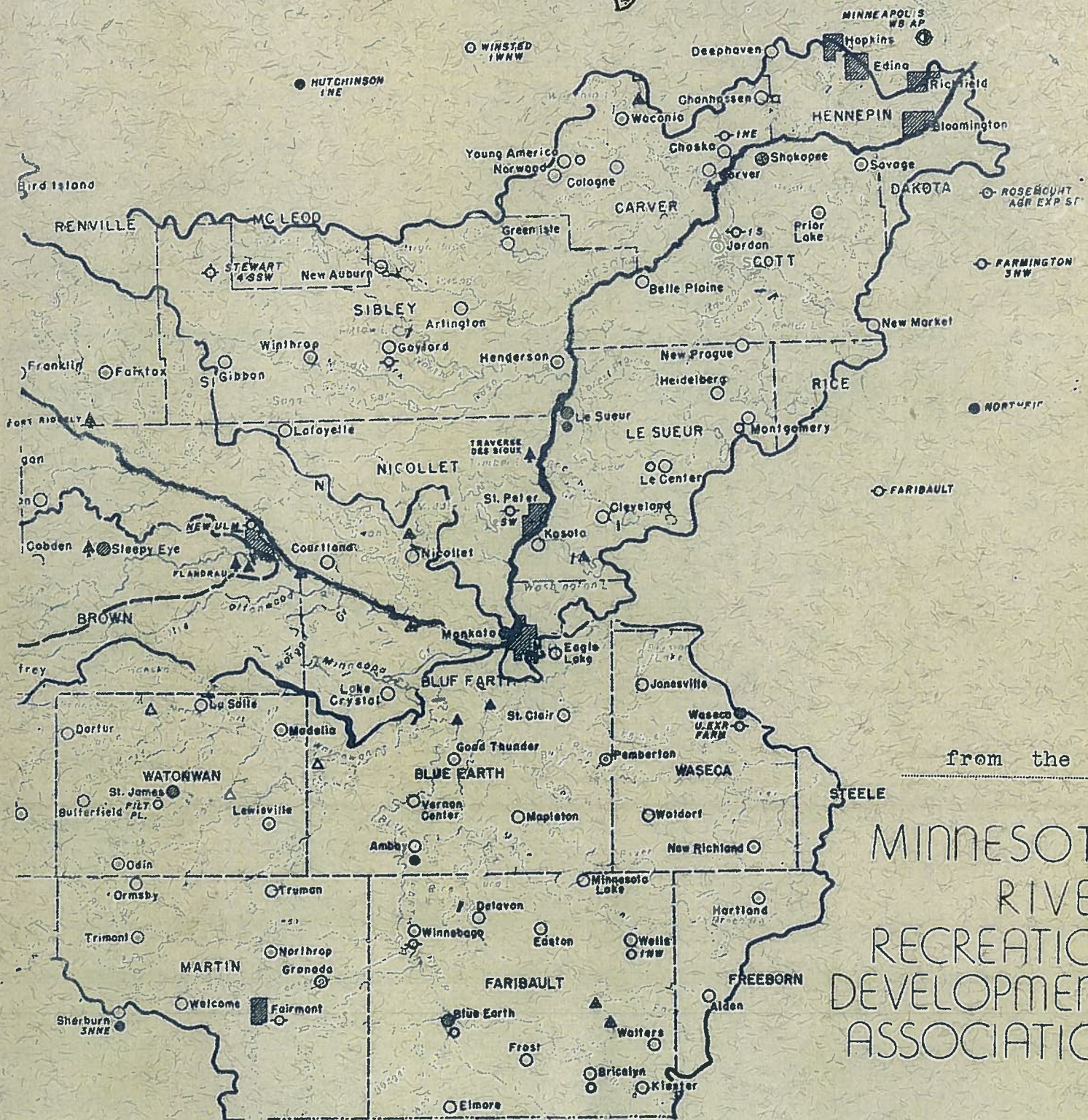
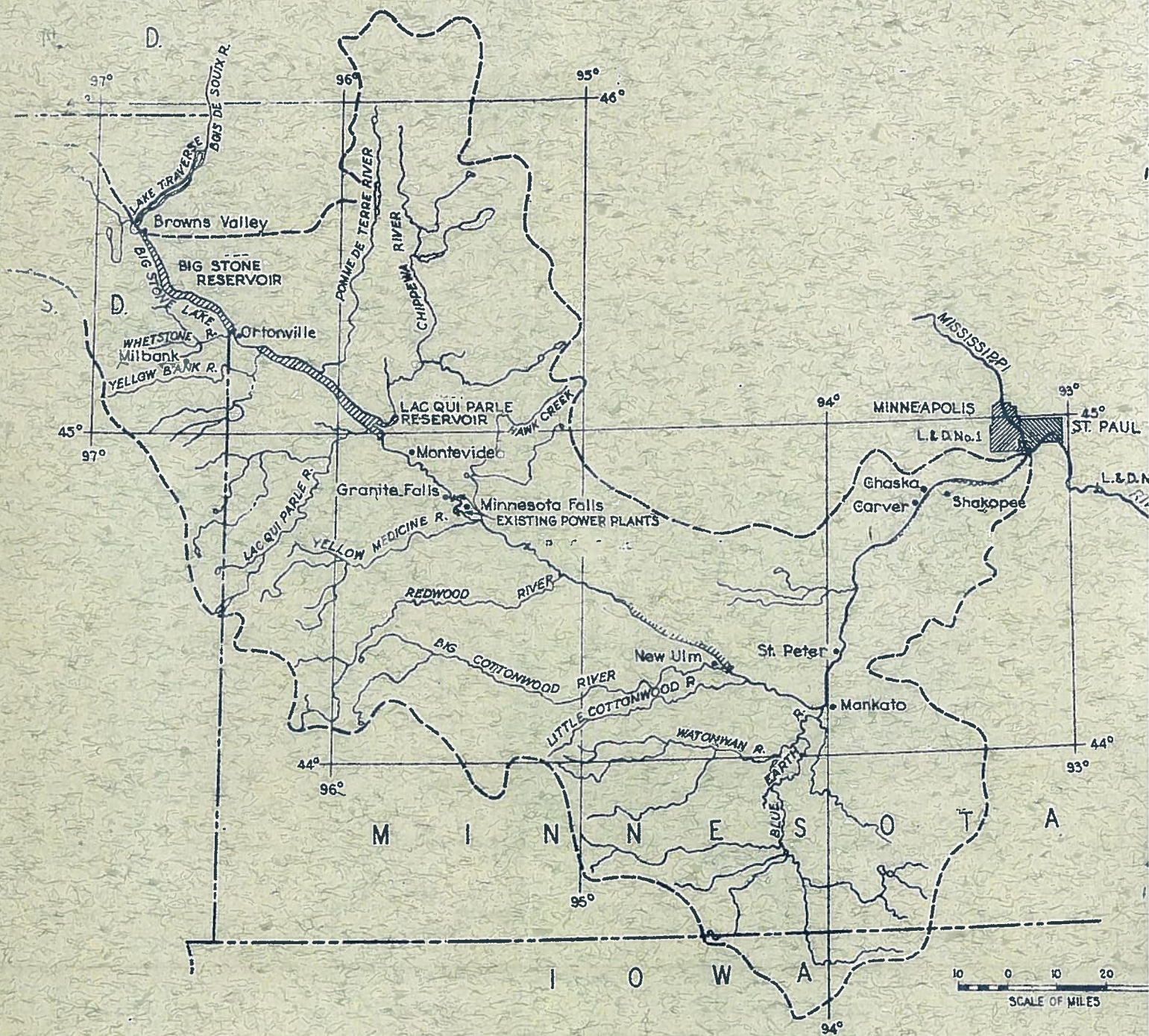


