SURFACE WATER RESOURCES

OF

ADAMS COUNTY

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MADISON

600-61

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SURFACE WATER RESOURCES OF ADAMS COUNTY

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Wisconsin Conservation Department
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Census, population, and economic reports

Climatological reports

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Field surveys and personal contacts

Forest inventory survey report

Geological survey reports

Public Service Commission reports

Soil surveys

U.S.G.S. maps

Wisconsin Blue Book, 1964

Wisconsin Conservation Department waters files and bulletins

Wisconsin Crop and Livestock Reporting Service

INTRODUCTION

Wisconsin's population in 1960 was 3,952,000. According to an estimate made for the federal government, it could be as high as 6,100,000 in another twenty years. Besides, there seems little doubt that the trend toward shorter work weeks and longer vacations will continue. Additional leisure time is being spent outdoors in swimming, motorboating, water-skiing, fishing, hunting, skin diving, and other water use activities. The expansion of these activities in addition to increased agricultural, industrial, and domestic demands on water has resulted in conflicts. Often one interest may control water to the exclusion of others. To assure that the resource is equitably utilized, a method of apportioning water use must be found.

In 1959, the State Legislature requested the Conservation Department to develop a program for classification of lakes by use and in 1961 streams were added to this responsibility. Before an actual classification system can be devised, it is necessary to first prepare a water resource inventory consisting of basic data such as number, size, physical, and chemical characteristics of lakes and streams as well as present and potential uses of the water resources. Inventories are being prepared on a county by county basis. Collection of data for this summary of the surface water resources of Adams County was completed in October, 1965.

This inventory is intended to provide a summary of the quantity, quality, and character of the surface waters (lakes and streams) of Adams County. Use potential will be described and methods of protection discussed. The inventory will have served its purpose if it can be used as an aid in planning for the wise use and good management of the waters.

Data for this inventory came from a number of sources with the principal ones being aerial photographs, U.S.G.S. maps, Conservation Department files, and field investigations.

The maps reproduced in this publication are not intended for legal or regulatory use. They should, therefore, not be considered or used as factual or final authority because of natural or man-made changes which may have occurred.

That portion of the Wisconsin River lying between Adams and Juneau Counties and the impoundments formed by the Castle Rock, Petenwell, and Wisconsin Dells dams will be described and discussed in the Juneau County report; however, locations of public access to all these waters from Adams County are included in this report.

SETTING OF ADAMS COUNTY WATERS

The west boundary of Adams County lies along one of the major water highways of early settlers, trappers, and travelers, the Wisconsin River. The first white visitors to the county probably were fur traders, missionaries, and explorers. Shortly after the War of 1812, lumbermen passed through the county on their way north and it was their need for supplies that led to early white settlement. The first supply post was established in 1838 near Big Spring and for several years this was the only building between Fort Winnebago and Stevens Point (Wisconsin Crop Reporting Service, 1957).

The Wisconsin territorial legislature created Adams County in 1848 and it was named in honor of either John Adams or John Quincy Adams, both presidents of the United States. Boundary changes were made in 1850, 1853, and again in 1857 when the present boundaries were established. Quincy was the county seat between 1853 and 1858 and on the latter date it was moved to Friendship (Wisconsin Crop Reporting Service, 1957).

Located in the west central part of the state and with the Wisconsin River forming its western boundary, Adams County lies primarily in the Upper Wisconsin River drainage area. Only the southeastern portion of the county is located outside this drainage and it is a part of the Fox River drainage system (Fig. 1).

All of Adams County is included in the Central Plain geographical province. Most of the county is a part of Wisconsin's Driftless Area typified by a broad valley bottom plain (Weidman and Schultz, 1915). A considerable portion of this plain was once a part of glacial Lake Wisconsin. The Green Bay lobe of the continental glacier entered the southeastern part of the county and it covered the area now included in the Fox River drainage. The glacial drift in this area formed a belt of terminal moraine having irregular hills that rise 50 to 75 feet above the general level of the plain, and basins which are today the swamps and natural lakes (Weidman and Schultz, 1915). The various glacial deposits include end moraine, unpitted outwash, and pitted outwash. Their locations as well as the location of glacial Lake Wisconsin within the county and surrounding area are indicated in Fig. 2.

Upper Cambrian sandstone is the bedrock formation which underlies the entire county. The sandstone is covered with glacial drift and sandy alluvium (Weidman and Schultz, 1915). Sand dunes, usually covered with vegetation, and projecting sandstone mounds are a part of the valley bottom plain. These mounds have a simple rock structure, are usually flat-topped with cliffed sides, and are more appropriately called mesas or buttes depending on their size (Martin, 1932). They were eroded by the water of glacial Lake Wisconsin and later weathered and eroded by wind after the water in the glacial lake receded. Pilot Knob, Friendship Mound, and Roche-a-Cri Mound are examples. The weathered, steep sides of the mounds resemble towers or old castle ruins. Roche-a-Cri Mound rises to a height of 300 feet above the surrounding plain, or 1,185 feet above sea level, and is probably the steepest hill in Wisconsin (Martin, 1932). The altitude of the alluvial plain ranges from 1,000 feet in the southern portion of the county to 1,100 feet in the northern part (Weidman and Schultz, 1915).

Fig. 1 - Location of Adams County within major drainages.

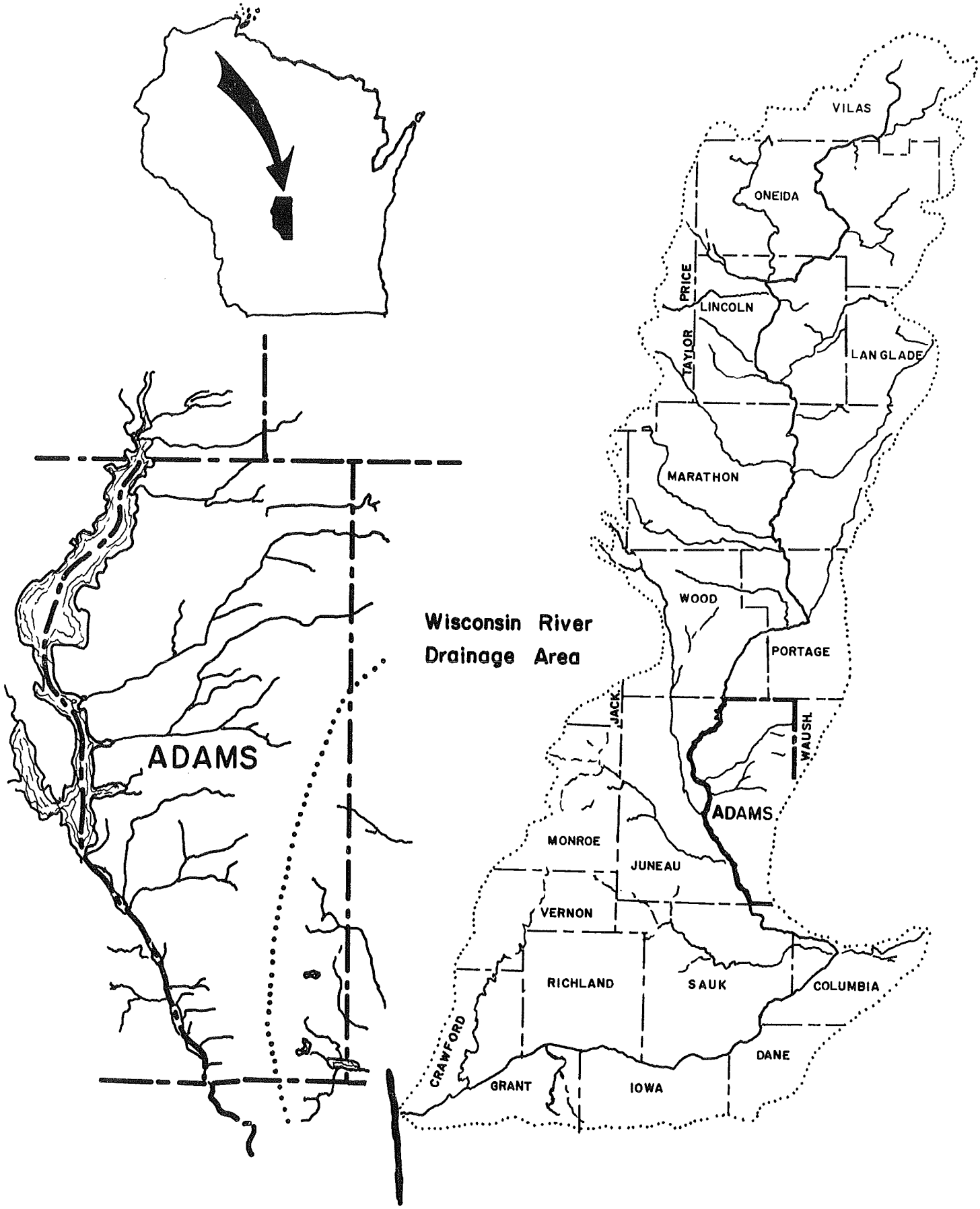
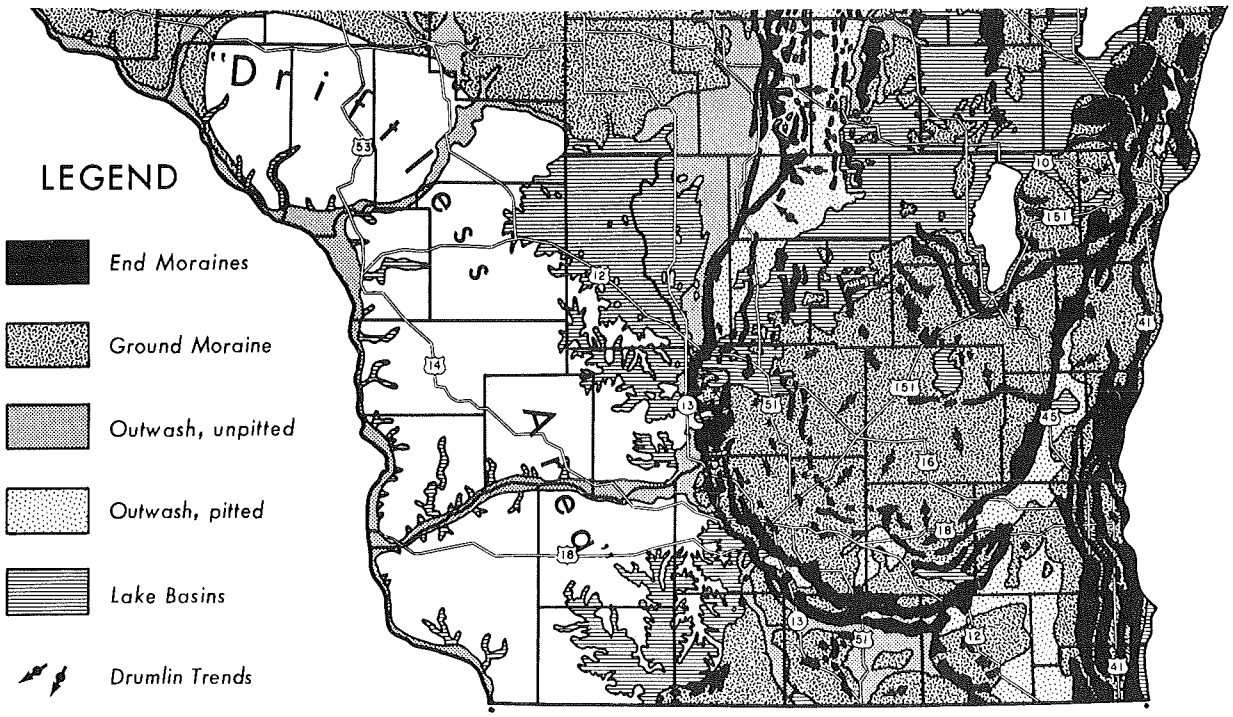


Fig. 2. Glacial geology of Adams and surrounding counties (after Thwaites, 1956).



According to the soils survey of Adams County (1924), most of the soils are sandy or sandy loam types with the light brown colored Plainfield soils type predominating in the broad valley plain. In the southeastern portion of the county, the glacial drift area, Coloma sand (a light brown, fine to medium sand) is dominant. Also present in this section of the county in fairly large quantities, are Coloma fine sandy loam (a light brown, fine sandy loam with a sandy clay subsoil) and Superior silt loam (a grayish brown silt loam to clay loam with heavy red clay loam subsoil). Scattered over the entire county are relatively small areas of Superior sandy loam (grayish brown fine to medium color, grading into sand and red clay). Approximately 20 percent of the soils in the county, but located primarily in the northeastern portion, are Dunning sandy loam (a black, loamy sand usually wet and mucky, with a nearly white subsoil) and peat. The extensive sandy soils provide excellent conditions for infiltration of groundwater.

The Conservation Department's 1961 Springhead and Spring Pond Survey, using the springs located on the land cover survey maps as a basis for its investigation, found 19 flowing springs in Adams County. Of these, nine had estimated flows of less than 10 gallons per minute and only two had flows that exceeded 49 gallons per minute. Fifteen of the springs were located in the Fox River drainage area. This inventory included only springs separated from the main streams and did not include spring seepage directly into the streams.

According to Weidman and Schultz (1915), wells are likely to be shallow, generally 20 to 40 feet deep, over much of the county with the water-bearing horizons being sandstone and sand. Drift is important as a water source only in the southeastern part of the county. Recharge of the groundwater in the sand plain area and in the drift portion of the county is by direct precipitation (Drescher, 1956).

Land use is illustrated in an inventory of the forest resources of Adams County (Wisconsin Conservation Department, 1954). Of the total land area, 59 percent is classed as commercial forest land, 1 percent as noncommercial forest land, and 40 percent as non-forest land. Hardwood types cover 51 percent of the commercial forest land and oak and scrub oak comprise the bulk of this total (43 percent). Of the remaining commercial forest land, softwoods make up 29 percent of the total (26 percent is jack pine) and brush and grass occupies the remaining 20 percent. The noncommercial forest land is comprised of stagnated aspen. Of the non-forest land, about 31 percent is farmland, 15.6 percent is marsh and muskeg, and about 52.4 percent is occupied by right-of-way, rock outcrop and sand dune, and recreational, residential, and industrial land. With extensive forest and outlands, a substantial portion of Adams County would be classed as having excellent watershed cover.

Farming followed logging operations and by the end of the 19th century there were several fine farms located in the southern portion of the county where much of the soil is less sandy than it is elsewhere. Dairying has become the most important source of farm income (Wisconsin Crop Reporting Service, 1957).

According to Marshall, Serie and Titus (1964), the land in farms declined from 218,675 acres, or 50.5 percent of land area in 1954, to 171,812 acres, 39.7 percent of the land area, in 1959--a decline of 10.8 percent. During this same period, the number of farms in Adams County declined from 989 to 729; however, the average size of farms increased from 222.1 to 235.7 acres, an increase of about 6.1 percent. This increase in farm size has been the trend in Wisconsin and throughout much of the United States.

Sand and gravel are important minerals quarried and processed in Adams County. Marl is a form of limestone deposited in lakes and is used locally as a substitute for agricultural lime. According to the Soil Survey of Adams County (1924), marl deposits were opened in Crooked, Goose, Jordan, McGinnis, Patrick, and Wolf Lakes. Similar deposits have been opened in marsh areas and on Peppermill and Widow Green Creeks.

As there are no weather bureau stations in Adams County, climatological data from several stations surrounding the Adams County area are shown in Table 1. The county has an average annual precipitation of about 30 inches. Approximately 60 percent of the average normal precipitation falls during the period from May through September while the months having the least precipitation are December, January, and February. The average annual runoff amounts to about 12.5 inches near Wisconsin Dells on the Wisconsin River (Table 1). The average growing season, defined as the number of days following the last 32-degree freeze in the spring to the first in the fall, for the county is probably about 135 days; however, according to Natural Resources of Wisconsin (1964), relatively short growing seasons of 120 days, or less, can be expected in portions of the county due in part to an inward cold air drainage and to the low heat capacities of peat and sandy soils. Figs. 3 and 4 compare mean annual precipitation and average length of growing seasons in Adams County with other counties of the state.

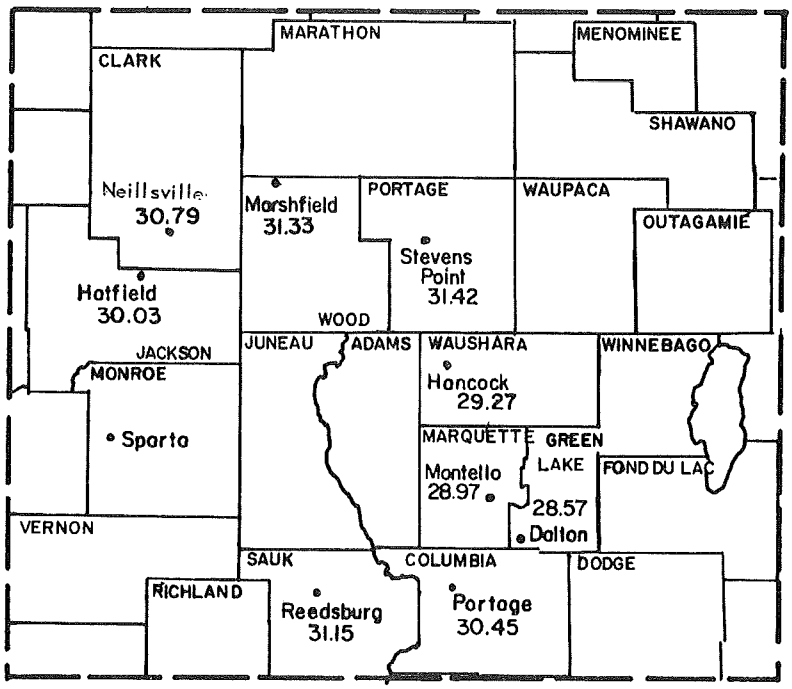


Fig. 3 - Mean annual precipitation recorded at weather stations in the vicinity of Adams County.
Source: Wisconsin Crop Reporting Service (1961)

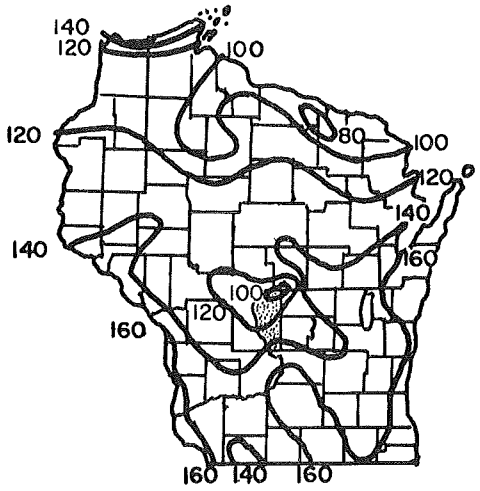


Fig. 4 - The location of Adams County within growing season isolines. Numbers and isolines represent the number of days between the last freeze in the spring and the first in the fall.
Source: NRCSA (1964)

Table 1. Mean climatological data for Adams County area for period 1930-1959*

Station	Mean Annual Precipitation (Inches)	60 Percent Annual Precipitation (Months, Inclusive)	Precipitation Dec. through Feb. (Inches) Dec.	Jan.	Feb.	Length of Growing Season (Days)	Avg. Dates of 32-Degree Freeze Last	First
Hancock	29.27	June-Sept.	1.03	0.97	0.99	135	May 17	Sept. 30
Montello	28.97	May-Sept.	1.18	1.12	1.07	135	May 13	Sept. 28
Portage	30.45	May-Sept.	1.35	1.38	1.22	165	April 29	Oct. 11
Reedsburg	31.15	May-Sept.	1.22	0.96	1.06	142	May 9	Sept. 28
Stevens Point	31.42	May-Sept.	1.28	1.36	1.26	142	May 11	Oct. 1

Wisconsin River near Wisconsin Dells**

Discharge (cfs)	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Mean or Total
High water, 1942	15,390	13,260	5,922	5,144	5,175	9,599	11,120	14,020	20,040	8,253	4,994	13,380	10,530
Low water, 1949	2,402	2,835	2,559	2,790	3,132	4,443	7,938	6,211	2,568	3,430	3,458	2,923	3,725
Runoff (inches)													
High water, 1942	2.36	1.86	0.78	0.54	0.48	1.64	1.89	2.08	2.87	1.21	0.64	2.02	18.37
Low water, 1949	.28	.49	.38	.36	.29	.77	1.37	1.06	.32	.69	.40	.37	6.78

* Data taken from Wisconsin Climatological Data, 1961, Wisconsin Crop Reporting Service

** Data taken from Geological Survey Water-Supply Paper 1308. The flow of the Wisconsin River is much more steady than most streams because of low flow augmentation from water storage reservoirs above. Using 1942 as an example, the water year runs from Oct., 1941 through Sept., 1942.

