C.2
4/1/92

L1630200005/St. Clair County
Dead Creek Segments C-F
(CS C-F)
ILD 984809285
Superfund/HRS

154174

CERCLA

Preliminary Assessment Report

Illinois Environmental
Protection Agency
P.O. Box 19276,
Springfield, IL 62794-9276

RECEIVED
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SITE ASSESSMENT
SECTION

CERCLA Preliminary Assessment Report

for

Dead Creek Segments C through F (CS-C-F)

ILD 984809285

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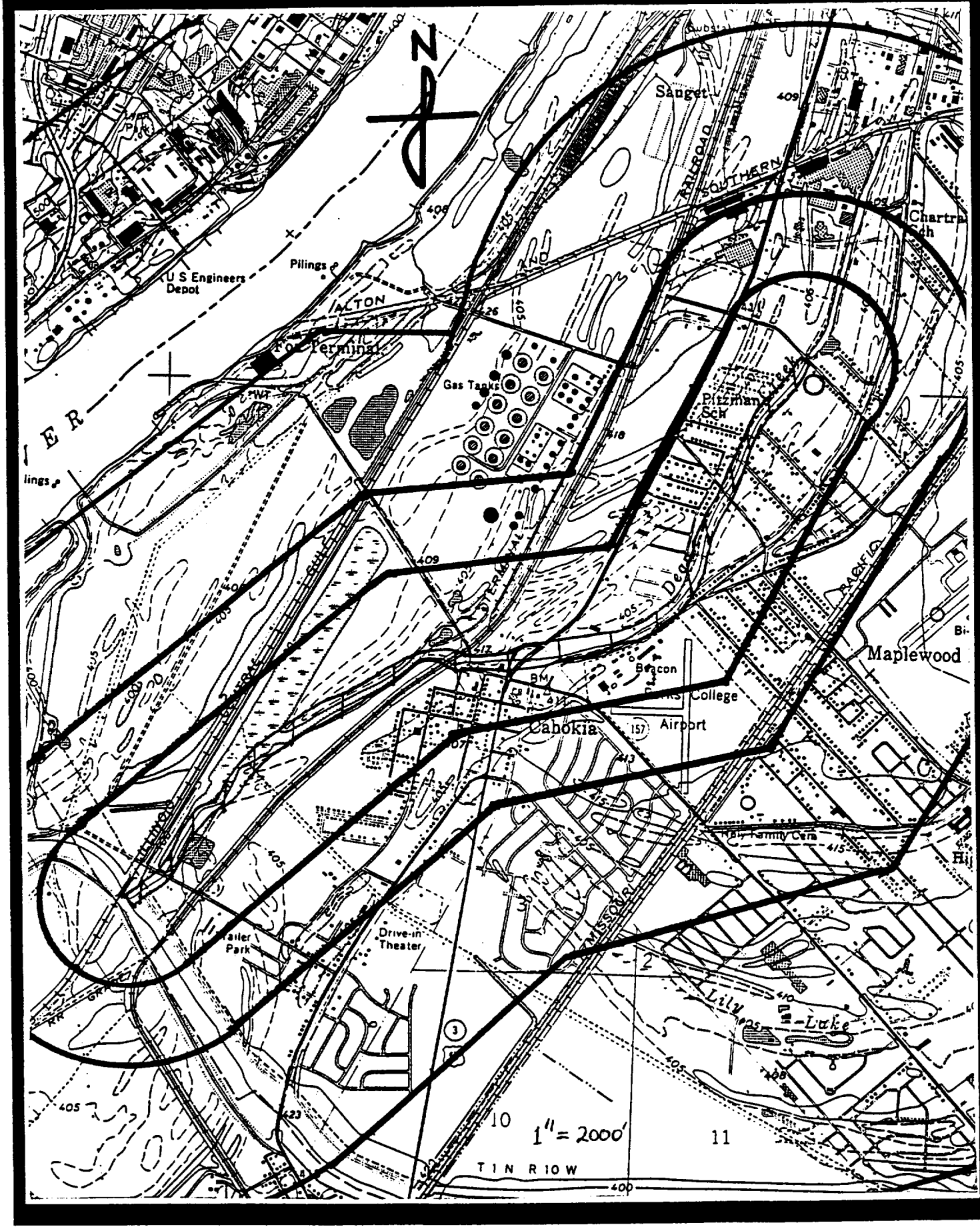
SECTION 1

EXECUTIVE SUMMARY

Executive Summary

On October 26, 1990 Dead Creek Segments C through F was placed on the Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS), as a result of a request for discovery action initiated by the Illinois Environmental Protection Agency (IEPA). The request was based on past disposal practices in the upper segments of the creek, which have migrated and contaminated the lower half of the intermittent creek. It is believed Dead Creek Segments C through F, are contributing to the degradation of environmental quality in the Cahokia, Illinois area.

Dead Creek Segments C through F (CS C-F) includes the entire length of the intermittent Dead Creek south of Judith Lane. This portion of the creek flows south-southwest through the village of Cahokia prior to discharging into the Old Prairie Dupont Creek (AKA Prairie Dupont Floodway). The Creek subsequently discharges into the Cahokia Chute of the Mississippi River. Dead Creek is wider in most parts of segments C through F than in segments A and B, where Dead Creek originates. At the southern portion of Creek Segment D (CS-D) near Parks College, the creek runs underground through a corrugated pipe. The creek resurfaces briefly at the intersection of Illinois Route 157 and Falling Springs Road. From this point on, the creek flows through a series of culverts prior to draining into a wetland area west of Illinois Route 3.



Site Location

CS C-F are delineated as follows: CS-C, Judith Lane to Cahokia Street which spans 1500 feet; CS-D, Cahokia Street to Jerome Street which spans 900 feet; CS-E, Jerome Street to the intersection of Illinois Route 3 and 157 which spans 4500 feet; and CS-F, from this intersection to the discharge point in the Old Prairie Dupont Creek (includes the wetland area) which spans about 8000 feet. These segments of Dead Creek are depicted on the following page. The width of the CS C-F vary from about 20 feet in a portions of CS-E and CS-F to about 100 feet in CS-F. CS C-F flows through Section 35 of Township 2 North, Range 10 West and Sections 3 and 4 of Township 1 North, Range 10 West of the Third Principal Meridian in St. Clair County.

No information is available on file concerning waste disposal activities directly into CS C-F, however disposal in the upper segments A and B is documented. From review of historical aerial photographs, it is evident that creek staining has extended beyond CS-B. A 1962 aerial photograph is contained in Section 3 of this report.

Information obtained from the Historical Assessment of Hazardous Waste Management in Madison and St. Clair Counties, Illinois, 1890-1980, states that in 1932, the village proposed to extend sewer lines to the Monsanto and Federal Chemical Companies. Prior to this, these companies were free

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Information obtained from the Historical Assessment of Hazardous Waste Management in Madison and St. Clair Counties, Illinois, 1890-1980, states that in 1932, the village proposed to extend sewer lines to the Monsanto and Federal Chemical Companies. Prior to this, these companies were free

to dump their wastes into Dead Creek.

In a 1942 interview with the engineer for the village of Sauget, industries in Sauget were sued by complainants living between the villages of Sauget and Cahokia because of direct discharges into the ditch (Dead Creek). The complainants were awarded $4000.00 despite arguments from industries that the discharge of wastes would be beneficial since the great volume of water would flush settled solids into the Mississippi River (an indication that contamination was/is prevalent throughout the entire length of Dead Creek). The 1942 interview is included as Reference #1 in this report.

In 1971, IEPA observed a waste hauler's truck discharging rinse water directly into CS-B (see Waggoner Trucking Company PA ILD 984809269).

Within the last two decades, IEPA and the Cahokia Health Department have received numerous complaints about Dead Creek, from residents in the area. These complaints address, for the most part, seepage of odoriferous water into basements and problems associated with well water use.

IEPA sampled several wells in the area of Dead Creek (just above CS-C) during the preliminary hydrogeologic study conducted in 1980. The results showed concentrations of copper, manganese and phosphorus above the state's water

quality standards in one or more wells and in residential basement seepage sample. Reference #2 contains the results of the well sampling and basement seepage samples from the Dead Creek study.

In 1985, IEPA contracted Ecology and Environment, Incorporated (E&E) to investigate 12 suspected uncontrolled hazardous waste sites and the six segments of Dead Creek in Sauget and Cahokia. Most of the Dead Creek sample locations were collected in upstream Segments A and B with relatively few samples collected in the downstream segments (CS-C-F). E&E also collected groundwater, surface water, sediment and soil gas samples the sites adjacent Dead Creek as well as nearby groundwater samples from private wells. The results of E&E's investigation were used in the preparation of this report.

Only 4 surface water samples were collected south of Judith Lane, 2 from CS-C and 2 from CS-D. No organic contaminants were detected in any of these samples, however elevated levels of some inorganics were detected the surface water from these segments. These included levels of barium, chromium, copper, iron, lead, nickel and zinc which were well above levels of a few of the other Dead Creek surface water samples.

Eight sediment samples were collected from the CS-C and CS-D.

The table on the following page summarizes the organic sediment sample results. Concentrations substantially above background were also found in the inorganic parameters of barium, cadmium, chromium, cobalt, iron, lead, manganese, mercury, selenium, vanadium, and zinc. The analytical results for the eight sediment samples are tabled in Reference #3.

Summary of Sediment Sample Results for Segments C & D

Chemical Name	Number of Detections	Highest Conc.	Sample with Highest Conc.
Volatiles			
2-hexanone	1	1200 J	SD-22
Semi-volatiles			
phenol	2	580 J	SD-23
1,3-dichlorobenzene	1	110 J	SD-22
1,4-dichlorobenzene	1	690 J	SD-22
1,2,4-trichlorobenzene	3	260 J	SD-22
naphthalene	2	330 J	SD-22
2-methylnaphthalene	1	100 J	SD-22
acenaphthene	1	130 J	SD-22
fluorene	1	370 J	SD-22
phenanthrene	3	810 J	SD-22
anthracene	1	500 J	SD-22
di-n-butyl phthalate	3	130 J	SD-25
fluoranthene	3	4600	SD-22
pyrene	4	4500	SD-22
benzo(a)anthracene	4	3300	SD-22
bis(2-ethylhexyl) phthalate	3	660 J	SD-22
chrysene	5	4400	SD-22
di-n-octyl phthalate	2	190 J	SD-22
benzo(b)fluoranthene	5	7500	SD-22
benzo(k)fluoranthene	2	920	SD-21
benzo(a)pyrene	6	4500	SD-22
indeno(1,2,3-cd)pyrene	6	4300	SD-22
benzo(g,h,i)perylene	3	1500 J	SD-22
dibenzo(a,h)anthracene	6	4000	SD-22
PCB's			
AROCLOR 1248	1	8700	SD-22
AROCLOR 1254	5	11000	SD-23
AROCLOR 1260	3	7800 J	SD-23

Conc.-Concentration, J-estimated value, values in ug/kg (ppb)

A CERCLA Preliminary Assessment site reconnaissance was conducted at Segments C through F by IEPA on March 27, 1991. At this time, IEPA was conducting a CERCLA Screening Site Inspection for Sauget Sites Area #1. IEPA's sample team

consisted of Judy Triller, Greg Spencer and Greg Dunn.

Access to CS-C-F is unrestricted. Residents and/or commercial property border the creek in all sections but the wetland area of CS-F. IEPA and their contractors have observed children playing in and around the creek on several occasions.

Creek Segments C through F are located in an area known as the American Bottoms. Area well logs indicated the upper stratigraphy in this area consists of 70-120 feet of unconsolidated alluvium and glacial outwash overlying Mississippian aged limestone and sandstone formations (Ste. Genevieve and St. Louis Limestones). The valley fill deposits are composed of two formations, the uppermost being the Cahokia Alluvium followed by the Mackinaw Member of the Henry Formation.

The Cahokia Alluvium is composed predominantly of silt, clay and fine sand deposits, generally indicative of a aggrading environment. In the vicinity of Dead Creek, these deposits vary in thickness, with a range of 15 to 30 feet. This formation was laid down via flood events, eolian activity, bank slumping, erosion and/or slugs of material deposited directly by tributary steams. The Mississippi River has frequently reworked this formation in such a way that coarser material is intermingled with finer-grained deposits.

Underlying the Cahokia Alluvium is the Mackinaw Member of the Henry Formation. This formation is composed of sand and gravel from glacial outwash. At the Dead Creek area, this material rest directly on the bedrock surface and varies between 70 and 100 feet in thickness. Reference #4 contains area well logs which describe the area geology.

Local hydrogeologic information has been obtained through groundwater monitoring in the Dead Creek area. Shallow sand and gravel deposits close to the ground surface, yield significant quantities of water for nearby homes and business. Horizontal groundwater movement in the shallow deposits generally follow the land surface topography, with lateral movement toward local discharge zones (wells and small streams), and some movement into the deeper unconsolidated aquifers. Groundwater is encountered between 10 and 28 feet below the ground surface in the Dead Creek area and consequently, the aquifer of concern (AOC) is at 10 feet. Groundwater in the deeper unconsolidated valley fill deposits generally follows the bedrock surface. Accordingly, groundwater generally flows downstream through the sand and gravel aquifers in much the same direction as the original stream flow, but at a much slower rate.

Most area residents are supplied with drinking water by the Illinois-American Water Company (IAWC) which operates an

intake on the Mississippi River upstream of Sauget. IAWC sells the water to the various water departments and districts within the Sauget/Cahokia area. However, some area residents do obtain drinking water from shallow wells. Illinois Department of Public Health (IDPH) files and Illinois State Water Survey (ISWS) well logs indicate at least 50 area residents have wells which are used for drinking or irrigation. These wells are located in Cahokia (23), East St. Louis (5), East Carondelet (16) and Dupo (6). These do not include the wells at the homes on Judith Lane in Cahokia or an unknown number of residents in the Schmids Lake area (approximately 1 mile southwest) that are not covered by any public water distribution. A 1983 report by the Southwestern Illinois Metropolitan and Regional Planning Commission (SIMRPC) listed 69 residences in Centreville Township (includes Sauget, Cahokia, Alorton and Centreville) which use private water systems. The same report lists 57 residences in East St. Louis and 365 residences in Sugarloaf Township (includes Dupo, North Dupo and East Carondelet). SIMRPC based their report on 1980 census data. Reference #5 contains a map which pin-points some of the ISWS well locations and a printout of area wells.

Dead Creek (AKA Old Cahokia Creek and Rigolet Creek), which travels south and southwest through its course, serves as drainage for approximately 1400 acres. As the creek exits the village of Cahokia, it enters a large wetland. The

wetland and Dead Creek drain underneath the 500-year levee (with flood control gate that protects the villages of Sauget and Cahokia) into the Old Prairie Dupont Creek. From the Old Prairie Dupont Creek, water flows west into the Cahokia Chute which discharges into the Mississippi River at river mile 174.2.

The average discharge of the Mississippi River, as measured over a 128 year period at St. Louis, Missouri, is 179,800 cubic feet per second. The Old Prairie Dupont Creek and the Cahokia Chute are minimal streams that lack stream flow information. The probable point of entry (PPE) is where the Dead Creek wetland area enters Old Prairie Dupont Creek, the end of Creek Segment F. The flow distance from the PPE to the Mississippi River is 8,520 feet or 1.61 miles. A 15-mile surface water map is included in Section 3 of this report. The 15-mile surface water target limit extends to Mississippi River mile 160.8.

Surface water use in the immediate area (from Mississippi River mile 174 to 178) is limited to recreation and freight trafficking. The upstream surface water intake (river mile 181), which supplies most of the Illinois side area residents, was mentioned in a previous paragraph. The city of St. Louis is also supplied by an upstream surface water intake, about 12 miles north at river mile 190. At downstream river mile 149 (about 28 river miles south), the

village of Crystal City, Missouri (population 4000) utilizes a Ranney well, adjacent the Mississippi River, for drinking water. A well of this kind, is assumed to draw in surface water due to its construction and location to the river. On the Illinois side, the nearest downstream surface water intake is located approximately 65 river miles south, at river mile 110. The intake is used by the town of Chester and surrounding communities in Randolf County.

According to the Illinois Department of Conservation (IDOC), the Resource Inventory for the Mississippi River at river miles 178-162 shows fishing areas, sport fishing areas, important wildlife habitat and bald eagle use at selected areas in this reach. Correspondence from IDOC, details the aforementioned sensitive areas in Reference #6.

Although air samples have not been collected from these section of the creek, it is a possible that an air release could occur, due to the off gassing of contaminated soil. As noted previously in this report, access to Dead Creek Segments C through F are unrestricted and contamination has been documented within 2 feet of the surface.

Through 1990 U.S. Census data, it has been estimated that about 2000 people live within a mile of the site and about 148,000 people live within 4-miles. The following table shows the 4-mile radius population calculation.

Target Population Calculation

City	Population Density/ Total Population	Area w/in 4-Mile Radius	Population w/in 4-Mile Radius
St. Louis	7,379/sq mi	11.5 sq mi	84,826
E. St. Louis	4,119/sq mi	8.5 sq mi	34,875
Alorton	2,237	100%	2,237
Cahokia	18,904	100%	18,904
Centreville	9,747	75%	7,310

Total Target Population = 148,152

A high priority has been assigned to this site. In order to quantitatively determine the threat posed by the contaminated creek, a CERCLA Screening Site Inspection has been conducted at Dead Creek Segments C through F. The creek segments have been aggregated along with similar sites in the immediate area (Sauget Sites Area #1), so as to more accurately assess their cumulative health risks and environmental threats.

BIBLIOGRAPHY

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U.S. Department of the Interior. Fish and Wildlife Service, National Wetlands Inventory Maps: Monks Mound, IL. Quadrangle (225A), Granite City, IL-MO Quadrangle (225B), Cahokia, IL-MO Quadrangle (225C), French Village, IL. Quadrangle (225D).

SECTION 2

EPA FORM 2070-12

"Potential Hazardous Waste Site
Preliminary Assessment"

EPA

POTENTIAL HAZARDOUS WASTE SITE PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION
01 STATE: ILD | 02 SITE NUMBER: 984809285

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site): Dead Creek Segment C-F

02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER: South of Judith Lane

03 CITY: Cahokia | 04 STATE: IL | 05 ZIP CODE: 62206 | 06 COUNTY: St. Clair | 07 COUNTY CODE: 163 | 08 CONG DIST: 23

09 COORDINATES LATITUDE: 38 33 50.0 | LONGITUDE: 090 11 25.0 | Cahokia IL-MO Quad (225C)

10 DIRECTIONS TO SITE (Starting from nearest public road): See map section of report

III. RESPONSIBLE PARTIES

01 OWNER (If known): + residents of Cahokia Village of Cahokia et al | 02 STREET (Business, mailing, residential): 103 Main Street

03 CITY: Cahokia | 04 STATE: IL | 05 ZIP CODE: 62206 | 06 TELEPHONE NUMBER: (618) 337-3492

07 OPERATOR (If known and different from owner): | 08 STREET (Business, mailing, residential):

09 CITY: | 10 STATE: | 11 ZIP CODE: | 12 TELEPHONE NUMBER: ( )

13 TYPE OF OWNERSHIP (Check one)
Some – ■ A. PRIVATE ☐ B. FEDERAL: _____ (Agency name) ☐ C. STATE ☐ D. COUNTY ■ E. MUNICIPAL – Some
☐ F. OTHER: _____ (Specify) ☐ G. UNKNOWN

14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)
☐ A. RCRA 3001 DATE RECEIVED: / / (MONTH DAY YEAR) ☐ B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: / / (MONTH DAY YEAR) ■ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION
■ YES DATE 11 05 86 (MONTH DAY YEAR)
☐ NO

BY (Check all that apply)
☐ A. EPA ☐ B. EPA CONTRACTOR ☐ C. STATE ■ D. OTHER CONTRACTOR
☐ E. LOCAL HEALTH OFFICIAL ☐ F. OTHER: IEPA Contractor (Specify)
CONTRACTOR NAME(S): Ecology and Environment, Inc.

02 SITE STATUS (Check one)
☐ A. ACTIVE ■ B. INACTIVE ☐ C. UNKNOWN

03 YEARS OF OPERATION
BEGINNING YEAR | ENDING YEAR ■ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED
PCB's, pesticides, PNA's

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION
Surface water (environment, population)
Ground water (population)

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 3 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents)
■ A. HIGH (Inspection required promptly) ☐ B. MEDIUM (Inspection required) ☐ C. LOW (Inspect on time available basis) ☐ D. NONE (No further action needed, complete current disposition form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT: Paul M | 02 OF (Agency/Organization): Village of Cahokia | 03 TELEPHONE NUMBER: (618)

04 PERSON RESPONSIBLE FOR ASSESSMENT: Timothy J. Murphy | 05 AGENCY: IEPA | 06 ORGANIZATION: DLPC/RPMS | 07 TELEPHONE NUMBER: (217) 782-6760 | 08 DATE: 08 12 91 (MONTH DAY YEAR)

EPA FORM 2070-12 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
ILD	984809285

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- A SOLID
- B POWDER, FINES
- ■ C SLUDGE
- D OTHER _____ (Specify)
- E SLURRY
- ■ F LIQUID
- G GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

TONS

CUBIC YARDS

NO OF DRUMS

UNKNOWN

03 WASTE CHARACTERISTICS (Check all that apply)

- ■ A TOXIC
- B CORROSIVE
- C RADIOACTIVE
- ■ D PERSISTENT
- E SOLUBLE
- F INFECTIOUS
- G FLAMMABLE
- H IGNITABLE
- I HIGHLY VOLATILE
- J EXPLOSIVE
- K REACTIVE
- L INCOMPATIBLE
- M NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE	UNK		
OLW	OILY WASTE	UNK		
SOL	SOLVENTS	UNK		
PSD	PESTICIDES	UNK		
OCC	OTHER ORGANIC CHEMICALS	UNK		
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS	UNK		

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
SOL	1,2,4-trichlorobenzene			260 J	ug/kg
OLW	phenol			580 J	"
SOL	1,3-dichlorobenzene			110 J	"
SOL	1,4-dichlorobenzene			690 J	"
OLW	naphthalene			330 J	"
OLW	2-methylnapthalene			100 J	"
OLW	acenaphthene			130 J	"
OLW	fluorene			370 J	"
OLW	phenanthrene			810 J	"
OLW	anthracene			500 J	"
OLW	fluoranthene			4600	"
OLW	pyrene			4500	"
OLW	benzo(a)anthracene			3300	"
OLW	chrysene			4400	"
OLW	benzo(b)fluoranthene			7500	"
OLW	benzo(K)fluoranthene			660 J	"

J - estimated

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Illinois EPA Division of Land Pollution Control (DLPC) files L1631210005

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
OLW	benzo(a)pyrene		found in	4,500	ug/kg
OLW	indeno(1,2,3-cd)pyrene		sediment samples	4,300	"
OLW	benzo(g,h,i)perylene		taken from	1,500	"
OLW	dibenzo(a,h)anthracene		Dead Creek	4000	"
psd	endrin		Segments C-D	580	"
OCC	Aroclor 1248 (PCB)		on 11/05/86	8,740	"
OCC	Aroclor 1254 (PCB)			11,000	"
OCC	Aroclor 1260 (PCB)			7,800	"
MES	lead			925	Mg/Kg
MES	cobalt			12	"
MES	chromium			68	"
MES	cadmium			42	"
MES	barium			1700	"
MES	aluminum			12,600	"
MES	mercury			2.81	"
MES	selenium			2.5	"
MES	zinc			6,880	"
MES	copper			6,640	"
SOL	2 hexanone			1200	ug/kg
OCC	di-n-butylphthalate			130	"

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: ILD
02 SITE NUMBER: 984809285

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ■ A. GROUNDWATER CONTAMINATION — 02 ■ OBSERVED (DATE ____) — POTENTIAL — ALLEGED
03 POPULATION POTENTIALLY AFFECTED: >50
04 NARRATIVE DESCRIPTION
Local groundwater contamination has been observed

01 ■ B. SURFACE WATER CONTAMINATION — 02 ☐ OBSERVED (DATE ____) — ■ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: ____
04 NARRATIVE DESCRIPTION
Intermittent Dead Creek is contaminated as are fish in the nearby Mississippi River.

01 ■ C. CONTAMINATION OF AIR — 02 ☐ OBSERVED (DATE ____) — ■ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: ____
04 NARRATIVE DESCRIPTION
Volatilization of contaminants in the Creek may create human health effects

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS — 02 ☐ OBSERVED (DATE ____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: ____
04 NARRATIVE DESCRIPTION

01 ■ E. DIRECT CONTACT — 02 ☐ OBSERVED (DATE ____) — ■ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: unk
04 NARRATIVE DESCRIPTION
None of Creek Segments C - F are fenced off.

01 ■ F. CONTAMINATION OF SOIL — 02 ■ OBSERVED (DATE 11/05/86) — POTENTIAL — ALLEGED
03 AREA POTENTIALLY AFFECTED: ≈ 3.3 (Acres)
04 NARRATIVE DESCRIPTION
Dead Creek Soil/Sediment have shown contamination

01 ■ G. DRINKING WATER CONTAMINATION — 02 ☐ OBSERVED (DATE ____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: >50
04 NARRATIVE DESCRIPTION
Segments of Dead Creek above C-F have had

01 ☐ H. WORKER EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE ____) — ☐ POTENTIAL — ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: ____
04 NARRATIVE DESCRIPTION
None observed or documented

01 ■ I. POPULATION EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE ____) — ■ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: ____
04 NARRATIVE DESCRIPTION
See B, C, E + G above

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
ILD	984809285

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None observed or documented

01 ☐ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include name(s) of species)

None observed or documented

01 ■ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Fish from the Mississippi River near the site have been found to contain dioxins/furans, PCB's and chlorinated nitro benzenes

01 ■ M. UNSTABLE CONTAINMENT OF WASTES (Spills, runoff, standing liquids, leaking drums) — 02 ■ OBSERVED (DATE: 1942) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 2000
04 NARRATIVE DESCRIPTION

Wastes were allowed to enter Dead Creek routinely prior to regulation.

01 ■ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Homes border the creek with some property lines running to the center of the creek.

