

LEGISLATIVE REFERENCE LIBRARY
F612.M58 C766

Minnesota. Dept. - A management plan for the North Fo



3 0307 00025 4782

MANAGEMENT PLAN FOR THE NORTH FORK CROW RIVER MEEKER COUNTY

5615

MINNESOTA DEPARTMENT OF NATURAL RESOURCES

F
612
.M58
C766

PRELIMINARY DRAFT
DECEMBER 1975

A MANAGEMENT PLAN FOR THE NORTH FORK CROW RIVER MEEKER COUNTY

MINNESOTA DEPARTMENT OF NATURAL RESOURCES

ADDENDUM

PRELIMINARY DRAFT
FEBRUARY 1976



LEGISLATIVE REFERENCE LIBRARY
STATE OF MINNESOTA

Preliminary Draft: North Fork-Crow River (Meeker County Portion) Management Plan

ADDENDUM

This addendum has been prepared subsequent to the public informational meetings and a review of the draft management plan.

It consists of changes and corrections made to certain portions of the preliminary management plan. These changes and corrections should be noted in the preliminary draft of the management plan, dated December 1975.

This addendum, along with the draft plan will together comprise the subject matter about which the public hearing will be concerned.

p. 1, Study Area Description, 3rd para., -- change 11,577.02 acres to: 11,549.02
and: change 283.75 to: 283.06

p.11, -- After 2nd para., add new para:

(9) Development of any new recreational facilities (other than those shown on the Recreation Management Map) by the DNR, should be done only if assurances can be made that these facilities and any increased use caused by them, will not adversely affect the quality of the river. Local authorities should be consulted prior to future development of recreational facilities by the DNR.

p. 11, (e), (2) -- After "ordinances" add: and maps.

p. 11, (e), (2),(bb), 1st and 2nd lines -- Deleted . . . for a Natural Environmental River (Shorelands Classification) . . .

p.11, (e), (2), (cc) -- Delete in it's entirety.

p. 11, (e), (3), 2nd line -- Between "regulations" and "which" add:
(adopted in accordance with Minnesota Regulations NR 70-77).

p. 11, (f), (1) -- Delete in it's entirety.

p. 11 -- Change (e) ADMINISTRATION and (f) RECOMMENDATIONS to:
(d) ADMINISTRATION and (e) RECOMMENDATIONS

p. 12, (2), (3), (4), (5), (6), (7) -- Renumber to read: (1), (2), (3), (4), (5), (6)

p. 12, Bottom of page -- Add: (7) It is recommended that any recreational facilities, other than those shown on the Recreation Management Map, be developed by local units of government, to insure that maximum local input is obtained.

p. 20 and 21 right side of plate 4 and left side of plate 5 -- The land use district boundary is changed, only where it goes through the corporate limits of Kingston; so that it runs 300 ft. landward from the normal high water mark on both sides of the river. This change will be incorporated on the final Land Management Maps, after the public hearing.

p. 23 -- Acreage for River Mile 92 - 91 is changed from 293.00 to: 275.00
The Acreage for River Mile 91 - 90 is changed from 243.00 to: 233.00
The TOTAL ACREAGE is changed from 11,577.02 to 11,549.02.

p. 29, Section 15 and Section 22 -- Change to read:

Section 15 - SW $\frac{1}{4}$ within 300 ft. of River bank only	17.00
S $\frac{1}{2}$ of SW $\frac{1}{4}$ of SE $\frac{1}{4}$	20.00
S $\frac{1}{2}$ of SE $\frac{1}{4}$ of SE $\frac{1}{4}$	20.00
Section 22 - NW $\frac{1}{4}$ within 300 ft. of River bank only	23.00
NE $\frac{1}{4}$	160.00

p. 29, Bottom of page -- Change TOTAL ACREAGE from 11,577.02 to: 11,549.02.

p. 30, 6th line -- Delete: Section 10 Government Lot 2 39.53
and substitute: Section 10 NE $\frac{1}{4}$ of SE $\frac{1}{4}$ 40.00

p. 33, Bottom of page -- Change TOTAL ACREAGE from 2,670.73 to: 2,671.20

p. 41, 2nd para., 1st line -- Change miximum to maximum.

p. 66, 1st para., 2nd line, -- Change 1,278 acres to: 1278 square miles.

FOREWARD

The Minnesota Department of Natural Resources (DNR) has conducted a study of that portion of the North Fork of the Crow River which flows through Meeker County. The study was carried out under the authority of the Minnesota Wild and Scenic Rivers Act, Minn. Stats. 1974, Sections 104.31 to 104.40.

Proceeding on the findings of this study, the Commissioner of Natural Resources proposes to designate this portion of the river a component of the Minnesota Wild, Scenic and Recreational Rivers system, and adopt a management plan for the river and its shorelands.

This document is composed of four sections: Introduction, Management Plan, Analysis and Appendix. In accordance with Minn. Regs. NR 78 (g) (2), the Management Plan section includes:

- a) proposed classification of the river segment;
- b) proposed land use district boundaries which shall not exceed 320 acres per each mile of river for both sides (not each side);
- c) proposed methods for preserving the river and its adjacent lands;
- d) proposed regulations for local land use controls;
- e) proposed regulations, if any, for water surface use of the river;
- f) proposed plan for recreational management within the land use district; and
- g) proposed plan for administration of the management plan.

The analysis section explains management procedures and describes the physical and social characteristics of the area.

LEGISLATIVE REFERENCE LIBRARY
STATE OF MINNESOTA

R108
5556

If the river is designated, only the Management Plan section will be re-printed as the final management plan for the North Fork of the Crow River, Meeker County portion. The Management Plan is subject to change, based on public input received from all public informational meetings and the preparation of the "findings of fact" from the public hearing to be conducted in the county seat.

TABLE OF CONTENTS

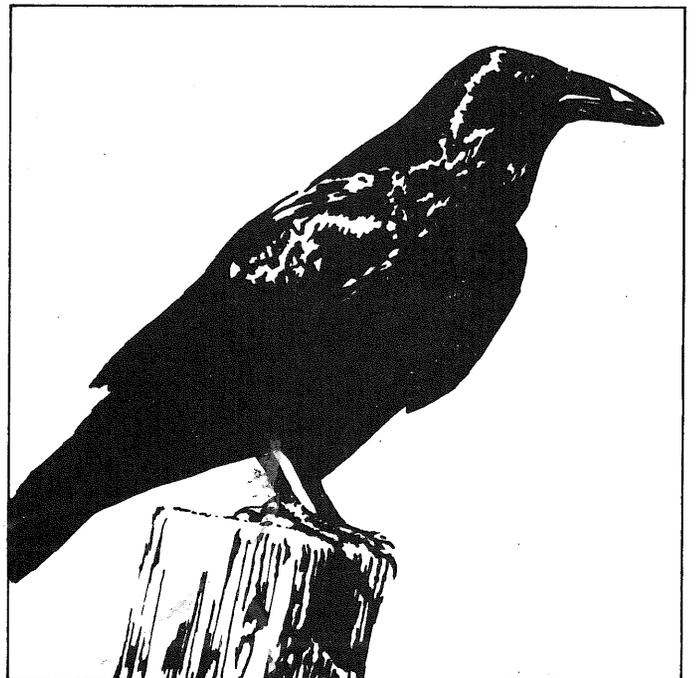
I. INTRODUCTION	
Summary	1
Study Area Description	1
Locational Map	2
Study Conclusions	3
Objectives	6
II. MANAGEMENT PLAN	
Rules and Regulations	8
Recommendations	11
Land Management Maps	13
River Mile Acreage	23
Land Use District - Property Descriptions	24
Scenic Areas - Property Descriptions	30
Recreation Management Map	34
Recreational Site Typical	36
III. ANALYSIS	
Land Use Provisions	
Introduction	41
Zoning Dimension Provisions	41
Permitted and Conditional Uses	42
Vegetative Cutting	43
Grading and Filling	44
Utility Crossings	45
Public Roads	45
Land Acquisition	
Introduction	45
Scenic Easements	46
Fee Acquisition	47
Use Easements	47
Recreation Management	
Introduction	48
Campsites	49
Rest Areas	49
Access	50
Trails	50
Maintenance	50
Signs	51
Sign Typical	51
Site Analysis	
Route Description	53
Site Analysis Maps	56

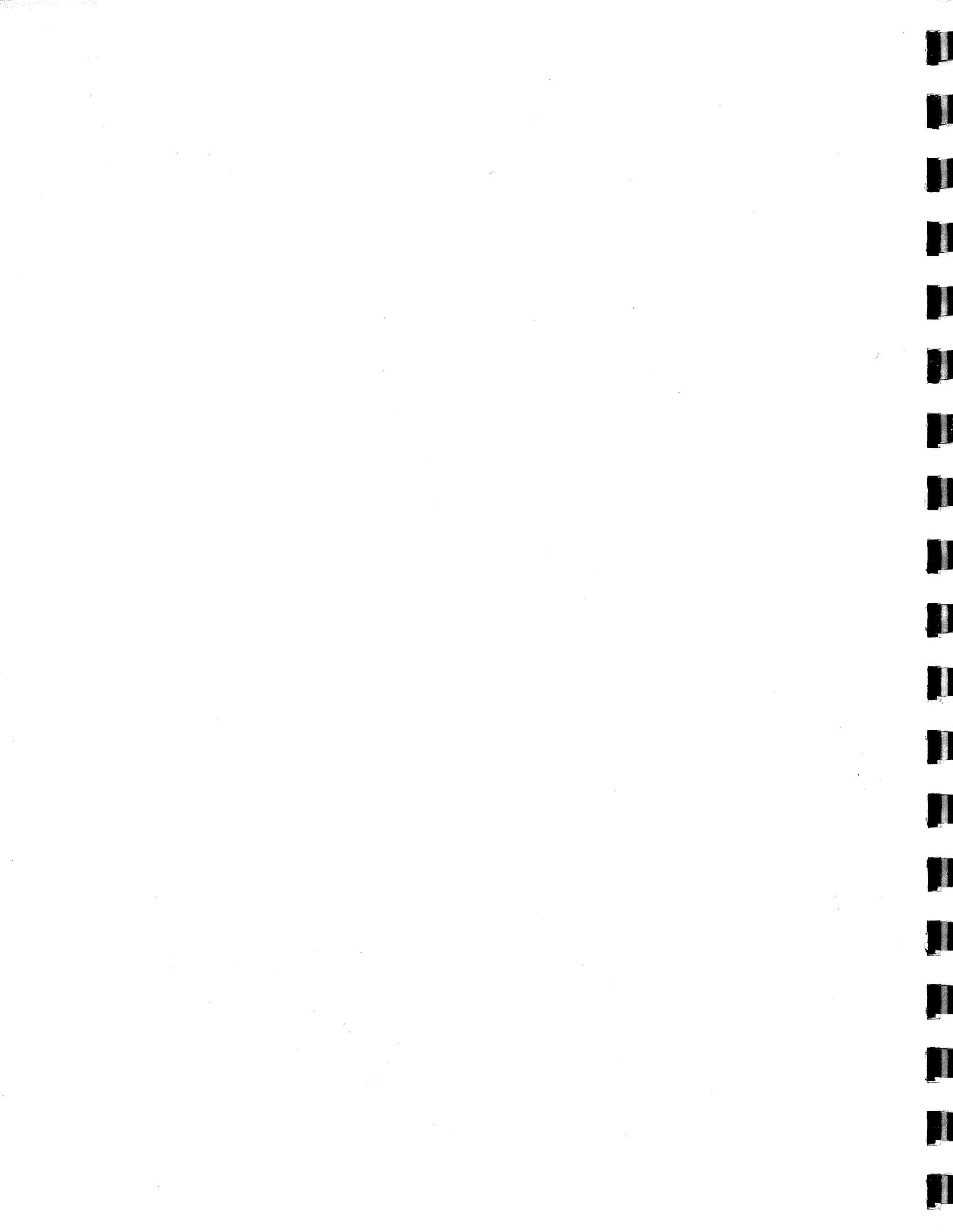
Physical Characteristics	
Watershed	66
Watershed Map	67
Geology	68
Soils	69
"Big Woods" Map	70
Vegetation	71
Wildlife	73
Fisheries	75
Water Quality	79
Social Characteristics	
History	81
Land Use	83
Population Characteristics	84
Water Use	85
Existing Public Lands	85
Existing Facilities	85

IV. APPENDIX

Related Projects	88
Project Financing and Cost	89

INTRODUCTION





SUMMARY

The DNR proposes to classify the North Fork of the Crow River, from the spillway at Lake Koronis to the Meeker-Wright county line, a "recreational" component of the Minnesota Wild and Scenic Rivers System.

Rivers may be classified as recreational rivers even though they have undergone some impoundment or diversion, or flow through land which has been developed for a full range of agricultural or other uses. The existence of nearby roads or railroads does not necessarily preclude a river from being protected under the act so long as it can be managed to further the purposes of the Wild and Scenic Rivers Act.

This proposed classification is made pursuant to the Minnesota Wild and Scenic Rivers Act, Minn. Stats. 1974, Sections 104.31 to 104.40.

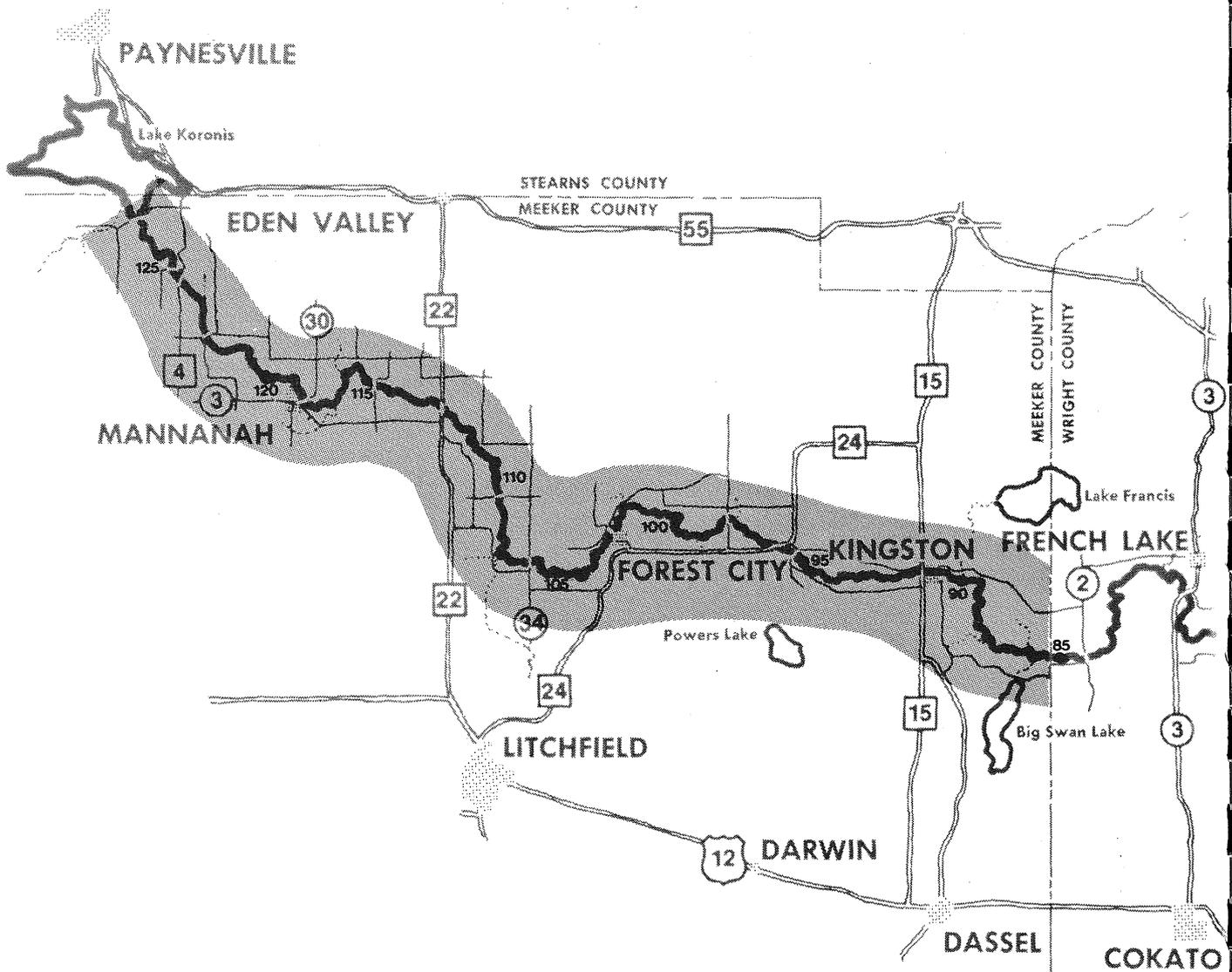
The specific management procedures are contained in Minn. Regs. NR 78-81 (Wild, Scenic and Recreational River System Regulations) and the management plan.

STUDY AREA DESCRIPTION

The study route comprises the 40.8 miles of the North Fork of the Crow River in northern Meeker County, from the spillway at Lake Koronis to the Meeker-Wright county line.

The incorporated city of Kingston and the unincorporated townships of Manannah and Forest City are located along this part of the river. Litchfield, located about four miles south of the river, is the largest city near the study area.

The proposed land use district on either side of the Crow River varies in width although its area does not exceed 320 acres per river mile. The entire district comprises 11,577.02 acres, an average of 283.75 acres per river mile. The district boundaries are shown on the Land Management Maps. Legal descriptions of the district are given in the Management Plan.



NORTH FORK - CROW RIVER LOCATION MAP

STUDY CONCLUSIONS

Why is this particular part of the Crow River being considered for inclusion into the Minnesota Wild and Scenic Rivers System?

The Minnesota Wild and Scenic Rivers Act, Minn. Stats. 1974, Section 104.32, states that: "The whole or a segment of any river and its adjacent lands in this state that possess outstanding scenic, recreational, natural, historical, scientific or other similar values shall be eligible for inclusion within the Minnesota Wild and Scenic Rivers System." The part of the Crow River that has been studied has many of these values, including:

Scenic Values

Dense woods of oak, elm, basswood, maple, ash and cottonwood can be seen along the river, providing outstanding fall colors and beautiful scenery year-around. Banks rise 50 to 70 feet above the river in some areas, providing scenic vistas of the river valley. Nearby lands are essentially undeveloped, except for agricultural purposes. In fact, a canoeist may travel two or three miles in places without seeing a farm or house.

The Crow is a narrow, winding river. Protected from wind, it is usually calm. The character of its banks changes abruptly; within a mile or two, a canoeist may pass pastures, dense thickets, wooded bluffs, croplands and sparsely-wooded prairie lands.

Recreational Values

Three publicly-owned sites now exist along the river, all owned by Meeker County. However, development of only one site is complete. There are no state-or federally-owned recreational lands along the river. One goal of the management plan is to provide an adequate number of developed recreational areas near the river.

This portion of the river is ideal for family canoe trips. Rapids are mild, though interesting, and currents are moderate. The Crow River is expected to draw an increasing number of canoeists. In general, people have more leisure time and canoe sales are on the rise throughout the state. The Crow River is only slightly more than an hour's drive from the Twin Cities. Two canoe outfitters already are situated within the study area.

The study area also is suitable for snowmobiling, fishing and picnicking. A snowmobile trail parallels and occasionally crosses the river. Fishing is good, although there are few anglers. Daytime outings will become even more popular once Meeker County fully develops its park lands.



Natural Values

The study area sustains a wide variety of plant and animal life. This area is unique in that it contains remnants of both Big Woods and original prairie vegetation. Marshlands adjacent to the river are heavily utilized by waterfowl and fur bearers. Woodlands along the river provide much-needed habitat for a healthy population of white-tailed deer. A wide variety of fish species inhabit the river and portions of this segment are important spawning grounds for certain species.

Historical Values

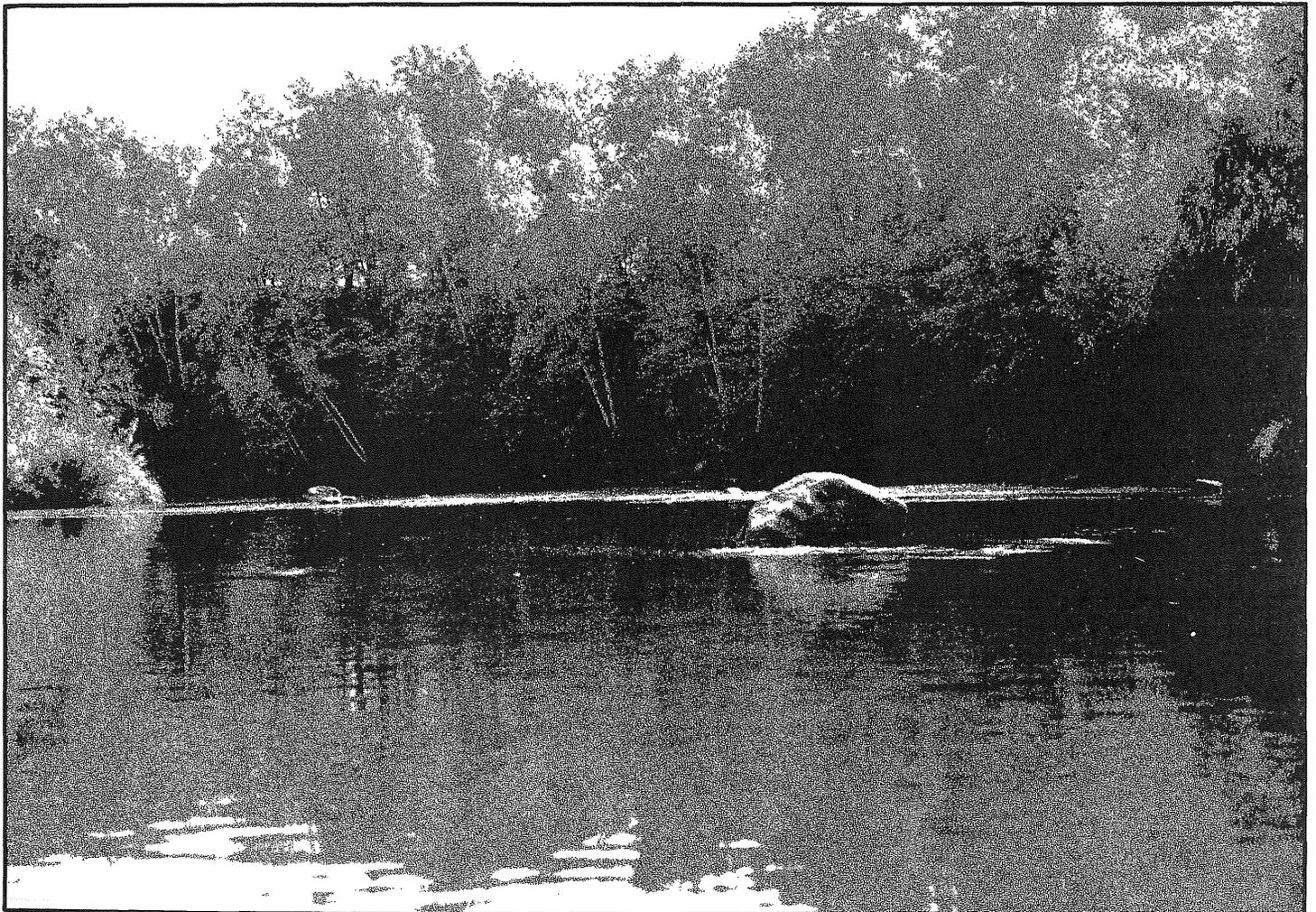
Several archaeological sites along the river provide evidence of the Crow River's importance to prehistoric man. The river played an instrumental role in white man's discovery of the prairie lands of southwestern Minnesota. Three mills once existed along the study area and were extremely important to early settlement and economic development of this part of the state. The Crow River, being a dividing line between the prairie and the Big Woods, also became the northernmost battlegrounds during the Sioux Indian War of 1862. The townspeople of Forest City became famous for their role in the Indian War by erecting a life-saving stockade in a 24-hour period. With the completion of a wagon road from Monticello to Forest City, many new settlers crossed the Crow River on their way to Minnesota's prairie lands.

Why doesn't the Crow River qualify for Wild or Scenic classifications?

The Wild and Scenic Rivers Act states that rivers or segments thereof must "exist in a free-flowing state" to be classified as Wild or Scenic components. Past channelization of a two-mile segment of the Crow River is one reason for the less restrictive Recreational classification.

Lands adjacent to the Crow River are largely undeveloped, but do not present an overall natural character because of extensive agricultural use. The Wild or Scenic classification requires an overall natural character.

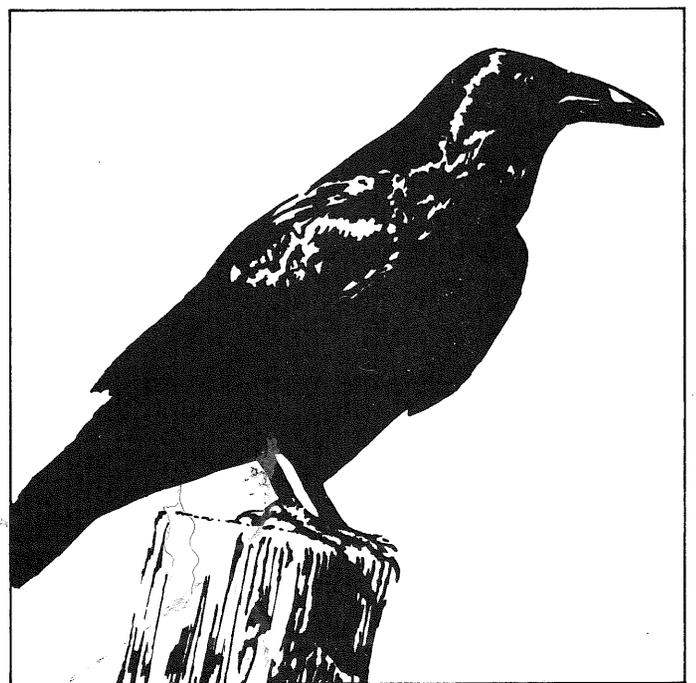
The 15 bridge crossings within the 40.8-mile study area also preclude the Crow River from a Wild or Scenic classification. To be classified Scenic, rivers may occasionally be crossed by roads. In contrast, the Crow River is frequently crossed by roads.

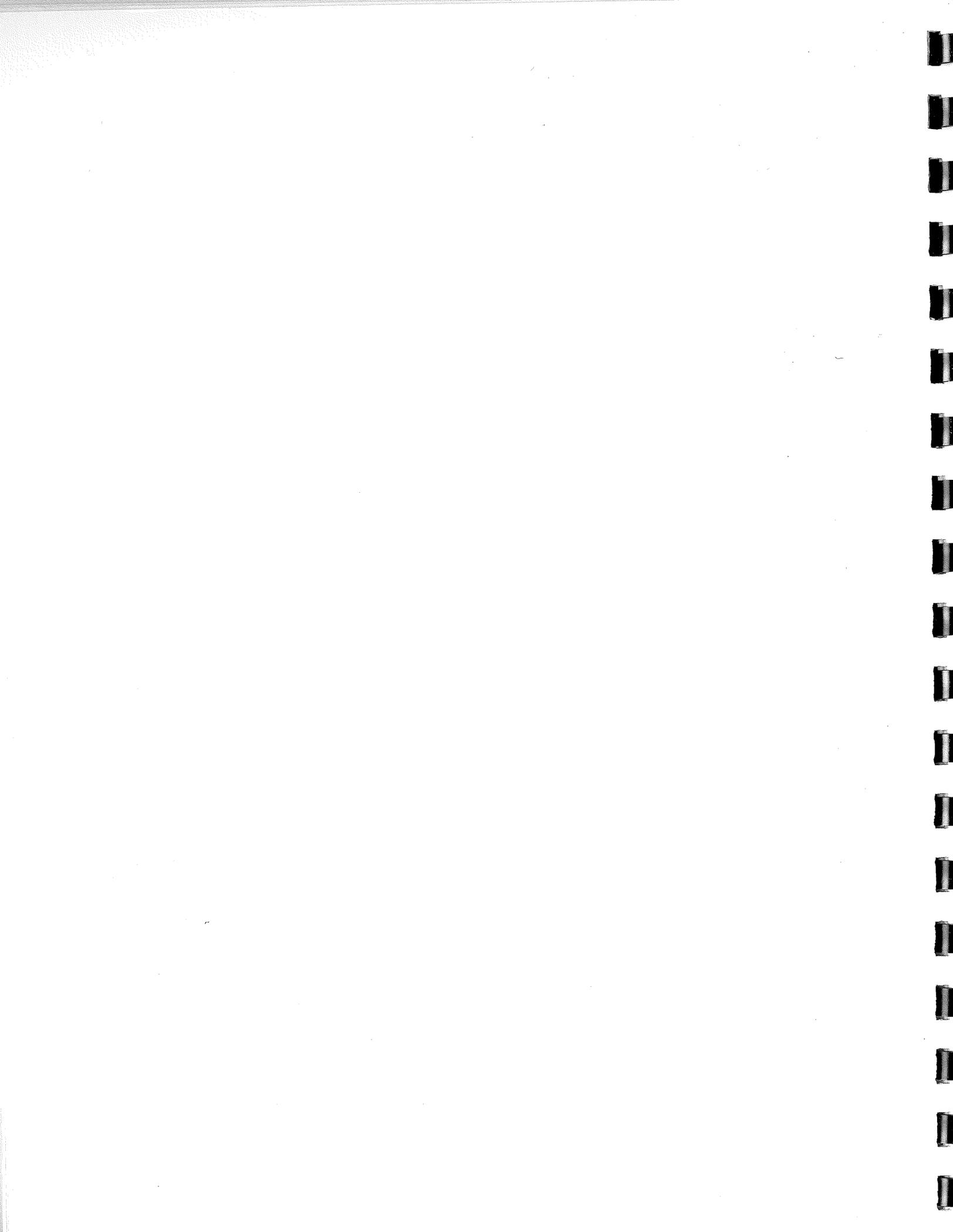


OBJECTIVES

1. To protect and preserve the outstanding scenic, recreational, natural, historic, scientific and similar values of the study area for present and future generations.
2. To recommend how to best protect this river segment and its adjacent lands in accordance with the Minnesota Wild and Scenic Rivers Act.
3. To define area boundaries to be administered according to the established statewide standards and criteria and the management plan.
4. To provide the basic analysis and subsequent recommendations for use by state and local governments in making decisions regarding the land use district.

MANAGEMENT PLAN





STATE OF MINNESOTA
DEPARTMENT OF NATURAL RESOURCES

Rules and Regulations

CHAPTER TWENTY FIVE: NR 2500

DESIGNATION, CLASSIFICATION AND MANAGEMENT OF THE
NORTH FORK OF THE CROW RIVER IN MEEKER COUNTY

NR 2500 DESIGNATION

(a) THE RIVER

That portion of the North Fork of the Crow River from the spillway at the southern end of Lake Koronis to the Meeker-Wright County line, located entirely within Meeker County, is designated a component of the Minnesota Wild and Scenic Rivers System.

(b) AUTHORITY

This designation is made by the Commissioner of Natural Resources pursuant to the authority of the Minnesota Wild and Scenic Rivers Act, Minn. Stats. 1974, Sections 104.31 to 104.40.

(c) SHORELAND INCLUDED

The designation and these rules apply to the river and the adjacent lands indicated on the Land Management Maps, Plates 1 through 5 and the property descriptions for the land use district.

NR 2510 CLASSIFICATION

That portion of the North Fork of the Crow River in Meeker County from the spillway at the southern end of Lake Koronis to the Meeker-Wright County line, is classified as Recreational, in accordance with provisions of Minn. Stats., Section 104.33, Subd. 2, and Minn. Regs. NR 78 (f).

NR 2520 MANAGEMENT

(a) LAND USE PROVISIONS

(1) The Commissioner of Natural Resources hereby adopts the Recreational River Land Use District as identified on the Land Management Maps (plates 1-5) and the Land Use District Property Descriptions. The Land Use District was derived in accordance with NR 78 (g) (2) (bb).