ALPHABETICAL LISTING AND DESCRIPTION OF ALL LAKES AND STREAMS

Lakes, impoundments, and ponds have been defined for inventory purposes. Lakes are all water navigable, meandered or public that are wet nine out of ten years. Impoundments are those bodies of water which owe one-half or more of their maximum depth to an artificial impounding structure.

Each named lake is listed in alphabetical order. McCall Lake is omitted from the Adams County report since most of it lies in Marquette County and is described in the Marquette County report. Unnamed lakes are listed in alphabetical order according to political township. A numbering system has been devised for unnamed lakes based on township, range, section, and sixteenth section, etc., in which they are located. The system is described on the resource maps.

Data included in the description of each lake, pond and impoundment are location, area, degree of irregularity (S.D.F.) and known maximum depth. The latter is the maximum depth found during investigations and it may vary with water levels or small deeps may have been missed. Characteristics of the waterspresented include color, hardness and transparency. Among resources, significant fish species present are listed and waterfowl and furbearer use is noted. Circumstances contributing to use of the waters are presented in terms of the degree of public access and amount of private development. If problems affecting the use of these waters were encountered, they are cited. A more detailed description of the named lakes is provided than for the unnamed lakes that follow them. The description of unnamed lakes, ponds and impoundments is presented in tabular form for quick reference. All of these waters are located on the resource maps. Due to extremely dry conditions, water levels of all seepage lakes and ponds were below normal in 1964 and 1965 and levels of one or more feet below normal were not uncommon. Physical and chemical data for all lakes, ponds and impoundments are provided in Appendix I.

Streams referred to in this inventory are those that have permanent, or continuous flow. Named streams are listed in alphabetical order. Unnamed streams are listed in alphabetical order according to the political township in which they are located. The numbering system devised for unnamed lakes is also used for unnamed streams.

All streams are described by the location of their confluence with another stream or flowage, or by the point they exit the county, by surface acres, length, and gradient where it is known. The general direction of flow, basic fishery, amount of bank cover and impoundments, if any, are given. Furbearer and waterfowl use information is provided where known. Public access, including road crossings and public lands bordering streams, is noted. The description of unnamed streams is less detailed than for named streams and is presented in tabular form. Water levels of all streams were below normal during 1964 and much of 1965. Most streams were intermittent at least a portion of their length. The description of each stream in this report is based on only that part of the stream that had continuous flow. The physical and chemical characteristics of all streams are given in Appendix II. Most of the descriptive terms are defined in Appendix III.

Named Lakes

Amey Pond, T14N, R7E, Section 36
Surface Acres = 56, S.D.F. = 2.00, Maximum Depth = 7 feet

A hard water lake connected at its north end to Mason Lake and by a man-made channel to Lake 36-11 at its south end. Its water level is controlled by the dam impounding Mason Lake and from the fish management viewpoint it should be considered a part of Mason Lake. The water is slightly acid, has a light brown color and a low transparency. Northern pike, largemouth bass, bluegills, pumpkinseed, bullheads and carp make up the fishery. There is access from STH 23 and a navigable water access from Mason Lake. Periodic winterkill conditions occur. A local property owner has a fur farm license (muskrat) for a portion of the area surrounding the lake. Duck broods (mallard and blue-winged teal) may be present during the summer months, and during the migratory seasons dabbler ducks are hunted.

Arkdale Millpond: See Appendix I for details. The dam washed out in 1965.

Beaver Pond, T15N, R7E, Section 15
Surface Acres = 50.6, S.D.F. = 1.90, Maximum Depth = 6 feet

A hard water, drained lake located at the headwaters of Peppermill Creek. This lake was originally formed by a beaver dam. Local residents improved upon the dam, strengthening it and making it a more permanent structure. The water is clear, about neutral (neither acid or alkaline) and transparency is high. Largemouth bass, bluegills, and pumpkinseed are present. There is no public access. Mallard ducks nest at the lake and migrating ducks use it. Furbearers, including muskrat, beaver and mink, are present.

Big Roche-a-Cri Lake, T18N, R6E, Section 5
Surface Acres = 122.3, S.D.F. = 3.9, Maximum Depth = 20 feet

A hard water drainage impoundment located on Big Roche-a-Cri Creek. The dam has a 17 foot head and it was recently sold by the Wisconsin Power and Light Company to Adams County. The clear water is alkaline and has a high transparency. Northern pike, largemouth bass, bluegills, black crappies, yellow perch, black and brown bullheads, and white suckers comprise the fishery. Brown trout are caught occasionally near the upper end of the flowage. Carp are also present, but have not caused a management problem. The lake contains slow-growing panfish, especially bluegill. Aquatic vegetation is a problem during summer months. There is public access from STH 13 and from a boat launching site immediately east of the highway crossing. Commercial resort facilities are available and there are 99 dwellings around the flowage. Muskrat are present. Mallard and blue-winged teal broods may be observed during the summer.

Crooked Lake, T15N, R7E, Section 24
Surface Acres = 48.0, S.D.F. = 2.08, Maximum Depth = 56 feet

This is a clear, hard water seepage lake having alkaline water and a low transparency. Northern pike, largemouth bass, bluegills, pumpkinseed, green sunfish, black crappies, yellow perch, and bullheads are present. Marl was reportedly removed from this lake many years ago. The county has recently acquired public access, but development has not been completed. Commercial facilities are available and there are nine dwellings on the lake. Muskrat are present. Ducks (mallard and blue-winged teal) reportedly nest at the lake and it is also used by spring and fall migrant dabbler species.

Deep Lake, T15N, R7E, Section 15
Surface Acres = 35.4, S.D.F. = 1.43, Maximum Depth = 47 feet

This clear, alkaline, hard water seepage lake has a moderate transparency. The fishery is comprised of largemouth bass, bluegills, rock bass, pumpkinseed, green sunfish, yellow perch, rainbow trout, and brook trout. Public access was recently acquired by the county. When development has been completed, it will consist of a parking area and a walk-in access that may be used to carry light boats. There is one resort and 14 dwellings on the lake. Migrant dabbler ducks may be found and nesting mallard and teal have been reported.

Deer Lodge Lake, T20N, R6E, Section 16
Surface Acres = 55, S.D.F. = 2.36, Maximum Depth = 11 feet

This is a hard water drainage lake located on Fourteenmile Creek. The dam has an 11 foot head and is privately owned. The light brown colored water is slightly alkaline and has a low transparency. Northern pike, largemouth bass, bluegills, pumpkinseed, black crappies, yellow perch, bullheads, white sucker, and carp comprise the fishery. The carp have caused no particular management problem. The state is in the process of acquiring public access. There are no commercial facilities and there are 11 dwellings. Dabbler duck species nest at the lake.

Easton Lake, T16N, R6E, Section 29
Surface Acres = 15.3, S.D.F. = 2.74, Maximum Depth = 11 feet

A hard water drainage lake located on Campbell Creek. The clear water is alkaline and has moderate transparency. The dam has a 13 foot head and is privately owned. Largemouth bass, brown trout, northern pike, bluegills, black crappies, pumpkinseed, bullheads, and white suckers comprise the fishery. Past surveys also indicate the presence of carp but they are no problem. There is public access from a road crossing at the dam and from a county-owned boat launching site and parking area. There are 34 dwellings around the impoundment. Aquatic vegetation is an important use problem. Muskrat are present. Dabbler species of ducks nest at the lake and it is also used by spring and fall migrants.

Fenners Lake, T16N, R7E, Section 13
Surface Acres = 46.6, S.D.F. = 1.27, Maximum Depth = 19 feet

This is a hard water seepage lake. The water is clear, alkaline and has a moderate transparency. Bluegills, yellow perch, bullheads, and white suckers comprise the bulk of the fishery. Northern pike, while present, are scarce. There is public access, at the east end of the lake. Periodic winterkill conditions occur. There are no commercial facilities and there is one dwelling. Migrating waterfowl likely use the lake and mallard nesting has been reported.

Friendship Lake, T17N, R6E, Section 5
Surface Acres = 115.2, S.D.F. = 3.69, Maximum Depth = 16 feet

This is an impoundment of Little Roche-a-Cri Creek. The dam has a 16 foot head and it was recently sold by the Wisconsin Power and Light Company to the Village of Friendship. The clear water is alkaline and has a moderate transparency. Largemouth bass, bluegills, pumpkinseed, black crappies, bullheads, yellow perch, white suckers, and carp comprise the fishery. Although present, carp are relatively scarce and have not posed a management problem. Northern pike are scarce. The impoundment has slow-growing panfish, especially bluegill. Aquatic vegetation has posed a use problem. Commercial facilities are available and there are 54 private dwellings. There is a public access and swimming beach at the west end of the lake near the dam and a road crosses the lake near its upper end. Muskrat are present. Dabbler species of ducks nest at the lake.

Goose Lake, T15N, R7E, Section 11
Surface Acres = 81.0, S.D.F. = 1.98, Maximum Depth = 18 feet

This hard water seepage lake has light brown colored water, is alkaline, and has a low transparency. The fishery consists of northern pike, largemouth bass, bluegills, pumpkinseed, and bullheads. There are no commercial facilities, but there are 24 private dwellings. An unimproved public access is present. Periodic winterkill and abundant aquatic vegetation are use problems. Marl was reportedly removed from the lake many years ago. Marsh furbearers are present. Waterfowl use the lake during the migration periods and mallard and blue-winged teal nesting has been reported.

Jordan Lake, T15N, R7E, Section 34
Surface Acres = 212.9, S.D.F. = 1.41, Maximum Depth = 79 feet

This clear, alkaline, hard water seepage lake has moderate transparency. Rainbow and brown trout, northern pike, largemouth bass, bluegills, pumpkinseed, black crappies, yellow perch, and bullheads comprise the fishery. There is an unimproved public access on the north side of the lake. Commercial facilities are present and there are 48 private dwellings. Although Jackson Township restricts water-skiing on all lakes with the township, it has been reported that boating on this lake has been a use problem. Marl was reportedly removed from the lake many years ago. Muskrat are present. Ducks are present during the migrating seasons and dabbler species nest at the lake.

Mason Lake, T14N, R7E, Section 25
Surface Acres = 857, S.D.F. = 1.92, Maximum Depth = 10 feet

This hard water drainage lake is located on the south branch of Neenah Creek. The dam has a head of 11 feet and until recently was privately owned and used for power. It has been purchased by the Town of Douglas (Marquette County). Light brown, often turbid water is alkaline and has a low transparency. Walleyes, northern pike, largemouth bass, crappies, yellow perch, bluegills, pumpkinseed, yellow bass, channel catfish, black bullheads, and carp comprise the fishery. There is an improved boat launching site in Briggsville, but there is no designated parking area for cars and trailers. Commercial facilities are available and, in addition, there are 99 private dwellings. Turbidity and carp are the major use problems. Muskrat are present. Although some dabbler ducks nest at the lake, the majority are present during their migration periods.

McDougall Lake, T15N, R7E, Section 11
Surface Acres = 8.5, S.D.F. = 1.96, Maximum Depth = 8 feet

This is a clear, slightly alkaline, hard water drainage lake that has a high transparency. It is a man-made lake located on Peppermill Creek and it was constructed as the result of a marl removal operation. The fishery consists of largemouth bass, bluegills, pumpkinseed, rock bass, and bullheads. There is public access from Peppermill Creek. Boats may be rented. There is one dwelling. Marsh furbearers are present and waterfowl may be found during the migratory seasons.

McGinnis Lake, T16N, R7E, Section 27
Surface Acres = 10.2, S.D.F. = 1.25, Maximum Depth = 25 feet

This hard water spring lake is clear, alkaline, and has a moderate transparency. It is the headwaters for Neenah Creek. Largemouth bass, bluegills, pumpkinseed, and yellow perch comprise the fishery. The land surrounding the lake is privately owned. During 1965, an earthen dike was constructed across the outlet in an apparent attempt to raise the water level, but a hole opened in the dike during the last part of the year. Marl was reportedly removed from the lake many years ago. Although none were observed during the investigation, migrating waterfowl probably use this lake and mallard nesting has been reported. Plans are being discussed for enlarging its surface area by about 10 or 12 acres through construction of a dam on Neenah Creek below the present dam.

Parker Lake, T15N, R7E, Section 14
Surface Acres = 59.4, S.D.F. = 1.02, Maximum Depth = 30 feet

This is a clear, hard water seepage lake with a moderate transparency. Following the fall overturn, a slightly acid pH was indicated. In an effort to eliminate carp from the lake, a chemical eradication project was carried out during 1965. It is planned to manage the water for largemouth bass and bluegills. These two species as well as pumpkinseed, black crappies, yellow perch, bullheads, and carp were present prior to the eradication project. The only public access is from a highway wayside. Commercial facilities are available and there are 22 private dwellings. A fluctuating, but generally declining, water level appears to be the major use problem. Ducks may use this lake during spring and fall.

Patrick Lake, T16N, R7E, Section 9
Surface Acres = 47.5, S.D.F. = 1.77, Maximum Depth = 10 feet

A hard water seepage lake that has clear water, is alkaline, and has a moderate transparency. This lake has had periodic winterkills but between times it is managed for northern pike, largemouth bass, and bluegills. An abundance of aquatic vegetation and a fluctuating, but generally declining water level are the major use problems. Public access, including an unimproved boat landing, is present. There are 18 dwellings and one youth camp located on the lake. Marl was reportedly removed from this lake many years ago. Waterfowl make use of the lake during spring and fall.

Rollers Lake, T16N, R7E, Section 12
Surface Acres = 27.2, S.D.F. = 1.15, Maximum Depth = 5 feet

A clear, medium hard seepage lake, that is alkaline and has a moderate transparency. This shallow lake winterkills and a survey in 1963 found no fish. There is no public access, dwelling, or commercial facility. Waterfowl and marsh furbearers are common residents.

Silver Lake, T16N, R5E, Section 4
Surface Acres = 7, S.D.F. = 1.69, Maximum Depth = 11 feet

This is a clear, very soft water seepage lake that has a moderate transparency and is alkaline. Largemouth bass were formerly caught by anglers, but the lake suffers from periodic winterkill conditions and a survey in 1960 found no fish. There is no public access and there are no dwellings or commercial facilities. It has a fluctuating but generally declining water level. No waterfowl were observed during the investigation, but mallard nesting has been reported and it is likely used during the migratory seasons.

Spring Branch Lake, T20N, R6E, Section 17
Surface Acres = 7.1, S.D.F. = 2.09, Maximum Depth = 7 feet

A clear, medium hard drainage lake that is slightly alkaline and has a moderate transparency. This impoundment is located on Spring Branch Creek. It has an earthen dike with the spillway portion lower than the rest of the dike. There is a seven foot head. The fishery consists of bluegills, pumpkinseed, green sunfish, and white suckers. Northern pike have reportedly been stocked by individuals. There is no public access or developments other than the earthern dike. Aquatic vegetation is abundant. Furbearers and ducks no doubt use this water, but none were observed during the investigation.

Wolf Lake, T15N, R7E, Section 11
Surface Acres = 49.3, S.D.F. = 1.12, Maximum Depth = 47 feet

This is a hard water seepage lake that has clear water, a moderate transparency and is alkaline. Largemouth bass, bluegills, pumpkinseed, green sunfish, yellow perch, rock bass, and black crappies comprise the fishery. A past investigation indicates the lake is suited to trout between the 10 and 25 foot levels during the summer months. There is improved public access. Developments include one youth camp, one resort, and 10 dwellings. No motorboats are allowed on the lake. Mallard reportedly raise broods at the lake and other waterfowl likely use it during the spring and fall.

Unnamed Lakes

Easton Township, T16N, R6E

20-6 (Risk Creek Pond)
Surface Acres = 1.8
S.D.F. = 2.13
Maximum Depth = 5.5 feet
Hard water, drainage lake.
Clear, slightly alkaline water with low transparency.
Fishery: Brook trout, black crappies, perch, black bullheads.
Access: Without parking from town road.
Developments: Dam with 5 foot head, one resort, 7 dwellings.
Game: Possible migratory waterfowl.

Easton Township, T16N, R5E

36-7
Surface Acres = 0.3
S.D.F. = 2.47
Maximum Depth = 6 feet
Hard water, drainage lake.
Clear, slightly alkaline water with a low transparency.
Fishery: Brown trout.
Access: Without parking from town road.
Developments: Dam with 5 foot head and two dwellings.
Game: None.

Jackson Township, T15N, R7E

3-12
Surface Acres = 1.7
S.D.F. = 1.37
Maximum Depth = 2 feet
Soft water, seepage lake.
Light brown, slightly alkaline water.
Fishery: None, winterkill.
Access: None.
Developments: None, pond used for livestock watering.
Game: Duck nesting.

6-8
Surface Acres = 2.7
S.D.F. = 1.10
Maximum Depth = 7.5 feet
Soft water, seepage lake.
Light brown, about neutral water with low transparency.
Fishery: None, winterkill.
Access: None.
Developments: One organizational camp.
Game: Some use by migrating waterfowl.

11-15
Surface Acres = 2.6
S.D.F. = 2.56
Maximum Depth = 6.5 feet
Hard water, drainage lake.
Clear, slightly alkaline water with moderate transparency.
Fishery: Largemouth bass, bluegills, pumpkinseed, rock bass, bullheads.
Access: Via Peppermill Creek.
Developments: Dam with 6 foot head, one resort, one dwelling.
Game: Some use by migrating waterfowl.

14-16
Surface Acres = 0.2
S.D.F. = 1.20
Maximum Depth = 3 feet
Medium hard water, seepage lake.
Light brown, slightly alkaline water.
Fishery: None, winterkill.
Access: None.
Developments: None.
Game: Marsh furbearers, and spring and fall migrant waterfowl.

Jackson Township, T15N, R7E (Cont.)

23-2
Surface Acres = 4.1
S.D.F. = 1.09
Maximum Depth = 22 feet
Soft water, seepage lake.
Medium brown, slightly acid water with a low transparency.
Fishery: None, winterkill.
Access: None.
Developments: None.
Game: Marsh furbearers and waterfowl nesting.

23-16
Surface Acres = 0.6
S.D.F. = 1.20
Maximum Depth = 4 feet
Soft water, seepage lake.
Light brown, alkaline water.
Fishery: None, winterkill.
Access: None.
Developments: None.
Game: Marsh furbearers and nesting waterfowl.

26-3
Surface Acres = 3.7
S.D.F. = 1.22
Maximum Depth = 9 feet
Hard water, seepage lake.
Light brown, slightly alkaline water with a moderate transparency.
Fishery: Yellow perch, pumpkinseed, subject to winterkill.
Access: None.
Developments: None.
Game: Marsh furbearers and nesting waterfowl.

26-4
Surface Acres = 0.8
S.D.F. = 1.28
Maximum Depth = 4.5 feet
Hard water, seepage lake.
Clear, slightly acid water.
Fishery: Bluegills.
Access: None.
Developments: None.
Game: Possible migrant waterfowl.

26-6
Surface Acres = 0.5
S.D.F. = 1.27
Maximum Depth = 3 feet
Soft water, seepage lake.
Medium brown, slightly acid water.
Fishery: None, winterkill.
Access: None.
Developments: None.
Game: Duck nesting.

33-2
Surface Acres = 2.9
S.D.F. = 1.17
Maximum Depth = 4 feet
Hard water, seepage lake.
Clear, slightly acid water.
Fishery: None, winterkill.
Access: None.
Developments: None.
Game: Duck nesting, marsh furbearers.