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None observed or documented

01 ■ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ■ OBSERVED (DATE: 1942) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

See M. above

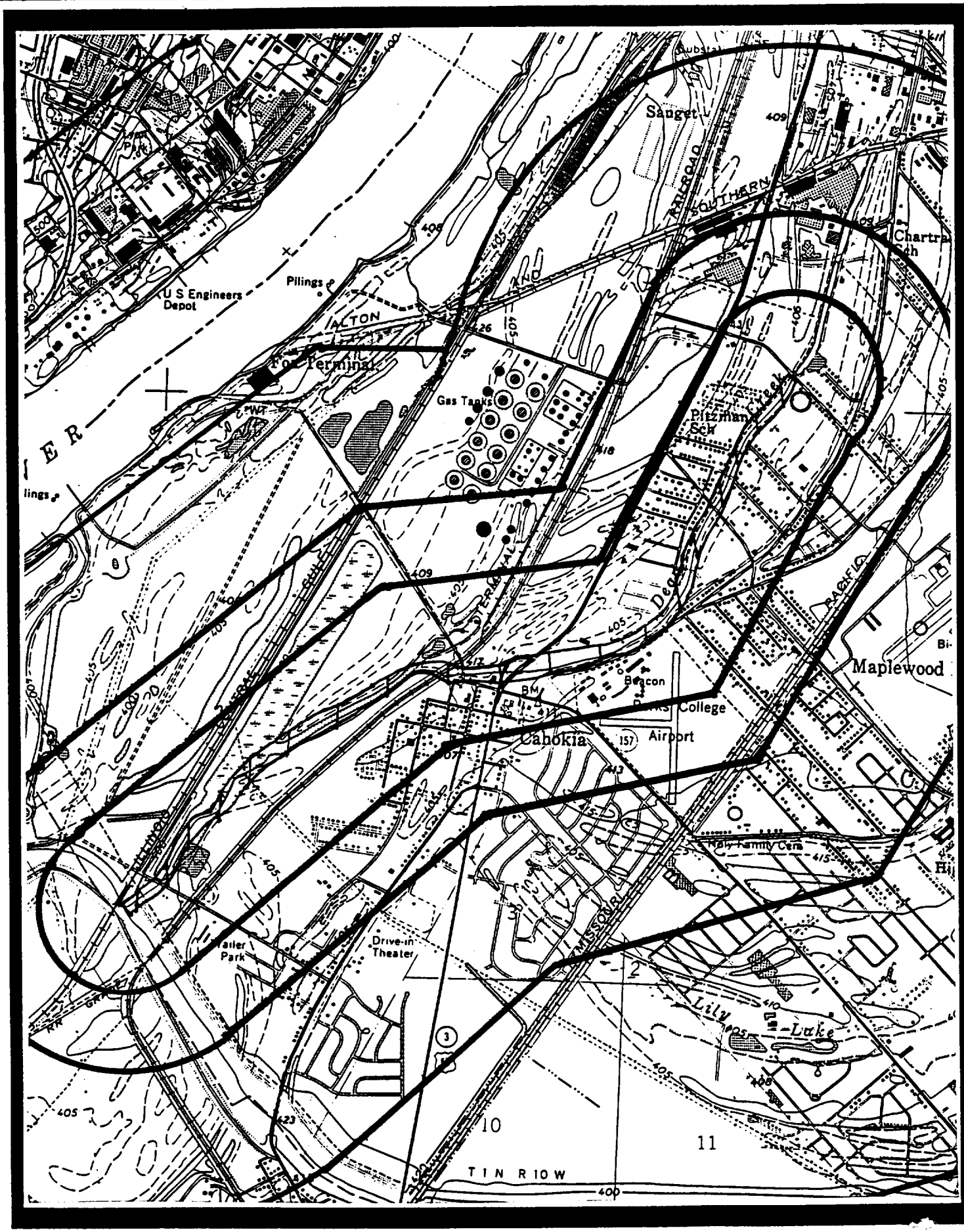
05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

III. TOTAL POPULATION POTENTIALLY AFFECTED: >2000

IV. COMMENTS

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

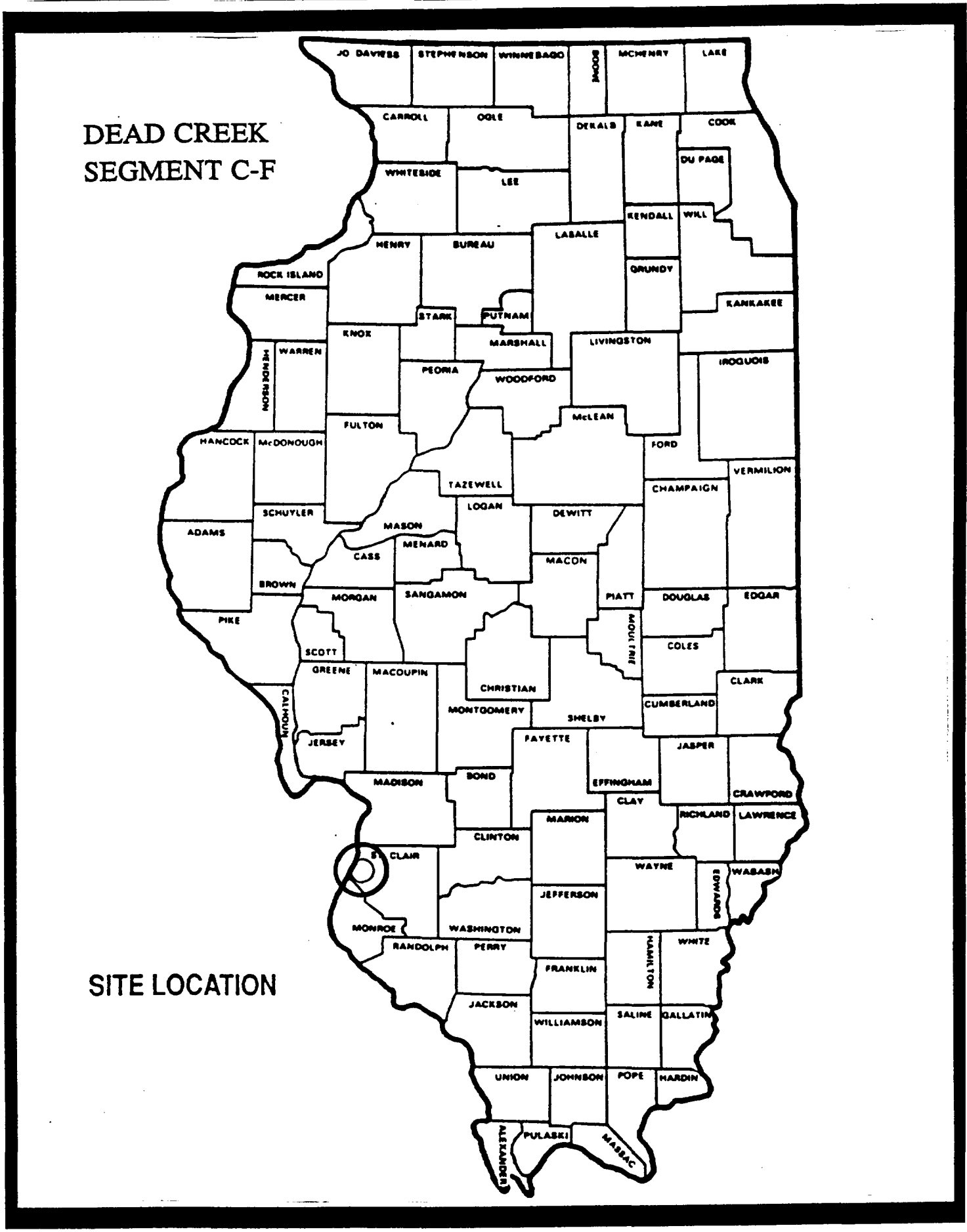
IEPA DLPC files for St. Clair County



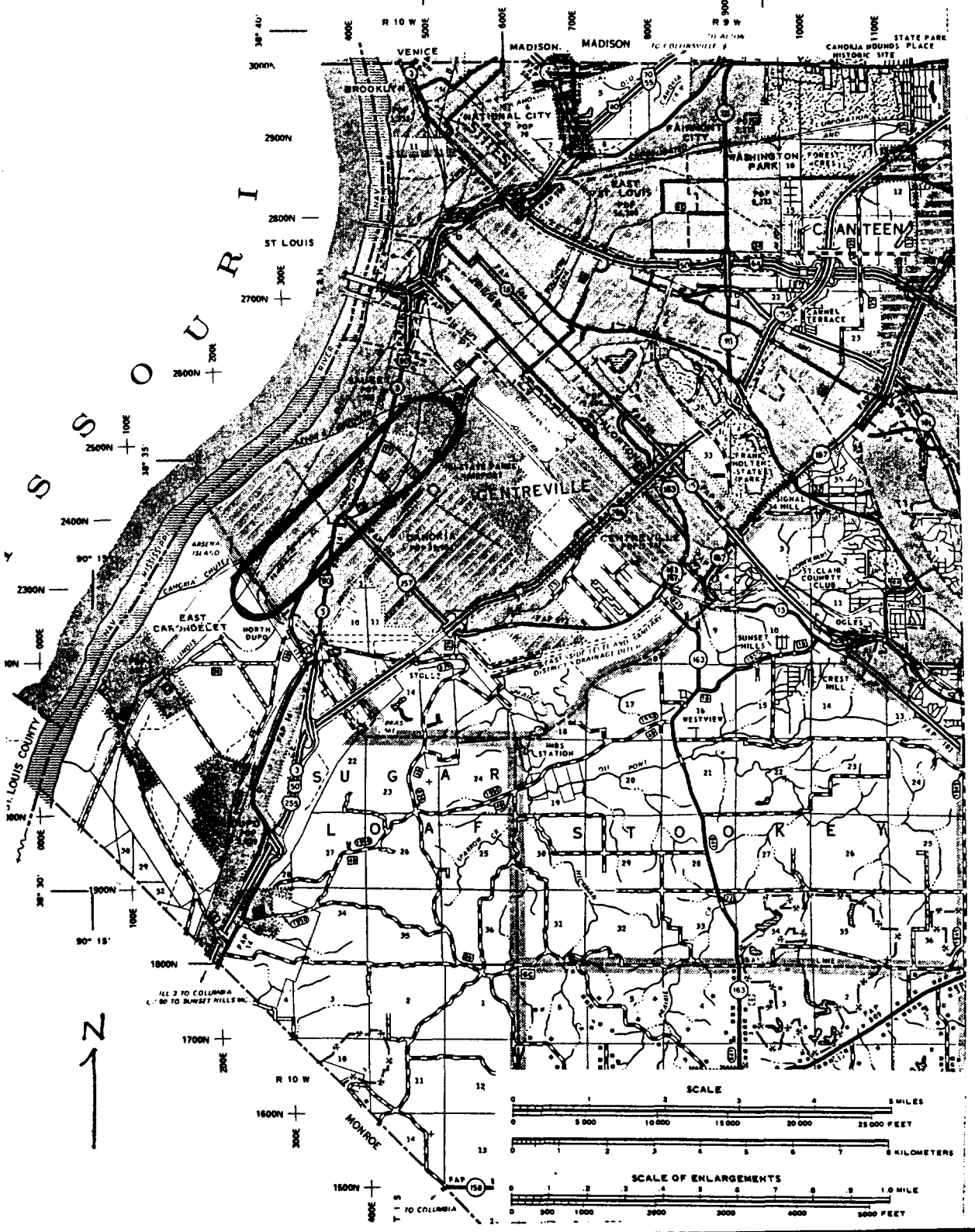
PA: Dead Creek Segments C-F (CS C-F) ILD 984809285

SECTION 3

MAPS


DEAD CREEK
SEGMENT C-F
SITE LOCATION
JO DAVIESS
STEPHENSON
WINNEBAGO
BOONE
McHENRY
LAKE
CARROLL
OGLE
DEKALB
KANE
COOK
DU PAGE
WHITESIDE
LEE
KENDALL
WILL
LASALLE
HENRY
BUREAU
GRUNDY
ROCK ISLAND
MERCER
KANKAKEE
STARK
PUTNAM
KNOX
MARSHALL
LIVINGSTON
HENDERSON
WARREN
PEORIA
WOODFORD
IROQUOIS
McLEAN
FULTON
HANCOCK
McDONOUGH
FORD
VERMILION
TAZEWELL
CHAMPAIGN
SCHUYLER
LOGAN
DEWITT
ADAMS
MASON
MENARD
CASS
MACON
BROWN
MORGAN
SANGAMON
PIATT
DOUGLAS
EDGAR
PIKE
MOULTRIE
SCOTT
COLES
GREENE
MACOUPIN
CHRISTIAN
CLARK
CALHOUN
MONTGOMERY
CUMBERLAND
SHELBY
JERSEY
FAYETTE
JASPER
MADISON
BOND
EFFINGHAM
CRAWFORD
CLAY
RICHLAND
LAWRENCE
MARION
CLINTON
ST. CLAIR
WAYNE
EDWARDS
WABASH
JEFFERSON
MONROE
WASHINGTON
RANDOLPH
PERRY
WHITE
HAMILTON
FRANKLIN
JACKSON
SALINE
GALLATIN
WILLIAMSON
UNION
JOHNSON
POPE
HARDIN
ALEXANDER
PULASKI
MASSAC

GENERAL HIGHWAY MAP
ST. CLAIR COUNTY
ILLINOIS

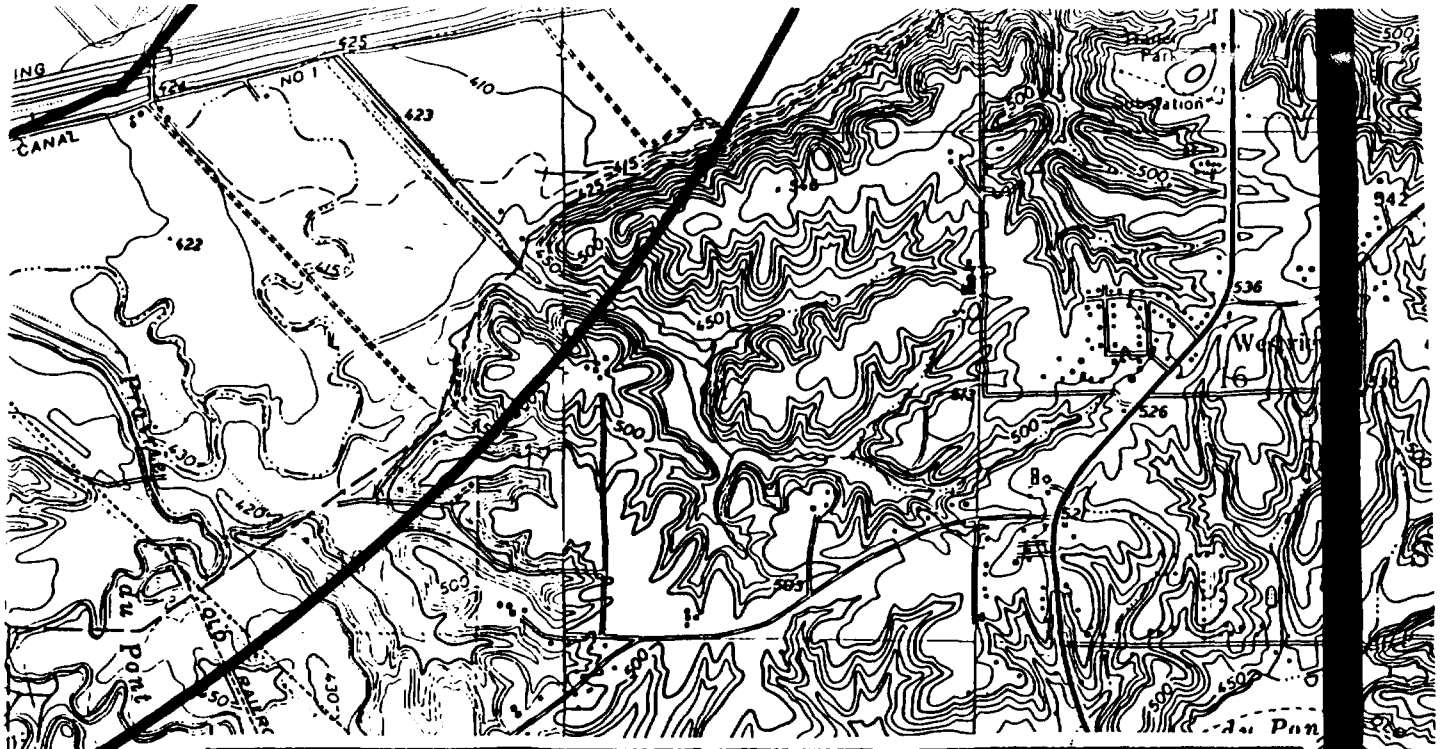


PA: Dead Creek Segments C-F (CS C-F) ILD 984809285

SDMS US EPA REGION V
FORMAT- OVERSIZED - 5
IMAGERY INSERT FORM

The item(s) listed below are not available in SDMS. In order to view original document or document pages, contact the Superfund Records Center.

SITE NAME	SAUGET AREA 1 (NFRC)		
DOC ID #	154174		
DESCRIPTION OF ITEM(S)	USGS TOPOGRAPHIC MAPS- DEAD CREEK SEGMENTS C-F		
REASON WHY UNSCANNABLE	_X_OVERSIZED	OR	__ FORMAT
DATE OF ITEM(S)			
NO. OF ITEMS	2		
PHASE	SAS		
PRP			
PHASE (AR DOCUMENTS ONLY)	___ Remedial ___ Removal ___ Deletion Docket ___ AR ___ Original ___ Update # ___ Volume ___ of ___		
COMMENT(S)			
PARTIAL COPY OF SITE MAPS			



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

N

SITE NAME Dead Creek Segments C-F

SITE ILD 984809285

USGS TOPOGRAPHIC MAPS

225B	225A
NAME Granite City, IL-MO	NAME Monks Mound, IL
DATE 1954	DATE 1954
REVISED 1982	REVISED 1968, 1974
225C	**225D**
NAME Cahokia, IL-MO	NAME French Village, IL
DATE 1954	DATE 1954
REVISED 1968, 1974	REVISED 1982

LEGEND

- SITE LOCATION
- PUBLIC WELL
- NEAREST WELL
- SURFACE WATER INTAKE

ILLINOIS

QUADRANGLE LOCATION

MAP SCALE

1 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

☐ 1 acre ☐ 10 acres ☐ 20 acres

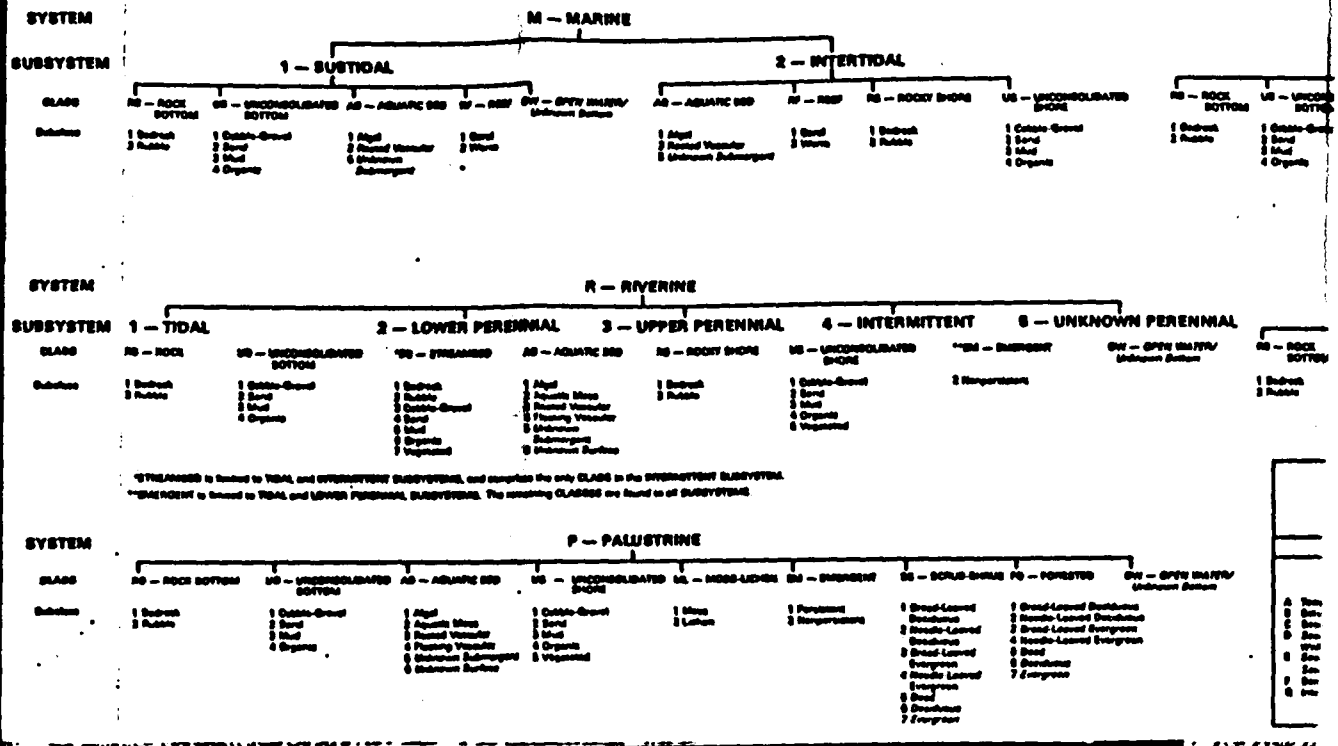
ACREAGE GUIDE

Other information including a narrative report concerning the wetland resources depicted on this document may be available. For information, contact:

Regional Director (ARDE) Region III
U.S. Fish and Wildlife Service
Federal Bldg., Ft. Snelling (AD/SSP)
Twin Cities, Minnesota 55111

photographs typically reflect conditions during the year and season when they were taken. In addition, there is a margin of error inherent in the use of the aerial photographs. Thus, a detailed on the ground and historical analysis of a single site may result in a revision of the wetland boundaries established through photographic interpretation. In addition, some small wetlands and those obscured by dense forest cover may not be included on this document.

Federal, State and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, State or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, State or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY	SITE: Dead Creek Segments C-F SITE ILD 984809285
QUAD: Webster Groves, MO-IL	QUAD: Cahokia, IL-MO
NUMBER: 224 D	NUMBER: 225 C
DATE: 1974/1988 Wetland	DATE: 1974/1988 Wetland

SDMS US EPA REGION V
FORMAT- OVERSIZED - 5
IMAGERY INSERT FORM

The item(s) listed below are not available in SDMS. In order to view original document or document pages, contact the Superfund Records Center.

SITE NAME	SAUGET AREA 1 (NFRC)		
DOC ID #	154174		
DESCRIPTION OF ITEM(S)	INDIVIDUAL COLOR PHOTOGRAPHS SEGMENTS E-F		
REASON WHY UNSCANNABLE	__OVERSIZED	OR	X_ FORMAT
DATE OF ITEM(S)	3/27/91 - 7/31/91		
NO. OF ITEMS	2		
PHASE	SAS		
PRP			
PHASE (AR DOCUMENTS ONLY)	___ Remedial ___ Removal ___ Deletion Docket ___ AR ___ Original ___ Update # ___ Volume ___ of ___		
COMMENT(S)			

SECTION 4

PHOTOGRAPHS

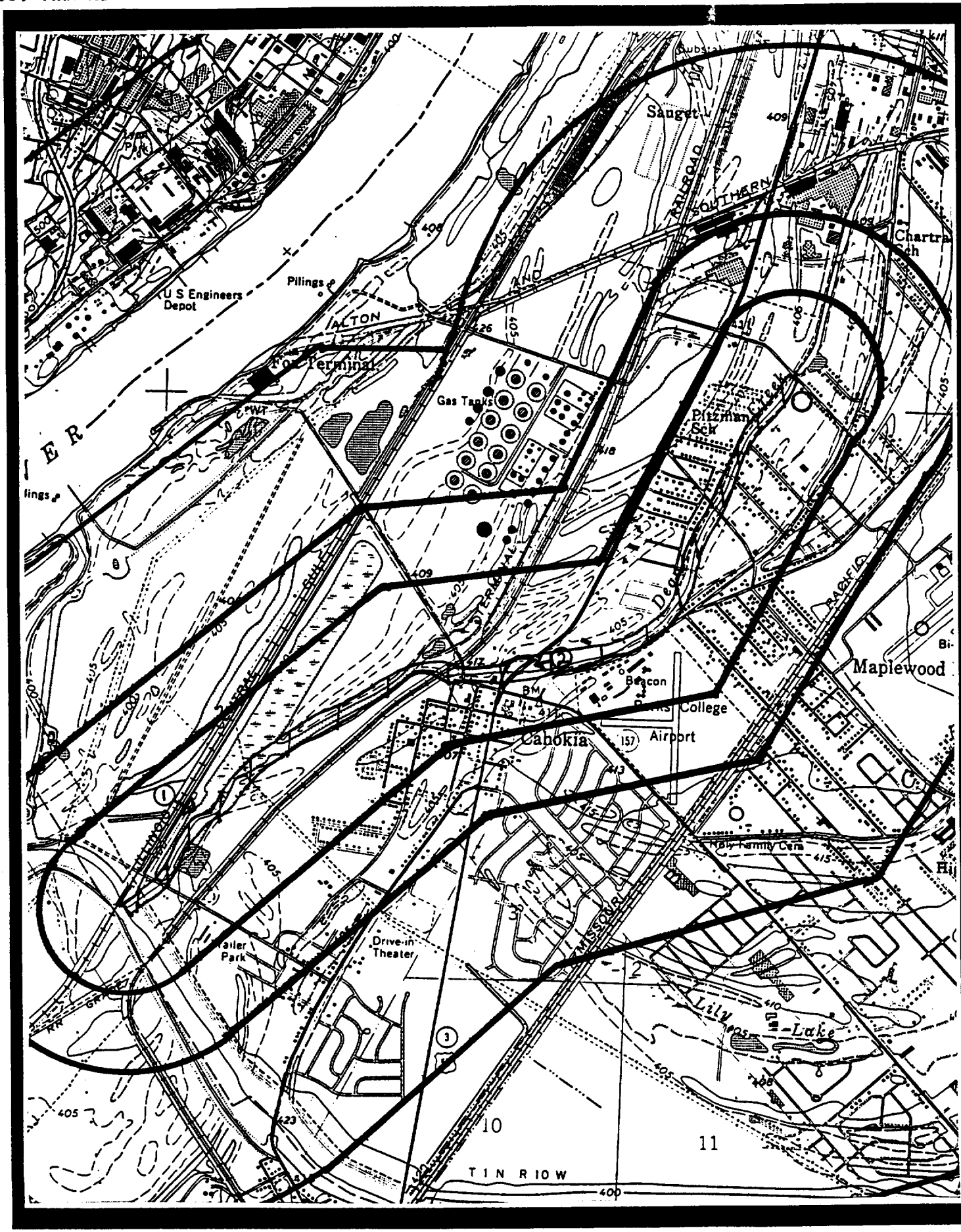
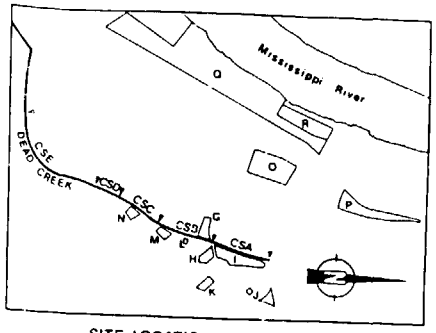


Photo location Map



SITE LOCATION INDEX MAP

AERIAL PHOTOGRAPH
OF DCP AREA - 1962

SECTION 5

SUPPORTING DOCUMENTATION AND REFERENCES

Reference Number 1

Reference Number:

1. 1942 Interview of Sauget Village Engineer
2. 1980 Well and Basement Sample Results from IEPA's Investigation
3. Creek Sediment Sample Results from E&E's Investigation
4. ISWS Area Well Logs
5. Private/Industrial Well Location Map and Printout of Area ISWS Well Logs
6. IDOC Sensitive Area Maps and Correspondence

REPORT ON INDUSTRIAL WASTE DISCHARGE FROM INDUSTRIES AT MONSANTO

MONSANTO--Industrial waste discharge

Date----March 6, 1942

Interviewed--Mr. McCurdy, City Engineer for the Village of Monsanto

Mr. McCurdy wished to inform the Sanitary Water Board of work being done on sewers carrying industrial wastes from the industries in Monsanto to the Mississippi River. He stated that under certain conditions it might be necessary to discharge these wastes to a creek running through a residential area outside of the village limits. If this should happen, the residents in this area might complain to the Board; and, therefore, Mr. McCurdy wanted us to be acquainted with the situation.

