

HAM LAKE

COLUMBUS

FOREST LAKE

FOREST LAKE

Anoka

Washington

LINO LAKES

BLAINE

CENTERVILLE

HUGO

CLEARWATER CREEK

ONEKA

LEXINGTON

CIRCLE PINES

SHOREVIEW

NORTH OAKS

LINCOLN

GRANT

DELLWOOD

WHITE LAKE

BEAR LAKE

MAHTOMEDI

LINCOLN

WILLERNE

SPRING LAKE PARK

MOUNDS VIEW

RICE

FRIDLEY

NEW BRIGHTON

ARDEN MILLS

HILLTOP COLUMBIA HEIGHTS

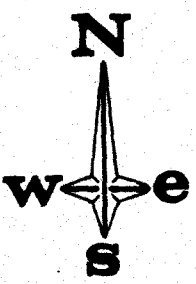
ST. ANTHONY

ROSEVILLE

RICE

CREEK

WATERSHED



Hennepin

Ramsey

THE RICE CREEK WATERSHED

Rice Creek flows through twenty-seven municipalities and four counties. It has its source in Clear Lake just south of the Village of Forest Lake and meanders southwestward through a chain of lakes to the Mississippi River in Fridley. The water which drains into it and its two tributaries, Hardwood Creek and Clearwater Creek, comes from Anoka, Ramsey, Washington, and Hennepin Counties and from an area bordering by Forest Lake, White Bear, Dellwood, Roseville, Arden Hills, Shoreview, New Brighton, Fridley and Blaine. This area is the Rice Creek watershed.

The League of Women Voters have long been active in support of "clean water". In 1968, nine Leagues within the Rice Creek watershed formed an Inter-League Rice Creek Watershed Study Committee. Leagues participating were Arden Hills, Blaine, Fridley, New Brighton, Roseville, Shoreview, St. Anthony, St. Paul and White Bear. These Leagues with 350 members, represent people who either live on lands which drain into Rice Creek, or use water from the creek (St. Paul Water Department users). The information in this booklet is copied from a booklet published by the Committee in May, 1971.

Before this booklet was prepared the Leagues studied the Rice Creek Watershed for three years. They then came to consensus on what they felt was the best solution to the problems of Rice Creek. This is the position statement:

The Leagues of Women Voters in the Rice Creek watershed believe that the long-term trend toward urbanization in the watershed will cause water resource problems to develop unless preventive government action is taken now. Comprehensive long-range planning, with regional cooperation, determination of best land uses, and citizen participation is essential to control pollution and protect water supplies. Present government units alone are inadequate to meet the problems -- an approach using stronger guidelines from Metropolitan Council and its boards, or a government unit along watershed lines with Metro Council reviewal power, and strong political and financial commitments to cooperation is necessary for effective conservation and development of the water resources.

The Inter-League Rice Creek Watershed Committee has followed closely the steps taken by Anoka, Ramsey, and Washington Counties to form a Joint Powers Agreement so that they could jointly petition the Minnesota Water Resources Board for the establishment of a Watershed District for the Rice Creek watershed. Because of the strong feeling by League members that action should be taken now to do something about the problems in the Rice Creek watershed, the Inter-League Committee has been actively supporting the establishment of a Watershed district.

On the following pages there is a discussion of the water resource problems that exist in the Rice Creek watershed. A fact sheet on Watershed Districts is included to clarify the purposes and powers of a Watershed District. Finally, there is a chart showing the Minnesota state agencies that are working in water and how the Watershed District fits into the statewide picture.

WATER RESOURCE PROBLEMS OF THE RICE CREEK WATERSHED

DRAINAGE

Rice Creek and its lakes and tributaries drain part of the north suburban area. Many of the villages along Rice Creek and its branches use it for storm sewer outlets and open ditching. In the northern portion of the watershed -- principally the Lino Lakes, Circle Pines, and Blaine area -- county ditches are maintained to drain the land and make it suitable for truck and sod farming.

If these northern suburbs are to urbanize completely, much of the land would require draining because it is wetland. The wet soils are the peats, poorly drained wet sands within the Anoka Sand Plain, heavy loam to clay loam which restricts internal drainage, and the flood plain which is subject to stream overflow. It is possible to impound surface water on the wetland area to form artificial lakes which would enhance the area and take care of drainage, but this is usually done only by developers of large tracts of land. If ditching is used, will the Rice Creek watershed be able to handle all the drainage plus spring run-off?