33-7
Surface Acres = 0.25
S.D.F. = 1.14
Maximum Depth = 1 foot
Very soft water, seepage lake.
Medium brown, slightly alkaline water.
Fishery: None, winterkill.
Access: None.
Developments: None.
Game: Used for livestock watering. May be used by migrant waterfowl.

Lincoln Township, T17N, R7E

14-9
Surface Acres = 12.5
S.D.F. = 1.63
Maximum Depth = 3 feet
Very soft water, seepage lake.
Clear, alkaline water.
Fishery: None, winterkill.
Access: None.
Developments: None.
Game: May be used by migrant waterfowl.

Lincoln Township, T17N, R7E (Cont.)

35-15
Surface Acres = 0.5
S.D.F. = 1.28
Maximum Depth = 2 feet
Very soft water, seepage lake.
Light brown, slightly acid water.
Fishery: None, winterkill.
Access: None.
Developments: None.
Game: Possible migrant waterfowl.

Monroe Township, T19N, R5E

31-12
Surface Acres = 1.1
S.D.F. = 2.58
Maximum Depth = 2 feet
Medium hard water, seepage lake.
Light brown, slightly alkaline water.
Fishery: Bullheads, winterkill.
Access: Without parking from town road.
Developments: None.
Game: Possible migrant waterfowl.

New Chester Township, T16N, R7E

23-2bb
Surface Acres = 0.6
S.D.F. = 1.20
Maximum Depth = 1 foot
Soft, water, seepage lake.
Light brown, about neutral water.
Fishery: None, winterkill.
Access: None.
Developments: None.
Game: Waterfowl nesting, marsh furbearers.

25-16
Surface Acres = 0.03
S.D.F. = 1.24
Maximum Depth = 1 foot
Medium hard water, seepage lake.
Turbid, slightly acid water with a low transparency.
Fishery: None, winterkill.
Access: None.
Developments: None.
Game: None, cattle watering.

35-14
Surface Acres = 0.4
S.D.F. = 1.24
Maximum Depth = 3 feet
Very soft water, seepage lake.
Clear, slightly acid water.
Fishery: None, winterkill.
Access: None.
Developments: None.
Game: Duck nesting, marsh furbearers.

New Haven Township, T14N, R7E

9-12
Surface Acres = 0.4
S.D.F. = 1.13
Maximum Depth = 3 feet
Soft water, seepage lake.
Dark brown, slightly alkaline water with a low transparency.
Fishery: None, winterkill.
Access: None.
Developments: None.
Game: Migrant waterfowl, cattle watering.

27-1 (Big Spring Pond)
Surface Acres = 7.3
S.D.F. = 2.14
Maximum Depth = 5 feet
Hard water, drainage lake.
Light brown, alkaline water with a low transparency.
Fishery: Largemouth bass, bluegills, pumpkinseed, brook trout, brown trout.
Access: Without parking from a town road.
Developments: Dam with 11 foot head, five dwellings.
Game: Muskrat, duck nesting.

29-2
Surface Acres = 2.0
S.D.F. = 1.26
Maximum Depth = 3 feet
Very soft, seepage lake.
Light brown, alkaline water with a low transparency.
Fishery: None, winterkill.
Access: None.
Developments: None.
Game: None, used for livestock watering.

New Haven Township, T14N, R7E (Cont.)

36-11
Surface Acres = 2.0
S.D.F. = 1.56
Maximum Depth = 1.5 feet
Medium hard water, seepage lake.
Medium brown, slightly alkaline water.
Fishery: Northern pike, largemouth bass, bluegills, bullheads, pumpkinseed, carp; winterkill.
Access: Navigable water from Amey Pond.
Developments: Connected to Amey Pond by man-made ditch.
Game: Marsh furbearers, duck nesting.

15-1
Surface Acres = 0.9
S.D.F. = 1.04
Maximum Depth = 2 feet
Very soft water, drain lake.
Light brown, slightly alkaline water.
Fishery: None, winterkill.
Access: None.
Developments: None.
Game: Possible migrant waterfowl.

Preston Township, T18N, R6E

22-6
Surface Acres = 5.2
S.D.F. = 2.35
Maximum Depth = 5.5
Medium hard, drainage lake.
Light brown, slightly alkaline water with a low transparency.
Fishery: Bullheads.
Access: Without parking from town road.
Developments: Dam with 5 foot head. Cranberry reservoir.
Game: Marsh furbearers, waterfowl.

Strongs Prairie Township, T18N, R4E

10-8
Surface Acres = 10.1
S.D.F. = 1.46
Maximum Depth = 10 feet
Medium hard water, drain lake.
Light brown, alkaline water with a low transparency.
Fishery: Northern pike, largemouth bass, bullheads, carp.
Access: Without parking from state highway.
Developments: None.
Game: Marsh furbearers and waterfowl.

Named Streams

Big Roche-a-Cri Creek, T18N, R4E, Section 25
Surface Acres = 110, Miles = 28.3

A hard water stream having clear water that flows in a southwesterly direction into Castle Rock Lake. Sand is the dominant bottom type. That portion of the stream above Big Roche-a-Cri Lake (21.5 miles) is considered trout water, but most of the natural reproduction is found within the upper two miles of the stream in Adams County. The fishery consists of northern pike, smallmouth bass, brook trout, brown trout, rainbow trout, bluegills, pumpkinseed, bullheads, and carp. It provides habitat for furbearers, including beaver; and migrant waterfowl. The aerial groundwater survey conducted February, 1963, found open water in two stretches of stream above CTH "C". There is 0.8 mile of public frontage. Access is also possible from several road crossings as well as from Castle Rock Lake and Big Roche-a-Cri Lake. There are several dwellings along the stream and land has been subdivided into lots at several locations.

Bingham Creek, T18N, R6E, Section 29
Surface Acres = 5.6, Miles = 5.4

A clear, hard water stream that flows in a southwest direction and is a tributary of Carter Creek. Sand and silt are the dominant bottom types. Forage fish species constitute the fishery, but northern pike may be present seasonally. Beaver are present and wood ducks nest along the stream. A cranberry reservoir is located on the stream. There are no adjoining public lands. Access is possible from several road crossings and by boat from the reservoir.

Campbell Creek, T16N, R6E, Section 30
Surface Acres = 5.3, Miles = 4.4, Gradient = 15.4 feet per mile

A clear, medium hard water stream that flows westward and is actually the upper portion of White Creek. Locally and according to U.S.G.S. maps, it is that part of White Creek that lies upstream from, east of, the confluence of Fairbanks Creek with White Creek. Easton Lake is located on the stream and some of the local residents call that portion above the lake Reed Creek. Silt and sand are the dominant bottom types. The entire stream is considered trout water with brown trout being the dominant species and brook trout present, especially toward the headwater portion. Though not abundant, largemouth bass and bluegills are present below the dam at Easton. Trout reproduce naturally and that part of the stream above Easton Lake contains one of the highest naturally produced population of brown trout in the state. Marsh furbearers are trapped along the stream. The aerial groundwater survey conducted February, 1963, found the entire stream devoid of ice cover. There are 1.1 miles of public frontage. Access is also possible from Easton Lake and from several road crossings. There are 14 dwellings on the stream.

Carter Creek, T17N, R5E, Section 1
Surface Acres = 26, Miles = 17.2

This is a clear, hard water tributary of Little Roche-a-Cri Creek which flows in southwesterly direction. Sand is the dominant bottom type. Although the entire stream is considered trout water (brook and brown trout), that portion flowing through Colburn Township is considered the best. Northern pike inhabit most of the stream, and yellow perch have been found in the lower end. Marsh furbearers and beaver are present and wood ducks nest along the stream. There are over 2,600 acres of adjoining wetland. The aerial groundwater survey conducted February, 1963, found open water upstream from CTH "G" and downstream from STH 13. A total of 5.2 miles of stream passes through public land. Access is also possible from 12 road crossings.

Corning Creek, T15N, R6E, Section 31
Surface Acres = 2.8, Miles = 217, Gradient = 20 feet per mile

A clear, hard water stream that flows in a westwardly direction and joins the Wisconsin River. Sand is the dominant bottom type. It is a spring-fed trout stream with brook trout found in the headwater portion and brown trout present elsewhere. Although not as productive as Campbell Creek, it has a sizeable native trout population. Muskrat are present. The stream was devoid of ice during the February, 1963, aerial groundwater survey. There is no public land along the stream. Access is possible from four road crossings.

Dead Horse Creek, T18N, R5E, Section 12
Surface Acres = 14.5, Miles = 10.9

This clear, medium hard water stream flows over a predominantly sand bottom. It flows in a southerly direction and joins Big Roche-a-Cri Creek a short distance below Big Roche-a-Cri Lake. Forage fish species are the primary residents, but northern pike are seasonal inhabitants. Beaver and other furbearers are present and the upper end of the stream flows through land licensed as a fur farm. Wood duck nesting has been reported. Approximately the upper half of the stream has been ditched. There is no public land along the stream. Access is possible from several road crossings.

Dry Creek, T19N, R6E, Section 28
Surface Acres = 5.8, Miles = 4.0

This is a clear, hard water, sand bottom stream that flows in a general westwardly direction and is a tributary of Big Roche-a-Cri Creek. A portion of the creek is ditched. Small forage fish inhabit the stream and it has been reported that on occasion northern pike are seasonal residents. There is no adjoining public land. Access is possible from three road crossings.

Duck Creek, T15N, R5E, Section 4
Surface Acres = 6.5, Miles = 6.7, Gradient = 8.6 feet per mile

This hard water stream has a light brown color and it flows in a west and thence south direction before emptying into the Wisconsin River. Its bottom is primarily sand and muck. A portion of the stream was dry or had intermittent flow during the survey. Continuous flow was found at the upper and lower ends of the stream. The area of adjoining wetlands amounted to about 2,100 acres. Forage fish species constitute the fishery. Marsh furbearers and beaver are present. Small, scattered areas of open water were observed during the February, 1963, aerial groundwater survey. There is 0.8 mile of public frontage. Several road crossings provide additional access. Mallard and wood ducks nest along the stream.

Fairbanks Creek, T16N, R6E, Section 30
Surface Acres = 5.5, Miles = 4.3, Gradient = 10 feet per mile

This clear, hard water stream has a predominantly sand bottom as it flows in a southerly direction and joins White Creek. This is a brook trout stream having rather limited natural reproduction. Muskrat and beaver are present. Mallard and wood ducks reportedly nest along the stream. There are 717 acres of adjoining wetlands and most of it is located near the headwaters. One resort and one dwelling are located on the stream. The entire stream had open water during the February, 1963, aerial groundwater survey. There is no public land adjoining the creek. Access is possible from two road crossings.

Fordham Creek, T18N, R6E, Section 34
Surface Acres = 7.9, Miles = 5.0, Gradient = 8.9 feet per mile

A clear, hard water stream that has primarily a sand bottom and which flows in a westwardly direction into Little Roche-a-Cri Creek. It is considered to be one of the better trout streams in west central Wisconsin and brook, brown, and rainbow trout are present. Natural reproduction of trout is very successful. Northern pike are scarce. During the February, 1963, groundwater survey, the entire stream had open water. A considerable amount of the land along this stream has been subdivided into lots. A total of 11 private dwellings was counted during the investigation. Beaver are present and broods of mallard and wood ducks may be found. Access by road crossings is available at four sites.

Fourteenmile Creek, T20N, R5E, Section 10
Surface Acres = 33.9, Miles = 10

This light brown, hard water stream has a sand bottom and flows in a westerly direction into Petenwell Lake. The fishery consists primarily of northern pike and forage species. Relatively few largemouth bass are present in the stream immediately above Deer Lodge Lake, which is an impoundment on the Creek. Beaver are present. Wood duck and mallard broods may be seen during the summer. Access is possible from Petenwell Lake and Deer Lodge Lake; small craft may be navigated; and there are six road crossings.

Gulch Creek, T14N, R6E, Section 21
Surface Acres = 1.6, Miles = 3.2, Gradient = 20 feet per mile

Primarily a sand bottom stream, it has clear, medium hard water and flows in a westerly direction into the Wisconsin River. It is considered a brown trout stream. Anglers depend on natural reproduction for their fishing pleasure. The February, 1963, aerial groundwater survey found about a mile of open water at the upper end of the stream. Wood ducks nest along the creek. Three road crossings provide access.

Klein Creek, T17N, R5E, Section 29
Surface Acres = 1.8, Miles = 2.9, Gradient = 13.3 feet per mile

A clear, medium hard water stream, having a silt and sand bottom, that flows in a westerly direction into Castle Rock Lake. It has no known sport fishery value. Small forage fish species are present. Wood ducks nest along the stream. Access is possible from two road crossings.

Lawrence Creek, T17N, R7E, Section 36
Surface Acres = 3.0, Miles = 1.1

This is a clear, hard water, spring-fed stream that has a predominantly sand and silt bottom. It flows in an easterly direction into Marquette County. The gradient does not exceed 10 feet per mile. The fishery consists primarily of brook trout, but a small rainbow trout population is present. A Wisconsin Conservation Department cold water research station is located on the stream in Marquette County and various research programs have been conducted since 1952. Anglers may fish the stream by permit only. Wood ducks nest along the stream. Much of the stream in Adams County is in public ownership. A town road crosses the stream at the county line.

Leola Ditch, T20N, R6E, Section 13
Surface Acres = 12.4, Miles = 7.3

A clear, hard water ditch that has a predominantly sand bottom. It flows in a westerly direction and is a tributary of Fourteenmile Creek. It is managed for brook trout but anglers are primarily dependent upon stocked fish. Several short lateral ditches flow into Leola Ditch. There are many ditches in Leola Township and all of the main ones have water control structures, including Leola Ditch. The Water Regulatory Board has control of water levels in the ditches and it works in cooperation with commissioners of the Leola Township Drainage District. Raising beef cattle and potatoes appear to be the major agricultural pursuits in the immediate watershed. Several road crossings provide access.

Little Roche-a-Cri Creek, T17N, R5E, Section 5
Surface Acres = 40.3, Miles = 13.3, Gradient = 6.2 feet per mile

This is a clear, hard water stream that has a predominantly sand bottom. It flows in a westerly direction to Castle Rock Lake. A dam at Friendship forms Friendship Lake. Trout, northern pike, carp, and small forage fish species are the principal fishes in the stream; however, largemouth bass and bluegills are present. All of that portion of stream above Friendship Lake is considered trout water and it is managed for brook trout; however, the stream has marsh drainage and it isn't until spring seepage and water from Fordham Creek enter the stream that the best trout water is found. Past investigations indicate considerable natural trout reproduction in this area of stream. Open water was found from the eastern edge of Preston Township downstream to the mouth during the February, 1963, aerial groundwater survey. There are over 2,400 acres of adjoining wetland and mostly at the upper end of the stream. Beaver and muskrat are present. Mallard and wood ducks nest along the stream. There are three dwellings along the stream, but this number may grow as adjoining land has been subdivided into lots. Access is possible from a park in Friendship and at several road crossings.

Neenah Creek, T15N, R7E, Section 12
Surface Acres = 6.2, Miles = 6.0, Gradient = 12 feet per mile

A clear, hard water, principally sand bottom stream that flows in a general southerly direction into Marquette County. The stream originates in springs and lake drainage (McGinnis Lake). It is classed as brown trout water and there is some natural reproduction, especially in that portion lying north of Goose Lake. Although it is primarily a trout stream, largemouth bass, bluegills, pumpkinseed, green sunfish, rock bass, and bullheads are present in the area immediately above the flowage at Oxford and scattered elsewhere through the stream. Wood ducks nest along the creek. Beaver and muskrat are present. Open water was observed from CTH "A", east of Brooks, south for most of its length in Adams County during the February, 1963, aerial groundwater survey. Approximately one-tenth of a mile of stream passes through public land. Several road crossings provide additional access.

Peppermill Creek, T15N, R7E, Section 12
Surface Acres = 2.1, Miles = 1.6, Gradient = 13.3 feet per mile

This is a clear, spring-fed, hard water stream that has a predominantly sand bottom and flows in an easterly direction. Beaver Pond, a drainage lake, is located at its headwaters and before the stream joins Neenah Creek, it passes through McDougall Lake and an unnamed flowage. The fishery consists of largemouth bass, bluegills, pumpkinseed, rock bass, bullheads, and forage species. Brook trout are incidental. Beaver and muskrat are present. Ducks have been observed and wood ducks nest along the stream. Open water was observed the full length of the stream during the February, 1963, aerial groundwater survey. Three road crossings provide access.

Plainville Creek, T14N, R6E, Section 8
Surface Acres = 1.3, Miles = 2.2, Gradient = 22.8 feet per mile

A clear, hard water stream with a predominantly sand bottom. It flows in a westerly direction and empties into the Wisconsin River at Plainville. Although a few brook trout are present, the fishery consists mainly of small forage species. All of the stream had open, flowing water during the February, 1963, aerial groundwater survey. Wood ducks nest along the stream. One resort is located along the stream. Access is possible from two road crossings.

Risk Creek, T16N, R6E, Section 19
Surface Acres = 1.4, Miles = 1.6, Gradient = 17.5 feet per mile

A short stream which flows westerly into Fairbanks Creek. A small, unnamed flowage is located on the stream near its mouth at Brookside. At the time of the investigation, a partially constructed pond was observed further upstream. The stream has marsh drainage, but picks up more and more spring water as it nears the Brookside pond. It is managed as a brook trout stream and there is natural reproduction. That part of the stream from just above the pond at Brookside downstream to its mouth had open water during the February, 1963, aerial groundwater survey. Mallard and wood ducks reportedly nest along the stream. Several road crossings provide access.

Shadduck Creek, T14N, R6E, Section 17
Surface Acres = 1.3, Miles = 2.3, Gradient = 28.6 feet per mile

This is a clear, medium hard water stream that has a bottom consisting primarily of gravel, sand and silt in about equal amounts. It flows westerly into the Wisconsin River. The fishery consists of forage species. A farm pond is located on the stream. Open water was observed the full length of the stream during the February, 1963, aerial groundwater survey. Access is possible from two road crossings.

South Branch of Neenah Creek, T14N, R7E, Section 26
Surface Acres = 3.7, Miles = 1.8, Gradient = 13.3 feet per mile

This is a clear, hard water stream that flows in an easterly direction. It loses its identity as a stream in Adams County when it flows into Mason Lake. Silt and sand are the principal bottom types. A dam is also located on the stream at Big Springs. Locally, that part of the stream above this dam is known as Big Springs Creek. It is managed for trout (brook, brown and rainbow trout are present) and natural reproduction of brook and rainbow trout has been observed. Although a few trout may be present in the section of stream between the dam at Big Springs and Mason Lake, northern pike, largemouth bass, bluegills, pumpkinseed, bullheads, carp, and forage species make up the bulk of the fishery. Muskrat are present. Open water was observed the full length of the stream in Adams County during the February, 1963, aerial groundwater survey. Two road crossings provide possible access.

Spring Branch Creek, T20N, R6E, Section 17
Surface Acres = 2.1, Miles = 3.1

A light brown, medium hard water sand bottom stream that flows in a southwesterly direction and is a tributary of Fourteenmile Creek. A small flowage, Spring Branch Lake, is located on the creek. Forage fish species inhabit the stream. Wood ducks reportedly nest along the stream. There are nine-tenths of a mile of public frontage and four road crossings on the stream.

Trout Creek, T14N, R6E, Section 6
Surface Acres = 0.8, Miles = 1.5, Gradient = 28.6 feet per mile

This is a clear, hard water, sand bottom stream. It flows in a westerly direction into the Wisconsin River. Forage fish species comprise the fishery. A private campground and pond are located near the headwaters and near the mouth there is a commercial trout pond. During the February, 1963, aerial groundwater survey, open water was observed the entire length of the stream. Access is possible from two road crossings.

