NATIONAL WETLANDS INVENTORY

NOTES TO USERS

1:100,000 SCALE MAP

JEFFERSON CITY SW
LAWRENCE SE
JOPLIN NE
MISSOURI

USER REPORT: JEFFERSON CITY SW, LAWRENCE SE, JOPLIN NE; MISSOURI

NATIONAL WETLANDS INVENTORY MAP

A. INTRODUCTION

The U.S. Fish & Wildlife Service's National Wetlands Inventory is producing maps showing the location and classification of wetlands and deepwater habitats of the United States. The Classification of Wetlands and Deepwater Habitats of the United States by Cowardin et al. is the classification system used to define and classify the wetlands. Photo interpretation conventions, hydric soils lists and wetland plant lists are also available to enhance the use and application of the classifications system.

B. PURPOSE

The purpose of the notes to users is threefold: (1) to provide localized information regarding the production of NWI maps, including specific imagery and interpretation discussion; (2) to provide a descriptive crosswalk from wetland codes on the map to common names and representative plant species; and (3) to explain local geography, climate, and wetland communities.

C. STUDY AREA

Geography:
The study area covered by the Jefferson City SW, Joplin NE and Lawrence SE 1:100,000 base maps is located in western south-central Missouri (See Appendices). Bailey classifies the study aea as being in two ecoregions: the Oak-Hickory-Bluestem section of the Prairie-Parkland Province in the Subhumid Prairie Division, and the Oak-Hickory section of the Eastern Deciduous Forest Province in the Humid Warm-Summer Continental Division. The former occupies approximately 70% of the study area and the latter 30%. Both ecoregions fall within the Humid Temperate Domain. (Bailey, 1980)

The Interior, Midcontinental Plains and Escarpments cover approximately 70% of the study area with the Eastern Highland, Ozark-Ouachita Highlands occupying the remaining 30%. In general, the topography east of Warsaw is gently sloping with local relief of 100 - 300 ft.. West of Warsaw the study area consists of smooth plains, which are mostly pasture and farmland.

Areas of major importance within the project area are the Schell-Osage Wildlife Area, the Prairiewoods State Forest, and the Truman Reservoir. The Schell-Osage Wildlife Area is located in the southeast corner of Lawrence SE along the floodplain of the Osage River. It's river frontage extends eight and one-half miles down the Osage and covers a total of 8,633 acres. Of this, there are 983 acres of bottomland hardwoods, 951 acres of permanent open water and 1,600 acres of marsh land. The remainder is devoted to agriculture and native prairie. Management is primarily for migratory and resident waterfowl, but the area also supports a variety of other wildlife. Public hunting and fishing are it's primary recreational activities.

The Prairiewoods State Forest is located in Joplin NE, north of Nevada, in the floodplain of the Marmaton River. the area covers 330 acres and approximately 80% is bottomland hardwood forests. The area is open to hunting and fishing, as well as other forms of other outdoor recreation. It is one of the few forested areas remaining in the southwest prairie region of the state.

The Harry S. Truman Reservoir, located in Jefferson City SW, on the Osage River, is the largest flood control lake in Missouri. It's storage capacity is approximately 5 million acre - feet with a surface area of 55,600 acres. As a relatively new reservoir, opening in 1979, it experiences significant rises in pool elevations annually. This is largely due to the fact that three major river systems flow into it. Pool elevations average six to ten feet above normal pool (706 ft.) in spring and fall. The maximum elevation in 1986 was to the 741 ft. contour. The reservoir also provides and excellent habitat for fish, wildlife, and various recreational opportunities.

Climate:
The climate of both the Prairie-Parkland Province and Eastern Deciduous Forest Province is characterized by warm summers and cold winters. The Prairie-Parkland Province experiences an average annual temperature of approximately 56'F and average annual precipitation ranging from 15 to 40 inches. The average annual temperature in the Eastern Deciduous Forest Province ranges between 40'F and 60'F. Average annual precipitation is 35 to 60 inches. (Bailey, 1980).

