

CITIZENS LEAGUE REPORT

A RIVER

TO USE AND

TO ENJOY

How the Twin Cities Area Can Develop a Balanced Program To
Preserve and To Enhance the Mississippi Riverfront

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I N T R O D U C T I O N

At the time our committee began its discussion of the Mississippi Riverfront in late summer 1973, many - if not most - of us knew very little about the river. Very few of us had been in a boat on the river, and only one or two lived near the river,

The charge from the Citizens League Board of Directors, which, in part, asked us to determine, for the metropolitan area portion of the Mississippi, the adequacy of existing efforts "*. . . to preserve and enhance the beauty of areas along the river and to 'open up' the river so it can be more fully appreciated as a resource for the entire region,*" sounded interesting, and many joined the committee for that reason.

Although the feeling of several members of the committee was that the river was a foul-smelling, polluted body of water and that most of the land along the river had been forever lost to unsightly industry, we soon found out this was not an accurate description of the Mississippi River in the Twin Cities.

The river is actually much cleaner than we had thought, and will become much cleaner in the future. Along the river, vast amounts of land - yet to be developed - still retain a rich natural beauty, a beauty that ranges from the rugged bluffs of the Gorge to the undeveloped splendor of the floodplain. Even certain aspects of the development that has already occurred along the river have a beauty of their own; a barge tow moving up the river, for instance.

We quickly realized that this river, which most of us had taken for granted, was a resource that wasn't lost to us, but rather something that was still worth working hard to save.

As we were about to complete our report, we re-read the charge we had been given ten months earlier. In reading it again, we were struck by the words "*preserve and enhance*" -- words that, without realizing it, we had come to use to identify the two essential steps that must be taken, and must be taken now, in order for others to appreciate the river as we have.

MAJOR IDEAS

- * THE MISSISSIPPI RIVERFRONT is on the verge of experiencing significant new development.
 - The riverfront, long ignored as a valuable resource for the region, is increasingly recognized as a high-amenity site for development.
 - Exciting plans for the river, and newly established commercial ventures on the river, are contributing to an increased interest in the riverfront by the public.
 - Increased industrial and commercial use of the riverfront, and increased barge traffic on the river, can be expected. A major coal transfer facility may well be constructed at Pig's Eye.
 - Additional land will be needed in the future for dredge spoil disposal.
 - As a high-amenity site, the riverfront will be viewed increasingly in the future as a favorable site for housing, both single-family and high-density.
 - New and upgraded roadways can be expected along the river.
 - A new sewage treatment plant may be constructed on the river in Fridley.
 - To provide land for new developments, floodplain land will likely continue to be filled and developed.
- * STEPS MUST BE TAKEN NOW by public agencies to preserve the Mississippi Riverfront as a regionally significant public resource, and insure that the pending uses do not eliminate the opportunity to increase the public use of the riverfront.
- * RECOGNIZING THE MISSISSIPPI RIVERFRONT primarily as a public resource does not necessarily mean that existing uses of the riverfront should be eliminated, nor that all of the riverfront be publicly owned.
 - The Mississippi Riverfront can, and should, continue to be viewed as a multiple-purpose resource. It is not necessarily desirable to eliminate totally any of the present uses that are made of the riverfront.
 - The riverfront, however, is a limited resource. It will not be possible to accommodate all of the projected uses of the riverfront. Limitations will be necessary. Choices between alternative uses will need to be made.
- * THE EXISTING GOVERNMENTAL FRAMEWORK for managing the land along the Mississippi River is not adequate, for it does not sufficiently recognize the systematic nature of the riverfront, nor does it adequately recognize the regional significance of the riverfront.
- * THE CRITICAL AREAS ACT, on the other hand, provides an effective tool for guiding future development of the Mississippi Riverfront. The river corridor in the metropolitan area should be established as a permanent state critical area to insure that future development within the riverfront is based on standards which recognize the river corridor as a regionally significant natural system.

I N O U R R E P O R T

- * STANDARDS, which will guide all future development in the river corridor, should be established which will provide public access to the shoreline; provide protection to the river bluffs and increased protection of the floodplain; insure that riverfront roadways enhance the riverfront; protect existing riverfront parks; control the density and improve the appearance of developments; restrict commercial and industrial developments to certain portions of the river corridor.
- * AN AFFIRMATIVE PROGRAM for the further enhancement of the riverfront should be initiated. The protection of the river corridor as a critical area is of primary importance, but is not totally sufficient to turn the vast potential of the riverfront as a public resource into reality.
 - A Riverfront Enhancement Program should be developed by the Metropolitan Council, in cooperation with the Metropolitan Parks and Open Space Commission, the Minnesota Historical Society, and county and municipal agencies. The program should build upon existing plans for the river.
 - The primary purpose of such a program should be to draw more people to the river and enable them to more fully appreciate and use the riverfront. The program should increase the recreational use of the land along the river; stress the important role the river played in the history of the region; and serve to stimulate and encourage further recreationally oriented commercial developments along the river.
 - The recreational aspects of the riverfront program should emphasize those projects, such as trails, which utilize to greatest advantage the linear nature of the riverfront.
- * A PRIVATE ORGANIZATION, similar in nature to the Voyageurs National Park Association, should be established to promote greater interest in the use of the river by the public. A private citizens group can be effective in helping to protect and enhance the river. It should encourage support of riverfront projects by public officials and assist in the raising of funds for these projects.
- * WITH RESPECT TO SPECIFIC ISSUES which affect the riverfront, we recommend:
 - The Watergate Apartment site be acquired and made a part of the riverfront park system.
 - Alternate sites be considered for the coal transfer facility that is being proposed for Pig's Eye Lake.
 - The practice of disposing of dredge spoils on the banks of the river above the Ford Dam be terminated within the next two years.
 - The Metropolitan Sewer Board not build a new waste treatment plant on the river above Minneapolis.

FINDINGS

Part I

UNDERSTANDING THE MISSISSIPPI RIVER - WHAT IT IS AND WHY IT BECAME THE BASIS FOR SETTLEMENT IN THE TWIN CITIES

Before one can develop any plan for the Mississippi Riverfront, it is necessary, first, to have an understanding of what a river is - what its components are, what it does, how it serves man. With respect to the Mississippi Riverfront, in particular, it is also important to realize that the Mississippi River was the single most important reason why this area was settled where it was and why it grew into a major industrial and commercial center in the way it did.

A. As a river, the Mississippi is a unique natural system.

A river - and, to a lesser degree, a stream or creek - exists for the purpose of moving water. In that important respect, it is unique - unlike anything else.

A river contains many distinct and divergent parts, but in total it is, and must be treated as, a system. Any action on one part of the river - building a dam, filling the floodplain, discharging wastes, etc. - will have an impact throughout the length of the river.

1. As with any system, a river is composed of several distinct components. For purposes of this study, the river corridor has been defined to include:

- * River channel - That part of the river necessary to move the normal flow of the river. Depending upon the depth of the channel and the volume of the water, the channel may be very deep or quite shallow.
- * Floodplain - That portion of the river valley that is inundated when the river is at flood stage. The floodplain often is subdivided into two components:
 - Floodway - That portion of the floodplain that is used to move the flood waters. The floodway serves much the same role as the river channel during times of normal water level, although it encompasses a larger area than the channel.
 - Floodfringe - That portion of the floodplain that stores, rather than moves, flood waters. During times of flooding, the floodfringe serves much the same purpose as a reservoir.
- * Islands - These are laced throughout the river corridor. In general, they are small and easily flooded during high water. Several, however, are quite large in area; and a few - Nicollet Island and Grey Cloud Island in particular - are the site of major developments.

- * Bluffs and blufftops - The bluffs that rise up from the floodplain, and that portion of the top of the bluff from which the opposite river bluff is visible, generally serve as the outer limits of this study.
- 2, The river valley changes dramatically as the river flows through the metropolitan area.

In total, the Mississippi River is 80 miles long from the point in Dayton where it enters the Twin Cities metropolitan area to the point below Hastings where it leaves Dakota County. It is between these two points that the river becomes one of the major watersheds and water transportation networks of the nation. The flow of the river at the southern point is between two to three times the flow at Dayton.

- * The river valley throughout the northern stretch can be described as a shallow, narrow valley that for the most part is lined with trees. The quality of the water is high enough to permit water-contact recreation in places.
 - * Between the Falls of St. Anthony and Fort Snelling, the river valley undergoes a dramatic geological change. This change can probably be best described by quoting General G. K. Warren (the first district engineer to be assigned to Minnesota by the United States Army) as he described the area as it appeared in the 1860's: "*. . . The valley of the Mississippi below the junction (with the Minnesota) . . . is wide and beautiful, and is continuous in direction and of nearly the same breadth, varying from about one to two miles. In marked contrast is the valley of the Mississippi above their junction, it being only about a quarter of a mile wide and nearly at right angles with the other. It is a mere gorge, whose bottom is almost completely filled by the river, and evidently has its origin in the water-fall now at St. Anthony.*"
 - * Below the confluence with the Minnesota River, the river valley is characterized by distant river bluffs and wide floodplains. Today, the stretch of the river below South Saint Paul is the least developed of any portion of the river corridor in the metropolitan area. Here, too, the quality of the water is the poorest.
- 3, The natural characteristics of the river have made it a valuable resource for society.
- a. It is a source of power. Lumber and flour are but two industries that utilized the flow of the river to operate their mills. The flow of a river can be used to generate electricity, and even today there are three hydro-electric generating plants in use on the Mississippi River in the Twin Cities area.
 - b. It is a source of water for domestic use. The constant flow of the river assures a reliable supply of water. The Mississippi River, for instance, is the primary source of drinking water for a large part of the Twin Cities area, including Minneapolis and St. Paul.

c. It serves as an important means of transportation. The river serves to connect two points and can be used much as a highway or railroad track to move people and freight. When this area was first settled, the river played an important role in transporting settlers and visitors to this area. Today, the Mississippi River is no longer used, to any significant degree, to transport people. It is, however, a major transportation system for the shipment of bulk freight, such as coal and grain, to and from this area.

4. The natural characteristics of the river serve to make it a prime recreation area.

The river is not only a working system but a recreation system as well. Many forms of recreation are possible along the river corridor in the metropolitan area: from hiking, bicycling or driving along the riverfront - or just stopping to view the geological splendor of the river valley - to water activities such as motor boating, canoeing, sculling, fishing, water skiing and (in places) swimming.

B. The Mississippi Riverfront has major historical significance to the Twin Cities area.

The history of the Twin Cities metropolitan area is practically written in the river. It was because of the river that this area was first settled, and it was because of the river that the Twin Cities became a major business center for the entire upper midwest.

In *Minnesota: A History of the State*, Theodore Blegen identified the importance of the river to Minnesota when he wrote: *"It is no chance circumstance that the leading city of the state grew up alongside the Mississippi and the eternally plunging (but not harnessed) Falls of St. Anthony, or that St. Paul, the capital city, was the head of steamboat navigation on the great river."*

Because the river served as the source for transportation for the white man when he settled this area - and, before that, for the Indian - the earliest settlements are nearly all associated with the river. Literally, the entire stretch of the riverfront from the beginning of Anoka County to the southern limit of Dakota County recalls the early life of man in this region. A few examples:

- * The Kelley Farm. Located just beyond the Anoka County line directly on the Mississippi River, this 190-acre farm was homesteaded in 1849 by Oliver H. Kelley, the founder of the National Grange. Today, the farm is a major historical site operated by the Minnesota Historical Society.
- * Red River Oxcart Trail. Going through the Kelley Farm and continuing along the east bank of the river to Brainerd and then on to Pembina is the site of the main Red River Oxcart Trail. The trail was a major route for hauling furs and other supplies between Pembina and St. Paul. As many as 500 carts were recorded to have used the trail during one year in the 1850's.

- * Indian mounds. One of the reminders to the aboriginal inhabitants of the area, Indian burial mounds have been discovered, still preserved, at many sites along the Mississippi River. The river not only served as the focus for development for the white man but had played an important part in Indian history much earlier. Indian Mounds Park in St. Paul is one such site. There are many others.
- * Steamboat and ferry landings. Historical Society records indicate numerous such sites throughout the riverfront north of Minneapolis. During the 1850's, steamboats traveled from sites above St. Anthony Falls to as far as Brainerd, often hauling passengers and goods upriver and wheat on return.
- * Indian village sites. Former Indian villages, too, can be traced to sites along the Mississippi River. Kaposia (in the area now known as South Saint Paul), Pine Bend, and Itasca (a site near Anoka) are only three of the many Indian Villages that once dotted the edge of the river.
- * Sawmills and flour mills. St. Anthony Falls was not the only site of such mills on the Mississippi River. Numerous others sprang up at points throughout the riverfront. The site of the Dayton mill has been preserved in that town. Across from Dayton on the Crow River, near the point where the Crow joins the Mississippi, Berning's Mill, built in about the 1860's, is still milling flour.
- * St. Anthony Falls. Certainly one of the most important factors in the development of this area as a major commercial center is St. Anthony Falls. The only falls on the entire Mississippi River, the Falls - and the surrounding land - are today listed on the register of nationally significant historic sites.

The potential of the falls as a source of power was first realized shortly after Fort Snelling was constructed, when soldiers from the fort, in 1821, constructed the first sawmill and grist mill in Minnesota on the west bank of the river. By 1849, after a dam had been constructed across the Falls, the first commercial sawmill was constructed above the Falls.

From this first commercial mill at the Falls, sawmilling grew to become a major industry for Minneapolis and St. Anthony. As late as 1890, nearly a half billion feet of lumber were cut in Minneapolis, making the city, according to one historian, the premier lumber market of the world.

Another form of milling - flour milling - began to evolve at the Falls in the 1860's and later replaced lumbering as the city's largest industry. By 1880, Minneapolis had become the flour milling capital of the world, a title it held until 1930.

In 1882, a third major industry began to develop at the Falls with the construction of the nation's first hydro-electric station.

Today, several buildings at the Falls still evoke memories of the industries of former years. Northern States Power Company still operates two hydroelectric plants at the Falls. On the east bank, the Pillsbury "A" Mill still stands. When built in 1881 it was the largest mill in the world. Across the river, General Mills elevators are being used today for shipping grain by barge.

A 1963 report of the Minnesota Outdoor Resources and Recreation Commission (MORRC), developed in cooperation with the Minnesota Historical Society, suggested a major historic site at the Falls. Plans for such a site have never been developed by the state, however.

- * Fort Snelling. A major state historic site, Fort Snelling today is an example of how a major element in the state's history can be preserved and restored.

The ultimate future of the fort, however, was not so certain when, in 1858, troops were withdrawn and the land turned over to sheep ranching. In the 1870's and 1880's the original walls and several of the buildings began to crumble and be torn down.

