MASTER PLAN STUDY
LAKE MACBRIDE STATE PARK
IOWA CONSERVATION COMMISSION

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MASTER PLAN STUDY
LAKE MACBRIDE STATE PARK

JOHNSON COUNTY, IOWA

SEPTEMBER, 1978

PRELIMINARY ONLY

IOWA CONSERVATION COMMISSION
WALLACE STATE OFFICE BUILDING
DES MOINES, IOWA

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SUPPORTING FACILITIES FOR THE PARK WERE COMPLETED IN 1937, AND WHEN THE PARK WAS OFFICIALLY OPENED ON JUNE 15, 1937, ALL CONSTRUCTION WAS COMPLETE AND OVER 3,000 PEOPLE VISITED THE PARK. THE PARK WAS DEDICATED LAKE MACBRIDE STATE PARK IN HONOR OF THE LATE THOMAS HOUSTON MACBRIDE, PRESIDENT EMERITUS OF THE UNIVERSITY OF IOWA, AND A NOTED BOTANIST AND EDUCATED IN THE AREA 40 YEARS EARLIER. WITH THE OPENING OF THE PARK, AREA CONSERVATIONISTS SAW THEIR GOALS FOR THE AREA FINALLY ACCOMPLISHED, THAT IS, CONSERVATION OF THE SOIL, THE SURFACE WATERS, AND THE WOODLAND AREAS AND PRESERVATION OF A HAVEN FOR MANY SPECIES OF FISH, WATERFOWL, MARSH WILDLIFE, ANIMALS, FLOWERS, TREES, AND NEARLY ALL BIRDS TO BE FOUND IN IOWA.

IN ANTICIPATED OF THE CONSTRUCTION OF A DAM ON THE IOWA RIVER NORTH OF IOWA CITY BY THE U.S. ARMY CORPS OF ENGINEERS, A MASTER PLAN FOR AN ENLARGED LAKE MACBRIDE STATE PARK WAS APPROVED BY THE IOWA STATE CONSERVATION COMMISSION IN 1947. JUST THREE YEARS LATER, THE CORPS OF ENGINEERS BEGAN PURCHASING ALL LAND SURROUNDING LAKE MACBRIDE WHICH LAID BELOW ELEVATION 717. IN MARCH, 1956, THE CORPS OF ENGINEERS WAS GIVEN APPROVAL TO COMPLETE REMEDIAL WORK AT THE PARK AND ON OCTOBER 17, 1956, THE DRAIN FLUME OF THE OLD DAM WAS OPENED. IT TOOK TEN DAYS TO DRAIN THE LAKE AND DURING THIS TIME FISHERIES PERSONNEL RESCUED GAME FISH, THEN TRANSPORTED AND RESTOCKED THEM IN OTHER LAKES THROUGHOUT IOWA.

IN MARCH, 1957, FIVE FIRMS SHARED IN A CONTRACT FOR $162,569 FOR RELOCATION OF THE BATHING, BOATING, AND PICNIC FACILITIES IN THE PARK AND FOR CONSTRUCTION OF A NEW HOUSE FOR THE CUSTODIAN. THIS WORK PROCEEDED AT THE SAME TIME THAT DIFFERENT CONTRACTORS WERE COMPLETING THE NEW DAM, SPILLWAY, AND SEWERS. THE NEW SPILLWAY WAS BLASTED FROM A SOLID ROCK BLUFF AND DAM HEIGHT WAS RAISED 28 FEET BY ADDING TO THE TOP AND SIDES OF THE OLD DAM. ALL DAM CONSTRUCTION WAS COMPLETED IN NOVEMBER, 1957, AND IN DECEMBER, 1957, THE VALVE WAS CLOSED WHICH BEGAN THE IMPOUNDING OF WATER IN LAKE MACBRIDE. WATER FLOWED OVER THE SPILLWAY FOR THE FIRST TIME IN JANUARY, 1960, THEREBY CREATING IOWA'S LARGEST STATE-OWNED ARTIFICIAL LAKE AT 950 ACRES. WHILE A NEW PARK CUSTODIAN'S RESIDENCE WAS BUILT AT THE NEW MAIN ENTRANCE AREA, THE ORIGINAL RESIDENCE WAS MAINTAINED FOR THE MANAGER OF THE CABINET AND SIGN SHOP. THIS SHOP, OPENED IN 1948, STILL TURNS OUT PICNIC TABLES, FURNITURE, AND SIGNS FOR ALL STATE PARKS IN IOWA.

HOMES IN THE PRIVATE COTTAGE AREA, WHICH WOULD BE BELOW THE NEW LAKE WATER LEVEL, HAD BEEN PURCHASED AND OWNERS WERE PERMITTED TO REPURCHASE THEM FOR MOVEMENT TO HIGHER LOCATIONS. A WASTE WATER TREATMENT PLANT WAS BUILT ALONG WITH SEWAGE LINES, SEPIC TAKES, AND FILTER BEDS.

ON SEPTEMBER 2, 1959, THE IOWA STATE CONSERVATION COMMISSON ACCEPTED BY LICENSE THE 1,118 ACRES SURROUNDING LAKE MACBRIDE FROM THE CORPS OF ENGINEERS, WHICH HAD BEEN PURCHASED FOR PARK RECONSTRUCTION. ALL REMEDIAL WORK NECESSARY FOR PARK

REDEVELOPMENT WAS PAID FOR BY THE CORPS AND WAS OFFICIALLY COMPLETED IN JANUARY, 1960. ON THE 13TH OF THAT MONTH WATER BEGAN RUNNING OVER THE NEW SPILLWAY FOR THE FIRST TIME. THE CLIMAX FOR A SECOND LAKE MACBRIDE STATE PARK CAME IN MAY, 1960, WHEN FISHING AND THE NEW BEACH WERE OPENED TO THE PUBLIC FOR THE FIRST TIME.

WHEN LAKE MACBRIDE STATE PARK WAS IN ITS INFANCY, 700 MEMBERS OF THE IOWA JUNIOR FARM BUREAU HELD THE FIRST PICNIC IN THE PARK ON JUNE 16, 1935. IN THE FIRST SEASON FOLLOWING REMEDIAL WORK, 1960, THERE WERE 3,902 CAMPERS IN THE PARK. THE POPULARITY OF LAKE MACBRIDE STATE PARK HAS INCREASED RAPIDLY SEASON AFTER SEASON PRIMARILY DUE TO ITS LOCATION AND PROXIMITY TO THE CORALVILLE RESERVOIR, THE UNIQUENESS OF THE RECREATION EXPERIENCE POSSIBLE AT THE LAKE, AND AN OVERALL INCREASE IN OUTDOOR RECREATION ACTIVITY SINCE THE 1950'S.

TO MEET THE DEMAND OF INCREASED USAGE NEW ACCESS ROADS, PARKING LOTS, PICNIC AREAS, SHELTERS, AND LATRINES HAVE BEEN BUILT. PRIMITIVE AND MODERN CAMPING AREAS ON THE NORTH AND SOUTH PARK AREAS HAVE BEEN IMPROVED AND EXPANDED. A NEW BOAT STORAGE AND LAUNCHING RAMP FOR THE EVER INCREASING SAILBOAT ENTHUSIASTS WAS CONSTRUCTED, AT VARIOUS LOCATIONS AROUND THE LAKE EARTHEN JETTIES WERE INSTALLED FOR FISHERMEN'S USE, AND WINDBREAK PROTECTION OF SHORELINE AND PERIODIC PLACEMENT OF RIPRAP FOR SHORELINE PROTECTION HAVE BEEN UNDERTAKEN. RECENTLY SNOWMOBILE TRAILS HAVE BEEN LAYED OUT AND MARKED THROUGH A LARGE PORTION OF THE PARK. IN 1963 A ROAD WAS BUILT TO THE NORTH END OF THE DAM AND ON A SITE OVERLOOKING THE DAM AND THE CORALVILLE RESERVOIR A FISHERIES MANAGEMENT STATION WAS BUILT AND STAFFED TO SERVE THE FISHING WATERS OF EAST CENTRAL IOWA. THROUGH THE YEARS THE IOWA STATE CONSERVATION COMMISSION HAS CONTINUED TO EXPAND ON DEVELOPMENT OF LAND, FACILITIES, AND MAINTENANCE CAPABILITIES AS FUNDS ARE AVAILABLE.

PURPOSE OF THE MASTER PLAN STUDY

THE PURPOSE OF THIS STUDY IS TO PROVIDE THE IOWA STATE CONSERVATION COMMISSION WITH AN OFFICIALLY ADOPTED, DETAILED, LONG-RANGE MASTER PLAN, OUTLINING THE DEVELOPEMENT OF INTERPRETATION, RECREATION, AND MANAGEMENT PROGRAMS AND FACILITIES AT LAKE MACBRIDE STATE PARK; ALL OF WHICH ARE CONSISTENT WITH THE ADOPTED AREA AND AGENCY GOALS AND OBJECTIVES. THE MASTER PLAN SERVES NOT ONLY AS A TOOL FOR THE COMMISSION STAFF DURING REDEVELOPMENT BUT ALSO AS A LONG-RANGE CAPITAL BUDGET PROGRAM FOR USE BY COMMISSION ADMINISTRATION IN PREPARATION OF THE BIENNIAL BUDGET REQUEST. THE MASTER PLAN STUDY BRINGS TOGETHER IN A LOGICAL AND COMPREHENSIVE TECHNIQUE ALL ELEMENTS AND EXPERTISE WHICH MUST MUTUALLY INTERACT TO PROVIDE AN EFFECTIVE AND HIGH-QUALITY PUBLIC FACILITY; NOT ONLY IN THE SENSE OF PHYSICAL CONSTRUCTION, BUT ALSO, OPERATION, MAINTENANCE, AND FUTURE PROGRAMMING. THROUGH A MASTER PLAN, THE COMMISSION MEETS ITS OBLIGATION TO SERVE THE PUBLIC

INTEREST BY PROFESSIONALLY WEIGHING BOTH THE NEGATIVE ASPECTS AND POSITIVE FACTORS TO ASSURE THAT LONG-TERM BENEFITS ARE COMMENSURATE WITH THEIR REAL COST. DUE TO CONSTANTLY CHANGING SOCIAL VALUES, LEGISLATION, BUDGET LEVELS, AND COMMISSION PROGRAMMING, A MASTER PLAN CAN NEVER BE A PERFECTLY COMPLETE DOCUMENT NOR A STATIC PLAN. CONTINUING UPDATING IS ESSENTIAL. A HIGH QUALITY MASTER PLAN CAN, HOWEVER, PROVIDE A SOUND FOUNDATION OF GOALS AND OBJECTIVES ON WHICH COUNTLESS FUTURE MODIFICATIONS CAN BE PLACED AS NEEDED.

MASTER PLANNING PROCESS

IN MARCH, 1976, THE IOWA STATE CONSERVATION COMMISSION APPROVED A PLANNING POLICY AND PROCEDURE FOR THE PREPARATION OF AREA PLANS (SEE APPENDIX A). THIS PROCEDURE PROVIDES FOR THE MAXIMUM AMOUNT OF MULTI-DISCIPLINARY STAFF INVOLEMENT, PUBLIC REVIEW, AND COMMISSION REVIEW AND OFFICIAL ACTION. IT ALSO REQUIRES THAT EACH PLAN INCLUDE INFORMATION UPON WHICH DECISIONS MADE IN THE PROCESS ARE BASED. A PART OF THE PLANNING PROCEDURE IS THE SCHEDULING OF ALL COMMISSION AREAS FOR PLAN PREPARATION. LAKE MACBRIDE STATE PARK WAS DETERMINED A HIGH PRIORITY FOR PLANNING. ONCE AN AREA HAS BEEN SELECTED, THE PREPARATION OF THE PLAN IS CONDUCTED ACCORDING TO THE 14-STEP PROCESS. AS INDICATED IN THE PLANNING PROCESS INSTRUCTION, THE STAFF, WITH COMMISSION CONCURRENCE, CAN WAIVE SEVERAL OF THE 14 STEPS. DUE TO THE SIGNIFICANCE OF THIS PARTICULAR PROJECT, THE ENTIRE 14-STEP PROCESS HAS BEEN EMPLOYED.

THE FIRST STEP OF THE PROCESS CALLS FOR THE ESTABLISHMENT OF A COMMISSION STAFF TASK FORCE. THE CHAIRPERSON OF THIS TASK FORCE, APPOINTED BY THE CONTROLLING DIVISION CHIEF, IN EFFECT, IS RESPONSIBLE FOR ALL PRODUCTS OF THE PLAN. THE TASK FORCE CHAIRPERSON COORDINATES THE PREPARATION OF THE PLAN AND THE TASK FORCE MEMBERS ASSIST THE CHAIRPERSON IN PREPARATION OF THE PLAN BY PROVIDING TECHNICAL REVIEW AND DATA FOR INCORPORATION INTO THE FINAL DOCUMENT. THE COMMISSION HAS EXCLUSIVE AUTHORITY TO APPROVE A MASTER PLAN, BUT IT IS THE RESPONSIBILITY OF THE TASK FORCE TO WORK OUT PROBLEM RESOLUTIONS, DETERMINE THE POLICY DECISIONS NEEDED, AND FORMULATE A FINAL PLAN UPON WHICH THE COMMISSION CAN ACT.

STEPS 7 AND 11 OF THE PLANNING PROCESS BOTH REQUIRE A PUBLIC REVIEW OF THE PLAN DURING EARLY STAGES. STEP 7 CONSTITUTES A GENERAL OPEN MEETING HELD IN THE PROJECT VICINITY FOR THE BENEFIT OF ANYONE WISHING TO ATTEND AND/OR EXPRESS AN OPINION. STEP 11 REQUIRES THAT A SPECIFIC PUBLIC COMMITTEE BE SET UP TO REVIEW THE PLAN ON A MORE FORMAL BASIS. THE PUBLIC REVIEW COMMITTEE IS COMPRISED OF THOSE LOCAL GOVERNMENTS OR PUBLIC AGENCIES WHICH MUST COORDINATE AND COOPERATE WITH THE COMMISSION IN THE IMPLEMENTATION OF THE PROPOSED PLAN. WHILE THE PUBLIC REVIEW AT STEP 11 IS TARGETED FOR A SELECT COMMITTEE, THE GENERAL PUBLIC MAY ATTEND.

PUBLIC REVIEW COMMITTEE

LAKE MACBRIDE STATE PARK MASTER PLAN

CITY COUNCIL, SOLON, IOWA
DISTRICT CONSERVATIONIST, U.S. SOIL CONSERVATION SERVICE
THE EAST CENTRAL IOWA ASSOCIATION OF REGIONAL PLANNING COMMISSIONS
JOHNSON COUNTY BOARD OF HEALTH
JOHNSON COUNTY BOARD OF SUPERVISORS
JOHNSON COUNTY CONSERVATION BOARD
JOHNSON COUNTY REGIONAL PLANNING COMMISSION
JOHNSON COUNTY ZONING COMMISSION
STATE HISTORICAL DEPARTMENT, DIVISION OF HISTORIC PRESERVATION
U.S. ARMY CORPS OF ENGINEERS, ROCK ISLAND DISTRICT
UNIVERSITY OF IOWA
STATE ARCHAEOLOGIST

GOALS AND OBJECTIVES

STATEWIDE

CHAPTER 111.3 OF THE CODE OF IOWA SPECIFIES THE DUTY OF THE IOWA STATE CONSERVATION COMMISSION AS, "TO ESTABLISH, MAINTAIN, IMPROVE, AND BEAUTIFY PUBLIC PARKS AND PRESERVES UPON THE STREAMS OF LAKES, STREAM, OR OTHER WATERS OR AT OTHER PLACES WITHIN THE STATE WHICH HAVE BECOME HISTORICAL OR WHICH ARE OF SCIENTIFIC INTEREST, OR WHICH BY THE REASON OF THEIR NATURAL SCENIC BEAUTY OR LOCATION ARE ADAPTED THEREFORE. THE COMMISSION SHALL HAVE THE POWER UNDER SUCH PROVISION AND DIRECTION TO MAINTAIN, IMPROVE, OR BEAUTIFY STATE-OWNED PROPERTIES OF WATER AND TO PROVIDE AND OPERATE FACILITIES FOR THE PROPER PUBLIC USE OF THE AREAS ABOVE DESCRIBED."

COMMISSION-WIDE

IN ORDER TO PROVIDE A RESOURCE HERITAGE TO THE PEOPLE OF IOWA, THE COMMISSION HAS ESTABLISHED THE OBJECTIVE, "TO ENSURE OUR CITIZENS AND VISITORS TO THE STATE OF A RESOURCE HERITAGE, INCLUDING BIOLOGICAL, HYDROLOGICAL, AND CULTURAL RESOURCES IN SIGNIFICANT QUANTITY AND QUALITY TO MEET PRESENT NEEDS AND THE CHANGING FUTURE REQUIREMENTS WITH THE UTILIZATION OF THESE RESOURCES." REGARDING THE QUALITY OF THE RESOURCE HERITAGE, THE COMMISSION ADOPTED THE OBJECTIVE "TO PROVIDE THE HIGHEST STANDARD FOR THE SELECTION, DEVELOPMENT, AND MANAGEMENT OF THESE RESOURCES IN ORDER TO ENSURE A QUALITY OUTDOOR RECREATIONAL EXPERIENCE WHICH WILL IMPART A PSYCHOLOGICAL AWARENESS AND STIMULATE PHYSIOLOGICAL ENDEAVOR FOR THE ENJOYMENT OF OUR CITIZENS AND VISITORS TO THE STATE NOW AND IN THE FUTURE." AND LASTLY, REGARDING THE USE OF OUR RESOURCE HERITAGE, THE COMMISSION HAS ADOPTED THE OBJECTIVE, "TO FACILITATE THE USE AND ENJOYMENT OF THESE RESOURCES BY

PROVIDING SUCH AREAS AND FACILITIES SO AS TO ENSURE EQUAL OPPORTUNTY FOR AND FIRST CONSIDERATION TO THE GENERAL RESOURCE USER, THE ELDERLY, THE UNDERPRIVILEGED, AND THE HANDICAPPED NOW AND IN THE FUTURE."

SECTION-WIDE

ALL COMMISSION SECTIONS ARE NOW IN THE INITIAL STAGE OF THE COMMISSION-WIDE PLANNING PROGRAM IN WHICH THEY ARE SETTING DOWN THE GOALS AND OBJECTIVES FOR THE DEVELOPMENT AND MANAGEMENT OF STATE AREAS UNDER THEIR JURISDICTION. THE PARKS SECTION IS DEVELOPING A METHOD FOR CLASSIFYING AREAS UNDER ITS SUPERVISION; DESIGNATING THEM EITHER A STATE PARK/NATURAL AREA, A STATE PARK/RECREATION AREA, A STATE PARK/MULTIPURPOSE AREA, OR AN AREA TO BE TRANSFERRED TO A LOCAL GOVERNMENT FOR MANAGEMENT BECAUSE OF ITS LACK OF STATEWIDE SIGNIFICANCE. LAKE MACBRIDE STATE PARK MEETS THE CRITERIA FOR A STATE PARK/RECREATION AREA WHICH IS, "AN AREA SELECTED AND DEVELOPED PRIMARILY TO PROVIDE NONURBAN OUTDOOR RECREATION OPPORTUNITIES TO MEET DEMANDS BEYOND LOCAL NEEDS. THESE AREAS ARE USUALLY HIGHLY DEVELOPED AND MAY OR MAY NOT HAVE SCENIC OR SCIENTIFIC VALUES."

THE PARKS SECTION'S FIVE-YEAR GOALS AND OBJECTIVES ARE:

GOAL I

TO SECURE BUDGET AND PERSONNEL ADEQUATE TO ENSURE THAT EXISTING AS WELL AS PROPOSED AREAS ARE ADEQUATELY MAINTAINED AND PROGRAM/STUDY EFFORTS INITIATED AND IMPLEMENTED.

OBJECTIVES:

A) TO EXAMINE THE EXISTING "T.O.", IDENTIFY DEFICIENCIES THEREIN, AND ESTABLISH PRIORITIES FOR STAFF/EQUIPMENT AT BOTH FIELD AND SUPERVISORY LEVELS. THIS EFFORT TO INCLUDE THE UPGRADING OF POSITIONS WHERE NECESSARY TO REFLECT INCREASED INVOLVEMENT IN PROGRAM EFFORTS.

B) TO REQUEST BUDGET AND STAFF NECESSARY TO BEST ADDRESS THE PRIORITIES IDENTIFIED.

C) TO PROVIDE RESOURCE AND VISITOR PROTECTION AND ASSIST LOCAL AND STATE LAW ENFORCEMENT AGENCIES UPON REQUEST. INCREASE THE NUMBER OF PARK RANGERS IN ORDER TO PROVIDE ADEQUATE RESOURCE AND VISITOR PROTECTION. UPGRADE PARK ATTENDANT POSITIONS TO RANGER I'S IN THE LARGER PARKS AND THOSE NEAR MAJOR MUNICIPALITIES. ANNUALLY EXAMINE BOTH THE IOWA CODE AND COMMISSION POLICIES RELATIVE TO THEIR EFFECTIVENESS IN BOTH OVERALL AREA MANAGEMENT AND LAW ENFORCEMENT.

D) TO FORMULATE, IN COOPERATION WITH OTHER OPERATING SECTIONS, AN EFFICIENT MANAGEMENT STRUCTURE FOR EXISTING AND FUTURE STATE RECREATION AREAS.

E) TO CRITICALLY REVIEW THE IOWA CODE SECTIONS PERTAINING TO THE STATE PARKS SYSTEM, SUGGEST CLARIFICATIONS AND ADDITIONS WHERE NECESSARY, AND INITIATE THE CODE AMENDMENT PROCESS BY APPROPRIATE MEANS. TO DO SAME FOR COMMISSION POLICIES.

F) TO CONTINUE AND IMPROVE UPON ONGOING IN-SERVICE TRAINING PROGRAMS FOR ALL LEVELS OF PARKS SECTION PERSONNEL.

GOAL II

CONTINUE TO COORDINATE THE EFFORTS OF THE STATE PARKS SYSTEM WITH LOCAL, STATE, AND FEDERAL AGENCIES FOR PURPOSES OF GENERAL PROGRAM COORDINATION AND TO BRING PARK FACILITIES UP TO APPROPRIATE STANDARDS.

OBJECTIVES:

A) CONTINUE ONGOING EFFORTS TO BRING EXISTING SEWER AND WATER SYSTEMS UP TO ENVIRONMENTAL PROTECTION AGENCY STANDARDS. REQUEST SUFFICIENT FUNDING TO COMPLETE "HIGH PRIORITY" SEWER AND WATER PROJECTS, AS IDENTIFIED IN THE PARKS DRAFT PLAN.

B) CONTINUE TO CONFORM TO PERTINENT LOCAL AND STATE CODES OR ORDINANCES.

C) FORMULATE, IN COOPERATION WITH OTHER SECTIONS, COMMISSION POLICIES AND PREPARE (AND SUPPORT) APPROPRIATE STATE AND/OR FEDERAL LEGISLATION TO PROVIDE:

1) PAYMENT IN LIEU OF TAXES TO LOCAL AGENCIES.

2) COMPENSATION TO LOCAL AGENCIES FOR LAW ENFORCEMENT, FIRE, AND EMERGENCY SERVICES RENDERED ON COMMISSION PROPERTIES WHERE RESIDENT I.C.C. CAPABILITY DOES NOT EXIST (I.E. UNMANNED AREAS SUCH AS MARGO FRANKEL WOODS AND PREPARATION CANYON).

3) COMPENSATION TO LOCAL ENTITIES FOR ADDITIONAL IMPACTS TO PUBLIC FACILITIES AS A RESULT OF COMMISSION LANDS OR PROGRAMS (FOR EXAMPLE, TO HELP MAINTAIN ACCESS ROADS TO STATE PARKS).

GOAL III

IN ACCORDANCE WITH THE ADOPTED "FIVE-YEAR PLANNING PROGRAM FOR COMMISSION PROPERTIES", CONTINUE DEVELOPMENT AND REDEVELOPMENT PROJECTS ON COMMISSION PARK LANDS ACCORDING TO MASTER (OR DEVELOPMENT) PLANS. ATTAIN A TOTAL OF 15,509,000 ANNUAL ACTIVITY DAYS ON STATE PARKS SYSTEM AREAS BY 1982.

OBJECTIVES:

A) INITIATE AND COMPLETE PLANNING EFFORTS FOR PROGRAMMED AREAS IN ACCORDANCE WITH THE APPROVED FIVE-YEAR PLANNING PROGRAM.