White Creek, T15N, R5E, Section 3
Surface Acres = 14.9, Miles = 4.0, Gradient = 6.7 feet per mile

A clear, hard water predominantly sand bottom stream that flows in a westerly direction into the Wisconsin River. Although Campbell and White Creek are all the same water, local residents and the U.S.G.S. maps consider only that portion of the stream from the mouth of Fairbanks Creek downstream as White Creek. This report is based on that designation. The water is impounded by a dam within the Village of White Creek, but the resulting flowage covers only 0.3 acre. From CTH "Z" upstream, the stream is managed as brown trout water, but natural reproduction appears lacking. Ducks have been observed. The entire stream was open during the February, 1963, aerial groundwater survey. A total of nine dwellings and one trailer court was counted during the investigation. There is possible access at five road crossings.

Widow Green (O'Keefe) Creek, T14N, R7E, Section 12
Surface Acres = 6.3, Miles = 6.5, Gradient = 14.1 feet per mile

This is a clear, hard water stream having a predominantly silt bottom. It flows in a general southeasterly direction into Marquette County. The stream heads in a licensed private fish hatchery pond, but during the 1965 investigation, no water was flowing out of the pond and the stream was intermittent for a distance of approximately one and one-half miles. The stream is considered brown trout water, but a past survey found few trout. Forage fish species dominate. During the February, 1963, aerial groundwater survey, open water was observed from the Marquette County line upstream for a distance of three miles. There are 83 acres of adjoining wetland. Several road crossings provide public access.

Unnamed Streams

Big Flats Township, T19N, R6E

12-1
Surface Acres = 11.0
Miles = 6.0
Clear, hard water.
Sand and silt bottom.
Direction of flow: Westerly.
Tributary of: Big Roche-a-Cri Creek.
Fishery: Forage species.
Access: Four road crossings.

35-11
Surface Acres = 0.1
Miles = 0.4
Medium brown, medium hard water.
Primarily a sand bottom.
Direction of flow: Northwest.
Tributary of: Carter Creek.
Fishery: Forage species.
Access: Two road crossings.

Colburn Township, T19N, R7E

3-11
Surface Acres = 2.2
Miles = 2.6
Clear, medium hard water.
Sand and silt bottom.
Direction of flow: Northwest.
Tributary of: Creek 12-1 (Big Flats Tn.).
Fishery: Forage species.
Remarks: Drainage ditch.
Access: One road crossing.

3-16c
Surface Acres = 0.6
Miles = 0.8
Clear, medium hard water.
Silt and sand bottom.
Direction of flow: Southwest.
Tributary of: Creek 3-11 (Colburn Tn.).
Fishery: Forage species.
Remarks: Drainage ditch.
Access: None.

Colburn Township, T19N, R7E (Cont.)

3-16d
Surface Acres = 0.3
Miles = 0.5
Clear, medium hard water.
Primarily sand bottom.
Direction of flow: West.
Tributary of: Creek 3-16c (Colburn Tn.).
Fishery: Forage species.
Remarks: Drainage ditch.
Access: None.

22-5
Surface Acres = 3.6
Miles = 2.7
Clear, hard water.
Primarily silt bottom.
Direction of flow: West.
Tributary of: Dry Creek during wet periods.
Fishery: Forage species.
Remarks: Drainage ditch.
Access: Four road crossings.

Easton Township, T16N, R6E

18-2
Surface Acres = 0.2
Miles = 1.2
Gradient = 12.5 feet per mile.
Light brown, hard water.
About equal amounts of sand and silt bottom.
Direction of flow: West.
Tributary of: Fairbanks Creek.
Fishery: Forage species.
Remarks: Approximately 186 acres of adjoining wetland. Drainage ditch.
Access: One road crossing.

27-10
Surface Acres = 0.1
Miles = 0.4
Gradient = 33.3 feet per mile.
Clear, hard water.
Primarily a silt bottom.
Direction of flow: West.
Tributary of: Campbell Creek.
Fishery: Forage species and some trout.
Remarks: Two farms ponds on intermittent portion of stream, open water noted in nonintermittent portion of stream during February, 1963, aerial groundwater survey.
Access: One road crossing.

Easton Township, T16N, R5E

35-8
Surface Acres = 3.9
Miles = 5.6
Gradient = 9.7 feet per mile
Clear, medium hard water.
Primarily a sand bottom.
Direction of flow: South.
Tributary of: White Creek.
Fishery: Forage species.
Remarks: Stream ditched most of its length.
Access: One road crossing.

Jackson Township, T15N, R7E

2-7
Surface Acres = 0.4
Miles = 0.75
Clear, hard water.
Primarily sand and silt bottom.
Direction of flow: East.
Tributary of: Neenah Creek.
Fishery: Trout.
Remarks: Entire stream open during February, 1963, aerial groundwater survey.
Access: No road crossings.

Leola Township, T20N, R7E

2-11
Surface Acres = 1.0
Miles = 0.5
Clear, hard water.
Primarily a silt bottom.
Direction of flow: Southwest.
Tributary of: Creek 7-7 (Leola Tn.).
Fishery: Forage species.
Remarks: Drainage ditch.
Access: No road crossings.

4-6
Surface Acres = 1.2
Miles = 1.5
Medium brown, hard water.
Primarily sand bottom.
Direction of flow: West.
Tributary of: Creek 4-11 (Leola Tn.).
Fishery: Forage species.
Remarks: Drainage ditch.
Access: Two road crossings.

Leola Township, T20N, R7E (Cont.)

4-11
Surface Acres = 2.5
Miles = 1.3
Clear, hard water.
Sand predominant bottom type.
Direction of flow: South.
Tributary of: Creek 7-7 (Leola Tn.).
Fishery: Forage species.
Remarks: Drainage ditch.
Access: Two road crossings.

5-11
Surface Acres = 0.9
Miles = 0.6
Medium brown, hard water.
Detritus only bottom type.
Direction of flow: South.
Tributary of: Creek 7-7 (Leola Tn.).
Fishery: Possible forage species.
Remarks: May be intermittent during dry periods; drainage ditch.
Access: No road crossings.

6-11
Surface Acres = 3.0
Miles = 2.7
Light brown, hard water.
Primarily sand bottom, some detritus.
Direction of flow: West and south.
Tributary of: Creek 7-7 (Leola Tn.).
Fishery: Forage species.
Remarks: Drainage ditch; local resident stated ditch is usually dry by July.
Access: Two road crossings.

7-7
Surface Acres = 8.7
Miles = 5.5
Clear, hard water.
Sand predominant bottom type.
Direction of flow: West.
Tributary of: Fourteenmile Creek.
Fishery: Forage species.
Remarks: Drainage ditch.
Access: Several road crossings.

10-11
Surface Acres = 0.5
Miles = 0.6
Light brown, hard water.
Detritus bottom.
Direction of flow: South.
Tributary of: Leola Ditch.
Fishery: Forage species.
Remarks: Drainage ditch.
Access: No road crossings.

10-16
Surface Acres = 0.4
Miles = 0.5
Light brown, hard water.
Silt bottom.
Direction of flow: South.
Tributary of: Leola Ditch.
Fishery: Forage species.
Remarks: Drainage ditch.
Access: No road crossings.

29-6
Surface Acres = 1.6
Miles = 0.9
Medium brown, hard water.
Silt bottom.
Direction of flow: South.
Tributary of: Creek 13-13 (T20N, R6E).
Fishery: Forage species.
Remarks: Drainage ditch.
Access: One road crossing.

29-11
Surface Acres = 0.9
Miles = 1.3
Medium brown, hard water.
Predominantly silt bottom, some sand.
Direction of flow: East.
Tributary of: Creek 32-6 (Leola Tn.).
Fishery: Forage species.
Remarks: Drainage ditch; beaver present.
Access: No road crossings.

Leola Township, T20N, R7E (Cont.)

32-6
Surface Acres = 0.4
Miles = 0.5
Medium brown, hard water.
Sand predominant bottom type.
Direction of flow: South.
Tributary of: Big Roche-a-Cri Creek.
Fishery: Forage species.
Access: One road crossing.

Lincoln Township, T17N, R7E

6-5
Surface Acres = 0.6
Miles = 1.0
Gradient = 12.5 feet per mile.
Clear, hard water.
Sand predominant bottom type.
Direction of flow: Northwest.
Tributary of: Fordham Creek.
Fishery: Brook trout.
Remarks: Beaver present; 544 acres of adjoining wetland.
Access: One road crossing.

Monroe Township, T19N, R5E

30-8
Surface Acres = 2.2
Miles = 1.5
Silt somewhat dominant over sand bottom type.
Direction of flow: West.
Tributary of: Petenwell Lake.
Fishery: Forage species.
Remarks: Drainage ditch.
Access: One road crossing.

New Chester Township, T16N, R7E

26-11
Surface Acres = 0.1
Miles = 0.6
Gradient = Approximately 10 feet per mile.
Clear, medium hard water.
Silt bottom.
Direction of flow: South.
Tributary of: Neenah Creek.
Fishery: Forage species.
Access: No road crossings.

New Haven Township, T14N, R7E

22-16
Surface Acres = 1.2
Miles = 0.4
Gradient = 10 feet per mile.
Clear, hard water.
Muck bottom.
Direction of flow: Southeast.
Tributary of: Lake 27-1 (New Haven Tn.).
Fishery: Forage species.
Remarks: Farm pond near headwaters.
Access: One road crossing.

24-15
Surface Acres = 1.0
Miles = 3.3
Gradient = 13.3 feet per mile
Turbid, hard water.
Primarily muck bottom with some clay and sand.
Direction of flow: Southerly.
Tributary of: Mason Lake.
Fishery: Forage species.
Access: Two road crossings.

25-1
Surface Acres = 0.1
Miles = 0.5
Gradient = Approx. 5 feet per mile
Clear, hard water.
Primarily a silt and detritus bottom.
Direction of flow: South.
Tributary of: Creek 25-4 (New Haven Tn.).
Fishery: Forage species.
Access: No road crossings.

25-4
Surface Acres = 0.2
Miles = 0.5
Gradient = Probably doesn't exceed 5 feet per mile
Clear, hard water.
Some sand, primarily silt and detritus bottom.
Direction of flow: South.
Tributary of: Mason Lake.
Fishery: Forage species.
Remarks: Stream heads at McCall Lake.
Access: No road crossings.

New Haven Township, T14N, R7E (Cont.)

27-6
Surface Acres = 0.8
Miles = 1.0
Gradient = Doesn't exceed 20 feet per mile
Clear, hard water.
Primarily muck and sand bottom, some gravel.
Direction of flow: East.
Tributary of: South Branch of Neenah Creek.
Fishery: Trout.
Remarks: Farm pond at headwaters and commercial fish hatchery on small, short feeder.
Access: Three road crossings.

Preston Township, T18N, R6E

17-16
Surface Acres = 0.7
Miles = 1.8
Clear, hard water.
Silt bottom, some sand and detritus.
Direction of flow: Westerly.
Tributary of: Carter Creek.
Fishery: Forage species.
Remarks: Much of stream intermittent; beaver present; 221 acres of adjoining wetland.
Access: Two road crossings over nonintermittent portion.

35-16
Surface Acres = 0.7
Miles = 1.2
Gradient = 20 feet per mile
Clear, medium hard water.
Primarily sand bottom.
Direction of flow: Southwest.
Tributary of: Fordham Creek.
Fishery: Trout.
Remarks: Farm pond on stream; 134 acres of adjoining wetland.
Access: No road crossings.

Quincy Township, T16N, R5E

18-8
Surface Acres = 13.6
Miles = 2.8
Gradient = 4.2 feet per mile
Clear, hard water.
Silt bottom, with some sand.
Direction of flow: South then west.
Tributary of: Creek 18-12 (Quincy Tn.).
Fishery: Trout (private hatcheries).
Remarks: Drainage ditch; portions licensed as private fish hatcheries.
Access: Four road crossings.

18-12 (East Castle Rock Ditch)
Surface Acres = 18.2
Miles = 3.0
Gradient = 3.3 feet per mile
Light brown, medium hard water.
Primarily sand bottom.
Direction of flow: Southerly.
Tributary of: Wisconsin River.
Fishery: Brown and rainbow trout.
Remarks: Ditch identified as East Castle Rock Ditch for management purposes; anglers depend on stocked trout for fishing pleasure; drainage ditch; open water noted in Quincy Township during February, 1963, aerial groundwater survey; muskrat present; migrant waterfowl.
Access: One road crossing.

Richfield Township, T18N, R7E

6-7
Surface Acres = 0.7
Miles = 1.4
Dark brown, hard water.
Silt bottom.
Direction of flow: East.
Tributary of: Creek 17-16 (Preston Tn.).
Fishery: Forage species.
Remarks: 128 acres of adjoining wetlands.
Access: No road crossings.

Richfield Township, T18N, R7E (Cont.)

10-7
Surface Acres = 0.5
Miles = 0.3
Clear, medium hard water.
Silt bottom dominant, sand present.
Direction of flow: West.
Tributary of: Probably Little Roche-a-Cri Creek during high water.
Fishery: Forage species.
Remarks: Under low or probably normal water conditions, stream disappears in marsh; 102 acres adjoining wetland.
Access: One road crossing.

18-6aa
Surface Acres = 0.2
Miles = 0.4
Light brown, hard water.
Silt bottom, some detritus.
Direction of flow: West.
Tributary of: Bingham Creek.
Fishery: Forage species.
Access: No road crossings.

Rome Township, T20N, R6E

12-12

Surface Acres = 0.3
Miles = 0.6
Medium brown hard water.
Detritus bottom.
Direction of flow: West.
Tributary of: Fourteenmile Creek.
Fishery: Forage species.
Remarks: Appeared as though it may be intermittent during dry periods.
Access: No road crossings.

13-13
Surface Acres = 9.8
Miles = 7.6
Light brown, hard water.
Primarily sand bottom.
Direction of flow: Westerly.
Tributary of: Leola Ditch.
Fishery: Forage species.
Remarks: Drainage ditch.
Access: Several road crossings; 0.62 mile public frontage.

Rome Township, T20N, R6E (Cont.)

13-16
Surface Acres = 8.2
Miles = 5.2
Light brown, hard water.
Primarily sand bottom, but considerable muck present.
Direction of flow: West.
Tributary of: Creek 13-13 (T20N, R6E).
Fishery: Forage species.
Remarks: Drainage ditch.
Access: Four road crossings.

Rome Township, T20N, R5E

11-7 (Chester Creek)
Surface Acres = 5.6
Miles = 1.4
Clear, medium hard water.
Sand dominant bottom type, also silt and gravel.
Direction of flow: Southwest.
Tributary of: Petenwell Lake.
Fishery: Brook trout.
Remarks: Known locally as Chester Creek; natural trout reproduction; stream not observed during February, 1963, aerial groundwater survey, but suspect open water would have been found; considerable spring seepage.
Access: Two road crossings.

Springville Township, T15N, R6E

19-10
Surface Acres = 0.6
Miles = 0.1
Gradient = Not in excess of 5 feet per mile
Clear, hard water.
Primarily silt and sand bottom.
Direction of flow: Northwesterly.
Tributary of: Creek 24-16 (T15N, R5E).
Fishery: Forage species.
Remarks: Spring seepage and instream springs.
Access: No road crossings.

Springville Township, T15N, R6E (Cont.)

32-13
Surface Acres = 0.2
Miles = 0.6
Clear, hard water.
Primarily sand bottom.
Direction of flow: West.
Tributary of: Corning Creek.
Fishery: Brook trout.
Remarks: Considerable spring seepage; during February, 1963, aerial groundwater survey the stream was open.
Access: No road crossings.

Springville Township, T15N, R5E

24-16
Surface Acres = 5.9
Miles = 0.6
Gradient = Probably not in excess of 5 feet per mile
Clear, hard water.
Primarily sand and silt bottom.
Direction of flow: West.
Tributary of: Wisconsin River.
Fishery: Forage species.
Remarks: Duck nesting; licensed private fish hatchery at headwater; spring seepage and instream springs abundant; during high water periods, Wisconsin River backs up into stream and its tributary.
Access: One road crossing.

Strongs Prairie Township, T18N, R5E

1-4
Surface Acres = 0.2
Miles = 0.4
Light brown, soft water.
Detritus bottom.
Direction of flow: Southerly.
Tributary of: Dead Horse Creek.
Fishery: Forage species.
Access: No road crossings.

Strongs Prairie Township, T18N, R4E

2-8
Surface Acres = 3.4
Miles = 1.4
Clear, medium hard water.
Sand dominant bottom type.
Direction of flow: West.
Tributary of: Creek 2-10 (T18N, R4E).
Fishery: Forage species.
Remarks: Drainage ditch; investigations conducted through a year indicated a lack of dissolved oxygen in this water during nighttime hours.
Access: One road crossing.

2-10
Surface Acres = 4.2
Miles = 1.5
Light brown, medium hard water.
Primarily sand bottom.
Direction of flow: Westerly.
Tributary of: Wisconsin River.
Fishery: Forage species.
Remarks: Drainage ditch.
Access: One road crossing.

23-14
Surface Acres = 4.1
Miles = 1.0
Light brown, medium hard water.
Sand and detritus dominant bottom types.
Direction of flow: Southwesterly.
Tributary of: Castle Rock Lake.
Fishery: Forage species.
Access: Two road crossings.

SUMMARY OF INVENTORY DATA

The following information, comments, tables, and maps have been compiled from all data presently available for the waters, including the field inventory of 1965. Supplemental information was obtained from publications listed in the bibliography.

In order to provide a tabular summary of the physical and chemical characteristics of each body of water, two appendices are included. They contain specific information gathered in the inventory. The comments that follow have reference to some of the items and data presented in the appendices.

Quantitative Aspects

The total water surface area in the county is 2,427 acres. Of this total, 1,977 acres are included in 46 lakes and 450 acres are found in 73 streams. The area covered by the Wisconsin River and the impoundments there on are not included in the summary. These waters form the common boundary between Adams and Juneau Counties and therefore the data will be listed with the Juneau County surface water report.

Total stream length amounts to 234.5 linear miles of which 92 miles are considered trout water. Frontage on both sides of the streams amounts to 469 miles while the lake frontage total is 53.14 miles. Although stream frontage is over eight times that of the lake frontage, 39 streams, about 53 percent of the total number, have average widths of less than 10 feet. These small streams have about 31 percent of the total frontage yet include only 13 percent of the total surface water acreage. Table 2 illustrates stream length, acreage, and public frontage according to average width classes. Streams with average widths of 10 feet or greater are usually more desirable for recreational purposes. There are 34 such streams, or about 47 percent of the total number, in the county. The largest stream in the county is Big Roche-a-Cri Creek. It has 12 percent of the total miles of streams and nearly 24.5 percent of the total surface acres for streams.

Information concerning lakes by size classes is given in Table 3. Of the 46 lakes in Adams County, 22 have areas of less than 5 surface acres and 31, or 67 percent, have less than 20 surface acres. Only 11 lakes have areas ranging between 20 and 100 acres and 4 have 100 or more surface acres. About 54 percent of the lakes are subject to winterkill conditions due to their shallow depth and most of these have no water source other than runoff waters. There are 29 that have maximum depths of less than 10 feet and 8 lakes that have depths exceeding 19 feet (Table 4). Two of these experience periodic partial winterkills. Sand and muck are the principal bottom types in the littoral zone with muck dominant in lakes having less than 5 surface acres and in those between 10 and 20 acres in size. In all other lakes, sand is dominant (Table 5). The shoreline development factor (S.D.F.) for all the lakes ranges from 1.02 to 3.90 and averages 1.70. As expected, the higher S.D.F. figures are found for impoundments. The average S.D.F. for the 13 impoundments is 2.48, while for all other lakes it is 1.39.