REPORT ON THE
Minnesota River
FOR THE
1963 Legislature





GENERAL MAP OF MINNESOTA RIVER BASIN

CONTENTS

The outside COVERS, when opened out, show the Minnesota River watersheds within the State

Inside Front Cover
Minnesota River Basin

Inside Back Cover
State Parks on River

HISTORY

GEOGRAPHIC DATA

WATERSHEDS of RIVER

MAPS OF WATERSHEDS OF:
Cottonwood River
Blue Earth River
Minnesota River-Hawk Creek
Lower Minnesota River

STATISTICAL DATA

Facilities on River

Pollution Control and
Conservation

Summary and
Recommendations

Acknowledgements

To the Honorable

SENATORS and REPRESENTATIVES

of the State of Minnesota

Gentlemen:

The "forgotten river" is forgotten no longer, thanks largely to the action of the 1961 Legislature. The appropriation made at that time has stimulated the entire area, resulting in a tremendous increase in interest and use of this longest body of water entirely within the State.

We who have studied the river have no doubt that State expenditures to facilitate use will be small compared to the economic and recreational benefits which may be derived. The increased boat and fishing licenses and gasoline tax will substantially return any investment by the State, to say nothing of the general boost in the retail economy of all the communities near to or otherwise serving the river.

Over and above all this is the value that cannot be measured in money, opening up a huge new vacation area in the State, handy to most of our population and with a great tourist potential.

Our organization is pleased to present this report on the Minnesota River. This organization, its members and officers, stand ready to furnish any assistance or information you may require. We consider it a privilege to work with and for our State.

Sincerely,

H. F. Dietrich

OFFICERS and DIRECTORS

President

William F. Dietrich, LeSueur

Vice-President

Lawrence Wallner, New Ulm

Treasurer

Arthur E. Anderson, LeSueur

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Dick Stewart, Mankato

MINNESOTA RIVER RECREATION DEVELOPMENT ASS'N

A non-profit corporation, based at LeSueur, Minnesota

What went before ...

THE GLACIERS MADE THE RIVER

Some 12,000 years ago the last of the glaciers, melting northward, created what geologists call Lake Agassiz and the River Warren. Both lake and river were immense, fed all summer by the shrinking glacier, and in draining to the south and east carved out what we know today as the Minnesota River valley. The greatest floods of our times are puny in comparison to the volume of water that carved through granite and prairie to what is now the valley and the river as we know it.

IT WAS THE BROAD HIGHWAY

To the Indians it was the Minne Pau Sota - to the early French explorers it was the St. Pierre - to the early settlers the St. Peter. Now and for many years it has been - the MINNESOTA.

For centuries this river was the major artery of traffic for Indians, hunters, traders, missionaries, settlers. It was an easier access to the west than across the land. Trade goods and furs could be transported in bulk with minimum effort; later it carried horses and cows and farm machinery to tame the land. Bordered with woods, hills and prairies, it was a source of shelter, food and wealth.

Such bounty was not long ignored, and the settlers came, creating Shakopee, Chaska, Carver, Mankato, New Ulm, and many other towns through the whole length of the river. Steamboats, the colorful river packets, served the communities on regular schedules out of St. Paul to New Ulm and beyond.

SUDDENLY IT WAS FORGOTTEN

The Civil War came - the Sioux uprising - and then the railroads spanned the state and made the paddlewheels obsolete. The river was forgotten.

For years the giant slept, occasionally impressing itself upon the residents of the valley in times of flood, but then only as a menace.

SOME STILL SAW ITS VALUE

In 1935 the U. S. Corps of Engineers submitted a far-sighted report to Congress on the practicality of developing the Minnesota River for commerce and flood control, but no local interest developed and the project was dropped except for dams built at Laq qui Parle, Marsh Lake and Big Stone Lake. The real potential of the river to serve the state and its people was ignored.

COMMERCE AND INDUSTRY REDISCOVER THE RIVER

During the Second World War the river staged a brief revival when ocean-going ships were built at Savage and floated down to the Mississippi and thence to New Orleans. After the war the facilities were purchased by Cargill, Inc., who commenced limited grain shipments by barge.

After World War II, Northern States Power built a generating plant in Burnsville, and together with Cargill they created a deep nine-foot channel to carry barges loaded with coal and grain. This same area rapidly filled with people, since the Minnesota river here meanders through the southern part of the metropolitan area of the Twin Cities where the suburbs are multiplying population.

Barge tonnage began to increase to such an extent that soon there was more tonnage carried on the Minnesota than to the Port of Minneapolis. Richards Oil Company built a terminal port; so did Continental Grain Co. Then in 1962 the Peavey Elevator was built in Valley Industrial Park, and the nine-foot channel extended to Shakopee.

RECREATIONAL VALUES APPEAR

Meanwhile, recreational boating was also finding that the river could be used for pleasure boating and fishing. The marina at Mendota was renewed and expanded. Aquaport started at Lyndale avenue, Bloomington, in 1958. In 1957 a leisurely eight-day trip by open raft from the Minnesota headwaters at Ortonville to its mouth at Fort Snelling and the Mississippi by a man and his wife received wide-spread notice in local papers along the way. The Centennial observances in 1961 of the Sioux uprising centered almost entirely on river towns and many people were made sharply aware of what a treasure lode of history the river and its valley holds.

