



PLANNING AND CLASSIFICATION REPORT

PUBLIC DOMAIN LANDS

LOWER YELLOWSTONE AREA



MONTANA AND NORTH DAKOTA

A MISSOURI RIVER BASIN INVESTIGATION

FOR ADMINISTRATIVE USE ONLY

UNITED STATES DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

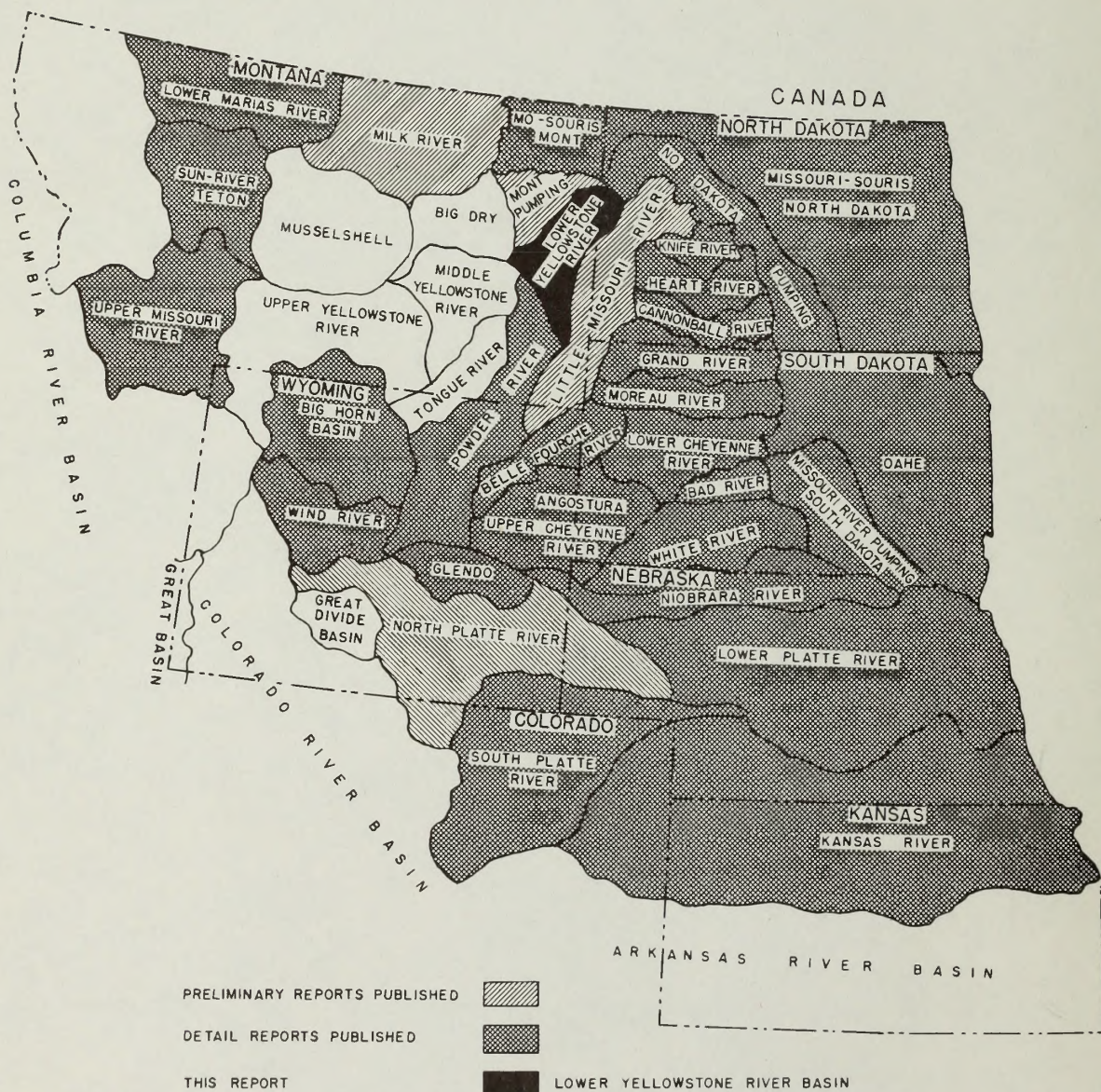
AREA 3 DENVER, COLORADO

MAY, 1958

HD
243
.M9
L363
1958

PROPERTY OF
Bureau of Land Management
DSC LIBRARY

PRESENT STATUS OF BUREAU OF LAND MANAGEMENT
 STUDIES IN THE MISSOURI RIVER BASIN
 (LAND CLASSIFICATION)



BLM LIBRARY
 RS 150A BLDG. 50
 DENVER FEDERAL CENTER
 P.O. BOX 25047
 DENVER, CO 80225

ID 88045 981

AD
243
.M9
L363
1958

Land Planning and Classification Report
Public Domain Lands

LOWER YELLOWSTONE AREA
MONTANA AND NORTH DAKOTA

A (Missouri River Basin Investigation)

For Administrative Use Only

U.S. Department of the Interior
Bureau of Land Management

Area 3

Denver, Colorado

May, 1958

BLM LIBRARY
RS 150A BLDG. 50
DENVER FEDERAL CENTER
P.O. BOX 25047
DENVER, CO 80225

The resource inventory and land status information contained in this report is based on data obtained by field examination and studies made prior to January 1955. Changes in resource data or land status subsequent to January 1955 are not necessarily in this report.

This report was compiled as a feature of the program of the Department of the Interior for the development, conservation and use of the resources of the Missouri River Basin.

PROPERTY OF
Bureau of Land Management
D S C LIBRARY

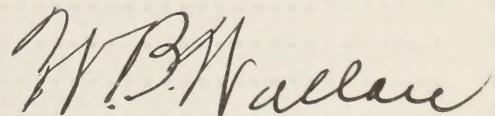
CONTENTS

TRANSMITTAL AND ACKNOWLEDGMENT

Lower Yellowstone River Area is located in Montana with a small part in North Dakota. This lower part of the Yellowstone River Basin is a tributary unit of the Missouri River Basin for which a comprehensive study is being made by the Department of the Interior. This report of the area involves an inventory of the resources and proposed development, especially for the public lands. Public domain lands are in scattered tracts which have been studied and classified individually. The area includes irrigated valley lands, dry farmed bench lands, rolling grazing lands and picturesque badlands.

Information assembled in this report provides basic data to determine the best ultimate use development of this area for the present and future. Material presented herein is based on field examination of the individual tracts of public domain lands administered by the Bureau of Land Management and upon information from other agencies of the Department of the Interior that administer resources in the basin. Several other Federal agencies, various state offices in Montana and North Dakota, livestock operators and others concerned with the resources of this area, have also contributed information. Field investigations and this report were completed by the Missouri River Basin staff of the Bureau of Land Management, Area 3.

This report is made as a contribution by the Bureau of Land Management to the over-all coordinated program of the Department of the Interior for the ultimate maximum development and use of the Missouri River Basin. The basins for which reports have been completed are shown on the study map which is the frontispiece of this report.



Area Administrator

CONTENTS

Topic	Page
INTRODUCTION.....	1
GENERAL DESCRIPTION.....	3
Location and Size.....	3
Topography.....	3
Geology.....	4
Soils.....	6
Climate.....	7
NATURAL RESOURCES.....	13
Rangelands.....	13
Forest Lands.....	14
Cropland.....	14
Irrigated Farm Lands.....	14
Non-irrigated Farm Lands.....	16
Wildlife.....	16
Minerals.....	17
Locatable Minerals.....	18
Leasable Minerals.....	18
Water.....	20
HISTORY OF RESOURCE USE.....	22
Explorers, Trappers and Traders.....	22
Military Posts.....	23
Settlement and Development.....	23
Bureau of Land Management History in the Area.....	26
AREA ECONOMY.....	27
Transportation.....	27
Utilities.....	28
Agriculture.....	28
Trade and Services.....	38
Population.....	38
LAND USE AND OWNERSHIP.....	41
Rangeland Use.....	41
State Grazing Districts.....	43
Farmland Use.....	44
Land Use for Mineral Production.....	48
Landownership.....	49
Land Utilization Areas.....	51

LANDS ADMINISTERED BY THE BUREAU OF

LAND MANAGEMENT.....	53
Special Classifications and Uses for Public Domain.....	56
Maco Sica Badlands State Park	56
Cedar Creek Anticline Area.....	57
Prairie County Federal Lands.....	58

FIGURES

Number	Title	Opposite Page
1.	Soils Within the Lower Yellowstone Area, Montana and North Dakota, 1957.....	6
2.	Lower Yellowstone River Area, Rural and Urban Population, 1930, 1940, 1950.....	40
3.	Average Size of Farms in the Five Lower Yellowstone Area Counties for 1930, 1940, 1950.....	40
	Average Number of Farms in the Five Lower Yellowstone Area Counties for 1930, 1940, 1950.....	40
4.	Average yield and average returns of wheat per harvested acre for five Lower Yellowstone Area Counties in Montana; with the total annual precipitation and average price of wheat per bushel at Glendive, Montana; by years, 1919-1955....	47
5.	Total Yield of Crops Produced on the Lower Yellowstone and Buffalo Rapids Reclamation Projects, Montana, 1955 See Appendix.....	14

TABLES

Number	Title	Page
1.	Climatological data for stations in or near Lower Yellowstone River Basin, Montana and North Dakota	9
2.	Annual precipitation at four Lower Yellowstone Area Stations in Montana, 1919-1957.....	10

Number	Title	Page
3.	Comparisons of annual and long-time average amounts of precipitation for Lower Yellowstone Area Stations, Montana, 1952-1957.....	12
4.	Stream flows, Lower Yellowstone River, Montana, record years to 1954.....	21
5.	Cash receipts of farms in five Lower Yellowstone Area Counties, Montana, 1952-1955 (dollars).....	30
6.	Area and value of all crops, irrigated and non-irrigated, in five Lower Yellowstone Area Counties, Montana 1952-1955 .	31
7.	Combined crop statistics for five Lower Yellowstone Area Counties; Dawson, Fallon, Prairie, Richland and Wibaux, Montana, 1952 and 1953	32
8.	Area harvested, total area planted and total yield of wheat in five Lower Yellowstone Area Counties, Montana, 1919-1955 (acres).....	34
9.	Yields, average yields, prices and returns of wheat per harvested acre in five Lower Yellowstone Area Counties, Montana, 1919-1955 (bushels)	35
10.	Yield and value of wheat, irrigated and non-irrigated, in five Lower Yellowstone Area Counties, Montana, 1953.....	37
11.	Livestock on farms and ranches in five counties in the Lower Yellowstone Area, Montana, 1950, 1953 and 1956 (number of head).....	42
12.	Relative importance of crops grown in the Lower Yellowstone Area as shown by yield and returns for the combined data of Dawson, Fallon, Prairie, Richland and Wibaux Counties, Montana, 1953	45
13.	Landownership in the Lower Yellowstone Area by Counties, Montana and North Dakota, 1955 (acres).....	50
14.	Public domain land classification by counties in the Lower Yellowstone Area, Montana and North Dakota, 1955	54

Number	Title	Page
15.	Description, Area, Classification, Suitability and Proposed Management of Unreserved Public Domain by Counties, Within the Lower Yellowstone River Basin, Montana and North Dakota, 1955.....	59-92
16.	Area, value and yield of crops produced on the Lower Yellowstone and Buffalo Rapids reclamation projects, Montana, 1955	Appendix 13
17.	Crops produced on the Lower Yellowstone Project, Montana and North Dakota, 1946-1955	Appendix 14
18.	Crops produced on the Buffalo Rapids Project, Montana, 1950-1955	Appendix 15
19.	Livestock and poultry on the Lower Yellowstone Reclamation Project, Montana and North Dakota, 1946-1955.....	Appendix 16
20.	Livestock and poultry on Buffalo Rapids and Lower Yellowstone reclamation projects, Montana and North Dakota, 1955 See Appendix	17

APPENDIXES

A.	Principal plants growing on range lands of the Lower Yellowstone River Basin, Montana and North Dakota.....	Appendix 1
B.	Land Classification Report Form No. 4-1090	Appendix 5
C.	Description and definitions of Land Use Capability Classes.....	Appendix 9
D.	Lower Yellowstone and Buffalo Rapids Irrigation Projects See Appendix.....	11

MAP

Lower Yellowstone Area Land Ownership and Land Use Map.....	In pocket on the back cover
---	-----------------------------

INTRODUCTION

Lower Yellowstone River Basin contains important agricultural, oil and gas producing areas. Badland and near badland areas are potential sources of heavy sediment production which present a control problem of importance as the area drains into the Garrison reservoir on the Missouri River. The area extends up the Yellowstone River Valley from its confluence with the Missouri River near Buford in McKenzie County, North Dakota to ten miles above Terry in Montana. This basin has common divides with the Powder River, Little Missouri River, North Dakota Pumping, Montana Pumping, Big Dry River and Middle Yellowstone River Basins. Reports have been published by this Bureau for the first four of these adjoining basins as listed. They are available as shown on the progress map which is the frontispiece of this report. No reports have been published for the Big Dry and Middle Yellowstone areas.

The preliminary study of the area was published in March, 1949. That report proposed that each individual tract of public domain should be examined and classified to determine their resource condition and proper management. Area classification was not proposed because of the scattered pattern of public domain landownership. This final report is based on the field investigation of each tract of public domain. No large areas were classified entirely over all types of ownership, as is the practice in report areas that contain large concentrations of public domain.

Detailed studies of the scattered tracts of public domain in this area were completed in 1954. A land classification report, form number 4-1090, was completed for each tract of public domain. This form report lists sixty items bearing on land use, classification and value. A copy of this form is appendix B of this report. These reports are filed in the Montana State Office of the Bureau of Land Management at Billings. A synopsis of each 4-1090 report is presented in table 15 of this report, each line of the table being an outline classification of a tract of public domain in the area. Field work was performed with the aid of aerial photographs for use in mapping, locating, relating and describing. Public domain in the area is located in parts of Carter, Custer, Dawson, Fallon, Prairie, Richland and Wibaux Counties in Montana and in small parts of Golden Valley and McKenzie Counties in North Dakota.

This report and the accompanying map present the findings of the detailed studies. Federal lands are shown on the map as public domain and Land Utilization lands. All other landownership, state and privately owned lands, on the map are uncolored. Land Use is shown as

irrigated and non-irrigated lands, those proposed for irrigation development, and the proposed Maco Sica Badlands State Park. No differentiation is shown between range and cultivated lands on the map. Changes in land use and tenure are proposed for Federal lands in parts of the area in this report. Problems affecting the public domain lands are a feature of this report. Valuable resources in the area and their proper administration are considered.

Gross area of the Lower Yellowstone Basin is 4,570,095 acres, of which 190,106 acres are public domain. There are 4,095,879 acres in Montana and 474,216 acres in North Dakota. Public domain in Montana totals 189,801 acres. In North Dakota there are 305 acres of public domain. Land Utilization land totals 359,544 acres in Montana and 8,563 acres in North Dakota, a total of 368,107 acres in the area. Land Utilization lands are Federally acquired lands within so-called Land Utilization Projects. These are lands which were repurchased for conservation purposes during the drought and depression of the 1930's under the Bankhead-Jones Act.

The preliminary "Land Planning and Classification Report of the Public Domain Lands in the Lower Yellowstone Area" was published in March 1949 by the Bureau of Land Management. Reports are available for most of the adjacent and associated basin areas as shown on the progress map which is the frontispiece of this report. No reports have been published for the Middle or Upper Yellowstone River Basins or for the Big Dry area.

GENERAL DESCRIPTION

Location and Size

Lower Yellowstone Area includes the drainage of the Yellowstone River downstream from the Powder River drainage to the mouth of the Yellowstone, where it joins the Missouri River. The upstream point is at Calypso in Prairie County, Montana, about ten miles above Terry on the Yellowstone River. Yellowstone River joins the Missouri River near Buford, in McKenzie County, North Dakota, 115 miles northeastward. Maximum width of the basin is 82 miles and its greatest length is 148 miles from north to south. The area is in two states, Montana and North Dakota. Counties included in Montana are parts of Carter, Custer, Dawson, Fallon, Prairie, Richland and Wibaux. In North Dakota a small part of Golden Valley and a portion of McKenzie County are within the basin area, as shown on the maps with this report.

Lower Yellowstone Area covers 4,570,095 acres. There are 4,095,879 acres in eastern Montana and 474,216 acres in western North Dakota. Public domain land in the area totals 190,106 acres, with 189,801 acres in Montana and 305 acres in North Dakota. Land Utilization repurchased lands comprise 368,107 acres, 359,544 acres being in Montana and 8,563 acres in North Dakota within the borders of the basin area. Total area of the basin is 7,141 square miles or 198 townships.

Topography

Topography varies from nearly level and undulating along the Yellowstone River and O'Fallon Creek to very rough and broken badlands. The Yellowstone River flows through a narrow to broad alluvial plain which is bordered by a succession of terraces, steeply rolling hills and rough, broken badlands. This succession is irregular and in some places is indefinite. Some of the terraces are broad level benches with cultivated land; in other places they are so narrow that they would not be observed. Elevations vary from 1,863 feet at the mouth of the Yellowstone River in North Dakota to 3,830 feet on the Little Missouri River - O'Fallon Creek Divide in Montana.

Physiographic features of the area are the Yellowstone River with its level bottomlands; rugged badlands; and rolling gravel hills. Bottomlands along the Yellowstone are generally quite extensive, from 2 to 5 miles in width except for short reaches near Terry and Glendive where badlands reach the river on both sides. In this area the Yellowstone is usually a sluggish, muddy stream about 250 feet wide and 3 feet deep. Ice jams in the spring frequently cause minor floods and occasionally cause major floods.

Outer limits of the area along the exterior divides are almost completely steeply rolling land, with some badland areas. Divides between tributary drainages in the area are often of this same type. Low rolling gravel hills of the Flaxville formation are along the north half of the western divide. Steep, spectacular badlands cover a large area south and east of Glendive in the central section of the Basin. This area has been proposed as a State Badlands Park. Other rugged badlands are found on the headwaters of Cedar Creek, and west of Terry. Several large natural bridges of sandstone are located in the Terry Badlands.

Most of the area is grazing land varying from gently to steeply rolling. About one-fourth of the area is sufficiently level so that it can be cultivated. Generally more of the land west of the river is suitable for farming than the more steeply rolling land east of the Yellowstone. Suitable farm land in Prairie County is mostly in the Land Utilization Area and is not farmed. There is considerable farm land east of the river in the O'Fallon Creek drainage.

Geology

Lower Yellowstone Basin is located in the western portion of the Missouri Plateau section of the Great Plains physiographic province. The basin consists of broad rolling upland surfaces dissected by the Yellowstone River and its tributaries. The Yellowstone River flows in a broadly terraced valley with as many as four terraces along the west side, varying from one half to three miles wide and extending for many miles along the river. The terraces are attributed to eastward downdip migration of the Yellowstone River during regional tilting. The tributaries to the Yellowstone River are predominantly parallel to each other and generally flowing in shallow trough-like valleys, having nearly level floors one quarter to two miles wide. Locally, erosion has dissected portions of the uplands into the "badlands" type. Elevations vary in the basin from about 1,900 feet where the Yellowstone flows into the Missouri up to about 3,500 feet on the tops of some of the hills southwest of Baker. However, local relief seldom exceeds 400 feet.

Rock formations exposed in the Lower Yellowstone Basin are of sedimentary, non marine origin, ranging in age from late Cretaceous to recent. The surface of most of eastern Montana and of the Lower Yellowstone Basin in particular is developed on the Tertiary Fort Union formation, which is the formation containing most of the lignite resources of the area. The Fort Union formation is of continental origin, having been deposited in lakes, swamps, and river flood plains.

It is composed mostly of sandstone, shale and clay and contains numerous beds of lignite. The Fort Union formation is divided into three members, the Sentinel Butte at the top, Tongue River, and the Ludlow at the base. The Ludlow lays conformably on the Cretaceous Hell Creek formation, and in most older reports, the two were undifferentiated and called the Lance formation.

The Ludlow member of the Fort Union formation and earlier formations are only exposed on the Cedar Creek anticline in the Lower Yellowstone Basin Area. The oldest formation exposed in the area along the Cedar Creek anticline is the Pierre Shale, which is overlain by the Fox Hills and subsequently the Hell Creek formation, all of upper Cretaceous age. The Sentinel Butte member, as nearly as can be determined from reports, is almost entirely removed in the area except for a few scattered remnants on some of the higher hills, such as Blue Mountain. Thus the Tongue River member forms the surface of most of the entire basin.

The upper part of the Tongue River member consists of massive, crossbedded, yellow, light buff to light gray, fine-grained, friable sandstone with interbedded light gray, poorly indurated shale and local fresh water limestone lenses. The lower part is predominantly light gray. The Tongue River member as a whole contains numerous beds of lignite, and several of the beds in the lower half are thick and continuous. The thicker lignite beds are usually burned at the outcrop and for some distance back underground. The heat from the burning lignite has baked and fused the overlaying sandstone to a red to brownish colored clinker, locally called scoria, which is highly resistant to erosion.

More recent deposits include the Quaternary alluvium deposits in the bottom of the Yellowstone River Valley and some of its tributaries and the Flaxville gravels on the terraces in the northern part of the basin west of the Yellowstone River. The Flaxville gravels consist of well rounded pebbles of igneous and metamorphic rocks varying from 1/8 inch to 3 inches in diameter in a matrix of fine gravel, sand and silt. The Flaxville gravel is generally unconsolidated and has been reworked to form lower stream gravel terraces, some covering a considerable area. One of these terraces, covering the surface of Breezy Flat, west of Savage, varies from 5 to 30 feet in thickness.

