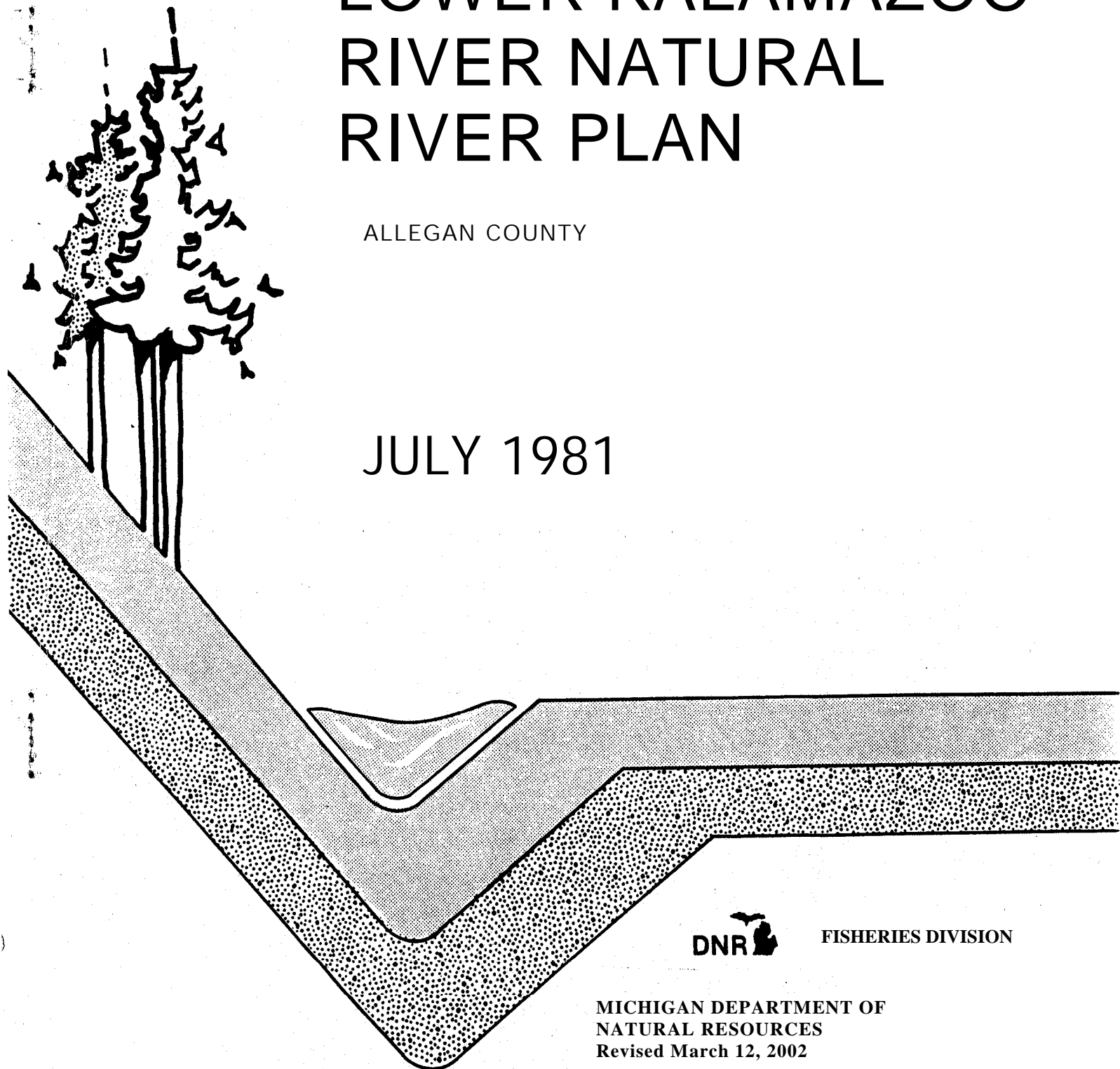


LOWER KALAMAZOO RIVER NATURAL RIVER PLAN

ALLEGAN COUNTY

JULY 1981



FISHERIES DIVISION

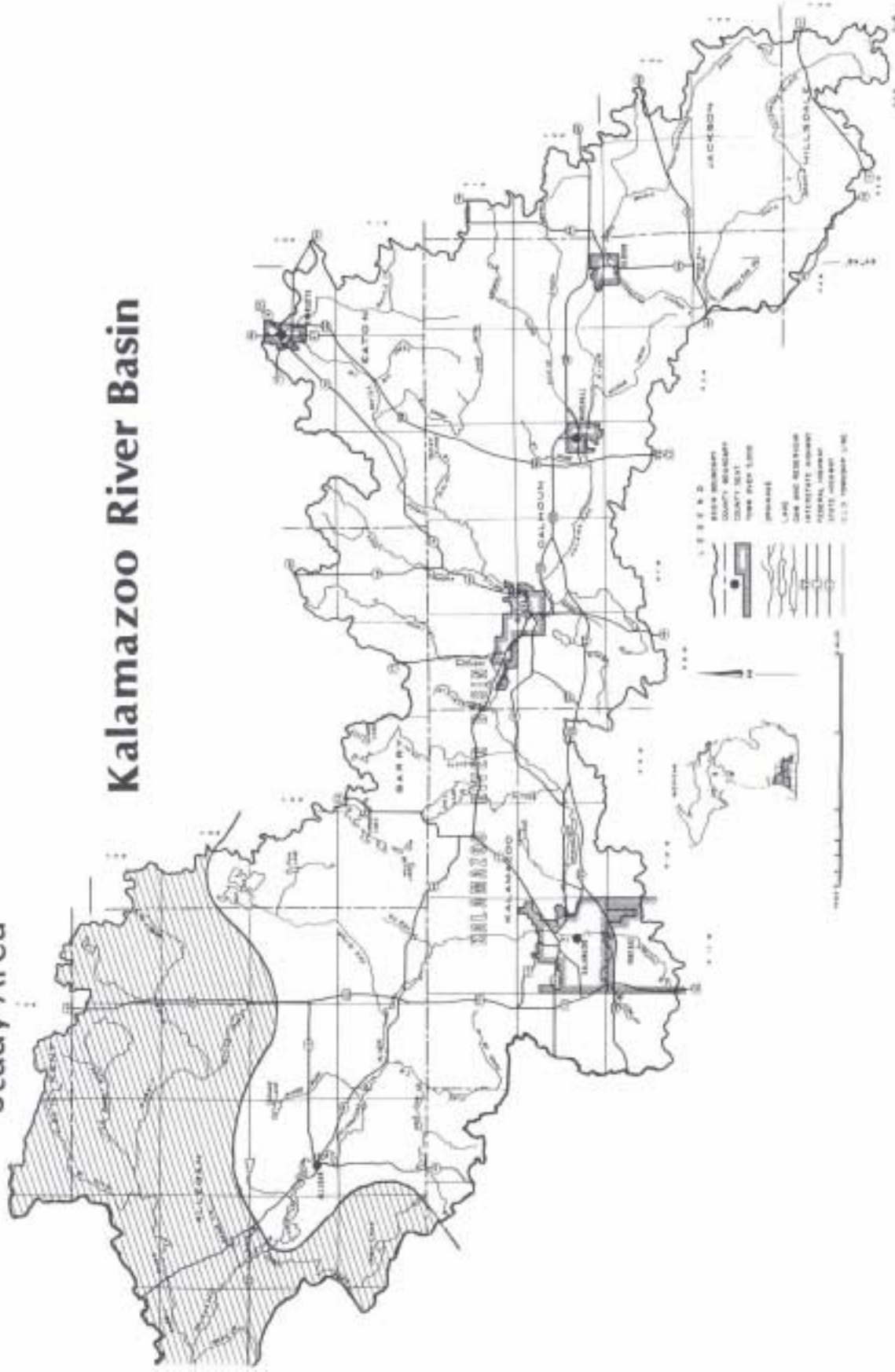
MICHIGAN DEPARTMENT OF
NATURAL RESOURCES
Revised March 12, 2002

TABLE OF CONTENTS

PREFACE	1
THE WATERSHED AND STUDY AREA.....	2
A. General Description.....	2
B. Physiography and Soils	4
C. Stream Characteristics.....	6
D. Vegetation	10
E. Climate	11
F. Accessibility	12
G. Ownership	12
EXISTING USES AND RECREATIONAL OPPORTUNITIES	14
A. Land Use	14
B. Private Recreation Facilities.....	14
C. Public Recreation Facilities.....	14
D. Fishing.....	14
E. Wildlife Observation and Hunting	18
F. Canoeing and Boating	20
G. Historic and Archaeological Sites.....	21
NATURAL RIVER PLAN	24
A. Goal	24
B. Objectives.....	24
C. Designated Portions.....	24
D. Natural River District.....	26
E. Land Management – Private Lands – Zoning Guidelines.....	26
F. Land Management – State and Other Public Lands.....	30
G. State Program Management	31
H. Administration.....	35
I. Recommendations – Encouragements	36
J. Assistance Available from the Department of Natural Resources.....	39
APPENDIX A – PART 305 – NATURAL RIVERS PA 451 OF 1994	41
APPENDIX B – NATURAL RESOURCES COMMISSION POLICY AND PROCEDURES REGARDING THE NATURAL RIVER ACT OF 1970	45
APPENDIX C – RELATED LAWS.....	51
APPENDIX D – LOWER KALAMAZOO RIVER – DESIGNATED STREAM MILEAGE.....	53

Study Area

Kalamazoo River Basin



PREFACE

The Kalamazoo River is an important physical feature of the landscape in southwestern Michigan flowing through wooded areas, agricultural and rural areas affected little by existing development, and through villages and cities. In an area of intensifying potential population growth, economic development and changing land uses, the lower Kalamazoo represents a unique and special resource providing the region's inhabitants with numerous benefits. In addition to supplying water for municipal, industrial, residential and agricultural uses, the river possesses significant natural values, in terms of fish, wildlife, vegetation and aesthetics. The river environment offers a myriad of recreational opportunities to the region's inhabitants.

The Natural River Act (Part 305 of P.A. 451 of 1994) authorizes the Natural Resources Commission to establish a system of "natural rivers" in the state to provide for their preservation, protection and enhancement. Section 3 of the Natural River Act states, in part, that: "The commission, in the interests of the people of the state and future generations, may designate a river or portion thereof, as a natural river area for the purpose of preserving and enhancing its values for water conservation, its free flowing condition and its fish, wildlife, boating, aesthetic, flood plain, ecologic, historic and recreational values and uses."

The Michigan Department of Natural Resources and the Kalamazoo River Advisory Group (representing riparian property owners, the Kalamazoo River Preservation Association, Kalamazoo-Black-Macatawa-Paw Paw Rivers Basin Citizen's Advisory Group, and other interested citizens) have studied the lower Kalamazoo River and recommend that a portion of the river from Calkins Bridge Dam (Lake Allegan), down to just below the Hacklander public access site, Allegan County, be designated a "wild-scenic" river. A "wild-scenic" river is one of wild character with wild or forested borders, in close proximity to human development. The wild aspect may be relatively broad or confined to a narrow band.

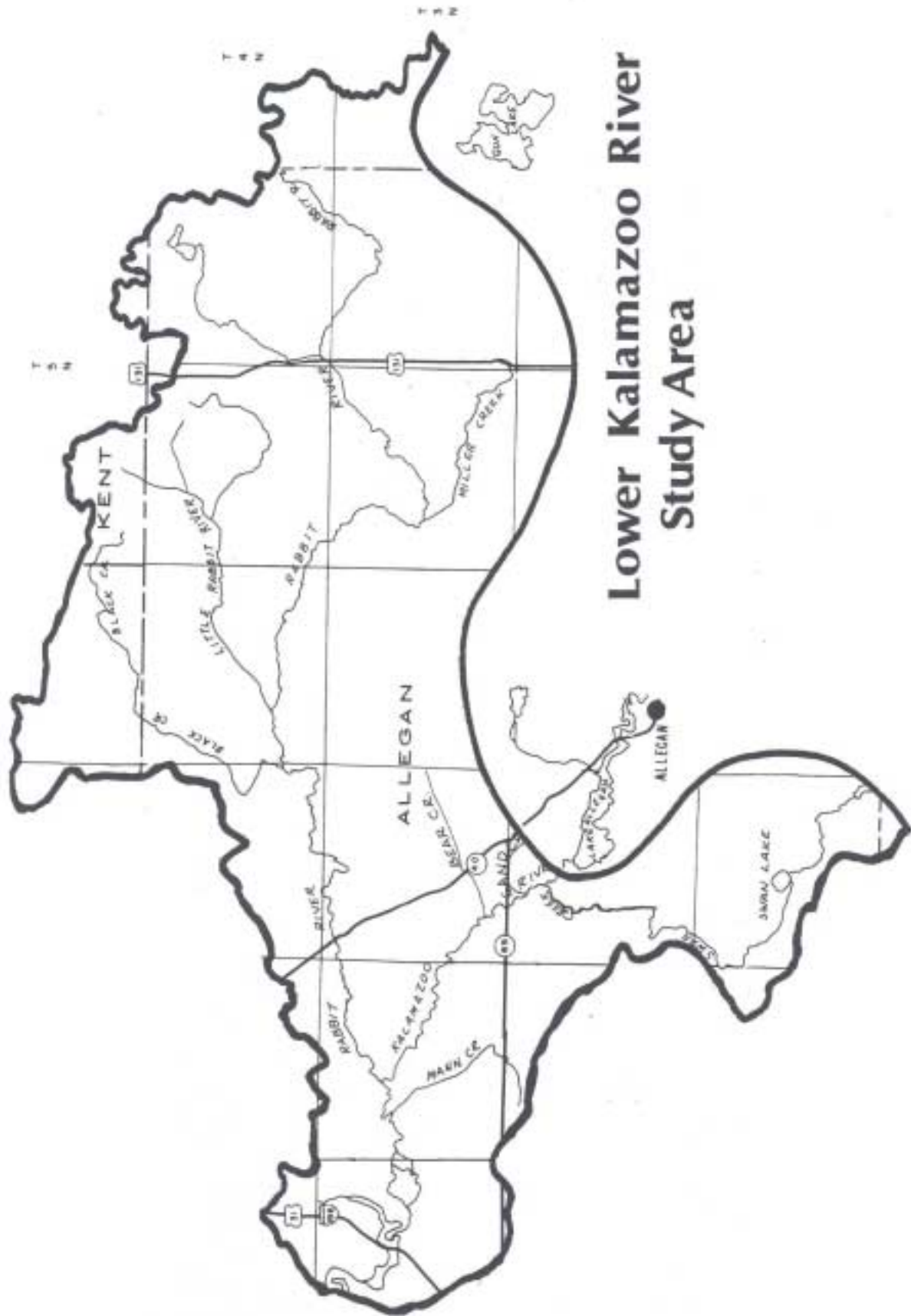
This report (1) provides a physical description of the river and the watershed as a whole; (2) reviews values of the river and factors affecting its future nature and use; (3) provides a plan for the protection of the river's natural qualities and to guide its future use; and (4) provides a policy guide for adoption and administration of local zoning ordinances and state administrative rules. The plan is the result of joint efforts of the Department of Natural Resources and the Kalamazoo River Advisory Group, and reflects the thoughts of a broad representation of people interested in use and protection of the many values of the lower Kalamazoo River.

