
1 core fragment (silica)	4 retouch flakes (3 quartz, 1 jasper)
4 primary flakes (2 quartz, 1 silica, 1 chert)	organic material (charred)
8 secondary flakes (3 quartz, 4 silica, 1 jasper)	35-40 cm: 1 grit decorated sherd, dentate
4 retouch flakes (3 quartz, 1 silica)	14 grit body sherds (1 cr, 13 exfoliated)
10-15 cm: 2 grit body sherds, cr	3 grit ceramic crumbs
1 primary flake (silica)	25 secondary flakes (8 quartz, 6 jasper,
2 secondary flakes (quartz, silica)	5 silica, 3 shist, 2 chert, 1 flint)
15-20 cm: 2 grit body sherds, exfoliated	3 retouch flakes (quartz, shist, chert)
1 primary flake (quartz)	40-45 cm: 1 grit decorated sherd, dentate
8 secondary flakes (3 quartz, 2 chert, 1 shist,	1 grit ceramic crumb
2 silica)	1 primary flake (quartz)
2 retouch flakes (quartz, chert)	6 secondary flakes (2 quartz, 2 jasper,
20-25 cm: 2 primary flakes (quartz, chert)	1 chalcedony, 1 shist)
4 secondary flakes (quartz, chert, silica, jasper)	45-50 cm: 1 secondary flake (silica)
1 retouch flake (quartz)	50-55 cm: 5 fired clay fragments
25-30 cm: 1 grit body sherd, cr	1 secondary flake (jasper)
1 core fragment (chert)	55-60 cm: 2 secondary flakes (quartz, chert)
3 primary flakes (chert, shist, quartzite)	1 retouch flake (silica)
19 secondary flakes (8 quartz, 4 jasper,	60-65 cm: 2 secondary flakes (silica, chert)
3 chert, 2 silica, 1 shist, 1 chalcedony)	organic material, charred
2 retouch flakes (quartz)	70-75 cm: 1 retouch flake (quartz)
30-35 cm: 3 grit body sherds (1 cr, 2 exfoliated)	79 cm: 1 preform (quartz)
1 grit ceramic crumb	85-90 cm: 1 secondary flake (quartz)

Figure 22, continued

## Unit 2:

0-5 cm:	1 secondary flake (oolitic chert)	20-25 cm:	1 secondary flake (quartz) charcoal
5-10 cm:	1 blade flake (silica) 1 primary flake (chert) 2 secondary flakes (quartz) 2 retouch flakes (quartz) plastic and glass fragments	25-30 cm:	1 secondary flake (jasper)
10-15 cm:	1 lead musket ball (.54 caliber) 7 secondary flakes (6 quartz, 1 silica) 3 retouch flakes (quartz) organic material, charred	30-33 cm:	1 grit rim sherd (cws impressed)
15-20 cm:	2 secondary flakes (chert, silica) aluminum foil fragments	45-50 cm:	1 secondary flake (chert)
		60-65 cm:	organic material, charred
		65-75 cm:	1 secondary flake (quartz)
		75-85 cm:	charcoal
		85-90 cm:	1 secondary flake (chert) charcoal
		90-95 cm:	organic material, charred
		110-120 cm:	1 tool fragment (chalcedony) 1 secondary flake (quartz)

## Unit 3:

0-5 cm:	2 grit body sherd (cr, exfoliated) 1 primary flake (quartz) 4 secondary flakes (2 quartz, 1 chert, 1 chalcedony) 3 retouch flakes (2 quartz, 1 chalcedony)	10-15 cm:	3 secondary flakes (2 quartz, 1 agate) painted wood fragments
5-10 cm:	5 core fragments (quartz) 6 secondary flakes (quartz)	15-20 cm:	1 secondary flake (quartz)
		35-40 cm:	1 core fragment (quartz) 1 glass fragment (burned)
		40-45 cm:	2 secondary flakes (quartz)
		45-50 cm:	1 secondary flake (quartz)

### Halvorsen Bay/Pelican Lake

#### Location

Sec. 12, T. 136N, R. 28W; NW 1/4, NW 1/4, SE 1/4, NW 1/4; City of Breezy Point-Pelican Township. Located on the north shore of Halvorsen Bay, an arm of Pelican Lake, about 4 miles northeast of Pequot Lakes, MN (see Figure 23).

#### Geomorphic Region

Crow Wing Outwash Plain (Minnesota Soil Atlas Project, Duluth Sheet).

#### Scope of Project

Rehabilitation of existing Public Water Access. No detailed construction plans are currently available, but information received from the Project Engineer indicates that work will involve regrading and graveling of the existing access road, construction of barriers to prevent trespass use of DNR's road by adjoining landowners, and a slight expansion of the existing gravel-surfaced parking area.

#### Description of Project Area

Level, low-lying area bordered by wooded hills to the north. Most of the project area is the existing gravel-surfaced parking area and entry road, bordered on the west, northeast and southeast by narrow wooded strips.

#### Records Review

Previous surveys: none known.

Recorded sites in vicinity: none.

#### Field Review

Methods: surface reconnaissance, 12 shovel tests.

Results: No cultural materials were found on surface in open areas or in shovel tests. Subsurface testing was conducted in the wooded areas that border the existing lot. Soils in all shovel tests were shallow, very sandy loams over beach and lakebed sediments.

#### Project Status

It appeared that the proposed development would not affect any historic or prehistoric resources. It was recommended that a conditional determination of no effect be granted, dependent on review of formal construction plans. If the development plans indicate that construction will affect unsurveyed portions of the property, additional field review will be conducted prior to construction; otherwise, the project should proceed with no additional field review. SHPO is currently reviewing this recommendation.

## Stearns County

### Big Fish Lake

#### Location

Sec. 20, T. 124N, R. 30W; E 1/2, NE 1/4, SE 1/4, SE 1/4; Collegeville Township. Located on the north shore of Big Fish Lake, about 7 miles south of Avon, MN (see Figure 24).

#### Geomorphic Region

St. Croix Moraine Complex (Minnesota Soil Atlas Project, St. Cloud Sheet).

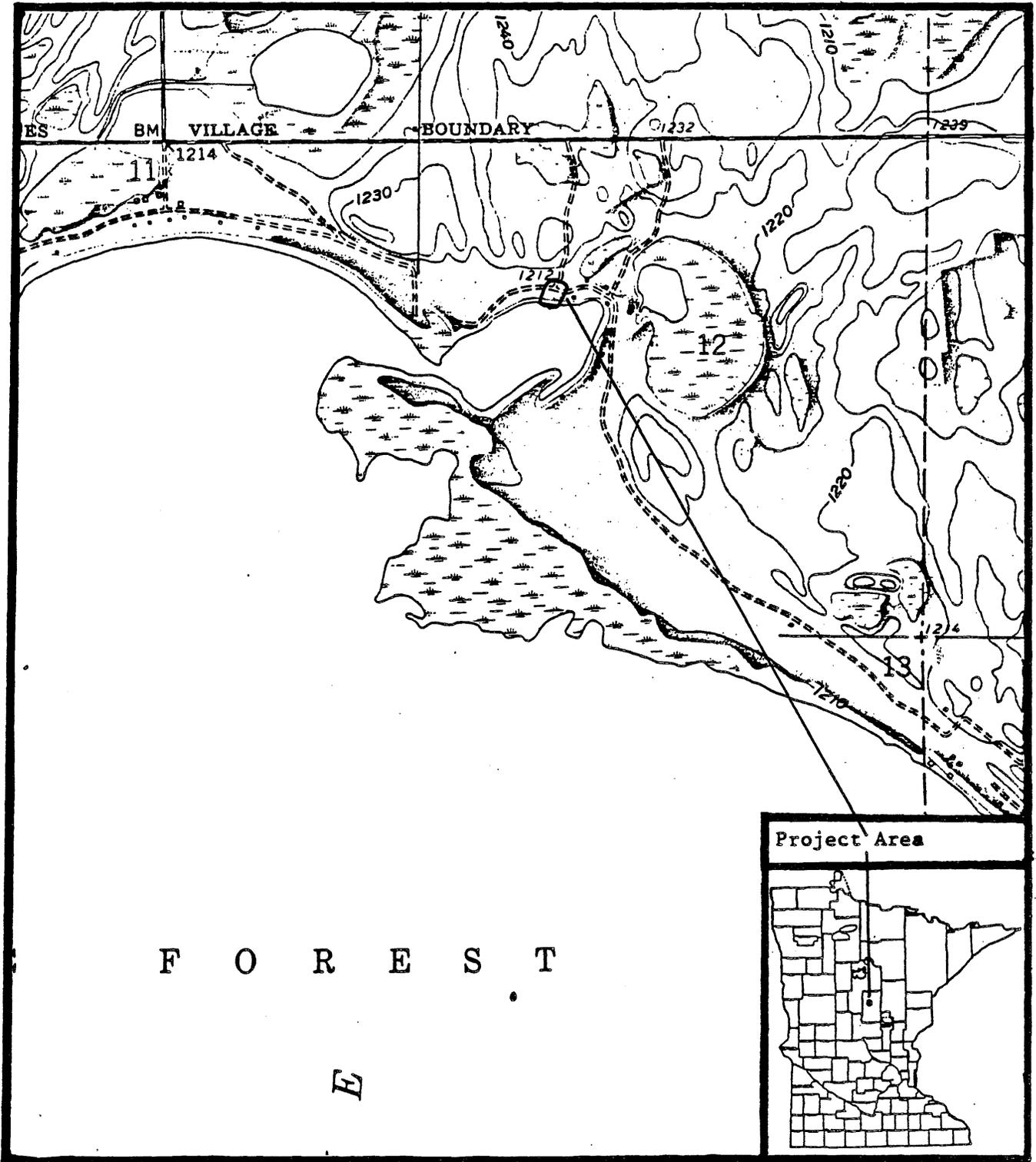
#### Scope of Project

Construction of a new Public Water Access (DNR has been operating an unimproved access at this location for about 1 year.) Development plans call for construction of a two-level parking area with a total of 25 parking spaces, an entry drive off the township road, and a concrete plank ramp. Most of the construction will be close to existing grade, except for some filling close to the lakeshore.

#### Description of Project Area

The property is bounded on the east and west by private residences and on the north by a township road. Prior to purchase by the State, the property in use as a

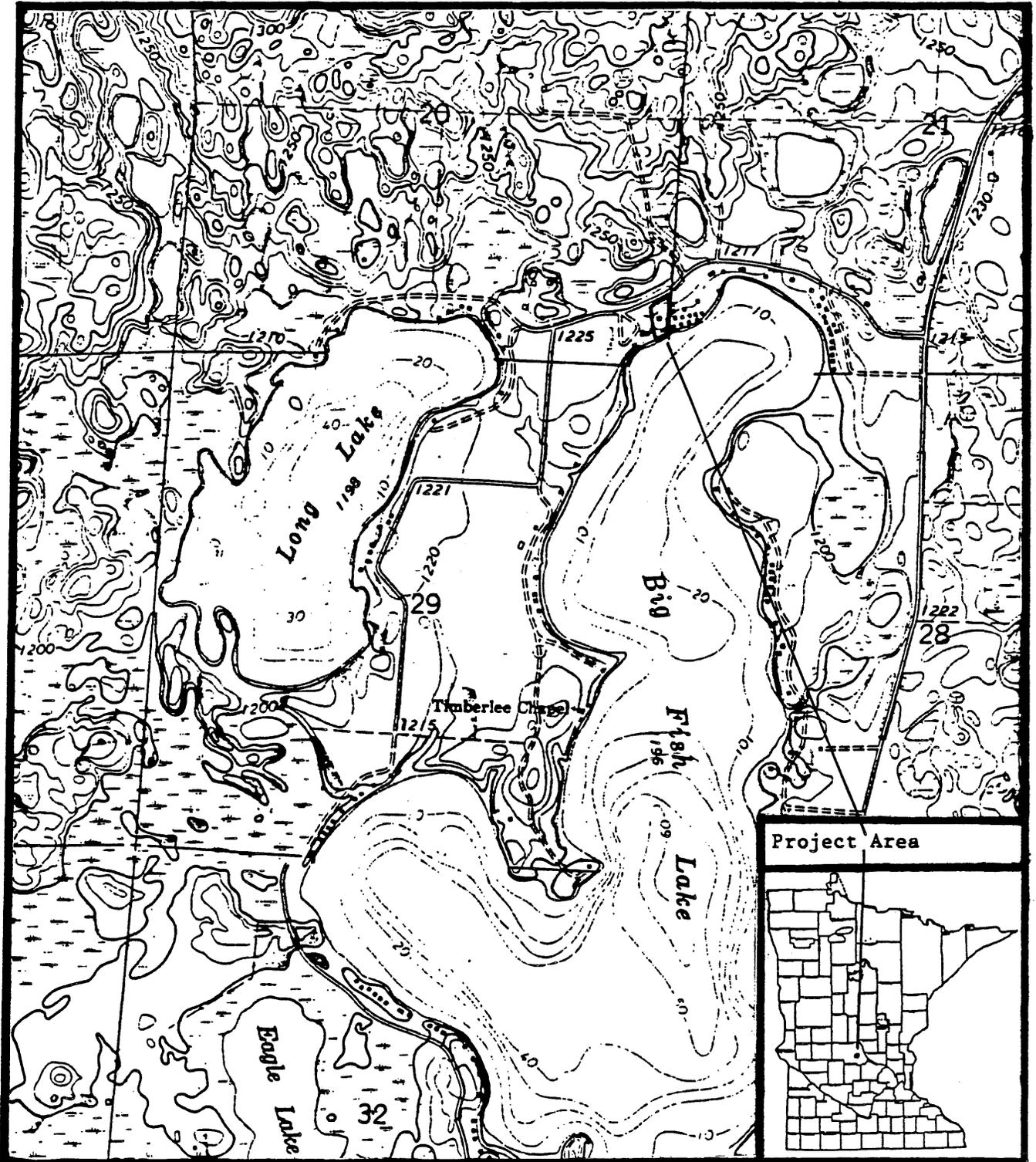
Figure 23. Halvorsen Bay/Pelican Lake Project Area



F O R E S T  
E

USGS Pelican Lake Quadrangle, 1959, 7.5' series  
(enlarged x 1.42 - approximately 1:17,000)

Figure 24. Big Fish Lake Project Area



USGS Avon Quadrangle, 1965, 7.5' series  
(enlarged x 1.42 - approximately 1:17,000)

small summer resort; two cabins were demolished just after the land was purchased. At the time of survey one small concrete block structure remained standing. The northern half of the property is a level terrace, about 3 meters above the lake level, at the base of a steep wooded slope; this terrace drops off steeply to a level grassy area at the lakeshore.

#### Records Review

Previous surveys: none known.

Recorded sites in vicinity: 21SN9 - recorded by Shay, University of Minnesota, 1963 on the basis of information obtained from landowner; on the east shore of Big Fish Lake, about 1/4 mile from DNR's property; no formal archaeological testing; landowner reported finding Kathio ceramics, side-notched and stemmed projectile points. 21SN10 - about 3/4 mile west of the project area, on the west shore of Long Lake; defined on basis of informant data (grooved maul found by landowner); defined as Middle Woodland. Additionally, there is an informant report of burial mounds (not officially recorded as a site) on the west shore of Big Fish Lake, about 1/4 mile west of DNR's property.

#### Field Review

Methods: surface reconnaissance, 16 shovel tests.

Results: No cultural materials were found on surface or in shovel tests.

Soils in the northern part of the project area, at higher elevations, are well-developed sandy clay loams over clay. In the low-lying area close to the lakeshore, what appears to be recent fill overlaying sandy loam and fine sand. It appeared that the upper portion of the property may have been under cultivation at one time; additional disturbance, probably related to cabin construction, was noted in a few shovel tests. Overall, soil stratigraphy was very consistent throughout the project area.

#### Project Status

It appeared that the proposed development would not affect any historic or prehistoric resources. A recommendation was made that work proceed with no additional review; SHPO concurred (Ref. #DD-247).

### Big Watab Lake

#### Location

Sec. 9, T. 124N, R. 30W; NW 1/4, NW 1/4, SE 1/4, SE 1/4; Colledgeville Township. Located on the north shore of Big Watab Lake, about 3 miles southeast of Avon, MN (see Figure 25).

#### Geomorphic Region

St. Croix Moraine Complex (Minnesota Soil Atlas Project, St. Cloud Sheet).

#### Scope of Project

Rehabilitation of existing Public Water Access; current facilities include a bituminous-surfaced entry road and grass parking area. Development plans call for widening and resurfacing of the entry road, and construction of a 9-unit gravel-surfaced parking area which will overlap with the present parking area. Most of the work will be at or above existing grade, except for a cut to be made into a steep ridge that bisects the property. This cut will provide fill to be used in the expanded parking area.

#### Description of Project Area

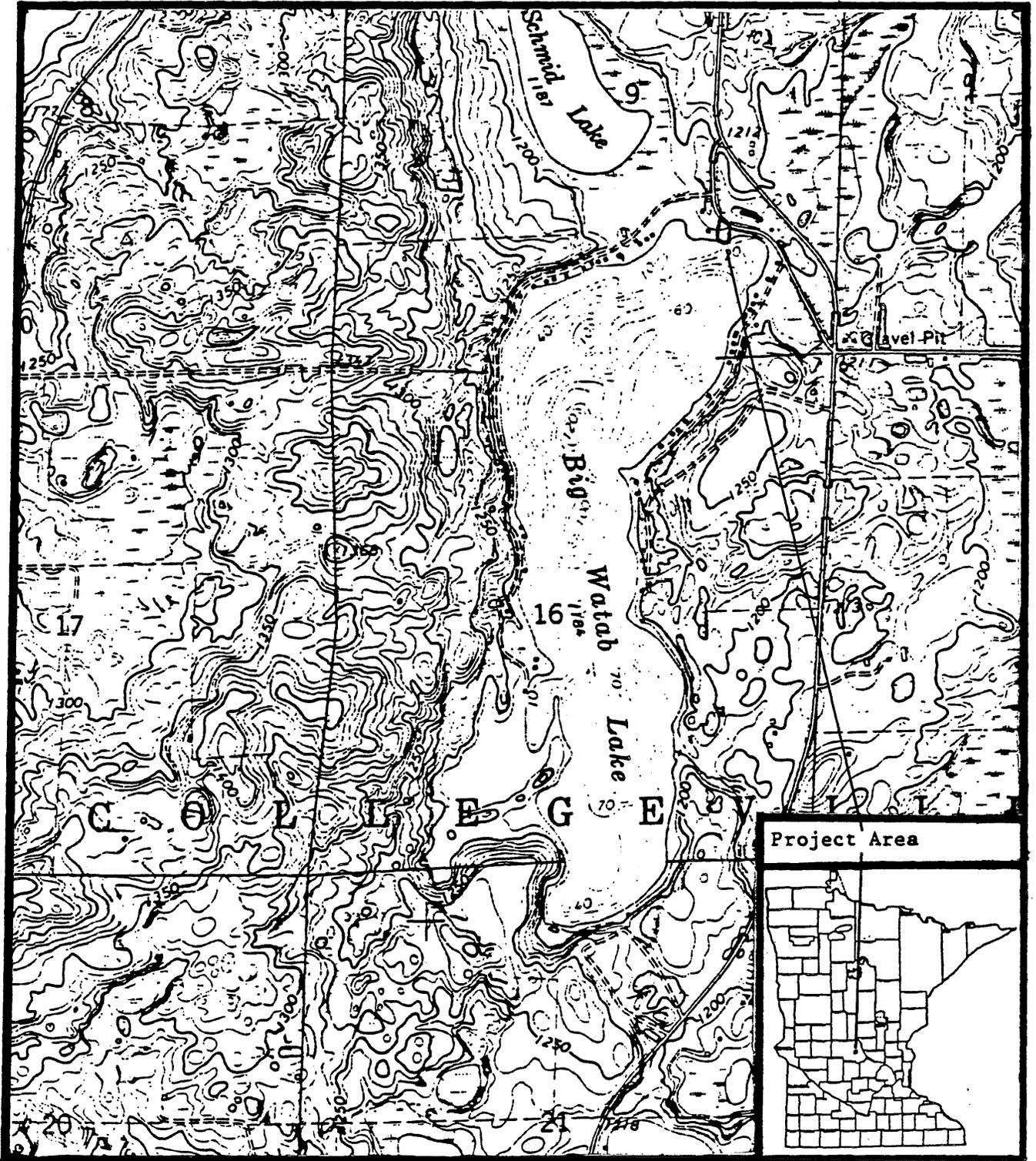
The existing parking area is located on a very low-lying strip of beach, which is bordered by a narrow, steep-sided ice ridge that runs roughly east-west through the middle of DNR's property. The ridge is presently wooded, with a thick understory of grasses. To the north of the ridge, the existing entry road has been constructed on fill over marsh.

#### Records Review

Previous surveys: none known.

Recorded sites in vicinity: none.

Figure 25. Big Watab Lake Project Area



USGS Avon Quadrangle, 1965, 7.5' series  
(enlarged x 1.42 - approximately 1:17,000)

#### Field Review

Methods: surface reconnaissance; 8 shovel tests.

Results: No cultural materials were found on surface or in shovel tests. Because the planned road upgrade will be confined to the existing alignment, which was constructed on fill, that part of the project area was not surveyed. The existing road cut through the ridge provided good exposure of soil stratigraphy in that feature, which is composed mainly of shallow sandy loams over very coarse glacial materials. A transect of shovel tests along the top of the ridge confirmed continuation of this profile throughout the construction area. In the existing parking lot, a shallow stratum of sandy loam fill overlies coarse beach sediments.

#### Project Status

It appeared that the proposed development would not affect any historic or prehistoric resources. A recommendation was made that work proceed with no additional review; SHPO concurred (Ref. #DD-246).

### REGION IV - SOUTHWEST

#### Big Stone County

#### Artichoke Lake

##### Location

Sec. 1, T. 121N, R. 44W; S 1/2, SE 1/4, SE 1/4, NE 1/4; Akron Township. Located in the southwestern corner of the lake, about 12 miles northwest of Appleton, MN (see Figure 26).

##### Geomorphic Region

Big Stone Moraine (Minnesota Soil Atlas Project, St. Cloud Sheet). (Graceville Till Plain adjoins to northwest).

##### Scope of Project

Rehabilitation of an existing Public Water Access. Construction plans call for widening of the entry road and expansion of the parking lot into the area immediately to the west of the existing lot.

##### Description of Project Area

Artichoke lake, which lies within a glacial outwash channel, is generally shallow and surrounded by small areas of marsh in the low spots between morainal ridges. The project area is currently operated by DNR as an unimproved Public Water Access with a dirt entry road and small graded-off parking area adjacent to the shoreline. Relief in the project area slopes up gradually from the lakeshore towards the southern and western property boundaries. Vegetation at the time of survey consisted of tall grasses and weeds in the western part of the property.

##### Records Review

Previous surveys: Oothoudt & Watson, 1978, survey of north end of Artichoke Lake for U.S. Dept. of Agriculture-Soil Conservation Service.

Recorded sites in vicinity: none within a 1-mile radius; several sites at far northern end of the lake.

##### Field Review

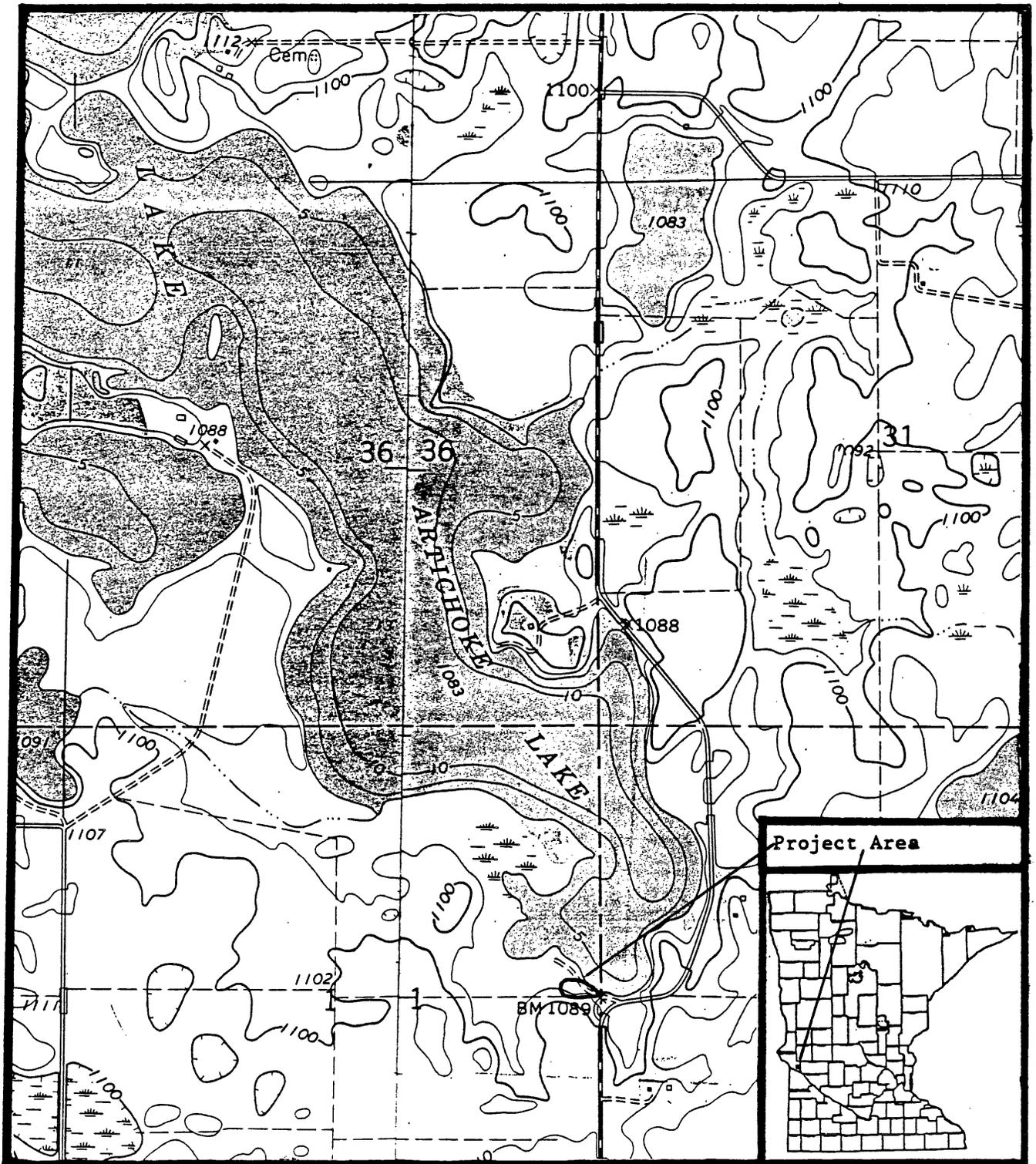
Methods: surface reconnaissance; 18 shovel tests.

Results: No cultural materials were found either on surface or in shovel tests. Soils were predominantly silty clays developed at least in part under marsh vegetation. In the lower elevations, closer to the lakeshore, soils were quite mucky and mostly saturated very close to the surface.

##### Project Status

It appeared that the proposed development would not affect any historic or prehistoric resources. A recommendation was made that construction proceed with no

Figure 26. Artichoke Lake Project Area



USGS Lake Oliver Quadrangle, 1968 & Artichoke Lake Quadrangle, 1968, 7.5' series (enlarged x 1.42 - approximately 1:17,000)

additional review; SHPO concurred (Ref. #DD-237).

## Martin County

### Budd Lake

#### Location

Sec. 17, T. 102N, R. 30W; SW 1/4, SW 1/4, NW 1/4, SW 1/4; City of Fairmont. Located on the south shore of the lake, within Gomruds City Park (see Figure 27).