(aa) The regulations contained in Minn. Regs. NR 78-81 and this management plan shall be applicable to all lands which are unincorporated at the time of designation within the Recreational River Land Use District.

(bb) The land use regulations contained in Minn. Regs. NR 82-84 and this management plan shall be applied to all incorporated lands, and shall be administered in conformity with the provisions of NR 81, as applicable.

(cc) All existing local ordinances and regulations, as adopted in accordance with Minn. Regs. NR 70-77, which are more protective than those in Minn. Regs. NR 78-81 shall continue to apply within the entire land use district, as applicable.

(2) The maximum building height restriction contained in Minn. Regs. NR 79 (c) (3) (dd) shall not apply to buildings used primarily for agricultural purposes, where applicable.

(3) The grading and filling provisions shall be enforced by local ordinance, which shall require a grading and filling permit. Filling or drainage of federally determined type III - V wetlands (in accordance with U.S. Department of Interior, circular #39) shall not be allowed within the land use district. A map showing the location and classification of these wetlands shall be provided to the local authority by the Commissioner of Natural Resources.

(4) Clear cutting of vegetation, in accordance with Minn. Regs. NR 79 (g), shall not be allowed within 200 feet of the normal high water mark, in order to correspond with the existing structural setback.

(b) LAND ACQUISITION

(1) The Commissioner of Natural Resources hereby adopts the Scenic Areas, as identified on the Land Management Maps (plates 1-5) and in the Scenic Areas Property Descriptions, as priority areas for land or land interest acquisition.

(aa) All lands shown as Scenic Areas are recommended for scenic easement acquisition. However, in those areas where recreational sites are needed, fee title to the lands may be acquired, when possible.

(bb) Because acquisition of land, or interests in land, is from willing sellers, at the appraised value, some lands shown as Scenic Areas and not needed for recreational sites, may be purchased in fee title. Purchase of fee title to lands would be based on an agreement between the State of Minnesota and the landowner(s).

(cc) Other forms of acquisition, such as use easements or leases, may be used to acquire land interests in the Scenic Areas if considered feasible or necessary by the Commissioner of Natural Resources.

(2) Lands, or interests in land, other than those identified as Scenic Areas, may be purchased in order to further the policies established in the Wild and Scenic Rivers Act and the management plan.

(3) The lands or interests in land recommended to be acquired in this plan will be acquired where funds are available for such purchases from willing sellers, as provided for in Minn. Stats., Section 104.37.

(4) Land exchange will be expedited, wherever feasible, in order to acquire lands within the land use district boundaries. These exchanges will be expedited in the manner described by state law. However, land exchanges will not be recommended if such exchanges would adversely affect other Department of Natural Resources management programs.

(c) RECREATION MANAGEMENT

(1) As provided for in this management plan, the recreation management policy is to provide for the orderly use of public lands and waters within the Recreational River Land Use District. The development of selected land and river oriented recreational facilities and the maintenance of these could help "protect the rights of private landowners, ensure quietude, prohibit trespassing, and maintain the essential quality of wild and scenic river land use districts" as provided in NR 80 (a) (1).

(2) As provided for in NR 79 (b) (2) and the management plan, development of public or private recreational facilities within the Recreational River Land Use District shall conform to the design specification guidelines shown in this plan.

(3) No public river-oriented camping facilities will be provided in close proximity to private recreational developments which are designed to meet this need.

(4) The recreational use of the North Fork of the Crow Recreational River and adjacent state lands will be regulated where necessary to insure that the use does not adversely affect the values for which the river qualified for designation.

(5) The Commissioner of Natural Resources adopts the Recreation Management Map for the protection, recreational use and management of public lands or interests in land, for the North Fork of the Crow Recreational River and its adjacent lands within the Recreational River Land Use District. The locations, types, and number of sites shown on the Recreation Management Map are recommendations.

(6) The Division of Parks and Recreation shall allocate funds for maintenance of the Department of Natural Resources' recreational facilities within the North Fork of the Crow Recreational River area from the Department's river development and maintenance account.

(7) The DNR's Division of Enforcement shall enter into discussions with the local units of government concerning delineation of responsibilities for enforcement of applicable wild, scenic, and recreational river regulations.

(8) Additional public snowmobile trails may be established within the land use district, when developed in cooperation with the Department of Natural Resources.

(e) ADMINISTRATION

(1) Meeker County shall enact or amend such ordinances and maps as necessary to:

(aa) Establish the Recreational River Land Use District identified on the Land Management Maps and the land use district property descriptions as given in this management plan.

(bb) Conform to the provisions of NR 78-81 and this management plan, as applicable.

(2) The municipality of Kingston shall enact or amend such ordinances as necessary to:

(aa) Establish the Recreational River Land Use District as delineated for their jurisdiction on the Land Management Maps.

(bb) Conform to the provisions of Minn. Regs. NR 82-84 for a Natural Environment River (Shorelands Classification) within the land use district, and administer these provisions according to Minn. Regs. NR 80-81 as applicable.

(cc) Conform to the provisions and administrative procedures of Minn. Regs. NR 78, 79 (e) - (j) and Minn. Regs. NR 80-81, as applicable.

(3) Meeker County, or its subdivisions, shall retain any existing regulations which are more protective than Minn. Regs. NR 78-81, and may adopt other more protective regulations as they deem appropriate.

(4) The Department of Natural Resources shall assist the local units of government in the implementation of Minn. Regs. NR 78-81 and this management plan, in accordance with the provisions of Minn. Stats. 1974, Section 104.36, Subd. 2. The Department of Natural Resources shall delineate the land use district boundaries on the appropriate zoning maps, for the affected local units of government.

(f) RECOMMENDATIONS

(1) It is recommended that the Minnesota Pollution Control Agency initiate an analysis of water quality information for the designated portion of the Crow River to insure that water quality standards are maintained.

(2) It is recommended that Meeker County work with the Board of Supervisors of the Soil and Water Conservation District in setting criteria for the use of SCS technical assistance for evaluating grading and filling permit requests relating to Minn. Regs. NR 79 (1) -- Grading and Filling Provisions.

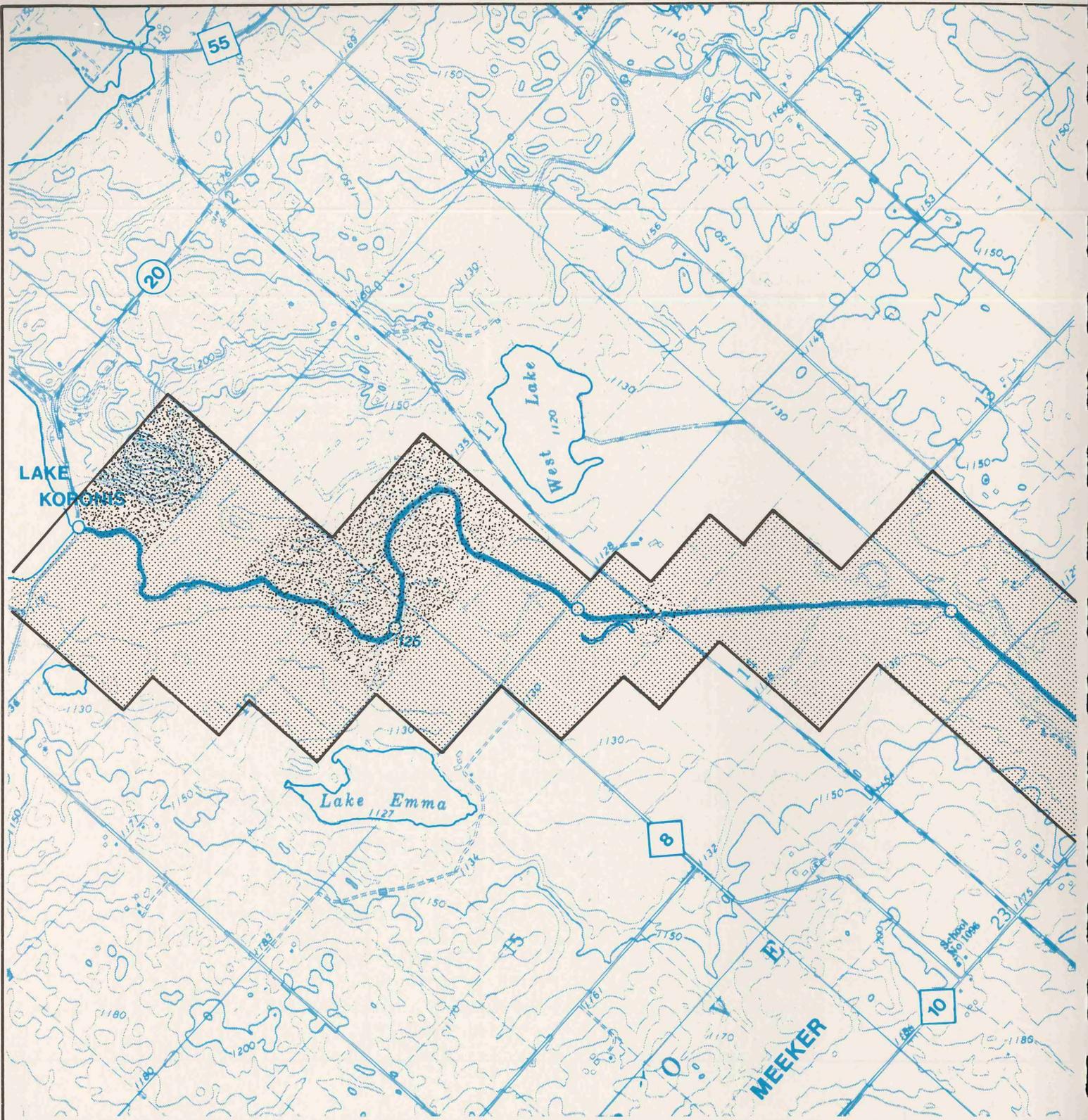
(3) It is recommended that the Meeker County Highway Department and the Minnesota Highway Department cooperate with the Minnesota Department of Natural Resources by placing no-parking signs along any bridge crossing right-of-ways that are determined to be inadequate or dangerous as river access points.

(4) It is recommended that the Meeker County Park Board complete development of lands it owns along the management area. DNR assistance will be provided for development, where appropriate.

(5) It is recommended that the State Planning Agency, Office of Local and Urban Affairs give highest priority for any local funding requests for recreational land acquisition within the management area, consistent with the goals of the State Comprehensive Outdoor Recreation Plan (SCORP).

(6) No Department of Natural Resources "corridor" trails are proposed in this management plan for the Crow River area. Local residents and landowners may desire specific trails. If so, it is recommended that such trails be developed through DNR's trail assistance programs, which make funds for trail development and maintenance available to local units of government, and private clubs and organizations.

(7) To insure that the historical heritage of the Crow River will be protected for the enjoyment of present and future generations, it is recommended that the State Historical Society consider the feasibility of conducting a study of historical and archaeological sites within the management area.



NORTH FORK
 CROW RIVER
 MANAGEMENT PLAN

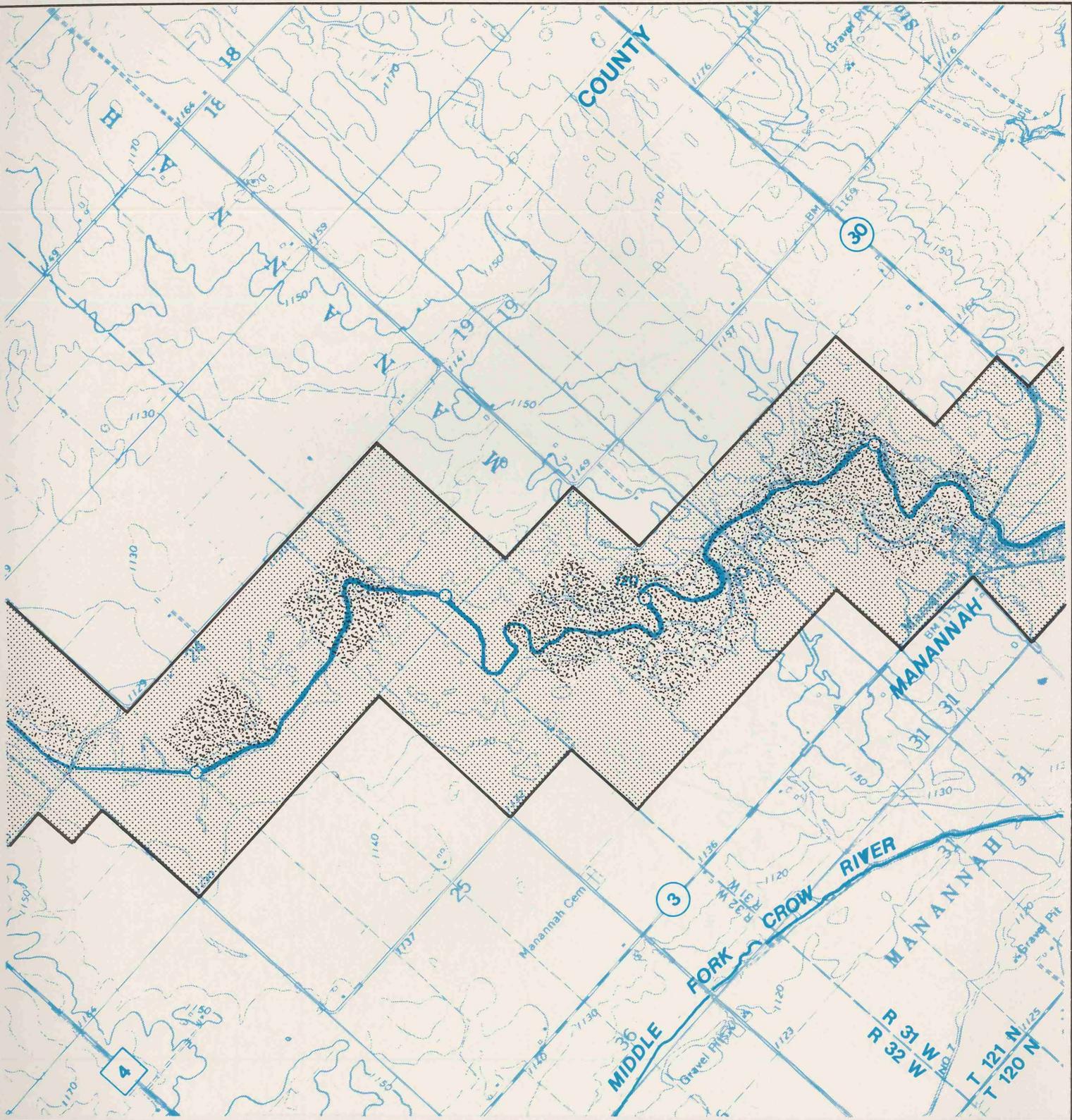
LAND



LAND USE DISTRICT



PUBLIC OWNERSHIP



MANAGEMENT



SCENIC AREA

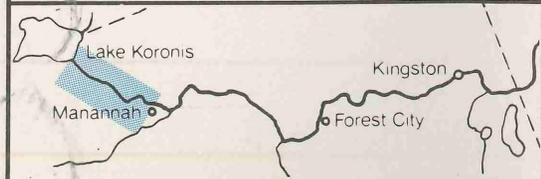


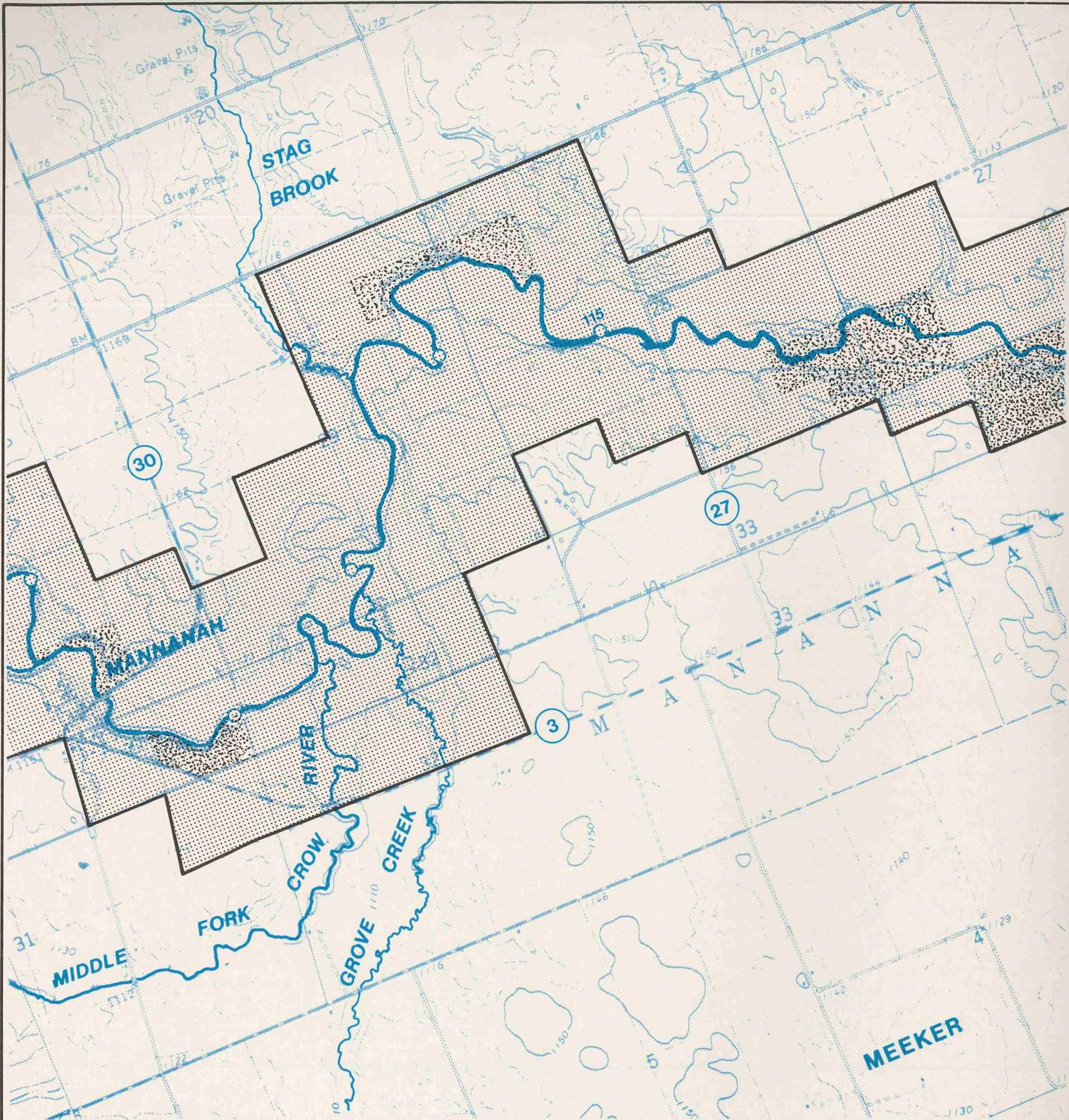
ZONING



PLATE

SCALE: 1" = 2000'





NORTH FORK
CROW RIVER
MANAGEMENT PLAN

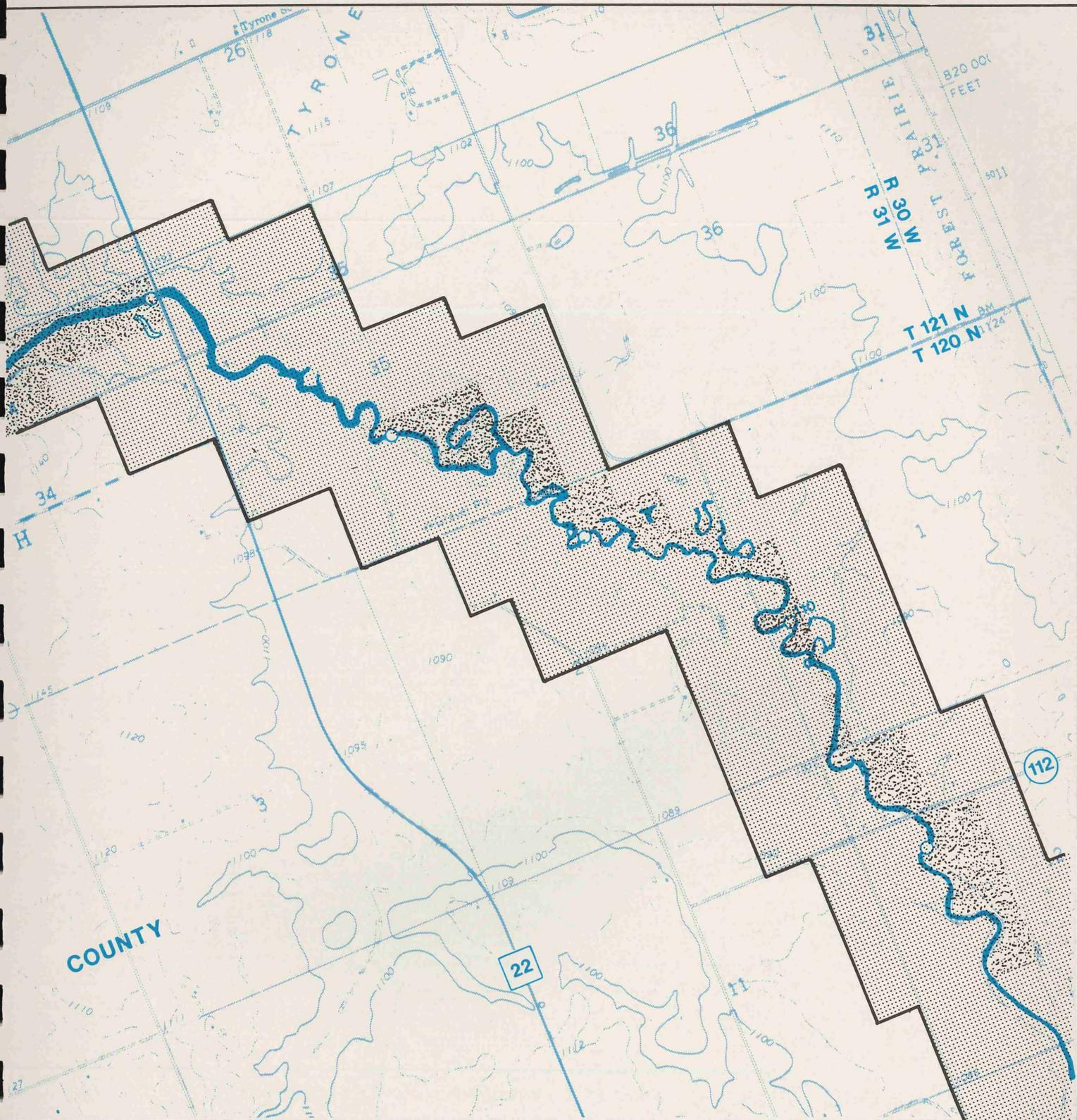
LAND



LAND USE DISTRICT



PUBLIC OWNERSHIP



MANAGEMENT



SCENIC AREA



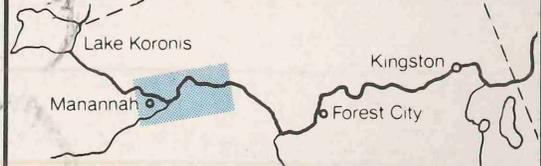
ZONING

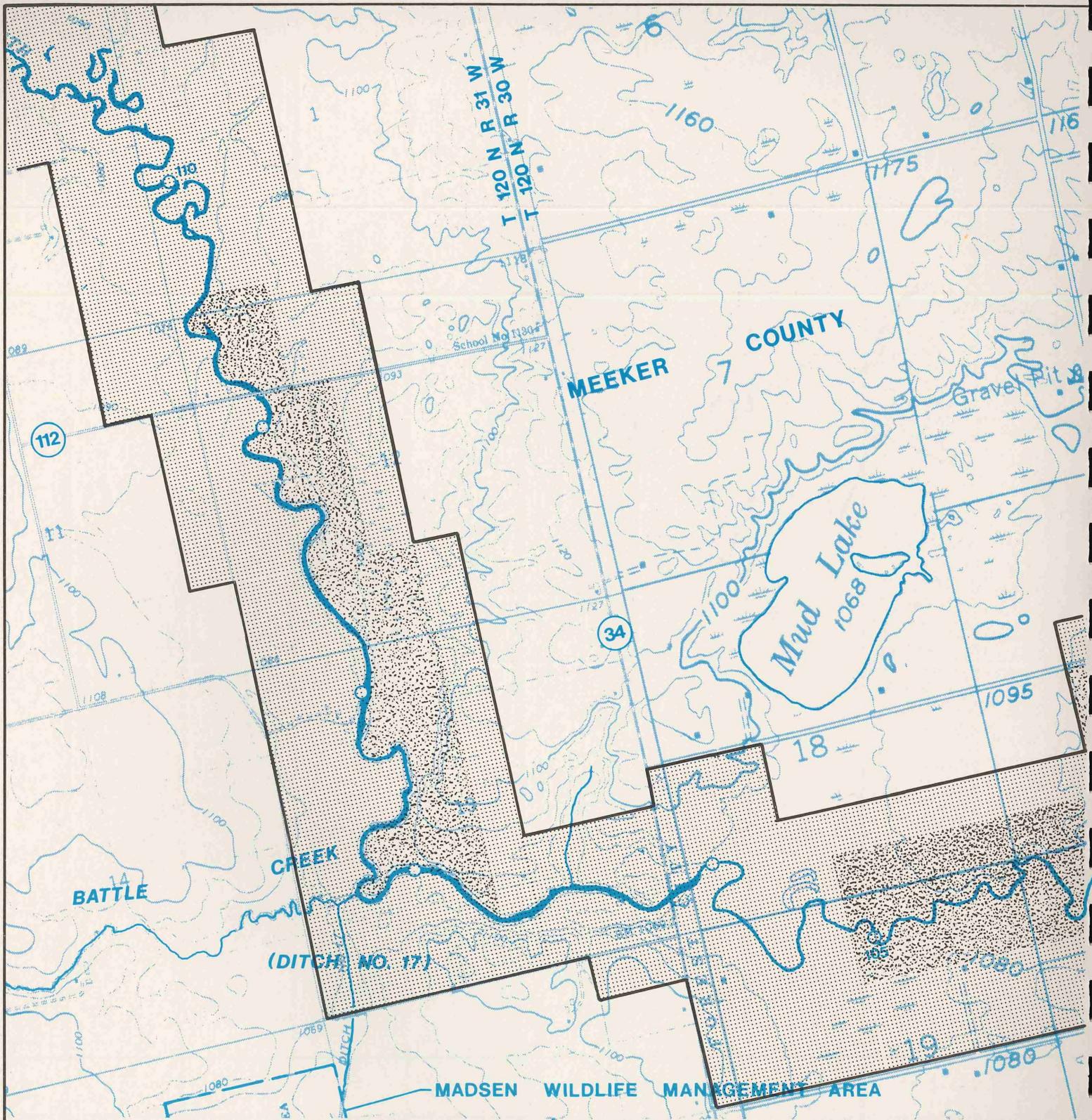


PLATE

2

SCALE: 1" = 2000'





NORTH FORK
CROW RIVER
MANAGEMENT PLAN

LAND



LAND USE DISTRICT



PUBLIC OWNERSHIP

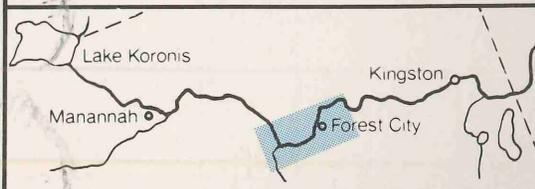


MANAGEMENT

-  SCENIC AREA
-  ZONING

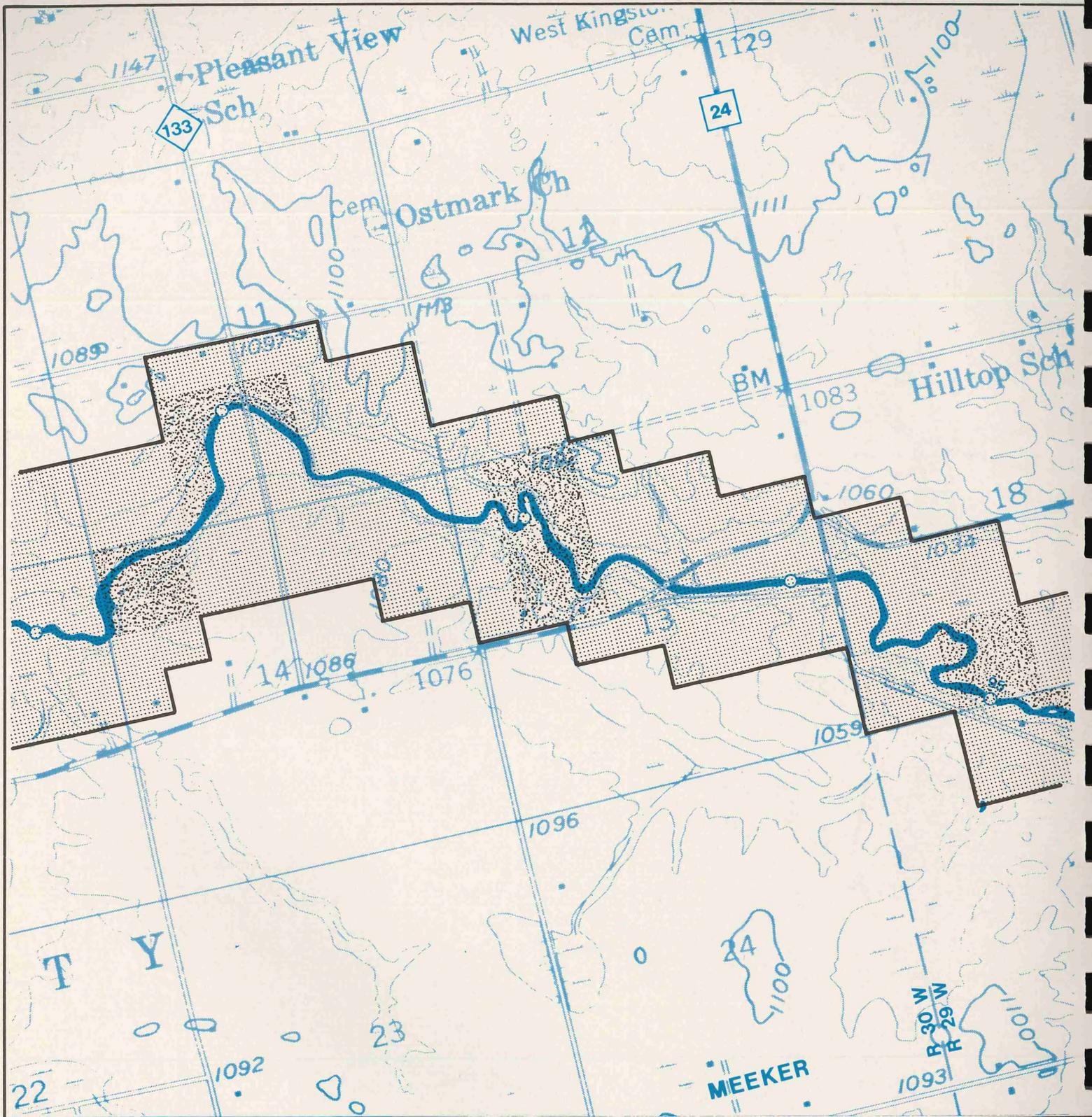


SCALE: 1" = 2000'