THE WATERSHED AND STUDY AREA

A. General Description

- 1) **The Watershed.** The Kalamazoo River system drains an area of approximately 2,020 square miles as it flows through portions of the southwest Michigan counties of Allegan, Barry, Eaton, Van Buren, Kalamazoo, Calhoun, Jackson, Hillsdale, Kent and Ottawa. The North and South branches originate within a few miles of each other. The North Branch heads in Farewell and Pine Hills lakes in southern Jackson County while the South Branch rises in marshy areas south of Moscow in northeastern Hillsdale County. The two branches join at Albion, forming the mainstream which flows northwesterly for approximately 123 miles before entering Kalamazoo Lake and eventually Lake Michigan near the towns of Douglas and Saugatuck.
- 2) **The Study Area.** The Kalamazoo River system contains approximately 542 linear miles of streams. Although the mainstream is roughly 123 miles long, only the 23-mile stretch between the Calkins Bridge Dam and I-196 is considered in the study area at this time. The drainage area in the study area is estimated at 460 square miles (294,400 acres). One hundred and thirty-five miles of tributaries were included in the study. Other sections of the river may be added in the future.





Lower Kalamazoo River Study Area

B. Physiography and Soils

The surface topography of the watershed was determined by the last continental glacial period, the Wisconsin. A wide variety of glacial or glacial-related deposits make up the surface area. These include ground moraines of variably textured materials, terminal moraines, coarse-textured outwash, alluvial ponded areas, and other types of deposits. The glacial materials extend to a depth of several hundred feet in the western portions of the watershed and generally are 50 feet or less in depth east of Battle Creek.

Soils are as varied as the glacial materials in which they are developed. They range from clay and silt to sand and organic materials. About 25 percent of the soils have clay loam or clay textures. These soils, such as the Miami, Marlette and Bount soils, are found principally in Eaton County and to a lesser extent in Allegan and Van Buren counties. Forty percent of the soils are sandy loams, and loams of intermediate texture. These soils, which include the Hillsdale, Kalamazoo and Boyer, are found primarily in Calhoun, Allegan, Barry and Kalamazoo counties.

Soils with loamy sand and sandy textures, which include the Oakville, Spinks and Rubicon soils, are found on approximately 30 percent of the land. These sandy soils are largely in the western part of the basin. The remaining five percent of the soils are organic and are distributed throughout the basin, usually in river bottoms.

A general soil association map delineates 16 soil associations, each of which have certain predominant soil characteristics. These characteristics impose limitations on the suitability of the soils for various uses.

The north branch of the Kalamazoo River originates in Farewell and Pine Hills lakes, Jackson County, at an elevation of 1,042 feet above sea level, while the South Branch rises in marshy areas in Hillsdale County at an elevation of 1,120 feet above sea level. The two branches join at Albion and drop to an elevation of 580 feet above sea level at Lake Michigan.

Within the study area, the low areas along the Kalamazoo River are for the most part old glacial drainage ways. These valley plains are generally not more than a mile or two wide and are traversed by streams. The streams in places have cut a lower plain a few feet deep which is floored with recent flood plain alluvium. The plains are nearly flat but are intersected in places by inflowing streams from the adjacent highlands. Although dry in places, most of these extensive flats have a high water table, large areas of muck soil and swampy land bordering the river channel. In addition to the large areas of muck soils, these areas contain wet sandy loams and loams of medium fertility.

Upland areas adjacent to the rivers are flat to gently undulating glacial outwash plains. The predominant soils in these plains and the study area are the dry sandy soils which are usually acid and low in fertility. An exception to these dry sandy soils are the areas along the Rabbit River which contain the more fertile sandy loams, loams and silt loam soils.

C. Stream Characteristics

The table below is a partial list of streams within the Kalamazoo River system. Lengths are shown in miles. (Many small streams and drains are not included.)

Stream		Stream	
Kalamazoo River (mainstream)	123.0	Spring Brook	6.0
North Branch Kalamazoo River	28.0	Gun River	13.0
South Branch Kalamazoo River	43.0	Miner Creek	7.0
Rice Creek (North & South Branches)	29.5	School Section Creek	3.0
Wilder Creek	10.5	Schnable Brook	4.0
Seven Mile Creek	4.0	*Swan Creek	16.5
Wabascon Creek	16.0	*Bear Creek	6.5
Battle Creek River	46.0	*Sand Creek	3.5
Wanadaga Creek	12.0	*Mann Creek	6.0
Indian Creek	9.0	*Rabbit River	46.5
Big Creek	6.0	*Little Rabbit	14.0
Augusta Creek	15.0	*Red Run Drain	7.0
Portage Creek (includes West Branch)	18.5	*Black Creek	15.0
Pine Creek	6.0	*Miller Creek	7.0
Baseline Creek	4.0	*Miller Creek	3.5
Sand Creek	4.0	*Silver Creek	2.0
		*Green Lake Creek	7.0
		TOTAL	542.0 miles

*Tributaries draining into the mainstream within the study area.



Approximately 2,450 lakes and ponds totaling 37,500 acres are scattered throughout the watershed. These lakes range in size from Gun Lake at 2,611 acres to numerous small ponds. There are 52 lakes or impoundments of 100 acres or more in size:

County	Number of Lakes 100+ Acres	Total Surface Acres
Allegan	17	5,510
Barry	11	5,560
Kent	0	0
Calhoun	12	2,360
Eaton	1	130
Hillsdale	0	0
Jackson	2	340
Kalamazoo	9	3,880
Ottawa	0	0
Van Buren	0	0
WATERSHED	52	17,780

The mainstream is dammed in nine locations and the majority of these dams were constructed for generating electric power. The Department acquired three dams in the Plainwell-Otsego area to be used for waterfowl hunting habitat. These areas were also to be managed for food production. Vandalism and high maintenance costs have forced the department to draw these down to a low-sill head. There are three dams on tributary streams in the study area. One located on Swan Creek has become the base for a popular campground. A second dam on lower Swan Creek creates a diversion to maintain goose habitat in the Swan Creek Marsh. The third is Hamilton Mill Pond on the Rabbit River. Further, there is a control dam at the outlet for Palmer Bayou at the M-89 Bridge.

Water quality in the mainstream sections of the Kalamazoo and the study area is protected for the following uses: agriculture, industrial water supply, navigation, public water supply, recreation, warm water fish and partial body contact. The same conditions apply on the tributary streams under study except for those streams classified for cold water fish.

Despite increasingly effective wastewater treatment facilities and enforcement efforts, pollution problems still arise. The Michigan Department of Public Health advises against eating fish taken in the Kalamazoo River below Kalamazoo because PCB in the fish exceeds Food and Drug Administration limits.

Legislation to control PCB in Michigan was initiated by the Part 147, PCB of P.A. 451. This law limited concentrations of the chemical and regulated the sale, labeling, transportation and disposal of PCB products. PCB is also controlled at the federal level by the Toxic Substances Control Act (TSCA), P.L. 94-469. This law became effective on January 1, 1977 and prohibited the manufacture, processing, distribution and use of PCB after July 2, 1979, unless specifically exempted by the Environmental Protection Agency.

These stringent measures will control future introductions, but because of past practices PCB will continue to be an environmental contaminant for some time due to its persistence in the environment and its historic widespread use. However, the flushing action of the river, over time, should cleanse it of these toxic chemicals.

The Kalamazoo River has a relatively slow to moderate stream gradient dropping 540 feet in elevation from its headwaters on the South Branch to Lake Michigan. Although there are areas where the gradient is greater, the average drop in elevation over the 166 miles of mainstream and South Branch is just over three feet per mile. The following chart indicates basic flow data for the Kalamazoo River including the study area:

Station	Period of Record	Average Discharge (CFS)	Annual Mean Discharge (CFS)		Extremes for Period Of Record (CFS)	
			Maximum	Minimum	Maximum	Minimum
Marshall	1948-77	313	829	52	2,130	12
Battle Creek	1937-77	640	1,610	167	3/29/50	8/2/67
Comstock	1933-77	844	1,790	305	7,290	50
**Fennville	1929-77	1,383	4,150	143	4/7/47	9/22/39
					6,910	119
					4/8/47	5/29/58
					17,500	50*
					4/11/47	8/19/76

*Caused by shutting off flow at Calkins (Lake Allegan) Dam.

**Within the study area.

The North Branch of the Kalamazoo River above Concord is a small, clear water stream that varies in size from ten feet wide by four inches deep below Farewell Lake to 35 feet wide by one foot deep above the Concord impoundment. The bottom type, in general, through this stretch of stream is sand with some areas of gravel.

The South Branch of the Kalamazoo River from Homer to Albion is a larger river averaging 40 feet wide by 18 inches deep in the upper areas to 70 feet wide by two feet deep in the lower areas. There are a few flat areas in marsh situations where the river may widen up to 100 feet and the water is quite shallow (eight inches or less). Bottom types are mostly sands and gravel with some rubble and boulders in the riffle areas.

More than half the length of the mainstream between Albion and Ceresco is impounded or heavily developed in the cities of Albion and Marshall. The mainstream of the Kalamazoo River from Ceresco to the southwestern edge of Battle Creek is fairly scenic. A number of islands are present in the stream which adds to its attractiveness. The river is about 80 to 100 feet wide and averages 1-2 feet deep. A moderate current moves the canoeist or boater at a good speed in wide, flat areas. Although the bottom has many areas of gravel and rock, the major bottom type is sand and contains heavy growth of aquatic weeds (curly leaf pondweed). The river through Battle Creek and down to Augusta is almost entirely within the urban developed areas of the city.

The river from Augusta to Galesburg has no development except in the villages. The river is wide and deep, averaging 110 feet wide and four feet deep. Low stream banks

are well vegetated with soft maple, willow and ash. Oak is dominant in areas of high ground. Below Galesburg, the river flows into Morrow Pond, a cooling pond for Consumers Power Company fossil fuel plant. Below this pond, the river flows through the urbanized areas of Kalamazoo. The river's gradient increases to 2.6 feet per mile between Plainwell and Allegan. This natural feature of the river was instrumental in bringing about the construction of five dams between the latter two cities. Three of these impoundments have been drawn down, but there still exists a great deal of slack water in this stretch of the Kalamazoo.



The mainstream throughout the study area is free-flowing and varies from 50 to 150 feet in width, but generally is 100 feet wide by four to six feet deep. The bottom type is mostly sand and silt in this area. Most of the riverbanks are low, two to six feet in height, with extensive flood plains along the main channel. In the mid to lower reaches of the river, the main channel splits into smaller channels creating a number of islands. It is also in these mid to lower areas where adjacent flood plains have been turned into extensive waterfowl marshes. During normal summer flows, the water is relatively clear.

The river becomes very turbid below the Rabbit River after heavy rains, a result of suspended silt.

The Rabbit River is the major tributary of the Kalamazoo in the study area. Originating in the northeast corner of Allegan County, the stream flows through extensive agricultural areas. Although this stream contains some areas of gravel and rubble, the major bottom type is sand, silt and clay. The Rabbit River is a sizeable stream by the time it reaches Hamilton, with widths of about 50 to 60 feet. Average depth in this area is about 18 inches to two feet.

The other tributaries under consideration in the study area are Swan, Bear, Mann and Sand creeks. These are all small clear water streams containing significant spring seepage. Sand Creek is classed as top quality trout water, while the others are classed second quality trout water. Stream size varies from ten to 15 feet in width by six to ten inches deep on Mann and Sand creeks, to 30 feet in width by six to 18 inches deep on Swan Creek. Although most of these streams are mainly sand bottomed, they do contain some areas of gravel. The exception is Bear Creek which contains a bottom of gravel, rubble and sand in its lower reaches. These streams are well vegetated along their banks and the smaller streams in particular have dense growths of tag alder in certain areas.

D. Vegetation

As a result of the action of the Wisconsin glacier, the region is topographically diverse, possessing hills, valleys, plains, ponds, lakes and a variety of soil types that provide excellent habitat for a vast number of plants. In addition, the influence of nearby Lake Michigan somewhat moderates the climate of this region so that a number of plant species thrive or survive that otherwise might not.

Seven major types of native plant communities are recognized in the watershed and are listed below. While each of these is considered as a distinct community, many ecotones, or gradual transition zones, exist between these communities. Some of the dominant species have a fairly wide tolerance of habitats and, therefore, may be prevalent in more than one habitat. All of these species are considered abundant where they occur.

Community	Characteristics
Dry Southern Hardwood Forest	Forests of dry upland sites with bur oak, black oak, or white oak dominating.
Mesic Southern Hardwood Forest	Forests that occur in moist soils and are dominated by beech and sugar maple.
Wet Lowland Forest	Forests characterized by willow or cottonwood, or silver maple or ash.
Sphagnum Bogs	Open, treeless wet areas dominated by heath-like shrubs and sphagnum moss.
Grassland-Savanna Complex	Includes the combination of prairies, sedge meadows and savannas. Characterized as treeless or with scattered trees and dominated by grasses or sedges either wet or dry.
Marshes and Emergent Aquatic Communities	Treeless areas in which the water table is above the soil surface during most of the growing season.
Submerged Aquatic Communities	Dominant plant species are below or on the water surface. These communities are essentially lakes and ponds.

Broad floodplains are characteristic of the lower Kalamazoo River. The floodplains along the rivers and streams in the study area are generally covered with lowland forest or are in marshy wetlands. Woody vegetation consists of varying mixtures of willow, cottonwood, silver maple and ash. Sycamores are scattered singly or in clumps along the entire lowland area. Where conditions are right, a few black walnut occur, which have grown to large sizes. The marsh areas contain various amounts of sedges, rushes, cattail, smartweed and aquatic species such as pondweeds and waterlilies.