B) CRITICALLY EXAMINE THE FIVE-YEAR PLANNING AND PARK AND INSTITUTIONAL ROAD PROGRAMS ON AN ANNUAL BASIS IN ORDER TO DETERMINE THE APPROPRIATENESS OF THE PRIORITIES WITHIN. MAKE ADJUSTMENTS IF NECESSARY.

C) UPON COMPLETION OF MASTER/DEVELOPMENT PLANS, MONITOR SUBSEQUENT DEVELOPMENT OR REDEVELOPMENT PROJECTS TO ENSURE CONFORMITY TO RECOMMENDED ACTIONS AND PRIORITIES. (THIS TO BE A RESPONSIBILITY OF THE PROPOSED ADDITIONAL ASSOCIATE SUPERINTENDENT OF PARKS POSITION.)

GOAL IV

TO IDENTIFY AND TO ENSURE BOTH THE CONTINUED EXISTENCE AND THE INTEGRITY OF THOSE LAND AND WATER AREAS SIGNIFICANT FOR NATURAL AND/OR RECREATIONAL REASONS.

OBJECTIVES:

A) TO IDENTIFY, IN COORDINATION WITH OTHER SECTIONS AND AGENCIES, THOSE AREAS FOR WHICH COMMISSION ACTION (ACQUISITION AND/OR "REMEDIAL") WILL BE NECESSARY TO HELP ATTAIN THE ABOVE GOAL.

B) TO COORDINATE WITH LOCAL, STATE, AND FEDERAL ENTITIES IN ORDER TO HELP ATTAIN THE ABOVE GOAL (FOR EXAMPLE, THROUGH INPUT INTO STATE AND COUNTY LAND-USE PLANNING EFFORTS).

C) TO DEVISE, PROPOSE, AND/OR SUPPORT APPROPRIATE LEGISLATION IN ORDER TO HELP ATTAIN THE ABOVE GOAL. THIS WOULD INCLUDE A MAJOR EFFORT TO ADDRESS BOTH WATERSHED CONTROL AND SHORELINE EROSION-CONTROL PROBLEMS.

D) TO MAKE THE COMMISSION'S POSITION KNOWN ON LOCAL, STATE, AND FEDERAL LEGISLATION AND/OR PROGRAMS WITH RELEVANCE TO THE ABOVE GOAL.

GOAL V

FORMULATE AND IMPLEMENT AN IOWA SCENIC RIVERS PROGRAM.

OBJECTIVES:

A) REQUEST STAFF AND BUDGET NECESSARY TO CARRY OUT A COMPREHENSIVE IOWA SCENIC RIVERS STUDY.

B) COMPLETE THE STATE SCENIC RIVERS STUDY.

C) SECURE THE NECESSARY FUNDING AND MANPOWER (FULL TIME) TO BEGIN IMPLEMENTATION OF THE PROGRAM.

GOAL VI

FORMULATE AND IMPLEMENT AN IOWA TRAILS PROGRAM.

OBJECTIVES:

A) REQUEST STAFF AND BUDGET NECESSARY TO CARRY OUT A COMPREHENSIVE STATE SCENIC TRAILS STUDY.

B) COMPLETE THE STATE TRAILS STUDY.

C) SECURE THE NECESSARY FUNDING (AND POSSIBLY STAFF) TO BEGIN IMPLEMENTATION OF THE PROGRAM.

GOAL VII

DEVELOP AND IMPLEMENT A FORMAL INTERPRETIVE PROGRAM FOR IOWA STATE PARKS.

OBJECTIVES:

A) CARRY OUT (BY CONSERVATION EDUCATION CENTER STAFF) A COMPREHENSIVE INTERPRETATION/CONSERVATION EDUCATION STUDY.

B) REQUEST BUDGET AND STAFF NECESSARY TO BEGIN IMPLEMENTATION OF STATE INTERPRETIVE SYSTEM. AS AN INITIAL OR "PILOT-PROJECT", DEVELOP AN INTERPRETIVE PROGRAM IN CONJUNCTION WITH THE DEVELOPMENT OF THE PROPOSED LEDGES STATE PARK INTERPRETIVE FACILITY.

C) EXPAND THE INTERPRETIVE PROGRAM IN ACCORDANCE WITH THE OVERALL STATEWIDE PLAN.

THE SITE

LOCATION/ACCESS

LAKE MACBRIDE STATE PARK IS LOCATED ON THE SOUTHERN BORDER OF THE LANDSCAPE OF THE IOWAN SURFACE NEAR THE IOWA RIVER AND CORALVILLE LAKE, A U.S. ARMY CORPS OF ENGINEERS' FLOOD-CONTROL RESERVOIR ON THE IOWA RIVER. THIS AREA IS MODERATELY POPULATED; WITHIN A 50-MILE RADIUS OF THE PARK IS A POPULATION IN EXCESS OF 280,000.1 LAKE MACBRIDE IS APPROXIMATELY 14 MILES NORTH OF IOWA CITY AND INTERSTATE 80, FOUR MILES EAST OF INTERSTATE 280, AND SIXTEEN MILES SOUTH OF CEDAR RAPIDS, IOWA'S SECOND LARGEST CITY. ADEQUATE ACCESS TO THIS SITE IS PROVIDE OVER A SYSTEM OF STATE AND COUNTY HIGHWAYS. (SEE FIGURE 1.) MAJOR METROPOLITAN AREAS WITHIN TWO TO FIVE HOURS DRIVING TIME ARE: DES MOINES, DAVENPORT/ROCK ISLAND/MOLINE, KANSAS CITY, OMAHA/COUNCIL BLUFFS, AND ST. LOUIS. APPROXIMATELY 9 MILLION PEOPLE ARE ESTIMATED TO LIVE WITHIN THIS "HALF-A-DAY" DISTANCE OF LAKE MACBRIDE BASED ON INFORMATION IN THE 1970 CENSUS. THE AVAILABILITY OF A WIDE RANGE OF RECREATION EXPERIENCES, THE OPPORTUNITY FOR HIGH-SPEED BOATING ON CORALVILLE LAKE, AND THE CLOSE PROXIMITY OF AN INTERSTATE HIGHWAY, MAKE THE PARK ONE OF REGIONAL SIGNIFICANCE.

GENERAL SITE DESCRIPTION

THE LAND FORM FOUND IN THE PARK IS ONE OF UNIFORMLY LEVEL RIDGE TOPS AND ROLLING HILLS WHICH HAVE A FURROWED TEXTURE OF DRAINAGE WAYS. THE ROLLING, WOODED LAND IS INTERRUPTED BY FINGERS OF THE LAKE PROVIDING A PLEASANT CONTRAST IN COLOR AND TEXTURE TO THE WOODLAND ABOVE. TREES FOUND IN THE PARK ARE THOSE TYPICAL TO THE WHITE OAK-SHAGBARK HICKORY ASSOCIATION ON DRIER SOUTH-FACING SLOPES, THE MAPLE-LINDEN ASSOCIATION ON MORE MOIST, NORTH-FACING SLOPES, AND THE ELM-ASH-COTTONWOOD FLOODPLAIN ASSOCIATION.

THE TOTAL AREA OF THE PARK, 2,180 ACRES, IS COMPRISED OF 1,118 ACRES WHICH ARE LEASED FROM THE U.S. ARMY CORPS OF ENGINEERS AND 1,062 ACRES WHICH ARE STATE-OWNED. OF THE TOTAL ACREAGE, THERE IS A 950-ACRE LAKE, 486 ACRES OF WOODLAND, 53 ACRES OF MARSH, 688.2 ACRES OF OPEN GRASSLAND, AND 2.8 ACRES OF BUILDINGS.

RESIDENTIAL DEVELOPMENTS ARE LOCATED ON THE POINT OF THE FINGER OF LAND BETWEEN THE TWO ARMS OF THE LAKE AND ALONG THE NORTH SHORE OF THE NORTH ARM OF THE LAKE.

RESOURCE INVENTORY/GEOLOGY

LAKE MACBRIDE STATE PARK LIES NEAR THE SOUTHERN BORDER OF THE REGION OF IOWA WHICH JEAN CUTLER PRIOR HAS CALLED, THE "IOWAN SURFACE" (SEE FIGURE 2), IN "A REGIONAL GUIDE TO IOWA

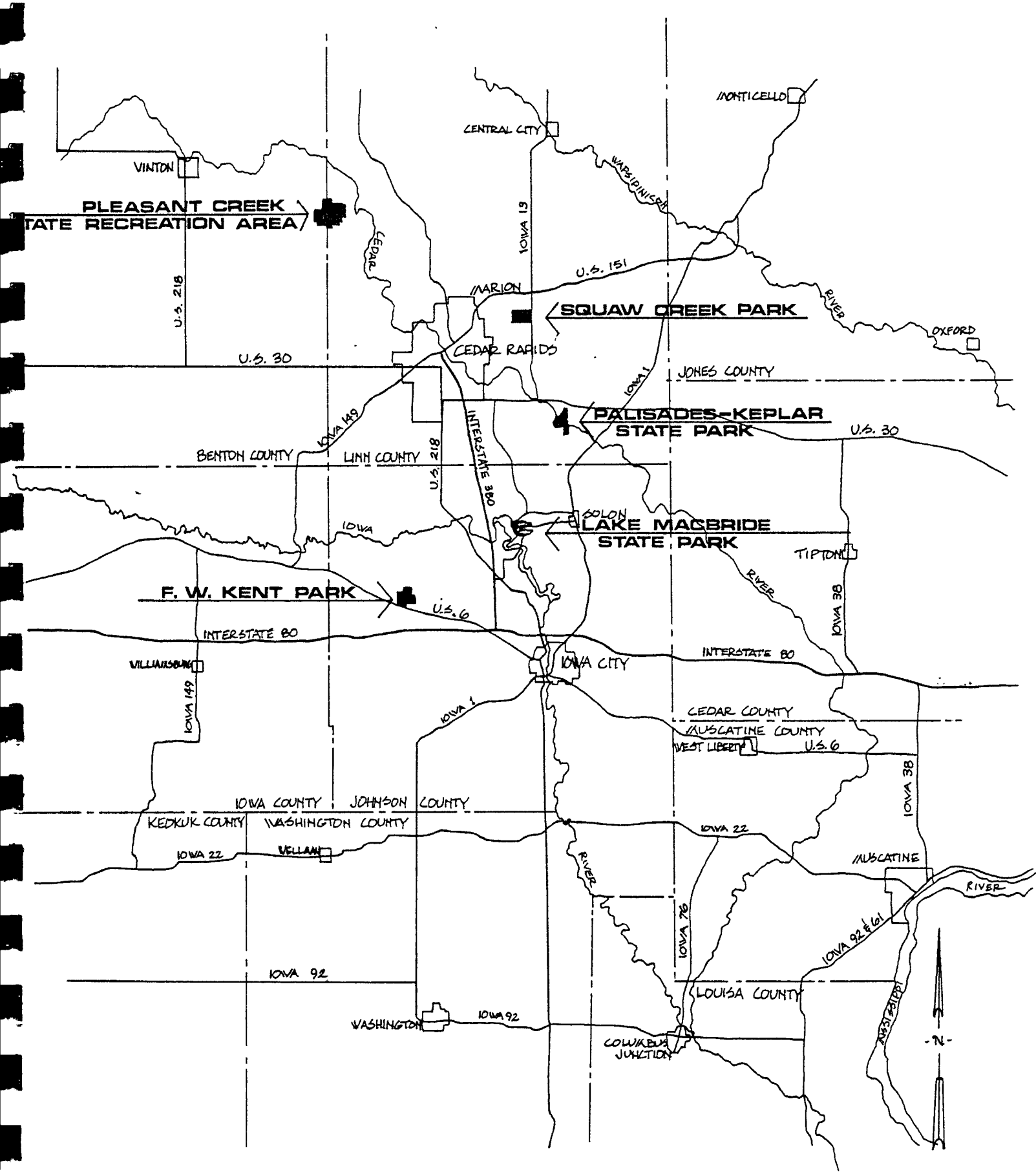
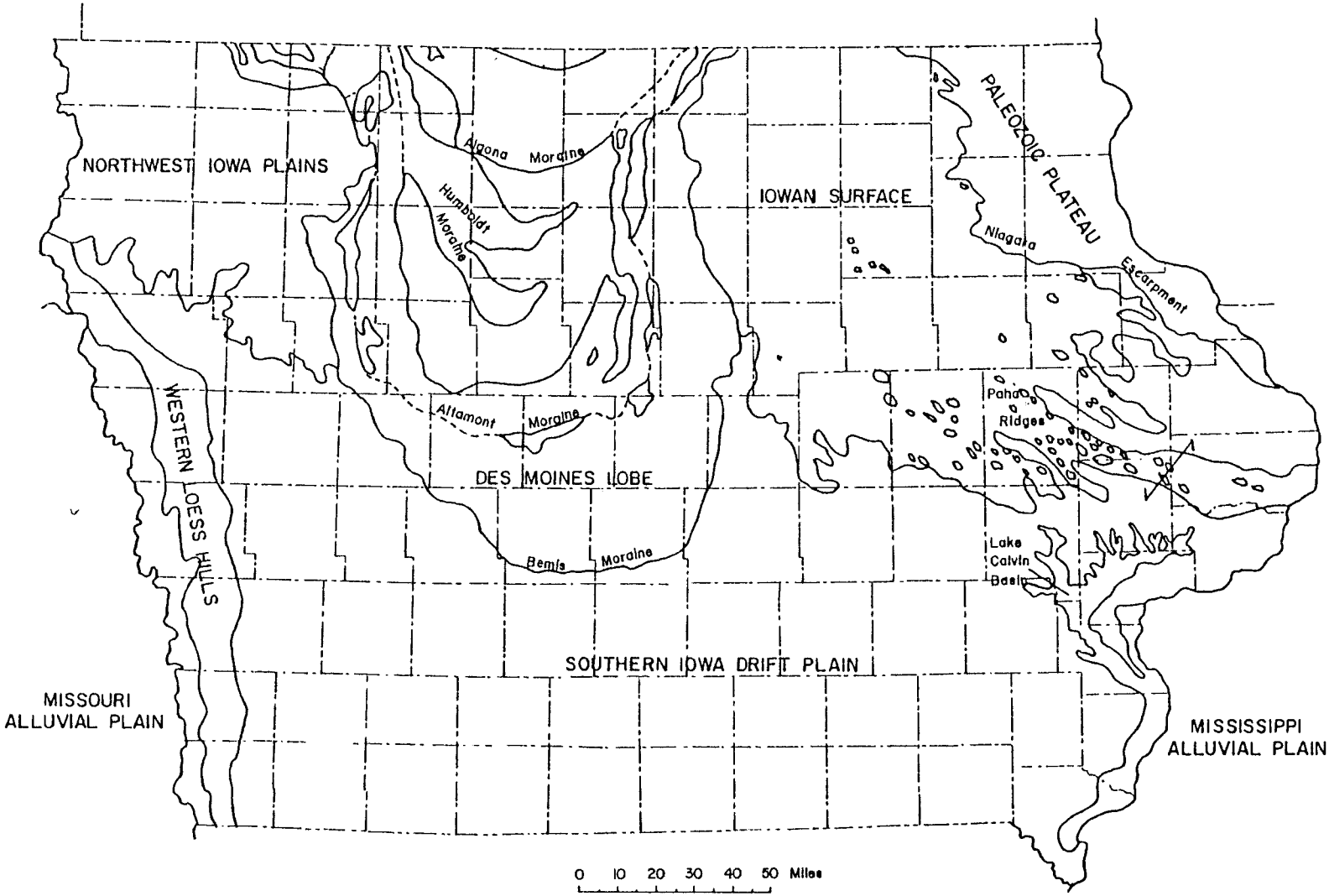


FIGURE 1. LOCATION MAP



Iowa Geological Survey
1976

FIGURE 2. IOWA LAND FORMS

LANDFORMS". HIGH-QUALITY LIMESTONE AND DOLOSTONE COMPRISE THE THINLY-COVERED BEDROCK WITHIN THE IOWAN SURFACE. ITS COVERING CONSISTS OF A WIDE ASSORTMENT OF PLEISTOCENE (GLACIAL) SEDIMENTS. LOESS IS ONE COMMON BEDROCK COVER; IT IS PRESENT IN A THIN AND SEGMENTED COVER OVER MOST OF THIS REGION. HOWEVER, LOESS AND BLOWN SAND HAVE FORMED A THICK MANTLE ON THE PAHA HILLS AND RIDGES CHARACTERISTIC OF THIS LAND FORM REGION'S SOUTHERN BORDER. THE PAHA ARE PROMINENT ELONGATED RIDGES AND SOLITARY ELLIPTICAL HILLS ORIENTED IN A CHARACTERISTIC NORTHWEST-SOUTHEASE DIRECTION. AN ELONGATE PAHA IS LOCATED JUST FOUR MILES EAST OF THE PARK NEAR SOLON, IOWA.

GLACIAL TILL IS ANOTHER COMMON COVERING OF THE NEAR-SURFACE BEDROCK OF THIS REGION. IN SOME LOCATIONS THE TILL IS FOUND WITH A THIN COVERING OF LOESS, IN OTHER AREAS WITH A THIN COVERING OF LOAM OR MIXED-SIZED SEDIMENTS, AND AT OTHER SITES ONE CAN FIND NO COVER OVER THE TILL AT ALL.

THE INTERPRETATION OF THE FEATURES OF THE IOWAN SURFACE HAS BEEN A CASE FOR DISAGREEMENT AMONG AUTHORITIES DUE TO THE VARIETY OF PLEISTOCENE-AGED SEDIMENTS AND THE VARIATION IN THEIR VERTICAL AND HORIZONTAL PATTERNS.

BEDROCK OF THE WAPSIPINICON FORMATION UNDERLIES THE CENTRAL AND NORTHERN PORTIONS OF LAKE MACBRIDE STATE PARK WHILE THE CEDAR VALLEY FORMATION UNDERLIES THE WEST, EAST, AND SOUTH PORTIONS OF THE PARK. THIS BEDROCK IS SUFFICIENTLY BURIED UNDER THE DEPOSITS OF GLACIAL TILL AND LOESS THAT IT HAS NO AFFECT ON THE SOIL FORMATION IN THE AREA. WITHIN THE PARK'S BOUNDARIES A THIN COVERING OF LOAM OVER A THIN LAYER OF GLACIAL TILL WHICH IN TURN COVERS THE BEDROCK IS THE COMMON OCCURRENCE. OUTCROPPINGS OF THE LIMESTONE BEDROCK OCCUR, HOWEVER, BOTH ALONG SIDE AND BELOW THE LAKE MACBRIDE DAM.

RESOURCE INVENTORY-HYDROLOGY

THE FOLLOWING IS TAKEN FROM A REPORT PREPARED BY PAUL J. HORICK, WHO IS A GEOLOGIST ON THE IOWA GEOLOGICAL SURVEY.

"ON THE WHOLE, ADEQUATE QUANTITIES OF WATER OF ACCEPTABLE QUALITY SHOULD BE AVAILABLE FOR THE PARK AND ITS EXPANDED FACILITIES OPERATIONS FOR THE FORESEEABLE FUTURE FROM THE SILURIAN-DEVONIAN AQUIFER WHICH IS THE CURRENT SOURCE. APPARENTLY THE AGGREGATE FUTURE WATER DEMAND OF THE PARK WILL NOT BE EXCESSIVE, ONLY 5-6 MILLION GALLONS PER YEAR. THIS PREDICTION IS BASED ON YOUR ESTIMATES OF 1 MILLION VISITORS ANNUALLY BY 1985 INCLUDING ABOUT 50,000 CAMPER DAYS... PEAK WATER NEEDS MIGHT RUN AS HIGH AS 50,000-60,000 GALLONS A DAY OR 85-100 GALLONS A MINUTE FOR 10 HOURS PUMPING EACH DAY. THE PERFORMANCE OF THE EXISTING PARK WELLS AND OTHER WELLS COMPLETED IN THE SILURIAN-DEVONIA AQUIFER IN THE SURROUNDING AREA INDICATES PRODUCTIONS OF

100-200 GPM OR MORE USUALLY CAN BE OBTAINED FROM INDIVIDUAL WELLS PENETRATING THE FULL THICKNESS OF DOLOMITES DOWN TO THE TOP OF THE MAQUOKETA SHALE. SPECIFIC CAPACITIES GENERALLY RANGE BETWEEN 2.5-6.5 GPM/FT. OF DRAWDOWN. THE POTENTIOMETRIC SURFACE OF THE SILURIAN-DEVONIAN AQUIFER SHOULD BE ABOUT 675 FEET ABOVE SEA LEVEL IN THE PARK AREA. THIS WILL BE ABOUT 25 FEET BELOW THE SURFACE OF THE LAKE AND AS MUCH AS 150 FEET BELOW THE HIGHEST POINTS IN THE PARK. SINCE THE TOP OF THE UNDERLYING MAQUOKETA SHALE PROBABLY WILL LIE AT AN ELEVATION OF 300-325 FEET ABOVE SEA LEVEL, THE AVAILABLE DRAWDOWN FOR A WELL PENETRATING FULL THICKNESS OF THE SILURIAN IS QUITE LARGE, AS MUCH AS 350-375 FEET."

RESOURCE INVENTORY-SOILS

IN THE PROJECT AREA, LOESS-COVERED KANSASAN TILL PREDOMINATES AS THE PARENT MATERIAL WITH WIND-BLOWN SAND OCCURRING IN THE NORTHEAST PORTION OF THE STUDY AREA. FAYETTE SILT LOAM IS DERIVED FROM THE LOESSIAL COVERING AND OCCUPIES 85 PERCENT OF THE STUDY AREA. THE ALLUVIAL SOILS WHICH OCCUR IN THE AREA ARE NODAWAY SILT LOAM AND SPILLVILLE LOAM. CHELSEA LOAMY FINE SAND IS DERIVED FROM THE WIND-BLOWN SAND. (SEE SOILS MAP 1.)

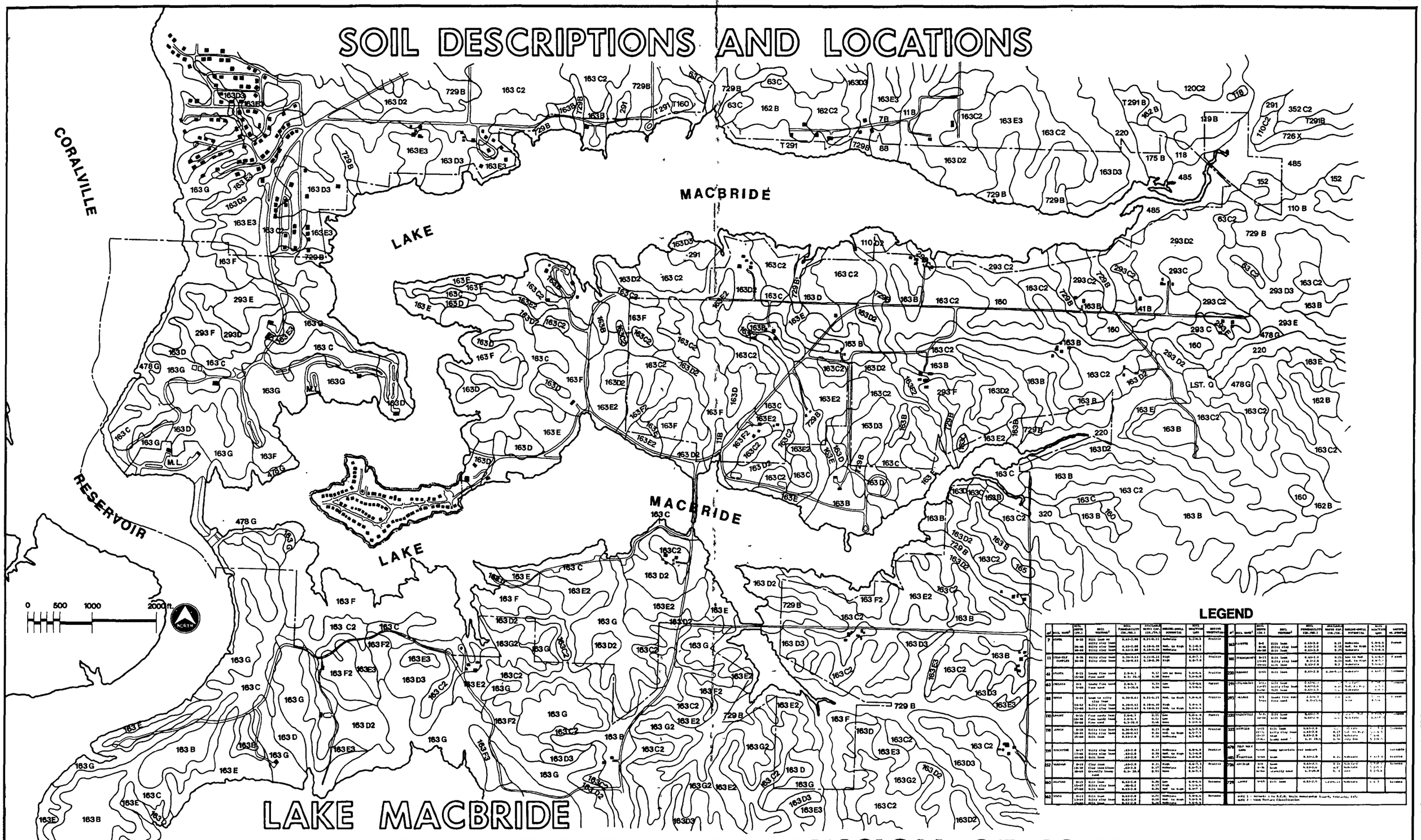
THE LAND IN THE STUDY AREA WHICH IS NOW CULTIVATED IS AGRICULTURAL LAND CLASS III, DESCRIBED BY THE SOIL CONSERVATION SERVICE AS MODERATELY GOOD LAND WHICH CAN BE CULTIVATED SAFELY WITH SPECIAL PRECAUTIONS. THERE IS A SMALL AREA OF CLASS II LAND IN THE NORTHWEST PORTION OF THE STUDY AREA, BUT NO CLASS I LAND OCCURS IN THE STUDY AREA.