In 1961 a large state park was proposed at the juncture of the Minnesota and Mississippi. The State Legislature quickly saw the value of this and authorized the formation of Fort Snelling State Park the same year.

THE STATE BECOMES INTERESTED

During the 1959-60 period, an Interim Commission studied the Mississippi and Minnesota Rivers. The hearings of that commission created interest in the Minnesota River, and this led to the establishment of the Minnesota River Recreational Development Association (MRRDA) in 1960. Members of this organization took part in and financed a documentary movie of trips on the Minnesota, Mississippi and St. Croix rivers, with color and in sound, called The Forgotten River. This film was shown hundreds of times in the Minnesota River valley and in many places throughout the state, even going so far as New York and Chicago. Writer Evan Jones of New York was working on a book on our Minnesota River, and after viewing the film he adopted its name for his book - forgotten river was being remembered!

Interest in the river and its potential now began to snowball. There developed wide-spread support for a proposal to the 1961 Legislature that an appropriation be made to help make the river passable for recreational craft from Shakopee to Mankato. Through the efforts of the Interim Commission, the Department of Conservation and interested citizens, the appropriation was made in the amount of \$20,000 for the biennium.

THE SNAG BOAT

Through the help of the MRRDA, a snag boat was equipped and began operation in May of 1961, although state funds would not be available until after July 1, 1961. Basic clearance and marking work was commenced to allow a small-boat regatta to be held in early July of 1961 in conjunction with the Minneapolis Aquatennial. This regatta was an unqualified success and will lead to many other such events in the future, drawing many boaters from outside the state as well as within it.

During the summer of 1961 the snag boat operated between Mankato and Shakopee, clearing a basic channel for small craft. This snag boat, originally financed by MRRDA, did the channel improvement work under the appropriation, but the cost of boat and equipment was not from this appropriation.

CARVER RAPIDS DYNAMITED

A serious barrier to low-water navigation was the rock shelf at the so-called Carver Rapids, so in February of 1962, at extreme low water, a 14-foot wide cut was dynamited through the lower rock shelf at the rapids.

All channel work has been done after consultation with and approval received from the U. S. Corps of Engineers and the State Department of Conservation, Division of Waters.

PLEASURE BOATS INCREASE

No channel work was done during the summer of 1962. The water was extremely high during almost the whole of the boating season; the snag boat could not get under the upstream bridges. However, with such high water, the snags did not particularly hinder small boats. In spite of the high water (and possibly somewhat because of it) pleasure boats on the Minnesota increased rapidly during 1962, with many trips being made both up and down stream as far as New Ulm.

A RIVER CITY SEES A PROFIT

Residents of New Ulm and the surrounding area became interested in the commercial and recreational returns that could accrue to that city, and during the late fall and early winter survey trips were made to determine the feasibility of extending all-season navigation to New Ulm. It was found to be completely practical, requiring only snagging operations similar to that on the lower river and the same moderate dredging that will be needed below Mankato to make the river navigable in low water.

WHERE DO WE GO FROM HERE?

This is the history to date of the development of the Minnesota River, whose potential as a state resource has barely been touched.

GEOGRAPHIC DATA

Total length of river from Big Stone Lake to Mississippi . . 332 miles
New Ulm to Mississippi . . 142 miles
Mankato to Mississippi . . 108 miles
Mankato to Shakopee . . . 83 miles

Area

The Minnesota River Valley is from one to five miles in width, from 75 to 200 feet in depth and drains an area over 16,900 square miles, of which 14,250 square miles are in Minnesota.

Population

The population of counties and communities adjacent to the river from New Ulm to the Mississippi add up to almost one half of the population of the State. Its juncture with the Mississippi is in the center of the Metropolitan area, which has had - and is - experiencing phenomenal growth.

Type of Land

Rolling prairie, occasional outcroppings of granite, from low to moderately high hilly areas. Richly agricultural: corn, beets, peas, soybeans, dairying. Silica sand of high quality in Ottawa area is the major source of supply for Brockway Glass at Rosemount. Granite quarries.

Elevation: 966 feet above sea level at Big Stone Lake to 800 feet at Ft. Snelling. Average drop 8/10 foot per mile.

Navigational interruptions

Dams at Big Stone Lake, Marsh Lake, Laq qui Parle and Granite Falls. Natural rock falls at Granite Falls. Rock shelf at Carver Rapids (channel opened here in February, 1962.

Channel

At extreme low water, some very shallow stretches have poorly defined channels. These generally occur where streams enter the main river or where there has been recent bridge construction. It is these areas which should be dredged to some minimum depth and width. From Chaska to the mouth, the river level is held up by the dam on the Mississippi at Hastings. This creates, in effect, an immensely long, narrow lake of almost no current at low (or pool) level. From Shakopee (Valley Industrial Park) to the mouth there is a nine foot channel, created and maintained by private funds. In 1964 the Corps of Engineers are to begin the construction of a Federal channel to mile 14.5 (Continental Grain Elevators.)

Watersheds: Ten watershed units make up the total watershed of the Minnesota River. They are listed on the following pages. Also included are maps of the 4 watersheds from New Ulm down.

State Parks: Six existing state parks on Minnesota River, two authorized parks, one proposed park and one new site under study. (see map of State Parks)

THE TEN WATERSHED UNITS OF THE MINNESOTA RIVER

Lower Minnesota River watershed comprises 1487 square miles and includes an area from Mankato to the Mississippi; a population of 126,000 people live in this watershed (1950). River drops one inch per mile from Mankato to Carver. SNAG HAG operated in this watershed unit.

Hawk Creek watershed includes the Minnesota River from Montevideo to Mankato. 1479 square miles, 39,300 population (1950). The river averages a drop of one inch per mile except for the four miles between Granite Falls and Minnesota Falls, where there is a drop of 41 feet. This area consists of several streams which drain into the Minnesota, of which Hawk Creek is the largest.

Blue Earth River watershed includes 3,106 square miles in Minnesota and 453 in Iowa. 1950 population 96,200. Drains into the Minnesota at Mankato, only spot where watershed touches the Minnesota.

Cottonwood River watershed borders the Minnesota from Redwood Falls to North Mankato. 1,878 square miles, 1950 pop. 58,500.

Redwood River watershed touches the Minnesota only at North Redwood. 739 square miles, 1950 pop. 22,600.