PLATE

3



NORTH FORK

CROW RIVER MANAGEMENT PLAN

LAND



LAND USE DISTRICT



PUBLIC OWNERSHIP



MANAGEMENT



SCENIC AREA



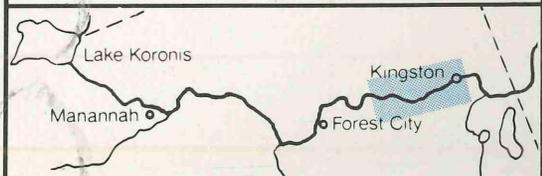
ZONING

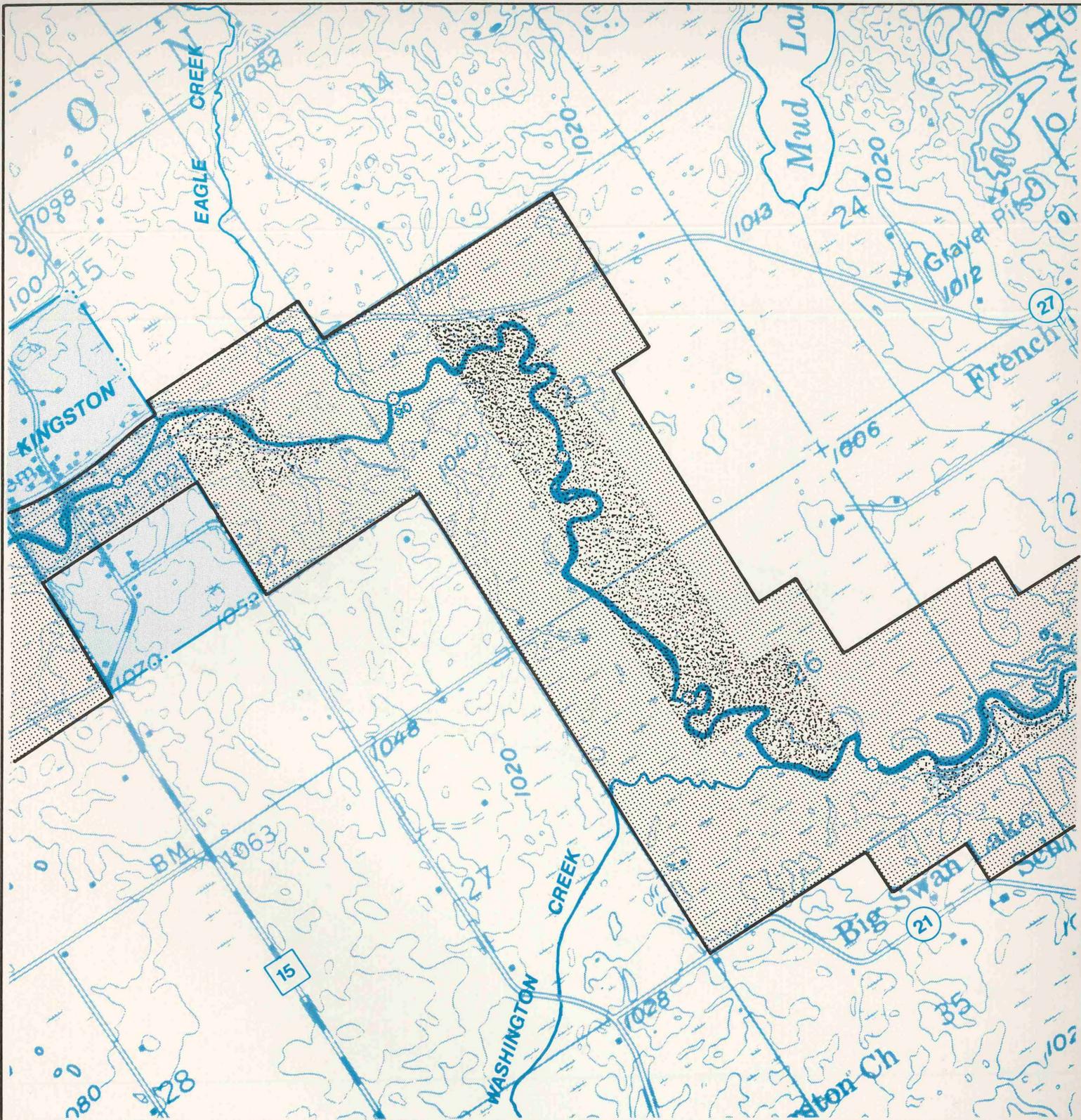


PLATE

4

SCALE: 1" = 2000'





NORTH FORK
CROW RIVER
MANAGEMENT PLAN

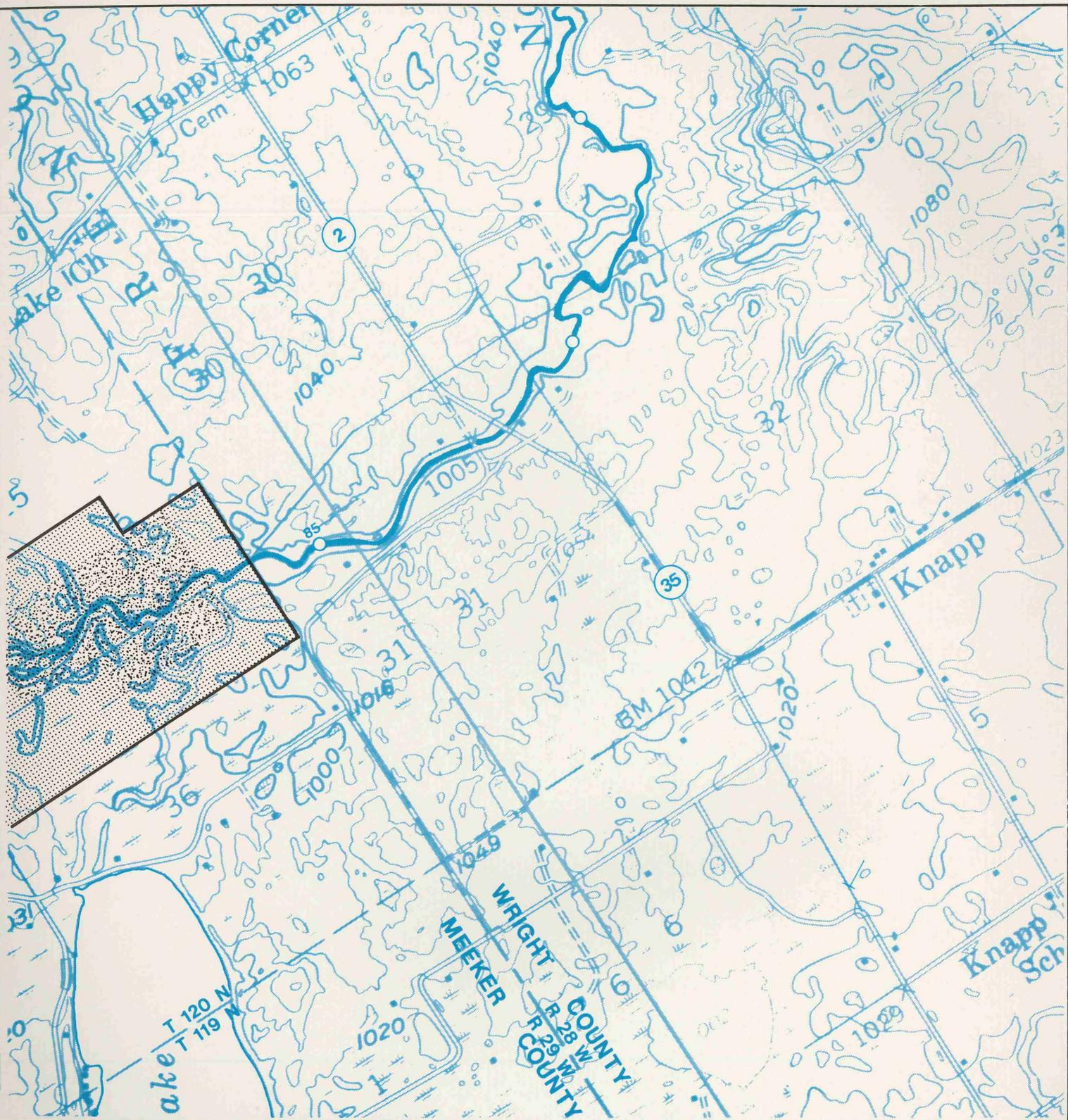
LAND



LAND USE DISTRICT



PUBLIC OWNERSHIP



MANAGEMENT



SCENIC AREA



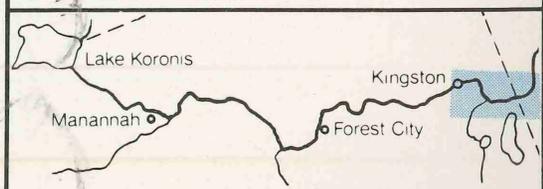
ZONING

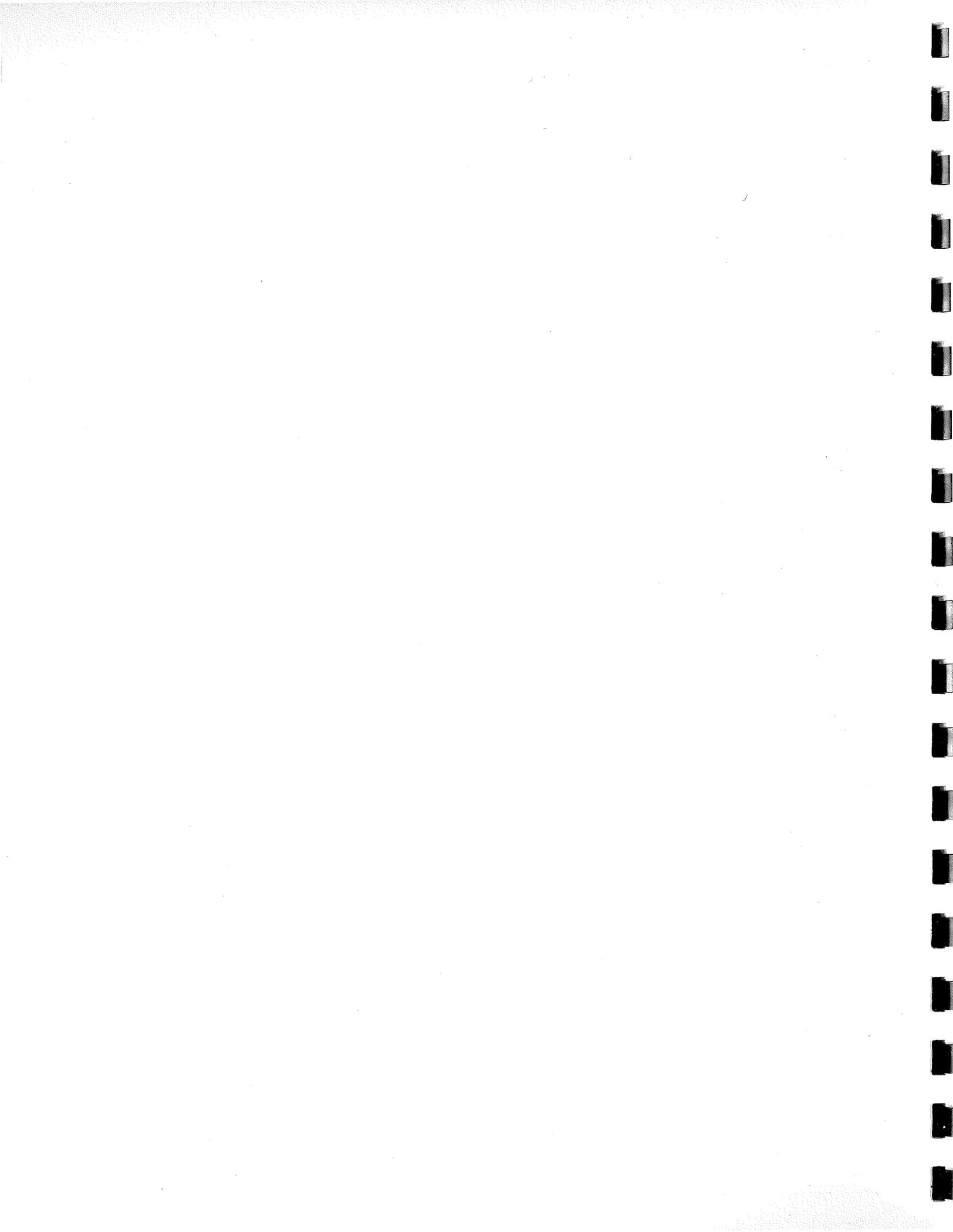


PLATE

5

SCALE: 1" = 2000'





LAND USE DISTRICT ACREAGE PER RIVER MILE

<u>River Mile</u>	<u>Acreage</u>	<u>River Mile</u>	<u>Acreage</u>
126-125	302.67	105-104	315.00
125-124	193.00	104-103	313.00
124-123	306.00	103-102	187.00
123-122	314.00	102-101	318.00
122-121	310.89	101-100	268.00
121-120	275.93	100-99	320.00
120-119	245.00	99-98	318.00
119-118	285.00	98-97	314.00
118-117	320.00	97-96	278.00
117-116	316.00	96-95	212.24
116-115	244.00	95-94	310.00
115-114	307.00	94-93	301.00
114-113	313.00	93-92	264.00
113-112	298.00	92-91	293.00
112-111	263.98	91-90	243.00
111-110	262.51	90-89	212.00
110-109	312.00	89-88	303.00
109-108	315.00	88-87	285.00
108-107	215.00	87-86	312.00
107-106	295.00	86-85.2	243.00
106-105	273.80		

TOTAL ACREAGE 11,577.02

PROPERTY DESCRIPTIONS - LAND USE DISTRICT

(Area in which Land Use Provisions Apply)

Starting from Lake Koronis

T 121 N - R 32 W

Section 3 -	Government lot 5	16.48 East
	Government lot 4	38.88
Section 10 -	Government lot 4	31.30
	Government lot 1	32.60
	E $\frac{1}{2}$ of SE $\frac{1}{4}$ of NW $\frac{1}{4}$	20.00
	Government lot 3	41.56
	Government lot 2	39.53
	Government lot 8	35.32
	NE $\frac{1}{4}$ of SE $\frac{1}{4}$	40.00
	Government lot 7	40.00 East
Section 11 -	S $\frac{1}{2}$ of SW $\frac{1}{4}$ of NW $\frac{1}{4}$	20.00
	SW $\frac{1}{4}$ of SE $\frac{1}{4}$ of NW $\frac{1}{4}$	10.00
	NW $\frac{1}{4}$ of SW $\frac{1}{4}$	40.00
	SW $\frac{1}{4}$ of SW $\frac{1}{4}$	40.00
	W $\frac{1}{2}$ of NE $\frac{1}{4}$ of SW $\frac{1}{4}$	20.00
	W $\frac{1}{2}$ of SE $\frac{1}{4}$ of SW $\frac{1}{4}$	20.00
Section 14 -	NW $\frac{1}{4}$ of NW $\frac{1}{4}$	40.00
	NE $\frac{1}{4}$ of NW $\frac{1}{4}$	40.00
	S $\frac{1}{2}$ of NW $\frac{1}{4}$ of NE $\frac{1}{4}$	20.00
	N $\frac{1}{2}$ of SE $\frac{1}{4}$ of NW $\frac{1}{4}$	20.00
	SW $\frac{1}{4}$ of NE $\frac{1}{4}$	40.00
	W $\frac{1}{2}$ of SE $\frac{1}{4}$ of NE $\frac{1}{4}$	20.00
	NW $\frac{1}{4}$ of SE $\frac{1}{4}$	40.00
	NE $\frac{1}{4}$ of SE $\frac{1}{4}$	40.00
	SE $\frac{1}{4}$ of SE $\frac{1}{4}$	40.00
Section 13 -	NW $\frac{1}{4}$ of SW $\frac{1}{4}$	40.00
	SW $\frac{1}{4}$ of SW $\frac{1}{4}$	40.00
Section 23 -	NE $\frac{1}{4}$ of NE $\frac{1}{4}$	40.00
	SE $\frac{1}{4}$ of NE $\frac{1}{4}$	40.00
	NE $\frac{1}{4}$ of NE $\frac{1}{4}$ of SE $\frac{1}{4}$	10.00
Section 24 -	NW $\frac{1}{4}$ of NW $\frac{1}{4}$	40.00
	SW $\frac{1}{4}$ of NW $\frac{1}{4}$	40.00
	SW $\frac{1}{4}$	160.00
	SE $\frac{1}{4}$	160.00
Section 25 -	NE $\frac{1}{4}$ of NE $\frac{1}{4}$	40.00
	SE $\frac{1}{4}$ of NE $\frac{1}{4}$	40.00

T 121 N - R 31 W

Section 19 -	Government lot 12	38.47
	Government lot 13	38.42

T 121 N -R31 W (cont.)

Section 30 - Government lot 4	38.37
" " 5	38.31
" " 12	38.25
" " 3	40.00
" " 6	40.00
" " 11	40.00
" " 7	40.00
" " 8	40.00
" " 9	40.00
" " 10	40.00
" " 16	40.00
SW $\frac{1}{4}$ of NE $\frac{1}{4}$	40.00
NW $\frac{1}{4}$ of SE $\frac{1}{4}$	40.00
SW $\frac{1}{4}$ of SE $\frac{1}{4}$	40.00
SE $\frac{1}{4}$ of SE $\frac{1}{4}$	40.00
S $\frac{1}{2}$ of NE $\frac{1}{4}$ of SE $\frac{1}{4}$	20.00
Section 31 - NW $\frac{1}{4}$ of NE $\frac{1}{4}$	40.00
NE $\frac{1}{4}$ of NE $\frac{1}{4}$	40.00
SE $\frac{1}{4}$ of NE $\frac{1}{4}$	40.00
Section 32 - NW $\frac{1}{4}$	160.00
NW $\frac{1}{4}$ of NE $\frac{1}{4}$	40.00
SW $\frac{1}{4}$ of NE $\frac{1}{4}$	40.00
Section 29 - SW $\frac{1}{4}$ of SW $\frac{1}{4}$	40.00
SE $\frac{1}{4}$ of SW $\frac{1}{4}$	40.00
NE $\frac{1}{4}$ of SW $\frac{1}{4}$	40.00
NE $\frac{1}{4}$	160.00
SE $\frac{1}{4}$	160.00
Section 28 - NW $\frac{1}{4}$	160.00
NW $\frac{1}{4}$ of SW $\frac{1}{4}$	40.00
NE $\frac{1}{4}$ of SW $\frac{1}{4}$	40.00
N $\frac{1}{2}$ of SE $\frac{1}{4}$ of SW $\frac{1}{4}$	20.00
S $\frac{1}{2}$ of SW $\frac{1}{4}$ of NE $\frac{1}{4}$	20.00
SE $\frac{1}{4}$	160.00
Section 27 - SW $\frac{1}{4}$ of SW $\frac{1}{4}$	40.00
NW $\frac{1}{4}$ of SW $\frac{1}{4}$	40.00
SE $\frac{1}{4}$ of SW $\frac{1}{4}$	40.00
W $\frac{1}{2}$ of NE $\frac{1}{4}$ of SW $\frac{1}{4}$	20.00
SW $\frac{1}{4}$ of SE $\frac{1}{4}$	40.00
S $\frac{1}{2}$ of SE $\frac{1}{4}$ of SE $\frac{1}{4}$	20.00
Section 34 - N $\frac{1}{2}$ of NW $\frac{1}{4}$ of NW $\frac{1}{4}$	20.00
NE $\frac{1}{4}$ of NW $\frac{1}{4}$	40.00
NW $\frac{1}{4}$ of NE $\frac{1}{4}$	40.00
NE $\frac{1}{4}$ of NE $\frac{1}{4}$	40.00
SE $\frac{1}{4}$ of NE $\frac{1}{4}$	40.00

T 121 N- R31 W (cont.)

Section 26 -	S $\frac{1}{2}$ of SW $\frac{1}{4}$ of SW $\frac{1}{4}$	20.00
Section 35 -	NW $\frac{1}{4}$	160.00
	NW $\frac{1}{4}$ of SW $\frac{1}{4}$	40.00
	NE $\frac{1}{4}$ of SW $\frac{1}{4}$	40.00
	SE $\frac{1}{4}$ of SW $\frac{1}{4}$	40.00
	S $\frac{1}{2}$ of SW $\frac{1}{4}$ of NE $\frac{1}{4}$	20.00
	SE $\frac{1}{4}$	160.00

T 120N- R 31 W

Section 2 -	NE $\frac{1}{4}$ of NW $\frac{1}{4}$	34.66
	E $\frac{1}{2}$ of SE $\frac{1}{4}$ of NW $\frac{1}{4}$	20.00
	NW $\frac{1}{4}$ of NE $\frac{1}{4}$	34.64
	NE $\frac{1}{4}$ of NE $\frac{1}{4}$	34.61
	SW $\frac{1}{4}$ of NE $\frac{1}{4}$	40.00
	SE $\frac{1}{4}$ of NE $\frac{1}{4}$	40.00
	NE $\frac{1}{4}$ of SE $\frac{1}{4}$	40.00
	SE $\frac{1}{4}$ of SE $\frac{1}{4}$	40.00
Section 1 -	W $\frac{1}{2}$ of NW $\frac{1}{4}$ of NW $\frac{1}{4}$	17.58
	SW $\frac{1}{4}$ of NW $\frac{1}{4}$	40.00
	W $\frac{1}{2}$ of SE $\frac{1}{4}$ of NW $\frac{1}{4}$	20.00
	NW $\frac{1}{4}$ of SW $\frac{1}{4}$	40.00
	W $\frac{1}{2}$ of NE $\frac{1}{4}$ of SW $\frac{1}{4}$	20.00
	SW $\frac{1}{4}$ of SW $\frac{1}{4}$	40.00
	W $\frac{1}{2}$ of SE $\frac{1}{4}$ of SW $\frac{1}{4}$	20.00
Section 11 -	NE $\frac{1}{4}$ of NE $\frac{1}{4}$	40.00
	E $\frac{1}{2}$ of SE $\frac{1}{4}$ of NE $\frac{1}{4}$	20.00
	E $\frac{1}{2}$ of NE $\frac{1}{4}$ of SE $\frac{1}{4}$	20.00
Section 12 -	NW $\frac{1}{4}$	160.00
	SW $\frac{1}{4}$	160.00
	W $\frac{1}{2}$ of SW $\frac{1}{4}$ of SE $\frac{1}{4}$	20.00
Section 13 -	NW $\frac{1}{4}$	160.00
	SW $\frac{1}{4}$	160.00
	W $\frac{1}{2}$ of NW $\frac{1}{4}$ of NE $\frac{1}{4}$	20.00
	W $\frac{1}{2}$ of SW $\frac{1}{4}$ of NE $\frac{1}{4}$	20.00
	W $\frac{1}{2}$ of NW $\frac{1}{4}$ of SE $\frac{1}{4}$	20.00
	SE $\frac{1}{4}$ of NW $\frac{1}{4}$ of SE $\frac{1}{4}$	10.00
	S $\frac{1}{2}$ of NE $\frac{1}{4}$ of SE $\frac{1}{4}$	20.00
	SW $\frac{1}{4}$ of SE $\frac{1}{4}$	40.00
	SE $\frac{1}{4}$ of SE $\frac{1}{4}$	40.00
Section 24 -	N $\frac{1}{2}$ of NE $\frac{1}{4}$ of NE $\frac{1}{4}$	20.00

T 120 N - R 30 W

Section 18 -	NW $\frac{1}{4}$ of SW $\frac{1}{4}$	36.78
	W $\frac{1}{2}$ of NE $\frac{1}{4}$ of SW $\frac{1}{4}$	20.00
	SW $\frac{1}{4}$ of SW $\frac{1}{4}$	36.83
	SE $\frac{1}{4}$ of SW $\frac{1}{4}$	40.00
	SW $\frac{1}{4}$ of SE $\frac{1}{4}$	40.00
	SE $\frac{1}{4}$ of SE $\frac{1}{4}$	40.00
Section 19 -	NW $\frac{1}{4}$ of NW $\frac{1}{4}$	36.73
	SW $\frac{1}{4}$ of NW $\frac{1}{4}$	36.46
	NE $\frac{1}{4}$ of NW $\frac{1}{4}$	40.00
	SE $\frac{1}{4}$ of NW $\frac{1}{4}$	40.00
	NE $\frac{1}{4}$	160.00
Section 17 -	SW $\frac{1}{4}$ of SW $\frac{1}{4}$	40.00
	SE $\frac{1}{4}$ of SW $\frac{1}{4}$	40.00
	NE $\frac{1}{4}$ of SW $\frac{1}{4}$	40.00
	S $\frac{1}{2}$ of SE $\frac{1}{4}$ of NW $\frac{1}{4}$	20.00
	SW $\frac{1}{4}$ of SE $\frac{1}{4}$	40.00
	NW $\frac{1}{4}$ of SE $\frac{1}{4}$	40.00
	SW $\frac{1}{4}$ of NE $\frac{1}{4}$	40.00
	NW $\frac{1}{4}$ of NE $\frac{1}{4}$	40.00
	NE $\frac{1}{4}$ of NE $\frac{1}{4}$	40.00
Section 20 -	NW $\frac{1}{4}$	160.00
	NW $\frac{1}{4}$ of NE $\frac{1}{4}$	40.00
Section 8 -	SE $\frac{1}{4}$ of SE $\frac{1}{4}$ East of CSAH #2	30.00
	NE $\frac{1}{4}$ of SE $\frac{1}{4}$ East of CSAH #2	10.00
Section 16 -	NW $\frac{1}{4}$ of NW $\frac{1}{4}$ of NW $\frac{1}{4}$	10.00
Section 9 -	SW $\frac{1}{4}$ of SW $\frac{1}{4}$	40.00
	NW $\frac{1}{4}$ of SW $\frac{1}{4}$	40.00
	NE $\frac{1}{4}$ of SW $\frac{1}{4}$	40.00
	N $\frac{1}{2}$ of SE $\frac{1}{4}$ of SW $\frac{1}{4}$	20.00
	SW $\frac{1}{4}$ of NW $\frac{1}{4}$ SE of CSAH #2	23.00
	SE $\frac{1}{4}$ of NW $\frac{1}{4}$	40.00
	N $\frac{1}{2}$ of SW $\frac{1}{4}$ of SE $\frac{1}{4}$	20.00
	SE $\frac{1}{4}$ of SE $\frac{1}{4}$	40.00
	NW $\frac{1}{4}$ of SE $\frac{1}{4}$	40.00
	NE $\frac{1}{4}$ of SE $\frac{1}{4}$	40.00
	SW $\frac{1}{4}$ of NE $\frac{1}{4}$	40.00
	SE $\frac{1}{4}$ of NE $\frac{1}{4}$	40.00
Section 15 -	NW $\frac{1}{4}$	160.00
	NE $\frac{1}{4}$	160.00
Section 10 -	SW $\frac{1}{4}$	160.00
	NW $\frac{1}{4}$ of SE $\frac{1}{4}$	40.00
	SW $\frac{1}{4}$ of SE $\frac{1}{4}$	40.00
	SE $\frac{1}{4}$ of SE $\frac{1}{4}$	40.00

T 120 N - R 30 W (cont.)

Section 14 -	NW $\frac{1}{4}$ of NW $\frac{1}{4}$	40.00
	NE $\frac{1}{4}$ of NW $\frac{1}{4}$	40.00
	N $\frac{1}{2}$ of SW $\frac{1}{4}$ of NW $\frac{1}{4}$	20.00
	SW $\frac{1}{4}$ of SW $\frac{1}{4}$ of NW $\frac{1}{4}$	10.00
	NW $\frac{1}{4}$ of NE $\frac{1}{4}$	40.00
	NE $\frac{1}{4}$ of NE $\frac{1}{4}$	40.00
	N $\frac{1}{2}$ of SE $\frac{1}{4}$ of NE $\frac{1}{4}$	20.00
Section 11 -	SW $\frac{1}{4}$ of SW $\frac{1}{4}$	40.00
	SE $\frac{1}{4}$ of SW $\frac{1}{4}$	40.00
	NE $\frac{1}{4}$ of SW $\frac{1}{4}$	40.00
	SW $\frac{1}{4}$ of SE $\frac{1}{4}$	40.00
	NW $\frac{1}{4}$ of SE $\frac{1}{4}$	40.00
	SE $\frac{1}{4}$ of SE $\frac{1}{4}$	40.00
	S $\frac{1}{2}$ of NE $\frac{1}{4}$ of SE $\frac{1}{4}$	20.00
Section 12 -	S $\frac{1}{2}$ of SW $\frac{1}{4}$ of SW $\frac{1}{4}$	20.00
	SW $\frac{1}{4}$ of SE $\frac{1}{4}$ of SW $\frac{1}{4}$	10.00
Section 13 -	NW $\frac{1}{4}$	160.00
	N $\frac{1}{2}$ of NE $\frac{1}{4}$ of SW $\frac{1}{4}$	20.00
	NW $\frac{1}{4}$ of SE $\frac{1}{4}$	40.00
	NE $\frac{1}{4}$ of SE $\frac{1}{4}$	40.00
	SW $\frac{1}{4}$ of NE $\frac{1}{4}$	40.00
	SE $\frac{1}{4}$ of NE $\frac{1}{4}$	40.00
	S $\frac{1}{2}$ of NW $\frac{1}{4}$ of NE $\frac{1}{4}$	20.00

T 120 N - R 29 W

Section 18 -	S $\frac{1}{2}$ of SW $\frac{1}{4}$ of NW $\frac{1}{4}$	20.09
	NW $\frac{1}{4}$ of SW $\frac{1}{4}$	40.11
	SW $\frac{1}{4}$ of SW $\frac{1}{4}$	40.04
	NE $\frac{1}{4}$ of SW $\frac{1}{4}$	40.00
	SE $\frac{1}{4}$ of SW $\frac{1}{4}$	40.00
	S $\frac{1}{2}$ of SW $\frac{1}{4}$ of SE $\frac{1}{4}$	20.00
	NW $\frac{1}{4}$ of SW $\frac{1}{4}$ of SE $\frac{1}{4}$	10.00
	S $\frac{1}{2}$ of SE $\frac{1}{4}$ of SE $\frac{1}{4}$	20.00
Section 19 -	NE $\frac{1}{4}$ of NW $\frac{1}{4}$	40.00
	NE $\frac{1}{4}$	160.00
Section 17 -	S $\frac{1}{2}$ of SW $\frac{1}{4}$ of SW $\frac{1}{4}$	20.00
	S $\frac{1}{2}$ of SE $\frac{1}{4}$ of SW $\frac{1}{4}$	20.00
	S $\frac{1}{2}$ of SW $\frac{1}{4}$ of SE $\frac{1}{4}$	20.00
	S $\frac{1}{2}$ of SE $\frac{1}{4}$ of SE $\frac{1}{4}$	20.00
Section 20 -	NW $\frac{1}{4}$	160.00
	NE $\frac{1}{4}$	160.00

T 120 N - R 29 W (cont.)