FOR EACH SOIL TYPE, THE SOIL CONSERVATION SERVICE HAS PREPARED A DESCRIPTION OF THOSE LAND USES FOR WHICH IT CONSIDERS THAT SOIL SUITABLE. SOIL SUITABILITY MAPS WERE PREPARED FOR THE STUDY AREA FROM THESE SCS DESCRIPTIONS. (SEE SOIL SUITABILITY MAPS 2 AND 3.)

THE DRAINAGE OF JOHNSON COUNTY IS BROUGHT ABOUT BY THE CEDAR AND IOWA RIVERS AND THEIR TRIBUTARIES. THE CEDAR RIVER IS THE LARGER STREAM, BUT IT DRAINS ONLY ABOUT 30 SQUARE MILES IN THE NORTHEAST CORNER OF THE COUNTY AND HAS FEW TRIBUTARIES. IN THE STUDY AREA, MILL CREEK, JORDAN CREEK, AND OTHER MINOR INTERMITTENT STREAMS DRAIN THE 16,220-ACRE WATERSHED INTO LAKE MACBRIDE.

IN 1973, THE JOHNSON COUNTY SOIL CONSERVATION DISTRICT EVALUATED THE SOIL CONSERVATION NEEDS FOR THE LAKE MACBRIDE WATERSHED.[2] THEY REPORTED THAT THE ANNUAL SOIL LOSS FOR THE TOTAL WATERSHED WAS 224,950 TONS PER YEAR WITH 33,700 TONS OF SEDIMENT TRANSPORTED TO THE LAKE ANNUALLY. THIS SEDIMENT RESULTED PRIMARILY FROM SHEET EROSION OCCURRING ON TILLED LANDS WITHIN THE DRAINAGE BASIN. IT WAS ESTIMATED IN THAT YEAR TO COST $1,068,458 TO PROVIDE MINIMAL CONTROL OF EROSION IN THE WATERSHED. TO APPLY THE BEST AVAILABLE TECHNOLOGY IN SOIL CONSERVATION, THE 1973 COST ESTIMATE WAS $4 MILLION.

SOIL DESCRIPTIONS AND LOCATIONS



LEGEND

SYM.	SOIL NAME	SOIL DEPTH (IN.)	SOIL TEXTURE	SOIL PERMEABILITY (IN./HR.)	SHRINKAGE WATER CAP. (IN./IN.)	HAZARD-SHELL POTENTIAL	SOIL REACTION (pH)	NATIVE VEGETATION
7	GARNA	0-38	Silt loam or silty clay loam	0.63-2.00	0.21-0.23	Moderate	5.1-6.5	Prairie
		38-48	Silty clay loam	0.63-2.00	0.18-0.20	Mod. to High	5.1-6.5	
		48-60	Silty clay loam	0.63-2.00	0.18-0.20	Moderate	5.1-6.5	
11	COLO-ELK COMPLEX	0-36	Silty clay loam	0.20-0.63	0.21-0.23	High	6.0-7.3	Prairie
		36-60	Silty clay loam	0.20-0.63	0.18-0.20	High	6.0-7.8	
41	OTAYE	0-15	Loamy fine sand	2.0-6.3	0.12	Low or None	5.6-6.4	Prairie
		15-60	Fine sand	6.3-20.0	0.08	None	5.6-6.0	
63	DELAKE	0-5	Loamy fine sand	2.0-6.3	0.14	Low	5.6-6.4	Forest
		5-60	Loamy fine sand	6.3-20.0	0.06	None	5.6-6.0	
88	RIVER	0-24	Loam to silty clay loam	0.20-0.63	0.21-0.23	Mod. to High	5.6-6.4	Prairie
		24-52	Silty clay loam	0.20-0.63	0.18-0.20	High	5.6-6.4	
		52-60	Silty clay loam	0.20-0.63	0.18-0.20	Mod. to High	5.6-6.4	
110	LAWLEY	0-14	Fine sandy loam	2.0-6.3	0.15	Low	5.6-6.4	Forest
		14-30	Fine sandy loam	2.0-6.3	0.12	None	5.6-6.4	
		30-60	Fine sand	6.3-20.0	0.06	None	5.6-6.4	
118	JAMES	0-18	Silty clay loam	0.20-0.63	0.21	High	5.6-7.3	Prairie
		18-40	Silty clay loam	0.20-0.63	0.21	Mod. to High	6.0-7.3	
		40-60	Silt loam	0.63-2.0	0.18	Moderate	6.1-8.4	
119	KINGSTON	0-13	Silty clay loam	.63-2.0	0.21	Moderate	6.0-6.8	Prairie
		13-40	Silty clay loam	.63-2.0	0.20	Mod. to High	5.1-6.8	
		40-60	Silt loam	.63-2.0	0.18	Moderate	5.1-6.8	
152	WADENA	0-12	Clay loam	.63-2.0	0.21	High	6.6-7.3	Prairie
		12-38	Clay loam-clay	.20-2.0	0.17	Moderate	6.6-7.3	
		38-60	Gravelly loamy sand	6.3-20.0	0.11	None	6.6-7.3	
160	HAYWARD	0-15	Silt loam	0.63-2.0	0.20	Low	6.6-6.8	Savanna
		15-47	Silty clay loam	.20-0.2	0.17	High	5.1-6.4	
		47-60	Silt loam	0.63-2.0	0.20	Mod. to High	6.6-7.3	
163	ZEARL	0-13	Silt loam	0.63-2.0	0.21	Moderate	5.6-6.4	Savanna
		13-40	Silty clay loam	0.63-2.0	0.20	Mod. to High	5.6-6.4	
		40-60	Silt loam	0.63-2.0	0.18	Moderate	5.6-6.4	

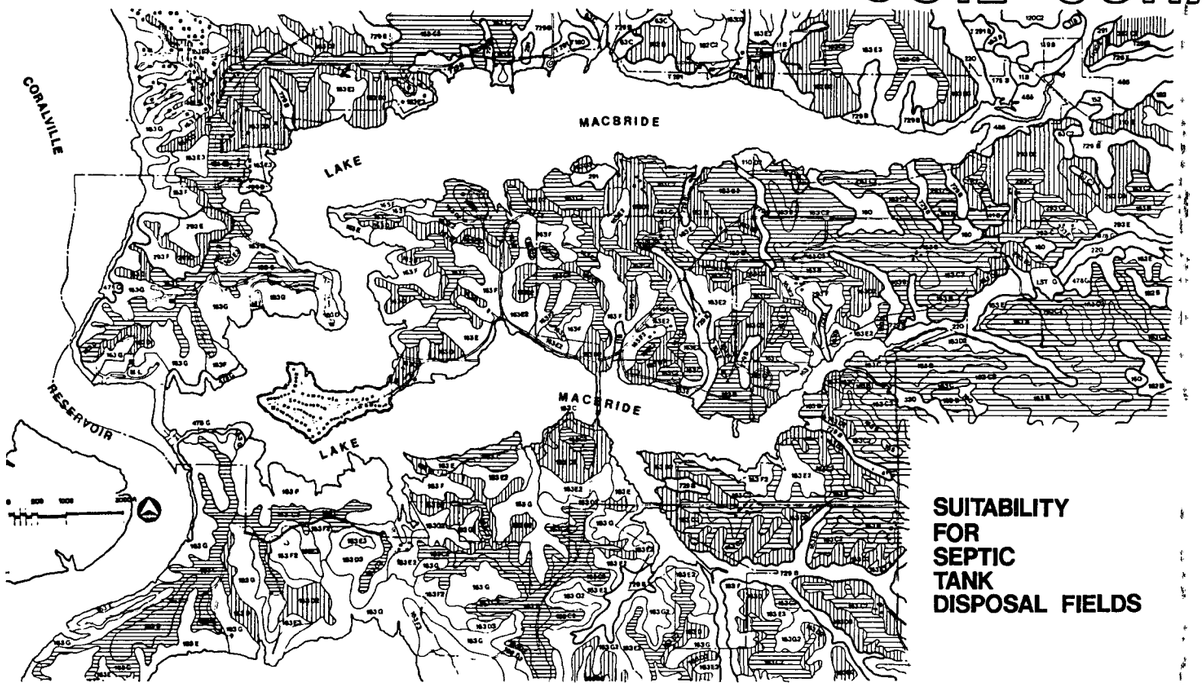
SYM.	SOIL NAME	SOIL DEPTH (IN.)	SOIL TEXTURE	SOIL PERMEABILITY (IN./HR.)	SHRINKAGE WATER CAP. (IN./IN.)	HAZARD-SHELL POTENTIAL	SOIL REACTION (pH)	NATIVE VEGETATION
163	ZEARLE	0-6	Silt loam	0.63-2.0	0.21	Moderate	5.6-6.4	Prairie
		6-40	Silty clay loam	0.63-2.0	0.20	Mod. to High	5.6-6.4	
		40-60	Silt loam	0.63-2.0	0.20	Moderate	5.6-6.4	
168	FRANKLIN	0-11	Silt loam	0.63-2.0	0.21	Low to Mod.	5.1-6.4	Prairie
		11-44	Silty clay loam	0.2-2.0	0.24	Mod. to High	5.1-6.4	
		44-60	Silt loam	0.63-2.0	0.2	Moderate	5.1-6.4	
220	KANAWHA	0-40	Silt loam	0.63-2.0	0.20-0.23	Moderate	6.6-7.3	Lowland
290	LITTLE MAHONY	0-12	Silt loam	0.63-2.0	[illegible]	[illegible]	[illegible]	[illegible]
		12-[illegible]	Silty clay loam	0.63-2.0	[illegible]	[illegible]	[illegible]	
		[illegible]	Silt loam	0.63-2.0	[illegible]	[illegible]	[illegible]	
292	ALDEAN	0-1	Muck	2.0-6.3	[illegible]	[illegible]	[illegible]	[illegible]
		1-60	Loamy fine sand	6.3-20.0	[illegible]	[illegible]	[illegible]	
320	MAQUOKETA	0-12	Silt loam	0.63-2.0	[illegible]	Moderate	[illegible]	[illegible]
332	OTTOSEN	0-13	Silt loam	0.63-2.0	[illegible]	[illegible]	[illegible]	[illegible]
		13-[illegible]	Silty clay loam	0.63-2.0	0.17	[illegible]	[illegible]	
		[illegible]	Silt loam	0.63-2.0	0.15	[illegible]	[illegible]	
		17-60	Loamy sand	6.3-20.0	0.04	[illegible]	[illegible]	
476	MUCK MAKE LAND	0-[illegible]	Loamy materials	[illegible]	[illegible]	[illegible]	[illegible]	Variable
480	STILLMAN	0-[illegible]	Loam	0.63-2.0	0.21	Moderate	[illegible]	Prairie
726	APPLEGATE	0-8	Loam	0.63-2.0	0.14	Moderate	[illegible]	[illegible]
		8-36	Loam	0.63-2.0	0.14	Moderate	[illegible]	
		36-60	Loamy sand	6.3-20.0	0.1	None	5.1-6.4	
729	LAMONI	0-45	Silt loam	0.63-2.0	[illegible]	Moderate	[illegible]	Savanna

NOTE 1 - Percent: 1 in S.C.S. Soil Conservation County, February, 1971
NOTE 2 - Lake Macbride Classification

LAKE MACBRIDE
STATE CONSERVATION COMMISSION OF IOWA

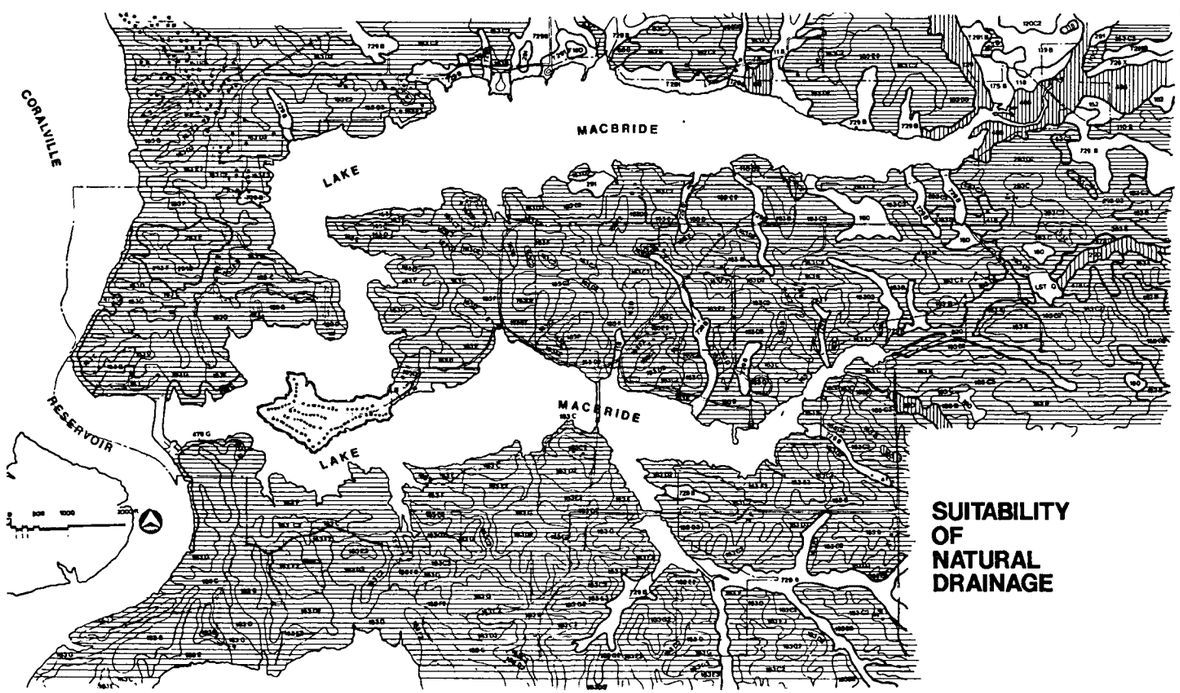
TITLE SHEET NO. 4 DRAWN BY F. J. C. DATE 4/15/76
PROJECT LAKE MACBRIDE STATE PARK COUNTY JOHNSON PROJ. NO.

SOIL SUITABILITY*

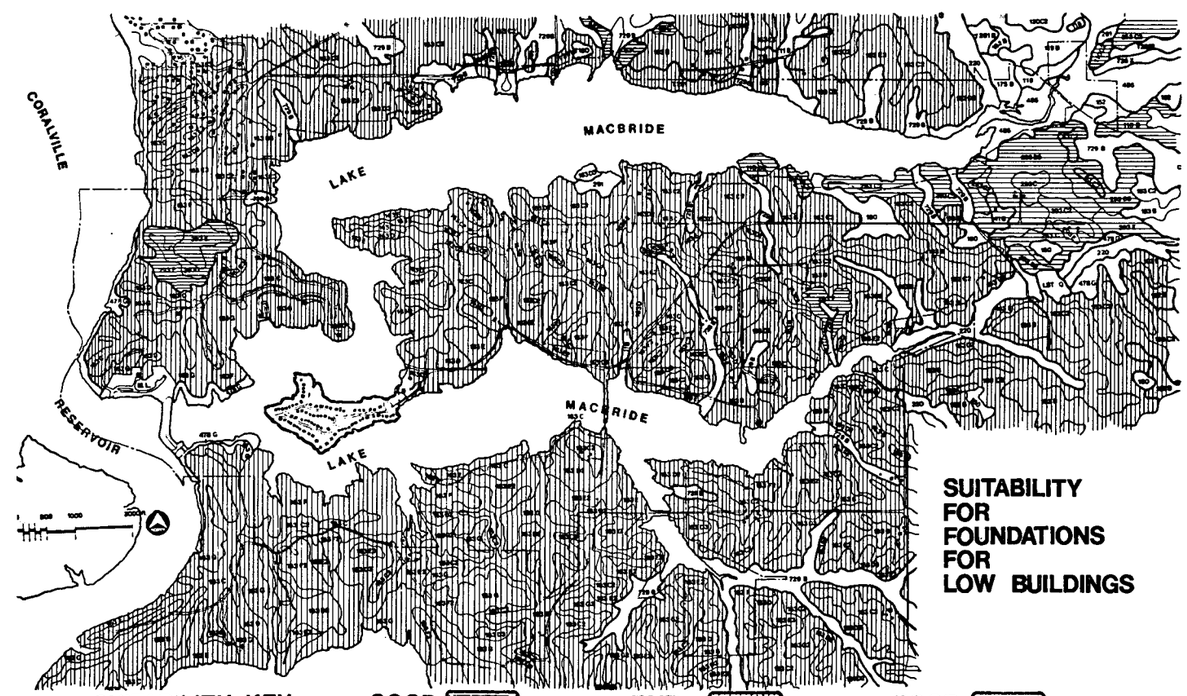


SUITABILITY FOR SEPTIC TANK DISPOSAL FIELDS

SUITABILITY FOR SEWAGE LAGOONS



SUITABILITY OF NATURAL DRAINAGE



SUITABILITY FOR FOUNDATIONS FOR LOW BUILDINGS

SUITABILITY KEY GOOD FAIR POOR

* THE SITE MAPS OF THESE SUITABILITIES ILLUSTRATE GENERAL CAPABILITIES AND RESTRICTIONS RESULTING FROM INDIVIDUAL SOIL CHARACTERISTICS. SOILS HAVING SIMILAR QUALITIES MAKING THEM SUITABLE, WITHOUT RESTRICTION, FOR A PARTICULAR PARAMETER, SUCH AS PICNIC AREAS, RECEIVED A GOOD RATING. PARAMETERS WERE CHOSEN FROM "IOWA SOILS 2" AND "IOWA SOILS 5" SHEETS WHICH BEST ANTICIPATED USE AT LAKE MACBRIDE STATE PARK. THE PARAMETERS SHOULD BE INTERRELATED WHEN USES REQUIRE THIS.

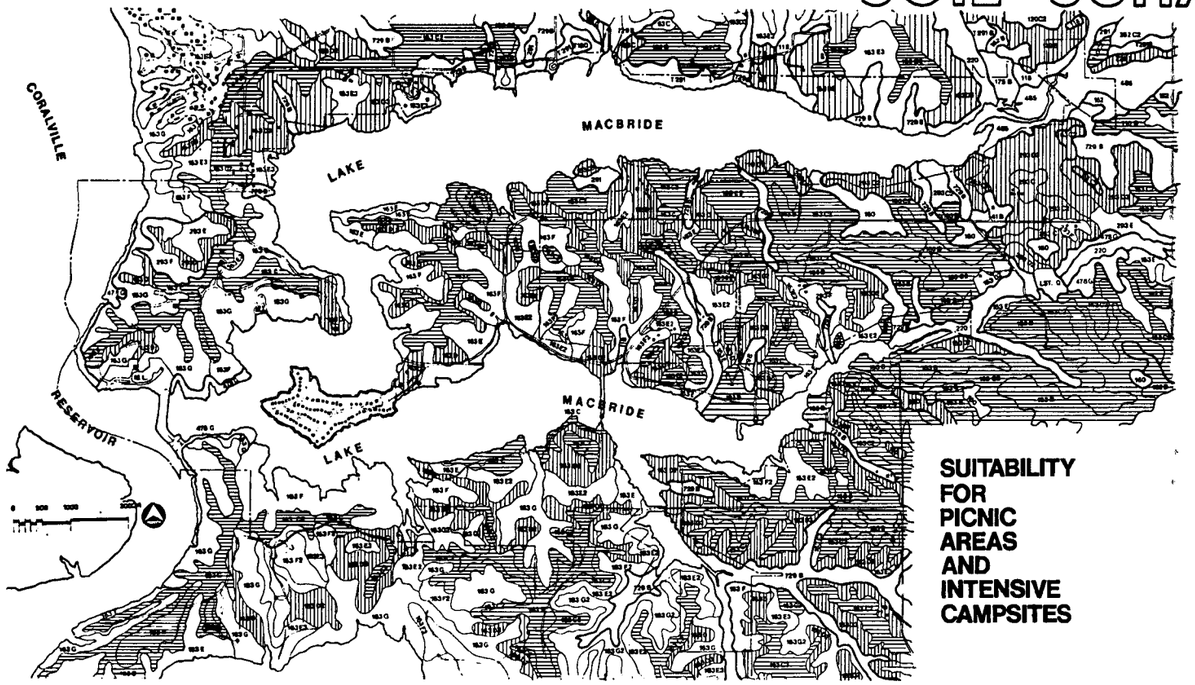
LAKE MACBRIDE
STATE CONSERVATION COMMISSION OF IOWA

TITLE SHEET NO. 5 DRAWN BY F.J.C. DATE 5/10/76

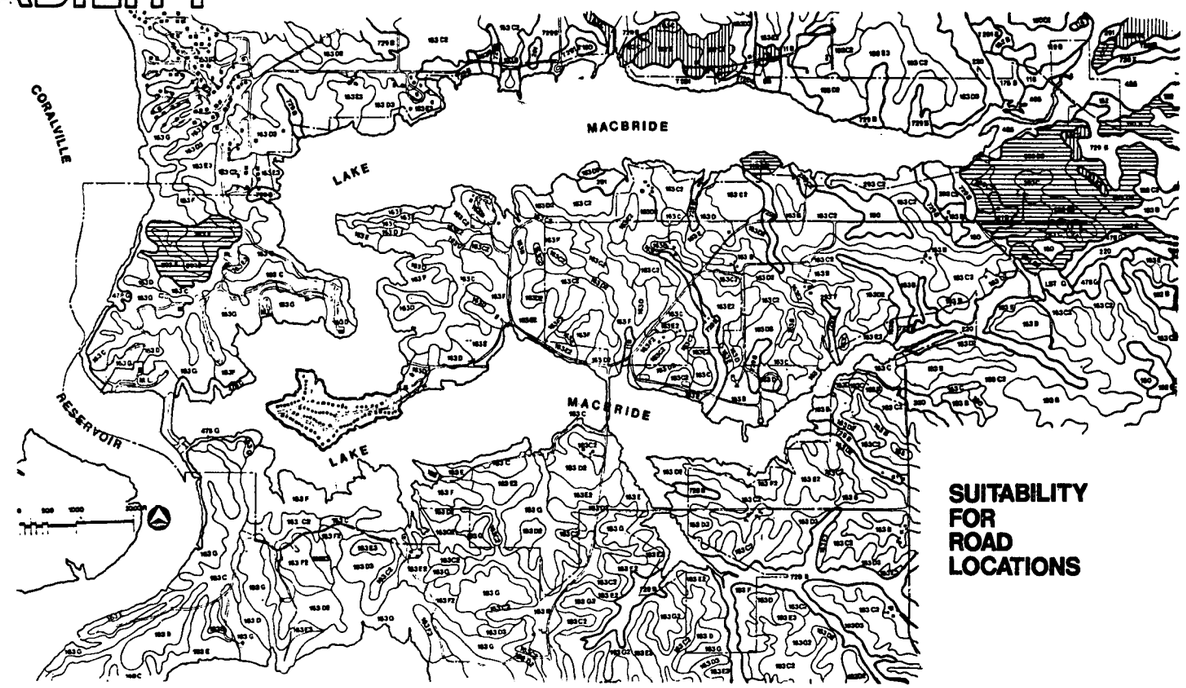
PROJECT LAKE MACBRIDE STATE PARK COUNTY JOHNSON PROJ. NO.

