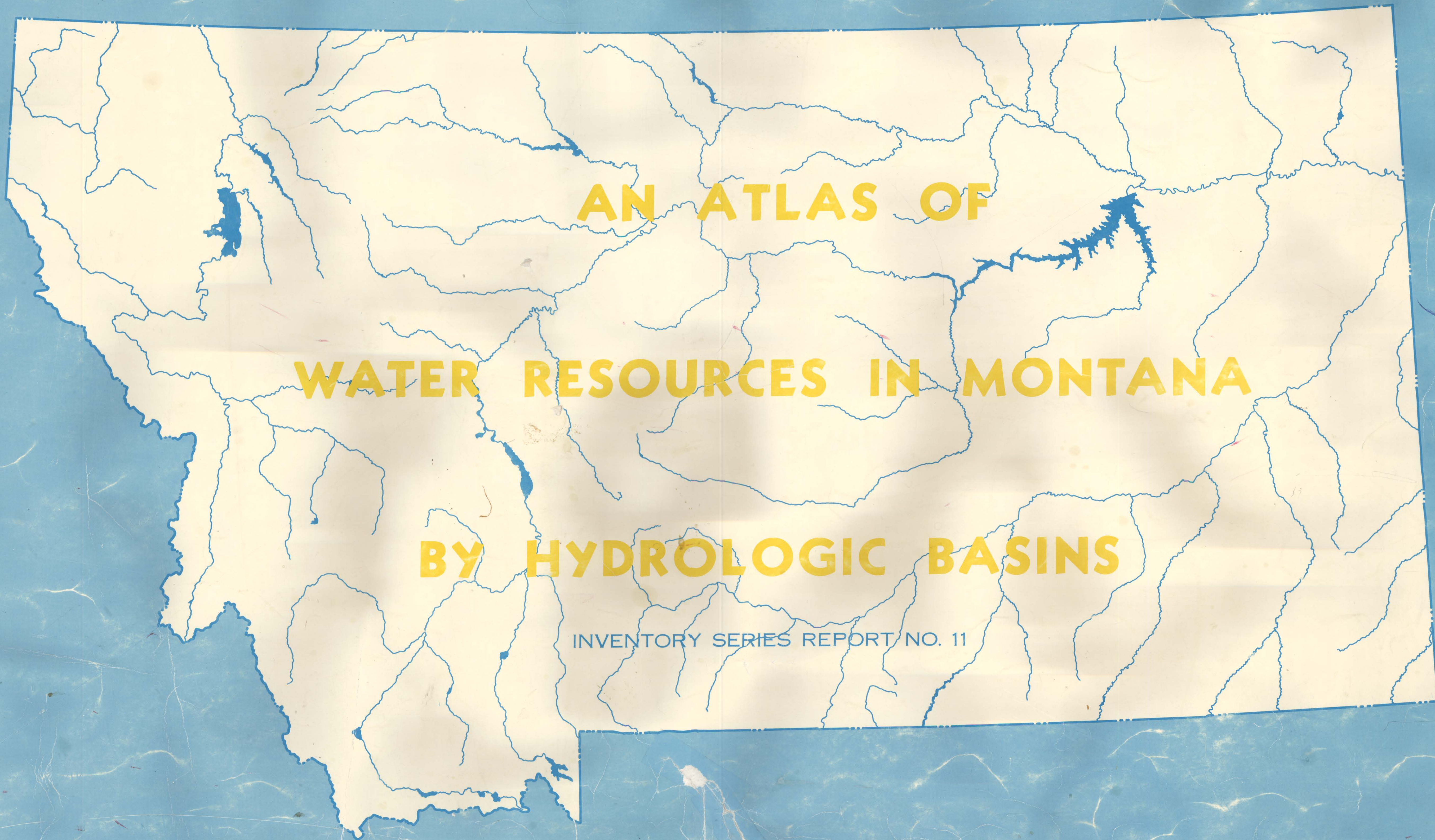


*"A Comprehensive Water and Related Land Resources Plan  
for the State of Montana"*



**AN ATLAS OF  
WATER RESOURCES IN MONTANA  
BY HYDROLOGIC BASINS**

INVENTORY SERIES REPORT NO. 11

**MONTANA WATER RESOURCES BOARD**

Sam W. Mitchell Building  
Helena, Montana

17-8328  
Drives L

# MONTANA WATER RESOURCES BOARD



SAM W. MITCHELL BUILDING  
HELENA, MONTANA  
59601

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*“A Comprehensive Water and Related Land Resources Plan  
for the State of Montana”*

INVENTORY SERIES REPORT NO. 11

## AN ATLAS OF WATER RESOURCES IN MONTANA BY HYDROLOGIC BASIN

### FOREWORD

This publication, prepared by the Montana Water Resources Board, is the eleventh in a statewide water planning series which the Board will publish utilizing funds provided by Montana's 1967 legislature together with funds obtained from the Federal Water Resources Council under Public Law 89-80. It is an inventory of surface water resources and projects which form an integral part of the inventory phase of development of the state water plan.

The data contained herein will help to lay the foundation necessary for future studies and will present a map scale upon which all future work can be based so uniform material collection and compilation will be possible. Further, it is hoped that the material will prove of interest and utility to all who are interested in water and land resources development in the state.

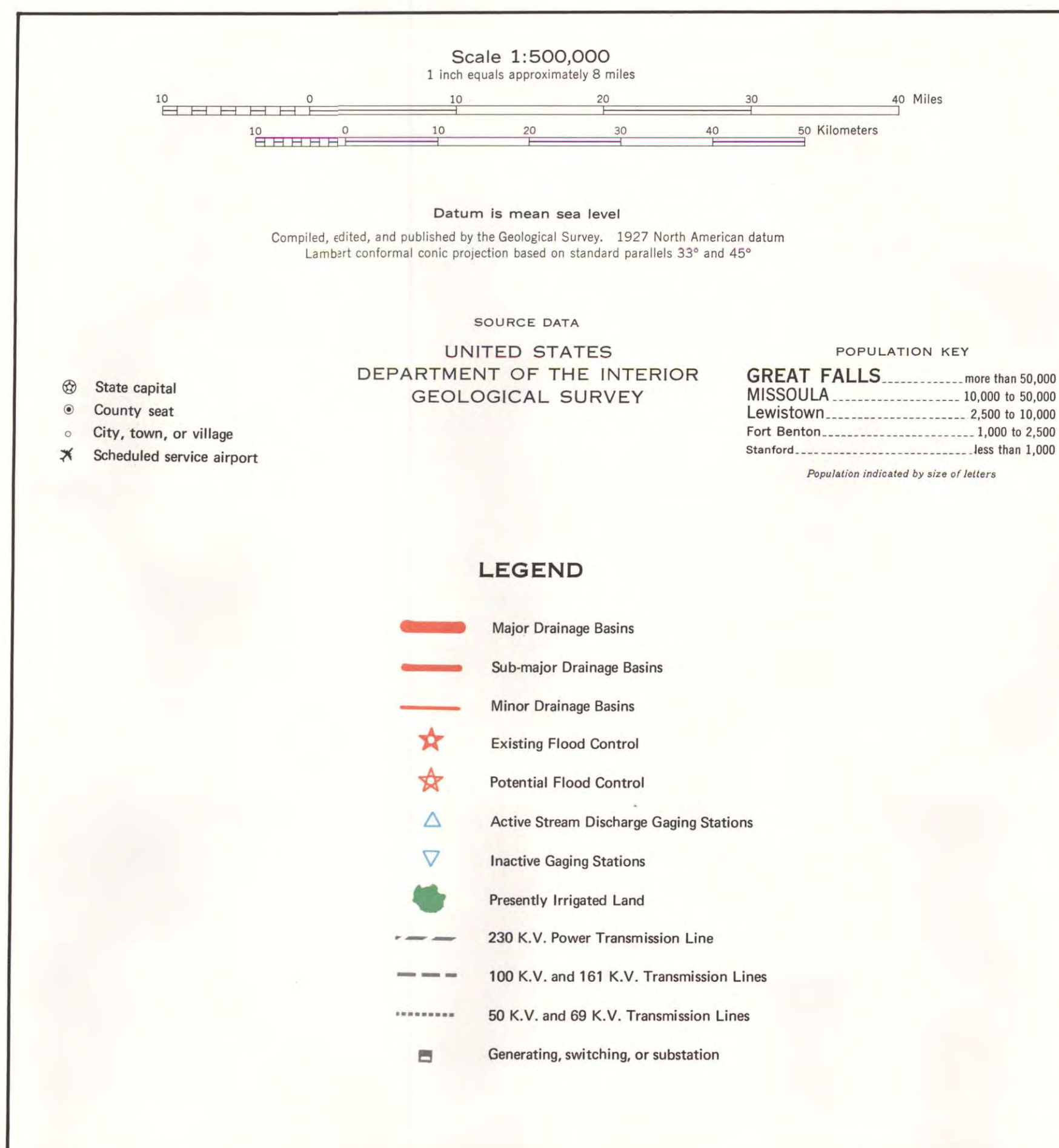
The Montana Water Resources Board wishes to express appreciation to the following organizations who made available to the Board much of the information found in this atlas:

Montana Highway Commission  
State Fish and Game Department  
U. S. Bureau of Reclamation  
U. S. Geological Survey  
Soil Conservation Service  
Montana Power Company  
U. S. Army Corps of Engineers

DOUGLAS G. SMITH

Director

Montana Water Resources Board



### INTRODUCTION

The Montana Water Resources Board, in preparing a state water plan, has compiled an inventory of surface water resources and prepared this atlas of drainage basin maps showing some of these resources in relation to one another throughout the State of Montana.

Montana is the headwaters of three major continental drainage basins. The smallest basin which contains less than one percent of the state's total land area, is the Hudson Bay drainage located in northwestern Montana; this includes the St. Mary, the Waterton and Belly Rivers which flow northward into Hudson Bay. West of the continental divide is the Columbia basin which flows into the Pacific Ocean and contains approximately twenty percent of the state's total land area. Major tributaries of the Columbia River are the Clark Fork, Flathead, and Kootenai Rivers. About eighty percent of the state's total land area lies east of the continental divide in the Missouri River drainage which flows to the Mississippi River and into the Gulf of Mexico. The major tributaries to the Missouri River in Montana are the Milk and Yellowstone Rivers.