By the time the Legislature moved to restore the fort as an historic site, busy roads had been built through the area, and all but four of the original buildings had been destroyed. Today, the restoration of the fort is essentially complete, and it now serves as a major historic and tourist attraction for the state and region.

- * Mendota. Located across the river valley from Fort Snelling, Mendota is considered to be the oldest permanent white settlement in Minnesota. It, too, is on the national register of historic sites and was also designated in the 1963 MORRC report as a major historic site. Historic buildings include the Sibley House (1836) and the Faribault House (1840), both operated by the D.A.R. and located adjacent to Fort Snelling State Park. St. Peter's Catholic Church, built in 1853, is the oldest church in use in the state.

- * St. Paul's Landing. Just as the Falls of St. Anthony served as the focal point for the development of Minneapolis, St. Paul's Landing served as the basis for the settlement and development of St. Paul. The landing, and subsequently the city, took their names from the Chapel of St. Paul, a small log church built in 1841 by Father Galtier on the river bluff near the steamboat landing.

The growth of St. Paul was attributable in large measure to the fact that the city was, for many years, the head of steamboat navigation on the Mississippi. Settlers would travel from the east to the Mississippi River and then journey by steamboat to St. Paul before continuing their journey onward. Today, the only reminder of the original landings is Lambert's Landing, a short strip of concrete located at the base of Jackson Street.

Irvine Park, an important residential section in the early settlement of St. Paul, is located adjacent to the river behind the Grain Terminal Association terminal. (Subsequent filling has moved the river bank away from the area.) For many years Irvine Park was the fashionable residential section of St. Paul. At least nine homes in the area can still be traced back to pre-Civil War times. The Alexander Ramsey House (home of Minnesota's first Governor) today is owned and operated by the Minnesota Historical Society. Irvine Park is another historic site on the riverfront listed on the register of nationally significant historic sites.

- * Carver's Cave. Located below Dayton's Bluff in St. Paul, Carver's Cave was named for Jonathan Carver, who, in the 1770's, signed a treaty at the site of the Cave with the Indians for acquisition of the area. In the 1880's the Cave was a notable tourist attraction for the area but has since been closed by the railroad that owns the property. Currently there is talk of again opening the Cave.

Part II

THE MISSISSIPPI RIVERFRONT - IT SERVES MANY USES

- A. Riverfront land use has been determined in large measure by the nature of the river.
 - 1. Water quality is an important factor in determining riverfront land use. When this area was first visited by Father Hennepin in 1680, or even when it was first settled in the early 1800's, the river probably was relatively clear. If so, it did not stay that way for long, once man began to settle the area.
 - a. By the 1920's, the river, in the Twin Cities, had become an 'open sewer'. The quality of the river had deteriorated to such a point in the 1920's that the Legislature created, in 1927, a Metropolitan Drainage Commission to study the subject of sewage disposal in Minneapolis and St. Paul. At the time, sewage from the metropolitan area was discharged directly into the Mississippi River without treatment.

In 1928, the commission stated in its second annual report: "A zone of heavy pollution extends from Minneapolis to the mouth of the St. Croix at Prescott. The river in this zone is unfit for a use of water supply, for bathing or for boating, and is a potential danger from a health standpoint to persons and livestock coming in contact with water. Nuisances are frequent and fish life has been practically exterminated in this zone . . . A condition of public nuisance exists, except during periods of high water. (It) is evidenced by odors, floating and suspended material, sludge deposits, and by the ebullition of gases."
 - b. The polluted condition made the riverfront unattractive for nearly any but industrial-type use. The 1928 Drainage Commission report went on to say: "In the opinion of real estate experts this polluted condition has resulted in the depreciation of property values, especially in the residential areas adjacent to the river. The loss to the commercial fishing and clamming industries has been substantial. The recreational value of the river is being rapidly destroyed."

- c. Not until the Minneapolis-St. Paul sewage treatment plant was completed in 1938 did the quality of the river improve. The Metropolitan Drainage Commission identified six potential sites for a sanitary treatment facility: Pike Island, Crosby Lake, Pickerel Lake, Pig's Eye Lake, South Saint Paul, and the Minnesota River bottoms. The Pig's Eye location was eventually selected as the site of the Minneapolis-St. Paul treatment plant and the City of South Saint Paul constructed a plant at the South Saint Paul site which began operation in 1940. Ironically, the four locations that were rejected are now, or are scheduled to become, major riverfront park sites.
- d. Today, the quality of the water in the river is higher than it has been in many years. A report issued in 1973 by the Metropolitan Sewer Board stated that the rivers in the metropolitan area are the cleanest they have been since the 1920's. While the quality of the water in the Mississippi River does not yet meet all state and federal standards, it does meet the standard for dissolved oxygen. For much of the year, coliform counts for that portion of the river above the mouth of the Minnesota River fall within the level permitted for swimming.
- e. Water quality standards already adopted will produce further improvements in the quality of the river in future years. The Minnesota Pollution Control Agency (PCA) has recently adopted a non-degradation standard, which means that the water being discharged from any new plant on the river must meet or exceed the condition of the water immediately above the discharge point. In addition, federal law (PL 92-500) requires that the discharge of pollutants into the navigable waters be eliminated by 1985.

Whether the standards are met on time, the ultimate result will be a cleaner Mississippi River in the future - a river that should be safe, from a water quality standpoint, for swimming throughout the metropolitan area for most of the year, at least.

2. The navigation channel has had a major impact on riverfront land use.

Throughout the late 1800's, the Mississippi River was heavily used to haul both passengers and freight. By the turn of the century, however, competition from the nation's railroads, and the difficulty boats experienced in traveling up or down the river during times of low water, caused the river to diminish in importance as a transportation corridor. By 1916, only 500,000 tons of freight were moved on the river between St. Paul and the mouth of the Missouri River.

To encourage greater use of the Mississippi River for transportation, Congress authorized the construction of a nine-foot channel in 1930. Actually, this was not the first time Congress had authorized improvements on the upper Mississippi River to stimulate river traffic. In 1878, Congress authorized the U. S. Army Corps of Engineers to develop a navigable channel 4½ feet deep between St. Paul and the Missouri River. In 1901, the depth of the channel was increased to six feet.

The nine-foot channel project required a series of locks and dams across the Mississippi River. Lock and Dam #1 (often referred to as Twin Cities Lock and Dam, or Ford Dam) was actually completed in 1917 as part of an effort to extend the navigable channel from St. Paul to the Falls of St. Anthony. In 1932 it was deepened by 2½ feet to accommodate the nine-foot channel. The lock and dam located at Hastings, Minnesota, referred to as Lock and Dam #2, was constructed in 1930 as part of the congressionally authorized nine-foot channel project. In the 1950's, the nine-foot channel was extended above the Falls of St. Anthony to the Soo Line bridge in north Minneapolis with the construction of two additional locks at the Falls,

- a. Lowlands were inundated by the backwaters formed by the dams. In the metropolitan area, this was most pronounced between St. Paul and Hastings. Pig's Eye Lake was enlarged and a large amount of lowland on either side of the river between South St. Paul and Hastings was flooded. Lowlands were submerged to form Grey Cloud Island. Across from Grey Cloud Island, Spring Lake - a spring-fed lake at Nininger - became part of the enlarged river channel.

The trees on the lands that were inundated were cut down just below water level, making the area extremely hazardous for boating outside the navigation channel. The higher water level also meant that additional land fell within the new floodplain.

- b. Dredge spoils are deposited on the river bank. In order to maintain a minimum depth of nine feet throughout the navigable channel, the Corps of Engineers has found it necessary to dredge a large amount of sediment from the river channel each year. This sediment, called dredge spoils, is then discharged on low land adjacent to the river near the site of the dredging.

For that portion of the Mississippi River above the Hastings lock and dam, an average of 324,288 cubic yards of sediment is dredged from the Mississippi River each year. The intensity of the dredging varies, depending on river flow and the natural configuration of the river. For example, in Pool #1 (the stretch of the river between Lock and Dam #1 and St. Anthony Falls) roughly 22,000 cubic yards are annually dredged per mile.

The dredge spoil sites in Pool #1, in particular, have had a noticeable impact on the configuration of the river. Large dredge spoil sites are clearly visible at several locations along both banks of the river, particularly between Franklin and Summit Avenues.

B. Industry has always been a major user of riverfront land.

Lumbering, flour milling, and water-borne transportation are three industries that quickly developed along the river shortly after the area was first settled. Sawmills and flour mills were located at points throughout the river. St. Anthony Falls was by far the most significant location. For the St. Paul section of the river, steamboating and businesses related to it quickly developed as St. Paul became a major port on the Mississippi River.

1. Access to water transportation is not the only reason why industries have located on the riverfront.

- a. Many industries located along the riverfront to gain access to the railroads that have been built along the river. The riverfront was an attractive site for the railroads. The relatively level topography of the land adjacent to the river made it easier, and cheaper, to build the railroads along the river rather than farther inland. For this reason, and also because the towns that were first settled were nearly always located along the river, the river valley became a major location for the railroads. With few exceptions - the gorge area being one - railroads are located near the river throughout most of the metropolitan river corridor.

Industries which required rail transportation logically chose the riverfront as a site for their operations. The Minneapolis and Saint Paul Post Offices and many of the industries in north Minneapolis were built on the river primarily because of the accessibility the sites provided to major rail lines. The flour milling industry at Saint Anthony Falls, for instance, required rail access both to receive grain and to ship flour.

- b. Other industries have located near the river in order to utilize the river for discharging wastes. This is one of the reasons why the stockyards were located near the river in South Saint Paul. Farther downriver, the 3M Chemolite Plant in Cottage Grove is a more recent example of an industrial plant that was located on the river because of the need to discharge wastes into the river,
- c. Today, industries which have no relationship to the river are being encouraged to locate on the river by communities which have no other land available for industrial development. For the communities of Minneapolis and South Saint Paul, very little land is presently available for industrial development other than that which is located on the river. Consequently these communities, in particular, are looking to portions of the riverfront as prime sites for future industrial development.

2. The nine-foot navigation channel has brought about a resurgence in the use of the riverfront for industries using the river for transportation.

Today, roughly 50 terminals are located on the river in the metropolitan area and use the river to ship or receive freight.

Just as flour milling was the dominant industry to use the river years ago, today grain is the major commodity that is shipped from the Twin Cities by barge. Commodities that are used to provide energy and construct facilities - coal, petroleum products, and sand and gravel - are the major products this region receives by barge,

For the year 1972, 7,258,000 tons (4,900 barge loads) were received and 9,105,000 tons (6,000 barge loads) were shipped from ports within the Twin Cities metropolitan area. The total shipments include 4.8 million tons of grain (3,200 barge loads) which, if shipped by an alternate form of transportation, would have required about 97,000 boxcars or 194,000 trucks.

3. Industries do not need to be located directly on the river.

Somewhat surprisingly, we have found that even industries which must utilize the river in their operations - whether for transportation purposes or for water intake or waste discharge purposes - do not need to be located directly on the river. The oil refineries at Pine Bend and the GTA grain terminal in St. Paul are two examples of industries which ship commodities on the river but which are located some distance from the river. (In the case of the refineries, the distance is roughly one mile.) By using conveyors or pipes, the product can be moved from the industry to the barge loading site. The same holds for industries which either must discharge wastes or which must withdraw water from the river. The new Rosemount waste treatment plant, for instance, is located several miles away from the river, yet its discharge is piped to the river.

C. The use of the riverfront for housing has expanded dramatically in recent years.

Because the early settlements in this area were all closely tied to the river, it is not surprising that many of the oldest residential developments in the Twin Cities were located near the river. Irvine Park in St. Paul is one example. Less elegant housing than that found in Irvine Park was also constructed throughout the river, frequently on the floodplain. Until recently, such housing existed on the floodplain on both sides of the river near downtown St. Paul.

1. Within the suburban communities, the riverfront has been used extensively for single-family housing.

Most of the land north of Minneapolis has been developed for single-family homes. Unlike the gorge section of the river, where the actual riverfront was preserved for the public, suburban municipalities have generally permitted residential lots to stretch to the river, eliminating any public access. The same holds true for the area to the south of Saint Paul, although this stretch of the river has not been as extensively developed as has the suburban area north of Minneapolis. Presently, however, a significant amount of single-family housing is being constructed along portions of the riverfront on both sides of the river between Grey Cloud and the Dakota County line below Hastings.

2. Particularly in Minneapolis and Saint Paul, apartment complexes are becoming a prominent feature of the riverfront.

Sites along the riverfront that have been taken for apartment development within just the past couple of years include a series of 2-3 story apartments in Mendota Heights, the Kellogg Square apartment in St. Paul, and several low-rise apartments on Shepard Road in St. Paul.

Plans have recently been announced for several more apartment developments to be constructed on the river which, if all are built, will have a major impact on the riverfront. These projects include the Burlington Northern project in downtown Minneapolis, the Batzli and Cedar-Riverside River Bluff addition near the University's west bank, a high-rise development at Northport Industrial Park across from downtown Saint Paul, a 16-story complex to be located along Shepard Road near Univac, a 20-story project near Crosby Lake Park, and the 26-story Watergate complex across from Fort Snelling.

The Watergate apartment complex, in particular, will have a dramatic impact on the riverfront, for it is being built below the bluff directly on the river in an area that has essentially been preserved for public use.

Across the river from the apartment site is Pike Island, a part of Fort Snelling State Park, and the restored historic Fort Snelling. Just upriver is Saint Paul's Hidden Falls Park, and just downriver is the site of Saint Paul's new Crosby Lake Park. Unlike nearly all other apartment developments currently proposed for the riverfront, the Watergate site provides for essentially no setback from the river.

- D. A significant amount of the riverfront has been preserved for recreational and historical purposes.

Historically, the acquisition of the river bluffs between the University and Fort Snelling and the donation of Harriet Island for a public park were among the first parcels of riverfront land to be preserved for the public. The river bluffs were acquired by Minneapolis and Saint Paul in the 1880's, and Harriet Island was donated to Saint Paul before the turn of the century. At one point in time, Harriet Island was a site of one of the large swimming beaches in the city.

Other opportunities to preserve the riverfront for the public were rejected by city officials, as far back as before the turn of the century. Minneapolis passed up an opportunity to purchase Nicollet Island in 1864, and a City of Minneapolis plan prepared in 1917, which called for parkways to be developed along the river in downtown Minneapolis, was never implemented.

1. Perhaps surprisingly, public agencies have acquired a significant amount of the riverfront for public recreational purposes.