The exact age of the terraces is unknown, but the presence of glacial rocks on the surface of the highest of the stream terraces indicates formation prior to Pleistocene glaciation. These glacial boulders dot the surface of the high stream terraces as far south as Intake, indicating that glaciation extended at least that far up the Yellowstone Valley.

The northeastern part of the Lower Yellowstone Drainage Basin overlaps the western portion of the so-called Williston Structural Basin, which has its center at Williston, North Dakota. The formations in the Lower Yellowstone Drainage Basin dip very gently toward the Williston Structural Basin, dipping to the northeast in the southern part and to the east in the northern part. The dip of the formations varies from about 10 to 50 feet per mile except in the vicinity of the Cedar Creek anticline, which is approximately tangent to the Williston Structural Basin. On the flanks of the Cedar Creek anticline the dip of the formations steepens to as much as 250 feet per mile. The Cedar Creek anticline is a breached anticline drained by Cedar Creek, a tributary of the Yellowstone River. Its axis trends South 30° East from its intersection with the Yellowstone about 8 miles upstream from Glendive.

Soils

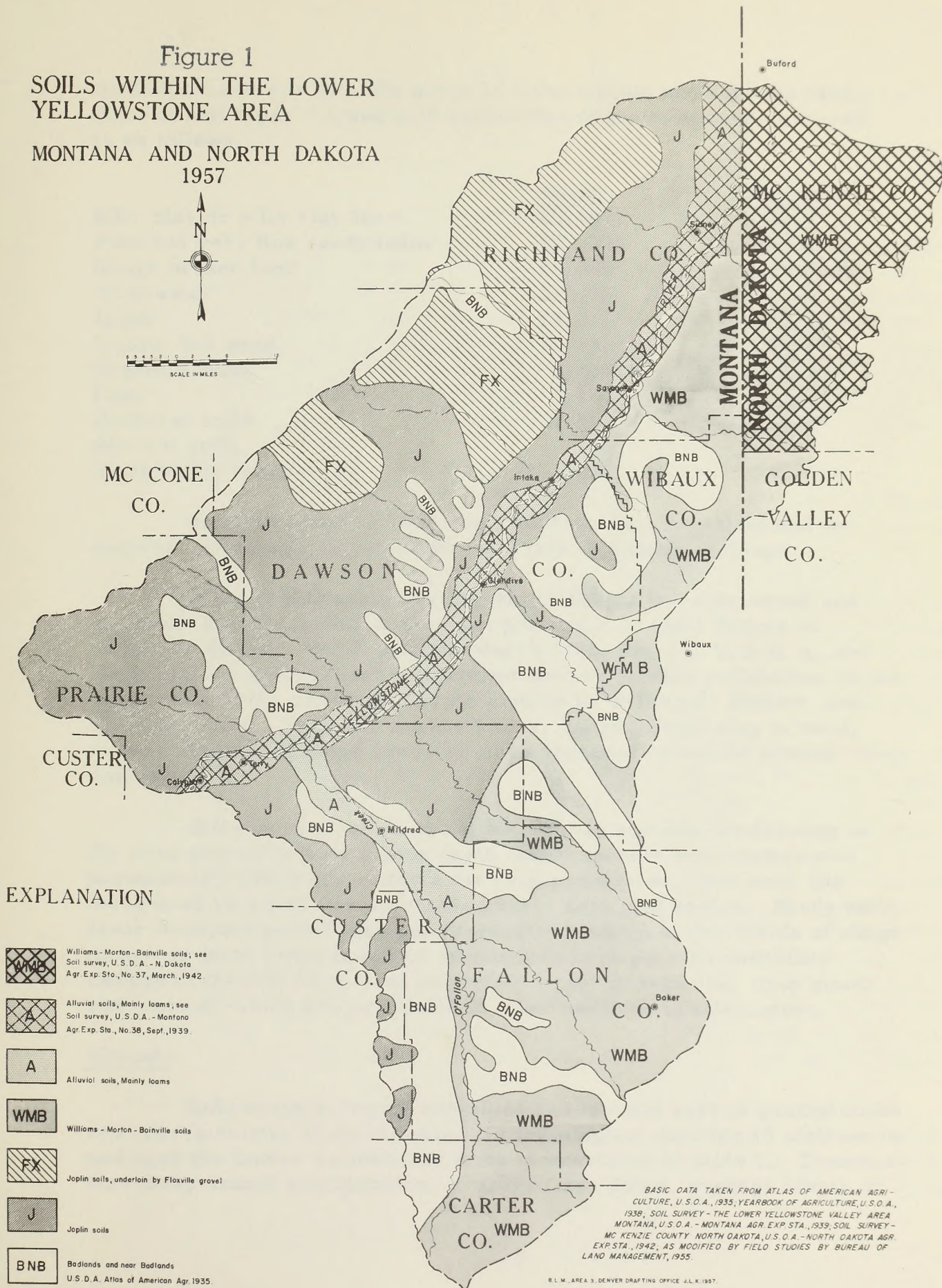
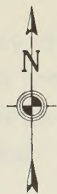
Soils vary from alluvial sands and gravels along the creeks and rivers to fine clays and raw shales in the Badlands. Alluvial soils are virtually restricted to the bottomlands of the Yellowstone and Missouri Rivers along with the lower part of O'Fallon Creek, as shown on the soils map, figure 1. The Flaxville gravel areas, along the north half of the western boundary are considered to be glacial soils. Other soils in the area are nearly all residual. Most of the area is covered with soil of the Joplin type, formerly considered to be the Rosebud and Otero soils. The eastern part of the area has loam soils with clay and silt phases on terrain ranging from sloping to rolling and steep.

Soils on the public domain lands vary from sandy to clays and shales in the badlands. Most of the public domain outside of the badlands is covered with a sandy soil over a hard layer of shale, sandstone or concretion. This sandy soil is very subject to wind erosion if cultivated. Depth of the sandy layer is usually about 14 inches, but there is considerable variation.








Soils of the irrigable part of the area were surveyed by the Department of Agriculture and the Montana Agricultural Experiment Station. Results of this survey are published as No. 38, series 1932, Soil Survey of the Lower Yellowstone Valley Area, Montana, September 1939. This survey divides the soils of the area into five groups: (1) soils of the valley bottoms; (2) soils of the valley benches; (3) soils of the valley slopes; (4) soils of the upland; (5) miscellaneous soils and land types.

Figure 1 SOILS WITHIN THE LOWER YELLOWSTONE AREA

MONTANA AND NORTH DAKOTA
1957



EXPLANATION

-  Williams - Morton - Bainville soils; see Soil survey, U.S.D.A. - N. Dakota Agr. Exp. Sta., No. 37, March, 1942.
-  Alluvial soils, Mainly loams; see Soil survey, U.S.D.A. - Montana Agr. Exp. Sta., No. 36, Sept., 1939.
-  Alluvial soils, Mainly loams
-  Williams - Morton - Bainville soils
-  Joplin soils, underlain by Floxville gravel
-  Joplin soils
-  Badlands and near Badlands U.S.D.A. Atlas of American Agr. 1935.

BASIC DATA TAKEN FROM ATLAS OF AMERICAN AGRICULTURE, U.S.O.A., 1935, YEARBOOK OF AGRICULTURE, U.S.O.A., 1939, SOIL SURVEY - THE LOWER YELLOWSTONE VALLEY AREA MONTANA, U.S.O.A. - MONTANA AGR. EXP. STA., 1939, SOIL SURVEY - MC KENZIE COUNTY NORTH DAKOTA, U.S.O.A. - NORTH DAKOTA AGR. EXP. STA., 1942, AS MODIFIED BY FIELD STUDIES BY BUREAU OF LAND MANAGEMENT, 1955.

Area surveyed was 263,680 acres of river bottom and adjacent lands. Area of soil types mapped with percentage of the total area surveyed is as follows:

	<u>Acres</u>	<u>Percent</u>
Silt, clay or silty clay loam	66,496	26.1
Fine and very fine sandy loam	62,272	23.3
Rough broken land	59,328	22.5
Riverwash	22,976	8.7
Loam	18,816	7.4
Loamy fine sand	16,192	6.1
Gravelly loam	9,344	3.5
Clay	5,120	1.4
Colluvial soils	2,752	1.0
Alluvial soils	384	
Total valley lands	263,680	100.0

Limited areas of irrigated land have become saline due to seepage, principally from ditches and lack of proper drainage.

Soils of McKenzie County, North Dakota were surveyed and mapped. Results of this survey are published as "Soil Survey of McKenzie County, North Dakota, March 1942; No. 37, U. S. D. A. and North Dakota Agricultural Experiment Station." This publication shows the portion of the county within the area to be Williams, Morton and Bainville soils. They are mostly loams, ranging from clay to sandy loams. There are some areas of clays and small areas of several other soil types.

Soils on most of the more level lands suitable for farming in the area generally have a good depth combined with both texture and permeability which are suitable for crop production. The area has more sand as a soil component than other adjoining basins. Sandy soils favor moisture penetration and frequently produce better yields of range forage or farm crops than fine soils which have poor permeability. Quality of the soil here is an important factor in land use, crop yields and income, which are presented in other sections of this report.

Climate

Cold winters, warm summers and low and erratic precipitation are characteristic of the climate. Climatological data for 18 stations in and near the Lower Yellowstone Area is presented in table 1. Temperature data, annual precipitation, average frost dates, average length of

growing season and years of record are given for each of the stations. The area extends from the mildest in eastern Montana at Miles City to the most severe along the "High Line" on the Missouri River. Miles City has the longest growing season in eastern Montana.

Length of frost free period at Miles City varies from 116 to 186 days in 40 years, the mean being 158 days. This period is shorter over most of the area as shown in table 1. Severe, damaging hail occurs somewhere in the area nearly every year. Infrequently hail damage or total loss affects a fairly large portion of the area. Blizzards and cold spells are normal winter occurrences. The cold may be displaced by a warm "Chinook" wind. Some winters are open and mild. Occasionally blizzards heap huge drifts of snow during protracted periods of subzero weather, disrupting traffic and killing livestock.

The area has sufficient summer rainfall, heat and humidity to be favorable for growing corn, and this is the "corn belt" of Montana. Below zero temperatures are common in the winter and those above 100°F. in summer are quite frequent. Precipitation for the area averages about 13 inches annually, the range being from 3.73 inches at Mildred in 1934 to 24.35 inches recorded at Baker in 1927. Variations within the area are considerable in some years, as shown in table 2. Much of the summer precipitation falls as thunder showers, many of them being highly localized. Sunny, bright days are the rule. Cloudy days are infrequent and fog very seldom occurs.

Usually annual and seasonal rainfall is sufficient for the production of a satisfactory amount of range forage and also for the production of the non-irrigated crops grown in the area. Occasional droughts of six weeks or even longer during the growing season interfere with crop and range forage production. Cyclical low annual precipitation also occurs occasionally reducing yields of range forage and crops and causing abandonment of crop lands. In the thirty-seven year period, 1919 to 1955, average wheat yields per harvested acre have been more than 8 bushels 26 times and less than 8 bushels in 11 years as shown in table 9. Climatic conditions are usually responsible for the major part of the differences between the area of wheat planted and harvested as shown in table 8. Data on yields and returns from crops as given in this report also largely reflect variations in climate.

The variation in annual precipitation between four stations in the area and from year to year is shown in table 2. This table lists the annual precipitation for four Lower Yellowstone area stations over a 39 year period, 1919 to 1957. These four stations, Glendive, Savage, Mildred and

Table 1 - Climatological data for stations in or near Lower Yellowstone River Basin, Montana and North Dakota

Stations	Temperatures in degrees F.			Avg. dates killing frost		Last in Spring date	First in Fall date	Avg. days Frost Free number	Avg. Annual Precipitation inches	Elevation + MSL feet	Years of Record for	
	Jan. Mean	July Mean	Max. Min.	°F.	°F.						Temperature	Precipitation
Montana												
Bakar	15.6	71.4	112.	-50.		May 9	Sept. 25	139	13.31	2,934	11	21
Circle	13.3	70.2	112.	-57.		May 24	Sept. 13	112	11.67	2,428	52	54
Culbertson	9.6	70.5	113.	-57.		May 19	Sept. 18	122	13.11	1,919	37	49
Ekalaka	17.9	70.9	108.	-43.		May 19	Sept. 23	127	13.27	3,434	50	58
Fallon	9.6	70.4	108.	-54.		May 19	Sept. 18	122	13.36	2,231	12	12
Garland	17.8	73.6	112.	-51.		May 18	Sept. 23	128	12.91	2,641	31	31
Glendive	15.1	74.9	117.	-50.		May 13	Sept. 24	134	13.07	2,091	56	64
Knowlton	16.4	71.6	108.	-46.		May 15	Sept. 22	130	13.16	2,708	14	14
Mildred	15.7	73.7	112.	-50.		May 14	Sept. 25	134	12.74	2,362	36	48
Miles City	14.5	72.9	111.	-49.		Apr. 30	Oct. 5	158	14.45	2,358	40	40
Miles City Airport	16.1	75.0	110.	-37.		May 15	Sept. 29	137	12.81	2,629	19	19
Plevna	14.8	71.9	111.	-52.		May 18	Sept. 27	132	13.39	2,757	39	44
Savage	12.9	72.2	111.	-53.		May 18	Sept. 22	127	13.44	1,971	49	51
Sidney	9.2	68.8	110.	-47.		May 18	Sept. 21	126	14.93	1,931	17	17
Vida	12.5	71.1	112.	-38.		May 20	Sept. 21	125	15.99	2,409	23	29
Wibaux	16.2	69.0	110.	-55.		May 25	Sept. 13	111	15.52	2,647	18	20
North Dakota												
Beach	12.1	69.9	110.	-43.		May 18	Sept. 20	124	15.14	2,779	36	36
Watford City	11.2	71.4	112.	-45.		May 17	Sept. 21	127	15.94	2,082	23	23
Station Averages	13.9	71.6	111.1	-48.7		May 17	Sept. 22	129	13.76	2,462	31	35

Climatological Data, Montana and North Dakota Annual Summaries for several calendar years, varying with station records, 1956 and prior; U. S. Department of Commerce, Weather Bureau.

Table 2. - Annual precipitation at four Lower Yellowstone Area Stations in Montana, 1919-1957

Year	Glendive	Savage	Mildred	Plevna	Average
1919	9.17	9.64	-	7.26	8.69
1920	13.51	13.02	-	17.14	14.56
1921	13.23	9.32	10.17	14.00	11.68
1922	13.50	12.24	15.85	18.41	15.00
1923	14.22	15.48	15.46	16.71	15.47
1924	13.40	13.21	11.77	13.57	12.99
1925	14.80	11.50	10.02	12.19	12.13
1926	10.16	10.82	7.64	11.60	10.05
1927	18.92	17.43	14.89	18.34	17.39
1928	11.53	11.05	9.02	12.53	11.03
1929	14.93	9.99	15.83	14.49	13.81
1930	12.76	10.44	11.15	14.60	12.24
1931	9.14	6.18	8.48	7.79	7.90
1932	16.80	12.97	13.46	15.47	14.67
1933	14.70	14.46	9.91	14.12	13.30
1934	4.83	5.93	3.73	6.92	5.35
1935	14.18	11.80	10.77	12.58	12.33
1936	9.19	9.21	6.10	9.29	8.45
1937	10.52	9.84	12.28	11.94	11.14
1938	12.54	16.77	13.69	16.53	14.88
1939	10.59	12.79	10.23	17.44	12.76
1940	14.98	14.81	14.14	17.29	15.30
1941	13.69	15.75	18.15	22.61	17.55
1942	19.21	17.75	15.59	15.98	17.13
1943	14.81	16.49	17.74	12.94	15.42
1944	15.67	15.35	19.69	15.24	16.49
1945	12.89	11.19	12.25	10.03	11.59
1946	15.71	17.48	17.69	17.26	17.03
1947	18.19	14.17	13.00	14.53	14.97
1948	14.26	14.73	14.64	15.23	14.71
1949	8.28	8.26	8.85	9.41	8.70
1950	17.94	19.93	12.09	12.18	15.53
1951	9.90	11.89	12.31	12.32	11.60
1952	8.37	10.68	8.77	6.67	8.62
1953	16.67	20.02	20.93	15.05	18.17
1954	12.97	14.52	11.30	9.13	11.98
1955	10.63	13.24	10.71	11.53	11.53
1956	11.46	12.16	8.05	9.41	10.27
1957	15.91	16.42	14.42	12.04	14.70
Period					
Average	13.18	13.05	12.45	13.38	13.01
Average Record					
Years	13.07	13.44	12.74	13.39	13.16
Record					
Years, No.	65	52	49	45	53
Elevation,					
MSL, ft.	2,091	1,971	2,362	2,757	2,295

Glendive and Savage are located on the Yellowstone River near the center of the area. Mildred and Plevna are upland stations in the Southern part of the area. These four stations are the only ones in the area for which records are readily available for 1919-1957.

Climatological Data, Montana Annual Summary, 1919-1957; U. S. Department of Commerce, Weather Bureau.

Plevna, may be considered to be representative of the entire area. They are two pairs of stations, each of which is similar in elevation and site. One pair, Glendive and Savage, are on the Yellowstone River; Mildred and Plevna are more than 800 feet higher on the upland plains. Table 2 shows the variation between these stations in similar and different sites in the same year as well as variations from year to year for the 37 year period. Average precipitation for each year is also given. Most of the precipitation in the area falls as rain during the growing season.

Thornwaite's classification of climates has been used to classify climates in the area from 1909 to 1939. This classification is based on precipitation effectiveness indexes which were computed from precipitation and temperature data. Annual precipitation effectiveness (P-E) indexes for the climatic types are 0-15 for arid, 16-31 for semiarid and 32-47 for dry subhumid. For crop seasons the precipitation effectiveness (P-E) indexes are 0-7 for arid, 8-15 for semiarid, 16-23 for dry subhumid and 24-31 for moist subhumid. In the years 1900 to 1939 climatic types in the area for the entire years were 7 percent arid, 63 percent semiarid and 30 percent dry subhumid. In the same years crop seasons were 7 percent arid, 38 percent semiarid, 40 percent dry subhumid and 15 percent moist subhumid.

Annual precipitation over a six year period, 1952-1957, at ten stations in the area is compared with the long time average amounts of precipitation at these stations in table 3. The average figures for the ten stations is also given. Deviations from the norm are shown as percentages of the long time averages for each station. The difference between the annual precipitation in the odd and even years, 1952-1957, at each station is shown in inches and as a percent of the long time average annual precipitation. The comparisons for 1952 and 1953 are interesting as these two years were considerably different in amounts of annual precipitation, 1953 being a year of unusually high precipitation and 1952 being an unusually dry year. This table further emphasizes the variation in the production potential for range forage and non-irrigated crops. Soil and site conditions on nearly all of the area are such that the amount and effectiveness of precipitation are usually the governing factors for the amount of production of both range forage and non-irrigated crops.

Table 3. -Comparisons of annual and long-time average amounts of precipitation for Lower Yellowstone Area Stations, Montana, 1952-1957

Station	1952		1953		Long Time Average Inches	Variation 1952-53	
	Precipitation Inches	Percent of Avg. Percent	Precipitation Inches	Percent of Avg. Percent		Total Variation Inches	Percent of Avg. Percent
Baker	7.72	58	17.12	129	13.31	9.40	71
Fairview	9.05	68	23.62	178	13.25	14.57	114
Glendive	8.37	64	16.67	128	13.07	8.30	64
Lindsay	9.78		18.47			8.69	
Mildred	8.77	69	20.93	164	12.74	12.16	95
Plevna	6.67	50	15.05	112	13.39	8.38	63
Savage	10.68	79	20.02	149	13.44	9.34	69
Sidney	8.46		16.15			7.69	
Terry	8.61		18.34			9.73	
Wibaux	8.50	55	15.49	100	15.52	6.99	45
Average	8.66	64	18.19	134	13.57	9.53	72
Station	1954		1955		Long Time Average Inches	Variation 1954-55	
	Precipitation Inches	Percent of Avg. Percent	Precipitation Inches	Percent of Avg. Percent		Total Variation Inches	Percent of Avg. Percent
Baker	11.78	89	15.20	114	13.31	3.42	26
Fairview	15.38	116	14.80	112	13.25	.58	4
Glendive	12.97	99	10.63	81	13.07	2.34	18
Lindsay	11.09		14.23			3.14	
Mildred	11.30	89	10.71	84	12.74	.59	5
Plevna	9.13	68	11.53	86	13.39	2.40	18
Savage	14.52	108	13.24	99	13.44	1.28	10
Sidney	13.66		13.14			.52	
Terry	10.45		10.64			.19	
Wibaux	17.69	114	9.39	61	15.52	8.30	53
Average	12.80	95	12.35	91	13.57	2.32	17
Station	1956		1957		Long Time Average Inches	Variation 1956-57	
	Precipitation Inches	Percent of Avg. Percent	Precipitation Inches	Percent of Avg. Percent		Total Variation Inches	Percent of Avg. Percent
Baker	9.63	72	13.49	101	13.31	3.86	29
Fairview					13.25		
Glendive	11.46	88	15.91	122	13.07	4.45	34
Lindsay	10.66		15.30			4.64	
Mildred	8.05	63	14.42	113	12.74	6.37	50
Plevna	9.41	70	12.04	90	13.39	2.63	20
Savage	12.16	90	16.42	122	13.44	4.26	32
Sidney	11.04		13.61			2.57	
Terry	8.35		11.37			3.02	
Wibaux	9.48	61	16.62	107	15.52	7.14	46
Average	10.03	74	14.35	106	13.57	4.33	32

Climatological Data, Montana Annual Summaries, for the calendar years 1952-57; U. S. Department of Commerce, Weather Bureau.