Vegetation:
The Prairie-Parkland Province is characterized by a mixture of prairie and deciduous forest. This intermingling is largely due to local soil and slope conditions. In general, forests occur along steams and on north facing slopes. Oak and hickory dominate upland forests in this province, with

much greater diversity occuring in floodplains. Prairie areas are dominated by bluestem. (Bailey, 1980)

The Eastern Deciduous Forest Province is dominated by tall, broadleaf trees that form a dense canopy in summer, and shed their leaves completly in winter. Common trees are oak, beech, birch, hickory, maple, basswood, elm, and ash. Poorly drained areas may support ash, willow, elm, and hydrophytic shrubs. (Bailey, 1980)

Soils:
Deciduous forested areas characteristically have Artisold, although Ultisols or Mollisols may be encountered. In the forests, a thick layer of leaves cover the ground and humus is abundant. Mollisols dominate the prairie region, with Alfisols occuring in the Mississippi valley portion of the province. (Bailey, 1980)

D. WETLAND CLASSIFICATION CODES AND WATER REGIME DESCRIPTIONS

Table - Cowardin Classification Codes and Descriptions

NWI CODE WATER REGIME	NWI DESCRIPTION	COMMON DESCRIPTION	CHARACTERISTIC VEGETATION
L1UB (H)	Lacustrine, limnetic, unconsolidated bottom	Lakes	Unconsolidated bottom
h	Impounded	Reservoir, Lake	
x	Excavated	Strip Mine	
R2UB (H)	Riverine, lower perennial, unconsolidated bottom	River	Unconsolidated bottom
R2US (A)	Riverine, lower perennial, unconsolidated shore	Sand Bar	Unconsolidated bottoms (sand, cobble, gravel)
R3UB (G,H)	Riverine, upper perennial, unconsolidated bottom	River	Unconsolidated bottom
R3US (A)	Riverine, upper perennial, unconsolidated shore	Sand Bar	Unconsolidated bottoms (sand, cobble, gravel)
R4SB (A,C)	Riverine, intermittent stream bed	River, Creek, or Branch	Streambed (sand, cobble, gravel)
PUB (F,G)	Palustrine, unconsolidated bottom	Pond	Unconsolidated bottoms
h	Impounded	Farm, Pond, Reservoir	
x	Excavated	Strip Mine	

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NWI CODE WATER REGIME	NWI DESCRIPTION	COMMON DESCRIPTION	CHARACTERISTIC VEGETATION
PAB (F,G)	Palustrine, aquatic bed	Farm Pond, Reservoir, Marsh	Lemna sp. (duckweed)
h	Impounded		Green algae
PEM (A,C,F)	Palustrine, emergent	Marshes, Depressions, Drainages, Backwaters	Asciepas sp. (milkweed) Rhus radicans (posion ivy) Carex sp. (sedge) Ambrosia (ragweed) Polygonum sp. (smartweed) Solidago sp. (goldenrod) Bidens polyopses (beggars ticks) Xanthium strumarium (cocklebur) Leersia oryzoides (rice cutgrass) Rubus allegheniensis (common blackberry) Eupatorium perfoliatum (boneset) Aster sp. (aster) Typha sp. (cattail) Scirpus fluvatilis (river bullrush)

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NWI CODE WATER REGIME	NWI DESCRIPTION	COMMON DESCRIPTION	CHARACTERISTIC VEGETATION
PSS1 (A,C,F)	Palustrine, scrub-shrub, broad leaved deciduous	Marsh, floodplains	Salix sp. (willow) Cephalanthus occidentalis (button bush)
h	Impounded	Reservoir, backwaters	
PFO1 (A,C,F)	Palustrine, forested, broad leaved deciduous	Forested stands, floodplains	Salix nigra (black willow) Populus deltoides (cottonwood)
h	Impounded	Reservoir, backwaters	Fraxinus sp. (ash) Salix sp. (willow) Ulmus americana (american elm) Platanus occidentalis (sycamore) Acer saccharinum (silver maple) Acer rubrum (red maple) Quercus palustris (pin oak) Quercus rubra (red oak) Carya illinoensis (sweet pea)

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NWI CODE WATER REGIME	NWI DESCRIPTION	COMMON DESCRIPTION	CHARACTERISTIC VEGETATION
PFO1 (cont)			Betula nigra (river birch) Quercus bicolor (swamp white oak) Carya laciniosa (shellbark hickory)

E. WATER REGIME DESCRIPTION

(A) Temporarily Flooded - Surface water present for brief periods during growth season, but water table usually lies well below soil surface. Plants that grow both in uplands and wetlands are characteristic of this water regime.