FLOODING

Drainage poses a threat in the Rice Creek chain as the land is generally flat and there are only small basins which could hold water. Localized flooding was a serious problem in 1965 in Fridley when the creek rose out of its banks. Increased development in the watershed will add more water to the creek with the probability of increasing the frequency, severity and range of flooding.

Rice Creek's size is also controlled by the amount of water that the St. Paul Water Department pumps from the station at Lake Centerville. The Department maintains a dam at Lake Peltier for holding water in Centerville Lake. This helps control the spring run-off in Rice Creek as well as aid in water retention.

WATER SUPPLY

Because St. Paul gets a great deal of its water from the Rice Creek watershed and also supplies water to Arden Hills, Lauderdale, Falcon Heights, Roseville, Maplewood, West St. Paul and Mendota, and there is the possibility of serving Little Canada, Shoreview, Vadnais Heights and North Oaks in the near future, the Rice Creek watershed is important. When it is possible, the St. Paul Water Department takes as much as 40 Million gallons a day, or one-third of the total water for that day, from Centerville Lake. At other times of the year, when the water level is low, the Department gets its water from the Mississippi. Except in late summer when algae blooms in the lake water may cause a disagreeable off-taste, the water from Rice Creeek is of higher quality and therefore less costly to treat for drinking water than the river water.

We are considered to be in a peak high water decade in the 60's. When we get less water, will the residents of the area want the St. Paul Water Department to take out so much water? Where would the Department get its water then? Could the Mississippi be used all year? (The St. Paul Water Department projects withdrawing the same amount of water from Rice Creek in 2000 A.D.)

One little understood and seldom considered role of the Rice Creek Watershed is its part in providing underground water supply for the entire Metropolitan region. The Jordan sandstone, which lies like a basin under the region, is believed to be nearest the surface in the Rice Creeek watershed and the Anoka sand plain to the north. Many private, industrial, and municipal wells in the Twin Cities and suburbs draw water from the Jordan sandstone. Is much of the water they draw seeping through the Anoka Sand Plain and the upper Rice Creek Watershed?

WATER SUPPLY, continued

A very limited recharge study, done by the Minnesota Geological Survey to supply data relating to the Ham Lake airport site question, showed that the surface water table near the Rice Creek chain of lakes is a "perched" water table, with little seepage to the underground. Other hydrologists dispute the implications from this data, and believe other studies indicate that significant recharge occurs here. A more detailed study could solve the controversy, and would have important implications for water management and land use.

NUTRIENT POLLUTION

Since numerous communities drain storm water in the watershed and spring run-off is considerable, it is possible for pesticides, herbicides, and commercial and animal fertilizer from lawns and farms and fields to enter the creek. Such nutrient pollution causes increased algae blooms. Although the blooms are not harmful, they are undesirable from a recreation and esthetic point of view. The cost of drinking water treatment is also increased.

PUBLIC AND PRIVATE SEWAGE POLLUTION

Forest Lake applied for a permit to enlarge their sewage plant, but the Pollution Control Agency denied their permit. It was decided it would be more feasible to build an interceptor sewer into the Metropolitan Sanitary Sewer District system. Until the interceptor is completed, the Forest Lake sewage treatment plant dumps its effluent into Howard Lake which is at the head of the Rice Creek chain of lakes. White Bear used to use the chain for its effluent, too, but it is now connected to the MSSD. The Lino Lakes Youth Treatment Center sends effluent from its sewage treatment plant to a holding pond near Marshan Lake.

In the Rice Creek Watershed, the only sewered areas are Forest Lake on the north and the southern villages like New Brighton and Fridley. So, besides the public sewage, there is private sewage that enters as the creek flows downstream due to inadequate or improperly placed private cesspools and septic tanks on the lakes, tributaries, the stream itself, or the entire watershed.

INDUSTRIAL SEWAGE

Until January 1971, an aluminum manufacturing plant in Fridley discharged a cloudy and caustic industrial effluent into Rice Creek. Though the Minnesota Health Department said the discharge was not a health hazard in the creek, Minnesota Pollution Control Agency regulations prohibit such a discharge into Rice Creek. Two years of negotiations with the FCA, the Metropolitan Sanitary Sewer District, the City of Fridley, and a change in the processing method were necessary before the hookup could be completed.