Table 2. Size classes of Adams County streams

Avg. Width (feet)	No.	Percent of Total No.	Length (miles)	Percent of Total Length	Area (acres)	Percent of Total Area	Public Frontage* (miles)	Percent of Total Public Frontage
Less than 10	39	53	73.6	31	57.9	13	1.9	11
10 to 20	20	27	89.1	38	133.2	30	11.5	70
20 to 40	10	14	65.3	28	220.3	49	3.08	19
40 and wider	4	6	6.5	3	38.3	8	0.0	0
Totals	73		234.5		449.7		16.48	

*Does not include road crossings

Table 3. Size classes of Adams County lakes

Size Class (acres)	No.	Percent of Total No.	Area (acres)	Percent of Total Area	Shoreline (miles)	Percent of Total Shoreline	Public Frontage (miles)	Percent of Total Public Frontage	With Boat Access	With Unimproved Access	With Wilderness Access	With Multiple Use Access	Without Public Access
Less than 5	22	48	30.13	2	4.89	9	0.0	0	0	3	0	0	19
5 to 10	5	11	35.1	2	3.77	7	0.0	0	0	2	0	0	3
10 to 20	4	8	48.1	2	4.03	8	0.01	4	1	2	0	0	2
20 to 50	6	14	254.0	13	8.1	15	0.13	48	2	3	0	0	1
50 to 100	5	11	302.0	15	10.05	19	0.01	4	0	3	0	0	2
100 to 200	2	4	237.5	12	11.6	22	0.10	37	1	1	0	1	0
200 to 500	1	2	212.9	11	2.8	5	0.01	4	0	1	0	0	0
500 to 1,000	1	2	857.0	43	7.9	15	0.01	4	1	0	0	0	0
Totals	46		1,976.73		53.14		0.27		5	15	0	1	27

Table 4. Depth classes of Adams County lakes

Maximum Depth Class (feet)	No. Lakes	Percent of Total	Area (acres)	Percent of Total	Shoreline (miles)	Percent of Total
Less than 5	17	37	27.43	1	3.66	7
5 to 10	12	26	173.0	10	9.75	18
10 to 15	6	13	991.9	50	14.71	28
15 to 20	3	7	242.8	12	6.13	12
20 to 25	2	4	126.4	6	10.13	19
25 and deeper	6	13	415.2	21	8.76	16
Totals	46		1,976.73		53.14	

Table 5. Littoral composition of Adams County lakes according to size class

Size Class (acres)	No. Lakes	Area (acres)	Shoreline (miles)	Percent Bottom Types in Littoral Zone* Sand	Gravel	Rock	Muck
Less than 5	22	30.13	4.89	20.3	0.5		79.2
5 to 10	5	35.1	3.77	39.6	26		34.4
10 to 20	4	48.1	4.03	40	8		52
20 to 50	6	254.0	8.1	52	3	0.5	44.5
50 to 100	5	302.0	10.05	52.4	2.2	1	44.4
100 to 200	2	237.5	11.6	85	2.5		12.5
200 to 500	1	212.9	2.8	83	5		12
500 to 1,000	1	857.0	7.9	60	5		35
Averages				54	6.5	0.2	39.3

*Percent of littoral zone bottom soil types based on field observations and estimates rather than actual measurement.

Water Quality

During the gathering of information for the inventory, total alkalinity, pH, specific conductance, water color, and transparency data were collected for each lake and stream so that interpretations of water quality could be made. In addition, detailed chemical analysis of water samples from three of the named lakes has been made to determine the relative quantities of dissolved nutrients (Table 6).

Total alkalinity is generally used as an index of fertility. Based on Moyle's classification values, 15 percent of the lakes are classed as having low fertility, 15 percent of the lakes and 1 percent of the streams as low to medium, 18 percent of the lakes and 28 percent of the streams as having medium to high, and 52 percent of the lakes and 71 percent of the streams as having high fertility. The classification, fertility, and productivity of Adams County lakes and streams according to size class are illustrated in Tables 7 and 8 respectively. In general, the streams have a higher index of fertility than do the lakes. Figure 5 shows the water fertility in the county.

The pH (hydrogen ion concentration) ranges from 6.5 to 9.4 for lakes and from 7.0 to 8.5 for streams. Ten of the 46 lakes were acid (a pH of less than 7.0).

Specific conductance measures the total concentration of dissolved electrolytes in water and the higher the conductance, the greater the fertility and productivity of the water. The average specific conductance for Adams County lakes, measured in micromhos at 77 degrees Fahrenheit, was 181 and ranged from 32 to 364. The average specific conductance for streams was somewhat greater than it was for lakes and it amounted to 271.7. The range was higher and also greater (119 to 574).

Water color ranged from clear to dark brown in Adams County lakes and streams and while the color was usually dependent upon the type and extent of wetlands that drained into the stream or lake, most of the wetlands were dry during the period of investigation. It is suspected that had the adjoining marsh and bog areas been wet, a brown color would have been more prevalent in stream waters. Water color of lakes and streams by size classes is shown in Table 9. About 52 percent of the lakes were clear and one was turbid. As suspected, the transparency of lake water was low. It ranged from 0.5 to 12.0 feet. Nearly 70 percent of the streams had clear water and one was turbid.

Fishery Resource

The fishery resource has been classified on the basis of predominant species and present management. In Fig. 6, a color code has been used to indicate the classification of individual waters.

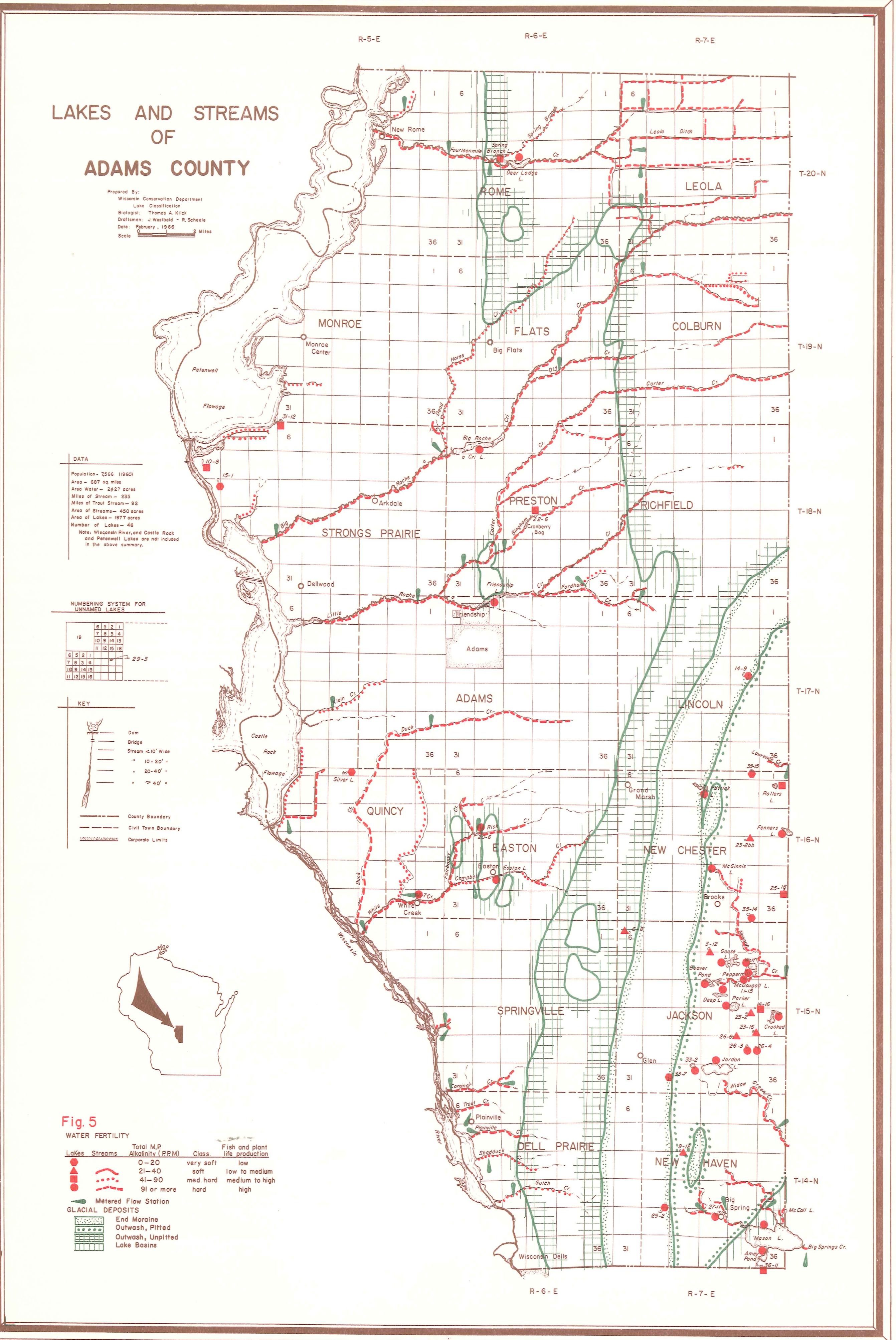
Of the 73 streams scattered throughout the county, 24 or nearly 33 percent are classified as trout water; however, five are not classed as trout water their entire lengths. With the exception of ditches, such as Leola Ditch and the unnamed ditches that are classed as trout water, fairly substantial native populations are found in most streams. Fishermen are dependent upon stocked trout for their angling pleasure in the ditches and several of the streams are also stocked. Brook and brown trout are the species generally found, although rainbow trout have been planted in some of the larger streams. Forage fish species are found in all the trout streams; there are three that have northern pike in the areas designated as trout water; and in one off these three there are also smallmouth bass.

Table 6. Detailed chemical analysis of waters from three Adams County lakes

Lake	pH	Total Alkalinity (ppm)	Specific Conductance (mmhos at 77°F)	Cl (ppm)	SO_4 (ppm)	Fe(T) (ppm)	NH_3-N (ppm)	K-N* (ppm)
Jordan	7.8	111	196	0.8	-	-	-	-
Patrick	8.2	92	184	0.25	5.0	0.05	0.07	0.75
Silver	4.8	4	36	0-	2.5	0.02	0.03	0.90

Lake	NO_3-N (ppm)	(D)PO_4** (ppm)	Ca (ppm)	Mg (ppm)	Na (ppm)	K (ppm)	Date Sampled
Jordan	-	-	24.0	10.1	0.9	1.5	9- 4-63
Patrick	0.02	0.17	20.0	7.5	0.94	0.40	4-27-64***
Silver	0.22	0.04	2.3	0.8	0.85	0.65	4-27-64***

* Kjeldahl nitrogen
** Dissolved phosphate
*** "Analytical method for (T)PO_4 proved inadequate for this series for some reason. All (T)PO_4 results were less than (D)PO_4." -Ronald J. Poff, WCD Biologist

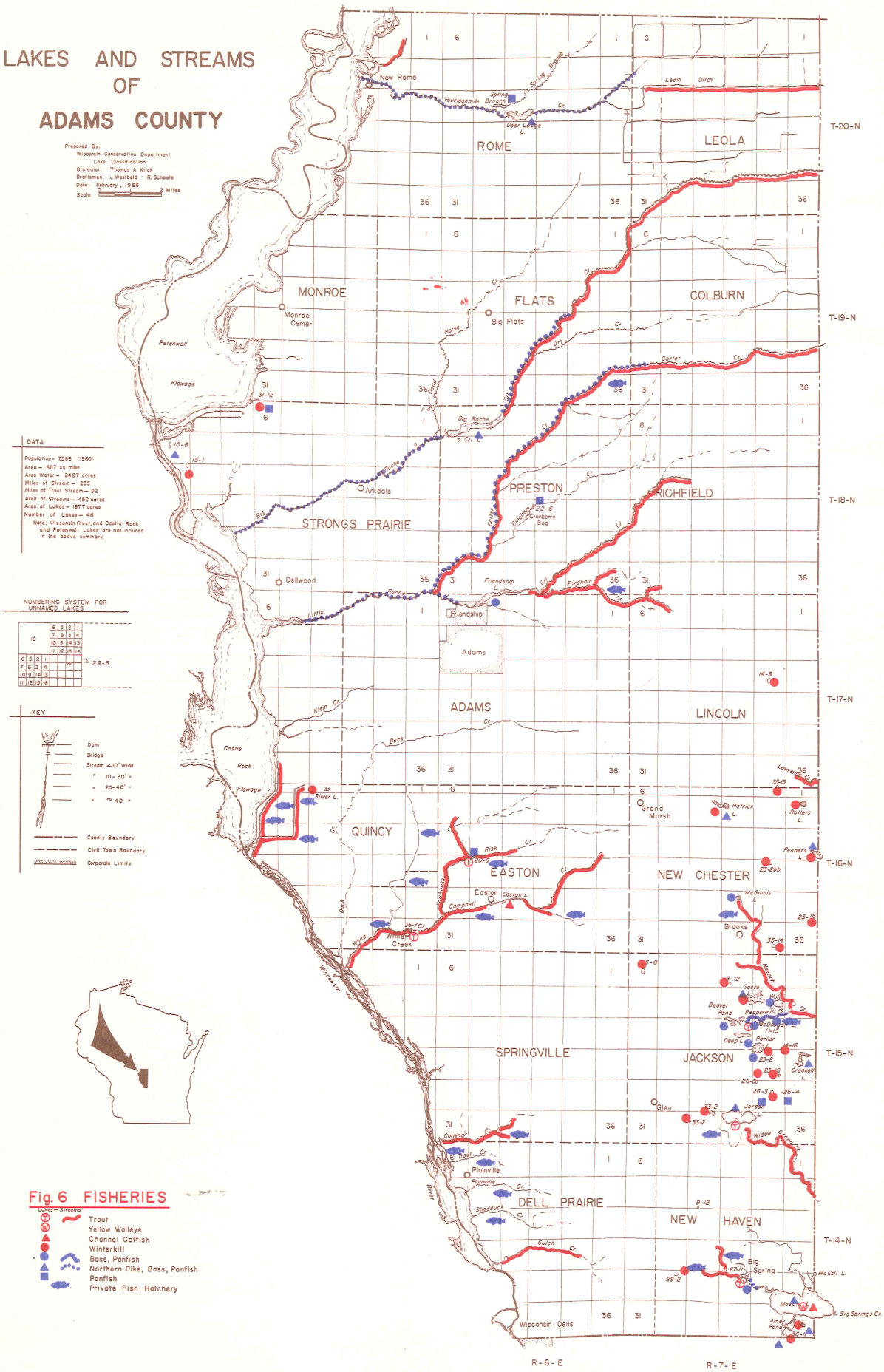


LAKES AND STREAMS
OF
ADAMS COUNTY
Prepared By:
Wisconsin Conservation Department
Lake Classification
Biologist; Thomas A. Klick
Draftsmen: J. Westbeld - R. Scheele
Date: February, 1966
Scale 0 2 Miles
R-5-E
R-6-E
R-7-E
T-20-N
T-19-N
T-18-N
T-17-N
T-16-N
T-15-N
T-14-N
ROME
LEOLA
MONROE
FLATS
COLBURN
PRESTON
RICHFIELD
STRONGS PRAIRIE
ADAMS
LINCOLN
QUINCY
EASTON
NEW CHESTER
SPRINGVILLE
JACKSON
DELL PRAIRIE
NEW HAVEN
New Rome
Monroe Center
Big Flats
Arkdale
Dellwood
Friendship
Adams
Grand Marsh
Brooks
White Creek
Easton
Glen
Plainville
Wisconsin Dells
Big Spring
Petenwell Flowage
Castle Rock Flowage
Wisconsin River
DATA
Population - 7,566 (1960)
Area - 687 sq. miles
Area Water - 2,427 acres
Miles of Stream - 235
Miles of Trout Stream - 92
Area of Streams - 450 acres
Area of Lakes - 1977 acres
Number of Lakes - 46
Note: Wisconsin River, and Castle Rock and Petenwell Lakes are not included in the above summary.
NUMBERING SYSTEM FOR UNNAMED LAKES
KEY
Dam
Bridge
Stream <10' Wide
10-20'
20-40'
>40'
County Boundary
Civil Town Boundary
Corporate Limits
WATER FERTILITY
Lakes | Streams | Total M.P. Alkalinity (P.P.M) | Class. | Fish and plant life production
0-20 | very soft | low
21-40 | soft | low to medium
41-90 | med. hard | medium to high
91 or more | hard | high
Metered Flow Station
GLACIAL DEPOSITS
End Moraine
Outwash, Pitted
Outwash, Unpitted
Lake Basins

Fig. 5

LAKES AND STREAMS OF ADAMS COUNTY

Prepared By:
Wisconsin Conservation Department
Lake Classification
Biologist: Thomas A. Klick
Draftsmen: J. Westbald - R. Scheele
Date: February, 1966
Scale: 2 Miles



DATA

Population - 7366 (1960)
Area - 667 sq. miles
Area Water - 3627 acres
Miles of Stream - 235
Miles of Trout Stream - 92
Area of Streams - 450 acres
Area of Lakes - 1977 acres
Number of Lakes - 46
Note: Wisconsin River, and Castle Rock and Petenwell Lakes are not included in the above summary.

NUMBERING SYSTEM FOR UNNAMED LAKES

KEY

- Dam
- Bridge
- Stream < 10' Wide
- " 10 - 20' "
- " 20-40' "
- " > 40' "
- County Boundary
- Civil Town Boundary
- Corporate Limits

Fig. 6 FISHERIES

Lakes — Streams

- Trout
- Yellow Walleye
- Channel Catfish
- Winterkill
- Bass, Panfish
- Northern Pike, Bass, Panfish
- Panfish
- Private Fish Hatchery

Table 7. Classification, fertility, and productivity of Adams County lakes according to size classes

Size Class (acres)	No.	Methyl Purple Alkalinity (ppm) Range	Mean	pH Range	Mean	Spec. Conductance (mmhos at 77°F) Range	Mean	Hardness Classification Range	Mean	Productivity Classification Range	Mean	Fertility Classification Range	Mean
Less than 5	22	10-160	60.5	6.5-8.3	7.2	32-303	138.7	V.S.-H.	M.H.	L.-H.	M.H.	Inf.-V.F.	M.F.
5 to 10	5	9-176	99.2	7.2-8.6	7.5	59-364	212.2	V.S.-H.	H.	L.-H.	H.	Inf.-V.F.	V. F.
10 to 20	4	18-175	85.8	8.0-8.8	8.5	48-345	179.8	V.S.-H.	M.H.	L.-H.	M.H.	Inf.-V.F.	M.F.
20 to 50	6	48-152	106.8	7.8-9.4	8.4	81-307	219.8	M.H.-H.	H.	M.H.-H.	H.	M.F.-V.F.	V.F.
50 to 100	5	104-166	130.8	6.9-7.7	7.3	129-313	252.2	H.	H.	H.	H.	V.F.	V.F.
100 to 200	2	95-107	101.0	8.4-8.6	8.5	192-218	205.0	H.	H.	H.	H.	V.F.	V.F.
200 to 500	1		105.0		8.9		207.0		H.		H.		V.F.
500 to 1,000	1		138.0		7.5		276.0		H.		H.		V.F.
Averages			85.0		7.8		180.5		M.H.		M.H.		M.F.

Note: Classification - V.S. = very soft, S. = soft, M.H. = medium hard, H. = hard
Productivity - L. = low, L.M. = low to medium, M.H. = medium to high, H. = high
General - Inf. = infertile, F.F. = fairly fertile, M.F. = moderately fertile, V.F. = very fertile
See fertility classification in Appendix III.

Table 8. Classification, fertility, and productivity of Adams County streams according to size classes

Avg. Width (feet)	No.	Methyl Purple Alkalinity (ppm) Range	Mean	pH Range	Mean	Spec. Conductance (mmhos at 77°F) Range	Mean	Classification Range	Mean	Productivity Range	Mean	General Range	Mean
Less than 10	39	33-203	121.2	7.1-8.2	7.6	119-574	276.3	S.-H.	H.	L.M.-H.	H.	F.F.-V.F.	V.F.
10 to 20	20	63-188	118.2	7.2-8.5	7.8	184-401	281.4	M.H.-H.	H.	M.H.-H.	H.	M.F.-V.F.	V.F.
20 to 40	10	70-249	115.5	7.1-8.1	7.6	169-438	254.1	M.H.-H.	H.	M.H.-H.	H.	M.F.-V.F.	V.F.
40 and wider	4	80-117	102.5	7.0-7.5	7.3	206-244	223.8	M.H.-H.	H.	M.H.-H.	H.	M.F.-V.F.	V.F.
Averages			118.6		7.6		271.8		H.		H.		V.F.