There are three identified sites within the study area which contain one or more rare plant species. These sites are listed below:

- | | | | |
|----|-------------------------------------|----------------------------------|------------------------------------|
| 1. | Ely, Little Tom & Crooked Lake Area | Allegan County, Clyde Township | Bog plants, coastal plains species |
| 2. | Fennville Bog | Allegan County, Manlius Township | Native orchids, other bog species |
| 3. | Prairie Areas | Allegan County, Valley Township | Sandy prairie species |

E. Climate

Climate varies from modified marine (Great Lakes influence) in the study area to continental in the eastern portions of the watershed. Average annual precipitation is about 32 inches, and snowfall exceeds 40 inches annually. In the study area, annual snowfall approaches 100 inches. The average July temperature is 72 degrees and average January temperature is about 24 degrees. Average January temperature is slightly

warmer near Lake Michigan, being about 26 degrees. The annual mean temperature for the area is about 49 degrees. The average growing season ranges from about 153 days at the eastern end of the watershed to about 184 days along Lake Michigan.

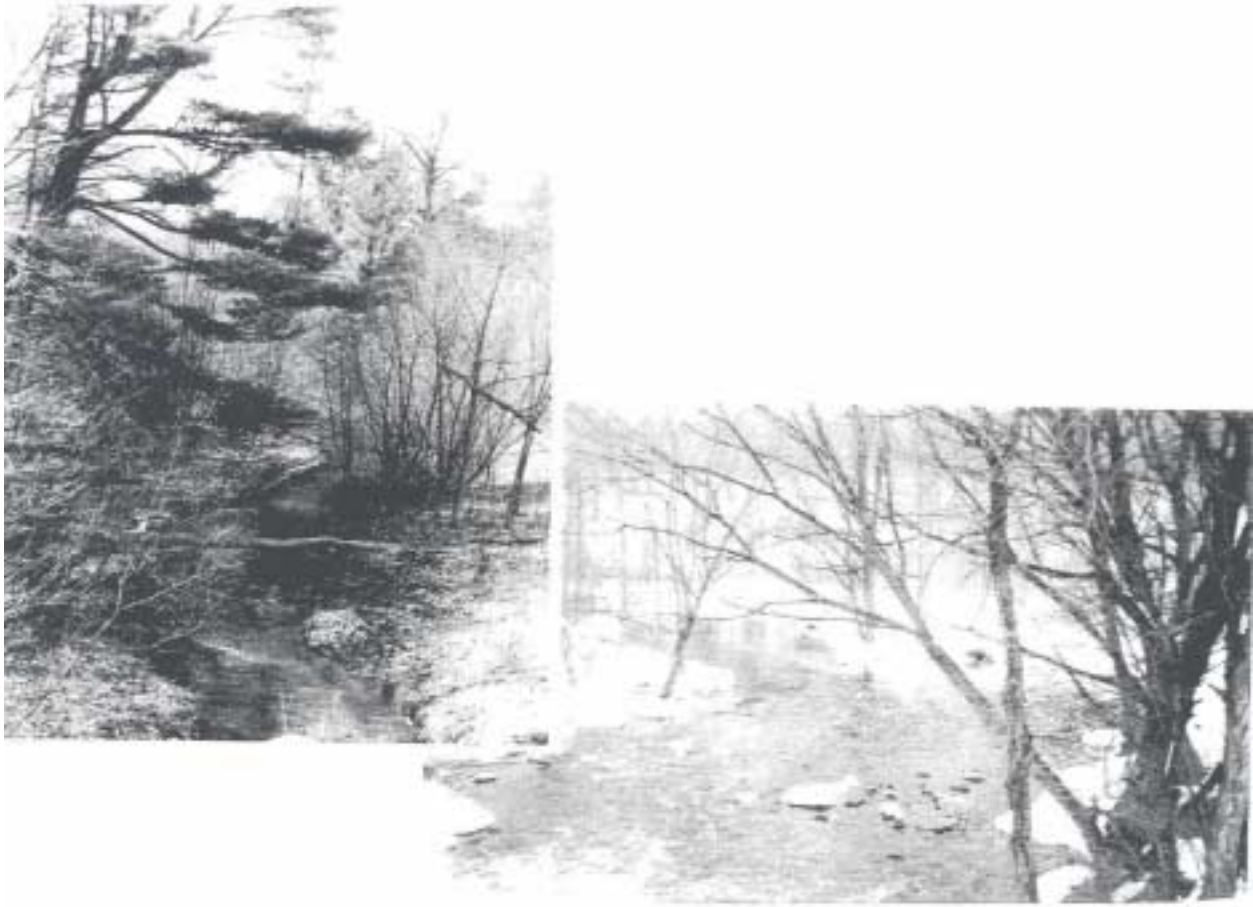
F. Accessibility

The Kalamazoo River system lies within easy access of the population centers of Holland, Grand Rapids, Lansing and Jackson, while Albion, Marshall, Battle Creek and Kalamazoo lie within the watershed boundaries. Highway access to the river system and study area is good. The watershed is crossed in a north-south direction by I-196 at the western edge, US-131 in the western third, I-69 in the eastern third, and US-127 just east of the headwater areas. I-94 crosses over two-thirds of the watershed in an east-west direction. In addition to the major highways, there are many paved state and county roads crossing the watershed.

In reference to the study area, US-131 crosses the watershed in a north-south direction east of the study area, while US-31 crosses the river at the western end near Saugatuck. M-89 crosses the study area east to west, south of the river, and M-40 cuts diagonally along the northern portion of the watershed crossing the Rabbit River at Hamilton.

G. Ownership

The Kalamazoo River watershed contains roughly 1,292,800 acres of land. Of this total, 1,245,550 acres (96 percent) are in private ownership. The remaining 48,250 acres are in public ownership as follows: Allegan State Game Area – 44,290 acres, Fort Custer Recreation Area – 2,960 acres, and Yankee Springs Recreation Area – 1,000 acres. Note: The Yankee Springs Recreation Area contains 5,000 acres of state land, however, only an estimated 1,000 acres is within the Kalamazoo River watershed. Ownership along the mainstream of the Kalamazoo River and those tributaries being recommended for designation in the Natural Rivers Program is summarized as follows:



OWNERSHIP – KALAMAZOO RIVER
(recommended portions)

Stream	LINEAR MILES			FRONTAGE		
	Public	Private	Total	Public	Private	Total
Kalamazoo Mainstream	11	11	22	22	24	44
Rabbit River	0	17	17	0	34	34
Mann Creek	0	2	2	0	4	4
Bear Creek	3.5	1.5	5	7	3	10
Sand Creek	1.5	.5	2	3	1	4
Tributary Totals	5	21	26	10	42	52
OVERALL TOTALS	16	32	48	32	64	96

EXISTING USES AND RECREATIONAL OPPORTUNITIES

A. Land Use

Distribution of land in the Kalamazoo River watershed by major use shows cropland and pasture account for the greatest share, 57.0 percent. Forest land is the second most important land use, utilizing 21.0 percent of available lands. The remaining 22.0 percent is composed of wetlands (three percent), water (two percent), urban areas (eight percent), and other (nine percent). Agricultural enterprises within the watershed vary from general farming to production of specialty crops, such as grapes, apples and blueberries. Those areas in the eastern half of the watershed produce the major share of row crops and small gains, while the western counties produce the greatest share of fruits and vegetables.

Land use within the study area varies only slightly from the watershed figures. Sixty percent of the land is in cropland and pasture, and 27 percent is in forest land. Most of the lands classed as other and portions of the agricultural lands classed as idle are used as recreational lands. The upland areas and the adjacent wetlands and water areas are used for camping, hunting, wildlife production, fishing and boating.

B. Private Recreation Facilities

Private sources provide a wide range of recreational activities and uses within the ten counties making up the Kalamazoo River watershed. There are 55 private campgrounds which provide roughly 5,000 campsites. These sites range from the rustic tent campers to modern trailer or recreation vehicle sites. In addition, many of the camps provide swimming, boating and picnicking. Within the study area, 12 private campgrounds provide 877 campsites.

Other recreational activities provided by private sources include golf courses, archery ranges, horseback riding, boat and canoe rentals, marinas, charter boats for Great Lakes fishing and fishing ponds and lakes.

C. Public Recreation Facilities

Public recreation facilities are limited within the Kalamazoo River watershed. Fort Custer Recreation Area, Allegan State Game Area and Yankee Springs Recreation Area offer a wide variety of recreation opportunities. Only Allegan Game Area and Yankee Springs provide camping. Six camp areas provide 540 campsites, while one organization camp provides for another 50 persons. Within a short drive of the study area, two state parks (Van Buren and Holland), provide an additional 545 campsites and a variety of day-use facilities.

In addition, 26 county, township or municipal parks within the watershed provide additional camping (250 sites) and day-use facilities for recreationists.

D. Fishing

The Kalamazoo River system is conducive to a warmwater fishery, although a number of tributaries are cool enough to support a quality trout fishery. Warm water species generally include northern pike, large mouth bass, panfish, carp and suckers. Cold water species consist of brown and rainbow trout.

An anadromous fish-stocking program was initiated on the lower Kalamazoo River in 1969. The stream has received large plants of chinook and coho salmon, steelhead and domestic rainbow trout, and brown trout in recent years. Although coho plants were discontinued in 1973 because of poor returns, the chinook fishery in the fall and the steelhead fishery throughout the winter and early spring are productive. Also, brown trout are taken during the fall and winter at the Allegan Dam and in the lower river areas.

There is an excellent fishery for northern pike in Silver Lake and the mainstream below New Richmond in the winter and spring. Fishing is also good for largemouth bass, panfish, catfish, carp and suckers in the lower river. Walleyes have made a substantial comeback in the Kalamazoo River during the past five years. Fishing for warm water fish in the lower Kalamazoo River would be much more popular if water quality were improved. The Michigan Department of Public Health has issued an advisory warning against eating fish from the Kalamazoo River (Kalamazoo to Saugatuck) because of high PCB levels.

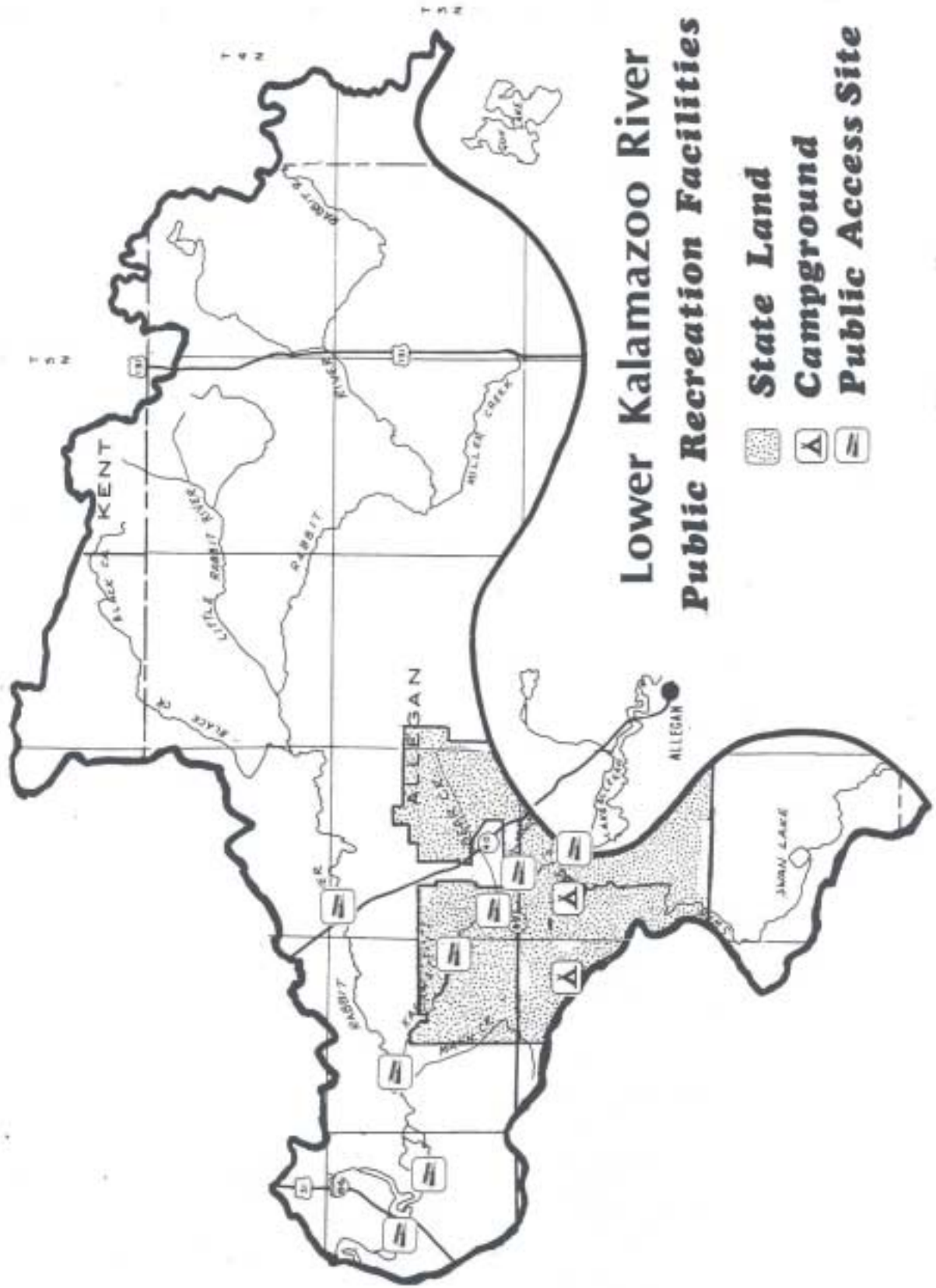


The major gamefish in the Rabbit River are pike, smallmouth bass and rock bass. Also, the annual spring run of white suckers is heavily fished. In addition to these resident fish, the Rabbit River has been stocked with steelhead and domestic rainbow trout since 1972. These fish have provided a very good winter and spring fishery, particularly at the Hamilton Dam. Also, there have been significant stray runs of salmon in the streams during the fall in recent years. Some of the anadromous fish ascending the Rabbit River have passed over the Hamilton Dam, since steelhead and salmon have been observed in the Diamond Springs to Hopkins area.



The upstream portions of the Rabbit River, primarily in Wayland Township, are managed for brown trout. A chemical treatment project was conducted on this segment of the stream in 1971. Brown trout survival and growth was excellent after the project and a good trout fishery has developed.