#### Geomorphic Region

Blue Earth Till Plain (Minnesota Soil Atlas Project, New Ulm Sheet).

#### Scope of Project

Cooperative project with the City of Fairmont; rehabilitation of an existing Public Water Access currently operated by the City. DNR is providing engineering assistance and funding for the project.

#### Description of Project Area

Existing access facilities consist of a large gravel-surface parking area and several concrete ramps. Prior to development as a City Park, it appears that this area was a low-lying marshy area, bordering a small drainageway that connects Budd Lake and Hall Lake to the south. Both of these ice-block basin lakes are part of the "Fairmont chain of lakes", which occupy what appears to be a pre-glacial valley that became an outlet for Glacial Lake Minnesota at the end of the Wisconsin glaciation.

#### Records Review

Previous surveys: none known.

Recorded sites in vicinity: none within a 1-mile radius; numerous sites on nearby lakes.

#### Project Status

All proposed construction will be confined to the existing parking and ramp areas, and will consist mainly of re-surfacing. No field review of this project was considered necessary; a recommendation was made that work proceed with no additional review.

### Sisseton Lake

#### Location

Sec. 8, T. 102N, R. 30W; W 1/2, SE 1/4, NW 1/4, SW 1/4; City of Fairmont. Located on the east shore of the lake, within Wards City Park (see Figure 28).

#### Geomorphic Region

Blue Earth Till Plain (Minnesota Soil Atlas Project, New Ulm Sheet).

#### Scope of Project

Cooperative project for rehabilitation of existing Public Water Access within a city park. DNR is providing engineering assistance and funding for expansion of the existing parking area and construction of a new entry road. A related development will be construction of a new shelter house to the south of the parking area. This work will be done by a local service club, utilizing private funds.

#### Description of Project Area

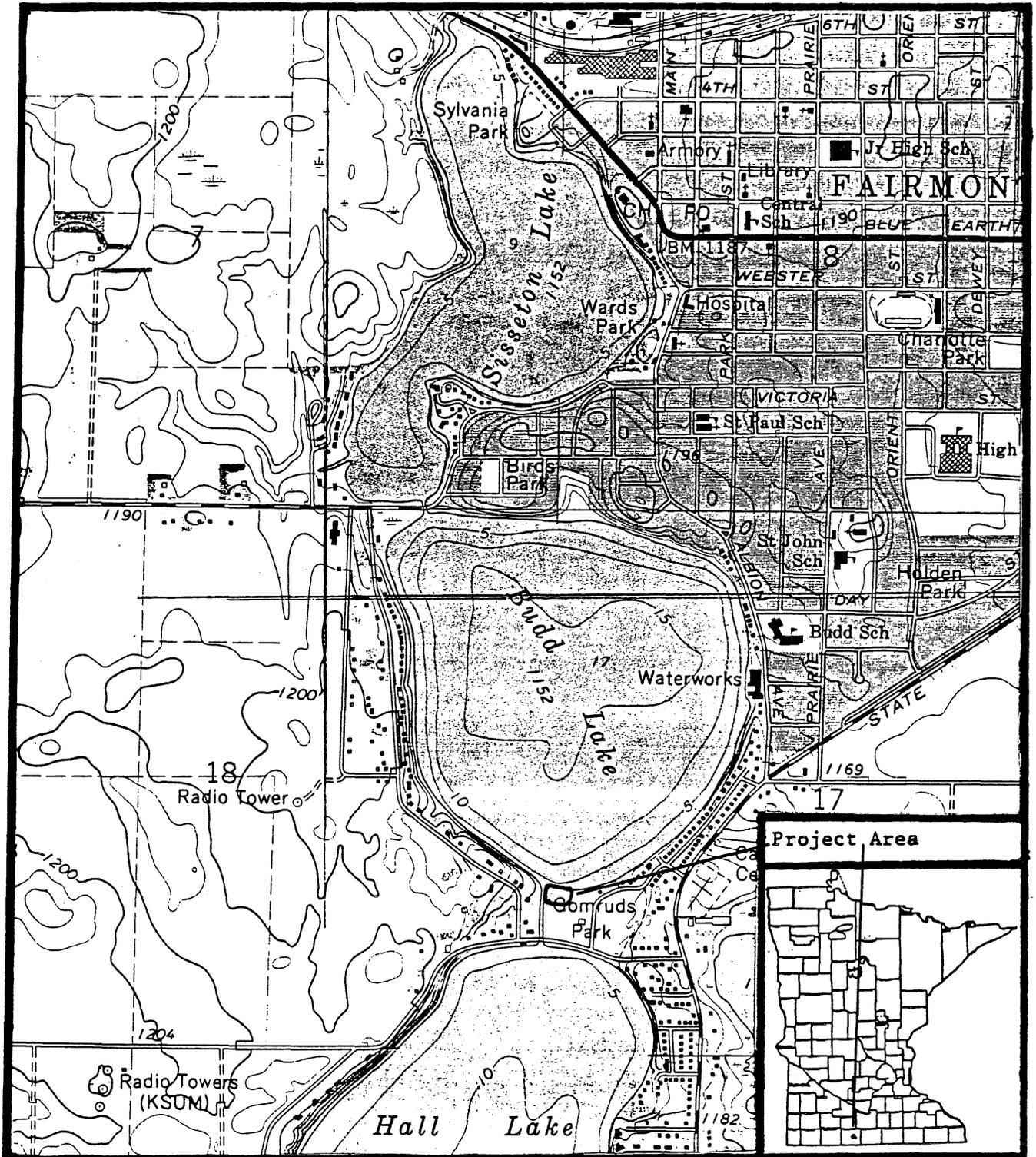
Existing facilities include a gravel-surface parking lot, concrete ramp and small restroom structure. Most of the in-place structures lie in a filled drainageway; they are bordered to the south by a morainal ridge that is presently part of the park and has playground equipment on it.

#### Records Review

Previous surveys: none known.

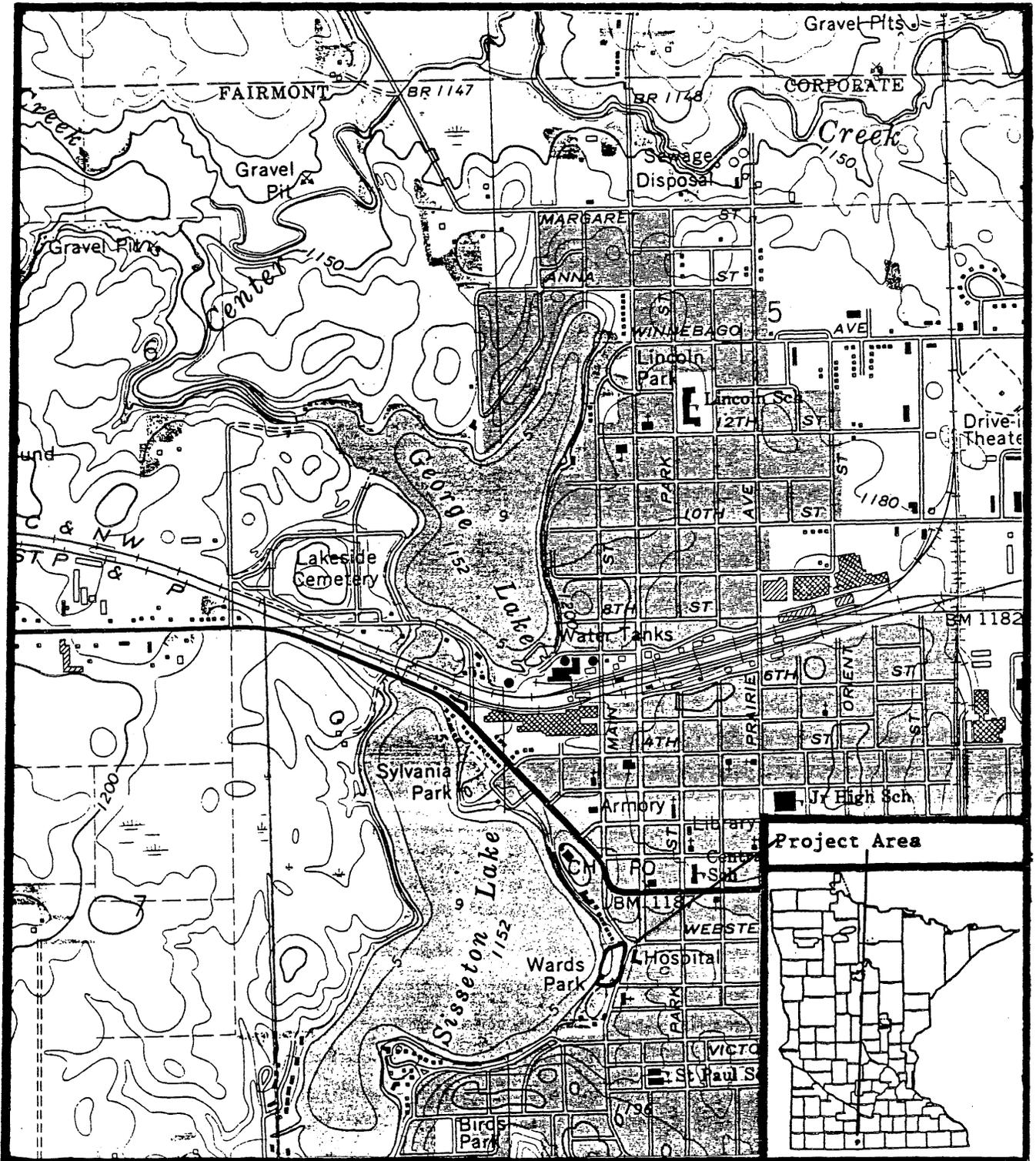
Recorded sites in vicinity: none within a 1-mile radius; numerous sites on

Figure 27. Budd Lake Project Area



USGS Fairmont Quadrangle, 1967, 7.5' series  
(enlarged x 1.42 - approximately 1:17,000)

Figure 28. Sisseton Lake Project Area



USGS Fairmont Quadrangle, 1967, 7.5' series  
(enlarged x 1.42 - approximately 1:17,000)

nearby lakes.

**Field Review**

Methods: surface reconnaissance, 8 shovel tests.

Results: No cultural materials were found on surface or in shovel tests within the existing access area. However, lithic and ceramic artifacts were recovered on the surface of a foot trail and in shovel tests on the ridge just south of the main construction area (see Figure 29):

Surface: 2 grit-tempered body sherds, cord-roughened

- ST #4, 15-20 cm: 1 flake  
1 bone fragment, mammal
- ST #6, 25-30 cm: 3 grit-tempered body sherds, cord-roughened
- ST #7, 25-30 cm: 1 flake  
40-45 cm: 3 flakes  
45-50 cm: 1 flake
- ST #8, 0-10 cm: glass fragments (recent)  
30-35 cm: 1 grit-tempered body sherd, cord-roughened

A site form was submitted to the State Archaeologist's Office, which designated the site 21MR23. Based on the appearance of the ceramics, the site represents a Middle to Late Woodland period occupation.

Some disturbance of the upper soil strata was apparent in shovel tests, especially those close to the top of the ridge. A layer of gravel was encountered in one shovel test, about 15 cm below the surface; this may be associated with a house that once stood on top of the ridge. However, the bulk of the prehistoric cultural deposit appears to be undisturbed below that level.

**Project Status**

Officials of the City of Fairmont and the project engineer (at Bolton & Menk, Inc.) were informed of the existence of the site. Because no public funding will be utilized for the shelter house construction, State and Federal cultural resource review regulations are not applicable. However, the project engineer indicated a willingness to redesign the project so as to avoid affecting the site area. A summary of testing results was forwarded to the City of Fairmont for use in planning of this project, with a recommendation that every consideration be given to avoiding the site area during construction.

**McLeod County**

**Stahls Lake**

**Location**

Sec. 11, T. 117N, R. 30; SW 1/4, SW 1/4, SW 1/4, SW 1/4; Acoma Township. Located on the south shore of Stahls Lake (also known as Stahlis Lake), about 6 miles north-northwest of Hutchinson, MN (see Figure 30).

**Geomorphic Region**

Waconia-Waseca Moraine (Minnesota Soil Atlas Project, St. Cloud Sheet).

**Scope of Project**

Rehabilitation of existing Public Water Access. Development plans call for construction of a new parking area along the existing road and extending onto a small knoll on the southern edge of the property.

**Description of Project Area**

The property is bordered on the south by CSAH #60, on the northwest by the lake and on the northeast by Popp Slough. An unimproved public access consisting of a dirt entry road, small dirt parking area and ramp is currently in operation on the

Figure 29. 21MR23 (Sisseton Lake) - Site Area

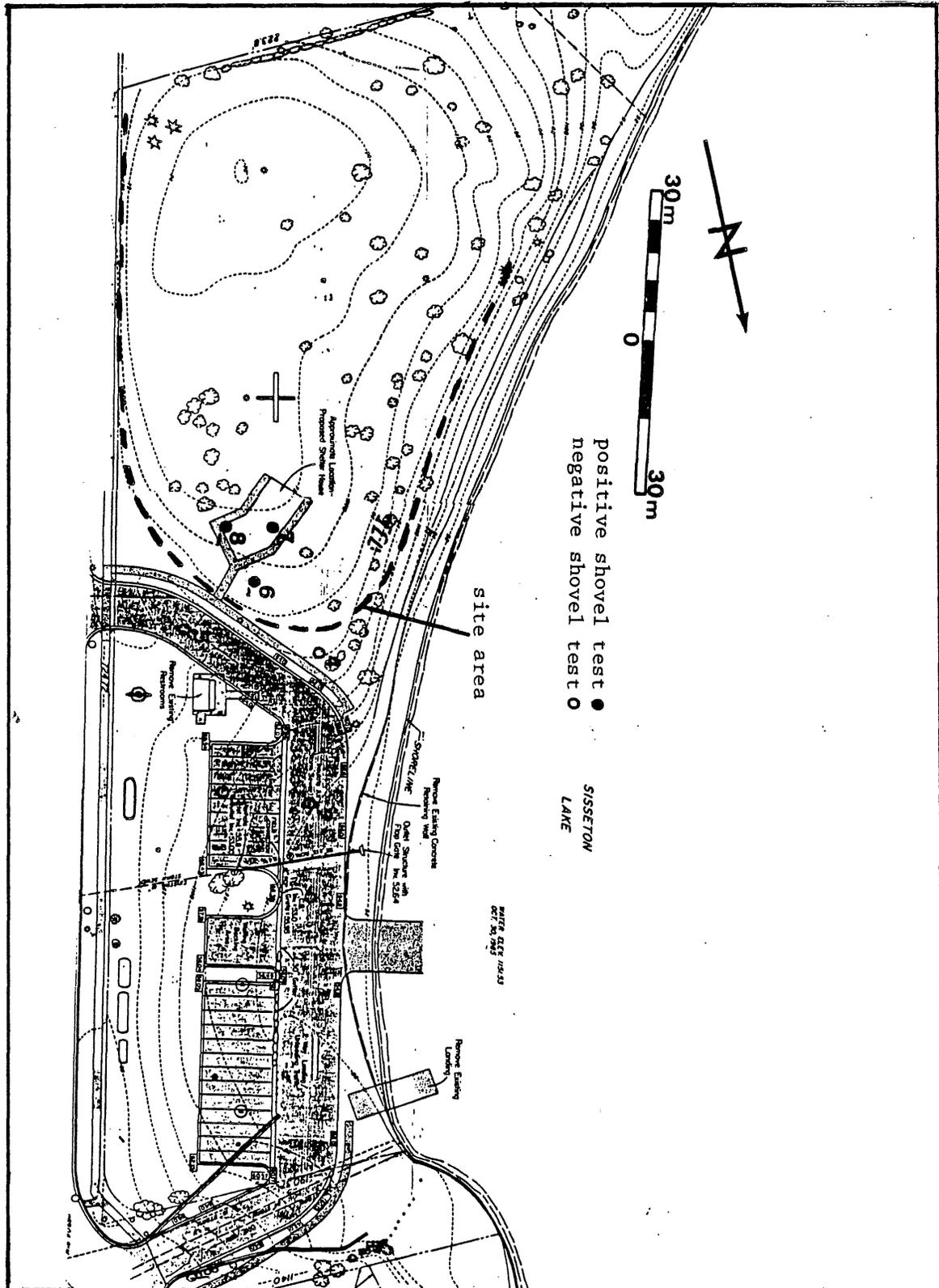
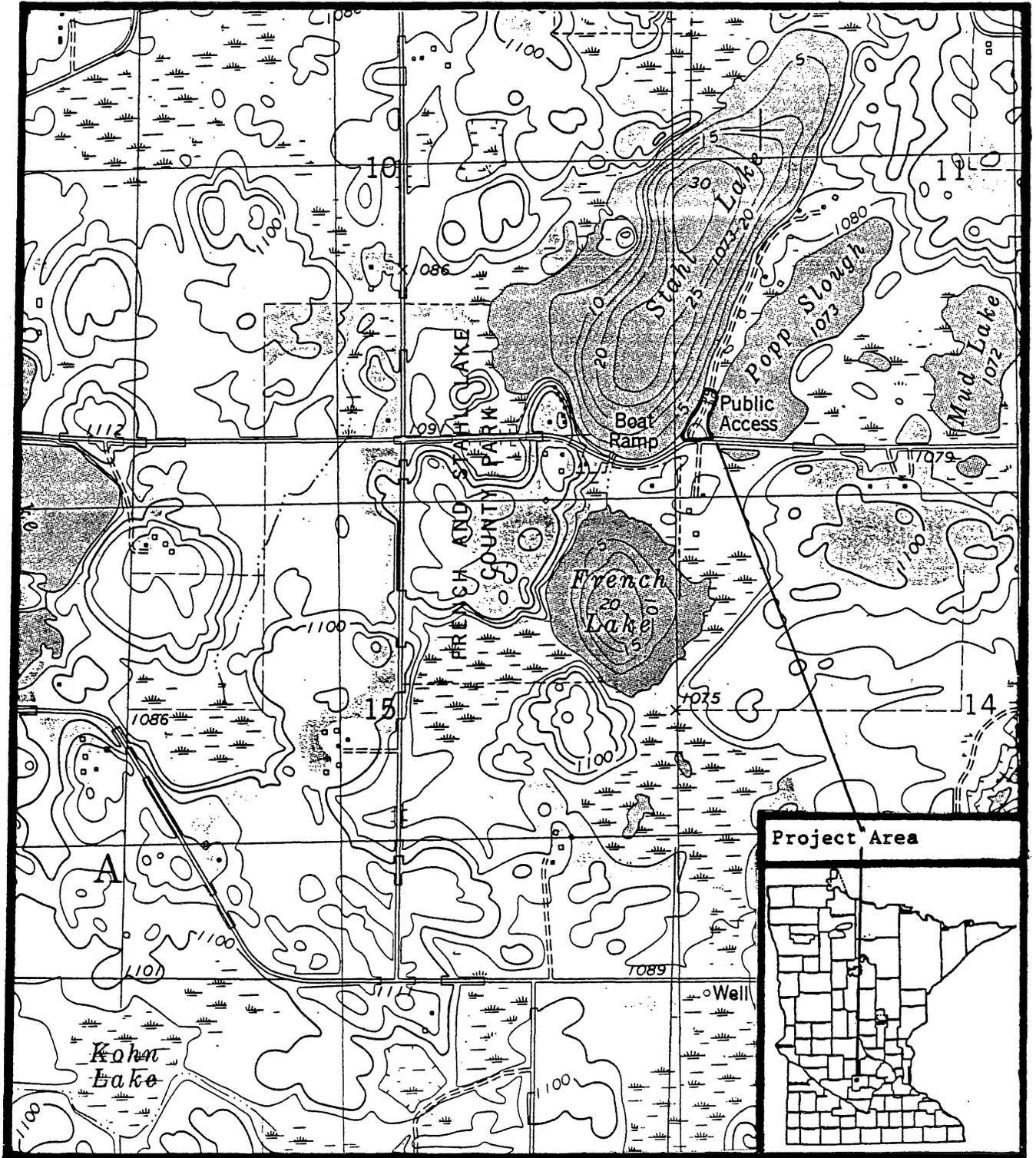


Figure 30. Stahls Lake Project Area



USGS Hutchinson West Quadrangle, 1982, 7.5' series  
(enlarged x 1.42 - approximately 1:17,000)

#### Records Review

Previous surveys: Survey report files contain information on one cultural resource survey near the project area: in 1981, McLeod County contracted for survey of areas to be affected by proposed development in Piepenburg County Park, which is located on the shores of Belle Lake, about 1 mile northwest of the Stahls Lake public access (Brew 1981). During that survey, prehistoric artifacts were found in three locations within the park (on two ridges overlooking the lake and along an eroded cutbank). No diagnostic artifacts were recovered, and no subsurface testing of these locations was done. They were designated 'find spots' by the investigator, and have not been assigned official state site numbers.

Recorded sites in vicinity: none.

#### Field Review

Methods: surface reconnaissance; 6 shovel tests.

Results: Most of the existing road and parking area appear to have been built up by the addition of fill on the existing very low ground surface; no cultural materials were found in these areas. Soil stratigraphy in the shovel tests appeared to reflect past cultivation of the higher-lying portion of the project area. Soils are silty loam over silty clay and glacial till, and it appears that the plow zone does extend into subsoil on the highest part of the knoll. At the height of the knoll, most of the upper stratum has eroded away, while shovel tests at lower elevations had a thicker, more intact A horizon. Recent debris (glass and plastic) was found at 20 cm below surface, within the apparent plow zone, in ST #3. No other cultural materials were found in shovel tests.

#### Project Status

It appeared that the proposed development would not affect any historic or prehistoric resources. A recommendation was made that work proceed with no additional review; SHPO concurred (Ref. #DD-244).

## REGION V - SOUTHEAST

### Rice County

#### Circle Lake

##### Location

Sec. 16, T. 111N, R. 21W; S 1/2, SW 1/4, NW 1/4, NW 1/4; Forest Township. Located on the north shore of Circle Lake, adjacent to County Road 61, about 1.5 miles west of Millersburg, MN (see Figure 31).

##### Geomorphic Region

Lonsdale-Lerdal Till Region (Minnesota Soil Atlas Project, St. Paul Sheet).

##### Scope of Project

Rehabilitation of an existing Public Water Access. Development plans call for construction of a new parking area to the west of the existing facility. Construction will involve placement of filter fabric and about 1' of fill over the entire proposed parking area.

##### Description of Project Area

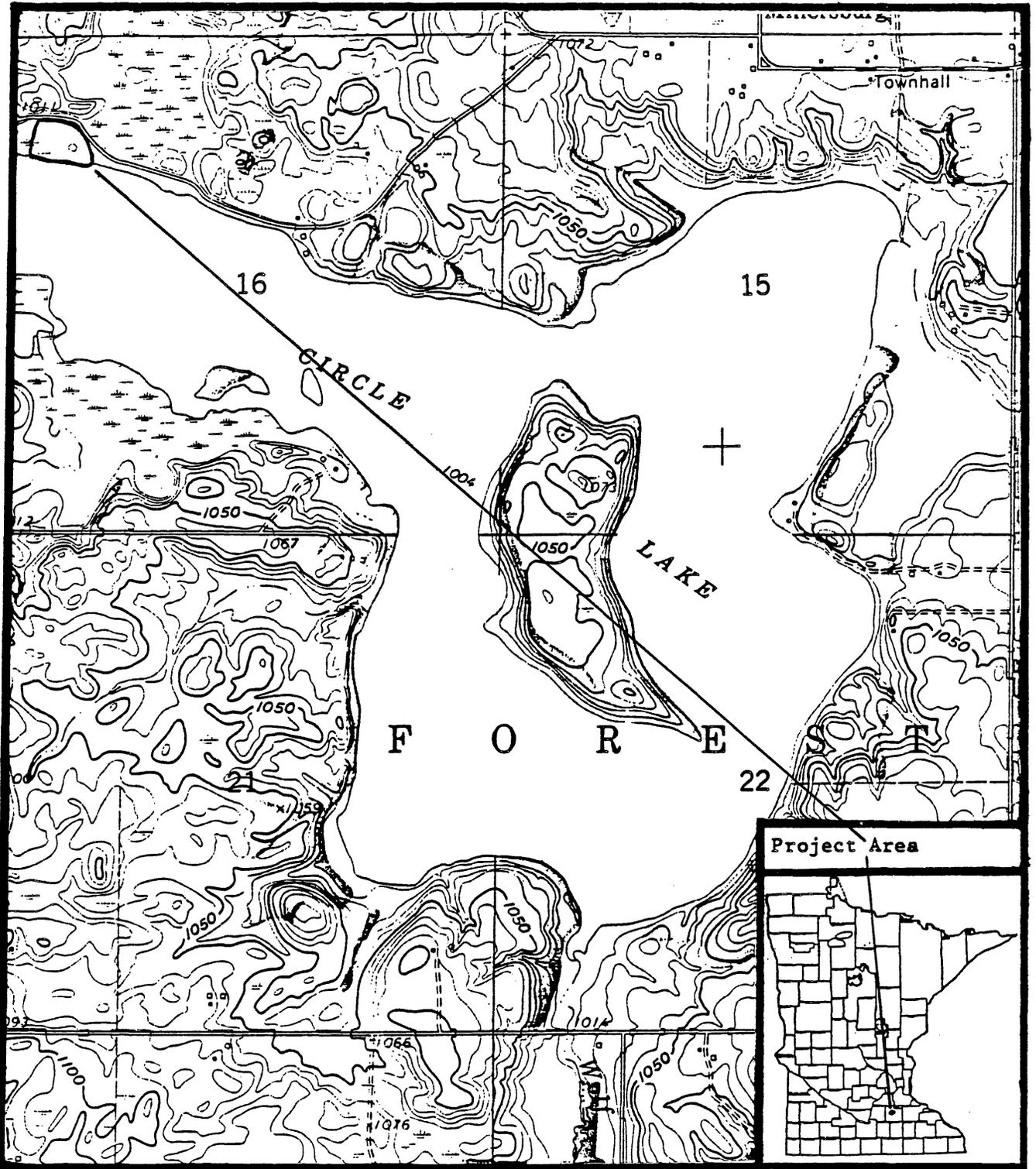
The eastern half of the project area is currently maintained by DNR as a public water access. The currently undeveloped portion of the property is wooded and low-lying; at the time of survey, an area about 3 meters wide along the lakeshore was covered with standing water, and it appeared that most of the construction area had been flooded earlier in the year.

##### Records Review

Previous surveys: none known.

Recorded sites in vicinity: 21RC8 is a 'village' site recorded by Wilford in

Figure 31. Circle Lake Project Area



USGS Little Chicago Quadrangle, 1960, 7.5' series  
(enlarged x 1.42 - approximately 1:17,000)

1945 on the basis of local informant data. It is located c. 1/4 mile east of the project area, on a hill overlooking a western extension of Circle Lake. 21RC16 is a surface lithic scatter recorded by Anfinson in 1979; it is located c. 1 mile east of the project area, on the north side of Circle Lake.

#### Field Review

Methods: surface reconnaissance; 12 shovel tests.

Results: No cultural materials were found on surface or in shovel tests. Soils were sandy silt loams over sandy loams and beach sediments; they were rather mucky and mostly saturated below about 30 cm.

#### Project Status

It appeared that the proposed development would not affect any historic or prehistoric resources. A recommendation was made that work proceed with no additional review; SHPO concurred (Ref. #DD-243).

### Fox Lake

#### Location

Sec. 27, T. 111N, R 21W; E 1/2, SE 1/4, SW 1/4, SE 1/4, and Sec. 34; E 1/2, NE 1/4, NW 1/4, NE 1/4; Forest Township. Located on the southwest shore of Fox Lake, about 7 miles north-northwest of Faribault, MN (see Figure 32).