In an effort to aid in data gathering for the state water plan, the state was divided into six major drainage basins based upon those streams which flow out of the state and do not re-enter the state again: the Kootenai, Clark Fork of the Columbia, St. Mary, Missouri, Yellowstone, and Little Missouri. The Belle Fourche drainage of the Cheyenne River in South Dakota extends into a small area in the southeastern corner of the state.

These six major drainage basins are subdivided into fifteen sub-major drainage basins consisting of the Upper Clark Fork, Lower Clark Fork, Flathead and Kootenai River basins in the Columbia River drainage; the Upper Missouri tributaries, Missouri-Smith, Missouri-Sun-Marias, Missouri-Musselshell, Milk, and Missouri-Fort Peck basins in the Missouri River drainage; the Upper Yellowstone, Middle Yellowstone, and Lower Yellowstone River basins in the Yellowstone drainage; the St. Mary River basin in the Hudson Bay drainage; and the Little Missouri River basin.

The fifteen sub-major drainage basins have been further divided into eighty-five minor drainage basins representing the minor tributaries within the state. These eighty-five minor basins are shown on a statewide scale on page two and throughout the atlas by sub-major drainage basin at a scale of 1:500,000.

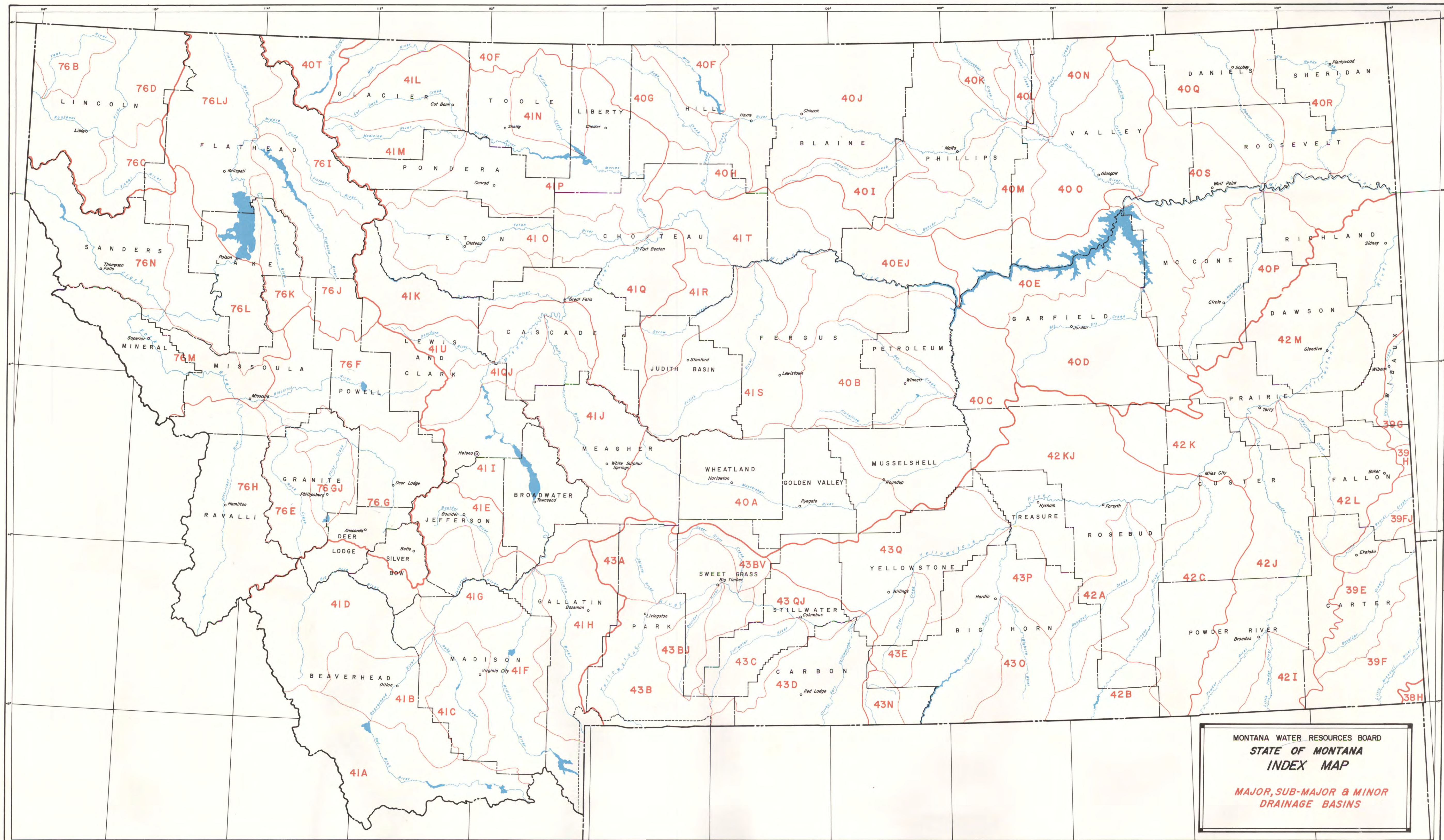
The basis for the drainage subdivisions, and the code used to represent these subdivisions, is the Office of Water Data Coordination, U. S. Department of the Interior, Geological Survey atlas of stream gaging stations. Several modifications have been made which do not significantly change any of the OWDC basins.

The atlas includes twelve maps showing the fifteen sub-major drainage basins with two of these maps showing more than one of the drainage basins on one map page. The maps show culture in black, power lines in grey, and streams and stream names in blue. The major, sub-major, and minor drainage basin boundary lines are shown in three significant widths of red lines. Existing and proposed flood control projects are located by red stars with open stars representing potential projects while closed stars designate existing projects. Blue triangles represent U.S.G.S. stream discharge gaging stations with righted triangles representing stations active as of January 1, 1970, and inverted triangles representing those stations, used in the past, but now discontinued. Green areas on the maps represent presently irrigated land according to the county-wide surveys being conducted by the water resources survey division, Montana Water Resources Board.

The last two maps in the atlas are prepared by the Montana Water Resources Board staff from information supplied by cooperating agencies.

The first is one prepared through a joint effort of the Water Board and the Montana Fish and Game Department. Shown in green are the fishing access sites, state parks and monuments, and state recreation areas maintained by the Fish and Game Department throughout the state. An index to this map provides the proper names of each of these sites as of January 1, 1970.

The last map in the atlas shows mountain precipitation by colored isohyet lines representing increments of annual precipitation above 20 inches. This map was prepared in cooperation with the Soil Conservation Service and the National Weather Service.

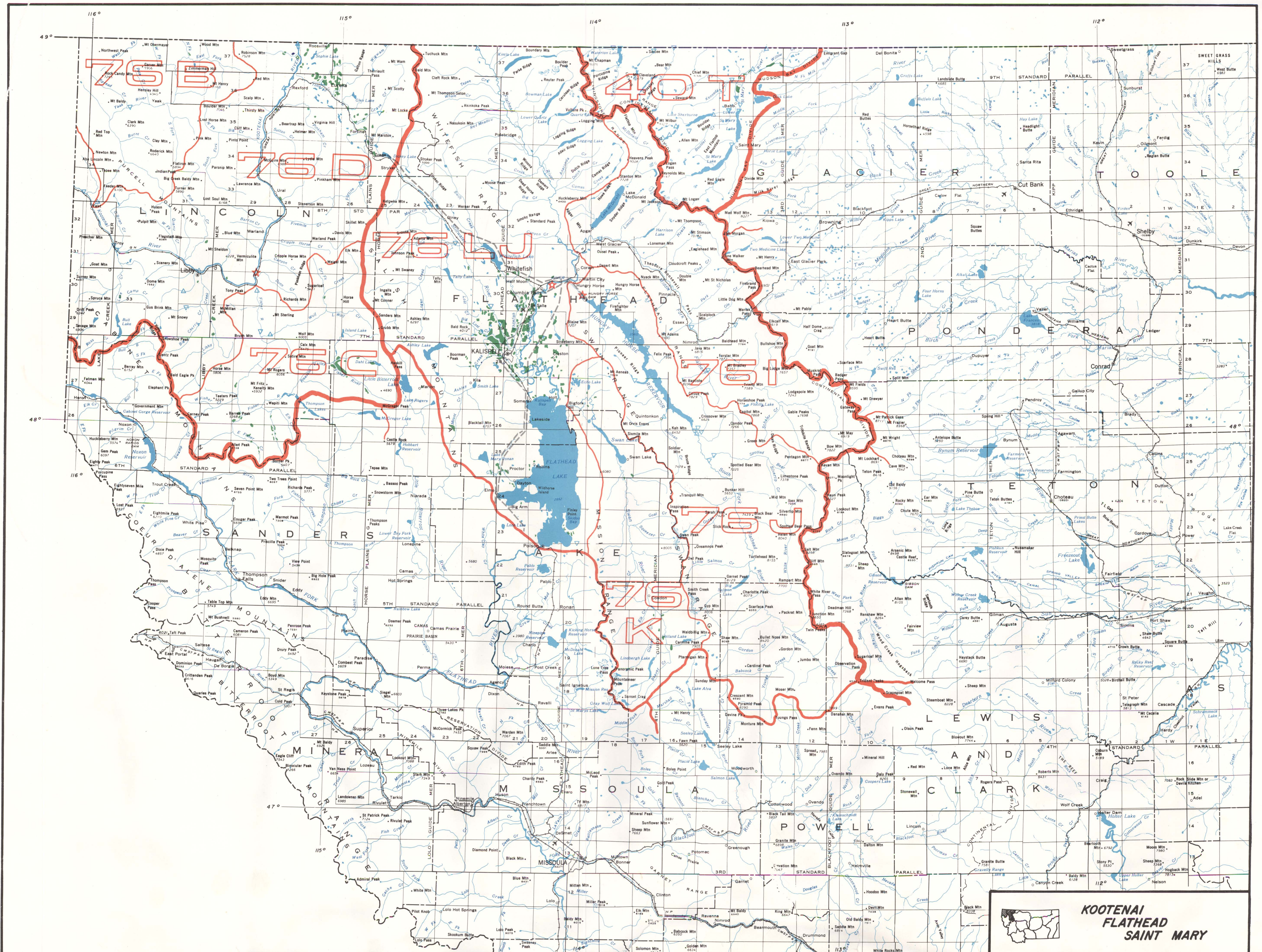


- KOOTENAI**
- 76B Yaak River
  - 76C Fisher River
  - 76D Kootenai River
- FLATHEAD**
- 76I Middle Fork Flathead River
  - 76J South Fork Flathead River
  - 76K Swan River
  - 76L Flathead River to and including Flathead Lake
- UPPER CLARK FORK**
- 76E Rock Creek
  - 76F Blackfoot River
  - 76G Clark Fork above Blackfoot River
  - 76H Flint Creek
  - 76I Bitterroot River
- LOWER CLARK FORK**
- 76L Flathead River below Flathead Lake
  - 76M Clark Fork between Blackfoot River and Flathead River
  - 76N Clark Fork below Flathead River
- ST. MARY**
- 40T Hudson Bay Drainage (Part 5)