(B) Saturated - The substrate is saturated to surface for extended periods during the growing season, but surface water is seldom present.

(C) Seasonally Flooded - Surface water is present for extended periods especially early in the growing season, but is absent by the end of the growing season in most years. The water table after flooding ceases is extremely variable, extending from saturated to a water table well below ground surface.

(F) Semipermanently Flooded - Surface water persists throughout the growing season in most years. When surface water is absent, the water table is usually at or very near the land's surface.

(G) Intermittently Exposed - Surface water is present throughout the year except in years of extreme drought.

(H) Permanently Flooded - Water covers land surface throughout the year in all years.

(K) Artificially Flooded - The amount and duration of flooding is controlled by means of pumps or siphons in combination with dikes and dams.

F. MAP PREPARATION:

The wetland classification that appears on the Jefferson City SW, Lawrence SE, and Joplin NE National Wetlands Inventory (NWI) Base Maps (Figure 1) is in accordance with Cowardin et al (1977). The delineations were produced through stereoscopic interpretation of 1:58,000 scale color infrared photography. The photography was taken in October 1981, November 1981, August 1982, March 1983, April 1984, October 1984, and March 1985.

Field checks of areas found within the Jefferson City SE, Lawrence SE, and Joplin NE photography were made prior to the actual delineation of wetlands. Field check sites were selected to clarify varying signatures found on the photography. These photographic signatures were then identified in the field using vegetation types and soil types, as well as additional input from field personnel.

Collateral data included USGS topographic maps, SCS soil surveys, climate, vegetation, and ecoregional information.

The user of the map is cautioned that, due to the limitation of mapping primarily through aerial photointerpretation, a small percentage of wetlands may have gone unidentified. Since the photography was taken during a particular time and season, there may be discrepancies between the map and current field conditions. Changes in landscape which occurred after the photography was taken would result in such discrepancies.

Aerial photo interpretation and drafting were completed by Geonex Martel, Inc., St. Petersburg, Florida.

G. SPECIAL MAPPING PROBLEMS

There are two groups of photography covering 60% of the work area that are leafed out and present a mapping problem. 20% of this photography has very dark emulsion with high water conditions. The wetland/upland break will be difficult to determine due to leafed out conditions, while over delineation of wetlands on this dark, high water photography will be tempting. The interpreter will have to follow topographic contour information very closely and use soil surveys as an aid in delineation.

H. MAP ACQUISITION

To discuss any questions concerning these maps or to place a map order, please contact:

Ron Erickson
Regional Wetland Coordinator
U.S. Fish and Wildlife Service - Region 3
Federal Building, Ft. Snelling
Twin Cities, MN 55111

To order maps only, contact:

Earth Science Information Center
U.S. Geological Survey
507 National Center
Reston, VA 22092
1-800-USA-MAPS

Maps are identified by the name of the corresponding USGS 1:24,000 scale topographic quadrangle name. Topographic map indices are available from the U.S. Geological Survey.