SHEET ___ OF ___

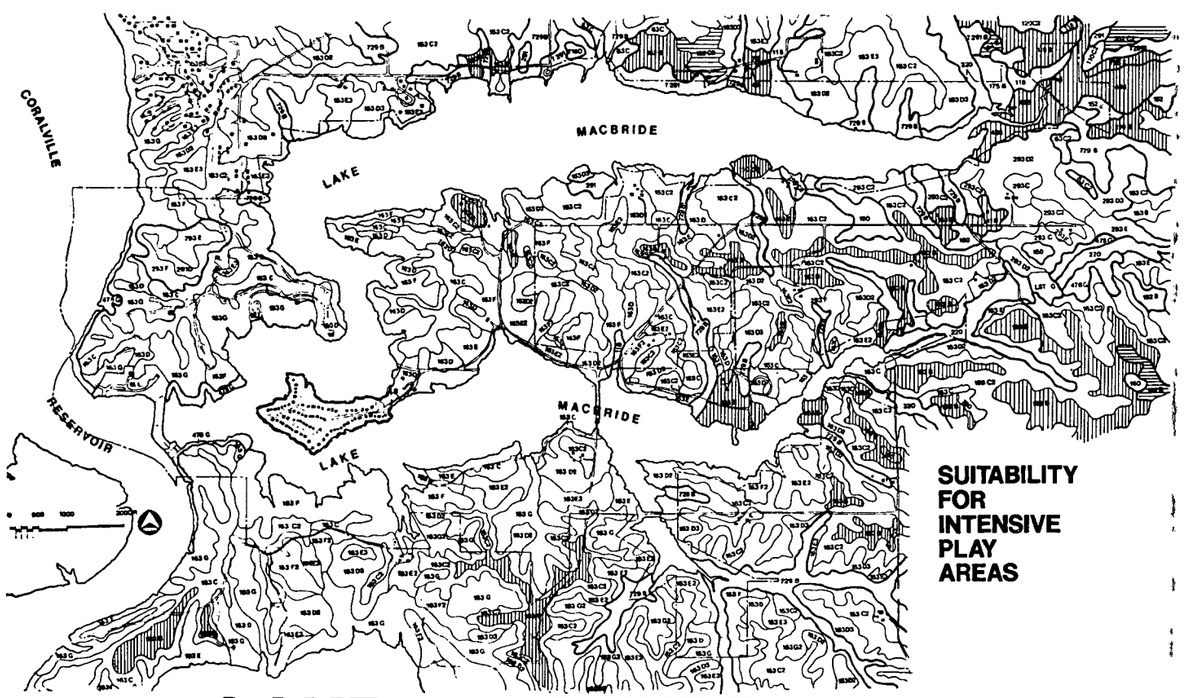
SOIL SUITABILITY*



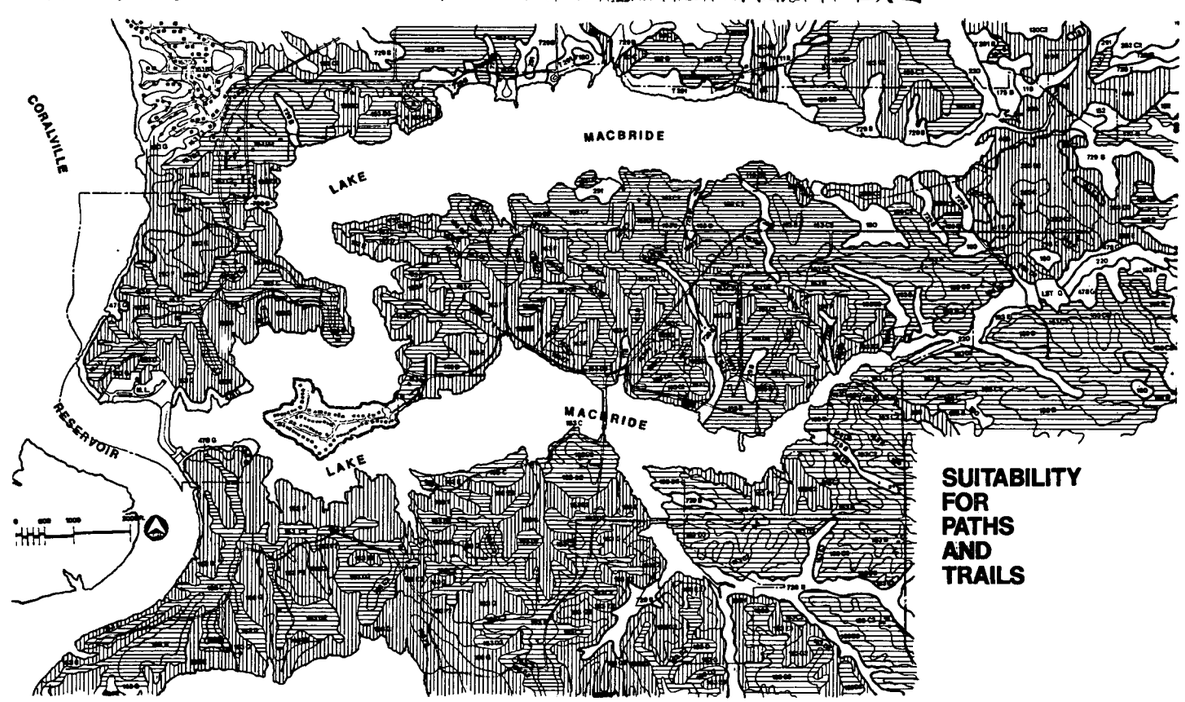
SUITABILITY FOR PICNIC AREAS AND INTENSIVE CAMPSITES



SUITABILITY FOR ROAD LOCATIONS



SUITABILITY FOR INTENSIVE PLAY AREAS



SUITABILITY FOR PATHS AND TRAILS

SUITABILITY KEY GOOD FAIR POOR

* THE SITE MAPS OF THESE SUITABILITIES ILLUSTRATE GENERAL CAPABILITIES AND RESTRICTIONS RESULTING FROM INDIVIDUAL SOIL CHARACTERISTICS. SOILS HAVING SIMILAR QUALITIES MAKING THEM SUITABLE, WITHOUT RESTRICTION, FOR A PARTICULAR PARAMETER, SUCH AS PICNIC AREAS, RECEIVED A GOOD RATING. PARAMETERS WERE CHOSEN FROM "IOWA SOILS 2" AND "IOWA SOILS 5" SHEETS WHICH BEST ANTICIPATED USE AT LAKE MACBRIDE STATE PARK. THE PARAMETERS SHOULD BE INTERRELATED WHEN USES REQUIRE THIS.

TITLE SHEET NO. 6 DRAWN BY F. J. C. DATE 5/25/76

PROJECT LAKE MACBRIDE STATE PARK COUNTY JOHNSON PROJ. NO.

LAKE MACBRIDE
STATE CONSERVATION COMMISSION OF IOWA

SHEET ___ OF ___

THE U.S. ENVIRONMENTAL PROTECTION AGENCY'S NATIONAL EUTROPHICATION SURVEY,[3] PUBLISHED IN AUGUST, 1976, FOUND THAT LAKE MACBRIDE IS EXPERIENCING ANNUAL PHOSPHORUS LOADING (0.67 GRAMS/SQUARE METER/YEAR) THAT IS ALMOST DOUBLE THE DANGEROUS LEVEL (0.36 GRAMS/SQUARE METER/YEAR) ACCORDING TO VOLLENWEIDER (VOLLENWEIDER AND DILLON, 1974). THE LAKE IS NOW EUTROPHIC AND ITS WATER QUALITY WILL CONTINUE TO DETERIORATE UNLESS THE PHOSPHORUS LOADING OF THE LAKE IS GREATLY DECREASED. MCMULLEN (MCMULLEN, 1975) FOUND THAT PHOSPHORUS IS THE CONTROLLING NUTRIENT IN THE ALGAE BLOOMS THAT OCCUR IN LAKE MACBRIDE.[4] THE EPA SURVEY FOUND THAT 41.6 PERCENT OF THE TOTAL PHOSPHORUS LOADING OF THE LAKE IS COMING FROM THE SOLON, IOWA, MUNICIPAL SEWAGE TREATMENT PLANT, WHILE 55.9 PERCENT IS COMING FROM AGRICULTURAL RUNOFF WITHIN THE WATERSHED.

A CHALLENGING MANAGEMENT PROBLEM IS THE ALLOCATION OF SCARCE FUNDS FOR SOIL CONSERVATION COST SHARING IN THE WATERSHED. THE LAKE MACBRIDE OPTIMAL ALLOCATION MODEL DEVELOPED BY MCMULLEN[4] EMPLOYS LINEAR PROGRAMMING TO OPTIMALLY ALLOCATE AVAILABLE RESOURCES TO SOIL CONSERVATION IN THE WATERSHED. THE SOIL DELIVERY (RUNOFF) FOR EACH FARM WAS CALCULATED USING THE UNIVERSAL SOIL LOSS EQUATION (WISHCHMEIER AND SMITH, 1960).

ADDITIONALLY, THE MODEL USED THE FOLLOWING COSTS FOR SOIL CONSERVATION MEASURES:

SLOPE	COST OF SOIL CONSERVATION
0-4 PERCENT	$200/ACRE
4-8 PERCENT	$300/ACRE
8 AND UP	$400/ACRE

SINCE AGRICULTURAL LAND RUNOFF IS THE LARGEST CONTRIBUTOR TO THE LAKE'S WATER QUALITY PROBLEMS, THE MODEL SIMULATED THE EFFECTS OF CONTROLLING 0, 50, 75, AND 100 PERCENT OF THE LAND RUNOFF BY USE OF TYPICAL CONSERVATION MEASURES UP TO AND INCLUDING TILED TERRACES. IT WAS ASSUMED BY THIS MODEL THAT SOLON'S WASTE WATER WAS CHEMICALLY TREATED TO REMOVE NUTRIENTS AND THAT LAKE HOME WASTE WATER WAS REMOVED FROM THE WATERSHED. RESULTS OF THE SIMULATIONS SHOWED SIGNIFICANT REDUCTIONS IN EXPECTED ALGAL GROWTH WITH INCREASED CONTROL UNTIL 75 PERCENT OF THE LAND RUNOFF WAS CONTROLLED. ADDITIONAL CONTROL BEYOND 75 PERCENT ACHIEVES LITTLE ADDITIONAL BENEFIT IN TERMS OF ALGAL CONTROL. AT THIS CONTROL LEVEL, THE INPUT OF PHOSPHORUS FROM RAINFALL, CHEMICALLY TREATED WASTE WATER, AND NONAGRICUTURAL LAND REPRESENT THE MAJOR INPUTS.

THE LAKE MACBRIDE WATERSHED CONSISTS OF OVER 130 FARMS, ALL CONTRIBUTING TO THE PHOSPHORUS INPUT OF THE LAKE. HOWEVER, NOT ALL FARMS CONTRIBUTE THE SAME QUANTITY OF PHOSPHORUS OR RESULTED IN THE SAME COST FOR CONTROLLING LAND RUNOFF. THE OPTIMIZATION MODEL WAS RUN TO DETERMINE A PRIORITY LIST OF FARMS, BASED ON THE MOST CONTROL FOR THE LEAST COST, VARYING

THE FINANCIAL RESOURCES FROM 0 TO $4 MILLION. MCMULLEN FOUND THAT THE DESIRED 75 PERCENT CONTROL IS ACHIEVABLE WITH AN EXPENDITURE OF $2 MILLION (1975) ON THE WATERSHED AND 58 OF THE 130+ FARMS WERE SELECTED FOR TREATMENT. (SEE WATERSHED TREATMENT PRIORITIES MAP 4.) THESE FARMS ARE GENERALLY THOSE NEAR THE LAKE OR TRIBUTARY STREAMS. THEY SHOULD BE GIVEN PRIORITY RATING WHEN DECISIONS FOR COST SHARING OF NEEDED SOIL CONSERVATION TREATMENTS ARE MADE.

THE LAKE

LAKE MACBRIDE, COVERING 950 ACRES IS IOWA'S LONGEST STATE-OWNED MAN-MADE WATER AREA WITH A WATERSHED OF 16,640 ACRES. THE DAM ON MILL CREEK FORMS AN IMPOUNDMENT WITH A MEAN DEPTH OF 24 FEET AND A MAXIMUM DEPTH OF 47 FEET FOUND AT THE DAM. THE MEAN HYDRAULIC RETENTION TIME IS 2.2 YEARS AND THE MEAN FLOW AT THE SPILLWAY IS 14.5 CUBIC FEET PER SECOND.

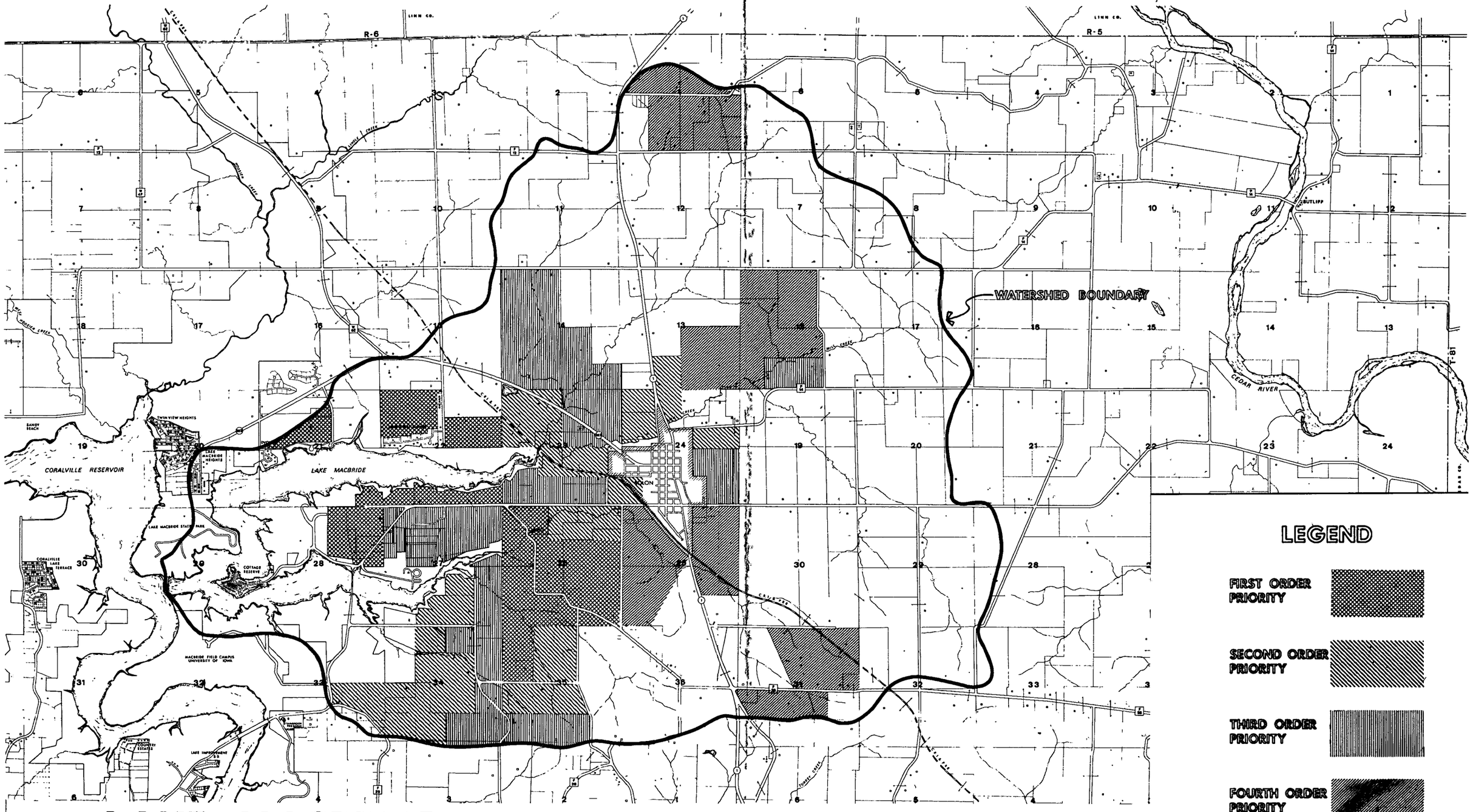
SURROUNDING LAND USES

A PRIMARY CONCERN OF ICC STAFF IS THE RESIDENTIAL ZONING OF ALL PRIVATELY-OWNED LAND THAT BORDERS ON THE STATE PARK. AS MENTIONED PREVIOUSLY, RESIDENTIAL SUBDIVISIONS HAVE BEEN DEVELOPED ALONG THREE SEGMENTS OF THE NORTH SHORE OF THE NORTH ARM OF THE LAKE. THE EXTREME NARROWNESS OF PUBLIC LAND ALONG THIS STRETCH OF SHORELINE IS A DIRECT RESULT OF THE SHORTAGE OF FUNDS FOR LAND ACQUISITION WHEN THE U.S. ARMY CORPS OF ENGINEERS PURCHASED LAND TO EXTEND THE PARK IN THE 1950'S. WHERE EXISTING SUBDIVISIONS FRONT ON THIS NARROW STRIP OF LAND PUBLIC ACCESS AND USE IS SIGNIFICANTLY DIMINISHED. PROPRIETARY ACTIONS BY ADJOINING HOMEOWNERS IS A SIGNIFICANT CONTRIBUTING FACTOR TO THIS SITUATION. ADDITIONALLY, THE QUALITY OF THE VISUAL RECREATIONAL EXPERIENCE IN THE PARK IS DIMINISHED BY THE PRESENCE OF PRIVATE LAKESHORE RESIDENCES. ACQUISITION OF A WIDER BAND OF LAND AROUND THE NORTH ARM OF THE LAKE IS NECESSARY TO ALLOW FULL PUBLIC ACCESS AND USE OF THIS PORTION OF THE PARK.

THE ACQUISITIONS PROPOSED IN THIS MASTER PLAN STUDY WILL ALSO BRING INTO PUBLIC OWNERSHIP AND PERMANENT COVER THOSE TRACTS OF LAND WHICH UNDER PRESENT USE ARE AMONG THE GREATEST CONTRIBUTORS OF SILT AND PHOSPHORUS TO THE LAKE. (SEE WATERSHED TREATMENT PRIORITIES MAP 4.) THIRDLY, THE PROPOSED ADDITIONS TO THE LAND AREA OF THE PARK WILL MAKE AVAILABLE SITES FOR EXPANSION AND ADDITIONS TO EXISTING OVERUSED PARK FACILITIES.

ICC STAFF ARE ALSO INTERESTED IN THE AREA SOUTH OF LAKE MACBRIDE STATE PARK NAMED THE MACBRIDE FIELD CAMPUS AND OPERATED BY THE UNIVERSITY OF IOWA. THIS AREA IS FEDERAL LAND LEASED TO THE UNIVERSITY BY THE U.S. ARMY CORPS OF ENGINEERS. IN THEIR APRIL, 1977, MASTER PLAN FOR THE CORALVILLE LAKE

LAKE MACBRIDE WATERSHED IMPROVEMENT PRIORITIES



THOSE UNSHADED AREAS OF THE WATERSHED EITHER REQUIRE NO FURTHER CONSERVATION MEASURES OR ARE OF LOWEST PRIORITY FOR COST SHARING.

LAKE MACBRIDE
STATE CONSERVATION COMMISSION OF IOWA

TITLE SHEET NO. 9 DRAWN BY F.J.C. DATE 10/21/78

PROJECT LAKE MACBRIDE STATE PARK COUNTY JOHNSON PROJ. NO.

SHEET ___ OF ___

COMPLEX THE CORPS PROPOSES A LARGER SCALE OF RECREATIONAL DEVELOPMENT IN THIS AREA THAN EXISTS AT PRESENT. FURTHER DEVELOPMENT BY THE UNIVERSITY IN THIS AREA IS NOT FEASIBLE ACCORDING TO ITS STAFF DUE TO THE NATURE OF THE ACTIVITIES THERE IN ASSOCIATION WITH THE EDUCATION OF HANDICAPPED CHILDREN. THE PRESENT LEASE ON THIS PROPERTY TO THE UNIVERSITY EXPIRES IN 1984. DEVELOPMENTS PROPOSED BY THE CORPS WOULD MAKE OPERATION OF THE AREA COMPATIBLE WITH THAT OF THE ADJOINING STATE PARK.

FINALLY, ICC STAFF ARE CONCERNED ABOUT THE AGRICULTURAL PRACTICES ON FARMLAND SURROUNDING LAKE MACBRIDE. THE MAP ON PAGE 20 IDENTIFIES THOSE LANDS CONTRIBUTING THE MOST SILT AND PHOSPHORUS TO THE LAKE. SOIL STABILIZATION MEASURES ARE DESPERATELY NEEDED TO HALT EROSION ON THESE LANDS IN ORDER TO LENGTHEN THE LIFE OF THE LAKE. LEGISLATION ENACTED BY THE 1978 STATE LEGISLATURE WHICH INCREASED THE STATE'S SHARE OF THE COST OF WATERSHED IMPROVEMENTS TO 75 PERCENT ON THOSE LANDS ABOVE PUBLICLY-OWNED LAKES SHOULD GO FAR TO IMPROVE THE SITUATION ABOVE LAKE MACBRIDE.

AREA EVALUATION/RECOMMENDATIONS

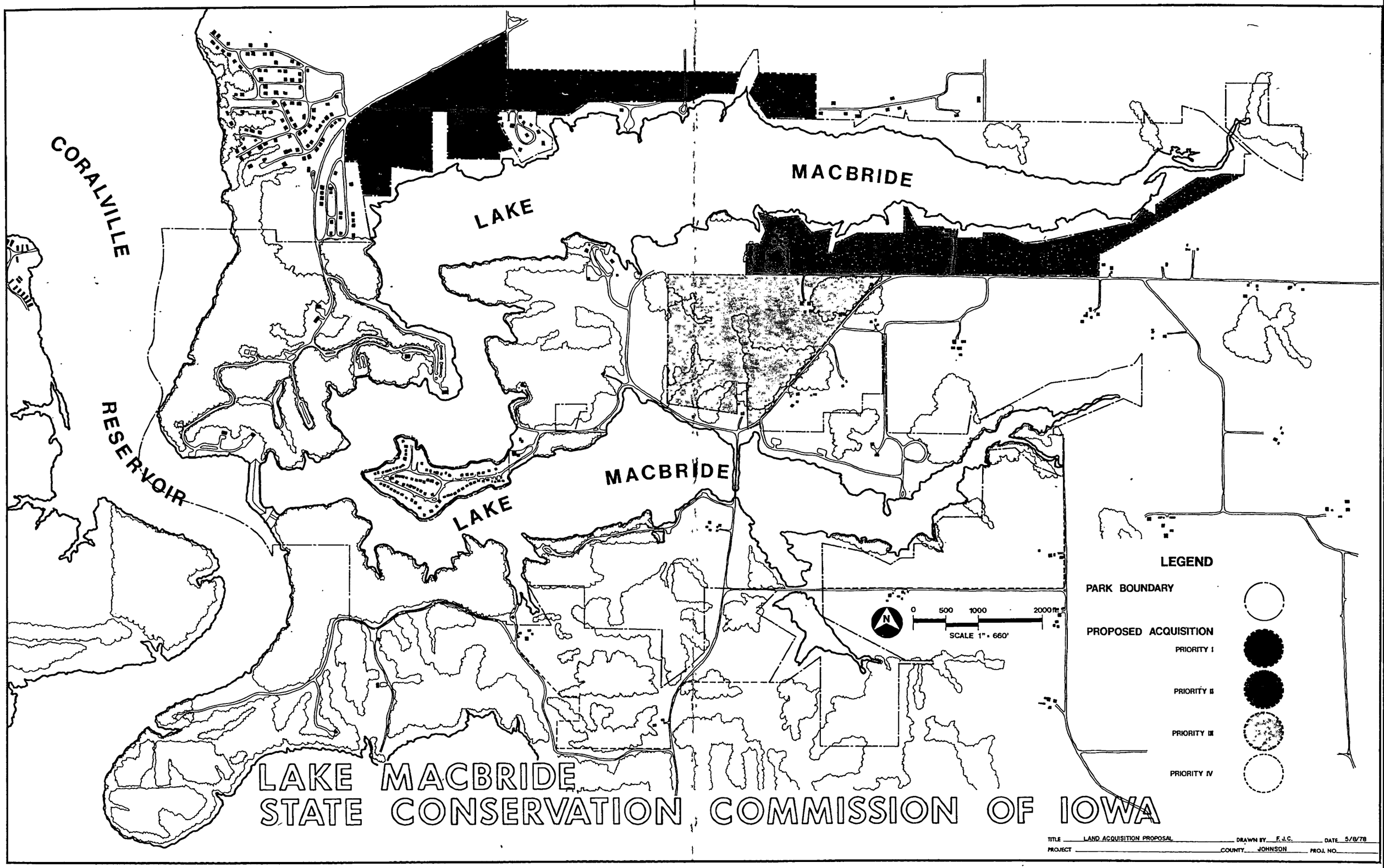
IN THE PRECEDING SECTION THREE PROBLEM AREAS WERE CITED. FIRST, THE QUALITY OF THE VISUAL EXPERIENCE IN THE PARK WILL BE DIMINISHED BY ADDITION TO THE RESIDENTIAL SUBDIVISIONS ON THE LAKESHORE. SECOND, A PORTION OF THE FARMS SURROUNDING THE NORTH ARM OF THE LAKE HAVE BEEN DETERMINED TO BE AMONG THE GREATEST CONTRIBUTORS OF SILT AND PHOSPHORUS TO THE LAKE. THIRD, CERTAIN ACTIVITY AREAS IN THE PARK ARE BEING OVERUSED WITH NO LIKELIHOOD THAT VISITATION TO LAKE MACBRIDE STATE PARK WILL DECREASE SIGNIFICANTLY IN THE FUTURE.