- UPPER MISSOURI TRIBUTARIES**
- 41A Red Rock River
  - 41B Beaverhead River
  - 41C Ruby River
  - 41D Big Hole River
  - 41E Boulder River
  - 41F Madison River
  - 41G Jefferson River
  - 41H Gallatin River
- MISSOURI-SMITH**
- 41I Missouri River above Holter Dam
  - 41J Smith River
  - 41Q Missouri River from Holter Dam to the Sun River
  - 41U Dearborn River
- MISSOURI-SUN-MARIAS**
- 41K Sun River
  - 41L Cut Bank Creek
  - 41M Two Medicine Creek
  - 41N Willow Creek
  - 41O Teton River
  - 41P Marias River
  - 41Q Missouri River from Sun River to Marias River
- MISSOURI-MUSSELSHELL**
- 40A Musselshell River above Roundup
  - 40E Flatwillow Creek including Box Elder Creek
  - 40C Musselshell River below Roundup
  - 41R Arrow Creek
  - 41S Judith River

- UPPER YELLOWSTONE**
- 43A Shields River
  - 43B Yellowstone River above and including Bridger Creek
  - 43BF Boulder River
  - 43BV Sweet Grass Creek
  - 43C Stillwater River
  - 43D Clarks Fork Yellowstone River
  - 43Q Yellowstone River from Bridger Creek to the Clarks Fork Yellowstone
- MIDDLE YELLOWSTONE**
- 43E Fryer Creek
  - 43N Shoshone River
  - 43O Little Bighorn River
  - 43P Bighorn River below Greybull River
  - 43Q Yellowstone River between Clarks Fork Yellowstone and Bighorn River
  - 42A Rosebud Creek
  - 42B Tongue River above and including Hanging Woman Creek
  - 42C Tongue River below Hanging Woman Creek
  - 42K Yellowstone River between Bighorn River and Tongue River
- LOWER YELLOWSTONE**
- 42I Little Powder River
  - 42J Powder River below Clear Creek
  - 42K Yellowstone River between Tongue and Powder River
  - 42L O'Fallon Creek
  - 42M Yellowstone River below Powder River
- MILK**
- 40F Milk River above Fresno Reservoir
  - 40G Sage Creek
  - 40H Big Sandy Creek
  - 40I Peoples Creek
  - 40J Milk River between Fresno Reservoir and Whitewater Creek
  - 40K Whitewater Creek
  - 40L Frenchman Creek
  - 40M Beaver Creek
  - 40N Rock Creek
  - 40O Milk River below Whitewater Creek including Porcupine Creek
- MISSOURI-FORT PECK**
- 40D Dry Creek
  - 40E Missouri River between Musselshell River and Fort Peck Dam
  - 40P Redwater River
  - 40Q Poplar River
  - 40R Big Muddy Creek
  - 40S Missouri River below Fort Peck Dam
- LITTLE MISSOURI**
- 39E Box Elder Creek
  - 39F Little Missouri River above Little Beaver Creek
  - 39G Little Beaver Creek
  - 39H Beaver Creek
  - 39I Little Missouri below Little Beaver Creek
  - 38H Belle Fourche River above Cheyenne River

MONTANA WATER RESOURCES BOARD  
 STATE OF MONTANA  
 INDEX MAP  
 MAJOR, SUB-MAJOR & MINOR  
 DRAINAGE BASINS



76B

76D

76L

76C

40T

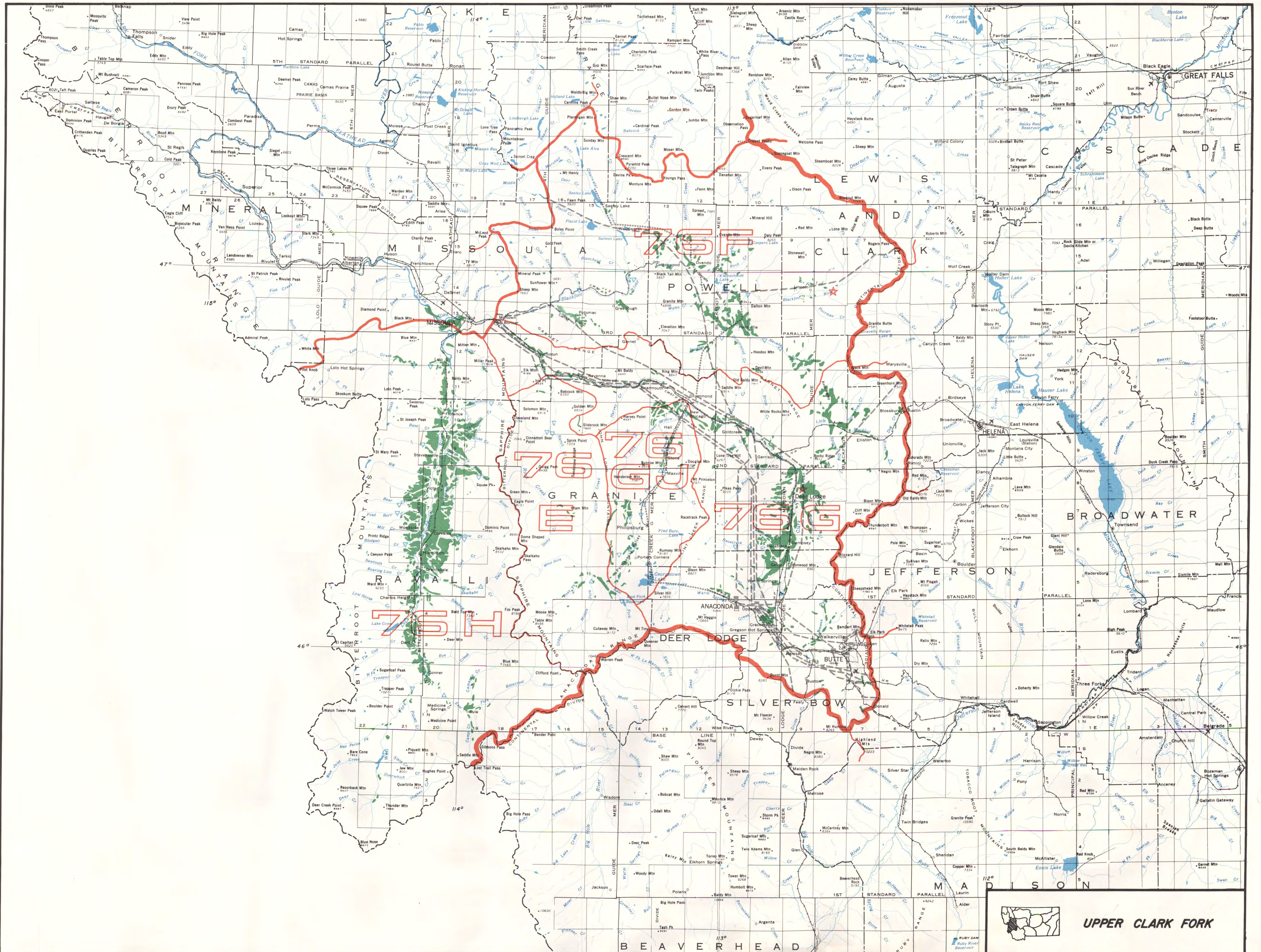
76I

76J

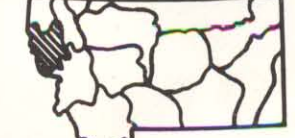
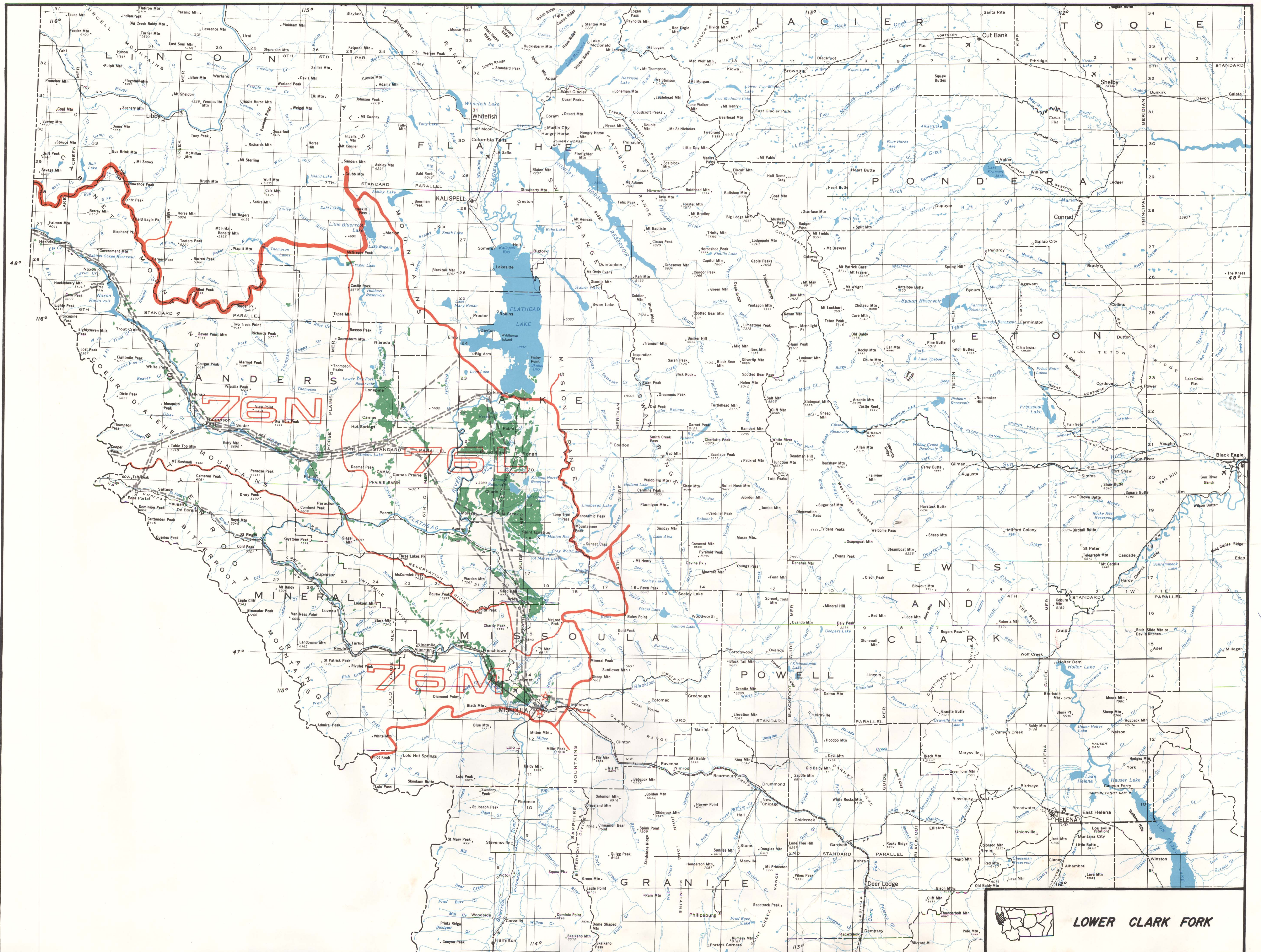
76K