I. LITERATURE CITED:

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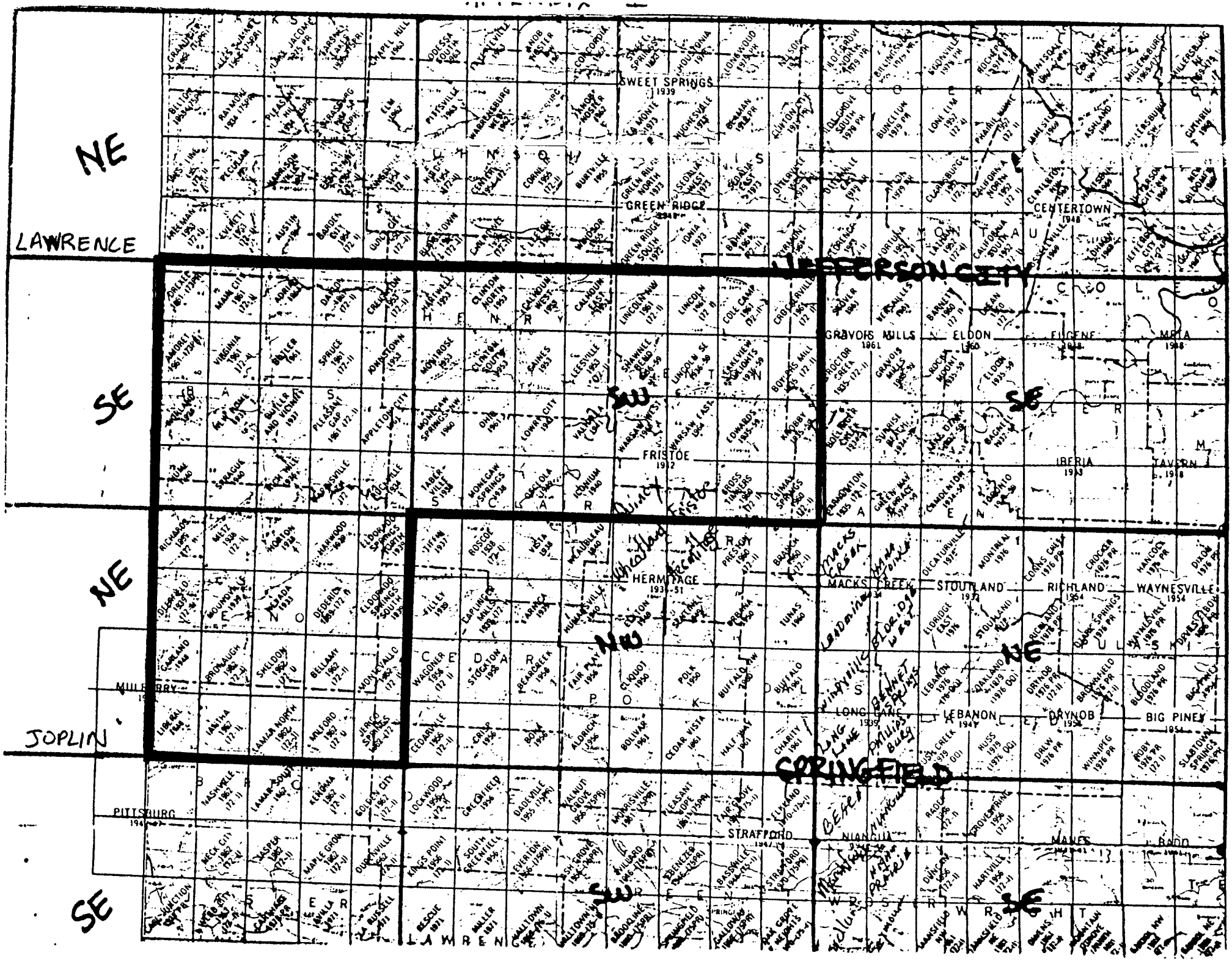
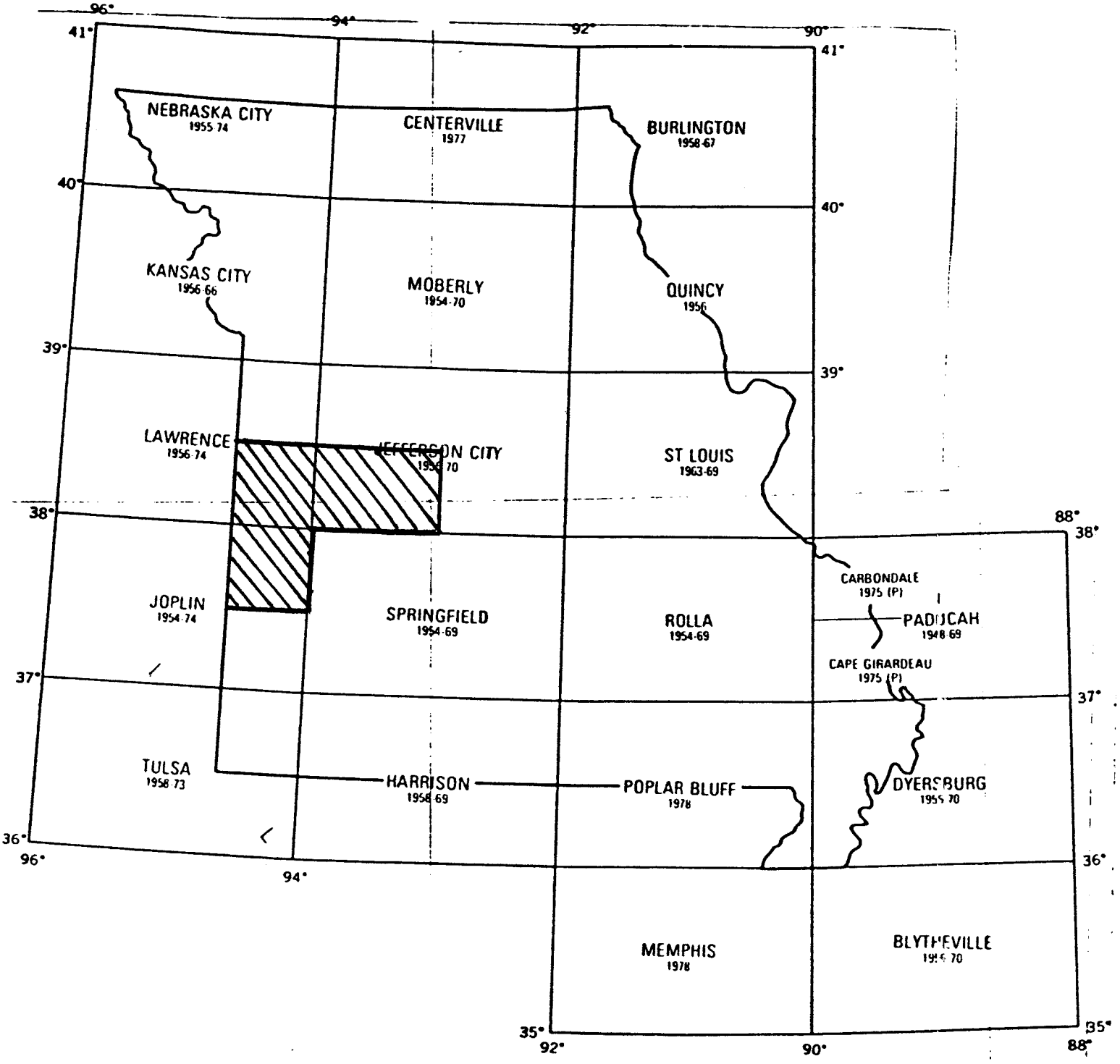