Yellow Medicine River watershed borders the Minnesota from near North Redwood upstream almost to Montevideo. 1,057 square miles, 20,500 people in 1950.

Chippewa River watershed touches the Minnesota from Montevideo upstream to Lac qui Parle reservoir. 2,072 square miles, 43,000 pop. (1950), many lakes, 16 state dams, and the Watson Sag, which is an exposed glacial river channel used now in flood control.

Lac qui Parle river watershed touches the Minnesota at its drainage point into the Lac qui Parle reservoir. 767 square miles; 16,000 people (1950).

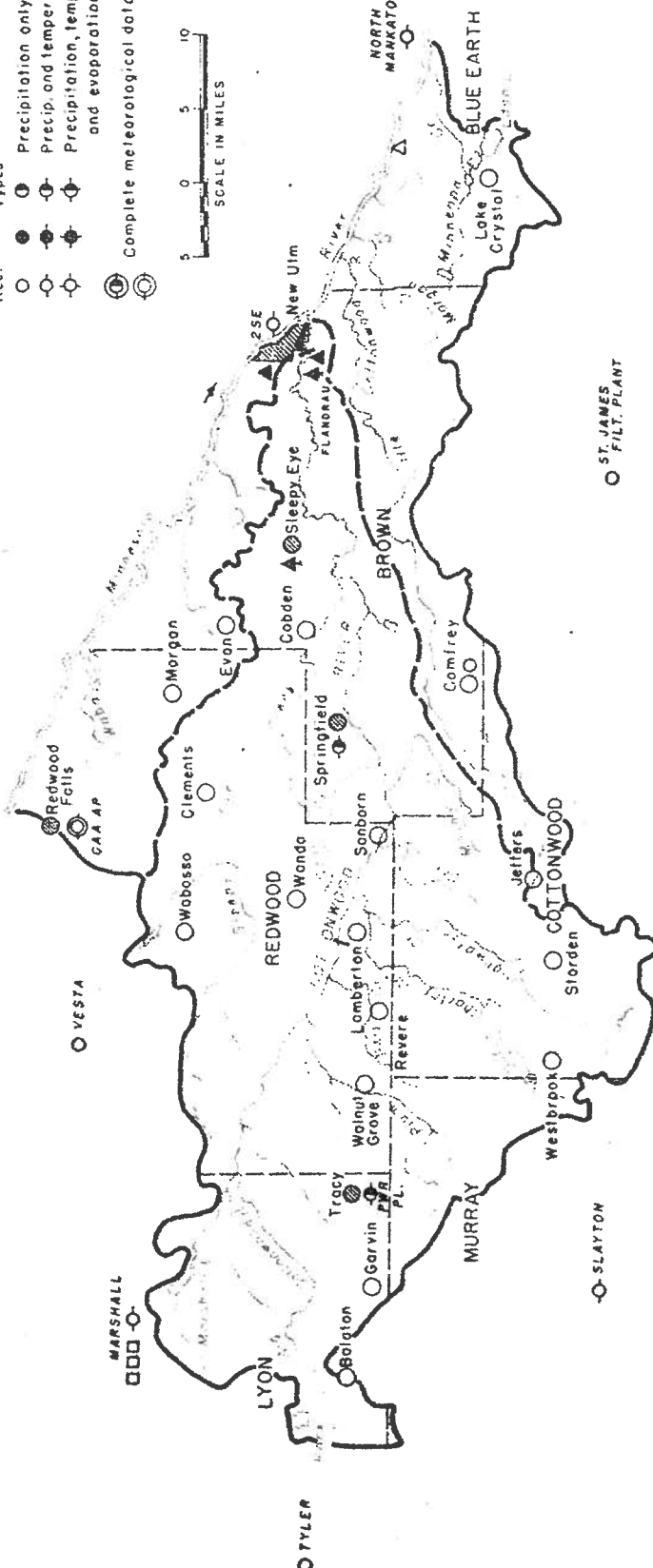
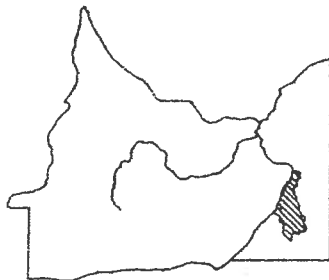
Pomme de Terre River watershed drains into the Minnesota at Appleton. It includes 966 square miles; 20,250 population (1950).

Big Stone Lake watershed is in the headwaters area of the Minnesota river. 688 square miles of this watershed is in Minnesota, and an even larger area in South Dakota. Population in Minnesota section about 10,000 (1950). Big Stone Lake reservoir, along with Marsh Lake and Lac qui Parle reservoirs constitute a flood control project that, when completed and coordinated, will completely control floods of 15-year frequency, will substantially reduce extreme floods, and also provide water from storage for minimum flows required by several communities downstream for municipal water supplies.

COTTONWOOD RIVER WATERSHED UNIT

EXPLANATION

- POPULATION**
- Over 5,000
 - 2,500 - 5,000
 - Less than 2,500
- STATE PARKS**
- State Park, Wayside, Memorial Park, Recreational or Scenic Reserve
- SURFACE WATER STATIONS**
- Recording
 - Non-Recording
 - Discontinued
- GROUND WATER STATIONS**
- Recording
 - Non-Recording
- WEATHER STATIONS**
- Both Rec. Types
 - Precipitation only
 - Precip. and temperature
 - Precipitation, temperature, and evaporation
 - Complete meteorological data