KOOTENAI  
FLATHEAD  
SAINT MARY

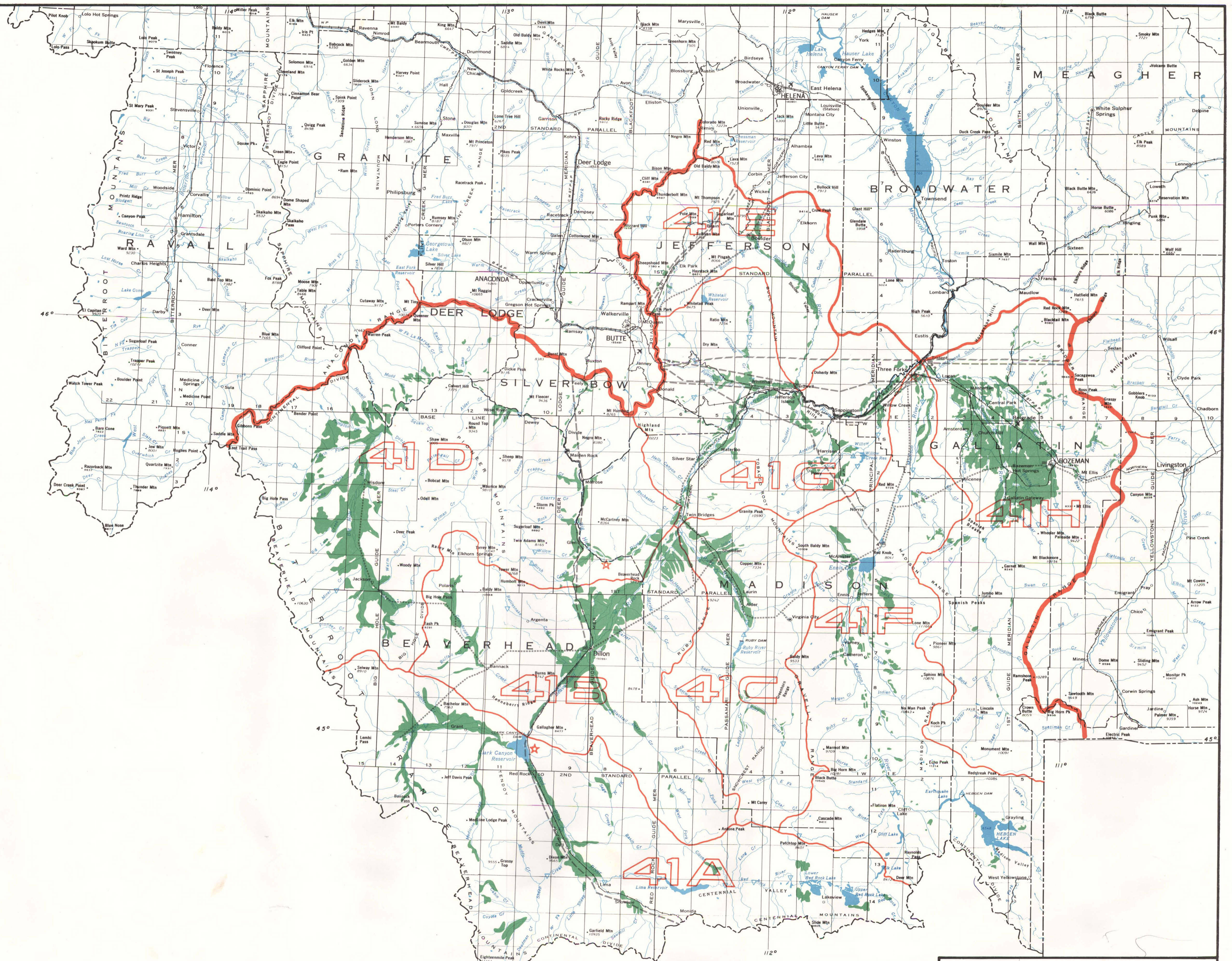




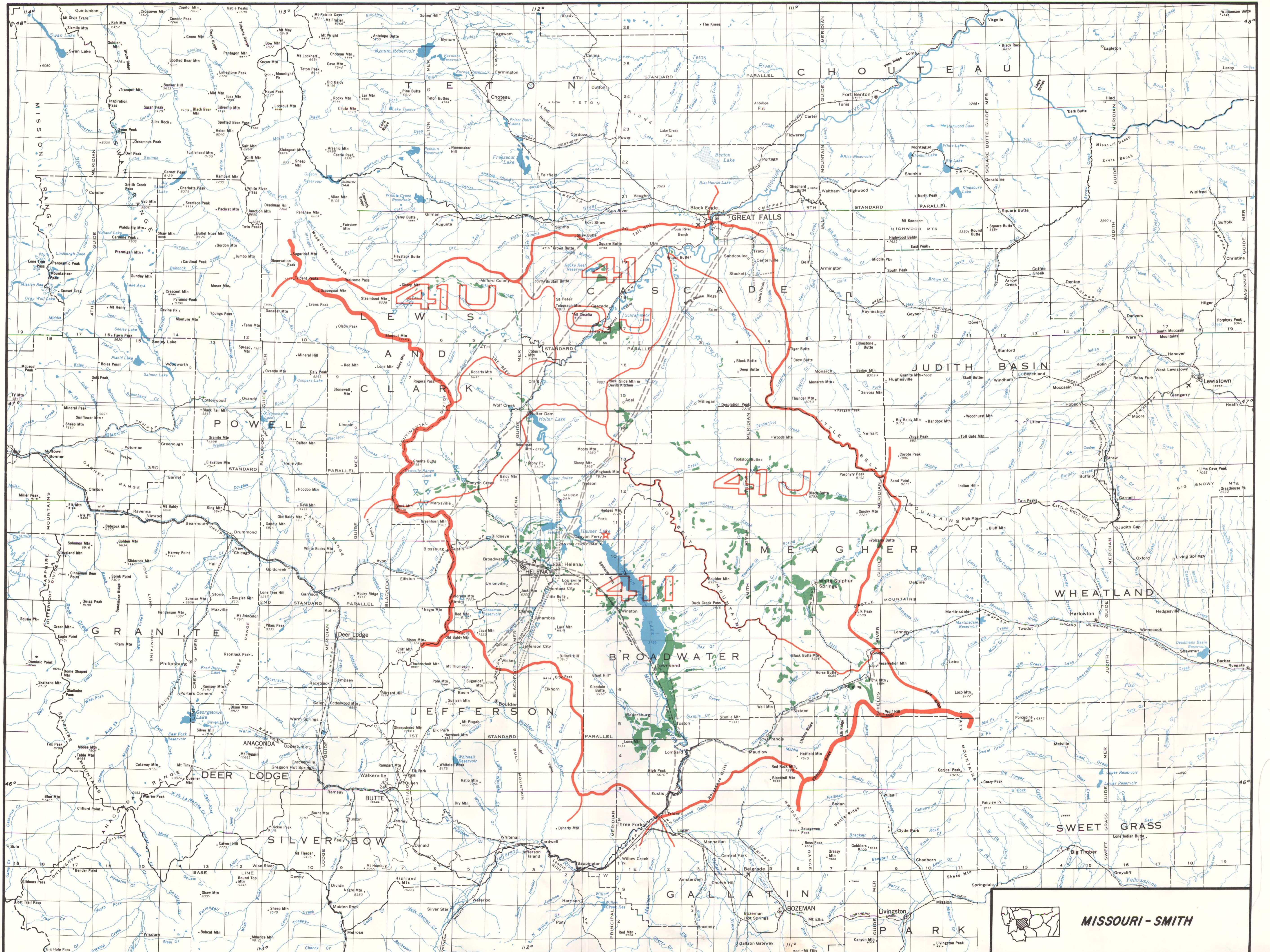
UPPER CLARK FORK



LOWER CLARK FORK

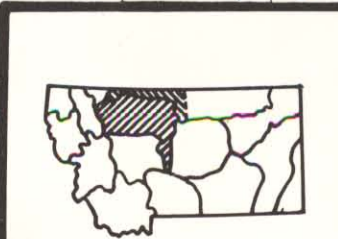
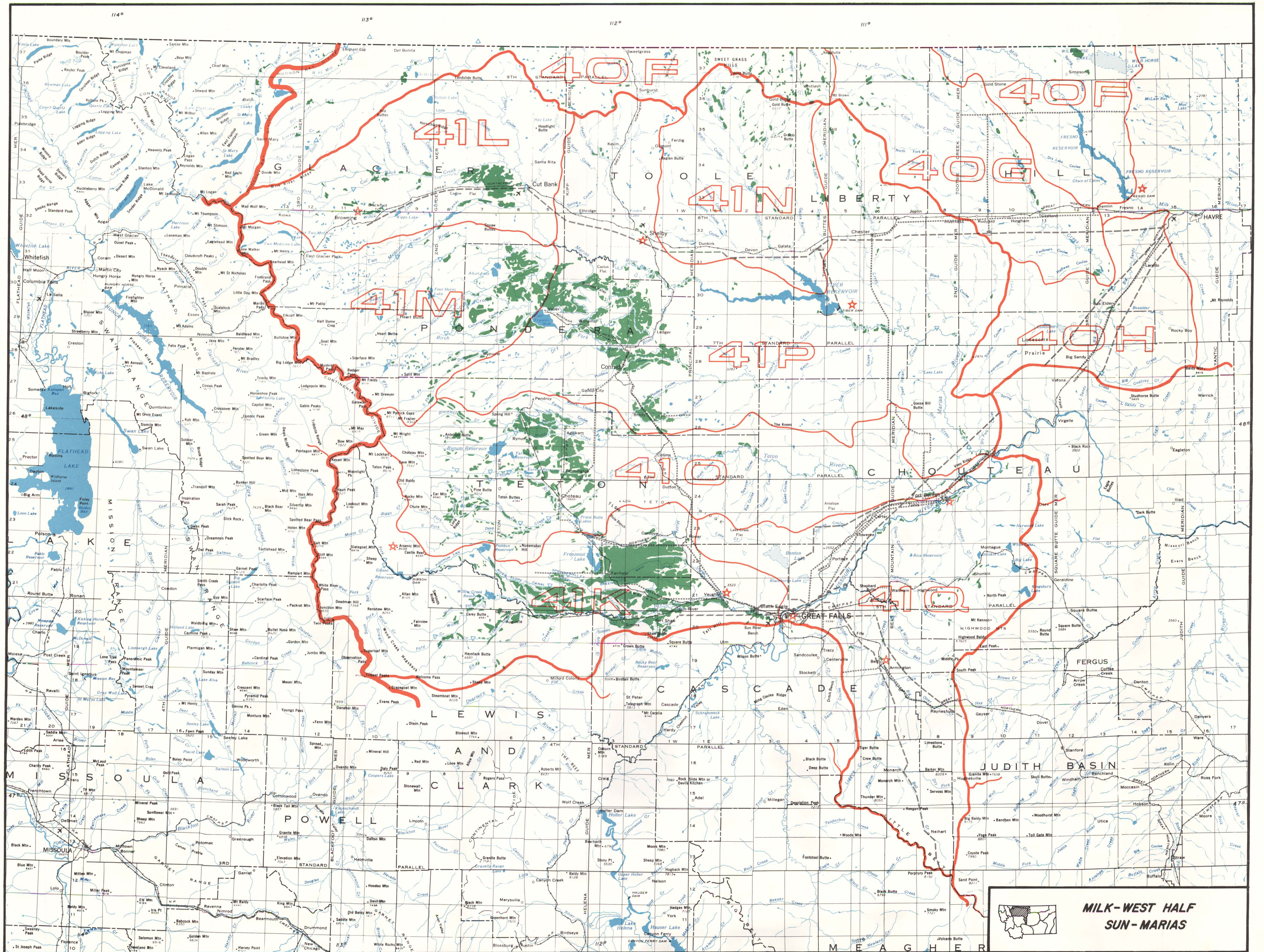