NATURAL RESOURCES

Most of the area is rangeland. Soil and slope conditions on much of the area permit use for non-irrigated farming. Irrigated land is restricted to the level bottom lands of the Yellowstone and a small area of low bench land. Other natural resources of the area are oil, gas, coal, the waters of the Yellowstone, fish and wildlife and the scenic badlands.

Rangelands

Rangelands of the area vary from undulating to steeply rolling silty, sandy and clay sites with considerable areas of badlands as shown on the Soils Map, figure 1. Vegetal cover varies considerably with sites, slopes, use and climate. The common vegetal cover is grass, big sagebrush dominating the aspect on only a minor part of the area. Principal range grasses are bluestem wheatgrass, blue grama, needleandthread, prairie junegrass, sandberg bluegrass and threadleaf sedge. Big sagebrush is the only shrub making up a major part of the composition on these rangelands. There is some silver and sand (fringed) sagebrush in parts of the area. Most of this rangeland requires four to five acres to supply an animal unit month of feed. Former farm lands, purchased by the Federal Government for conservation purposes during the drought and depression of the thirties, are now Land Utilization Project lands. Most of these lands are now covered with almost pure stands of bluestem wheatgrass and some have been seeded to crested wheatgrass. These lands produce good hay in years with good growing conditions. Two or three acres of this land supply an animal unit month of forage.

Parts of the river bottom land which are too wet or too rough to farm are used for grazing, with limited areas being cut for hay. These lands are covered with wheatgrasses, tall brome, Canada wild-rye and sweetclover. Cottonwoods and willows grow along the river banks, stream margins and on islands in the Yellowstone River. Thickets of willows, chokecherry, serviceberry, rose and silver sage occur on moist bottom lands of the river and on the larger streams. Saline areas, small in extent, are usually covered with inland saltgrass with some saltbush. Greasewood and buffaloberry are also found here. Ash and boxelder grow along the creeks in the eastern part of the area.

In the badlands vegetal cover is largely confined to the level tops or "tables" or to the intervening patches of level small bottoms between the breaks and the cliffs. Grasses of the plains extend into these areas, bluestem wheatgrass and blue grama being the dominant species.

Slopes and faces are generally steep to perpendicular with little or no vegetation. Big sagebrush and silver sagebrush grow on the more gentle slopes. There are a few juniper, skunkbush and rose here. Ten acres of badlands provide one animal unit month of range forage.

Most of the public domain is on sandy rolling to steeply rolling sites with a grass vegetal cover aspect. About six percent is in true badlands and considerable public domain is in near badlands. Land use capability classification of the public domain is 33,499 acres or 18 percent class VI; 148,219 acres or 78 percent class VII, and 8,389 acres or 4 percent class VIII. Recommended stocking rate for the class VI public domain land averages 3.8 acres per animal unit month; class VII, 5.4 acres per AUM, and for class VIII the figure is 17 acres. Class VI public domain land supplies 24 percent of the total AUMs; class VII furnishes 75 percent, and class VIII offers only one percent. Description and definitions of land use capability classes are given in appendix C. Each tract of public domain has been classified by land use capability as outlined in table 15.

Rangelands cover 3,443,823 acres or 75½ percent of the area. Wastelands, principally badlands, make up 25,272 acres or one-half of one percent of the area.

Forest Lands

Tree cover on the area is so limited that none of the area is considered to be forest lands. Timber use is restricted to fuel and fence posts. Cottonwood trees are frequent along the Yellowstone River and are also found along the margins of the principal streams. In the eastern part of the area ash and boxelder grow along the margins of the creeks.

Cropland

Irrigated Farm Lands

Irrigated farm lands cover 101,000 acres in the area, practically all being in the Yellowstone River Valley. This is two percent of the area. Most of the irrigable lands, 56,170 acres, is within the Lower Yellowstone irrigation project developed by the Bureau of Reclamation in 1905-1909. An additional 22,938 acres is in the Buffalo Rapids project of the Bureau of Reclamation, a recent development which was started in 1937. The Lower Yellowstone project is irrigated from a gravity main canal supplied from a diversion dam at Intake, midway between Savage and Glendive in

Montana. This project extends 72 miles down the Yellowstone River to its mouth on the Missouri River. About two-thirds of the project is in Montana and one-third is in North Dakota. The main canal and lands of the project are shown on the Land Ownership and Land Use Map of the area with this report.

Buffalo Rapids project, located near Terry, is supplied with water by pumping. Two pumping projects were developed by state authorities. Sidney project, 5,300 acres, was constructed by the Montana Water Conservation Board in 1938. Sioux project, 700 acres in extent, was designed by the North Dakota State Water Conservation Commission in 1939.

Two pumping projects have recently been completed and put into service in the area by the Bureau of Reclamation. Savage Unit, 2,215 acres, pumps water out of the Lower Yellowstone project main canal into a distribution canal 7.8 miles in length. This project commenced delivery of water in 1952. Intake project also pumps from the Lower Yellowstone main canal to serve 881 acres through 4 miles of canals. Completed in 1946, this project has two low lifts. Both of these recent improvements adjoin the Lower Yellowstone gravity project which was completed in 1909. The balance of the irrigable land, 12,796 acres, is in small private developments with simple diversions or pumps.

Additional pumping projects have been investigated by the Bureau of Reclamation. These potential projects have not been developed, partly because the land owners do not favor them. Construction of these projects would increase crop production, help to stabilize the livestock industry, and would promote the economy and general welfare of the area. Potential projects along the Yellowstone River in the area are as follows:

Units of MRB Project	Irrigable Area-Acres	Length of Main Canal - Miles
Cartwright	800	4
Colgate	1,300	5
Cracker Box	800	3
Elm Coulee	1,800	4
Haley	3,100	12
Mar sh	3,200	9
Seven Sisters	4,400	14
Sidney	1,800	9
Stipek	4,400	11
Total	21,600	71

Non-Irrigated Farm Lands

Non-irrigated farm lands make up 1,000,000 acres or 22 percent of the area. Most of this land is cropped every year, only about one-fourth being summer fallowed usually. In dry years the amount summer-fallowed will be greater. Much of the non-irrigated land is strip farmed with alternate strips of corn and wheat, these crops being rotated in the strips. Most of the crop land is west of the Yellowstone River. Land with gentle slopes, good soil depth and having suitable texture is utilized for crop land.

Amount and efficiency of precipitation is the limiting factor for crop production on the farm land. Low rainfall and low prices combined to make farming unprofitable in the dry "thirties". At this time 368,107 acres in the area were purchased by the Federal Government for conservation and relief purposes. Much of this was formerly farm land. This Federally owned land is now in Land Utilization projects and is called Land Utilization or LU land.

Potential crop lands in the area approximate 400,000 acres, 200,000 acres being former farm land now Federally acquired Land Utilization project land and 200,000 acres being privately owned land now used for range. Standards for crop lands may change in the future to alter this figure as influenced by changing conditions. At present one of the principal limiting factors for classifying land to be suitable for farming in the area is in size of the site. Farm land must be in fields of sufficient size and located so as to be an economic unit for large scale mechanized operation. Some fields and units which would not be truly economic for cash crop production are utilized in order to provide feed for the livestock of the operator. In these cases the need for hay or grain or the convenience involved becomes the ruling factor to operators whose enterprise is livestock.

Wildlife

Deer and antelope are numerous and are nearly always evident in the area. Deer are especially common in the badlands and along the Yellowstone River. Deer population of the area is estimated to be 22,000, 90 percent being blacktail deer and 10 percent are white tail deer. Pronghorn antelope are numerous on the plains and benches of the area. During the 1955 hunting season hunters were apparently able to get their limit of deer and antelope readily.

Upland game birds are quite common over most of the area. Sage grouse and sharp-tail grouse appear to be staging a good comeback, as many coveys were noted during the summer. A few coveys of Hungarian pheasants were seen on the first bench lands near the river. Ringneck or Chinese pheasants appear to be abundant in places, especially in the irrigated farm areas in Richland, Dawson and Prairie Counties.

Duck hunting is fairly good along the river sloughs and on some of the larger reservoirs. A few Mallards remain all winter in the Sidney area to nest the next spring. Fox Lake in Sections 4, 5, 8 and 9, T. 22 N., R. 55 E., has in the past been an excellent duck hunting area, but the last few years the water has been so low that many ducks have been killed by the brash water. This lake should probably either be raised or drained. The Great Northern Railway crosses this lake and it could not be raised or drained without their permission and then could only be raised about three feet. The Montana Fish and Game Department owns 520 acres in and adjacent to the lake and there are 160 acres of unreserved public domain that are nearly all under water. At the time of examination, vegetation could be seen over most of the lake area. Most of the water was not over two feet deep.

Cottontail rabbits and jack rabbits are quite plentiful all over the area. Fur bearing animals are not plentiful, except skunks and racoons. There are some bob and lynx cats in the badlands area, and a few beaver and mink along the river and the larger streams.

There is fair fishing along the Yellowstone River and one can observe the Issac Walton followers fishing all the way from Miles City to the Missouri River. The favorite spot in this area is below Glendive at Intake where the Reclamation Service has a low diversion dam. Pike, perch, catfish, sturgeon and occasionally trout are taken in the Yellowstone. Some of the larger reservoirs in the area have been stocked with breem and small mouth bass.

Minerals

The mineral resources of present economic importance within the Lower Yellowstone Basin include only oil and gas. Some interest has developed in possible uraniferous lignite deposits, particularly in the southeast portion of the area.

The relation of the mineral resources to the management and disposal activities on the public domain within this area can best be correlated on the basis of locatable and leasable minerals.

Locatable Minerals

Uraniferous lignite is a locatable mineral under Public Law 357, which provides for the exploration and exploitation, under the mining laws, of uraniferous coal deposits. However, while extensive beds of lignite, which is generally a leasable mineral, underlay the area except along the crest of the Cedar Creek anticline; the only activity to be expected under Public Law 357 will most likely be in the areas adjacent to the Ollie-Carlyle, Long Pine and Ekalaka Hills districts of the Little Missouri River Basin to the southeast. Those areas of Townships 9, 10 and 11 North, Range 59 West in which the Fort Union formation outcrops and which are underlaid by lignite beds should be considered as probable conflict areas as a result of uranium staking activities.

The Lower Yellowstone River Basin contains no known evidence of igneous activity or any relation to a metallogenetic province. Consequently, no metalliferous ore deposits are known in the area. The area has been affected only mildly by diastrophism as evidenced by the Cedar Creek anticline, which trends southeast from the vicinity of Glendive; and the Williston Basin, the western flanks of which are located in the northeast portion of the area.

Mineral production in the past has consisted primarily of sand, gravel, scoria and clay, all of which now come under the common varieties provision of Public Law 167 and are no longer locatable. Demand for sale of these materials will probably remain minor and desultory.

Leasable Minerals

The only leasable minerals of any importance are oil and gas. During 1957, eighty new wells were completed in the area, including 73 oil producers, 1 oil and gas producer and 6 abandoned wells. Of the 74 producing wells, only one was a new discovery which extended the Pennel field to the southeast.

Because a market is essentially non-existent, lignite presently has only a potential value even though the reserves are tremendous. At the present time only a very minor amount of lignite is mined for local consumption.

The comparative importance of the leasable minerals in the Lower Yellowstone River Basin is shown by the receipts of the Bureau of Land Management from royalties and rentals under the Mineral Leasing Acts. The receipts include rental and production income from public domain minerals and minerals in acquired lands. The following table, computed to include approximately only those lands of each county within the Lower Yellowstone Basin, shows the receipts by counties for the calendar year 1957:

State & County	Producing Oil & Gas Royalties	Non-Producing Oil & Gas Rentals	Coal & Other	Totals
Montana				
Richland	\$ 0.00	\$ 17,982.00	\$644.38	\$ 18,626.38
Dawson	105,113.00	31,055.00	0.00	136,168.00
Prairie	19,563.00	20,502.00	0.00	40,065.00
Wibaux	460,906.00	6,127.00	0.00	467,033.00
McCone	0.00	232.00	0.00	232.00
Fallon	345,431.00	39,692.00	0.00	385,123.00
Custer	0.00	5,834.00	0.00	5,834.00
Carter	409.00	6,372.00	0.00	6,781.00
Total	\$931,422.00	\$127,796.00	\$644.38	\$1,059,862.38
North Dakota				
McKenzie	\$12,581.00	\$14,694.00	\$ 0.00	\$27,275.00
Golden Valley	0.00	499.00	0.00	499.00
Total	\$12,581.00	\$15,193.00	\$ 0.00	\$27,774.00
Area Total	\$944,003.00	\$142,989.00	\$644.38	\$1,087,636.38
Increase or Decrease over 1956	+64.41%	+104.84%	-18.46%	+68.68%

Disposal and management activities within the basin are not likely to be materially affected by mineral development with the exception of minor conflicts resulting from the location of uraniferous lignite claims. Only minor demands are apt to be made for the common varieties of sand, gravel, stone, scoria, clay, etc. Due to adequate classification for the leasable minerals by the United States Geological Survey, no foreseeable land use or disposal problems are indicated.

Water

Yellowstone River is the only live flowing stream in the area. Local tributary drainages are intermittent streams. The larger creeks have occasional pot holes which usually provide livestock water nearly all of the year. There are some scattered springs in the badlands and along the creeks.

Yellowstone River is 671 miles in length, draining an area of 70,400 square miles. It originates in Yellowstone Lake, high in the Rockies of Wyoming in Yellowstone National Park. This is the largest natural lake at the source of any of the rivers west of the Mississippi in the United States. Several tributaries of the Yellowstone also rise at high elevations in the Rocky Mountains. Numerous small reservoirs have been constructed on parts of the drainage to supplement natural flows for irrigation. Boysen Reservoir on the Wind River, which is the upper part of the Bighorn River, is the only reservoir large enough to have any stabilizing effect on the lower reaches of the Yellowstone. Stream flow stabilization effect of this reservoir is virtually all utilized on the large area of irrigated land downstream from the reservoir within the Bighorn River Drainage. It also offers little protection against flood as it only stores the Wind River drainage, which is eleven percent of the Yellowstone drainage area.

When Yellowtail Dam is constructed in Bighorn Canyon in Montana, flow of the Bighorn River will be stored and stabilized much closer to the Yellowstone River and will be of some benefit to the Lower Yellowstone Area. The dam in Bighorn Canyon will regulate the flow of 28 percent of the Yellowstone River Basin. Drainage for this dam includes high mountains with large amounts of run-off and desert areas with little production. This drainage area is considered in the Wind River and Bighorn Basin reports of the Bureau of Land Management.

Low stream flows or increase in use of upstream flows will reduce flows within the Lower Yellowstone area so as to interfere with the operation of irrigation pumps. Development of additional irrigated land may not be feasible unless there is additional storage on or near the main stream of the Yellowstone River. Absaroka dam and reservoir are being investigated to provide storage for the further development of irrigated lands in the Yellowstone River Valley. In addition to providing a stabilized flow ample for all uses, this dam would also provide water of improved quality for downstream use. Although this dam would store water from only five percent of the Yellowstone drainage, it is a mountain area with high water yield and a heavy annual snow melt which can be

stored for later irrigation season use at a time when normal flow of the stream is relatively low. Absaroka Dam is located on the main stream of the Yellowstone near Livingston, Montana. This dam will also be valuable for controlling floods which periodically threaten the Yellowstone Valley. It has been proposed to store 892,000 acre-feet of water and produce 30,000 kilowatts of firm power.

Lower Yellowstone Area is 7,141 square miles in extent, representing ten percent of the drainage area of the entire Yellowstone River Basin. Drainage above the area is 63,259 square miles or ninety percent. The intermittent streams of the Lower Yellowstone Area provide relatively little run-off to the flow of the Yellowstone River. Precipitation in the area is low. Tributary streams flow large amounts only at times of heavy rainfall or following snow melt. Run-off from Glendive Creek has been so high as to cause considerable flood damage to property in Glendive. Ice jams and stage flow variations as high as twenty feet cause flooding in the lower reaches of the Yellowstone River. Largest tributary stream in the Lower Yellowstone Area is O'Fallon Creek, 112 miles long, with 1,562 square miles of drainage area. Cabin Creek is 58 miles in length, draining 460 square miles. Deer Creek, 35 miles long, drains 187 square miles.

Stream flow measurements by the Geological Survey are available for four gaging stations on the Lower Yellowstone River. These discharge records are shown in table 4.

Table 4. - Stream flows, Lower Yellowstone River, Montana, record years to 1954.

Gaging Station Location	Drainage Area	Area Irrigated	Max. Flow	Min. Flow	Average Annual Flow	Record Period Years
	sq. mi.	acres	cfs	cfs	ac. ft.	
Miles City State Highway 22	48,436	1,100,000	96,300	996	7,804,000	25
Glendive	66,943		107,000	1,060	8,113,983	4
Intake	67,901		159,000	1,200	10,736,539	21
Sidney 7 miles south	69,450	1,250,000	138,000	860	8,586,000	20

USGS Water Supply Paper #1389, Surface Water Supply of Missouri River Basin above Sioux City, Iowa, 1954; published 1956. Additional water use in the upper basin or low flow periods may cause water shortages in the Lower Yellowstone River unless upstream storage is developed. Low flows will particularly affect irrigated areas that are dependent upon pumping.

HISTORY OF RESOURCE USE

Explorers, Trappers and Traders

The Lower Yellowstone River and Valley have always been a travel route, both north to south and east to west. Originally used by buffalo and Indians, then by explorers, trappers and traders in canoes, on through the steamboat and the freight route to the railroad, the highway and the skyway. River steamers used the Yellowstone upstream to the site of Billings, Montana.

William Clark, of the Lewis and Clark exploring expedition, returned eastward down the Yellowstone in 1806. The first fur trading post in Montana was established a year later, in 1807, at the mouth of the Bighorn River in the Yellowstone Valley, 130 miles upstream from this area. This was Fort Manuel Lisa, the first building in Montana. Also known as Manuel's Fort, it was built by a St. Louis fur trader to trade with the Crow Indians and as headquarters for trapping brigades. John Colter left here to discover the then unbelieved geysers, hot springs and boiling mud pots of what is now Yellowstone National Park. Hostility of the Blackfeet Indians caused abandonment of the fort in 1811, and it was totally destroyed by 1812. Later trading posts built here were headquarters for trappers who explored present Wyoming. Fort Van Buren was built near here in 1835 by the American Fur Company, and served as a frontier post until 1843.

Fort Henry was established at the mouth of the Yellowstone River in 1822 by William H. Ashley as a fur trading post. The site was abandoned in 1823 until Fort Union was built in 1829. Two fur trading posts preceded Fort Buford, located a few miles east of Fort Union. Fort William was there 1833-1834, and Fort Mortimer served trade and trappers from 1842 until 1845.

Fort Union, king of the trading forts, was built on the north side of the Missouri River, at the mouth of the Yellowstone, in 1829, for the American Fur Company. Built to trade with the Assiniboine Indians and as a central depot for scattered outposts, it was not completed until 1834. It continued until 1867 when it was purchased by the Federal Government, wrecked, and the materials were used to complete Fort Buford, two miles down the Missouri. Fort Union was the best in the west with towered blockhouses 24 feet square, with embrasures for cannon and ramparts behind log stockades. In the fort were log houses, stores, accommodations for 150 horses and a powder magazine of 50,000 pounds capacity.

Military Posts

Fort Buford was a military outpost built on the Missouri River near the mouth of the Yellowstone in 1866. Built by the 13th U. S. Infantry, this fort served as an infantry and cavalry frontier post until 1895. These early forts served not only as protective centers, but they were also the only law in the early days. They also served as communication, emergency, supply, transportation, health, governmental and social centers during their existence. All the Army forts were connected by military roads. These roads became freight routes to supplement the river steamers prior to the building of the railroads.

After the Custer Massacre on the Little Bighorn in July 1876, Fort Custer was built at the mouth of the Little Bighorn in Bighorn River Valley. General Miles arrived at the mouth of the Tongue River in August 1876 with orders to compel the Sioux and Cheyenne Indians to return to their reservations. Fort Keogh was built here in 1877. General Miles commanded it until 1880, when all the buffalo had been killed and many of the Indians had died. This fort was an Army post until 1900 and continued as a remount station for the cavalry until 1924. Buildings and land of the old fort are now used by the Bureau of Animal Industry and the Forest Service of the Department of Agriculture for the U. S. Livestock Experiment Station. Livestock breeding and feeding work and range utilization studies are carried on here. This fort was located 30 miles up the Yellowstone River Valley from the area. Fort Keogh and Fort Buford, at the mouth of the Yellowstone River, protected and administered the area until 1895.

Last of the great buffalo hunts occurred in the area in the early 1870's. Robe hunters brought in one million hides in a season. This wasteful slaughter was carried on in the winter, the hunters spending their summers cutting wood for river steamers. The Indians rebelled at this wanton destruction of their food supply. Sioux, Crow and Blackfoot Indians hunted and trapped in the area. Trading and trapping continued to be the principal and almost exclusive industry until 1880.