EXPLANATION

POPULATION

- Over 5,000
- 2,500 - 5,000
- Less than 2,500

STATE PARKS

- State Park, Wayside, Memorial Park, Recreational or Scenic Reserve

SURFACE WATER STATIONS

- Recording
- Non-Recording
- Discontinued

GROUND WATER STATIONS

- Recording
- Non-Recording

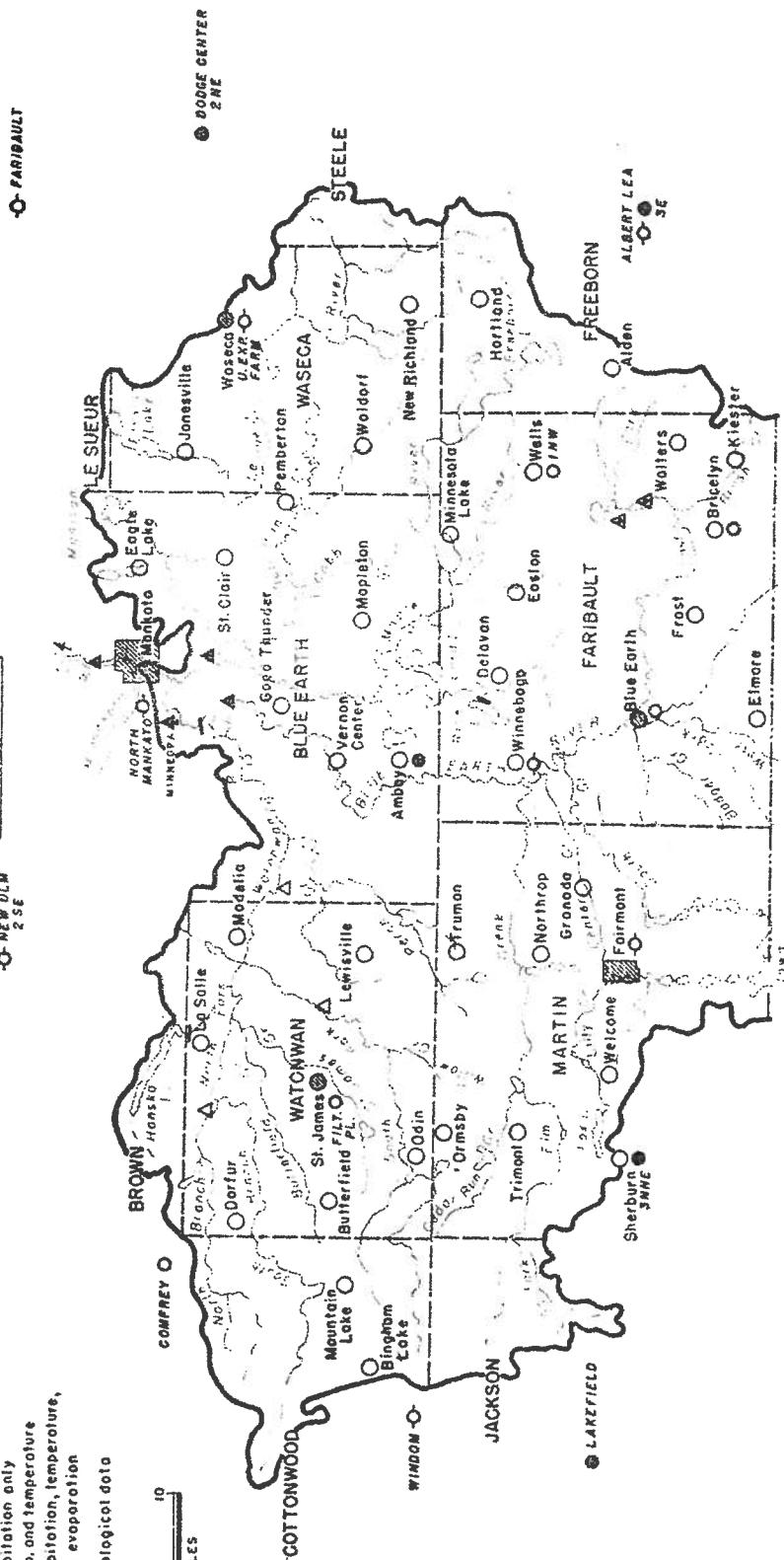
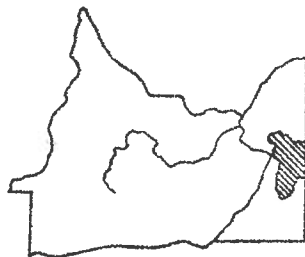
WEATHER STATIONS

- Non Rec. Bath
- Non Rec. Types
- Precipitation only
- Precip. and temperature
- Precipitation, temperature, and evaporation
- Complete meteorological data

- Complete meteorological data



BLUE EARTH RIVER WATERSHED UNIT



MINNESOTA RIVER - HAWK CREEK WATERSHED UNIT

EXPLANATION

- POPULATION**
 Over 5,000
 2,500 - 5,000
 Less than 2,500

STATE PARKS

- State Park, Wayside, Memorial Park, Recreational or Scenic Reserve

SURFACE WATER STATIONS

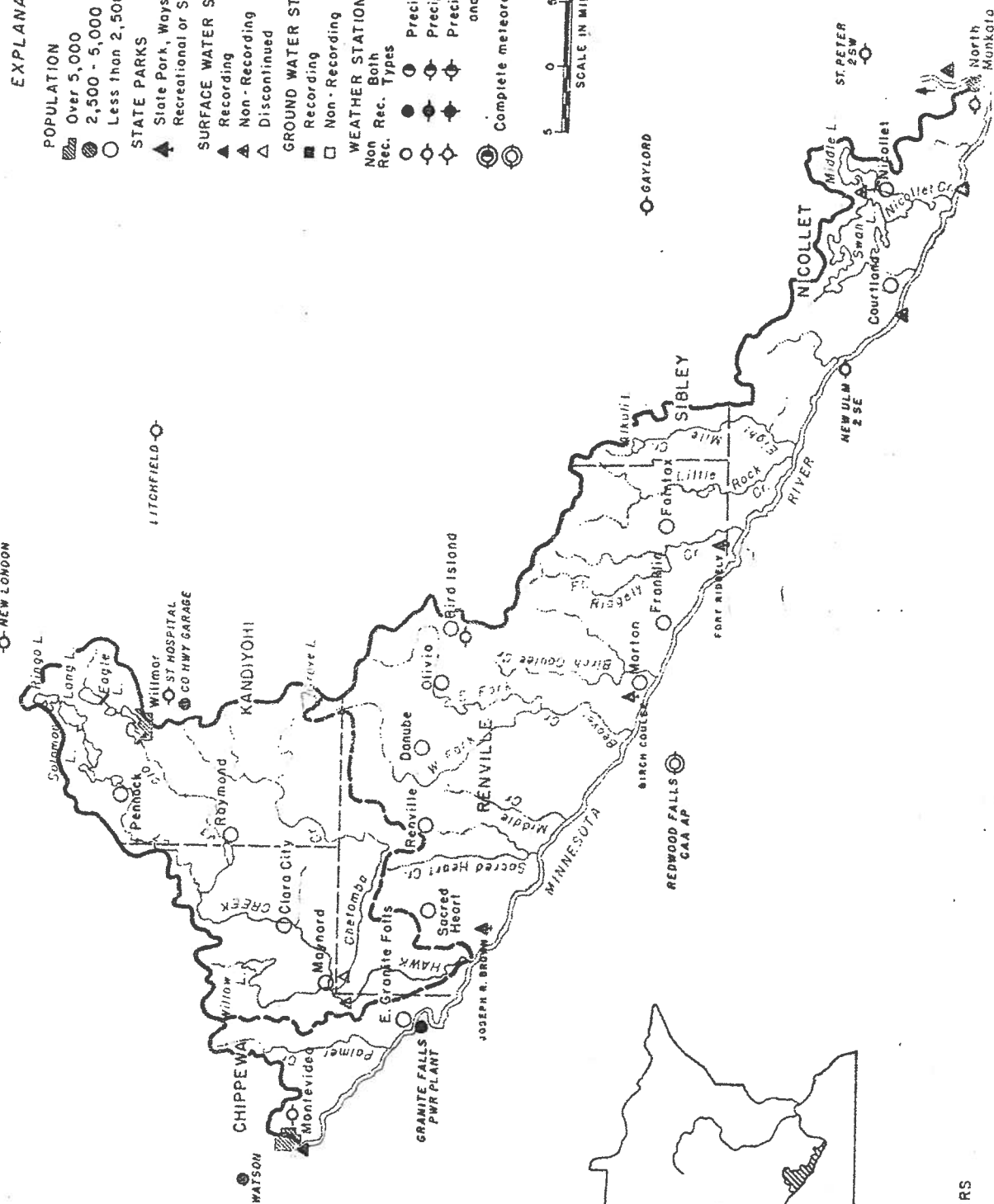
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GROUND WATER STATIONS