Section 21 -	NW $\frac{1}{4}$	160.00
	NE $\frac{1}{4}$	160.00
Section 16 -	S $\frac{1}{2}$ of SW $\frac{1}{4}$ of SW $\frac{1}{4}$	20.00
	S $\frac{1}{2}$ of SE $\frac{1}{4}$ of SW $\frac{1}{4}$	20.00
	S $\frac{1}{2}$ of SW $\frac{1}{4}$ of SE $\frac{1}{4}$	20.00
	S $\frac{1}{2}$ of SE $\frac{1}{4}$ of SE $\frac{1}{4}$	20.00
Section 15 -	SW $\frac{1}{4}$ of SW $\frac{1}{4}$ South of CSAH#27	13.00
	SE $\frac{1}{4}$ of SW $\frac{1}{4}$ South of CSAH#27	15.00
	S $\frac{1}{2}$ of SW $\frac{1}{4}$ of SE $\frac{1}{4}$	20.00
	S $\frac{1}{2}$ of SE $\frac{1}{4}$ of SE $\frac{1}{4}$	20.00
Section 22 -	N $\frac{1}{2}$ of NW $\frac{1}{4}$ of NW $\frac{1}{4}$	20.00
	N $\frac{1}{2}$ of NE $\frac{1}{4}$ of NW $\frac{1}{4}$	20.00
	NE $\frac{1}{4}$	160.00
Section 23 -	NW $\frac{1}{4}$	160.00
	NW $\frac{1}{4}$ of NE $\frac{1}{4}$	40.00
	SW $\frac{1}{4}$ of NE $\frac{1}{4}$	40.00
	SW $\frac{1}{4}$	160.00
	W $\frac{1}{2}$ of NW $\frac{1}{4}$ of SE $\frac{1}{4}$	20.00
	W $\frac{1}{2}$ of SW $\frac{1}{4}$ of SE $\frac{1}{4}$	20.00
Section 26 -	NW $\frac{1}{4}$	160.00
	W $\frac{1}{2}$ of NW $\frac{1}{4}$ of NE $\frac{1}{4}$	20.00
	SW $\frac{1}{4}$ of NE $\frac{1}{4}$	40.00
	SW $\frac{1}{4}$	160.00
	SE $\frac{1}{4}$	160.00
Section 35 -	NE $\frac{1}{4}$ of NE $\frac{1}{4}$	40.00
	N $\frac{1}{2}$ of NW $\frac{1}{4}$ of NE $\frac{1}{4}$	20.00
Section 25 -	NW $\frac{1}{4}$ of SW $\frac{1}{4}$	40.00
	SW $\frac{1}{4}$ of SW $\frac{1}{4}$	40.00
	SE $\frac{1}{4}$ of SW $\frac{1}{4}$	40.00
	S $\frac{1}{2}$ of NE $\frac{1}{4}$ of SW $\frac{1}{4}$	20.00
	SE $\frac{1}{4}$ of SE $\frac{1}{4}$	40.00
	SW $\frac{1}{4}$ of SE $\frac{1}{4}$	40.00
	S $\frac{1}{2}$ of NW $\frac{1}{4}$ of SE $\frac{1}{4}$	20.00
Section 36 -	NW $\frac{1}{4}$ of NW $\frac{1}{4}$	40.00
	NE $\frac{1}{4}$ of NW $\frac{1}{4}$	40.00
	NW $\frac{1}{4}$ of NE $\frac{1}{4}$	40.00
	NE $\frac{1}{4}$ of NE $\frac{1}{4}$	40.00

TOTAL ACREAGE

11,577.02

PROPERTY DESCRIPTIONS - SCENIC AREAS

(Priority Areas for Land or Land Interest Acquisition from Willing Sellers)

Starting from Lake Koronis

T 121 N - R 32 W

Section 3 - Government Lot 4	38.88
Section 10 - Government Lot 2	39.53
" " 8	35.32
Section 11 - S $\frac{1}{2}$ of SW $\frac{1}{4}$ of NW $\frac{1}{4}$	20.00
SW $\frac{1}{4}$ of SE $\frac{1}{4}$ of NW $\frac{1}{4}$	10.00
NW $\frac{1}{4}$ of SW $\frac{1}{4}$	40.00
W $\frac{1}{2}$ of NE $\frac{1}{4}$ of SW $\frac{1}{4}$	20.00
Section 14 - SE $\frac{1}{4}$ of NE $\frac{1}{4}$ of NW $\frac{1}{4}$	10.00
Section 24 - W $\frac{1}{2}$ of SW $\frac{1}{4}$ of NW $\frac{1}{4}$	20.00
S $\frac{1}{2}$ of NE $\frac{1}{4}$ of SW $\frac{1}{4}$	20.00
SE $\frac{1}{4}$ of SW $\frac{1}{4}$ North of River only	10.00
S $\frac{1}{2}$ of NE $\frac{1}{4}$ of SE $\frac{1}{4}$	20.00
N $\frac{1}{2}$ of SE $\frac{1}{4}$ of SE $\frac{1}{4}$	20.00

T 121 N - R 31 W

Section 30 - Government Lot 4 - SE $\frac{1}{4}$	10.00
" " 5 - NE $\frac{1}{4}$	10.00
" " 3 - SW $\frac{1}{4}$	10.00
" " 6	40.00
" " 11 - N $\frac{1}{2}$	20.00
" " 7 - S $\frac{1}{2}$	20.00
" " 10 - N $\frac{1}{2}$	20.00
" " 8 - S $\frac{1}{2}$	20.00
" " 9 - N $\frac{1}{2}$	20.00
" " 9 - SE $\frac{1}{4}$	10.00
" " 16 - NE $\frac{1}{4}$	10.00
SW $\frac{1}{4}$ of SW $\frac{1}{4}$ of NE $\frac{1}{4}$	10.00
W $\frac{1}{2}$ of NW $\frac{1}{4}$ of SE $\frac{1}{4}$	20.00
N $\frac{1}{2}$ of SW $\frac{1}{4}$ of SE $\frac{1}{4}$	20.00
SE $\frac{1}{4}$ of SW $\frac{1}{4}$ of SE $\frac{1}{4}$ North of CSAH #30	4.00
Section 31 - NE $\frac{1}{4}$ of NE $\frac{1}{4}$ South of River & NE of CSAH #3	18.00
Section 29 - S $\frac{1}{2}$ of NE $\frac{1}{4}$ of NE $\frac{1}{4}$ North of River	15.00

T 121 N - R 31 W (cont.)

Section 28 - S $\frac{1}{2}$ of NW $\frac{1}{4}$ of NW $\frac{1}{4}$ North of River	16.00
N $\frac{1}{2}$ of SW $\frac{1}{4}$ of NW $\frac{1}{4}$ North of River	5.00
N $\frac{1}{2}$ of SE $\frac{1}{4}$ of SE $\frac{1}{4}$	20.00
SE $\frac{1}{4}$ of SE $\frac{1}{4}$ of SE $\frac{1}{4}$	10.00
Section 27 - SW $\frac{1}{4}$ of SW $\frac{1}{4}$	40.00
Section 34 - NE $\frac{1}{4}$ of NW $\frac{1}{4}$	40.00
N $\frac{1}{2}$ of NW $\frac{1}{4}$ of NE $\frac{1}{4}$	20.00
SW $\frac{1}{4}$ of NW $\frac{1}{4}$ of NE $\frac{1}{4}$	10.00
N $\frac{1}{2}$ of NE $\frac{1}{4}$ of NE $\frac{1}{4}$	20.00
Section 35 - SE $\frac{1}{4}$ of NE $\frac{1}{4}$ of SW $\frac{1}{4}$ NE of River	5.00
S $\frac{1}{2}$ of NW $\frac{1}{4}$ of SE $\frac{1}{4}$ NE of River	18.00
SW $\frac{1}{4}$ of SE $\frac{1}{4}$ NE of River	16.00
W $\frac{1}{2}$ of SE $\frac{1}{4}$ of SE $\frac{1}{4}$ East of River	18.00

T 120 N - R 31 W

Section 2 - NW $\frac{1}{4}$ of NE $\frac{1}{4}$ NE of River	20.00
SW $\frac{1}{4}$ of NE $\frac{1}{4}$ of NE $\frac{1}{4}$	10.00
SE $\frac{1}{4}$ of NE $\frac{1}{4}$ NE of River	15.00
Section 1 - SW $\frac{1}{4}$ of SW $\frac{1}{4}$ of NW $\frac{1}{4}$ of River	7.00
W $\frac{1}{2}$ of W $\frac{1}{2}$ of SW $\frac{1}{4}$ East of River	18.00
Section 12 - NW $\frac{1}{4}$ of NW $\frac{1}{4}$ East of River	27.00
SW $\frac{1}{4}$ of NW $\frac{1}{4}$ East of River	16.00
W $\frac{1}{2}$ of SE $\frac{1}{4}$ of NW $\frac{1}{4}$	20.00
W $\frac{1}{2}$ of NE $\frac{1}{4}$ of SW $\frac{1}{4}$ East of River	19.00
NW $\frac{1}{4}$ of SW $\frac{1}{4}$ East of River	9.00
SE $\frac{1}{4}$ of SW $\frac{1}{4}$ East of River	38.00
SW $\frac{1}{4}$ of SW $\frac{1}{4}$ East of River	4.00
Section 13 - NE $\frac{1}{4}$ of NW $\frac{1}{4}$ East of River	35.00
SE $\frac{1}{4}$ of NW $\frac{1}{4}$ East of River	30.00
SW $\frac{1}{4}$ NE of River	42.00

T 120 N - R 30 W

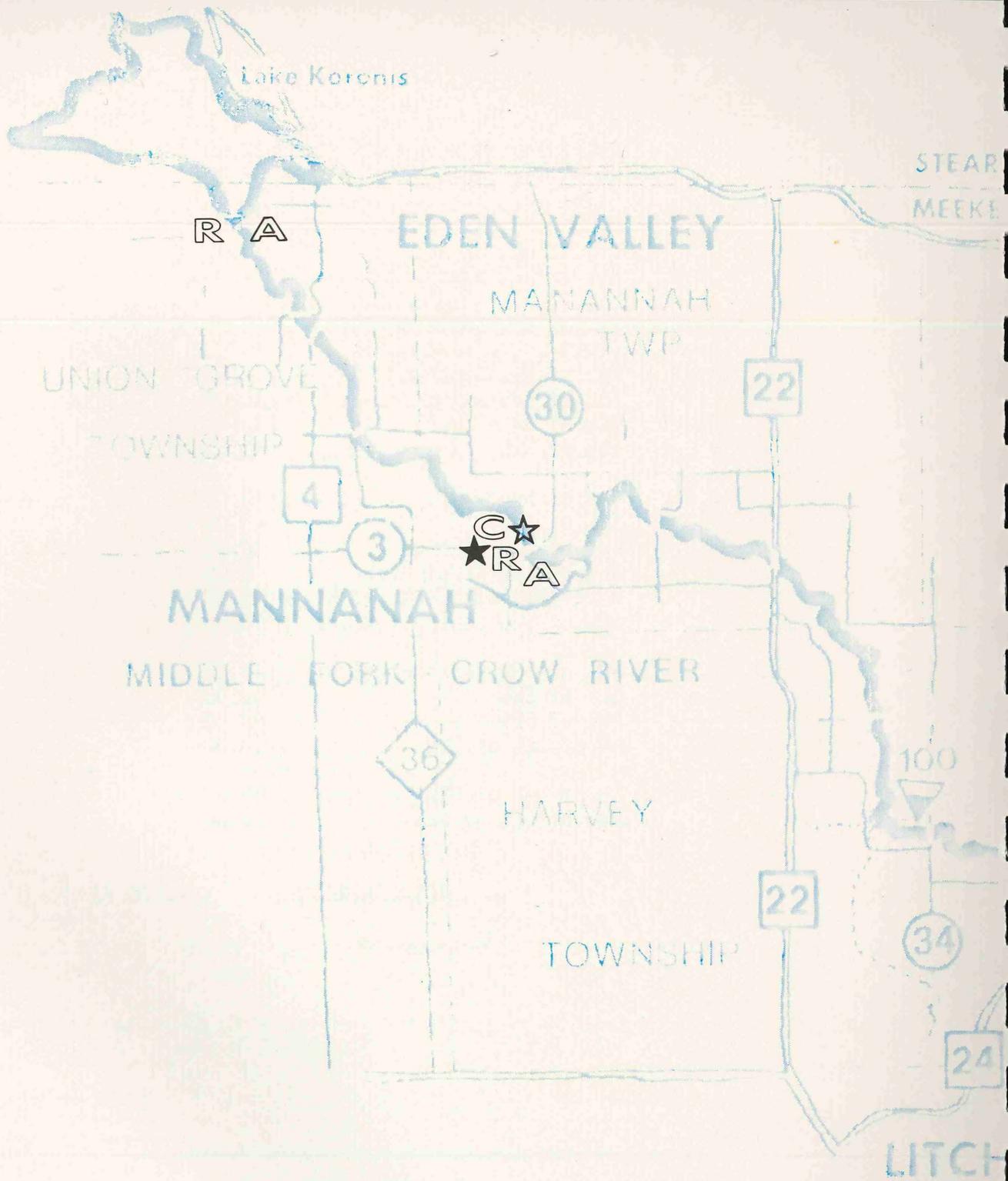
Section 18 - S $\frac{1}{2}$ of S $\frac{1}{2}$ of SE $\frac{1}{4}$	40.00
Section 19 - N $\frac{1}{2}$ of NE $\frac{1}{4}$	80.00
Section 20 - N $\frac{1}{2}$ of NW $\frac{1}{4}$	80.00
W $\frac{1}{2}$ of NW $\frac{1}{4}$ of NE $\frac{1}{4}$	20.00

T 120 N - R 30 W (cont.)

Section 17 -	S $\frac{1}{2}$ of SW $\frac{1}{4}$ of SW $\frac{1}{4}$	20.00
	SE $\frac{1}{4}$ of SW $\frac{1}{4}$	40.00
	W $\frac{1}{2}$ of SW $\frac{1}{4}$ of SE $\frac{1}{4}$	20.00
	NE $\frac{1}{4}$ of SW $\frac{1}{4}$ South of County Road	38.00
	SW $\frac{1}{4}$ of NW $\frac{1}{4}$ of SE $\frac{1}{4}$	10.00
	N $\frac{1}{2}$ of NW $\frac{1}{4}$ of SE $\frac{1}{4}$ Except Forest City Park	16.00
	SE $\frac{1}{4}$ of NW $\frac{1}{4}$ SE of County Road	4.00
	SW $\frac{1}{4}$ of NE $\frac{1}{4}$ SE of County Road & except Forest City Park	28.00
	NW $\frac{1}{4}$ of NE $\frac{1}{4}$ East of CSAH #2	7.00
	NE $\frac{1}{4}$ of NE $\frac{1}{4}$ West of River	9.00
Section 8 -	SE $\frac{1}{4}$ of SE $\frac{1}{4}$ East of CSAH #2	30.00
Section 9 -	NE $\frac{1}{4}$ of SE $\frac{1}{4}$	40.00
Section 10 -	NW $\frac{1}{4}$ of SW $\frac{1}{4}$	40.00
	E $\frac{1}{2}$ of SW $\frac{1}{4}$ of SW $\frac{1}{4}$	20.00
	SE $\frac{1}{4}$ of SW $\frac{1}{4}$	40.00
	S $\frac{1}{2}$ of NE $\frac{1}{4}$ of SW $\frac{1}{4}$	20.00
Section 15 -	NE $\frac{1}{4}$ of NW $\frac{1}{4}$	40.00
	E $\frac{1}{2}$ of NW $\frac{1}{4}$ of NW $\frac{1}{4}$	20.00
Section 14 -	NW $\frac{1}{4}$ of NW $\frac{1}{4}$	40.00
Section 11 -	S $\frac{1}{2}$ of NE $\frac{1}{4}$ of SW $\frac{1}{4}$ North of River	17.00
	N $\frac{1}{2}$ of SE $\frac{1}{4}$ of SW $\frac{1}{4}$ West of River	10.00
	SW $\frac{1}{4}$ of NW $\frac{1}{4}$ of SE $\frac{1}{4}$ North of River	8.00
	W $\frac{1}{2}$ of SW $\frac{1}{4}$ of SE $\frac{1}{4}$ North of River	2.00
Section 13 -	E $\frac{1}{2}$ of W $\frac{1}{2}$ of NW $\frac{1}{4}$	40.00
	W $\frac{1}{2}$ of E $\frac{1}{2}$ of NW $\frac{1}{4}$	40.00

T 120 N - R 29 W

Section 18 -	SE $\frac{1}{4}$ of SW $\frac{1}{4}$	40.00
Section 19 -	NW $\frac{1}{4}$ of NE $\frac{1}{4}$ North of River	18.00
	NE $\frac{1}{4}$ of NW $\frac{1}{4}$ North of River	4.00
Section 20 -	NE $\frac{1}{4}$ of NW $\frac{1}{4}$ North of River	27.00
	NW $\frac{1}{4}$ of NE $\frac{1}{4}$ North of River	26.00
	W $\frac{1}{2}$ of NE $\frac{1}{4}$ of NE $\frac{1}{4}$	20.00



NORTH FORK

CROW RIVER MANAGEMENT PLAN

RECREATION

PROPOSED

A
R

EXISTING

A
R

FACILITY

ACCESS
REST AREA

NS COUNTY
R COUNTY

KIMBALL

55

15

MEEKER COUNTY
WRIGHT COUNTY

133

24

KINGSTON
TOWNSHIP

Lake Francis

KINGSTON

FOREST CITY

ACR

2

80

35

FOREST CITY
Powers Lake

TOWNSHIP

Big Swan Lake

15

14

FIELD

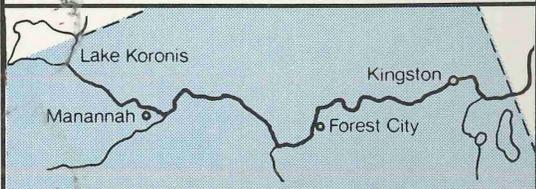
MANAGEMENT

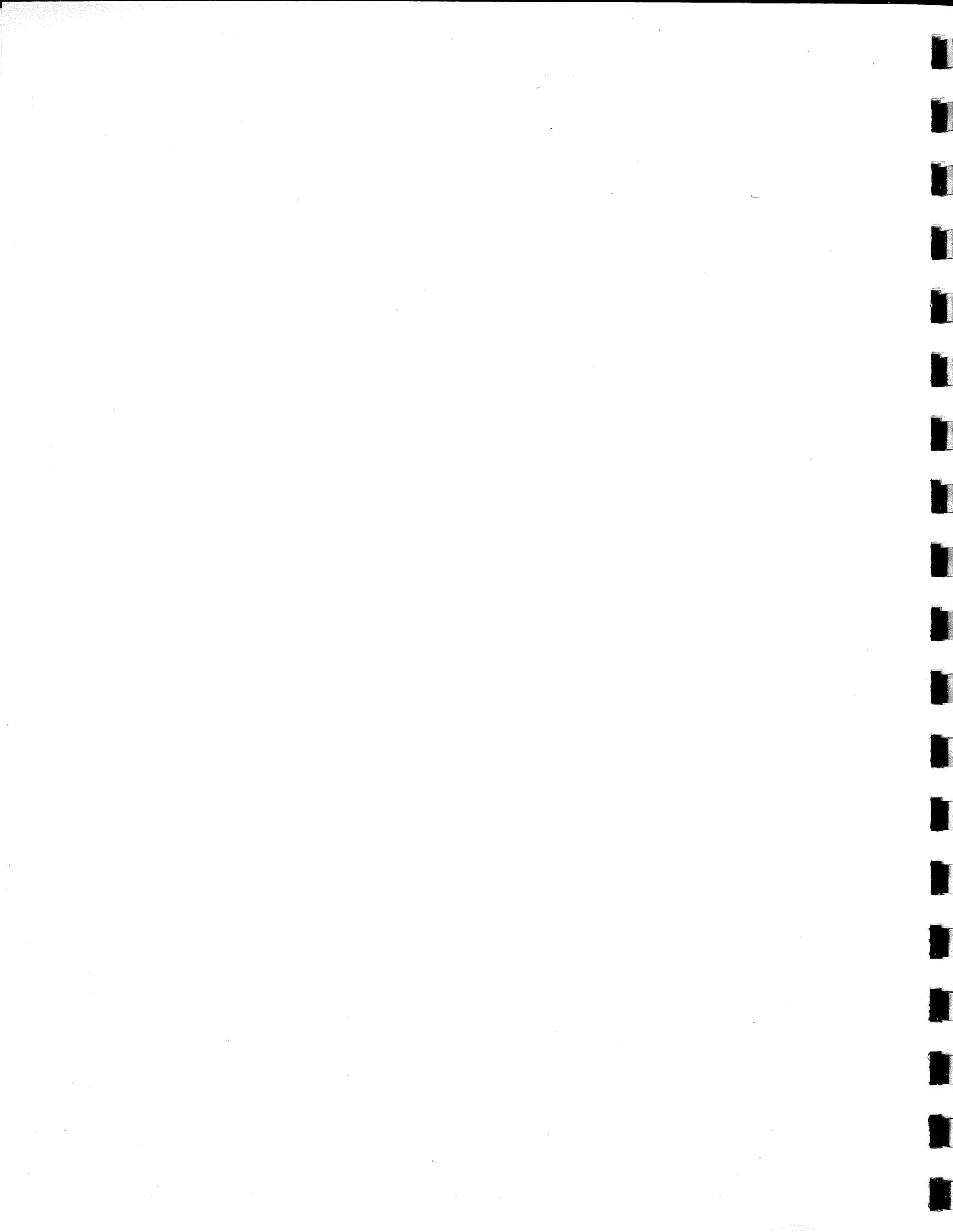


SCALE: 1" = 10,000'