#### Geomorphic Region

Emmons-Faribault Moraine (Minnesota Soil Atlas Project, St. Paul Sheet).

#### Scope of Project

Rehabilitation plans call for addition of fill along the entry road, which runs between a marsh on the east and a cornfield on the west, and expansion of the parking area. The parking area will then be resurfaced with gravel.

#### Description of Project Area

The project area is an existing unimproved Public Water Access; current facilities consist of a dirt entry road built on fill, which is also used for access to private homes on the lakeshore, and a small gravel parking area.

#### Records Review

Previous surveys: none known.

Recorded sites in vicinity: none.

#### Field Review

Methods: surface reconnaissance; 4 shovel tests.

Results: Surface reconnaissance was conducted in the cornfield in the southwestern corner of the project area, within a corridor about 20 meters wide on the west side of the existing road. Four shovel tests were dug in the parking lot expansion area. It appeared that most of the area had been leveled in the past and most of the A horizon had been removed; soils were shallow silty clay loams over heavy clay. No cultural materials were found in shovel tests.

#### Project Status

It appeared that the proposed development would not affect any historic or prehistoric resources. A recommendation was made that work proceed with no additional review; SHPO is currently reviewing this recommendation.

### Shields Lake

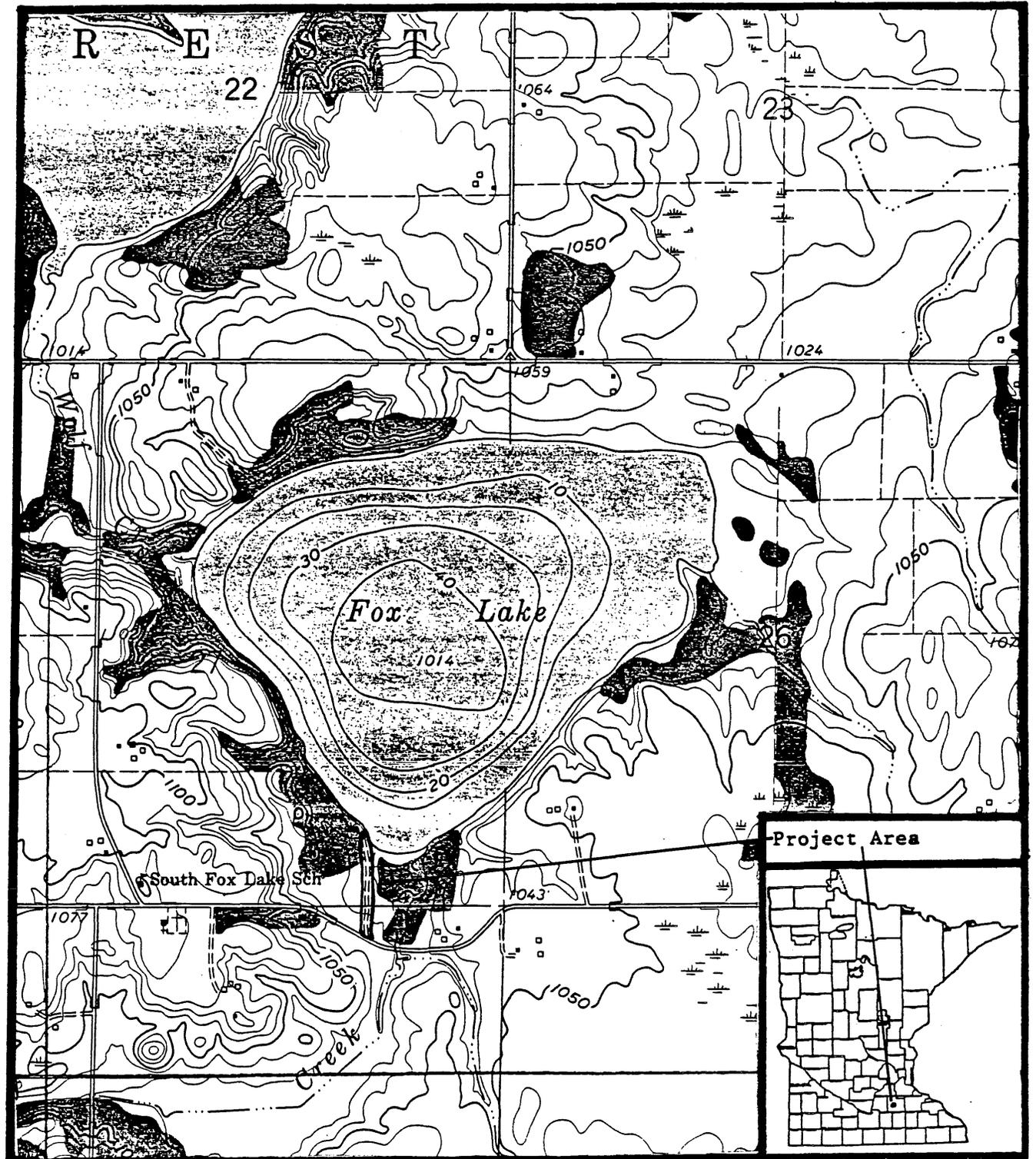
#### Location

Sec. 35, T. 111N, R. 22W; SW 1/4, NE 1/4, NW 1/4; Erin Township. Located on the north shore of Shields Lake (also known as General Shields Lake), adjacent to TH #21, 1.5 miles northwest of Shieldsville, MN (see Figure 33).

#### Geomorphic Region

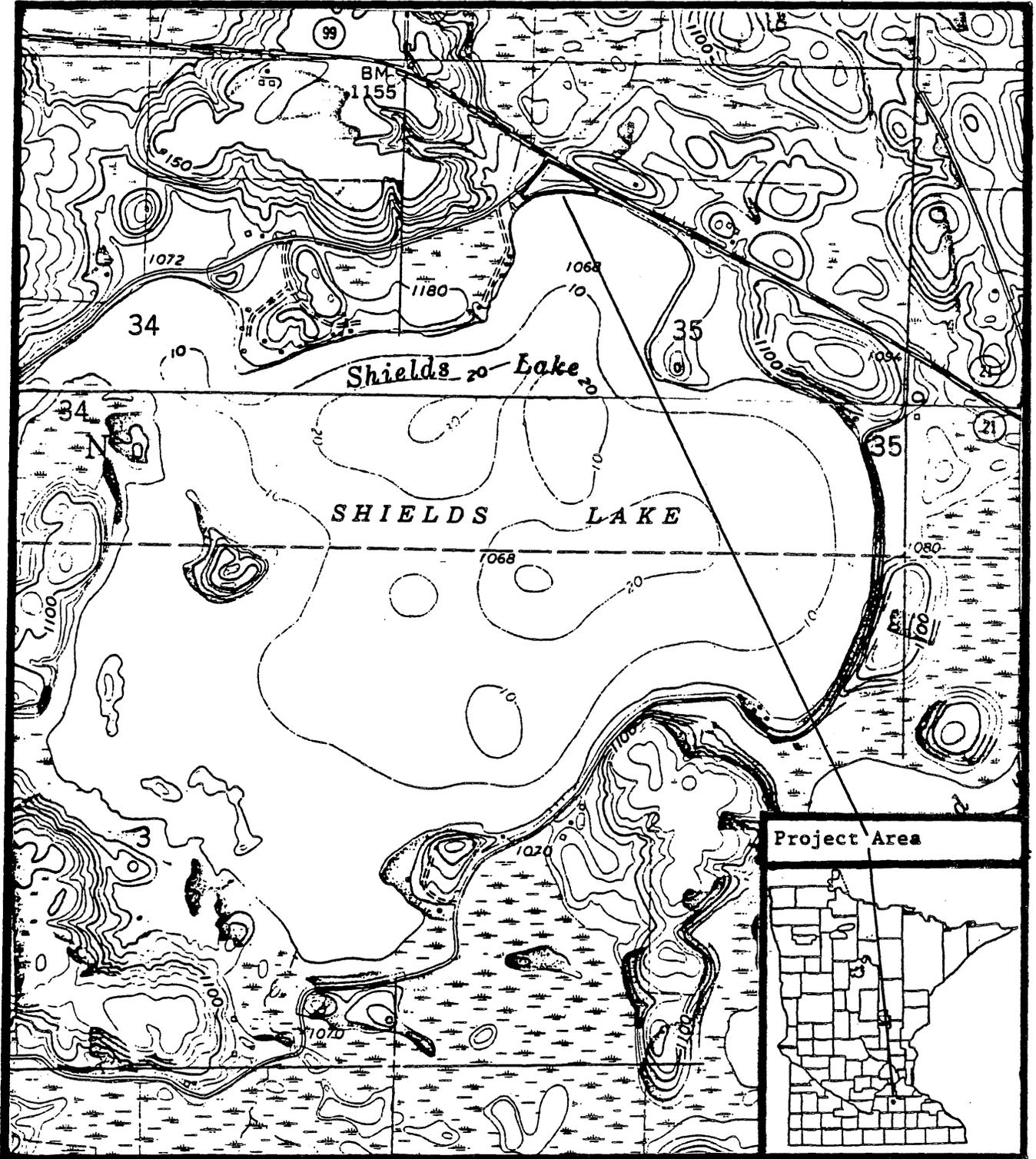
Lonsdale-Lerdal Till Region (Minnesota Soil Atlas Project, St. Paul Sheet).

Figure 32. Fox Lake Project Area



USGS Little Chicago Quadrangle, 1960, 7.5' series  
(enlarged x 1.42 - approximately 1:17,000)

Figure 33. Shields Lake Project Area



USGS Lonsdale Quadrangle, 1960 & Shieldsville Quadrangle, 1960, 7.5' series  
(enlarged x 1.42 - approximately 1:17,000)

### Scope of Project

Plans for rehabilitation of this access call for construction of a gravel-surfaced parking area on MnDOT property, just west of the current wayside rest, and realignment of the access road. The new road will run from the parking area down a steep cutbank to the lakeshore.

### Description of Project Area

The property that will be developed is currently part of a wayside rest maintained by MnDOT. The existing wayside consists of a small gravel-surfaced parking area on a level area about 4 meters above the lakeshore. DNR also operates an unimproved Public Water Access in this location, which includes a dirt entry road and small parking area along the lakeshore, below the wayside rest.

### Records Review

Previous surveys: The only formal cultural resources survey known to have been done in the area is a 1974 Trunk Highway Archaeological Reconnaissance Survey of a portion of TH #21. Surface reconnaissance was done within a 100'-wide corridor that passed the project area; the survey report does not indicate that the wayside rest area itself was surveyed.

Recorded sites in vicinity: There is one recorded prehistoric site within a 1-mile radius of the project area: 21RC4, a single mound recorded by Winchell on the shore of Mud Lake, about 1.5 miles southeast of the project area. Also, in a 1945 memo, Wilford noted an informant report of artifacts found on high land at the east end of Shields Lake (probably in Section 2, T. 110, R. 22); he visually inspected the area but found nothing. (This area has not been given an official site number.)

### Field Review

Methods: surface reconnaissance along cutbank and existing access road; 12 shovel tests in proposed parking area.

Results: Soils were very heavy silty clay loams and clay loams over clay. It appears that this area was graded off during construction of the wayside rest; it also appears to have been rolled and sodded. Soil profiles in the cutbank (c. 4 m high) were consistent with what was seen in shovel tests. No cultural materials were found on surface or in shovel tests.

### Project Status

It appeared that the proposed development would not affect any historic or prehistoric resources. A recommendation was made that work proceed with no additional review; SHPO is currently reviewing this recommendation.

## REGION VI - METRO

### Hennepin County

#### Christmas Lake

##### Location

Sec. 35, T. 117N, R. 23W; SE 1/4, NE 1/4, SW 1/4, NE 1/4; City of Shorewood. Located on the west shore of the lake, just south of TH #7 (see Figure 34).

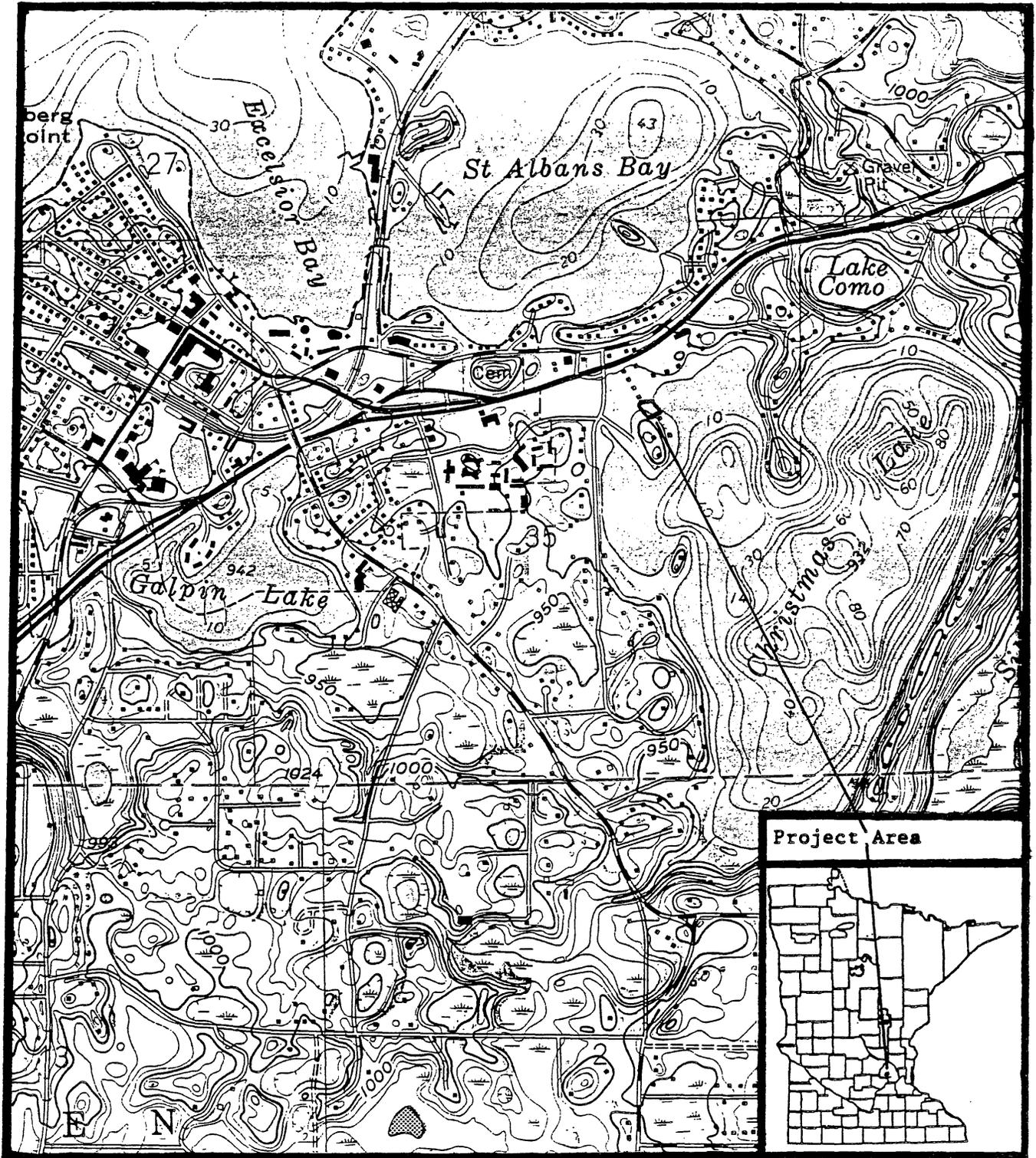
##### Geomorphic Region

Twin Cities Formation (Minnesota Soil Atlas Project, St. Paul Sheet). (Prior Lake Moraine adjoins to southwest.)

##### Scope of Project

Development of a new Public Water Access. Development plans call for construction of an 8-space parking area and concrete plank ramp. The existing unimproved road will be widened and blacktopped to the State property boundary, and the intermittent stream that flows through the property will be channelized.

Figure 34. Christmas Lake Project Area



USGS Excelsior Quadrangle, 1958, 7.5' series  
(enlarged x 1.42 - approximately 1:17,000)

#### Description of Project Area

Bordered to the west by Merry Lane, an unimproved road, and on the north and south by private year-round residences. Approximately the northern one-third of the property is wooded; the southern two-thirds is mowed lawn. An intermittent stream and small marsh lie just south of the wooded area. The normal lake elevation is approximately 933'; DNR's property lies between elevations 933' and 935'.

#### Records Review

Previous surveys: Numerous surveys and site inventories have been conducted in past decades around Lake Minnetonka and other nearby lakes, but no evidence was found that DNR's property had ever been formally surveyed for cultural resources.

Recorded sites in vicinity: 21HE41 is a group of 8 mounds that are located about 1/4 mile southwest of the project area; 21HE44 is a single mound approximately 1 mile west-northwest of the project area.

#### Field Review

Methods: surface reconnaissance; 9 shovel tests.

Results: No cultural materials were found on surface or in shovel tests. The stream and marsh areas were not surveyed due to standing water. Soil profiles showed that this property had been intermittently inundated in the past; an organic stratum, probably developed under marsh, was encountered below more recent soils in the northern part of the property. Most of the southern half of the property consists of recent fill and sod over very sandy beach sediments. This filling was probably done at the time the nearby houses were constructed (ca. early 1950s).

#### Project Status

No evidence of prehistoric or historic resources was found during survey of this project area. It was recommended that construction proceed as planned with no further review; SHPO concurred (Ref. #DD-235).

### Little Long Lake

#### Location

Sec. 10, T. 117N, R. 24W; NW 1/4, NW 1/4, SW 1/4, SW 1/4; City of Minnetrista. Located on the east shore of the lake, adjacent to (south of) Game Farm Road (see Figure 35).

#### Geomorphic Region

Minnesota Valley Outwash (Minnesota Soil Atlas Project, St. Paul Sheet). (Waconia-Waseca Moraine adjoins to west.)

#### Scope of Project

Development of a new Public Water Access. Facilities to be constructed will include an 8-space parking area and concrete ramp; the existing gravel access road will be modified. Fill will be placed in the central part of the construction area; a small ridge on the very northern edge of the property is to be left untouched, to provide vegetative screening between the parking lot and the road.

#### Description of Project Area

The project area is bordered on the east and south by church camp property. Most of the property has a substantial slope off the roadgrade on the eastern edge down to the southwest; vegetation consists of tall grasses and scattered small trees, with larger trees along the lakeshore.

#### Records Review

Previous surveys: none known.

Recorded sites in vicinity: none.

#### Field Review

Methods: surface reconnaissance along shoreline cutbank; 6 shovel tests.

Results: No cultural materials were found on surface or in shovel tests. Soils in the lowest-lying portion of the construction area appeared to be mostly slopewash from the higher elevations, overlaying saturated sediments that probably developed under wetland conditions.



### Project Status

It appeared that the proposed development would not affect any historic or prehistoric resources. A recommendation was made that work proceed with no additional review; SHPO concurred (Ref. #DD-238).

## Scott County

### Cedar Lake

#### Location

Sec. 18, T. 113N, R. 22W; E 1/2, SW 1/4, NW 1/4, SE 1/4; Cedar Lake Township. Located on the eastern shore of the lake, 1/2 mile southwest of the town of St. Patrick, MN, just west of TH #13 (see Figure 36).

#### Geomorphic Region

Lonsdale-Lerdal Till Region (Minnesota Soil Atlas Project, Twin Cities Metro Area Sheet). (Waconia-Waseca Moraine adjoins to west).

#### Scope of Project

Rehabilitation of an existing Public Water Access operated by Cedar Lake Township, which is leasing it to DNR for development as an access with a 24-space parking lot and double concrete ramps.

#### Description of Project Area

The property is bounded on the south by Simon Road, on the east by Janine Drive, and on the north by private property (year-round residences). (The 1981 USGS Quad map shows this area as lakebed.) There is currently an unimproved access in this location, which consists of a dirt road loop and ramp at the northern edge of the property. The rest of the project area has been plowed; at the time of survey, it was covered with a sparse growth of clover and alfalfa (planted by the township to control erosion). The shoreline is mostly reeds and canary grass.

#### Records Review

Previous surveys: none known.

Recorded sites in vicinity: none.

#### Field Review

Methods: surface reconnaissance; 6 shovel tests.

Results: No cultural materials were found on surface or in shovel tests. Surface visibility was approximately 60% to 70% over the entire construction area. Soils are predominantly silty clays over very dense clays and glacial till. Much of the upper soil stratum revealed in shovel tests appeared to be slopewash from higher elevations.

#### Project Status

It appeared that the proposed development would not affect any historic or prehistoric resources. A recommendation was made that work proceed with no additional review; SHPO concurred (Ref. #DD-241).

### Thole Lake

#### Location

Sec. 25, T. 115N, R. 23W; N 1/2, NW 1/4, NE 1/4, NW 1/4, SE 1/4; Louisville Township. Located on the north shore of the lake, adjacent to County Road #79, about 3.5 miles south of Shakopee, MN (see Figure 37).

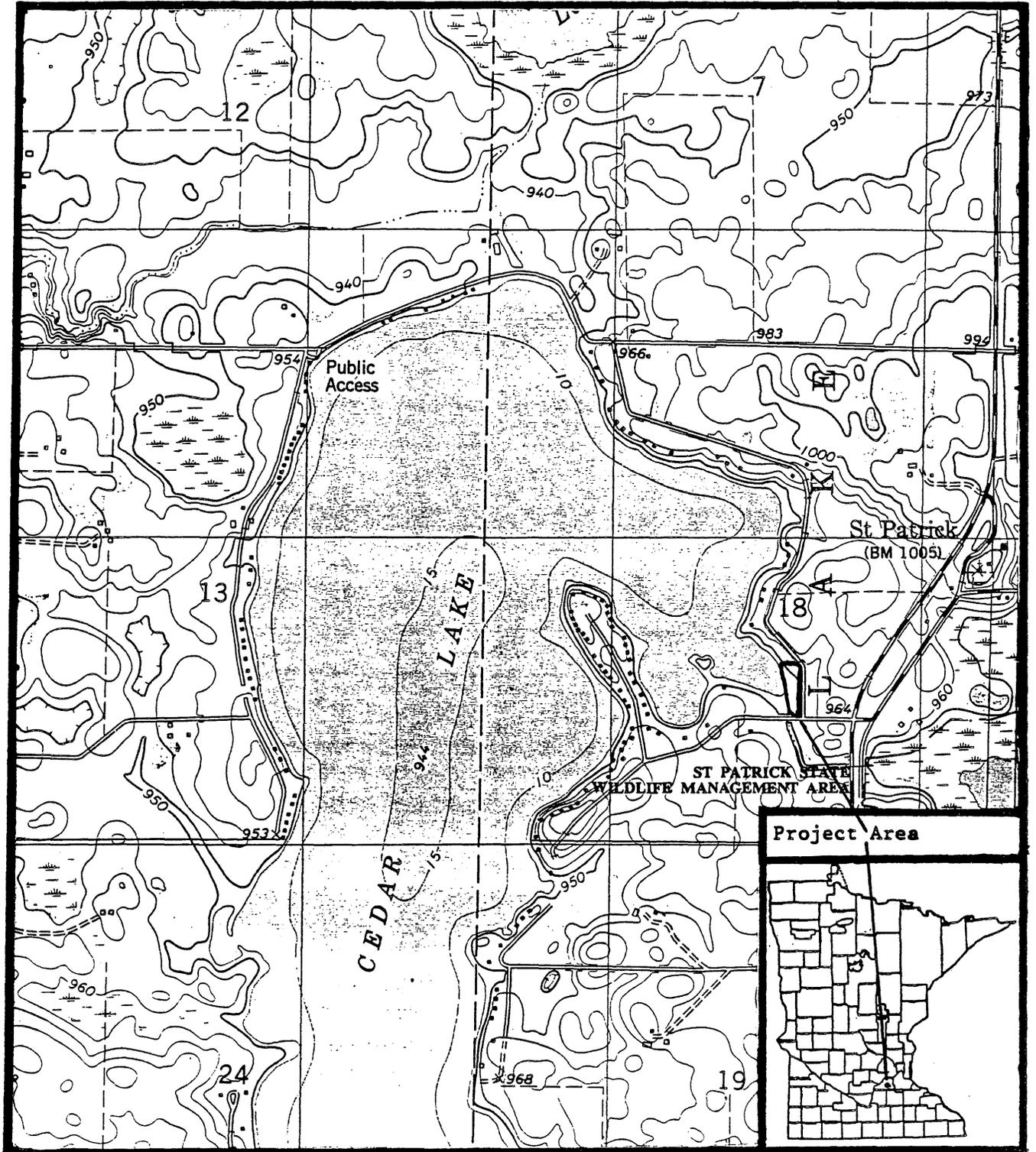
#### Geomorphic Region

Prior Lake Moraine (Minnesota Soil Atlas Project, St. Paul Sheet).

#### Scope of Project

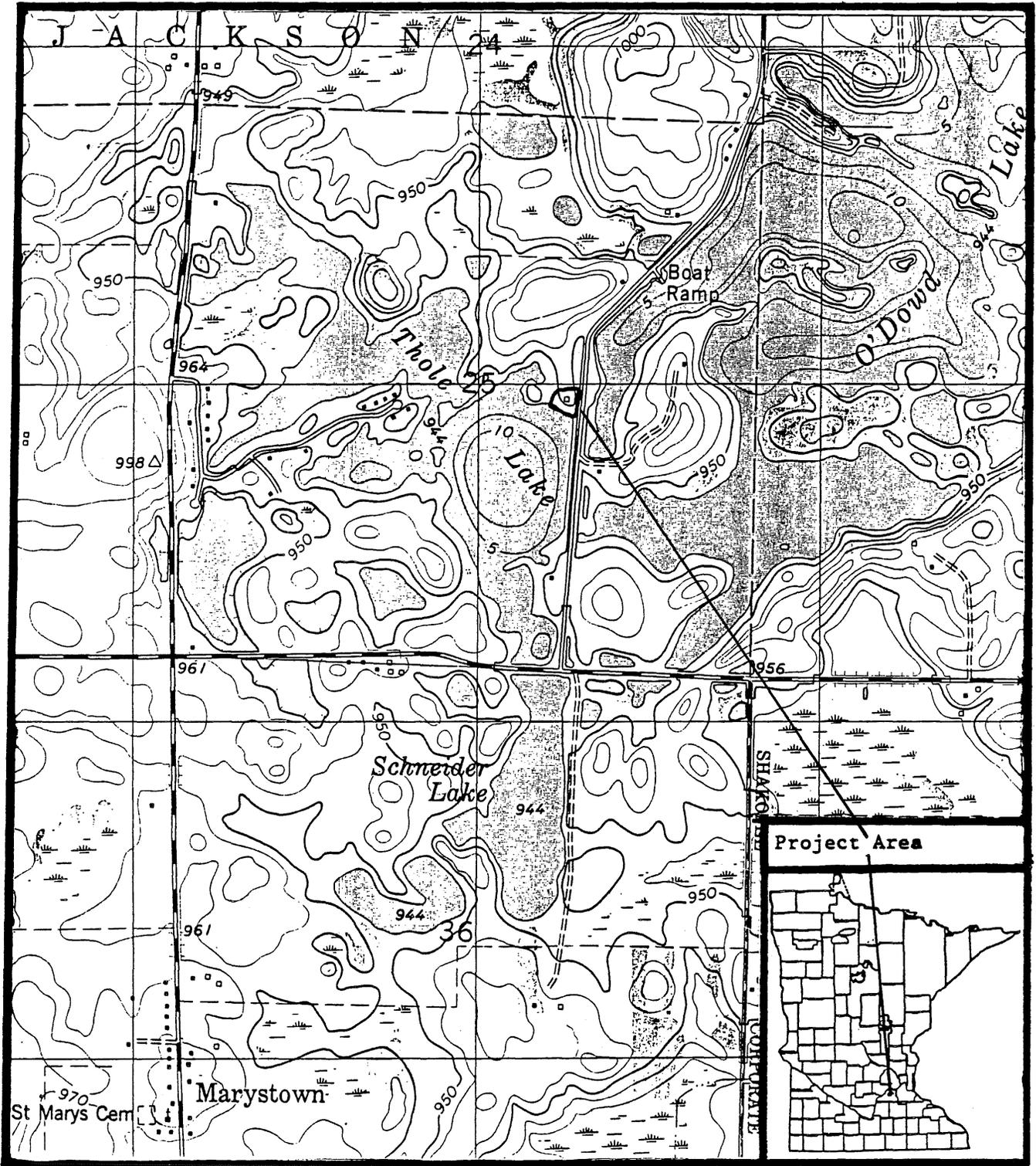
Rehabilitation of an existing Public Water Access. Development plans call for expansion and recontouring of existing parking area, construction of new entry road

Figure 36. Cedar Lake Project Area



USGS New Prague Quadrangle, 1981, 7.5' series  
(enlarged x 1.42 - approximately 1:17,000)

Figure 37. Thole Lake Project Area



USGS Jordan East Quadrangle, 1981, 7.5' series  
(enlarged x 1.42 - approximately 1:17,000)

and installation of a concrete ramp.