Below 109th Avenue, Swan Creek is designated a second quality cold water stream. Brown trout have been stocked in Swan Creek since at least the early 1930's. Rainbow trout were also stocked until the mid 1960's. The stream has a history of providing a good brown trout fishery throughout the years. Since the stream's bottom is comprised almost entirely of sand, natural reproduction of trout is minimal. During the early 1970's, an extensive habitat development program was completed on the portions of the stream in state ownership. Two hundred and sixteen log fish cover structures were installed in the stream. Also, gravel and stone spawning areas were installed in eight locations.



Northern pike, largemouth bass, bluegills and other panfish are available in the Swan Creek Impoundment. This small impoundment and the creek immediately downstream receive considerable fishing pressure, since the popular Pine Point Campground is adjacent to the pond. Anadromous trout and salmon ascend Swan Creek in the fall and spring, and provide a fishery. The upstream end of these anadromous fish runs is the Swan Creek Impoundment.

Three small tributary streams to the lower Kalamazoo River (Mann, Bear and Sand creeks) are also classed as top or second quality cold water. Mann and Sand creeks are primarily brook trout streams and Bear contains predominantly brown trout. In addition to natural reproduction, Bear Creek also receives annual supplementary plants of brown trout.

Anadromous trout and salmon spawn successfully in these streams. Coho salmon, brown trout, brook trout and rainbow trout reproduction have been documented in Sand and Bear creeks. Although Mann Creek has not been surveyed to document natural reproduction, brook trout reproduction obviously occurs and rainbow and coho reproduction is likely.

Bear Creek is the most heavily fished of the three streams. Since much of the stream is in the Allegan State Game Area, access is not a problem. Also, the stocking program is attractive to trout anglers. Sand Creek does not receive heavy angling pressure because of its small size. Mann Creek receives only moderate fishing pressure primarily because of its very brushy banks which make fishing difficult.

E. Wildlife Observation and Hunting

The wildlife resources of the Kalamazoo River Basin are as varied as the habitat through which the river flows. From the rich farmlands of Calhoun and Kalamazoo counties to the oak-pine sand barrens of Allegan County, the make-up of the local fauna changes rather dramatically.

Throughout the river basin, the forest species of fox, squirrel, cottontail rabbit and whitetailed deer can be found, while species such as the ring-necked pheasant, bobwhite quail and wild turkey require more specific habitat requirements.

Both resident and migratory species are important to the Kalamazoo River valley. Important resident species of game animals include the white-tailed deer, cottontail rabbit, fox squirrel, grey squirrel, raccoon, ring-necked pheasant, ruffed grouse, bobwhite quail and wild turkey. Furbearing mammals common to the river valley are the mink, muskrat, red fox, skunk, opossum, weasels and woodchuck. Less common mammals are the gray fox, badger and beaver. Many small mammal species also occur including the red squirrel, northern flying squirrel, chipmunk, ground squirrel, plus several species of voles, mice and bats. The list of songbirds and raptors number in the hundreds. Migratory species present range from the often seen and studied Canada goose to the seldom seen prothonotary warbler. Individual Canada geese can be found 12 months of the year in various areas of the valley. Several hundred other species of both migratory songbirds and waterfowl also occur.



Important species of waterfowl which commonly take up summer residence in the Kalamazoo valley include mallard duck, black duck, wood duck, Canada goose, blue-winged teal, and American coot. Other species common, usually only during spring and fall migration, include the blue goose, whistling swan, redhead duck, canvasback, goldeneye, American merganser, bufflehead, lesser scaup, American gallinule, Wilson's snipe, baldpate, pintail, gadwall and green-winged teal.

The American woodcock is an important migratory forest species. Nongame species seldom receive attention from the general public because they are not hunted and often are inconspicuous. However, they make up the larger portion of the wildlife resource and their involvement in the physical well being of the total environment is no less important than that of game species. Species densities of most nongame mammals and birds, amphibians and reptiles are relatively unknown.

Limited information is available on population estimates of endangered, rare or threatened species (with the exception of the sandhill crane). The only endangered amphibian or reptile in the basin is the Kirtland's water snake. An endangered species is one in danger of extinction through all or is a significant part of its range. Some birds and mammal species that formerly occurred in the region have long since been extirpated locally.

There are 13 threatened species known to occur in the Kalamazoo River valley, including the cooperbellied water snake, the barn owl, the Cooper's hawk and the pine vole. A threatened species is one likely to become endangered within the foreseeable future.

There are 49 known rare or scarce species in the basin, including the badger, coyote, river otter, sandhill crane, upland sandpiper, the great blue heron, the prothonotary warbler and the pileated woodpecker. Rare or scarce species are not known to be endangered or threatened but are uncommon and deserve continued monitoring of their status.

The State of Michigan is an important landowner in the lower Kalamazoo River valley with over 48,000 acres in Kalamazoo and Allegan counties. Ownership includes approximately 23 miles of Kalamazoo River frontage. Management of the lands adjacent to the river are very dependent upon the river as a source of water and wildlife habitat. A great deal of furtrapping and waterfowl hunting occur on the Kalamazoo River and its adjacent marshes. Three specially managed waterfowl management units are in existence downstream from the Allegan Dam – the Koopman, Swan Creek and Ottawa marshes. These three units provide thousands of hunter days of recreation each fall as hunters seek out Canada geese, mallards, wood ducks and other waterfowl. Development and improvement projects planned for these three units will create additional quality habitat for waterfowl and waterfowl hunting. Possible future marsh management techniques which include diking, water control, diversions and ditching will provide many more acres of quality wetland habitat.

Four species of birds seldom seen in southern Michigan which are listed as endangered or rare are the American bald eagle, golden eagle, osprey and pileated woodpecker. Individuals of each of these species are usually spotted in or near the Ottawa marsh during the year.

The lands of the Allegan State Game Area which straddle the Kalamazoo River form the nucleus of the home range for southern Michigan's only flock of wild turkeys. The river and its tributaries are an important part of habitat needed for the continuance of this flock of 300 to 400 birds. A limited spring hunting season for approximately 300 hunters has produced 25 to 30 turkey dinners for successful hunters each year from 1975 through 1979.

F. Canoeing and Boating

The North Branch of the Kalamazoo River is generally small and not considered canoe water. Much of the South Branch, from the vicinity of Mosherville downstream, is canoeable and except for the urban areas is quite attractive for canoeing. The river becomes quite large below Battle Creek and will accommodate small fishing boats.



Below Allegan Dam, the mainstream is wide and deep and has a moderate current. These factors coupled with very little development makes it an enjoyable stretch of river to canoe or boat. Boaters should be careful when using motors since the river has numerous snags and logs not visible from the surface.

Most of the tributaries entering the mainstream in the study area are not considered canoeable. The Rabbit, however, is smaller but similar in character to the Kalamazoo River and provides an enjoyable experience for canoeists who don't mind an occasional carry over a logjam.

G. Historic and Archaeological Sites

Historic and archaeological resources in the Kalamazoo River watershed are numerous. There are 105 numbered or marked historic sites in the watershed area (Table 1). Of these, about half are registered as local sites and half as state sites. Twenty-one of these sites are also listed on one of the National Registers. All of the sites receive some protection under Michigan law.

Archaeological sites are scattered throughout the watershed (Table 2) and probably represent only a small percentage of the actual sites which exist.

TABLE 1

RECOGNIZED HISTORIC SITES

County	Homes	Gov't and Business	Education Schools	Church	Other	Total
Allegan	2	1		4	3	10
Barry					3	3
Calhoun	12	9	5	4	12	42
Eaton	2	2	1	1	1	7
Hillsdale	1					1
Jackson			1			1
Kalamazoo	3	5	6		12	26
Ottawa			1	5	4	10
Van Buren		3	1	1	1	5
BASIN	20	20	15	14	36	105

TABLE 2
IDENTIFIED ARCHAEOLOGICAL SITES IN THE WATERSHED

County	Number
Van Buren	0
Allegan	98
Ottawa	0
Kent	0
Barry	7
Kalamazoo	34
Calhoun	18
Eaton	12
Jackson	1
Hillsdale	6
BASIN	176

The Lower Kalamazoo valley in Allegan County is one of the areas in the state best known to archaeologists. Professional archaeologists have surveyed about one third of the region between the Calkins Dam in Valley Township and the mouth of the river. Thus far, 83 archaeological sites have been recorded on the bluffs and terraces along this stretch of the Kalamazoo.

Few of the 83 reported sites have been investigated in enough detail to determine their time period or function, or whether enough scientific information has been preserved to qualify them for listing on the National Register of Historic Places.

Artifacts representing all cultural periods known in southwestern Michigan have been found along the lower Kalamazoo River. These periods include:

Paleo-Indian (10000-8000 BC): Hunters of Pleistocene game such as mastodon and musk oxen entered Michigan as the Ice Age glaciers retreated. They left behind small campsites and butchering stations, identified by the presence of distinctive fluted lance points.

Archaic (8000-1000 BC): Human adaptations changed with the long transition from Pleistocene to modern climatic conditions, lake shore and drainage patterns, and vegetation. Hunting and gathering peoples developed annual cycles of camp location and group size to take advantage of a variety of natural resources, each in season. The spearthrower ground stone axes and woodworking tools, and copper tools came into use, and burial practices became more elaborate. This period is subdivided into the Early Archaic (8000-6000 BC), Middle Archaic (6000-3000 BC), and Late Archaic (3000-1000 BC).

Woodland (1000 BC-AD 1500): Ceramics, the bow and arrow, and horticulture were major innovations of the Woodland period. During the Early (1000-200 BC) and Middle (200 BC-AD 700) Woodland periods, burial ritual became increasingly complex, and

burial mounds were often built. Horticulture did not become a major factor until the villages were built, sometimes protected by circular earthworks supporting stockades.

Upper Mississippian (AD 1500-1700): People with strong cultural ties to those in Indiana and Illinois lived in southwestern Michigan during late prehistoric times. They were probably the ancestors of the Potawatomi and Miami. They lived in large stockaded villages in the summer, and moved inland as a group to hunt in the winter. They depended more heavily on crops than did the Woodland peoples, tended to live in larger settlements, and made distinctive, well made artifacts.

Historic (AD 1700-present): The increasing dominance of European culture, first through trade, and then by white settlement characterizes this period. The Potawatomi and Ottawa both hunted in Allegan County in the winter, and some of the Ottawa both hunted in Allegan County in the winter, and some of the Ottawa stayed year round. Trading posts were built, and by the 1830's white settlement was underway. The area was ceded to the U.S. in the Treaty of Chicago, 1821. Mills were built, and towns grew up around them.

NATURAL RIVER PLAN

A. Goal

To preserve, protect and enhance the Kalamazoo River environment in a natural state for the use and enjoyment of present and future generations.

B. Objectives

1. Maintain and enhance the water quality of the Kalamazoo River and its tributaries consistent with the wild-scenic classification of the river and adhere to the concept of nondegradation of water quality.
2. Maintain the existing free-flowing conditions and seek to stabilize or improve the water flow characteristics for the purpose of preserving the natural environment.
3. To prohibit or limit those developments and activities which may damage or destroy the Kalamazoo River's fish, wildlife, boating, scenic, aesthetic, flood plain, ecologic, historic-archaeological, and recreational values and uses.
4. To ensure that the development and activities which do occur shall be done in an orderly manner, shall insure the protection of the river's natural values and qualities, and shall protect the river's outstanding scenic and aesthetic qualities.
5. To ensure that recreational uses which do occur, are done in an orderly manner consistent with the natural environment and aesthetic qualities of the stream, and that a quality recreation experience is maintained.

C. Designated Portions

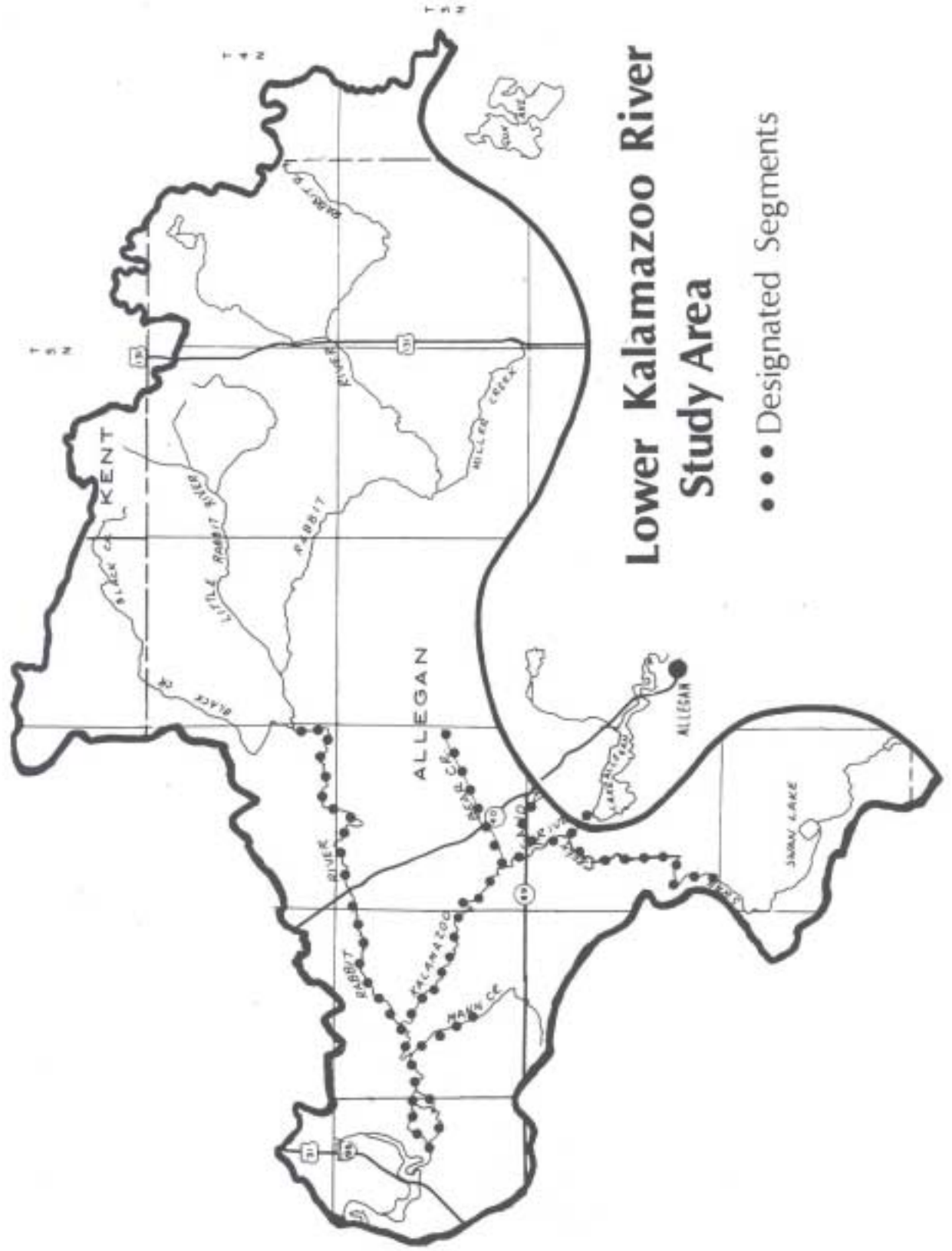
It is recommended that the following portions of the Kalamazoo River within Allegan County be designated as a wild-scenic river under the authority of Part 305 of P.A. 451 of 1994:

Mainstream: From Calkins Bridge Dam at Lake Allegan (Valley Township) downstream to the border between flood zones A2 and A3 in Saugatuck Township (approximately ½ miles downstream of the Hacklander public access site) as identified on the 1980 Flood Insurance Rate Map by the Federal Insurance Administration, including all channels of the mainstream (approximately 22 miles).