IT IS THE OPINION OF THE MEMBERS OF THE TASK FORCE THAT ACQUISITION OF 612 ACRES OF LAND AROUND THE PARK WILL CONTRIBUTE TO THE SOLUTION OF ALL THREE OF THESE PROBLEMS. (SEE PARCEL ACQUISITION MAP 5.) WE ARE HOPEFUL THAT THE RECENT INCREASE IN THE STATE COST SHARE OF WATERSHED IMPROVEMENTS WILL HELP TO SOLVE THE SECOND PROBLEM CITED ABOVE.

THE PARK HAS SEVERAL FACILITIES WHICH HAVE DETERIORATED BADLY DUE TO THE NORMAL WEAR AND TEAR OF DAILY USE. IN PARTICULAR, THE EXISTING BATHHOUSE HAS SEVERE STRUCTURAL DETERIORATION AS A RESULT OF BEING MOVED IN THE MID-1950'S AND EXPOSURE TO THE ELEMENTS. REPLACEMENT OF THIS STRUCTURE IS NEEDED. THE STONE LODGE BUILT DURING THE CCC ERA NEEDS MAJOR STRUCTURAL REPAIR AND INTERIOR REFURBISHING. THE POPULARITY AND OVERUSE OF THE CAMPING AREA IN THE NORTH PORTION OF THE PARK, COUPLED WITH THE INADEQUACY OF ITS ORIGINAL LAYOUT, HAS BROUGHT ABOUT SEVERE EROSION AND COMPACTION OF THE SITE. HARDENING THE SITE WITH PAVED ROADS AND CAMPING PADS AND REGRADING SOME AREAS WILL BE NECESSARY SINCE THIS CAMPGROUND WILL CONTINUE TO BE USED.

SHORELINE EROSION ALTHOUGH CONTRIBUTING MINIMALLY TO THE SILT LOAD OF THE LAKE IS A HIGHLY VISIBLE PROBLEM TO PARK USERS. THIS NATURAL PROCESS IF ALLOWED TO PROCEED DOES CAUSE SHORELINE AREAS TO BECOME SHALLOW AND LESS SUITABLE FOR FISHING AND BOATING. THE ICC IS PROCEEDING WITH THE RIPRAPPING OF BADLY ERODED PORTIONS OF SHORELINE. HOWEVER, MANY REACHES OF ERODING SHORELINE AROUND THE LAKE ARE SIMPLY INACCESSIBLE TO THE HEAVY TRUCKS WHICH MUST DELIVER LARGE ROCKS USED TO STABILIZE THE SHORELINE DUE TO STEEP SLOPES, TREE COVER, OR LACK OF ROADS. WHILE PLACEMENT OF RIPRAP ON THE ICE IN WINTER SEEMS TO BE A SUITABLE SOLUTION, IT IS ACTUALLY NOT. SHOULD A TRUCK FALL THROUGH THE ICE THE ICC STAFF WOULD BE LIABLE TO HEAVY FINES UNDER CURRENT OSHA REGULATIONS. BECAUSE ICE CONDITIONS MAY CHANGE WITHIN AN HOUR FROM GOOD TO BAD, THE ICC WILL NOT CONDONE THE PLACEMENT OF RIPRAP BY TRUCK ON ICE IN WINTER. IN PLACE OF THIS, WE ARE CONSIDERING THE PURCHASE OF A BARGE TO PLACE RIPRAP ALONG THE INACCESSIBLE REACHES OF SHORELINE AND ALTERNATIVES TO RIPRAPPING FOR SHORELINE STABILIZATION.

LATER IN THIS MASTER PLAN STUDY THE DIVISION OF ACTUAL IMPLEMENTATION OF PARK IMPROVEMENTS INTO PHASES WILL BE EXPLAINED. PHASE I OF PARK DEVELOPMENT WILL BE DEVOTED SOLELY TO THE IMPROVEMENT AND/OR REPLACEMENT OF EXISTING FACILITIES AND THE RIPRAPPING DISCUSSED ABOVE.


CORALVILLE
RESERVOIR
LAKE
MACBRIDE
LAKE
MACBRIDE
0 500 1000 2000 ft
SCALE 1" = 660'
LEGEND
PARK BOUNDARY
PROPOSED ACQUISITION
PRIORITY I
PRIORITY II
PRIORITY III
PRIORITY IV
LAKE MACBRIDE
STATE CONSERVATION COMMISSION OF IOWA
TITLE LAND ACQUISITION PROPOSAL
DRAWN BY F.J.C.
DATE 5/8/78
PROJECT
COUNTY JOHNSON
PROJ. NO.

THERE EXISTS IN THE PARK AND SURROUNDING RESIDENTIAL SUBDIVISIONS A MULTIPLICITY OF SEWAGE DISPOSAL FACILITIES. FAILURE OF SINGLE FAMILY SEPTIC SYSTEMS NEAR THE PARK HAS BEEN DOCUMENTED IN THE PAST. SOMETHING MUST BE DONE TO CORRECT THIS AND OTHER SEWAGE DISPOSAL PROBLEMS IN THIS AREA. THE CONSTRUCTION OF A REGIONAL SEWAGE TREATMENT FACILITY SEEMS TO HAVE MERIT. ICC STAFF HAVE BEEN CONSISTENT OVER THE YEARS IN THEIR STAND ON PARTICIPATION BY THE ICC IN THE STUDY AND POSSIBLE CONSTRUCTION OF SUCH A FACILITY IN THE LAKE MACBRIDE VICINITY. THAT STAND HAS ALWAYS BEEN THAT A LAND-USE PLAN FOR THE LAKE MACBRIDE VICINITY MUST PRECEDE THE PLANNING OF A SEWAGE TREATMENT PLANT SO THAT THERE IS A CONTROL ON SUBURBAN GROWTH IN THE AREA SERVED BY THE PLANT. THE VARIOUS GOVERNMENTAL BODIES IN JOHNSON COUNTY ARE NOW ENGAGED IN A LAND-USE PLANNING PROCESS FOR THE RURAL PORTIONS OF THE COUNTY AND ARE FOCUSING THEIR INITIAL PLANNING EFFORT ON THE LAKE MACBRIDE VICINITY. ICC STAFF ARE SUPPORTIVE OF THIS ACTION AND WILL PARTICIPATE IN IT. ONCE THE LAND-USE PLAN IS ADOPTED AND IMPLEMENTED BY THE COUNTY BOARD OF SUPERVISORS, THE ICC WILL PARTICIPATE FINANCIALLY UP TO ITS FAIR SHARE IN THE STUDY AND POSSIBLE CONSTRUCTION OF A REGIONAL SEWAGE TREATMENT FACILITY.

THE MEMBERS OF THE STAFF TASK FORCE HAVE RECOMMENDED THAT THE FOLLOWING ACTIVITIES BE CONSIDERED FOR INCLUSION IN THE PARK'S REDEVELOPMENT:

- BICYCLING
- HORSEBACK RIDING
- OPEN FIELD SPORTS
- BEACH SWIMMING
- ENVIRONMENT-ORIENTED PASSIVE RECREATION (I.E. BIRDWATCHING, HIKING, AND NATURE STUDY)
- FAMILY RV, TENT, AND GROUP CAMPING IN A DEVELOPED CAMPGROUND
- PICNICKING
- TARGET AND/OR TRAP SHOOTING
- BOATING
- FISHING (INCLUDING ICE FISHING)
- SNOWMOBILING
- SKIING, SLEDDING, AND ICE SKATING

EXISTING AND PROPOSED UTILITY SUMMARY

IOWA ELECTRIC LIGHT AND POWER COMPANY OF CEDAR RAPIDS, IOWA, PROVIDES PRIMARY 7,200-VOLT THREE-PHASE SERVICE TO THE PARK. ELECTRIC DISTRIBUTION LINES WITHIN THE PARK ARE A MIX OF ABOVE GROUND AND UNDERGROUND INSTALLATIONS. THE POWER COMPANY IS SUFFICIENTLY FLEXIBLE TO INCREASE THE SERVICE IF NECESSARY TO SUPPLY FUTURE PARK DEVELOPMENT.

TELEPHONE SERVICE IS PROVIDED IN BURIED CABLE SERVICE BY THE CONTINENTAL TELEPHONE COMPANY OF MOUNT PLEASANT, IOWA. TELEPHONE LINES WITHIN THE PARK ARE A MIX OF ABOVE GROUND AND UNDERGROUND INSTALLATIONS.

POTABLE WATER IS SUPPLIED TO THE PARK'S FACILITIES THROUGH ITS OWN SYSTEM OF WELLS LOCATED AT THE RANGER'S RESIDENCE, BATHHOUSE, AND FISHERIES STATION IN THE NORTH PORTION OF THE PARK AND AT THE RANGER'S RESIDENCE, ATTENDANT'S RESIDENCE, AND PARK OFFICE IN THE SOUTH PORTION OF THE PARK. ALL WATER TREATMENT IS ACCOMPLISHED AT EACH INDIVIDUAL WELL. PROPOSED ADDITIONAL FACILITIES CAN BE ADEQUATELY SERVED BY THESE EXISTING WELLS ACCORDING TO A STUDY BY THE IOWA GEOLOGICAL SURVEY. (SEE RESOURCE ANALYSIS-HYDROLOGY.)

REGARDING SEWAGE DISPOSAL, THE PARK IS SERVED BY SEVERAL SEPTIC TANKS AND ABSORBTION FIELDS LOCATED NEAR THE TWO RANGERS' RESIDENCES, ATTENDANT'S RESIDENCE, BATHHOUSE, AND FISHERIES STATION. SEWAGE EFFLUENT FROM THE ABSORBTION FIELD LOCATED NEAR THE BATHHOUSE IS PIPED TO AN OUTFALL ON THE DOWNSTREAM SIDE OF THE LAKE MACBRIDE DAM. SEWAGE FROM THE MODERN CAMPING AREA IN THE NORTH PORTION OF THE PARK IS DISPOSED OF IN A NEARBY SEWAGE LAGOON.

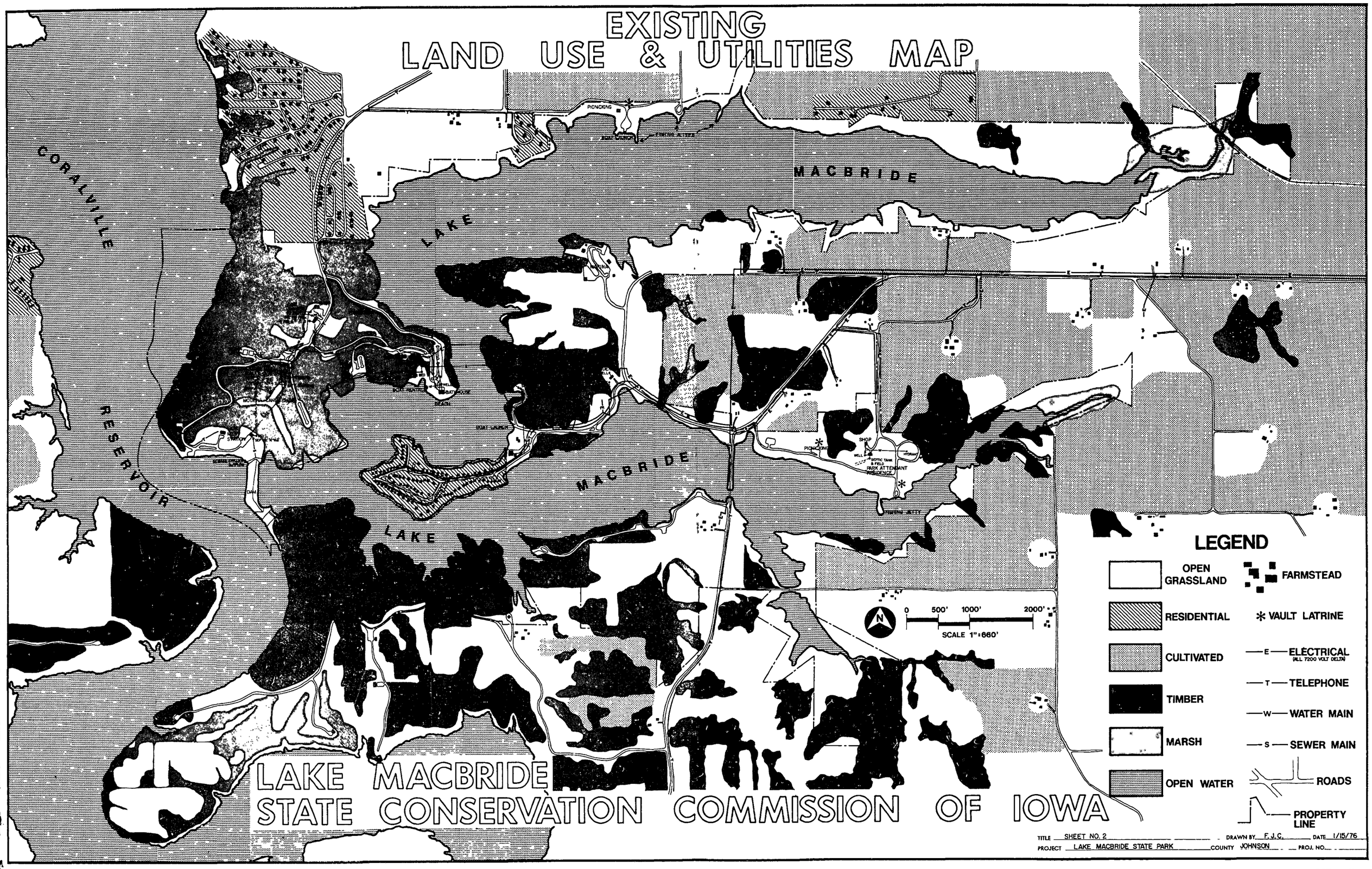
ALSO OF CONCERN TO ICC STAFF IS THE SEWAGE TREATMENT PLANT SERVING THE COTTAGE RESERVE AREA. IT IS LOCATED ON PARK PROPERTY NEAR THE COTTAGE RESERVE AREA AND CONSISTS OF A SETTLING TANK AND IMHOFF FILTER. EFFLUENT FROM THIS FILTER IS PIPED TO THE AFOREMENTIONED OUTFLOW AT THE LAKE MACBRIDE DAM.

PUBLIC AGENCIES IN JOHNSON COUNTY ARE PROCEEDING LOGICALLY TOWARD THE GOAL OF A LAND-USE PLAN FOR THE SENSITIVE LAKE MACBRIDE VICINITY AND, ULTIMATELY, A FEASIBILITY STUDY FOR A SEWAGE TREATMENT PLANT TO SERVE THIS REGION. THE ICC HAS CONSISTENTLY STATED SINCE THE EARLY 1970'S THAT ONCE THE LAND-USE PLAN IS COMPLETED AND ADOPTED BY THE COUNTY BOARD OF SUPERVISORS, IT WILL PARTICIPATE FINANCIALLY UP TO ITS FAIR SHARE IN THE FEASIBILITY STUDY AND POSSIBLE CONSTRUCTION OF A SEWAGE TREATMENT PLANT SERVING THE LAKE MACBRIDE VICINITY. SHOULD THE ONGOING LAND-USE PLANNING EFFORT FOR THE LAKE MACBRIDE VICINITY STAGNATE, THE ICC WILL FALL BACK ON CONSTRUCTION OF ZERO DISCHARGE SEWAGE LAGOONS FOR SEWAGE DISPOSAL WITHIN THE PARK.

(SEE EXISTING LAND USE AND UTILITIES MAP 6 FOR LOCATION OF ALL THE ABOVE UTILITY SYSTEMS.)

PARK PERSONNEL REQUIREMENT

AT THE PRESENT TIME THE WORK FORCE AT LAKE MACBRIDE STATE PARK CONSISTS OF THREE FULL-TIME EMPLOYEES: ONE RANGER II, ONE RANGER I, AND ONE ATTENDANT AND THIRTEEN PART-TIME EMPLOYEES WHO WORK ONLY DURING THE WARM MONTHS OF THE YEAR. FUTURE YEARS WILL REQUIRE THIS NUMBER OF EMPLOYEES TO BE CONTINUED. THE SCHEDULING OF FORTY-HOUR WORK PERIODS, AS REQUIRED BY EXECUTIVE COUNCIL POLICY DIRECTIVE AND POSSIBLE LATER CONTRACTS, WILL HAVE A DIRECT EFFECT ON THE NUMBER OF


EXISTING
LAND USE & UTILITIES MAP
CORALVILLE
RESERVOIR
LAKE
MACBRIDE
PICNICKING
BOAT LAUNCH
FISHING JETTY
MARINA
BOAT RENTAL
BATH HOUSE
BEACH
MOTOR BOAT LAUNCH
STATION
BOAT WELL
SERVICE STORAGE
SHOP
PICNICKING
WELL
SEPTIC TANK & FIELD
PARK ATTENDANT RESIDENCE
HYDRANT
FISHING JETTY
0 500' 1000' 2000'
SCALE 1"=660'
N
LEGEND
OPEN GRASSLAND
RESIDENTIAL
CULTIVATED
TIMBER
MARSH
OPEN WATER
FARMSTEAD
VAULT LATRINE
E ELECTRICAL (ALL 7200 VOLT DELTA)
T TELEPHONE
W WATER MAIN
S SEWER MAIN
ROADS
PROPERTY LINE
LAKE MACBRIDE
STATE CONSERVATION COMMISSION OF IOWA
TITLE SHEET NO. 2
DRAWN BY F.J.C.
DATE 1/15/76
PROJECT LAKE MACBRIDE STATE PARK
COUNTY JOHNSON
PROJ. NO.

SHEET ___ OF ___

EMPLOYEES REQUIRED FOR THE MANAGEMENT, MAINTENANCE, AND OPERATION OF THIS PARK AS DEVELOPMENT PROCEEDS. THE PROJECTED NUMBER OF PERSONNEL REQUIRED TO STAFF THE PARK AS THE PHASES OF THIS MASTER PLAN ARE IMPLEMENTED IS BASED ON SPECIFIC ADMINISTRATIVE, LAW ENFORCEMENT, RESOURCE INTERPRETATION, AND MAINTENANCE TASKS.

PHASE I DEVELOPMENT PERIOD

PHASE I DEVELOPMENT CONSTRUCTION IS PROJECTED TO BEGIN IN THE SPRING-SUMMER OF 1979 AND CONTINUE THROUGH THE SUMMER OF 1981 WITH PHASE I COMPLETION ESTIMATED FOR 1981.

PHASE I PERSONNEL

THE NECESSARY FULL-TIME AND PART-TIME EMPLOYEE MAN-HOURS WILL BE INCREASED BY ONE FULL-TIME PARK ATTENDANT POSITION WHEN POSIBLE DURING THIS BUDGET PERIOD.

PHASE II ACQUISITION PERIOD

LAND ACQUISITION IS ESTIMATED TO BEGIN IN THE FALL OF 1981 WITH COMPLETION ESTIMATED IN THE FALL OF 1983.

PHASE II PERSONNEL

NO INCREASE IN EITHER FULL-TIME OR PART-TIME PERSONNEL MAN-HOURS ARE PROJECTED DURING THIS PERIOD.

PHASE III DEVELOPMENT PERIOD

PHASE III DEVELOPMENT CONSTRUCTION IS ESTIMATED TO BEGIN IN THE SPRING-SUMMER OF 1983 AND CONTINUE THROUGH THE FALL OF 1984 WITH COMPLETION ESTIMATED FOR FALL, 1984.

PHASE III PERSONNEL

THE NECESSARY FULL-TIME AND PART-TIME EMPLOYEE MAN-HOURS WILL BE INCREASED BY ONE FULL-TIME PARK ATTENDANT POSITION WHEN POSSIBLE DURING THIS BUDGET PERIOD.

PHASE IV DEVELOPMENT PERIOD

PHASE IV DEVELOPMENT CONSTRUCTION IS ESTIMATED TO BEGIN IN THE SPRING-SUMMER OF 1985 AND CONTINUE THROUGH THE FALL OF 1986 WITH COMPLETION ESTIMATED IN THE FALL OF 1986.

RECREATION DEMAND ANALYSIS

THIS SECTION OF THE MASTER PLAN STUDY DRAWS HEAVILY FROM TWO VISITOR SURVEYS CONDUCTED IN THE PARK, ONE DURING THE SUMMER OF 1970 BY DR. MARTHA GLASCOCK OF THE UNIVERSITY OF IOWA RECREATION EDUCATION PROGRAM AND THE OTHER DURING THE SUMMER OF 1977 BY JAMES W. STONER, PHILIP R. POORMAN, AND JOHN REED OF THE UNSTITUTE OF URBAN AND REGIONAL RESEARCH, UNIVERSITY OF IOWA.

THE FINDINGS OF THE 1970 VISITOR SURVEY CAN BE INTERPRETED TO INDICATE THAT THE AMOUNT OF FACILITIES IN THE PARK DID NOT FULFILL THE DEMANDS OF THE CURRENT VISITORS. THE VISITOR TO THE PARK IN THAT SUMMER TENDED TO BE A SHORT-TERM VISITOR WHO DESIRED QUALITY IN THE WATER-BASED RECREATION AREAS AND FACILITIES HE USED AND HAD A WELL-ROUNDED INTEREST IN WATER-BASED OUTDOOR RECREATION ACTIVITIES. THE MAJORITY OF THOSE USERS WANTED THE CHARACTER OF LAKE MACBRIDE STATE PARK PRESERVED.

IN ENSUING YEARS, NEW FACILITIES WERE ADDED TO THE PARK WHICH IN PART FILLED THE VOID FELT BY VISITORS IN THE SUMMER OF 1970. THE NEW THREE-LANE BOAT RAMP, SAILBOAT STORAGE AREA, AND ADDITIONAL COURTESY DOCKS WERE ADDED, TELEPHONES WERE INSTALLED IN THE SOUTH PORTION OF THE PARK, AND TWO MODERN TOILET BUILDINGS WERE ADDED TO THE PARK. HOWEVER, THE SHORTAGE OF SPACES IN THE CAMPING AREAS ON PEAK WEEKENDS IN THE SUMMER OF 1970 WAS AGGRAVATED WHEN THE CAPACITY OF THE PARK'S TWO EXISTING CAMPING AREAS WAS REDUCED FROM 400 UNITS TO 160 UNITS IN 1977 TO BRING THE CAPACITY IN LINE WITH AGENCY HEALTH STANDARDS.

EXTENDED SURVEY INSTRUMENTS COMPLETED DURING THE 1977 SURVEY EMPHASIZED THAT WOODS AND ATTRACTIVE SCENERY IN THE PARK ARE VITALLY IMPORTANT TO THE USERS OF THE PARK. ALSO, MUCH OF THE USE OF THE PARK IS DEPENDENT ON THE LAKE AND LAKE CONDITIONS. BOATERS RATED WOODS AND ATTRACTIVE SCENERY AS THIRD MOST IMPORTANT TO THEM AHEAD OF SUCH THINGS AS AVAILABILITY OF RESTROOMS AND PICNIC AREAS. SWIMMERS AND CAMPERS BOTH RATED THAT QUALITY AS FOURTH MOST IMPORTANT TO THEM.