UPPER MISSOURI  
TRIBUTARIES

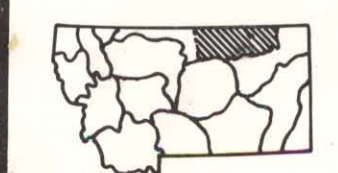
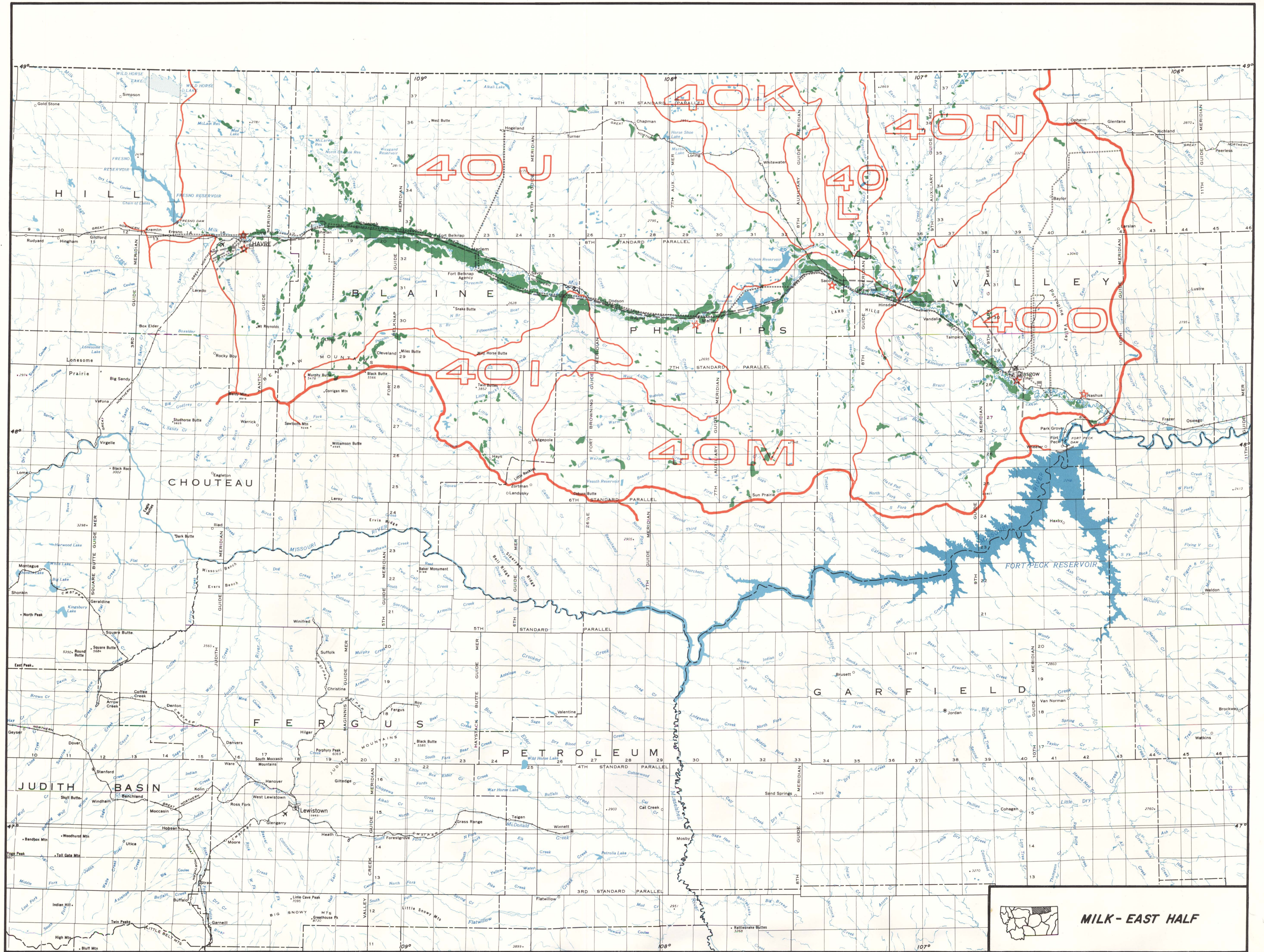


MISSOURI - SMITH

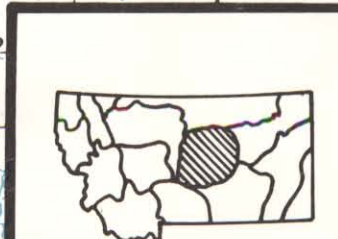
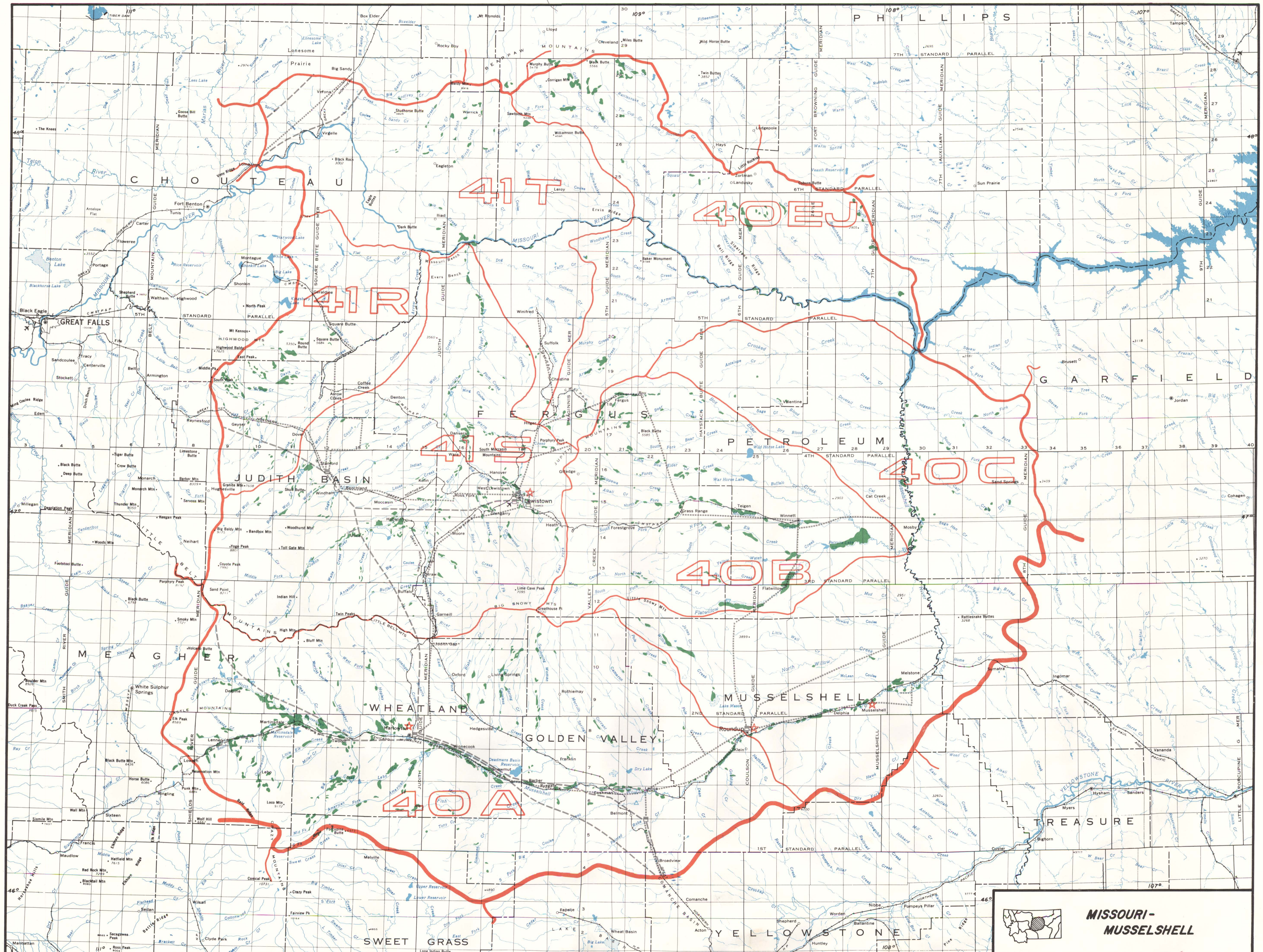