A resident living on Rice Creek noticed an oil slick on the stream and traced it to a storm sewer which came from a large industrial plant in Fridley. The plant said a switch had been pulled by mistake. Citizen action like this is necessary in the watershed since no one is policing it. Only when there is a complaint is action taken. Will such incidents occur more frequently with increased urbanization and industrialization?

EUTROPHICATION

Eutrophication is the natural process of aging that a body of water goes through from its existence as a lake to a marsh to being naturally filled in. This process takes tens of thousands of years. However, eutrophication can be greatly speeded up by pollution. In some literature some of the lakes in the Rice Creek chain are listed as marshes and in other geographical literature as lakes.

Many studies are being done on how to retard eutrophication. Some scientists feel that the effects of eutrophication can be retarded by dredging out marshes. Others say that when dredging occurs the ecological balance of the lake is upset and the lake dies anyway. In addition it is necessary to dredge correctly so that the seal at the bottom of the lake is not broken.

It appeared that the seal had been broken in Reshanau Lake, one of the Rice Creek chain of lakes, when a builder who owned most of the property around the lake dredged it. The inlet to the lake was cut off, and the shallow lake went down four feet before the inlet was reopened and the water level restored. There are reports of a controversy in the Department of Natural Resources over issuing the permit. The Game and Fish Division was against issuing the permit because Reshanau is a water-fowl lake. The permit was approved with only a stipulation that certain "islands" of cattails be maintained. On the other hand, many lakeshores have been enhanced when marshy areas were dredged, and that was the builder's intent here, to make the lake more usable for motor boating and waterskiing.

PROVISION FOR OPEN SPACE AND RECREATION AND WILDLIFE PROTECTION

The Metropolitan Parks and Open Space Chapter of the Metropolitan Development Guide designates a major park in the Lino-Lakes-Centerville area in the first rank of priority for the metropolitan area. The park is needed to preserve the unique natural values of the lakes area and to prevent serious water problems from developing with impending urbanization, representatives of Metro Council say. About \$1 million of state cigarette tax money may be allocated, upon request, each year to regional metropolitan parks such as a Lino Lakes Chain Park. The problem that faces the north suburban area is that key sections of the land may be developed before park land acquisition can take place. In addition, the Mayor and village council of Lino Lakes are adamantly opposed to the park idea, fearing "metropolitan takeover". They also object to having a large park around the lakes, which run through the center of the village, because it would split the village, they feel. They consider the lakeshore property some of the most attractive in the village. If the land were developed, it would add to the property tax base. However, development requires municipal services, too, and some say a major park would attract more desirable, higher tax-yielding development, and so create a more favorable tax picture.

The St. Paul Water Department controls 2,128 acres of land along the water-course (1,457 by fee title, easements on 22 acres, and flowage rights on 649 acres) to protect their water supply. Anoka County leases land from the St. Paul Water Department for a park and public beach along the southern edge of Centerville Lake. Other counties and municipalities also maintain public beaches and parks within the watershed. Most of the lakes are relatively shallow, have marshy areas and some algae bloom in the summer. So far lakes in heavily populated and sewered areas, such as Lake Johanna, White Bear Lake, and Long Lake are safe for swimming. The lakes are also used for canoeing and boating by many lakeshore dwellers. The Ramsey County Open Space Plan proposes preservation of natural drainage areas as open space for recreation, wildlife, and to save on storm sewer construction costs.

Although the Dept. of Natural Resources has not considered the Rice Creek watershed a major wildlife area, much wildlife does exist in the area. Many of the lakes good habitat for duck breeding and nesting. Over 80 species of birds, 14 species of reptiles, 18 species of mammals and 100 plant species have been catalogued by the Rice Creek nature trail citizens' committee. Metropolitan Council representatives

working with the City of Fridley to develop a Rick Creek Nature Trail. In the northern part of the watershed several gun clubs own large tracts of land for duck hunting by their membership.

MULTIPLICITY OF GOVERNMENT UNITS

Many governmental agencies, as well as county and municipal governments, are involved in the watershed, as the above material indicates. The Pollution Control Agency can be called in when pollution threatens. Metropolitan Council is working on a Rick Creek Nature Trail and Lino Lakes Chain Park. The Metropolitan Sanitary Sewer District will act to get the Forest Lake sewage out of the Rice Creek chain. The Department of Natural Resources considers permits for dredging and rechanneling. On-site sewage disposal plans are reviewed by the Minnesota Health Department. The St. Paul Water Department is concerned about protecting the source of much of its water. Metropolitan Council established development guidelines and approves requests for federal funding.