#### Description of Project Area

The existing access facilities occupy roughly the southeastern quarter of the project area; the remainder of the property is an old farmstead. Standing structures at the time of survey included a wooden frame garage, two metal silos. A concrete block barn foundation and concrete slab house footings were also in place. A dirt driveway bisects the property, the rest of which was overgrown lawn.

#### Records Review

Previous surveys: none known.

Recorded sites in vicinity: none.

#### Field Review

Methods: surface reconnaissance, 10 shovel tests.

Results: No cultural materials except for recent debris were found on surface or in shovel tests. The existing structures on the property are of relatively recent construction, and do not appear to be of any historic or architectural significance. Soil stratigraphy suggested some erosion of topsoil from higher elevations and corresponding deposition of slopewash sediments in the lower portions of the property, near the lakeshore. There also appeared to have been some cutting and filling done in the northern part of the project area, in association with the farm buildings.

#### Project Status

It appeared that the proposed development would not affect any historic or prehistoric resources. A recommendation was made that work proceed with no additional review; SHPO concurred (Ref. #Z-273).

## Washington County

### Bone Lake

#### Location

Sec. 5, T. 32N, R. 20W; W 1/2, SW 1/4, NW 1/4, NE 1/4; New Scandia Township. Located on the north shore of the lake, adjacent to 238th Street, about 6 miles east of Forest Lake, MN (see Figure 38).

#### Geomorphic Region

McGrath Till Plain (Minnesota Soil Atlas Project, Stillwater Sheet).

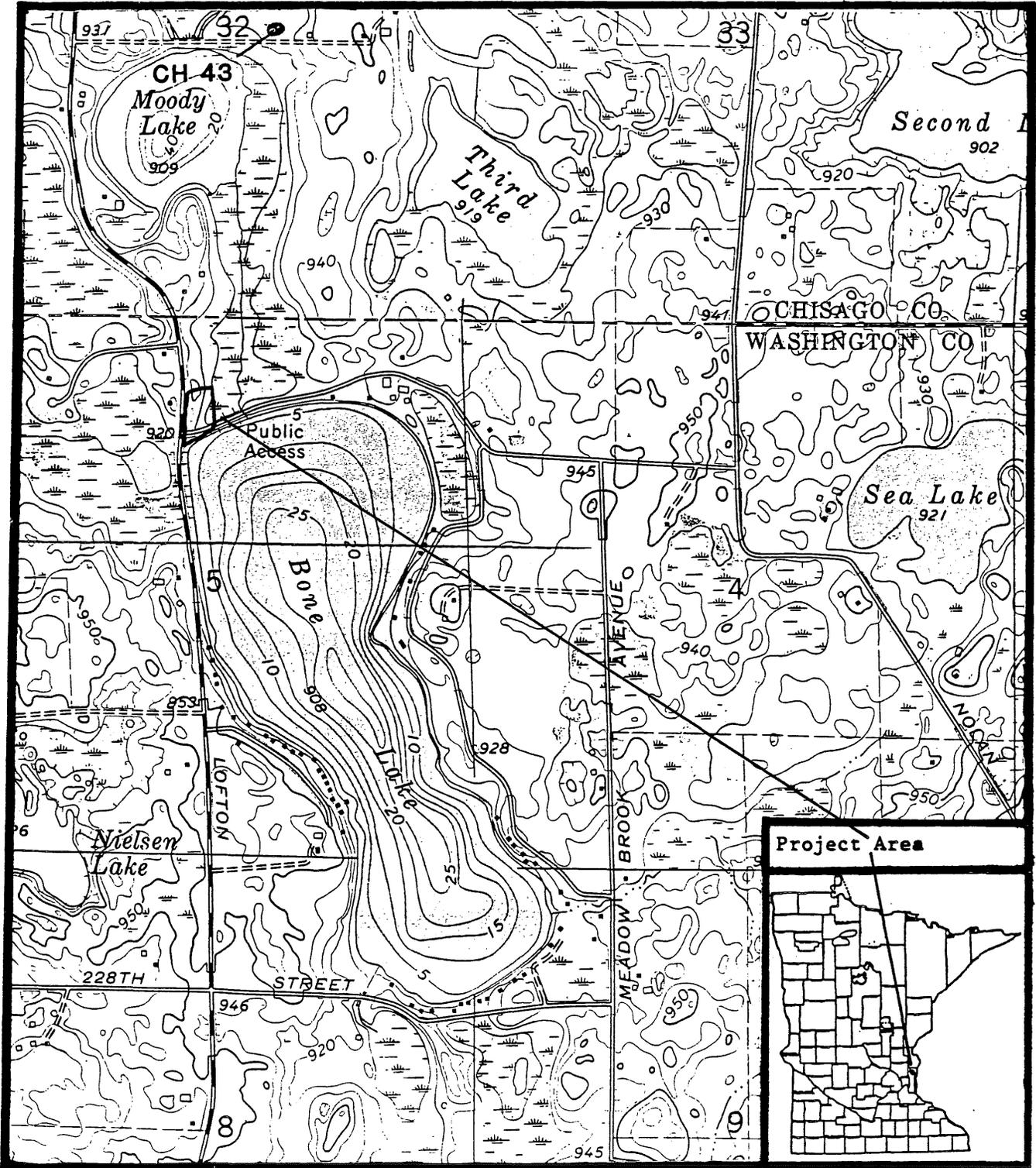
#### Scope of Project

Rehabilitation and expansion of an existing Public Water Access. Existing facilities, which consist of a small dirt parking area and concrete ramp, are located in the approximate middle of the northern shore, about 200 meters east of a narrow, north-south trending ridge. Construction plans call for the present launch area to be moved to the west, and for a 10-space parking lot and road loop to be built on the eastern side of the ridge. This work will require a cut of c. 6' maximum depth down the long axis of the ridge, with the resultant fill being placed on the eastern sideslope. In addition, a new township road alignment will be cut across the ridge about 36 meters north of the existing road.

#### Description of Project Area

The existing Public Water Access abuts a township road (238th Street) that runs along the north shore of the lake, and has partially blocked drainage from Bone Lake into a swamp on the north side of the road. This swamp, in turn, connects with Moody Lake about 1 mile to the north. The swamp and surrounding land, a total of 26 acres, are part of a Washington County wildlife preserve. DNR has established a cooperative agreement with the county and the township, in which DNR will construct and maintain an upgraded Public Water Access on county lands, and will be reimbursed by the township for a re-alignment of 238th Street that will serve the new access.

Figure 38. Bone Lake Project Area



USGS Scandia Quadrangle, 1974, 7.5' series  
(enlarged x 1.42 - approximately 1:17,000)

The landform upon which the new parking area will be constructed is a narrow ridge that slopes rapidly down along its eastern edge into the swamp; it appears to have been created by deposition of sandy outwash around the edge of an iceblock in an outwash channel. The project area has been mapped as "Zimmerman fine loamy sand", an excessively drained soil that borders drainageways and depressions on outwash and lake plains (Soil Survey Staff 1977:37-39). The ridge is currently in second growth of deciduous hardwoods (oak, maple, hickory) with a sparse understory. Prior to its purchase by the county, it was pastured; fenceposts and coils of old barbed wire were found along the western edge of the ridge. Some disturbance of soil strata is assumed to have resulted from the initial clearing of the ridge.

#### Records Review

Previous surveys: informal examination of township road by MnSAS crew (see below). There is no other record of formal archaeological survey in or close to the project area.

Recorded sites in vicinity: Two prehistoric sites have been recorded within a 1-mile radius of the project area. Both were located during MnSAS work in Washington and Chisago Counties in 1978 and 1979. 21WA40 is located on the northwest side of Sea Lake, just over a mile east of Bone Lake; 21CH43 is located on the northeast side of Moody Lake, about 3/4 mile north of Bone Lake. Both sites yielded only undiagnostic lithic artifacts. Notes from the MnSAS project also indicate that crew members briefly examined the Bone Lake Public Water Access area, with negative results. Although not specified in project records, it is likely that this examination consisted only of surface reconnaissance along the township road cut, where visibility is extremely poor.

#### Field Review

Methods: surface reconnaissance, 18 shovel tests, 3 excavation units.

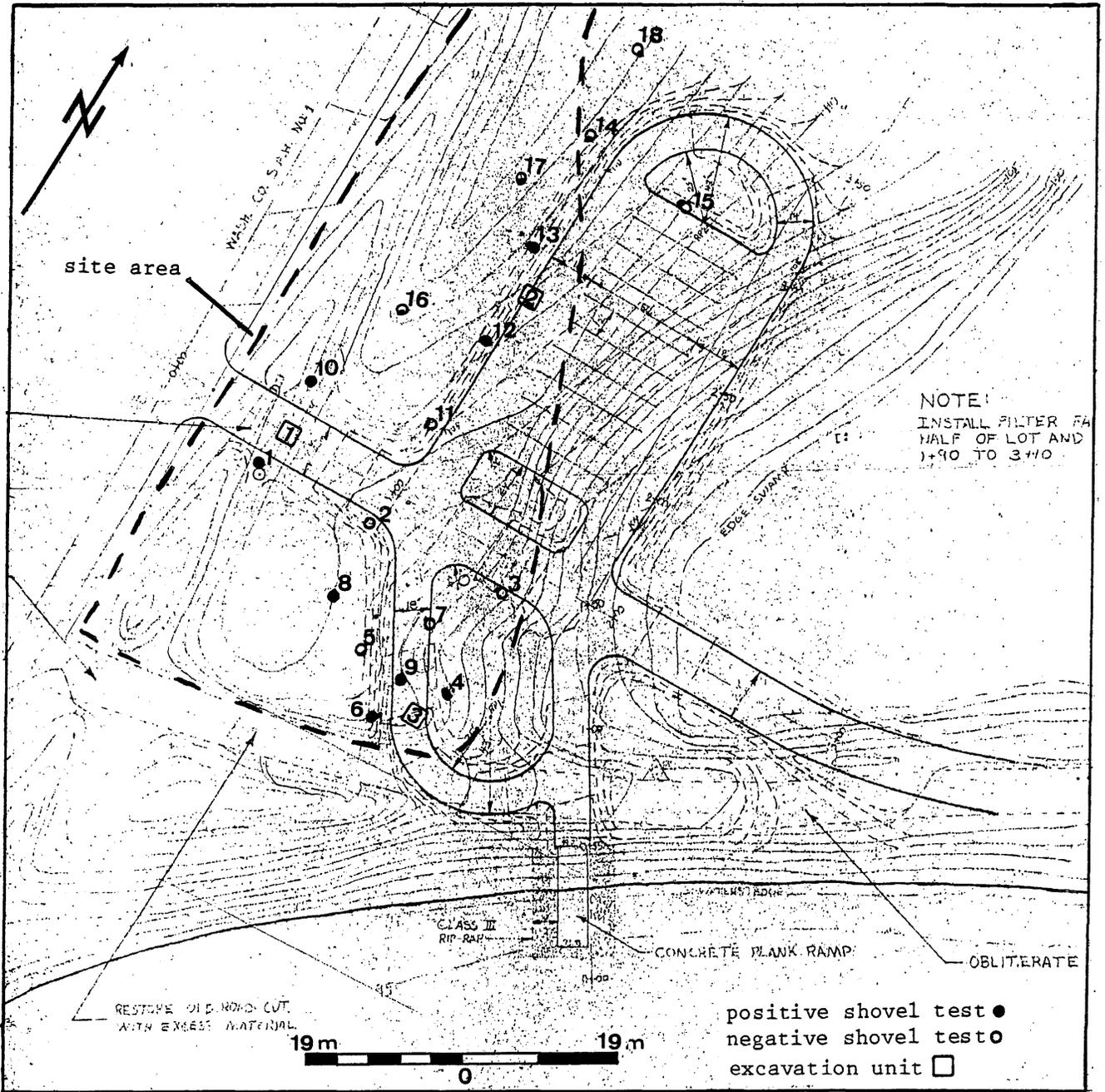
Results: during reconnaissance survey, lithic and ceramic artifacts were recovered from the existing roadcut and in shovel tests on the ridge itself (see Figures 39 and 40). The artifacts included a few small cord-roughened body sherds and one very small rim sherd with horizontal cord-wrapped-stick impressions below what appears to be a tool-impressed lip. These characteristics led to tentative identification of the sherd as belonging to the Kathio/Clam River ceramic type. On the basis of these results, a site form was submitted to the State Archaeologist's Office, which designated the site 21WA52.

The development that DNR is proposing for this area involves making a substantial cut into the ridge upon which 21WA52 is located. Consultations with the Project Engineer indicated that there are no feasible design alternatives that would reduce the effect of construction on the site area. Therefore, a recommendation was submitted to SHPO that further testing of the site be undertaken before construction proceeded. The purposes of the testing were to more clearly delineate the horizontal and vertical extent of the deposit, attempt to recover additional materials indicative of cultural affiliation, evaluate the site's current condition and gather information upon which a determination of eligibility for nomination to the National Register of Historic Places could be based.

The initial survey of the Bone Lake project area was based on preliminary construction plans, and therefore was not intended to provide enough information to determine the specific extent to which proposed construction would affect the site area. The northern boundary of the site area was not clearly delineated during reconnaissance survey, since the northern limits of the construction area were not marked at that time. Upon request, DNR Engineering personnel staked out the locations of major construction components (based on final plans) before site testing began, so that test unit locations could be more precisely related to the proposed development.

Three excavation units were laid out in areas to be affected by construction.

Figure 39. 21WA52 (Bone Lake) - Site Area



## Figure 40. 21WA52 - Artifact Summary

Surface: 1 core fragment (heat-treated oolitic chert)

## Shovel Tests:

ST 1 0-10 cm: 1 bone fragment (deer tibia)  
 10-20 cm: 2 bone fragments (deer tibia)  
 ST 4 0-10 cm: 1 grit body sherd, cord-roughened  
 1 primary flake (quartz)  
 ST 6 0-10 cm: 1 secondary flake (chert)  
 10-20 cm: charcoal  
 ST 8 25-30 cm: 1 secondary flake (chert)  
 ST 9 15-20 cm: 1 secondary flake (chert)  
 1 grit body sherd, fabric-impressed  
 25-30 cm: 2 grit body sherds, exfoliated  
 30-35 cm: 1 secondary flake (chert)  
 1 grit rim sherd (cord-wrapped-stick-impressed lip, horizontal  
 cord-wrapped-stick impressions below rim on exterior)  
 ST 10 20-25 cm: 1 grit body sherd, exfoliated  
 ST 12 20-25 cm: 1 secondary flake (chert)  
 30-35 cm: 1 secondary flake (quartz)  
 ST 13 35-40 cm: 1 primary flake (chert)  
 40-45 cm: 1 grit body sherd, cord-roughened  
 ST 17 10-15 cm: 1 secondary flake (chert)

## Excavation Units:

Unit 1: 10-15 cm: 1 core fragment (quartz)  
 15-20 cm: 1 primary flake (chert)  
 1 tertiary flake (chalcedony)  
 charcoal  
 20-25 cm: 2 core fragments (chert, quartz)  
 25-30 cm: 1 secondary flake (chert)  
 30-35 cm: 1 core fragment (quartz)  
 1 primary flake (chert)  
 1 secondary flake (chert)  
 35-40 cm: 1 primary flake (oolitic chert)  
 1 secondary flake (oolitic chert)  
 40-45 cm: 1 secondary flake (shist)  
 1 ceramic crumb  
 1 grit body sherd, smooth

Unit 2: 10-15 cm: 1 mandible fragment w/teeth (small rodent)  
 1 secondary flake (chert)  
 15-20 cm: 2 secondary flakes (chert, oolitic chert)  
 20-25 cm: 1 core fragment, utilized (chert)  
 1 fragment fire-cracked rock  
 25-30 cm: 1 primary flake (chert)  
 1 secondary flake (quartz)  
 charcoal  
 30-35 cm: 2 secondary flakes (chert)  
 35-40 cm: 1 primary flake (chalcedony)  
 charcoal

## Figure 40, continued

- Unit 3:
- 5-10 cm: 1 secondary flake (oolitic chert)
  - 10-15 cm: 5 secondary flakes (1 quartz, 1 chert, 1 shist,  
2 oolitic chert)  
1 core fragment (chert)  
1 tertiary flake (oolitic chert)  
1 grit decorated sherd, horizontal & oblique cws  
1 retouch flake (quartz)
  - 15-20 cm: 3 primary flakes (flint, chert, oolitic chert)  
1 grit body sherd, cord-roughened  
2 secondary flakes (quartz)  
1 core nodule (flint)  
2 tertiary flakes (chert, chalcedony)
  - 20-25 cm: 7 secondary flakes (5 chert, 1 flint, 1 oolitic chert).  
1 blade flake, utilized (chert)  
1 grit body sherd cord-roughened  
1 grit body sherd, combed  
1 ceramic crumb  
1 core nodule (chert)  
2 core fragments (chert, oolitic chert)
  - 25-30 cm: 4 grit body sherds, cord-roughened  
1 secondary flake, utilized (oolitic chert)  
1 grit body sherd, fabric-impressed
  - 30-35 cm: 1 grit body sherd cord-roughened  
2 secondary flakes (quartz, oolitic chert)  
1 ceramic crumb
  - 35-40 cm: 3 secondary flakes (2 chert, 1 oolitic chert)  
1 retouch flake (oolitic chert)
  - 40-45 cm: 3 grit body sherds, exfoliated  
1 grit decorated sherd, tool-impressed  
1 secondary flake (silica)  
charcoal

Units 1 and 2 were in areas that had shown evidence of only sparse cultural deposits during reconnaissance survey; for this reason, only 1/2 of each of these two units was excavated during testing. Unit 3 was placed in the middle of the highest artifact concentration, and the entire unit was excavated. In addition, the roadcut through the ridge and the eastern sideslope, which is sparsely vegetated, were examined for cultural materials on several occasions. One core fragment was found on the southern side of the roadcut during reconnaissance survey. No artifacts were found on the sideslope, even though surface visibility conditions were very good.

The results of site evaluation indicated the presence of a sparse cultural deposit on the ridge. Artifact densities were quite low in all three excavation units. Average densities per 1/2-unit level (50 x 100 x 5 cm) were 1.75 artifacts in Unit 1, 1.25 artifacts in Unit 2, and 3.25 artifacts in Unit 3. The cultural deposit was generally confined between 5 and 45 cm below surface, but no particular vertical concentrations were discernable within that region. Most of the assemblage recovered from the excavation units consists of lithic debitage. A few body sherds with varying surface treatments were found, as was a single sherd decorated with horizontal and oblique cord-wrapped-stick impressions. These materials are consistent with the initial designation of Kathio Ware given to the rim sherd found during reconnaissance survey.

Soil stratigraphy in all three units was quite consistent with what had been encountered during reconnaissance survey: a grayish-brown loamy sand A horizon overlaying lighter-colored strata of increasingly fine sand. The lowest stratum was a layer of light yellow very fine sand. Soil probing indicated that this horizon extends to a depth of at least 150 cm. The color changes between strata made it possible to delineate several sources of disturbance to the original stratigraphy, including recent (historic period) postmolds, root casts and rodent burrows. Burrowing has been extensive in this area (not surprisingly, considering the very sandy character of the soils), and very probably has introduced some bias into the vertical artifact distributions encountered during testing.

Current topographic configurations on both sides of the county highway suggest that construction of that road may have resulted in destruction of a portion of the ridge upon which 21WA52 is located. Thus, there is a probability that part of the original site area was destroyed when CSAH #1 was built (prior to the initiation of the County-Municipal Highway Archaeological Survey Program). Presently, it is not possible to make an absolute declaration that this is the case, although it appears likely that this is the case. Another segment of the original cultural deposit was apparently destroyed by construction of the existing township road (238th Street), which cuts across the southern tip of the ridge upon which the site is located. The single artifact retrieved from the southern side of the roadcut suggests that construction here may have also destroyed a portion of the original site area.

Overall, the information gathered during site evaluation suggests that 21WA52 was partially destroyed in the past by road construction, and the remaining cultural deposit probably represents the fringes of the original occupation area. The site does not qualify for consideration as a NRHP property, and does not appear to have sufficient research potential to warrant additional fieldwork. A recommendation has been made that the proposed access development be allowed to proceed as planned; SHPO is currently reviewing this recommendation (Ref. #AA-840).

## Clear Lake

### Location

Sec. 18, T. 32N, R. 21W; SE 1/4, NE 1/4, SE 1/4, NW 1/4; City of Forest Lake. Located on the west shore of Clear Lake, adjacent to Interstate 35E (see Figure 41).

### Geomorphic Region

Twin Cities Formation (Minnesota Soil Atlas Project, Twin Cities Metro Area Sheet). (Anoka Sand Plain adjoins to west).

### Scope of Project

Rehabilitation of an existing Public Water Access. Development plans call for construction of a 20-space parking lot along the western edge of the township road. The existing road would be terminated and a new segment of road built along the northwestern edge of the property. Most of the construction area has a moderate slope down from the roadgrade into a swampy area. Drainage between this area and Clear Lake is cut off by the intervening roadgrade. Construction will require placement of up to 4 feet of fill over filter fabric in the proposed parking area (see attached project plan). The remainder of DNR's property, which will not be affected by construction, is low-lying and wooded.

### Description of Project Area

The property is roughly triangular, bounded on the northwest by the Interstate Highway 35E ditch and right-of-way fence, and on the northeast and southeast by a township road that runs between the project area and the lakeshore. A small public access is currently in place at this location; it does not, however, include any parking facilities.

### Records Review

Previous surveys: MnSAS Washington County Survey, 1977/78.

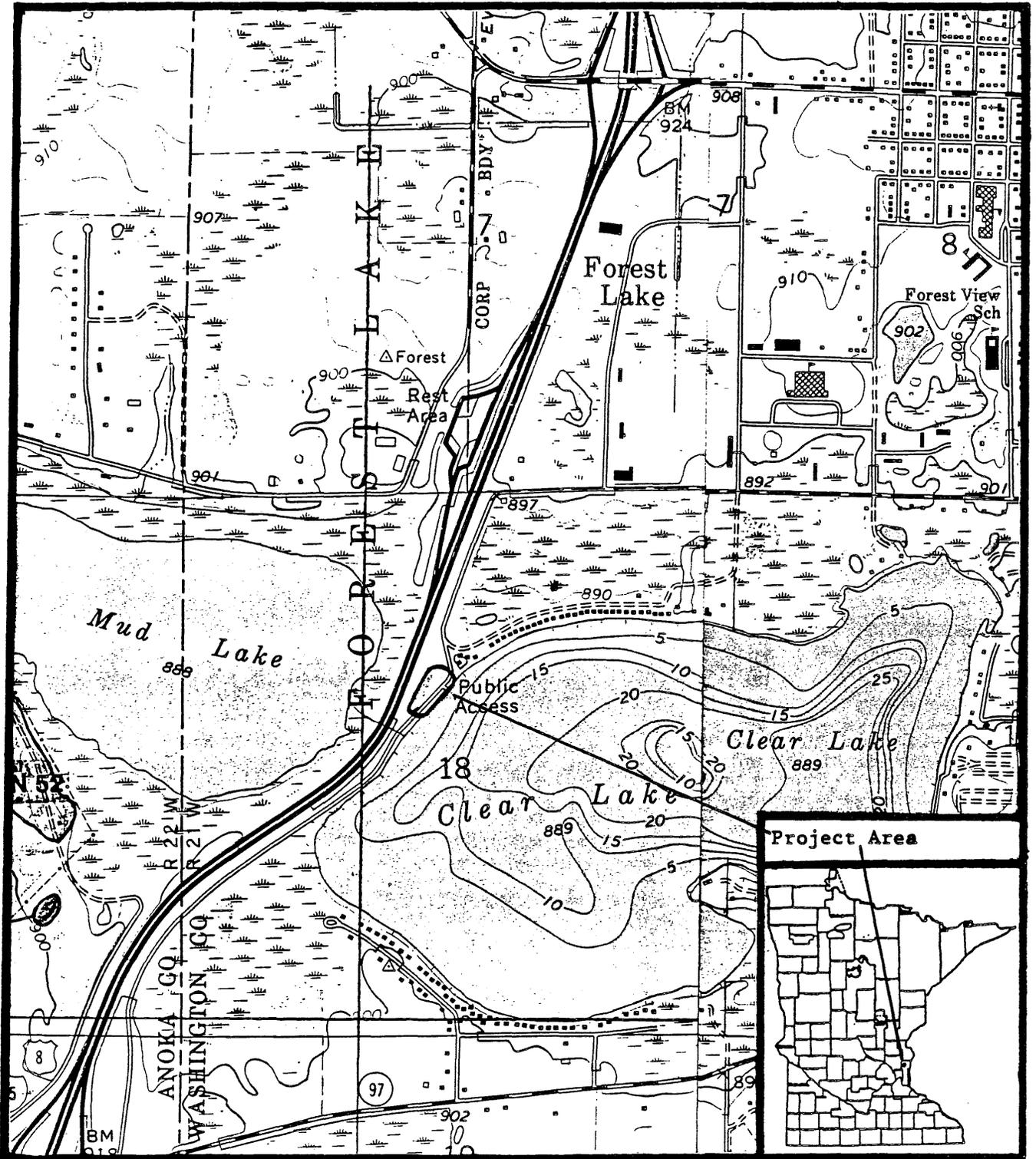
Recorded sites in vicinity: 21AN1, AN8, AN50, AN52 and AN53 are all located on the shores of Howard and Mud Lakes, 1/4 mile to 1 mile distant from the project area, on the west side of Interstate Highway 35E. These sites are part of what has been termed the 'Howard Lake Complex', a local Middle Woodland manifestation which exhibits strong technological and stylistic similarities to Hopewellian complexes in Illinois. All of the sites contain habitation material; three of them also include burial mounds. Several appear to have Late Woodland components (probably Onamia), and one has a possible Archaic or Early Woodland component. 21AN1 was initially recorded by Lewis and Winchell as a group of three burial mounds. Later work by Minnesota Statewide Archaeological Survey crews revealed three additional mounds and associated habitation debris. 21AN8 was recorded and investigated by Alfred Jenks in 1932 and 1934; excavation of one of the mounds at this site was the topic of Lloyd Wilford's Master's Thesis (University of Minnesota, 1937), and additional work at the site was done by Oothoudt and Watson in 1976. 21AN50, 52 and 53 were all recorded during the Minnesota Statewide Archaeological Survey of Anoka County in 1977 and 1978. This group of sites collectively has been designated the Howard Lake Archaeological District; documentation for this district's nomination to the National Register of Historic Places was compiled in 1980. The nomination was approved by the State Review Board in June 1980, but apparently was never submitted to the Advisory Council. (Construction of the portion of I-35E that runs between the Howard Lake sites and DNR's property preceded the Trunk Highway Archaeological Survey Program, so no data are available regarding sites within the highway corridor.)