Settlement and Development

The Northern Pacific Railroad came into the area from the east in 1881 and built on westward up the Yellowstone River Valley. Construction of the military forts and building of the railroad enabled cattlemen to enter the area. First cattle came into eastern Montana from western Montana, where cattle had been introduced from Oregon in 1856. Early in the 1880's trail herds came up the Powder River trail from Texas and Kansas. These cattle thrived on the open range until the severe winter

of 1886-1887. More than half of the cattle perished in that winter. Carcasses were thick in the badlands where the cattle had gone for protection. Many deer and antelope perished with the cattle. After this, stockmen began to settle in the area and commenced to put up hay and care for their stock in the winter. Most of the trail riders were Texans. These men largely settled the area and many of the present inhabitants are their descendants.

First settlers were "squatters" who lived near the frontier military forts. Settlement spread from the forts along the Yellowstone River and on the military roads between the forts. Settlers came into the area ahead of the Northern Pacific Railroad. Practically all of the land suitable for cultivation was homesteaded and plowed in the period from 1907 to 1917. This was the era of the "dry land movement" that brought settlers to eastern Montana and the western Dakotas. Most of this land was farmed with horse equipment in small units with fair to good success until the dry year of 1919. Many dry farmers left the area in this drought period. In the twenties operating units increased in size and the use of power equipment increased.

Production of hay for range livestock and cavalry horses led to farming, both irrigation and dry farming. Low production and virtual failure of hay production in dry years, except on the most favorably situated sites, led to the practice of irrigation. Simple diversions from temporary streams in the area provided for the early irrigated areas. Livestock operators purchased hay meadows and water holes or homesteaded these sites.

Irrigation developed slowly in the area, principally because the practice is not essential to the production of most crops that had been grown there. The precipitation is usually ample for satisfactory yields of grain and wild hay which were almost the sole crops produced prior to the development of the irrigation projects. Simple diversions to spread water on hay meadows were the first irrigation developments. Surveys for the 56,170 acre Lower Yellowstone irrigation project were made soon after Congress passed the Reclamation Act of 1902. Construction started in 1905 and water was available in 1909. Ditches and structures were built by horse and man power. Large crews supported camps and pioneer towns that have vanished along with the slip, the fresno and the dump wagons that built the project.

Several years elapsed before irrigation was generally used on the project. Planting of alfalfa and promotion of sugar beet acreage brought about complete irrigation of project lands which has since been

an accepted practice in the area. Holly Sugar Company built a beet sugar factory at Sidney in 1925. Buffalo Rapids irrigation project added 22,938 irrigable acres to the area in 1939. Several smaller state and private projects were developed prior to 1939.

The Chicago, Milwaukee, St. Paul and Pacific Railroad was built across the area along O'Fallon Creek from Baker to Terry in 1908. Branch lines of the Northern Pacific Railway were built from Glendive to Sidney in 1912 and to Circle in 1928. The Great Northern Railway built southward from its main line north of the area into Sidney in 1913. A branch line was built westward from Sidney to Richey in 1916. Another branch line was built eastward from Fairview across the Yellowstone River to Watford City, North Dakota in 1914. These railroad lines promoted settlement and more intensive utilization and development of the area. Their service greatly enlarged the area suitable for wheat production by making economic shipment feasible.

Drought was prevalent in the area in the thirties, 1934 being the year of the lowest precipitation. Depression conditions caused low prices and the drought brought poor crops, short feed on the ranges and dry water holes. Livestock died, soil blew away and people left the ranges and non-irrigated lands. Range and dry-farmed land reverted to mortgage holders and to the counties for taxes. At this time the Federal Government purchased 368,107 acres in the area under the Bankhead-Jones Act. Much of this was former farm land which had been abandoned by the operators. Purchased range land had been in units which were submarginal in size and were in poor condition. After purchase, this Federal land was operated under conservation practices and management. Crested wheat grass was sown on much of the former farm land. Range units were redesigned to be economic units which could be operated with good conservation management. Land management and conservation practices were conducted on organized districts named Land Utilization Projects. The Federally acquired land in these projects is called Land Utilization (LU) land.

Precipitation and prices started to increase in the late "thirties" and early "forties". Dry lands in the area were resold to operators of larger units. Use of tractors and combines increased on the dry land farms. Equipment increased in size and cost, encouraging the formation of still larger units. Mechanization spread to livestock and irrigated land operations with the pick up, the jeep, the power mower, power rakes and stackers, tractors, trucks and beet harvesters. Larger units also developed on the range and in the irrigated areas.

Bureau of Land Management History in the Area

Land along the Yellowstone River was entered and patented under the Homestead Act and the Desert Land Act. During the settlement and breaking of the tillable parts of the area in 1907-1917, patents were also obtained under the Enlarged Homestead Act and the Stockraising Homestead Act. Four land offices served settlers in the area at various times; Helena, Miles City, Glasgow and Billings, all in Montana.

Cadastral surveys to sectionize the area were made from 1881 until 1909. The Montana-North Dakota State Line was surveyed in 1885, Townships along the Yellowstone River were surveyed in 1881-1883, and some of the adjacent townships were also surveyed then. Townships above the Yellowstone River were surveyed in the period from 1899 to 1909. Townships in North Dakota were surveyed during 1901-1903. Farm units within the Lower Yellowstone irrigation project were surveyed when the project was developed in 1906-1908.

Resurveys of much of the old 1881-1885 surveys along the Yellowstone River were made in 1937-1948. Original monuments had been cottonwood posts in many instances and most of the monumentation was obliterated. Many of the old rock monuments on the older surveys have disintegrated or have been lost by cultivation in the farmed areas, so there are considerable areas where resurveys are needed.

Most of the area is within Montana Grazing Districts 2 and 3 as shown on the Location Map of Lower Yellowstone Area on the Land Ownership and Land Use Map of the area with this report. Montana Grazing District 3 was one of the first grazing districts formed under the Taylor Grazing Act, having been organized April 8, 1935. Montana Grazing District 2 was established soon after, on July 11, 1935. The office of these two districts is located at Miles City, Montana. All public domain lands in the area and all other functions of the Bureau of Land Management in the area are administered from this office under the direction of the District Manager, Horace E. Jones.

AREA ECONOMY

Economy of the area is based on its natural resources and transportation. Range and cropland produce livestock, wheat, corn, alfalfa, sugar beets, barley, beans, oats and miscellaneous crops. Oil and gas production and transportation are an important segment of the economy. Some coal is produced, and it may become an important product in the future. Holly Sugar Company has a 2,200 ton per day capacity plant at Sidney, which processes sugar beets grown in the area and elsewhere. Water from the Yellowstone and from some of the tributary local drainages is used to produce irrigated crops in the area.

Transportation

The Northern Pacific Railroad, "Main Street of the Northwest", provides transcontinental freight and passenger service in the area. Their division headquarters at Glendive with offices, shops and round-houses are an important segment of the economy. The main line enters the area from Wibaux on the east and proceeds up the Yellowstone Valley westward. A branch line extends west from Glendive to Circle and another goes northward along the Yellowstone to Sidney where it connects with a branch of the Great Northern Railway, as shown on the map of the area with this report. Great Northern Railway has two other branch lines in the area, one westward from Sidney to Richey and Brockway and the other eastward from Fairview to Watford City. Main line of the Milwaukee Road (Chicago, Milwaukee, St. Paul and Pacific Railroad) crosses the southern part of the area along O'Fallon Creek. All of these rail lines facilitate the shipment of products, especially grain, livestock and sugar, from the area to markets all over the United States and for export. These lines service grain elevators at many points in the area. In addition to providing a market and storage for grain, many of the elevators also supply seed, feed, fertilizer and other farm supplies. Sugar beets are shipped from a number of dumps on these rail lines.

Two transcontinental highways cross the area. Highway 10 traverses the Yellowstone Valley from the west to Glendive where it turns eastward toward Wibaux. Highway 12 crosses the southern part of the area through Baker. Glendive, Fallon and Terry profit from traffic on highway 10. Baker provides services for travelers on highway 12. Montana State Highway 16 is a main paved route northward down the Yellowstone Valley to Sidney where it leaves the valley to go northward to U. S. Highway 2 and Canada. Paved state routes leave Sidney northward to Fairview and to Nohly on the Missouri River and eastward to Watford City in North Dakota. Paved state routes also go east and west

from Fairview. State Highway 18 leaves Glendive westward to Circle and to connections with U. S. 18 and State 13. State 23 connects Sidney with Richey on the west. A hard-surfaced road extends northwest from Terry to Brockway on State 18. County roads service farms and ranches throughout the area, providing routes that are traversable under all but the most adverse conditions. National bus lines operate on the U. S. highways and most of the state routes. Truck freight lines operate on all of the highways.

Frontier Airlines provides daily flights to Glendive and Sidney on their Billings-Williston-Bismarck route. These flights connect at Billings with national routes and with their own south bound flights. One of the few east-west airways crosses the southern part of the area at Mildred between Miles City and Dickinson. There is one beacon on this airway in the area. Aerodromes with facilities are located at Baker, Fallon, Glendive, Sidney and Terry. A small private field is located at Mayer's Ranch on the southern tip of the area.

Utilities

Electric power in the area is furnished from the Fort Peck power plant by the Bureau of Reclamation lines. Montana-Dakota Utilities distributes power to the cities and towns and to much of the rural part of the area. Rural Electric Administration Cooperatives service parts of the area. Thermal plants at Glendive, 7,000 kilowatts steam, and at Baker, 1,000 kilowatts internal combustion, are now virtually stand-by plants with the advent of low-cost hydroelectric power from Fort Peck and Garrison power plants. Natural gas is supplied to cities and towns in the area from the Baker field by pipe lines of the Montana-Dakota Utilities Company. Telephone service is available in the cities and towns and in most of the rural areas. There are two radio broadcasting stations in the area, KXGN at Glendive and KGCX, a 5,000 watt station, at Sidney.

Agriculture

Agriculture is the basic economic surface resource use of the area, 4,544,823 acres being used for grazing and farming. This is over 99 percent of the area. Grazing accounts for the use of 3,443,823 acres; crops are produced on 1,101,000 acres of farm land. Irrigated crops are produced on 101,000 acres; non-irrigated farmlands cover 1,000,000 acres in the area. Climate, especially the amount of precipitation, is very important in determining production potential on the 4,443,823 acres of grazing and non-irrigated farm lands, which is 97 percent of the area. Variations in annual precipitation among four stations in the area over a

39 year period are shown in table 2. Comparisons of the amount of annual precipitation, with long-time average amounts for ten stations in the area over a six year period, are presented in table 3. Effects of these variations on yields, areas harvested and returns are shown in figure 4 and in tables 5 to 10.

The combined area of the five Lower Yellowstone area counties of Dawson, Fallon, Prairie, Richland and Wibaux in Montana has been utilized for crop data in this report. This combined area is representative of the entire Lower Yellowstone River Basin. Cash receipts of all farms in these five counties totaled \$28,802,900 in 1953. Amount of cash receipts of all farms by the five counties, with type of receipts, receipts per farm and number of farms, for the four years 1952-1955, are shown in table 5.

Harvested area and value of all crops produced, both on irrigated and non-irrigated land in the five counties, are given in table 6. Values per acre are also presented in this tabulation for the four years, 1952-1955. Comparison of returns from irrigated and non-irrigated farmland shows that irrigated land returned 4.17 times as much per acre compared with non-irrigated in 1952. This ratio fell to 2.12 in the "wet" year of 1953. It became 2.92 in 1954 and 2.48 in 1955. Average returns per acre varied from \$14.91 to \$26.91 on the non-irrigated lands. These returns compare with \$53.06 to \$66.84 per acre from irrigated land for the four years. Returns per acre from non-irrigated lands ranged from 55 to 100 percent in the four years on this basis, while returns per acre from irrigated lands varied only from 79 to 100 percent. Total value of crop production on irrigated land was maximum in 1952. In that year it was minimum on the non-irrigated farm land, being only fifty percent of the value of the maximum year, 1953. Range in value of crop production in the four-year period was 84 to 100 percent on the irrigated farmlands. These data indicate the value and stability of returns from irrigated farmlands as compared with non-irrigated.

Relative economic importance of fifteen crops in the area is shown in table 7. Area planted, area harvested, production and value are given. Yields per acre are shown for both irrigated and non-irrigated lands for 1952 and 1953. These two years are sharply contrasting, 1952 being a dry year, while 1953 had heavy precipitation. Wheat is the leading crop in the five county area both by value and area utilized. Hay is second in importance, followed by corn. Sugar beets are fourth in value but occupy less than one percent of the cultivated area. Barley and oats are the only other crops producing over two percent of the total annual crop value.

Table 5. - Cash receipts of farms in five Lower Yellowstone Area counties, Montana, 1952 - 1955

County & Year	Crops	Livestock & Livestock Products	Total From Marketings	Government 1/ Payments	Total Cash Receipts	Cash Receipts Per Farm	No. of Farms
Dawson '52	2,739,500	3,444,200	6,138,700	112,200	6,295,900	7,919	795
Dawson '53	6,600,100	2,284,300	8,884,400	100,100	8,984,500	11,301	795
Dawson '54	5,360,900	2,485,400	7,846,300	90,400	7,936,700	10,917	727
Dawson '55	4,486,100	2,915,400	7,401,500	78,800	7,480,300	10,404	719
Fallon '52	1,548,700	2,901,900	4,450,600	47,700	4,498,300	10,365	434
Fallon '53	2,630,700	1,503,700	4,139,400	38,100	4,177,500	9,626	434
Fallon '54	2,482,100	1,631,900	4,114,000	36,200	4,150,200	10,197	407
Fallon '55	2,328,500	1,906,900	4,235,400	32,300	4,267,700	10,616	402
Prairie '52	590,000	2,314,400	2,904,400	63,800	2,968,200	10,993	270
Prairie '53	1,286,900	1,488,300	2,775,200	64,200	2,839,400	10,516	270
Prairie '54	1,391,500	1,517,800	2,909,300	60,800	2,970,100	10,879	273
Prairie '55	1,370,300	1,747,300	3,117,600	60,900	3,178,500	11,772	270
Richland '52	5,061,800	3,321,000	8,382,800	361,200	8,744,000	7,835	1,109
Richland '53	7,544,700	2,188,000	9,732,700	276,600	10,009,300	9,026	1,109
Richland '54	6,392,100	3,242,300	9,634,400	268,300	9,902,700	9,316	1,063
Richland '55	6,531,000	3,646,200	10,177,200	301,200	10,478,400	9,970	1,051
Wibaux '52	1,034,400	1,559,400	2,593,800	34,300	2,628,100	8,239	319
Wibaux '53	1,794,300	961,600	2,755,900	36,300	2,792,200	8,753	319
Wibaux '54	2,007,700	933,500	2,941,200	29,200	2,970,400	9,676	307
Wibaux '55	1,822,100	1,387,900	3,210,000	18,600	3,228,600	10,620	304
Total '52	10,974,400	13,540,900	24,470,300	619,200	25,134,500	8,587	2,927
Total '53	19,856,700	8,430,900	28,287,600	515,300	28,802,900	9,840	2,927
Total '54	17,634,300	9,810,900	27,445,200	484,900	27,930,100	10,058	2,777
Total '55	16,538,000	11,603,700	28,141,700	491,800	28,633,500	10,427	2,746

1/ Government payments do not include price supports and quotas, which are foundations for most of the return, as wheat and sugar beets are principal crops.

Compiled from Montana Agricultural Statistics, Montana Department of Agriculture and USDA, Helena, Montana, Dec. 1954 & 1956. Crop receipts are favored in comparison with livestock receipts in 1953 as that was an unusually favorable year for both crop production and price, and livestock prices were relatively low.

Table 6.-Area and value of all crops, irrigated and non-irrigated, in five Lower Yellowstone Area Counties, Montana, 1952 to 1955

County & Year	NON IRRIGATED										TOTAL				
	IRRIGATED										Value of Crop Production	Area Harvested Acres	Value per Acre Dollars	Value of Crop Production	Value per Acre Dollars
	Area Harvested Acres	Value of Crop Production	Value per Acre Dollars	Area Harvested Acres	Value of Crop Production	Value per Acre Dollars	Area Harvested Acres	Value of Crop Production	Value per Acre Dollars						
Dawson '52	14,230	\$ 794,200	55.81	255,540	\$ 3,507,400	13.73	269,770	\$ 4,301,600	15.95						
Dawson '53	13,880	690,100	49.72	322,110	8,884,500	27.58	335,990	9,574,600	28.50						
Dawson '54	14,700	828,800	56.38	259,890	4,648,900	17.89	274,590	5,477,700	19.95						
Dawson '55	14,110	845,600	59.93	258,890	6,765,900	26.13	273,000	7,611,500	27.88						
Fallon '52	3,120	88,800	28.46	187,030	2,618,400	14.00	190,150	2,707,200	14.24						
Fallon '53	1,510	41,100	27.22	220,800	4,576,600	20.73	222,310	4,617,700	20.77						
Fallon '54	200	5,000	28.00	179,470	3,167,800	17.65	179,670	3,172,800	17.66						
Fallon '55	400	9,600	24.00	177,870	4,095,500	23.03	178,270	4,105,100	23.03						
Prairie '52	10,740	551,600	51.36	49,630	699,600	14.10	60,370	1,251,200	20.73						
Prairie '53	12,130	569,800	46.97	76,920	1,591,500	20.69	89,050	2,161,300	24.27						
Prairie '54	10,240	524,400	51.21	69,420	1,478,500	21.30	79,660	2,002,900	25.14						
Prairie '55	7,390	469,200	63.49	68,210	1,751,400	25.68	75,600	2,220,600	29.37						
Richland '52	47,920	3,298,900	68.84	286,640	4,586,900	16.00	334,560	7,885,800	23.57						
Richland '53	47,970	2,717,900	56.66	300,620	8,495,700	28.26	348,590	11,213,600	32.17						
Richland '54	47,020	2,604,100	55.38	262,350	4,761,200	18.15	309,370	7,365,300	23.81						
Richland '55	41,370	2,912,100	70.39	281,900	8,688,500	30.82	323,270	11,600,600	35.89						
Wibaux '52	200	8,400	42.00	120,960	2,008,000	16.60	121,160	2,016,400	16.64						
Wibaux '53	400	8,200	20.50	144,370	3,117,100	21.59	144,770	3,125,300	21.59						
Wibaux '54	100	3,600	36.00	121,700	2,749,600	22.59	121,800	2,753,200	22.60						
Wibaux '55	200	5,900	29.50	111,850	2,880,300	25.75	112,050	2,886,200	25.76						
Total '52	76,210	4,741,900	62.22	899,800	13,420,300	14.91	976,010	18,162,200	18.61						
Total '53	75,890	4,027,100	53.06	1,064,820	26,665,400	25.04	1,140,710	30,692,500	26.91						
Total '54	72,260	3,965,900	54.88	892,830	16,806,000	18.82	965,090	20,771,900	21.52						
Total '55	63,470	4,242,400	66.84	898,720	24,181,600	26.91	962,190	28,424,000	29.54						

Data presented above was compiled from Montana Agricultural Statistics, Montana Department of Agriculture and USDA, Helena, Montana, Dec. 1954 & 1956. The crop year of 1953 was favorable for non-irrigated production, so comparisons with irrigated will favor non-irrigated more than an average or norm. Wheat was produced on 62.8% of the non-irrigated crop land. The 1953 figures present a potential for the immediate future, rather than an average, as both prices and conditions were good to excellent for "dry" farming in 1953. Figures for 1952 are more representative of average production and returns at current prices. Note variations both from county to county and between years.