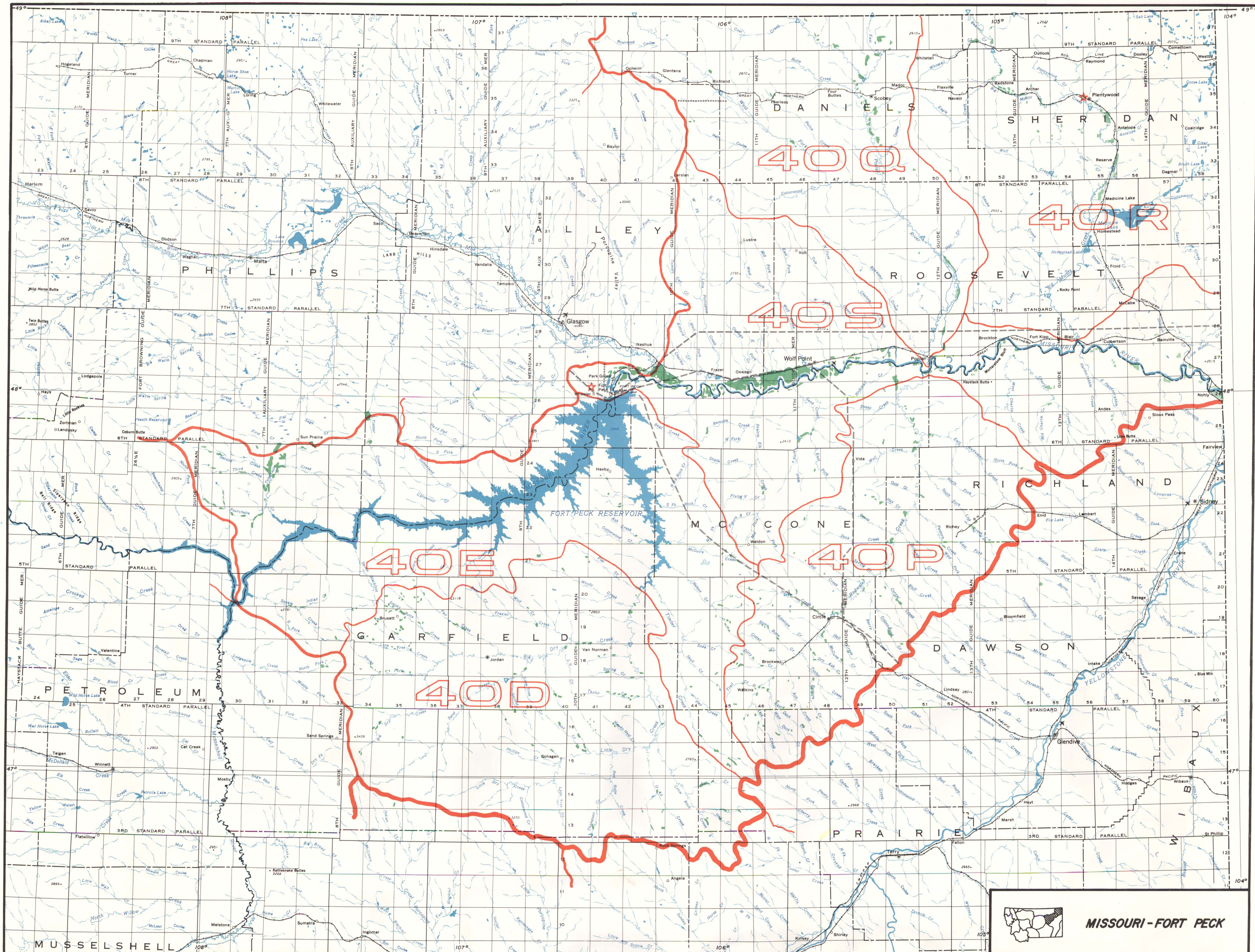
**MILK - WEST HALF**  
**SUN-MARIAS**



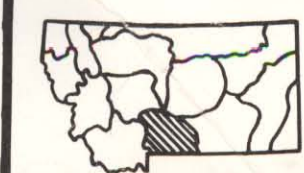
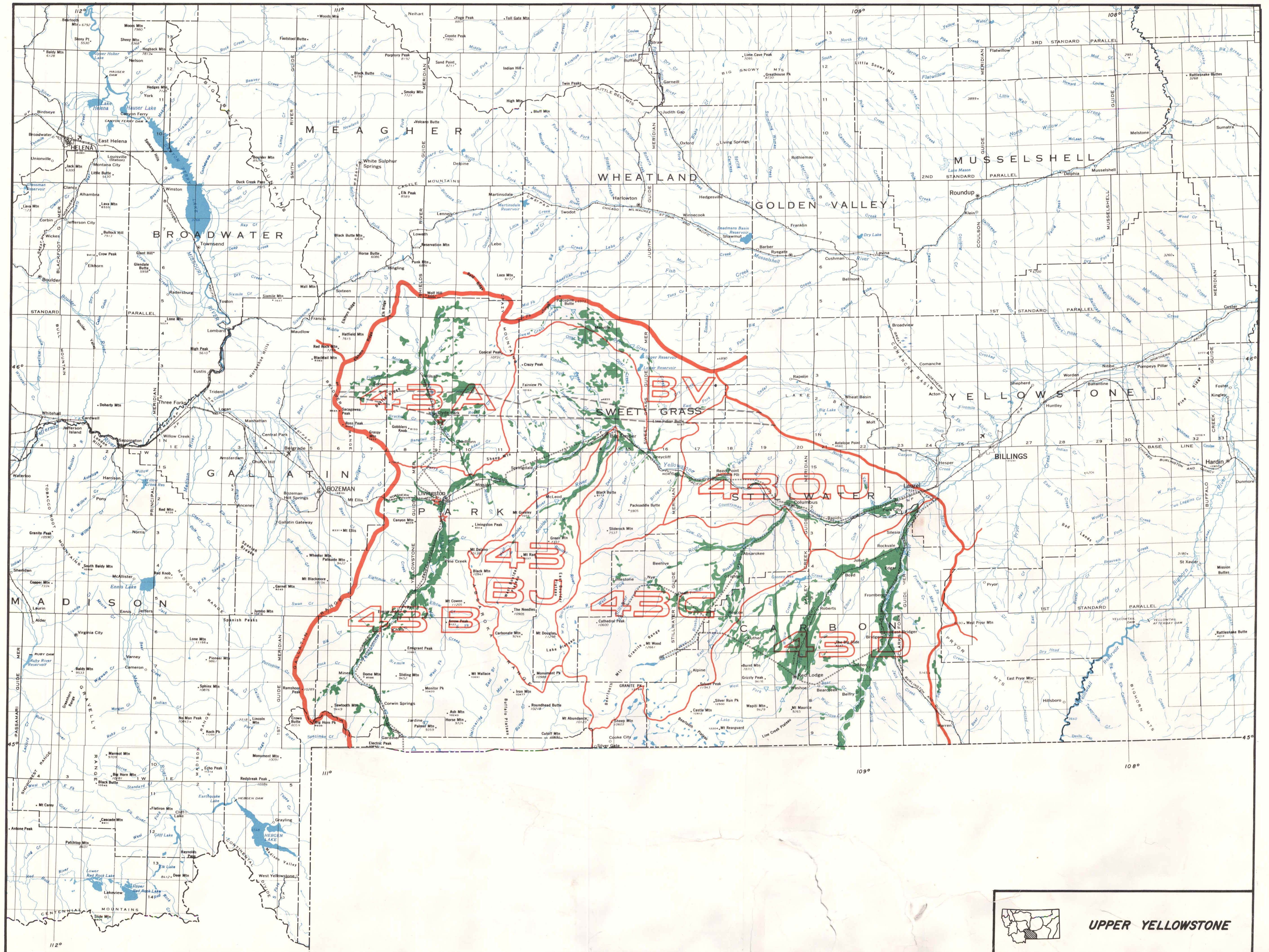
MILK - EAST HALF