Major recreation sites, major sites already owned by public agencies and designated for public recreational use include the following:

- * Historic sites. The Kelley Farm site north of Anoka and historic Fort Snelling.
- * State park facilities. Fort Snelling State Park, which includes all of Pike Island. The state park, incidentally, is the one public open space facility which requires an admission fee and for which access is restricted.
- * County park sites. The Hennepin County Park Reserve District is presently developing a park at the site of the Coon Rapids Dam.
- * Municipal park facilities. Along with other sites, these include North Mississippi Park located on the west bank of the river at the mouth of Shingle Creek in Minneapolis; East and West River Roads stretching from the University south to Fort Snelling; the University River Flats, owned by the Minneapolis Park Board; Harriet Island in St. Paul; and Crosby Lake Park currently being developed by the City of St. Paul.

Although all of the above-listed sites are publicly owned, not all of them are presently available for public recreational use. The Coon Rapids Park site is only now undergoing initial development. North Mississippi Park is open to the public but is in need of improvements. These, however, are not scheduled to be started until 1977. The University River Flats is presently being leased to the University for use as a parking lot and is not scheduled to be improved by the Minneapolis Park Board until 1978 at the earliest. Crosby Lake Park is being improved but is not yet open to the public.

2. The Metropolitan Open Space program will provide for acquisition and development of two additional riverfront parks.

The \$40-million bonding program authorized by the 1974 Legislature will provide funds to establish regional parks at Lilydale and at Spring Lake.

3. Privately owned land on the river has also been made available for public use.

The riverfront land which is available for public use is not limited to that which is publicly owned. For instance, the Center for Community Action has been successful in improving and opening to public use land owned by NSP on Hennepin Island and Burlington Northern property at the mouth of Bassett's Creek. A recently adopted state law limiting the liability of private property owners who make land available for public recreational use could result in additional privately owned land being made available to the public.

4. Although the river, itself, is being used increasingly for recreational purposes, such uses contain inherent limitations.

The river is being used to a significant degree for various forms of boating, as well as for fishing and swimming. The river north of the Coon Rapids Dam, for instance, is often used for water skiing, while

the gorge section of the river is considered one of the best sites for sculling and is heavily used for that purpose.

General boating on the river continues to increase. Between 1960 and 1972, Corps of Engineer records indicate, the number of pleasure boats moving through Lock and Dam #1 (the Ford lock and dam) increased from about 1,400 boats to nearly 3,000.

Boating on the river does, however, have its limitations. The dams on the river limit the length of the river that may be traveled without either going through a lock or, in the case of the Coon Rapids Dam, portaging around the dam. Several factors make boating on the river dangerous to a beginning boater. These include the current, which can be particularly dangerous immediately above a dam; the many wing dams which are located outside the navigation channel (structures which are located below the water level but which can cause damage to the under side of boats); and the stumpage that remains, particularly in the Spring Lake stretch of the river. (Such factors as the river current make swimming along much of the river dangerous, even though it may be considered safe from a water quality standpoint.)

Part III

THE RIVERFRONT CAN EXPECT INCREASED PRESSURES, AS WELL AS OPPORTUNITIES, IN THE FUTURE

A. The use of riverfront land will likely change in the future.

Land use changes over time. This is true for any land, but particularly true for the riverfront, where much of the land was put to its present use many years ago. In several cases, a change in the use of the riverfront land can be expected within the near future.

1. The present use of riverfront land does not necessarily eliminate the possibility for a better use of the land in the future.

A frequent attitude that is encountered in discussing plans for the riverfront is that an area of the riverfront that is today being used for an esthetically displeasing purpose will always be limited to that type of use in the future. Such is not necessarily the case, however. For example, the proposed Burlington Northern complex north of Hennepin Avenue will be built on land that was formerly used for warehousing. In the Cedar-Riverside area a new riverfront park will soon take shape on land that was formerly used as a municipal dock and coal storage area.

2. Zoning is not, and should not be viewed as, a permanent tool to guarantee the future use of riverfront land.

The zoning designation of a piece of land can be, and frequently is, changed. By way of example, the land immediately north of Shepard Road in St. Paul has been zoned residential. A developer who is interested in constructing a high-rise apartment complex has purchased the land and appears to have been successful in convincing the City Council to rezone the land to permit such a development. Opponents of the rezoning have sought to block it in the courts.

Brooklyn Park has been concerned about preserving Durnam Island as undeveloped open space. The Island is privately owned, however. Recently the City Council in Brooklyn Park rezoned the land from residential to a conservancy district designation, meaning that permanent construction is not permitted on the Island. While this zoning change will prevent development today, a future Council could just as easily rezone the land back to residential.

- B. Interest in the riverfront is increasing and indications are that pressures will increase to develop, and redevelop, significant portions of the riverfront.

With the amount of land next to the river within the metropolitan area limited, and as interest in developing the land increases, the pressure of resolving how land on the riverfront is used can be expected to increase as well.

1. The riverfront is increasingly becoming recognized as a high-amenity site for development.

This feeling will be heightened in the future as such things as water quality in the river improves and as additional public recreational uses are developed. Particularly for the built-up cities of St. Paul and Minneapolis, much of the riverfront is, from an amenity standpoint, one of the most desirable places to locate.

2. Exciting plans, and newly established river-oriented commercial ventures, are contributing to an increased interest in the riverfront by the public.

- a. Within just the past four years, several significant studies and plans have been issued on the riverfront; more are under way. In terms of identifying many imaginative opportunities the riverfront provides, the Mississippi/Minneapolis plan recently issued by Minneapolis, and Mississippi River - A Comprehensive Plan for the Waterfront in the City of St. Paul prepared in 1970, have been instrumental in beginning to turn the public's attention to the potential of the riverfront.

These are not the only studies that have been undertaken, however. A comprehensive staff study entitled Major River Corridors in the Twin Cities Metropolitan Area and released by the Metropolitan Council in 1970 is just one of several other studies. Even today, the State Planning Agency in cooperation with the Department of Natural

Resources is in the midst of a study of the Mississippi River in the metropolitan area, and the Metropolitan Council has been designated the lead agency in carrying out a comprehensive study of the metropolitan area portion of the Upper Mississippi River Basin.

- b. Recently established commercial ventures which are tied to the river - the Jonathan Padelford excursion boat and the Pracna Restaurant are two examples - have played a significant role in drawing the public to the river. They join several more established restaurants, such as the Fuji-Ya, Edgewater, and Channel House, which have for some time provided the public an opportunity to enjoy the river.

C. Many of the likely future uses of the riverfront can already be identified.

Looking ahead to the period of time leading up to the turn of the century, the future uses of the river and riverfront are likely to include the following:

1. On the river, increased barge traffic is likely.

- a. Grain shipments are projected to increase in future years. With the world-wide demand for grain continuing at high levels, estimates are that the volume of grain (in terms of volume, the largest commodity shipped from the Twin Cities) shipped from this region will continue to increase in future years.
- b. The Twin Cities appears to be becoming a major transfer center for low sulphur coal, meaning that coal shipments will undergo a dramatic increase in future years. Up to now, most of the coal barged on the upper Mississippi has been eastern coal headed upriver. The increased demand for low sulphur western coal is likely to see this region shift from being primarily a receiver of coal to a shipper.

Already, two coal transfer facilities are in use in the Twin Cities. The Riverside plant is being used temporarily by NSP to transfer coal from rail to barge for shipment to other NSP plants, and the Minneapolis Upper Harbor Terminal has recently installed a coal transfer facility which, according to estimates, could eventually result in the shipment of one million tons of coal per year. The St. Paul Port Authority's proposed Pig's Eye coal transfer facility would replace the Riverside operation but would result in an even greater increase in the volume of coal shipped from the Twin Cities.

- c. The anticipated increase in barging, however, is not likely to have a major impact on the riverfront in north Minneapolis. The existing plan for the Minneapolis riverfront calls for the north Minneapolis riverfront to be used for river-related industry. Several factors, however, suggest that additional river-related industry is not likely to locate in north Minneapolis, at least to a significant degree. The primary limiting factor is the series of locks located on the river above Fort Snelling. There are three, and all are significantly smaller than all of the remaining locks on the upper Mississippi. Whereas a standard lock (110 feet by 600 feet) is designed to accommodate nine barges, the three locks located above Fort Snelling are significantly smaller (56 feet by 400 feet) and can take only two barges at a time.

The size limitation of these locks has been one reason why ports on the Minnesota River have grown rapidly in recent years. It takes less time to move six barges, for instance, up the Minnesota River than it does to move six barges, two at a time, through three locks to north Minneapolis.

Although the navigation channel to north Minneapolis is not likely to be used extensively (within the total metropolitan area, in 1972, only 8% of the shipments and 12% of the receipts moved through Minneapolis terminals), its mere existence has been beneficial to Minneapolis businessmen by causing the railroads to lower their rates to compete with barge transportation.

2. A major coal transfer facility may be built at Pig's Eye.

The St. Paul Port Authority is currently proposing to construct and lease a major new coal transfer facility on Port Authority property near Pig's Eye Lake. In part, this terminal would replace the temporary transfer station at Riverside, which NSP now uses for supplying their Black Dog and Allen S. King plants with coal. (These plants do not have adequate rail service, so must rely on barge transportation for their coal.) The Pig's Eye facility, however, would also serve as a transfer point for several other power companies which have plants on the Mississippi River south of the Twin Cities, and it could conceivably serve as a transfer facility, in this case transferring coal from unit trains to individual hopper cars, for Twin Cities industries which may, in the near future, find it necessary to convert from gas or oil to coal.

The proposed site of the transfer facility has generated widespread opposition from persons who either feel that such a coal transfer facility is not needed at all, or believe that, from an environmental point of view, Pig's Eye is an undesirable site for a coal terminal. Portions of the Pig's Eye Lake area have often been proposed as a site for open space and recreation.

On the other hand, the industries that would utilize the terminal support the Pig's Eye location for a variety of reasons. They believe that a terminal to transfer coal from rail to barge is needed within this general area, that the Pig's Eye site offers access to several rail lines, that the Pig's Eye area is already heavily used for industrial purposes, and that such a terminal would be less objectionable at Pig's Eye than at other sites.

Perhaps a major reason why the Pig's Eye site is supported, however, is that, at Pig's Eye, the terminal would be built not by a private business but by a public agency - the St. Paul Port Authority. The Port Authority is limited, however, to constructing such a terminal within the city limits of St. Paul, and the Pig's Eye site appears to be the only possible site for such a terminal within St. Paul. Consequently, as long as the St. Paul Port Authority is a participant in the development of the facility, the public debate over the location of the terminal will likely be limited to accepting or rejecting Pig's Eye rather than considering and selecting the best of several possible sites.

3. Additional riverfront land will be needed for dredge spoil disposal.

Until an alternate form of disposal is adopted by the Army Corps of Engineers, land along the riverfront will continue to be needed for the disposal of dredge spoils. It is apparent, from observation, that existing disposal sites are not limited to the riverfront but, in the gorge region at least, extend into the river channel as well. Presently, nearly 325,000 cubic yards of spoils are dredged from the Mississippi River above Hastings each year as part of the Corps' efforts to maintain the navigation channel.

For that portion of the river above Lock and Dam #1 the Corps of Engineers, in its environmental impact statement on the maintenance of the channel, acknowledges that riverfront sites available for future dredge spoil disposal are limited. The cost of alternate methods of disposal, several of which are listed in the Corps' impact statement, makes alternate methods unlikely until the Corps requests, and receives, from Congress additional funds for dredge spoil disposal. Estimates are that for the Mississippi River above Hastings, the least expensive alternate method would cost, at \$5.50 per cubic yard, about \$1.8 million annually. The cost of the present method of disposal is considered to be 33¢ per cubic yard or \$108,000 per year.

It has been suggested that dredge spoils, because they contain a significant quantity of sand, may have commercial value. As yet, however, no detailed studies have been made of the feasibility of using the dredge spoils in the Twin Cities area for commercial use.

The on-site method of disposal for the Twin Cities region of the river does have several undesirable effects. The present method, as noted earlier, does appear to result in the gradual narrowing of the river channel. Within the gorge section of the river, considered to be one of the most beautiful in the region, the visual effect of the dredge spoil sites does conflict with the rugged natural beauty of the riverfront. The present method is not totally satisfactory from the standpoint of being effective. The Corps' impact statement acknowledges that, for at least the St. Anthony Falls pool, some and possibly a substantial portion of the material is returned to the main channel for re-dredging during major flood flows. Compared with portions of the riverfront farther downstream, the present method of disposal does not appear to have as significant an effect in the Twin Cities on the closing off of the backwaters and the destruction of fish and wildlife.

4. Floodplain land will continue to be filled and developed.

The State Floodplain Management Act is not, as many believe, for the purpose of preventing all forms of development in the floodplain. Instead, it was adopted for the purpose of managing development within the floodplain. The law prohibits any form of development within the "floodway" portion of the floodplain; that is, the portion of the floodplain that is needed to move the floodwaters. However, within the "floodfringe" section of the river, the flood storage portion of the floodplain, floodproof structures and filling of the land to raise it above the floodplain are permitted under the state law.

For the metropolitan portion of the Mississippi Riverfront, the filling of a small portion of the floodfringe will probably not appreciably affect floodwaters. If all of it was filled, however, the total effect would be significant.

Authority to fill floodfringe land is relatively simple so long as the fill is not dredged from the river. A permit from the municipal council is all that is necessary, assuming that the municipal floodplain ordinance is not more restrictive than the minimum standards provided in the state law. As long as existing floodplain management standards do not change, it appears certain that continued filling of the floodplain will occur in the future.

5. Additional riverfront land will be needed for industry.

Although precise estimates are not available, officials associated with river-related industries are certain that these industries will increase in size and volume in future years, requiring additional land. The Metropolitan Council's Major River Corridors Study, published in 1970, estimated that, if the riverfront was restricted to only firms whose functions were critically tied to the river, an additional 269 acres of Mississippi River frontage would be required by industry between 1969 and 1985. If no restrictions on the type of industry that might locate next to the river were imposed, the amount of land that would be developed by industry during that period of time would likely increase to somewhat over 1,000 acres. A State Planning Agency study in 1969, Physical Facilities Inventory: Minnesota Waterborne Transportation, estimated that an additional 2,000 feet of riverfront would be needed for terminal frontage by 1980.

Presently, significant amounts of riverfront land are available for industrial development on the Mississippi River. Additional land is also available on the Minnesota River. At present, none of the municipalities along the Mississippi River have restricted the type of industry that might locate on the riverfront to those industries which require use of the river. Some of the specific land sites that are or might in the future become available for industrial development include most of the riverfront in South St. Paul (including the stockyards site should it be moved at some point in the future), undeveloped land in Cottage Grove, and some land in Inver Grove Heights and Rosemount. A small amount of land is available in St. Paul and Minneapolis.