Table 7. - Combined crop statistics for five Lower Yellowstone Area Counties; Dawson, Fallon, Prairie, Richland and Wibaux, Montana, 1952 and 1953

Crop - Year	Area				Relative Importance		Yield			Yield			Irrigated			Non-Irrigated		
	Planted Acres	Harvested Acres	Area Harvested	Area	Harvested Percent	Value	Per Planted Acre	Per Harvested Acre	Unit of Yield	Production Units	Crop Value Dollars	Area Harvested Acres	Yield Per Harvested Acre	Area Harvested Acres	Yield Per Harvested Acre	Area Harvested Acres	Yield Per Harvested Acre	
																		Planted Acres
Corn '52	89,000	82,000	8,39	9.07	10.7	11.70	bu.	953,300	1,629,900	6,500	35.50	75,500	9.71					
'53	93,900	91,400	8.01	8.67	19.1	19.60	bu.	1,194,500	2,655,700	7,300	42.80	84,100	17.52					
Oats '52	78,500	35,300	3.61	3.74	11.0	24.40	bu.	862,000	672,700	10,500	49.80	24,800	13.57					
'53	71,000	51,400	4.51	3.43	24.2	33.40	bu.	1,718,400	1,054,600	10,300	52.00	41,100	22.73					
Barley '52	33,500	25,500	2.62	2.09	8.8	13.20	bu.	338,000	375,300	3,800	32.20	21,800	9.89					
'53	42,300	40,700	3.57	2.72	20.5	21.50	bu.	876,100	835,700	4,900	29.40	35,800	20.19					
Flaxseed '52	3,400	2,600	.27	.29	4.3	5.60	bu.	14,500	51,300	500	14.20	18,000	9.24					
'53	13,900	18,500	1.62	1.87	9.2	9.40	bu.	173,400	575,900	500	14.20	18,000	9.24					
Potatoes '52	490	450	.05	.74	121.8	129.80	bu.	59,700	133,100	260	186.00	200	56.50					
'53	610	590	.05	.37	129.7	134.10	bu.	79,100	114,000	320	185.90	270	72.59					
All hay '52		243,300	24.91	30.93		.83	ton	201,300	5,557,200	31,300	2.00	212,000	.55					
'53		252,800	22.16	12.95		.96	ton	243,800	3,981,200	29,300	2.00	223,500	.83					
Alfalfa hay '52		33,500	3.43	10.46		1.75	ton	58,700	1,878,400	20,000	2.40	13,500	.74					
'53		44,300	3.89	5.09		1.86	ton	82,300	1,553,700	23,900	2.20	20,400	1.45					
Wild hay '52		81,300	8.32	5.45		.46	ton	37,650	979,150	5,000	.80	76,300	.44					
'53		125,800	11.12	4.95		.67	ton	84,640	1,523,520	2,500	1.00	124,300	.55					
Alfalfa seed '52		3,100	.32	.47		80.00	lb.	248,000	83,600	1,000	110.00	2,100	65.71					
'53		3,600	.32	.17		68.30	lb.	246,000	53,100	1,000	93.00	2,600	58.85					
Crested wheat-grass seed '52		400	.04	.05		65.00	lb.	26,000	9,100			400	65.00					
'53		2,250	.20	.09		60.40	lb.	136,000	26,300			2,250	60.44					
Rye '52		2,700	.04	.02		5.80	bu.	2,300	3,500	50	20.00	350	3.71					
'53		1,500	.05	.03		16.30	bu.	9,800	9,900	150	22.00	450	14.44					
Beans '52		400	.04	.14		8.50	cwt.	3,400	25,000	400	8.50							
'53		900	.08	.29		13.4	cwt.	12,100	89,800	900	13.40							
Sugar beets '52		8,050	.77	6.87		14.50	ton	109,250	1,234,500	7,550	14.50	559,900	6.76					
'53		9,640	.75	4.28		13.40	ton	116,270	1,313,800	8,680	13.40	655,700	14.70					
Wheat '52		688,400	58.81	45.23		7.20	bu.	4,124,600	8,125,452	14,400	23.60	20,000	14.70					
'53		682,300	58.62	64.95		14.90	bu.	9,953,700	19,959,500	12,000	25.00	600	24.83					
Gardens '52		475	.05	.23		92.70	\$		40,800	400	100.00	40	20.00					
'53		500	.04	.14		92.20	\$		41,500	400	100.00	50	30.00					
Miscellaneous '52		740	.08	.13		31.50	\$		23,500	140	50.00	600	24.83					
'53		140	.01	.03		60.00	\$		8,400	140	60.00							
Total '52	911,755	975,590	100.00	100.00			\$	17,954,762	30,740,400	75,890	62.15	900,290	14.91					
'53	922,790	1,140,710	100.00	100.00			\$	30,740,400	53,066,820	1,064,820	53.06	1,064,820	25.04					

Montana Agricultural Statistics, December 1954, Montana Department of Agriculture, Helena, Montana. Area harvested vs. area planted in grains is not all lost as much of the difference in a good production year is used for hay or pasture particularly for rye and oats. Some of this will be included in the area of hay harvested. Differences in yields and returns will usually be greater in comparing irrigated vs. non-irrigated lands than in 1953 which was a favorable year for production on non-irrigated land. Major portions of the five counties are within the Lower Yellowstone Basin. The above data, while not limited to the Basin, may be regarded as representing the Basin area. All of the irrigated land listed is within the Basin and there are 23,680 acres irrigated in North Dakota. Part of the non-irrigated tabulated is outside the Basin, but there is other non-irrigated land in the Basin which is not within these five counties.

Area of wheat harvested in each of the five counties during the 37 year period, 1919-1955, is shown in table 8. Total area planted and harvested in the five Lower Yellowstone Area counties are also given, along with the total crop production for each year. Averages have been calculated for the period and the maxima and minima figures are presented.

In the 37 year period, 1919-1955, the area of wheat planted in the five Montana Counties of Dawson, Fallon, Prairie, Richland and Wibaux has varied from 382,300 acres to 703,600 acres, the mean being 518,400 acres. Total yield in bushels has ranged from 556,900 to 9,953,700, with a mean of 5,182,000 bushels. Yield per planted-acre varied from 1.44 bushels to 14.59 bushels, with a mean yield of 10.00 bushels. Data for other non-irrigated crops and totals for non-irrigated production would vary in a similar manner as wheat is both the leading crop and probably the most adaptable to the area for "dry" farming. These figures show the wide range, due to the variable climate and changing economic conditions.

Area of wheat harvested in the five Lower Yellowstone Area counties of Montana for the 37 year period, 1919-1955, is also shown in table 8. Both the range and variability of these figures indicate the variations in climate and economic conditions that have influenced wheat production in the area. Smallest area harvested was 151,200 acres, the largest being 672,900 acres. These figures show the variation in land use. This table also shows the area planted in the five counties. Difference between the planted and harvested figures each year do not represent total abandonment. Part of the unharvested area may have been cut for hay or pastured. In some years hail damage affects a considerable area, this damage ranging from slight to total destruction. Years of greatest differential between planted and harvested area usually are years of low precipitation when growing conditions were so poor that much of the crop was not good enough to pay to harvest. Poorest years were in the dry "thirties". In 1936, 72 percent of the planted area was not harvested. Other dry years were 1931 with 58 percent not harvested and 1934 with 59 percent. Before the thirties, 1919 was a drought year when 49 percent of the area planted was not harvested.

Yields, prices and returns per acre for wheat in the five Lower Yellowstone Area counties over the 37 year period, 1919-1955, are shown in table 9. Variations among the counties in the same year as well as wide ranges from year to year are interesting and important economic data. Eight bushels per acre was selected as a probable average break-even yield. The marginal nature of non-irrigated farming in the area is demonstrated by the fact that average yields in the area exceed 8 bushels per acre 70 percent of the 37 years and fell below 8 bushels 30 percent of the 37 years.

Table 8. - Area harvested, total area planted and total yield of wheat in five Lower Yellowstone Area Counties, Montana, 1919-1955 (acres)

Year	HARVESTED AREA					Total Area Harvested	Total Area Planted	Total Produced (Bushels)
	Dawson	Fallon	Prairie	Richland	Wibaux			
1919	55,200	36,500	24,400	33,700	46,800	196,600	382,300	556,900
1920	104,500	81,000	66,000	117,000	66,000	434,500	443,700	4,689,000
1921	105,500	77,500	62,000	101,000	61,500	407,500	433,000	3,568,500
1922	101,000	72,000	61,000	121,000	58,800	413,800	415,500	6,208,000
1923	107,000	86,000	66,000	125,400	61,000	445,400	463,600	4,283,000
1924	92,500	76,000	53,000	112,500	53,700	387,700	388,300	6,422,000
1925	92,000	75,000	55,000	115,500	54,000	391,500	446,100	3,753,600
1926	104,000	92,000	65,000	128,000	65,000	454,000	487,100	2,853,000
1927	161,000	94,000	75,000	140,000	71,000	541,000	544,200	9,296,000
1928	149,900	86,800	85,100	150,700	66,400	538,900	548,000	8,396,400
1929	162,900	94,600	90,000	170,300	67,700	585,500	631,900	4,887,000
1930	144,300	80,000	76,500	155,300	57,800	513,900	558,700	4,677,100
1931	40,500	24,800	37,500	68,200	24,300	195,300	462,700	952,200
1932	97,800	89,100	82,700	155,200	65,800	490,600	539,100	5,364,100
1933	134,800	66,400	61,700	137,000	37,900	437,800	487,300	2,926,300
1934	53,800	31,500	14,500	48,000	15,000	162,800	401,300	576,500
1935	137,300	50,000	48,500	133,400	35,500	404,700	507,500	3,083,000
1936	52,500	9,700	1,200	75,400	12,400	151,200	540,400	734,300
1937	73,100	66,300	39,200	34,600	44,200	257,400	559,900	1,349,100
1938	136,700	77,100	73,200	146,800	69,400	503,200	603,500	2,672,300
1939	98,400	67,200	33,400	102,900	45,400	347,300	400,400	3,585,700
1940	139,600	72,300	45,900	139,600	57,700	455,100	464,200	5,836,000
1941	129,000	69,800	43,200	128,900	55,400	426,300	437,800	6,411,300
1942	119,900	60,600	44,800	117,500	49,100	391,900	396,600	7,969,600
1943	135,500	73,300	55,300	163,500	46,700	474,300	518,100	8,695,800
1944	145,800	85,500	64,000	114,600	58,500	468,400	567,300	6,667,200
1945	145,400	84,200	52,000	152,500	56,600	490,700	556,700	5,903,100
1946	132,700	81,600	53,700	128,700	60,000	456,700	515,900	5,185,300
1947	138,200	88,400	43,800	152,000	61,900	484,300	539,300	6,620,900
1948	153,300	96,800	47,900	185,000	69,200	552,200	605,300	8,178,900
1949	173,700	115,500	48,600	180,900	72,200	590,900	666,000	3,922,500
1950	165,900	92,600	49,000	171,200	70,100	548,800	558,400	9,556,700
1951	202,700	132,500	57,800	201,200	78,700	672,900	703,600	7,842,500
1952	171,000	111,500	29,600	199,300	62,900	574,300	688,400	4,124,600
1953	205,800	128,200	47,900	212,000	74,800	668,700	681,900	9,953,700
1954	150,700	92,200	41,200	158,700	67,600	510,400	526,700	5,510,500
1955	143,900	90,700	40,100	159,100	56,200	490,000	502,100	8,541,600
37 Yr. Avg.	125,886	78,627	52,316	133,422	56,141	446,392	518,184	5,182,000
Max. Yr.	205,800	132,500	90,000	212,000	78,700	672,900	703,600	9,953,700
Min. Yr.	40,500	9,700	1,200	33,700	12,400	151,200	382,300	556,900

Compiled from Montana Agricultural Statistics, Montana Department of Agriculture and USDA, Helena, 1954 and 1956.

Table 9. - Yields, average yields, prices and returns of wheat per harvested acre in five Lower Yellowstone Area Counties, Montana, 1919-1955 (bushels)

Year	COUNTY					AVERAGE			
	Dawson	Fallon	Prairie	Richland	Wibaux	Five Counties	+ or - 8 bu. Break-even Yield	Price Per Bushel	Returns Per Acre
1919	3.1	1.8	1.9	4.6	2.6	2.80	- 5.20	\$2.38	\$ 6.66
1920	11.0	8.9	9.0	13.9	9.1	10.38	+ 2.38	1.31	13.60
1921	10.0	6.9	7.1	11.0	7.0	8.40	+ .40	.88	7.39
1922	15.0	15.1	13.0	16.0	15.0	14.82	+ 6.82	.92	13.63
1923	10.6	9.0	9.0	10.0	9.8	9.68	+ 1.68	.85	8.13
1924	15.7	14.7	13.9	20.1	15.9	16.06	+ 8.06	1.27	20.40
1925	8.0	10.0	9.0	10.2	11.0	9.64	+ 1.64	1.43	13.79
1926	7.1	6.8	3.3	8.0	3.9	5.82	- 2.18	1.16	6.75
1927	17.0	16.0	16.1	19.5	15.7	16.86	+ 8.86	1.00	16.86
1928	15.5	13.7	13.1	18.5	14.5	15.06	+ 7.06	.87	13.10
1929	7.7	8.9	7.2	8.7	9.8	8.46	+ .46	1.02	8.63
1930	8.5	9.2	9.0	10.0	8.0	8.94	+ .94	.61	5.45
1931	4.2	5.8	4.2	4.2	8.0	5.28	- 2.72	.55	2.90
1932	10.1	10.4	12.1	10.2	13.1	11.18	+ 3.18	.39	4.36
1933	7.0	6.3	6.8	6.4	7.2	6.74	- 1.26	.66	4.45
1934	3.5	3.4	2.0	4.0	4.0	3.38	- 4.62	.91	3.08
1935	6.1	7.2	6.8	10.2	5.7	7.20	- .80	.99	7.13
1936	4.0	3.2	4.0	6.0	3.0	4.04	- 3.96	1.28	5.17
1937	1.9	7.4	6.6	7.4	4.7	5.60	- 2.40	1.05	5.88
1938	3.7	6.3	5.9	5.4	6.6	5.58	- 2.42	.52	2.90
1939	8.9	11.1	9.0	10.9	11.8	10.34	+ 2.34	.67	6.93
1940	13.3	9.5	10.2	14.9	12.8	12.14	+ 4.14	.65	7.89
1941	14.0	13.9	10.4	15.8	20.8	14.98	+ 6.98	.91	13.63
1942	21.1	16.1	18.0	22.6	20.4	19.64	+11.64	1.07	21.01
1943	20.9	11.0	11.2	21.0	21.4	17.10	+ 9.10	1.30	22.23
1944	15.0	12.2	15.2	12.5	17.7	14.52	+ 6.52	1.36	19.75
1945	10.5	13.4	11.7	10.8	17.7	12.82	+ 4.82	1.49	19.10
1946	8.1	15.0	9.7	11.4	15.0	11.84	+ 3.84	1.90	22.50
1947	12.0	10.5	14.7	15.9	15.9	13.80	+ 5.80	2.40	33.12
1948	12.5	14.9	12.2	16.5	16.9	14.60	+ 6.60	1.94	28.32
1949	6.2	5.4	7.9	7.2	7.3	6.80	- 1.20	1.96	13.33
1950	17.1	13.9	14.2	21.3	15.5	16.40	+ 8.40	1.95	31.98
1951	11.7	9.0	12.3	12.5	13.5	11.80	+ 3.80	2.03	23.95
1952	6.3	6.0	6.1	8.9	7.0	6.86	- 1.14	2.02	13.86
1953	17.0	11.0	12.2	16.4	13.0	13.92	+ 5.92	2.00	27.84
1954	10.4	9.7	12.8	10.4	13.0	11.26	+ 3.26	2.14	24.10
1955	16.8	14.5	16.8	20.2	16.6	16.98	+ 8.98	1.99	33.79
37 Yr.	Average 10.56	9.95	9.85	12.26	11.65	10.864	+ 2.86	\$1.29	\$14.42

Compiled from Montana Agricultural Statistics, Montana Department of Agriculture and USDA, Helena, 1954-1956. A break-even figure of 8 bushels per acre has been used as representative of average units. The break-even figure will vary with size of operation, cost of land and equipment, other costs, efficiency and other factors. In the 37 years tabulated, average yields have exceeded the break-even figure 26 times or 70 percent. Yields were below the break-even point 11 times or 30 percent of the time.

Average yield for the five counties over the 37 years was 10.85 bushels per acre, only 2.85 bushels per acre over the selected break-even figure. Actual break-even yields will vary greatly with prices, costs, operational efficiency and many other factors. Break-even yields will vary considerably among operators and also from year to year. Variations in yield shown in this table are expressed similarly in the volume of range forage produced in the area in different years and at varying points. Table 9 clearly shows the irregular variability and marginal nature of wheat production from year to year and within the area. It is of interest and importance to note that seven crops out of eight years were below the selected "break-even" yield of eight bushels. Six of these were consecutive in the period 1931-1938. Maintenance of operations over such a cyclical period calls for reserves, skillful management and probable relief and support measures. These data also emphasize that only the most suitable land should be cultivated under a conservation program. Most of the area is best adapted to the production of grazing plant cover.

Wheat yields and values on both irrigated and non-irrigated land in the five Lower Yellowstone area counties in 1953 are shown in table 10. Even in this very favorable producing year for non-irrigated wheat, the irrigated wheat produced 10.3 bushels more per acre than the non-irrigated wheat. Yields averaged 25 bushels irrigated and 14.7 bushels from non-irrigated wheat. In 1953 winter wheat was grown on non-irrigated land only, all irrigated wheat being spring wheat.

Nearly all wheat produced in the area grades dark hard northern spring with substantial premiums for high protein content. Gluten in this wheat is of high quality so wheat from this region is desired by millers for bread flours and for blending with other wheats. Wheat from the area is shipped to the east, west and south for milling.

Holly Sugar Company operates the 2,200 tons daily capacity beet sugar factory at Sidney. This plant processes beets from the area, from more distant points up the Yellowstone River Valley, from the Milk River project, and from fields on the Missouri in Montana and North Dakota. A number of sugar beet dumps are operated in and outside of the area at railroad sidings to weigh, screen and ship beets to this factory. This plant also produces dried beet pulp and molasses for livestock feed. Most of the feed dealers in the area grind grain and mix feeds in addition to merchandising proprietary feeds and concentrates.

Livestock and livestock products are important enterprises in the area, second only to crops, as shown in table 5. In the dry year of 1952, returns from livestock and their products surpassed those from crops. Range cattle and sheep are the principal classes of livestock as shown in

Table 10. - Yield and value of wheat, irrigated and non-irrigated, in five Lower Yellowstone Area Counties, Montana, 1953

County	IRRIGATED				NON-IRRIGATED				TOTAL - IRRIGATED AND NON-IRRIGATED			
	Area Harvested Acres	Yield Per Acre Bushels	Value Per Acre Harvested Dollars	Area Harvested Acres	Yield Per Acre Bushels	Value Per Acre Harvested Dollars	Area Planted Acres	Area Harvested Acres	Yield Per Acre Harvested Bushels	Production Bushels	Crop Value Dollars	
Dawson												
spring	2,100	20	39.80	203,000	17	33.83	207,200	205,100	17.0	3,493,000	6,951,100	
winter				700	15	29.29	1,100	700	15.0	10,500	20,500	
total				203,700	17	33.81	208,300	205,800	17.0	3,503,500	6,971,600	
Fallon												
spring				126,700	11	22.66	130,600	126,700	11.0	1,393,700	2,871,000	
winter				1,500	9	17.80	1,800	1,500	9.0	13,500	26,700	
total				128,200	11	22.60	132,400	128,200	11.0	1,407,200	2,897,700	
Prairie												
spring	1,900	18	36.54	39,800	11	22.33	43,000	41,700	11.3	472,000	958,200	
winter				6,200	18	35.47	6,900	6,200	18.0	111,600	219,900	
total				46,000	12	24.64	49,900	47,900	12.2	583,600	1,178,100	
Richland												
spring	8,000	28	55.72	203,100	16	31.84	215,400	211,100	16.5	3,473,600	6,912,500	
winter				900	15	29.11	1,200	900	15.0	13,500	26,200	
total				204,000	16	31.83	216,600	212,000	16.4	3,487,100	6,938,700	
Wibaux												
spring				74,700	13	26.52	75,500	74,700	13.0	971,100	1,981,000	
winter				100	12	24.00	100	100	12.0	1,200	2,400	
total				74,800	13	26.52	75,600	74,800	13.0	972,300	1,983,400	
Totals and weighted averages	12,000	25	49.90	656,700	14.7	29.54	682,800	668,700	14.9	9,953,700	19,969,500	

Compiled from Montana Agricultural Statistics, Montana Department of Agriculture and USDA, Helena, Montana, December 1954. The crop year of 1953 was favorable for non-irrigated crop production, so comparisons with irrigated returns will favor non-irrigated more than an average or norm.

table 11, which gives the numbers of six classes of livestock. Many farms and ranches in the area also keep some milk cows, horses, hogs and poultry. Beef cattle, sheep and horses utilize the 3,443,823 acres of grazing land which is 75 percent of the area. They are also fed most of the hay and much of the other roughage produced on the farms and considerable quantities of grain and purchased concentrates. Other classes of livestock are usually kept on farms and make little use of rangelands. Yield of range forage and gains of sheep and cattle utilizing the range in the area are largely dependent upon the amount of precipitation received and the management of the rangelands. Annual cyclical, seasonal and local variations occur in amounts of precipitation. Quality of range and operations management vary among operators.

Shipping pens for shipping and receiving livestock are located in all of the towns on the rail lines and at several minor points. Livestock auction sales rings are operated at Glendive and Sidney.

Trade and Services

Supplies, feeds, implements and equipment are available at all of the principal towns in the area; Baker, Fairview, Glendive, Sidney and Terry. High schools, grade schools, theatres, churches, lodges, banks and all usual economic and social services are available in these towns. Motels, hotels and restaurants are available for travelers in all of the large towns and also in the smaller towns on the highways. Elevators for marketing and storing grain are available at all of the towns on railroads and at several sidings that are not named on the map of the area. Nearly all of the elevators also sell feeds.

There are four county seats in the area making a considerable contribution to the economy and population. Baker is the county seat of Fallon County; Glendive serves for Dawson County; Sidney for Richland County and Terry is the county seat of Prairie County.

Four newspapers are published in the area; one daily and three weekly. The Glendive Ranger is published daily. The Sidney Herald, the Terry Tribune and the Fallon County Times, published at Baker, are weekly newspapers.

Population

Lower Yellowstone area is largely used for ranching and dry farming, both being operated in large units which have steadily increased in size since 1919. Mechanization and increase in unit size have caused population to decrease in rural areas. Most of the population is in the

irrigated valley which is also on the railroad and highway. Trading and services to farms, ranches and the traveling public are the fundamentals of population in the towns. Schools, churches and other social services also contribute to population in the towns. The Northern Pacific Division Point at Glendive helps its population. Oil and gas production and transport have helped Baker and Glendive. Development of a new irrigated area has promoted the growth of Terry. The sugar factory at Sidney aids population there.

Population of the area gradually increased from the pioneer days of 1876. Settlement commenced prior to the coming of the rails in 1881. Peak of rural population was reached in 1918, after the land rush for dry land settlement that began in 1907. The drought of 1919 caused many to leave the area. Population increased in the Yellowstone Valley as irrigation was developed after 1906. The towns grew as travel, farms and ranches required more services, equipment and supplies. Population of counties in the area and of the area for the last three censuses is shown in the following list. Percentile changes from 1930 to 1950 are also given.