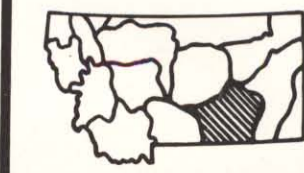
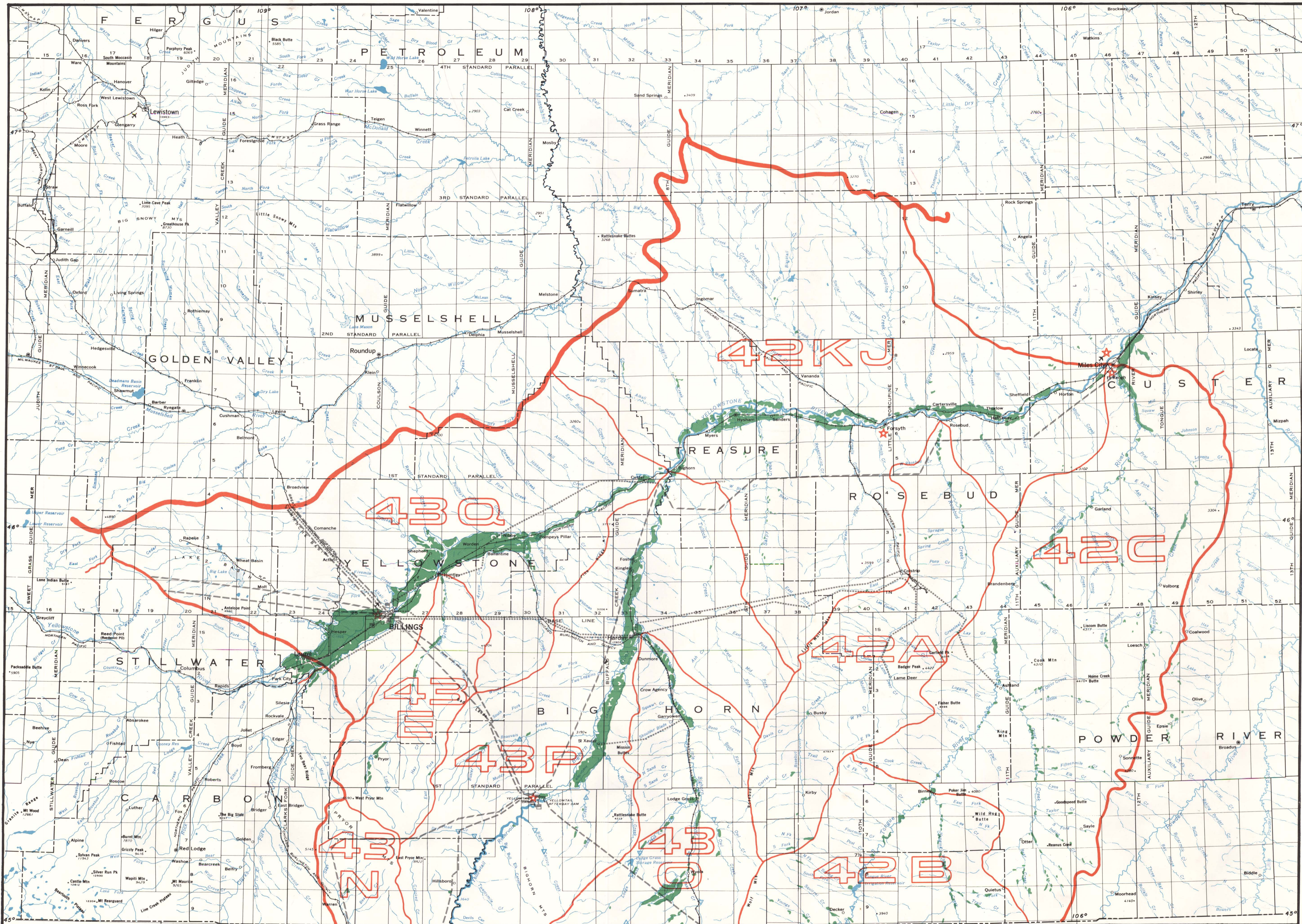
MISSOURI-  
MUSSHELL



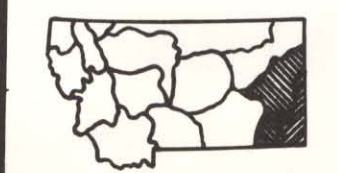
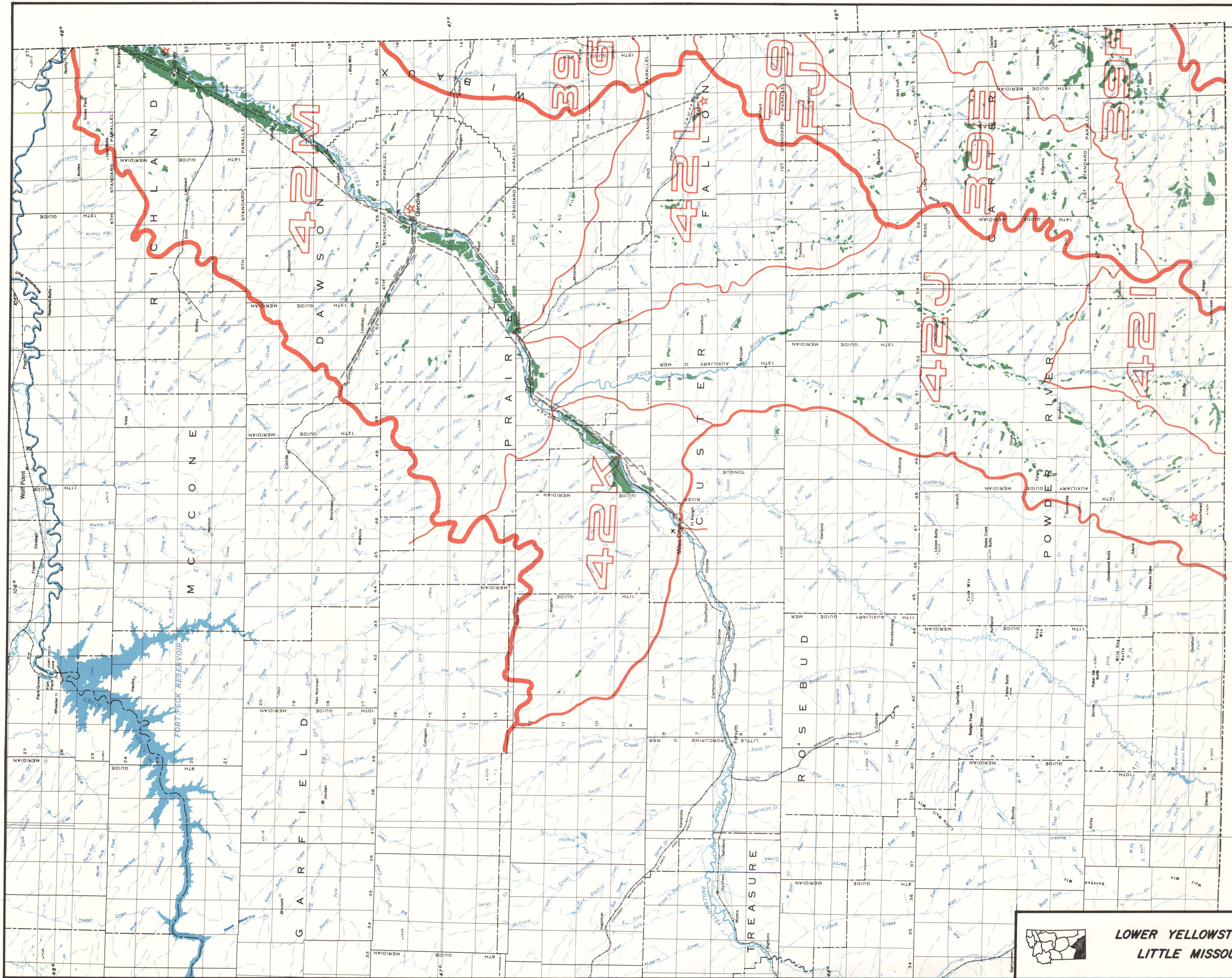
MISSOURI - FORT PECK



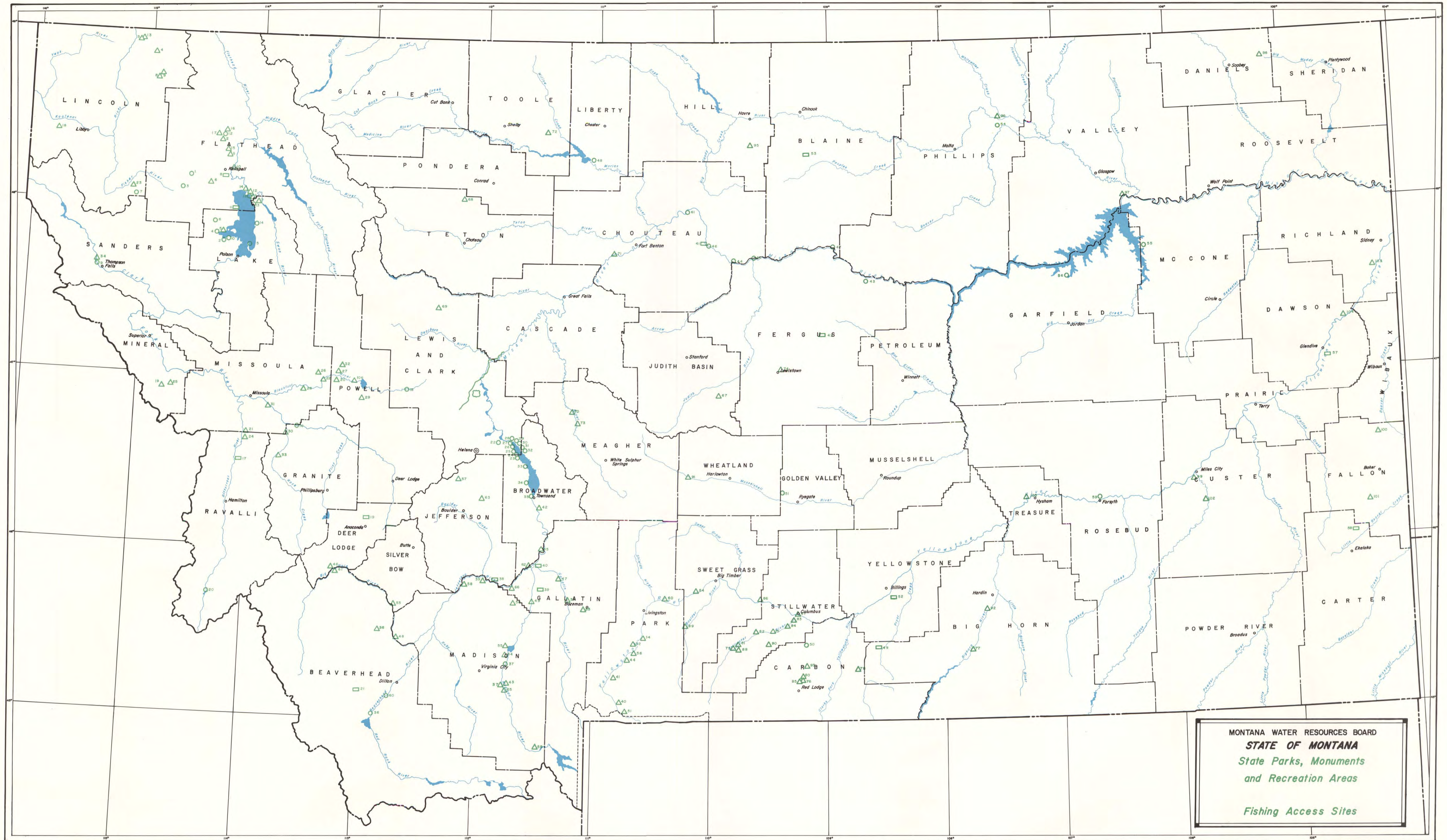
UPPER YELLOWSTONE



MIDDLE YELLOWSTONE



LOWER YELLOWSTONE  
LITTLE MISSOURI



MONTANA WATER RESOURCES BOARD  
**STATE OF MONTANA**  
*State Parks, Monuments  
 and Recreation Areas*  
*Fishing Access Sites*