THE USER COMMENTS RECEIVED MOST FREQUENTLY INCLUDED THE DESIRE FOR MORE AND BETTER RESTROOMS, MORE AVAILABLE DRINKING WATER, MORE DOCKING SPACE FOR BOATS, AND INCREASED BEACH AND SWIMMING AREA.

INSPECTION OF THE SUMMER USAGE ESTIMATES FOR THE OVERALL PARK IN THE 1977 SURVEY DISCLOSES THE FACT THAT A PEAK PARK POPULATION OF 6,000 VISITORS WAS EXCEEDED ON ONLY 31 PERCENT OF THE WEEKEND DAYS BETWEEN MAY 28 AND SEPTEMBER 5, IN OTHER WORDS BETWEEN MEMORIAL DAY WEEKEND AND LABOR DAY WEEKEND. LOOKING AT THE 6,000 PERSON PARK POPULATION A DIFFERENT WAY, WE COULD SAY THAT PLANNING FACILITIES IN THE PARK TO ACCOMMODATE THIS NUMBER OF VISITORS WOULD BE SUFFICIENT FOR 70 PERCENT OF THE WEEKEND DAYS BETWEEN THESE TWO HOLIDAY WEEKENDS. THIS FIGURE WOULD BE A SUITABLE PEAK PARK POPULATION FOR

PLANNING PURPOSES WERE IT NOT FOR TWO ADJUSTMENTS THAT MUST BE MADE. FIRST, PARK POPULATION WAS DRASTICALLY LOWER IN 1977 THAN IN PRECEDING YEARS AND SECOND, AS POPULATION INCREASES IN THIS AREA VISITATION TO THE PARK WILL INCREASE. IT CAN BE PROVEN, UTILIZING CONCESSIONAIRE RECEIPTS AND CAMPGROUND RECEIPTS, THAT VISITATION TO THE PARK IN THE SUMMER OF 1977 WAS DOWN 24 PERCENT BELOW PRECEDING YEARS. THIS CAN BE ATTRIBUTED TO 1) VERY HEAVY MEMORIAL DAY TRAFFIC WHICH DISCOURAGED SOME FROM RETURNING TO THE PARK, 2) TELEVISION NEWS IN THE IOWA CITY-CEDAR RAPIDS AREA ON THE FOURTH OF JULY WEEKEND CONCERNING SWIMMER'S ITCH OUTBREAKS AT SOME IOWA LAKES (NONE AT LAKE MACBRIDE) WHICH USED FILM OF THE LAKE MACBRIDE BEACH, 3) ANTICIPATED GASOLINE SHORTAGES, WHICH WOULD HAVE DISCOURAGED LONG-RANGE TRAVEL, FAILED TO MATERIALIZE, AND 4) SIGNIFICANT RAINFALL IN THE LAST HALF OF THE SUMMER. COMPENSATING FOR THIS 24 PERCENT DROP RAISES THE PARK POPULATION PLANNING FIGURE TO 8,000 PERSONS. SINCE OUR INTENT IN THIS MASTER PLAN STUDY IS TO PLAN FOR FUTURE USAGE AT THE PARK, SPECIFICALLY, FOCUSING ON THE YEAR 1990, WE MUST MAKE THE SECOND ADJUSTMENT. THE OFFICIAL IOWA POPULATION PROJECTIONS PREPARED BY THE OFFICE FOR PLANNING AND PROGRAMMING ESTIMATES THE COMBINED POPULATION OF BENTON, LINN, JONES, IOWA, JOHNSON, CEDAR, KEOKUK, MUSCATINE, AND WASHINGTON COUNTIES, THE PRIMARY DEMAND AREA FOR LAKE MACBRIDE STATE PARK, WILL INCREASE BY 0.38 PERCENT PER YEAR THROUGH 1990. COMPENSATING FOR THIS POPULATION INCREASE, THE PEAK PARK ATTENDANCE FOR PLANNING PURPOSES IN 1990 WILL BE 8,370 PERSONS.

THE 1977 VISITOR SURVEY DETERMINED THAT THE FOLLOWING PERCENTAGES OF VISITORS TO THE PARK PARTICIPATE IN THE LISTED KEY ACTIVITIES ON THE PEAK WEEKEND DAY:

BOATING	42.1 PERCENT
SWIMMING	48.8 PERCENT
PICNICKING	51.9 PERCENT
CAMPING	19.8 PERCENT
HIKING/BIKING	20.9 PERCENT
SHORE FISHING	15.4 PERCENT
BOAT FISHING	13.3 PERCENT
GAMES/SPORTS	25.6 PERCENT
NATURE ENJOYMENT	59.7 PERCENT

THE ABOVE PERCENTAGES WHEN APPLIED TO THE PEAK WEEKEND PARK POPULATION OF 8,370 PERSONS INDICATE THAT THE PARK'S FACILITIES SHOULD ACCOMMODATE THE FOLLOWING NUMBERS OF PERSONS ENGAGED IN THE LISTED ACTIVITIES:

Boating	3,523
Swimming	4,084
Picnicking	4,344
Camping	1,657
Hiking/Biking	1,749
Shore Fishing	1,289
Boat Fishing	1,113
Games/Sports	2,142
Nature Enjoyment	4,997

FACILITY NEEDS

Picnicking Calculations:

Participants on Peak Day	4,344
Turnover Rate	2
Instantaneous Peak Day Demand	2,172
Party Size (Occupants per Car)	2.8
Facility Need (Picnic Units)	775
Facility Standard (Units per Acre)	8
Acreage Need	97
Existing Acreage in Park	35
Deficiency in Acres	62
Parking Required (1.5 Cars/Unit @ 35 S.Y. per Car)	40,688 S.Y. or 8.4 Acres
Existing Picnic Parking Area	6,325 S.Y. or 1.3 Acres
Picnic Parking Deficiency	34,363 S.Y. or 7.1 Acres

Swimming Calculations:

Participants on Peak Day	4,084
Turnover Rate	2
Instantaneous Peak Day Demand	2,042
Facility Standard (S.F. Water/User)	35
Facility Need (Water Area)	71,470 S.F.
Existing Facility Size	35,000 S.F.
Deficiency (Water Area)	36,470 S.F.
Party Size	2.8
Parking Required (729 cars x 35 S.Y. per car)	25,515 S.Y. or 5.3 Acres
Existing Public Swimming Area Parking (200 Cars x 35 S.Y. per Car)	7,000 S.Y. or 1.4 Acres
Deficiency (Parking Area)	18,515 S.Y. or 3.9 Acres

BOATING CALCULATIONS:

PARTICIPANTS ON PEAK DAY	3,523
TURNOVER RATE	3
INSTANTANEOUS PEAK DAY DEMAND	1,174
PARTY SIZE (OCCUPANTS PER BOAT)	3.8
INSTANTANEOUS PEAK DAY DEMAND (BOATS)	309
FACILITY STANDARD	24 BOATS/LANE
FACILITY NEED	12 LANES
EXISTING FACILITIES	11 LANES
DEFICIENCY	1 LANE

CAMPING CALCULATIONS:

PARTICIPANTS ON PEAK DAY	1,657
TURNOVER RATE	1
INSTANTANEOUS PEAK DAY DEMAND	1,657
PARTY SIZE (OCCUPANTS PER UNIT)	3.8
FACILITY NEED (CAMPING UNITS)	436
EXISTING CAMPING AREA UNITS	160
DEFICIENCY (UNITS)	266

TRAILS CALCULATIONS:

PARTICIPANTS ON PEAK DAY	1,749
TURNOVER RATE	8
INSTANTANEOUS PEAK DAY DEMAND	218
FACILITY STANDARD	25 PERSONS/MILE
FACILITY NEED	8.7 MILES
EXISTING TRAILS IN PARK	3.0 MILES
DEFICIENCY	5.7 MILES

REGIONAL RECREATION OUTLOOK

THE FOLLOWING EXCERPTS FROM THE LINN COUNTY PARK AND OUTDOOR RECREATION PLAN, JUNE, 1975 INDICATES THE DEFICIT OF WATER ACREAGE FOR RECREATION THAT WILL NOT BE MET EVEN WITH THE COMPLETION OF TWO NEW AREA LAKES, ONE AT SQUAW CREEK PARK, A LINN COUNTY PARK, AND THE OTHER AT STATE RECREATION AREA AT PLEASANT CREEK.

"A VERY SIGNIFICANT FINDING OF THE 1974 COMMUNITY PROFILE SURVEY IN LINN COUNTY IS THAT THE AVERAGE LINN COUNTY RESIDENT PARTICIPATES IN RECREATIONAL ACTIVITIES MORE DAYS PER YEAR THAN INDICATED FOR REGION II IN THE IOWA CONSERVATION COMMISSION'S STATE COMPREHENSIVE OUTDOOR RECREATION PLAN. THIS CAN BE ATTRIBUTED TO THE FACT THAT LINN COUNTY IS MORE URBANIZED THAN MOST COUNTIES IN REGION II AND DEMONSTRATES THE PRINCIPLE THAT THE USAGE OF RECREATION FACILITIES INCREASES AS THE NUMBER OF PEOPLE EMPLOYED IN NON-FARMING OCCUPATIONS INCREASES."

"USING A STANDARD OF FIVE ACRES OF LAKE FOR EACH 1,000 PERSONS WITHIN A 30-MILE SURFACE RADIUS OF LAKE MACBRIDE STATE PARK (950 WATER ACRES), SQUAW CREEK PARK (127 WATER ACRES), AND STATE RECREATION AREA AT PLEASANT CREEK (410 WATER ACRES), A NEED IS INDICATED FOR AT LEAST 200 ACRES OF SURFACE WATER BESIDES THESE THREE FACILITIES (USING 1970 POPULATIONS). LONGER RANGE NEEDS FOR BOATING AND FISHING CAN BE ESTIMATED AT FROM 500 TO 1,000 ACRES BEYOND THE APPROXIMATELY 1,500 ACRES TO BE PROVIDED BY THE THREE FACILITIES."

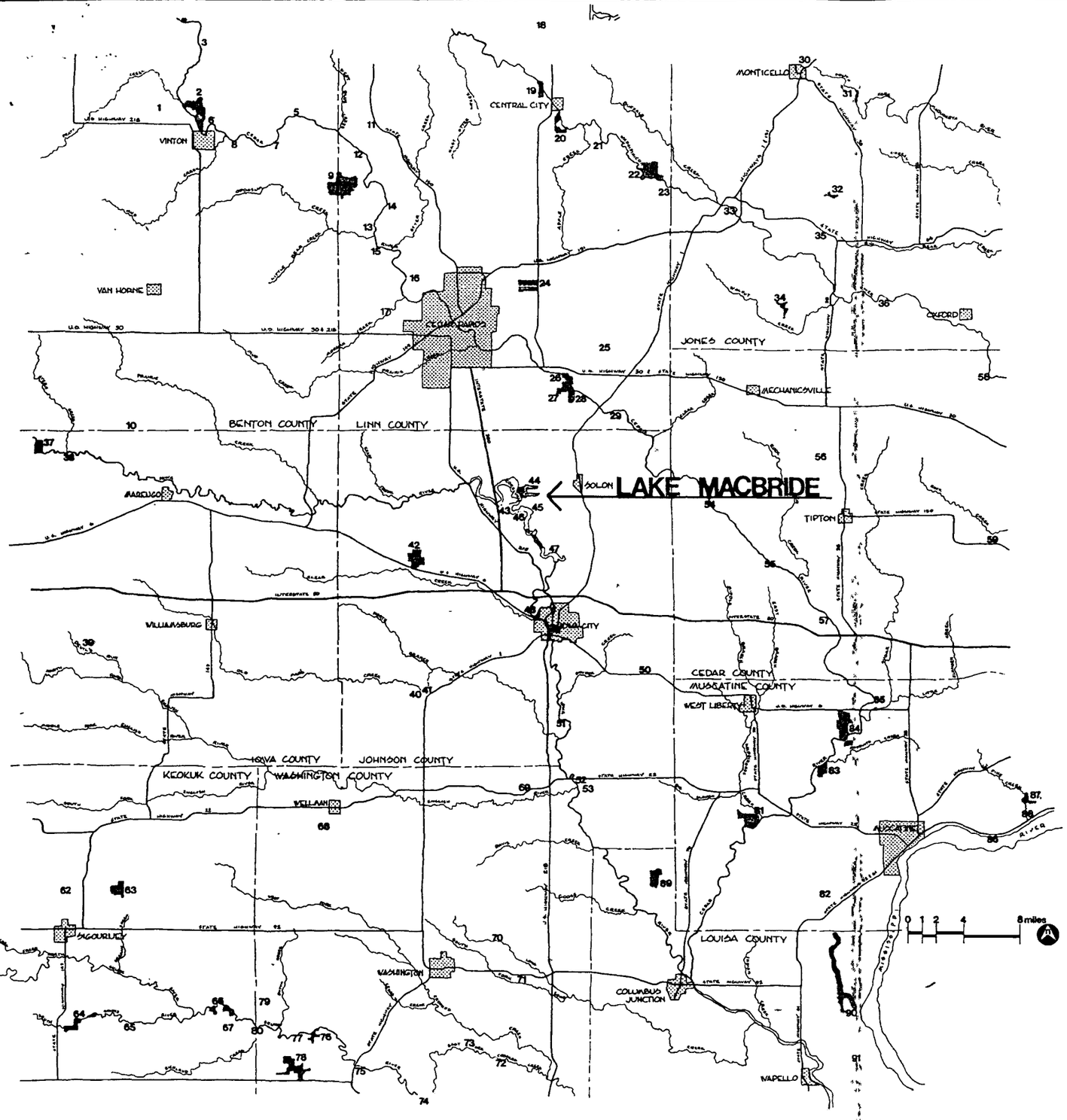
THE JOHNSON COUNTY REGIONAL PLANNING COMMISSION, IN ITS JANUARY, 1977, UPDATE OF THE 1970 JOHNSON COUNTY REGIONAL PLAN FOR PARKS, RECREATION, AND OPEN SPACE, RECOGNIZED THAT JOHNSON COUNTY ALONE (USING 1974 POPULATION) HAS A SURPLUS OF 3,494 ACRES OF FEDERAL RECREATION AREAS, A SURPLUS OF 8,123 ACRES OF STATE RECREATION AREAS, AND A DEFICIT OF 320 ACRES OF COUNTY RECREATION AREAS.

HOWEVER, IN ADDITION TO EXISTING RECREATION AREAS IN JOHNSON COUNTY, THIS PLAN RECOMMENDS THE DEVELOPMENT OF TWO ADDITIONAL "COUNTY LOCAL" PARKS: ONE IN THE SOUTHERN PART OF THE COUNTY, AND ONE IN THE NORTHEASTERN PART OF THE COUNTY NEAR THE CEDAR RIVER. IT ALSO MAKES THE GENERAL RECOMMENDATION THAT FEDERAL, STATE, AND LOCAL RECREATION PLANNING IN JOHNSON COUNTY SHOULD ADDRESS THE NEED FOR ACCOMMODATING 25 OTHER SPECIALIZED RECREATION EXPERIENCES, INCLUDING WILDLIFE PRESERVES, NATURE PRESERVES, SCENIC OVERLOOKS, CANOE LAUNCHING SITES, GEOLOGICAL SITES, ARCHERY AND TARGET PRACTICE FIELDS, SNOWMOBILING TRAILS, AND FIRING/SKEET RANGES.

THE PLAN INDICATES THAT THE SITUATION THAT EXISTS IN LINN COUNTY, AN ABOVE-AVERAGE LEVEL OF RECREATION NEEDS, ALSO EXISTS IN JOHNSON COUNTY AND THAT EXISTING RECREATION AREAS CANNOT SUFFICIENTLY MEET THESE NEEDS.

ACCORDING TO THE SCORP, REGION II, WHICH ENCOMPASSES LINN AND JOHNSON COUNTIES, DISPLAYS THE HIGHEST PRIORITY AMONG THE 7 REGIONS OF IOWA FOR CLASS II AREA DEVELOPMENT, THE CLASS TO WHICH LAKE MACBRIDE STATE PARK BELONGS. WITHIN REGION II, PICNICKING, CAMPING, HIKING, AND NATURAL ENVIRONMENT (BEACH) SWIMMING ARE THE TOP ACTIVITY PRIORITIES FOR FACILITY DEVELOPMENT.

(SEE REGIONAL RECREATION FACILITIES MAP 7 FOR LOCATIONS AND DESCRIPTIONS OF ALL RECREATION AREAS.)