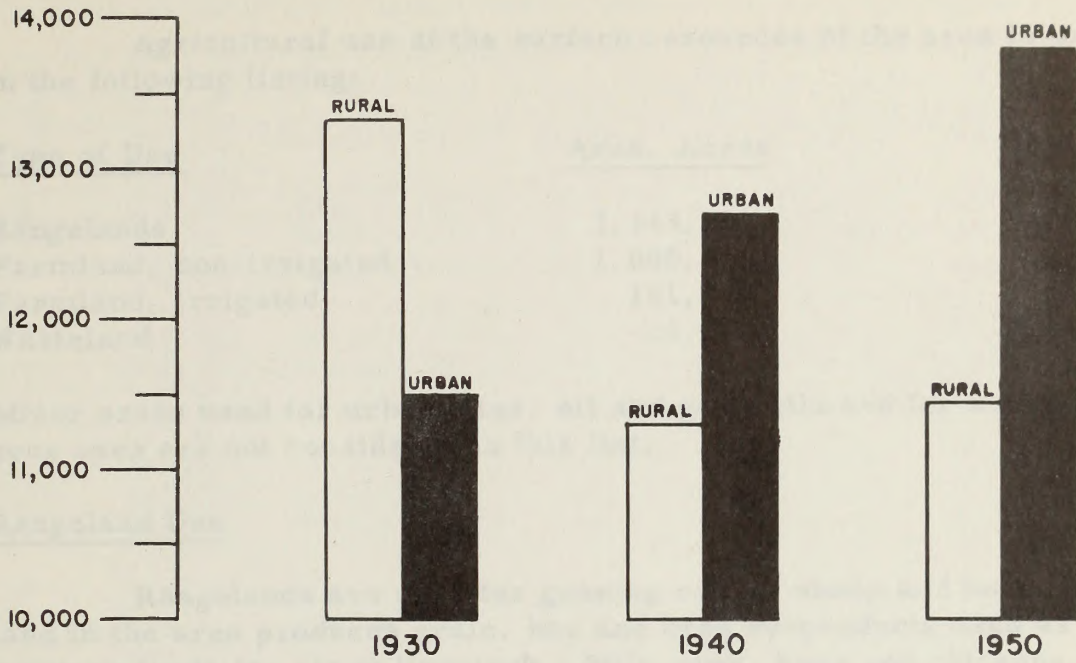
County	Entire County Totals			Lower Yellowstone Area Change 1930-1950			
	1930	1940	1950	1930	1940	1950	Percent
Montana							
Carter	4,136	3,280	2,798	142	106	98	-31
Custer	11,242	10,422	12,661	555	287	282	-49
Fallon	4,568	3,719	3,660	3,793	3,335	3,079	-19
Prairie	3,941	2,410	2,377	2,239	2,031	2,290	+ 2
Wibaux	2,767	2,161	1,907	845	615	594	-30
Dawson	9,881	8,618	9,092	9,387	8,187	8,637	- 8
Richland	9,633	10,209	10,366	6,115	7,834	9,083	+49
Subtotal	46,168	40,819	42,863	23,076	22,395	24,063	+ 4
N. Dakota							
McKenzie	9,709	8,426	6,849	1,551	1,409	1,087	-30
Golden Val.	3,499	3,498	4,122	195	189	107	-45
Subtotal	13,208	11,924	10,971	1,746	1,598	1,185	-32
Area							
Total	59,376	52,743	53,834	24,822	23,983	25,248	+ 2
Less cities and towns of the area							
			11,510	12,687	12,687	13,812	+15
Rural population only acres per capita-----3,990							
Total rural and urban population acres per capita-----1,807							

Population has increased in all towns that had over 500 population in 1930, and has decreased in smaller towns, irrespective of location. Small towns and rural areas did not increase in population even in the fertile irrigated Yellowstone River Valley, except for rural increases on areas of new irrigation. Population data for towns with 100 or more persons in 1930 within the area is shown in the following list. Location is shown by YV for the Yellowstone Valley and Up for Upland sites above the valley. All of the towns are in Montana except Alexander, which is in North Dakota.

Town	Location		Population			Change
	County	Valley Upland	1930	1940	1950	1930-1950 Percent
Baker	Fallon	Up	1,212	1,304	1,772	+46
Plevna	Fallon	Up	247	291	247	0
Terry	Prairie	YV	779	1,012	1,191	+52
Fallon	Prairie	YV	310	240	145	-55
Mildred	Prairie	Up	160	75	44	-73
Glendive	Dawson	YV	4,639	4,524	5,640	+23
Lindsay	Dawson	Up	150	100	65	-57
Fairview	Richland	YV	576	901	942	+63
Sidney	Richland	YV	2,010	2,978	2,987	+49
Savage	Richland	YV	407	346	250	-39
Lambert	Richland	Up	268	241	238	-11
Alexander	McKenzie	Up	461	415	302	-34

Population changes in the area are graphically displayed in figure 2.

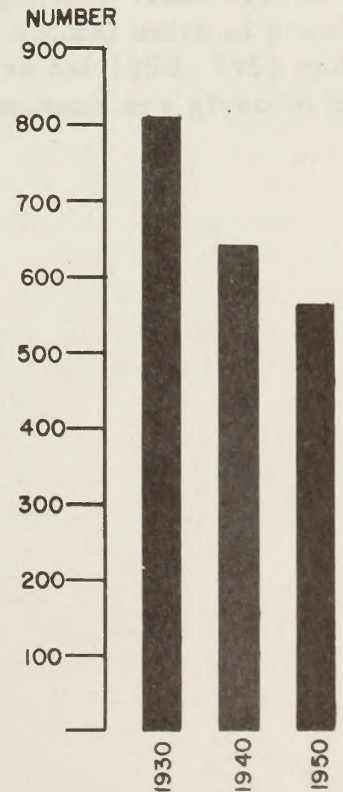
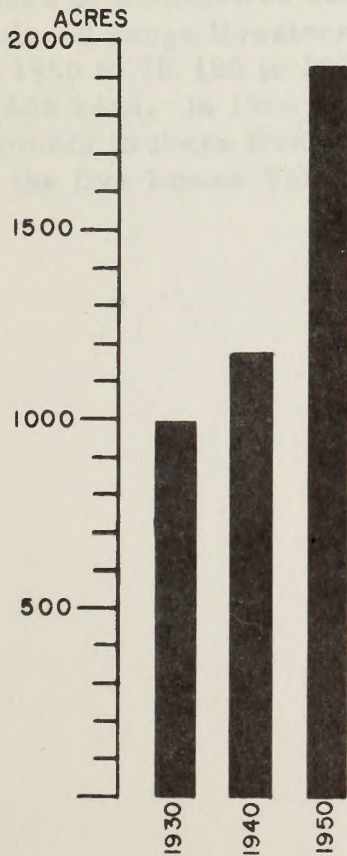
Figure 2. Lower Yellowstone River Area Rural and Urban population 1930, 1940, 1950.



Census 1950.

Figure 3.—Average size of Farms in the five Lower Yellowstone Area Counties for 1930, 1940, 1950.

Average number of Farms in the five Lower Yellowstone Area Counties for 1930, 1940, 1950.



LAND USE AND OWNERSHIP

Agricultural use of the surface resources of the area is presented in the following listing:

<u>Type of Use</u>	<u>Area, Acres</u>	<u>Percent</u>
Rangelands	3,443,823	75
Farmland, non-irrigated	1,000,000	22
Farmland, irrigated	101,000	2
Wasteland	25,272	1

Minor areas used for urban sites, oil and gas wells and for miscellaneous uses are not considered in this list.

Rangeland Use

Rangelands are used for grazing cattle, sheep and horses. Farm land in the area produces grain, hay and crop by-products used as supplementary feeds for range livestock. Milk cows, hogs and chickens are kept on farm lands. In 1956 there were 162,000 beef cattle in the five Lower Yellowstone Area Counties of Dawson, Fallon, Prairie, Richland and Wibaux. This was a 70 percent increase from 95,300 in 1950. Numbers in 1950 had been gradually built up following the drought and depression years of the thirties until 1949-50, when drought and a severe winter again reduced range livestock numbers. Sheep increased 26 percent from 55,700 in 1950 to 70,100 in 1956. Horses decreased 44 percent from 11,700 to 6,600 head. In 1956 there was a total of 190,222 animal units of grazing animals in these five counties. Livestock numbers for 1950, 1953 and 1956 in the five Lower Yellowstone Area counties in Montana are given in table 11.

Table 11. - Livestock on farms and ranches in five counties in the Lower Yellowstone Area, Montana, 1950, 1953 and 1956 (number of head)

County & Year	All		Stock		Hogs	Chickens	Animal Units of Grazing Animals ^{1/}	Total Animal Units ^{2/}
	Cattle & Calves	Milk Cows	Sheep & Lambs	Horses & Mules				
Dawson '50	24,400	2,500	15,800	3,700	3,600	49,900	31,260	33,158
Dawson '53	31,900	2,200	21,200	2,400	2,800	42,800	38,540	40,096
Dawson '56	42,300	2,400	19,000	1,900	3,800	44,600	48,000	49,842
Fallon '50	22,100	1,400	6,700	2,100	3,300	24,400	25,540	26,853
Fallon '53	23,700	1,200	7,400	1,400	1,600	21,100	26,580	27,402
Fallon '56	32,300	1,200	8,100	1,100	3,800	21,800	35,020	36,406
Prairie '50	17,600	700	11,300	1,700	1,100	14,500	21,560	22,125
Prairie '53	23,200	700	15,200	1,100	500	11,200	27,340	27,689
Prairie '56	29,400	800	13,500	1,000	1,100	12,200	33,100	33,619
Richland '50	28,600	2,900	18,600	3,000	3,800	65,000	35,320	37,570
Richland '53	36,500	2,600	23,300	2,200	2,400	51,500	43,360	44,990
Richland '56	48,100	2,400	21,600	1,900	2,600	48,200	54,320	55,934
Wibaux '50	11,200	1,100	3,300	1,200	2,200	22,100	13,060	14,052
Wibaux '53	13,000	900	7,100	800	1,400	19,500	15,220	15,960
Wibaux '56	17,500	800	7,900	700	2,200	18,800	19,780	20,706
Total '50	103,900	8,600	55,700	11,700	14,000	175,900	126,740	133,758
Total '53	128,300	7,600	74,200	7,900	8,700	146,100	151,040	156,137
Total '56	169,600	7,600	70,100	6,600	13,500	145,600	190,220	196,507

^{1/} Exclusive of hogs and chickens; cattle, sheep, horses and mules only. Each class is one animal unit except sheep which are 5 sheep to one animal unit.

^{2/} Cattle, horses and mules equal one animal unit. Five sheep and lambs are one animal unit. Four hogs or 50 chickens are considered to be one animal unit.

Montana Agricultural Statistics, Vol. VI, Dec. 1956; Montana Department of Agriculture, Helena, Montana. Columns 7 and 8 have been computed as described above.

State Grazing Districts

Four Montana State Grazing Districts operate in the area. These districts are named in the following listing along with all of their lands in different ownerships within the area and with recommended stocking rates in animal unit months:

District name	Federal Lands				Other Lands			
	Public Domain		Land Utilization		State & Private		Total	
	acres	aums	acres	aums	acres	aums	acres	aums
East Custer	2,541	800	24,678	7,500	81,781	23,400	109,000	31,700
Fallon Creek	12,114	3,856	44,644	12,600	16,917	5,330	73,675	21,786
Prairie	48,787	8,200	270,150	62,000	472,063	120,000	791,000	190,200
Red Butte	1,516	504	11,527	3,842	7,328	2,441	20,371	6,787
Total	64,958	13,360	350,999	85,942	578,089	151,171	994,046	250,473

These non-profit Cooperative State Grazing Districts were established under authority of the "Grass Conservation Act", enacted by the legislative assembly of the State of Montana on March 15, 1939 (Chapter 208, Session Laws of Montana, 1939). Section one of the act states that its purpose is to "provide for the conservation, protection, restoration and proper utilization of grass, forage and range resources of the State of Montana; to provide for the incorporation of cooperative non-profit grazing districts; to provide a means of cooperation with the Secretary of the Interior as provided in the Federal Act known as the Taylor Grazing Act, and any other Governmental Agency or Department having jurisdiction over lands belonging to the United States or other State or Federal Agencies as well as agencies having jurisdiction over Federal Lands; to permit the setting up of a form of grazing administration which will aid in the unification or control of all grazing lands within the State where the ownership is diverse and the lands intermingled; and to provide for the stabilization of the live-stock industry and the protection of dependent commensurate ranch properties as defined herein. This act provides a State Grass Conservation Commission to assist in carrying out the purposes of this act, to act in an advisory capacity with the State Land Board and County Commissioners, and to supervise and coordinate the formation and operation of districts which may be incorporated under this act".

Cooperation between each cooperative State Grazing District and the Bureau of Land Management is obtained through a cooperative agreement. The purpose of this agreement is to provide for the protection, administration, regulation and improvement of the public domain and to bring about a better coordination of the use of the public domain and the other lands subject to the agreement, and to take all necessary steps to

protect such lands from over-grazing and improper use. By virtue of this agreement, the Bureau of Land Management issues to the State Cooperative Grazing Districts an annual permit for grazing privileges which may be utilized on the public domain lands by qualified licensees or permittees. Only annual permits have been issued by state grazing districts. Ten-year permits would tend to stabilize ranch units and would aid in practicing sound range management because the permittee would be assured of benefiting from range improvement.

Soil Conservation Districts cover the area. Personnel of the Soil Conservation Service cooperate with ranch and farm operators in the area to make farm and ranch plans and to recommend conservation practices, programs and structures.

Farmland Use

Number and size of farms in the Lower Yellowstone Area are indicated in the following tabulation of entire counties in Montana. Average size and number of farms in these five counties in 1930, 1940 and 1950 is shown graphically in figure 3.

County	1945		1950	
	Number	Average Size-Acres	Number	Average Size-Acres
Dawson	792	1,606	758	1,854
Fallon	414	2,261	403	2,458
Prairie	254	2,322	237	2,574
Richland	1,099	1,033	1,057	1,153
Wibaux	337	1,438	304	1,582
Total	2,896	8,660	2,759	9,621
Average	579	1,525	552	1,706
Percentile variant			-5%	+12%

Farm land use in 1952 and 1953, both irrigated and non-irrigated, is presented in table 7 by crops planted and harvested. Non-irrigated farm land is principally used for the production of grain crops for sale. In 1952, seventy-six percent of the dry farm land harvested, or 682,350 acres, produced grain. Wheat was the leading crop on the non-irrigated land, 559,900 acres being harvested, which was 62 percent of the total harvested area. In 1953, harvested dry-farmed grain was produced on 818,150 acres, 77 percent of the total harvested dry-farmed area. Wheat was harvested on 656,700 dry-farmed acres in 1953, sixty-two percent of the dry-farmed total.

Use of farm land for crops in the area is shown in table 12. Relative importance of crops is shown by area harvested and by returns. Relative importance of each crop is also shown as percents of the total area harvested and of total returns. This table includes both irrigated and non-irrigated farm land of five Lower Yellowstone Area counties in Montana in 1953.

Table 12. - Relative importance of crops grown in the Lower Yellowstone Area as shown by yield and returns for the combined data of Dawson, Fallon, Prairie, Richland and Wibaux Counties, Montana, 1953.

Crop	Area Harvested		Returns	
	Acres	Percent	Dollars	Percent
Corn	91,400	8.01	2,665,700	8.67
Oats	51,400	4.51	1,054,600	3.43
Barley	40,700	3.57	836,700	2.72
Flaxseed	18,500	1.62	575,900	1.87
Potatoes	1,590	.05	114,000	.37
All Hay	252,800	22.16	3,981,200	12.95
Alfalfa Hay	44,300	3.88	1,563,700	5.09
Wild Hay	126,800	11.12	1,523,520	4.96
Alfalfa Seed	3,600	.32	53,100	.17
Crested Wheat- grass Seed	2,250	.20	26,300	.09
Rye	600	.05	9,900	.03
Beans	900	.08	89,800	.29
Sugarbeets	8,680	.76	1,313,800	4.28
Wheat	668,700	58.62	19,969,500	64.96
Gardens	450	.04	41,500	.14
Miscellaneous	140	.01	8,400	.03
Total	1,140,710	100.00	30,740,400	100.00

Compiled from Montana Agricultural Statistics, Montana Department of Agriculture and USDA, Helena, 1954. Data for gardens is extended from Annual Project History, Lower Yellowstone Project, 1953, and Annual Project History, Buffalo Rapids Project, 1953, Bureau of Reclamation, Region 6, Billings, Montana.

Non-irrigated farm land use in the area during 1952 and 1953 is shown in the following tabulation of crops harvested in the area on dry farmed lands:

	AREA HARVESTED				Increase in Area Harvested 1953 vs 1952%
	1952		1953		
	Acres	Percent of Total	Acres	Percent of Total	
Grain	682,350	75.7	818,150	76.8	20
Corn	75,500	8.4	84,100	7.9	11
Small grain	606,850	67.3	734,050	68.9	21
Wheat	559,900	62.2	656,700	61.7	17
Barley	21,800	2.4	35,800	3.4	64
Oats	24,800	2.7	41,100	3.8	66
Rye	350	.0	450	.0	29
All hay	212,000	23.6	223,500	21.0	5
Wild hay	76,300	8.5	124,300	11.7	63
Alfalfa hay	13,500	1.5	20,400	1.9	51
Other hay	122,200	13.6	78,800	7.4	-36
Other Crops	5,940	.7	23,170	2.2	290
Total	900,290	100.0	1,064,820	100.0	18

The two years listed above were contrasting, 1952 having low precipitation and 1953 being a year of heavy precipitation. Increase in area of wheat harvested in 1953 was restricted by wheat allotment. This restriction may have increased the area of other crops, especially barley and oats. This factor, along with more favorable moisture, helped to increase the area of alfalfa hay in 1953.

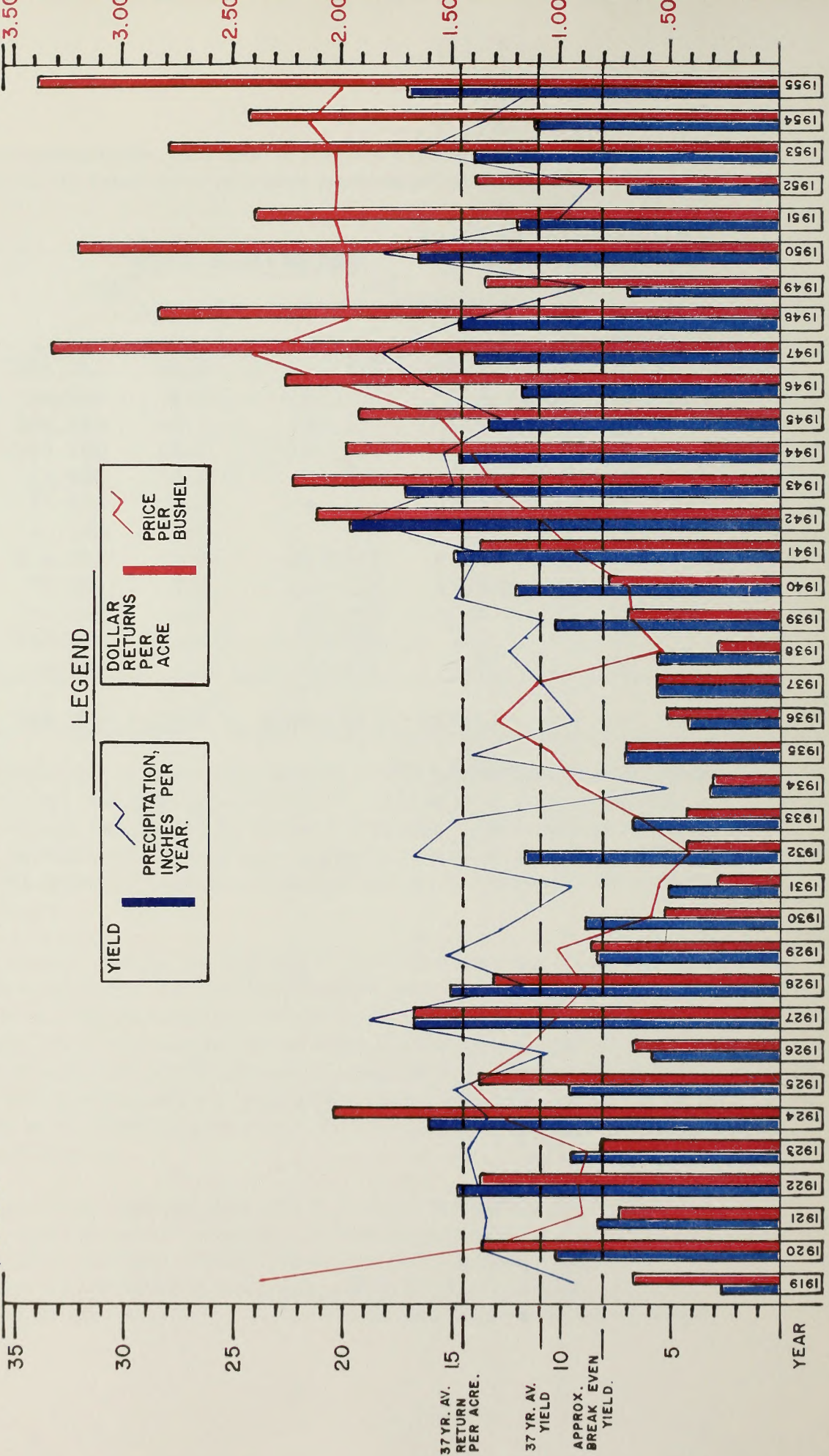
The increase in area of wild hay cut in 1953 was due to heavy precipitation increasing the volume and density of native vegetation so that a much larger area of grassland was fit to cut for hay. Other hay is largely grain hay. In 1952 operators considered that 18 percent of the small grain that had been planted would be best suited for harvest as hay rather than grain because of the probable poor yield if cut for grain. In 1953 over 90 percent of the grain planted was fit for harvest as grain, so there was little grain hay produced.