Note: Classification - V.S. = very soft, S. = soft, M.H. = medium hard, H. = hard
Productivity - L. = low, L.M. = low to medium, M.H. = medium to high, H. = high
General - Inf. = infertile, F.F. = fairly fertile, M.F. = moderately fertile, V.F. = very fertile
See fertility classification in Appendix III.

Table 9. Water color of Adams County lakes and streams by size classes

Water	No.	Clear	Light Brown	Medium Brown	Dark Brown	Turbid
Lakes (size class-acres)						
Less than 5	22	6	10	4	1	1
5 to 10	5	3	2			
10 to 20	4	3	1			
20 to 50	6	6				
50 to 100	5	2	3			
100 to 200	2	2				
200 to 500	1	1				
500 to 1,000	1		1			
Totals	46	23	17	4	1	1
Streams (size class-avg. width in feet)						
Less than 10	39	25	8	5	1	
10 to 20	20	17	2	1		
20 to 40	10	6	3			1
40 and wider	4	3	1			
Totals	73	51	14	6	1	1

Sport fish are scarce in most of the warmwater streams. Only one is classed as a smallmouth bass stream and in this one the smallmouth bass are in combination with other species such as northern pike, bluegills, pumpkinseed, and bullheads. One has northern pike, another stream has largemouth bass, bluegills, pumpkinseed, rock bass, and bullheads; and in another northern pike, largemouth bass, bluegills, pumpkinseed, and bullheads are present. All of the warmwater streams have a forage fish population and in many these fishes are the only species.

There are no trout lakes as such in Adams County; however, two named lakes, two unnamed lakes, and one unnamed lake that barely qualifies as an impoundment contain trout. In all but the latter, trout are managed in combination with warmwater fish species. The largemouth bass-panfish combination is the most commonly found lake in the county followed closely by those that have northern pike in addition to largemouth bass and panfish. Only one lake, Mason, has walleyes, but walleyes are also planned for Parker Lake following the chemical eradication of fish in 1965. Catfish are found only in Mason Lake.

Six of the named lakes and 21 of the unnamed lakes are subject to winterkill conditions. Of the latter, 17, or 81 percent, have maximum depths that do not exceed 4.5 feet and many may freeze solid during winter months. Table 4 shows the depth classes of Adams County lakes. As many winterkill annually, no attempt is made to manage them for fish, and species found in them are those most tolerant to winterkill conditions, such as bullheads, pumpkinseed, mudminnows and golden shiners. Certain waters are subject to periodic winterkills and it has been feasible to manage them for the sport fishes best suited. Usually anglers can get two or three years of fishing between winterkills. Since the more tolerant, but often less desirable fish species survive all but the most severe winterkills, their populations continue to grow and it is necessary to carry on chemical eradication programs from time to time before stocking more desirable game species following a winterkill.

Commercial fishing in the county is limited to the taking and selling of bait minnows by licensed minnow dealers; however, a state crew has removed carp from Mason Lake for several years. Some of these fish have been sold to mink ranches, but most have been buried or used as fertilizer.

Aquatic Game Resource

Based on the total of important inland acreages for wetlands and waters within the state (a total of 1,127,246 acres) Adams County has 0.2 percent of the inland habitat of importance to ducks and coot (Jahn and Hunt, 1964). The largest, single, state-owned area in the county that is important to waterfowl is the Colburn management area where there are about 200 acres of water and wetland of importance to ducks and coot. Waterfowl generally do not make major use of waters in the county for nesting, but there is some mallard, black duck, wood duck, and blue-winged teal nesting on lakes and along streams, especially where there is adjoining wetland. According to 1957 figures, 319 migratory waterfowl hunting stamps were sold in Adams County which ranked it 64th among the counties of the state (Jahn and Hunt, 1964).

The principal furbearers are mink, beaver, muskrat, red fox, raccoon, otter and weasel. The latter two are relatively scarce while the others are common. Trapping trends have remained quite stable and the bulk of the trapping is carried on by professionals.

Farm Ponds and Private Fish Hatcheries

Information from the Soil Conservation Service office in Friendship and observations made during the 1965 survey indicate there are approximately 117 constructed farm ponds in the county. They range from about 0.03 to 3 acres in size and, exclusive of ponds licensed as private fish hatcheries, cover a total area of approximately 30.45 acres. A few of the ponds are used as a source of water for irrigating crops, some are suitable for fish, but the majority are too shallow to carry fish through winter months and are better suited for livestock watering and for waterfowl.

As of December 31, 1965, there were 26 licensed private fish hatcheries in the county and their surface water area totaled about 246 acres. Their locations are shown in Fig. 6.

Boating

According to Wisconsin Conservation Department figures as of December 31, 1965, there were 726 boats registered in Adams County. This total included 398 outboard motor, 1 inboard motor, 5 sail, and 322 outboard fleet registrations. As there are only four lakes in the county that exceed 100 acres in size, boating use is rather restricted. Jordan Lake (215.6 acres) and Mason Lake (857 acres) are probably the most ideally suited to various boating activities; however, in the latter, stumps can be a hazard to fast boating speeds. Abundant aquatic plant growth limits fast boat traffic to the deeper water areas on Big Roche-a-Cri Lake (122.3 acres) and on Friendship Lake (115 acres). Although there is public access to all four of these lakes, there is no public boat launching site on Jordan Lake and both Jordan and Mason Lakes lack adequate parking facilities.

Light boat traffic is possible on some of the larger streams such as Big Roche-a-Cri, Little Roche-a-Cri, Fourteenmile, and White; however, portaging or dragging boats over shallow areas is necessary except during high water periods. None of the above named streams can be called a "white water" stream as sand is the predominant bottom type.

Swimming

Public bathing facilities are available only at Friendship Lake; however, resorts and organizational camps on various lakes have facilities for their guests. Most of the lakes in Adams County with suitable depth for swimming have clear, unpolluted water and varying amounts of sand beach areas; however, the small, bog shoreline lakes are unsuited to bathing. Aquatic plant removal is required in some of the lakes in order to provide swimming areas and in others marl bottoms may make bathing undesirable in the areas where this bottom type is present.

Aesthetics

Aesthetics, as referred to in this report, is the appreciation of the beauties of nature. Some of the first things that catch the traveler's eye as he passes through the county are the numerous picturesque hills and crags that jut above the surrounding countryside. Pilot Knob, Roche-a-Cri Rock, Rabbit Rock, and Minnie Rock are examples, but there are several more. Several gorges in the Dells area, caused by weathering and stream erosion, with their potholes, steep sides, and artistic features have assisted in making the Dells one of the most attractive scenic areas of the state.

Wild shores along lakes and streams have the highest aesthetic value and lake and stream property is being purchased so that wildlife activity and the peacefulness that water movement brings may be enjoyed. As water use becomes more intense and as more lots are sold, the aesthetic values tend to decrease. The large public holding in Colburn and Leola Townships have maintained wildlife habitats and hence their aesthetic values have remained high.

AVAILABILITY OF THE WATER RESOURCE

Area and Population

Adams County covers an area of 439,680 acres, or 687 square miles, and it represents approximately 1.23 percent of the total area of the state. The population is rural as there is no incorporated place of 2,500 inhabitants and over. Adams, the largest incorporated town, had a 1960 census figure of 1,301. The county population of 7,566 represents about 0.19 percent of the state's population. There are 11.2 people per square mile as compared to the state average of 72.2.

While the 1960 census indicated an increase of 15.1 percent for the state during the past 10 years (Fuguitt, 1961), the Adams County population declined 4.3 percent. It has been estimated that the county population declined 2.3 percent between April 1, 1961 and July 1, 1963 (Brenneke and Marshall, 1963). It is interesting to note that while the general population trend in Wisconsin has been upward, the trend in Adams County has been up and then down. For several decades the county population increased until the peak of 9,287 was reached in 1920. Since that time, the trend has been downward (Wisconsin Department of Resource Development, 1962 or 1963).

Public Access and Use

Lakes were classified by degree of access during the 1965 investigations. Information obtained appears on Fig. 7, an access map of Adams County. Data concerning access on lakes and streams according to size classes are provided in Tables 2 and 3. Multiple-use accesses are those that have park areas in connection with boat accesses; boat access indicates there are only launching sites with parking; and unimproved or difficult access indicates there are no boat launching sites, but that a public picnic area or other public land adjoins the water from a nearby public road. A wilderness access is one where public land adjoins the water from a public road that is over 200 feet from the water.

Of the 46 lakes investigated, 27 had no public access; however, 19 of these were small waters less than five acres in size that were natural ponds located on farm property. There were 15 lakes with unimproved or difficult access; five that had only a boat launching site, and one with a multiple-use access. The two multiple-use accesses on Petenwell and Castle Rock Flowages are not included in Table 3 although they are shown in Fig. 7 since these two impoundments will be treated in the Juneau County report. There are no wilderness lakes in Adams County.

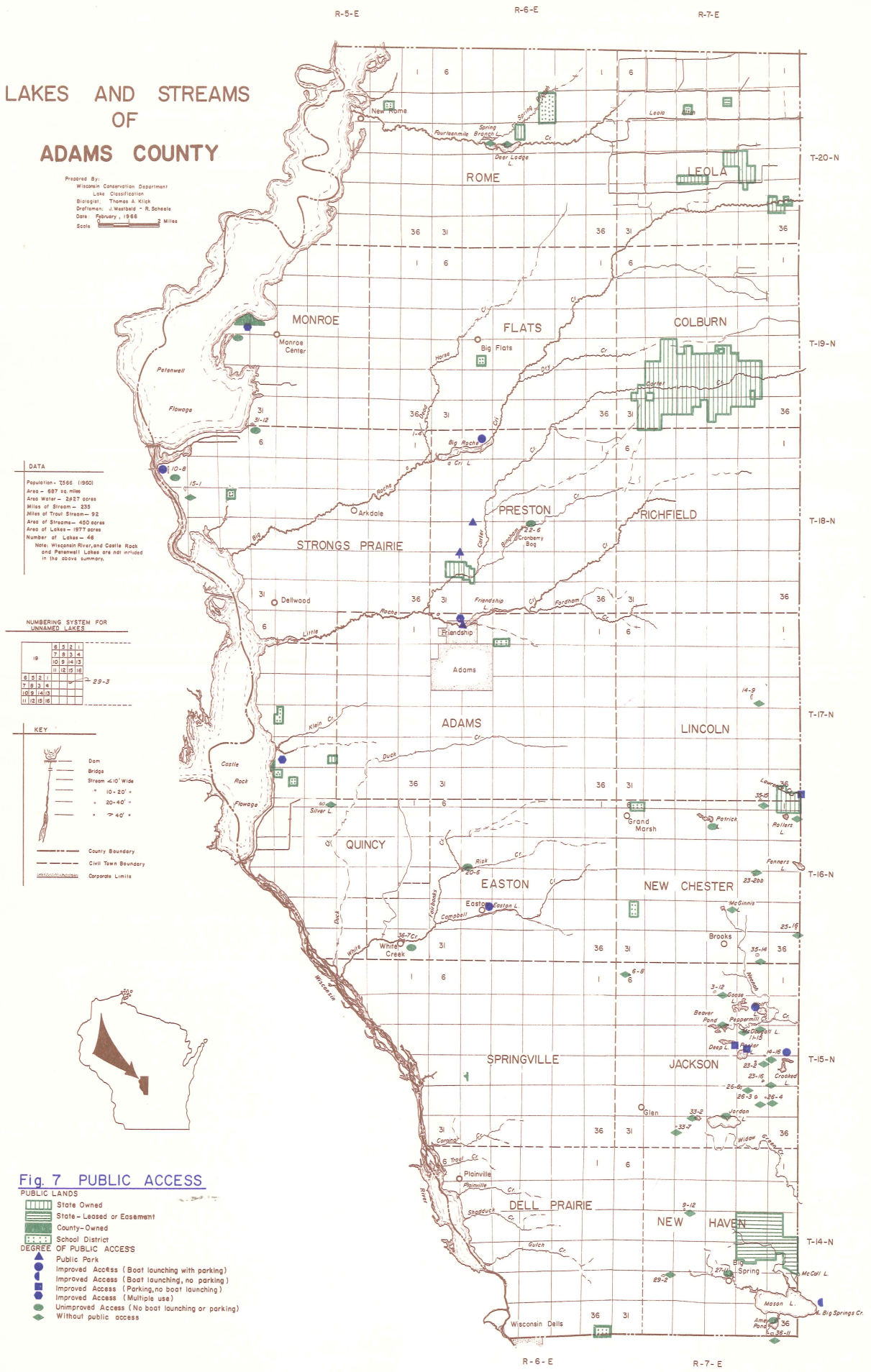
There are 16.48 miles of public frontage along streams and 0.27 miles around lakes (Tables 2 and 3). The larger park areas are Roche-a-Cri State Park (262 acres), Castle Rock Park (15 acres), and Petenwell Park (30 acres). The latter two are owned by Adams County. Land acreage in public ownership totals 9,261.26 acres. These include: State (owned)-6,371.04 acres; State (leases or easements)-1,933.41 acres; county-71.4 acres; school district-888.19 acres; township and village-7.22 acres. The locations of various public lands are shown on Fig. 7.

Private Development

There are 445 dwellings on the 20 named lakes in Adams County. In addition, there are 18 resorts, 2 organizational camps, 3 boat liveries, 1 motel, and 1 private campground. The unnamed lakes have a total of 13 dwellings, 2 resorts, and 1 organizational camp. The development around the unnamed lakes is concentrated around those having recreational potential. It is unlikely that development will occur in the foreseeable future on lakes in Adams County where water depths do not exceed three or four feet and where surface areas are less than five acres.

Development along streams, especially along the larger or better trout streams, has increased significantly within the past five or six years. Developers have sold lots and have been especially active along such streams as Fordham, Big Roche-a-Cri, Little Roche-a-Cri, and White Creeks.

LAKES AND STREAMS OF ADAMS COUNTY



Prepared By:
Wisconsin Conservation Department
Lake Classification
Biologist: Thomas A. Klick
Draftsmen: J. Westbald - R. Scheele
Date: February, 1966
Scale: Miles

DATA

Population - 7366 (1960)
Area - 687 sq. miles
Area Water - 2827 acres
Miles of Stream - 235
Miles of Trout Stream - 92
Area of Streams - 450 acres
Area of Lakes - 1977 acres
Number of Lakes - 46
Note: Wisconsin River, and Castle Rock and Petenwell Lakes are not included in the above summary.

NUMBERING SYSTEM FOR UNNAMED LAKES

KEY

Fig. 7 PUBLIC ACCESS

PUBLIC LANDS
- State Owned
- State - Leased or Easement
- County-Owned
- School District

DEGREE OF PUBLIC ACCESS
- Public Park
- Improved Access (Boat launching with parking)
- Improved Access (Boat launching, no parking)
- Improved Access (Parking, no boat launching)
- Improved Access (Multiple use)
- Unimproved Access (No boat launching or parking)
- Without public access

SURFACE WATER PROBLEMS

Resource Based Problems

Like most of the counties in the west central part of the state, Adams County has relatively few natural lakes of any significance. Most of these are located in the pitted outwash area, east of the end moraine (Fig. 5) in the eastern part of the county.

An abundance of aquatic vegetation has been a problem in several of the lakes and flowages. In order that various recreational activities might be enjoyed, it has been necessary for interested parties to initiate mechanical or chemical projects in an effort to control the abundant plant growth.

Winterkill, attended by fluctuating water levels, is a problem in Adams County lakes. Irrigation may contribute to the fluctuating water levels, but probably one of the major causes is the varying precipitation. During wet years, many lakes are able to increase their depths and avoid winterkill. In dry years, lake levels decline so that winterkill conditions exist. Due to the sandy nature of the soil, many lakes directly reflect the conditions of the groundwater table.

Another problem is the natural aging process of lakes. This is especially noticeable in the small, fertile lakes where undecomposed aquatic vegetation and other detritus build up on the bottom and where the encroaching shoreline reduces the surface water area and depth. These lakes become smaller each year and will eventually become devoid of open water.

Fishery Problems

Winterkill is a problem in many lakes. In some, game fish could not survive even moderate winters. In others, intensive management is needed to keep a good population balance in waters where periodic, or partial, winterkills occur. Slow-growing panfish populations are present in some of the lakes, especially in those fertile waters having an abundance of aquatic vegetation and where attempts have been made to reduce the vegetation by chemical or mechanical means.

Mason Lake, the largest lake in Adams County, has a carp and turbidity problem. While the two are probably related in one sense due to carp feeding activity, the predominant west and southwest wind during the open water season helps to keep bottom materials in suspension and causes erosion along the north shore. The lake contains little rooted aquatic vegetation. Since the explosion of the carp population in 1956, following an attempt to eradicate them in 1955, there apparently has been little carp reproduction. State crews have been active each year in an attempt to control the carp by mechanical means and the flowage level has been fluctuated each year during the peak of carp spawning in an effort to isolate spawn.

Use Conflicts

Recreational demands upon most of the lakes and streams are not intensive at this time. Seasonal inhabitation at some of the lakes can be expected to cause use conflicts; however, since towns and counties have the authority to regulate uses, it is expected that use of this authority will be made. In fact, Jackson Township does regulate hours of water-skiing on certain lakes within its boundaries. On Wolf Lake, no motors can be used on boats. In addition, towns and counties may be guided by lake-use recommendations originating with the state.

Public Access

The two largest lakes in the county lack adequate parking facilities for effective access. Seven named lakes lack access. The availability of waters through public access sites can be described as "fair". At some waters, boat launching sites are undeveloped while others lack parking facilities. Some lakes have public access, but due to the kind of topography present these sites are unusable. Recent developments by the county, with state aid, have provided more desirable access to Wolf Lake, Crooked Lake, Deep Lake, and Easton Lake.

Additional public ownership of land is needed along some of the better trout streams to insure future public access and to help keep the stream in its natural wild state.

Pollution

Adams County, with its low population density, few industries, and lack of large municipalities, has no major pollution problem. According to personal communication on January 6, 1966, from Mr. F. H. Schraufnagel, Public Health Engineer for the State Committee on Water Pollution, there is only one source of pollution in the county. Effluent from the secondary sewage treatment plant at Adams, which also receives sewage from the Village of Friendship, is discharged to Little Roche-a-Cri Creek. The plant treats an estimated 125,000 gallons of sewage per day and its effluent contains about 30 pounds of B.O.D.

THE FUTURE

Adams County has not reached the peak of its recreational potential. Its scenic areas, waters, winter sports areas, and hunting areas can all expect increased use. Transportation is excellent from major midwest cities and as travel time becomes even shorter with the new interstate highways and as leisure time increases, more recreational opportunities will be sought. Present public-use opportunities are inadequate for future needs. Effective zoning, land acquisition and development for public use, and intensified management of the land, fish, and wildlife resources are vitally important and necessary if the aesthetic fish and wildlife values are to be maintained. Slummy land developments reduced water quality and poorer fish and game resource are in prospect without effective action.

ACKNOWLEDGEMENTS

Grateful appreciation is extended to Raymond Chap who assisted in the field investigations and to other personnel of the Conservation Department and other agencies who assisted and contributed to this inventory.