1	[illegible]	[illegible]	USER	REGIONAL	31	35	127	[illegible]	FISHING, HIKING, NATURE CENTER, CAMPING, [illegible]
2	[illegible]	BENTON	USER	REGIONAL	1,256		1,256	STATE (F & G)	HUNTING, FISHING, SNOWMOBILING, SOME NATURE ACTIVITIES, ACCESS TO CEDAR RIVER.
3	[illegible]	BENTON	USER	LOCAL	60		60	STATE-COUNTY	CAMPING, FISHING, HISTORICAL LOOK, ACCESS TO CEDAR RIVER.
4	[illegible] BRIDGE	BENTON	USER	LOCAL	248		248	COUNTY	HUNTING, FISHING, ACCESS TO CEDAR RIVER.
5	[illegible]	BENTON	USER	LOCAL	118		118	COUNTY	FISHING, PICNICKING, CAMPGROUND, ACCESS TO CEDAR RIVER.
6	[illegible] ACCESS	BENTON	USER	LOCAL	3		3	COUNTY	BOATING, ACCESS TO CEDAR RIVER.
7	BENTON CITY-FAW ACCESS	BENTON	USER	LOCAL	40		40	COUNTY	CAMPING, PICNICKING, FISHING, BOATING, ACCESS TO CEDAR RIVER.
8	[illegible]-BLAIN ACCESS	BENTON	USER	LOCAL	52		52	COUNTY	CAMPING, BOATING, ACCESS TO CEDAR RIVER.
9	PLEASANT CREEK RECREATION AREA (Not Completed)	BENTON-LINN	USER	REGIONAL	1,490	500	1,990	STATE (L & W)	CAMPING, BOATING, PICNICKING.
10	WARNER PARK	BENTON	USER	REGIONAL	145	35	180	COUNTY	LAKE FISHING, HUNTING, PICNICKING, CAMPING, BOATING, SWIMMING.
11	[illegible] PARK	LINN	USER	LOCAL	4		4	COUNTY	PICNICKING, SOME SPORTS.
12	LOWES WILDLIFE AND TIMBER AREA	LINN	RESOURCE	LOCAL	435		435	COUNTY	BOATING, WILDLIFE HABITAT, ACCESS TO CEDAR RIVER.
13	PALO MARSH	LINN	RESOURCE	LOCAL	144		144	COUNTY	WILDLIFE HABITAT, HUNTING.
14	WICKIUP HILL	LINN	USER	LOCAL	178		178	COUNTY	CAMPING, HUNTING, ACCESS TO CEDAR RIVER.
15	[illegible] LAKES	LINN	USER	LOCAL	64		64	COUNTY	HUNTING, FISHING, CAMPING, PICNICKING, ACCESS TO CEDAR RIVER.
16	ROCK ISLAND AREA	LINN	RESOURCE	LOCAL	20		20	COUNTY	WILDLIFE PRESERVE.
17	MORGAN CREEK PARK	LINN	USER	LOCAL	156		156	COUNTY	CAMPING, PICNICKING, HIKING, SPORTS.
18	BUFFALO CREEK PARK	LINN	USER	LOCAL	137		137	COUNTY	CAMPING, PICNICKING, FISHING, BOATING, ACCESS TO MAQUOKETA RIVER.
19	FIRESTONE RIDGE PARK	LINN	USER	REGIONAL	720		720	COUNTY	HUNTING, FISHING, CAMPING, HIKING, ACCESS TO MAQUOKETA RIVER.
20	[illegible]	LINN	USER	LOCAL	251		251	COUNTY	HUNTING, FISHING, BOATING, TRAIL, CAMPING, ACCESS TO MAQUOKETA RIVER.
21	JAY G. STORMS MEMORIAL	LINN	RESOURCE	LOCAL	3		3	COUNTY	FISHING, HISTORICAL SITE.
22	MATSELL BRIDGE ACCESS	LINN	USER	LOCAL	1,108		1,108	STATE-COUNTY	HUNTING, FISHING, HIKING, ACCESS TO MAQUOKETA RIVER.
23	MT. HOPE ACCESS	LINN	USER	LOCAL	16		16	COUNTY	CAMPING, HIKING, PICNICKING, FISHING, ACCESS TO MAQUOKETA RIVER.
24	SUGAR CREEK PARK (Not Completed)	LINN	USER	LOCAL	521	79	601	COUNTY	CAMPING, PICNICKING.
25	ABBE CREEK SCHOOL MUSEUM	LINN	RESOURCE	LOCAL	2		2	COUNTY	PICNICKING, HISTORICAL AREA.
26	PALISADES ACCESS	LINN	USER	LOCAL	89		89	STATE-COUNTY	HUNTING, FISHING, CAMPING, BOATING, PICNICKING, ACCESS TO CEDAR RIVER.
27	PALISADES-KEPLER STATE PARK	LINN	USER	REGIONAL	890		890	STATE (L & W)	CAMPING, FISHING, PICNICKING, SWIMMING, ACCESS TO CEDAR RIVER.
28	PALISADES-DOWS AREA	LINN	RESOURCE	LOCAL	182		182	COUNTY	WILDLIFE PRESERVE.
29	SOUTH CEDAR ACCESS	LINN	USER	LOCAL	154		154	COUNTY	HUNTING, FISHING, BOATING, CAMPING, PICNICKING, ACCESS TO CEDAR RIVER.
30	MOR-MAC DAM AND RECREATION AREA	JONES	USER	LOCAL	63		63	COUNTY	PICNICKING, FISHING, BOATING, EDUCATION, ACCESS TO MAQUOKETA RIVER.
31	PICTURED ROCKS	JONES	USER	LOCAL	427		427	STATE-COUNTY	HUNTING, FISHING, BOATING, HIKING, PICNICKING, ACCESS TO MAQUOKETA RIVER.
32	CEDARAK PARK	JONES	USER	REGIONAL	192	25	217	COUNTY	CAMPING, PICNICKING, TRAILS, FISHING, BOATING, SWIMMING.
33	WAPSIPINICON STATE PARK	JONES	USER	REGIONAL	248		248	STATE (L & W)	CAMPING, BOATING, FISHING, HIKING, PICNICKING, ACCESS TO WAPSIPINICON RIVER.
34	HUSSEMY BLUFFS	JONES	RESOURCE	REGIONAL	366		366	STATE (F & G)	HUNTING, WILDLIFE HABITAT.
35	HWY. NO. 64 WEST AREA	JONES	USER	LOCAL	1		1	COUNTY	PICNICKING.
36	JONELTOWN PARK AND RIVER ACCESS	JONES	USER	LOCAL	1.5		1.5	COUNTY	FISHING, BOATING, PICNICKING, ACCESS TO OLD MAN'S CREEK.
37	RANDOLPH ACCESS	IOWA	RESOURCE	LOCAL	399		399	STATE (F & G)	HUNTING, WILDLIFE HABITAT, ACCESS TO IOWA RIVER.
38	HOLTA ACCESS	IOWA	RESOURCE	LOCAL	61		61	STATE (F & G)	HUNTING, WILDLIFE HABITAT, ACCESS TO IOWA RIVER.
39	IOWA COUNTY PARK	IOWA	USER	REGIONAL	395	92	487	COUNTY	CAMPING, FISHING, BOATING, SWIMMING, PICNICKING, WILDLIFE HABITAT.
40	MILLER-GRUNTRAD WILDLIFE AREA	JOHNSON	RESOURCE	LOCAL	84		84	COUNTY	HUNTING, WILDLIFE MANAGEMENT AREA.
41	FRYTOWN CONSERVATION AREA	JOHNSON	RESOURCE	LOCAL	10		10	COUNTY	HUNTING, WILDLIFE PRESERVE.
42	F. W. HERT PARK	JOHNSON	USER	REGIONAL	810	30	840	COUNTY	BOATING, FISHING, SWIMMING, HIKING, CAMPING.
43	GREEN CASTLE AREA	JOHNSON	RESOURCE	LOCAL	8		8	COUNTY	CAMPING, PICNICKING, ACCESS TO COALVILLE RESERVOIR.
44	LAKE MACBRIDE STATE PARK	JOHNSON	USER	REGIONAL	1,049		1,049	STATE (L & W)	CAMPING, BOATING, SWIMMING, PICNICKING.
45	STANBROOK STATE PRESERVE	JOHNSON	RESOURCE	LOCAL	3		3	COUNTY	ECOLOGICAL PRESERVE.
46	OLD STATE BOARD PRESERVE	JOHNSON	RESOURCE	LOCAL	28		28	COUNTY	ECOLOGICAL PRESERVE.
47	COALVILLE RESERVOIR	JOHNSON	USER	REGIONAL	19,100	4,900	24,000	FEDERAL	CAMPING, BOATING, HIKING, FISHING.
48	COALVILLE HYDROELECTRIC DAM	JOHNSON	USER	LOCAL	.3		.3	COUNTY	FISHING, ACCESS TO IOWA RIVER.
49	PLUM GROVE	JOHNSON	RESOURCE	LOCAL	4		4	STATE (L & W)	HISTORICAL SITE.
50	BERRY CHURCH	JOHNSON	USER	LOCAL	5		5	COUNTY	PICNICKING.
51	MILES ACCESS	JOHNSON	USER	LOCAL	40		40	COUNTY	CAMPING, BOATING, FISHING, PICNICKING, ACCESS TO IOWA RIVER.
52	RIVER JUNCTION ACCESS	JOHNSON	USER	LOCAL	12		12	COUNTY	CAMPING, BOATING, FISHING, PICNICKING, ACCESS TO IOWA RIVER.
53	WALKER PARK	JOHNSON	USER	LOCAL	1.6		1.6	COUNTY	PICNICKING.
54	CEDAR BLUFFS CONSERVATION PARK	CEDAR	USER	LOCAL	13		13	COUNTY	ACCESS TO CEDAR RIVER, PICNICKING, FISHING, BOATING.
55	CEDAR VALLEY GREEN BELT	CEDAR	USER	LOCAL	228		228	COUNTY	HUNTING, FISHING, CAMPING, BOATING, PICNICKING, ACCESS TO CEDAR RIVER.
56	RED OAK PARK	CEDAR	USER	LOCAL	7		7	COUNTY	FISHING, PICNICKING.
57	ROCHESTER AREA	CEDAR	USER	LOCAL	3		3	COUNTY	HUNTING, FISHING, PICNICKING, ACCESS TO CEDAR RIVER.
58	MUSCATINE PARK	CEDAR	USER	LOCAL	20		20	COUNTY	HUNTING, FISHING, CAMPING, PICNICKING, ACCESS TO MUSCATINE RIVER.
59	BERNEY PARK	CEDAR	USER	LOCAL	85	10	75	COUNTY	CAMPING, FISHING, PICNICKING.
60	GRIFFIN PARK	CEDAR	USER	LOCAL	32	8	40	COUNTY	FISHING, HIKING, CAMPING, PICNICKING, EDUCATION.
61	DELTA COVINGS BATURE	NEOSHO	USER	LOCAL	1		1	COUNTY	FISHING, PICNICKING, EDUCATION, ACCESS TO NORTH SKUNK RIVER.
62	TEN-MILE-GIS PARK	NEOSHO	USER	LOCAL	68	8	76	COUNTY	CAMPING, SWIMMING, FISHING, PICNICKING.
63	DELTA-DEER RECREATION AREA (Not Developed)	NEOSHO	RESOURCE	REGIONAL	357	3	360	COUNTY	FISHING, CAMPING, NATURE CENTER, PICNICKING.
64	SKUNK RIVER ACCESS	NEOSHO	RESOURCE	LOCAL	426		426	STATE (F & G)	HUNTING, ACCESS TO NORTH SKUNK RIVER.
65	WANNATTEN BRIDGE	NEOSHO	USER	LOCAL	1		1	COUNTY	CAMPING, FISHING, BOATING, PICNICKING, ACCESS TO NORTH SKUNK RIVER.
66	SKUNK RIVER WILDLIFE AREA	NEOSHO	RESOURCE	LOCAL	425		425	STATE (F & G)	HUNTING, ACCESS TO SKUNK RIVER.
67	BOND HILL PARK	NEOSHO	USER	LOCAL	8		8	COUNTY	PICNICKING, EDUCATION.
68	FOSTER TIMBER AREA	WASHINGTON	USER	LOCAL	10	1	12	COUNTY	HUNTING, FISHING, HIKING, PICNICKING.
69	IOWA TOWNSHIP PARK	WASHINGTON	USER	LOCAL	26	1	27	COUNTY	PICNICKING, SPORTS.
70	REYES TIMBER	WASHINGTON	RESOURCE	LOCAL	34		34	COUNTY	HIKING, PICNICKING, EDUCATION.
71	JOHN PARK	WASHINGTON	USER	LOCAL	39	1	40	COUNTY	CAMPING, FISHING, PICNICKING, SPORTS.
72	FIRE CLIFF AREA	WASHINGTON	USER	LOCAL	40		40	COUNTY	CAMPING, HUNTING, FISHING, TRAILS, PICNICKING, ACCESS TO EAST FORK CROWSON CREEK.
73	SUGAR RIDGE PARK	WASHINGTON	USER	LOCAL	267	1	266	COUNTY	FISHING, HUNTING, CAMPING, TRAILS, PICNICKING.
74	COMMERCE ACCESS	WASHINGTON	USER	LOCAL	2		2	COUNTY	ACCESS TO SKUNK RIVER.
75	HWY. 1 SKUNK RIVER ACCESS	WASHINGTON	USER	LOCAL	1		1	COUNTY	HUNTING, ACCESS TO SKUNK RIVER.
76	BRIDGEN FOREST AREA	WASHINGTON	RESOURCE	LOCAL	310		310	COUNTY	HUNTING, ACCESS TO SKUNK RIVER.
77	MERSER ACCESS	WASHINGTON	USER	LOCAL	10		10	STATE-COUNTY	HUNTING, FISHING, CAMPING, BOATING, PICNICKING, ACCESS TO SKUNK RIVER.
78	LAKE DARLING STATE PARK	WASHINGTON	USER	REGIONAL	1,085	302	1,387	STATE (L & W)	CAMPING, BOATING, FISHING, SWIMMING, PICNICKING.
79	VALLEY WILDLIFE AREA	WASHINGTON	USER	LOCAL	1		1	COUNTY	HUNTING.
80	MUNTO ACCESS	WASHINGTON	RESOURCE	LOCAL	134		134	STATE (F & G)	HUNTING, ACCESS TO SKUNK RIVER.
81	RED CEDAR WILDLIFE AREA	MUSCATINE	RESOURCE	LOCAL	713		713	STATE (F & G)	HUNTING, ACCESS TO CEDAR RIVER.
82	MUSCATINE SLOUGH	MUSCATINE	RESOURCE	LOCAL	1,833		1,833	STATE (CONVERTED)	WILDLIFE PRESERVE.
83	SALTSBURY-CEDAR RIVER ACCESS	MUSCATINE	USER	REGIONAL	477		477	COUNTY	CAMPING, BOATING, FISHING, PICNICKING, SPORTS, ACCESS TO CEDAR RIVER.
84	WEESE SLOUGH	MUSCATINE	RESOURCE	LOCAL	1,767		1,767	STATE (F & G)	HUNTING, ACCESS TO CEDAR RIVER.
85	WILSON-CEDAR RIVER ACCESS	MUSCATINE	USER	LOCAL	6		6	COUNTY	CAMPING, BOATING, FISHING, PICNICKING, ACCESS TO CEDAR RIVER.
86	FAIRPORT STATION	MUSCATINE	USER	REGIONAL	22		22	STATE (L & W)	CAMPING, BOATING, FISHING, PICNICKING, ACCESS TO MISSISSIPPI RIVER.
87	WILDCAT BEN STATE PARK	MUSCATINE	USER	REGIONAL	321		321	STATE (L & W)	CAMPING, HIKING, PICNICKING, HISTORIC AREA.
88	NYE HISTORICAL AREA	MUSCATINE	RESOURCE	LOCAL	2		2	COUNTY	HISTORICAL SITE.
89	[illegible]	LOUISA	RESOURCE	REGIONAL	751		751	STATE (F & G)	HUNTING, WETLAND.
90	[illegible]	[illegible]	RESOURCE	REGIONAL	590	60	650	STATE (F & G)	HUNTING, WETLAND.
91	[illegible]	[illegible]	RESOURCE	[illegible]	[illegible]	[illegible]	[illegible]	FEDERAL-STATE	HUNTING, WETLAND.

TITLE REGIONAL RECREATION FACILITIES DRAWN BY FJC DATE 9/18/78

PROJECT LAKE MACBRIDE STATE PARK MASTER PLAN COUNTY JOHNSON PROJ. NO.

SHEET ___ OF ___

RECREATION ACTIVITIES AND PROGRAMS

PICNICKING - THERE ARE A TOTAL OF 35 ACRES OF PICNIC GROUNDS IN THE PARK AT THIS TIME WHICH WILL ACCOMMODATE OVER 840 PICNICKERS. WHILE A DEFICIENCY OF 62 ACRES WAS INDICATED IN THE DEMAND ANALYSIS, CAUTION IN THE ENLARGEMENT OF THIS ACREAGE IS INDICATED BY OBSERVATIONS OF THE 1977 SUMMER SURVEY STAFF. CONSEQUENTLY, THE MASTER PLAN PROPOSAL IS TO ADD ONLY 35 ACRES OF MOWED TURFGRASS AREA WHICH WILL ACCOMMODATE PICNICKING, AS WELL AS OPEN FIELD SPORTS SUCH AS SOFTBALL, SOCCER, AND LAWN GAMES. CAUTION WILL BE EXERCISED IN THE ADDITION OF PICNICKING FACILITIES SO THAT THE DEMAND FOR PICNIC TABLES AND GRILLS IS NOT EXCEEDED BY SUPPLY. TWO SHELTER/LATRINE BUILDINGS, ONE SHELTER, AND ONE MODERN LATRINE WILL BE ADDED TO THE PARK IN THE NEWLY DEVELOPED AREAS.

SWIMMING - THE EXISTING CONCESSIONAIRE-MANAGED BEACH HAS A 350-FOOT LONG BATHING AREA WITH 35,000 SQUARE FEET OF WATER AREA FOR SWIMMING AND A 45,000 SQUARE FOOT TURF AREA FOR SUNBATHING. IT CAN ACCOMMODATE SAFELY 1,000 SWIMMERS. THE BEACH AREA WILL BE ENLARGED BY THE ADDITION OF 150 LINEAR FEET OF BEACH. SECOND, EXISTING GRASS PARKING LOTS IN CLOSE PROXIMITY TO THE BEACH AREA WILL BE PAVED TO MORE EFFICIENTLY ACCOMMODATE VISITORS TO THE SWIMMING BEACH. LAST, THE EXISTING BADLY DETERIORATED BATHHOUSE WILL BE RENOVATED.

BOATING - DUE TO THE EXPANSIVE AREAS OF OPEN WATER AND THE 6-HP MOTOR LIMITS, LAKE MACBRIDE HAS PERENNIALLY BEEN POPULAR FOR SAILBOATS, PONTOON BOATS, CANOES, AND BOAT FISHING. THE POTENTIAL FOR INCREASED BOAT TRAFFIC AS SPELLED OUT IN THE DEMAND ANALYSIS IS IN PART BACKED UP BY THE NUMBER OF BOATS MOORED ON THE LAKE FOR THE SUMMER. OVER 125 BOATS HAVE BEEN OBSERVED MOORED AT DOCKS IN THE COTTAGE RESERVE AREA. ADDITIONALLY, THERE ARE 50 SAILBOATS IN DRY STORAGE AND 35 PONTOON BOATS IN WET MOORINGS UNDER THE MANAGEMENT OF THE PARK CONCESSIONAIRE AND 40 TO 50 BOATS IN DRY STORAGE ON THE MACBRIDE FIELD CAMPUS. THE STAFF TASK FORCE FEELS THAT THE EXISTING 11 RAMPS ARE SUFFICIENT FOR THE BOATING DEMAND AT LAKE MACBRIDE, HOWEVER. EXISTING RAMPS WILL BE REPAIRED AND BROUGHT UP TO THE HIGH STANDARD UTILIZED BY THE ICC.

CAMPING - EXISTING CAMPING AREAS IN THE PARK WILL BE MAINTAINED FOR USE IN THE FORESEEABLE FUTURE. THEY WILL ACCOMMODATE 160 CAMPING UNITS. SITE IMPROVEMENTS WILL BE MADE IN BOTH TO AUGUMENT THE CAMPER'S EXPERIENCE AND TO INCREASE THE EFFICIENCY OF MANAGEMENT AND MAINTENANCE ACTIVITIES. A NEW CAMPGROUND WILL BE DEVELOPED ON LAND TO BE ACQUIRED BETWEEN THE ARMS OF THE LAKE. TO BE ADDED ARE 40 ACRES OF CAMPGROUNDS ACCOMMODATING 230 UNITS ON A 24-HOUR BASIS. THE NEW AREA WILL REQUIRE TWO SHOWER/LATRINE BUILDINGS AND ONE SANITARY DUMP STATION. BOTH SINGLE AND GROUP SITES ARE PLANNED WITH PAVED PADS, ELECTRIC AND WATER HOOKUPS, SITE AMENITIES, AND SANITARY FACILITIES.

HIKING/BIKING TRAILS - THE 8.7 MILES OF TRAILS ARE DESIGNED TO PROVIDE A TRAIL SYSTEM FOR THE PEDISTRIAN, BICYCLIST, HIKER, HANDICAPPED PERSON, AND SNOWMOBILER, WITH INTERCONNECTING ACCESS TO MANY PARK FACILITIES. THEY WILL BE DEVELOPED TO PROVIDE MAXIMUM DIVERSITY WITH THE LEAST ENVIRONMENTAL IMPACT. THE TRAILS WILL BEGIN FROM PARKING AREAS, ENCIRCLE RECREATION AREAS, AND TRAVEL ALONG THE LAKESHORE WHERE TOPOGRAPHY PERMITS. SOME TRAILS WILL HAVE ALL-WEATHER SURFACING IN ORDER TO ACCOMMODATE THE HANDICAPPED INDIVIDUAL AND THE BICYCLIST, WHILE OTHERS WILL BE SURFACED WITH LOCAL NATURAL MATERIALS. ACCESS WILL BE PROVIDED TO SCENIC OVERVIEWS AND AREAS OF ECOLOGICAL, ARCHAEOLOGICAL, AND CULTURAL INTEREST.

EQUESTRIAN TRAILS - THE 8.9 MILES OF TRAILS ARE DESIGNED TO PROVIDE A TRAIL SYSTEM FOR THE EQUESTRIAN, SNOWMOBILER, AND HIKER WITH ACCESS INTO AN AREA OF THE PARK WHICH HAS BEEN LARGELY INACCESSIBLE TO THE PARK VISITOR IN THE PAST, THAT AREA EAST OF COUNTY ROAD F-8 AND SOUTH OF THE SOUTH ARM OF THE LAKE CALLED THE REDHAW DAY USE AREA. THE TRAILS WILL BE DEVELOPED TO PROVIDE MAXIMUM DIVERSITY WITH THE LEAST ENVIRONMENTAL IMPACT. THEY WILL BEGIN FROM PARKING AREAS, PASS ALONGSIDE AND THROUGH THE TIMBERED AREAS, AND TRAVEL ALONG THE LAKESHORE WHERE TOPOGRAPHY PERMITS. DURING THE WINTER AND FOR THE SNOWMOBILER, THERE WILL BE CONNECTIONS TO THE TRAIL IN THE BASSWOOD AREA BY CROSSING OVER THE SPILLWAY AND DAM.

TRAP/SKEET FIELDS - ICC STAFF FEEL THAT THERE EXISTS SUFFICIENT DEMAND IN THE LAKE MACBRIDE VICINITY TO SUPPORT THIS TYPE OF FACILITY. IT WILL BE MANAGED BY A CONCESSIONAIRE WHO WILL SCHEDULE USE OF THE FACILITY; HOWEVER, THE FACILITY WILL BE USED BY ICC STAFF FOR HUNTING SAFETY CLASSES. THIS PORTION OF THE PROPOSED ACQUISITION WILL NOT BE DEDICATED AS A PART OF THE STATE PARK SINCE CARRYING AND FIRING OF WEAPONS BY THE GENERAL PUBLIC IS NOT ALLOWED IN STATE PARKS BY STATE LAW. SELECTION OF A CONCESSIONAIRE WILL BE BY USUAL ICC PROCEDURE.

WINTER ACTIVITIES - THE PARK WILL PROVIDE OPPORTUNITIES FOR CROSS-COUNTRY SKIING, SNOWMOBILING, SLEDDING, TOBOGANNING, SKATING, AND FISHING. SKATING WILL BE ALLOWED IN THE SWIMMING BEACH AND A PORTION OF THE NEW BATHHOUSE WILL BE CONVERTED ANNUALLY INTO A WARMING HOUSE.

ECOLOGICAL RECREATION AREAS - OVER 70 PERCENT OF THE PARK'S LAKE AREA WILL REMAIN IN AN UNDEVELOPED STATE AND WILL BE AVAILABLE FOR LOW-INTENSITY USE SUCH AS EDUCATIONAL INTERPRETATION AND STUDY, MULTIPURPOSE TRAIL USE, AND GENERAL ENJOYMENT OF THE NATURAL ENVIRONMENT. THE ENTIRE PARK WILL BE MANAGED TO INCREASE VEGETATIVE COVER AND WILDLIFE HABITAT. MANAGEMENT PROGRAMS CALL FOR MAINTENANCE OF CLIMAX FOREST, SECESSIONAL ZONES, AND NATIVE PRAIRIE AND WILL PROVIDE VEGETATIVE COVER FOR EROSION CONTROL, EDUCATIONAL INTERPRETATION AND STUDY, AESTHETIC AND VISUAL EFFECT, WILDLIFE COVER AND FOOD, AS WELL AS SHADE FOR PICNICKING AND CAMPING AREAS. (SEE LAND MANAGEMENT PLAN MAP 8.)

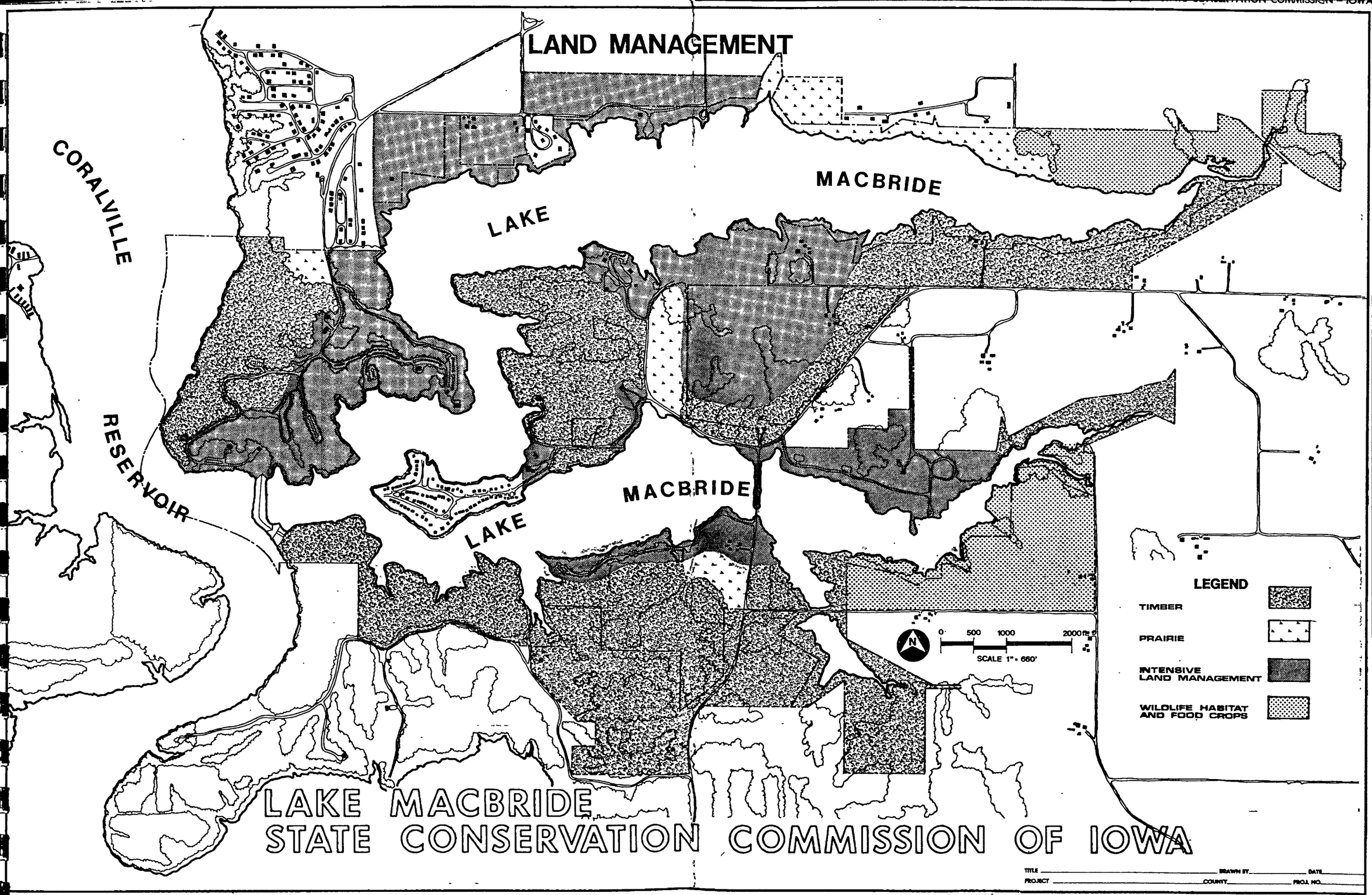
CONTROL AND MANAGEMENT

VISITOR AND ADMINISTRATIVE CENTERS OF THE PARK ARE LOCATED AT THE PARK RANGER RESIDENCE IN THE NORTH PORTION OF THE PARK AND AT THE SOUTH END OF THE CAUSEWAY FOR THE SOUTH PORTION OF THE PARK. THEY PROVIDE GENERAL INFORMATION, FIRST-AID, ADMINISTRATIVE SPACE, AND COORDINATION OF PARK INTERPRETATION FOR VISITORS. THE MAINTENANCE AREA FOR THE NORTH PORTION OF THE PARK IS LOCATED ADJACENT TO THE PARK RANGER RESIDENCE, WHILE THE MAINTENANCE CENTER FOR THE SOUTH PORTION OF THE PARK IS LOCATED AT THE PARK ATTENDANT'S RESIDENCE. THE LATTER WILL BE RELOCATED ADJACENT TO THE VISITOR AND ADMINISTRATIVE CENTER AT THE SOUTH END OF THE CAUSEWAY. THE MAN-POWER MANAGEMENT OF LAKE MACBRIDE STATE PARK WILL PROVIDE FOR PROTECTION, LAW ENFORCEMENT, SAFETY, VISITOR ASSISTANCE, AND MAINTENANCE, AND WILL BE AN INTEGRAL FUNCTION IN THE CONTROL AND ORGANIZATION OF THE AREA. THEREFORE, DEVELOPMENT IS PHASED TO MEET THE CONSTRAINTS OF MANPOWER AVAILABILITY AND BUDGETING, AS WELL AS DEMANDS OF USERS FOR FACILITIES.

REFER TO MASTER PLAN MAP 9 FOR THE LOCATION AND DESIGN OF ALL PROPOSED FACILITIES.