Industries located in the village are:

Monsanto Chemical Co.
American Zinc Co.
A. Lubrite Refining Co.
Lewin Metals Reclaiming Co.
Sterling Steel Corp.
Midwest Rubber Reclaiming Co.
Federal Chemical Co.
U. S. Chemical Warfare Service
Darling Fertilizer Co.
Union Electric Power Co.

The power plant contributes no industrial wastes, but pays practically 60% of the taxes.

The village plans and expects to construct a new sewer parallel to the old one carrying wastes to the river. Wastes will be collected in a pumping station and discharged through this new line which is 57 1/2 X 56 inches cross-sectional area, and which is lined with vitrified tile plates to prevent rapid deterioration from acids.

Levels are such that when the river stage is less than 15 feet waste will flow by gravity. At present, waste discharge amounts to approximately 1500 g.p.m. but it is expected that this will be increased by 3000 g.p.m. With the increased quantity and a high river stage, It is probable that, when the wastes are being pumped to the river, a rupture might occur in the discharge line. It was predicted that if the river stage reached a 40-foot-gauge reading, rupture might occur. In case of such rupture or in the case of failure of the two pumps that are being provided, it would be necessary to discharge wastes to an open ditch that flows south through the Village of Cahokia and thence to the river.

Industries accepted responsibility

Several years ago some wastes were discharged to this open ditch flowing south and the industries at Monsanto were sued by those residents living between the villages of Monsanto and Cahokia. At that time the industries were required to pay complainants $4,000.00. Mr. McCurdy stated that, because of war activities, the industries would not be able to shut down, should the main sewer line become unavailable for discharge of wastes; and that, regardless of complaints received, it would then be necessary to discharge wastes through this ditch draining toward Kahokia. This ditch is kept clean and receives raw sewage from those persons living close to it who would normally be the complainants. It is felt that even though industrial wastes would have a slight odor their discharge to the ditch would be beneficial since the great volume of water would flush settled solids into the Mississippi River.

Contam. all the way to Miss.

The industries are financing this new sewer, which will cost approximately $200,000.00, and the third reading of the bond issue was recently read. It is expected that a contract will be let in April and that work should be started by May 1.

Mr. McCurdy reported that Monsanto Chemical Co. makes regular tests on the wastes passing through the present pump house. He does not know what these tests are or for what purpose they are made. It was stated that the present outfall extends a considerable distance into the river and discharges at a zero river gauge. It is usually under water, and wastes are well mixed with the river water in a short distance.

Wm. A. Hazlerther
Senior Sanitary Engineer

wah:a

NOTES ON INSPECTION OF INDUSTRIES AT MONSANTO

Date: August 4 and 5, 1947

All of the industries connected to the Monsanto village sewer were contacted on the above dates to determine the type process employed and the type wastes discharged so that the effect that the wastes might have in causing taste in fish in the Mississippi River might be assessed.

Lewin Metals Company

Interviewed: M. H. Marx, Plant Superintendent; J. W. Goldenberg Plant Engineer

Operations at Lewin Metals Company Monsanto plant consist of the refining and smelting of copper. Manufacture of seamless copper tubing is also carried on in this plant. No process wastes are discharged to the sewer, with the exception of the overflow water from the cooling pond. This water should contain nothing that would be detrimental to the river or cause tastes in fish.

Sterling Steel Casting Company

Interviewed: R. O. Shive, Plant Manager and President

The entire operation of this plant consists of steel casting. The only process wastes [illegible]charged to the sewer consist of cooling waters from the electr[illegible]naces, compressors, and air-conditioning system. These wastes [illegible] have no detrimental effect on the river.

Midwest Rubber Reclaiming Company

Interviewed: D. V. Topper, Plant Superintendent; G. K. Trimble, Executive Vice President.

Reclaimed rubber is produced in this plant. In the process, old rubber, principally from discarded automobile tires, is heated in autoclaves with a 5 per cent caustic solution or a zinc chloride solution of less than 1 per cent concentration. The charge from the autoclaves is dropped into a magazine tank where water is added. The suspension of rubber and water is screened, the rubber being removed from the screens for sales or dry processing and the water being dumped into settling tanks. After the settling period in these tanks, the supernatant is drained to the sewer and the sludge is discharged to a Dorr clarifier for further settling and decanting. Water overflowing from the Dorr clarifier is discharged to the sewer and the remaining sludge is discharged to an Oliver filter. Water removed in the filter is discharged to the sewer and the rubber is either dry processed or sold as is. In the process certain compounds such as pine tar, naptha, sulfides and polysulfides may be added. These are added in very small amounts and it is doubtful if they would be in sufficient amounts to cause taste in fish in the Mississippi River. The total waste volume from the plant is approximately 1.5 mgd.

While it appears doubtful that Midwest Rubber Reclaiming Company wastes are responsible for taste in fish in the Mississippi River, it is possible that these wastes may be responsible. It is recommended that samples be collected of waste waters from Midwest Rubber Reclaiming Company in order to further investigate the possibilities of their wastes causing tastes in fish.

Darling and Company

Interviewed: F. B. Bliss, Plant Superintendent

Darling and Company manufactures fertilizer at the Monsanto plant. The process consists of the acidulation of phosphate rock and and the subsequent blending of the rock with nitrates, lime, etc., to meet the individual specifications for fertilizer. The only point in the process from which liquid wastes are discharged to the sewer consists of the washing of gases from the acidulation process. These gases are washed by a water spray in a tower and the overflow from the bottom of the tower discharges to the sewer. While no definite determination of the volume of water used in this plant was obtainable, it is understood to be quite small. Mr. Bliss advised that only a 2-inch water line supplies all of the water needs of the plant.

It appears doubtful that wastes from Darling and Company are responsible for tastes in fish in the Mississippi River, and it is believed that this plant can be dropped from further consideration.

American Zinc Company of Illinois

Interviewed: L. P. Davidson, Plant Superintendent

The process at American Zinc Company Monsanto plant consists primarily of the electrolytic refining of zinc. The raw material at the plant consists of zinc oxide which is dissolved in sulfuric acid and settled. The sludge is further refined for the removal of copper, cobalt, etc. The resulting sludge from this process is piled on company property and does not [illegible] the sewer. The liquid residue remaining after the removal of [illegible] materials consists of a solution of zinc sulfate and is

returned to the original process. The zinc dissolved in sulfuric acid is in the form of zinc sulfate here also. Zinc is removed from the zinc sulfate solution electrolytically. Oxygen is given off to the atmosphere. Pure zinc is plated out and the sulfuric acid remaining is returned to the head end of the process where it is reused to dissolve more zinc oxide.

The only liquid wastes from the process consist of spills and a large volume of cooling water used in the electrolytic cells. This volume consists of about 1,100 gallons per minute.

It would appear that wastes from American Zinc Company plant are not responsible for tastes in fish and that this plant may be dropped from further consideration.

Socony Vacuum Oil Company Refinery

Interviewed: C. P. Baker, Plant Manager; W. F. Fuhrhop, Industrial Relations Manager; and, John W. Borders.

This plant is an oil refinery. Only topping and cracking of crude oil is carried on at this plant. No lube oil processing or other specialized refinery processes are used. The plant capacity is nominally 21,000 barrels of oil per day, however, present operations were at a rate of 28,000 barrels per day. The high rate was possible due to the conversion of a catalytic cracking unit to straight distillation.

Sweet crude only is refined at this plant. As a result, no acid sludges are produced. Caustic treating solution that is no longer fit for use in the process is collected in a tank at the refinery and is sold to a chemical company for processing and the removal of phenols. No caustic solutions are normally discharged to the sewer. Water wash

from the treatment of gasoline amounts to sixty to ninety gallons per minute.

The entire wastes from this refinery are discharged through an API separator for removal of oils. Waste volume was stated to be approximately 600 gpm. The pH of waste water discharged was stated to be 9.0. The refinery checks the operation of the separator by running determinations for oil, total solids, dissolved solids, suspended solids, and pH.

It would appear from the nature of the operation that Socony Vacuum Oil Company Refinery is not responsible for discharging wastes which might cause tastes in fish in the Mississippi River. However, it is possible that the wastes discharged may contribute to the tastes in fish and it is recommended that their process be further investigated by the collection of samples of the wastes discharged.

J. T. Moss Tie Company

Interviewed: R. C. Studebaker, Assistant Plant Superintendent

The Moss Tie Company plant operation consists of the impregnating of railroad ties, telegraph poles, etc., with asphaltic compounds. The operation at this plant is identical with that carried on at their Mt. Vernon, Illinois plant. All process wastes are discharged to a lagoon where they seep into the soil. Sanitary wastes are discharged to a cesspool. Moss Tie Company has no connection with the Monsanto village sewer.

Since Moss Tie Company is obviously not responsible for the discharge of wastes to the Mississippi River which might cause tastes in fish, it is recommended that they be dropped from further consideration.

Monsanto Chemical Company

Interviewed: F. M. Berkey, Service Superintendent

Mr. J. F. Stickley, Assistant Plant Manager, was on his vacation at the time of the inspection and, as a result, no information could be obtained regarding the present status of investigation by Monsanto Chemical Company into their process, in an attempt to evaluate the properties of their wastes which might cause tastes in fish. Mr. Berkey advised that Monsanto Chemical Company was entirely agreeable to any sampling program which we might deem necessary to determine the effect of their wastes on the river.

Recommendations

From a survey of all of the above-listed industries, it would appear that the only ones which might be considered as being at all responsible for the discharge of wastes which might cause taste in fish are Midwest Rubber, Socony Vacuum, and Monsanto Chemical Company. It is recommended that samples be collected from the outfall sewers of all three plants in order to evaluate the effect of their wastes.

A. P. Troemper
Principal Sanitary Engineer

APT:mms

Reference Number 2

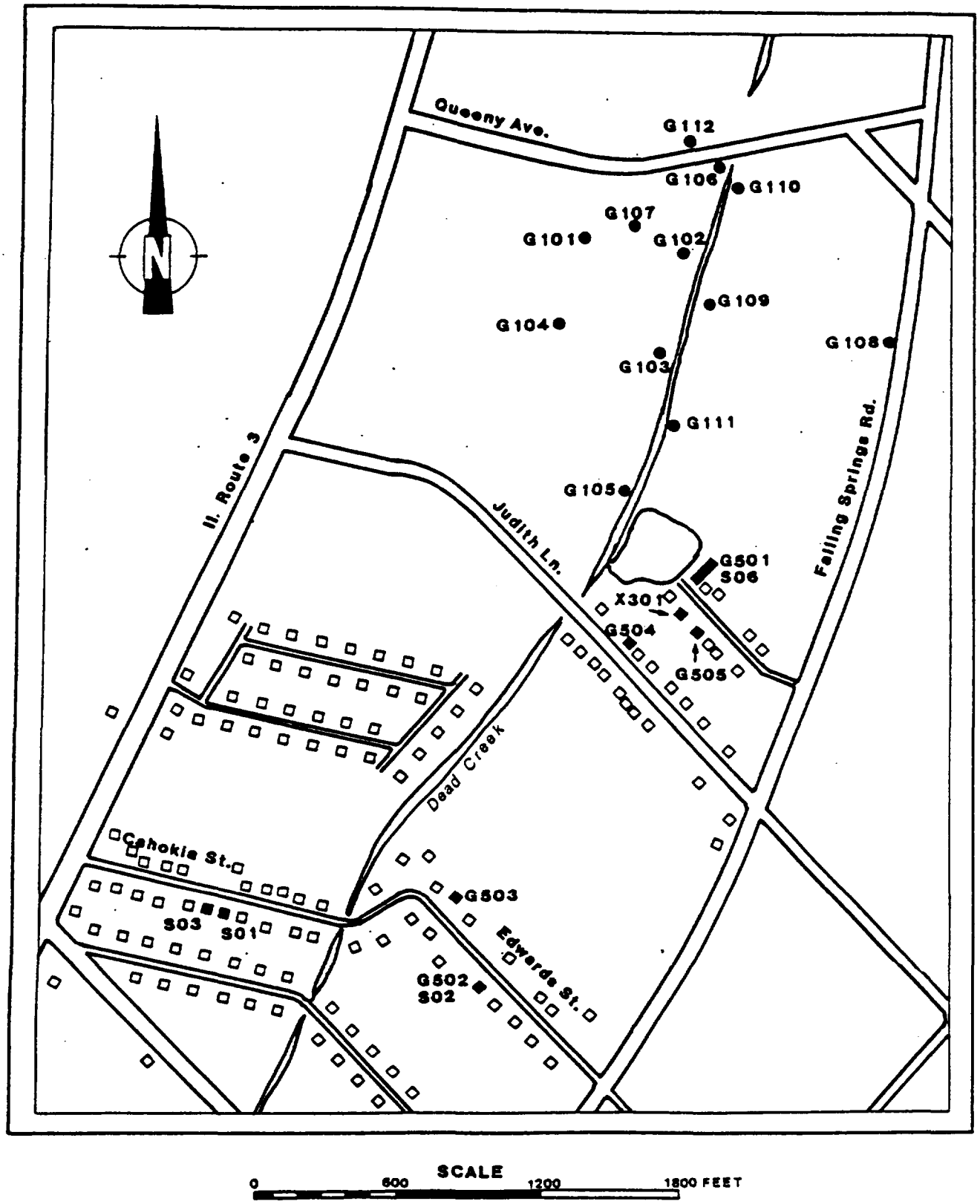


FIGURE B-2
LOCATIONS OF IEPA MONITORING WELLS AND RESIDENTIAL WELLS SAMPLED IN THE VICINITY OF DEAD CREEK

TABLE B-9: ANALYSIS OF RESIDENTIAL WELL AND SEEPAGE SAMPLES COLLECTED BY IEPA

SAMPLE DATES AND LOCATIONS

PARAMETERS	9/16/80 G501	9/16/80 G502	9/16/80 G503	9/23/80 G504	6/8/83 G505	1/5/83 x301
Arsenic	0.008	0.004	0.001		0.01	0.027
Barium	0.2	0.16	0.39	0.05	0.4	1.1
Boron	0.28	0.27	0.25	0.58	0.4	0.3
Cadmium						
Chromium						
Copper	0.02			0.06	0.01	0.03
Iron	4.6	19	17.7	0.73	26	31
Lead						0.03
Magnesium	33	39	36	30	35.3	54
Manganese	1.02	1.26	0.79	0.65	1.3	1.49
Mercury				0.0001		
Nickel				0.02		0.1
Phosphorus				0.02	0.62	1.2
Potassium	6.6	5.7	4.5	6	6.2	6.4
Silver						
Sodium	21	24	12	26	15.2	19
Zinc	0.85		0.18	0.8		0.7
PCBs	-	-	-			
Chlordane (ppb)	-	-	-	-		0.13

NOTE: All results in ppm unless otherwise noted
Blanks indicate below detection limit
- Indicates parameter not analyzed
Sample x301 was collected from basement seepage

TABLE M-1:

ANALYSIS OF SURFACE WATER AND SEDIMENT SAMPLES FROM SITE M
(COLLECTED BY IEPA 9-15-80)

	SAMPLE LOCATIONS			
	Water		Sediment	
PARAMETERS	S 501	S 502	X 123	X 124
Alkalinity	80	85		
Arsenic	0.006	0.01		
Barium	0.2	0.5	4,400	350
Berylium			3	1
BOD-5	4	33		
Boron	0.2	0.2	-	25
Cadmium	-	-	40	4
Calcium			12,500	4,500
COD	58	85		
Chloride	27	28		
Chromium	-	-	150	50
Copper	0.035	0.33	18,700	4,500
Cyanide	0.02	-		
Flouride	0.4	0.4		
Iron	0.8	1.8	49,000	13,500
Lead	-	0.01	1,400	130
Magnesium	6	6	3,400	3,500
Manganese	0.06	0.82	200	80
Mercury	-	-		
Nickel	0.02	0.05	1,600	590
Phenol	0.01	0.01		
Phosphorus	0.17	0.31		
Potassium	5.9	6.2	950	1,000
Silver	-	-	30	6
Sodium	24	25	650	100
Strontium			175	27
Vanadium			42	19
Zinc	0.1	0.7	17,700	2,600
PCBs	0.0009	0.0044	1,100	24
Dichlorobenzene				

NOTE: All results in ppm.
Blanks indicate parameter not analyzed.
- Indicates below detection limits.

Reference Number 3

Explanation For Analytical Data Summary Tables

All ground water results in ug/l.
All soil/sediment organic results in ug/kg
All soil/ sediment inorganic results in mg/kg

For sample location headings, the following qualifiers are used :

+	Denotes blank samples.
*	Denotes duplicate samples.
^	Denotes that sample was not analyzed for the compounds listed.

For chemical results, the folling qualifiers are used :

B	Compound detected in blank samples.
J	Estimated value . Result is less than the specified detection limit, but greater than zero.
E	Estimated value. Concentration detected exceeds the calibrated range.
C	Result confirmed by GC/MS.
*	Duplicate analysis not with in control limits.
R	Spike sample recovery not with in control limits.

Surface Water Volatiles

	SITE	SITE M	SITE M	SITE M	CS-B	CS-B	CS-B	CS-C	CS-C	CS-D	CS-D		CS-A	CS-A
	SAMPLE NUMBER	DC-SW-01 +	DC-SW-02	DC-SW-03	DC-SW-04	DC-SW-05	DC-SW-06 *	DC-SW-07	DC-SW-08	DC-SW-09	DC-SW-10	DC-SW-11 +	DC-SW-12	DC-SW-13
	DATE	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-6-86	11-6-86	11-6-86
1	Chloroethane													
2	Bromomethane													
3	Vinyl Chloride													
4	Chloroethane													
5	Methylene Chloride	6 B	3 BJ	3 BJ	3 BJ	3 BJ	3 BJ	3 BJ	6 B	5 B	7 B	6 B	4 BJ	4
6	Acetone	12 B		7 BJ	9 BJ	12 B	11 B	13 B	13 B	11 B	11 B	17 B	20 B	6
7	Carbon Disulfide													
8	1,1-Dichloroethene													
9	1,1-Dichloroethane													3
10	trans-1,2-Dichloroethene													
11	Chloroform	27										25	8	7
12	1-2-Dichloroethane													
13	2-Butanone (MEK)													
14	1,1,1-Trichloroethane												33	41
15	Carbon Tetrachloride													31
16	Vinyl Acetate													
17	Bromodichloromethane													
18	1,2-Dichloropropane													
19	trans-1,3-Dichloropropene													
20	Trichloroethene												6	16
21	Dibromochloromethane													
22	1,1,2-Trichloroethane													
23	Benzene												1 J	
24	cis-1,3-Dichloropropene													
25	2-Chloroethyl Vinyl Ether													
26	Bromoform													
27	4-Methyl-2-pentanone												6 J	
28	2-Hexanone													
29	Tetrachloroethene													
30	1,1,2,2-Tetrachloroethane													
31	Toluene													
32	Chlorobenzene												2 J	
33	Ethylbenzene													
34	Styrene													
35	Total Xylenes												2 J	

Surface Water Semivolatiles

SITE	BLANK	SITE M	SITE M	CS-B	CS-B	CS-B	CS-C	CS-C	CS-D	CS-D	BLANK	CS-A	CS-A
SAMPLE NUMBER	DC-SW-01 +	DC-SW-02	DC-SW-03	DC-GW-04	DC-SW-05	DC-SW-06 *	DC-SW-07	DC-SW-08	DC-SW-09	DC-SW-10	DC-SW-11 +	DC-SW-12 +	DC-SW-13
DATE	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-6-86	11-6-86	11-6-86
1 Phenol													
2 bis(2-Chloroethyl)ether													
3 2-Chlorophenol													
4 1,3-Dichlorobenzene													
5 1,4-Dichlorobenzene													
6 Benzyl Alcohol													
7 1,2-Dichlorobenzene													
8 2-Methylphenol													
9 bis(2-Chloroisopropyl) ether													
10 4-Methylphenol													
11 N-Nitroso-n-Dipropylamine													
12 Hexachloroethane													
13 Nitrobenzene													
14 Isophorone													
15 2-Nitrophenol													
16 2,4-Dimethylphenol													
17 Benzoic Acid													
18 bis-(2-Chloroethoxy)methane													
19 2,4-Dichlorophenol													
20 1,2,4-Trichlorobenzene													
21 Naphthalene													
22 4-Chloroaniline												3 J	
23 Hexachlorobutadiene													
24 4-Chloro-3-methylphenol													
25 2-Methylnaphthalene													
26 Hexachlorocyclopentadiene													
27 2,4,6-Trichlorophenol													
28 2,4,5-Trichlorophenol													
29 2-Chloronaphthalene													
30 2-Nitroaniline				9 J									

Surface Water Semivolatiles

	SITE	BLANK	SITE M	SITE M	CS-B	CS-B	CS-B	CS-C	CS-C	CS-D	CS-D	BLANK	CS-A	CS-A
	SAMPLE NUMBER	DC-SW-01 *	DC-SW-02	DC-SW-03	DC-SW-04	DC-SW-05	DC-SW-06 *	DC-SW-07	DC-SW-08	DC-SW-09	DC-SW-10	DC-SW-11 *	DC-SW-12	DC-SW-13
	DATE	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-6-86	11-6-86	11-6-86
1	Dimethyl Phthalate													
2	Acenaphtylene													
3	3-Nitroaniline													
4	Acenaphthene													
5	2,4-Dinitrophenol													
6	4-Nitrophenol													
7	Dibenzofuran													
8	2,4-Dinitrotoluene													
9	2,6-Dinitrotoluene													
10	Diethylphthalate							1 J						
11	4-Chlorophenyl-Phenylether													
12	Fluorene													
13	4-Nitroaniline													
14	4,6-Dinitro-2-methylphenol													
15	N-Nitrosodiphenylamine													
16	4-Bromophenyl-phenylether													
17	Hexachlorobenzene													
18	Pentachlorophenol													
19	Phenanthrene												4 J	
20	Anthracene													
21	Di-n-butyl phthalate	15 B	26 B	25 B	18 B	15 B	16 B	19 B	19 B	19 B	20 B	17 B	5 BJ	27 B
22	Fluoranthene													
23	Pyrene													
24	Butyl Benzyl phthalate												12 J	
25	3,3'-Dichlorobenzidine													
26	Benzo(a)Anthracene													
27	bis(2-ethylhexyl) phthalate												7 J	5 J
28	Chrysene													
29	Di-n-octyl phthalate		4 J	2 J							1 J		36 J	1 J
30	Benzo(b)Fluoranthene													
31	Benzo(k)Fluoranthene													
32	Benzo(a)Pyrene													
33	Indeno(1,2,3-cd)Pyrene													
34	Benzo(g,h,i)Perylene													
35	Dibenz(a,h)Anthracene													

Surface Water Pest/PCBs

SITE	BLANK	SITE M	SITE M	CS-B	CS-B	CS-B	CS-C	CS-C	CS-D	CS-D	BLANK	CS-A	CS-A
SAMPLE NUMBER	DC-SW-01 *	DC-SW-02	DC-SW-03	DC-SW-04	DC-SW-05	DC-SW-06 *	DC-SW-07	DC-SW-08	DC-SW-09	DC-SW-10	DC-SW-11 *	DC-SW-12	DC-SW-13
DATE	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-6-86	11-6-86	11-6-86
1 Alpha-BHC													
2 Beta-BHC													
3 Delta-BHC													
4 Gamma-BHC (Lindane)													
5 Heptachlor													
6 Aldrin													
7 Heptachlor Epoxide													
8 Edosulfan I													
9 Dieldrin													
10 4,4'-DDE													
11 Endrin													
12 Edosulfan II													
13 4,4'-DDD													
14 Endosulfan Sulfate													
15 4,4'-DDT													
16 Methoxychlor													
17 Endrin Ketone													
18 Chlordane													
19 Toxaphene													
20 AROCLOR-1016													
21 AROCLOR-1221													
22 AROCLOR-1232													
23 AROCLOR-1242													
24 AROCLOR-1248													
25 AROCLOR-1254													
26 AROCLOR-1260				3.6	34	44							