Tributaries (approximately 33.0 miles)

1. Rabbit River from Overisel Township, east section line (Section 25) at 36th Street, downstream to the Kalamazoo River (17.0 miles).
2. Bear Creek from Heath Township, east section line (Section 24) at 36th Street, downstream to the Kalamazoo River (5.0 miles).
3. Sand Creek from the M-89 bridge, north section line (Section 3), Valley Township, downstream to the Kalamazoo River (2.0 miles).
4. Swan Creek from Valley Township, south section line (Section 32) at 112th Avenue, downstream to the Kalamazoo River (7.0 miles).

5. Mann Creek from the road crossing at 128th Avenue (south section line of Section 21, Manlius Township), downstream to the Kalamazoo River (2.0 miles).



Lower Kalamazoo River Study Area

••• Designated Segments

D. Natural River District

The Kalamazoo River Natural River District includes an area 300 feet wide on each side of and parallel to all channels of the designated mainstream and the designated mainstream and the designated tributaries. This district establishes a definable area within which local zoning may guide future development and use. ESTABLISHMENT OF THIS DISTRICT IN NO WAY IMPLIES A “TAKING” OF THESE LANDS BY THE STATE OR OPENING THEM UPTO PUBLIC USE. PRIVATE LANDS REMAIN PRIVATE AND ARE SUBJECT TO ALL RIGHTS OF PRIVATE OWNERSHIP.

E. Land Management – Private Lands – Zoning Guidelines

1. Residential Housing: Unplatted lots and new subdivisions in the Natural River District shall be of sufficient size to accommodate the building setbacks as set forth in Section E.3, and shall have a minimum riverfront lot width of 150 feet.

Lots or properties of record which are nonconforming at the time of the effective date of these regulations because of lack of size to accommodate the setback from the water’s edge shall be allowed to be built upon and variances shall be allowed for the required setback upon such reasonable terms as set forth by the zoning administrator or the zoning review board.

Upon approval by the Department of Natural Resources of an ordinance, a local community may allow the administrator of their zoning ordinance to determine the location of proposed structures on substandard lots of record, provided that structures be so placed so as to best meet the objectives of the Natural River Act.

One single family dwelling will be permitted on each lot or parcel within the Natural River District subject to the building setbacks as set forth in Section E.3. A single-family dwelling is defined as a detached building or structure designed for or occupied exclusively by one (1) family and containing housekeeping facilities.

2. Industrial and Commercial Structures and Uses:
 - a. New industrial uses and buildings and expansion of existing uses and buildings will not be permitted within 300 feet of the designated portions of the Kalamazoo River and tributaries, except as allowed in approved local zoning ordinances or state administrative rules.
 - b. Commercial uses and buildings; such as gas stations, motels, restaurants, retail stores, etc., will not be permitted within 300 feet of the designated river and tributaries. However, certain commercial uses requiring special exception permits may be compatible with maintaining the natural aspects of the river. Those uses permitted under the special exception procedure shall be strictly controlled. Controls such as location, parking, drainage, setback, natural vegetation strip, signs and hours of operation of the

proposed use shall be included in the special exception procedure. Those uses which may be compatible with natural river designation include:

- i. Commercial crop farms or forest plantations that are landward of the native vegetation strip.
 - ii. Campgrounds that are constructed, maintained and operated in accordance with State Health Department regulations (Act 17, P.A. 1970). Includes, tent, travel trailer, camper and motor homes uses, buildings, cement pads, hookups, etc. in conformance with established setbacks.
 - iii. Sales, rental and service of recreational watercraft, provided principle structures are in conformance with established setbacks.
 - iv. Small home operated businesses such as a photography studio, beauty shop, home repair, insurance, or other business that does not alter the residential nature of the property and are in conformance with established setbacks.
 - v. Small rental cabins with light housekeeping, but not motels, which are in conformance with setback requirements.
3. **Building Setbacks:** On the designated portions of the Kalamazoo River system, the building setback for new structures and appurtenances along the mainstream and tributaries shall be at least 200 feet from the river's edge¹. However, the setback may be decreased three feet for every foot of vertical bank height above the ordinary high watermark until a minimum setback of 75 feet from the river's edge is reached. Further, no building shall take place on land that is subject to flooding.²
4. **Docks:** Riparian owners have the right of reasonable access to the river. Therefore, construction of docks is a permitted use. Permanent docks must be constructed in accordance with the rules of Part 301 of P.A. 451 of 1994. The use of "natural" materials is encouraged.

¹River's edge is defined as the ordinary high water mark and means "the line between upland and bottomland which persists through successive changes in water levels, below which the presence and action of the water is so common or recurrent that the character of the land is marked distinctly from the upland and is apparent in the soil itself, the configuration of the surface of the soil and the vegetation. Where water returns to its natural level as the result of the permanent removal or abandonment of a dam, it means the natural ordinary high water mark." (This is the definition used for administration of the Inland Lakes and Streams Act, Part 301 of P.A. 451 of 1994.)

²Land that is subject to flooding means that area of land adjoining the designated portions of river and tributaries which:

- a. Will be inundated by a flood which has a one percent chance of occurring or being exceeded in any given year (intermediate regional flood), as determined by detailed hydraulic studies which are acceptable to the Michigan Water Resources Commission; or
- b. In the absence of such detailed floodplain studies, have a history of flooding or are delineated by approximate methods such as USGS flood prone area maps or HUDs special flood hazard boundary maps.

5. On-Site Sanitation Systems: All habitations within the Natural River District shall be provided with sanitary waste disposal facilities conforming in type to those required by health specifications of the State of Michigan and the county or district health department having legal jurisdiction. The facilities provided may be for either waterborne waste disposal by the septic tank-absorption tile field method or for nonwaterborne disposal by the use of a health department approved or other state approved sanitary system.

Minimum standards for new septic systems along designated portions of the Kalamazoo River shall be as follows:

- a. The setback for septic tanks and absorption fields shall be a minimum of 100 feet from the ordinary high water mark. Further, Allegan County Health Department requirements state that septic systems must be setback a minimum of 25 feet from the edge of a bluff along a river or stream. However, depending on soil type and soil profile, height, slope and condition of the bank at the site, health department officials may increase the setback up to 100 feet from the edge of a bluff. This is done to prevent possible leaching or seepage of contaminants from a waste system from flowing directly down the bank to the stream.
 - b. The bottom of the absorption field shall be at least four feet above the known high ground water table.
 - c. No absorption field shall be closer than 50 feet from any permanent surface or subsurface drainage system. (This will not include basement footing drains.)
 - d. Variances from these standards may be allowed by the district health department where existing lots of record cannot conform because of their size.
6. Signs: Only those signs necessary for: identification, direction, resource information, regulation of use, and related to permitted uses, shall be placed along the designated river and tributaries. Within the Natural River District, signs for the sale of products or services shall be prohibited. Signs on private lands within the Natural River District must be in conformance with the following standards:
- a. Not larger than one square foot in area posted no more than one per 100 feet or one sign posted at upstream and downstream corner of lot. However, one temporary real estate “for sale” sign per parcel of land not to exceed four square feet in area shall be allowed outside of the natural vegetation strip (as described in Section E.10).
 - b. Not attached to any tree or shrub.
 - c. Not illuminated.
7. Agriculture: Existing agricultural practices will be permitted within the natural vegetation strip. Grazing will be permitted within the natural vegetation strip unless the Department of Environmental Quality determines that it contributes to stream degradation (Part 31, P.A. 451 of 1994). In those cases, livestock will be fenced out to protect the riverbanks. Cattle crossings and watering areas shall be

constructed according to accepted methods, after the landowner has consulted with the local Soil Conservation District, Soil Conservation Service, County Extension Service, and/or Department of Natural Resources.

Water withdrawal for irrigation will continue to be permitted in accordance with the rights of other riparians and the public values associated with the Kalamazoo River system.

New agricultural uses and practices including commercial tree farms shall be allowed in the Natural River District provided they are landward of the natural vegetation strip.

8. Disposal of Solid Wastes: No unsightly or offensive material, including, but not limited to: trash, refuse, junk cars, junk appliances or garbage, shall be dumped or stored within the Natural River District or as provided by Part 115 , PA 451 of 1994.

No dumps or sanitary landfills shall be permitted within 300 feet of the designated portions of the Kalamazoo River or its tributaries.

9. Land Alteration: Land alteration for building such as grading, dredging and filling of the land surface within 300 feet of the river's edge is permitted, unless the high ground water table is within six feet of the land surface or on lands subject to flooding. (This does not apply to septic system drain fields which must be four feet above the known high ground water table.) Dredging or filling for the construction of fish or wildlife ponds outside of the natural vegetation strip is permitted. All activities must meet provisions of Michigan's Inland Lakes and Streams Act, Part 305, P.A. 451 of 1994, the Soil Erosion and Sedimentation Control Act, Part 91, P.A. 451 of 1994, and the Wetlands Protection Act, Part 303, P.A. 451 of 1994.
10. Natural Vegetation Strip on Adjacent Shorelines: Trees, shrubs, and other vegetation native to the area shall be maintained and enhanced on each side of the river and tributaries to retain the river's natural values. Maintenance of the natural vegetation strip is required to help in stabilizing the riverbanks, minimize erosion, provide shading which will help maintain cool water temperatures, help protect water quality by absorbing nutrients from surface water runoff, provide screening of manmade elements, protect fisheries and wildlife habitat, and maintain the aesthetic quality of the river. The zoning administrator shall notify each applicant for a building permit of the purpose of the natural vegetation strip and of the provisions of this section.

- a. Vegetation Strip

Private Land – On privately owned land, a fifty (50) foot deep minimum restricted cutting strip shall apply on each side of the mainstream and on all designated tributaries. The following provisions shall apply within the natural vegetation strip:

- i. Dead, diseased, unsafe or fallen trees, shrubs and noxious plants, including poison ivy, poison sumac and poison oak, and other plants regarded as a common nuisance in Section 2, Public Act 359 of 1942, as amended, may be removed.
 - ii. Trees and shrubs may be pruned for a filtered view¹ of the river.
 - iii. Trees and shrubs may be selectively removed for harvest of merchantable timber, public utility facilities, to achieve a filtered view of the river from the principal structure, and for reasonable access to the river upon approval of the local zoning administrator.
 - (a) If the zoning administrator feels it is necessary he should direct the property owner to consult with the Department of Natural Resources Forester in Plainwell to establish an acceptable selective cutting plan for the area.
 - iv. Clear cutting is not allowed.
11. Minerals: New development, exploration or production of oil, gas, salt brine, sand and gravel, or other minerals except groundwater are not permitted within 300 feet of the designated river or tributaries (Section 10, Natural River Act).

F. Land Management – State and Other Public Lands

1. Structures Related to Recreation: On public land, no new structures associated with a campground, picnic area, rest area, access site or any other publicly provided facilities, except those necessary to protect the riverbank, will be permitted within 200 feet of the designated mainstream or tributaries. Such structures shall be designed and constructed in such a manner as to further the purposes of the Natural River Act.
2. Natural Vegetation Strip on Adjacent Shorelines: Trees, shrubs and other vegetation native to the area shall be maintained and enhanced on each side of the river and tributaries to retain the river's natural values. Maintenance of the natural vegetation strip is necessary to help in stabilizing the riverbanks, minimize erosion, provide shading which will help maintain cool water temperatures, help protect water quality by absorbing nutrients from surface water runoff, provide screening of manmade elements, protect fisheries and wildlife habitat, and maintain the aesthetic quality of the river.

¹"Filtered view" means the maintenance or establishment of woody vegetation of sufficient density to screen developments from the river, to provide for streambank stabilization and erosion control, to serve as an aid to infiltration of surface runoff, and to provide cover to shade the water. The vegetation need not be so dense as to completely block the river view. It means no clear cutting.

a. Vegetation Strip

Public Land – On all publicly owned land, a one hundred and fifty (150) foot deep minimum restricted cutting strip shall apply on each side of the mainstream and on all designated tributaries. The following provisions will apply within the natural vegetation strip:

- i. Dead, diseased, unsafe or fallen trees, shrubs and noxious plants, including poison ivy, poison sumac, and poison oak, and other plants regarded as a common nuisance in Section 2, Public Act 359 of 1942, as amended, may be removed.
- ii. Trees and shrubs may be pruned for filtered view of the river.
- iii. Trees and shrubs may be selectively removed for harvest of merchantable timber to maintain and establish public utility facilities, and for reasonable access to the river.
- iv. Clear-cutting within 150 feet generally is not permitted, but may be allowed if it meets the policy of cutting within water influence zones on state forestland. Limited clear cutting of certain species for fish and wildlife habitat improvement may be allowed upon approval of such plans by the affected divisions of the Department of Natural Resources (Part 305, PA 451 of 1994).

3. Signs: Only those signs necessary for identification, direction, resource information and regulation of use shall be placed along the designated river and tributaries.

- a. Signs posted by public agencies must be kept to a minimum, no larger than ten square feet in area, and placed so as to best meet the objectives of the Natural River Act.
- b. The Department of Natural Resources should initiate a signing program at major access sites along the mainstream emphasizing litter control and respect for private property. Signs should be placed along the mainstream, particularly at bridge crossings and all other strategic locations indicating present location and float time to rest areas and access sites.