**MISSOURI RIVER-WOLF CREEK CANYON RECREATION ROAD**

**FISHING ACCESS SITES**

- District 1**
- 1. Bigfork
- 2. Blanchard Lake
- 3. Carpenter Lake
- 4. Glen Lake
- 5. Juniper Beach
- 6. Kila Lake
- 7. Loon Lake I
- 8. Loon Lake II
- 9. Mari Lake
- 10. Noxon Rapids
- 11. Old Steel Bridge
- 12. River's End
- 13. Skyles Lake
- 14. Sportsman's Bridge
- 15. Whitefish River
- 16. Whitefish Satellite
- District 2**
- 19. Big Pine
- 20. Box Canyon
- 21. Chief Looking Glass
- 22. Clearwater Crossing
- 23. Crystal Lake
- 24. Florence Bridge
- 25. Forks
- 26. Harper Lake
- 27. Manture
- 28. Ninemile Prairie
- 29. River Junction
- 30. Tamarack Creek
- 31. Turah
- 32. Upsala Lake
- 33. Welcome Creek
- District 3**
- 35. Bosaman Pond
- 36. Browne's Lake
- 37. Burnt Tree Hole
- 38. Cameron Bridge
- 39. Cardwell
- 40. Corwin Springs
- 41. Dalley Lake
- 42. Deepdale
- 43. Eight Mile Ford
- 44. Emigrant
- 45. Fairweather
- 46. Fishtrap Creek
- 47. Four Corners
- 48. Glen
- 49. Greycliff
- 50. Harrison Lake
- 51. Link Tract
- 52. Loch Leven

- 53. Maidenrock
- 54. Mallard's Rest
- 55. Meadow Lake
- 56. Paradise
- 57. Park Lake
- 58. Parrot Castle
- 59. Reynolds' Pass
- 60. Sheep Mountain
- 61. Sportsman's Park
- 62. Three Forks Gravel Pits
- 63. Tizer Lakes
- 64. Valley Garden
- 65. Varney Bridge
- 66. Williams' Bridge
- District 4**
- 67. Ackley Lake
- 68. Arod Lake
- 69. Bean Lake
- 70. Fort Baker
- 71. Carter's Ferry
- 72. Devon Reservoir
- 73. Smith River
- 74. Upper and Lower Carter's Pond
- District 5**
- 75. Absaroka
- 76. Beaver Lodge
- 77. Bighorn River
- 78. Bluewater
- 79. Buffalo Jump

- 80. Bull Springs
- 81. Castle Rock
- 82. Cliff Swallow
- 83. Fireman's Point
- 84. Grey Bear
- 85. Horseshief Station
- 86. Indian Fort
- 87. Itch-Keep-Pe
- 88. Moraine
- 89. Natural Bridge
- 90. Rosebud Isle
- 91. Selkirk
- 92. Two Leggins
- 93. Water Birch
- 94. White Bird
- District 6**
- 95. Bear Paw Reservoir
- 96. Cole Ponds
- 97. Fort Peck Dredge Cuts
- 98. Whitetail Reservoir
- District 7**
- 99. Branum Lake
- 103. Gartside Dam
- 104. Intake Dam
- 105. Peace Bottom
- 107. Rush Hill Reservoir
- 101. Sportsman's Pond
- 102. Twelve-Mile Dam

**RECREATION AREAS**

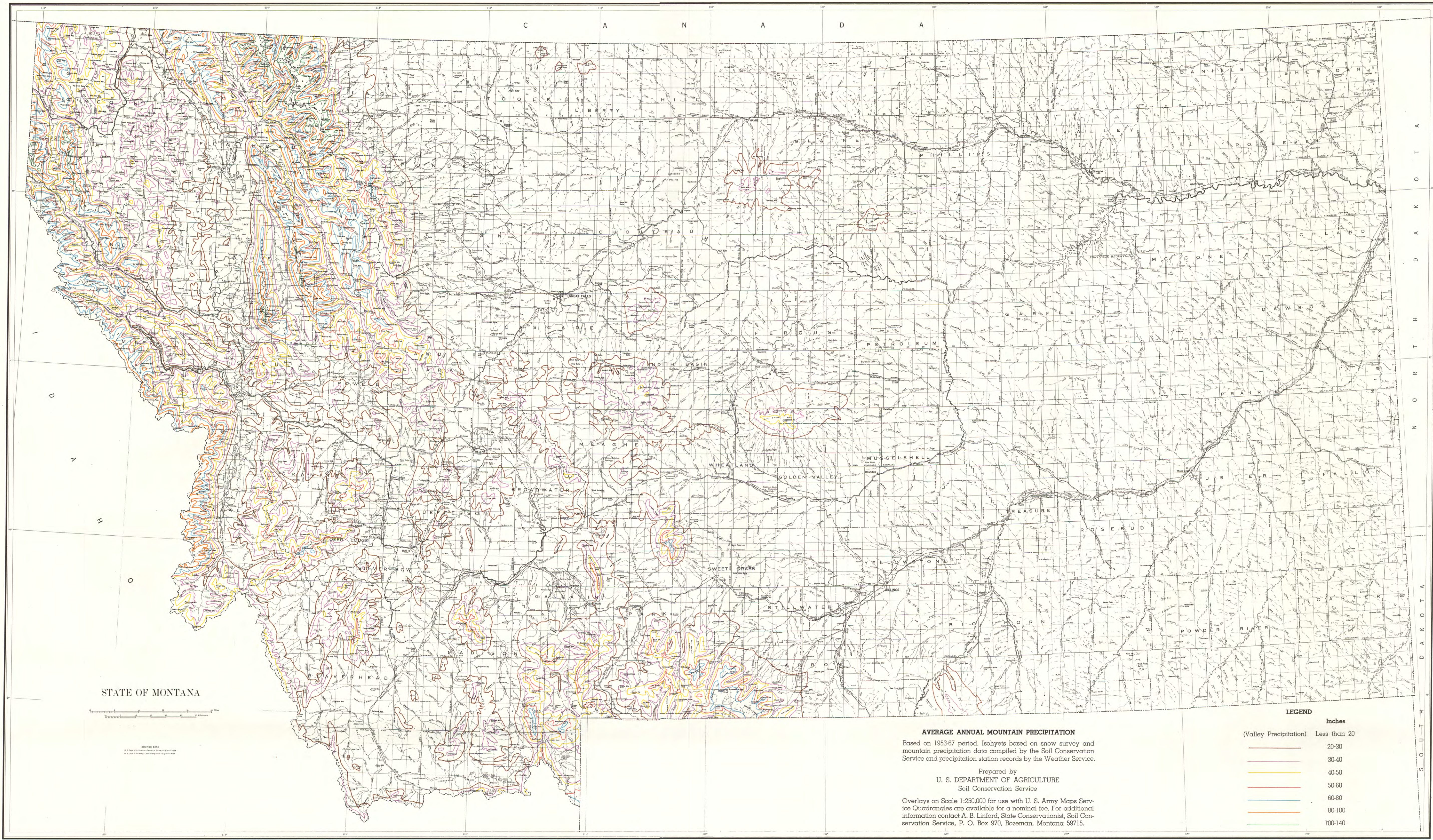
- District 1**
- 1. Ashley Lake
- 2. Big Arm
- 3. Bitlerroot Lake
- 4. Elmo
- 5. Finley Point
- 6. Lake Mary Ronan
- 7. Logan
- 9. Thompson Falls
- 10. Walstad Memorial
- 15. Weyerer
- 12. Whitefish Lake
- 13. Woods Bay
- 14. Yellow Bay
- District 2**
- 16. Beavertail Hill
- 18. Hooper
- 20. Painted Rocks
- District 3**
- 29. Court Sheriff
- 23. Crittendon
- 32. Hellgate
- 35. Indian Road
- 25. Lewis and Clark
- 26. Lorelei
- 31. Moopie Bay

- 24. Orchards
- 27. Overlook
- 22. Regulating Reservoir
- 28. Riverside
- 30. Schaffer Gulch
- 3. Bitlerroot Lake
- 33. White Earth
- 60. Barrette Siding
- 36. Clark Canyon
- 37. Ennis
- District 4**
- 47. Cow Island
- 46. Hole-in-the-Wall
- 43. James Kipp
- 45. Judith Landing
- 44. Slaughter River
- 48. Tiber
- District 5**
- 50. Cooney
- 51. Deadman's Basin
- District 6**
- 54. Nelson
- 55. Rock Creek
- District 7**
- 56. Hell Creek
- 59. Rosebud

**STATE PARKS, MONUMENTS**

- District 1**
- 8. Lone Pine State Park
- 11. West Shore State Park
- District 2**
- 17. Fort Owen State Monument
- 19. Lost Creek State Park
- District 3**
- 21. Bannack State Monument
- 38. Lewis and Clark Caverns State Park
- 39. Madison Buffalo Jump State Monument
- 40. Missouri River Headwaters State Monument
- District 4**
- 41. Citadel Rock State Monument
- 42. Fort Maginnis State Monument
- District 5**
- 49. Chief Plenty Coups State Monument
- 52. Pictograph Cave State Monument
- District 6**
- 53. Chief Joseph Battleground of the Bear's Paw State Monument
- District 7**
- 57. Mokoshika State Park
- 58. Medicine Rocks State Park





STATE OF MONTANA



SOURCE DATA  
U.S. GEOLOGICAL SURVEY  
AND  
U.S. WEATHER SERVICE

**AVERAGE ANNUAL MOUNTAIN PRECIPITATION**  
 Based on 1953-67 period. Isohyets based on snow survey and mountain precipitation data compiled by the Soil Conservation Service and precipitation station records by the Weather Service.

Prepared by  
 U. S. DEPARTMENT OF AGRICULTURE  
 Soil Conservation Service

Overlays on Scale 1:250,000 for use with U. S. Army Maps Service Quadrangles are available for a nominal fee. For additional information contact A. B. Linford, State Conservationist, Soil Conservation Service, P. O. Box 970, Bozeman, Montana 59715.

**LEGEND**

(Valley Precipitation)	Inches
	Less than 20
	20-30
	30-40
	40-50
	50-60
	60-80
	80-100
	100-140

S O U T H D A K O T A N O R T H D A K O T A