Surface-Water Inorganic

	SITE	BLANK	SITE M	SITE M	CS-B	CS-B	CS-B	CS-C	CS-C	CS-D	CS-D	BLANK	CS-A	CS-A
	SAMPLE NUMBER	DC-SW-01 +	DC-SW-02	DC-SW-03	DC-SW-04	DC-SW-05	DC-SW-06 *	DC-SW-07	DC-SW-08	DC-SW-09	DC-SW-10	DC-SW-11 +	DC-SW-12	DC-SW-13
	DATE	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-6-86	11-6-86	11-6-86
1	Aluminum		464		1090	204	9080		767	5000	1190	323	354	294
2	Antimony												115	
3	Arsenic						31							
4	Barium		200				7130			274				
5	Beryllium													
6	Boron													
7	Cadmium						25			8.1			75	23
8	Chromium, trivalent		14				99			12			81	65
9	Cobalt													
10	Copper		51	46	660	239	17900	226	84	619	57		7030	2410
11	Iron	255	937	350	1510	495	24500	528	2790	7470	1570		2040	724
12	Lead		6.4		77	17	1300	710	30	89	36		3060	76
13	Manganese		97	95	188	66	222	141	234	196	28		68	252
14	Mercury				8.6			1.9	0.2	0.26			0.59	0.2
15	Nickel		46				1500	83		189			2600	667
16	Selenium													
17	Silver												16	
18	Thallium													
19	Tin						60		40				499	
20	Vanadium													
21	Zinc		186	73	404	302	10300	537	247	1090	185		1450	480
22	Cyanide													

Sediment Volatiles

	SITE	CS-B	CS-B	SITE M	SITE M	SITE M	CS-B	CS-B	CS-B	CS-C	CS-C	CS-C	CS-C	CS-D	CS-D	CS-D
	SAMPLE NUMBER	DC-SD-13 *	DC-SD-14	DC-SD-15	DC-SD-16	DC-SD-17	DC-SD-18 *	DC-SD-19	DC-SD-20	DC-SD-21	DC-SD-22	DC-SD-23	DC-SD-24	DC-SD-25	DC-SD-26	DC-SD-27
	SAMPLE DEPTH	0-6"	2'-3'	0-6"	0-6"	0-6"	0-6"	0-6"	1.5'-2'	0-6"	2'-2.5'	0-6"	2'-2.5'	0-6"	1.5'-2'	0-6"
	DATE SAMPLED	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86
1	Chloroethane															
2	Bromoethane															
3	Vinyl Chloride															
4	Chloroethane															
5	Methylene Chloride	11000 B	2200 B	7800 B	10000 B	8400 B	12000 B	13000 B	14000 B	19000 B	18000 B	27000 B	17000 B	23000 B	19000 B	43000 B
6	Acetone	15000 B	820	4900 B	5100 B	5600 B	4100 JB	10000 B	6100 B	6400 B	9900 B	15000 B	7300 B	18300 B	9800 B	30000 B
7	Carbon Disulfide															
8	1,1-Dichloroethene															
9	1,1-Dichloroethane															
10	trans-1,2-Dichloroethene															
11	Chloroform															
12	1-2-Dichloroethane															
13	2-Butanone (MEK)	21000 B	510	11000	14000	13000	14000	14000	10000 B	11000 B	14000 B	22000 B	12000 B	21000 B	16000 B	35000 B
14	1,1,1-Trichloroethane															
15	Carbon Tetrachloride															
16	Vinyl Acetate															
17	Bromodichloromethane															
18	1,2-Dichloropropane															
19	trans-1,3-Dichloropropene															
20	Trichloroethene															
21	Dibromochloromethane															
22	1,1,2-Trichloroethane															
23	Benzene		87 J													
24	cis-1,3-Dichloropropene															
25	2-Chloroethyl Vinyl Ether															
26	Bromoform															
27	4-Methyl-2-pentanone		220 J													
28	2-Hexanone							52000 B			1200 J					
29	Tetrachloroethene															
30	1,1,2,2-Tetrachloroethane															
31	Toluene		810													
32	Chlorobenzene		5200													
33	Ethylbenzene		3600													
34	Styrene															
35	Total Xylenes		990													

Sediment Volatiles

SITE	CS-D	BLANK	BLANK	CS-A	CS-A	CS-A	CS-A	CS-A
SAMPLE NUMBER	DC-SD-28	DC-SD-29 +	DC-SD-31 +	DC-SD-32	DC-SD-33 *	DC-SD-34 *	DC-SD-35	DC-SD-36
SAMPLE DEPTH	1.5'-2'			1.5'-2'	0-6"	0-6"	0-6"	1.5'-2'
DATE SAMPLED	11-5-86	11-5-86	11-6-86	11-6-86	11-6-86	11-6-86	11-6-86	11-6-86
1 Chloroethane								
2 Bromomethane								
3 Vinyl Chloride								
4 Chloroethane								
5 Methylene Chloride	20000 B	15000 B	14000 B	14000 B	6300 B	6600 B	8800 B	7200 B
6 Acetone	7400 B	6200 B	4700 B	11000 B	12000 B	5300 B	23000 B	6800 B
7 Carbon Disulfide								
8 1,1-Dichloroethene								
9 1,1-Dichloroethane								
10 trans-1,2-Dichloroethene								
11 Chloroform								
12 1-2-Dichloroethane								
13 2-Butanone (MEK)	15000 B	11000 B	5400 B	12000 B	11000 B	9200 B		12000 B
14 1,1,1-Trichloroethane								
15 Carbon Tetrachloride								
16 Vinyl Acetate								
17 Bromodichloromethane								
18 1,2-Dichloropropane								
19 trans-1,3-Dichloropropene								
20 Trichloroethene								
21 Dibromochloromethane								
22 1,1,2-Trichloroethane								
23 Benzene								
24 cis-1,3-Dichloropropene								
25 2-Chloroethyl Vinyl Ether								
26 Bromoform								
27 4-Methyl-2-pentanone								
28 2-Hexanone						930 JB		
29 Tetrachloroethene								
30 1,1,2,2-Tetrachloroethane								
31 Toluene								
32 Chlorobenzene								480 J
33 Ethylbenzene								
34 Styrene								
35 Total Xylenes								

Sediment Semivolatiles

	SITE	CS-B	CS-B	SITE M	SITE M	SITE M	CS-B	CS-B	CS-B	CS-C	CS-C	CS-C	CS-C	CS-D	CS-D
	SAMPLE NUMBER	DC-SD-13 B	DC-SD-14	DC-SD-15	DC-SD-16	DC-SD-17	DC-SD-18 B	DC-SD-19	DC-SD-20	DC-SD-21	DC-SD-22	DC-SD-23	DC-SD-24	DC-SD-25	DC-SD-26
	SAMPLE DEPTH	0-6"	2'-3'	0-6"	0-6"	0-6"	0-6"	0-6"	1.5'-2'	0-6"	2'-2.5'	0-6"	2'-2.5'	0-6"	1.5'-2'
	DATE SAMPLED	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86
1	Phenol											580 J	81 J		
2	bis(2-Chloroethyl)ether														
3	2-Chlorophenol														
4	1,3-Dichlorobenzene										110 J				
5	1,4-Dichlorobenzene		220000					130 J			690 J				
6	Benzyl Alcohol														
7	1,2-Dichlorobenzene		17000 J												
8	2-Methylphenol														
9	bis(2-Chloroisopropyl) ether														
10	4-Methylphenol														
11	N-Nitroso-n-Dipropylamine														
12	Hexachloroethane														
13	Nitrobenzene														
14	Isophorone														
15	2-Nitrophenol														
16	2,4-Dimethylphenol														
17	Benzoic Acid														
18	bis-(2-Chloroethoxy)methane														
19	2,4-Dichlorophenol														
20	1,2,4-Trichlorobenzene		5400 J					390 J	76 J		260 J	130 J	64 J		
21	Naphthalene	400 J	9500 J				190 J	120 J			330 J	100 J			
22	4-Chloroaniline														
23	Hexachlorobutadiene														
24	4-Chloro-3-methylphenol														
25	2-Methylnaphthalene		8400 J								100 J				
26	Hexachlorocyclopentadiene														
27	2,4,6-Trichlorophenol														
28	2,4,5-Trichlorophenol														
29	2-Chloronaphthalene														
30	2-Nitroaniline														

Sediment Semivolatiles

SITE	CS-D	CS-D	BLANK	BLANK	CS-A	CS-A	CS-A	CS-A	CS-A
SAMPLE NUMBER	DC-SD-27	DC-SD-28	DC-SD-29 +	DC-SD-31 +	DC-SD-32	DC-SD-33 ‡	DC-SD-34 ‡	DC-SD-35	DC-SD-36
SAMPLE DEPTH	0-6"	1.5'-2'			1.5'-2'	0-6"	0-6"	0-6"	1.5'-2'
DATE SAMPLED	11-5-86	11-5-86	11-5-86	11-6-86	11-6-86	11-6-86	11-6-86	11-6-86	11-6-86
1 Phenol									
2 bis(2-Chloroethyl)ether									
3 2-Chlorophenol									
4 1,3-Dichlorobenzene					160 J				550 J
5 1,4-Dichlorobenzene					1000		410 J	130 J	2900
6 Benzyl Alcohol									
7 1,2-Dichlorobenzene					480	270 J			
8 2-Methylphenol									
9 bis(2-Chloroisopropyl) ether									
10 4-Methylphenol									
11 N-Nitroso-n-Dipropylamine									
12 Hexachloroethane									
13 Nitrobenzene									
14 Isophorone									
15 2-Nitrophenol									
16 2,4-Dimethylphenol									
17 Benzoic Acid									
18 bis-(2-Chloroethoxy)methane									
19 2,4-Dichlorophenol									
20 1,2,4-Trichlorobenzene					580			90 J	1500 J
21 Naphthalene								130 J	
22 4-Chloroaniline								1000 J	
23 Hexachlorobutadiene									
24 4-Chloro-3-methylphenol									
25 2-Methylnaphthalene							450 J		
26 Hexachlorocyclopentadiene									
27 2,4,6-Trichlorophenol									
28 2,4,5-Trichlorophenol									
29 2-Chloronaphthalene									
30 2-Nitroaniline									

Sediment Semivolatiles

SITE	CS-A	CS-B	SITE M	SITE M	SITE M	CS-A	CS-B	CS-A	CS-C	CS-C	CS-C	CS-C	CS-D	CS-D
SAMPLE NUMBER	DC-SD-13 &	DC-SD-14	DC-SD-15	DC-SD-16	DC-SD-17	DC-SD-18 &	DC-SD-19	DC-SD-20	DC-SD-21	DC-SD-22	DC-SD-23	DC-SD-24	DC-SD-25	DC-SD-26
SAMPLE DEPTH	0-6"	2'-3'	0-6"	0-6"	0-6"	0-6"	0-6"	1.5'-2'	0-6"	2'-2.5'	0-6"	2'-2.5'	0-6"	1.5'-2'
DATE SAMPLED	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86
1 Diethyl Phthalate														
2 Acenaphtylene														
3 3-Nitroaniline														
4 Acenaphthene										130 J				
5 2,4-Dinitrophenol														
6 4-Nitrophenol		2600 J												
7 Dibenzofuran														
8 2,4-Dinitrotoluene														
9 2,6-Dinitrotoluene														
10 Diethylphthalate														
11 4-Chlorophenyl-Phenylether														
12 Fluorene		3900 J								370 J				
13 4-Nitroaniline														
14 4,6-Dinitro-2-methylphenol														
15 N-Nitrosodiphenylamine														
16 4-Bromophenyl-phenylether														
17 Hexachlorobenzene							1900	210 J						
18 Pentachlorophenol							940 J	370 J						
19 Phenanthrene		15000 J							280 J	810 J		220 J		
20 Anthracene										500 J				
21 Di-n-butyl phthalate			580 B	570 BJ	560 J	300 J		280 J				120 J	130 J	79 J
22 Fluoranthene		11000 J								4600		370 J		130 J
23 Pyrene		13000 J				1400 J		91 J	440 J	4500		290 J		120 J
24 Butyl Benzyl phthalate						830 J								
25 3,3'-Dichlorobenzidine														
26 Benzo(a)Anthracene						430 J			380 J	3300	650 J	230 J		
27 bis(2-ethylhexyl) phthalate	9900 J	9500 J		540 J	150 J	5300		95 J	740 J		660 J			72 J
28 Chrysene						1200 J		180 J	550 J	4400	1000	300 J		83 J
29 Di-n-octyl phthalate		2600 J	120 J	270 J		940 J		96 J		190 J				
30 Benzo(b)Fluoranthene		3400 J					2400			7500	2000	1000		200 J
31 Benzo(k)Fluoranthene	720 J					1500 J		410 J	920	660 J				
32 Benzo(a)Pyrene	1100 J	1800 J				490 J	310 J	95 J	480 J	4500	940	350 J		86 J
33 Indeno(1,2,3-cd)Pyrene						850 J	1400 J	200 J	590 J	4300	1700	530 J		100 J
34 Benzo(g,h,i)Perylene							390 J			1500 J	640 J	110 J		
35 Dibenz(a,h)Anthracene						1400 J	1800	210 J	550 J	4000	1700	470 J		91 J

Sediment Semivolatiles

	SITE	CS-D	CS-D	BLANK	BLANK	CS-A	CS-A	CS-A	CS-A	CS-A
	SAMPLE NUMBER	DC-SD-27	DC-SD-28	DC-SD-29 *	DC-SD-31 *	DC-SD-32	DC-SD-33 *	DC-SD-34 *	DC-SD-35	DC-SD-36
	SAMPLE DEPTH	0-6"	1.5'-2'			1.5'-2'	0-6"	0-6"	0-6"	1.5'-2'
	DATE SAMPLED	11-5-86	11-5-86	11-5-86	11-6-86	11-6-86	11-6-86	11-6-86	11-6-86	11-6-86
1	Diaethyl Phthalate									
2	Acenaphtylene									
3	3-Nitroaniline									
4	Acenaphthene									170 J
5	2,4-Dinitrophenol									
6	4-Nitrophenol									
7	Dibenzofuran									
8	2,4-Dinitrotoluene									
9	2,6-Dinitrotoluene									
10	Diethylphthalate									
11	4-Chlorophenyl-Phenylether									
12	Fluorene									
13	4-Nitroaniline									
14	4,6-Dinitro-2-aethylphenol									
15	N-Nitrosodiphenylamine					220 J				
16	4-Bromophenyl-phenylether									
17	Hexachlorobenzene					110 J			1100 J	
18	Pentachlorophenol								800 J	
19	Phenanthrene					190 J				
20	Anthracene									
21	Di-n-butyl phthalate									900 J
22	Fluoranthene								600 J	
23	Pyrene					110 J			1000 J	1400 J
24	Butyl Benzyl phthalate					520		2400 J		
25	3,3'-Dichlorobenzidine									
26	Benzo(a)Anthracene									
27	bis(2-ethylhexyl) phthalate					280 J	2200 J	2900	130 J	
28	Chrysene					110 J		710 J	1000 J	1700 J
29	Di-n-octyl phthalate	170 J				300 J	420 J	2900	8100	11000
30	Benzo(b)Fluoranthene	500 J						330 J	760 J	1000 J
31	Benzo(k)Fluoranthene									
32	Benzo(a)Pyrene	240 J							430 J	540 J
33	Indeno(1,2,3-cd)Pyrene	310 J							570 J	
34	Benzo(g,h,i)Perylene									
35	Dibenz(a,h)Anthracene	360 J							960 J	

Sediment Pest/PCBs

SITE	CS-B	CS-B	SITE M	SITE M	SITE M	CS-B	CS-B	CS-B	CS-C	CS-C	CS-C	CS-C	CS-D	CS-D	CS-D
SAMPLE NUMBER	DC-SD-13 *	DC-SD-14	DC-SD-15	DC-SD-16	DC-SD-17	DC-SD-18 *	DC-SD-19	DC-SD-20	DC-SD-21	DC-SD-22	DC-SD-23	DC-SD-24	DC-SD-25	DC-SD-26	DC-SD-27
SAMPLE DEPTH	0-6"	2'-3'	0-6"	0-6"	0-6"	0-6"	0-6"	1.5'-2'	0-6"	2'-2.5'	0-6"	2'-2.5'	0-6"	1.5'-2'	0-6"
DATE SAMPLED	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86
1 Alpha-BHC															
2 Beta-BHC															
3 Delta-BHC															
4 Gamma-BHC (Lindane)															
5 Heptachlor															
6 Aldrin															
7 Heptachlor Epoxide															
8 Edosulfan I															
9 Dieldrin															
10 4,4'-DDE															
11 Endrin													580		
12 Edosulfan II															
13 4,4'-DDD															
14 Endosulfan Sulfate															
15 4,4'-DDT															
16 Methoxychlor															
17 Endrin Ketone															
18 Chlordane															
19 Toxaphene															
20 AROCLOR-1016															
21 AROCLOR-1221															
22 AROCLOR-1232															
23 AROCLOR-1242				20000											
24 AROCLOR-1248		480000 C	660	8830	5200					8700					
25 AROCLOR-1254			670		4200		141000 C	16000 C		9300	11000	1600 J			7500
26 AROCLOR-1260	10300 J	66000 C	430 J		2700 J	7700	54000 JC	5600 JC		5000 J	7800 J				4500

Sediment Pest/PCBs

SITE	CS-D	BLANK	BLANK	CS-A	CS-A	CS-A	CS-A	CS-A
SAMPLE NUMBER	DC-SD-28	DC-SD-29 +	DC-SD-31 +	DC-SD-32	DC-SD-33 *	DC-SD-34 *	DC-SD-35	DC-SD-36
SAMPLE DEPTH	1.5'-2'			1.5'-2'	0-6"	0-6"	0-6"	1.5'-2'
DATE SAMPLED	11-5-86	11-5-86	11-6-86	11-6-86	11-6-86	11-6-86	11-6-86	11-6-86
1 Alpha-BHC								
2 Beta-BHC								
3 Delta-BHC								
4 Gamma-BHC (Lindane)								
5 Heptachlor								
6 Aldrin								
7 Heptachlor Epoxide								
8 Edosulfan I								
9 Dieldrin								
10 4,4'-DDE								
11 Endrin								
12 Edosulfan II								
13 4,4'-DDD								
14 Endosulfan Sulfate								
15 4,4'-DDT								
16 Methoxychlor								
17 Endrin Ketone								
18 Chlordane								
19 Toxaphene								
20 AROCLOR-1016								
21 AROCLOR-1221								
22 AROCLOR-1232								
23 AROCLOR-1242								
24 AROCLOR-1248				21000 C	7900	11000		
25 AROCLOR-1254	1900			13000 JC	6500	10600	71000 C	38000
26 AROCLOR-1260					2000 J	2200 J	24000 C	13000 J

Sediment Inorganic

	SITE	CS-D	CS-D	SITE M	SITE M	SITE M	CS-D	CS-D	CS-D	CS-C	CS-C	CS-C	CS-C	CS-D	CS-D	CS-D
	SAMPLE NUMBER	DC-SD-13 *	DC-SD-14	DC-SD-15	DC-SD-16	DC-SD-17	DC-SD-18 *	DC-SD-19	DC-SD-20	DC-SD-21	DC-SD-22	DC-SD-23	DC-SD-24	DC-SD-25	DC-SD-26	DC-SD-27
	SAMPLE DEPTH	0-6"	2'-3'	0-6"	0-6"	0-6"	0-6"	0-6"	1.5'-2'	0-6"	2'-2.5'	0-6"	2'-2.5'	0-6"	1.5'-2'	0-6"
	DATE SAMPLED	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86	11-5-86
1	Aluminum	4800	6380	6560	2430	7510	5380	9750	12900	12600	7530	8450	12600	11250	12500	6400
2	Antimony															
3	Arsenic	14 R	20 R	3.6 R	12 R	16 R	16 R	21	13 R	5.1 R	9 R	33 R	30 R	3.2 R	7.8 *	4.7 R
4	Barium	410	1110	156	131	196	467	17300	3120	376	570	1700	1010	239	622	214
5	Beryllium															
6	Boron															
7	Cadmium	22	36	1.5	11	8	24	30	8.2	17	34	27	42	12	42	23
8	Chromium, trivalent	62	153	15	37	53	79	118	113	41	60	54	68	33	48	34
9	Cobalt	6.6	9.2	7.7	7.2	5	6	11	6.9	7.5	10	6.6	7.2	5	12	
10	Copper	8740 *	6700 *	167 *	1270 *	1780 *	8640 *	15300 *	2610 *	580 *	5910 *	6640 *	2440 *	379 *	1630 *	1320 *
11	Iron	16400	19500	11100	26000	14400	16300	58200	21300	18400	18000	35800	50900	22800	40200	31300
12	Lead	853	931	26	65	71	983	1460	330	467	593	975	661	146	480	309
13	Manganese	197	153	100	97	139	218	82	70	177	98	161	151	190	273	178
14	Mercury	0.73	1.3	0.13	0.56	0	0.9	1.68	0.89	0.71	0.95	1.64	2.81	1	0.89	0.34
15	Nickel	56 R*	502 R*	356 R*	258 R*	309 R*	82	1520 R*	867 R*	116 R*	838 R*	1290 R*	748 R*	174 R*	665 R*	537 R*
16	Selenium	3.3	4.1				4	2					2.5			
17	Silver	10	11				14	15								
18	Thallium							4								
19	Tin	32	28		23			16								
20	Vanadium	23	27	19		19	24	48	25	32	22	27	36	37	32	
21	Zinc	3310	6650	868	872	1010	3410	11900	6610	1370	15600	6880	6430	1010	6590	2380
22	Cyanide		3.8													

	SITE	CS-B	BLANK	BLANK	CS-A	CS-A	CS-A	CS-A	CS-A
	SAMPLE NUMBER	DC-SB-28	DC-SB-29 +	DC-SB-31 +	DC-SB-32	DC-SB-33 ‡	DC-SB-34 ‡	DC-SB-35	DC-SB-36
	SAMPLE DEPTH	1.5'-2'			1.5'-2'	0-6"	0-6"	0-6"	1.5'-2'
	DATE SAMPLED	11-5-86	11-5-86	11-6-86	11-6-86	11-6-86	11-6-86	11-6-86	11-6-86
1	Aluminum	5870	11800	10500	8570	6720	8310	7210	9180
2	Antimony								
3	Arsenic	5.1 R	5.6 R	5.2 R	18 R	30 R	76 R	21 R	12 R
4	Barium	199	362	277	430	287	287	732	328
5	Beryllium								
6	Boron								
7	Cadmium	5.6	2.5	2.1	18	25	22	31	17
8	Chromium, trivalent	13	15	13	34	102	121	206	75
9	Cobalt	6.4	5.8	5.4	8.9	3.2		27	11
10	Copper	247 ‡	35 ‡	31 ‡	2620 ‡	4630 ‡	3130 ‡	11400 ‡	10300 ‡
11	Iron	15000	16600	15700	25000	37400	36100	36600	21900
12	Lead	44	47	30	225	1900	2030	1600	910
13	Manganese	191	412	384	123	69	66	296	153
14	Mercury	0.18			2.81	4.06	5.62	3	1.18
15	Nickel	236 R‡	18 R‡	19 R‡	765 R‡	310 R‡	255 R‡	559 R‡	307 R‡
16	Selenium					3.3		3	
17	Silver				6	26	23	33	13
18	Thallium								
19	Tin				14	76	412	57	
20	Vanadium	17	27	24	24	20	23	25	22
21	Zinc	917	197	172	1590	1510	1230	3420	2740
22	Cyanide								

Reference Number 4

283

LOG OF WATER WELL

#17

Property owner Monsanto Chem. Co. Well No. 3

Drilled by H.L. Watson (Waly) Year July 1941

Formations passed through	Thickness	Depth of Bottom
Fill	10	10
Mud	8	18
Yellow sand	10	28
Gray sand (getting coarser)	35	63
#30 sand	15	78
#40 gravel	5	83
#50 "	5	88
#60 "	17	105 TD

[Continue on back if necessary]

Finished in _____ at _____ to _____ ft.

COUNTY No. 1947

Cased with _____ inch _____ from 0 to _____ ft.

and _____ inch _____ from _____ to _____ ft.

Size hole below casing _____ inch. Static level from surf. 30 ft.

Tested capacity _____ gal. per min. Temperature _____ °F.

Water lowered to _____ ft. _____ in. in _____ hrs. _____ min.

Length of test _____ hrs. _____ min. Screen Johnson

Slot 40 Diam. 16 Length 30' Bottom set at _____ ft.

[Show location in Section Plat]

Township name _____ Elev. _____ Sec. 26

Description of location SW, NE Sec. 26, T 2 N, R 10 W Twp. 2 N

Rge. 10 W

Location by Groundwater Div. 6-5

Signed _____ County St. Clair

St. CLAIR NO ENVELOPE 26-2N-10W

Copy for Illinois State Geological Survey Index:

Plotted on photo

373

379

LOG OF WATER WELL

Property owner Monsanto Chem. Co. Well No. 19

(80'S+E of main entrance gate) K.W. #2

Drilled by Layne-Western (F. Sallee) Year Aug. 1948

Formations passed through	Thickness	Depth of Bottom
Cinder + clay fill	2	2
Brown sand	14	16
Brown + blue clay	2	18
Brown dirty sand	27	45
Med. gray sand	5	50
Med. fine clammy gray sand	5	55
Med. coarse sand + gravel, much rotten wood	6	61
Coarse sand + gravel	5	66
Black med sand, some gravel	7	73
Coarse sand + gravel	2	75
Coarse brown sand	5	80
Med. brownish gray sand + boulders	4	84
Coarse gray sand	6	90
" " " + gravel	18	108

[Continue on back if necessary]

Finished in _____ at _____ to _____ ft.