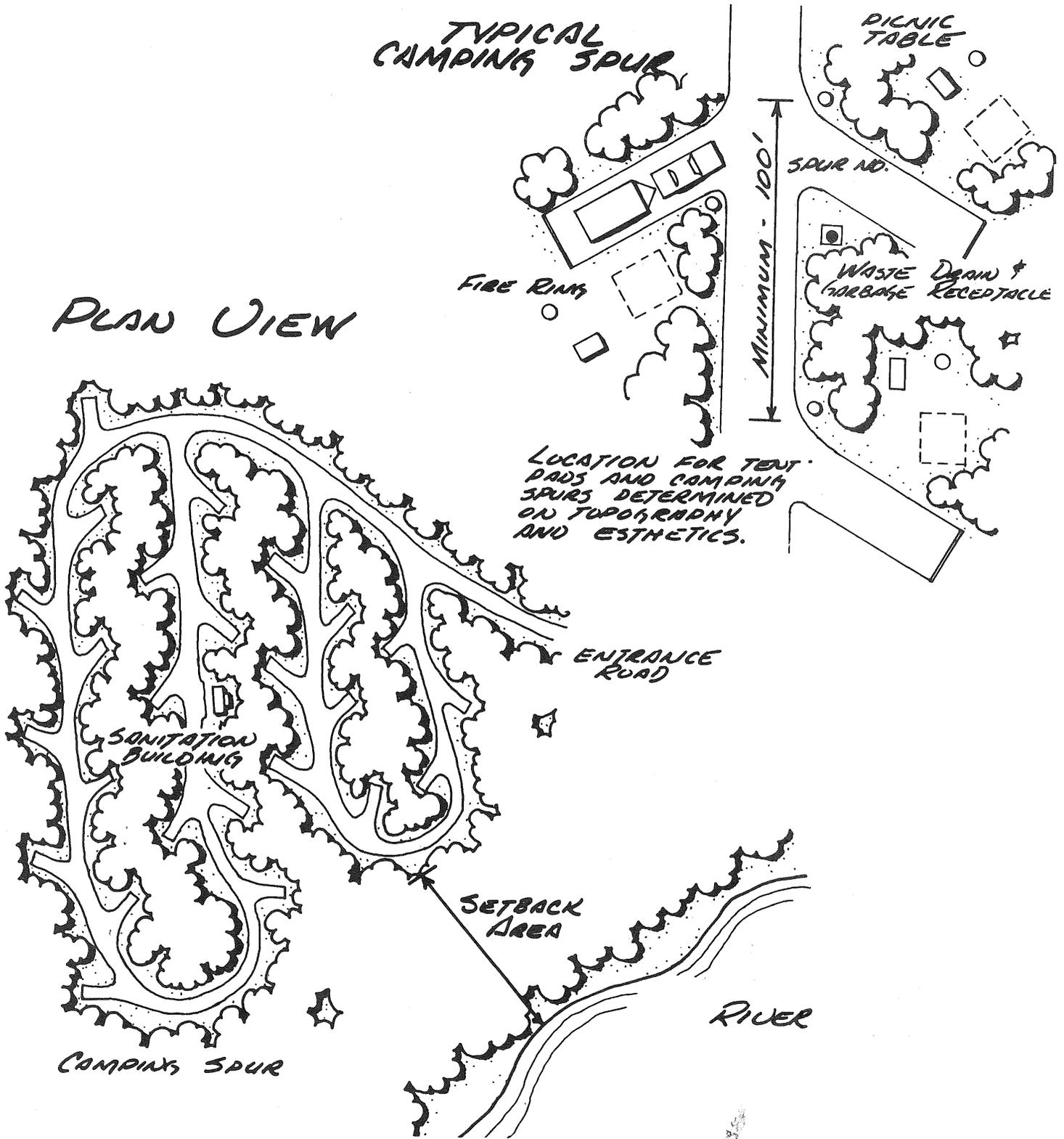
CAMPSITE
HISTORIC SITE





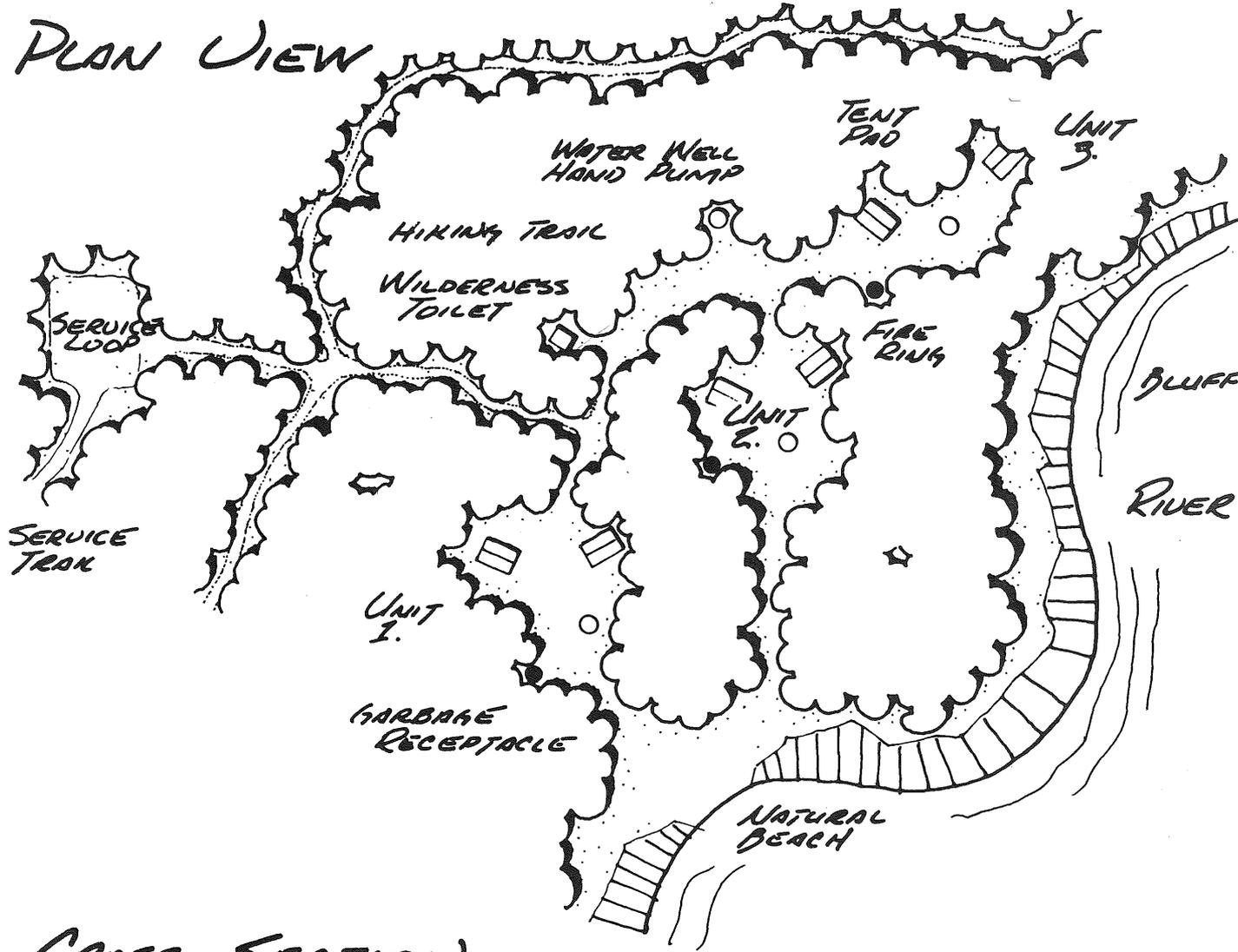
CAMPGROUND

PLAN VIEW

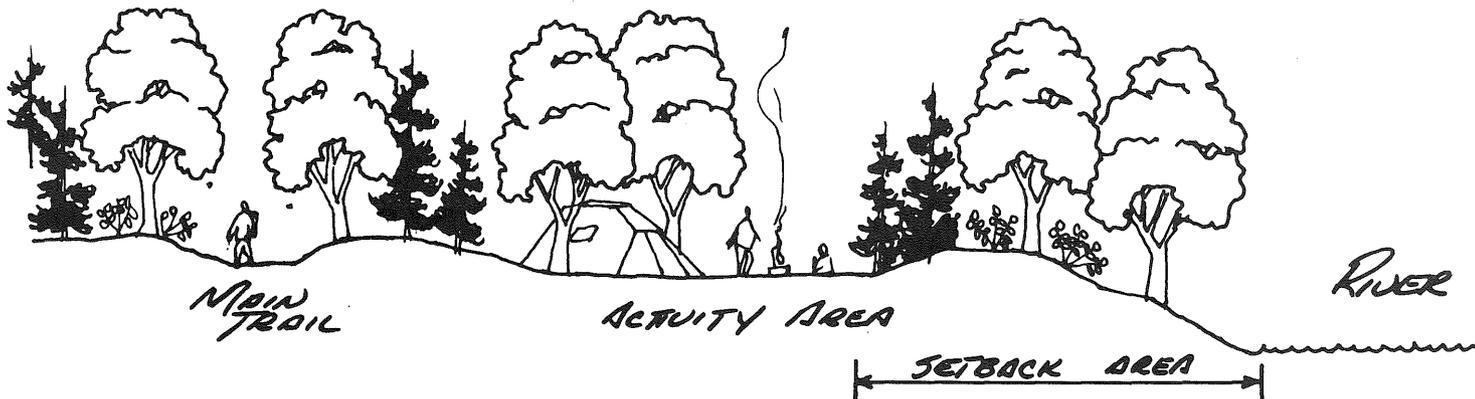


PRIMITIVE CAMPSITE

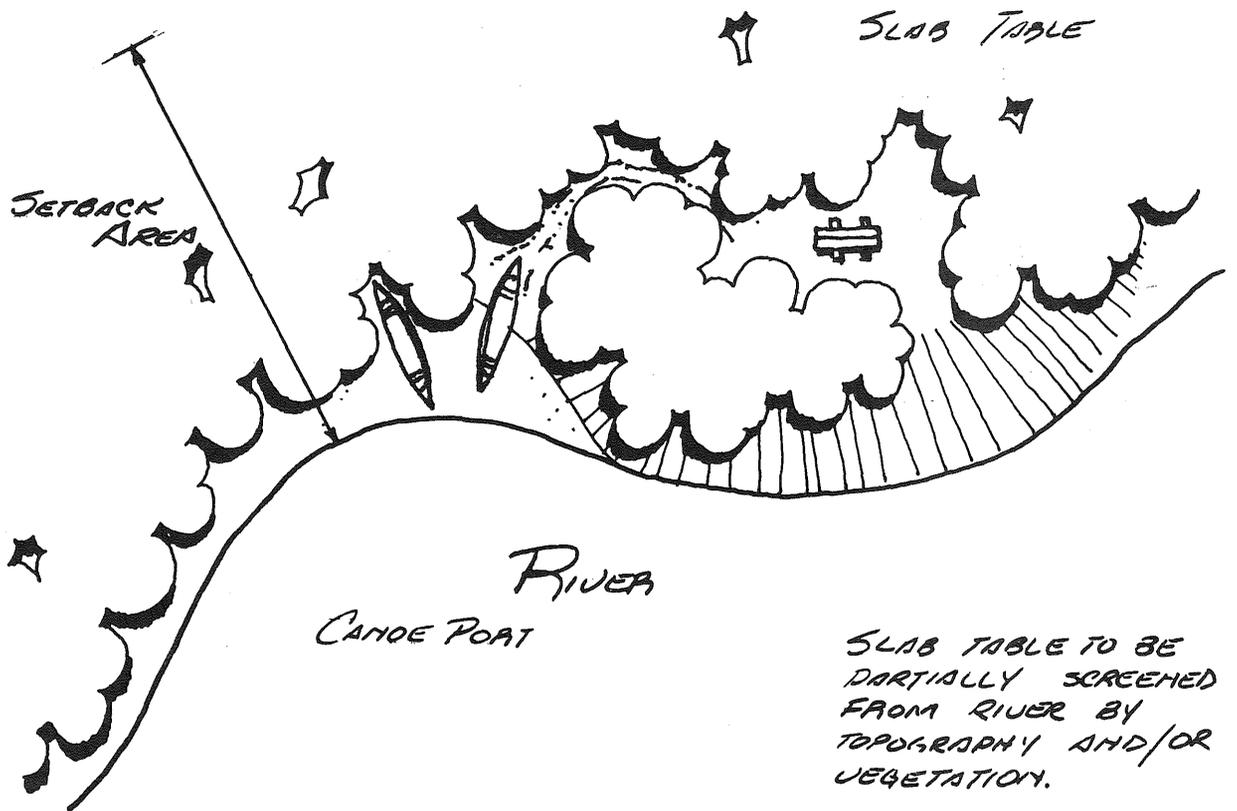
PLAN VIEW



CROSS SECTION



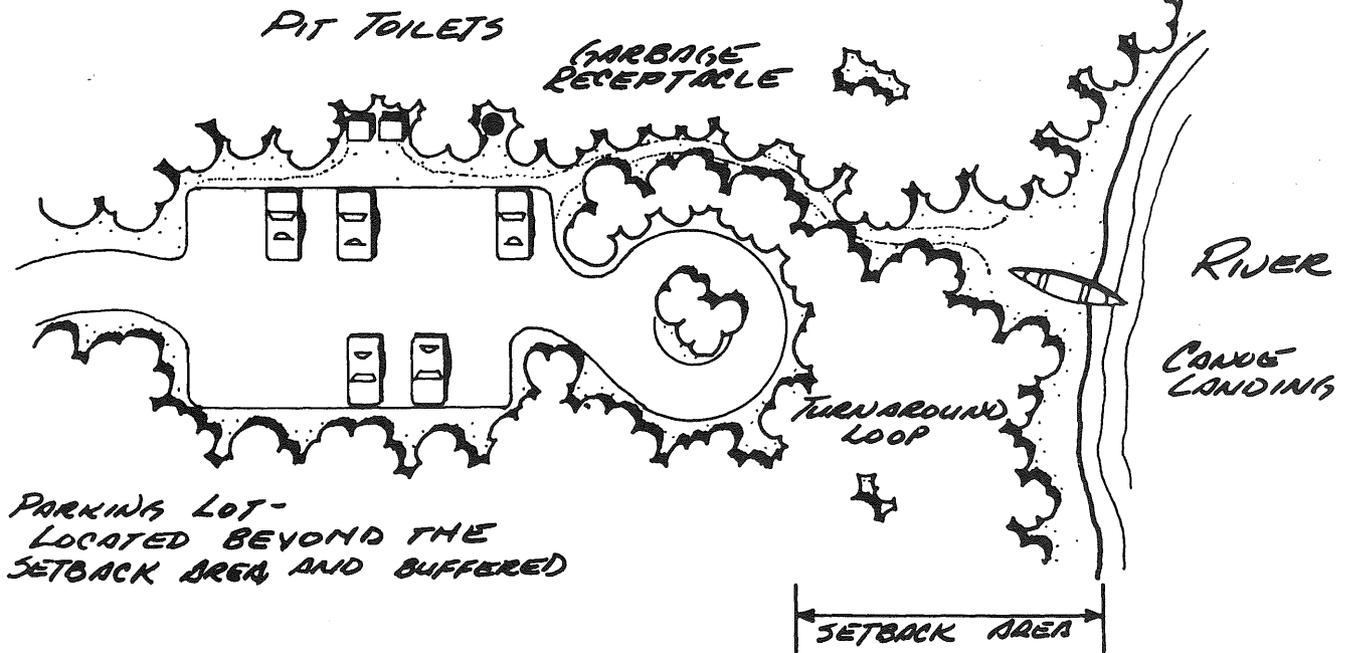
REST AREA



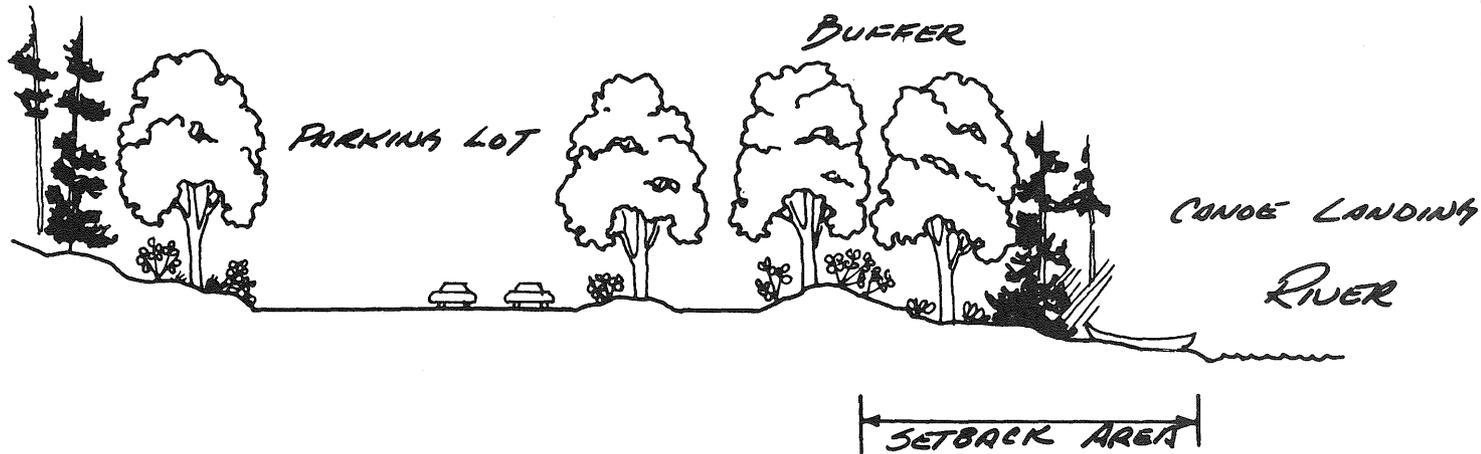
SLAB TABLE TO BE PARTIALLY SCREENED FROM RIVER BY TOPOGRAPHY AND/OR VEGETATION.

CANOE ACCESS

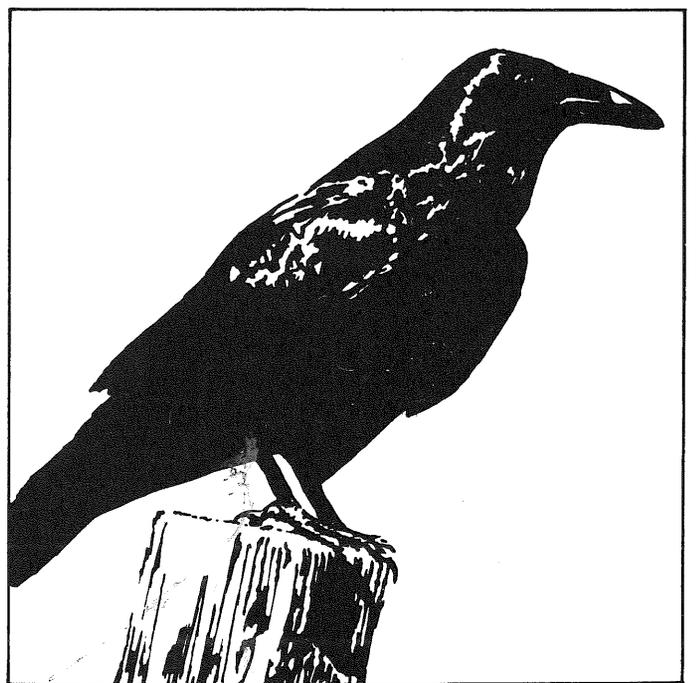
PLAN VIEW

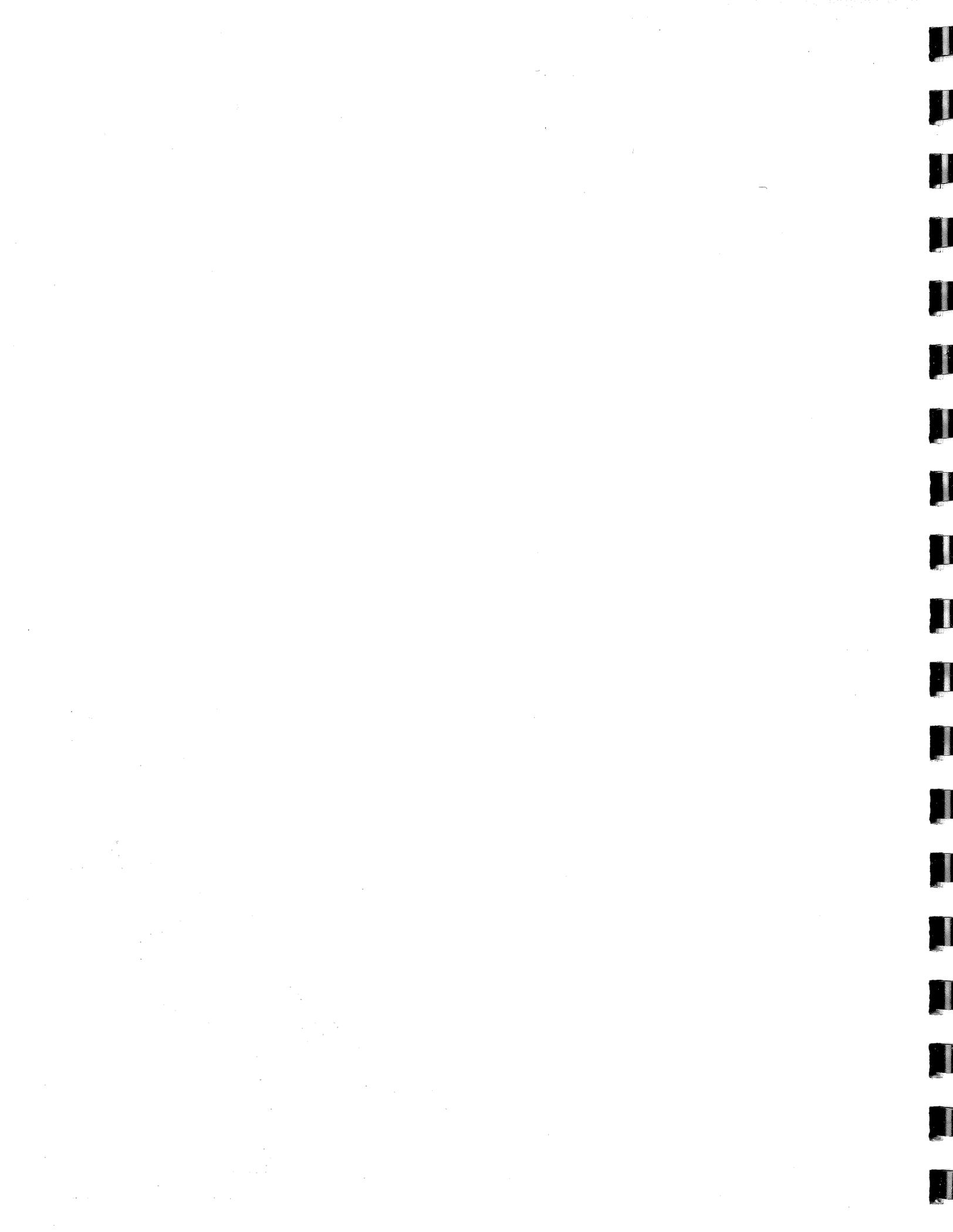


CROSS SECTION



ANALYSIS





LAND USE PROVISIONS

Introduction

The Minnesota Wild and Scenic Rivers Act authorizes the DNR in Minn. Stats., Section 104.34, Subd. 2, to "promulgate statewide minimum standards and criteria for the preservation and protection of shorelands within the boundaries of wild, scenic and recreational rivers." These standards and criteria have been promulgated according to Chapter 15 procedures and are identified as Minn. Regs. NR 78-81. Minn. Regs. NR 79 provide the minimum land use controls for Wild and Scenic River land use districts.

According to Minn. Regs. NR 78, a maximum of 320 acres of land per mile of river may be designated as the management area. Within these boundaries, zoning will be applied through local ordinances. The area in which these land use provisions will apply is called the land use district. This district is shown on the Land Management Maps; all lands within this district are described in the management plan. Land use district boundaries were determined by following property lines and section lines near or immediately outside of the estimated line of sight. The estimated line of sight was determined by actual field observations and topographical maps.

It must be emphasized that existing buildings will not be affected by new dimensional requirements (i.e. lot size, bluffline setback, building height, etc.).

Zoning Dimension Provisions

The zoning provisions applied within the management plan are provided for under the authority of the Minnesota Wild and Scenic Rivers Act and Minnesota State Regs. NR 78-81, relating to Wild, Scenic and Recreational Rivers Systems. The zoning regulations are contained specifically in Minn. Regs. NR 79.

The study area portion of the Crow River is presently classified as a Natural Environment River, under the State Shoreland Management Program. This category is the most protective of the shoreland classifications. However, the State Shoreland Management Program was intended primarily to protect lakes (zoned 1,000 feet back from normal high water mark), with rivers receiving a minimum of protection (zoned 300 feet back from normal high water mark).

In general, most of the dimensional zoning provisions now enforced in Meeker County are considered adequate. However, the following amendments to the existing dimensional provisions of the county are recommended:

1. Amend land use district boundaries by adopting those shown on Land Management Maps.
2. Adopt a 20-foot bluffline setback within the land use district.

3. Amend minimum lot size to 2 acres (instead of 1.92).
4. Adopt a provision requiring combining of substandard lots under same ownership in order to meet the existing lot width requirements.

Permitted and Conditional Uses

The following table shows which types of uses would be permitted in the land use district and which types of uses require a conditional use permit from the local official. All uses not listed are not permitted within the land use district.

P means permitted use

C means conditional use

N means nonpermitted use

Certain of the following uses are subject to the zoning dimension provisions and sanitary provisions. All of the following uses are subject to the vegetative cutting provisions and the grading and filling provisions.

	<u>Land use district</u>
(aa) Governmental campgrounds, subject to management plan specifications.	P
(bb) Private campgrounds, subject to management plan specifications.	C
(cc) Public accesses, road access type with boat launching facilities subject to management plan specifications.	P
(dd) Public accesses, trail access type, subject to management plan specifications.	P
(ee) Temporary docks.	P
(ff) Other governmental open space recreational uses, subject to management plan specifications.	P
(gg) Other private open space recreational uses, subject to management plan specifications.	C
(hh) Agricultural uses.	P
(ii) Single family residential uses.	P
(jj) Forestry uses.	P
(kk) Essential services.	P

Land use district

- (ll) Sewage disposal systems. P
- (mm) Private roads and minor public streets. P
- (nn) Signs approved by federal, state, or local government which are necessary for public health and safety and signs indicating areas that are available, or not available, for public use. P
- (oo) Signs not visible from the river that are specified in (nn). P
- (pp) Governmental resource management for improving fish and wildlife habitat; wildlife management areas, nature areas; accessory roads. P
- (qq) Underground mining that does not involve surface excavation in the land use district. C
- (rr) Utility transmission power lines and pipelines, subject to the provisions of NR 79 (i). C
- (ss) Public roads, subject to the provisions in NR 79 (j). C

Vegetative Cutting

The vegetative cutting provisions contained in Minn. Regs. NR 79 are more protective and specific than those that exist under the State Shorelands Regulations. Clear-cutting will not be permitted within 200 feet of the normal high water mark. However, selective cutting of trees in excess of four inches in diameter is permitted as long as continuous tree cover is maintained. Also allowed is the removal of diseased, insect-infested, rotten, or damaged trees; pruning of understory vegetation, plants and grasses; and harvesting of crops.

Clear-cutting of vegetation in the land use district, but outside of the 200-foot setback lines, is allowed, but is subject to the following conditions: (1) Clear-cutting is not done where soil, slope or other watershed conditions are fragile and subject to injury. (2) Clear-cut areas are blended with the natural terrain. (3) Size of the clear-cut must be kept to the minimum necessary. (4) The clear-cut operation must be conducted between September 15 and May 15. (5) Replanting must be done the same spring, or the following spring.

These provisions are based on the policy of the Wild and Scenic Rivers Program, which is to preserve and protect the river and its adjacent lands. However, they also are based on established forestry conservation practices designed to allow for harvesting of trees without adversely affecting natural and scenic conditions. The 200-foot, no clear-cutting zone is being used instead of the 100-foot zone for Recreational Rivers, because a 200-foot building setback is now enforced.

Filling and Grading Provisions

Also contained in Minn. Regs. NR 79 are grading and filling provisions. Generally, grading and filling within the land use district is allowed only in conjunction with permitted or conditional uses including building a house, installing a sewage system, or building a road. Any grading and filling would require a permit from the local authority. It is hoped that these permits would be reviewed by the local Soil and Water Conservation District representative in order to assure good land and water conservation practices. When any allowed grading and filling is done, it must be done in accordance with the requirements as given in Minn. Regs. NR 79.

The drainage or filling of major wetlands in the land use district (bogs, swamps or marshes classified as type III-V wetlands by the U.S. Fish and Wildlife Service in 1975) is not permitted. Lowlands not included in this classification may be drained or filled if a grading and filling permit is obtained from the local authority.



Utility Crossings

Minn. Regs. NR 79 (i) (1) (aa), states that: "All utility crossings (transmissions and distribution) of Wild, Scenic, or Recreational River, or of state lands within their land use districts which are under the control of the Commissioner, require a permit from the Commissioner pursuant to Minn. Stats., Section 84.415 or 105.42. In reviewing permit applications for such crossings, primary consideration shall be given to crossings that are proposed to be located with or adjacent to existing public facilities, such as roads and utilities." These existing roads and utilities are shown on the Site Analysis Maps.

Utility transmission crossings of any part of the land use district would require a permit from the local authority.

The purpose of these regulations is to minimize any potentially adverse environmental effects these crossings may have. Primary consideration is given to route design, construction methods, safety considerations and right-of-way maintenance. These regulations do not affect or apply to utility "distribution" crossings of private land within the proposed management area. "Distribution" refers to lines, cables, conduits, mains or pipelines used to distribute power, gas or other essential services to the utility company's customers. These are essential services for which a conditional use permit is not required.

Public Roads

Minn. Regs. NR (j) (1) (aa), states that: "A permit as established in Minn. Stats., Section 105.42, is required for the construction or reconstruction, removal, or abandonment of any road or railroad crossing, of a public water."

A conditional use permit from the local authority is required for any construction or reconstruction of public roads within the land use district.

LAND ACQUISITION

Introduction

Within the land use district boundaries, the DNR is authorized to "acquire the title, scenic easement, or other interests in land by purchase, grant, gift, devise, exchange, lease, or other lawful means." (M.S.A. 104.37)

This law does not authorize the DNR to acquire land or interests in land by eminent domain (condemnation).

The Land Management Maps in the Management Plan section show the land use district, existing public lands and scenic areas. Scenic areas are tracts of land that possess outstanding scenic, natural, historic or other similar values. In scenic areas, land use controls (zoning) alone are not considered adequate to preserve the quality of these areas. Purchase of scenic easements, use easements, leases, and fee title to lands is dependent on willing sellers. Thus, the term "scenic areas" is being used, rather than designating separate areas for specific types of acquisition.

Within scenic area boundaries, scenic easements will be the most probable form of acquisition, depending on the willingness of landowners to sell such an easement. Where feasible, and in areas considered to be important for public use sites, use easements or fee title to the land may be purchased from willing sellers.

The scenic area boundaries were derived from field surveys and aerial photographs. Areas adjacent to existing county park lands were given a priority, in order to provide additional protection for these park lands. Boundaries may be subject to change, because of changes in the quality of some of these lands. Some additional tracts later may be considered eligible for inclusion as a scenic area.

Scenic Easements

In general, willing landowners will be reimbursed for selling their rights to develop or alter the landscape. The particular type of rights that are sold are negotiable between the purchaser (the state) and the landowner. The landowner will be paid market value for the rights that are sold. In general terms, the landowner could be paid for keeping his land the way it is.

There are five primary advantages to acquisition of scenic easements:

- (1) By limiting only continued development of the parcel, it permits the continuation of existing, often economically valuable, uses while leaving the management and maintenance of the land a private responsibility.
- (2) Monetary savings are realized by compensating for less than full fee value while still accomplishing management objectives.
- (3) The land remains on the tax rolls and produces revenue for the local taxing authority.
- (4) Scenic easements allow landowners to retain all property rights not in conflict with preservation objectives.
- (5) The easement remains valid indefinitely, offering permanent protection that land use controls cannot.

In accordance with Minn. Stats., Section 104.37, the criteria for the selection of lands on which to acquire scenic easements are provided as follows:

- (1) Lands highly visible from the water surface.
- (2) Lands adjacent to, or across the river from publicly-owned parks, forests and other units.
- (3) Environmentally sensitive lands which would be adversely affected by developments.
- (4) Lands which possess outstanding scenic, scientific, natural, historical, and other similar values.

Scenic easements are particularly well-suited to the purpose of the Wild and Scenic Rivers Program. They will prevent development and destruction of unique areas, while leaving lands in private ownership. Also, because of their lower cost, scenic easements could be applied over a larger area than could fee acquisition control. If a scenic easement is purchased, the land is private in every sense and cannot be used by the public for any purpose, unless specifically provided for in the easement.

The Wild and Scenic Rivers Act specifically authorizes the acquisition of scenic easements along designated Wild, Scenic and Recreational Rivers. As defined in the Act, a scenic easement means: "an interest in land, less than the fee title, which limits the use of such land for the purpose of protecting the scenic, recreational, or natural characteristics of a wild, scenic or recreational river area. Unless otherwise expressly and specifically provided by the parties, such easement shall be (a) perpetually held for the benefit of the people of Minnesota, (b) specifically enforceable by its holder or any beneficiary; and (c) binding upon the holder of the servient estate, his heirs, successors and assigns. Unless specifically provided by the parties no such easement shall give the holder or any beneficiary the right to enter on the land except for enforcement of the easement."

Fee Acquisition

In some instances placing lands in public ownership may be the best form of protection. Again, it is emphasized that under the Wild and Scenic Rivers Act the power of eminent domain (condemnation) cannot be used for fee acquisition of lands.

In accordance with Minn. Stats., Section 104.37, the criteria for the selection of lands to be acquired in fee title are listed as follows:

- (1) Lands to be used for active recreation as recommended in the recreation management plan.
- (2) Lands which possess outstanding scenic, natural, recreational, scientific and other similar values which can best be protected by placing such lands in public ownership.
- (3) Lands which would consolidate existing "blocks" of public ownership providing for the recreational use of such lands and the preservation of its natural character.

Use Easements

Use easements are a form of land acquisition, for which landowners are compensated for allowing certain uses on specific tracts of land. Under a use easement, landowners are able to negotiate the specific uses to be allowed. Use easements are negotiated for purposes such as (but not limited to) rest areas, portages and campsites. These easements, as in the case of all other forms of acquisition, can be obtained only with a landowner's consent.



RECREATION MANAGEMENT

Introduction

One purpose of the management plan is to provide for orderly recreational development and use of public land within the land use district. A specific goal is to provide an adequate number of well-designed recreational facilities for users and to keep them properly maintained. By properly designing and planning recreational development, user and landowner conflicts can be kept to a minimum.

User regulations as outlined in Minn. Reg. NR 80 should be adequate to control users, and yet protect landowners' rights. However, if future conflicts occur, measures will be taken to eliminate these problems. The DNR is authorized to hold public hearings and propose additional use regulations to resolve any conflicts. Any new regulations will be consistent with the management plan, the Minnesota Wild and Scenic Rivers Act, and Minn. Regs. NR 78-81.

The management plan recommends that Meeker County complete the development of its park lands located along the study portion of the river. DNR assistance will be provided for this development where appropriate. These sites shall be developed in accordance with the guidelines of this plan.

The management plan recommends that at least two additional tracts of land be purchased for recreational development. Exact location of these lands depends on any landowners' willingness to sell. In general, one or two sites will be needed in the vicinity of Manannah, consisting of a rest area, primitive campsite and an access point. Also, a primitive campsite will be needed in the Forest City area. General locations of these proposed facilities are shown on the Recreation Management Map.

At least three types of recreational developments are needed at properly spaced intervals along the river to meet minimum user needs. Developments include: primitive campsites, rest areas (picnic areas) and access points. These facilities should be physically separated from other user sites to lessen abuse of these sites and to minimize conflicts between land- and water-oriented users.

The types and location of proposed recreational developments are based upon current minimum needs. If use of the river should increase, some additional sites may be needed, with location and type to be determined by the DNR.

Campsites

To help alleviate any possible unauthorized use of private lands, campsites should be located at properly-spaced intervals along the river.

Three primitive campsites are needed: one in the vicinity of Manannah, one in the Forest City area, and one in Kingston Finnish Memorial Park (See the Recreation Management Map). These locations may be subject to change due to the unavailability of willing land sellers.

Campsite design will be of a primitive nature, consisting of tent pads, fire grates, picnic tables and sanitary facilities. These campsites should be kept separated from land-based user facilities whenever feasible. This will help prevent user conflicts and will enhance the experience for the river user.

If future use patterns show a need for the development of additional campsites or the removal of existing campsites, such needs will be acted on in a way as considered feasible and necessary by the DNR.

Rest Areas

Rest areas should provide a place for the river user to stop in order to eat and/or rest. An adequate number of rest areas along the river will help to alleviate trespassing on private lands.

A total of four rest area sites now are needed. The existing park at Forest City currently meets the standards of a rest area site. The undeveloped parks at Kingston and the south end of Lake Koronis should be developed as rest areas. In addition, a rest area should be developed in conjunction with the proposed campsite in the vicinity of Manannah.

Recommended locations of these rest areas are shown on the Recreation Management Maps. As with the campsites, the location of these sites may be subject to change. Increased use of the river may dictate development of additional rest area sites; this will be determined by the DNR.

Access

Three potential access sites are located on public lands within the land use district and should be developed for river-user access. These sites are located at the south end of Lake Koronis, at Forest City Shaw Memorial Park and at Kingston Finnish Memorial Park. An additional access point in the vicinity of Manannah should be acquired and developed.

These access points should cater to carry-in, canoe access only, since boating with larger watercraft is very difficult on this portion of the river. These accesses should be developed by the county and/or state.

Unless properly developed, access from bridges should be discouraged for safety reasons. Orientation signs, as described in the Signs portion of this section, should be placed at each legitimate access point.

If necessary, the DNR will develop additional accesses to the river.

Trails

There are no DNR plans for any additional trail development along this portion of the river. There now exists an extensive snowmobile trail system along the river. Any expansion of this system or new trails should be coordinated with the DNR, Division of Parks and Recreation.

Maintenance

An integral part of any recreation management plan is the maintenance of public facilities. It is assumed that private landowners will maintain their property since it is in their interest to do so. Minn. Regs. NR 80 list the restrictions for river users, but proper maintenance of public lands remains essential. The DNR has, through public education programs, informed recreationists of the proper use of public land and water, and respect for private property. In general, river users are conscientious about such uses. However, this does not eliminate the need for good facility maintenance, because well-maintained facilities generally receive less abuse than poorly maintained ones.

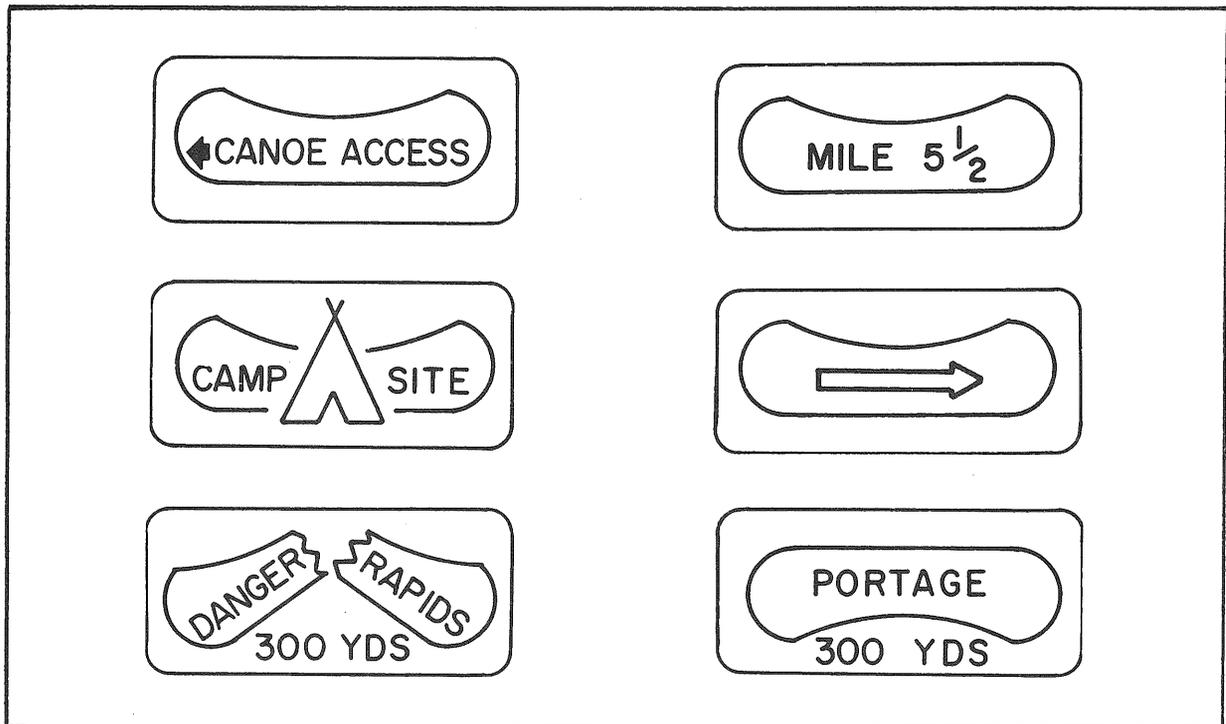
The Division of Parks and Recreation will be responsible for maintenance of any state-owned facilities. Local units of government will be responsible for maintaining facilities under their jurisdiction, as they have in the past. The river and its immediate banks will be maintained by the DNR within available budgeting constraints by such services as litter pick-up and snag removal.

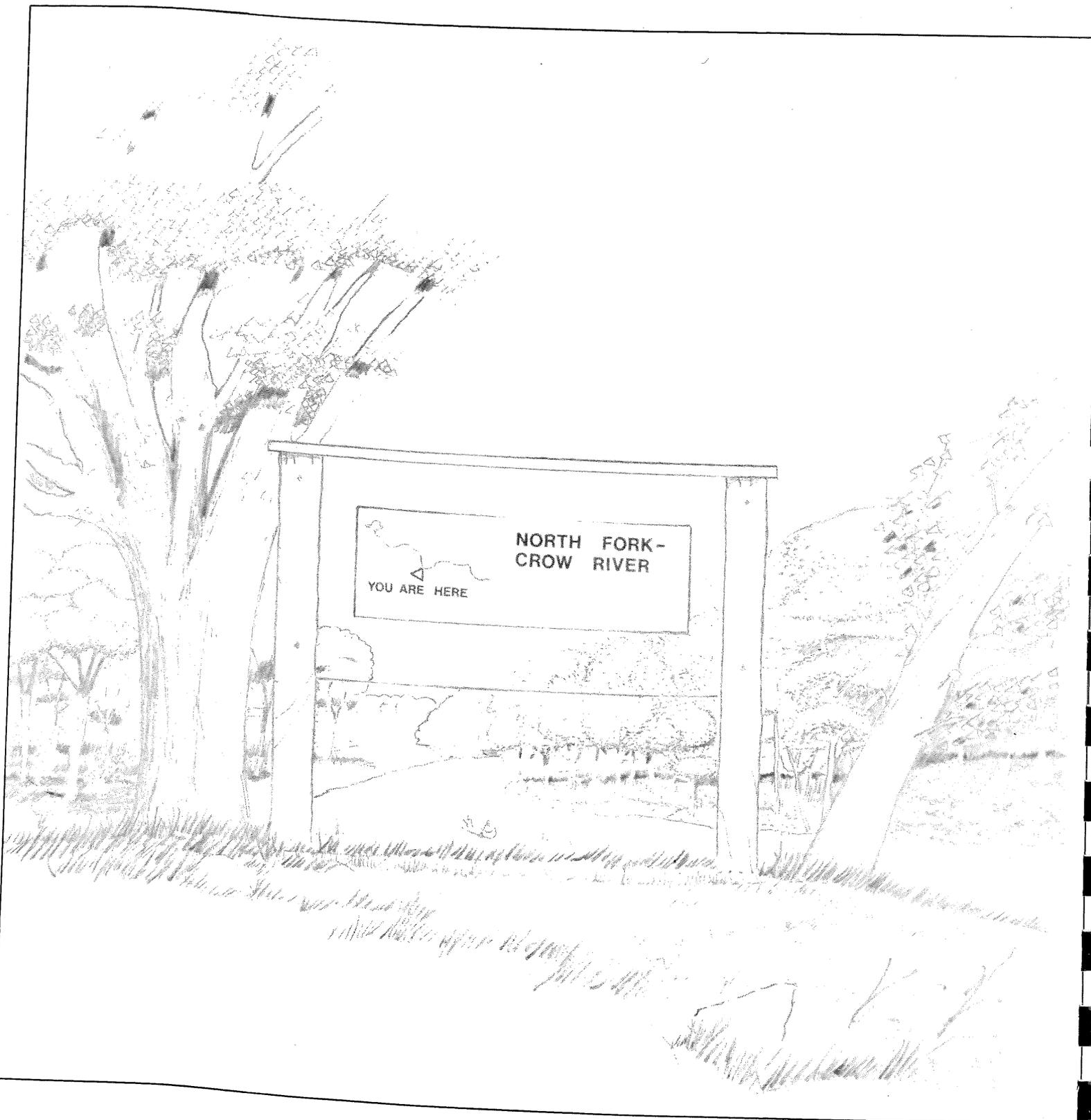
Signs

Placement of signs along the North Fork of the Crow River will be kept to the minimum necessary to provide users with sufficient information for a safe and interesting trip.