(Note: Signs by public agencies may need to be larger or within the 300 foot Natural River District to provide for public safety, such as warning of impending dangers in the river, or for an interpretive or historic sign.)

4. Minerals: New development, exploration or production of oil, gas, salt brine, sand and gravel, or other minerals except groundwater is not permitted within 300 feet of the designated river or tributaries (Section 10, Natural River Act). On new leases on state land, Natural Resources Commission policy prohibits drilling for gas or oil within ¼ mile of any principal stream.

G. State Program Management

1. Stream Alteration: To protect the natural character of the river and the natural flow of its waters, no damming, dredging, filling or channelization of the stream will be permitted in those portions of the Kalamazoo River or tributaries designated under the Natural River Act unless approved by the Department of Natural Resources under authority of Michigan's Inland Lakes and Streams, Part 301 of P.A. 451 of 1994.

Natural materials should be used to construct streambank stabilization projects to control erosion, or to enhance fisheries habitat. These structures should be camouflaged and the local Conservation Officer, district fish biologist, or Soil Conservation Service representative contacted to provide technical advice for such projects. All work done below the ordinary high water mark requires a permit under the authority of the Inland Lakes and Streams, Part 301 of P.A. 451 of 1994.

Permission must be obtained from the property owner when removing fallen trees and log jams from the river. If extensive removal of log material from the bottom during these operations is anticipated, advice and permission should be sought from the district fish biologist.

2. Soil Erosion and Sediment Control Measures: Michigan's Soil Erosion and Sedimentation Control, Part 91 of P.A. 451 of 1994. All earth changing activities, other than normal landscaping or maintenance, undertaken within 500 feet of a lake or stream must be conducted in accordance with the requirements of Part 91 of P.A. 451 of 1994, its administrative rules and those procedures established by the local enforcing agency. Development along the river involving earth moving shall provide for water disposal and/or protection of the soil surface during and after construction.

Practical combinations of the following will provide effective erosion control when skillfully used in planning and construction:

- a. The development plan should be fitted to the soils and topography so as to create the least erosion potential. Local offices of the Soil Conservation Service can provide detailed information on the soil characteristics of a given site and on the suitability of such soils for various uses.
- b. Wherever feasible during construction, natural vegetation shall be retained and protected. Where adequate vegetation does not exist, temporary or permanent vegetation shall be established where possible.
- c. Where it is necessary to remove vegetation for construction, limit the exposed area to the smallest practical size at any one time.
- d. Limit the duration of exposure of soils to the shortest practical time.
- e. Critical areas exposed during construction should be protected with temporary vegetation and/or mulching.
- f. Permanent vegetation and improvements, such as roads, storm sewers and other features of development capable of carrying storm runoff in a safe manner, shall be installed as early as possible.

- g. Provisions should be made to accommodate the increased runoff caused by changed soil and surface conditions during and after construction.
 - h. Sediment basins to remove suspended soil particles from runoff water from land undergoing development should be constructed and maintained where erosive conditions indicate a need to prevent sediment damage to the river.
 - i. Diversions, grassed waterways, grade stabilization structures, and similar mechanical measures required by the site shall be installed as early in the development as possible.
3. Utilities: New gas or oil pipelines, or electric transmission lines shall not be permitted in the Natural River District or to cross the designated river and tributaries without prior written consent of the Department of Natural Resources. Plans for these transmission lines which include crossing the river district or the river and designated tributaries shall be done in accordance with the rules entitled Utilities and Publicly Provided Facilities in Natural River Areas (Section 30514 Part 305, PA 451 of 1994).

New distribution lines within the designated portions of the river or housing setback zone shall be placed underground, unless overhead lines are less disruptive to the environment. Plans for distribution lines which are to be placed under the river shall be approved by the Department of Natural Resources and all construction shall meet the requirements under the Soil Erosion and Sedimentation Control, Part 91, P.A. 451 of 1994 and the Inland Lakes and Streams, Part 301, P.A. 451 of 1994. Local service lines to private dwellings shall originate from the landward side of the dwelling insofar as practical.

Management of trees, shrubs and other vegetation for maintenance of utility rights-of-way shall be done manually in the natural vegetation strip. However, hand application of herbicides to stumps of selectively cut trees may be allowed in the natural vegetation strip where it is the objective to establish and maintain a low growing shrub community in this zone. The department may authorize application of selected pesticides to control insect or disease infestations.

No new dams will be allowed across the designated portions of the Kalamazoo River system. Permits for reactivation or relicensing of the Calkins Dam and/or the Hamilton Dam shall include a requirement that minimum flows be maintained which will ensure protection of the water quality, fish, wildlife, wetlands, ecologic, recreational and aesthetic values of the designated portions.

4. Recreation:
- a. Fishing, Hunting and Trapping: Fishing, hunting and trapping will be permitted in the Natural River District in accord with current state and local laws and regulations.

IT IS EMPHASIZED THAT NATURAL RIVER DESIGNATION, OR ESTABLISHMENT OF A ZONING DISTRICT ALONG THE RIVER, DOES NOT OPEN PRIVATE LANDS TO THE PUBLIC.

Fisheries and wildlife management will be done in conformance with the character of the area and objectives of the natural river designation. A definite fish management plan has not been developed for the lower Kalamazoo River system. However, emphasis will be placed on maintaining and enhancing the quality of the fisheries through stocking, rehabilitation and other necessary management practices. As long as PCB concentrations in fish in this area remain at a dangerous level, every effort should be made to keep the public advised of the situation.

Wildlife management plans call for development and improvement projects to enhance the three existing marsh management areas. In addition, adjacent uplands will be managed to maintain existing wildlife species.

- b. Boating and Canoeing: Boating and canoeing are permitted. Local units of government (township or county) are encouraged to limit the use of motorized watercraft by limiting size of motor or no wake speeds in areas where problems of bank erosion, property damage or personal safety exist. Such controls should be done in accordance with the Marine Safety Section of the Law Enforcement Division.
 - c. Litter: In view of the special status of the Kalamazoo River and its unique beauty and character, the Department of Natural Resources shall encourage and cooperate with private interests as well as other public agencies that have programs for river clean-up.
5. Public Access Sites and Rest Areas: The Advisory Group feels that existing public access is adequate and recommends no new public access sites be provided along the lower Kalamazoo River. However, one new rest stop with no public vehicular access, may be desirable in the future. If such a facility is needed in the future, it should be established in the vicinity of the following areas:
- a. NW1/4 of Section 30, T3N, R14W, on the north side of the river.
 - b. SE1/4 of SE1/4 of Section 30, T3N, R14W, on the south side of the river.

Any additional public access must be walk-in only with parking facilities at least maintaining established setbacks. These should be located only where there is sufficient adjacent public lands so as to minimize trespass and user conflicts on privately owned lands.

These recommendations should meet present and foreseeable future needs for access. Should use expand or an unexpected need for access arise, it may be necessary to restudy the adequacy of public access and rest areas.

6. **Motorized Vehicles:** Operation of all motorized vehicles except normal farm and lawn machinery, other than on designated public roads or access roads to permitted uses, will be prohibited within the Natural River District. Use of ORVs on publicly owned lands contiguous to the Natural River District shall be in conformance with guidelines and regulations of the agency administering such lands, and state and federal noise level standards shall be strictly enforced. (Muffler requirement of MVC – Section 708, Act 300, P.A. 1949, etc.)
7. **Historic and Archaeological Sites:** It is recommended that responsible groups, individuals and the History Division, Michigan Department of State, should continue to identify and evaluate historic and archaeological sites. For those sites that qualify, work should continue toward inclusion of these sites on the State and National Registers of Historic Places, and/or Historic Sites and Historic American Buildings.
8. **Water Quality Management:** Designated stretches of the Kalamazoo River and its tributaries will be governed by the “nondegradation” rule of the Water Resources Commission’s water quality standards. Baseline water quality shall be determined, both chemically and biologically, at the time of designation. A program for water quality monitoring shall be established by the Department of Environmental Quality to ensure that continued efforts are being made to maintain or enhance water quality. Of particular concern is the monitoring of PCB levels in fish tissue.

Upstream municipal and industrial discharges to the Kalamazoo River system should be closely controlled to insure protection to the water quality and natural values of the designated portions.

H. Administration

1. **Land Use Guidelines:** under Part 305, P.A. 451 of 1994, zoning by local governmental units shall be the preferred means of protecting the Kalamazoo River and its designated tributaries as a natural river.
 - a. Zoning shall be applied within the 300-foot Natural River District on both the designated mainstream and tributaries. Upon adoption of a local zoning ordinance, certified copies of maps and/or documents describing the Natural River District shall be filed with the local tax assessing officer and the County Equalization Department.

In establishing true cash value of property within the Natural River District, the assessing officer shall take cognizance of the effect of use limits established by the ordinance (Section 30512, PA 451, of 1994).
2. **Utilities and Publicly Provided Facilities in Designated Natural River Areas:** As provided in Section 30514, PA 451 of 1994, administrative rules have been adopted by the state which provide that: Plans for construction, enlargement, and site or route location of all utility pipelines and transmission lines, roads and road

rights-of-way, publicly provided recreation facilities, access sites, and public water management projects within a natural river area shall be approved by the department. An application for the approval of such plans shall be submitted by the applicant, in writing, to the Department of Natural Resources, Fisheries Division.

3. **Appeals:** Under certain circumstances, strict adherence to this plan may create unreasonable hardships for the frontage owner. Such cases may be appealed to the appropriate state or local board for a variance. Applications for a variance shall be based on a site plan. The county health department, Soil Conservation Service, appropriate staff and field personnel of the Department of Natural Resources, and other experts should be consulted to recommend to the appeals board a course of action which will have the least degrading impact on the character of the natural river. Final determination of the variance shall be made by the appropriate board.
4. **Nonconforming Uses:** As stated in Section 30512 of the Natural River, Part 305, P.A. 451 of 1994, “the lawful use of any building or structure, and of any land or premise as existing and lawful at the time of enactment of a zoning ordinance or rule or an amendment thereof, may be continued although such use does not conform with the provisions of the ordinance, rule or amendment. The ordinance or rule shall provide for the completion, restoration, extension or substitution of nonconforming uses upon such reasonable terms as may be set forth in the zoning ordinance or rule.”
5. **Zoning Regulations in Unusual Circumstances:** The regulations proposed in this report are not intended to be applied in disregard of the requirement of Section 30508, PA 451 of 1994 that zoning regulations “take cognizance of the characteristics of the land and water concerned, surrounding development and existing uses.” Where specific circumstances can be proven to warrant a variance, other or different regulations, either more or less restrictive, should be adopted.
6. **Land Acquisition:** The state may purchase or trade lands with owner consent on the designated river and tributaries to maintain or improve the river and its environment. Efforts should be made by the appropriate public agency to purchase key parcels for canoe rest areas, walk-in fishermen access, or to protect sensitive environmental areas. Some landowners in the Natural River District may be interested in offering scenic or other easements or inserting restrictions in their deeds which serve to protect the river environment and which coincide with their property interests. The opportunity to obtain such easements or restrictions should be pursued by interested public agencies.
7. **State Resources:** Overall responsibility for implementing and coordinating the natural river plan is assigned to the Region III Office of the Department of Natural Resources. The Natural Rivers Unit and the Department of Natural Resources Natural Rivers Advisory Group will act in an advisory capacity. Enforcement of water quality standards and water use regulations will be the

responsibility of the Environmental Enforcement Division and other divisions of the Department of Natural Resources. Other laws and programs reinforcing natural rivers management objectives should be utilized to the extent necessary to protect the river in implementing the management plan for the river in implementing the management plan for the river and tributaries (see Appendix C).

I. Recommendations – Encouragements

1. Private Landowners: Although not required by this plan, property owners are encouraged to consider the following recommendations which will help protect and enhance private lands, and offer additional protection to the river and adjacent environment.
 - a. Building Design – Property owners along the streams are encouraged to use natural materials and natural unobtrusive colors in the construction of new or remodeling of existing buildings. Upon request to the Department of Natural Resources, individual property owners may receive technical advice on location and design of structures and management of their lands. Such requests and the Department’s response should be channeled through the local zoning administrator.
 - b. Building Screening – Property owners of new or existing buildings visible from the river are encouraged to screen them with native vegetation. The Department of Natural Resources Area Forester and Soil Conservation Service will advise on planting stock, etc. on request. When available at state nurseries, recommended planting materials will be supplied to property owners at cost.
 - c. Building Setbacks on Bluffs - Property owners are encouraged to maintain a reasonable setback from the edge of a bluff. Bluffs are sensitive areas subject to erosion. Where construction occurs too close to the edge of a bluff, damage to the structure and severe bank sloughing may occur. The following are suggested distances for these setbacks:
 - i) New buildings and appurtenances should be setback at least 50 feet from top of the bluff¹ on the cutting edge² of a stream.
 - ii) New buildings and appurtenances should be setback at least 25 feet from the top of a bluff on the noncutting edge of the stream.
 - d. Erosion Control – Planting of perennial native species in the natural vegetation strip is encouraged, especially where exposed soil and steep slopes exist. The Department of Natural Resources or Soil Conservation Service may be consulted for selection of plant species best suited for erosion control and/or screening of existing developments. When available at state nurseries, the recommended planting materials will be supplied to property owners at cost.

2. Local Units of Government: The management of areas beyond the natural river zone is extremely important since land use and resources are closely related. What happens on the lands beyond the Natural River District but within the drainage area of the river, affects the river. Local units of government adjacent to the district, through their powers to influence the location, timing and nature of development, can have a positive effect on water resources.

¹”Bluff” means the top of a steep bank rising sharply from the water’s edge.

²”Cutting edge of a stream” means the edge of a river or stream where water velocity is such that it may cause soil or stream bank erosion.

It is recommended that local governmental units zone areas adjacent to the Natural River District to maintain the integrity of the Kalamazoo River and designated tributaries as a wild-scenic river:

- a. By limiting residential development to low density, single-family structures or medium density cluster developments. Medium density cluster developments are recommended because it is more cost effective to provide services and control.
- b. By providing districts where industry which may produce noise, smoke, fumes, odors, etc., will not affect the natural characteristics of the river area.
- c. By providing districts for commerce where heavy traffic parking, automobile exhaust and noise will not create environmental intrusions.

Further, it is recommended that local units of government incorporate water resource protection and/or management measures into their plans, programs and decisions involving land use. Such measures are of particular importance when dealing with lands in the stream corridor as defined below.