6. As a high-amenity site, the riverfront will increasingly be viewed as a favorable site for housing.

As the water quality of the river continues to improve, and as additional steps are taken by public agencies to enhance the riverfront, the land along the river will become an even more attractive site for housing in the future.

Should the river between Anoka and the Anoka County line be made a part of the wild and scenic rivers system, residential development may be curtailed somewhat along this stretch of the river. Otherwise, on the basis of the current rate at which homes are being constructed, a significant amount of new housing can be expected along this stretch in the near future. Additional residential development can also be expected along much of the undeveloped portions of the south suburban stretch of the river.

With respect to apartment developments, riverfront land in Minneapolis and St. Paul can be expected to be redeveloped for this purpose. In addition, it would seem quite likely that riverfront land in the close-in suburbs of Brooklyn Center, Fridley, Newport and Saint Paul Park could be redeveloped for high-density housing as well.

7. Many potential sites remain for recreational use.

In addition to those sites which have already been set aside for recreational use, including the soon-to-be-developed regional park sites at Lilydale and Spring Lake, ~~several additional prime riverfront sites are potential sites for recreational development.~~

These sites include land in the city of Dayton; some privately owned land below the Coon Rapids Dam (currently Anoka County is seeking to purchase this land for park purposes); numerous islands in the river, one of the most significant of which is Durnam Island in Brooklyn Park; perhaps portions of the Minneapolis Waterworks property; Nicollet Island and Hennepin Island; Pig's Eye Lake; privately owned floodplain land near the south end of South Saint Paul; and Grey Cloud Island.

Hiking trails and, perhaps in some areas, scenic drives would seem to be possible developments along much of the riverfront - most particularly along portions of the riverfront below Inver Grove Heights and above Anoka, where sizable portions of the riverfront have yet to be developed.

8. A new sewage treatment plant is a possibility north of Minneapolis.

The Metropolitan Sewer Board is presently considering the feasibility of constructing a new waste treatment plant on the river in Fridley just south of the Minneapolis Waterworks. Although existing water quality standards would require that such a facility be constructed so that the waste discharge from the plant meets or exceeds the existing water quality of the river, the construction of a new plant at this site could have an undesirable effect on efforts to increase the use of the riverfront in Minneapolis and Saint Paul as a public resource. The impression that is conveyed by the construction of a waste treatment plant at this site could be quite detrimental to the efforts to further enhance the riverfront in Minneapolis and Saint Paul.

9. Increased commercial development can be expected along the river.

The success of recent commercial ventures on the river and the emphasis that is placed on commercial development in the Minneapolis and Saint Paul riverfront lands suggests that additional commercial developments can be expected along the downtown stretches of the river in the future.

10. Riverfront roadway improvements are planned.

- a. Shepard Road/Warner Road will be upgraded. Plans are being developed to widen a large stretch of this roadway. For the Warner Road section (east of Jackson Street) tentative plans include a bike path as part of the project. At this point, however, no pedestrian or bike paths have been incorporated into the Shepard Road section of the plan, nor are there any plans for parking bays along the river. An interchange is planned for the Chestnut Street intersection to cut down on accidents and improve access to the Civic Center.

- b. West River Road will be extended above the University of Minnesota. In Minneapolis, plans are being developed to extend the West River Road above the point where it leaves the river near the University. Although the existing river road is maintained by the Park Board, the new stretch of road will be developed by the Minneapolis Public Works Department. It appears that the new roadway will be wider than the recently repaved parkway to the south, and will, unlike the parkway, be open to trucks. Eventually it will be extended to connect with Fifth Avenue South.

Part IV

RIVERFRONT LAND USE IS DETERMINED, TO A CONSIDERABLE DEGREE, BY PEOPLE'S ATTITUDES TOWARDS THE RIVER - ATTITUDES THAT ARE EXPRESSED THROUGH THE GOVERNMENTAL DECISION-MAKING PROCESS

- A. The public does not fully appreciate the Mississippi River as a valuable resource for the Twin Cities area.

The use of riverfront land is determined, in large measure, by the attitude of the public toward the river. There are indications, as we have stated before, that the public is becoming aware of the great potential of the riverfront. But, to a considerable degree, both citizens and their public officials have yet to fully recognize the opportunities that exist to turn the riverfront into a major public resource. There seem to be several reasons why this recognition is slow in coming, including the following:

1. Many people are still unaware of the great beauty of the riverfront.

Until the Jonathan Padelford began operating on the river, very few people in the Twin Cities had probably ever viewed the river and the riverfront from the water. Despite the fact that each year approximately 80,000 people have an opportunity to view the river from the Padelford, most of the people in the Twin Cities have yet to appreciate the beauty of the river while boating on the river. Even the Padelford covers only a limited stretch of the riverfront.

Beyond the limitations of viewing the riverfront from the water, land access is limited as well. Vast stretches of the riverfront are privately owned, and the public is not permitted access to the river. This is particularly true through most of the suburban reaches of the river. For these areas, the private property extends directly to the river. Where there are public roads along the river, they generally are at such a distance from the river that it is not possible to view the river.

2. For all of the communities along the river except Minneapolis and Saint Paul, the river serves as a border.

For these communities it is entirely natural that the concerns of the public officials are devoted to other, more central problems of their communities. Because the river serves as a border through much of the metropolitan area, it is not possible for a municipal official to have any control over what happens to the opposite side of the river, the portion of the riverfront that residents of his community must view.

3. Public officials have other priorities that demand time and money.

The river, we have found, generally does not rank high on a local official's priority list. Other park and recreation projects, which are closer to most of the residents of the municipality, generally are given higher priority by public officials because their citizens are more interested in developing those recreational projects which will primarily benefit the local citizen. Because the river is on the edge of a community, riverfront projects are likely to be used proportionately less by local citizens and more by people from other communities. The levy limits imposed by the Legislature also serve to restrict the total amount of money a local official has to spend on necessary projects.

4. The tax base advantages to a community of industrial development can be over-stated.

Localities along the river may point to the fact that increased industrial development will add to the community's tax base, thereby helping to hold down the property tax burden on residential and other property in the community. The tax-base advantage of such development should be kept in perspective, however. First, a large portion of school district expenditures are subject to a state aid formula which provides state aid in inverse proportion to local property tax wealth. Thus, whether the industrial development is located within the community or not really is irrelevant for those school expenditures.

Another major recipient of the property tax is county government. County government, though, will benefit regardless of where in the county the development is located. With respect to municipal government, some additional tax revenues will be required to provide services to the new industrial development, partially offsetting the additional tax revenues such development produces.

Finally, the potential impact of the fiscal disparities law, if upheld by the Minnesota Supreme Court, should not be forgotten. That law assures every community a share of 40% of the growth of commercial-industrial tax base throughout the metropolitan area, regardless of its specific location within the area.

B. Although the systematic nature of the river suggests that the riverfront be treated on a systematic basis, decisions over the use of the riverfront are determined, individually, by each of the municipal-level governments located on the river.

The level of government which has the major power to determine how land along the river should be used, is the municipal level of government. For the metropolitan portion of the Mississippi Riverfront, this means that the policy which guides how the land shall be developed is determined separately for each of the twenty-four sections of the riverfront, with each section representing a separate municipality or town.

1. Major land-use powers have been delegated to municipal government.

Most important, the state has delegated general zoning powers to municipal government. Municipalities also have other important powers which can have an effect on the riverfront, including the authority to acquire riverfront

land through eminent domain; preserve open space for future public use, through the Official Map Act; establish municipal heritage preservation commissions to protect important historic sites; and create housing and redevelopment authorities to stimulate the redevelopment of the riverfront.

2. Municipal control over riverfront land use does not provide a systematic or regional perspective over the development of the riverfront.

With primary control over use of the riverfront a municipal responsibility, there can be no assurance that the riverfront land-use policy of one municipality will be compatible with adjacent municipalities across the river, up river, and down river. Nor is there any certainty that the limited amount of riverfront land will, in total, be put to the best use. There is no certainty, for instance, that the total amount of land available for recreational and industrial development will be balanced.

- C. Recent state legislation has provided tools which add a regional or statewide dimension to the management of the riverfront.

1. State floodplain and shoreland management programs require local ordinances that meet minimum state standards.

Both laws require that municipalities adopt ordinances which will provide some control over the development of the riverfront. The state laws establish minimum standards. Individual communities may, although few seem to be doing so, adopt more restrictive ordinances.

The floodplain law does provide some control over the type of development which may be carried out on the floodplain; it does not, however, prohibit all development on the floodplain. Within the floodfringe portion of the floodplain, certain floodproof buildings are permitted. The state law also permits a property owner to fill land within the floodfringe, thereby removing it from the floodplain and from the effects of the floodplain law.

In 1973 the Shoreland Management Act was extended to include shoreland within incorporated municipalities. Previously it applied only to shoreland in unincorporated areas. Because the 1973 amendment has not yet become effective, and will not for several months, it is not certain at this point how much effect the act will have on the Mississippi Riverfront in the metropolitan area.

The shoreland act is limited in its applicability, however, to only that land within 300 feet of the shoreline of a river. By contrast, the act covers all land within 1,000 feet of a lake. When originally enacted, the law's primary purpose was to control the pollution of the lakes of the state. Consequently, the provisions of the act deal essentially with regulating the type and placement of sanitary and waste disposal facilities within the designated shoreland area, regulations establishing minimum lot size and length of water frontage of lots that are suitable for building sites, regulations relating to the placement of structures in relation to the shoreline, and regulations governing the preservation of the natural landscape. The act does not deal with such things as limiting certain types of development, such as industrial development, along certain portions of the shoreland, nor does it deal with such developmental considerations as the height of a high-rise apartment or the design of a new structure.

2. The State Critical Areas and Wild and Scenic Rivers Acts grant the state authority to exercise greater control over the management of an area such as the Mississippi Riverfront.

- a. The Wild and Scenic Rivers Act is designed to protect the outstanding values of certain Minnesota rivers and their adjacent lands. The act classifies the rivers that are to be included within the system as either wild, scenic, or recreational rivers. The Mississippi River within the metropolitan area would seem not to qualify under the definitions of the wild river or scenic river. Portions of the river might be eligible for inclusion under the definition of a recreational river; a river that may have adjacent lands that are considerably developed but which still meet the overall objective of the act.

The Commissioner of Natural Resources is responsible for placing a river within the wild and scenic rivers system. For such rivers the Commissioner prepares a management plan which provides for the preservation and protection of the river. The management plan may include land-use controls that would be applied through local zoning ordinances. Scenic easements and fee title may be used to acquire land in some instances.

- b. The Critical Areas Act was enacted by the Legislature as a means to controlling development within areas of critical concern to the state. The act determines these to be areas of the state which possess important historic, cultural, or esthetic values, or natural systems which perform functions of greater than local significance. They are areas where development could result in irreversible damage to these resources, decreasing their value and utility for public purposes, or unreasonably endangering life and property.

The critical areas process is designed to be a permanent method for guiding development within a designated critical area. After it has been so designated by the Governor, the area is protected under the provisions of the act for a period of three years. If the Governor's designation is ratified by either the Legislature or the appropriate regional development commission -- in the metropolitan area the Metropolitan Council -- the designation then becomes permanent.

The process involved in designating a critical area usually begins when a regional development commission considers a proposal to establish a critical area and recommends the establishment of the critical area to the Environmental Quality Council (EQC). The EQC will then review the recommendation of the development commission and, if it believes the critical area should be established, will recommend to the Governor that the critical area be designated. Through this process, a series of public hearings are provided before both the regional development commission and the EQC.

Only the Governor may officially designate a critical area. The Governor's designation of a critical area does three things. First, it describes the boundaries of the critical area. Second, the designation lists specific standards and guidelines that are to be followed in preparing and adopting plans and regulations for the critical area. Third, it specifies the development, if any, that shall be permitted within the critical area pending the adoption of the plans and regulations.

Local governmental units are then required to develop and submit plans and regulations for the use of the land within the critical area to the regional development commission for its review. The commission is required to review them for consistency with the provisions of the order, and submit its evaluation of the plans to the EQC. The EQC, in turn, reviews the plans and regulations and the comments of the commission and either approves the plans and regulations or returns them for modification. If any local governmental unit fails to prepare acceptable plans and regulations, the EQC is authorized to directly prepare the plans and regulations for the critical area.

3. Important metropolitan legislation will affect the riverfront.

- a. The Protection Open Space Act of 1974 directs the Metropolitan Council to prepare model ordinances for the regulation of certain fragile lands and waters within the metropolitan area. The law encourages, but does not require, municipalities to adopt these model ordinances. The model ordinance will deal with the following: The protection and preservation of wetlands and lowlands; the protection of groundwater recharge areas; the protection of slopes which are subject to severe or moderate erosion; the maximum retention of existing forests and woodlands; the determination of the suitability of soils or bedrock for development; the protection and preservation of the natural watercourses; the protection of areas containing unique or endangered plants and animals; and the preservation of natural resource areas of particular historical significance.
- b. The Metropolitan Recreation Open Space Act requires a planning process for developing a regional recreation open space program and provides significant funds for the acquisition of regional park sites. The Metropolitan Recreation Open Space Act affects the Mississippi Riverfront in the following ways:
 - * The act recognizes that valuable remaining large recreational open space areas in the metropolitan area are being threatened by the pressure of urbanization, and that immediate action is necessary to provide funds to acquire, preserve, protect and develop these sites for public use. Several sites on the river would appear to meet this criteria. Major linear parks, for instance, are specifically identified as sites that meet the definition of regional recreation open space.
 - * The law establishes a Metropolitan Parks and Open Space Commission as an agency of the Metropolitan Council.
 - * The Metropolitan Council, after consulting with the Parks and Open Space Commission and local governmental units, is directed to adopt by January 1, 1975, a long-range system policy plan for regional recreation open space. This plan will identify, generally, the areas which should be acquired by a public agency to provide a system of regional recreation open space. The policy plan will include a five-year capital improvement plan, and direct the Council to establish criteria and priorities for the allocation of funds for such acquisition and development. The policy plan must also be periodically reviewed and updated by the Council.

- * The Metropolitan Council is authorized to issue general obligation bonds, provided that the total amount outstanding and undischarged at any time shall not exceed \$40 million. Repayment of the bonds is through a levy by the Council against all taxable property in the metropolitan area up to a maximum of .5 mills. This means that as the bonds are paid off, additional bonds may be issued so long as the total amount outstanding does not exceed \$40 million.
- c. The Metropolitan Council may suspend projects which are considered to have metropolitan significance. The 1974 Metropolitan Reorganization Act provides that the Metropolitan Council must first establish standards and guidelines for determining if a proposed matter is of metropolitan significance. If such a matter is determined to be of metropolitan significance under the guidelines, the Council is empowered to suspend, for up to one year, any proposed matter which it finds to be inconsistent with the Metropolitan Council's Development Guide.
- 4. Designation of the Great River Road could provide federal funds for enhancement of the river.