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Appendix I – PHYSICAL AND CHEMICAL DATA OF ADAMS COUNTY LAKES AND IMPOUNDMENTS

NAMED WATERS	Location T-N	R-E	Sec.	Drainage System	Surface Acres	Max. Known Depth (feet)	Surface Acres Under 3 Feet (percent)	Surface Acres Over 20 Feet (percent)	Length (miles)	Width (miles)	Shoreline (miles)	Shoreline Dev. Factor	Methyl Purple Alkalinity (ppm)	pH	Specific Conductance (mmhos-77°F)	Water Color	Date of Sampling
Amey Pond	14	7	36	So. Br. Neenah Cr.	56.0	(-) 7.0	80	0	0.4	0.3	2.10	2.00	104	6.9	226	Lt. Brn.	10-1-65
Arkdale Mill Pond*	18	5	15	Big Roche-a-Cri Cr.	23.9	(6) 8.5	70	0	0.69	0.33	2.80	4.09	106	8.0	211	Clear	11-17-64
Beaver Pond	15	7	15	Peppermill Cr.	50.6	(-) 6.0	50	0	0.6	0.2	1.90	1.90	166	7.0	313	Clear	9-15-65
Big Roche-a-Cri	18	6	5	Big Roche-a-Cri Cr.	122.3	(18)20.0	8	0	1.70	0.25	6.10	3.90	107	8.4	218	Clear	8-9-65
Crooked	15	7	24	Landlocked	48.0	(55)56.0	10	15	0.45	0.43	2.00	2.08	152	7.8	307	Clear	9-29-65
Deep	15	7	15	Landlocked	35.4	(49)47.0	5	30	0.6	0.2	1.20	1.43	137	8.4	278	Clear	9-28-65
Deer Lodge	20	6	16	Fourteenmile Cr.	55.0	(11)11.0	60	0	0.53	0.16	2.45	2.36	132	7.6	290	Lt. Brn.	11-11-64
Easton	16	6	29	Campbell Cr.	15.3	(11)11.0	30	0	0.64	0.07	2.00	2.74	91	8.6	185	Clear	9-8-65
Fenners	16	7	13	Landlocked	46.6	(23)19.0	17	8	0.51	0.22	1.22	1.27	104	8.6	195	Clear	9-14-65
Friendship	17	6	5	Little Roche-a-Cri Cr.	115.2	(16)16.0	15	0	0.80	0.20	5.50	3.69	95	8.6	192	Clear	9-1-65
Goose	17	7	11	Landlocked	81.0	(22)18.0	45	5	0.6	0.3	2.50	1.98	110	7.7	129	Lt. Brn.	9-15-65
Jordan	15	7	34	Landlocked	212.9	(85)79.0	15	40	1.1	0.4	2.80	1.41	105	8.9	207	Clear	10-4-65
Mason	14	7	25	So. Br. Neenah Cr.	857.0	(10)10.0	11	0	2.1	0.9	7.90	1.92	138	7.5	276	Lt. Brn.	9-30-65
McDougall	15	7	11	Peppermill Cr.	8.5	(-) 8.0	85	0	0.20	0.10	0.80	1.96	169	7.3	323	Clear	9-10-65
McGinnis	16	7	27	Neenah Creek	10.2	(25) 25.0	5	3	0.19	0.15	0.56	1.25	175	8.8	345	Clear	9-17-65
Parker	15	7	14	Landlocked	59.4	(36)30.0	15	20	0.4	0.3	1.10	1.02	142	6.9**	303	Clear	9-29-65
Patrick***	16	7	9	Landlocked	47.5	(21)10.0	2	0	0.59	0.21	1.70	1.77	92	9.4	260	Clear	(8-18-61 (4-7-64
Rollers	16	7	12	Landlocked	27.2	(5) 5.0	50	0	0.3	0.25	0.88	1.15	48	7.8	81	Clear	9-14-65
Silver	16	5	4	Landlocked	7.0	(15.5)11.0	40	0	0.16	0.10	0.63	1.69	9	8.0	59	Clear	9-2-65
Spring Branch	20	6	17	Spring Br. Cr.	7.1	(-) 7.0	50	0	0.33	0.08	0.78	2.09	66	7.5	155	Clear	11-10-64
Wolf	15	7	11	Landlocked	49.3	(58)47.0	5	60	0.37	0.28	1.10	1.12	108	8.3	198	Clear	9-1-65
UNNAMED WATERS																	
Easton Tn.																	
Lake 20-6 (Risk Cr.	16	6	20	Risk Creek	1.8	(5.5)5.5	75	0	0.14	0.03	0.4	2.13	91	7.3	201	Clear	9-8-65
Lake 36-7 Pond)	16	5	36	White Cr.	0.3	(-) 6.0	92	0	0.09	0.01	0.19	2.47	101	7.3	212	Clear	9-8-65
Jackson Tn.																	
Lake 3-12	15	7	3	Landlocked	1.7	(-) 2.0	100	0	0.07	0.04	0.25	1.37	36	7.2	92	Lt. Brn.	8-30-65
Lake 6-8	15	7	66	Landlocked	2.7	(-) 7.5	20	0	0.08	0.08	0.23	1.10	22	7.0	76	Lt. Brn.	9-15-65
Lake 11-15	15	7	11	Peppermill Cr.	2.6	(-) 6.5	35	0	0.11	0.03	0.58	2.56	159	7.2	303	Clear	9-10-65
Lake 14-16	15	7	14	Landlocked	0.2	(-) 3.1	85	0	0.02	0.01	0.08	1.20	74	7.1	153	Lt. Brn.	8-31-65
Lake 23-2	15	7	23	Landlocked	4.1	(-) 22.0	15	0	0.11	0.08	0.31	1.09	35	6.5	69	Med. Brn.	9-16-65
Lake 23-16	15	7	23	Landlocked	0.6	(-) 4.3	85	0	0.05	0.03	0.13	1.20	39	8.2	64	Lt. Brn.	9-16-65
Lake 26-3	15	7	26	Landlocked	3.7	(-) 9.0	2	0	0.10	0.08	0.33	1.22	160	7.3	299	Lt. Brn.	9-16-65
Lake 26-4	15	7	26	Landlocked	0.8	(-) 4.5	83	0	0.06	0.03	0.16	1.28	116	6.9	254	Clear	8-30-65
Lake 26-6	15	7	26	Landlocked	0.5	(-) 2.7	100	0	0.04	0.03	0.13	1.27	22	6.5	62	Med. Brn.	9-2-65
Lake 33-2	15	7	33	Landlocked	2.9	(-) 3.8	93	0	0.10	0.05	0.28	1.17	126	6.8	262	Clear	9-17-65
Lake 33-7	15	7	33	Landlocked	0.3	(-) 1.4	100	0	0.03	0.02	0.08	1.14	15	7.2	33	Med. Brn.	9-3-65

Appendix I – PHYSICAL AND CHEMICAL DATA OF ADAMS COUNTY LAKES AND IMPOUNDMENTS (Continued)

UNNAMED WATERS	Location T-N	R-E	Sec.	Drainage System	Surface Acres	Max. Known Depth (feet)	Surface Acres Under 3 Feet (percent)	Surface Acres Over 20 Feet (percent)	Length (miles)	Width (miles)	Shoreline (miles)	Shoreline Dev. Factor	Methyl Purple Alkalinity (ppm)	pH	Specific Conductance (mmhos-77°F)	Water Color	Date of Sampling
Lincoln Tn.																	
Lake 14-9	17	7	14	Landlocked	12.5	(-)3.0	98	0	0.28	0.23	0.81	1.63	18	8.7	48	Clear	8-31-65
Lake 35-15	17	7	35	Landlocked	0.5	(-)2.4	100	0	0.04	0.02	0.12	1.28	11	6.9	32	Lt. Brn.	9-9-65
Monroe Tn.																	
Lake 31-12	19	5	31	Landlocked	1.1	(-)1.8	100	0	0.16	0.04	0.38	2.58	83	7.9	178	Lt. Brn.	11-13-64
New Chester Tn.																	
Lake 23-2bb	16	7	23	Landlocked	0.6	(-)0.9	100	0	0.05	0.04	0.13	1.20	23	7.0	76	Lt. Brn.	9-10-65
Lake 25-16	16	7	25	Landlocked	0.03	(-).08	100	0	0.01	0.01	0.03	1.24	64	6.8	195	Turbid	9-15 65
Lake 35-14	16	7	35	Landlocked	0.4	(-)2.7	100	0	0.04	0.03	0.11	1.24	10	6.9	36	Clear	9-15-65
New Haven Tn.																	
Lake 9-12	14	7	9	Landlocked	0.4	(-)3.0	95	0	0.04	0.02	0.10	1.13	26	7.1	72	Drk. Brn.	8-25-65
Lake 27-1(Big Spring Pond)	14	7	27	So. Br. Neenah Cr.	7.3	(-)5.0	70	0	0.15	0.05	0.81	2.14	176	8.6	364	Lt. Brn.	9-30-65
Lake 29-2	14	7	29	Landlocked	2.0	(-)3.2	80	0	0.10	0.04	0.25	1.26	16	8.3	58	Lt. Brn.	8-25-65
Lake 36-11	14	7	36	Landlocked	2.0	(-)1.5	100	0	0.09	0.08	0.31	1.56	85	6.9	219	Med. Brn.	10-1-65
Preston Tn.																	
Lake 22-6	18	6	22	Bingham Cr.	5.2	(-)5.5	95	0	0.22	0.06	0.75	2.35	76	7.2	160	Lt. Brn.	9-7-65
Strongs Prairie Tn.																	
Lake 10-8	18	4	10	Drain	10.1	(-)10.0	70	0	0.24	0.04	0.66	1.46	59	8.0	141	Lt. Brn.	9-7-65
Lake 15-1	18	4	15	Drain	0.9	(-)2.0	100	0	0.13	0.05	0.31	1.04	16	7.8	105	Lt. Brn.	11-16-64
TOTALS AND AVERAGES – 20 NAMED LAKES					1,911.5	22.6					45.22	1.94	112.5	8.4	227		
26 UNNAMED LAKES					65.23	4.6					7.92	1.51	63.8	7.3	106		
GRAND TOTALS AND AVERAGES	46 LAKES				1,976.73	12.4					53.14	1.70	85	7.8	181		

*The dam at Arkdale Mill Pond broke during the spring of 1965 and the flowage was drained. The flowage was not restored as of October 8, 1965. Information is given only to provide a past history of the water. Data concerning Arkdale Mill Pond are not included in totals and averages.

**The pH indicates an acid condition; however, at the time of the 1965 survey, the fall overturn had occurred. It is known that Parker Lake is alkaline.

***The surface acres, length, width, length of shoreline and S.D.F. were determined from 1957 aerial photos. Since the photos were taken, the water levels of Adams County seepage lakes have indicated a continual general decline with some temporary, or seasonal, increases. The maximum depths in parentheses were taken from previous survey records. Patrick Lake was starred because of the named lakes it appears to have shown the greatest drop in water level.

Appendix IA

Named Waters	Watershed Area (Sq. Miles)	% Muck Shore	Adjoining Wetlands[1] Acres	% Woody	% Nonwoody	Public Frontage (Miles)	No. of Dwellings
Amey Pond	2.2	100	89.0	15	85	0	0
Arkdale Mill Pond[2]	110.0	5	7.0	33	67	0	2
Beaver Pond	2.2	80	27.5	54	46	0	1
Big Roche-a-Cri	71.0	25	10.0	0	100	0.01	99
Crooked	2.5	5	59.5	37	63	0.01	9
Deep	1.1	10	0.0	0	0	0.01	14
Deer Lodge	50.0	20	0.0	0	0	0	11
Easton	16.0	95	0.0	0	0	0.01	34
Fenners	3.4	50	0.0	0	0	0.01	1
Friendship	59.0	0	12.0	100	0	0.09	54
Goose	1.1	21	78.7	32	68	0.01-	24
Jordan	2.1	12	9.0	71	29	.01	48
Mason	36.5	35	23.4	7	93	0.01	99
McDougall	2.6	5	30.0	9	91	0	1
McGinnis	7.3	4	0.4	0	100	0	0
Parker[3]	1.2	1	0.0	0	0	0	22
Patrick	3.8	100	0.0	0	0	0.09	18
Rollers	0.9	80	39.4	60	40	0	0
Silver	3.1	2	10.2	100	0	0	0
Spring Branch	5.4	80	0.0	0	0	0	0
Wolf	0.2	22	3.2	0	100	0.01	10
Unnamed Waters							
Easton Tn. (T16N, R5-6E)							
Lake 20-6 (Risk Creek Pond) (R6E)	15.2	100	0.0	0	0	0	7
Lake 36-7 (R5E)	21.7	0	0.0	0	0	0	2
Jackson Tn. (T15N, R7E)							
Lake 3-12	0.3	100	0.0	0	0	0	0
Lake 6-8	1.6	90	0.0	0	0	0	0
Lake 11-15	3.1	20	1.0	0	100	0	1
Lake 14-16	0.2	65	4.6	0	100	0	0

Named Waters	Watershed Area (Sq. Miles)	% Muck Shore	Adjoining Wetlands 1/ Acres	% Woody	% Nonwoody	Public Frontage (Miles)	No. of Dwellings
Unnamed Waters (Cont.)							
Jackson Tn. (T15N, R7E)- (Cont.)							
Lake 23-2	0.1	100	10.2	0	100	0	0
Lake 23-16	0.4	100	28.2	0	100	0	0
Lake 26-3	0.6	100	21.8	35	65	0	0
Lake 26-4	0.3	100	11.5	2	98	0	0
Lake 26-6	0.4	100	0.0	0	0	0	0
Lake 33-2	0.6	100	12.8	0	100	0	0
Lake 33-7	0.2	10	0.0	0	0	0	0
Lincoln Tn. (T17N, R7E)							
Lake 14-9	2.3	100	4.5	0	100	0	0
Lake 35-15	1.0	100	0.0	0	0	0	0
Monroe Tn. (T19N, R5E)							
Lake 31-12	0.4	60	10.9	0	100	0	0
New Chester Tn. (T16N, R7E)							
Lake 23-2bb	0.8	100	1.0	0	100	0	0
Lake 25-16	0.9	0	0.0	0	0	0	0
Lake 35-14	1.4	100	6.5	0	100	0	0
New Haven Tn. (T14N, R7E)							
Lake 9-12	0.2	98	0.0	0	0	0	0
Lake 27-1 (Big Spring Pond)	7.4	33	1.3	0	100	0	5
Lake 29-2	0.3	100	0.0	0	0	0	0
Lake 36-11	0.8	100	45.0	11	89	0	0
Preston Tn. (T18N, R6E)							
Lake 22-6	16.6	50	6.0	20	80	0	0

Appendix IA (Cont.)

Named Waters	Watershed Area (Sq. Miles)	% Muck Shore	Adjoining Wetlands 1/ Acres	% Woody	% Nonwoody	Public Frontage (Miles)	No. of Dwellings
Unnamed Waters (Cont.)							
Strongs Prairie Tn. - (T18N, R4E)							
Lake 10-8	0.1	10	33.0	71	29	0	0
Lake 15-1	1.3	100	13.4	57	43	0	0
Totals and Averages							
Named Lakes		37.4	395.3			0.27	447
Unnamed Lakes		74.5	211.7			0.00	16
Grand Totals and Averages		58.3	607.0			0.27	463

1/ Includes only the wetlands surrounding lake or impoundment. Does not include wetlands along stream or ditch that flows into lake or impoundment.

2/ Information given the former Arkdale Mill Pond only to provide past history of water. Data concerning this water are not included in totals and averages.

3/ There are approximately 1,300 feet, or 0.24 miles, of state highway right-of-way along Parker Lake.

Appendix II – PHYSICAL AND CHEMICAL DATA OF ADAMS COUNTY STREAMS

NAMED STREAMS	Outlet Location T-N	R-E	Sec.	Watershed	Surface Acres	Length (miles)	Av. Width (feet)	Flow* (c.f.s.)	Approx. Watershed Area (sq. mi.)	Gradient (feet/ mile)	Miles of Public Frontage	Fishery (See code)	Methyl Purple Alkalinity (ppm)	pH	Specific Conductance (mmhos-77°F)	Water Color	Date of Sampling
Big Roche-a-Cri Cr.	18	4	25	Wisconsin River	110.0	28.3	32	88.87	97.7	-	0.8	1,2,4, 5,6	98	7.9	206	Clear	7-20-65
Bingham Cr.	18	6	29	Carter Cr.	5.6	5.4	8.5	3.08	18.6	-	0.0	6	91	8.0	194	Clear	7-9-65
Campbell Cr.**	16	6	30	Wisconsin River	5.3	4.4	10	14.34	21.1	15.4	1.1	1.6	87	7.4	192	Clear	7-28-65
Carter Cr.	17	5	1	Little Roche-a-Cri Cr.	26.0	17.2	12.5	10.52	47.9	-	10.4	1,2,6	110	8.2	227	Clear	7-7-65
Corning Cr.	15	6	31	Wisconsin River	2.8	2.7	8.5	4.92	12.7	20.0	0.0	1,6	116	7.4	250	Clear	8-10-65
Dead Horse Cr.	18	5	12	Big Roche-a-Cri Cr.	14.5	10.9	11	3.34	25.3	-	0.0	6	85	7.9	184	Clear	6-25-65
Dry Cr.	19	6	28	Big Roche-a-Cri Cr.	5.8	4	12.5	6.74	6.5	-	0.0	6	142	7.8	303	Clear	6-24-65
Duck Cr.	15	5	4	Wisconsin River	6.5	6.7	8	1.05	25.4	8.6	0.8	6	151	7.7	317	Lt. Brn.	8-4-65
Fairbanks Cr.	16	6	30	White Creek	5.5	4.8	10.5	6.69	24.8	10.0	0.0	1,6	99	8.0	213	Clear	7-29-65
Fordham Cr.	18	6	34	Little Roche-a-Cri Cr.	7.9	5	13	11.58	22.1	8.9	0.0	1,6	92	7.9	192	Clear	7-12-65
Fourteenmile Cr.	20	5	10	Petenwell Flowage	33.9	10	28	53.47	58.3	-	0.0	2,6	131	7.8	308	Lt. Brn.	6-11-65
Gulch Cr.	14	6	21	Wisconsin River	1.6	3.2	4	0.42	6.7	20	0.0	1,6	89	7.6	203	Clear	8-24-65
Klein Creek	17	5	29	Castle Rock Flowage	1.8	2.9	5	0.64	10.4	13.3	0.0	6	80	7.7	185	Clear	7-20-65
Lawrence Cr.	17	7	36	Montello River	3.0	1.1	22.6	10.5	1.0	5	2.14	1,6	155	7.5	322	Clear	7-26-65
Leola Ditch	20	6	13	Fourteenmile Cr.	12.4	7.3	14	15.18	20.3	-	0.0	1,6	156	7.2	391	Clear	6-3-65
Lit. Roche-a-Cri Cr.	17	5	5	Castle Rock Flowage	40.3	13.3	25	28.1	134.1	6.2	0.08	1,2,6	106	7.6	230	Clear	7-14-65
Neenah Cr.	15	7	12	Fox River	6.2	6	8.5	12.71	24.3	12	0.2	1,6	160	7.4	326	Clear	8-5-65
Peppermill Cr.	15	7	12	Neenah Cr.	2.1	1.6	11	1.85	3.1	13.3	0.0	3,5,6	144	7.8	282	Clear	8-6-65
Plainville Cr.	14	6	8	Wisconsin River	1.3	2.2	5	1.87	8.5	22.8	0.0	6	109	7.3	218	Clear	8-23-65
Risk Cr.	16	6	19	Fairbanks Cr.	1.4	1.6	7	2.04	15.2	17.5	0.0	1,6	93	7.4	202	Clear	8-3-65
Shadduck Cr.	14	6	17	Wisconsin River	1.3	2.3	4.5	0.18	6.1	28.6	0.0	6	82	7.2	206	Clear	8-24-65
So. Br. Neenah Cr. (Big Springs Cr.)	14	7	26	Neenah Creek	3.7	1.8	17	14.64	8.0	13.3	0.0	1,2,3, 5,6	188	7.8	368	Clear	8-20-65
Spring Branch	20	6	17	Fourteenmile Cr.	2.1	3.1	5.5	2.62	5.7	-	0.9	6	56	7.8	136	Lt. Brn.	6-11-65
Trout Creek	14	6	6	Wisconsin River	0.8	1.5	4.5	0.62	2.8	28.6	0.0	6	106	7.5	194	Clear	8-23-65
White Creek	15	5	3	Wisconsin River	14.9	4	26	27.15	63.1	6.7	0.0	1,6	98	7.4	208	Clear	8-3-65
Widow Green Creek (O'Keefe Cr.)	14	7	12	Neenah Creek	6.3	6.5	8	3.3	13.8	14.1	0.0	1,6	198	7.2	392	Clear	8-11-65
UNNAMED STREAMS																	
Big Flats Tn.																	
Creek 12-1	19	6	12	Big Roche-a-Cri Cr.	11.0	6.0	15.5	9.70	9.8	-	0.0	6	106	7.9	278	Clear	6-17-65
Creek 35-11	19	6	35	Carter Creek	0.1	0.4	2.3	0.08	1.4	-	0.0	6	81	7.7	175	Med. Brn.	6-24-65
Colburn Tn.																	
Creek 3-11	19	7	3	Creek 12-1	2.2	2.6	7	1.29	2.2	-	0.0	6	83	7.9	267	Clear	6-16-65
Creek 3-16c	19	7	3	Creek 3-11	0.6	0.8	6	0.79	1.0	-	0.0	6	77	8.0	235	Clear	6-16-65
Creek 3-16d	19	7	3	Creek 3-16c	0.3	0.5	5	0.68	0.2	-	0.0	6	85	8.1	237	Clear	6-16-65
Creek 22-5	19	7	22	Dry Creek	3.6	2.7	11	0.68	1.3	-	0.0	6	112	7.4	252	Clear	6-22-65