COUNTY No. 1948

Cased with _____ inch _____ from 0 to _____ ft.

and _____ inch _____ from _____ to _____ ft.

Size hole below casing _____ inch. Static level from surf. _____ ft.

Tested capacity _____ gal. per min. Temperature _____ °F.

Water lowered to _____ ft. _____ in. in _____ hrs. _____ min.

Length of test _____ hrs. _____ min. Screen Shutter

Slot _____ Diam. _____ Length 25 Bottom set at _____ ft.

[Show location in Section Plat]

Township name _____ Elev. _____ Sec. 26

Description of location NE, NE Sec. 26, T 2 N, R 10 W Twp. 2 N

Rge. 10 W

Signed _____ County St. Clair

St. CLAIR No ENVELOPE 26-2N-10W

Copy for Illinois State Geological Survey Index:

Plotted on photo

LOG OF WATER WELL

M.C. #

Property owner: Monsanto Chemical Co. Well No. 20 (L.W. # 3)
East of Bldg. BI in plant 15'E. from RR. spur.

Drilled by: Layne-Western (Milliken) Year: 7-13-49

Formations passed through	Thickness	Depth of Bottom
Clay	1	1
Cinders	1	2
Clay	2	5
Sandy clay	26	31
Blue fine sand	30	61
Med. sand, gray	13	74
Med. to coarse sand	5	79
Rock + coarse sand	2	81
Coarse sand	3	84
Coarse sand + gravel + small rocks	19	103

[Continue on back if necessary]

COUNTY No. 1949

Finished in _____ at _____ to _____ ft.

Cased with _____ inch _____ from 0 to _____ ft.

and _____ inch _____ from _____ to _____ ft.

Size hole below casing _____ inch. Static level from surf. _____ ft.

Tested capacity _____ gal. per min. Temperature _____ °F.

Water lowered to _____ ft. _____ in. in _____ hrs. _____ min.

Length of test _____ hrs. _____ min. Screen Shutter

Slot _____ Diam. _____ Length 25 Bottom set at _____ ft.

[Show location in Section Plat]

Township name _____ Elev. _____ Sec. 26

Description of location NW NE Sec. 26 Twp. 2 N

T 2 N, R 10 W Rge. 10 W

Signed _____ County St. Clair

St. CLAIR No ENVELOPE Index:

Copy for Illinois State Geological Survey

26-2N-10W

Plotted on Photo 1F 89
Illinois. U.S.
Land Leg # 437

LOG OF WATER WELL

Property owner: Midwest Rubber Reclaiming Co. Well No. 1

Drilled by: Thorp (Morgan) Year: ?

Formations passed through	Thickness	Depth of Bottom
Sandy loam	10	10
Dry sand	14	24
Coarse sand	14	38
Coarse sand, some gravel	4	42
Fine sand	24	66
Blk. fine sand	8	74
Coarse sand + boulders	8	82
Very coarse sand + gravel	24	106

[Continue on back if necessary]

COUNTY No. 1937

Finished in _____ to _____ ft.

Cased with _____ inch _____ from 0 to _____ ft.

and _____ inch _____ from _____ to _____ ft.

Size hole below casing _____ inch. Static level from surf. 28' 2" ft.

Tested capacity _____ gal. per min. Temperature _____ °F.

Water lowered to _____ ft. _____ in. in _____ hrs. _____ min.

Length of test _____ hrs. _____ min. Screen _____

Slot _____ Diam. _____ Length _____ Bottom set at _____ ft.

[Show location in Section Plat]

Township name _____ Elev. _____ Sec. 26

Description of location _____ Twp. 2 N

Rge. 10 W

Location by Groundwater Div. Signed _____ County St. Clair Co.

St. CLAIR No ENVELOPE Index:

Copy for Illinois State Geological Survey

26-2N-10W

89

Plotted on Caholia Quad.

435

LOG OF WATER WELL

Property owner Midwest Rubber Reclaiming Co. Well No. 2

Drilled by Thorpe (Morgan) Year ?

Formations passed through	Thickness	Depth of Bottom
Sandy soil	27	27
River silt	8	35
Coarse sand + pea gravel	8	43
Ext. fine sand + silt	21	64
Very coarse sand	6	70
Coarse sand, wood, decayed veg., etc.	11	81
Very coarse sand	5	86
Very coarse sand + gravel	28	114

[Continue on back if necessary]

Finished in _____ to _____ ft.

COUNTY No. 1938

Cased with _____ inch _____ from 0 to _____ ft.

and _____ inch _____ from _____ to _____ ft.

Size hole below casing _____ inch. Static level from surf. 25'6" ft.

Tested capacity _____ gal. per min. Temperature _____ °F.

Water lowered to _____ ft. _____ in. in _____ hrs. _____ min.

Length of test _____ hrs. _____ min. Screen _____

Slot _____ Diam. _____ Length _____ Bottom set at _____ ft.

[Show location in Section Plat]

Township name _____ Elev. _____ Sec. 26

Description of location _____ Twp. 2N

Rge. 10W

Location by Groundwater Div. 6-6

Signed _____ County St. Clair

St. CLAIR NO ENVELOPE

Copy for Illinois State Geological Survey Index: 26-2N-10W

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use Log #435

436

LOG OF WATER WELL

See Mr. Luther

Property owner Midwest Rubber Reclaiming Co. Well No. 3

Drilled by Thorpe (Morgan) Year Mar. 1951

Formations passed through	Thickness	Depth of Bottom
Hard fill	3	3
Fine dry sand + silt	34	37
Med. fine sand very dirty	14	51
Med. coarse sand, dirty	11	62
Building sand some fine gravel	9	71
Clean coarse sand	23	94
Coarse sand + boulders	8	102
Med. coarse sand	10	112

[Continue on back if necessary]

Finished in _____ to _____ ft.

COUNTY No. 1939

Cased with _____ inch _____ from 0 to _____ ft.

and _____ inch _____ from _____ to _____ ft.

Size hole below casing _____ inch. Static level from surf. 35' Apr. 18 ft.

Tested capacity _____ gal. per min. Temperature _____ °F.

Water lowered to _____ ft. _____ in. in _____ hrs. _____ min.

Length of test _____ hrs. _____ min. Screen _____

Slot _____ Diam. _____ Length _____ Bottom set at _____ ft.

[Show location in Section Plat]

Township name _____ Elev. _____ Sec. 26

Description of location _____ Twp. 2N

Rge. 10W

Location by Groundwater Div. 6-6

Signed _____ County St. Clair

St. CLAIR NO ENVELOPE

Copy for Illinois State Geological Survey Index: 26-2N-10W

Plotted on Cahokia Quad. 437

Surv. Luther

LOG OF WATER WELL

Property owner Midwest Rubber Co. Adaiming East St. Louis Well No. #4

Drilled by _____ Year May 1951

Formations passed through	Thickness	Depth of Bottom
Clay	7	7
Dry yellow sand	21	28
Building sand	17	45
Fine gray sand	9	54
Med. Coarse sand	6	60
Ext. fine very dirty sand + silt	18	78
Coarse sand + Boulders	32	110

[Continue on back if necessary]

Finished in _____ at _____ to _____ ft.

COUNTY No. 1940

Cased with _____ inch _____ from 0 to _____ ft.

and _____ inch _____ from _____ to _____ ft.

Size hole below casing _____ inch. Static level from surf. 36' 10" ft.

Tested capacity _____ gal. per min. Temperature _____ °F.

Water lowered to _____ ft. _____ in. in _____ hrs. _____ min.

Length of test _____ hrs. _____ min. Screen _____

Slot _____ Diam. _____ Length _____ Bottom set at _____ ft.

[Show location in Section Plat]

Township name _____ Elev. _____ Sec. 26

Description of location _____ Twp. 2N

Rge. 10W

Location by Groundwater Div.

Signed _____ County St. Clair

St. CLAIR NO ENVELOPE 26-2N-10W

Copy for Illinois State Geological Survey Index:

ESTED AND MAIL ORIGINAL TO STATE
ER HEALTH PROTECTION, 535 WEST
. DO NOT REACH GEOLOGICAL/WATER
PROPER WELL LOCATION.

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Completed 4-12-76

10. Property owner Clayton Chemical Co. Well No. _____
Address 101 S. Brentwood Clayton Mo.
Driller L. Charles Dillon License No. 102-50
11. Permit No. 45480 Date 3-22-76
12. Water from Sand & Gravel Formation 13. County St. Clair
at depth 40 to 78 ft.
14. Screen: Diam. _____ in.
Length: 10 ft. Slotted ✓
Sec. 26
Twp. 2N
Rge. 10W
Elev. _____

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
6 5/8	PVC	0	78

SHOW LOCATION IN SECTION PLAT

562'SL, 587'WL SW (permit)

6. Size Hole below casing: 6 in.
7. Static level 15 ft. below casing top which is 1 ft. above ground level. Pumping level _____ ft. when pumping at 200+ gpm for _____ hours. Sub. pump set at 60'.

8. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Clay	40	40
Sand & Gravel	38	78

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

IGNED Robert M. Mellis DATE 5-4-76

ST. CLAIR COUNTY No. 24077 26-2N-10W

(2840—50M—12-64) 2

Page 1

ILLINOIS GEOLOGICAL SURVEY, URBANA

	Thickness	Top	Bottom
Soil	1'6"		1'6"
Sand	34		35'6"
Fine gravel	6		41'6"
Gravel & sand	24		65'6"
Gravel & boulders	13		84'6"
Gravel	5'6"		90
Coarse gravel & boulders	18		108

Tested 1400 gallons per minute.

Water stands 12'6" from surface of ground.

Water stands 26'6" when pumping 1400 gallons per minute.

Size of well 24".

20 cubic yards of gravel.

Material used in well:
50' of 38" Pit,
106'8" of 24" which includes 58' of 24" Shutter Screen & 48'4" of 24" Pit.

Kind of seal used Steel Plug.

*50'N and 50'E of crossing of Alton & Southern R.R. & Falling Springs Rd.

COMPANY Layne & Bowler Company
FARM Monsanto Chemical Works NO. 1
DATE DRILLED May 8, 1920 COUNTY NO. 1741
AUTHORITY Layne & Bowler Co.
ELEVATION 410' ±
LOCATION *
COUNTY ST. C)R

Projected 26-2N-10W

374

LOG OF WATER WELL

Property owner Monsanto Chem. Co. Well No. #1 Test well

Drilled by Layne-Western (F. Sallee) Year Feb. 1948

Formations passed through	Thickness	Depth of Bottom
Soil Fill	1	1
Cinder fill	4	5
Cinders, blue, green clay	5	10
Cinders + fine black sand	5	15
Fine black sand + clay	5	20
" " " , streak med. gray sand	5	25
Fine black mucky sand. Hard to get sample	20	45
Med. Coarse gray sand	10	55
Coarse gray sand	5	60
Fine, packed gray-brown sand boulders from 67 to 70	14	74
Sand + gravel, packed w/ much fine sand	3	77
Packed sand, gravel + boulders	3	80
Packed sand, gravel + boulders	13	93
Sand + boulders	9	102
(Formation in general is very tight)		TD

[Continue on back if necessary]

Finished in _____ at _____ to _____ ft.

COUNTY No. 1941

Cased with _____ inch _____ from 0 to _____ ft.

and _____ inch _____ from _____ to _____ ft.

Size hole below casing _____ inch. Static level from surf. _____ ft.

Tested capacity _____ gal. per min. Temperature _____ °F.

Water lowered to _____ ft. _____ in. in _____ hrs. _____ min.

Length of test _____ hrs. _____ min. Screen _____

Slot _____ Diam. _____ Length _____ Bottom set at _____ ft.

[Show location in Section Plat]

Township name _____ Elev. 410 TOPO

Sec. 26

Description of location SW, NE Sec. 26, T 2 N, R 10 W

Twp. 2 N

Rge. 10 W

Located by Layne-Western Div. 6

Signed _____ County St. Clair

NO ENVELOPE

Copy for Illinois State Geological Survey Index: 26-2N-10W

LOG OF WATER WELL

Property owner: Monsanto Chem. Co. Well No. Test well 2

Drilled by: Layne-Western (F. Sallee) Year: Feb. 1948

Formations passed through	Thickness	Depth of Bottom
Cinder fill	8	8
Hard green clay	4	12
Clay & black sand turning brown	3	15
Black & brown sand w/ clay	5	20
Brown sand	10	30
" " turning gray	5	35
Fine to med. gray sand	5	40
Med. gray sand	10	50
Med. to coarse gray sand	15	65
Med. gray sand	5	70
Sand & boulders, blue clay showing	5	75
Fine to med. sand, silt, few boulders	5	80
Med. sand, some gravel	5	85
Med. to coarse sand & gravel	15	100
Coarse sand, gravel & boulders	8	108
On rock at 108		

[Continue on back if necessary]

Finished in _____ at _____ to _____ ft.

Cased with _____ inch COUNTY No. 1942 from 0 to _____ ft.

and _____ inch _____ from _____ to _____ ft.

Size hole below casing _____ inch. Static level from surf. _____ ft.

Tested capacity _____ gal. per min. Temperature _____ °F.

Water lowered to _____ ft. _____ in. in _____ hrs. _____ min.

Length of test _____ hrs. _____ min. Screen _____

Slot _____ Diam. _____ Length _____ Bottom set at _____ ft.

[Show location in Section Plat]

Township name _____ Elev. 410 TOPO

Description of location NE, NE Sec. 26, T2N, R10W

Sec. 26 Twp. 2N Rge. 10W

Signed _____ County St. Clair

St. CLAIR Copy for Illinois State Geological Survey No ENVELOPE Index: 26-2N-10W

LOG OF WATER WELL

(Same as well #4) Test hole

Property owner: Monsanto Chem. Co. Well No. 4

Drilled by: Layne-Western (F. Sallee) Year: Feb. 1948

Formations passed through	Thickness	Depth of Bottom
Cinders	1	1
Brown to yellow clay	9	10
Brown sandy clay	20	30
Brown sand clay showing	10	40
Brown packed sand	3	43
Med. sand, some gravel, clay showing	7	50
Fine packed sand & gravel	10	65
Med sand, some coarse gravel - water at 68-70	5	70
Med. sand, some gravel	5	75
Fine to coarse sand & gravel, some clay	10	85
Medium fine sand, some gravel	5	90
Medium to coarse sand & gravel (rock 19'8")	19'8"	109'8"
on rock at 109'8"		

[Continue on back if necessary]

Finished in _____ at _____ to _____ ft.

Cased with _____ inch COUNTY No. 1943 from 0 to _____ ft.

and _____ inch _____ from _____ to _____ ft.

Size hole below casing _____ inch. Static level from surf. _____ ft.

Tested capacity _____ gal. per min. Temperature _____ °F.

Water lowered to _____ ft. _____ in. in _____ hrs. _____ min.

Length of test _____ hrs. _____ min. Screen _____

Slot _____ Diam. _____ Length _____ Bottom set at _____ ft.

[Show location in Section Plat]

Township name _____ Elev. _____

Description of location NE, NE Sec. 26, T2N, R10W

Sec. 26 Twp. 2N Rge. 10W

Signed _____ County St. Clair

St. CLAIR Copy for Illinois State Geological Survey No ENVELOPE Index: 26-2N-10W

(22844—50M—9-55) 2

Page 1

ILLINOIS GEOLOGICAL SURVEY, URBANA

Strata	Thickness	Top	Bottom
Redish sandy and blue silt		0	15
Grey sand little silt		15	20
Grey sand		20	25
Blue and grey sand		25	30
Fine grey sand		30	35
Fine grey sand and blue silt		35	40
Fine blue and grey sand		40	45
No recovery wash samole. Fine blue and grey sand		40	50
No recovery wash sample. fine blue and grey sand.		50	55
Fine blue sand, No recovery		55	60
Blue sand and wood no recovery		60	65
Grey and blue sand. No recovery		65	70
Fihe blue sand. No recovery		70	75
Fine blue sand. No recovery		75	80
Medium blue sand. No recovery		80	85
Mixed grey and blue sand no recovery		85	90
Mixed grey and blue sand. No recovery		90	95
Mixed blue and grey sand. Could not drive sample Barrell. Felt like gravel		95	100
Blue and grey sand. No spoon sample taken.		100	105
Blue and redish sand. no spoon sample taken. Drove casing to 110'4". refusal Set well screen at 108'11". Could not get any deeper as sand was running under casing.		105	110
Total Depth			110'4" TD

Location plat filed.
S.S. #29900

COMPANY Wabash Drilling Co.
FARM Monsanto Chemical Co. NO. SR-2
DATE DRILLED November 1956 COUNTY NO. 1987
AUTHORITY Wabash Drilling Co.
ELEVATION 412.5' refusal (MSL)
LOCATION 680'W of 90° 10'W longitude, 4310'S of 38° 35' north latitude.
COUNTY ST. CLAIR Projected 26- 2N-10W

See Frank Bufe (or Kelly) Photo 1F-88 279

Plotted on Photo

LOG OF WATER WELL

Property owner Monsanto Chem. Co. (Plant "B") Well No. 12

Drilled by H. C. Walters Year

Formations passed through	Thickness	Depth of Bottom
No log	70	
Fine sand	5	75
Coarse sand + gravel	5	80
Coarse sand + gravel	5	85
" " " "	5	90
" " " "	5	95
" " " "	5	100
Sand + gravel	5	105
" " "	5	110
Few boulders	2	112

[Continue on back if necessary]

COUNTY No. 1944

Finished in at to ft.

Cased with inch from 0 to ft.

and inch from to ft.

Size hole below casing inch. Static level from surf. 39'6" ft.

Tested capacity 1250 gal. per min. Temperature °F.

Water lowered to ft. in. in hrs. min.

Length of test hrs. min. Screen Johnson

Slot 60-80-100 Diam. 16 Length 27½' Bottom set at ft.

[Show location in Section Plat]

Township name Elev.

Description of location SE, NE Sec. 26, T2N, R10W

Sec. 26 Twp. 2N Rge. 10W

Location by Ground survey

Signed County St. Clair

ST. CLAIR No. ENVELOPE 26-2N 10W

Copy for Illinois State Geological Survey Index:

380

LOG OF WATER WELL

Property owner: Monsanto Chem. Co. Well No. 15

Drilled by: H. L. Watson (Moretti) Year: Feb. 1941 ~~Mar.~~ 1941

Formations passed through	Thickness	Depth of Bottom
Xolog	70	
Fine sand	5	75
Fine sand + gravel	5	80
Coarse sand + gravel	5	85
" " " "	5	90
Coarse sand	5	95
Coarse sand + gravel	5	100
" " " "	5	105
Sand + gravel	1½	106½

[Continue on back if necessary] T.D.

Finished in _____ at _____ to _____ ft.

COUNTY No. 1945

Cased with _____ inch _____ from 0 to _____ ft.

and _____ inch _____ from _____ to _____ ft.

Size hole below casing _____ inch. Static level from surf. 34' ft.

Tested capacity _____ gal. per min. Temperature _____ °F.

Water lowered to _____ ft. _____ in. in _____ hrs. _____ min.

Length of test _____ hrs. _____ min. Screen Johnson

Slot 60-80-100 Diam. 16" Length 25' Bottom set at _____ ft.

[Show location in Section Plat]

Township name _____ Elev. _____ Sec. 26

Description of location SW, NE Sec. 26, T 2 N, R 10 W Twp. 2 N

Rge. 10 W

Location by Illinois Water Div.

Signed _____ County St. Clair

St. CLAIR No ENVELOPE 26-2N-10W

Copy for Illinois State Geological Survey Index:

LOG OF WATER WELL

#16

Property owner: Monsanto Chem. Co. Well No. 7

Drilled by: Watson (Weley) Year: June 1941

Formations passed through	Thickness	Depth of Bottom
Fill	10	10
Mud	8	18
Fine yellow sand → ?		
Sand	20'	38
Gravel	38	76
Fine gravel	5	81
Gray gravel	10	91
Gravel	10	101
Gravel	5	106

[Continue on back if necessary] TD = 106'

Finished in _____ at _____ to _____ ft.

COUNTY No. 1946

Cased with _____ inch _____ from 0 to _____ ft.

and _____ inch _____ from _____ to _____ ft.

Size hole below casing _____ inch. Static level from surf. 30 ft.

Tested capacity _____ gal. per min. Temperature _____ °F.

Water lowered to _____ ft. _____ in. in _____ hrs. _____ min.

Length of test _____ hrs. _____ min. Screen Johnson

Slot _____ Diam. 16" Length 30' Bottom set at _____ ft.

[Show location in Section Plat]

Township name _____ Elev. _____ Sec. 26

Description of location SW, NE Sec. 26, T 2 N, R 10 W Twp. 2 N

Rge. 10 W

Location by Illinois Water Div.

Signed _____ County St. Clair

St. CLAIR No ENVELOPE 26-2N-10W

Copy for Illinois State Geological Survey Index:

Plotted on Plat 1F37

322

LOG OF WATER WELL

Property owner: United Engineers + Const. Inc. E. St. Louis (American Zinc Co - Monsanto) Well No. 6

Drilled by: H. L. Watson (Vandervilla) Year: Nov. 1940

Formations passed through	Thickness	Depth of Bottom
Cinders + Mud	15	15
Fine sand	60	75
good water bearing formation	30	105
Quicksand to sinpstone	2	107

Abandoned

[Continue on back if necessary]

Finished in _____ at _____ to _____ ft.

Cased with _____ inch COUNTY No. 1926 from 0 to _____ ft.

and _____ inch _____ from _____ to _____ ft.

Size hole below casing _____ inch. Static level from surf. 34 ft.

Tested capacity 1500 gal. per min. Temperature _____ °F.

Water lowered to _____ ft. _____ in. in _____ hrs. _____ min.

Length of test _____ hrs. _____ min. Screen Cole

Slot 120 Diam. 16 Length 30' Bottom set at _____ ft.

[Show location in Section Plat]

Township name _____ Elev. _____ Sec. 23

Description of location 1E, 1S Sec 23 Twp. 2N

T 2N, R 10W (Rge. 10W)

Location by Drawing water lines

Signed _____ County St. Clair

St. CLAIR NO ENVELOPE Index: 23-2N-10W

Copy for Illinois State Geological Survey

251

LOG OF WATER WELL

Property owner: United Engineers American Zinc Co. Monsanto, Ill. Well No. 7

Drilled by: Watson (Morette + Cerilg) Year: Jan. 1942

Formations passed through	Thickness	Depth of Bottom
Dirt	5	
Fine sand	45	50
Coarse sand	25	75
gravel	30	105

COUNTY No. 1929

[Continue on back if necessary]

Finished in _____ at _____ to _____ ft.

Cased with _____ inch _____ from 0 to _____ ft.

and _____ inch _____ from _____ to _____ ft.

Size hole below casing _____ inch. Static level from surf. 33'6" ft.

Tested capacity _____ gal. per min. Temperature _____ °F.

Water lowered to _____ ft. _____ in. in _____ hrs. _____ min.

Length of test _____ hrs. _____ min. Screen _____

Slot 40+50 Diam. 16" Length 30' Bottom set at _____ ft.

[Show location in Section Plat]

Township name _____ Elev. 404 TOPO Sec. 23

Description of location SE, SE Sec 23, T2N, R10W Twp. 2N

800' W 90°10' 7000' N 38°35' (Rge. 10W)

Location by Drawing water lines

Signed _____ County St. Clair

St. CLAIR NO ENVELOPE Index: 23-2N-10W

Copy for Illinois State Geological Survey

ILLINOIS GEOLOGICAL SURVEY, URBANA

INDUSTRIAL Permit #NF4849	Thickness	Top	Bottom
Yellow brown clay		0	10
Fine sand brown		10	25
Medium coarse sand brown		25	30
Coarse sand brown with pea gravel		30	35
Coarse sand brown		35	40
Medium coarse sand brown		40	55
Medium fine sand brown		55	60
Fine sand brown		60	70
Very coarse sand gray with 1½" gravel		70	80
Very coarse sand gray with ¼" gravel		80	85
Very coarse sand gray with 3/4" gravel		85	90
Very coarse sand gray with ½" gravel		90	95
Very coarse sand gray with 3/8" gravel		95	100
Very coarse sand gray with 1" gravel		100	105
Very coarse sand gray with 3/4" gravel		105	107
Very coarse sand gray with ¼" gravel		107	113
Very coarse sand gray with ½" gravel		113	116
			TD

Size of hole 38"
Casing: 88" - 18" outside diameter steel
Casing elevation 2' above grade
Static water level 36.9' top of casing
24 tons gravel pack 11" wall 45' above screen
Screen: Johnson Stainless Steel 18" nominal diameter. Length 30' set at 116'
Slot size: .060'
Two well 300' apart were drilled under Permit #NF4849 S.S. # 55984
NO ENVELOPE
* North Reservoir

COMPANY Luhr Brothers, Inc.
FARM Midwest Rubber Reclaiming Co. 10
DATE DRILLED September 3, 1968 COUNTY NO. 2856
AUTHORITY Luhr Bros. Inc.
ELEVATION
LOCATION Lot 209 Third Subdivision of Cahokia* Commonfields
COUNTY ST. CLAIR 23?-2N-10 W

ILLINOIS GEOLOGICAL SURVEY, URBANA

INDUSTIRAL Permit #NF4849	Thickness	Top	Bottom
Brown Clay		0	5
Brown silty sand		5	20
Fine sand brown		20	25
Fine sand gray		25	30
Coarse sand gray with pea gravel		30	35
Medium coarse sand gray		35	40
Coarse sand gray		40	45
Medium fine sand gray		45	55
Very coarse sand gray with pea gravel		55	60
Medium coarse sand gray		60	65
Very coarse sand gray with 3/4" gravel		65	70
Medium coarse sand gray with pea gravel		70	75
Very coarse sand gray with 3/4" gravel		75	110
Very coarse sand gray with 1" gravel		110	115.5
			TD

Size of hole 38"
Casing: 88.70' - 18" outside diameter steel
Casing elevation 3.2' above grade
Static water level 37'
26.5 tons gravel pack 11" wall 55' above screen.
Screen: Johnson Stainless Steel 16" nominal diameter. Length 30' set at 115.5'
Slot size: .060
Two wells 300' apart were drilled under Permit #NF4849
NO ENVELOPE
+ Southwest Reservoir S.S.#55983

COMPANY Luhr Brothers, Incorparted.
FARM Midwest Rubber Reclaiming Co. 11
DATE DRILLED September 6, 1968 COUNTY NO. 2857
AUTHORITY Luhr Bros. Inc.
ELEVATION
LOCATION Lot 209 Third Subdivision of Cahokia* Commonfields
COUNTY ST. CLAIR 23?-2N-10W

Photo IF-36

321

LOG OF WATER WELL

Property owner American Zinc Co. Monsanto, Ill. Well No. 8

Drilled by H. L. Watson Year Feb. 1946

Formations passed through	Thickness	Depth of Bottom
Gumbo	20	20'
Quick sand	30	50'
Sand	16	66'
Med. Sand	10	76
No log	26	102
TD = 102		

[Continue on back if necessary]

Finished in _____ at _____ to _____ ft.