LONG TERM EFFECTS OF URBANIZATION

As we have seen, governmental responsibility over water in Rice Creek watershed is fragmented. No governmental body is concerned with the watershed as a whole, no one agency sets policy and regulations for the area. Each community which Rice Creek and its tributaries drain is concerned about their portion of the watershed and what happens to the stream above them but not below them. Residents all over the metropolitan area ought to be concerned because it is the source of much of the drinking water of St. Paul and the suburbs it services, and may be an important source for wells which draw their water from the Jordan Basin.

The drainage problems in the northern suburbs will increase as these areas build up. Will development occur in a way that will preserve water resources or will there be periodic flooding? Will the collective ordinances and storm sewer systems work for the watershed or will these be inadequate?

Who is going to set standards on the regulation of septic tanks? What will happen to the wetlands and peat bogs? Will there be industrialization in the watershed? Will complexes such as shopping centers be built on wetlands? Often such developments do not cause problems in the community in which they occur, but in communities downstream. Should the water be impounded? Will standards be set up to control nutrient pollution so that beaches and parks in the area and downstream do not become useless.

If we are in a peak high water period, what will happen to the watershed when there is less water? Will St. Paul be allowed to pump all the water they want from Centerville Lake or will provisions have to be made for the level of water downstream?

A public hearing on establishment of a Rice Creek Watershed District will be held by the Minnesota Water Resources Board in June 1971. This could set up a form of regional water resource management in the watershed. Will a watershed district alone be able to cope with the water management problems? Would some other type of arrangement work better at less cost? Should an already existing agency like the Metropolitan Council be given more control over municipal development? A metropolitan storm water study, delineating effects of varying development densities on natural resources will supply policy guidelines for Metro Council and expert advice for local governments that wish to take it. Will this be enough? Would the limited powers a watershed district has be enough to protect the Rice Creek watershed? What would be the cost to the taxpayer for the various possible uses of land and water and means of water management?

What course of action ought the north suburban areas choose for the Rice Creek watershed?

FACT SHEET: MINNESOTA WATERSHED DISTRICTS (Chapter 112, Minnesota Statutes) 1969

Watershed districts are independent units of government formed "in order to carry out conservation of the natural resources of the state...for the protection of the public health and welfare and the provident use of the natural resources."

HOW ESTABLISHED - by the Minnesota Water Resources Board, following this procedure:

1. the counties or cities and village or a group of residents within the proposed district file petition with the Water Resources Board
2. Official recommendation of the Conservation Department is made within 30 days
3. Public hearings scheduled within 35 days (heard by Water Resources Board)
4. establishment of a district or dismissal of the petition.

BOUNDARIES - along natural water drainage boundaries. Set by Minnesota Water Resources Board, using data from Conservation Department.

PURPOSES - May be any or all of the following: Flood control; stream channel improvement; reclaiming wetland; providing irrigation water; stream-flow regulation; watercourse diversion; supplying water for domestic, industrial, recreation and other public uses; regulating use of watercourse for waste disposal; drainage system changes; erosion control; regulating improvements by riparian landowners. Must be stated in the petition.

POWERS - The district may regulate water use; work on or operate drainage systems and dams; acquire property; and take other actions necessary to carry out the purposes of the district. Enforceable by district court injunction or order.

HOW GOVERNED - By a 3-5 man Board of Managers. First Board named by the Water Resources Board. Successors named by County Commissioners. Managers serve 3 year terms, are paid per diem expenses. They appoint a citizens advisory committee of at least 5 members.

OPERATION - First, the Board of managers submits an overall plan for carrying out the purposes of the district to the Minnesota Water Resources Board. After receiving the opinion of the Conservation Department, the Water Resources Board holds public hearings on the plan, then prescribes an overall plan for the district.

The Board of Managers does not initiate projects except under special circumstances. Petitions may be filed with the Board of Managers for projects or improvements conforming to the overall plan. After engineer's reports, appraisers' reports, recommendations from the Water Resources Board and the Conservation Department are received, a public hearing is held by the Board of Managers of the watershed district, who then decide whether or not to undertake the project of the petition. Appeal of a watershed board's proceedings may be made to the district court or the Water Resources Board.