### Field Review

Methods: surface reconnaissance; 6 shovel tests.

Results: No cultural materials were found on surface or in shovel tests. The existing boat access consists of a cut approximately 4 feet high at the shoreline in the northeastern corner of DNR's property; both sides of this cut, as well as the length of the shoreline within State property boundaries were examined for surface materials. Some scattered open areas in the woods and along the road alignment were also examined. Six shovel tests were done in the wooded area east of the proposed

Figure 41. Clear Lake Project Area



USGS Linwood Quadrangle, 1974 & Forest Lake Quadrangle, 1974, 7.5' series (enlarged x 1.42 - approximately 1:17,000)

parking lot and along the new road corridor. Most of the wooded area was mucky on the surface, with a few small spots of standing water, especially on the northern edge of the new road alignment, close to the existing highway ditch. Roughly the western 2/3 of the proposed parking lot area was not surveyed due to several feet of standing water. Soils encountered in shovel tests were shallow clay loams over heavy clay. They appear to have developed primarily under wetland conditions, perhaps as part of the wet prairie shown in this area on GLO surveys.

#### Project Status

It appeared that the proposed development would not affect any historic or prehistoric resources. A recommendation was made that work proceed with no additional review; SHPO concurred (Ref. #DD-242).

### Wright County

#### Cokato Lake

##### Location

Sec. 14, T. 119N, R. 28W; NE 1/4, NW 1/4, SE 1/4, SE 1/4; Cokato Township. Located on the east shore of Cokato Lake, about 3 miles northeast of the City of Cokato, MN (see Figure 42).

##### Geomorphic Region

Waconia-Waseca Moraine (Minnesota Soil Atlas Project, St. Cloud Sheet).

##### Scope of Project

Rehabilitation of existing Public Water Access; current facilities include a dirt entry road, small turnaround area and concrete ramp. DNR plans to upgrade this access by expanding it to the south, onto property that was previously owned by the County and operated as a fish hatchery. Construction plans call for placement of a 12-space parking area in the pond location, realignment of the existing entry road and placement of a new ramp. The construction area overlaps to a large degree with the locations of existing facilities.

##### Description of Project Area

The existing entry road is separated from the expansion area by a small channelized stream; the area south of the stream was covered with thick vegetation (tall grasses and some scattered hardwoods) at the time of survey. A hatching pond about 4' deep is located on the southern edge of the property.

##### Records Review

Previous surveys: none known.

Recorded sites in vicinity: There are no formally recorded sites in the area, but there are two known site locations. One of these is a mound group located on the southeast shore of the lake, about 1 mile from the project area. In 1936, only one of the original mounds was still identifiable; the others had been destroyed by the landowner. The other site is a single mound on the northwest side of the lake, about 1.5 miles from the project area. In 1974 it was examined by MHS personnel who determined that the mound had been disturbed by road construction which also may have completely destroyed a second near-by mound.

##### Field Review

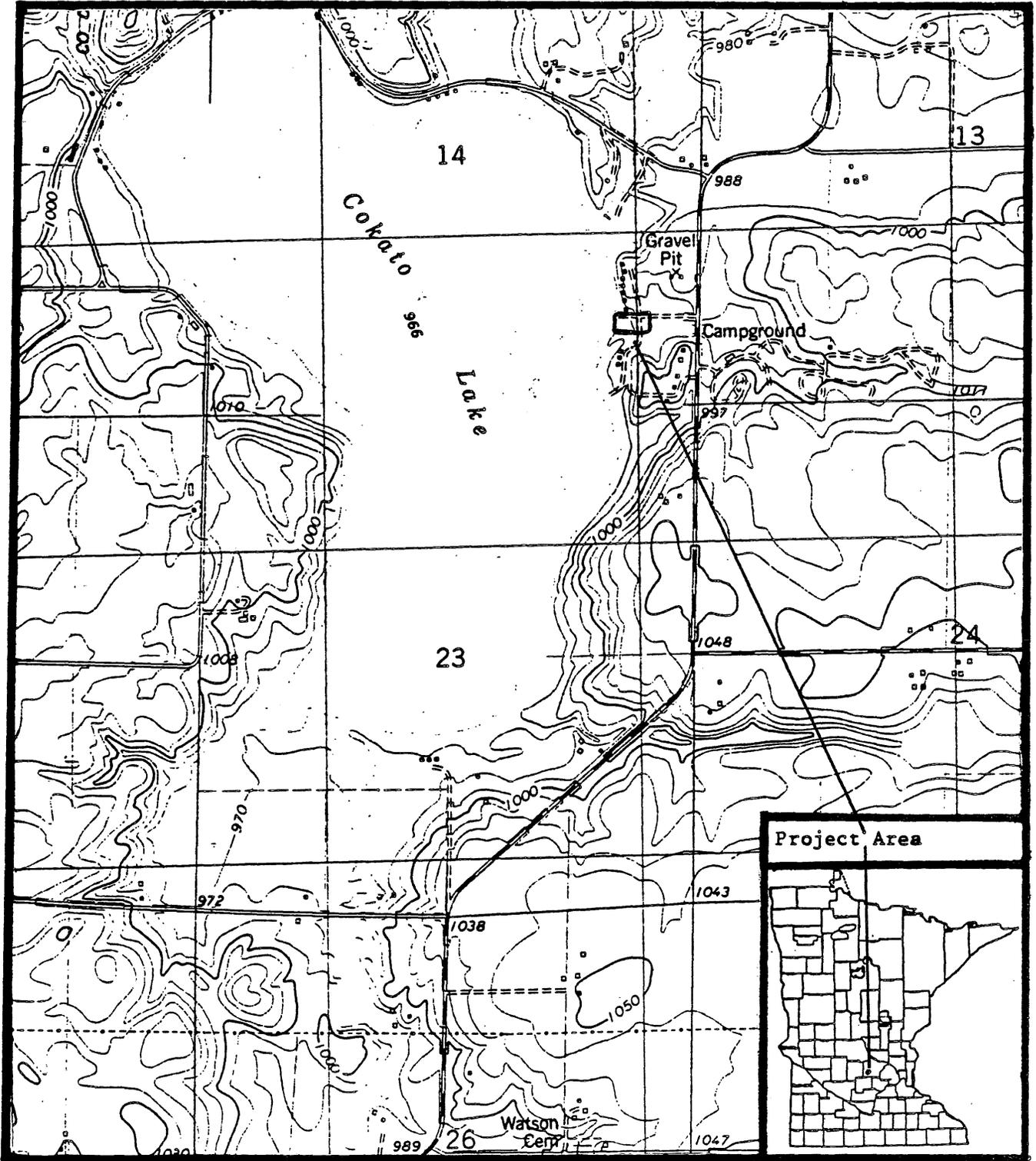
Methods: surface reconnaissance; 6 shovel tests.

Results: No cultural materials were found on surface or in shovel tests. Soils were very mucky silt loams (partially slopewash) that appeared to have formed under marshy conditions, and appeared to have been disturbed by construction of the existing hatchery facilities.

##### Project Status

No evidence of prehistoric or historic resources was found during survey of this project area. It was recommended to SHPO that construction proceed as planned with no additional field review; the recommendation is currently being reviewed.

Figure 42. Cokato Lake Project Area



USGS Cokato Quadrangle, 1982, 7.5' series  
(enlarged x 1.42 - approximately 1:17,000)

## French Lake

### Location

Sec. 11, T. 120N, R. 28W; N 1/2, SE 1/4, SW 1/4, SW 1/4; French Lake Township. Located on the western shore of French Lake, approximately 2 miles northeast of the town of French Lake, MN (see Figure 43).

### Geomorphic Region

Waconia-Waseca Moraine (Minnesota Soil Atlas Project, St. Cloud Sheet).

### Scope of Project

Rehabilitation of an existing Public Water Access. Development plans call for construction of a 12-space parking area and new entry road. Due to the very low elevation of the property, placement of some fill close to the shoreline will be required during construction.

### Description of Project Area

The property is bounded on three sides by private property - small summer residences to the north, cultivated field to the south and marsh across the dirt road to the west. The property is currently in use as an improved access to the lake; a township road which runs north-south along a line of summer homes north of DNR's property turns eastward at the edge of the project area to provide access to the lakeshore and a small dirt parking area. The remainder of the property has been cultivated in the past (plow furrows are still apparent), and is presently overgrown with tall grasses and weeds.

### Records Review

Previous surveys: none known.

Recorded sites in vicinity: none.

### Field Review

Methods: surface reconnaissance; 12 shovel tests.

Results: No cultural materials were found on surface or in shovel tests. An area about 25 meters wide along the lakeshore which was covered with standing water was excluded from survey. Soils included high proportions of undecayed organic material mixed with sand and very sandy clays, and were generally saturated 40 cm or less below the surface. The surface of the dirt road that borders DNR's property to the west was also examined.

### Project Status

It appeared that the project will not affect any significant prehistoric or historic resources. It was recommended that development proceed as planned; SHPO concurred (Ref. #DD-363).

## Granite Lake

### Location

Sec. 30, T. 120N, R. 27W; NW 1/4, NW 1/4, NE 1/4, NE 1/4; Albion Township. Located on the west shore of Granite Lake, 6.5 miles southwest of Maple Lake, MN (see Figure 44).

### Geomorphic Region

Waconia-Waseca Moraine (Minnesota Soil Atlas Project, St. Cloud Sheet).

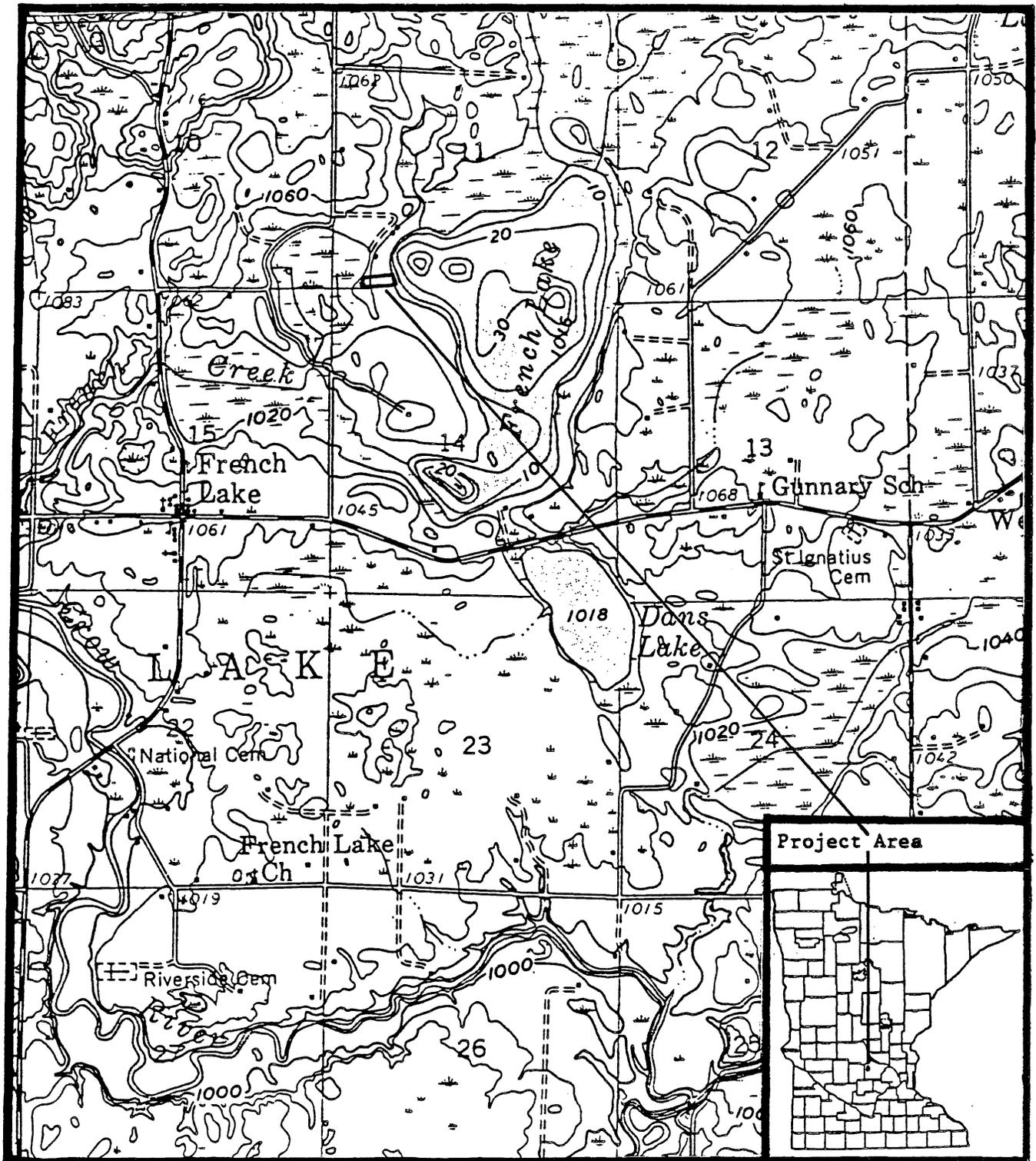
### Scope of Project

Rehabilitation of an existing Public Water Access. Construction plans call for expansion of the existing parking lot onto the property immediately to the south, the former site of a small cabin.

### Description of Project Area

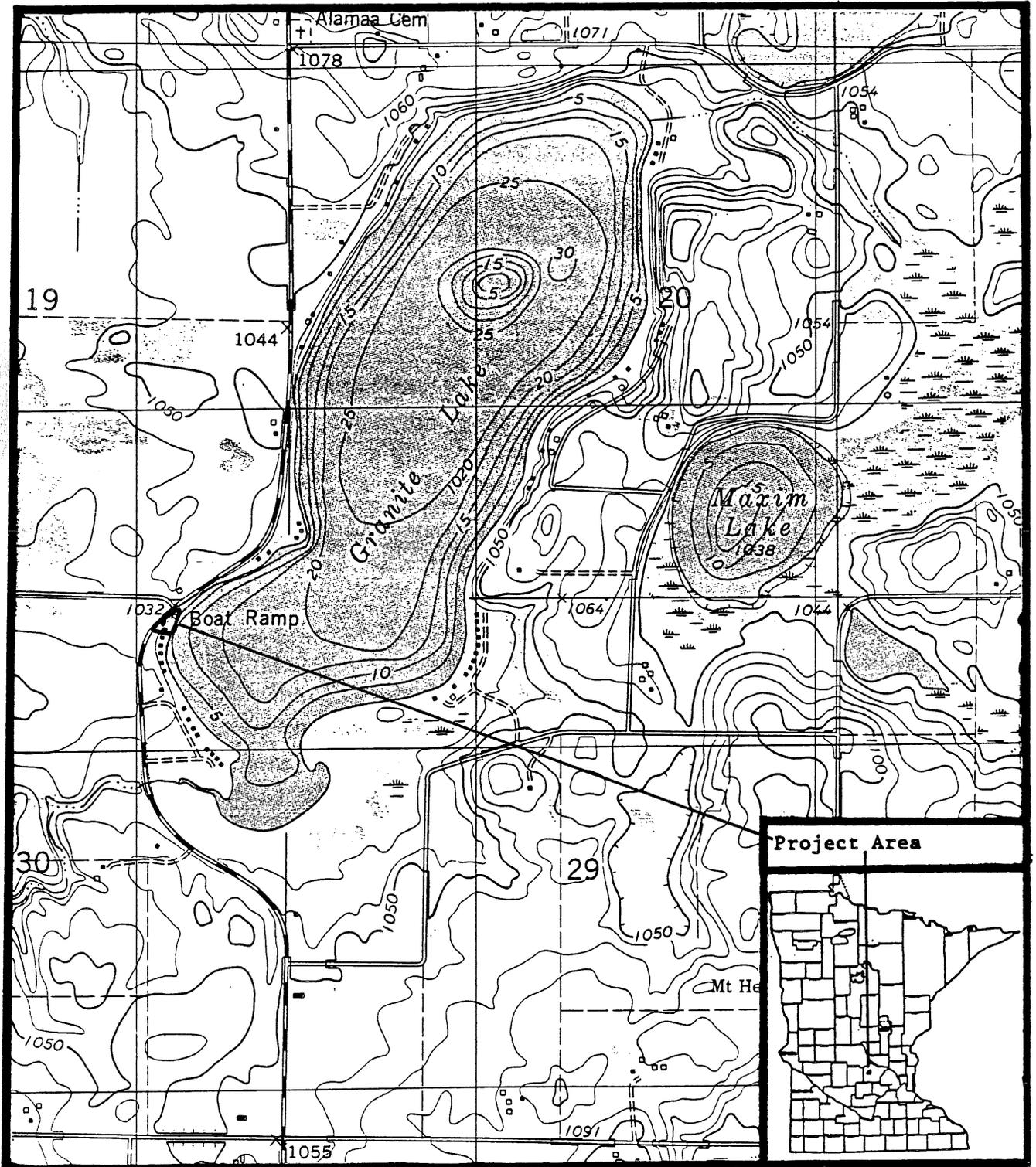
The project area is bounded on the north and west by Wright County Road #10, and on the south by private property (year-round residences). DNR presently operates a Public Water Access in this location; existing facilities consist of a concrete ramp and bituminous-surfaced parking area. The parking lot expansion area is separated from the existing lot by an intermittent stream that provides drainage

Figure 43. French Lake Project Area



USGS Cokato Quadrangle, 1958, 15' series  
(enlarged x 2.01 - approximately 1:31,000)

Figure 44. Granite Lake Project Area



USGS Albion Center Quadrangle, 1982, 7.5' series  
(enlarged x 1.42 - approximately 1:17,000)

between Granite Lake and a large marsh to the west of the county road. The cabin site was apparently residential lawn until purchased by the State; at the time of survey it was overgrown with weeds and grasses. The cabin that stood on the property has been demolished; a concrete block foundation was still in place at the time of survey.

#### Records Review

Previous surveys: none known.

Recorded sites in vicinity: none.

#### Field Review

Methods: six shovel tests at approximately a 10-meter interval (shovel test placement was determined by the location of existing cultural features - cabin foundation, county road ditch and driveway grade).

Results: No cultural materials (other than recent debris) were found in shovel tests. Soils in all shovel tests appeared to have been disturbed to a considerable extent; in most places, recent fill was encountered over very sandy loam and coarse lakebed sediments.

#### Project Status

No evidence of prehistoric or historic resources was found during survey of this project area. It was recommended that construction proceed as planned; SHPO concurred (Ref. #DD-248).

#### IV. RIVER RECREATION PROGRAM DEVELOPMENT PROJECTS

##### REGION II - NORTHEAST

##### Koochiching County

##### Big Fork River/Big Falls

###### Location

Sec. 35, T. 155N, R. 25W; N 1/2, NE 1/4, SE 1/4, SE 1/4 & N 1/2, NW 1/4, SE 1/4, SE 1/4; City of Grand Falls. Located on a low terrace on the north bank of the Big Fork River, just below the Big Falls Rapids, adjacent to TH #71 (see Figure 45).

###### Geomorphic Region

Agassiz Lacustrine Plain, Big Falls Area (Minnesota Soil Atlas Project, International Falls Sheet).

###### Scope of Project

Construction of a new Public Water Access; development will involve upgrading of an existing dirt entry road, construction of a small (8-unit) parking area and placement of a concrete plank ramp. Most of the work will be done at or above existing grade.

###### Description of Project Area

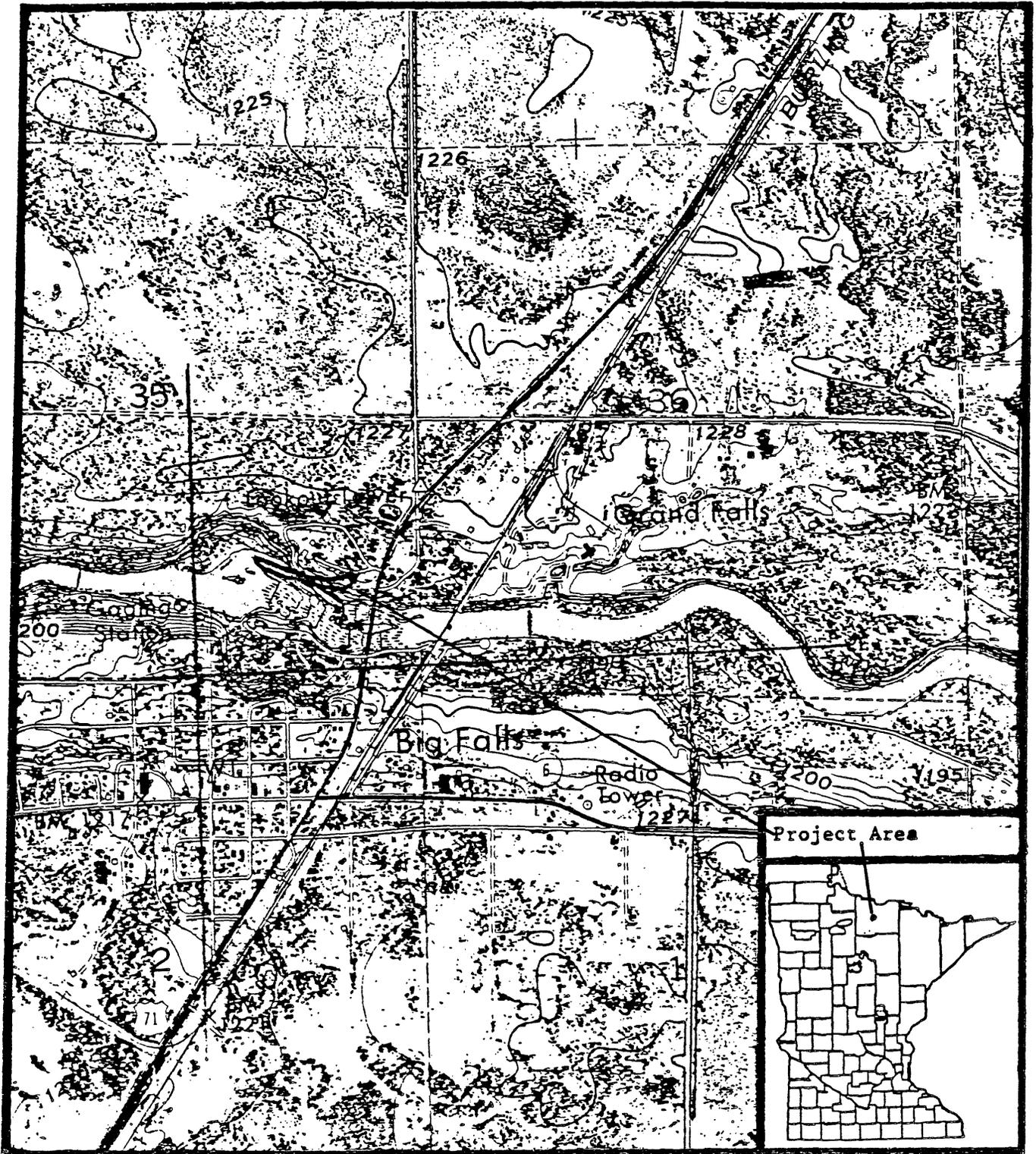
The property is presently owned by Minnkota Power Cooperative, Inc., which has agreed to allow DNR to develop and maintain a portage trail and canoe access. The area to be developed includes a small portion of the upland terrace immediately west of TH #71, at which point a gravel entry road to the access will begin. The road will run down the slope below the upland terrace to a nearly level terrace remnant on which Minnkota once operated a hydroelectric plant. Information from local residents and DNR personnel indicated that, at the time the power plant was built, Minnkota dredged a tailrace between the project area and the terrace interface, and spread the dredge spoil over the project area. Another channel was also cut on the north side of the river, just below the falls, as part of the power plant facilities. The project area is subject to inundation on an annual basis; at the time of survey, it was covered with thick grasses and a few small trees along the water's edge.

###### Records Review

Previous surveys: Lloyd Wilford visited the Falls of the Big Fork River several times during the 1930s, and recorded habitation and burial areas on both sides of the river, just below the falls. In 1981, the Minnesota Statewide Archaeological Survey conducted field review of known site areas along the river in this vicinity.

Recorded sites in vicinity: The following sites are recorded in and near the project area: MnSAS Field Number 7-1 - about 1/4 mile downstream from the Big Falls, on the north side of the river; recorded by MnSAS in 1981; lithics and fire-cracked rock from shovel tests on terrace about 15' above the river. 21KC9 - initially located by Wilford, 1932; 'village' site on the north side of the river, at the foot of the falls. In a 1939 memo, Wilford refers to the site as being 'entirely destroyed by the construction of a canal along it, in connection with a hydraulic power plant'. When the site was assigned an official number, it was defined as including a single mound on the north side of the Minnkota property, cultural materials in garden plots (both located on the upper terrace, about 25' above the river), and also the site on the first terrace, destroyed as of 1939.

Figure 45. Big Fork River/Big Falls Project Area



USGS Big Falls Quadrangle, 1971, 7.5' series  
(enlarged x 1.42 - approximately 1:17,000)

In 1981, a MnSAS crew visited the area and briefly tested the site on the upper terrace. Lithic and ceramic artifacts were found on surface, in a small garden area, and in shovel tests. They apparently did not examine the lower terrace area to see if anything remained of the cultural deposit noted by Wilford in that location.

#### Field Review

Methods: 10 shovel tests along the proposed road alignment and within the parking area (the construction area was staked by the Project Engineer prior to field survey).

Results: Cultural materials were recovered from disturbed soil strata above 20 cm in 7 shovel tests on the lower terrace (see Figure 47):

ST #1,	10-20 cm:	1 secondary flake, utilized (chert)
ST #2,	0-10 cm:	1 grit-tempered decorated sherd, cord-wrapped-stick impressed
		2 small grit-tempered body sherds, smooth over cr
	10-20 cm:	1 grit-tempered body sherds, smooth
		5 small grit-tempered body sherds, cr
ST #4,	0-10 cm:	1 grit-tempered rim sherd, stamped, tool-impressed lip
		1 grit-tempered neck sherd, cr
		1 secondary flake (chert)
ST #6,	0-10 cm:	2 ceramic crumbs
	10-20 cm:	1 grit-tempered body sherd, smooth over cr
		1 grit-tempered body sherd, cr
		1 secondary flake (chert)
ST #7,	0-10 cm:	2 small body sherds, smooth over cr
	10-20 cm:	1 body sherd, fabric-impressed
ST #10,	0-10 cm:	4 small grit-tempered body sherds, fabric-impressed
		1 small grit-tempered body sherd, cr
		2 small grit-tempered body sherds, smooth
	10-20 cm:	1 grit-tempered body sherd, fabric-impressed
	60-65 cm:	6 bone fragments (mammal)

The cultural materials were entirely contained within extremely disturbed soils. The stratum in which they were found consisted of a mixture of sand, silty loam and clay loam with no consistent profile or structure. Just below this layer, there did appear to be more intact strata of alternating silty and sandy soils, probably deposited by floodwaters. No cultural materials were found in this stratum. Bedrock was encountered in shovel tests at depths ranging from 70 to 106 cm below surface.

#### Project Status

It appears that the recovered cultural materials were transported to this location along with dredge spoil, probably from the lower terrace site that Wilford visited in 1932. They do not represent an intact cultural deposit present on the lower terrace portion of the construction area. While the section of the access entry road closest to TH \$71 may cross the site area on the upper terrace, no alteration of the existing roadbed will be done as part of DNR's development. It thus appears that the work as proposed will not affect any significant, intact cultural resources. It was recommended that the project proceed with no further field review; SHPO is currently reviewing this recommendation.