COUNTY No. 1927

Cased with _____ inch _____ from 0 to _____ ft.

and _____ inch _____ from _____ to _____ ft.

Size hole below casing _____ inch. Static level from surf. _____ ft.

Tested capacity _____ gal. per min. Temperature _____ °F.

Water lowered to _____ ft. _____ in. in _____ hrs. _____ min.

Length of test _____ hrs. _____ min. Screen Cooke

Slot _____ Diam. 16 Length 30' Bottom set at _____ ft.

[Show location in Section Plat]

Township name _____ Elev. _____ Sec. 23

Description of location SE, SE Sec. 23 Twp. 2N

T 2N, R 10W 6-28 Rge. 10W

Location by Groundwater Div.

Signed _____ County St. Clair

St. CLAIR No ENVELOPE 23-2N-10W

Copy for Illinois State Geological Survey Index:

323

LOG OF WATER WELL

Property owner American Zinc Co. Monsanto, Ill. Well No. 9

Drilled by H. L. Watson (G. W. Finke) Year Nov. 1950

Formations passed through	Thickness	Depth of Bottom
Mud	35	35
Sand	45	80
Medium sand	20	100
Sand + coarse gravel	4	104
TD = 104'		

[Continue on back if necessary]

Finished in _____ at _____ to _____ ft.

Cased with _____ inch _____ from 0 to _____ ft.

COUNTY No. 1928

and _____ inch _____ from _____ to _____ ft.

Size hole below casing _____ inch. Static level from surf. _____ ft.

Tested capacity _____ gal. per min. Temperature _____ °F.

Water lowered to _____ ft. _____ in. in _____ hrs. _____ min.

Length of test _____ hrs. _____ min. Screen _____

Slot _____ Diam. 40" Length 60' Bottom set at _____ ft.

[Show location in Section Plat]

Township name _____ Elev. _____ Sec. 23

Description of location SW, SE Sec. 23 Twp. 2N

T 2N, R 10W 6-28 Rge. 10W

Location by Groundwater Div.

Signed _____ County St. Clair

St. CLAIR No ENVELOPE 23-2N-10W

Copy for Illinois State Geological Survey Index:

John C. Moore Corpor Rochester, N. Y. Binder and holes in leaves, each Patented 1908. 306742

(575—5M—7-23)

TOWN Cahokia TOWNSHIP MAP No. 4W

COMPANY Union Electric Light & Power 10W

FARM 100 ft. S. of N. property line

AUTHORITY 258 ft. E. of Eastern Inner 2 Proj.

ELEVATION Harbor line. HOLE No. 1 N 23

COLLECTOR DATE DRILLED

COUNTY NO. 1730 STRATA	Thickness Feet	Thickness In.	Depth Feet	Depth In.
Mud, black and fine sand	30		30	
Sand, fine	4		34	
Sand, coarse 5% 1/8 in. gravel	2		36	
25% 1/4 in. gravel	2		38	
30% 2½ in. gravel	2		40	
Sand, coarse 30% 1/8 to 1 in. gravel	8		48	
Sand, coarse 10% 1/4 in. gravel	4		52	

County St. Clair Index No. 0416

DRILL RECORD ILLINOIS STATE Projected 23-2N-10W

John C. Moore Corporation, Rochester, N. Y. Binder and holes in leaves, each Patented 1908. 302136

(575—5M—7-23)

TOWN Cahokia TOWNSHIP MAP No. 4W

COMPANY Union Electric Light and Power 10W

FARM 300 ft. S. of N. Property Line

AUTHORITY 250 ft. E. of Eastern Inner 2 Proj.

ELEVATION Harbor line HOLE No. 2 N 23

COLLECTOR DATE DRILLED

No. COUNTY NO. 1731 STRATA	Thickness Feet	Thickness In.	Depth Feet	Depth In.
Sand, fine	10		10	
Sand, very fine	8		18	
Mud, black	6		24	
Mud, black and fine sand mixed	11		33	
Sand, fine. 10% 1/4 in. gravel	5		38	
Sand, coarse. 15% 1/2 in. gravel	5		43	
Sand, coarse 20% 1/2 in. gravel	5		48	
Sand, fine	5		53	
Sand, coarse. Pieces of soapstone	5		58	
Sand, coarse 5% 1/4 in. gravel	8		66	
Sand, coarse 10% 1/2 in. gravel	6		72	
Sand, coarse 20% 4 in. gravel	4		76	
Sand, coarse, 20% 3/4 in. gravel	15		91	
Sand, coarse	10		101	
Minus 73.66 Rock				

County St. Clair Index No.

DRILL RECORD ILLINOIS STATE Projected 23-2N-10W

John C. Moore Corporation, Rochester, N. Y. Binder and holes in leaves, each Patented 1906. 302136

(575—5M—7-23)

TOWN
TOWNSHIP
MAP No. 4W
COMPANY Union Electric Light and Power 10W
FARM 300 ft. S. of North property Line
AUTHORITY 50 ft. E. of Eastern Inner 2 Proj.
ELEVATION Harbor Line HOLE No. 6 N 23
COLLECTOR
DATE DRILLED

No.	COUNTY NO. 1232 STRATA	Thickness Feet	Thickness In.	Depth Feet	Depth In.
	Water	16		16	
	Sand, fine	12		28	
	Sand, coarse	10		38	
	Sand, very coarse 1/2 in. gravel	10		48	
	Sand, coarse	27		75	
	Sand, coarse 5% 1/2 in. gravel	4		79	
	Sand, coarse 25% 1/2 in. gravel	4		89	
	Sand, coarse 40% 3 in. gravel	3		92	
	Sand with gravel	12	8	104	8
	Minus 76.06 rock				

St. Clair
County
DRILL RECORD
Index No.
Projected 23-2N-10W

John C. Moore Corporation, Rochester, N. Y. Binder and holes in leaves, each Patented 1906. 302136

(575—5M—7-23)

TOWN Cahokia
TOWNSHIP
MAP No. 4W
COMPANY Union Electric Light & Power 10W
FARM 100 ft. S. of N. property Line of
AUTHORITY Eastern Inner Harbor Line. 2 Proj.
ELEVATION HOLE No. 7 N 23
COLLECTOR
DATE DRILLED

No.	COUNTY NO. 1233 STRATA	Thickness Feet	Thickness In.	Depth Feet	Depth In.
	Water	35		35	
	Sand, fine	5		40	
	Sand, coarse	10		50	
	5% 2 in. gravel				
	Sand, coarse 15% 1/8 in. gravel	15		65	
	Sand, coarse 20% 1 1/2 and 10% 1/8 in. gravel	12		77	

St. Clair
County
DRILL RECORD
Index No.
Projected 23-2N-10W

John C. Moore Corporr Rochester, N. Y. Binder and holes in leaves, each Patented 1906. 356308

TOWN E. St. Louis-TOWNSHIP Monsanto P. O. Map No. 4W
COMPANY F. Thorpe- Engineer R. 10W
FARM Evans-Wallower Zinc Co. No. 2 T. 2N Sec. 24 ?
AUTHORITY F. Thorpe
ELEVATION
COLLECTOR DATE DRILLED March 1929
CONFIDENTIAL

No.	STRATA COUNTY NO. 1740	Thickness Feet	Thickness In.	Depth Feet	Depth In.
	Subsoil & clay	16		16	
	Sand, extremely fine	11		27	
	Sand, very fine, loamy	8		35	
	Sand, very fine	11		46	
	Sand, fine	6		52	
	Sand, very fine	3		55	
	Sand, fine, gritty	7		62	
	Boulders up to 4" with some sand	5		67	
	Regular building sand	14		81	
	Sand, medium coarse	2		83	
	Sand, very coarse	19		102	

"During the month of March, 1929, I installed a porous concrete well 30" I.D. and 40" O.D. at the plant of the Evans-Wallower Zinc Co. at Monsanto P.O., East St. Louis, Ill. and the above is the log of all the strata we went through in Well #2.

"The static level of water varies with the river level."
(Letter of F. Thorpe rec'd. 4-3-29)

NO ENVELOPE

County St. Clair Index No. 04W24
T.—DRILL RECORD 24-2N-10W

17893 4M 5 29 26

John C. Moore Corporation, Rochester, N. Y. Binder and holes in leaves, each Patented 1906. 90

TOWN East St. Louis WNSHIP Map No. 4W
COMPANY Thorpe Concrete Well Co. R. 10W
FARM Certain-teed Products No. 3 T. 2 N Sec. 24
AUTHORITY written log
ELEVATION 416 topo.
COLLECTOR Ireland DATE DRILLED 4-34
CONFIDENTIAL 18th and Broadway

No.	STRATA COUNTY NO. 1739	Thickness Feet	Thickness In.	Depth Feet	Depth In.
	Cinder fill	6		6	
	Gumbo	4		10	
	Soil, sandy	7		17	
	Sand, fine	10		27	
	Sand, extremely fine	13		40	
	Sand, fine, loamy	13		53	
	Sand, fine, gritty	7		60	
	Clay, blue	4		64	
	Sand, quick	26		90	
	Sand, fine	2		92	
	Sand, gritty	9		101	
	Gravel, fine	6		107	
	Sand, coarse	2		109	
	Boulders 2" to 10"	7		116	
	Baits drilled 3 wells	1-21		120	
		7-17		120	
		11-17		119	

NO ENVELOPE

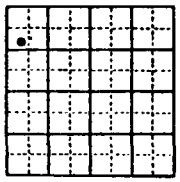
County ST. CLAIR Index No. 04W 24
T.—DRILL RECORD 24-2N-10W

47327—10M—4-35 4 Illinois Geological Survey, Urbana.

ILLINOIS GEOLOGICAL SURVEY, URBANA

PERMIT # NF 08825	Thickness	Top	Bottom
A 4" test hole was first drilled to a depth of 111', then filled in with sand and later re-drilled with a bigger bit. Both records follow.			
TEST HOLE			
Clay		0	11
Silty sand brown		12	21
Fine sand brown		22	30
Fine sand gray		31	41
Medium sand gray		42	51
Coarse sand gray with pea gravel		52	56
Coarse sand gray with pea gravel		57	61
Coarse sand gray with pea gravel		62	86
Very coarse sand gray with 3/8" gravel		87	91
Very coarse sand gray with ½" gravel		92	96
Very coarse sand gray with ½" gravel		97	101
Very coarse sand gray with ½" gravel		102	104
Very coarse sand gray with ½" gravel		105	111
			TD
WELL RECORD			
Clay		0	18
Sand coarse gray			20
Sand coarse gray with gravel			25
Sand fine			30
Sand coarse gray with gravel			35
Sand coarse gray with gravel			40
Sand coarse gray with 1" gravel			45
Sand coarse gray with 1" gravel		55	60
Sand coarse gray with 3/4" gravel		65	70

OMPANY Luhr Brothers, Inc.
ARM Cerro Copper & Brass Co. NO. 1
ATE DRILLED July 10, 1970 COUNTY NO. 3208
UTHORITY Company
LEVATION
OCATION 1000' N line, 400' W line of NW
OUNTY ST. CLAIR



26-2N-10W

	Thickness	Top	Bottom
Sand very coarse gray			75
Sand very coarse gray with cobbles to 5"		80	110½
			TD

Well Casing:
- Material - Steel coated with bituminous
- Diameter: 20" outside diameter
- Length - 78.73'
- Wall Thickness - .075

Final Casing Elevation Above Grade: 1'

Size of Drilled Hole:
- 40" to 20'
- 38" to bottom

Well Screen:
- Material - Stainless steel #304
- Diameter - 20" nominal
- Length - 31.82
- Slot Size - .100
- Type Make - UOP Johnson

Depth of Screen set at 110.55'

Gravel Filter:
- Used 23 tons Muscatine, 1/16" - 3/16" No. 3
- Wall Thickness - 8½"
- Feet Above Screen - 26'

Static Level: 23.86'

S.S. # 57106.

Luhr Bros., Inc. Cerro Copper & Brass Co #1
ST. CLAIR
26-2N-10W

287

LOG OF WATER WELL

Property owner Lewin-Mathes Well No.

Drilled by H.L. Watson (Moll) Year June 1948

Formations passed through	Thickness	Depth of Bottom
Lumber	3	3
Fine sand	12	15
" "	20	35
" " + gravel	10	45
Med sand + gravel	2	47
Fog	1	48
Med. Sand + gravel	4	52
" " " " + rock	10	62
" " " "	8	70
" " " "	5	75
" " " " + rock	5	80
Coarse sand	5	85
Coarse sand + rock	5	90
Coarse sand	5	95
Boulder	1	96
Coarse sand + rock	5	101

[Continue on back if necessary]

Finished in COUNTY No. 1935 at to ft.

Cased with inch from 0 to ft.

and inch from to ft.

Size hole below casing inch. Static level from surf. ft.

Tested capacity gal. per min. Temperature °F.

Water lowered to ft. in. in hrs. min.

Length of test hrs. min. Screen

Slot Diam. Length Bottom set at ft.

[Show location in Section Plat]

Township name Elev. Sec. 26

Description of location NE, SW Sec. 26 Twp.

T2N, R10W Rge. 10W

Location by Brown Water Div.

Signed County St. Clair

St. CLAIR NO ENVELOPE

Copy for Illinois State Geological Survey Index: 26-2N-10W

---

on Cahokia Quad.

286

LOG OF WATER WELL

Property owner Lewin-Mathes-Monsanto, Ill. Well No.

Drilled by H.L. Watson (Graves) Year Feb. 1947

Formations passed through	Thickness	Depth of Bottom
Fine sand	70	70
Fine sand + gravel	8	78
Good formation	26	104 TD

COUNTY No. 1936

[Continue on back if necessary]

Finished in at to ft.

Cased with inch from 0 to ft.

and inch from to ft.

Size hole below casing inch. Static level from surf. ft.

Tested capacity gal. per min. Temperature °F.

Water lowered to ft. in. in hrs. min.

Length of test hrs. min. Screen

Slot 30 Diam. 12" Length 26'5" Bottom set at ft.

[Show location in Section Plat]

Township name Elev. Sec. 26

Description of location NE, SW Sec. 26, Twp. 2N

T2N, R10W Rge. 10W

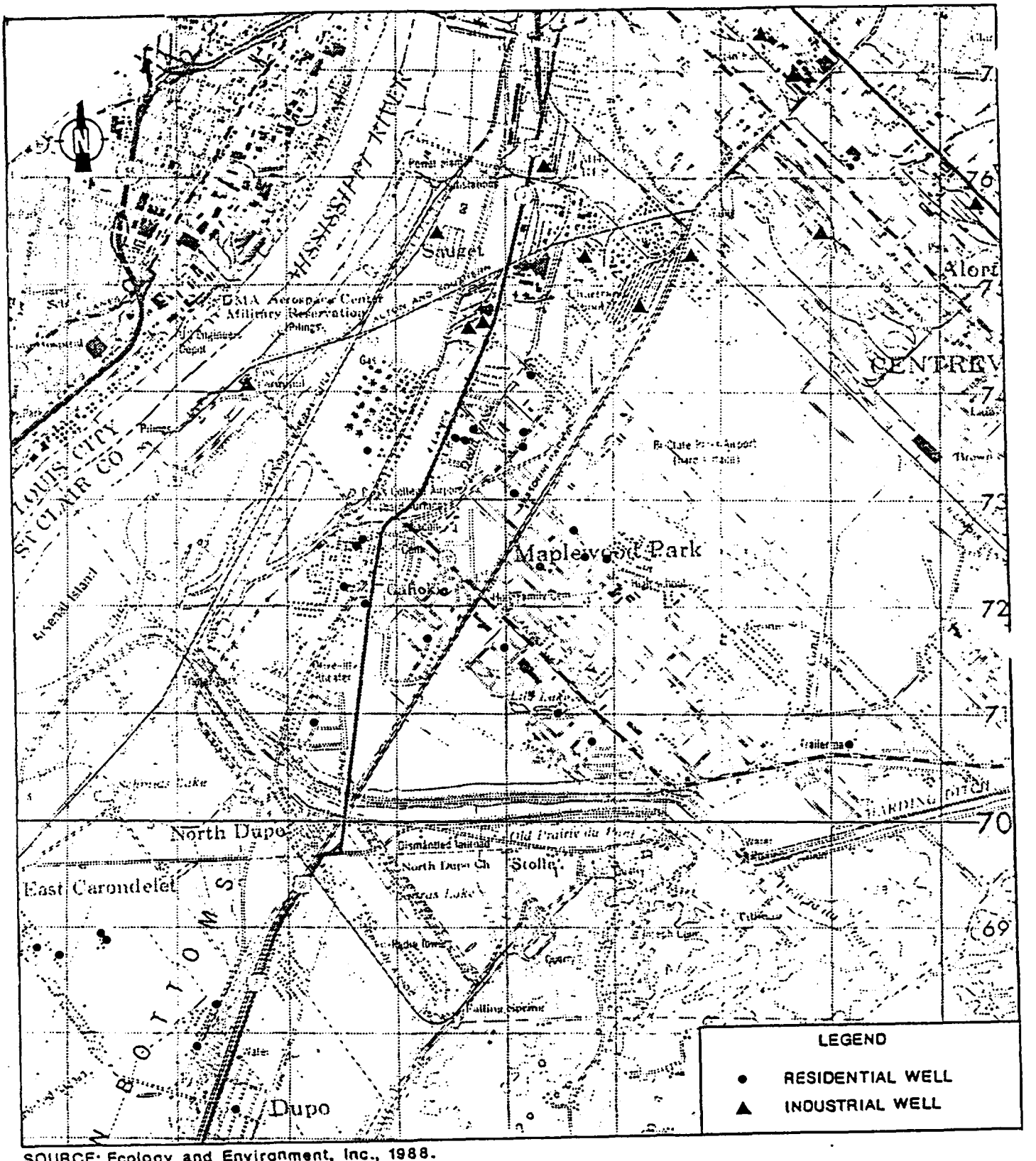
Location by Brown Water Div.

Signed County St. Clair

St. CLAIR NO ENVELOPE

Copy for Illinois State Geological Survey Index: 26-2N-10W

Reference Number 5



SOURCE: Ecology and Environment, Inc., 1988.

SCALE

0 1 2 3 4 MILES

RESIDENTIAL AND INDUSTRIAL WELL LOCATIONS IN THE DCP AREA

The following is an explanation of the ISWS Private Well Database Printout.

Columns	Field Length	Name	Description
1-3	3	FIPS	County Code Number

FIPS means Federal Information Processing System and is a Federal number to designate a county.

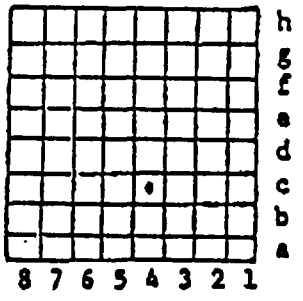
4-8	5	SGS County number	

SGS County number is the Geological Survey ID# that is assigned as an internal identification number.

9-18	10	Location	Township columns 9-11 Range columns 12-14 Section columns 15-16 Plot columns 12-18

The location system uses the township, range, and section. The location consists of five parts: county, township, range, section, and coordinate within the section. Sections are divided into rows of 1/8-mile squares. Each 1/8-mile square contains 10 acres and corresponds to a quarter of a quarter of a quarter section. A normal section of 1 square mile contains 8 rows of 1/8-mile squares; an odd-sized section contains more or fewer rows. Rows are numbered from east to west and lettered from south to north as shown in the diagram.

St. Clair County
T.2N., R.10W.
Sec. 23



The location of the well shown above is STC 2N10W-23.4c. Where there is more than one well in a 10-acre square they are identified by arabic numbers after the lower-case letter in the well number.

Columns	Field Length	Name	Description
93-94	2	Well type -	A two letter code indicating the type of well Blank - Assumed drilled BD Bored and dug DU Dug (being phased out) DR Driven SP Sand point SG Spring
95-96	2	Aquifer type -	A two letter code indicating aquifer type Blank - Undeterminable BR Bedrock UN Unconsolidated

The data in the Private Well Inventory Database is a listing of those non-municipal wells which are known to the Illinois State Water Survey (ISWS). This information has been entered verbatim from well logs submitted by the driller, from chemical analysis reports, from well sealing forms or well inventory forms from the 1930-34 well survey and other special projects. The accuracy of this data is controlled by those who submitted the form. Information in the private well database has not been field verified.

Columns	Field Length	Name	Description
19-48	30	Owner	
49-68	20	Driller	
69-75	7	Date	Month columns 69-70 Day columns 71-72 Century columns 73 Year columns 74-75
76	1	Permit code letter indicates agency which issued permit #. M Mines and Minerals (after 1988 only observation wells and irrigation wells) P Public Health - all non-community supplies E EPA - Community supplies N No fee X Undetermined	
77-82	6	Permit number	
83-86	4	Depth (in feet)	
87-90	4	Record type - Indicates paper source that documents the well exists, since records were collected before well log submittal was required. L Log A Affidavit C Chemical analysis I Inventory X Indicates comment in owner field something unusual	
91-92	2	Well use - A two letter code indicating the usage of the well CM Commercial CO Conservation DO Domestic IN Industrial IR Irrigation MO Monitoring MU Municipal NC Non-Community OB Observation PK Park SC School ST State	

163	01N09W047FLALUMIER E		0000943	29	C	DU
163	01N09W06 JC RR A YARD	LAYNE WESTERN	0400947	105	L	CM
163	01N09W081ABARBEAU E	DOHRMAN	0901977M065458207		L	DO
163	01N09W081COLIVER M	DS DRILL	0911974M032393140		L	DO
163	01N09W087EPIAT E		0000943	27	C	DU
163	02N09W075DCIRCLE PKG CO	WATSON	0200942	120	L	CM
163	02N09W075ECIRCLE PKG CO	LUHR	0000962	112	IC	CM
163	02N09W075ECIRCLE PKG CO	LUHR	0719966	115	IC	CM
163	02N09W076DCIRCLE PKG CO		0000941	111	LC	CM
163	02N09W076EE SIDE PKG		0000906	100	L	CM
163	02N09W076EHUNTER PKG CO	BUTLER	0421958	116	L	CM
163	02N09W076EHUNTER PKG CO	LAYNE WESTERN	0000968	106	I	CM
163	02N09W077EHUNTER PKG CO	FRANK	0322957	100	L	CM
163	02N09W077EHUNTER PKG CO	LUHR	0306956	106	LC	CM
163	02N09W077FHUNTER PKG CO		0000943	110	C	CM
163	02N09W087APFIZER	LAYNE WESTERN	0814972M016352115		L	CM
163	02N09W087APFIZER	RUESTER	1100983M109867117		L	CM
163	02N09W092HPENN RR LAKE ROAD HOUSE	WATSON	0900941	115	L	CM
163	02N09W097ANIEDERER DAIRY		0000936	96	C	CM
163	02N09W097ANIEDERER DAIRY	WATSON	0300946	98	LC	CM
163	02N09W103DWATERLOO ICECREAM		0000942	122	C	CM
163	02N09W103DWATERLOO ICECREAM		0000942	124	C	CM
163	02N09W106GWALWORTH CO		0000943	122	C	CM
163	02N09W108HWALWORTH CO		0000943	124	C	CM
1632659102N09W151EFREEDOM COMCRETE		ST CH DRILL	1208987M137981100		L	CM
163	02N09W157ASCHRANZ J		0908964	98	L	DO
163	02N09W16		0000930	110	C	DO
163	02N09W16 JONES PK		0000954		C	PK
163	02N09W167AE ST LOUIS CASTING		0200943	116	LC	CM
163	02N09W168EWATERLOO ICECREAM	WATSON	0909939	59	L	CM
163	02N09W172BAM ASPHALT ROOFING	WATSON	0200947	105	L	CM
163	02N09W173BAM ASPHALT ROOFING		0000939	115	LC	CM
163	02N09W173FE ST LOUIS PK DIST		0000930	110	C	PK
163	02N09W177FWILLIAMS PAINT CO	THORPE	0600929	117	L	CM
163	02N09W177GWILLAIMS PAINT CO(TEST)	LAYNE WESTERN	0000947	116	LX	CM
163	02N09W177GWILLIAMS PAINT CO	THORPE	0000947	114	L	CM
163	02N09W177GWILLIAMS PAINT CO	THORPE	0000947	115	L	CM
163	02N09W177GWILLIAMS PAINT CO	THORPE	0600929	113	L	CM
163	02N09W177GWILLIAMS PAINT CO(TEST)	LAYNE WESTERN	0000947	117	LX	CM
163	02N09W177GWILLIAMS PAINT CP		0000928	100	C	CM
163	02N09W177HPFIZER	THORPE	0000947	114	IC	CM
163	02N09W178BDRUG STORE		0000949	84	C	CM
163	02N09W187CROXY THEATRE		0000944	91	C	CM
163	02N09W187GBANNER ICE	WATSON	0000943	116	CL	CM
1632590302N09W19 PRESTRESSED SLABS		ST CH DRILL	1029986M126802100		L	CM
163	02N09W193HHOME ICECREAM CO		0000933	115	LC	CM
163	02N09W198EOBEAR NESTER CO		0000943	104	C	CM
163	02N09W198FCERTAIN TEED PROD		0903952	106	L	CM
163	02N09W198FCERTAIN TEED PROD		1026950	110	L	CM
163	02N09W198FOBEAR NESTER CO		0000943	104	C	CM
163	02N09W198GLEMP BREWING CO		0000946	720	C	CM
163	02N09W208AALTON AND SOUTH RR		0000944	100	C	IN
163	02N09W231AOPEN AIR THEATRE	WATSON	1000941	83	L	CM
~~163~~	~~02N09W231EPOPP R~~	~~ST CH DRILL~~	~~0727977M063762114~~		~~L~~	~~DO~~
~~163~~	~~02N09W232FPOPP R~~	~~KOHNEN~~	~~0623984M11312561~~		~~L~~	~~IR~~
163	02N09W263HAM ZINC CO			97	C	CM
163	02N09W29 ALUMINUM ORE COO		1000940	1215	L	IN
163	02N09W295GIND TRACK SUP INC	KOHNEN	0119981M09811132		L	DU
163	02N09W298FCHEM TECK PROD		0000972	98	IC	CM