NE
LAWRENCE
SE
NE
JOPLIN
SE
SWEET SPRINGS
1939
GREEN RIDGE
JEFFERSON CITY
CENTERTOWN
1948
GRAVOIS MILLS
1961
ELDON
1960
EUGENE
1948
MIRA
1948
IBERIA
1913
TAVERN
1918
FRISTOE
1932
HERMITAGE
1933-51
MACKS CREEK
STOUTLAND
1937
RICHLAND
1954
WAYNESVILLE
1954
LEBANON
1947
DRYNOB
1954
BIG PINEY
1954
LONG LANE
1939
STRAFFORD
1947
SPRINGFIELD
MILLER
PITTSBURG
1941
MANES
LAWRENCE

APPENDIX 2


96°
94°
92°
90°
41°
40°
39°
38°
37°
36°
35°
88°
NEBRASKA CITY
1955-74
CENTERVILLE
1977
BURLINGTON
1958-67
KANSAS CITY
1956-66
MOBERLY
1954-70
QUINCY
1956
LAWRENCE
1956-74
JEFFERSON CITY
1956-70
ST LOUIS
1963-69
CARBONDALE
1975 (P)
PADUCAH
1948-69
JOPLIN
1954-74
SPRINGFIELD
1954-69
ROLLA
1954-69
CAPE GIRARDEAU
1975 (P)
TULSA
1958-73
HARRISON
1958-69
POPLAR BLUFF
1978
DYERSBURG
1955-70
MEMPHIS
1978
BLYTHEVILLE
1955-70