#### Little Fork River/Lofgren Park

##### Location

Sec. 9, T. 68N, R. 25W; S 1/2, SW 1/4, NE 1/4, NW 1/4; City of Little Fork. Located on the east bank of the river, within Lofgren City Park (see Figure 47).

Figure 46. Big Fork River/Big Falls - Test Locations

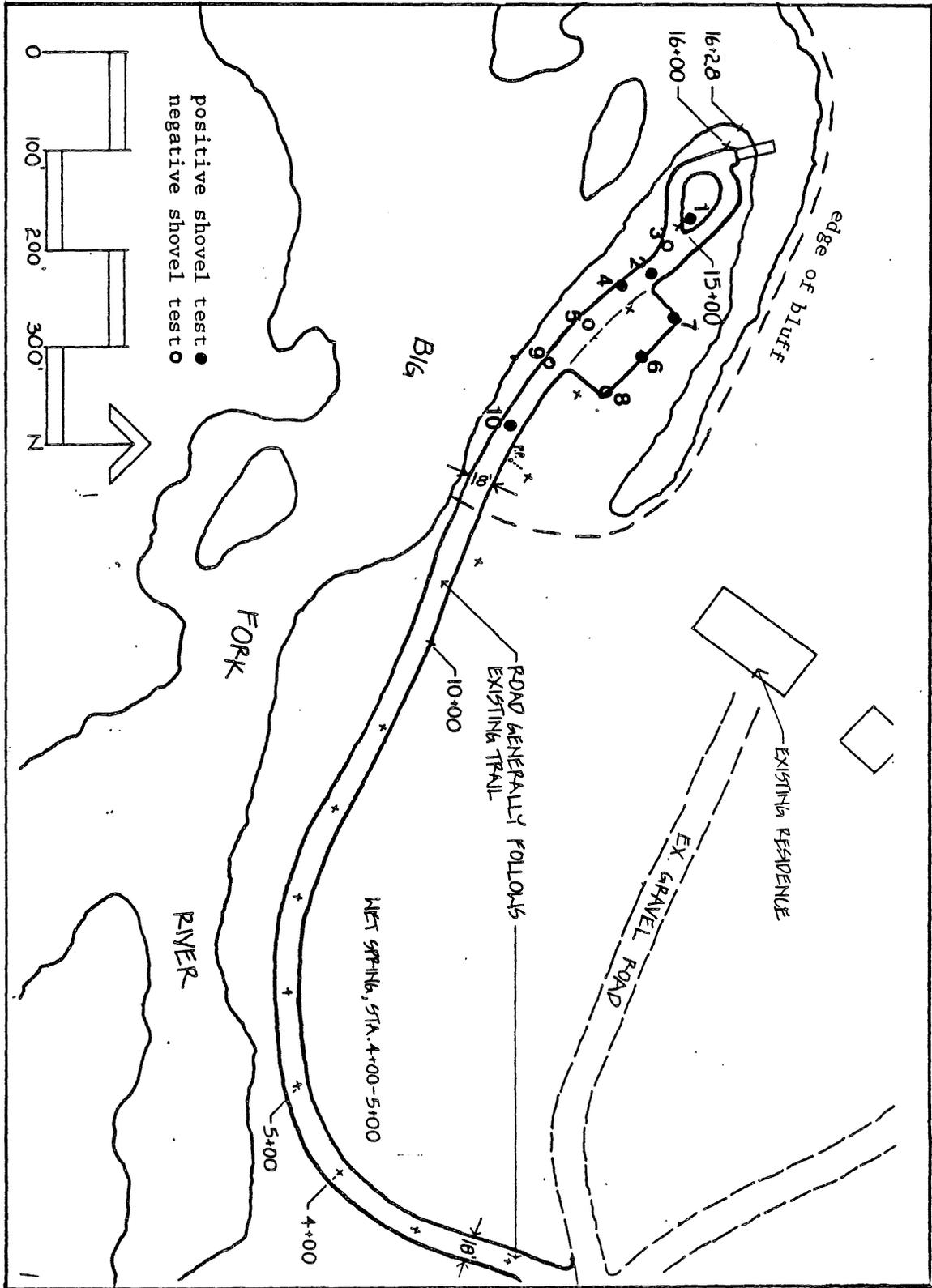
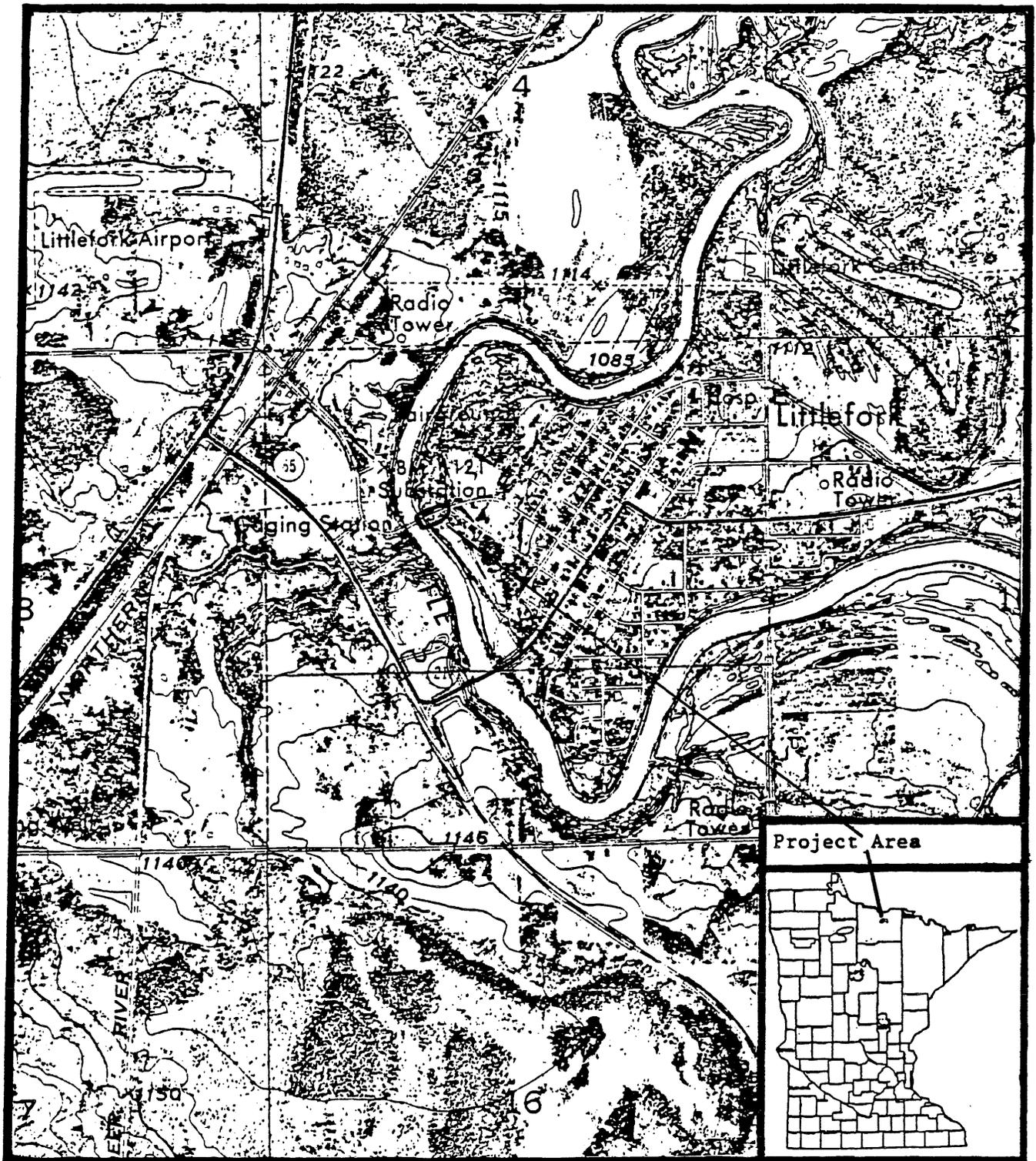


Figure 47. Little Fork River/Lofgren Park Project Area



USGS Little Fork Quadrangle, 1970, 7.5' series  
(enlarged x 1.42 - approximately 1:17,000)

**Geomorphic Region**

Agassiz Lacustrine Plain, Big Fork Area (Minnesota Soil Atlas Project, International Falls Sheet).

**Scope of Project**

Development of new canoe/boating access to Little Fork River. Construction will be confined to existing road and parking areas, except for a riverbank cut for installation of a concrete plank ramp.

**Description of Project Area**

Upper terrace on the east bank of the Little Fork River, about 1/3 mile downstream from the rapids in the town of Little Fork. The property is part of Lofgren Park, operated by the City.

**Records Review**

Previous surveys: Outhoudt, MHS, 1974 (transmission line survey); MnSAS 1981 (Koochiching County Survey).

Recorded sites in vicinity: 21KC26 - Reinerz site; about 1/3 mile upstream from the project area; initially located by Outhoudt in 1974, but not formally recorded at that time; field checked by MnSAS, 1981 and MTHARS, 1984; Sandy Lake and Laurel habitation. MnSAS Field Number LF-#1 - about 1/2 upstream from project area; recorded by MnSAS, 1981; Sandy Lake habitation, 1 mound, possible second mound destroyed. MnSAS Field Number LF-#3 - about 1/3 mile upstream from project area (across the river from LF-#1); recorded by MnSAS, 1981; Sandy Lake habitation; possibly additional components.

**Field review**

Methods: surface reconnaissance.

Results: no cultural materials were found within the project area. The only potential adverse effect of the planned construction would be in the ramp area, which is a nearly vertical cutbank. The terrace on which 21KC 26 and LF-#1 located is not present at this point in the river.

**Project Status**

It appeared that the proposed development would not affect any historic or prehistoric resources. A recommendation was made that work proceed with no additional review; SHPO concurred (Ref. #CC-598).

**Little Fork River/Highway 11****Location**

Sec. 29, T. 70N, R. 25W; SE 1/4, NW 1/4, SE 1/4, SW 1/4 and SW 1/4, NE 1/4, SE 1/4, SW 1/4. Located on the east bank of the river, about 700 meters south of its confluence with the Rainy River, 12 miles west of International Falls, MN (see Figure 48).

**Geomorphic Region**

Agassiz Lacustrine Plain, Big Fork Area (Minnesota Soil Atlas Project, International Falls Sheet).

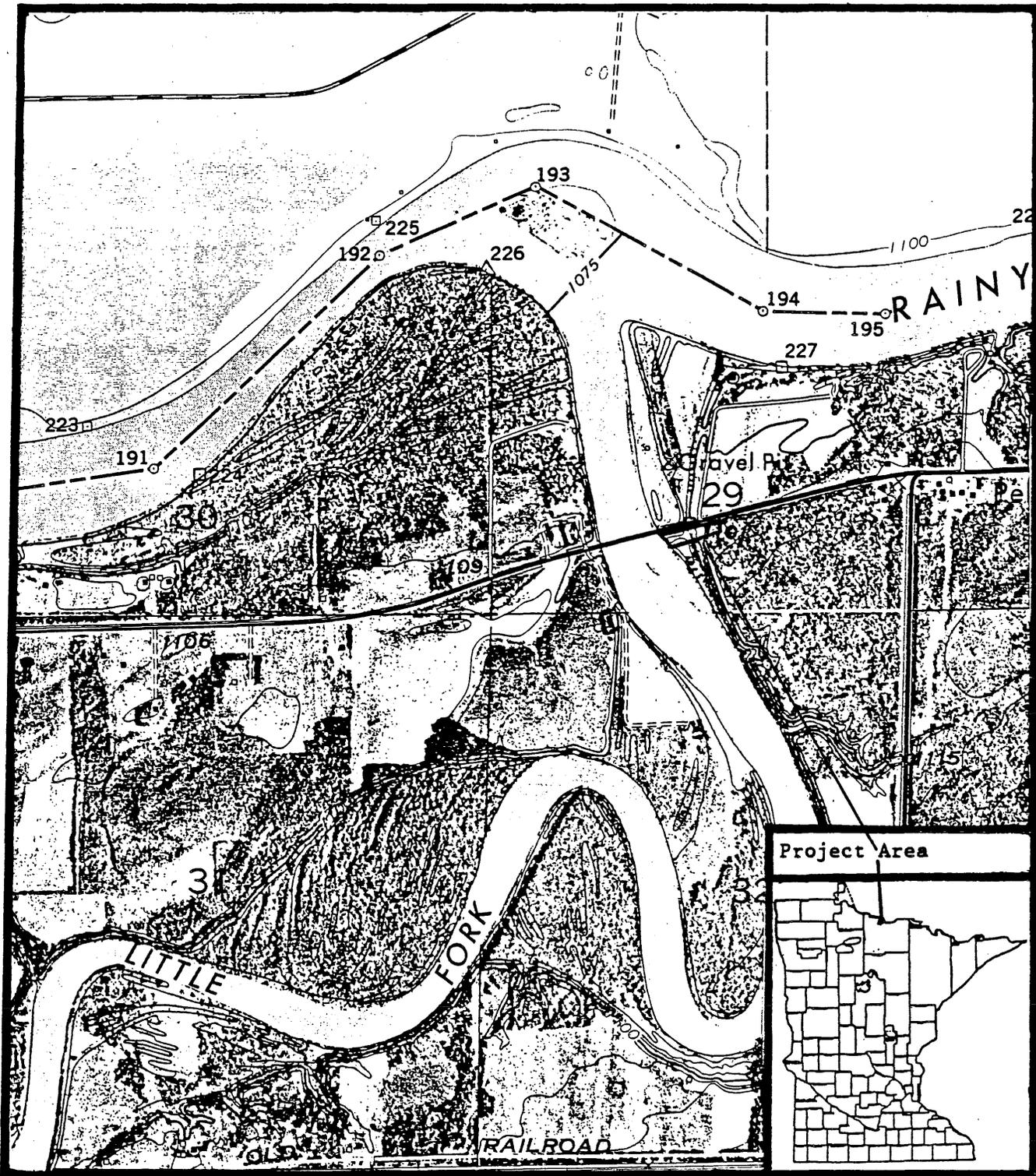
**Scope of Project**

Development of new Public Water Access; facilities will include gravel entry road, 8-unit parking area, and concrete ramp. Preliminary development plans indicated that most of the work would involve placement of fill over filter fabric, but ramp alignment would require cutting of an area 50' wide and about 4' deep at the riverbank.

**Description of Project Area**

The property purchased by DNR is a rectangular strip of land (350' north-south by 980' east-west) bordered on the north by the TH #11 right-of-way and on the east and south by private property. This parcel encompasses two distinct landforms: the western part is a low terrace (part of the current floodplain of the Little Fork River), and the eastern portion is upper terrace, situated 2 to 3 meters above the floodplain. Both terraces were agricultural land at one time; presently, the upper

Figure 48. Little Fork River/Highway 11 Project Area



USGS Pelland Quadrangle, 1970, 7.5' series  
(enlarged x 1.42 - approximately 1:17,000)

terrace is pine plantation and the floodplain is covered with brush, softwoods and poison ivy. This area has been in use for some time as a 'traditional' access to the Little Fork River. A dirt road drops from the highway down to the floodplain, where it loops past a shallow cut in the riverbank that constitutes the current launch area.

#### Records Review

Previous surveys: numerous investigations of the McKinstry Mounds and surrounding habitation area, including Lawson (1884-85), Brown (1892), Hulbert & Kempton (1896), Wilford (1939), Stoltman (1970); also Minnesota Trunk Highway Archaeological Reconnaissance Survey review of proposed T.H. #11 bridge replacement and road realignment (1982-present). None of this work has included any more than preliminary examination of the property that DNR owns.

Recorded sites in vicinity: 21KC7 - on the west bank of the Little Fork at its confluence with the Rainy River; one Archaic burial eroded out of the riverbank. 21KC24 - Pelland site; located in the northwestern quadrant of the TH #11 river crossing; Paleo(?), Archaic and Woodland materials recovered from a garden plot and during the Trunk Highway Survey review. 21KC30 - Hell site; on the west bank of the Little Fork about 300 m south of the TH #11 bridge; Laurel and Blackduck habitation materials on the intermediate terrace; identified during the Trunk Highway Survey bridge replacement project review.

DNR's property is within the boundaries of 21KC2, the McKinstry Site, a multi-component burial and habitation site that is listed on the National Register of Historic Places. The site was initially recorded in the 1800s due to the presence of two large burial mounds north of the present alignment of TH #11. Field investigations during the past century have demonstrated the presence of Proto-Historic, Blackduck, Laurel and possibly Archaic occupation debris within a matrix of laminated flood sediments. (The earliest occupation stratum that has been definitely identified at this time dates to approximately 2250 B.P.) (For a detailed discussion of the work conducted at 21KC2 by the Trunk Highway Survey, see Yourd, 1985.)

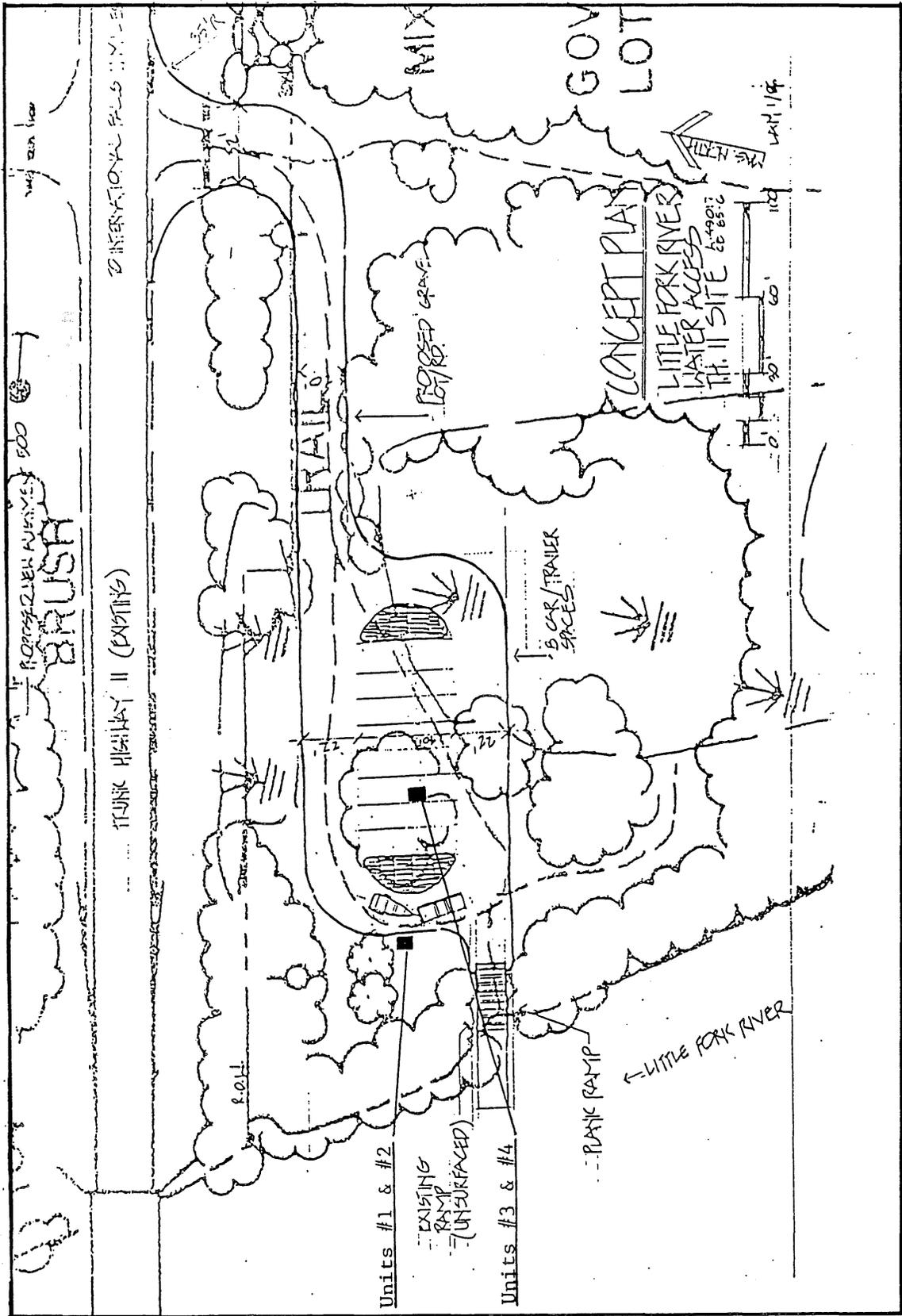
#### Field review

Because the project area was known to overlap with a National Register property, no reconnaissance survey was required. When preliminary construction plans were formulated by DNR, plans were made for limited testing in order to evaluate the nature of the cultural deposit on DNR's property and the probable effect of proposed construction. Site evaluation was conducted in October and November of 1986, and consisted of excavation of four 1x1 meter units in two locations within the proposed construction area (see Figure 49). Although weather conditions made it possible to complete excavation of Units 3 and 4, the work that was completed (Units 1 & 2 to 314 cm; Units 3 & 4 to 55 cm) clearly demonstrated the existence of a series of well-preserved occupation strata in areas that would be affected by the development of the Public Water Access on this property.

#### Project Status

Field research indicated that construction according to the preliminary project plan would undoubtedly have an adverse effect on a portion of the site. A summary of the results of site evaluation was presented to DNR, and consultations on possible mitigative actions were held. These negotiations resulted in the formulation of a revised construction plan that would eliminate the need for any subsurface cutting on the property, and would reduce the spatial extent of the site that would be covered by fill. Although this change in development plans will reduce the impact on the site to a large degree, additional work is still necessary in order to more clearly define the nature of the cultural deposit with the construction area. Recommendations for data recovery efforts at 21KC2 are currently being generated.

Figure 49. 21KC2 (Little Fork River/Highway 11) - Site Area



## REGION III - CENTRAL

## Crow Wing County

Mississippi River/Highway 6

## Location

Sec. 24, T. 47N, R. 29W; NW 1/4, NE 1/4, SW 1/4, NW 1/4; Wolford Township. Located on the south bank of the Mississippi River, adjacent to TH #6, 5 miles north of Crosby, MN (see Figure 50).

## Geomorphic Region

Mille Lacs Moraine Complex (Minnesota Soil Atlas Project, Duluth Sheet).

## Scope of Project

Development of new Public Water Access. Development plans call for construction of an entry drive off the township road on the southern property line, a 12-unit parking area, road loop and concrete ramp. Construction will require a cut along the riverbank, which is about 18' high at this point; the rest of the work will be done at or near existing grade.

## Description of Project Area

Level high terrace remnant; the western half of the property is currently planted in pine with a sparse understory. The eastern half has been cleared for a powerline corridor and the TH #6 right-of-way ditch, and is presently in regrowth of grasses and small trees. Numerous rodent burrows were observed in the cleared area, which had no other surface visibility. In the wooded area, surface visibility was moderate to good.

## Records Review

Previous surveys: Mn Trunk Highway Archaeological Reconnaissance Survey review of proposed TH #6 bridge replacement over Mississippi River; negative results (Peterson, 1981). No other surveys are known to have been done in the vicinity.

Recorded sites in vicinity: none.

## Field Review

Methods: surface reconnaissance, 13 shovel tests.

Results: No cultural materials were found on surface or in shovel tests. The cutbank was examined from the top down 2 meters along the length of the construction area. Soils observed in the cutbank as well as in shovel tests were uniform shallow sandy loams over sandy clay and outwash sediments. Some disturbance of soil profiles was apparent, probably as a result of historic-period logging and road construction activities.

## Project Status

It appeared that the proposed development would not affect any historic or prehistoric resources. A recommendation was made that work proceed with no additional review; SHPO concurred (Ref. #AA-923).

Nokasippi River

## Location

Sec. 27, T. 43N, R. 32W; E 1/2, NW 1/4, NW 1/4, SE 1/4; Fort Ripley Township. Located on the east bank of the Mississippi River just north of its confluence with the Nokasippi, about 1 mile north of Ft. Ripley, MN (see Figure 51).

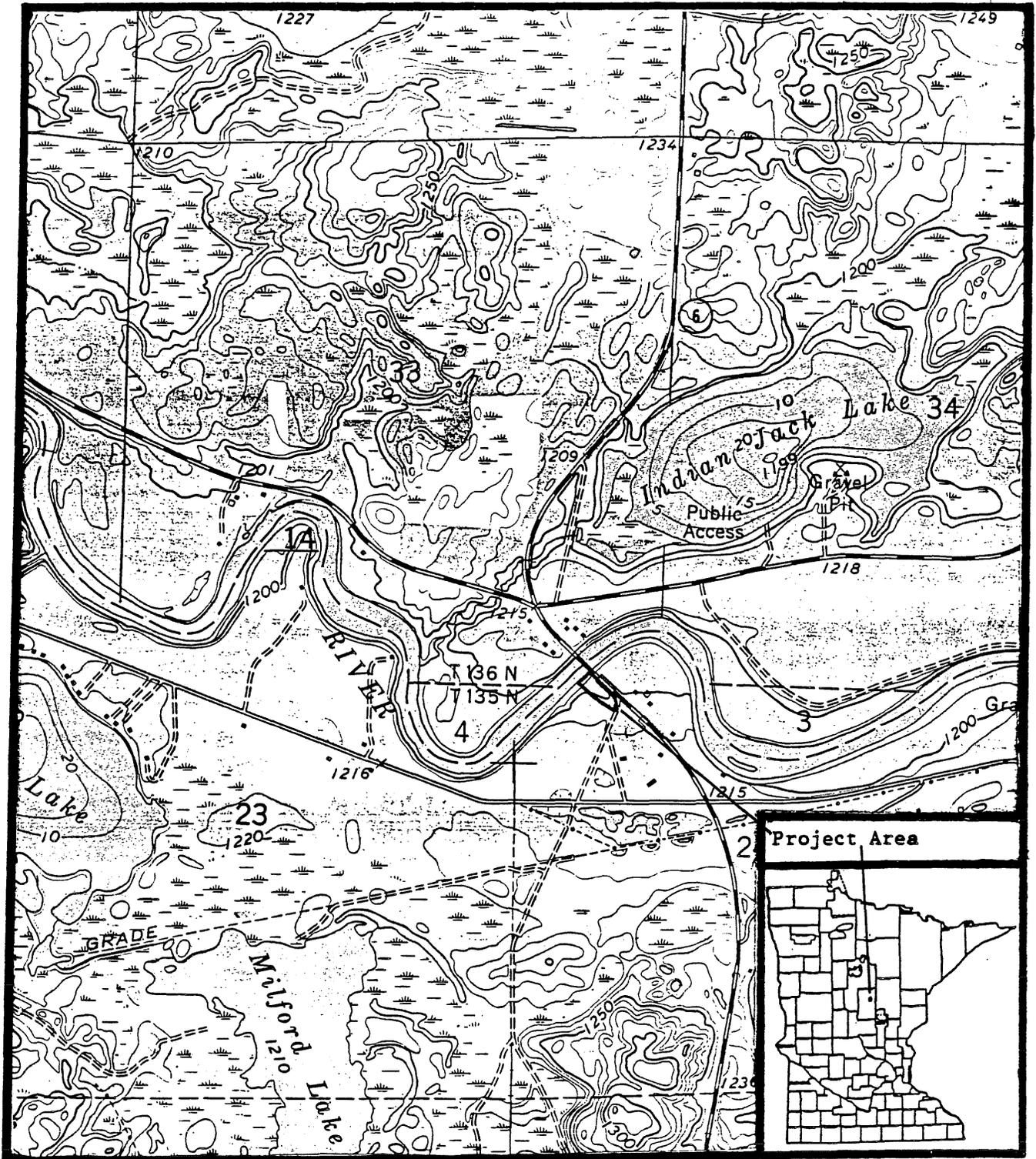
## Geomorphic Region

Crow Wing Outwash Plain (Minnesota Soil Atlas Project, Brainerd Sheet.)