Wooden, brown and yellow signs will mark dangerous rapids, dams, obstructions and identify sites available for public use. Examples are provided below.

River-orientation signs should be placed at the major access points. They will show locations of accesses, campsites, rest areas, and other features. A "you are here" arrow on each board will indicate the user's location. Rules and regulations will also be posted. One of the main objectives of the boards is to inform users that lands not specifically identified for public use are not to be used without a landowner's permission.





CROW RIVER ORIENTATION SIGN

SITE ANALYSIS

Route Description

(Refer to Site Analysis Maps)

<u>River Mile No.</u>	<u>Description</u>
126.0	BEGINNING; County State Aid Highway 20 bridge; access below Lake Koronis spillway; power line crossing.
124.2	Power line crossing.
124.1	County Road 8 bridge, quite low in high water; power line.
123.9 - 122.0	River channelized; some trees across river.
123.8	State Trunk Highway 4 bridge.
122.4	County Road 10 bridge.
121.9	Cedars on left bank.
119.5 - 118.2	Light to medium rapids, especially in high water.
118.8	50-foot bluffs along river.
118.6	Old mill site, remnants of rock dam remaining.
118.5	County State Aid Highway 30 bridge; Townsite of Manannah.
117.7	Middle Fork of Crow River enters North Fork
117.0	Grove Creek enters North Fork.
116.3	Stag Brook enters North Fork.
115.3	Scenic vista on left.
115.2	20-foot bank on right.
114.8	County Road 27 bridge, quite low in high water.
113.4 - 113.1	50-foot banks on right side; very light rapids.
113.0	State Trunk Highway 22 bridge.
111.2	Power line crossing.
109.2	County Road 112 bridge, quite low in high water; power line crossing.

River Mile No.	Description
109.0	Pine plantation on right.
108.7	30-foot bank on left.
107.2	Battle Creek enters river from west.
106.5	Ditch runs into river on left.
106.2	County State Aid Highway 34 bridge; power line.
104.5	Oak woods on left.
103.7	Beaver lodge, beaver sign prevalent.
103.4	Historical fort site, one-half mile on right.
103.0	Forest City County Park, picnic area and undeveloped access.
102.7	County State Aid Highway 2 bridge; Forest City town site; low rock dam, portage may be necessary at very low water levels; ditch entering river from right.
102.7	Old mill site.
102.0 - 101.2	Light to medium rapids.
101.5	60-foot bluffs on right.
100.9 - 100.6	Light rapids.
100.0	Poplar stand.
99.0 - 98.5	Medium to light rapids.
98.7	50-foot banks on right.
97.9	County Road 133 bridge; medium rapids below bridge.
97.7	Light rapids.
96.9	Light rapids.
96.5	State Trunk Highway 24 bridge; power line crossing.
95.8	County Road 19 bridge.
95.1	50-foot bank on right.

River Mile No.	Description
92.8	Power line crossing.
92.1	50-foot bank on right.
91.8	Kingston Finnish Memorial County Park, undeveloped.
91.6	Old mill site.
91.4	State Trunk Highway 15 bridge.
91.2	City of Kingston; County State Aid Highway 19 bridge.
91.2 - 90.6	County State Aid Highway 27 closely parallels river.
90.5	40-foot bank on right.
90.1	Power line crossing.
90.0	Eagle Creek enters the North Fork.
89.8	Pine plantation on right.
87.3	Washington Creek enters the North Fork.
86.7	50-foot bank on right.
85.2	Meeker-Wright County Line; END OF STUDY AREA.



NORTH FORK

CROW RIVER MANAGEMENT PLAN

SITE

- | | | | |
|--|------------|--|---------------------|
| | RIVER MILE | | CORPORATE LIMITS |
| | RAPIDS | | COUNTY PARK |
| | DAM | | STATE WILDLIFE AREA |
| | POWERLINE | | OTHER PUBLIC LAND |



ANALYSIS

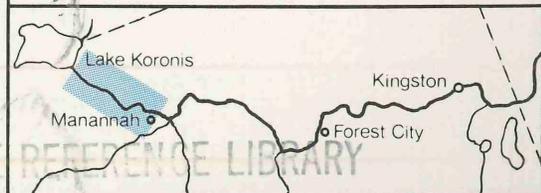
- ★ POINT OF INTEREST
- TRAIL SNOWMOBILE
- R REST AREA
- RESIDENCE
- * HISTORIC SITE

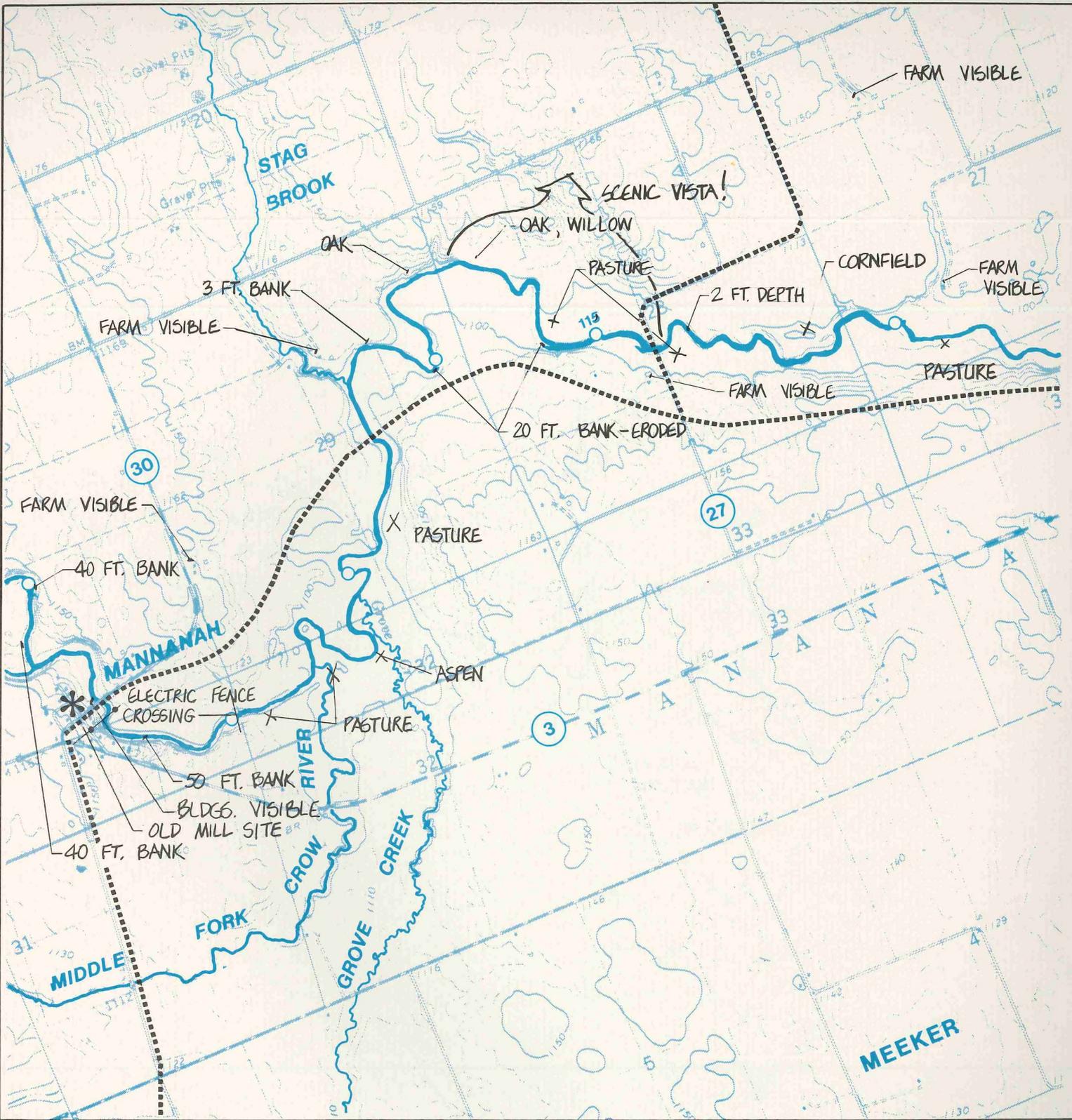
- INTERSTATE
- FEDERAL HWY
- STATE HWY
- C.S.A.H. HWY
- COUNTY RD



PLATE 7

SCALE: 1" = 2000'



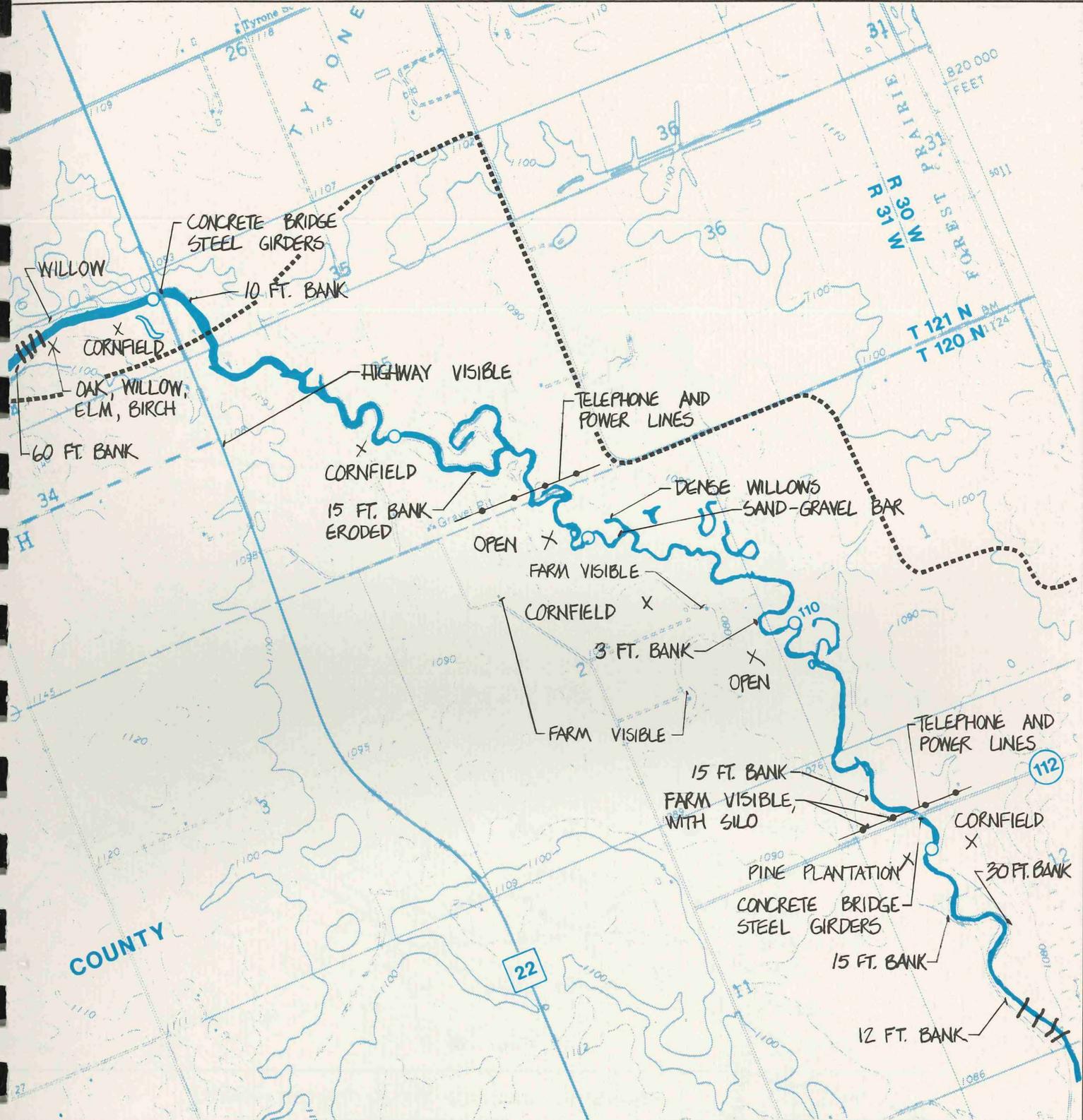


NORTH FORK
CROW RIVER
MANAGEMENT PLAN

- | | | | |
|--|------------|--|---------------------|
| | RIVER MILE | | CORPORATE LIMITS |
| | RAPIDS | | COUNTY PARK |
| | DAM | | STATE WILDLIFE AREA |
| | POWERLINE | | OTHER PUBLIC LAND |

SITE

MEEKER



ANALYSIS

- ★ POINT OF INTEREST
- TRAIL SNOWMOBILE
- R REST AREA
- RESIDENCE
- * HISTORIC SITE

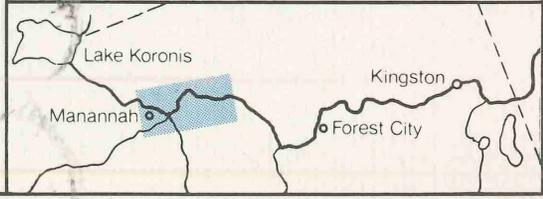
- INTERSTATE
- FEDERAL HWY
- STATE HWY
- C.S.A.H. HWY
- COUNTY RD

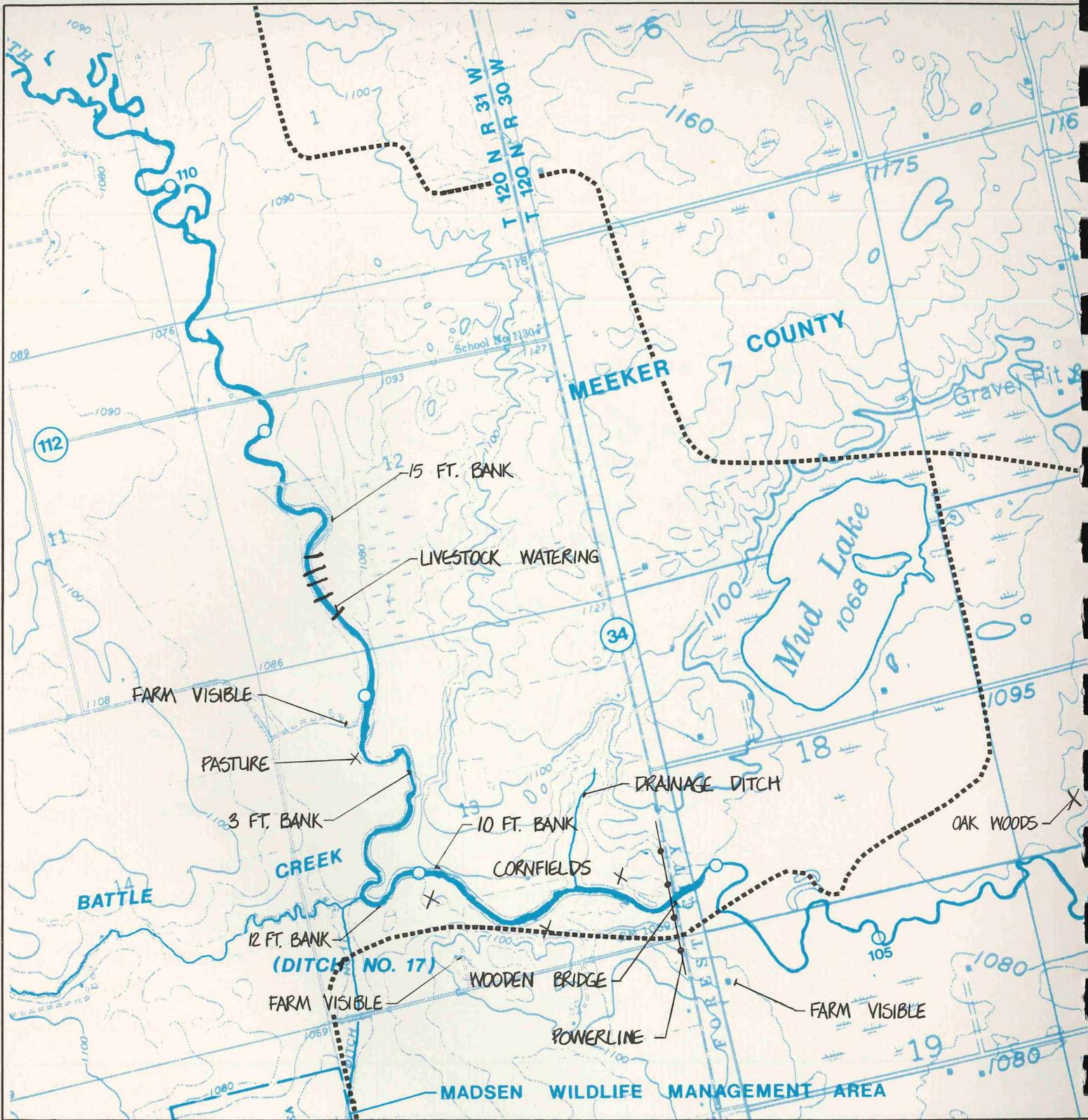


PLATE

2

SCALE: 1" = 2000'

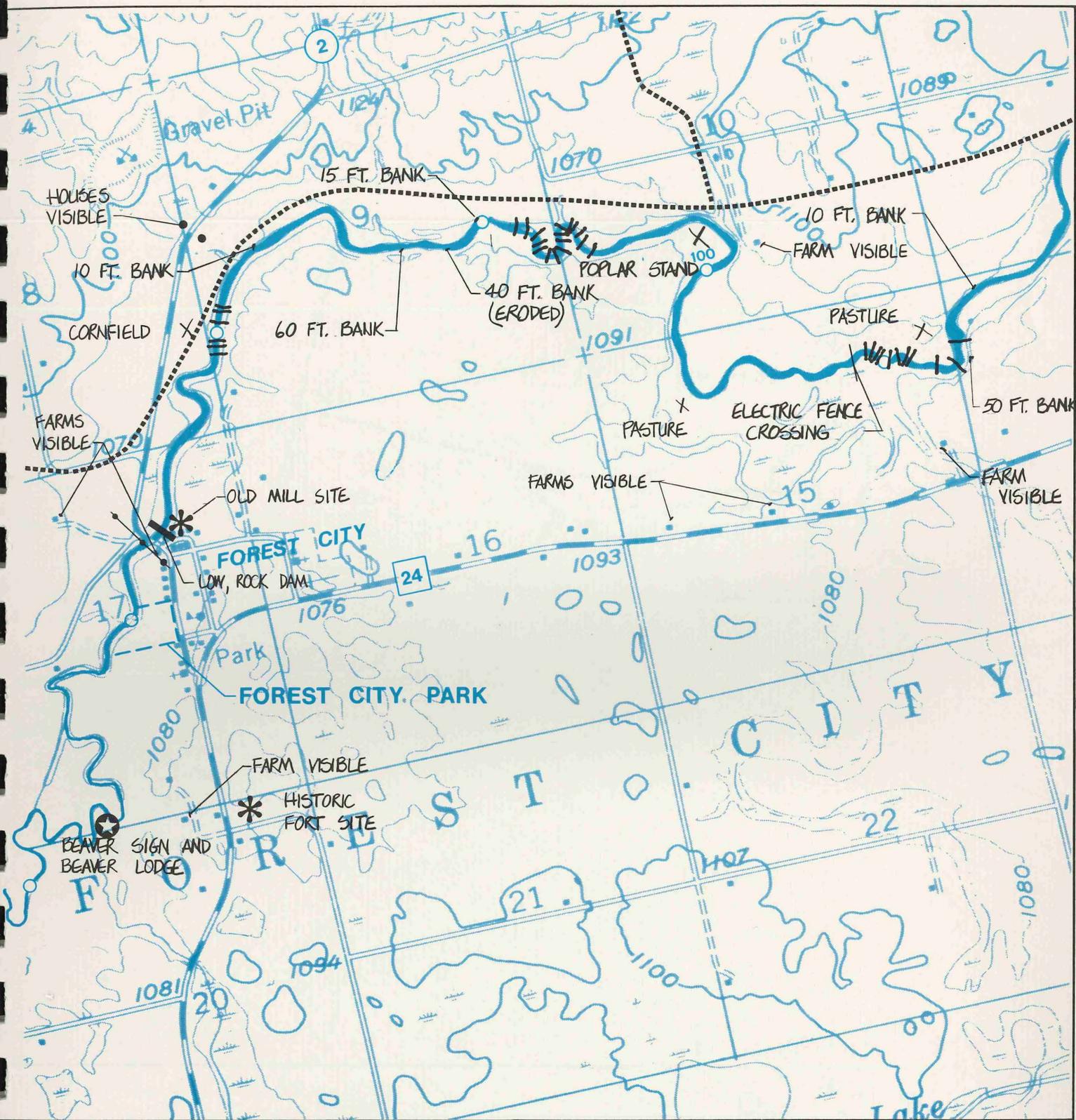




NORTH FORK
CROW RIVER
MANAGEMENT PLAN

SITE

- | | | | |
|--|------------|--|---------------------|
| | RIVER MILE | | CORPORATE LIMITS |
| | RAPIDS | | COUNTY PARK |
| | DAM | | STATE WILDLIFE AREA |
| | POWERLINE | | OTHER PUBLIC LAND |



ANALYSIS

- ★ POINT OF INTEREST
- TRAIL SNOWMOBILE
- R** REST AREA
- RESIDENCE
- * HISTORIC SITE

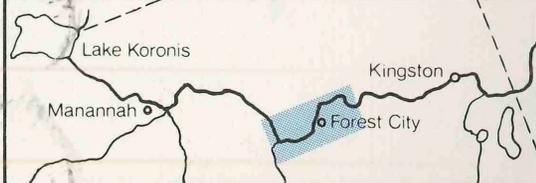
- INTERSTATE
- FEDERAL HWY
- STATE HWY
- C.S.A.H. HWY
- COUNTY RD

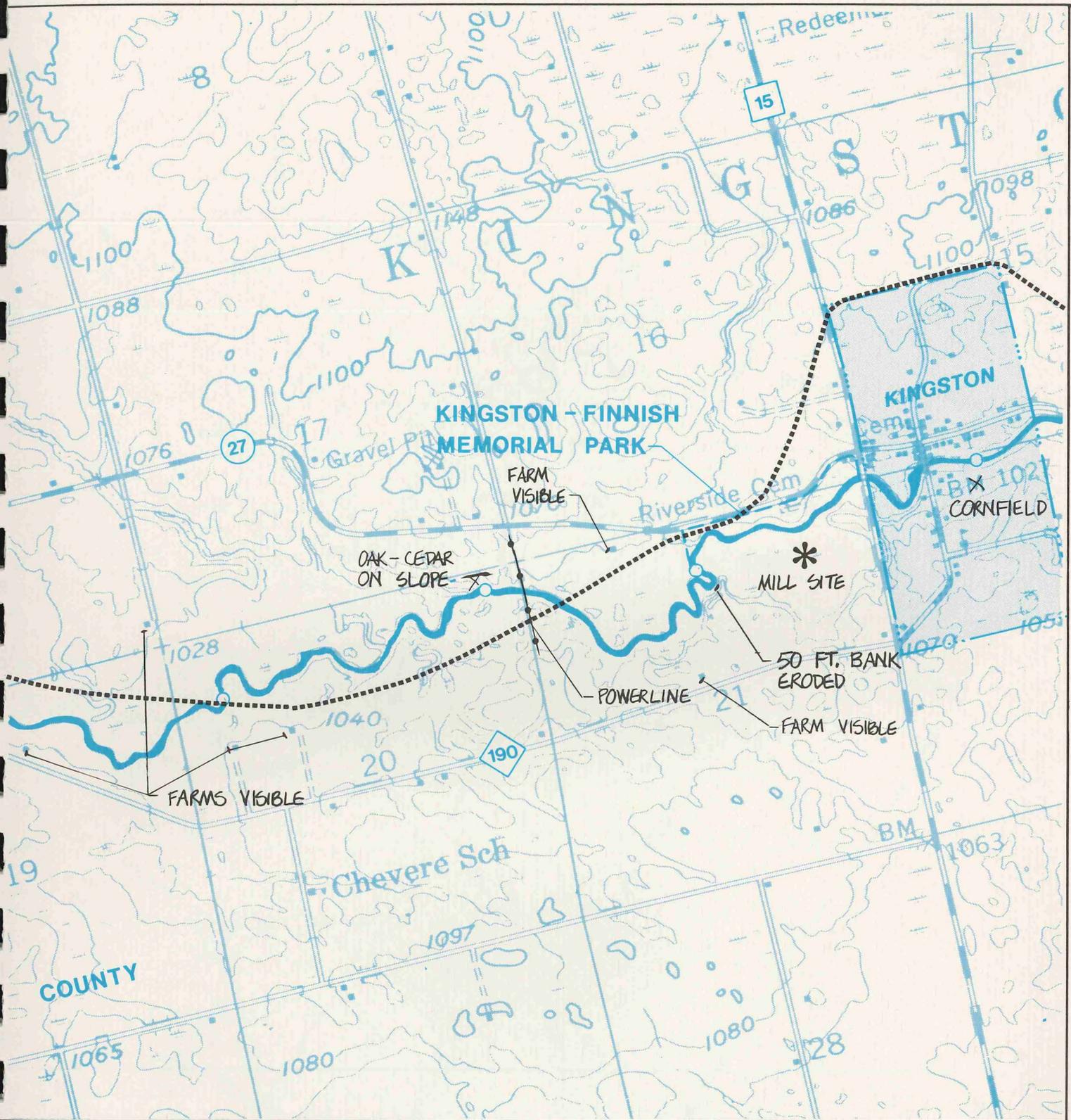


PLATE

3

SCALE: 1" = 2000'





ANALYSIS

- ★ POINT OF INTEREST
- TRAIL SNOWMOBILE
- R REST AREA
- RESIDENCE
- * HISTORIC SITE

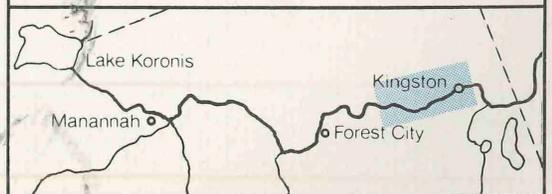
- INTERSTATE
- FEDERAL HWY
- STATE HWY
- C.S.A.H. HWY
- COUNTY RD



PLATE

4

SCALE: 1" = 2000'

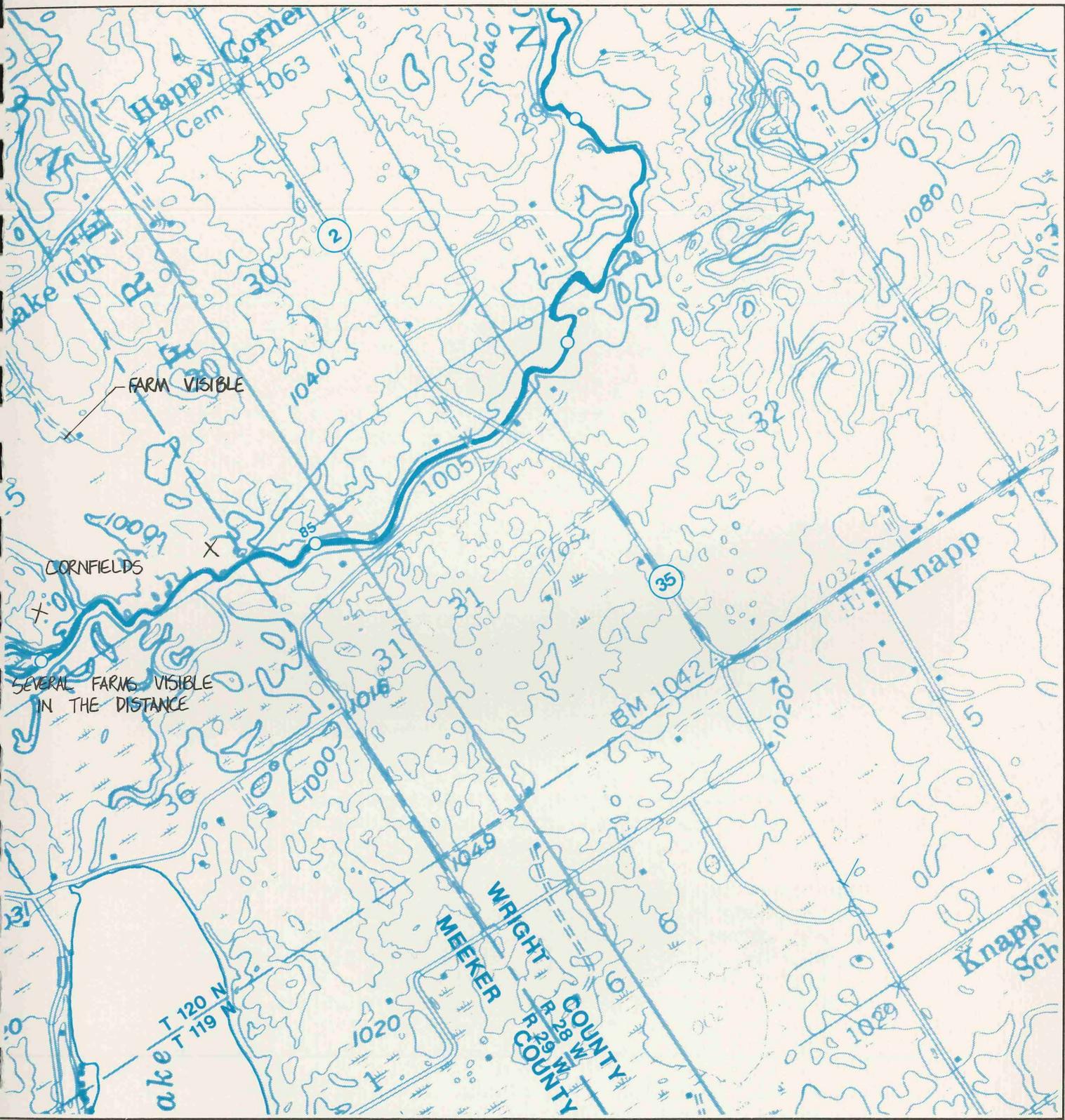




NORTH FORK
CROW RIVER
MANAGEMENT PLAN

SITE

- | | | | |
|--|------------|--|---------------------|
| | RIVER MILE | | CORPORATE LIMITS |
| | RAPIDS | | COUNTY PARK |
| | DAM | | STATE WILDLIFE AREA |
| | POWERLINE | | OTHER PUBLIC LAND |



ANALYSIS

- ★ POINT OF INTEREST
- TRAIL SNOWMOBILE
- R REST AREA
- RESIDENCE
- * HISTORIC SITE

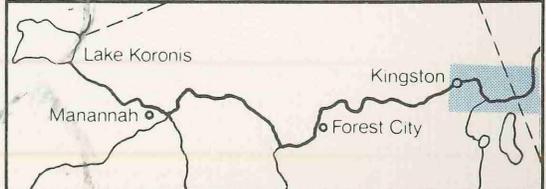
- INTERSTATE
- FEDERAL HWY
- STATE HWY
- C.S.A.H. HWY
- COUNTY RD



PLATE

5

SCALE: 1" = 2000'





PHYSICAL CHARACTERISTICS

Watershed

The Crow River basin is drained by two major streams, the South Fork, which is 104 miles long and drains about 1,278 acres, and the 175-mile North Fork which collects water from about 2,772 square miles of land. These two branches join near Rockford. From there they flow as a single river 25 miles eastward to the river's mouth on the Mississippi River at Dayton.