Several tables, numbered 6 to 10, are presented to show crop yields and areas planted and harvested for both irrigated and non-irrigated crops. These tables and their consideration pertain to land use, economy, natural resources and climate of the area. Data in these tables, as well as in tables 2 and 3, are indicative of variations in the production of range

Figure 4. — Average yield and average returns of Wheat per harvested acre for five Lower Yellowstone Area Counties in Montana; with the total annual precipitation and average price of Wheat per bushel at Glendive, Montana; by years, 1919-1955.

Data for yield has been calculated from area and production figures for Dawson, Fallon, Prairie, Richland and Wibaux Counties as given in Montana Agricultural Statistics, Montana Department of Agriculture, Helena, 1954 and 1956.

BUSHEL, PER ACRE
DOLLARS, PER ACRE
INCHES, ANNUAL PPT.



forage and of the potentials affecting range forage production. Much of this information has been combined graphically in figure 4. This figure portrays the effect of precipitation on yield and the combined effects of yield and precipitation upon returns per acre.

Data presented in this report for wheat and other non-irrigated crops in the area emphasize the variability in planted area, harvested area, yield per acre, total crop and returns from year to year, and within the area in any one year. Irrigated agriculture within the area contrasts with this picture by presenting an almost constant level of planting, harvested area, and production. Variations in returns are largely due to price fluctuations. Choice of irrigated crops is influenced by prospective returns, labor conditions, individual farm enterprise organization, personal preferences and several other factors. In addition to the stability of organization and production of the irrigated land, these desirable characteristics spread out to the non-irrigated farm and range lands of the area through the production of the irrigated land. While these values of irrigation are well known in arid lands with cyclical production and droughts, it is well to pause and view the actual conditions in this area where the advantages of irrigation were long regarded as marginal, the first projects were viewed with skepticism, and irrigation practice was slowly adapted by the resident farmers. Not only are the physical irrigated crop products and by-products available for range livestock feeding in case of range feed shortage or for fattening and finishing the range livestock, but the irrigated farms of the region also produce a fiscal stability in the local communities which stabilizes bank and retail credit so that non-irrigated farmers and range livestock producers benefit to a great extent. This is a phase of irrigation benefit which is especially appreciated in this area where "dry" farming and livestock enterprises are important land uses and where they are major segments of the economy.

Crops for livestock feeding are the principal use for irrigated lands in the area. This is shown by the crop area data given in table 6. Barley, corn, oats, hay and forage crops utilize 69 percent of the total crop area of the irrigated land. Hay is 24 percent of the total crop area in table 6, or 29 percent of the net crop area. Addition of small grain straw on 22,358 acres, bean straw on 3,166 acres and corn stover on 710 acres, would increase the total of all crops on irrigated land in table 6 to 107,007 acres. These additional residue feed crops would then be 25 percent of the new total crop area. These additional residue crops plus the listed feed crops would total 81,699 acres or 76 percent of the grand total crop area. Sugar beets and beans are principal cash crops on irrigated land. Grain and hay are also produced for sale by some farmers using irrigated land.

Crops grown on irrigated land of the Lower Yellowstone project are listed below. Percent of the area planted to different crops in 1955 and the range in percent of area planted in the ten year period 1946 to 1955 are shown. Yields per acre in 1955 are also given. Data are from the 1955 Annual Project History, Lower Yellowstone Project, Bureau of Reclamation.

Crop	Range, 1946-55 Percent of Area	1955	1955	Unit of Yield
		Percent of Area	Yield Per Acre	
Alfalfa	14.1 to 26.0	25.3	2.3	ton
Other hay	0.3 to 1.4	1.3	1.2	ton
Wheat	11.8 to 24.7	13.0	27.0	bu.
Oats	10.3 to 17.3	10.3	49.0	bu.
Barley	4.1 to 8.7	6.9	34.9	bu.
Flax	0.0 to 2.3	0.0		
Beans	0.2 to 5.1	5.1	13.6	bu.
Sugar beets	15.7 to 31.5	20.0	11.8	ton
Garden	0.6 to 0.9	0.6	75.7	dol.
Corn fodder & silage	3.6 to 6.0	5.2	6.9	ton
Potatoes	0.2 to 2.0	0.2	133.0	bu.
Pasture	2.9 to 8.8	6.5		
Miscellaneous	1.2 to 6.5	5.6		

Forage and grain crops are the principal crops grown on irrigated land in the Lower Yellowstone Area. All of the forage crops and much of the grain produced are utilized by local livestock. Data above show that forage crops were produced on 38 percent of the irrigated area in 1955, while grain crops covered 30 percent of the area. Smallest area in forage crops was 21 percent and the least in grain was 26 percent. The largest amount was 42 percent in forage crops and 51 percent in grain crops in the period 1946 to 1955. Additional information on use of irrigated land is given in the appendix for Lower Yellowstone and Buffalo Rapids projects.

Land Use for Mineral Production

Oil is produced from six fields in the area. Five fields are along the Cedar Creek anticline from Cabin Creek to Deer Creek northwest of Glendive. These fields are Cabin Creek, Glendive, Sand Creek, Woodrow and Deer Creek. Bronson field is 8 miles northwest of Sidney. Oil produced in the four fields west of Glendive is collected in an eight inch

gathering line of the Texas Company and delivered to the interstate line of the Butte Pipeline Company near Glendive. This is a ten inch line across the area from Poplar to Glendive. From Glendive to Baker it is a 12 inch line, and from there to Fort Laramie, Wyoming it is a 16 inch line. Terminus at Fort Laramie connects with the Platt Pipeline to middle-west points. Shell Oil operates a ten inch gathering line from Cabin Creek and Pennel Creek wells to the Butte line at Baker. Another gathering line, six inches in size, extends from Baker to Little Beaver field south of Baker. Sun Oil operates an eight inch line from the Bronson field into Glendive.

Gas is produced along the Cedar Creek anticline in the Cedar Creek and 101 Ranch-Plevna fields. Old developments in the vicinity of Baker, known as the Baker field, are now used for storing Wyoming gas. Montana-Dakota Utilities Company has a 12 inch gas line conveying natural gas from Wyoming which crosses the southern part of the area at the head of Cabin and Cedar Creeks. This line conveys gas to Dickinson, Mandan and Bismarck, North Dakota. Another 12 inch line extends northward from this line on Cabin Creek down the Yellowstone to serve Glendive and Sidney, and extends to Williston in North Dakota. An eight inch interconnection at Intake goes to Wolf Point and westward to Bowdoin gas field. This line extends eastward from Wolf Point to Poplar. Another 12 inch line goes southward along the Cedar Creek anticline to Belle Fourche, Rapid City and the other Black Hills cities in South Dakota.

Landownership

Surface area of the Lower Yellowstone Basin is 4,570,095 acres or 7,141 square miles. Landownership within this area by counties and states is shown in table 13. Ninety percent of the area, 4,095,879 acres, is in Montana and ten percent, 474,216 acres, is in North Dakota. Federal lands cover 12 percent of the area. Public domain lands make up four percent and Land Utilization Federally acquired lands within Land Utilization projects comprise eight percent of the total area. State-owned lands are six percent of the area. Private lands cover 82 percent of the total area. Federal ownership in Montana is 14 percent, and only two percent in North Dakota. In Montana five percent of the area is public domain, but it is less than one-tenth of one percent in North Dakota. Land Utilization Federally acquired lands within Land Utilization projects cover nine percent of the Montana portion of the area and two percent in the North Dakota part. State ownership in Montana is six percent and only two percent in North Dakota. Private lands make up 80 percent of the area ownership in Montana and 96 percent in the North Dakota part of the area.

Table 13.- Landownership in the Lower Yellowstone Area by Counties, Montana and North Dakota, 1955 (acres)

County ¹	Public Domain		Land Utilization 1 / Wdl.	Recl. Wdl.	Total		Private	Total Area
	Domain	Utilization 1 / Wdl.			Federal	State		
Montana								
Carter	3,611.12				3,611.12	8,960.00	174,270.89	186,842.01
Custer	1,906.00	27,947.31			29,853.31	7,808.00	93,894.27	131,555.58
Dawson	67,876.51		1,492.36		69,368.87	74,930.00	1,111,581.34	1,255,880.21
Fallon	23,467.81	47,911.25			71,379.06	35,560.00	566,602.73	673,541.79
McCone						640.00	6,124.00	6,764.00
Prairie	48,169.03	283,686.01			331,855.04	43,170.00	410,771.78	785,796.82
Richland	17,400.92		796.45		18,197.37	46,413.31	625,362.44	689,973.12
Wibaux	27,369.79				27,369.79	20,582.67	317,573.08	365,525.54
Montana								
Sub-total	189,801.18	359,544.57	2,288.81		551,634.56	238,063.98	3,306,180.53	4,095,879.07
North Dakota								
Golden Valley	80.00				80.00	640.00	30,680.80	31,400.80
McKenzie	225.25	8,562.70	518.65		9,306.60	9,845.18	423,662.97	442,814.75
North Dakota								
Sub-total	305.25	8,562.70	518.65		9,386.60	10,485.18	454,343.77	474,215.55
Total	190,106.43	368,107.27	2,807.46		561,021.16	248,549.16	3,760,524.30	4,570,094.62

^{1/} Land Utilization Project land was repurchased by the Federal Government for conservation purposes during the drought and depression years of the 1930's. This land is now within Land Utilization Projects. Compiled from County and Montana Land Office records.

Land Utilization Areas

Three Federally repurchased land areas extend into the Lower Yellowstone River Basin. Land Utilization Project Montana 4, Prairie County Land Utilization Project has the largest amount of land in this ownership, 283,686 acres. Land Utilization Project Montana 21 is second in amount of this type of Federal land with 75,858 acres in Custer and Fallon Counties in the area. North Dakota Land Utilization Project 24 includes 8,563 acres in McKenzie County in the area. Total area of Land Utilization ownership in the basin is 368,107 acres. Management, use and administration of this land is closely associated with adjacent public domain as the same operators lease and utilize both classes of land.

Land in Land Utilization projects was purchased by the Federal Government to relieve operators who owned non-economic units or who were making improper use of their land. These projects were created during the drought and depression years of the "dirty thirties". Purchased land was submarginal for the purpose for which it was then being used. Much of this land had been used for non-irrigated farming. Erosion on such land was usually severe at that time, soil loss being great from both washing and blowing away. Much of the land which had been broken and farmed was much better suited to a permanent grass cover with grazing use.

Most of the purchased land was in units which were too small to be economic, especially with lower production than that which had obtained when the units were established during the period 1907-1926. Lands in the areas were set up into proper economic units for grazing use. Excess buildings were removed. Worn, blown, eroded fields were reseeded to grass. Proper land use and good land management were established. Use and management were regulated to provide for range improvement, protection from erosion and watershed development. These lands were administered by the Soil Conservation Service for several years, and later by the Forest Service. Transfer of administration to the Bureau of Land Management is now being considered. Consummation of this transfer would place all Federal lands in the area in one agency, the Bureau of Land Management.

During the field investigation of the area certain residents of Prairie County indicated to our examiners that their county has suffered economically and as a Government unit because a large area of good farm land was included in Land Utilization area purchases there. This Federally purchased land was reverted to grass. These people also

indicated that their county has lost the potential population, trade, production and tax base of a large acreage of good wheat land. County residents also indicated that promises were made when this land was purchased that the land would be returned to farming use with the advent of improved climatic and economic conditions.

LANDS ADMINISTERED BY THE BUREAU OF LAND MANAGEMENT

Bureau of Land Management lands total 190,106 acres in the Lower Yellowstone Area. This public domain land is in 715 separate tracts as shown on the Land Ownership and Land Use Map with this report. Each tract has been examined, classified and reported on a Land Classification report form number 4-1090. These reports for the area were completed in 1954. They are filed in the Montana State Office of the Bureau of Land Management in Billings. The form of this Land Classification report is Appendix B of this report of the area. These individual Land Classification reports are the basis for this report of the area. There was no area classification of lands in all ownerships in this basin. Classification results for each tract of public domain are presented in six categories in table 15. Classification and description of each separate tract of public domain is summarized on one line in this table. Public domain land classification and recommended management within the area is summarized by counties and states in table 14. This table also gives the recommended stocking rates.

Ninety percent of the Lower Yellowstone Area is in Montana. The Montana portion of the area has 99.84 percent of the total public domain lands in the area. Ten percent of the area is in North Dakota containing only .16 of one percent of the public domain in the area. Most of the public domain in Montana is in two organized grazing districts as shown on the Location Map of Lower Yellowstone Area, which is a part of the map of the area with this report. Big Dry Grazing District, Montana 2, embraces all of Dawson County and that part of Prairie County which is north and west of the Yellowstone River. Powder River Grazing District, Montana 3, includes the balance of Prairie County and all of Carter, Custer and Fallon Counties within the area. Public domain lands in Richland and Wibaux Counties and in North Dakota are not in grazing districts. Seventy-six percent of the public domain land is within the two grazing districts, 145,030 acres in extent; that outside of the districts is 45,076 acres in area, or 24 percent of the public domain in the area.

In addition to the public domain areas listed, the Federal Government has retained mineral rights on a considerable portion of the total area. These rights on deeded private lands were not considered for this report. Basic information regarding minerals retained to the Federal Government in the area is on file in the Montana Land Office at Billings.

Table 14. - Public domain land classification by counties in the Lower Yellowstone Area, Montana and North Dakota, 1955

County	Total Area Acres	Class VI (or better) Acres	Class VII Acres	Class VIII Acres	Recommended Management			Recommended Stocking				
					Private Area Acres	Private Number of Tracts	Federal Area Acres	Federal Number of Tracts	Total Animal Unit Months	VI or better	VII	VIII
Carter	3,611.12	1,043.01	2,568.11		3,611.12	31			647	201	446	
Custer	1,906.00	1,396.00	510.00		1,906.00	7			387	288	99	
Dawson	67,876.51	9,486.46	54,043.69	4,346.36	32,555.79	133	35,320.72	74	12,220	2,372	9,625	223
Fallon	23,467.81	5,565.38	16,842.43	1,060.00	12,760.73	66	10,707.08	25	5,103	1,417	3,569	117
Prairie	48,169.03	6,173.59	39,476.65	2,518.79	5,590.62	33	42,578.41	120	8,761	1,670	6,945	146
Richland	17,400.92	4,477.32	12,552.68	370.92	17,240.92	73	160.00	1	4,035	1,369	2,666	
Wibaux	27,369.79	5,236.88	22,084.95	47.96	15,363.25	59	12,006.54	22	5,651	1,461	4,190	
Montana (St.)	189,801.18	33,378.64	148,078.51	8,344.03	89,028.43	402	100,772.75	242	36,804	8,778	27,540	486
Golden Valley	80.00	80.00			80.00	2			22	22		
McKenzie	225.25	40.12	140.28	44.85	191.15	7	34.10	2	41	6	35	
No. Dakota (St.)	305.25	120.12	140.28	44.85	271.15	9	34.10	2	63	28	35	
L. Y. Total	190,106.43	33,498.76	148,218.79	8,388.88	89,299.58	411	100,806.85	244	36,867	8,806	27,575	486

Compiled from the analysis of the classification of individual tracts as presented in table 15.

Public domain lands in the area are valuable for watershed and for grazing by livestock and game. A large area of public domain is badlands or near badlands. There are 7,932 acres of public domain within the proposed Maco Sica Badlands State Park. Lands in this proposed park are nearly all badlands or near badlands of rugged, austere beauty. Large concentrations of public domain lands south of the proposed park, as shown on the map of the area, are also badlands or nearly so. In Township 13 North, Range 56 East, all the public domain is badlands. South of this, in Wibaux County, the public domain is steep to rough near badlands. Southward, in Fallon County on the Cedar Creek Geological Structure, the public domain lands are thin breaks and badlands.

Public domain lands east of the proposed State park in Dawson County are also near badlands. Concentration of public domain in Township 14 North, Range 57 East is steeply rolling and badlands. Public domain in the adjoining township on the north is steeply rolling, rough land. Northward, in Wibaux and Richland Counties, the concentrations of public domain shown on the map of the area are badlands and steeply rolling hills. The concentration of public domain lands west of Terry in Prairie County is thin breaks and badlands.

Surface soils in the badlands are mostly thin or lacking, being raw shales, clays or sandstone. The more nearly level spots in the badlands may have shallow sandy soil, or some other type of soil, depending upon the parent material. Much of the public domain in the area has a thin, sandy soil over sandstone or over a poorly permeable layer. If the cover on this sandy soil is seriously disturbed, the soil starts to blow away and may be completely removed to the compacted layer or to the bare rock. Conservative stocking, careful management and protection against concentration of livestock or game on many sites is essential to protect the surface resources and the watershed. Soils on the rolling public domain lands are frequently clays or clay loams known as gumbo. Most of the public domain lands are so rough and marginal in nature that they are not attractive for private ownership. None of the public domain lands in the area are suitable for homestead or desert land entry.

Public domain lands in the area are marginal to poor producers of forage cover. They offer little to attract a prospective purchaser. These lands have not been selected during eighty years of active disposal of the public lands. At present they are less desirable for private ownership than previously.

Special Classifications and Uses for Public Domain

All public domain on islands in the Yellowstone River, or on the margins thereof, should be retained in Federal ownership for wildlife use. Such lands are valuable for pheasants, deer, water fowl and furbearers. All lands adjacent to the river should be retained in Federal ownership for possible future recreation use. Considerable public domain in the vicinity of Glendive may become attractive for homesites in the future. These lands are in Sections 26, 28, 30, 32 and 34 in Township 16 North, Range 56 East; in Sections 2 and 10 in Township 15 North, Range 55 East; and in Section 26, Township 16 North, Range 54 East. Public domain within easy access of Terry also has possible future value for small tract homesites; all lands within a six mile radius of Terry should be considered for such use before they are otherwise classified. Rough terrain is not necessarily a deterrent for homesite use. Some people prefer rugged sites for building their homes.

Public domain lands in the Cedar Creek Geological Structure have value for gas and oil production in addition to their other surface values. These lands, mostly thin breaks and badlands, offer little to attract buyers for their surface values. These lands should be retained in Federal ownership.

Maco Sica Badlands State Park

Maco Sica Badlands are ruggedly beautiful, scenic hills, bluffs and colorful rocks including 25,377 acres adjoining Glendive on the south and east. Area covered by this proposed State Park is shown on the map of the Lower Yellowstone Area with this report. This park should be established for a local and tourist attraction. Nearest other point of natural interest is Theodore Roosevelt National Memorial Park near Medora, North Dakota, 70 miles east. Westward are Custer, Battlefield, Bighorn Mountains and Bighorn Canyon, all about 225 miles. Further west are Yellowstone and Glacier National Parks. Development of Maco Sica State Park would create an added point of interest for travelers on U. S. Highway 10 which would correspond to Badlands National Monument in South Dakota on U. S. Highway 16. Another point of interest accessible to tourists from Glendive is Fort Peck Lake, 100 miles northwest. Maco Sica Badlands State Park would add another point of interest in Montana to attract travel on U. S. Highways 2, 10, 12 and 85.

Vegetation in the proposed park is so scant that grazing use for livestock is not justified. The park should be used for recreational purposes, watershed protection and game range. Vegetal cover is native grasses and big sagebrush with scattered juniper and scrubby yellow pine.

Recommended stocking for the proposed area of this State Park is only 14.23 acres per animal unit month.

Landownership of this proposed park is 31 percent public domain, 25 percent county, 8 percent state and 36 percent private. Landownership by townships in the proposed state park area, all within Dawson County, Montana, is as follows:

Montana		Public	State	County	Private
Meridian	Twp. Range	Domain	Acres	Acres	Acres
	North East	Acres	Acres	Acres	Acres
	14 55	160	640		1,120
	14 56	1,096			1,628
	15 55	2,484	640	1,280	2,600
	15 56	4,192	640	4,480	3,777
	16 55		640		
	16 56			640	
Total		7,932	1,920	6,400	9,125

Present access improvements in the proposed park area are a fair road from Glendive to the Sand Creek road and a number of trails to several observation points and to points of interest. There is a modern lodge near the center of the park which could be operated for meals and over night accommodations. There are a number of picnic tables at points of interest. Investigation of public domain within the area of this proposed State Park indicates that this park should be developed and livestock should be excluded to protect the park area, recreation and watershed values.

Cedar Creek Anticline Area

Cedar Creek anticline is the Geological Structure extending from Baker to the mouth of Cedar Creek, ten miles south of Glendive. The area of this structure is shown on the Lower Yellowstone Area Map with this report. Size of the area is 313,651 acres, including 65,771 acres of public domain. Oil and gas rights are retained by the Federal Government on most of the privately owned land within the structure. Virtually all of the public domain land here is badlands or thin breaks with low forage production and with relatively high values for gas and oil production and game range and watershed protection. All of this public domain has been recommended for retention for these multiple use values with the exception of 53 tracts on the margins of the area containing 8,510 acres. Each tract is described with the recommended management and an outline of its classification in table 15. There are numerous oil and gas wells, several gathering

lines and oil and gas transmission lines in the area of the structure. There are two gas pumping stations in the area. Location of the oil and gas transmission lines along and across the structure are described in the Land Use Section of this report.