## Scope of Project

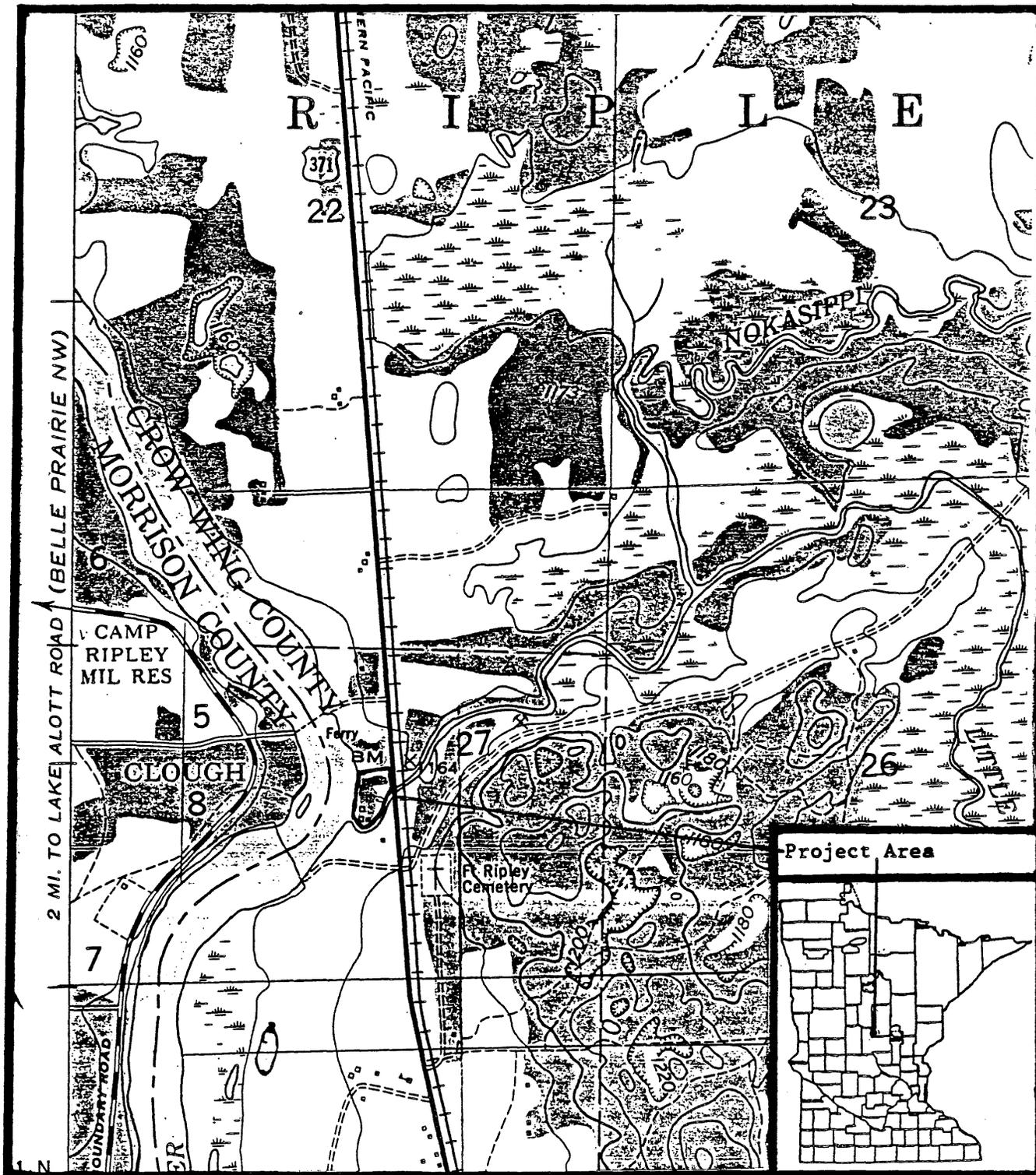
Development of new Public Water Access. Work will include upgrading and realignment of an existing dirt access road and construction of a 10-unit parking area. Most of the work will be done on several feet of fill over filter fabric.

Figure 50. Mississippi River/Highway 6 Project Area



USGS Cuyuna Quadrangle, 1973, 7.5' series  
(enlarged x 1.42 - approximately 1:17,000)

Figure 51. Nokasippi River Project Area



USGS Fort Ripley Quadrangle, 1956, 7.5' series  
(enlarged x 1.42 - approximately 1:17,000)

### Description of Project Area

Low-lying terrace remnant bounded on the east by TH #371 and on the north by private property. Prior to purchase by DNR, at least part of the property was under cultivation. The 1956 USGS Fort Ripley Quadrangle shows several small buildings on the property. No structures were standing when the property was acquired by the State, but several large depressions in the southern portion of the project area probably mark the former structure locations.

The project area is presently used as a 'casual' access to the Mississippi river. A dirt road enters the property off TH #71, runs west to the riverbank, then swings south to the bank of the Nokasippi River. Another segment of road runs along the eastern edge of the property (actually within the highway right-of-way). Except for bare areas along the road cuts, the property is heavily vegetated. Roughly the northern half of the parcel is covered by grasses and dense stands of prickly ash (planted by DNR); the southern portion is mostly second growth of deciduous hardwoods, with some areas of brush and grasses. There is a gentle but consistent slope from the highway right-of-way down to the southeastern tip of the terrace, which lies only a foot or two above the river. The property is frequently flooded in the spring; in 1986, high river levels kept portions of the property under water until well into July.

### Records Review

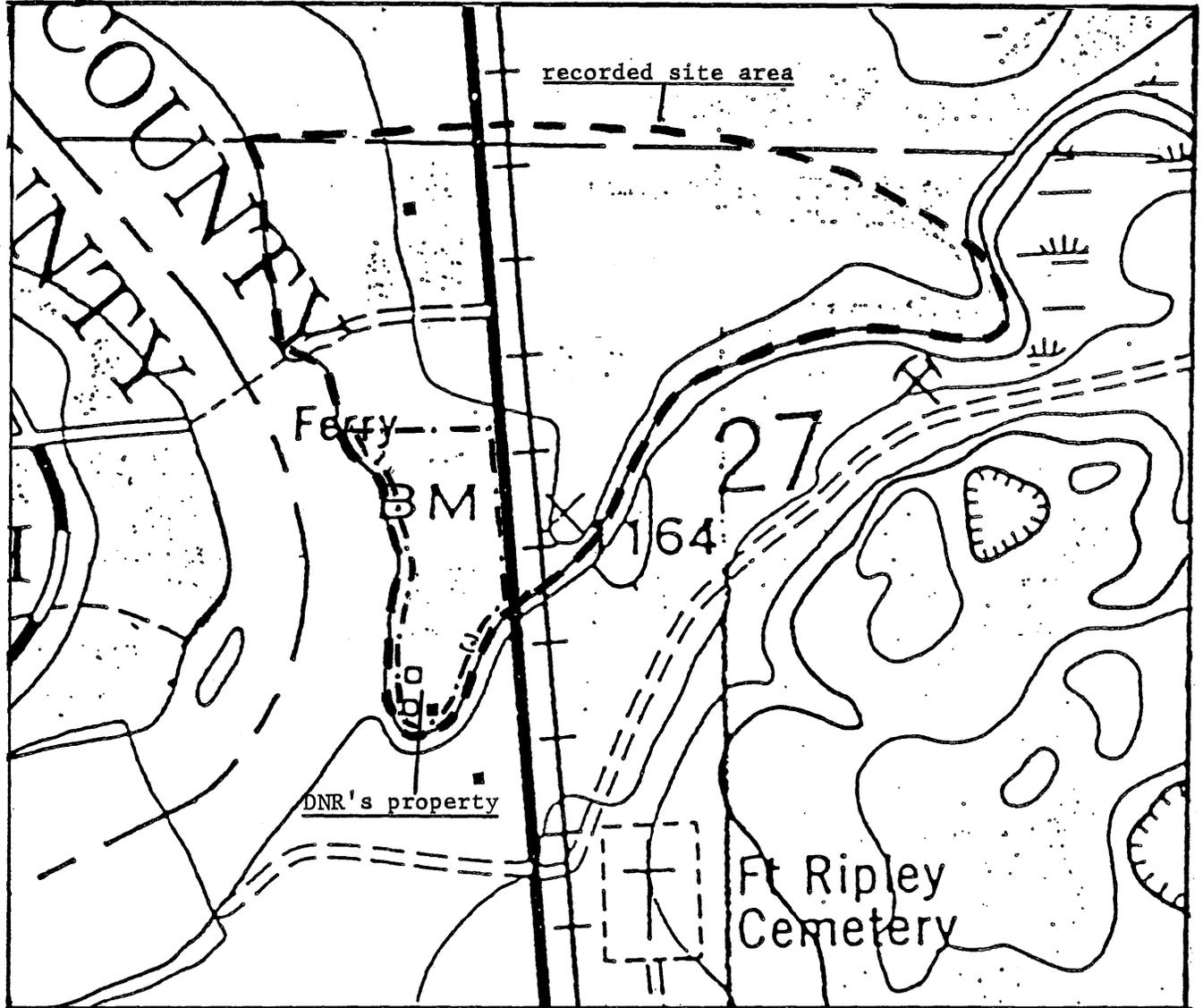
Previous surveys: Brower (1901); Birk (1978), survey of the Nokasippi River Valley; Minnesota Trunk Highway Archaeological Reconnaissance Survey of upgrade to TH #371, including removal of structural remnants from the old bridge over the Nokasippi River (Peterson 1985).

Recorded sites in vicinity: State site files indicate that there are a number of recorded sites in the vicinity of the project area, most of which were identified during Birk's 1978 survey of the Nokasippi River Valley. 21CW52, CW53, CW54 and 21CW56 through 21CW62 (inclusive) all are prehistoric sites located along the Nokasippi River upstream to the banks of Sebre Lake (in Sec. 25, T. 43N, R. 32W. 21CW103 is an historic site located just south of DNR's property, across the Nokasippi River; it appears to have been associated with the settlement of the town of Ft. Ripley, and has been severely damaged by gravel pit operations.

The project area itself is within the defined boundaries of 21CW65, a multi-component (historic/prehistoric) habitation and burial site (see Figure 52). This site is very broadly defined at present, and encompasses a number of discrete cultural components. Site designation apparently was based, initially, on a notation made by Jacob Brower in his journal entry for May 6, 1901: "Discovered mounds on both sides of Anoka Zibi [Nokasippi], above where that stream unites with the Mississippi, on S. 27, T. 43, R. 32" (Vol. 16). The mounds are again mentioned on June 18 of the same year: "Many mounds are situated on both sides of Anoka River, near its mouth" (Vol. 17). No specifics were provided regarding the number, configuration or exact locations of these mounds. In 1972, an MHS survey crew located six mounds on the north side of the Nokasippi, just east of TH #371. No mounds were found on the south side of the river; the assumption was made that the mounds observed here by Brower had probably been destroyed by construction of railroad and highway grades, the Nokasippi River bridge and gravel pit operations.

Further investigation of the prehistoric components at 21CW65 took place in 1978, as part of a survey of the Nokasippi Valley conducted by Douglas Birk under the auspices of MnSAS. Birk's crew identified several different artifact loci within a large triangular area defined by the two rivers and the north line of the incorporated village of Fort Ripley. One of these loci was along the highway right-of-way that currently forms the eastern edge of DNR's property. Permission to examine the property between the highway and the Mississippi River was denied by the landowner, but examination of the highway grade turned up prehistoric lithics and

Figure 52. 21CW65 (Nokasippi River) - Site Area



historic debris. (The landowner immediately north of DNR's property also reported finding projectile points in his garden.) Several other prehistoric artifact loci and a historic mill site (circa 1880s) were identified by Birk on private property east of the highway.

Another set of components within 21CW65 relates to the establishment of the Fort Ripley military reservation in 1849 and the concomitant growth of the village of Fort Ripley. The Nokasippi project area was part of the original military reservation, and is in the very northeastern corner of the original platted village of Ft. Ripley. As such, it could be considered at least peripherally related to the earliest historic settlement of the area, even though no fort-related structures or activities can be definitely associated with the project area proper. Another site component is located just north of DNR's property: a ferry landing established by the federal government in 1849-50. The bridge that eventually replaced the ferry washed out in 1940, after which the ferry was again in operation until 1948 (Birk 1979:155-158; Fay 1985:S-49). The 1978 site form mentions the mounds, prehistoric artifact loci, historic mill site and ferry landing as all being part of 21CW65.

#### Field Review

Methods: surface reconnaissance, 23 shovel tests, 3 excavation units.

Results: Although records review indicated that this project area was within the boundaries of a formally recorded site, the extent and nature of the cultural deposit within DNR's property was unclear. Reconnaissance-level survey consisting of surface reconnaissance and shovel testing was therefore conducted in the late fall of 1985 and spring and summer of 1986. Lithic debris was found scattered over the surface of the existing dirt access road and within the highway grade at the eastern edge of the property. Shovel testing indicated the presence of a subsurface cultural deposit consisting of both prehistoric and historic materials within the area to be covered by fill (see Figures 53 and 54). It was therefore recommended that additional evaluation of the site be undertaken before construction began. That work was done in September and October of 1986.

Site evaluation consisted of excavation of three 1-meter-square excavation units. Two of the units were placed within the proposed access road alignment; the third was within the proposed parking lot area. A substantial part of the proposed parking area was underwater for most of the fall; several large depressions in this location may reflect historic settlement of the terrace, although no structural remnants were found. Shovel testing, soil probes and surface reconnaissance in this area during the summer had shown that the soils consisted of very mucky silts that, for the most part, appeared to be reworked flood sediments with no consistent, well-developed profiles. No additional work was done in this area during site evaluation.

The materials recovered during site evaluation confirmed the existence of a diffuse cultural deposit, entirely contained within soils mixed by cultivation and inundation. In every unit, historic materials were found at or below the strata that contained prehistoric artifacts. The only diagnostic prehistoric artifacts recovered from excavation units were a few cord-roughened and smooth body sherds. (The side-notched projectile point from surface was found along the high part of the existing entry road, in sand fill used to build the highway grade. Lithic debris was observed in other areas along the right-of-way, also within the fill area. It is likely that MnDOT borrowed this material from a nearby location, perhaps the eastern side of the highway corridor, when TH #371 was first constructed.) Some of the historic materials appear to date from roughly the same time as the original settlement of the village of Fort Ripley (circa 1850s), although early maps of the village do not show any buildings on this property.

Soil stratigraphy varied somewhat between the northern and southern halves of



## Figure 54. 21CW65 - Artifact Summary

Surface, access road: 1 scraper (quartz)  
 1 biface (quartz)  
 14 core fragments (10 quartz, 3 silica, 1 agate)  
 2 primary flakes (quartz)  
 27 secondary flakes (23 quartz, 2 Swan River Chert, 1 argillite, 1 silica)  
 23 tertiary flakes (quartz)  
 2 tool fragments (quartz)  
 2 crockery fragments (1 whiteware, 1 brown glazed)  
 3 glass fragments

Surface, highway grade: 1 projectile point, side-notched (quartz)  
 2 core fragments (quartz)  
 1 primary flake (silica)  
 1 secondary flake (quartz)  
 1 glass fragment

## Shovel Tests:

ST 2, 10-20 cm: 1 secondary flake (quartz)	ST 21, 10-20 cm: 2 crockery fragments
20-30 cm: 1 secondary flake (silica)	1 glass fragment (green)
charcoal	1 core fragment (quartz)
30-40 cm: 1 primary flake (chert)	1 primary flake (chert)
1 tertiary flake (quartz)	3 secondary flakes (2 quartz, 1 shist)
ST 3, 15-20 cm: 2 secondary flakes (quartz, silica)	4 tertiary flakes (quartz)
2 tertiary flakes (quartz)	charcoal
20-30 cm: 1 core fragment (quartz)	20-25 cm: 1 tertiary flake (quartz)
1 tertiary flake (quartz)	metal fragments
ST 4, 5-10 cm: 1 secondary flake (quartz)	25-30 cm: 1 grit body sherd, cr
ST 5, 25-30 cm: 1 secondary flake (quartz)	1 core fragment (quartz)
ST 6, 15-20 cm: 1 core fragment (Swan River Chert)	2 secondary flakes (quartz)
1 secondary flake (quartz)	1 brick fragment
1 glass fragment (green)	ST 22, 10-15 cm: 1 whiteware fragment
20-25 cm: 1 secondary flake (quartz)	2 secondary flakes (quartz)
charcoal	15-20 cm: 1 retouch flake (quartz)
ST 7, 0-10 cm: 2 secondary flakes (quartz, silica)	20-25 cm: 2 secondary flakes (argillite, shist)
15-20 cm: 1 core fragment (quartz)	25-30 cm: 1 grit ceramic crumb
30-35 cm: 1 core fragment (quartz)	30-35 cm: 1 secondary flake (shist)
ST 8, 0-10 cm: 1 secondary flake (quartz)	35-40 cm: 2 secondary flakes (quartz)
ST 10, 10-20 cm: 1 core fragment (quartz)	ST 23, 10-15 cm: 2 tertiary flakes (quartz, oolitic chert)
ST 11, 15-20 cm: 1 secondary flake (quartz)	15-20 cm: 1 metal fragment
ST 15, 15-20 cm: 1 secondary flake (quartz)	2 retouch flakes (quartz)
ST 20, 35-40 cm: 1 secondary flake (quartz)	30-35 cm: 1 secondary flake (quartz)
ST 21, 0-10 cm: 1 cobble (quartz)	1 retouch flake (quartz)
1 blade flake (quartz)	
2 secondary flakes (quartz)	
2 tertiary flakes (quartz)	

## Figure 54, continued

## Unit 1:

- 0-5 cm: 9 secondary flakes (7 quartz, 1 silica, 1 chalcedony, 1 argillite)  
3 tertiary flakes (quartz)  
2 bone fragments (burned)  
2 metal fragments
- 5-10 cm: 2 core fragments (quartz)  
7 tertiary flakes (5 quartz, 1 argillite, 1 chalcedony)  
1 clamshell fragment  
1 metal fragment
- 10-15 cm: 8 secondary flakes (6 quartz, 1 chert, 1 chalcedony)  
9 tertiary flakes (8 quartz, 1 oolitic chert)  
4 bone fragments  
1 metal fragment (strap w/2 holes)
- 15-20 cm: 2 core fragments (quartz)  
7 secondary flakes (4 quartz, 1 quartzite, 1 argillite, 1 silica)  
6 tertiary flakes (quartz)  
4 bone fragments (1 burned)  
organic material (charred)  
charcoal  
1 metal fragment  
1 square nail fragment
- 20-25 cm: 1 scraper (oolitic chert)  
2 core fragments (quartz)  
6 secondary flakes (5 quartz, 1 argillite)  
2 tertiary flakes (quartz)  
6 bone fragments  
organic material (charred)
- 25-30 cm: 1 grit body sherd, cord-roughened  
3 secondary flakes (2 quartz, 1 silica)  
2 tertiary flakes (quartz, chalcedony)  
4 bone fragments  
organic material (charred)
- 30-35 cm: 1 grit ceramic crumb  
2 secondary flakes (quartz, silica)  
charcoal  
organic material (charred)
- 35-40 cm: 1 core fragment (quartz)  
3 secondary flakes (2 quartz, 1 chalcedony)  
charcoal
- 40-45 cm: 1 grit body sherd, smooth  
2 tertiary flakes (quartz)  
charcoal
- 45-55 cm: 2 secondary flakes (quartz)  
charcoal

## Unit 2:

- 0-10 cm: 2 core fragments (quartz)  
6 secondary flakes (4 quartz, 1 shist, 1 silica)  
2 grit body sherds, cord-roughened  
organic material (charred)
- 10-15 cm: 1 grit body sherd, cord-roughened  
1 grit ceramic crumb  
1 primary flake (quartz)  
6 secondary flakes (4 quartz, 1 shist, 1 chalcedony)  
3 tertiary flakes (quartz, argillite, silica)
- 15-20 cm: 4 core fragments (3 quartz, 1 shist)  
5 secondary flakes (3 quartz, 2 silica)  
3 tertiary flakes (2 quartz, 1 argillite)  
1 retouch flake (quartz)  
charcoal  
1 square nail  
1 metal fragment  
1 glass fragment
- 20-25 cm: 2 core fragments (quartz)  
7 secondary flakes (5 quartz, 1 silica, 1 argillite)  
1 tertiary flake (chert)
- 20-25 cm: 1 bone fragment  
organic material (charred)  
2 metal fragments  
1 glass fragment (thin)
- 25-30 cm: 9 secondary flakes (5 quartz, 3 argillite, 1 Swan River Chert)  
2 tertiary flakes (quartz, silica)
- 30-35 cm: 2 core fragments (quartz)  
3 secondary flakes (2 quartz, 1 chert)  
organic material (charred)
- 35-40 cm: 2 secondary flakes (quartz, argillite)
- 40-45 cm: 1 scraper (Knife River Flint)  
1 grit body sherd, exfoliated  
1 core fragment (quartz)  
1 brick fragment  
organic material (charred)
- 45-50 cm: 2 grit body sherds, cord-roughened  
1 tertiary flake (quartz)  
organic material (charred)
- 50-55 cm: 1 secondary flake (shist)  
organic material (charred)
- 55-60 cm: 1 tertiary flake (quartz)

## Unit 3:

- 5-10 cm: 1 core fragment (quartz)
- 10-15 cm: 1 secondary flake (argillite)  
3 tertiary flakes (2 quartz, 1 quartzite)  
1 bone fragment  
3 brick fragments
- 15-20 cm: 1 glass fragment (green)  
1 brick fragment

the property. In the north, they were primarily very sandy loams over medium to coarse-grained sands. Further south (closer to the Nokasippi), the soils predominantly silty loams and silty clay loams over heavy clays. This suggests that there are actually two terrace remnants here, although the interface between the low terrace and the intermediate terrace has been completely obscured by historic-period activities. Prehistoric artifact frequencies were much lower in the southern part of the property; no surface materials were found here, even though visibility was very good. The general trend seems to be an increase in the density of the cultural deposit as one moves closer to the northern boundary of DNR's property. (A dirt road just north of the project area was examined for surface materials; lithic debitage was observed in this area, but not collected.)

In summary, site evaluation has shown that, first, virtually the entire cultural deposit within DNR's property has been disrupted by cultivation and other recent sources of disturbance, and second, most of the area to be affected by DNR's proposed development is outside what appears to have been the densest portion of the cultural deposit as it originally existed. The major source of concern for potential adverse effect is realignment of the access road, which, as originally planned, would involve ditch cuts that would extend below existing grade.

#### Project Status

The results of site evaluation indicate that a fairly sparse, disturbed cultural deposit which includes both prehistoric and historic materials is present within this project area. No distinct vertical patterning of artifacts was discerned during field research; if the site did originally consist of more than one prehistoric component, cultivation of the terrace has obscured all traces of cultural stratigraphy. DNR's proposed construction is not likely to have a severe impact on the site, since it will involve placement of 1 to 2 feet of fill over the filter fabric on the existing ground surface. Additionally, a large percentage of the property will not be affected at all by construction; the cultural deposit does definitely extend in at least two directions into the areas that will not be disturbed. DNR's Regional Engineer has agreed to modify the construction plan in order to increase the amount of fill to be placed along the new road alignment. This will prevent ditching from cutting below the present ground surface. While some compaction may occur due to vehicular traffic on the road and parking area, it is not likely to damage the existing cultural deposit any further than it has already been damaged. Final project plans also specify an off-site source of fill, and instruct the contractor to avoid disturbance of areas outside the actual construction zone. It has been recommended that DNR proceed with construction based on these conditions; SHPO is currently reviewing this recommendation.

### Kanabec County

#### Snake River/County Road 11

##### Location

Sec. 6, T. 38N, R. 23W; center, SW 1/4, SW 1/4, NW 1/4. The project area is a point of land at the confluence of the Snake and Groundhouse Rivers, adjacent to CSAH #11, 5 miles south-southeast of Mora, MN (see Figure 55).

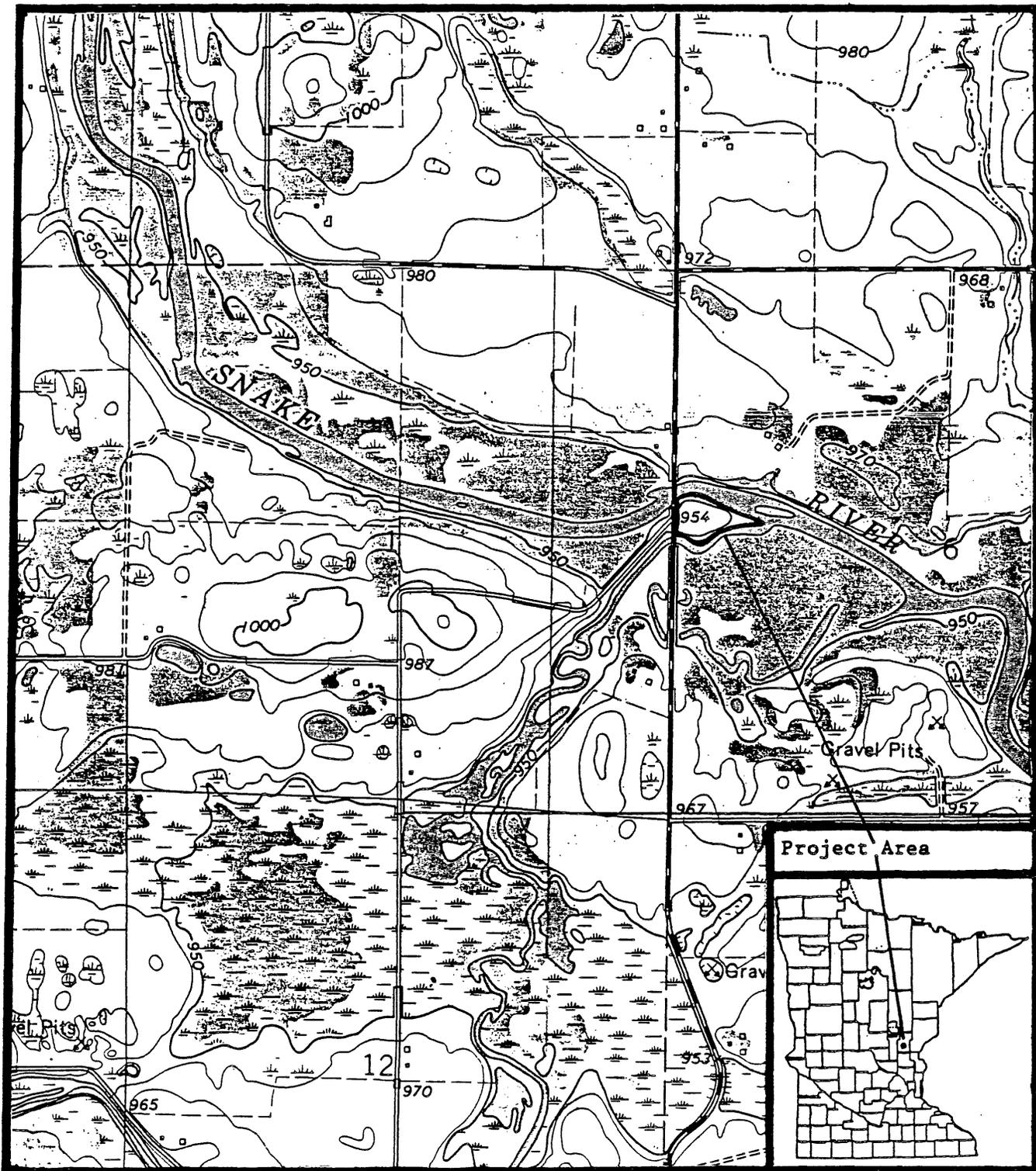
##### Geomorphic Region

McGrath Till Plain (Minnesota Soil Atlas Project, Stillwater Sheet).