A stream corridor essentially consists of lands contiguous to the stream, the alteration or development of which could potentially cause negative impacts on the stream and its environment. It is a composite of:

- a. Soil types with severe limitations for development.
- b. Vegetation along creek banks.
- c. Wetlands.
- d. Slopes.
- e. Flood profiles when known.

Sensitive areas involving one or more of the above factors may occur within the drainage area of the river but outside of the Natural River District itself. Modification or development within such areas may adversely affect water resource benefits within the district or create problems requiring costly public investment to rectify.

It is recommended that local units of government consider such measures as regulating changes in surface water runoff from specific locations through use of

the site plan review process, and protecting sensitive areas outside the Natural River District through use of conditional use permit procedures.

On private lands adjacent to and within ¼ mile of the Natural River District, it is recommended that the local Soil Conservation Districts, local soil erosion and sedimentation control agencies, Cooperative Extension Service and the Department of Natural Resources cooperate with landowners to ensure that timber harvest, agricultural practices, housing, road building, or other land use activities are compatible with the wild-scenic designation of the river and with maintaining the water quality of the river.

Further, local governmental units are urged to adopt building setbacks, vegetation management and septic system controls for other streams under their jurisdiction not within the natural river designation.

J. Assistance Available from the Department of Natural Resources: The following department procedures reflect adopted Commission policy and describe the commitment of the Department of Natural Resources to aid riverfront property owners and local governments along a designated river:

1. To Riverfront Property Owners – Upon Request –

- a) The Fisheries Division Programs will assist riverfront property owners in selection of the best sites on an individual's property for the location of buildings and appurtenances and with design and location of docks, pathways and riverbank protection.
- b) Forest, Mineral and Fire Management Division, through its local area foresters, will advise riverfront property owners on planting stock to be used to stabilize riverbanks or to screen existing structures. When available at state nurseries, recommended planting materials will be supplied to property owners at cost.
- c) The Fisheries Division Programs will provide technical assistance to riverfront property owners on programs of other agencies which provide information and assistance in the areas of water or septic systems location and design, soils information and management, pond development and management, and cooperative fencing.
- d) The Fisheries Division Programs and Fisheries Division will provide technical advice on erosion problems and streambank stabilization, including reference to programs of other agencies.
- e) The Fisheries Division Programs will assume responsibility for coordination of periodic river clean-ups.
- f) The Fisheries Division Programs will assist riverfront property owners, local governmental units, and other interested citizens in organization of

watershed councils, property owners' associations, or other river protective groups.

- g) The Department of Agriculture Programs will provide assistance to riverfront property owners in applying for property tax benefits available under the Farmland and Open Space Preservation Act (Part 361, PA 451 of 1994, as amended) and other relevant state statutes.

2. To Local Units of Government – Upon Request –

- a) The Division of Land Resource Programs will provide technical assistance in development and processing of local zoning and other controls designed to protect and enhance the natural qualities of the river and adjoining lands.
- b) The Fisheries Division Programs will provide assistance to local governments in administration of its zoning ordinance relating to the Natural Rivers Program by reviewing special exception or variance requests, and by providing available data.
- c) Upon specific written request of a local governmental unit along a designated natural river, the Fisheries Division Programs will delineate the “ordinary high water mark”.
- d) The Department of Environmental Quality will give high priority to floodplain delineation studies for river stretches designated under Part 305 of P.A. 451 of 1994 (Natural River Act) where heavy development activity in the floodplain is expected in the future and where recommendations for local zoning deal with setbacks in relation to lands subject to flooding.
- e) When an adopted river management plan identifies the need for administrative rules for watercraft under authority of Part 801, PA 451 of 1994, Law Enforcement Division will cooperate with the appropriate local units of government in the promulgation of such rules as soon as possible following river designation.

APPENDIX A

PART 305 NATURAL RIVERS

324.30501 Definitions.

Sec. 30501. As used in this part:

- (a) "Free flowing" means existing or flowing in natural condition without impoundment, diversion, straightening, riprapping, or other modification.
- (b) "Natural river" means a river that has been designated by the department for inclusion in the wild, scenic, and recreational rivers system.
- (c) "River" means a flowing body of water or a portion or tributary of a flowing body of water, including streams, creeks, or impoundments and small lakes thereon.
- (d) "System" means all of those rivers or portions of rivers designated under this part.

History: Add. 1995, Act 59, Imd. Eff. May 24, 1995.

324.30502 Natural river; designation; purpose; long-range plans; publicity; cooperation.

Sec. 30502. The department, in the interest of the people of the state and future generations, may designate a river or portion of a river as a natural river area for the purpose of preserving and enhancing its values for water conservation, its free flowing condition, and its fish, wildlife, boating, scenic, aesthetic, floodplain, ecologic, historic, and recreational values and uses. The area shall include adjoining or related lands as appropriate to the purposes of the designation. The department shall prepare and adopt a long-range comprehensive plan for a designated natural river area that sets forth the purposes of the designation, proposed uses of lands and waters, and management measures designed to accomplish the purposes. State land within the designated area shall be administered and managed in accordance with the plan, and state management of fisheries, streams, waters, wildlife, and boating shall take cognizance of the plan. The department shall publicize and inform private and public landowners or agencies as to the plan and its purposes, so as to encourage their cooperation in the management and use of their land in a manner consistent with the plan and the purposes of the designation. The department shall cooperate with federal agencies administering any federal program concerning natural river areas, and with any watershed council established under part 311, when such cooperation furthers the interest of the state.

History: Add. 1995, Act 59, Imd. Eff. May 24, 1995.

324.30503 Qualifications for designation; categories of rivers.

Sec. 30503. A river qualifying for designation as a natural river area shall possess 1 or more of the natural or outstanding existing values cited in section 30502 and shall be permanently managed for the preservation or enhancement of such values. Categories of natural rivers shall be defined and established by the department, based on the characteristics of the waters and the adjoining lands and their uses, both as existing and as proposed, including such categories as wild, scenic, and recreational. The categories shall be specified in the designation and the long-range comprehensive plan.

History: Add. 1995, Act 59, Imd. Eff. May 24, 1995.

324.30504 Land acquisition; purpose; interest acquired; consent.

Sec. 30504. The department may acquire lands or interests in lands adjacent to a designated natural river for the purpose of maintaining or improving the river and its environment in conformance with the purposes of the designation and the plan. Interests that may be acquired include, but are not limited to, easements designed to provide for preservation and to limit development, without providing public access and use. Lands or interests in lands shall be acquired under this part only with the consent of the owner.

History: Add. 1995, Act 59, Imd. Eff. May 24, 1995.

324.30505 Federal financial assistance programs; leases; expenditures; purposes.

Sec. 30505. (1) The department may administer federal financial assistance programs for natural river areas.

(2) The department may enter into a lease or agreement with any person or political subdivision to administer all or part of their lands in a natural river area.

(3) The department may expend funds for works designed to preserve and enhance the values and uses of a natural river area and for construction, management, maintenance, and administration of facilities in a natural river area conforming to the purposes of the designation, if the funds are appropriated by the legislature.

History: Add. 1995, Act 59, Imd. Eff. May 24, 1995.

324.30506 Public hearings; notice.

Sec. 30506. Before designating a river as a natural river area, the department shall conduct public hearings in the county seat of any county in which a portion of the designated natural river area is located. Notices of the hearings shall be advertised at least twice, not less than 30 days before the hearing, in a newspaper having general circulation in each such county and in at least 1 newspaper having general circulation in the state and 1 newspaper published in the Upper Peninsula.

History: Add. 1995, Act 59, Imd. Eff. May 24, 1995.

324.30507 Land uses; zoning; local ordinances; state rule.

Sec. 30507. After designation of a river or portion of a river as a natural river area and following the preparation of the long-range comprehensive plan, the department may determine that the uses of land along the river, except within the limits of an incorporated municipality, shall be controlled by zoning contributing to accomplishment of the purposes of this part and the natural river plan. County and township governments are encouraged to establish these zoning controls and additional controls as may be appropriate, including, but not limited to, building and subdivision controls. The department may provide advisory, planning, and cooperative assistance in the drafting of ordinances to establish these controls. If the local unit does not, within 1 year after notice from the department, have in full force and effect a zoning ordinance or interim zoning ordinance established under authority of the acts cited in section 30510, the department, on its own motion, may promulgate a zoning rule in accordance with section 30512. A zoning rule may also be promulgated if the department finds that an adopted or existing zoning ordinance fails to meet adequately guidelines consistent with this part as provided by the department and transmitted to the local units concerned, does not take full cognizance of the purposes and objectives of this part, or is not in accord with the purposes of designation of the river as established by the department.

History: Add. 1995, Act 59, Imd. Eff. May 24, 1995.

324.30508 Zoning ordinance or rule; purpose.

Sec. 30508. A zoning ordinance adopted by a local unit of government or a zoning rule promulgated by the department shall provide for the protection of the river and its related land resources consistent with the preservation and enhancement of their values and the objectives set forth in section 30502. The ordinance or rule shall protect the interest of the people of the state as a whole. It shall take cognizance of the characteristics of the land and water concerned, surrounding development, and existing uses and provide for conservation of soil, water, streambed and banks, floodplains, and adjoining uplands.

History: Add. 1995, Act 59, Imd. Eff. May 24, 1995.

324.30509 Zoning ordinance or rule; establishment of districts; powers; distance.

Sec. 30509. The ordinance or rule shall establish zoning districts within which such uses of land as for agriculture, forestry, recreation, residence, industry, commerce, and additional uses may be encouraged, regulated, or prohibited. It may limit or prohibit the placement of structures of any class or designate their location with relation to the water's edge, to property or subdivision lines, and to flood flows and may limit the subdivision of lands for platting purposes. It may control the location and design of highways and roads and of public utility transmission and distribution lines, except on lands or other interests in real property owned by the utility on January 1, 1971. It may prohibit or limit the cutting of trees or other vegetation, but such limits shall not apply for a distance of more than 100 feet from the river's edge. It may specifically prohibit or limit mining and drilling for oil and gas, but such limits shall not apply for a distance of more than 300 feet from the river's edge. It may contain other provisions necessary to accomplish the objectives of this part. A zoning rule promulgated by the department shall not control lands more than 400 feet from the river's edge.

History: Add. 1995, Act 59, Imd. Eff. May 24, 1995.

324.30510 Local zoning ordinance; conformance with applicable law; construction.

Sec. 30510. A local unit of government, in establishing a zoning ordinance, in addition to the authority and requirements of this part, shall conform to the township zoning act, 1943 PA 184, MCL 125.271 to 125.310, or the county zoning act, 1943 PA 183, MCL 125.201 to 125.240, including, but not limited to, the variance provisions of those acts. Any conflict shall be resolved in favor of the provisions of this part. The powers granted under this part shall be liberally construed in favor of the local unit or the department exercising them, in such manner as to promote the orderly preservation or enhancement of the values of the rivers and related land resources and their use in accordance with a long-range comprehensive general plan to ensure the greatest benefit to the state as a whole.

History: Add. 1995, Act 59, Imd. Eff. May 24, 1995;--Am. 2000, Act 17, Imd. Eff. Mar. 8, 2000.

324.30511 Districts; valuation for tax purposes.

Sec. 30511. Upon adoption of a zoning ordinance or rule, certified copies of the maps showing districts shall be filed with the local tax assessing officer and the state tax commission. In establishing true cash value of property within the districts zoned, the assessing officer shall take cognizance of the effect of limits on use established by the ordinance or rule.

History: Add. 1995, Act 59, Imd. Eff. May 24, 1995.

324.30512 Rules; enforcement; promulgation; variance; existing use.

Sec. 30512. (1) The department shall prescribe administrative procedures and rules and provide personnel as it considers necessary for the enforcement of a zoning ordinance or rule enacted in accordance with this part. A circuit court, upon petition and a showing by the department that there exists a violation of a rule properly promulgated under this part, shall issue any necessary order to the defendant to correct the violation or to restrain the defendant from further violation of the rule.

(2) The department shall promulgate a zoning rule to implement this part. The rule shall include procedures for receiving and acting upon applications from local units of government or landowners for change of boundaries or change in permitted uses in accordance with chapter 4 of the administrative procedures act of 1969, 1969 PA 306, MCL 24.271 to 24.287. An aggrieved party may seek judicial review under chapter 6 of the administrative procedures act of 1969, 1969 PA 306, MCL 24.301 to 24.306.

(3) A variance from a zoning rule promulgated by the department to implement this part may be applied for and granted pursuant to section 4 of the uniform condemnation procedures act, 1980 PA 87, MCL 213.54, and the variance provisions of the zoning rule.

(4) The lawful use of any building or structure and of any land or premise as existing and lawful at the time of enactment of a zoning ordinance or rule or of an amendment of a zoning ordinance or rule may be continued although the use does not conform with the ordinance, rule, or amendment. The ordinance or rule shall provide for the completion, restoration, reconstruction, extension, or substitution of nonconforming uses upon reasonable terms as set forth in the zoning ordinance or rule.

History: Add. 1995, Act 59, Imd. Eff. May 24, 1995;--Am. 2000, Act 17, Imd. Eff. Mar. 8, 2000.

324.30513 National wild and scenic river system; administration.

Sec. 30513. This part does not preclude a component of the system from becoming a part of the national wild and scenic river system under the wild and scenic rivers act, Public Law 90-542, 16 U.S.C. 1271 to 1287. The department may enter into written cooperative agreements for joint federal-state administration of rivers that may be designated under the wild and scenic rivers act.

History: Add. 1995, Act 59, Imd. Eff. May 24, 1995.

324.30514 Area plans; approval; rules.

Sec. 30514. The department shall approve preliminary and final plans for site or route location, construction, or enlargement of utility transmission lines, publicly provided recreation facilities, access sites, highways, roads, bridges, or other structures and for publicly developed water management projects, within a designated natural river area, except within the limits of a city or incorporated village. The department may require any measure necessary to control damaging erosion or flow alteration during or in consequence of construction. The department shall promulgate rules concerning the approvals and requirements provided for in this section.

History: Add. 1995, Act 59, Imd. Eff. May 24, 1995.

324.30515 Construction of part.

Sec. 30515. This part does not prohibit a reasonable and lawful use of any other natural resource that benefits the general welfare of the people of this state and that is not inconsistent with the purpose of this part.

History: Add. 1995, Act 59, Imd. Eff. May 24, 1995.