FUNDS - Supplied by property tax levy; when appropriate, district may issue revenue bonds, borrow federal funds, or make special property assessments. Funds consist of 1) organization and administrative fund (limited to the lesser of 3 mills or \$75,000); and, as needed, 2) a bond fund, 3) a construction fund, 4) repair and maintenance funds.

TERMINATION - A watershed district is created in perpetuity. However, a petition seeking termination may be submitted to the Water Resources Board. The petition must be signed by 25% of the resident landowners. The Water Resources Board holds a public hearing and determines whether the district shall continue or be terminated.

FOR FURTHER INFORMATION: contact Minn. Water Resources Bd., 353 Centennial Bldg.
St. Paul, 55101 (2212840) 6

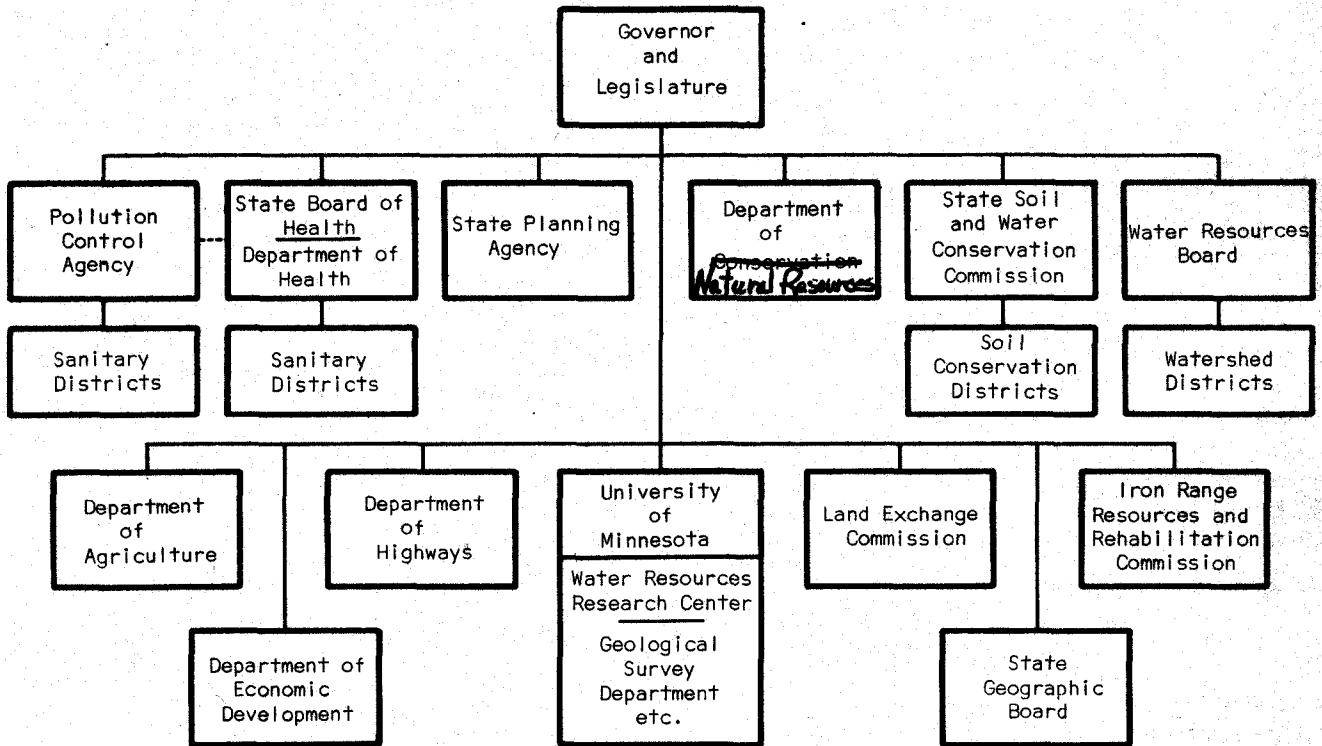


FIGURE 44. STATE AGENCIES CONCERNED WITH WATER AND RELATED RESOURCES MANAGEMENT IN MINNESOTA