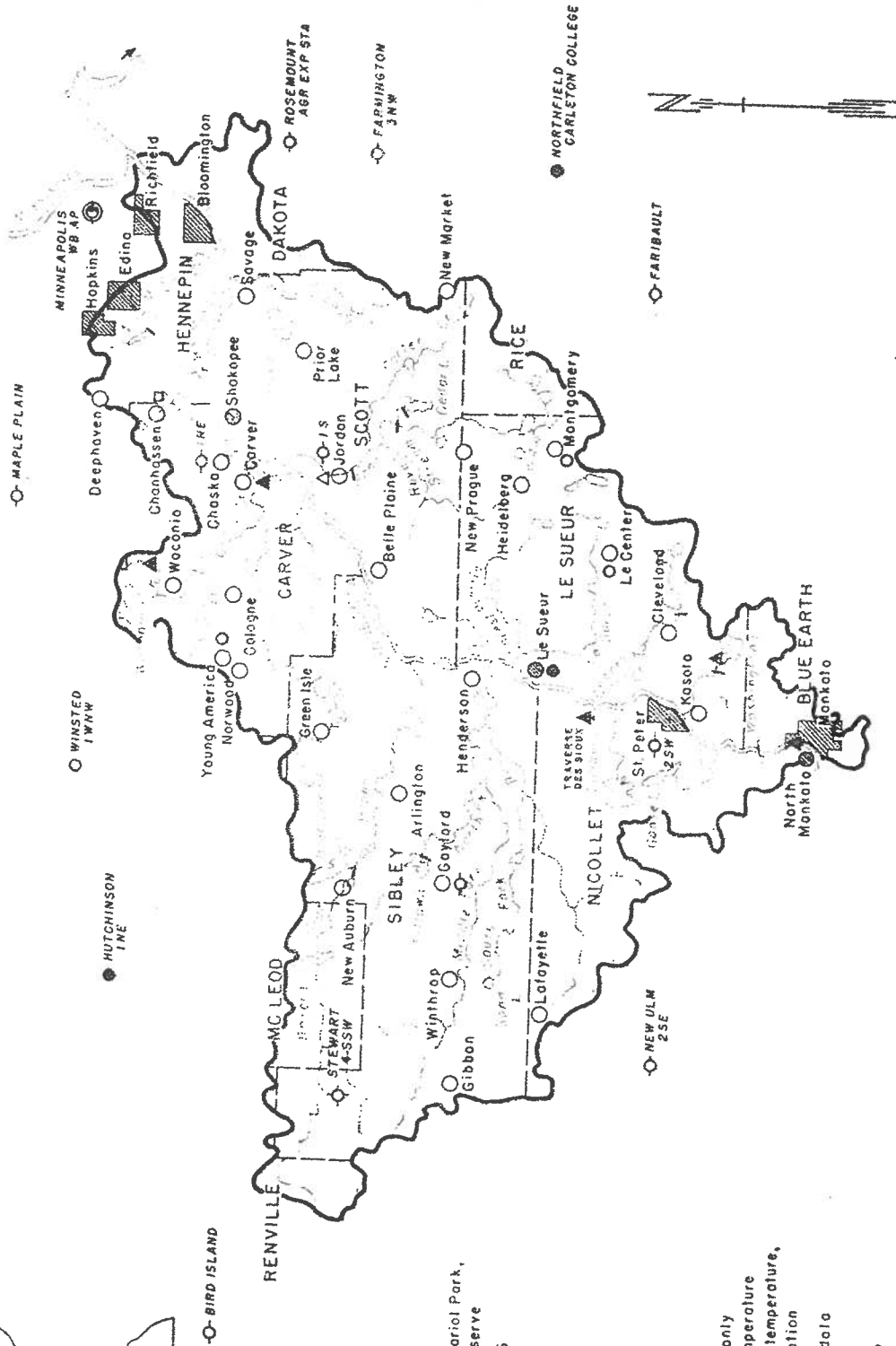
- Recording
 Non-Recording

WEATHER STATIONS

- Both Rec. Types
 Precipitation only
 Precip. and temperature
 Precipitation, temperature, and evaporation
 Complete meteorological data

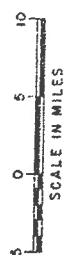


LOWER MINNESOTA RIVER WATERSHED UNIT



EXPLANATION

- POPULATION**
 - Over 5,000
 - 2,500 - 5,000
 - Less than 2,500
- STATE PARKS**
 - State Park, Wayside, Memorial Park, Recreational or Scenic Reserve
- SURFACE WATER STATIONS**
 - Recording
 - Non-Recording
 - Discontinued
- GROUND WATER STATIONS**
 - Recording
 - Non-Recording
- WEATHER STATIONS**
 - Both Rec. Types
 - Precipitation only
 - Precip. and temperature
 - Precipitation, temperature, and evaporation
 - Complete meteorological data



DIVISION OF WATERS
1959

INDUSTRIAL tonnage and PLEASURE BOAT data below show how people are taking to the water. With the population increase and the shortened work week, the need for more waterways becomes apparent.