This analysis focuses on the 40.8-mile section of the North Fork of the Crow River from the spillway below Lake Koronis to the Meeker-Wright county line. Several creeks enter the river along this segment. The largest tributary is the Middle Fork of the Crow River which drains a 277-square-mile area.

The floodplain of the North Fork occasionally is quite wide; river banks range from one to 50 feet in height. Many "oxbows" and abandoned channels exist in the North Fork basin.

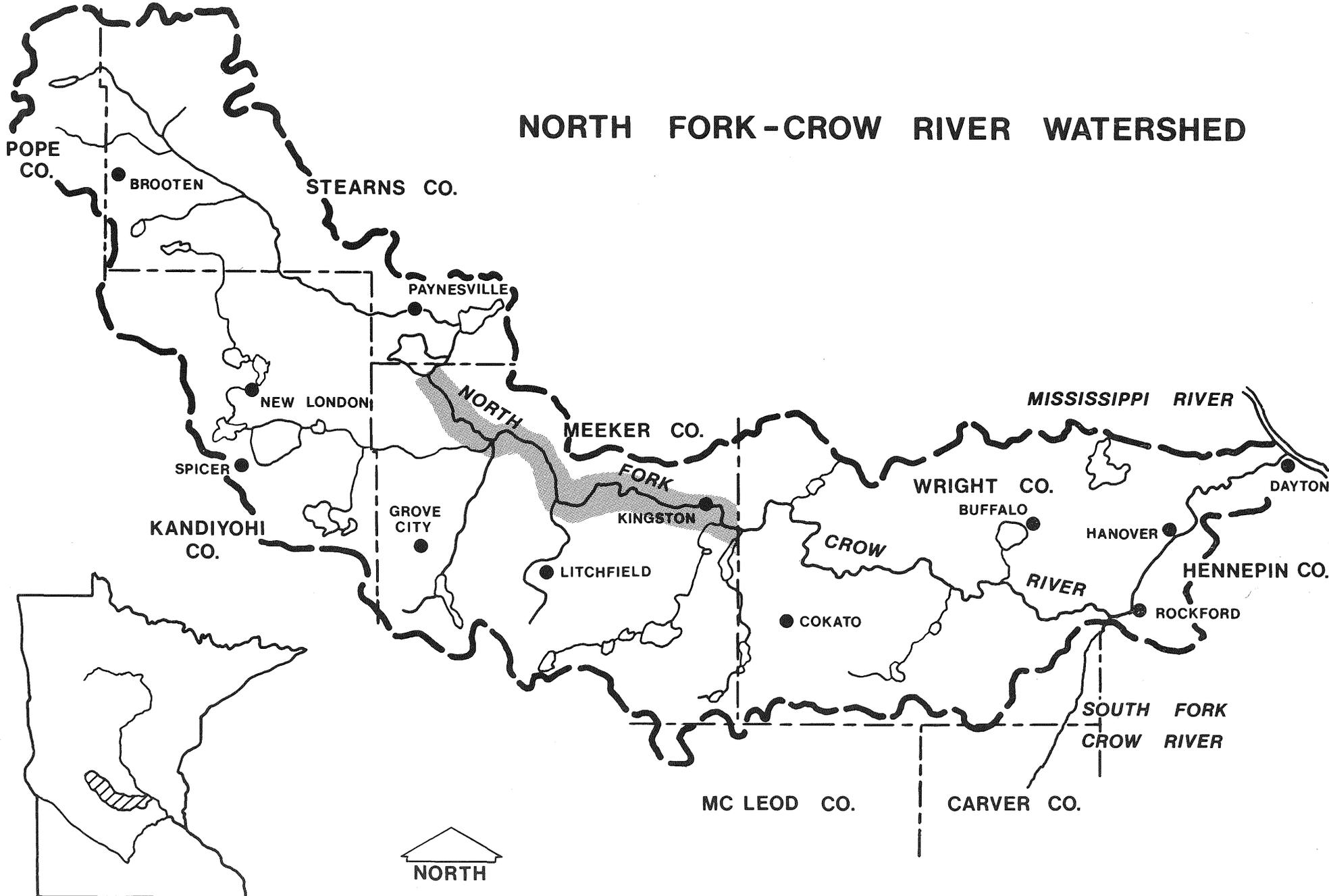
Little information is available on the river level and the discharge rate for the study area. A surface water recording station is located at Rockford, downstream from the junction of the North and South forks. Formerly, there were three other water level stations providing information relating to the study area. One was located in Dayton, another near Rockford on the North Fork and one near Regal, upstream from the study area.

Records from these now defunct stations, along with data gathered at the Rockford station, indicate that the highest river flow levels usually occur following spring break-up, in late March, April or early May. Summer and fall water levels are largely determined by precipitation.

Average annual precipitation for the study area is about 25.82 inches. June is the wettest month with an average of 4.65 inches of precipitation. Thus, the level of the North Fork usually rises during this month. The second highest monthly precipitation rate (3.75 inches) occurs during August. Surface water evaporation and evapotranspiration peak during July and August, however, so river levels generally do not rise as much then as in June.

It is predicted that once every 50 years the Crow Basin will receive a maximum of 37.5 inches of precipitation in a year's time, and a minimum of 15 inches in a single year. For example, the area received 39.5 inches of precipitation during the record flood year 1965 and about 15.3 inches in the drought year 1933 (Meteorological data was taken from records of stations closest to the study area at the given time). It is predicted that once every five years the Crow Basin will receive a maximum of 29.5 inches of annual precipitation and a minimum of 21.2 inches.

NORTH FORK-CROW RIVER WATERSHED



Compared with most other Minnesota rivers, the Crow River's flow level varies considerably from month to month. This happens partly because the Crow is fed by many drainage ditches. A 1940 federal census indicated that 870 miles of open ditches drained into the North Fork alone. When annual precipitation totals four or more inches below normal (as is projected to happen once every five years) the river becomes too shallow in places to canoe. This may be corrected by better water conservation practices.

Sources:

- (1) Water Resources Coordinating Committee, State Planning Agency, Bulletin #2, 1968.
- (2) Water Resources Data for Minnesota, U.S. Department of Interior, 1970.
- (3) Report of Water Resources Investigation of Minnesota, State Drainage Commission, 1912.
- (4) USDA - Soil Conservation Service - Minnesota Watershed Inventory.

Geology

Topography of the study area is generally of two types: irregular moraines that were deposited by the late Wisconsin ice sheet (Grantsburg Sublobe); and a large outwash plain in the center of Meeker County, which is associated with glacial-melt streams.

The county is entirely covered by unconsolidated surface material (glacial drift) averaging 250 feet in thickness. No rock formations outcrop in Meeker County. Drilling has indicated that the underlying bedrock consists of pre-Cambrian granite in the Manannah area and Cretaceous shale in the remainder of the county.

Because bedrock formations are few, availability of water supplies depends on the presence of sand and gravel aquifers in the glacial drift. Shallow wells finished in unsorted glacial till cannot be relied on to produce an adequate water supply. Well depths along the study area vary from less than 50 feet to more than 300 feet. The best water yields are from the deeper layers of sand and gravel. Artesian conditions are sometimes encountered along the North Fork at places in the sand plain where confining layers of clay are deposited over the aquifers.

Sources:

- (1) George Thiel, University of Minnesota, Minnesota Geological Survey, Geology and Underground Waters of Southern Minnesota, Bulletin 31, The University of Minnesota Press, 1944.
- (2) Department of Natural Resources, Division of Soils and Minerals.

Soils

Soil qualities play a large part in determining how land may be developed. In addition, soil types and associations provide clues about a region's natural history and ecological characteristics. There are about seven major series of soil associations in the study area on the Crow River. Here is a brief description of each.

Alluvial land-- This is the most common soil type found in the study area. Deposited by the river during floods, alluvial soils form a level plain, but are subject to constant change because of the accumulation of new material, scouring, and shifts in the river channel. The threat of floods precludes most development on these soils. Alluvial land is usually used for pasture, although it can support campsites, picnic areas and other seasonal facilities.

Clarion series-- These upland soils are generally deep and well-drained. They develop under prairie grasses on slight to steep slopes. These soils erode quite easily and are unsuitable for most development.

Madelia series-- These are deep, nearly level, poorly drained, silty soils that were formed in calcareous silty sediments. These soils are found in broad, flat areas with a shallow water table. Water-tolerant grasses originally grew on this soil.

Nicollet series-- These are deep, nearly level to gently undulating, moderately-drained to somewhat poorly-drained loamy soils. Native vegetation of this soil type was tall prairie grasses. The major limitation is poor drainage of some of these soils.

Peat and muck-- Peat consists of the organic remains of marsh grasses, sedges and reeds in low wetlands. Muck is decomposed peat, containing more minerals and silt than peat. These soils are unsuitable for almost all recreational and developmental uses. They may be used for agricultural purposes with the addition of large amounts of fertilizer.

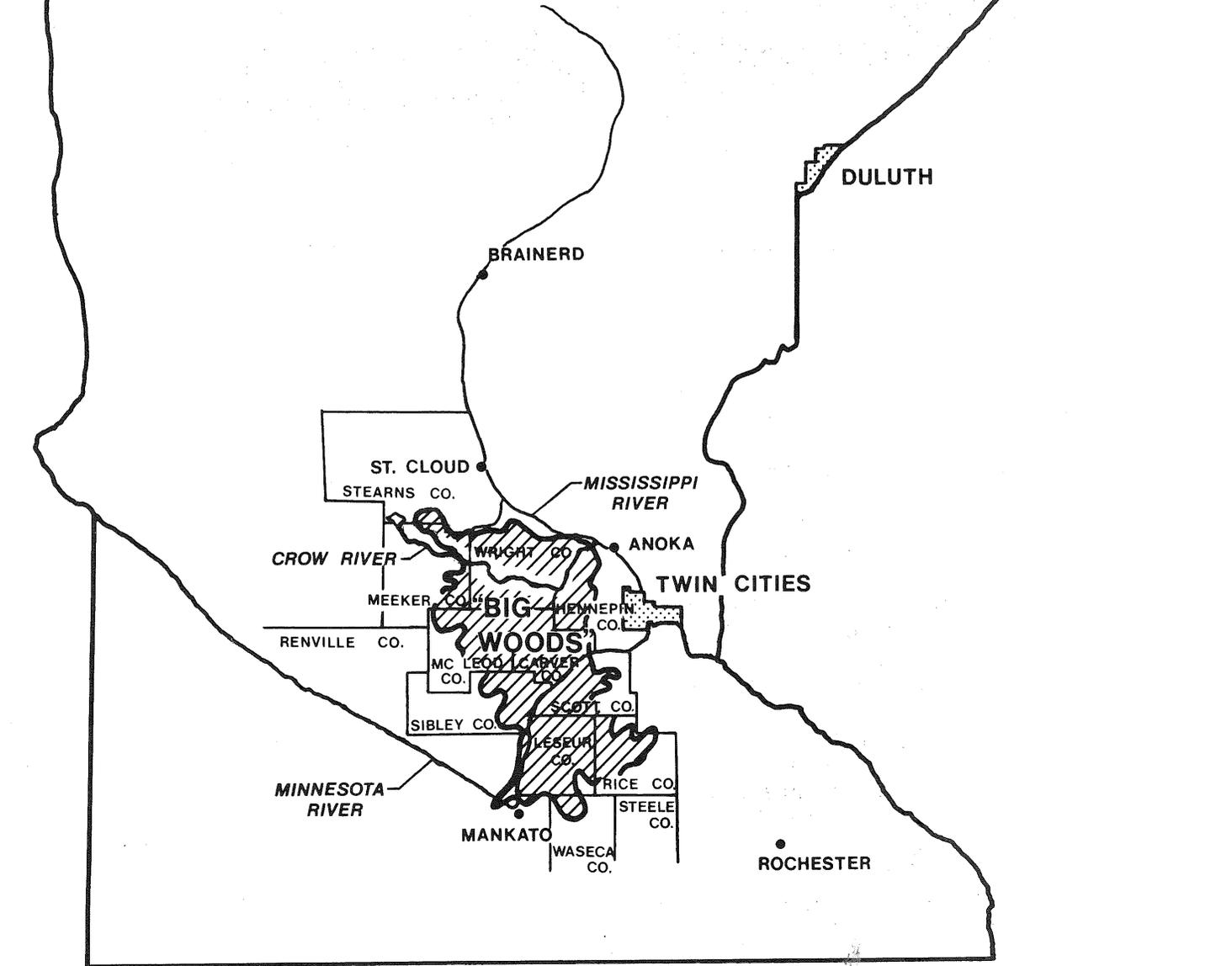
Truman series-- Truman soils are dark-colored, deep, well-drained soils of the uplands. Tall prairie grasses originally grew on these soil types. Major limitations of this soil series are the occasional steep slopes and the poor drainage character.

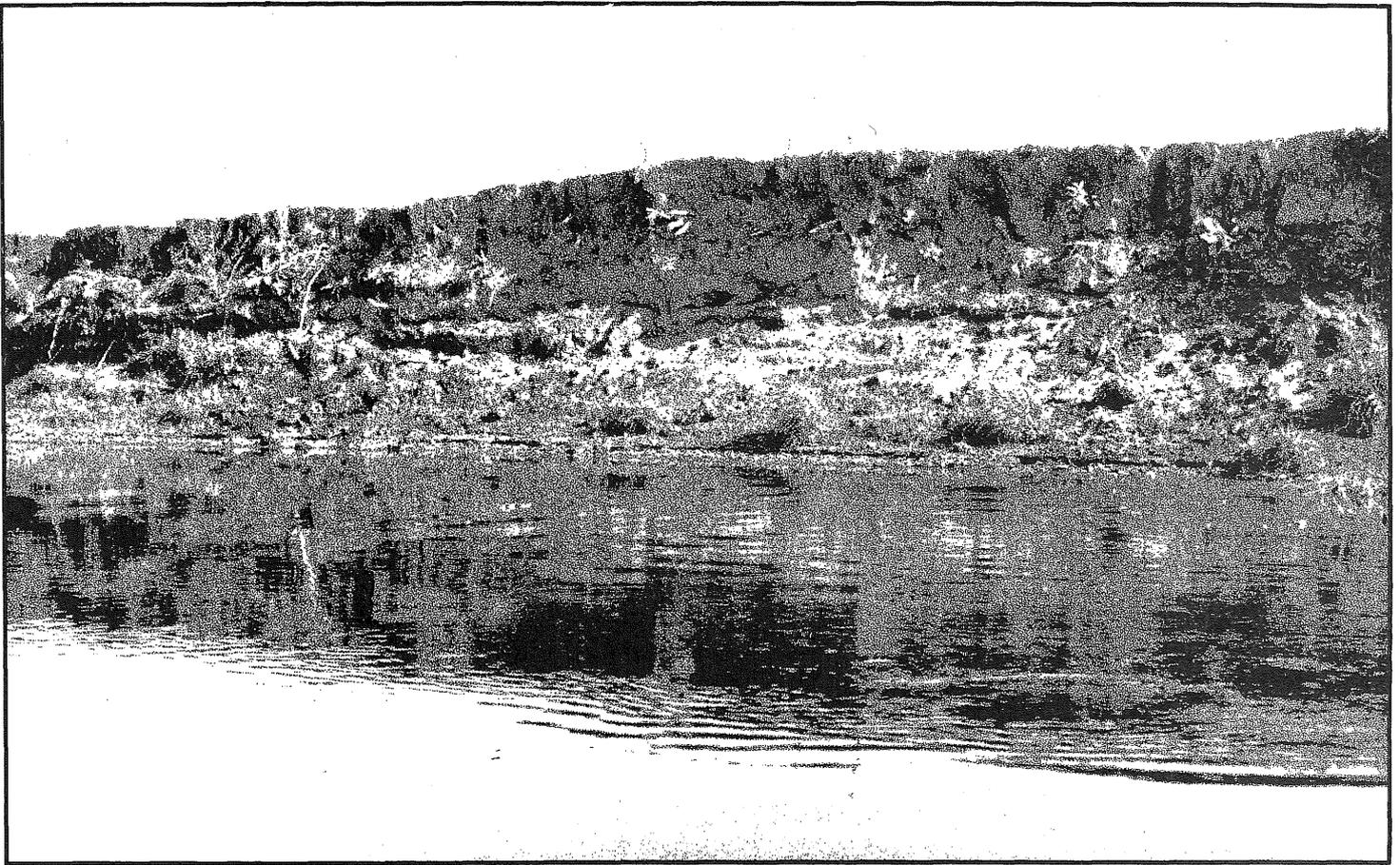
Webster series-- These soils also are dark-colored, deep and well-drained upland types. Tall prairie grasses originally grew on these gently undulating to rolling soils. The only major limitation of this soil type is the occasional steep slopes encountered.

Sources:

- (1) Soil Survey (uncompleted), USDA
Soil Conservation Service, Litchfield, Minnesota
- (2) University of Minnesota Soil Science Department

LOCATION OF MINNESOTA'S HISTORICAL "BIG WOODS"





Vegetation

An upland hardwood vegetative group known as the "Big Woods" at one time covered part of the study area. But because of clearing, cultivation, grazing and burning, little if any of this forest remains as it once was. However, some of the trees common to this community--sugar maple, basswood, bitternut hickory and red elm--still may be found in the study area. Some of the most common shrub and vine species of the Big Woods included the Virginia creeper, elder, gooseberry, bittersweet and moonseed.

The proposed management area is unique in that it forms a rough boundary between the Big Woods and the prairies of southwestern Minnesota. Prairie trees and shrubs were similar to those found in the Big Woods except that they were smaller and more sparse.

Much of the vegetation in the study area is affected directly or indirectly by the river and can be classified as bottomland vegetation. Willow, silver maple and cottonwood are the trees most commonly found on the floodplain. The "transitional zone" between the floodplain and uplands supports many different species depending on the frequency of flooding, soil type, bank steepness and land use. Among the most prominent species in this zone are basswood, maple, elm, green ash, oak, boxelder, prickly ash, gooseberry and raspberry. Some of the most common herbaceous plants are bellwort, blood-root, poison ivy, wood nettle, anemone, columbine and several species of ferns.



Aquatic vegetation is generally sparse in the river, though several types are found in marshy areas. Most common are reed canary grass, cattail, sedges, cane, spikerush and arrowhead. Submerged aquatic vegetation present includes some varieties of narrow-leaf pond weeds, white-water buttercup and filamentous green algae.

Sources:

- (1) Daubenmire, Rexford F., "The Big Woods of Minnesota", Ecological Monographs, April, 1936.
- (2) Rosendahl, C.O. and Butters, F.K., Trees and Shrubs of Minnesota, U. of M. Press, 1928.
- (3) Department of Natural Resources, Division of Fish and Wildlife, Environment Section, Major River Survey, 1974.

Wildlife

Early explorers of the North Fork of the Crow River came in search of game, particularly fur bearers. The Big Woods, which once surrounded much of the Crow River was rich in fur bearers, game, fish and fowl. Today, largely because of man's activities, certain animals which inhabited the area are absent or greatly reduced in number. Among the most noteworthy species now absent are bear, buffalo and the extinct passenger pigeon. Beaver, once quite common in the area, are present in limited numbers.

The Crow River is located along the Mississippi waterfowl flyway, which is used by migratory birds during spring and fall migrations. Various species of waterfowl pass through this area. Mallards, wood ducks and blue-winged teal are commonly found nesting along the river and adjacent wetland areas.

The abundance and variety of songbirds change seasonally. A partial list of late spring and summer birds sighted during the 1974 biological reconnaissance of the Crow River includes:

Baltimore oriole	crested flycatcher
bank swallow	crow
barn swallow	downy woodpecker
black and white warbler	flicker
blackpoll warbler	goldfinch
blue jay	grackle
brown thrasher	hairy woodpecker
cardinal	Harris sparrow
catbird	hermit thrush
cedar waxwing	house wren
chickadee	indigo bunting
chimney swift	kingbird
cowbird	kingfisher
meadowlark	red-winged blackbird
mourning dove	robin
Myrtle warbler	scarlet tanager
white-breasted nuthatch	song sparrow
oven bird	tree swallow
phoebe	white-throated sparrow
pileated woodpecker	Wilson's warbler
red-bellied woodpecker	wood peewee
rose-breasted grosbeak	yellow-headed blackbird
red-eyed vireo	yellowthroat
redstart	yellow warbler
red-headed woodpecker	

Shorebirds such as great blue herons, green herons, black-crowned night herons, killdeer, gulls, spotted sandpipers and black terns also live along the Crow River.

Upland game species include ring-necked pheasant, ruffed grouse, and woodcock. Pheasant numbers appear stable, although harsh winters and reduced nesting habitat are factors limiting the pheasant population. Wilson's snipe is found along the entire river corridor. Several species of owls and hawks also can be found.

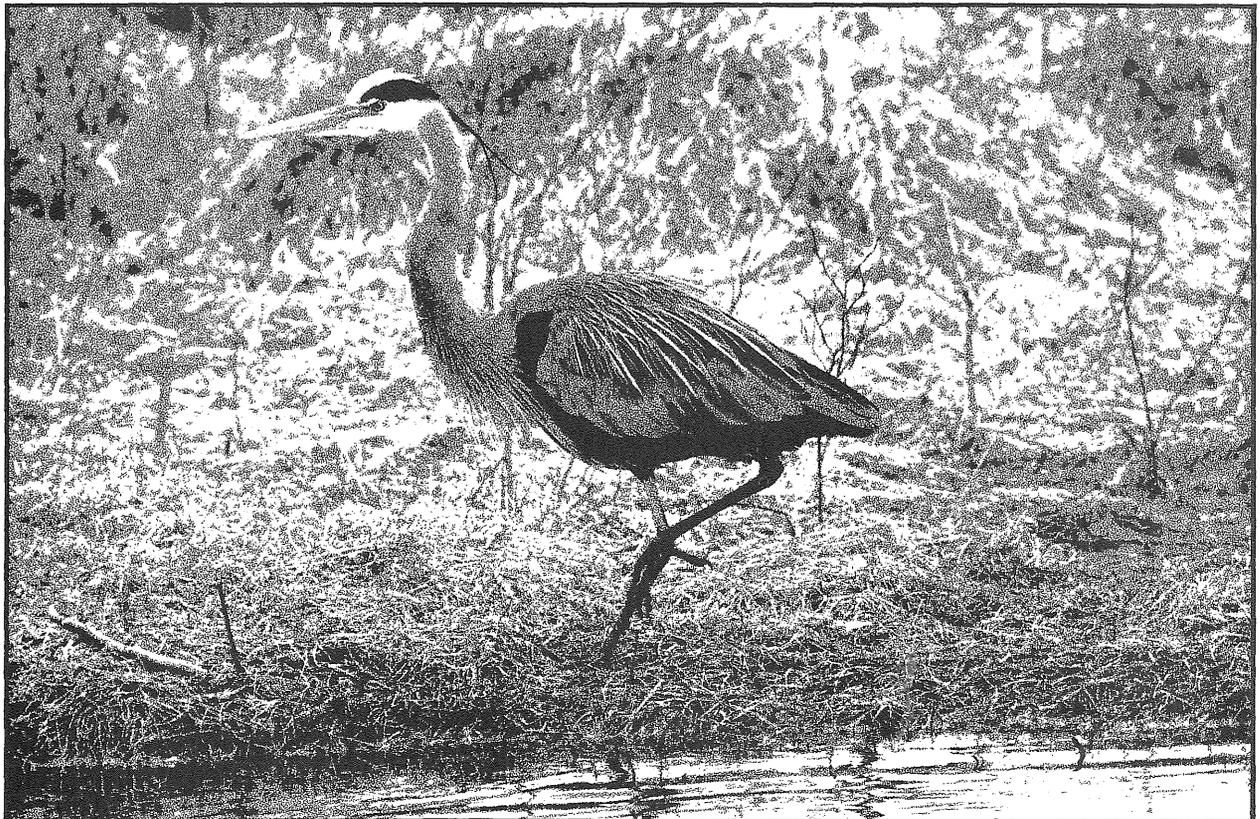
Small game species such as fox, squirrels and rabbits, also provide recreational hunting. Non-game species present include red squirrels, chipmunks, thirteen-lined ground squirrels, woodchucks, pocket gophers and a variety of mice, voles and shrews.

Fur bearers present along the river corridor--muskrat, mink, weasel, raccoon, beaver, fox and skunk--are a valuable natural resource.

The white-tailed deer is the only big game species found along the Crow River. Its woodlands provide good winter cover for the deer.

Man's influence on the area is evident, but a significant variety of wildlife remains. One purpose of the management plan, "maintaining the status quo," is crucial for future populations of wildlife.

Source:(1) Department of Natural Resources, Division of Fish and Wildlife, Environment Section, Major River Survey, 1974.



Fisheries

During the summer of 1974, the DNR, Division of Fish and Wildlife, conducted a biological survey of the river from the spillway below Lake Koronis to the river's mouth at Dayton. The survey was conducted in two phases. The first phase consisted of an inventory of the aquatic environment and a wildlife reconnaissance. The second phase consisted of an electro-fishing survey.

Electro-fishing is a technique utilizing an electric field which temporarily stuns fish. Fish then are netted, identified, weighed, measured and returned to the water. This process, although not without technological difficulties, provided excellent information concerning the species composition.

The electro-fishing survey was conducted over 16 sectors in a 126-mile portion of the river. Of these sectors, the first seven are located in the proposed management area.

Table A shows the rough and game fish species sampled and gives the numbers and percentages of the total catch for the study area. A list of the species of forage fish samples is also provided.

Table B gives the percentages for the individual species found in each of the seven sectors located in the study area. The table also shows a locational map of the area. Although some fish species were not caught in some sectors, they may be present.

The presence of Lake Koronis affects fish populations as far downstream as Forest City. Yellow perch, rock bass, largemouth bass and some species of sunfish are found in the upper portion of the study area, but are practically absent downstream from Forest City.

Game and rough fish compose a smaller percentage of the total fish population while sport and "other" fish form a greater percentage of the population in the Crow River than in the "average" state stream. Composition of the Crow River fish population is 61 percent large rough fish (carp, suckers), 5 percent game fish (northern pike, walleye), 7 percent sport fish (pan fish) and 27 percent other (perch, bullheads). Composition for the average stream is 71 percent large rough fish, 14 percent game fish, 4 percent sport fish and 9 percent other. Because of the high percentage of other fish, it can be said the Crow River has a diverse fish population.

The Crow River's predominately sand bottom does not support the abundant supply of invertebrates necessary to support large populations of game fish. Nor does the unstable substrate provide good spawning habitat because silt accumulates on gravel bars and other desirable spawning areas. High

spring flows and increased turbidity also damage potential spawning areas as well as erode stream banks and destroy fish holding cover. However, wise land management will help stabilize runoff and reduce siltation, thus providing more desirable stream characteristics.

Some pasture lands on the river banks now are being abandoned. This may increase bank cover and improve fish populations.

Sources:

- (1) Minnesota DNR, Division of Fish and Wildlife, Environment Section, Major River Survey, 1974.
- (2) Peterson, Arthur R., "Analysis of Composition of Fish Populations in Minnesota's Rivers and Streams," Investigative Report - to be published, DNR, Division of Fish and Wildlife, Environment Section.



TABLE A

NORTH FORK OF THE CROW RIVER IN MEEKER COUNTY

Rough and Game Fish

<u>Species</u>	<u>Number Sampled</u>	<u>% of Catch</u>
black bullhead	446	34.9
carp	433	33.9
white sucker	110	8.6
northern redhorse	64	5.0
black crappie	55	4.3
yellow perch	33	2.6
largemouth bass	32	2.5
pumpkinseed	25	2.0
northern pike	19	1.5
rock bass	17	1.3
green sunfish	12	0.9
walleye	8	0.6
bluegill	8	0.6
yellow bullhead	8	0.6
smallmouth bass	8	0.5

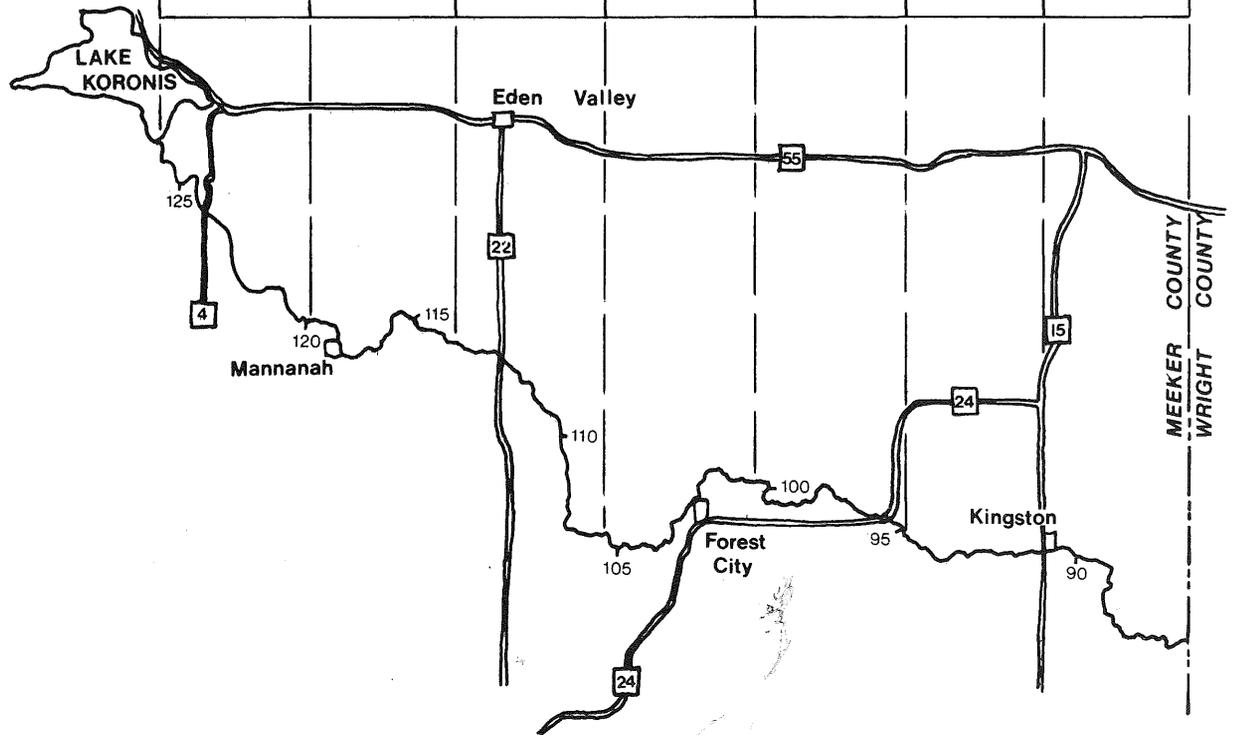
Forage FishSpecies

hornyhead chub	bluntnose minnow
spottail shiner	fathead minnow
spotfin shiner	tadpole madtom
common shiner	central mudminnow
sand shiner	log perch
blacknose dace	Iowa darter
longnose dace	Johnny darter
brassy minnow	creek chub

TABLE B

Percent of Catch Sampled per Sector

Black Bullhead	50.2	63.7	49.6	9.8	10.4	28.9	29.2
Carp	15.0	2.8	5.8	59.6	70.9	48.3	35.4
White Sucker	1.2	14.9	7.3	13.5	4.9	8.1	11.5
Northern Redhorse	-	-	1.5	12.2	6.6	5.2	12.5
Black Crappie	-	-	22.6	1.6	4.7	4.7	7.3
Yellow Perch	5.9	5.1	4.4	-	0.5	-	-
Largemouth Bass	3.6	9.8	-	-	-	-	-
Pumpkin Seed	8.3	1.8	-	-	-	-	-
Northern Pike	2.0	-	1.5	2.9	-	2.0	2.1
Rock Bass	6.7	-	-	-	-	-	-
Green Sunfish	2.4	-	4.4	-	-	-	-
Walleye	-	-	-	-	2.2	2.7	2.1
Bluegill	2.8	-	-	-	0.5	-	-
Yellow Bullhead	2.0	0.9	0.8	-	-	-	-
Smallmouth Bass	-	0.9	2.2	0.4	0.5	-	-



Water Quality

No water quality information is available on the study area portion of the river. The Minnesota Pollution Control Agency (MPCA), and the United States Geological Survey (USGS) have records pertaining to the monitoring of water quality indicators on the South Fork and the main stem of the Crow River.