163	02N10W103BNAT STOCK YD		0000967	108	C	CM
163	02N10W11 MISSOIRI ILL MATERIAL		0400943	115	L	CM
1630137002N10W22	MONSANTO CHEM	RANNEY	0800952	97	L	IN
1630137202N10W22	MONSANTO CHEM	RANNEY	0800952	97	L	IN
1630137102N10W22	MONSANTO CHEM	RANNEY	0909952	90	L	OB
163	02N10W23 AP GROCERY	WATSON	0600946	80	L	CM
163	02N10W241ECERTAIN TEED PROD		0000943	106	C	CM
163	02N10W241HCERTAIN TEED PROD	WATSON	1200942	123	L	CM
163	02N10W25 MOBIL OIL		0000987	105	A	IN
163	02N10W25 MOBIL OIL		0000987	109	A	IN
163	02N10W25 MOBIL OIL	EATSON	0000943	16	A	IN
163	02N10W25 MOBIL OIL	WATSON	0000940	115	A	IN
163	02N10W25 MOBIL OIL	WATSON	0000946	92	A	IN
163	02N10W25 MOBIL OIL	WATSON	0000951	106	A	IN
163	02N10W25 MOBIL OIL(PLANT CLOSED)	WATSON	0000939	115	AX	IN
163	02N10W25 MONSANTO CHEM(TEMPORARY)	BARBATO	0404984M11165867		LX	DU
163	02N10W25 MONSANTO CHEM(TEMPORARY)	BARBATO	0404984M11165968		LX	DU
163	02N10W25 MONSANTO CHEM(TEMPORARY)	BARBATO	0405984M11166068		LX	DU
163	02N10W25 MONSANTO CHEM(TEMPORARY)	BARBATO	0414984M11166168		LX	DU
163	02N10W25 MONSANTO CHEM(TEMPORARY)	BARBATO	0414984M11166268		LX	DU
163	02N10W25 MONSANTO CHEM(TEMPORARY)	BARBATO	0414984M11166368		LX	DU
163	02N10W25 MONSANTO CHEM(TEMPORARY)	BARBATO	0414984M11166468		LX	DU
163	02N10W25 MONSANTO CHEM(TEMPORARY)	BARBATO	0414984M11166568		LX	DU
163	02N10W25 MONSANTO CHEM(TEMPORARY)	BARBATO	0414984M11166668		LX	DU
163	02N10W25 MONSANTO CHEM(TEMPORARY)	BARBATO	0414984M11166768		LX	DU
163	02N10W25 MONSANTO CHEM(TEMPORARY)	BARBATO	0414984M11166868		LX	DU
163	02N10W25 MONSANTO CHEM(TEMPORARY)	BARBATO	0414984M11166968		LX	DU
163	02N10W25 MONSANTO CHEM(TEMPORARY)	BARBATO	0414984M11167068		LX	DU
163	02N10W25 MONSANTO CHEM(TEMPORARY)	BARBATO	0414984M11167168		LX	DU
163	02N10W25 MONSANTO CHEM(TEMPORARY)	BARBATO	0414984M11167268		LX	DU
163	02N10W25 MONSANTO CHEM(TEMPORARY)	BARBATO	0414984M11167368		LX	DU
1632569702N10W25	TWI INC	ST CH DRILL	0702985M11870189		L	CM
163	02N10W25 TWI INC	ST CH DRILL	1217982M10581984		L	CM
163	02N10W255DMOBIL OIL	LUHR	0214961	107	LC	IN
163	02N10W255EMOBIL OIL	LUHR	0000959	114	C	IN
163	02N10W256AMIDWEST RUBBER CO	THORPE	0500951	110	L	CM
163	02N10W256ESOCONY OIL	WATSON	0000943	95	L	IN
163	02N10W257BMONSANTO CHEM		0000920	100	L	IN
163	02N10W257EMOBIL OIL	LUHR	0411957	113	L	IN
163	02N10W257EMOBIL OIL	THORPE	0000951	106	LA	IN
163	02N10W257ESOCONY MOBIL OIL	WATSON	0000955	112	L	IN
163	02N10W26 AM AG CHEM CO	WATSON	000000	102	L	IN
163	02N10W26 LEWIN MATHES	WATSON	0200947	104	L	CM
163	02N10W26 MIDEWST RUBBER CO	THORPE	1200946	111	L	CM
163	02N10W26 MIDWEST RUBBER	WATSON	0321960	113	L	CM
163	02N10W26 MIDWEST RUBBER CO	MORGAN	0000950	106	L	CM
163	02N10W26 MIDWEST RUBBER CO	MORGAN	0000950	114	L	CM
163	02N10W26 MIDWEST RUBBER CO	WATSON	1007959	110	L	CM
163	02N10W261EMONSANTO CHEM		0000947	105	C	IN
163	02N10W261ESTERLING STEEL CASTING		0000942	95	LC	CM
163	02N10W261GMONSANTO CHEM(TEST)	WATSON	0000959	108	LX	IN
163	02N10W261HCWS PLANT US ARMY		0000941	100	LC	CM
163	02N10W261HCWS PLANT US ARMY		0700941	105	L	CM
163	02N10W262DSTERLING STEEL CATSING		0000973		C	CM
163	02N10W262EMONSANTO CHEM		0000947	105	C	IN
163	02N10W262EMONSANTO CHEM		0300941	107	LC	IN
163	02N10W262EMONSANTO CHEM	WATSON	0000941	107	L	IN
163	02N10W262HAM ZINC CO(ABANDONED)	WATSON	0000943	107	LX	CM

163	02N10W263DLEWIN MATHES		0000942	110	C	CM
163	02N10W263GMONSANTO CHEM		0100942	110	LC	IN
163	02N10W263GMONSANTO CHEM		1000939	105	LC	IN
163	02N10W263HAM ZINC CO	WATSON	0100942	105	LC	CM
163	02N10W264DLEWIN MATHES	WATSON	0600948	101	L	CM
163	02N10W264EMONSANTO CHEM		0000947	109	C	IN
163	02N10W264FMONSANTO CHEM		1000939	105	LC	IN
163	02N10W264SMONSANTO CHEM		0200943	104	LC	IN
163	02N10W265DCERRO COPPER BRASS	LUHR	0000970	111	CI	CM
163	02N10W265DDARLING CO		0000939	70	LC	CM
163	02N10W266BMIDWEST RUBBER CO	THORPE	0300951	112	LC	CM
163	02N10W268ACLAYTON CHEM CO	ST CH DRILL	0225983M10620890		L	CM
163	02N10W268ACLAYTON CHEM CO	ST CH DRILL	0412976M04548078		L	CM
163	02N10W268AMIDWEST RUBBER	LUHR	0906968M004849115		LC	CM
1630137602N10W27	MONSANTO CHEM	RANNEY	0000952	100	L	IN
163	02N10W27 MONSANTO CHEM	RANNEY	0801952	99	L	IN
163	02N10W27 MONSANTO CHEM	RANNEY	0826952	97	L	IN
163	02N10W273FMONSANTO CHEM	LUHR	0600959	101	L	IN
163	02N10W273HMONSANTO CHEM	RANNEY	0000952	102	I	IN
163	02N10W306GAP GROCERY	WATSON	0600946	120	L	CM
163	02N10W331FCARSILL ELEVATOR	WATSON	0600952	105	L	CM
163	02N10W333FMOBIL OIL	FUESTER	0217984M11117196		L	IN
163	02N10W34 PHILLIPS PETRO	WATSON	0000000	23	L	CM
163	02N10W34 US GOVT		0000000		L	RW
163	02N10W342FPHILLIPS PETRO	LAYNE WESTERN	0500978	100	IC	CM
163	02N10W342FPHILLIPS PETRO	RUEGTER	0428978M072589102		L	CM
163	02N10W342GPHILLIPS PETRO		0000943	73	C	CM
163	02N10W345FCORPS OF ENGINEERS		1015947	102	L	CM
163	02N10W355AUP OIL AND READY CONCRETE	ST CH DRILL	1107977M068630103		L	CM

Reference Number 6

Brent Manning
Director

John W. Comerio
Deputy Director

Bruce F. Clay
Assistant Director

Illinois Department of Conservation
life and land together

LINCOLN TOWER PLAZA • 524 SOUTH SECOND STREET • SPRINGFIELD 62701-1787
CHICAGO OFFICE • ROOM 4-300 • 100 WEST RANDOLPH 60601
[redacted]

June 24, 1991

Mr. Tim Murphy
IL EPA/LPC
P.O. Box 19276
Springfield, IL 62794-9276

Re: ILD #980606982, 000672329, 000605790, 000722074, 000665836
Sauget Sites Area #2

Dear Mr. Murphy:

In response to your June 10, 1991 request the Department has reviewed the proposed CERCLIS Sites (Sauget Area #2) in St. Clair County.

There are no sensitive areas on site, but there are several sensitive areas in the 0-¼ and ¼ to ½ mile radius of the site and along the water path, both on the Illinois and Missouri Sides.

The Resource Inventory for the Mississippi River for the 178-162 River Miles (see attached information) shows fish spawning areas, commercial fishing areas, sport fishing areas, important wildlife habitat and bald eagle use at selected areas in this reach.

Also, during September, 1989 fish contaminant sampling we observed numerous (~100) 9-12 inch sauger using this area of the river between RM. 178-176. Large numbers of channel catfish and white bass were also observed. It is likely these species also use much of the 178-162 mile reach.

Thank you for the opportunity to comment. If you need further information please advise.

Sincerely,

Richard W. Lutz

Richard W. Lutz, Supervisor
Impact Analysis Section
Division of Planning

RWL:ts

Att: sensitive areas form
Resource Inventory maps

RECEIVED
JUN 26 1991
IEPA/DLPC

DEPARTMENT OF CONSERVATION IDENTIFICATION OF
ENVIRONMENTAL SENSITIVE AREAS

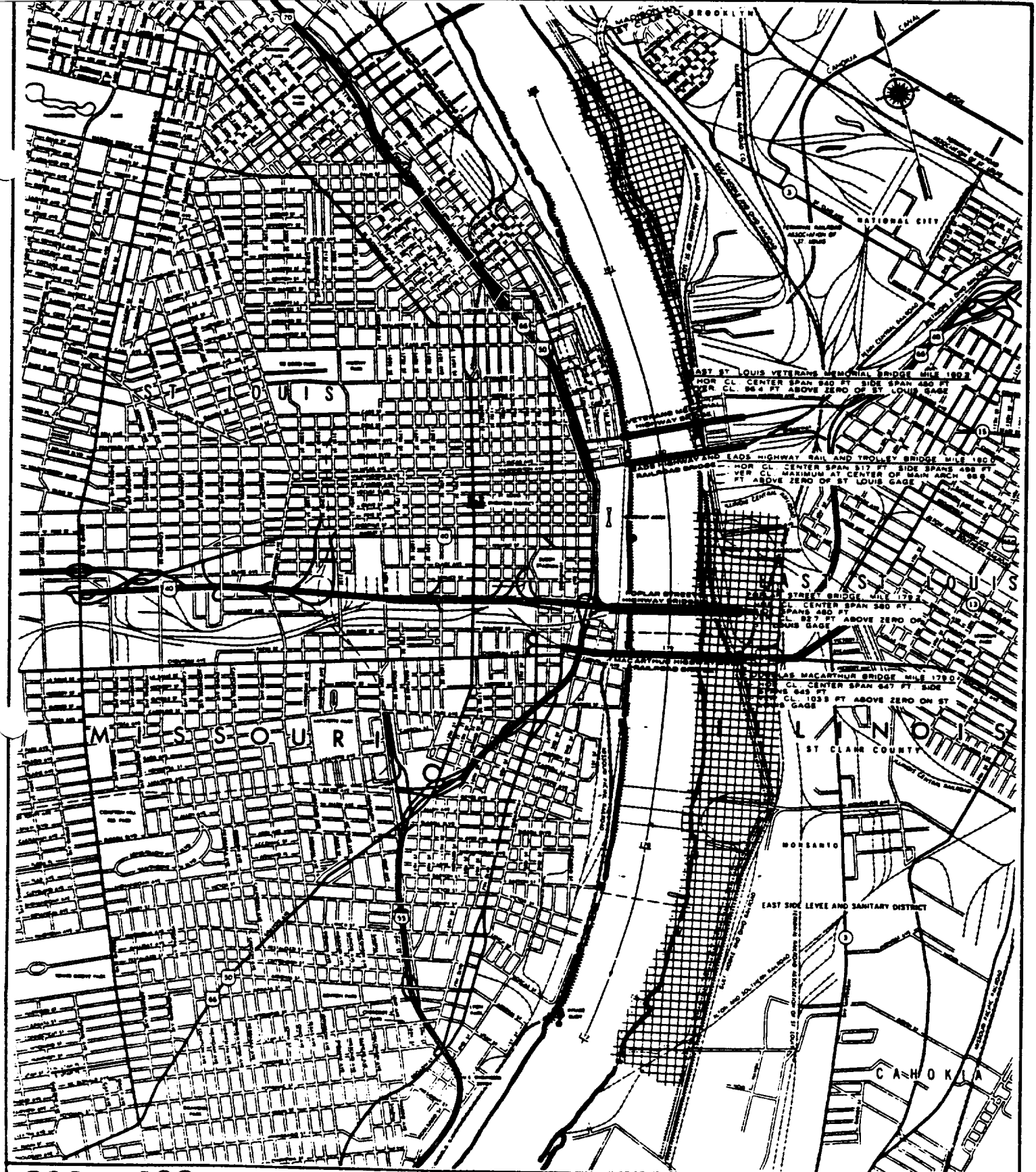
ILD# 000665836
980606982
000672329
000605790
000722074

— = None in Area

TARGET DISTANCE CATEGORIES

SENSITIVE ENVIRONMENTS	On-site	0-1/4 mile	1/4-1/2 mile	stream milage
I. Critical habitat for Federally designated or proposed endangered or threatened species	—	—	—	
II. Habitat known to be used by Federally designated or proposed endangered or threatened species	—	—	—	*
III. State wildlife refuge	—			
IV. Spawning areas critical for the maintenance of fish/ shellfish species within a river system	—	*	*	*
V. Terrestrial areas utilized by large or dense aggregations of verbebrate animals for breeding	—	—	—	*
VI. Habitat known to be used by State designated or threatened species	—	—	—	*
VII. Habitat known to be used by a species under review as to its Federal endangered or threatened status	—	—	—	—
VIII. State lands designated for wildlife or game management	—	—	—	*
IX. State designated natural area	—	—	—	—
X. Particular areas, relatively small in size, important to the maintenance of unique biotic communities	—	—	—	—

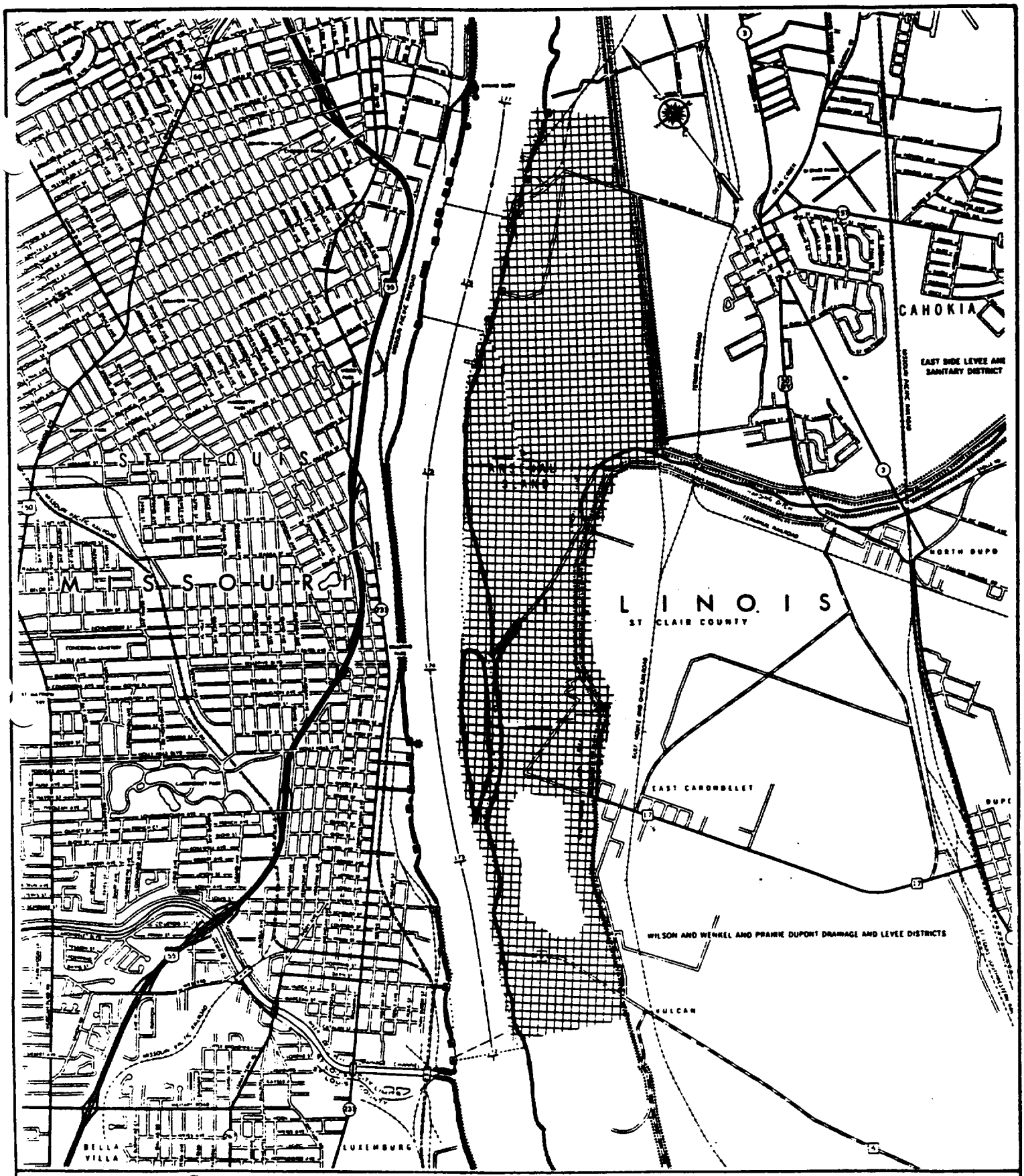
If any of the sensitive areas identified above exist within the designated target distance limits, please post an asterisk (*) in the appropriate column.



POOL B26 RIVER MILE 177 – 182

USFWS Closed area (restricted hunting)
Important wildlife habitat
Rookery
Bald eagle

WILDLIFE



POOL B26 RIVER MILE 172 - 177

USFWS Closed area (restricted hunting)
Important wildlife habitat
Rookery
Bald eagle

WILDLIFE

River Mile 177-182

Recreation

179.6(L) - The East St. Louis Access contains bank fishing and a scenic view of Gateway Arch.

179.7(R) - St. Louis City Harbor (boat ramp and marina).

179.8(R) - Jefferson National Expansion Memorial.

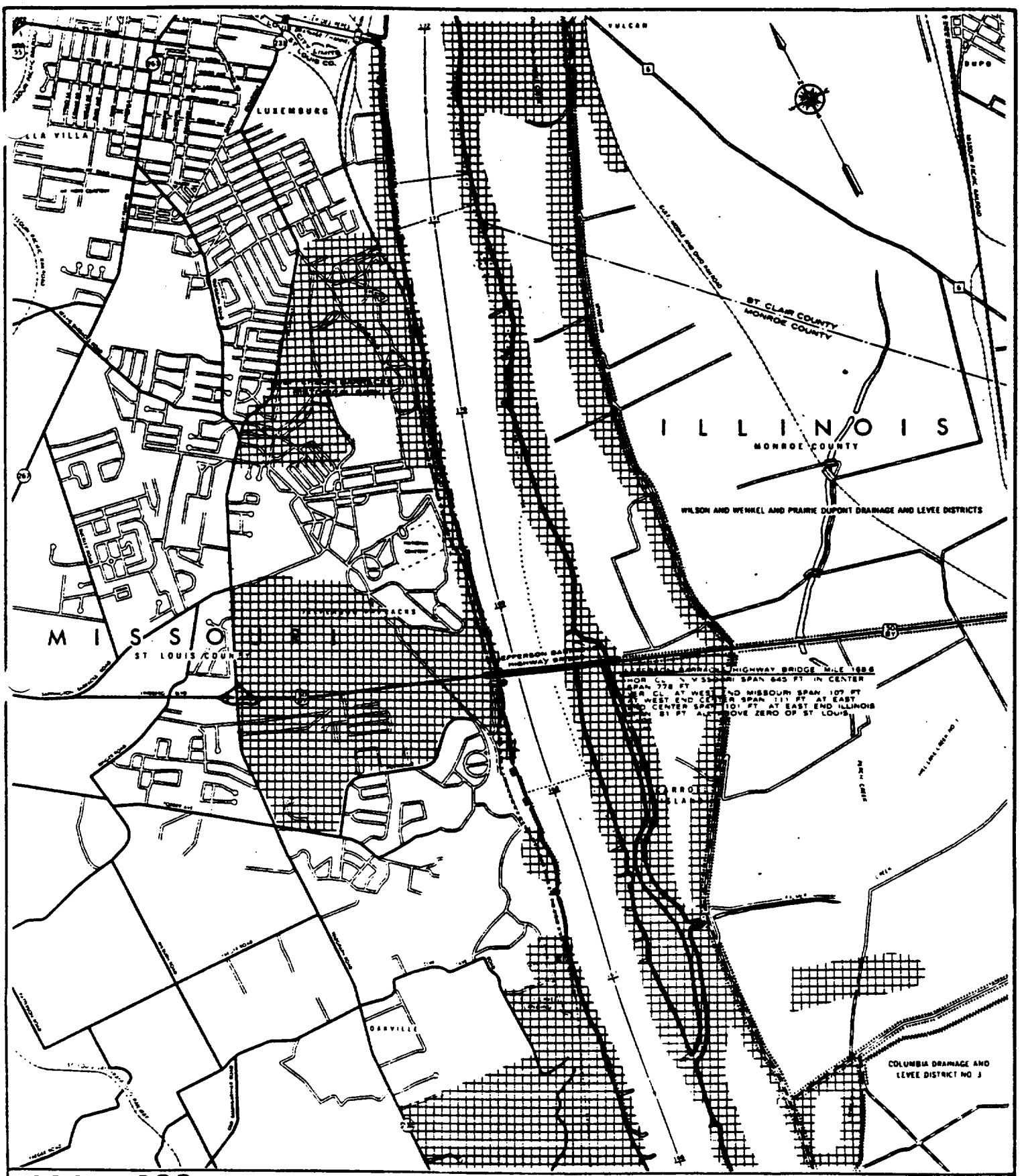
River Mile 172-177

Wildlife

172.5-176.0(L) - Important area for mourning dove.

Recreation

174.4(R) - Upper and Lower Bellerive Park.