##### Scope of Project

Development of a new Public Water Access; facilities will include an 8-unit parking area and new entry road. Most of the construction will be done at or near existing grade.

Figure 55. Snake River/County Road 11 Project Area



USGS Mora South Quadrangle, 1968, 7.5' series  
(enlarged x 1.42 - approximately 1:17,000)

### Description of Project Area

The project area is a roughly level point of land at the confluence of two rivers. Most of the property is wooded with a thick understory of stinging nettle, poison ivy and brush. The northwestern corner of the property has been in use for some time as a 'casual' access to the Snake River; a dirt road enters from County Road 11 and loops around to the riverbank just downstream from the county road bridge over the Snake. The northern side of the property has a vertical cutbank about 1 m high; this bank lessens in height downstream, and is only about 30 cm high in the southeastern corner of the point. The parcel is frequently inundated by spring floodwaters from both rivers.

### Records Review

Previous surveys: MnSAS 1978 (Kanabec County Survey). DNR's property, which was in private ownership at the time, was 'shovel-tested and checked' on October 19, 1979, with negative results. (Since the Statewide Survey was not intended to provide compliance-level survey data, additional field survey of the property was considered appropriate.)

Recorded sites in vicinity: 8 prehistoric and historic sites, all recorded by MnSAS in 1979. 21KA35 - 1/4 mile south-southeast of project area; prehistoric-aceramic and recent historic components. 21KA36 - 1 mile west of project area; prehistoric-aceramic. 21KA37 - 1/2 mile west of project area; possible Middle Woodland. 21KA39 - 1/8 mile north-northwest of project area; prehistoric-aceramic; historic Euro-American. 21KA40 - 1/2 mile west of project area; historic Euro-American cabin (ca. 1847). 21KA41 - 3/5 mile west of project area; historic Euro-American; possible historic aboriginal. 21KA42 - 3/4 mile west of project area; historic Euro-American. 21KA43 - 1/4 mile south of project area; Late Woodland.

### Field Review

Methods: surface reconnaissance, 16 shovel tests.

Results: no cultural materials were found within the area tested. Soils appeared to be primarily recent silt deposits overlying sandbar and old terrace formations, and therefore represent a relatively unstable landscape position.

### Project Status

The Project Engineer has been informed of the extent of surveyed area, and indicated that there should be no problem in restricting construction work to that portion of the property. If, however, during the actual design of the project, it becomes apparent that unsurveyed portions of the property will be affected by construction, those additional areas will be surveyed before the project proceeds. It has been recommended that a determination of no effect be issued, contingent on review of final development plans; SHPO is currently reviewing this recommendation.

## REGION IV - SOUTHWEST

### Blue Earth County

#### Le Sueur River

##### Location

Sec. 12, T. 107N, R. 27W; SE 1/4, SE 1/4, SE 1/4, SE 1/4; Rapidan Township. Located on the south bank of the river adjacent to CSAH #16, about 4 miles south of Mankato, MN (see Figure 56).

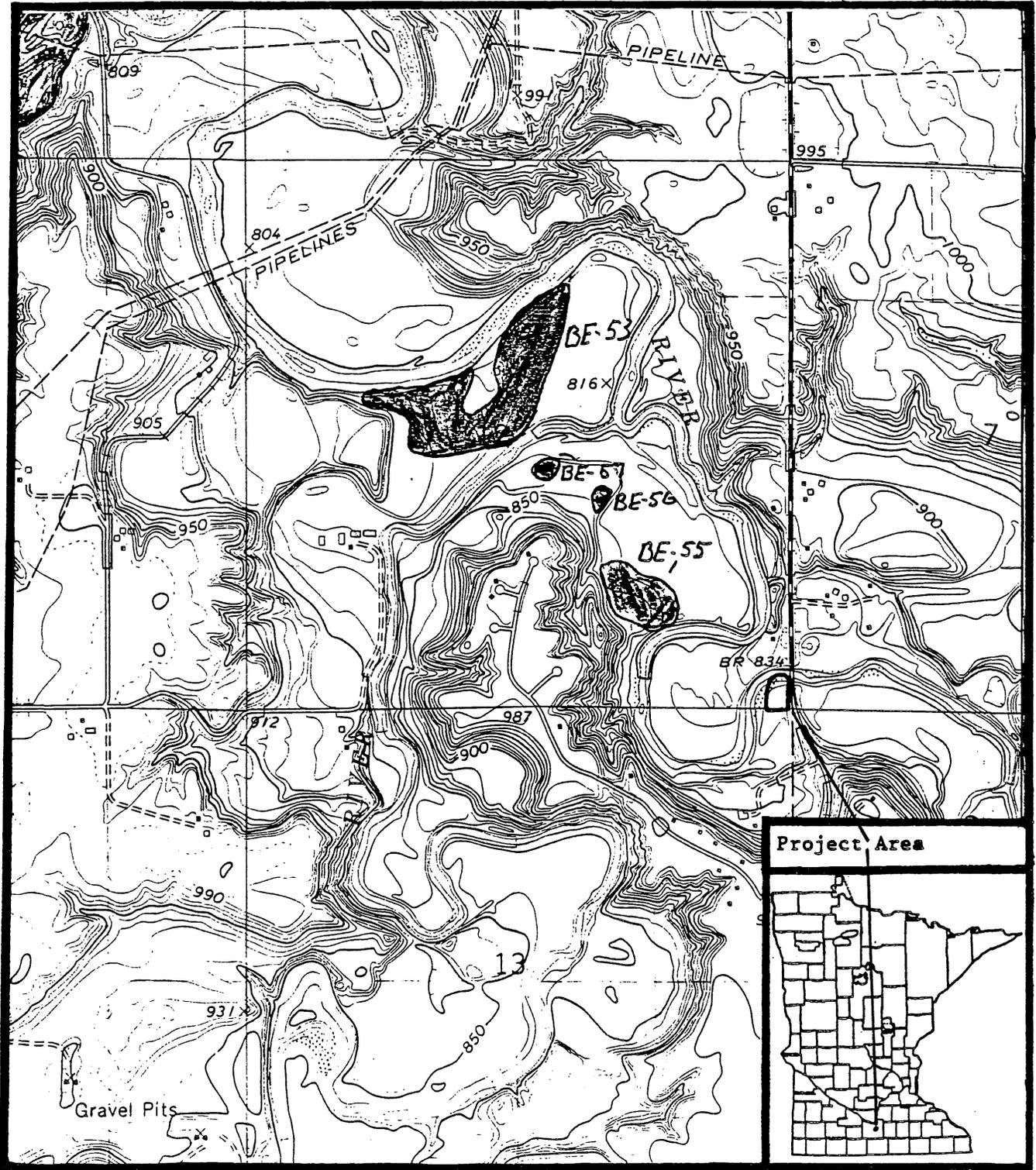
##### Geomorphic Region

Minnesota Lake Plain (Minnesota Soil Atlas Project, St. Paul Sheet.)

##### Scope of Project

Development of new Public Carry-in Canoe Access. Preliminary design calls for

Figure 56. LeSueur River Project Area



USGS Good Thunder Quadrangle, 1974, 7.5' series  
(enlarged x 1.42 - approximately 1:17,000)

construction of an entrance driveway off the county road (following a current field road alignment), 8-unit parking area and wooden steps down to the river (the cutbank is about 22' high at this point). Work in the parking area will be at or near existing grade.

#### Description of Project Area

Level, intermediate terrace remnant bordered on two sides by a bend of the LeSueur River. The property had been under cultivation for some time prior to purchase by DNR. At the time of survey, the property was not cropped and apparently had not been plowed for some time, judging by the encroaching weed cover.

#### Records Review

Previous surveys: none known.

Recorded sites in vicinity: 21BE53, BE 55, BE56, BE57 - all 1/4 to 1 mile northwest of the project area; 21BE27 - about 1/4 mile southeast of the project area. All five sites are surface lithic scatters in cultivated fields; none has had any subsurface testing.

#### Field Review

Methods: surface reconnaissance over entire property; 11 shovel tests.

Results: No cultural materials were found on surface or in shovel tests. Surface visibility was moderate to good over most of the property; some scattered recent debris was observed throughout the area. Soil stratigraphy reflected frequent flooding of this terrace, which has resulted in formation of a layer of recent sediments ranging in thickness from 21 to 38 cm. Recent debris from agricultural activities was found below surface at depths from 30 to 37 cm. Flood sediments were underlain by sandy outwash sediments below about 45 cm in all shovel tests.

#### Project Status

It appeared that the proposed development would not affect any historic or prehistoric resources. A recommendation was made that work proceed with no additional review; SHPO concurred (Ref. #Z-269).

### Chippewa County

#### Minnesota River/Fredrickson Landing

##### Location

Sec. 13, T. 115N, R. 39W NE 1/4, NE 1/4, SE 1/4, SE 1/4, NW 1/4; Granite Falls Township. Located adjacent to Chippewa County #40, about 1.5 miles south-southeast of the City of Granite Falls, MN (see Figure 57).

##### Geomorphic Region

Minnesota Valley Outwash (Minnesota Soil Atlas Project, New Ulm Sheet).

##### Scope of Project

Rehabilitation of existing Public Water Access. DNR's construction plans call for improvement of the access road and placement of a gravel parking area (45' x 120' in size) within the road loop.

##### Description of Project Area

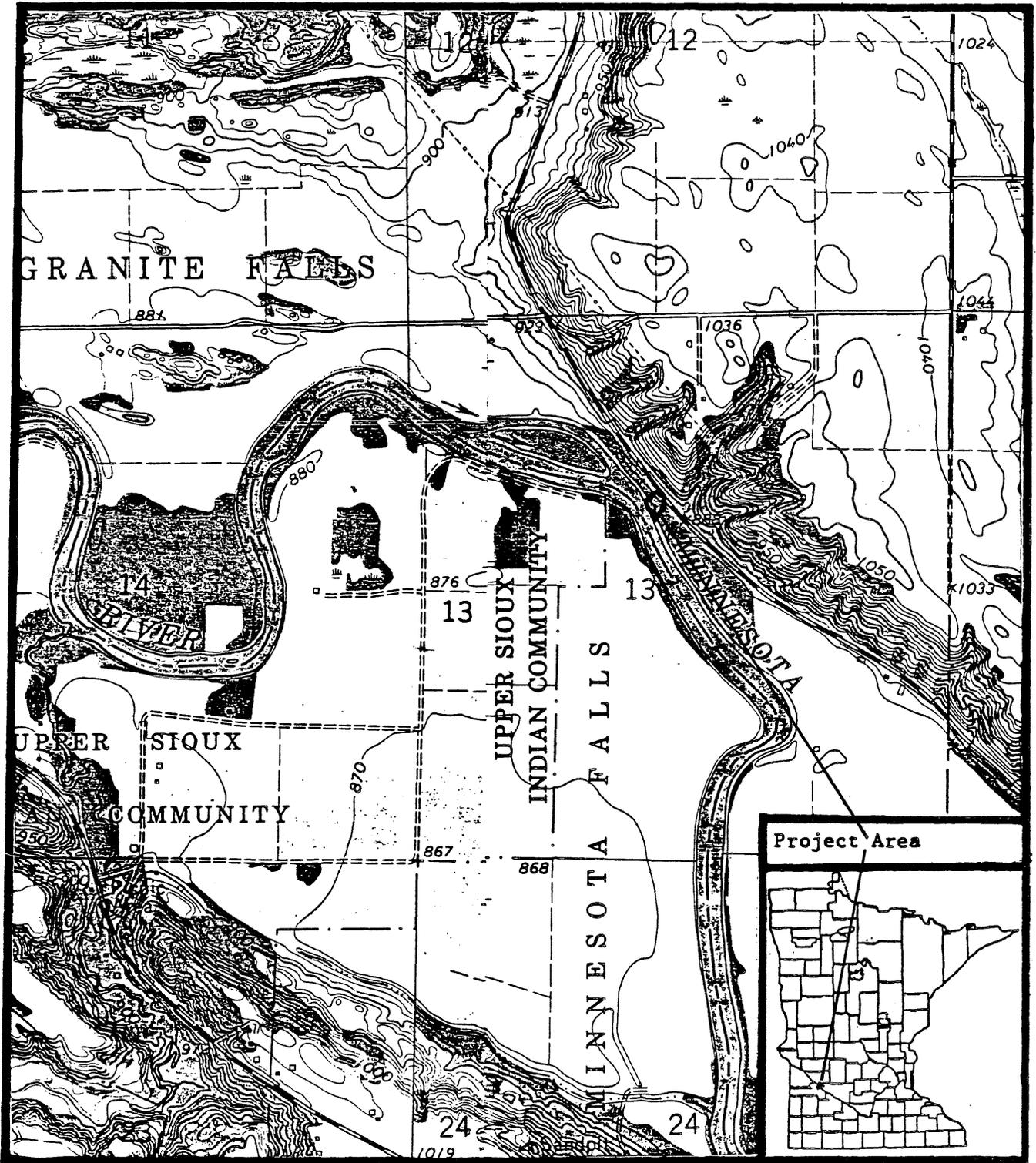
The property is located on the toeslope of an alluvial fan below the bluffs on the north bank of the Minnesota River, and has been used in recent years as an unimproved access to the river. Presently, a narrow gravel road loop runs from the county road to a dirt ramp at the riverbank. Current vegetation on the property includes grasses and weeds (nettles, poison ivy and creepers), a few mature oak trees and small stands of ash.

##### Records Review

Previous surveys: none known.

Recorded sites in vicinity: 21CP3, CP4, CP5, CP7, RN10 and RN11 are all single mounds or mound groups initially recorded by Lewis, on the bluffs overlooking

Figure 57. Minnesota River/Fredrickson Landing Project Area



USGS Minnesota Falls Quadrangle, 1965 & Granite Falls Quadrangle, 1965, 7.5' series (enlarged x 1.42 - approximately 1:17,000)

the north side of the Minnesota River Valley; they are from 1/8 mile to 1 mile distant from the project area. 21CP25 is a Mississippian habitation site located about 1 mile northwest of the project area, adjacent to TH 212.

#### Field Review

Methods: surface reconnaissance; 9 shovel tests.

Results: No cultural materials were found on surface or in shovel tests. Soils in the northern (higher) part of the property were silts and silty clays overlaying sandy clays and thin strata of sandy stream channel deposits. Shovel test soil profiles did not reveal the presence of paleosols beneath the alluvial sediments. The area close to the river, in particular, showed evidence of considerable mixing of sediments due to fluctuating water levels and intermittent stream channel migration.

#### Project Status

It appeared that the proposed development would not affect any historic or prehistoric resources. A recommendation was made that work proceed with no additional review; SHPO concurred (Ref. #AA-580).



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## APPENDIX II. PROJECTS REVIEWED, 1985/86, BY DNR REGION

REGION I

<u>COUNTY</u>	<u>PROJECT</u>	<u>RECORDS REVIEW</u>	<u>FIELD REVIEW</u>	<u>STATUS</u>	<u>YEAR</u>
Becker	Lake Sallie	21BK3	positive	review completed - construction restraints	1986
Beltrami	Grace Lake	negative	negative	review completed - project proceeded	1986
Douglas	Lake Geneva/West	negative	negative	review completed - project proceeded	1986
Hubbard	Blue Lake	negative	negative	review completed - project proceeded	1986
Otter Tail	Franklin Lake	negative	negative	review completed - project proceeded	1986

REGION II

<u>COUNTY</u>	<u>PROJECT</u>	<u>RECORDS REVIEW</u>	<u>FIELD REVIEW</u>	<u>STATUS</u>	<u>YEAR</u>
Aitkin	Hanging Kettle Lake	negative	21AK-9001	review completed - project proceeded	1986
Itasca	Sucker Lake	negative	negative	review completed - project proceeded	1986
Koochiching	Little Fork R./Hwy 11	21KC2	positive	review in progress - add'l work required	1986
Koochiching	Little Fork R./Lofgren	negative	negative	review completed - project proceeded	1986
Koochiching	Big Fork R./Big Falls	21KC9	positive	review completed - project proceeded	1986
St. Louis	White Iron Lake	negative	negative	review completed - project proceeded	1986
St. Louis	Shagawa Lake	negative	negative	review completed - project proceeded	1986

REGION III

<u>COUNTY</u>	<u>PROJECT</u>	<u>RECORDS REVIEW</u>	<u>FIELD REVIEW</u>	<u>STATUS</u>	<u>YEAR</u>
Cass	Boy Lake	negative	negative	review completed - project proceeded	1986
Cass	Inguadona Lake	negative	negative	review completed - project proceeded	1986
Cass	Sanburn Lake	negative	21CA161	review in progress, pending design	1986
Crow Wing	Mississippi R./Highway 6	negative	negative	review completed - project proceeded	1986
Crow Wing	Nokasippi River	21CW65	positive	review completed - construction restraints	1986
Crow Wing	Borden Lake	negative	21CW101	review completed - project proceeded	1985,86
Crow Wing	Pelican L./Halvorsen Bay	negative	negative	review completed - project proceeded	1986
Kanabec	Snake River/Co. Rd. 11	negative	negative	review completed - project proceeded	1986
Stearns	Big Fish Lake	negative	negative	review completed - project proceeded	1986
Stearns	Big Watab Lake	negative	negative	review completed - project proceeded	1986
Stearns	Pearl Lake	negative	negative	review completed - project proceeded	1985

REGION IV

<u>COUNTY</u>	<u>PROJECT</u>	<u>RECORDS REVIEW</u>	<u>FIELD REVIEW</u>	<u>STATUS</u>	<u>YEAR</u>
Big Stone	Artichoke Lake	negative	negative	review completed - project proceeded	1986
Blue Earth	LeSueur River	negative	negative	review completed - project proceeded	1985
Chippewa	Minnesota R./Fredrickson	negative	negative	review completed - project proceeded	1986
Martin	Budd Lake	negative	negative	review completed - project proceeded	1986
Martin	Sisseton Lake	negative	21MR23	review completed - avoidance recommended	1986
McLeod	Stahlis Lake	negative	negative	review completed - project proceeded	1986

APPENDIX II, continued

REGION V

<u>COUNTY</u>	<u>PROJECT</u>	<u>RECORDS REVIEW</u>	<u>FIELD REVIEW</u>	<u>STATUS</u>	<u>YEAR</u>
Rice	Circle Lake	negative	negative	review completed - project proceeded	1986
Rice	Fox Lake	negative	negative	review completed - project proceeded	1986
Rice	Shields Lake	negative	negative	review completed - project proceeded	1986

REGION VI

<u>COUNTY</u>	<u>PROJECT</u>	<u>RECORDS REVIEW</u>	<u>FIELD REVIEW</u>	<u>STATUS</u>	<u>YEAR</u>
Hennepin	Christmas Lake	negative	negative	review completed - project proceeded	1986
Hennepin	Little Long Lake	negative	negative	review completed - project proceeded	1986
Hennepin	Minnetonka/Halstead's Bay	negative	negative	review completed - project proceeded	1985
Scott	Cedar Lake	negative	negative	review completed - project proceeded	1986
Scott	Thole Lake	negative	negative	review completed - project proceeded	1985
Washington	Bone Lake	negative	21WAS3	review completed - project proceeded	1986
Washington	Clear Lake	negative	negative	review completed - project proceeded	1986
Wright	Cokato Lake	negative	negative	review completed - project proceeded	1986
Wright	French Lake	negative	negative	review completed - project proceeded	1986
Wright	Granite Lake	negative	negative	review completed - project proceeded	1986
Wright	Ramsey Lake	negative	negative	review completed - project proceeded	1985

## APPENDIX III. PROJECTS REVIEWED, 1985/86, BY COUNTY

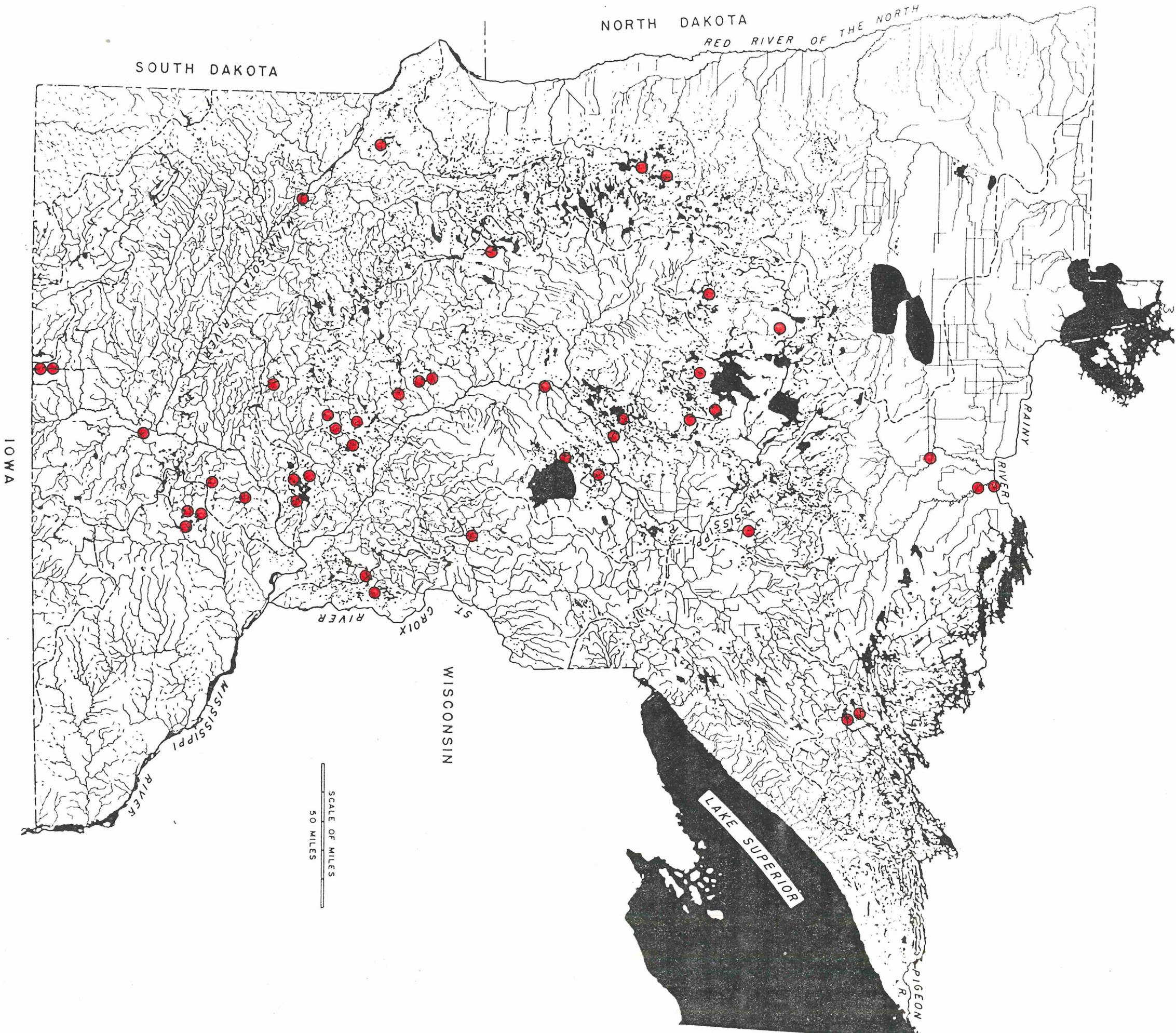
COUNTY	PROJECT	RECORDS REVIEW	FIELD REVIEW	STATUS	YEAR
Aitkin	Hanging Kettle Lake	negative	21AK9001	review completed - project proceeded	1986
Becker	Lake Sallie	21BK3	positive	review completed - construction restraints	1986
Beltrami	Grace Lake	negative	negative	review completed - project proceeded	1986
Big Stone	Artichoke Lake	negative	negative	review completed - project proceeded	1986
Blue Earth	LeSueur River	negative	negative	review completed - project proceeded	1985
Cass	Boy Lake	negative	negative	review completed - project proceeded	1986
	Inguadona Lake	negative	negative	review completed - project proceeded	1986
	Sanburn Lake	negative	21CA161	review in progress, pending design	1986
Chippewa	Minnesota R./Fredrickson	negative	negative	review completed - project proceeded	1986
Crow Wing	Mississippi R./Highway 6	negative	negative	review completed - project proceeded	1986
	Nokasippi River	21CW65	positive	review completed - construction restraints	1986
	Borden Lake	negative	21CW101	review completed - project proceeded	1985, 86
	Pelican L./Halvorsen Bay	negative	negative	review completed - project proceeded	1986
Douglas	Lake Geneva-West	negative	negative	review completed - project proceeded	1986
Hennepin	Christmas Lake	negative	negative	review completed - project proceeded	1986
	Little Long Lake	negative	negative	review completed - project proceeded	1986
	Minnetonka/Halstead's Bay	negative	negative	review completed - project proceeded	1985
Hubbard	Blue Lake	negative	negative	review completed - project proceeded	1986
Itasca	Sucker Lake	negative	negative	review completed - project proceeded	1986
Kanabec	Snake River/Co. Rd. 11	negative	negative	review completed - project proceeded	1986
Koochiching	Little Fork R./Highway 11	21KC2	positive	review in progress - add'l work required	1986
	Little Fork R./Lofgren	negative	negative	review completed - project proceeded	1986
	Big Fork R./Big Falls	21KC9	positive	review completed - project proceeded	1986
Lake	White Iron Lake	negative	negative	review completed - project proceeded	1986
Martin	Budd Lake	negative	negative	review completed - project proceeded	1986
	Sisseton Lake	negative	21MR23	review completed - avoidance recommended	1986
McLeod	Stahlis Lake	negative	negative	review completed - project proceeded	1986
Otter Tail	Franklin Lake	negative	negative	review completed - project proceeded	1986
Rice	Circle Lake	negative	negative	review completed - project proceeded	1986
	Fox Lake	negative	negative	review completed - project proceeded	1986
	Shields Lake	negative	negative	review completed - project proceeded	1986

## APPENDIX III, continued

<u>COUNTY</u>	<u>PROJECT</u>	<u>RECORDS REVIEW</u>	<u>FIELD REVIEW</u>	<u>STATUS</u>	<u>YEAR</u>
St. Louis	Shagawa Lake	negative	negative	review completed - project proceeded	1986
Scott	Cedar Lake	negative	negative	review completed - project proceeded	1986
	Thole Lake	negative	negative	review completed - project proceeded	1985
Stearns	Big Fish Lake	negative	negative	review completed - project proceeded	1986
	Big Watab Lake	negative	negative	review completed - project proceeded	1986
	Pearl Lake	negative	negative	review completed - project proceeded	1985
Washington	Bone Lake	negative	21WAS3	review completed - project proceeded	1986
	Clear Lake	negative	negative	review completed - project proceeded	1986
Wright	Cokato Lake	negative	negative	review completed - project proceeded	1986
	French Lake	negative	negative	review completed - project proceeded	1986
	Granite Lake	negative	negative	review completed - project proceeded	1986
	Ramsey Lake	negative	negative	review completed - project proceeded	1985

APPENDIX IV. 1985/86 PROJECT LOCATIONS





SOUTH DAKOTA

NORTH DAKOTA  
RED RIVER OF THE NORTH

IOWA

WISCONSIN

MISSISSIPPI RIVER

CROIX RIVER

RAINY RIVER

LAKE SUPERIOR

PIGEON R.

SCALE OF MILES  
50 MILES