As required by federal law, the 1974 Legislature designated the route of the Great River Road in Minnesota. Within the metropolitan area, the route generally is some distance from the river. Between Hastings and the point at which I-94 joins the river in north Minneapolis, the only point on the Great River Road at which the river is within view of a motorist is at the I-94 bridge which crosses the Mississippi River near the University.

Congress, in 1973, appropriated \$90 million to be used, on a priority basis, for construction and scenic easements along the Great River Road. Some of these funds probably could be used for the further enhancement of the Mississippi Riverfront. This would be more likely, within the metropolitan area, if the Legislature, in its designation of the road, were to use roadways which ran adjacent to the river.

The potential of the Great River Road project as a source of funds for enhancing the riverfront has suffered because of a misconception in the minds of the public that the Great River Road is designed to be a high-speed, heavily traveled highway which will be built throughout the river corridor from Lake Itasca to the Gulf of Mexico. This misconception probably arises because the Great River Road, along rural stretches of the river, does utilize many modern highways. It is designed, however, to be a scenic parkway that will make the beauty of the Mississippi River more accessible to the public. To the extent that new roadways might be constructed as part of the Great River Road, the roads are intended to be parkways, restricted to non-commercial traffic, with sufficient open space provided between the road and the river.

C O N C L U S I O N S

- I. The Mississippi Riverfront within the metropolitan area can, and should, continue to be viewed as a multiple-purpose resource.

In viewing the metropolitan Mississippi River corridor as a single entity, it is apparent, when considering present and projected uses of the riverfront, that the river corridor must be treated as a general-purpose, multiple-use resource.

- A. It is not realistic, nor necessarily desirable, to seek to totally eliminate any of the present general uses that are made of the riverfront. All can serve useful and beneficial purposes.

The metropolitan Mississippi River is, indeed, an urban river. It is not today, and never again will be, a wild, totally undeveloped river. Nor does it necessarily need to be for the river to become a resource to be appreciated by the public.

Within limits, the Mississippi River, and its riverfront, is properly a transportation system on which certain types of freight are shipped to or from this region. This will mean that certain industries will have to locate near the river and that towboats and barges will continue to use the river.

The riverfront provides the type of amenities that make up a desirable site for housing, both single-family and multiple-dwelling. Again, within limitations, this can be a desirable use of the riverfront.

For the foreseeable future, the river must be recognized as the primary facility for discharging the effluents generated by this metropolitan area. And, it will need to continue to be utilized as a major source of the metropolitan area's water supply.

Finally, it needs to be recognized as a facility for entertainment and recreation, whether this be in the form of shops and restaurants or parkways and wildlife preserves. All of these uses legitimately belong within the metropolitan river corridor.

- B. The riverfront, however, is a limited resource. It will not be possible, nor desirable, to accommodate all of the projected uses of the riverfront. Some limitations will be necessary. Choices between alternative uses will need to be made.

There is a growing realization that the riverfront is an amenity, a highly attractive and largely undeveloped resource, that exists in the midst of a metropolitan area of two million people. While this is an encouraging development, at the same time it poses serious problems for the future of the riverfront, for it will undoubtedly bring about increased pressures for the use of the riverfront.

Established uses of the riverfront, such as a place for industry and for waste treatment plants, will need to compete, to an increasing degree in the future, with proposals to establish high-rise housing and river-related commercial developments within the river corridor and with demands to preserve the remaining open space for public use.

While it is apparent that the riverfront is capable of being utilized to a certain degree for each of these purposes, the following examples demonstrate that some choices and limits are necessary:

- * Watergate apartments. The proposal for a 26-story apartment complex to be located at the edge of the river, below the bluff, in the heart of a major public open space system (Fort Snelling State Park including Pike Island, Crosby Lake Park, Hidden Falls Park) is incompatible with the efforts to maintain this area as an undeveloped, public resource.
- * Pig's Eye coal transfer site. The coal transfer proposal conflicts with the desires of those who believe the site should be preserved as a public wildlife sanctuary (as proposed in the Saint Paul riverfront plan) and with the view of others that too much filling has occurred within the floodplain already and that all additional filling should be prohibited.

With respect to the proposals for a coal transfer site, a major limitation which faces the public as it evaluates this proposal is the fact that the discussion centers around the acceptance or rejection of this one site. There is currently no mechanism available, such as has been provided by the Legislature for the siting of new power plants, for the public to consider alternate sites and to identify the site that is most desirable from the standpoint of the public interest.

- * Nicollet Island. Recent proposals for Nicollet Island have included suggestions that portions of the Island be used for public open space and as a site for a pioneer village, that some of the existing historic buildings be preserved and renovated as home sites, that the Island become a site for housing and commercial developments. While some of these proposals are compatible with one another, others are not.
- * North Minneapolis riverfront. Should the entire riverfront in north Minneapolis become a site for industries which require barging, as is proposed in the Minneapolis riverfront plan, the increased volume of barging that will result could conflict with the present use of the gorge region of the river for sculling and other pleasure boating.
- * Proposed Fridley sewage treatment plant. There is some disagreement within the community on this, but it appears possible that a new sewage treatment plant in Fridley could conflict with the Minneapolis water treatment plant as well as with proposals to utilize the river for water-contact recreational purposes.

- * South Saint Paul riverfront. A large, undeveloped portion of the riverfront in South Saint Paul, located on the floodplain, has been proposed, by the South Saint Paul Recreation Department, as the site of what would be that community's only riverfront park - at the same time the Public Works Department of that city considers it a prime location for new industry, the use for which the land is currently zoned.
- * Riverfront roadways. Should roadways along the riverfront serve primarily as access roads to enable the public to view and appreciate the beauty of the riverfront, as is the case with the West River Road between University and Franklin Avenues; or should the roadways be designed for the purpose of moving large volumes of traffic, as is the case with Shepard Road in Saint Paul, even to the point of not providing parking space or, because of a flood protection levee, not providing a view of the river?
- * Dredge spoil disposal. Within the gorge region of the river, the practice of disposing of dredge spoils on the riverbank, which causes large sandbars to protrude from the riverbank into the river, conflicts with the general, natural beauty of the riverfront in this region.

Beyond the undesirable effect on the esthetic appearance of the gorge, the current method of disposing of dredge spoils is not acceptable for other reasons, specifically:

- Although adequate data is not available to form a definite conclusion, it appears likely the present method is not particularly effective. The current of the river appears to draw a certain amount of the spoils back into the river, necessitating additional dredging farther downriver.
 - Because dredge spoils are redeposited on the same general site, it is not possible to make effective use of the dredge spoil sites. Any improvements in the spoil sites will likely be covered with additional spoils in a future year.
 - In areas such as the gorge, where the floodplain is essentially non-existent, the spoils sites gradually protrude farther into the river channel, causing a narrowing of the river channel. The present disposal method, if continued into the future, could have a serious impact on the already-narrow channel in the gorge.
- C. Development within the riverfront should be based on standards that will insure that the riverfront is best utilized for the benefit of the public.

Certain standards should be applicable for the entire river corridor, specifically:

- * Provide public access to the shoreline. To the greatest extent practicable, the shoreline of the river throughout the metropolitan area should be accessible to the public. Very few developments, including industry, need to be directly on the river.

- * Provide protection to the river bluffs. Developments that deface the river bluffs are not an appropriate use of the riverfront and should not be permitted. The cutting of vegetation along the river should be controlled.
- * Protect the floodplain. Developments that will increase the potential damage of a major flood, including the filling of floodplain land, should not be permitted.
- * Insure that riverfront roadways enhance the riverfront. Roadways that are designed for the primary purpose of moving large volumes of traffic from one point to another are undesirable forms of riverfront development. In general, a four-lane road should not be located along the riverfront in the metropolitan area.
- * Protect existing riverfront parks. Existing parklands along the river should not be used for housing, industry, or high-speed roads.
- * Improve the appearance of developments. The visual appearance of a development on the river, including the height of the development, should be a consideration in determining whether the industrial site is appropriate for the riverfront.
- * Control the density of development. Developments should be spaced sufficiently apart from each other so as to not form a "wall" which in effect blocks off the river.
- * Restrict commercial and industrial developments. Commercial and industrial developments should be restricted to those regions of the river which have already experienced significant urban development. Industries which locate on the river should be limited to those which require the use of the river in their operation.

II. The opportunity remains for the people of this area to turn the Mississippi Riverfront into a nationally significant recreation area.

We reject the idea - which some have advanced - that it is too late for the Twin Cities to do anything with the Mississippi Riverfront. True, many opportunities have been lost, but many more remain. If the people of this area have the desire and commitment to do so, the Mississippi Riverfront can become the major attraction of the Twin Cities. Rather than being viewed as our backyard, as riverfronts oftentimes are, it can become a resource to be proud of as we show it to the people who visit the Twin Cities and wish to view this nationally significant landmark.

In suggesting that the riverfront can become a significant recreation area, we do not suggest that recreation should be defined solely as active forms of recreation, such as hiking and boating, but that the potential of the riverfront be viewed in a broader recreational sense - one which includes passive forms of recreation such as scenic drives and visits to important historic sites, even dining at the riverside restaurants.

A. The Twin Cities area has not, however, given adequate attention to date to the recreational potential of the Mississippi Riverfront.

1. The lack of an awareness on the part of the public of the great potential of the riverfront has been a major reason why this area has failed to fully utilize the riverfront. Many of us, for example, were not aware of the great potential of the riverfront. Until the public becomes aware of the many opportunities provided by the river, it will be difficult for any major program to enhance the riverfront to be successful.
2. The acquisition and development of park sites along the riverfront has not received sufficient emphasis, primarily for these reasons:
 - * State and federal open space funding programs have emphasized the acquisition of additional land. They fail to provide sufficient funds to park agencies to enable them to develop and maintain existing publicly owned sites on the river. Existing public facilities along the river frequently are poorly maintained.
 - * Because other prime park sites, located away from the river, have been available for park acquisition at lower prices, park agencies - with limited funds - have tended to place their emphasis on these other sites.
 - * The riverfront is a regional recreation resource. Recreational sites on the river will draw people from beyond the boundaries of any one community. Municipalities are reluctant to acquire and develop sites that are not primarily for use by their residents. It is also difficult for a municipality, other than Minneapolis or St. Paul, to develop the trail-type recreational uses that are particularly appropriate for a linear system.
3. Existing plans for the riverfront fail to pinpoint responsibility for implementation of the ideas contained within the plans. While we find most of the proposals contained within the existing riverfront plans exciting and worthy of support, we are concerned over the fact that the plans do not identify the steps, and the timing of those steps, that public agencies should undertake in order to implement the plans.

B. Nevertheless, the opportunity does remain to turn the Mississippi Riverfront into a major public resource.

1. Even today, large areas of the river corridor have been set aside for public use. More sites - Coon Rapids, Lilydale and Spring Lake - are presently being purchased and developed. Historic Fort Snelling is a significant addition to the riverfront. The several restaurants that exist on the river are examples of how commercial ventures can serve to make the river a more enjoyable resource for the public. The river, too, is already used extensively for various forms of boating.
2. Many untapped opportunities still remain for increasing the public use of the riverfront. Trails along the river, for both hiking and biking,

could be developed throughout the river corridor. Trails cannot be used by everyone, however, and so additional scenic drives could be considered for portions of the riverfront. The many historic developments described earlier provide further opportunities for increasing the public use of the river. The remaining open space along the river provides opportunities for expanding the region's park sites. The urban stretches of the river are appropriate sites for additional commercial developments,

3. Recreational use within the metropolitan portion of the Mississippi River corridor should emphasize riverfront development. While not seeking to minimize the enjoyment boating on the river provides, we believe that most residents of this area are more likely to utilize the recreational opportunities which the land along the river provides, opportunities such as hiking or driving along the river to view its beauty, or visiting one of the many historic sites along the river.

III. The existing governmental process is not adequate to manage the Mississippi Riverfront. The State Critical Areas Act, however, does provide the tools to protect the riverfront; to enable the use of riverfront land to be based on regional considerations; yet to maintain local involvement in the land-use process.

A. Other than the Critical Areas Act, existing laws are not adequate to fully manage the resources of the metropolitan river corridor.

1. Municipal zoning powers do not assure a regional perspective to be placed on riverfront land use. With 24 separate communities involved in determining the use of riverfront land within the metropolitan area, it is not feasible for a consistent approach to riverfront land use to be developed through municipal zoning powers.
2. The State Wild and Scenic Rivers Act is an effective tool for controlling development. The law, however, is designed to apply to rivers that are less developed than the metropolitan portion of the Mississippi. The portion of the Mississippi River above Anoka does appear to be sufficiently undeveloped to permit it to be designated a wild and scenic river.
3. The Shoreland Management Act is not fully adequate to guide development within an urban river corridor such as the metropolitan portion of the Mississippi River corridor. By itself, the Shoreland Management Act will provide some control over development within the river corridor. The most recent legislative session did extend the coverage of the act to all of the shoreland in the state. The act does have some serious limitations, however, the most serious being that the act affects only that portion of the river corridor within 300 feet of the edge of the river. The other major limitation of the act is that it was intended primarily for the purpose of protecting the waters and rivers of the state. The controls provided by the act are essentially designed to reduce the pollution that is caused by shoreland developments. It does not address itself to such factors as the height or design of buildings, nor is it able to restrict certain types of development from particular areas.
4. The Floodplain Management Act also provides only minimum standards for controlling development on the floodplain. Floodplain ordinances are not necessarily consistent throughout the riverfront, nor are they intended

to protect the riverfront. Their primary purpose is to minimize the damage that might be caused by flooding.

5. The authority of the Metropolitan Council under the Metropolitan Reorganization Act to designate areas as having metropolitan significance is a temporary tool for controlling development, in that, under the law, the Council may suspend certain developments for a limited time - not to exceed one year.
6. The Metropolitan Protection Open Space Act does not require that the standards adopted by the Metropolitan Council be implemented by local government. The act does deal with many of our concerns relative to development along the river. Enactment of the standards is left to the option of each individual local governmental unit.

B. The Critical Areas Act, on the other hand, provides an effective tool for guiding future development of the Mississippi Riverfront.

1. The Mississippi Riverfront within the metropolitan area does meet the criteria established by the Critical Areas Act.

a. The Mississippi River corridor possesses, as the act requires, important historic and esthetic values.