Appendix II – PHYSICAL AND CHEMICAL DATA OF ADAMS COUNTY STREAMS (Continued)

UNNAMED STREAMS	Outlet Location T-N	R-E	Sec.	Watershed	Surface Acres	Length (miles)	Av. Width (feet)	Flow* (c.f.s.)	Approx. Watershed Area (sq. mi.)	Gradient (feet/ mile)	Miles of Public Frontage	Fishery (See code)	Methyl Purple Alkalinity (ppm)	pH	Specific Conductance (mmhos-77°F)	Water Color	Date of Sampling
Easton Tn.																	
Creek 18-2	16	6	18	Fairbanks Cr.	0.2	1.2	1.5	0.01 +	5.0	12.5	0.0	6	92	7.4	259	Lt. Brn.	7-27-65
Creek 27-10	16	6	27	Campbell Cr.	0.1	0.4	2	0.04 +	3.5	33.3	0.0	1,6	130	8.2	310	Clear	7-27-65
Creek 35-8	16	5	35	White Creek	3.9	5.6	5	0.67	9.6	9.7	0.0	6	61	7.7	135	Clear	8-4-65
Jackson Tn.																	
Creek 2-7	15	7	2	Neenah Creek	0.4	0.8	4.5	2.10	0.6	-	0.0	1,6	180	7.3	363	Clear	8-5-65
Leola Tn.																	
Creek 2-11	20	7	2	Creek 7-7	1.0	0.5	15	1.01 +	0.6	-	0.0	6	116	8.0	276	Clear	5-14-65
Creek 4-6	20	7	4	Creek 4-11	1.2	1.5	6.5	0.52 +	1.3	-	0.0	6	139	7.6	344	Med. Brn.	5-14-65
Creek 4-11	20	7	4	Creek 7-7	2.5	1.3	16	8.1 +	2.0	-	0.0	6	122	7.8	290	Clear	5-14-65
Creek 5-11	20	7	5	Creek 7-7	0.9	0.6	12	1.3 +	0.7	-	0.0	6	144	8.5	401	Med. Brn.	5-18-65
Creek 6-11	20	7	6	Creek 7-7	3.0	2.7	9	0.83 +	1.5	-	0.0	6	131	7.1	328	Lt. Brn.	5-14-65
Creek 7-7	20	7	7	Fourteenmile Cr.	8.7	5.5	13	18.17	8.0	-	0.0	6	133	7.3	300	Clear	6-2-65
Creek 10-11	20	7	10	Leola Ditch	0.5	0.6	7	1.14 +	0.7	-	0.0	6	177	8.0	574	Lt. Brn.	5-18-65
Creek 10-16	20	7	10	Leola Ditch	0.4	0.5	7	1.03 +	0.8	-	0.0	6	177	7.4	536	Lt. Brn.	5-18-65
Creek 29-6	20	7	29	Creek 13-13	1.6	0.9	14	3.76 +	1.0	-	0.0	6	100	8.0	299	Clear	5-19-65
Creek 29-11	20	7	29	Creek 32-6	0.9	1.3	6	1.18 +	0.7	-	0.0	6	106	7.8	256	Med. Brn.	5-20-65
Creek 32-6	20	7	32	Big Roche-a-Cri Cr.	0.4	0.5	6	0.98 +	1.0	-	0.0	6	101	7.5	241	Med. Brn.	5-20-65
Lincoln Tn.																	
Creek 6-5	17	7	6	Fordham Cr.	0.6	1.0	5	0.41	2.1	12.5	0.0	1,6	135	7.9	272	Clear	7-26-65
Monroe Tn.																	
Creek 30-8	19	5	30	Petenwell Flowage	2.2	1.5	12.5	1.16 +	1.1	-	0.0	6	90	8.0	232	Clear	6-28-65
New Chester Tn.																	
Creek 26-11	16	7	26	Neenah Cr.	0.1	0.6	1	0.00 +	1.4	10	0.0	6	61	7.6	119	Clear	7-29-65
New Haven Tn.																	
Creek 22-16	14	7	22	Lake 27-1	1.2	0.4	2.5	0.73	0.4	10	0.0	6	199	7.1	392	Clear	8-13-65
Creek 24-15	14	7	24	Mason Lake	1.0	3.3	25	0.21	9.4	13.3	0.0	6	249	7.6	438	Turbid	8-12-65
Creek 25-1	14	7	25	Creek 25-4	0.1	0.5	3	0.36	0.1	-	0.0	6	203	7.3	384	Clear	8-12-65
Creek 25-4	14	7	25	Mason Lake	0.2	0.5	3.5	0.43	0.1	-	0.0	6	198	7.2	377	Clear	8-12-65
Creek 27-6	14	7	27	So. Br. Neenah Cr.	0.8	1.0	7	3.84	5.2	-	0.0	1,6	201	8.2	403	Clear	8-19-65
Preston Tn.																	
Creek 17-16	18	6	17	Carter Cr.	0.7	1.8	3.0	0.07 +	6.0	-	0.0	6	151	7.6	323	Clear	7-2-65
Creek 35-16	18	6	35	Fordham Cr.	0.7	1.2	5.0	0.98	1.5	20.0	0.0	1,6	89	7.8	190	Clear	7-9-65
Quincy Tn.																	
Creek 18-8	16	5	18	Creek 18-12	13.6	2.8	40	1.36	6.0	4.2	0.0	1,6	103	7.5	213	Clear	8-5-65
Creek 18-12 (E. Castle Rock Ditch)	16	5	18	Wisconsin River	18.2	3.0	50	53***	7.1	3.3	0.0	1,6	80	7.0	206	Lt. Brn.	8-4-65
Richfield Tn.																	
Creek 6-7	18	7	6	Creek 17-16	0.7	1.4	4.0	0.0	1.1	-	0.0	6	130	7.7	294	Drk. Brn.	6-28-65
Creek 10-7	18	7	10	Little Roche-a-Cri Cr.	0.5	0.3	15.0	0.0	1.4	-	0.0	6	63	8.0	259	Clear	6-29-65
Creek 18-6aa	18	7	18	Bingham Cr.	0.2	0.4	4.5	0.28 +	0.1	-	0.0	6	137	8.0	294	Lt. Brn.	6-30-65

Appendix II – PHYSICAL AND CHEMICAL DATA OF ADAMS COUNTY STREAMS (Continued)

UNNAMED STREAMS	Outlet Location T-N	R-E	Sec.	Watershed	Surface Acres	Length (miles)	Av. Width (feet)	Flow* (c.f.s.)	Approx. Watershed Area (sq. mi.)	Gradient (feet/ mile)	Miles of Public Frontage	Fishery (See code)	Methyl Purple Alkalinity (ppm)	pH	Specific Conductance (mmhos-77°F)	Water Color	Date of Sampling
Rome Tn.																	
Creek 12-12	20	6	12	Fourteenmile Cr.	0.3	0.6	3.5	0.10‡	0.4	-	0.0	6	120	7.3	270	Med. Brn.	6-4-65
Creek 13-13	20	6	13	Leola Ditch	9.8	7.6	11.5	5.91	14.1	-	0.62	6	141	7.8	373	Lt. Brn.	6-4-65
Creek 13-16	20	6	13	Creek 13-13	8.2	5.2	13	5.57	5.2	-	0.0	6	134	7.5	316	Lt. Brn.	6-3-65
Creek 11-7 (Chester Cr.)	20	5	11	Petenwell Flowage	5.6	1.4	34.5	4.57	1.1	-	0.0	1,6	83	8.1	189	Clear	6-14-65
Springville Tn.																	
Creek 19-10	15	6	19	Creek 24-16	0.6	0.1	47	5.21	0.1	-	0.0	6	117	7.3	244	Clear	8-10-65
Creek 32-13	15	6	32	Corning Cr.	0.2	0.3	4	1.18	3.5	-	0.0	1,6	119	7.2	253	Clear	8-10-65
Creek 24-16	15	5	24	Wisconsin River	5.9	0.6	81	9.92	5.0	-	0.0	6	110	7.5	232	Clear	8-11-65
Strongs Prairie Tn.																	
Creek 1-4	18	5	1	Dead Horse Creek	0.2	0.4	4.0	0.61‡	0.9	-	0.0	6	33	8.0	122	Lt. Brn.	7-16-65
Creek 2-8	18	4	2	Creek 10-2	3.4	1.4	20.5	11.7 ‡	0.2	-	0.0	6	85	7.1	241	Clear	7-19-65
Creek 2-10	18	4	2	Wisconsin River	4.2	1.5	23	36.13‡	0.5	-	0.0	6	80	7.1	230	Lt. Brn.	7-19-65
Creek 23-14	18	4	23	Castle Rock Flowage	4.1	1.0	34	4.97‡	3.1	-	0.0	6	70	7.4	169	Lt. Brn.	7-16-65
TOTALS AND AVERAGES – NAMED STREAMS			26		323.0	157.8					16.42		116.2	7.6	248		
UNNAMED STREAMS			47		126.8	76.7					.62		119.9	7.6	284.9		
GRAND TOTALS AND AVERAGES			73		449.8	234.5					17.04		118.6	7.6	271.7		

Fishery Code:
1. Trout
2. Northern pike
3. Largemouth bass
4. Smallmouth bass
5. Panfish
6. Forage fish

*Where possible, flow data were gathered from the lower third of the streams investigated. Unless otherwise indicated, all flows were determined by metering. The locations of metering stations are shown in Figure 5.

‡Floating chip method used in determining flow.

**Campbell Creek is actually that portion of White Creek upstream from the confluence of Fairbanks Creek. It is treated as a separate stream in this report since it is known locally as Campbell Creek and as the U.S.G.S. topographic map has it named as such.

***Flow given is an average of 51 readings taken by the Wisconsin River Power Co. from Feb., 1957, through Sept., 1964.

Appendix III Definitions

To facilitate data collection and reporting, several technical terms are employed with which some readers may not be familiar. The following definitions should serve to clarify the meaning of these terms.

acidity - Is the preponderance of hydrogen (H) ions, which are acid, over base (OH) ions that are alkaline. It is ordinarily expressed as a pH less than seven.

alkalinity - A measure of the carbonates, bicarbonates, and hydroxides present in a sample of water, expressed as parts per million (ppm) calcium carbonate. In this report, alkalinity, determined with the acid-base indicator methyl purple, is assumed to represent total alkalinity.

aquatic plant types:

floating - Plants whose leaves normally float on the water surface such as duckweed, white water lily, and yellow pond lily, for example.

emergent - Plants whose leaves mostly emerge from the water such as cattail, pickerel weed, and arrowhead, for example.

submergent - Plants whose leaves are mostly beneath the water surface such as coontail, water milfoil, and bladderwort, for example.

dabbler or puddle ducks - Ducks characteristic of small streams, ponds, and marshes and who obtain their food at or near the water surface by dabbling or tipping rather than diving. Examples include mallard, black duck, pintail, wood duck, and teal.

diving ducks - Ducks more commonly found on the more open bodies of water, such as large rivers and lakes, who dive for their food. When taking off from water, they run along the surface before taking wing instead of springing up. Examples include bluebill, redhead, canvasback, bufflehead, goldeneye, and ringnecked duck.

drainage area - The land area where runoff flows directly into only a particular lake or stream, as differentiated from watershed area. The drainage area for a stream includes only the area within the county that is drained. The drainage area for a lake includes the total area, including that from other counties.

fertility classification - Used in Adams County report and in part from Moyle, 1946.

Total alkalinity	Classification	Productivity	General
9.0 - 20.0	very soft	low	infertile
21.0 - 40.0	soft	low-medium	fairly fertile
41.0 - 90.0	medium hard	medium-high	moderately fertile
90.0 and higher	hard	high	very fertile

lake types:

drainage - Lake or impoundment having an inlet and outlet.

drained - Lake that has no inlet, but has an outlet of no substantial flow.

seepage - Lake having no visible inlet or outlet. It is dependent upon groundwater seepage to maintain its level.

spring-fed - Lake or impoundment having no inlet, but has an outlet of substantial flow which reflects spring sources. These sources may be marginal or internal springs.

littoral zone - That part of the lake basin around the shore which is occupied by rooted aquatic plants. In this report, it refers to the shoreward part of the basin visible to the naked eye.

pH - The negative logarithm of the hydrogen ion concentration expressed in gram equivalents. A pH of less than 7.0 is acid, a pH of 7.0 neutral, and one more than 7.0 is alkaline.

shoreline development factor (S.D.F.) - A method of expressing the degree of irregularity of the shoreline of a lake. It is the ratio of the length of shoreline to the circumference of a circle having the same area as a lake. The number is therefore never less than 1.00.

soil bottom types:

sand - Particles having diameters of 0.125 inch or less.

gravel - Has a diameter of 0.125 to 3.0 inches.

rock - Includes rubble (3.0 to 12.0 inches in diameter), rock 12.0 inches and larger in diameter, and bedrock.

muck - Includes detritus, silt, clay, and marl.

specific conductance - A measure of the ability of water to conduct an electric current. It is therefore a measure of the total dissolved electrolytes in water and has use in determining relative purity of waters. The unit of measurement is reciprocal megohms or microhms, as measured at 77°F. (25°C.).

transparency - It is a measure of vertical distance that can be seen into water using an instrument known as a secchi disk. The distance a secchi disk can be seen is influenced by a number of factors including amount of sunlight, turbidity, and water color to mention a few. Where secchi disks can be seen at depths not exceeding 5.5 feet, the transparency is low; 6.0 to 12.0 feet, moderate; 12.5 to 20.0 feet, high; and 20.5 feet and deeper, very high.

unimproved or difficult access - An access of this type exists when a public road of any kind which permits vehicular traffic passes within 200 feet of the shoreline of a lake or stream but does not permit direct access. Also, the land between the road and the water must be in public ownership.

water color - As used in this report, water was either clear, light brown, medium brown, or dark brown. The color was determined of samples taken directly from the water; therefore, apparent color rather than true color was measured as it included not only that color produced by materials in solution, but also any color produced by substances in suspension. According to the American Public Health Association (1949), true and apparent color of clear water having low turbidity, is nearly alike.

wetlands - Any area where the water table is at such a level that raising of a cultivated crop, other than cranberries, is usually not possible. Wetland classifications include bogs, fresh meadow, shallow marsh, deep marsh, shrub swamp, and timber swamp.

wilderness access - An access of this type exists when there are no roads open to vehicular traffic within 200 feet of a lake or stream and where the land lying between the nearest road and the water is in public ownership.

winterkill - A fish mortality in ice and snow covered lakes resulting from the depletion of dissolved oxygen in the water to a level where it is no longer capable of supporting fish life. The high oxygen demand of, and the formation of methane, carbon dioxide, hydrogen sulfide and other gases by the decay of organic matter contribute to the kill. Winterkills usually occur in shallow or very fertile lakes, or in shallow bay areas of deeper lakes.

SURFACE WATER RESOURCE PUBLICATIONS

Adams County	1966
Barron County	1964
Chippewa County	1963
Clark County	1965
Columbia County	1965
Dane County	1962
Dodge County	1965
Door County	1966
Dunn County	1962
Eau Claire County	1964
Green County	1961
Kenosha County	1961
Kewaunee County	1966
Marquette County	1963
Menominee County	1963
Milwaukee County	1964
Ozaukee County	1964
Polk County	1961
Racine County	1961
St. Croix County	1961
Vilas County	1963
Walworth County	1961
Washington County	1962
Waukesha County	1963

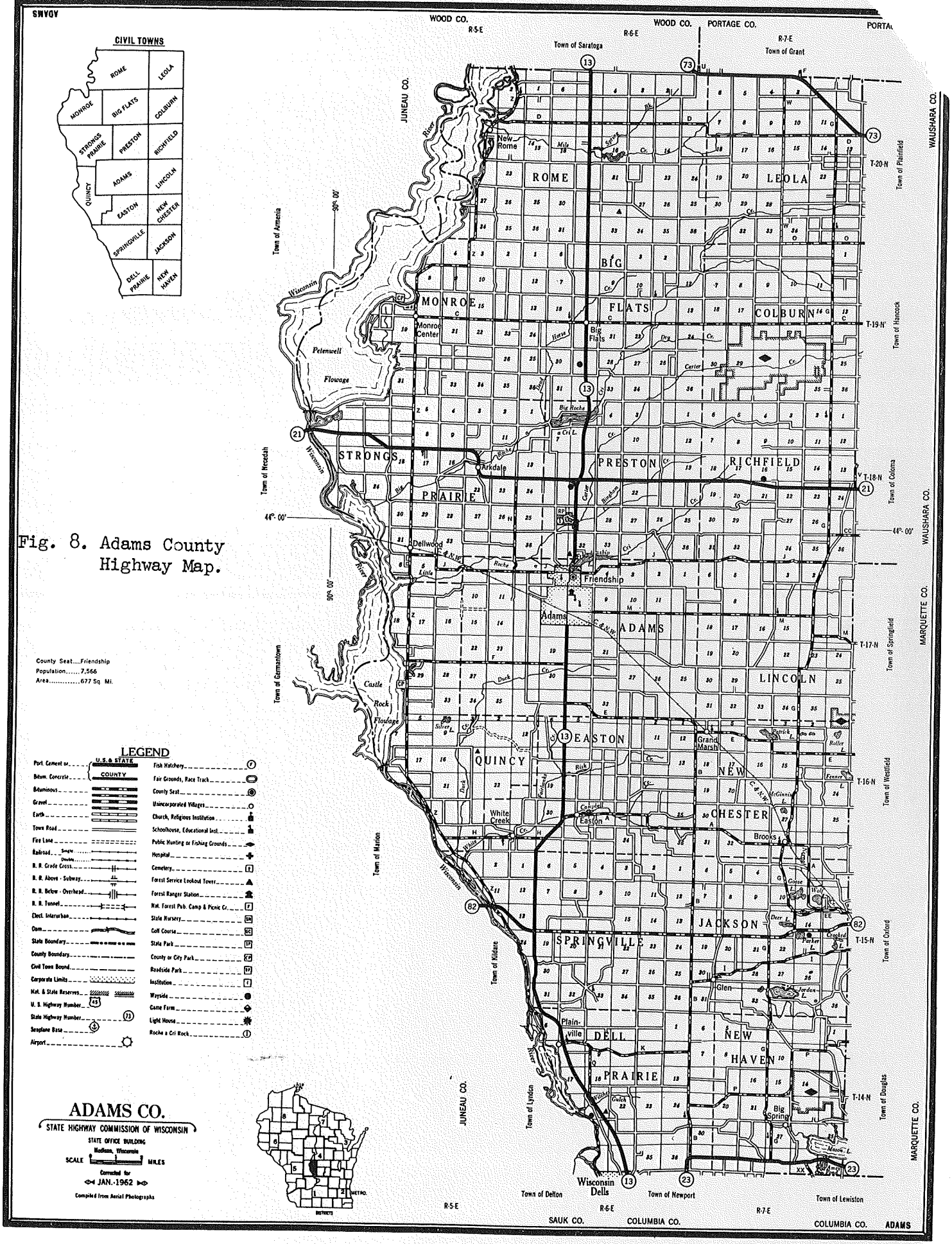

Fig. 8. Adams County Highway Map.

County Seat....Friendship
Population.....7,566
Area.....677 Sq. Mi.