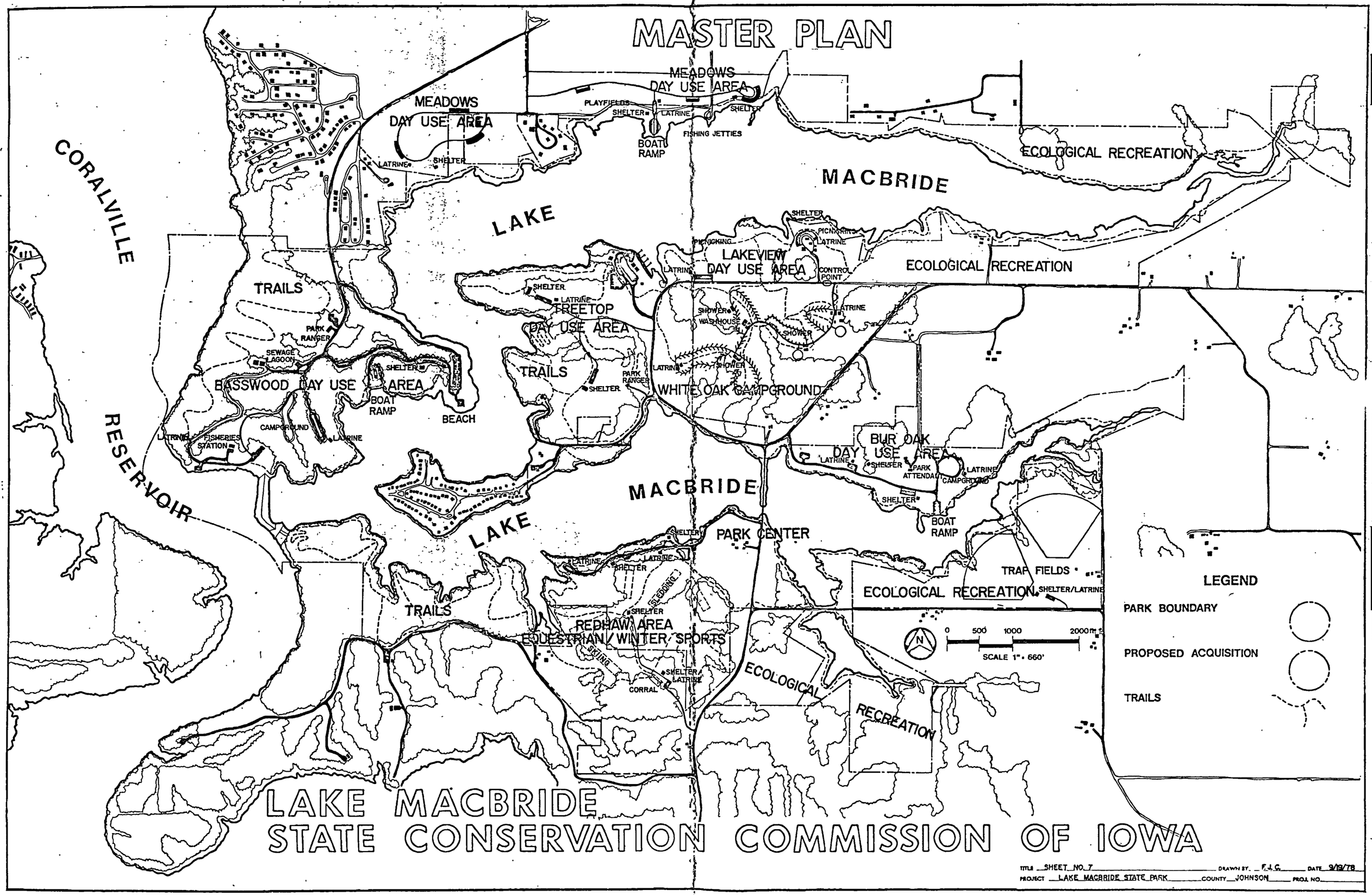
ARCHITECTURAL STYLE

THE ARCHITECTURAL MOTIF OF ALL NEW BUILDINGS WILL MATCH THAT OF THE ICC STANDARD DESIGN FOR SHELTERS AND LATRINE BUILDINGS ALREADY IN EXISTENCE IN THE PARK. IT WILL BE NECESSARY TO PREPARE HARMONIZING DESIGNS FOR THE PROPOSED BATHHOUSE AND SHOWER/LATRINE BUILDINGS. SEE THE ARCHITECTURAL CONCEPT PLATE FOR THE APPEARANCE OF THE EXISTING STANDARD FACILITIES.



TITLE _____ DRAWN BY _____ DATE _____
PROJECT _____ COUNTY _____ PROJ. NO. _____

SHEET ___ OF ___


MASTER PLAN
MEADOWS DAY USE AREA
MEADOWS DAY USE AREA
PLAYFIELDS
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LATRINE
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FISHING JETTIES
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CORALVILLE RESERVOIR
LAKE MACBRIDE
ECOLOGICAL RECREATION
SHELTER
PICNICKING
PICNICKING
LATRINE
LAKEVIEW DAY USE AREA
LATRINE
CONTROL POINT
ECOLOGICAL RECREATION
TRAILS
PARK RANGER
SEWAGE LAGOON
SHELTER
BASSWOOD DAY USE AREA
BOAT RAMP
BEACH
LATRINE
FISHERIES STATION
CAMPGROUND
LATRINE
SHELTER
LATRINE
TREETOP DAY USE AREA
TRAILS
PARK RANGER
SHELTER
SHOWER
WASHHOUSE
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SHOWER
WHITE OAK CAMPGROUND
BUR OAK DAY USE AREA
LATRINE
SHELTER
PARK ATTENDANT
LATRINE
CAMPGROUND
SHELTER
BOAT RAMP
MACBRIDE LAKE
PARK CENTER
SHELTER
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TRAPPING FIELDS
SHELTER/LATRINE
ECOLOGICAL RECREATION
TRAILS
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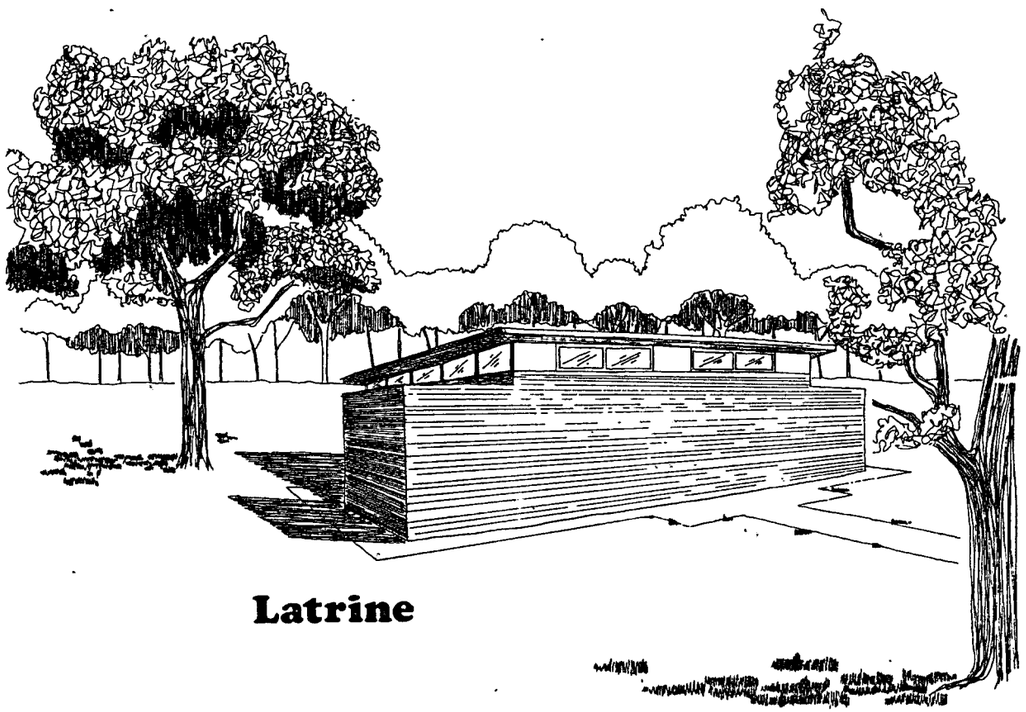
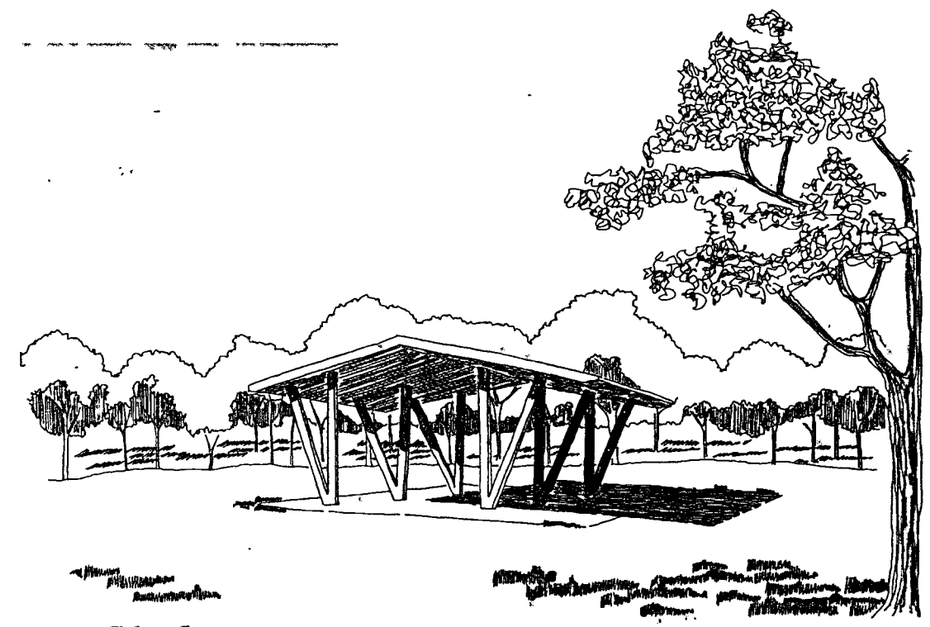
PARK BOUNDARY
PROPOSED ACQUISITION
TRAILS
LAKE MACBRIDE
STATE CONSERVATION COMMISSION OF IOWA
TITLE SHEET NO. 7
DRAWN BY F.J.C.
DATE 9/19/78
PROJECT LAKE MACBRIDE STATE PARK
COUNTY JOHNSON
PROJ. NO.



Latrine



Shelter

LAKE MACBRIDE
STATE CONSERVATION COMMISSION OF IOWA

TITLE _____ DRAWN BY F.J.C. DATE 3/28/78

PROJECT _____ COUNTY APPANOOSE PROJ. NO. _____

SHEET ___ OF ___

IMPLEMENTATION PROGRAM

I. CONSTRUCTION PROGRAM - TOTAL COST $582,500

I-A-SHOWER BUILDING, BASSWOOD AREA $50,000

THE EXISTING SHOWER/LATRINE BUILDING WAS ONE OF THE FIRST TEN SUCH FACILITIES BUILT IN IOWA'S STATE PARKS. WEAR AND TEAR AND WEATHERING HAVE CAUSED A LEVEL OF DETERIORATION SUCH THAT NEEDED REPAIRS WOULD EXCEED THE BUILDINGS VALUE. THE NEW FACILITY WILL BE A MASONRY SHOWER/LATRINE BUILDING OF STANDARD ICC DESIGN.

I-B-BEACH AREA IMPROVEMENTS, BASSWOOD AREA $148,000

STRUCTURAL DETERIORATION AND THE AGE OF THE FIXTURES IN THIS CCC-BUILT BATHHOUSE NECESSITATE COMPLETE RENOVATION OF THE ROOF, STRUCTURAL BEAMS, AND INTERIOR WALLS AND FIXTURES OF THE BUILDING. RENOVATION WILL PRESERVE THE UNIQUE ARCHITECTURAL MOTIF CHARACTERISTIC OF THE STRUCTURES BUILT BY CCC CREWS DURING THE 1930'S.

A TOTAL OF 150 LINEAR FEET OF BATHING AREA WILL BE ADDED TO THE EXISTING SAND BEACH IN ORDER TO REDUCE THE DENSITY OF BATHERS DURING CROWDED CONDITIONS. THE REGRADING PROJECT WILL INCLUDE SPREADING NEW, CLEAN SAND ON THE EXISTING BEACH AREA TO RESTORE IT TO A TYPICAL 12-INCH DEPTH.

THE PARKING LOT SERVING THE BEACH AREA IS PRESENTLY SURFACED WITH CRUSHED ROCK LEADING TO EXTREMELY DUSTY CONDITIONS DURING PEAK-USE PERIODS. THE PAVING OF THIS PARKING AREA WILL NOT ONLY END THE DUST PROBLEM, BUT ALSO INCREASE PARKING AREA CAPACITY, AND IMPROVE TRAFFIC MANAGEMENT DURING HIGH-USE PERIODS.

I-C-CAMPING AREA IMPROVEMENTS, BASSWOOD AREA $180,700

REWIRING OF ALL EXISTING CAMPER OUTLETS IS NECESSARY AS WELL AS EXPANSION OF THIS SERVICE TO MAKE A TOTAL OF 20 ELECTRICAL SITES IN THE CAMPGROUND.

APPROPRIATE REGRADING OF THIS CAMPGROUND WILL BE ACCOMPLISHED IN ORDER TO ENSURE DRAINAGE OF EACH SITE, TO PREVENT FUTURE EROSION, AND TO PREPARE ROADWAYS AND CAMPER PADS FOR PAVING. THE NEW CONFIGURATION OF THE CAMPGROUND WILL YIELD 80 TO 85 SITES INSTEAD OF THE PRESENT CONJESTED LAYOUT OF 96 SITES. ALL CAMPGROUND ROADWAYS AND PADS WILL BE PAVED WITH ASPHALTIC CONCRETE.

LASTLY, THE EXISTING DETERIORATED LATRINE BUILDINGS IN THE CAMPGROUND WILL BE REPLACED WITH A NEW MASONRY LATRINE BUILDING OF STANDARD ICC DESIGN.

I-D-Lodge Improvements, Basswood Area $71,000

This structure was also built by the 1930's CCC crew at Lake MacBride State Park. Over the years it has seen several modifications contributing to its deterioration. Refurbishing will include new wiring, additional toilets, repair of stonework in the fireplace, sand blasting of interior walls, new woodshade roofing, and replacement of an existing native stone walk. Renovation of this building will also preserve the unique architectural motif characteristic of these CCC-built facilities.

The existing parking lot serving the lodge area is presently surfaced with crushed rock which leads to extremely dusty conditions during peak-use periods. Paving this lot will not only solve this problem, but also will increase the parking area capacity and improve traffic management during high-use periods of the swimming beach.

I-E-Boat Launching Improvements, Basswood Area $43,600

The existing crushed rock surfaced parking area will be paved with asphaltic concrete. The existing deteriorated latrine buildings located here will be replaced with a masonry latrine of standard ICC design.

I-F-Boat Launching Improvements, Meadows Day-Use Area $69,200

Another boat launching lane will be added to the existing single-lane ramp. Supporting facilities to be constructed of asphaltic concrete include a new approach road, turning area, rigging areas, and a parking area for 40 cars with trailers. The deteriorating courtesy docks at the boat ramp will be replaced with new docks. Lastly, the parking area at the wet mooring area will be redesigned and paved.

I-G-Riprapping, Various Portions of Lake Shoreline $20,000

Shoreline stabilization with broken limestone will be accomplished on eroding portions of shoreline identified by the ICC Erosion Control Specialist as accessible by truck from the land. This is an appropriations item funded separately by the Legislature.

Phase 2-Acquisition Program-Total Cost $2.2-$3.0 Million

The proposed acquisition to expand the park, 612 acres is comprised of 80 acres of woodland, 322 acres of cropland, 207 acres of pasture, and 3 acres of buildings. (See Parcel Acquisition Map No. 5 for locations of land parcels to be acquired.)

PHASE 3-TOTAL COST $1,308,100

III-A-TREE TOP DAY-USE AREA IMPROVEMENTS-TOTAL COST $237,300

THIS AREA IS PRESENTLY INACCESSIBLE TO THE PARK USER. BY CONSTRUCTING AN ALL-WEATHER ROAD INTO THIS PART OF THE PARK, WE WILL GIVE THE VISITOR AN OPPORTUNITY FOR HIKING ON 4.5 MILES OF TRAIL, PICNICKING (5 ACRES), FISHING, AND RELATED ACTIVITIES IN AN UPLAND HARDWOOD HABITAT. ONE NEW MASONRY LATRINE OF STANDARD ICC DESIGN AND TWO OPEN SHELTERS OF STANDARD ICC DESIGN WILL BE CONSTRUCTED AND AUTOMOBILE PARKING AREAS WILL BE PROVIDED IN THIS DAY-USE AREA TO ACCOMMODATE 155 VEHICLES (PAVED AND OVERFLOW) FOR RECREATIONISTS COMING TO THE PARK FOR THE ABOVE ACTIVITIES. AN EXTENSIVE TRAIL SYSTEM WILL TAKE THE VISITOR ALONG THE WOODED SLOPES AND DOWN TO THE WATER'S EDGE.

III-B-LAKEVIEW DAY-USE AREA IMPROVEMENTS-TOTAL COST $220,200

THIS IS AN ENTIRELY NEW DEVELOPMENT WITH MAJOR USE CENTERED IN A PICNIC AREA (10 ACRES), OPEN PLAY FIELDS (5 ACRES), AND 3.25 MILES OF TRAIL (2 MILES PAVED). AUTOMOBILE PARKING AREAS WILL BE PROVIDED IN THIS DAY-USE AREA TO ACCOMMODATE 293 VEHICLES (PAVED AND OVERFLOW) FOR RECREATIONISTS COMING TO THE PARK TO PICNIC, HIKE, PLAY GAMES, OR FISH FROM THE LAKE BANK. NEW BUILDINGS TO BE BUILT IN THIS DAY-USE AREA ARE: ONE MASONRY LATRINE BUILDING OF STANDARD ICC DESIGN AND ONE SEMI-ENCLOSED SHELTER WITH FIREPLACE, CUSTOM DESIGNED TO HARMONIZE WITH THE ARCHITECTURAL MOTIF OF OTHER PARK FACILITIES. PAVED BICYCLE-PEDESTRIAL TRAILS WILL CONNECT THE PICNIC AREA, TREE-TOP AREA, AND WHITE OAK CAMPGROUND. ONE OF THE PARK'S NEW SEWAGE LAGOON SYSTEMS, IF THIS TYPE FACILITY IS ACTUALLY UTILIZED, WOULD BE SITED EAST OF THIS AREA.

III-C-BUR OAK AREA IMPROVEMENTS-TOTAL COST $231,900

THE EXISTING CAMPGROUND HERE WILL BE MAINTAINED AT ITS CURRENT LEVEL OF DEVELOPMENT. IN NEW DEVELOPMENTS THERE WILL BE 5 ACRES OF PICNICKING AND 5 ACRES OF PLAY FIELD HERE AND 4.0 MILES OF TRAIL SERVED FROM THIS AREA. ONE NEW SEMI-ENCLOSED SHELTER WITH FIREPLACE OF CUSTOM DESIGN WILL BE CONSTRUCTED HERE TO AUGMENT THE EXISTING TWO LATRINE BUILDINGS AND ONE SHELTER. THE EXISTING BOAT RAMP WILL BE REFURBISHED, PAVED, AND SERVED BY A 25-CAR/TRAILER PARKING AREA. AUTOMOBILE PARKING AREAS WILL BE PROVIDED IN THIS DAY-USE AREA TO ACCOMMODATE 167 VEHICLES (PAVED AND OVERFLOW) FOR THE USE OF THOSE RECREATIONISTS WHO COME TO PICNIC, PLAY GAMES, CAMP OR FISH FROM THE LAKE BANK. THE EXISTING PARK ATTENDANT'S RESIDENCE WILL BE EITHER RAISED OR MOVED OUT OF THE PARK THROUGH PUBLIC SALE AND THE EXISTING MAINTENANCE FACILITY WILL BE RELOCATED TO THE NEW SERVICE CENTER IN THE RED HAW AREA.

III-D-WHITE OAK CAMPGROUND DEVELOMENT-TOTAL COST $618,700

A MODERN, LOW-DENSITY, FULL DEVELOPMENT CAMPGROUND CONTAINING 255 CAMPSITES ALLOCATED AS FOLLOWS WILL BE DEVELOPED:

TENT SPACES-94 (37 PERCENT) AND TRAILER SPACES-161 (63 PERCENT).

TRAILER SPACES MAY, OF COURSE, BE USED BY EITHER TRAILER OR TENT CAMPERS. OF THE TOTAL CAMPSITES, 130 WILL HAVE ELECTRICAL AND WATER HOOKUPS. THE DESITY OF THE CAMPSITES WILL BE NO MORE THAN 6 PER ACRE (NET). WITHIN THIS CAMPING AREA WILL BE ONE TRAILER DUMP STATION, THREE MASONRY SHOWER/LATRINE BUILDINGS OF STANDARD ICC DESIGN, TWO MASONRY LATRINE BUILDINGS OF STANDARD ICC DESIGN, ONE MASONRY WASHHOUSE OF CUSTOM DESIGN (CONCESSIONAIRE OPERATION), YARD HYDRANTS, SITE AMENITIES, AND A CHILDREN'S PLAYGROUND. A MODERATE AMOUNT OF TREE PLANTING WILL BE NECESSARY TO PROVIDE A CANOPY OVER SOME CAMPSITES. A FIVE-CAR PARKING SPACE WILL BE PROVIDED AT EACH SHOWER BUILDING, LATRINE BUILDING, AND WASHHOUSE TO ACCOMMODATE BOTH CAMPERS AND VISITORS TO CAMPING FAMILIES.

PHASE 4-TOTAL COST $1,061,300

IV-A-MEADOWS DAY-USE AREA IMPROVEMENT-TOTAL COST $682,300

THIS IS AN EXPANSION OF AN EXISTING HEAVILY VISITED DAY-USE AREA TO PROVIDE PICNICKING (10 ACRES), PLAY FIELDS (15 ACRES), TRAILS, AND ACCESS TO FISHING, BOATING, AND 3 MILES OF TRAIL (1.1 MILES PAVED). THE PRESENT SUBSTANDARD GRAVEL ROAD WHICH WAS CONSTRUCTED BY ICC PERSONNEL IN THIS AREA IN THE 1950'S IS TO BE REPLACED BY A NEW ROAD FURTHER NORTH SO AS TO CREATE A LARGER AREA ORIENTED TO THE LAKE WITHOUT INTRUSION BY THE AUTOMOBILE. THE ONLY PARK BUILDING IN THIS AREA NOW IS AN OPEN SHELTER OF STANDARD DESIGN. NEW FACILITIES WILL INCLUDE ONE OPEN SHELTER OF STANDARD ICC DESIGN, TWO SEMI-ENCLOSED SHELTERS WITH FIREPLACES OF CUSTOM DESIGN, AND TWO MASONRY LATRINE BUILDINGS OF STANDARD ICC DESIGN. THIS AREA WILL ALSO INCLUDE A GREAT DEAL OF TREE AND SHRUB PLANTING IN ORDER TO ARTICULATE OPEN PLACE SPACES, SHADE PICNIC GROUNDS, AND PROVIDE BUFFERS FROM ROADS AND PARKING AREAS. THE EXISTING BOAT RAMP AND WET MOORING AREA WILL BE REFURBISHED IN PHASE I. AUTOMOBILE PARKING AREAS WILL BE PROVIDED IN THIS DAY-USE AREA TO ACOMMODATE 370 VEHICLES (PAVED AND OVERFLOW) FOR THOSE RECREATIONISTS COMING TO THE PARK TO PICNIC, HIKE, PLAY GAMES, OR FISH FROM THE LAKE BANK. THIS AREA WILL INCLUDE THE SITE OF ONE OF THE NEW SEWAGE LAGOON SYSTEMS OF THE PARK IF SUCH LAGOON SYSTEMS ARE UTILIZED.

IV-B-RED HAW AREA IMPROVEMENTS-TOTAL COST $379,000

A PORTION OF THIS AREA IS WITHIN PRESENT PARK BOUNDARIES BUT HAS NOT BEEN ACCESSIBLE TO THE PARK VISITOR. AN ALL-WEATHER ROAD AND 8.9 MILES OF EQUESTRIAN/HIKING TRAILS SYSTEMS WILL OPEN THE ENTIRE AREA OF OLD FIELD AND UPLAND HARDWOOD ASSOCIATIONS TO THE PARK VISITOR. ADDITIONALLY, A WINTER SPORTS AREA OF DOWNHILL SKIING, SLEDDING, AND TOBOGGANING WILL BE DEVELOPED. PICNICKING FACILITIES WILL BE DEVELOPED ON 5 ACRES HERE. NEW BUILDINGS REQUIRED IN THIS AREA ARE: ONE OPEN SHELTER OF STANDARD ICC DESIGN AND ONE SHELTER OF CUSTOM DESIGN WHICH CAN BE CONVERTED TO A WARMING HOUSE, AND ONE PIT-VAULT TYPE LATRINE BUILDING. AUTOMOBILE PARKING AREAS WILL BE PROVIDED IN THIS AREA TO ACCOMMODATE 165 VEHICLES (PAVED AND OVERFLOW) FOR THE RECREATIONISTS COMING TO THE PARK FOR THE ABOVE PURPOSES.

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