Commercial traffic on Minnesota (from U. S. Corps of Engineers.)

1962 data not yet available; substantial increase is expected again, especially since the new Peavey Elevator near Shakopee began shipping in late summer, at mile 22.2.

1952	291.206	tons
1953	434,696	"
1954	666,980	" *
1955	785,251	" ⊗
1956	682,602	"
1957	958,830	"
1958	1,236,367	"
1959	1,280,213	"
1960	1,367,502	"
1961	1,626,754	"

Boat registrations, State of Minnesota 1960-61 (Department of Water Safety)

<u>LENGTH</u>	<u>INBOARD</u>	<u>OUTBOARD</u>	
15' & under	544	120,526	
16' to 25'	2554	48,179	
26' to 39'	861	511	
40' to 64'	112	27	Outboard & Inboard
			Total
TOTALS	4,071	169,243	173,314

Distribution of outboard motors and sales (from Outboard Boating Club)

Minnesota ranks seventh in the nation with an estimated 259,000 outboards in use in 1961, and ranked eighth in sales with 15,600 motors sold in 1961.

The Twin City metropolitan area ranks fifth in the nation with an estimated 129,000 outboards in use in 1961; and fifth in sales, with 8,200 sold in 1961.

Growth of Water Sports in area: some indication may be had from figures furnished by Aquacrafts, the Aquaport Marina on Minnesota River at Lyndale avenue.

	<u>Boats in Harbor Storage</u>	<u>Gallons Gas Sold</u>	<u>Out-of-State Visitors coming in by boat</u>
1958	25	no record	none
1959	30	5,300	3
1960	36	8,200	20
1961	42	15,000	43
1962	55 (capacity, turned away)	21,000	135

Estimated annual expenditures for boating (from NAEBM and OBC) (in U.S.)

1947	\$ 905,000,000
1950	680,000,000
1955	1,230,000,000
1960	2,525,000,000

FACILITIES ON MINNESOTA RIVER

Miles upstream from Mississippi	Community, Company and kind of operation			open to public	financed by	esta- blished
0.2	Ft. Snelling Park	state park		yes	public	1961
1.2	Mendota	Twin City Marine	harbor	yes	private	1955
7.0	Burnsville	Meadow Inn	park & landing dock	yes	private	1958
7.8	Burnsville	Twin City Barge	cleaning	no	private	1962
8.0	Burnsville	Northern States Power	coal dock	no	private	1952
10.6	Bloomington	Aquaport	harbor	yes	private	1958
10.7	Burnsville	proposed public access		yes	public	not completed
12.1	Burnsville	Kraemer Rock Crushing		no	private	1957
13.0	Savage	Cargill's Inc.	grain, etc.	no	private	1950
14.5	Savage	Richard Oil Co.	oils	no	private	1952
14.7	Glendale twp.	Continental Grain	grain	no	private	1961
22.2	Shakopee	Peavey Elevator	grain	no	private	1962
24.5	Shakopee	Camerons Harbor	harbor	yes	private	1962
25.0	Shakopee	city park landing	landing	yes	public	1961
29.5	Chaska	proposed harbor and access	harbor	yes	combined pub & pvt	not comp.
49.0	Belle Plaine	harbor and access		yes	private	1961
74.6	LeSueur	harbor and access		yes	private	1961
89.7	St. Peter	access (harbor proposed)		yes	combined pub & pvt	1961
106.0	Mankato	sand and gravel operation		no	private	1950
107.5	Mankato	city park access		yes	public	1961
140.0	New Ulm	proposed harbor and access		yes	private	not comp.
142.0	New Ulm	city park access		yes	public	1961

POLLUTION CONTROL AND ABATEMENT

In the last few years it is estimated that something between five and ten million dollars have been spent (or are being spent) on sewer improvement to the waters of the Minnesota River and its tributaries.

Some of the plants known to be complete or under construction are:

Savage, Scott county	new plant	under construction	\$ 300,000.
Shakopee, Scott "	new plant	completed 1962	\$ 500,000.
Chaska, Carver "	new plant	authorized 1962	\$ 400,000.
LeSueur, LeSueur "	new plant	under construction 1962	\$ 750,000.
St. Peter, Nicollet cnty	new plant	under construction 1962	\$ 770,000.
Mankato, Blue Earth "	new plant	under construction 1962	\$ 1,500,000.
North Mankato, Nicollet"		under study for connection to Mankato	

Burnsville and Eagan townships in Dakota county have engineering studies under way. The entire Metropolitan Sewer Studies contemplate using the Minnesota River in one or more ways.

In addition to community sewer correction, many industrial firms along the river have spent large sums to alleviate water pollution, and others have studies under way for this purpose.

Anyone who has been boating on the Minnesota River for more than a short time can already see tremendous improvement in the quality of the water, due to pollution elimination and control.

CONSERVATION PRACTICES AND IMPROVEMENTS

In the last three years a great interest in better soil and water practices has developed in the Minnesota River valley. Communities, farm groups and conservationists are busy studying ways and means to improve the situation and keep our topsoil where it belongs. Fish & Wildlife departments, both State and Federal, are active, as are state and local sportsmen's groups in preserving the wild life habitat in the valley and in improving the conditions to improve the yield.

The Governor's Committee on Natural Resources makes special mention of the possibilities of the Minnesota River in its report.

HISTORICAL SOCIETY

The Minnesota State Historical Society and its member units in counties and cities took special interest in the Minnesota Valley during the Centennial of the Sioux Uprising. This interest is continuing and the Society has high hopes of making this historical area better known to all. In conjunction with the Highway Department, the Sioux Trail is being developed and marked.

The MRRDA has been working with the Historical Society ever since it began its work to develop this river.