POOL B26 RIVER MILE 166 - 172

USFWS Closed area (restricted hunting)
Important wildlife habitat
Rookery
Bald eagle

WILDLIFE

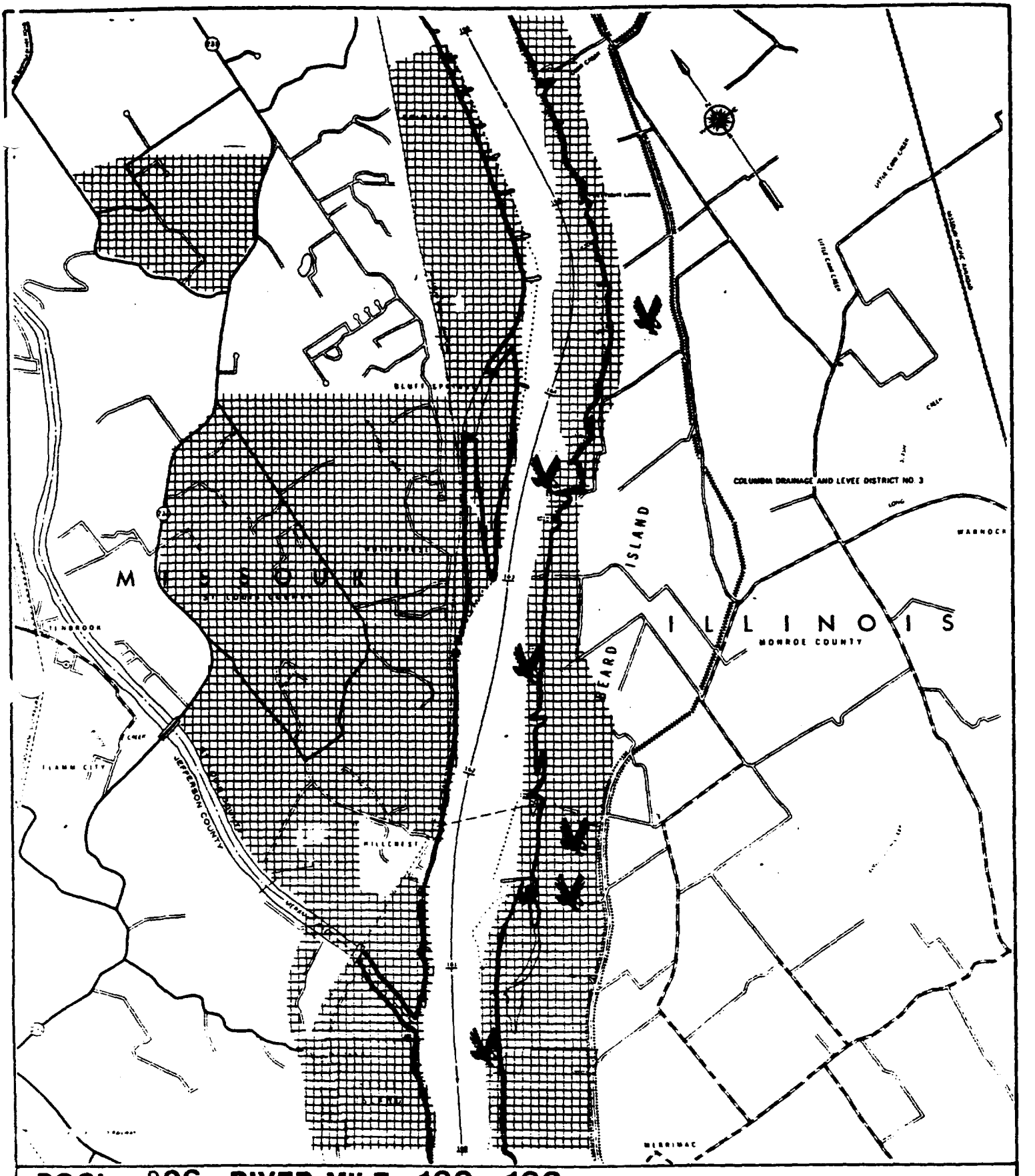
River Mile 166-172

Recreation

167.0(R) - Cliff Cave contains a picnic area, bluffs, and caves. The Cliff Cave Natural Area is also located here.

170.0-171.0(R) - Jefferson Barracks Historical Park (camping, picnic area, historic site).

171.5(R) - Black Forest Park (picnic area).



POOL B26 RIVER MILE 160 - 166

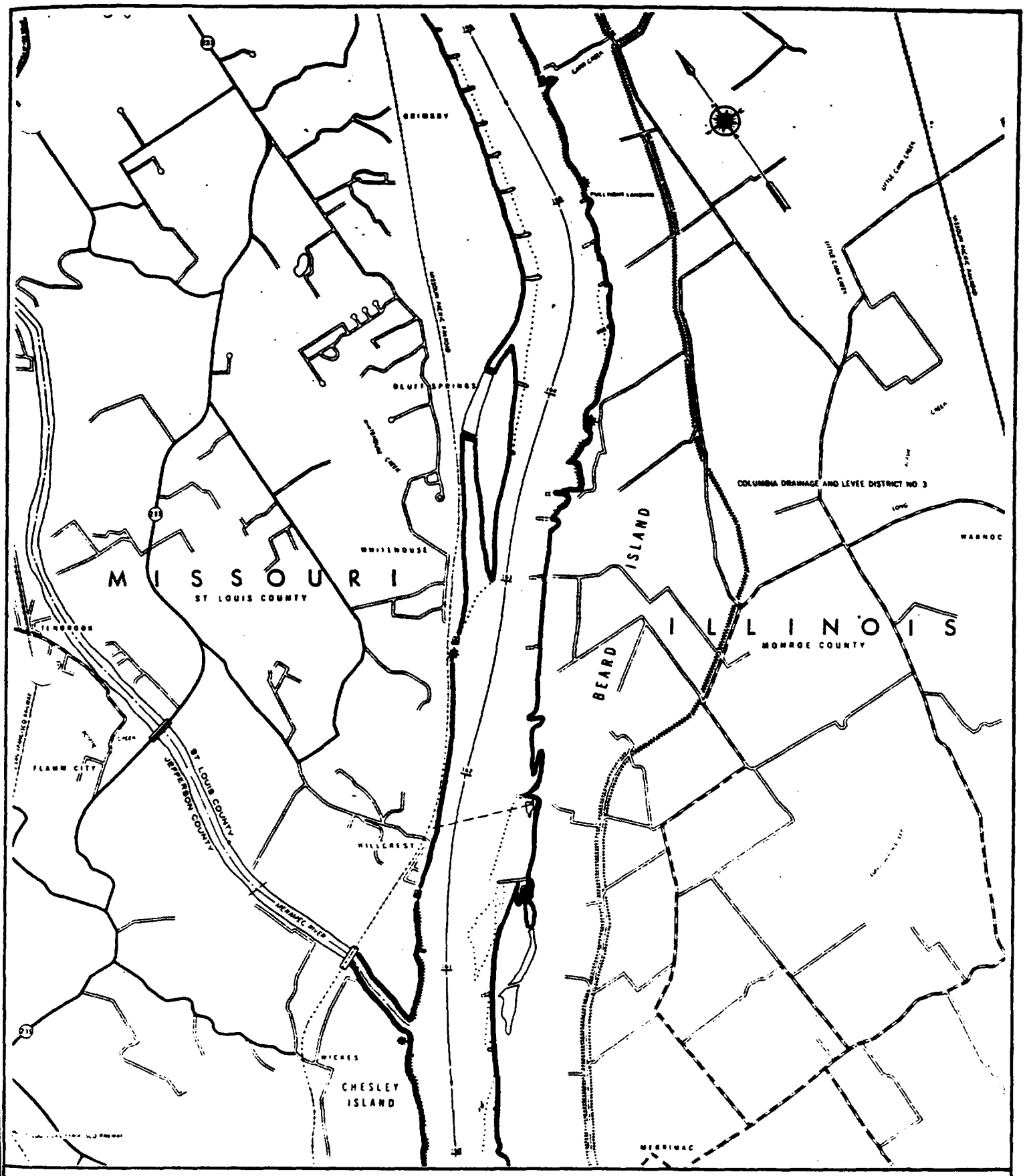
USFWS Closed area (restricted hunting)
Important wildlife habitat
Rookery
Bald eagle

WILDLIFE

River Mile 160-166

Recreation

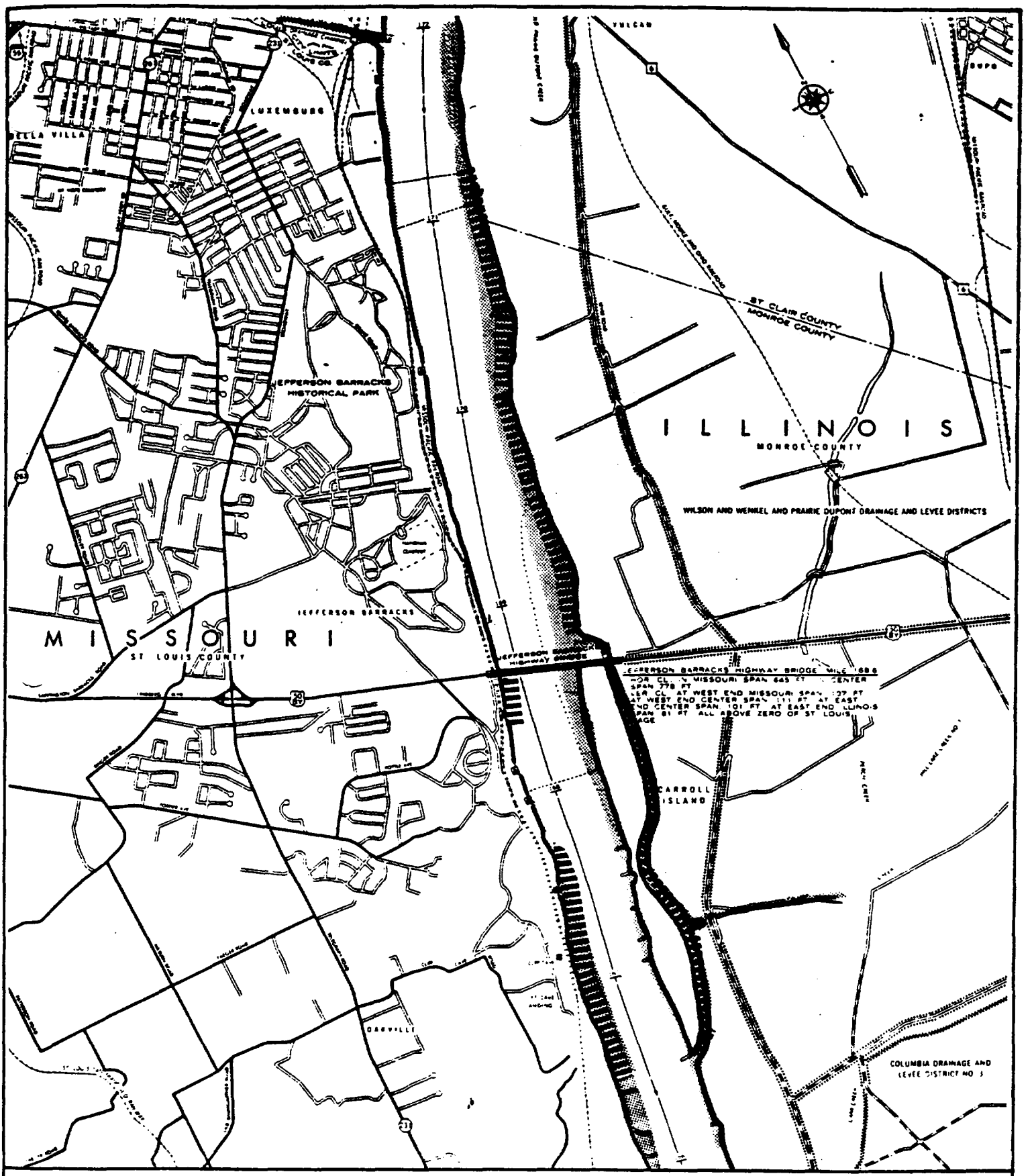
162.8 - Bee Tree (hiking trail and picnic area).



Popular sand beach
Water oriented recreation facility
Public park or recreation area
Popular water sport area
Access to side channel

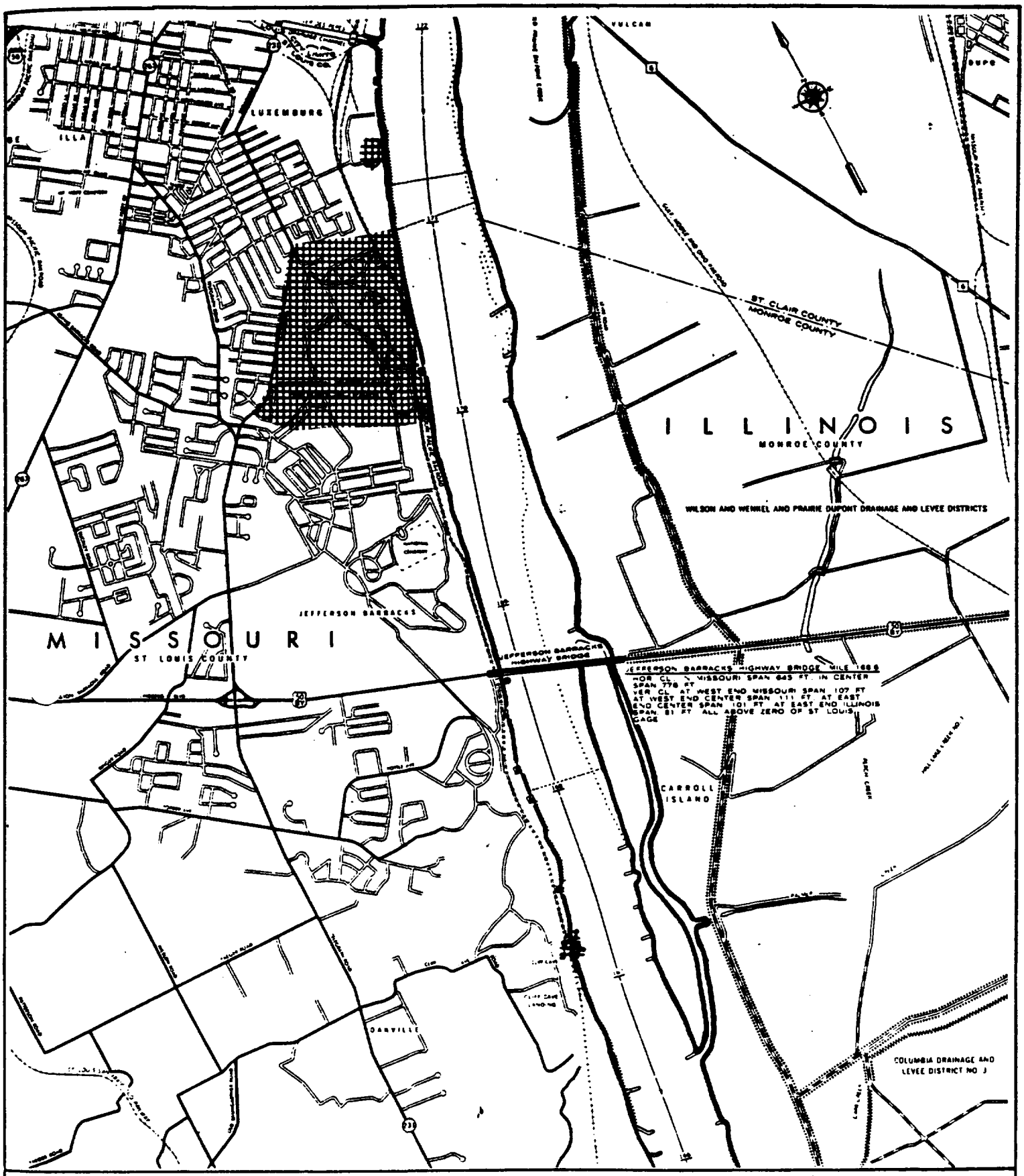
Significant vista

RECREATION



Spawning habitat
Sport fishing area
Important commercial fishing area
Mussel bed

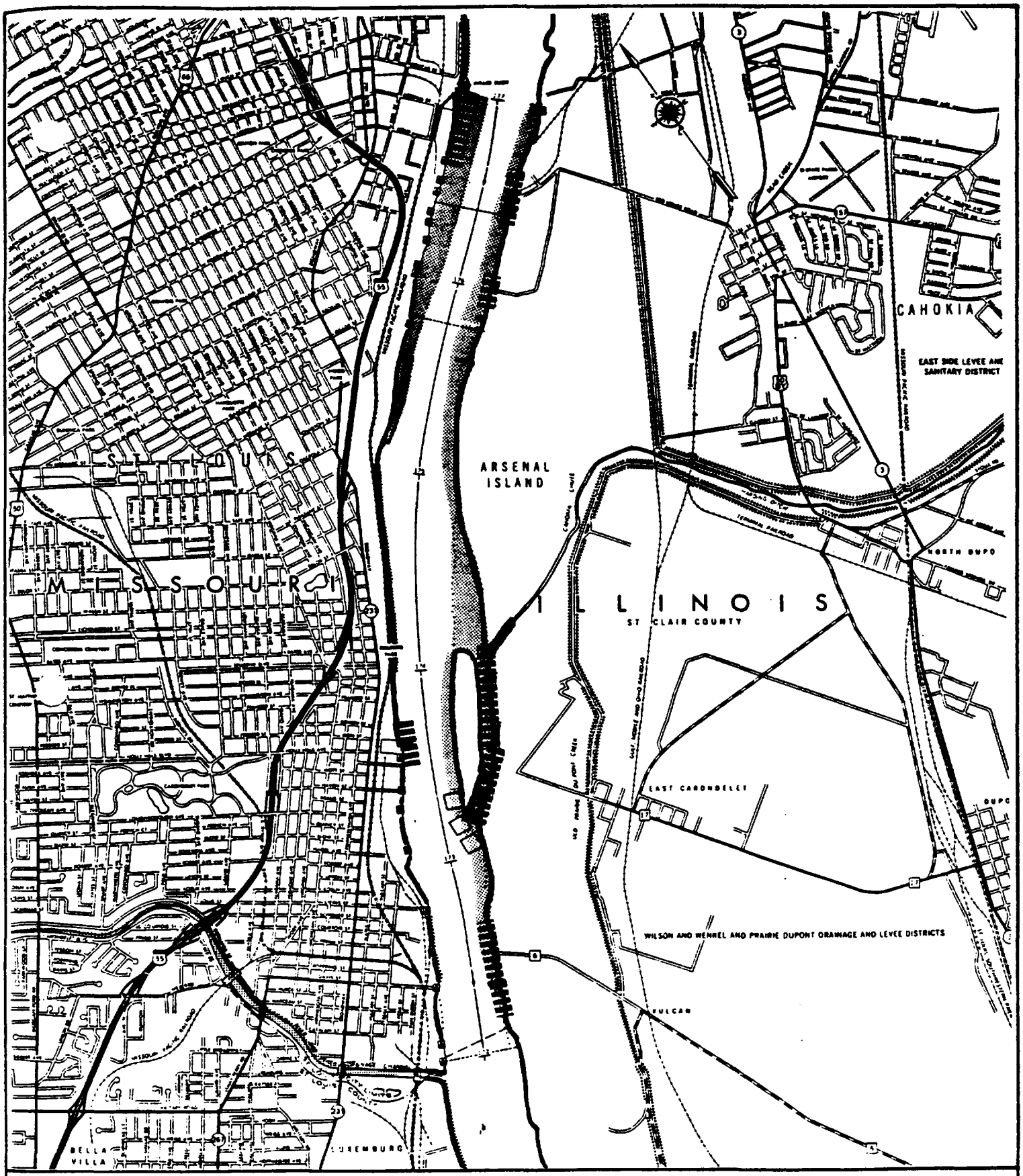
FISHERIES



Popular sand beach
Water oriented recreation facility
Public park or recreation area
Popular water sport area
Access to side channel

Significant vista

RECREATION

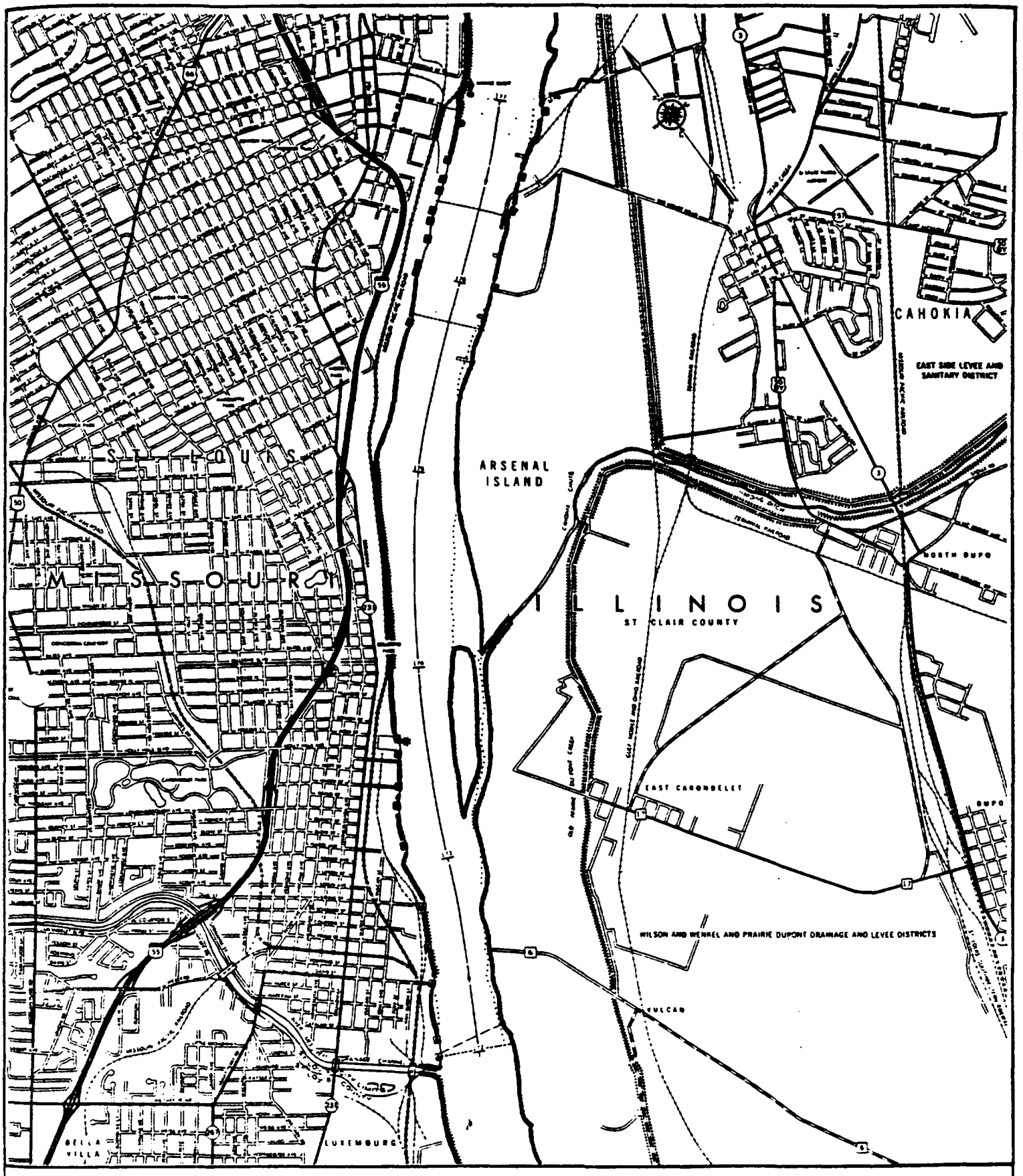


Spawning habitat
Sport fishing area
Important commercial fishing area
Mussel bed

FISHERIES

Spawning habitat
Sport fishing area
Important commercial fishing area
Mussel bed

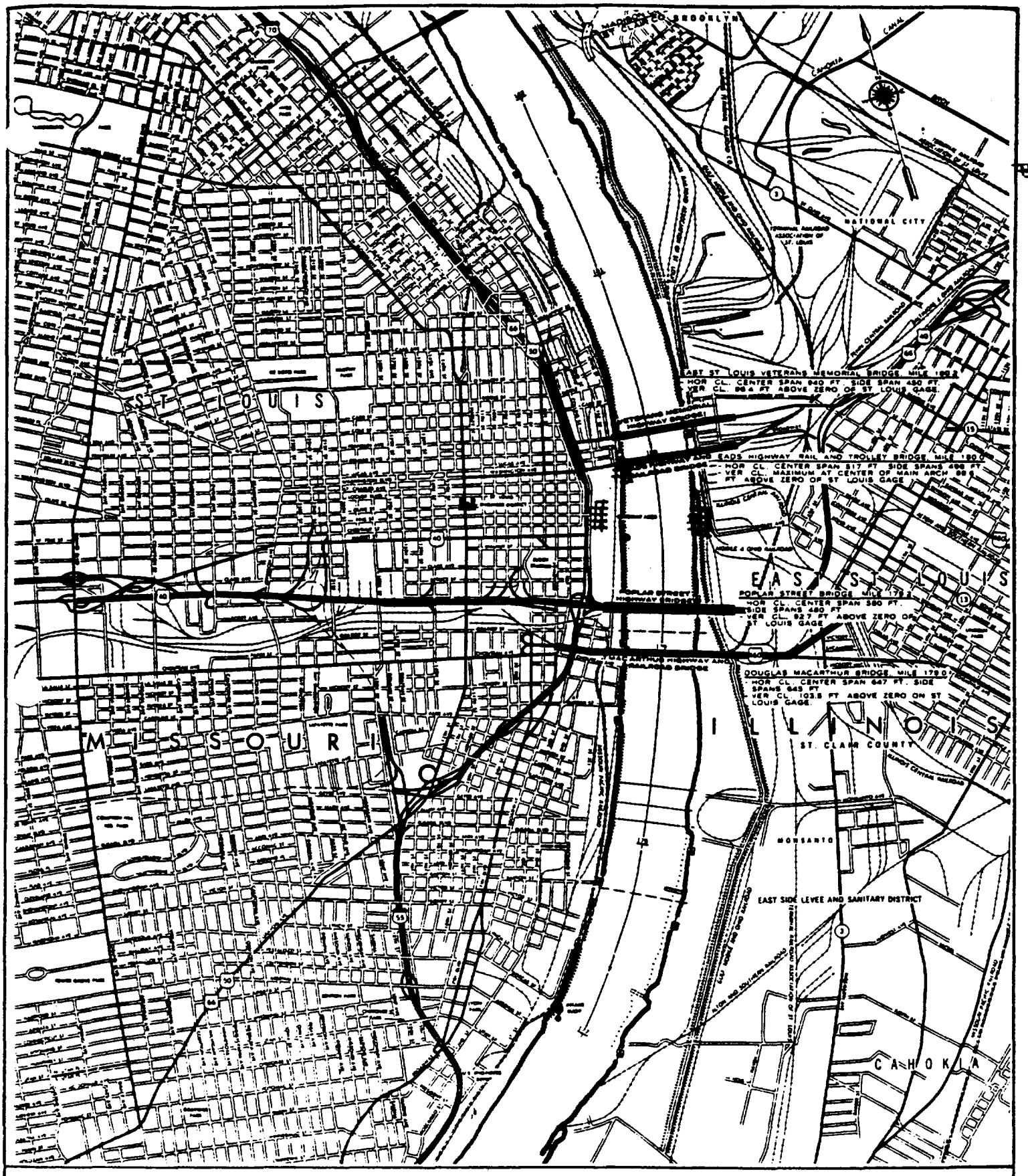
FISHERIES



Popular sand beach
Water oriented recreation facility
Public park or recreation area
Popular water sport area
Access to side channel

Significant vista

RECREATION



Popular sand beach
Water oriented recreation facility
Public park or recreation area
Popular water sport area
Access to side channel

Significant vista

RECREATION