Appendix B

Natural Resources Commission Policy and Procedures Regarding the Natural River Act of 1970

subject NATURAL RIVERS

PREAMBLE:

Michigan's rivers and streams, and their adjoining lands represent some of the State's most important natural resources. These areas are important for their recreational, scenic, historic, cultural, economic, scientific and environmental values. However, the beauty and quality of rivers is fragile and the existence of unspoiled, free-flowing stretches is diminishing. A program for identification, designation and protection of these free-flowing natural rivers is in the public interest. The responsibility for developing Michigan's state-wide system of designated natural rivers has been delegated to the Department of Natural Resources under authority of the Natural Rivers Act (Act 231, Public Acts of 1970). This task involves two entities often in conflict: private ownership of river frontage and protection of publicly-owned natural resources. Because of the impact on private land rights, the program must maintain high visibility in the minds of the public, private river front landowners, and local governmental officials.

General Policy:

Selection of free-flowing rivers or river segments for inclusion in Michigan's natural river system will be based upon the specific qualities outlined in Section 3 of the Natural Rivers Act--water conservation, free-flowing condition, and fish, wildlife, boating, scenic, aesthetic, floodplain, ecologic, historic and recreational values and uses. Priorities for study and designation will be based upon the quality of the resource, the impending and anticipated threats to those qualities, and local initiative and support.

Prior to designation as a natural river, the Department will develop a long-range plan for the river and adjoining lands. The plan's objective will be the strong protection and enhancement of natural river values for the use and enjoyment of present and future generations. The plan will recognize the right and the need of the public to use and enjoy designated rivers, and if necessary, will contain a program for protection of the resource from overuse, including efforts to relieve public pressures on private lands. Zoning controls will be the chief means of controlling development and use on adjacent or affected lands. These zoning controls must be reasonable, yet sufficient to ensure a high level of protection to the natural and aesthetic qualities of the designated public resource and adjoining lands. Development of natural river plans shall include a high level of citizen and local government involvement. Local governmental officials, river front property owners and other citizens will be approached at an early stage in an earnest effort to enlist their knowledge and opinion on the river resource and its protection.

B-2

identification	effective date	number	page <u>2</u> of <u>2</u>
NATURAL RIVERS	March 9, 1978	2703	

In administration of designated natural rivers, great emphasis will be placed on local control of protective zoning ordinances. Local governmental units will be strongly encouraged to adopt and enforce appropriate zoning controls. Every effort shall be made to re-enforce the idea that this is a program to protect a resource of great value to the citizens of the State, not a program to merely prevent development.


SPECIFIC POLICIES:

1. State land within the designated area shall be administered and managed in accordance with the plan, and State management of fisheries, streams, waters, wildlife and boating shall take cognizance of the plan. Emphasis will be placed on Department programs which affect designated rivers, in line with the adopted river management plans, including: design, development, relocation or screening of Departmental facilities; acquisition of critical lands to provide recreational facilities, disperse use or relieve trespass on private lands; and implementation of other land, water and resource management programs which serve to protect and enhance the qualities of the natural river area.
2. Where a proposed Departmental use or facility on a designated natural river appears to contravene the purposes and objectives of the natural river designation, the project will be modified to conform to the objectives of the designation and the Natural Rivers Act or will be cancelled. If a project is essential to the operation of other programs, but does not conform to the river management plan of a designated river, it must be submitted to the Natural Resources Commission for approval.
3. The Department shall provide technical assistance in drafting, processing and enforcement of local zoning for natural rivers protection.
4. The Department shall, upon request, provide technical advice to local river front property owners as to location and design of structures, management of private lands, planting and management of vegetation, river clean-up, and property tax benefits available under Act 116, Public Acts of 1974, as amended, or other relevant State statutes.
5. Recommended planting materials will be supplied at cost to property owners by the Department on designated natural rivers when available.
6. The Department shall conduct an on-going public information program to explain the values and importance of a natural rivers system, describe the pressures which pose a threat to rivers and to outline steps which river front property owners, local governments, State agencies and others may take to protect this State's outstanding river environments.

* * *

Supported by Commission Action March 9, 1978.

Procedure No. 2703.3.

 DEPARTMENT PROCEDURES department of natural resources	effective date March 9, 1978	number 2703.3
	supersedes Number _____ Date _____	
subject NATURAL RIVERS		
<p>I. <u>LOCAL ASSISTANCE ON DESIGNATED NATURAL RIVERS</u></p> <p>A. To Riverfront Property Owners - Upon Request:</p> <ol style="list-style-type: none"> 1. The Division of Land Resource Programs will assist riverfront property owners in selection of the best sites on an individual's property for the location of buildings and appurtenances and with design and location of docks, pathways and riverbank protection. 2. Forest Management Division, through its local area foresters, will advise riverfront property owners on planting stock to be used to stabilize riverbanks or to screen existing structures. When available at state nurseries, recommended planting materials will be supplied to property owners at cost. 3. The Division of Land Resource Programs will provide technical assistance to riverfront property owners on programs of other agencies which provide information and assistance in the areas of water or septic systems location and design, soils information and management, pond development and management, and cooperative fencing. 4. The Division of Land Resource Programs and Fisheries Division will provide technical advice on erosion problems and streambank stabilization, including reference to programs of other agencies. 5. The Division of Land Resource Programs will assume responsibility for coordination of periodic river clean-ups. 6. The Division of Land Resource Programs will assist riverfront property owners, local governmental units, and other interested citizens in organization of watershed councils, property owners' associations, or other river protective groups. 		

B-4

identification	effective date	number	page <u>2</u> of <u>4</u>
Natural Rivers	March 9, 1978	2703.3	

7. The Division of Land Resource Programs will provide assistance to riverfront property owners in applying for property tax benefits available under the Farmland and Open Space Preservation Act (Act No. 116 of the Public Acts of 1974, as amended) and other relevant state statutes.

B. To Local Units of Government - Upon Request:

1. The Division of Land Resource Programs will provide technical assistance in development and processing of local zoning and other controls designed to protect and enhance the natural qualities of the river and adjoining lands.
2. The Division of Land Resource Programs will provide assistance to local governments in administration of its zoning ordinance relating to the Natural Rivers Program by reviewing special exception or variance requests, and by providing available data.
3. Upon specific written request of a local governmental unit along a designated natural river, the Division of Land Resource Programs will delineate the "ordinary high water mark"
4. The Water Management Division will give high priority to floodplain delineation studies for river stretches designated under Act No. 231 of the Public Acts of 1970 (Natural River Act) where heavy development activity in the floodplain is expected in the future and where recommendations for local zoning deal with setbacks in relation to lands subject to flooding.
5. When an adopted river management plan identifies the need for administrative rules for watercraft under authority of Act No. 303 of the Public Acts of 1967, Law Enforcement Division will cooperate with the appropriate local units of government in the promulgation of such rules as soon as possible following river designation.

II. STATE LANDS AND PROGRAMS MANAGEMENT ON DESIGNATED NATURAL RIVERS

- A. The river management plan for each proposed natural river will address state lands and programs, including the following:
 1. Management and administration of state land.
 2. Fisheries management.
 3. Wildlife management.
 4. Camping facilities - number, location, proximity to the water's edge.

B-5

identification	effective date	number	page <u>3</u> of <u>4</u>
Natural Rivers	March 9, 1978	2703.3	
<p>5. Access sites, number, location, vegetative screening.</p> <p>6. Need for facilities to relieve pressures on private lands.</p> <p>7. Signing for access, of facilities, respect for private lands.</p> <p>8. Water quality management.</p> <p>9. Water management - impoundments, dredging, filling.</p> <p>10. Watercraft control and uses.</p> <p>B. A Departmental sign plan will be developed for each designated river. This plan will be submitted to the Department Sign Committee for approval, and will be implemented as soon as possible following designation of a river. Signs will be designated and located in such a manner as to enhance the purposes of the designation, but without detracting from the natural qualities of the stream environment, and to accomplish the following:</p> <ol style="list-style-type: none"> 1. Advise the public of the intent of the natural rivers designation. 2. Indicate that adjacent lands are not all public, and emphasize respect for private property. 3. Advise the public of special management regulations. 4. Advise the public of available public facilities to discourage trespass on private lands. 5. Advise the public of watercraft controls and uses in effect. <p>C. A fisheries management plan will be made a part of the natural rivers plan to address problems and needs for the maintenance and enhancement of the fisheries values found in the rivers.</p> <p>D. Management recommendations for streambank stabilization and habitat improvement plans will be developed by Fisheries Division for designated natural rivers. Fisheries Division will make every effort to place priority on these plans within its fisheries program.</p> <p>E. Streambank stabilization and habitat improvement structures will be constructed of materials which will harmonize with the natural characteristics of the stream environment on a designated natural river.</p> <p>F. Baseline water quality will be determined, both chemically and biologically, at the time of natural river designation.</p> <p>G. River stretches designated under Act No. 231 of the Public Acts of 1970 will be governed by the "nondegradation" rule of the Water Resources Commission's water quality standards.</p>			

B-6

Identification	effective date	number	page <u>4</u> of <u>4</u>
Natural Rivers	March 9, 1978	2703.3	

- H. A program for water quality monitoring shall be carried out on designated natural rivers.
- I. Where land acquisition is needed to implement the recommendations presented in an adopted river management plan, these needs will receive priority consideration by appropriate divisions.
- J. Recommendations in an adopted river management plan for new campgrounds or removal or relocation of existing nonconforming facilities will be implemented as soon as possible.
- K. Needed screening plantings between a designated river and existing Departmental facilities will be initiated as soon as planting stock becomes available.
- L. Management of state lands, vegetation, recreational use and repair of resource damage along designated natural rivers will be done in line with the adopted river management plan.
- M. The Department will implement a solid waste management and litter control program for the natural river area as soon as possible following designation.

Policy No. 2703.

APPENDIX C

“ALTERATION OF RIVERS” LAWS

Construction on Streams (Act 156, 1951): Authorizes county commissioners to permit or prohibit the construction of dams or bridges on navigable streams. They can also provide for the removal of obstructions.

Construction of Dams in Streams (Act 184, 1963): Prohibits dam building on a stream or river impounding more than five acres without a permit from the Department of Natural Resources.

Inland Lakes and Streams Act of 1972 (Act 346, 1972): Authorizes the Department of Natural Resources to regulate structures, fills, dredgings and other such actions on waterfronts.

Soil Erosion and Sedimentation Control Act of 1972 (Act 347, 1972): Control of soil erosion for the identified land uses of an area to prevent sedimentation of the waters of this state.

Regulate Alteration of Floodplain and Floodways (Act 167, 1968): Authorizes the Water Resources Commission to control alteration of the water courses and the floodplains of all rivers and streams, and to prohibit the obstruction of the floodways of rivers and streams of the state.

Goemaere-Andreson Wetland Protection Act (Act 203, 1979): Authorizes the Department of Natural Resources to regulate dredging, filling, draining and other such actions to wetlands, including those contiguous to Michigan rivers (effective October 1, 1980).

RIVER USE LAWS

Marine Safety Act (Act 303, 1967): Sets forth general regulations for the use of vessels on waters of the state. Department of Natural Resources may, via hearings and adoption of rules by local governments, further regulate the use of such waters by special regulation.

Pending Canoe Registration Act: Would require registering of canoes that are intended for use in public waters of the state.

POLLUTION LAWS AND PROGRAMS

Water Resources Commission (Act 245, 1929): Commission must establish “pollution standards for waters of the state in relation to the use to which they are or may be put.” Has the authority to make regulations and issue orders and permits restricting the polluting content of discharges into state surface and ground waters. Act prohibits discharges of any substance into water which are or may become injurious to public health, safety, welfare; domestic, commercial, industrial, agricultural, recreational or other uses of water; value or utility of riparian lands; to livestock, wild animals, birds, fish, aquatic life or plants, etc. Prohibits structures that will unduly restrict the capacity of the floodway.

Environmental Protection Act (Act 127, 1970): Allows the Attorney General, any public body, and private body or person to sue to enjoin the pollution or likely pollution of any natural resource or obtain relief with respect to such actions.

Clean Water Boding Act (Act 76, 1968 implemented by Act 329, 1966, as amended): For sewage treatment facilities eligible for federal aid, the Water Resources Commission may grant up to 25 percent of the project cost providing that the sum of state and federal aid shall not exceed 80 percent of the project cost.

RELATED & GENERAL LAWS APPLICABLE TO NATURAL RIVERS PROGRAM

Shorelands Protection and Management Act (Act 245, 1970): The Great Lakes counterpart of the Natural River Act.

Farmland and Open Space Preservation Act (Act 116, 1974): Provides tax relief for certain property owners signing nondevelopment agreements with the state.

Subdivision Control Act (Act 288, 1967): Regulates the subdivision of land; requires that the land be suitable for building sites and public improvements, and that there be adequate drainage thereof; to control residential building development within floodplain areas, etc.

State Constitution (Act IV, s.52): Legislature must provide for the protection of natural resources.

Department of Conservation (Act 17, 1921): Department must protect and conserve the natural resources of the State of Michigan.

Natural Beauty Roads (Act 150, 1970): Such roads may be established by county road commission upon local petition. After establishment, commission may enact regulations to preserve native vegetation in the road right-of-way.

Safety Zones (Act 61, 1968): Prohibits discharge of firearms within 150 yards of an occupied dwelling.

Reckless Use of Firearms Act (Act 45, 1952):

Recreational Trespass Act (Act 323, 1976): Must have written permission to be on an individual's property, and prohibits possession or discharge of a firearm within the limits of a right-of-way on certain public roads.

RIVER PLANNING & DEVELOPMENT ORGANIZATIONS

Local River Management Act (Act 253, 1964): Authority to establish both a watershed council (like a planning or advisory board) and a river management district and board (planning a development agency).

Intermunicipality Study Committee (Act 200, 1957): Two or more municipalities may establish an intermunicipality study committee to study area problems and formulate recommendations to their governing bodies.

APPENDIX D

LOWER KALAMAZOO RIVER

DESIGNATED STREAM MILEAGE

<u>Township*</u>	<u>LINEAR MILES</u>			<u>FRONTAGE</u>		
	<u>Public</u>	<u>Private</u>	<u>Total</u>	<u>Public</u>	<u>Private</u>	<u>Total</u>
Valley	10	1	11	20	2	22
Heath	9	7	16	18	14	32
Manlius	4	13	17	8	26	34
Overisel	0	6	6	0	12	12
Saugatuck	<u>0</u>	<u>5</u>	<u>5</u>	<u>0</u>	<u>10</u>	<u>10</u>
	23	32	55	46	64	110

*All townships are in Allegan County