* Important historic sites are located throughout the river corridor - sites which recall the efforts of man to settle this area, many of which are listed in detail earlier in this report.

* The Mississippi River corridor is also a unique esthetic resource. The beauty of the Mississippi River - both that which is natural and some which is man-made - is unique to the state.

b. The Mississippi River is a natural system which performs functions of greater than local significance, an additional requirement of a critical area.

* It is, truly, a natural system. Any river is a natural system, but within Minnesota - and for a large portion of the nation - the Mississippi River is a natural system of major significance. It serves as the watershed for a good share of the state and nation, and for all of the Twin Cities region.

The river, further, serves as a major source of water for the Twin Cities community and the primary facility for disposing of the treated wastes generated by the people and industries of this area.

* The river corridor is a regional facility. It is not possible for any one local governmental unit adequately to control the effects of the use of the riverfront. Land-use decisions at one point along the river corridor do have an effect on the remainder of the corridor.

--Because barges must move through the river corridor to reach terminals in north Minneapolis, locating terminals along this portion of the riverfront has an impact on downstream sections of the river corridor.

- The filling of floodplain land has a very direct impact on the riverfront in other communities. Filling all of the floodplain that can legally be filled would raise the flood level at other points on the river.
 - The placement of an industry or waste treatment plant which discharges effluents into the river could potentially have an undesirable effect on the downstream portion of the riverfront. That this is a real possibility was demonstrated by the forced closing of the metropolitan plant in April.
 - Because the river serves as a border between municipalities and counties throughout most of the metropolitan area, the public, and public officials, from a municipality on one side of the river have no choice in development decisions regarding riverfront land on the opposite riverbank, even though they are affected by those decisions.
 - The amount of land on the river that is available and appropriate for river-related industries (essentially industries that require barge transportation) is limited but exists in more than one municipality. Decisions on how the land is to be used - whether all or some of it should be reserved for river-related industry - are today made individually by each municipality. The considerations that go into these decisions should extend beyond the interests of any one municipality.
 - Although the Mississippi Riverfront has the potential for becoming a major historic and recreational site, citizens throughout the metropolitan area, who might utilize the riverfront, today have no effective voice in the use of riverfront land.
2. Designation of a critical area can be a permanent method for protecting the riverfront. If the Governor's designation of a critical area is ratified by either the Legislature or the Metropolitan Council, the powers of the law apply permanently. Such a designation would not prohibit, but would guide, development along the river.
 3. The act maintains local involvement in the use of the land but places land-use decisions within a regional perspective. Specifically, the act would require local governments to develop plans and regulations for the riverfront but these would be reviewed by the Metropolitan Council for consistency with regional objectives.
 4. The critical areas process can be utilized immediately. It does not require any new legislation for the authority to establish a critical area has already been enacted into law. Under the critical areas process, it is possible that the Mississippi River corridor could be accorded protection within four months.
 5. Utilizing the Critical Areas Act does not require the establishment of any new special-purpose governmental body. Existing governmental units are granted the authority to implement the act. The act, specifically in the instance of the Mississippi Riverfront, would utilize the existing general-purpose, regional agency -- the Metropolitan Council,

Although a new agency to protect the river might, at first glance, seem desirable, such an approach does contain significant problems. First, a new agency would add yet another governmental agency to the long list of public agencies that presently have some authority over the river. Unless the authority of existing bodies over the riverfront would be restricted, a new agency might not be any more effective than are the existing agencies.

Second, it is important that the development of the Mississippi Riverfront fits into a general framework. The use of single-purpose agencies has historically been unsuccessful in terms of balancing the total concerns of an area and relating one to another.

R E C O M M E N D A T I O N S

I. Designate the Mississippi River corridor a State Critical Area.

The Mississippi River corridor should receive further protection so that future development within the river corridor is based upon a recognition of the river corridor as a unique, regional, public resource.

- A. We recommend the Metropolitan Council propose that the Mississippi River corridor within the seven-county metropolitan area be designated a critical area under the provisions of the State Critical Areas Act. The Council's proposal should be supported by the Environmental Quality Council, and the corridor should be designated a critical area by the government.

The specific width of the critical area should be determined by the Metropolitan Council. In general, we recommend using the boundaries established by the Metropolitan Council in its 1969 Major River Corridors study.

- * The river corridor north of the city of Anoka should be treated as a critical area until it is established as a part of the state's wild and scenic rivers system.
- * For the remainder of the river corridor the designation should be ratified and made permanent by the Metropolitan Council.

- B. The Metropolitan Council should recommend specific standards to be made a part of the Governor's order - standards on which local plans for the critical area will be based.

To the greatest extent practicable, these standards should incorporate the standards and criteria being developed by the Metropolitan Council as required by the Metropolitan Protection Open Space Act. Those standards, while extremely important, are essentially limited to protecting certain natural features of the river corridor. The critical areas standards should be more extensive and cover certain important features of development, design and height of structures, for example.

More specifically, we recommend standards be established for the critical area which will:

1. Establish minimum setbacks from river for new developments. For the heavily developed regions of the river corridor, setback standards should be as specified by the State Shoreland Management Act for general development rivers, which specifies a minimum setback of 75 feet. For the less-developed regions of the river corridor, the minimum setback should be increased to that specified in both the Shoreland Management Act and the Wild and Scenic Rivers Act for recreational rivers, specifically 100 feet. Such a standard, however, should not preclude the construction of river-related facilities such as water intakes, observation platforms, docks, boat-launching ramps and necessary barge-loading facilities.
2. Regulate development on river bluffs. Structures should not be constructed on the face of the river bluffs. The definition of a bluff should be the same as for the suggested standards for the proposed lower St. Croix River critical area, specifically any slope of 13% or greater.

3. Regulate vegetative cutting. Clear-cutting of trees and shrubs should not be permitted on land adjacent to the river, and selective cutting should be regulated.
4. Prohibit development on the floodplain. Within the metropolitan area portion of the Mississippi River floodplain, all filling of floodplain land and all permanent development should be prohibited. The minimum standards specified by the State Floodplain Management Act for the floodway portion of the floodplain should apply, in the metropolitan area, to the entire floodplain of the Mississippi River.
5. Establish height restrictions for new buildings within the river corridor. Standards should be developed to regulate the height of new buildings within the river corridor. The standards should provide that the maximum height be increased as the distance from the river increases. The height restrictions for buildings below a bluff, for instance, should generally be more restrictive than for developments beyond the bluff.
6. Establish density standards. From the standpoint of land coverage, the density of development within the river corridor should be limited to insure that sufficient open space is retained between developments. High-rise developments, for instance, should be spaced so that they do not, in effect, form a wall which blocks the view of the river corridor.
7. Review the design of new structures in the corridor. The standards should require local governments to review the design of new structures in the river corridor. The Design District Law passed by the 1971 Legislature for Minneapolis is an example of a mechanism that could be used to implement this standard. The standard should provide that the design of new structures serve to enhance the river and should require, as a minimum, such things as landscaping and screening of buildings and regulation of signs.
8. Restrict commercial and industrial developments. Critical area standards should require that commercial and industrial developments in the river corridor be confined to certain specific regions of the corridor. In general these should be those regions which have already experienced significant development. The standard should, to the greatest degree possible, prohibit any new commercial or industrial development within the river corridor above the city of Minneapolis, between the Washington Avenue bridge in Minneapolis and the I-35E bridge in St. Paul, and - below St. Paul - within the Grey Cloud/Spring Lake region.
9. Restrict industrial development to industries which are river-related. The standards should also provide that, in those stretches of the river determined to be appropriate for increased navigational use, only industries which actually require the use of the river in their operation be permitted to locate immediately adjacent to the river. With the exception of a few industries which must locate on the river in order to withdraw or discharge water, this requirement essentially means that industries which require the use of barging in their operation may locate adjacent to the river. Other industries should not.

It appears that significant portions of the riverfront in north Minneapolis are likely to undergo redevelopment in the future. We question whether this portion of the riverfront is likely to become a major site for industries which require barging. This standard would likely reduce the amount of new industrial development on the north Minneapolis riverfront. Instead of viewing this portion of the riverfront as a primary industrial site, we suggest that other uses be considered relating them, as well, to the redevelopment that is likely to occur as a result of the construction of I-94 just a few blocks west of the river.

10. Limit roadway construction. For that portion of the critical area within 500 feet of the river, the standards should provide that any new linear roadways be designed primarily for parkway purposes, and not for movement of arterial traffic.
11. Encourage public access to the river. The standards should encourage local governments to designate substantial portions of the immediate riverfront for such public use as hiking and biking trails. The standards should require that any new developments on the riverfront - public or private - provide maximum feasible public access to the river and its shoreline, consistent with the proposed project.

One way for local governmental units to enforce these standards would be through the use of special use permits. A proposed development within the river corridor would have to meet the standards established for the critical area before a special use permit would be issued.

- C. Designate the Mississippi River corridor above the city of Anoka as part of the state's wild and scenic rivers system.

We support the preliminary decision of the Department of Natural Resources to designate that portion of the Mississippi River corridor above the city of Anoka as part of the state's wild and scenic rivers system,

II. Develop, and implement, a program to enhance the public use of the Mississippi Riverfront.

Establishing the Mississippi River corridor as a state critical area will be important in guiding the physical development of the river corridor. It will be effective in protecting the natural aspects of the riverfront by preventing undesirable development from occurring. The Critical Areas Act is not, however, a totally adequate tool for initiating a program to capitalize on the great potential of the Mississippi Riverfront as a public resource. Further steps are needed to turn this potential into a reality.

- A. Develop a Mississippi River Enhancement Program for the metropolitan area.

Building on existing plans a program for enhancing the riverfront should be developed which emphasizes those recreational uses most appropriate for a linear system, which the riverfront is; which builds upon the important role the Mississippi River played in the history of this area; and which encourages appropriate commercial development within certain developed regions of the river. The primary purpose of such an enhancement program should be to draw people to the river.

1. Utilize existing riverfront plans. Several plans - many of them being quite exciting - already exist for improving portions of the riverfront. Rather than being a reason why a program for enhancing the river is not needed, we believe the existence of these plans is one reason why it is.

A program, such as we are proposing, is needed to bring together - and relate to one another - all of the existing plans and ideas for enhancing the riverfront. Our proposal is designed to build upon those ideas which already have been proposed, but will go a step further to tie them together and, thereby, draw greater attention to the exciting opportunities which the riverfront provides.

Such a program would not deal solely with existing ideas for the riverfront, however. In areas where plans have not yet been developed, we would expect this program to generate additional specific plans for the river. By way of example, there is interest, but no specific plan, in the northern suburbs to develop a trails system along the river. The program we suggest should deal with this type of opportunity as well.

2. Emphasize the recreational potential of the riverfront land. Recreational aspects of the plan should receive primary emphasis and, in turn, should emphasize use of the land along the riverfront and incorporate projects, such as hiking and biking trails and scenic drives, which utilize to greatest advantage the linear nature of the riverfront and which attract people to the river.
 - a. A continuous hiking and biking trail throughout the entire river corridor should be one element of the plan. Access to Fort Snelling State Park should be modified to permit the riverfront portion of the park to be incorporated into a continuous riverfront trail system.
 - b. Consideration should also be given to developing additional scenic drives along portions of the river. Such drives should be limited to low-speed automobile traffic and should be designed primarily for viewing the river corridor and not for through traffic. The Great River Road program should be considered as a source of funding for any new scenic drives,
 - c. Additional park sites should also be acquired as part of the recreational element of the program. While not wishing to limit the open space sites that could be developed as part of this plan, we do recommend that consideration be given to acquisition or development of park facilities at the following sites:
 - * Riverfront land in Dayton. Presently a great amount of riverfront land in Dayton is in agricultural use. Plans should be established now, so that upon cessation of said use, portions of this land will be acquired for public recreational use.
 - * Durnam Island. Located in Brooklyn Park just north of the I-694 bridge, Durnam Island should be preserved in its natural state by the public. We recommend that any plan for the river include the acquisition of this land by the public.

- * Nicollet Island. A total plan for the development of Nicollet Island should be based on these general concepts, concepts which are essentially contained in the Minneapolis riverfront plan: The Island should be viewed as a public resource and should, from a regional perspective, be a major focal point in the revitalization of the riverfront; The Island should not be viewed as a site for industry, nor should it be used for high-scale housing developments; Redevelopment of the Island should give emphasis to the history of the Island and its relationship to the history of Minneapolis.
 - * Pig's Eye. A valuable asset for the region containing over 60 species of wildlife, Pig's Eye Lake should be protected as part of a riverfront enhancement program.
 - * South St. Paul Riverfront Park. The undeveloped floodplain on the south end of South St. Paul should be preserved as public open space.
 - * Grey Cloud Island. A site at Grey Cloud Island should be designated now as the site of a future regional park. We recommend the Parks and Open Space Commission negotiate an agreement to acquire the park site upon the completion of mining operations on the Island. Such an agreement should specifically provide that mining and reclamation efforts be conducted so as to maintain, and enhance, the recreational potential of the site.
- d. Existing park sites on the riverfront should be improved, and better identified. An enhancement program for the river should include additional development of existing public sites, such as Harriet Island in Saint Paul.

Many of the existing public sites on the river are unfamiliar to residents of this area in part because they are poorly marked. The entrance to North Mississippi Park, for example, does not indicate the area is a public park nor that the park includes a public ramp for launching boats on the river. Although renovations that are currently under way may change the situation, the Hidden Falls and Crosby Lake Parks are currently poorly marked.

3. Stress the rich history of the riverfront. The riverfront is full of exciting possibilities for significant historic developments that will draw people to the river and at the same time enable the public to better understand the history of this region. A few examples are:
- a. St. Anthony Falls. A major historic interpretive center at the Falls of St. Anthony, which would recall the important role the falls played in the development of this area as a major commercial center. The Minnesota Historical Society recommended the development of a major historic site at St. Anthony Falls as part of a state historic sites program in 1963. A specific plan for such a site, however, has not yet been developed. The Minneapolis Bicentennial Commission is an appropriate body to participate in the development of such a site, in conjunction with the State Historical Society.