It is impossible to directly relate the records of these water quality measuring stations to the study area portion of the river. However, a broad summary of the measurements obtained from these stations will be provided, since it will indicate what water quality problems may exist in the study area.

Some of the more important measures of water quality are temperature, pH, turbidity, the amount of dissolved oxygen, biochemical oxygen demand (BOD) and the concentration of fecal coliforms. These readings are based on information collected no earlier than 1969.

The MPCA classifies rivers or segments of rivers according to their water quality. This in turn indicates a river's suitability for a particular use. The North Fork of the Crow River is classified as 2B, meaning it is suitable for fisheries and recreation. More specifically, "the quality of this class of interstate waters of the state shall be such as to permit propagation and maintenance of cool- or warm-water sport or commercial fishes and be suitable for aquatic recreation of all kinds, including bathing, for which the waters may be useable."

The water quality of the Crow River generally falls within the standards applied to class 2B rivers with two notable exceptions.

Temperature-- Temperature has never exceeded 86 F at the testing stations, and is therefore within the MPCA standards for 2B waters.

pH-- pH is the symbol for the degree of acidity or alkalinity of a solution. Only once in all the testing occasions did the pH fall outside of the acceptable limits for class 2B waters.

Turbidity-- The MPCA standards for turbidity on class 2B rivers was exceeded on about 25 percent of the testing occasions. Therefore, the river does not meet MPCA standards in regards to turbidity.

Dissolved Oxygen-- Dissolved oxygen levels are rarely a problem in rivers, since they constantly aerate themselves. Data from the testing stations bears out this fact.

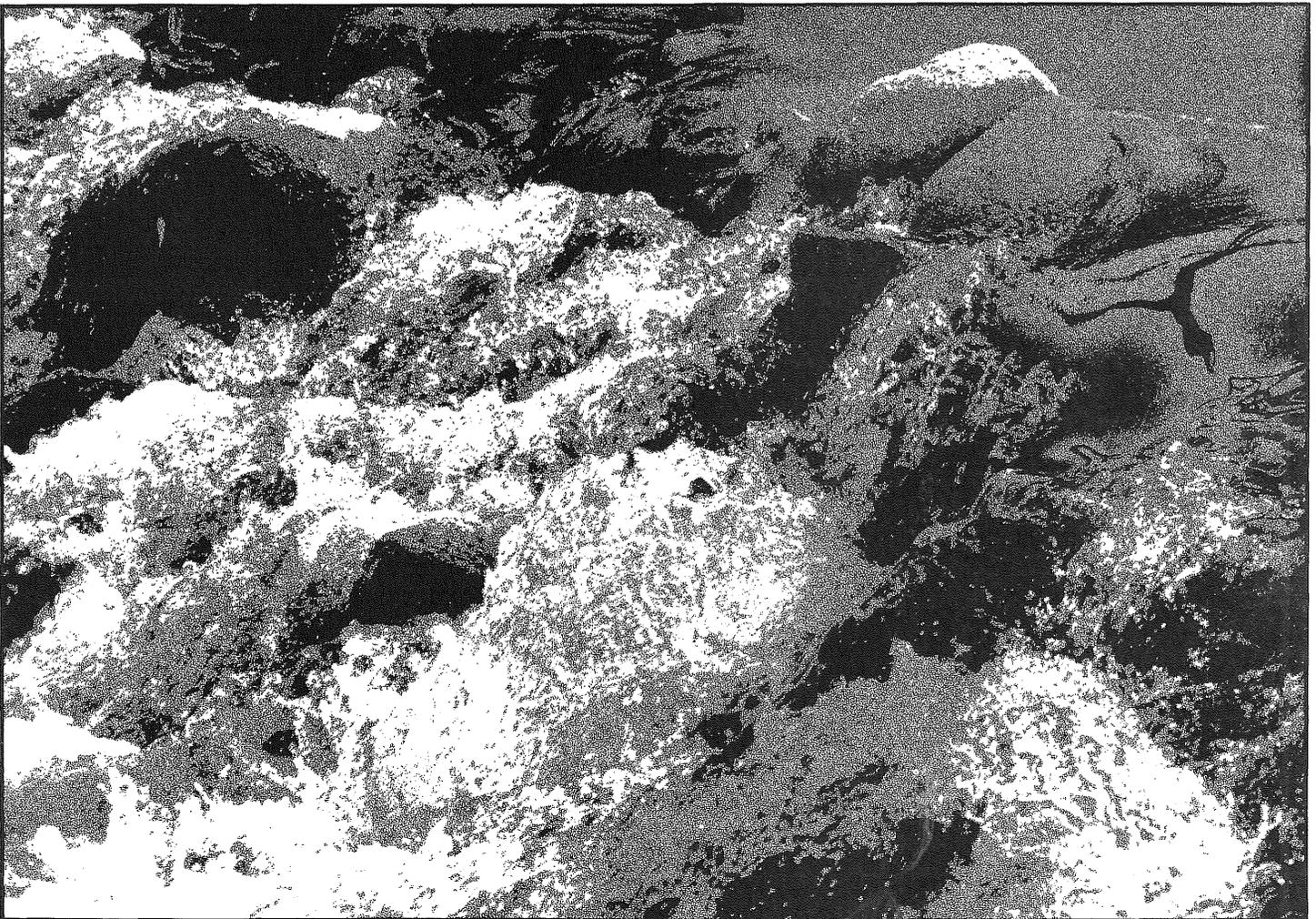
Fecal Coliforms-- Fecal coliform organisms are bacteria, which thrive in the intestines of warm-blooded animals. These organisms get into the water through inadequately treated wastes and runoff, and can cause skin and internal disorders in humans. More testing for fecal

coliforms in the Crow River is needed. However, available data shows that a real problem exists in regard to fecal coliforms. MPCA limits concerning fecal coliforms were exceeded on 76 percent of the testing occasions.

Water quality is probably better in the study area than in the lower reaches of the river where the sampling stations are. There are fewer homes along the upper river and the water is visibly clearer. However, water quality in the study area is impossible to determine accurately without testing.

Sources:

- (1) The Minnesota Pollution Control Agency, read outs for Mayer and Dayton.
- (2) The United States Geological Survey, read outs for Mayer, Rockford, and Dayton.
- (3) The Minnesota Pollution Control Agency - Minnesota State Regulations, Rules, regulations, classifications and water standards, 1973 supplement WPC 15, Documents Section, Department of Administration, Room 140, Centennial Building, St. Paul, Minnesota, 55155.



SOCIAL CHARACTERISTICS

History

There are several archaeological sites in the proposed management area including two burial sites and two possible habitation sites near Lake Koronis. These two sites contain a total of 43 burial mounds. Only limited study has been done of these sites, therefore, little is known about pre-historic man along the Crow River. More extensive study of these sites is expected in the near future.

When the first white men came into the Crow River area, they found a thick forest of maple, basswood, elm and other hardwoods. This area was known to the Indians as the Big Woods and was their sacred hunting grounds. Trappers were probably the first white men to penetrate the Big Woods country which had an ample supply of fish, waterfowl and game.

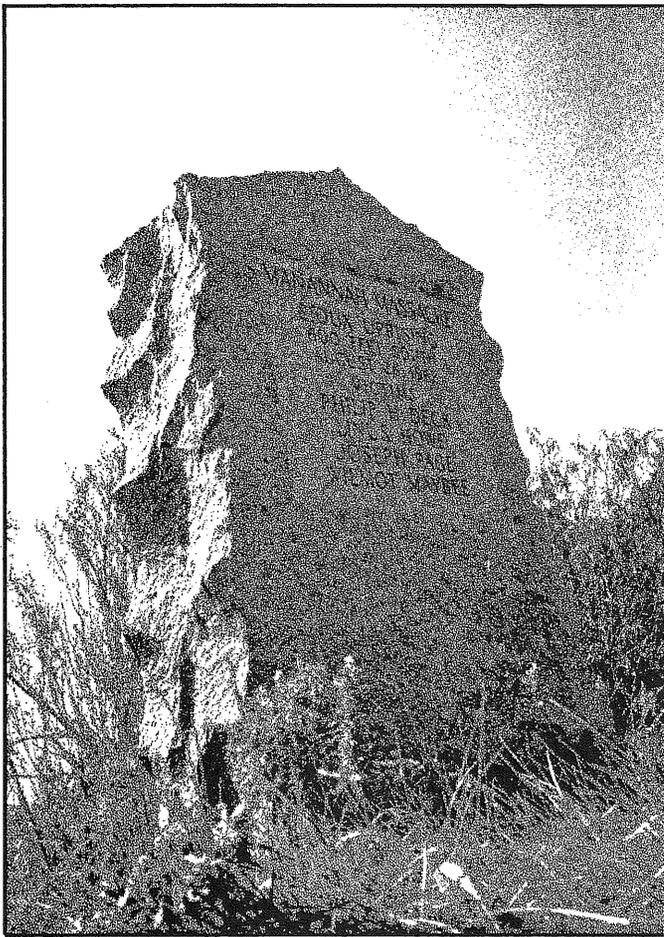
In 1851 the first white men settled permanently along the Crow River. They built their homes near Dayton where the Crow River joins the Mississippi River. These early settlers faced the task of clearing the land of trees before they could start farming. Many sawmills were built along the Crow River to make use of the felled trees. It took many years to clear the land. Today, agriculture is the main enterprise in the area.

Before 1856 the Crow River was the only transportation route into the area. For some years during the 1850s, steamboats brought provisions from St. Anthony Falls to Dayton. From Dayton the supplies were transferred to rowboats and carried upstream. For about two years, this steamboat to rowboat operation ran regularly from Dayton to Rockford. In May 1851, when the river was high, the steamboat "Governor Ramsey" paddled upstream to Rockford to pick up a huge cargo of dried fish, purchased from the Winnebago Indians. No commercial vessel has ever gone farther up the Crow River.

In 1885 three men paddled up the North Fork of the Crow River, through the Big Woods, until they came to a lush prairie. At this boundary between the Big Woods and the prairie they established Forest City.

From late 1855 to 1856, a wagon trail was cut through the Big Woods from Monticello to Forest City. This road became one of the main thoroughfares to the west, and virtually ended any use of the Crow River for transportation. This route is well marked today by signs along the county roads which follow the original route.

Following the building of the wagon road from Monticello to Forest City, settlers quickly moved to the fertile land along the North Fork of the Crow River. By 1860 most of the present townsites along the Crow River had been established.



As the settlers hunted, fished and gradually turned the Big Woods into lumber, frictions built up between the settlers and the Sioux Indians who still lived there. In 1860 armed settlers and trappers drove the Sioux from their village near the Rockford townsite. The settlers claimed that the Indians were killing too many deer.

Conflicts between Indians and white men, such as the Rockford incident, led to and probably caused the infamous Sioux Uprising of 1862. The city of Acton, in Meeker County is said to be the site where the Sioux Uprising started. On August 17, 1862, four young Sioux fired at some farmers with whom they were target practicing, and killed five of them. The next day, Chief Little Crow declared war on the white settlers. Ten days later, a band of Sioux attacked the village of Mannanah and four settlers were killed.

On September 2, 1862, the settlers around Forest City heard that a company of soldiers had been defeated by Sioux warriors about 20 miles south of Forest City. In a feverish effort, they erected a stockade within a 24-hour period. The Sioux attacked Forest City the next day but were thwarted by the stockade and forty armed settlers. After two hours they gave up their attack.

During the Sioux war many settlers left the Crow River area for the safety of Monticello, Dayton and Fort Snelling, although many remained to defend their homes and farms.

Many of these early townsites along the river were settled by various ethnic groups. The first settlers along the North Fork of the Crow River were Scandinavians and Germans. In some of the communities this distinct ethnic influence still exists.

The names of towns and townships along the North Fork of the Crow River often reflect the history or geography associated with the area. The Crow River received its name from an Ojibway Indian word, which means "the marauder of newly planted corn."

Harvey Township-- This township was settled in the spring of 1856, organized in 1867 and named for James Harvey, who took a homestead claim here in 1860.

Manannah-- An early village was platted and given its Scottish name by Ziba Caswell and J.W. Walker in December 1856. Manannah Township received its name from the town, and was organized in October of 1857.

Forest City-- This was the first settlement in Meeker County. Forest City was first settled in 1855 and platted in 1857. The name of Forest City came from the town's location at the edge of the Big Woods. It was the county seat until 1869. Forest City Township was organized in April of 1858, receiving its name from the village.

Union Grove Township-- The first settler arrived here in 1856. The township was organized in early 1866. This township was named for the grove where a union church had been built. The name was proposed by Lyman Allen, one of the pioneer farmers, who came from Massachusetts in 1856 and returned there in 1860.

Kingston-- This village was settled in 1856 and platted in 1857. Kingston Township took its name from its village. George A. Nourse, a lawyer from St. Anthony, named the town. The first mill in Meeker County was built at Kingston in 1857.

Sources:

- (1) Archaeology Department, University of Minnesota
- (2) Minnesota Historical Society, Archaeology Section, Fort Snelling
- (3) Folwell, William Watts, A History of Minnesota - Volume II - Minnesota Historical Society - St. Paul, 1961.
- (4) Upham, Warren, Minnesota Geographic Names, Minnesota Historical Society, 1969.
- (5) Meeker County History, Minnesota Historical Society

Land Use

Most of the land in the study area is cultivated or used for pasture. Major crops include corn, soybeans, alfalfa, oats, hay and wheat. Dairy and beef cattle are the most common domestic animals. More than a quarter of the river's corridor is forested because the floodplain is unsuitable for cultivation.

Marshland is poor for crops or pasture, but provides valuable habitat for wildlife. The greatest stretches of marshland are found immediately downstream of Lake Koronis. Marshes cover more than three percent of the proposed management area.

Township, county and state highways cross the Crow River at 15 places in the study area.

Source:

- (1) Minnesota Land Management Information System, University of Minnesota

Population Characteristics

The total population of Meeker County was 18,810 in 1970 and was estimated at 19,600 in 1975. It is projected to be at least 21,400 by the year 2000. The population of Meeker County has increased by four percent in the past five years; an 8.5 percent increase is predicted in the next 25 years.

Meeker County is rural in character. Farming is considered the primary rural occupation: 25.4 percent of all employed people over 16 years of age are involved in farm-related occupations in the county and agriculture is its largest industry. Wholesale and retail trade industries are a close second.

Kingston, population 115, is the only incorporated city in the study area. The largest city near the study area is Litchfield, the Meeker County Seat. Litchfield, located about four miles south of the study area, had 5,262 residents in 1970.

The five townships in the study area are declining in population, possibly because small farms have consolidated and farm operations are becoming more mechanized. Many people may be moving to larger cities because of greater job opportunities there.

Sources:

- (1) Minnesota Socio - Economic Characteristics, Volumes 1,2 and 3: Minnesota Analysis and Planning System, Ag. Extension Service, University of Minnesota, St. Paul, Minnesota 55101.
- (2) U.S. Census Bureau: Summary of 1970 Census for Minnesota.
- (3) Reinhardt, Hazel, St. Paul Pioneer Press, Article by Bruce R. Nelson, June 8, 1975.

Water Use

During the late 1800s and early 1900s, the North Fork of the Crow River was used extensively for milling. With the advent of better transportation, these local grain milling operations became unnecessary. Today these mill-sites are only of historical significance.

The Crow River is no longer used for transportation, industry, irrigation or other commercial purposes. It is used for livestock watering and to some extent for sewage disposal and drainage.

But the primary use of the North Fork of the Crow River and its adjacent lands is for recreation. Canoeing probably is the most popular activity although there is some fishing, swimming, picnicking, camping and snow-mobiling. The extent the river is used for recreation is impossible to determine without an extensive survey.

RECREATIONAL FEATURES

Existing Public Lands

Public lands are identified on the Site Analysis Maps and Land Management Maps. There are only two large blocks of public land in the study area, a 10-acre county park at Forest City and a 22-acre county park near Kingston. Both parks are administered by the Meeker County Park Board. The county plans to acquire additional land downstream of the Lake Koronis spillway.

The state or federal government owns no substantial lands in the study area. This means that aside from public road right-of-ways, there are only 32 acres of land available for public recreational use in the proposed management area.

Existing Public Facilities

Meeker County owns and administers four tracts of land located near or on the river, either as parks or sites which are scheduled for development.

Lake Koronis Park, on the western shore of Lake Koronis, is not located within the study area. However, it is significant because of its size (62 acres), its proximity and good facilities. This is a regional park built cooperatively by Meeker and Stearns Counties. It features 2,000 feet of lake shore. Facilities include picnic shelters, a theater building, bath houses, softball diamond, toilets, lookout tower, swimming beach and a modern campground with electrical hookups.

Lake Koronis access (not yet officially named), on the southern end of Lake Koronis, lies at the beginning of the study area. This highway right-of-way land is presently undeveloped. Land acquisition is planned on the downstream side of the access to allow for recreational development.

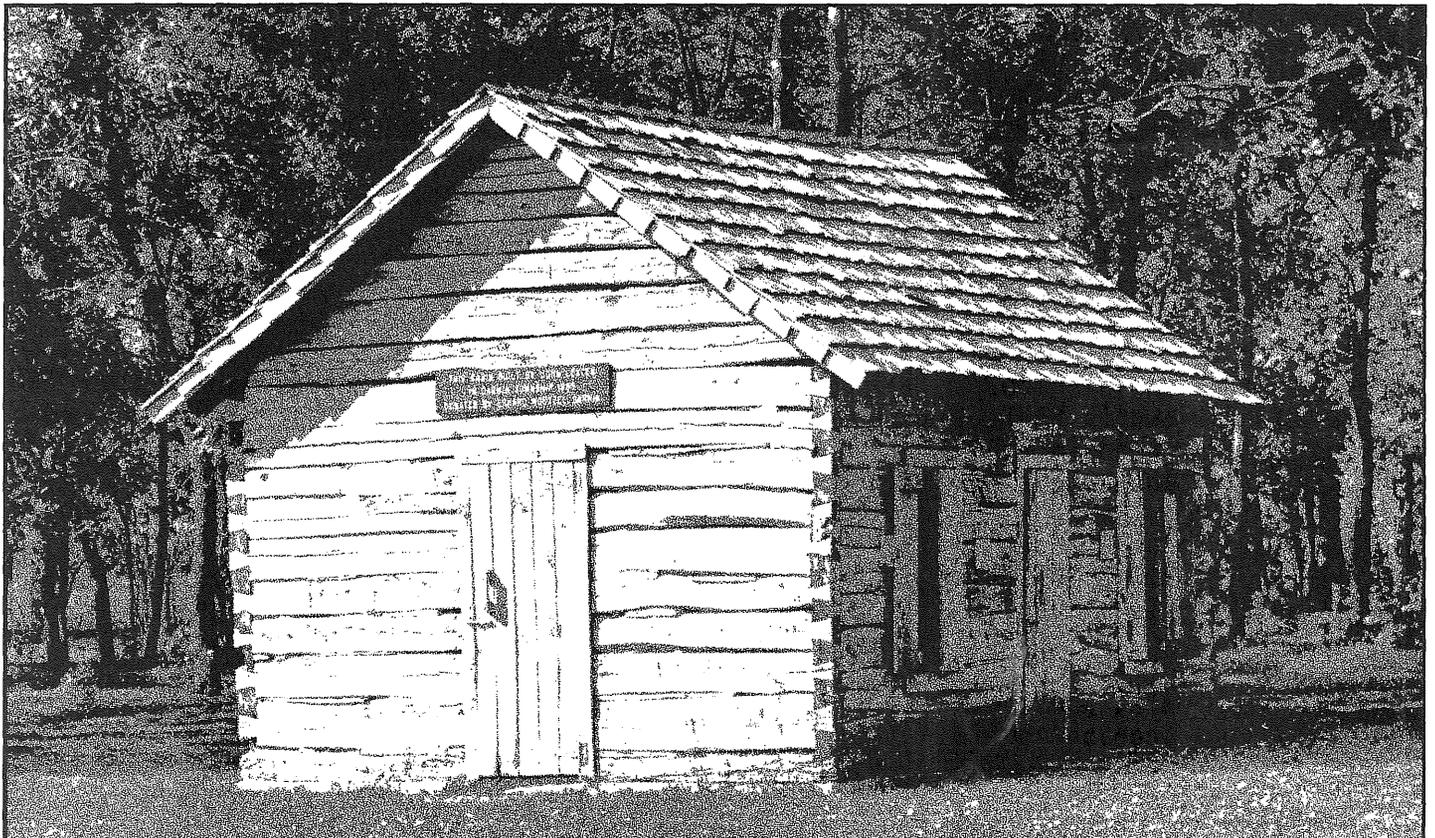
Forest City Shaw Memorial Park, located in Forest City, is a 10-acre park covered with large oak trees. Facilities include a picnic area with three shelters, toilets, historic cabin, ball diamond, asphalt basketball and volleyball courts, horseshoe court and playground.

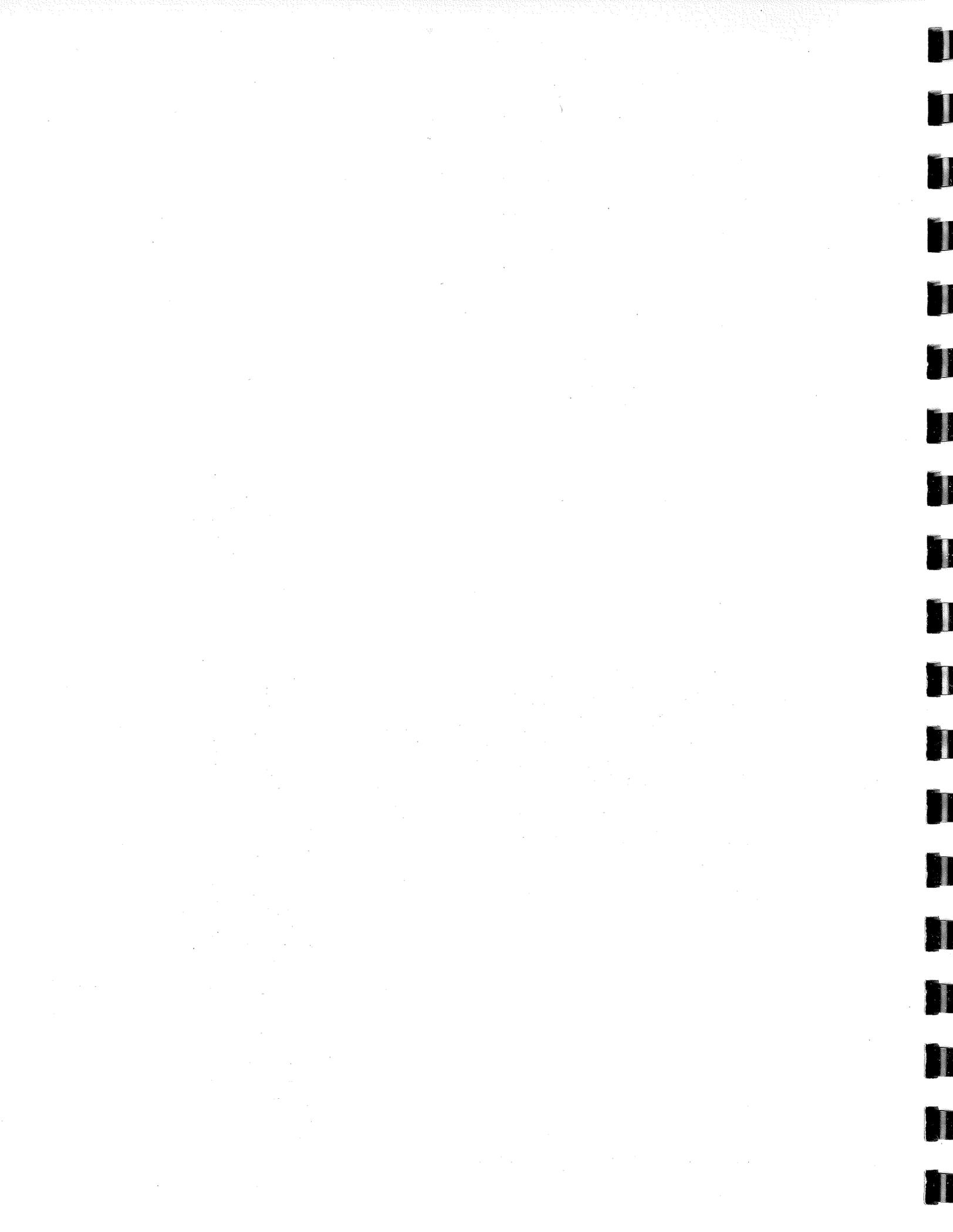
Kingston Finnish Memorial Park, located just west of Kingston, is under development by the county. Facilities will include a river access, picnic area and a canoe campsite.

There are no developed public access points along the study area. Access is available though undeveloped, at Lake Koronis spillway, Kingston Finnish Memorial Park, and Forest City Shaw Memorial Park.

Fifteen roads cross the Crow along this 40.8-mile course. Some of these crossings are used as access points. Many problems exist with the use of these existing bridges as access points. It is often difficult to tell where the highway right-of-way ends and private land begins. Therefore, river users may be trespassing while attempting access. These bridge accesses can also pose some traffic hazards if users park near the road bed. Other factors such as bank steepness and increased current speed under the bridges make some of these areas less than ideal access points.

Source:(1) Meeker County Park Board, K. Russel Bjorhus, County Extension Agent.





APPENDIX





RELATED PROJECTS

Water Safety Act

The Water Safety Act (Minn. Stats., Section 361.26) as amended, and another law (Minn. Stats., Section 378.32), convey water surface zoning authority to the Commissioner of Natural Resources and local units of government, respectively. Water surface use controls may regulate the type and size of watercraft allowed on particular water bodies, the type and horsepower of motors used on watercraft, times and areas in which watercraft may operate, and speeds at which watercraft may operate. Such controls are intended to resolve conflicts between various types of users, promote safety for persons and property, and protect the physical resource for future generations. The Commissioner has the authority to control water surface use under the Wild, Scenic and Recreational Rivers System Regulations.

Floodplain Management Act

The Floodplain Management Act of 1969 is legislation that will have an effect on the management of lands adjacent to the Crow River.

Regulations under this Act are designed to restrict uses which are dangerous to health, safety or property in time of flooding or which cause increases in flood heights and velocities; and require that uses vulnerable to flooding, including public facilities which serve such uses, be protected against flood damage at the time of initial construction. At the present time, state approved floodplain management rules and regulations have not been applied to the North Fork of the Crow River within Meeker County. Affected counties and municipalities will be required to adopt floodplain ordinances meeting state approval as more data becomes available through the National Flood Insurance Program. Recent federal legislation, the Flood Disaster Protection Act of 1973 (P.L. 93-234), should expedite the adoption of land use controls in these counties because such controls are a requirement of the National Flood Insurance Program.

Shoreland Management Act

The Shoreland Management Act of 1969 required all counties, except Hennepin and Ramsey, to adopt land use control ordinances for the unincorporated shorelands of public waters. The three possible shoreland classifications for public waters are as either Natural Environment, Recreational Development, or General Development. Land use control ordinances are provided for each of these three possible classifications. These minimum standards or land use controls regulate: (1) the type and placement of sanitary and waste disposal facilities; (2) the size and length of water frontage lots suitable for building sites; (3) the placement of structures in relation to shorelines and roads; (4) the alteration and preservation of the natural

landscape; (5) the subdivision of shoreland areas. At the present time, the North Fork of the Crow River is classified Natural Environment within Meeker County. This classification is the most restrictive of the three possible classifications.

The scope of the Shoreland Management Program was expanded in 1973 (M.S.A. Chapter 379), to include shoreland within incorporated areas. The Municipal Shoreland Act provides for the establishment of minimum statewide shoreland standards and criteria for incorporated areas. Kingston, located in the study area, would be affected by the Municipal Shoreland Act.

PROJECT FINANCING AND COSTS

Existing Sources of Funding

The following are the most common sources of funds for financing acquisition, scenic easements and development of recreation areas. They are applicable to any river within the state.

The Land and Water Conservation Fund (LAWCON) is administered by the Bureau of Outdoor Recreation (BOR), Department of Interior was established in 1965 to assist states and their political subdivisions in providing urgently needed public outdoor recreation areas and facilities.

The BOR shares 50 percent of the cost of planning, acquisition and development on projects which relate to outdoor recreation. Acquisition of lesser interests, such as scenic easements, are eligible when such lesser rights will insure a desired public use of the property. Scenic easements may be obtained with LAWCON funds on the basis of their merit and contribution to outdoor recreation.

The Soil Conservation Service of the Department of Agriculture administers project grants for flood prevention, sedimentation and erosion control, agriculture water management and outdoor recreation facilities. Resource Conservation and Development (R.C.&D.) grants are authorized on a long range comprehensive development plan within a recognized geographic area (i.e., a river watershed). Several different federal, state and local sponsors may be involved with the project and cooperate in the project's completion.

Natural Resources funds are derived from a two-cent-per-pack tax on cigarettes and are appropriated during each regular session of the Minnesota Legislature. The intent of the funds are to finance an accelerated program of natural and recreational resource development. The Minnesota Resources Commission reviews requests for Natural Resources funds each biennium and forwards to the House Appropriations Committee and the Senate Finance Committee its evaluations and recommendations.

Natural Resources Federal Reimbursement Account funds are accumulated from reimbursements and matching funds received from the federal government for expenditures of state appropriations. These funds are available for acquisition and development of state recreation or historic lands. The appropriations made out of the federal reimbursement account must have the approval of the Governor after consultation with the Legislative Advisory Committee. They are limited to one million dollars during a biennium.

DNR funds from the state snowmobile, cross-country skiing and bicycle grants-in-aid program are available to local units of government and snowmobile and bicycle clubs. The program is administered by the DNR Division of Parks and Recreation. Grants-in-aid funds are derived from the unrefunded gasoline taxes and the registration of snowmobiles. They are available for land acquisition and/or lease, trail development, trail facility development and trail maintenance. The program provides 65 percent of the cost of the project with the local unit of government or trail club providing 35 percent.

Funds may be solicited from any private sources, but only a few examples will be mentioned:

state park associations	trail clubs
private foundations	JC's
corporations	community organizations
private citizens	fund raising functions

Donations of land and interests in land, including scenic easements and facilities are accepted on the behalf of the Governor of the State of Minnesota by the DNR. They are important because they allow appropriated funds for acquisition and development to be extended. The generosity of private citizens is appreciated and remembered by a permanent acknowledgement on the site or facility. Land donations are appraised by a competent land appraiser and a portion of the true land value may be deducted from the donor's personal income tax.

Possible Future Sources of Funding

Although no funds have been appropriated from the revenue gathered by registration of canoes, it is expected as a future source. Canoes and kayaks represent an ever-growing percentage of the total watercraft registered and have accounted for approximately 70 percent of all new watercraft registrations since 1972. Funds appropriated from canoe registrations could be spent for acquisition of land or interest in land and recreational development. Recreational developments might include primitive campsites, rest areas, canoe and boat accesses and portages.