Summary

In general, the Minnesota River is

- A. Being developed and improved by both public and private means.
- B. An asset to the State in its
 - 1. Historical aspects
 - 2. Recreational uses
 - Boating
 - Fishing
 - Hunting
 - Preservation of natural flora and fauna
 - 3. Commercial activity
 - Barging of products into and out of the state
 - Creating jobs by development of marinas and other recreational facilities
 - 4. A source of future water supply for the Metro area
 - for public use
 - for industrial use
 - 5. A help in returning ground water to the reservoirs
- C. Worthy to be considered for more and continued public and private support for its development

Specifically:

It is the considered opinion of the members and officers of the Minnesota River Recreational Development Association that they recommend serious consideration by the 1963 Session of the State Legislature of:

- 1. Continuation of State support to channel improvement of the Minnesota River, extending present limits to New Ulm.
- 2. Authorize the extension of snagging and other operations to the City of New Ulm.
- 3. Appropriate the sum of \$40,000. to finance such activity during the next biennium (1963-64) one-half of this amount for continuation of present snagging and marking, and the other half for dredging those places on the river as required to create at least a three (3) foot channel to New Ulm from Shakopee.

The foregoing was approved at the January 17, 1963, meeting of the MRRDA at Shakopee by the officers and members present representing areas of New Ulm, Mankato, St. Peter, LeSueur, Belle Plaine, Chaska, Shakopee, Savage, Burnsville, and Bloomington.

This report and requests are herewith respectfully submitted to the members of the 1963 State Legislature.

William F. Dietrich - - President
Lawrence Wallner - Vice President
Clyde N. Ryberg - - Secretary

The work of the MRRDA in developing the river and in compiling this report would not have been possible without the generous cooperation of the following:

Conservation Department

Clarence Prout Commissioner
Sidney Frellsen Division of Waters
U. V. Hella Division of Parks
Stephen Sokolik Fish and Game
John McKane editor, Minnesota Conservation VOLUNTEER

Minnesota Historical Society, Russell Fridley, Director

State Department of Health
Pollution Control Commission
State Water Resources Board
State Highway Department
State Department of Business Development

State Association of County Commissioners

Metropolitan Planning Commission

U. S. Corps of Engineers
U. S. Fish and Game
U. S. Department of Agriculture

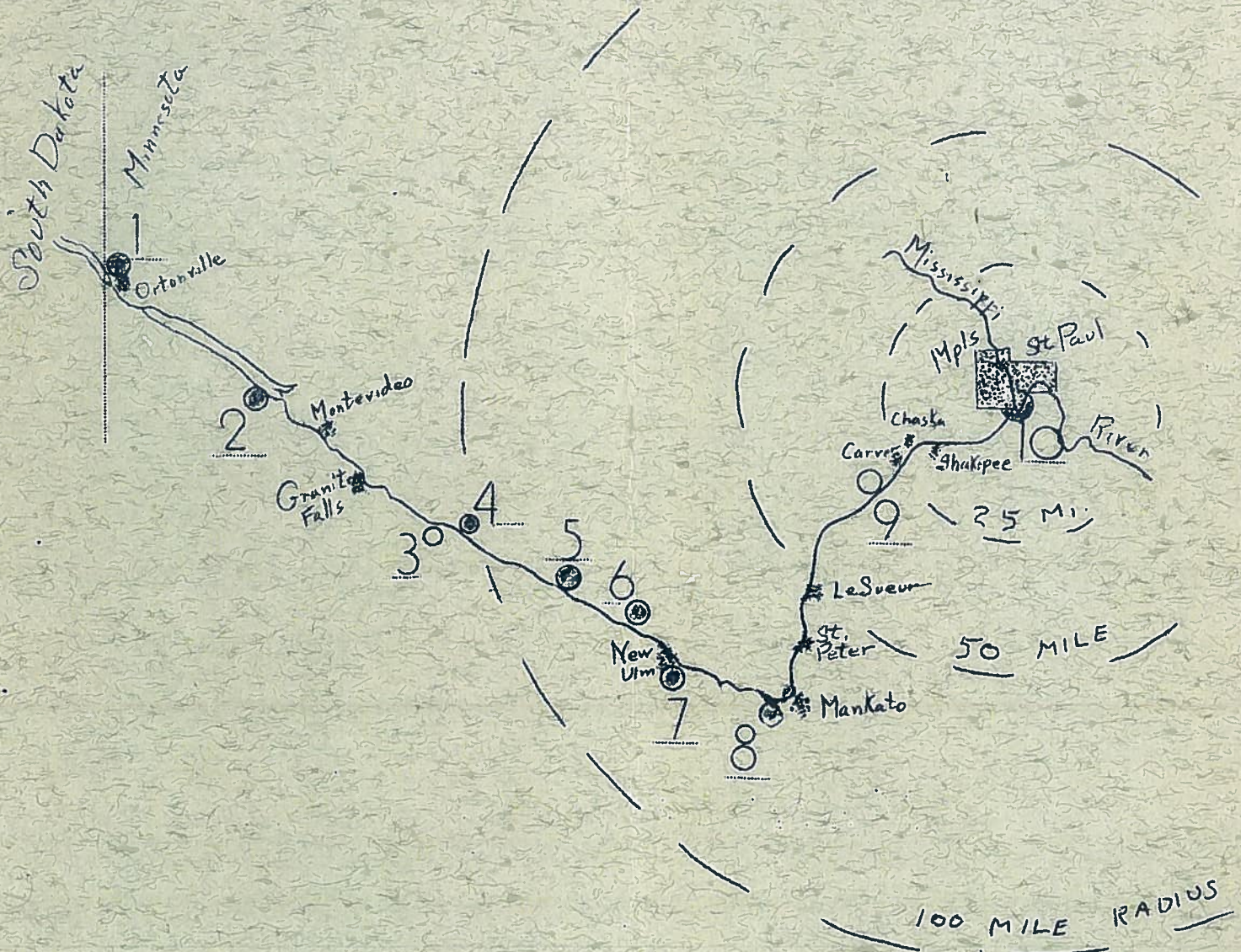
Belle Plaine Sportsmen's Club
Lost Dog and Fox Club, New Ulm

Minnesota Association of Marine Dealers
Outboard Boating Club of America
National Association of Engine and Boat Manufacturers

Members of the 1959-1960 Interim Commission, Upper Mississippi Reservoir
and Minnesota Valley Development
Senator Val Imm, Chairman

State Parks

- | | | |
|---|-------------------------------|----------------------------|
| 1 | Big Stone - authorized | |
| 2 | Lac qui Parle - existing | |
| 3 | Upper Sioux Agency - proposed | |
| 4 | Joseph Brown - existing | |
| 5 | Birch Coulee - existing | 8 |
| 6 | Fort Ridgely - existing | 9 |
| 7 | Flandrau - - - existing | 10 |
| | | Mineopa - existing |
| | | Carver Rapids - proposed |
| | | Fort Snelling - authorized |





"...remembering the
Forgotten River..."