- b. St. Paul's Upper Landing, With the eventual phase-out of the GTA terminal-elevator in downtown St. Paul likely in the future, consideration should be given to a development on that site which relates to Irvine Park and also which will recall the site as the historic Upper Landing for St. Paul. Perhaps it could become a new St. Paul's Landing for boats such as the Jonathan Padelford and the Delta Queen.
 - c. Other sites. Development of other historic sites on the river should be considered as well, including sites such as Carver's Cave in St. Paul, Old Mendota, and the Kaposia Sioux Village.
 - d. Relate historical and recreational elements. To the greatest extent possible, these historical and recreational elements should be tied together through the development of historic trails. Consideration should be given, for instance, to the creation of a hiking trail on the original Red River Oxcart Trail, which parallels the river north of Minneapolis. A water route which emphasizes the history of the area might also be a possibility.
 - e. Encourage the private sector to assist in the development of historic sites. The flour milling industry, for instance, should be encouraged to develop a working museum which depicts the relationship of the river to the development of the flour milling industry. The Pillsbury "A" mill would be an excellent location for such a project.
4. Stimulate and encourage commercial development. The riverfront enhancement program we are recommending should also recognize the important contribution that recreation-oriented commercial developments can make to the enhancement of the riverfront. Along with identifying sites for recreational and historical sites, the enhancement program should also identify sites, within appropriate areas, where river-oriented commercial developments would be desirable. Here, again, this program should build on the recommendations contained in the Minneapolis and St. Paul riverfront plans.

We recommend that the Minneapolis and St. Paul Housing and Redevelopment Authorities and the Industrial Development Commission and Port Authority undertake the responsibility to stimulate and support those commercial developments which will enhance the riverfront but which need assistance from the public sector. These cities should also consider rezoning, to a commercial designation, any riverfront land that is presently zoned industrial, which has been identified as a possible site for a commercial development in the city's riverfront plan.

5. Increase water-related recreational uses of the river. Although we believe the primary recreational use within the river corridor relates to the land along the river, water-oriented recreational uses should be part of an enhancement program as well. The program, for instance, should provide for additional boat-launching ramps and marinas.

For a person not properly educated, the river can be extremely dangerous. Primarily for that reason, we do not consider swimming to be a recreational use that should be emphasized in any recreational program for the river. If the Twin Cities was not blessed as it is with a multitude of attractive lakes, we might feel differently.

We do recommend, however, that serious consideration be given to separating Spring Lake from the main channel of the river and restoring it as a lake that could be used for such water-related activities as swimming and fishing.

With respect to boating, we are concerned with the potential dangers an inexperienced boater might encounter on the river and recommend the Department of Natural Resources establish, perhaps in cooperation with the existing programs of the Coast Guard Auxiliary and U. S. Power Squadron, an education program for boating on the river. Such a program should include ways of making new boaters aware of such a program; posting notices at locks and boat ramps might be one way of doing so. Some of the dangerous aspects of river boating such a program would emphasize would include: existence and location of the submerged wing dams; navigating around large barge tows; passing through the locks on the river.

6. Utilize the riverfront as an educational and cultural resource.

- a. Interpretive centers to explain the geology and biology of the riverfront and the hydrology of the river should be considered as possible elements of such a plan.
- b. We support the idea, contained in Mississippi/Minneapolis, for an annual conference on the river; a conference that would increase awareness of, and generate interest in, the river. Perhaps such a conference could be broadened beyond the confines of Minneapolis and be made a joint project of the two major river cities--Minneapolis and St. Paul.

B. The Metropolitan Council should undertake primary responsibility for the development of an enhancement program for the Mississippi Riverfront.

We believe the Metropolitan Council is the appropriate agency to undertake primary responsibility for the development of the program we have outlined, for these reasons:

- * The Major River Corridors Study published as a staff report by the Metropolitan Council in 1970 noted that the study was not a plan for the area's three major rivers but the basis on which a plan could ~~begin to be formulated, and that response to the study would be instrumental in assisting the Council in the development of a concept plan for the major river corridors.~~ As yet, that plan has not been developed by the Council. For the purpose of developing a program to enhance the riverfront, we believe one is needed now.

- * The Metropolitan Council has already been directed by the State Legislature to prepare, by January 1, 1975, a long-range system policy plan for regional recreation open space. We believe the development of the program we suggest could relate very closely to the preparation and adoption of this policy plan.
 - * A \$1.2 million "Level B" study has been authorized by the Upper Mississippi Basin Commission for the metropolitan area. One phase of the study deals with recreation within the Twin Cities area portion of the river basin. The Metropolitan Council is the designated lead agency for this study and could also, perhaps, use the Level B study as a vehicle for developing the program we are recommending.
 - * The Metropolitan Council's Development Guide chapter on Recreation Open Space recommends that the State of Minnesota be responsible for developing and acquiring recreation open space along the major river corridors. On the basis of our understanding of the priorities of the state park system, it does not seem likely to us that the state will assume this responsibility. In any event, we believe it is as appropriate for the Council to undertake this responsibility as it would be for a state agency. This is particularly true with our emphasis on developing the land along the river rather than giving primary emphasis to the development of water-related activities, an aspect the state might be better able to handle.
 - * We believe it is important that such a program build on but go beyond the ideas contained in local plans for the riverfront. We do not believe it is likely that all of the municipalities and counties along the river would jointly develop such a plan on their own. We learned, for instance, that there was minimal contact between the cities of Minneapolis and St. Paul in the development of each of their riverfront plans.
 - * Finally, the Metropolitan Council will be playing a key role in the establishment of the Mississippi River corridor as a state critical area. The work of the Council in the establishment of the critical area could relate very closely to the program we recommend.
1. Involve other public agencies. While the Metropolitan Council should undertake primary responsibility for the development of such a program, it should be certain to involve other affected public agencies as well, including:
 - a. The Minnesota Historical Society: We envision a major area of emphasis in any enhancement program for the riverfront to be the important relationship the riverfront has to the history of this region. The Minnesota Historical Society is uniquely qualified to develop plans for additional historic sites along the river. They should be deeply involved in the preparation - and implementation - of any program to enhance the riverfront.

- b. The Metropolitan Parks and Open Space Commission. The commission is directly responsible for working with the Council in establishing the regional recreation open space system plan. In such a capacity, the Parks and Open Space Commission should also play a key role in the development of the enhancement program for the Mississippi Riverfront.
- c. County and municipal agencies. This regional program for the riverfront is not intended to replace the efforts of local agencies to develop the riverfront. Instead, it recognizes that it is not possible for any one county or municipality which borders the river to deal adequately with the regional nature of the riverfront. The riverfront, for example, is an interest of citizens who live in communities which do not border the river. It is not realistic to expect the communities on the river to provide for the needs of these people, however.

We believe it is significant that many of the local park officials with whom we have spoken about plans for enhancing the riverfront have expressed a belief that a plan for the riverfront needs to be developed from a regional perspective.

That local park officials must be involved in the development of plans to expand the public use of the riverfront is apparent from the fact that most of the existing public open space along the river is owned and operated by the local governments. We would expect this to continue and for additional sites that are developed as part of this plan to be operated by local agencies.

- 2. Designate responsibility for funding and implementation of the program. One of the major failings of existing riverfront plans, we believe, is that they do not deal sufficiently with the need to pinpoint responsibility for implementation of the plan. The program we recommend the Council develop should be specific in terms of responsibility for implementing each element of the program. If necessary, implementing authority should be requested from the Legislature.

The Council should complete, by January 1, 1975, the first phase of the enhancement program so appropriate portions of it can be incorporated in the Council's policy plan for regional recreation open space. The development of this program should be an ongoing function of the Council, however, and should be periodically reviewed and updated as necessary.

With respect to funding the program, many sources of funding already exist which can be used to develop this program for the river, sources such as the Council's Open Space Fund, the DNR trail acquisition fund, the Minnesota Resources Commission and LAWCON funds, the Great River Road program, as well as county and municipal funds. We recognize, however,

that funds from these sources will not be adequate to carry out the program we are recommending. Consequently, we recommend the Council consider recommending to the Legislature either the expansion of the existing open space fund beyond the present \$40,000,000 limit or the establishment of a special Mississippi Riverfront development fund to be financed by legislative appropriation and/or a region-wide tax levy.

Financial support for the recreation-oriented commercial developments should be provided by the Housing and Redevelopment Authorities and the St. Paul Port Authority.

C. Establish a private organization to stimulate enhancement of the riverfront.

As we have said previously, the lack of awareness on the part of the public of the tremendous potential of the riverfront is a major reason why public agencies have not responded earlier with programs to increase the public use of the riverfront. An organization of private citizens who are committed to enhancing the riverfront is needed to draw the public's attention to the potential of the riverfront and for recommending specific actions to public agencies concerning the use of the riverfront.

We hope that a private constituency of concerned citizens will be created, perhaps in a manner similar to the Fort Snelling Association, the Minnesota Zoological Society, or the Voyageurs National Park Association, specifically to accomplish the following: (1) to promote interest in the use of the river; (2) to suggest ways of enhancing the river and encourage support by public officials for riverfront projects; (3) to assist in the raising of funds for the acquisition and development of riverfront property.

III. Other specific issues.

A. Consider alternate sites for the proposed coal terminal.

In order to insure a public role in the consideration of sites for large coal terminals, we recommend the State Power Plant Siting Act be amended to provide that the sites of large coal terminals be selected by the Environmental Quality Council (EQC) in the same manner as it selects the sites for power plants.

The EQC should utilize the environmental impact statement provisions of the Environmental Policy Act to require the State Pollution Control Agency (PCA) to withhold the issuance of any permit for the Pig's Eye facility until the site of the proposed terminal has been selected through the siting act process.

B. Acquire the Watergate Apartment site for public open space.

We recommend the site of the Watergate Apartments be acquired by the City of St. Paul and added to its riverside park system. Use of the site should include a marina. Funding should be provided by the Metropolitan Parks and Open Space Commission.

C. Terminate on-site disposal of dredge spoils.

We recommend that:

- * The U. S. Army Corps of Engineers terminate, by July 1, 1976, the practice of disposing of dredge spoils on the river bank above the Ford Dam. The Corps should request from Congress an appropriation for channel maintenance that is adequate to permit the hauling of dredge spoils to alternate sites,
- * Dredge spoils be disposed of on the river bank only at sites determined by the Minnesota Department of Natural Resources (DNR) to be esthetically and environmentally appropriate for such disposal.
- * The DNR approve all remote disposal sites to insure the land is environmentally capable of being used for such a purpose.
- * A detailed study of alternate uses, including commercial uses, of dredge spoils be conducted by an organization independent of the Corps of Engineers - perhaps the Minnesota Geological Survey. Congress should appropriate funds for the study.

D. Use proposed riverfront roadway construction to enhance the river.

1. Extension of West River Road in Minneapolis. We recommend the City of Minneapolis involve the Minneapolis Park Board in developing the design of the West River Road extension. Trucks, exclusive of service vehicles, should be excluded from the parkway,
2. Reconstruction of Warner and Shepard Roads in St. Paul. The proposed reconstruction of Warner and Shepard Roads in St. Paul should incorporate a bike path between the river and the road, and provide sufficient parking bays to permit motorists to stop and view the river. The proposed interchange between Shepard Road and Chestnut Street should be designed so as to not preclude eventual public use of the site of the GTA terminal once the terminal has been phased out,

E. Reject new waste treatment plant north of Minneapolis.

We recommend the Metropolitan Waste Control Commission reject a consultant's recommendation that a new waste treatment plant be constructed on the Mississippi River in Fridley just below the Minneapolis water works. While it is probably feasible from a technological point of view to construct a plant at this site that will meet existing PCA water quality standards and will not jeopardize the quality of Minneapolis drinking water, we believe the site should be rejected for these reasons:

- * We believe the riverfront has great potential as a major public resource for the Twin Cities, and we see evidence that the opportunity is at hand to turn this potential into reality. A new waste treatment plant located just upriver from the heart of the river corridor will not serve to enhance the recreational and commercial potential of the riverfront. Indeed, it will do just the opposite.

* The forced shutdowns of the Metropolitan waste treatment plant in May demonstrate there may be times when a plant is not able to adequately treat the sewage before it is discharged into the river. We do not believe the risk of such an incident occurring in this stretch of the river is worth taking. There are alternatives to the Fridley plant, even though they may be more expensive. We believe they should be pursued.

DISCUSSION OF THE RECOMMENDATIONS

This section of the report is intended to anticipate some of the questions readers may have about the recommendations.

1. Why didn't the committee address itself to the other major river corridors in the metropolitan area?

Limiting the scope of a study is always a problem, but a necessity if the scope of the study is to be kept within manageable limits. To the extent a number of issues relating to the Mississippi River corridor have applicability to the other major river corridors in the metropolitan area (primarily the Minnesota and St. Croix Rivers; in some instances, the Rum and Crow Rivers) the study could perhaps have dealt with all or some of the other river corridors. There are, however, a number of unique issues which affect the Mississippi River corridor but which do not relate to the other rivers. The downtown areas of Minneapolis and Saint Paul, for instance, are adjacent to the Mississippi River, and so issues relating to the development of these downtown areas affect only the Mississippi River.

Other factors set the other river corridors apart from the Mississippi as well. For instance, the Saint Croix River serves as a state boundary separating Minnesota and Wisconsin. The Saint Croix Riverfront is also scheduled to become a part of the federal wild and scenic rivers system, thereby receiving protection not presently accorded to the Mississippi Riverfront.

Nonetheless, although this study was confined to the Mississippi Riverfront, the recommendations we offer may, in some instances, have applicability to the other river corridors. In particular, they may relate to the Minnesota River, which, for several miles, serves as part of the nine-foot navigation channel. We did not, however, have adequate time to evaluate our recommendations in this light. Other interested parties, however, may wish to do so.

2. Is the Critical Areas Act really intended to deal with an area such as the Mississippi Riverfront?

We believe it is. Because the first critical area has yet to be designated, it is a bit difficult to know exactly how the act will, in fact, operate. In a way, our proposal, if adopted, could serve to a degree as a precedent for the implementation of the act.

Our recommendation is designed to establish the Mississippi River corridor as a permanent critical area. Perhaps because the Environmental Quality Council is currently considering a proposal to utilize the Critical Areas Act as a temporary measure to protect the Lower St. Croix River only until the Lower St. Croix is made a part of the federal wild and scenic rivers system, the critical areas concept may be viewed by some as a temporary, stopgap measure. We believe the Legislature intended the act to be used as a permanent tool and that implementation of the act should be viewed in that light.

We also believe that the act should be used as a tool to manage development in urban as well as rural undeveloped areas. The critical area we propose incorporates both urban and rural land.

If the Metropolitan Council, Environmental Quality Council, or Governor decides not to recommend or establish the river corridor as a critical area, the Legislature should enact legislation granting the Metropolitan Council direct authority to control development of the river corridor.

Our recommendations do not address themselves to any changes that should be made in the administration of the Critical Areas Act. It is quite possible, for instance, that additional authority should perhaps be delegated from the Environmental Quality Council to the regional development commissions. We concluded, however, that any recommendations dealing with the workings of the act would be premature until the critical areas process has actually been used enough to make an evaluation possible.

3. Does our proposal for alternate methods of dredge spoil disposal deal with the entire Mississippi River corridor?

Our recommendation pertains only to the metropolitan area portion of the Mississippi River corridor. Within the metropolitan area, it relates most directly to the river corridor above the Ford lock and dam. We recognize that the dredge spoil issue extends beyond the metropolitan area, but we did not have sufficient time nor adequate information to develop conclusions or recommendations with respect to the effect of dredge spoils on the Mississippi River farther downstream.

We recognize that alternate methods of dredge spoil disposal for the entire navigation channel can not be implemented over night. It will probably be necessary to try, on a trial basis, alternate methods to determine whether they help alleviate the problems associated with the present disposal method. We do suggest that the Corps of Engineers undertake the alternate methods which we have outlined in our recommendations for the Twin Cities metropolitan area on a test basis to determine how effective they are and whether they can have applicability to other sections of the riverfront.

4. Do our recommendations deal directly with the proposal to build a Pioneer Village on Nicollet Island?

Frankly, on this subject, the committee was unable to reach a consensus. Several members felt that the proposal is a good one for the Island, that it would draw more people to the River, and that it should be supported. On the other hand, a number of committee members expressed concern that the proposal was an attempt to recreate history without being historically authentic. Probably the real problem encountered by committee members, as well perhaps as by the public, is that the term "pioneer village" has different connotations to different people. Unless and until the pioneer village concept is more clearly defined as to exactly what is being proposed, there will probably continue to be disagreement within the community over this proposal.

5. If the Metropolitan Open Space Fund is to be used to acquire recreation sites with regional significance, why do we propose that these funds be used to acquire the few acres on which the Watergate apartment complex is scheduled to be developed?

We believe the Metropolitan Open Space Fund is an appropriate funding source for the acquisition of the Watergate apartment site primarily for these two reasons:

- * Although the size of the apartment itself is small, when that site is added to the Crosby Lake park site to the east and Hidden Falls Park, located below the Mississippi River Parkway to the west, over 500 acres are contained within these two park sites. If the Watergate apartment site is purchased for public recreational use, it will join together a park system which, in total, does have major regional significance.
- * Because the benefits which result from the acquisition of the site for park purposes extend beyond the limits of St. Paul, we do not believe the city, by itself, should be required to purchase the property. The regional open space fund is a way for all residents of the region to share the cost.

6. What type of relationship do we visualize would exist between the Metropolitan Council and the Metropolitan Parks and Open Space Commission, as the Council develops a riverfront enhancement program?

With respect to developing the recreational component of the enhancement program, we would expect the relationship to be essentially the same as presently exists between the two bodies for the development of the Council's system policy plan for regional recreation open space. In preparing that plan, the Council is expected to draw heavily on the expertise of the Parks and Open Space Commission and, once a basic plan has been prepared but before it has been adopted, the Council is required to submit it to the Parks and Open Space Commission for review and comment.

We would also expect the role of counties and municipalities to be similar to that prescribed in the development of the recreation open space system. Counties, in cooperation with affected municipalities, would be expected to develop more detailed master plans for the sites within the county that are designated in the regional system policy plan. The Metropolitan Council, with the advice of the Parks and Open Space Commission, then either approves the county's master plan or directs the county to revise and resubmit a new plan.

7. Our recommendations do not visualize, in the near future, conflicts between various forms of boating on the river. What if conflicts should become apparent at some point in the years ahead?

Although we do not have any reason to believe that the use of the river by boaters might increase in a few years to the point where limitations are needed, and consequently did not develop recommendations on the subject, if overuse of the river should at some point become a problem there are some ways that the problem could be handled. First of all, the commercial boaters could, voluntarily, refrain from doing any more barging on the river during weekends than is absolutely necessary. Recognizing that the river is most heavily used for recreational purposes on weekends, the one firm which hauls most of the barges on the St. Croix River has voluntarily decided to operate only five days on that river. Such a concept could be extended to all or portions of the Mississippi River.

It might also be possible for the State of Minnesota to exercise its authority contained under the Watercraft Regulation Laws of the state to control certain forms of boating on the river. The Department of Natural Resources already has this authority for the public waters of the state. Inasmuch as the state recognizes the Mississippi as a public water of the state, it would seem as though this law would have applicability to the Mississippi River as well.

WORK OF THE COMMITTEE

Background

The Citizens League has published reports in previous years which deal with issues of environmental concern. The 1971 report of the League, "Needed: Better Ways of Making Environmental Choices" is the most recent. Other reports include a 1968 proposal for a metropolitan parks and open space commission, and a 1966 proposal for the strict regulation of solid waste collection and disposal areas.

The report of the Riverfront Protection Committee, although it deals with an important environmental area, the Mississippi River, is unlike these previous reports in that it is confined to a specific geographic area, the Mississippi Riverfront.

The League first programmed a study of the Mississippi Riverfront in 1968; at that time a committee was established to review the competing demands for the use of the water and land along the banks of the Mississippi River through Minneapolis and Saint Paul and to develop recommendations for an overall program to upgrade the river. After holding several hearings the project was suspended, primarily because several of the riverfront studies the committee was to review had not yet been completed.

Returning to the subject of the Mississippi River, the League Board of Directors again authorized a study of the Mississippi Riverfront as part of its 1972-73 research program. The Riverfront Protection Committee was established and given this assignment:

"The Mississippi River is a unique resource in the Twin Cities metropolitan area, but there is increasing concern over how the land along the river is being preserved for maximum public benefit. We would review the extent to which proposed developments are endangering the protection of the riverfront and the adequacy of state, regional and local efforts now under way to preserve and enhance the beauty of areas along the river and to 'open up' the river so it can be more fully appreciated as a resource for the entire region."

Committee Membership

A total of 32 members actively participated in the work of the committee, under the chairmanship of Mary Rollwagen. Other committee members were:

Gerald D. Barfuss
Merlin H. Berg
William M. Bracken
Walter E. Bratt, Jr.
John R. Danielson
Marylyn Deneen
Wood R. Foster, Jr.
Jules A. Goldstein
Barbara Gudmundson
David B. Hall
Robert Handschin

Arthur J. Helland
Patricia Henkel
Fred S. Hird
Rudy Hogberg
Fred Jacobberger
Patricia Jacobberger
Sandra Krebsbach
Todd Jeffery Lefko
Marilyn Lundberg
Peggy Lynch

Ruth E. McLeod
William T. Patten
Alfred E. Pease
Douglas R. Platt
Mary F. Platt
Dudley J. Russell
Dana Schenker
James Seller
G. Rolf Svendsen
Fletcher C. Waller, Jr.

The committee was assisted by Glen J. Skovholt, Citizens League Research Associate, and Jean Bosch of the clerical staff.

Committee Activity

Beginning with its first meeting on August 21, 1973, and continuing through to June 11, 1974, the committee held a regular meeting nearly every Tuesday evening. Additional meetings were also held as needed. In total, the committee met 39 times, generally at Fort Snelling.

In order to provide committee members with the opportunity to gain a first-hand view of the riverfront, two boat trips were scheduled for the committee. The first, a trip on the Jonathan Padelford, covered the riverfront from downtown Saint Paul to a point just south of the Lake Street bridge. Later the committee viewed the river between Grey Cloud Island and downtown Saint Paul on a towboat furnished by the J. L. Shiely Company. Committee members were also encouraged to participate in the River Ramble, a walk along the river between the University River Flats and the Third Avenue bridge, that is held in September of each year.

During the first several months, the committee held a series of hearings at which experts were invited to explain to the committee the current state of development along the river, what new developments should be expected in coming months and years, and what problems should be of concern to the committee.

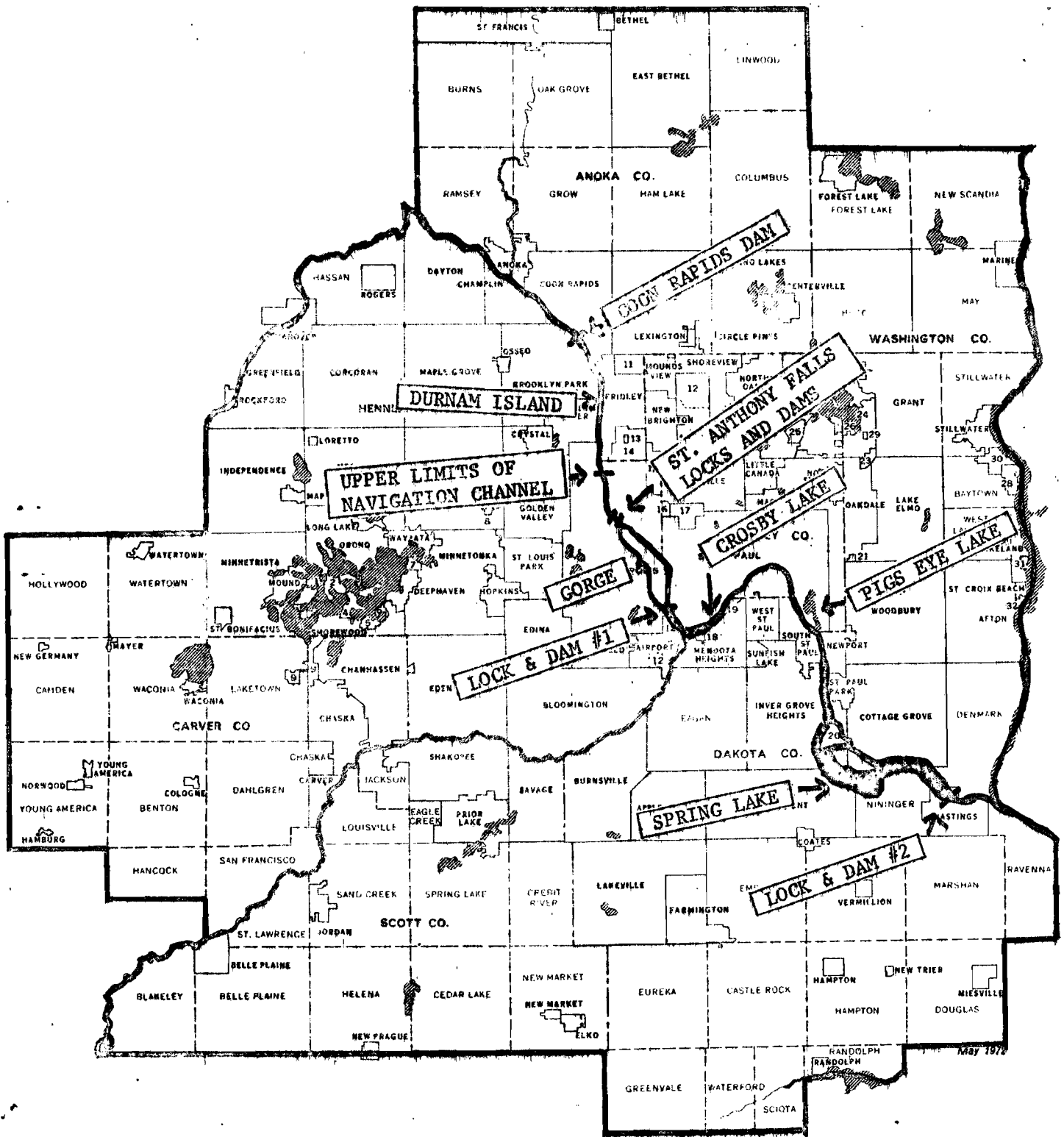
Following these orientation sessions, the committee held several internal sessions, discussing and defining what it considered to be the major problems that needed to be addressed. Finally, the committee spent several weeks reviewing drafts of the findings, conclusions and recommendations sections of the report.

Throughout the testimony session, and continuing beyond, detailed minutes were prepared of each meeting, with copies being made available to members as well as other individuals who were interested in the work of the committee. In addition, extensive background materials were made available to the committee on several subjects of concern to the committee. A limited number of copies of the minutes and other materials are available on file in the Citizens League office.

The committee wishes to thank the following resource persons who met with the committee:

Roger Williams, director of land-use planning, State Planning Agency.
Jerome Kuehn, bureau of planning, State Department of Natural Resources (DNR).
James Bellus, Saint Paul Planning Department.
James Carver, Minneapolis Planning Department.
Thomas Lutz, and Charles Nelson, Minnesota Historical Society.
Ronald West, Brooklyn Park Planning Director.
Blair Tremere, Brooklyn Center Planning Director.
Jerry Boardman, Fridley Planning Director.
Gunnar Isberg, then Dakota County Planning Director.
John Perkovich, South Saint Paul Recreation Director.
Robert Johnson, Anoka City Engineer.
Alan Hamel, Coon Rapids Planning Director.
Kathy Schneider, a resident of Ramsey Township.
Michael Hambrock, director of shoreland management section, DNR.
Lawrence Seymour, director of water permit section, DNR.
James Wright, director of flood plain management section, DNR.

Phil Olfelt, assistant attorney general assigned to Department of Natural Resources,
George Griebenow, chairman, Upper Mississippi River Basin Commission.
Col. Rodney E. Cox, district engineer, U. S. Army Corps of Engineers.
Rick Lewis, Cottage Grove Planning Director.
Gerald D. Barfuss, a resident of Dayton.
Thomas J. Kelley, Saint Paul Community Services Director.
David Torkildson, Anoka County Parks and Recreation Director.
John Sunde, Hennepin County Park Reserve District.
Al Wittman, Minneapolis Park Board Planning Director.
Dick Lambert, vice president for operations of Twin City Barge & Towing Co.
Clifton E. French, superintendent, Hennepin County Park Reserve District.
Joseph Shiely III, from the J. L. Shiely Company.
William Atkins, director of parks and recreation grants programs for the
State Planning Agency.
David Larson, Minneapolis Industrial Development Commission.
Gordon Morrison, Minneapolis Park Board.
Eugene Kraut, assistant executive vice president, St. Paul Port Authority.
Merle Anderson, manager of real estate activities, Northern States Power Company.
Frank Lamm, director, environmental planning department, Metropolitan Council.
Donald Davison, director of parks and recreation division, DNR.
Jock Robertson, director of critical areas planning, State Planning Agency.
Roscoe Colingsworth, North Star Research & Development Institute.



ABOUT THE CITIZENS LEAGUE . . .

The Citizens League, founded in 1952, is an independent, non-partisan educational organization in the Twin Cities area, with some 3,600 members, specializing in questions of government planning, finance and organization.

Citizens League reports, which provide assistance to public officials and others in finding solutions to complex problems of local government, are developed by volunteer research committees, supported by a fulltime professional staff.

Membership is open to the public. The League's annual budget is financed by annual dues of \$15 (\$25 for family memberships) and contributions from more than 500 businesses, foundations, and other organizations.

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