Prairie County Federal Lands

Nearly half of Prairie County within the Lower Yellowstone Area is in Federal ownership, most of it being Federally acquired lands in so-called Land Utilization projects. Public domain makes up 6 percent of these Prairie County lands; Federally acquired Land Utilization project lands are 36 percent; Montana State lands cover 6 percent and privately owned lands comprise 52 percent of the county ownership in the area. Prairie County residents and officials indicated that the economy and tax base of their county has been adversely affected very severely by the large Federal purchases for Land Utilization project lands. They also indicated that these purchases were made with the understanding that they would be returned to private ownership and, so, to the tax rolls and largely to farm land use. Most of the public domain in this area is the rough badlands near Terry along the Yellowstone River. Area of the several classes of landownership in acres within Prairie County in the area is shown in the following list:

Land Utilization Project	283,686
Public Domain	48,169
State of Montana	43,170
Private	<u>410,772</u>
Total	785,797

Prairie County Grazing Association, Terry, Montana, administers most of the grazing privileges in this county. This association leases the Federal and state lands in the county and a considerable area of private land. They also own some 3,000 acres of grazing land in the county.

Badlands in the area near Terry along the Yellowstone River are rugged and beautiful. They contain several large natural bridges of sandstone. These natural features are considered to be sufficiently attractive to justify exploitation as tourist attractions. Grazing value here is so low that recreation, watershed protection and wildlife are the highest type of use.

Table 15. - Description, Area, Classification, Suitability and Proposed Management of Unreserved Public Domain, by Counties, Within the Lower Yellowstone River Basin, Montana and North Dakota, 1955 - Continued

Montana Principal Meridian		North East Sec.	Subdivision	Acres	General Land Character	Present		Land Capability		Proposed Management
Twp. Range	County					AUM's Land Use 1/	Suitability 2/	Classification 3/	Suitability 2/	
3	55	2	Lot 1	40.92	Steeply rolling to rough	1	1	VII	1	Private
		2	Lot 3	32.99	Steeply rolling to rough	1	1	VII	1	Private
		2	Lot 1	39.73	Steeply rolling to rough	1	1	VII	1	Private
		2	Lot 4, SW $\frac{1}{4}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ SW $\frac{1}{4}$	119.50	Steeply rolling to rough	1	1	VII	1	Private
		2	Lot 4	52.72	Steeply rolling to rough	1	1	VII	1	Private
3	56	2	SE $\frac{1}{4}$ NE $\frac{1}{4}$	40.00	Level to rolling	1	1	VI	1	Private
		6	Lot 5	40.00	Gently to steeply rolling	1	1	VI	1	Private
3	57	8	SW $\frac{1}{4}$ NE $\frac{1}{4}$	40.00	Gently to steeply rolling	1	1	VI	1	Private
		32	E $\frac{1}{2}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ SE $\frac{1}{4}$	120.00	Gently to steeply rolling	1	1	VI	1	Private
		8	W $\frac{1}{2}$ W $\frac{1}{2}$	160.00	Steeply rolling to rough	1	1	VI	1	Private
		13	Lots 1, 2	87.23	Steeply rolling to rough	1	1	VI	1	Private
		21	SE $\frac{1}{4}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ SE $\frac{1}{4}$, SW $\frac{1}{4}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$	200.00	Steeply rolling to rough	1	1	VII	1	Private
3	58	22	SE $\frac{1}{4}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ SE $\frac{1}{4}$	80.00	Steeply rolling to rough	1	1	VII	1	Private
		26	NE $\frac{1}{4}$ NE $\frac{1}{4}$, S $\frac{1}{2}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ SE $\frac{1}{4}$	160.00	Gently rolling, undulating	1	1	VI	1	Private
		11	NE $\frac{1}{4}$ SW $\frac{1}{4}$	40.00	Gently to steeply rolling	1	1	VII	1	Private
		17	SE $\frac{1}{4}$ SW $\frac{1}{4}$	40.00	Steeply rolling to rough	1	1	VII	1	Private
		20	E $\frac{1}{2}$ NE $\frac{1}{4}$, SW $\frac{1}{4}$ SE $\frac{1}{4}$	120.00	Steeply rolling to rough	1	1	VII	1	Private
4	55	21	NW $\frac{1}{4}$ NW $\frac{1}{4}$	40.00	Steeply rolling to rough	1	1	VII	1	Private
		29	NW $\frac{1}{4}$ NW $\frac{1}{4}$, SE $\frac{1}{4}$ NW $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$	160.00	Rolling to rough, broken	1	1	VII	1	Private
		14	S $\frac{1}{2}$	320.00	Rolling to rough, broken	1	1	VII	1	Private

- Continued

Table 15. - Description, Area, Classification, Suitability and Proposed Management of Unreserved Public Domain, by Counties, Within the Lower Yellowstone River Basin, Montana and North Dakota, 1955 - Continued

Montana Principal Meridian		Twp. Range		Subdivision	Acres	General Land Character	AUM's Land Use 1/	Present Land Use 1/	Land Capability Classification 3/	Principal Suitability 2/	Proposed Management
North	East	Sec.	Sec.								
Carter County											
4	55	26		N $\frac{1}{2}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ NE $\frac{1}{4}$, SW $\frac{1}{4}$ SE $\frac{1}{4}$, SW $\frac{1}{4}$	320.00	Rolling to rough, broken	70	1	VII	1	Private
4	56	2		NW $\frac{1}{4}$, W $\frac{1}{2}$ NE $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$ Lot 1, 2, SE $\frac{1}{4}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ SE $\frac{1}{4}$	320.00	Steeply rolling to broken	48	1	VII	1	Private
		11		NW $\frac{1}{4}$	168.70	Steeply rolling to rough	32	1	VII	1	Private
		18		Lot 2, SE $\frac{1}{4}$ NW $\frac{1}{4}$, S $\frac{1}{2}$ SE $\frac{1}{4}$	160.00	Steeply rolling to rough	24	1	VI	1	Private
		20		SE $\frac{1}{4}$ SE $\frac{1}{4}$	155.78	Undulating, rough, broken	33	1	75.78/VI:80/VII	1	Private
		34		NW $\frac{1}{4}$ SE $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$	40.00	Steeply rolling to rough	6	1	VI	1	Private
4	57	4		Lots 1, 2	120.00	Gently to steeply rolling	18	1	VI	1	Private
		8		N $\frac{1}{2}$ NW $\frac{1}{4}$	33.55	Steeply rolling to rough	6	1	VII	1	Private
		28		NE $\frac{1}{4}$	80.00	Steeply rolling to rough	12	1	VII	1	Private
		34		W $\frac{1}{2}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ NE $\frac{1}{4}$	160.00	Gently to steeply rolling	37	1	VII	1	Private
					120.00	Gently to steeply rolling	26	1	VII	1	Private
North East											
Custer County											
6	54	26		NE $\frac{1}{4}$ NE $\frac{1}{4}$	40.00	Gently rolling, sloping	12	1	20/IV:20/VI	1	Private
7	54	2		Lots 1, 2, 3, S $\frac{1}{2}$ NE $\frac{1}{4}$ N $\frac{1}{2}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ NW $\frac{1}{4}$	320.00	Gently to steeply rolling	9	1	240/VI:80/VII	1	Private
8	54	2		Lots 1, 2, 3, 4	106.00	Gently rolling, sloping	28	1	VI	1	Private
9	54	4		S $\frac{1}{2}$	320.00	Gently to steeply rolling	84	1	VI	1	Private

- Continued

Table 15. - Description, Area, Classification, Suitability and Proposed Management of Unreserved Public Domain, by Counties, Within the Lower Yellowstone River Basin, Montana and North Dakota, 1955 - Continued

Montana Principal Meridian	Twp. Range	North East Sec.	Subdivision	Acres	General Land Character	AUM's Land Use 1/	Present Land Use 1/	Land Capability Classification 3/	Principal Suitability 2/	Proposed Management
Custer County	9	54	8	NE $\frac{1}{4}$ SE $\frac{1}{4}$, S $\frac{1}{2}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$	160.00	Gently rolling to sloping	1	VI	1	Private
	10	55	20	N $\frac{1}{2}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ NW $\frac{1}{4}$, SE $\frac{1}{4}$ SE $\frac{1}{4}$, SW $\frac{1}{4}$	320.00	Gently to steeply rolling	1	200/VI:120/VII	1	Private
	10	55	22	All	640.00	Steeply rolling to rough	1	330/VI:310/VII	1	Private
Dawson County	13	53	4	Lots 1, 2, 3, 4, S $\frac{1}{2}$ NE $\frac{1}{4}$	241.33	Rough badlands	1	VII	1	Private
	8			NW $\frac{1}{4}$, W $\frac{1}{2}$ NE $\frac{1}{4}$	240.00	Rolling rough badlands	1	80/VI:160/VII	1	Private
	14			Lot 5, 6	47.86	Level to undulating	1	VII	1	Private
	13	54	6	Lots 9, 10	52.42	Level to undulating, isl'd	1	VII	1	Private
	22			W $\frac{1}{2}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ SW $\frac{1}{4}$	120.00	Steeply rolling badlands	1	VI	1	Private
	24			S $\frac{1}{2}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$, W $\frac{1}{2}$ SE $\frac{1}{4}$	320.00	Steeply rolling badlands	1	VI	1	Private
	13	55	1	All	641.32	Rough rolling badlands	1, 2, 3, 6	VII	1, 2, 3, 6	Federal
	2			Lots 1, 2, S $\frac{1}{2}$ NE $\frac{1}{4}$	321.11	Rough rolling badlands	1, 2, 3, 6	VII	1, 2, 3, 6	Federal
	3			E $\frac{1}{2}$ SE $\frac{1}{4}$, S $\frac{1}{2}$ SW $\frac{1}{4}$	601.28	Rough rolling badlands	1, 2, 3, 6	VII	1, 2, 3, 6	Federal
	4			Lots 1, 2, 3, 4, S $\frac{1}{2}$ N $\frac{1}{2}$, N $\frac{1}{2}$ S $\frac{1}{2}$, S $\frac{1}{2}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$	320.84	Steeply rolling badlands	1, 2, 3, 6	VII	1, 2, 3, 6	Federal
	6			Lots 1, 2, 3, 4, SE $\frac{1}{4}$ NE $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ SE $\frac{1}{4}$	291.27	Steeply rolling to rough	1	VII	1	Private
10			Lots 1, 2, 3, 4, 5, 6, 7	320.00	Rough rolling badlands	1, 2, 3, 6	VII	1, 2, 3, 6	Federal	
11			W $\frac{1}{2}$ All	640.00	Rough rolling badlands	1, 2, 3, 6	VII	1, 2, 3, 6	Federal	

- Continued

Table 15. - Description, Area, Classification, Suitability and Proposed Management of Unreserved Public Domain, by Counties,
 Within the Lower Yellowstone River Basin, Montana and North Dakota, 1955 - Continued

Montana Principal Meridian		Twp. Range		North East Sec.		Subdivision		Acres	General Land Character	AUM's	Present Land Use	Land Capability Classification	Principal Suitability	Proposed Management
											1/	3/	2/	
											Land Use	Classification	Suitability	Management
Dawson County														
13	55	12	All	640.00	Rough rolling badlands	109	1, 2, 3, 6	VII	1, 2, 3, 6	Federal				Federal
		13	All	640.00	Rough rolling badlands	109	1, 2, 3, 6	VII	1, 2, 3, 6	Federal				Federal
		14	All	640.00	Rough rolling badlands	96	1, 2, 3, 6	VII	1, 2, 3, 6	Federal				Federal
		18	Lot 1	44.14	Steeply rolling rough	9	1	VII	1	Private				Private
13	56	6	All	644.45	Rough rolling badlands	116	1, 2, 3, 6	VII	1, 2, 3, 6	Federal				Federal
		7	All	643.92	Rough rolling badlands	116	1, 2, 3, 6	VII	1, 2, 3, 6	Federal				Federal
		8	All	640.00	Rough rolling badlands	141	1, 2, 3, 6	VII	1, 2, 3, 6	Federal				Federal
		9	All	640.00	Rough rolling badlands	141	1, 2, 3, 6	VII	1, 2, 3, 6	Federal				Federal
		10	W $\frac{1}{2}$	320.00	Rough rolling badlands	74	1, 2, 3, 6	VII	1, 2, 3, 6	Federal				Federal
		12	E $\frac{1}{2}$ NE $\frac{1}{4}$, NW $\frac{1}{4}$ SW $\frac{1}{4}$	320.00	Gently to steeply rolling	74	1	VII	1	Private				Private
		14	All	640.00	Rough rolling badlands	128	1, 2, 3, 6	VII	1, 2, 3, 6	Federal				Federal
		15	All	640.00	Rough rolling badlands	128	1, 2, 3, 6	VII	1, 2, 3, 6	Federal				Federal
		17	All	640.00	Rough rolling badlands	109	1, 2, 3, 6	VII	1, 2, 3, 6	Federal				Federal
		19	All	642.40	Rough rolling badlands	109	1, 2, 3, 6	VII	1, 2, 3, 6	Federal				Federal
		20	All	640.00	Rough rolling badlands	128	1, 2, 3, 6	VII	1, 2, 3, 6	Federal				Federal
		21	All	640.00	Rough rolling badlands	115	1, 2, 3, 6	VII	1, 2, 3, 6	Federal				Federal
		22	All	640.00	Rough rolling badlands	128	1, 2, 3, 6	VII	1, 2, 3, 6	Federal				Federal
		23	All	640.00	Rough rolling badlands	122	1, 2, 3, 6	VII	1, 2, 3, 6	Federal				Federal
		24	SW $\frac{1}{4}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$, W $\frac{1}{2}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ SE $\frac{1}{4}$	320.00	Rough rolling badlands	61	1, 2, 3, 6	VII	1, 2, 3, 6	Federal				Federal
13	57	6	Lots 3, 6	70.12	Steeply rolling, undulating	19	1	VI	1	Private				Private
		12	N $\frac{1}{2}$ N $\frac{1}{2}$, E $\frac{1}{2}$ SE $\frac{1}{4}$, S $\frac{1}{2}$ SW $\frac{1}{4}$	320.00	Gently to steeply rolling	77	1	VI	1	Private				Private
		14	E $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$	120.00	Gently to steeply rolling	40	1	VI	1	Private				Private

- Continued

Table 15. - Description, Area, Classification, Suitability and Proposed Management of Unreserved Public Domain, by Counties, Within the Lower Yellowstone River Basin, Montana and North Dakota, 1955 - Continued

Montana Principal Meridian		Twp. Range		Subdivision	Acres	General Land Character	AUM's	Present Land Use 1/	Land Capability Classification 3/	Principal Suitability 2/	Proposed Management
North	East	East	Sec.								
Dawson County											
13	57	18		SE $\frac{1}{4}$ NW $\frac{1}{4}$	40.00	Gently to steeply rolling	8	1	VII	1	Private
		20		NE $\frac{1}{4}$, E $\frac{1}{2}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$ SW $\frac{1}{4}$, NW $\frac{1}{4}$ SE $\frac{1}{4}$	320.00	Gently to steeply rolling	74	1	VI	1	Private
14	52	18		N $\frac{1}{2}$	320.00	Rolling gravelly hills	87	1	VI	1	Private
		22		NW $\frac{1}{4}$ NW $\frac{1}{4}$	40.00	Steeply rolling, undulating	13	1	VI	1	Private
		24		Lot 1	42.24	Steeply broken, rough hills	15	1	VII	1	Private
		32		SW $\frac{1}{4}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$	200.00	Broken, steep, rough hills	24	1	VII	1	Private
14	53	24		W $\frac{1}{2}$ NW $\frac{1}{4}$	80.00	Steeply rolling gravel hills	20	1	VII	1	Private
14	53	26		N $\frac{1}{2}$ NW $\frac{1}{4}$, E $\frac{1}{2}$ SE $\frac{1}{4}$, NE $\frac{1}{4}$	320.00	Steeply rolling gravel hills	84	1	80 VI/240/VII	1	Private
		30		Lots 1, 2, 3, 4, E $\frac{1}{2}$ SW $\frac{1}{4}$, S $\frac{1}{2}$ SE $\frac{1}{4}$	318.40	Steep, rolling gravel hills	61	1	39.90/VI:278.50/VII	1	Private
14	54	1		NE $\frac{1}{4}$ NE $\frac{1}{4}$	40.00	Steep rolling gravel hills	4	1	VII	1	Private
14	55	2		SE $\frac{1}{4}$	160.00	Steep rolling badlands	27	1, 2, 3, 6	VII	1, 2, 3, 6	Federal
		3		All	663.48	Steep rolling badlands	106	1, 2, 3, 6	VII	1, 2, 3, 6	Federal
		4		SE $\frac{1}{4}$ SE $\frac{1}{4}$	40.00	Steep rolling badlands	5	1, 2, 3, 6	VII	1, 2, 3, 6	Federal
		5		Lots 10, 11, 12, 13	136.50	Level to undulating	47	1, 2, 3, 6	VI	1, 2, 3, 6	Private
		8		SW $\frac{1}{4}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$ NE $\frac{1}{4}$, Lots 1, 4, 5	146.22	Gently to steeply rolling	89	1	VI	1	Private
		9		Lots 1, 2, 3, 4, E $\frac{1}{2}$ E $\frac{1}{2}$	325.91	Rough broken badlands	63	1, 2, 3, 6	VII	1, 2, 3, 6	Federal
		10		All	640.00	Rough broken badlands	121	1, 2, 3, 6	VII	1, 2, 3, 6	Federal
		12		All	640.00	Rough broken badlands	109	1, 2, 3, 6	VII	1, 2, 3, 6	Federal
		14		N $\frac{1}{2}$, SE $\frac{1}{4}$	480.00	Rough broken badlands	91	1, 2, 3, 6	VII	1, 2, 3, 6	Federal
		15		All	640.00	Rough broken badlands	134	1, 2, 3, 6	VII	1, 2, 3, 6	Federal

-Continued

Table 15.- Description, Area, Classification, Suitability and Proposed Management of Unreserved Public Domain, by Counties,
Within the Lower Yellowstone River Basin, Montana and North Dakota, 1955 - Continued

Montana Principal Meridian		Twp. Range		Subdivision	Acres	General Land Character	AUM's	Present Land Use 1/	Land Capability Classification 3/	Principal Suitability 2/	Proposed Management
North	East	Sec.	North								
Dawson County											
14	55	20	SW $\frac{1}{4}$, S $\frac{1}{2}$ NW $\frac{1}{4}$		240.00	Rough broken badlands	43	1, 2, 3, 6	VII	1, 2, 3, 6	Federal
		21	E $\frac{1}{2}$		320.00	Rough broken badlands	64	1, 2, 3, 6	VII	1, 2, 3, 6	Federal
		22	SE $\frac{1}{4}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$ SE $\frac{1}{4}$		80.00	Rough broken badlands	14	1, 2, 3, 6	VII	1, 2, 3, 6	Federal
		24	S $\frac{1}{2}$		320.00	Rough broken badlands	51	1, 2, 3, 6	VII	1, 2, 3, 6	Federal
		26	All		640.00	Rough broken badlands	90	1, 2, 3, 6	VII	1, 2, 3, 6	Federal
		27	All		640.00	Rough broken badlands	90	1, 2, 3, 6	VII	1, 2, 3, 6	Federal
		28	Lot 9		10.54	Steep rolling to rough	3	1, 2, 3, 6	VII	1, 2, 3, 6	Federal
		28	S $\frac{1}{2}$ SW $\frac{1}{4}$		80.00	Steeply rolling	20	1	VI	1	Private
		33	E $\frac{1}{2}$		333.24	Rough, rolling badlands	77	1, 2, 3, 6	VI	1, 2, 3, 6	Federal
		35	All		640.00	Rough rolling badlands	122	1, 2, 3, 6	VII	1, 2, 3, 6	Federal
14	56	2	All		637.76	Steeply rolling to rough	102	1, 2, 3, 6	VII	1, 2, 3, 6	Federal
		4	Lots 1, 2, S $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$		317.11	Steeply rolling to rough	44	1, 2, 3, 6	VII	1, 2, 3, 6	Federal
		6	All		620.98	Steeply rolling to rough	81	1, 2, 3, 6	VII	1, 2, 3, 6	Federal
		10	All		640.00	Steeply rolling to rough	102	1, 2, 3, 6	VII	1, 2, 3, 6	Federal
		12	All		640.00	Steeply rolling to rough	102	1, 2, 3, 6	VII	1, 2, 3, 6	Federal
		14	All		640.00	Steeply rolling to rough	102	1, 2, 3, 6	VII	1, 2, 3, 6	Federal
		18	All		635.36	Steeply rolling to rough	108	1	VI	1	Federal
		22	NW $\frac{1}{4}$ NW $\frac{1}{4}$, E $\frac{1}{2}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$, SE $\frac{1}{4}$ SE $\frac{1}{4}$		320.00	Steeply rolling to rough	60	1	80/VI:240/VII	1	Federal
		26	E $\frac{1}{2}$		320.00	Steeply rolling to rough	48	1	VII	1	Federal
		30	All		639.56	Steeply rolling to rough	95	1	VII	1	Federal
		32	NE $\frac{1}{4}$ NE $\frac{1}{4}$, S $\frac{1}{2}$ S $\frac{1}{2}$		200.00	Steeply rolling to rough	40	1	VI	1	Federal
14	57	2	All		638.88	Steeply rolling to rough	140	1	VII	1	Private

- Continued

Table 15. - Description, Area, Classification, Suitability and Proposed Management of Unreserved Public Domain, by Counties, Within the Lower Yellowstone River Basin, Montana and North Dakota, 1955 - Continued

Montana Principal Meridian	Twp. Range	North East Sec.	Subdivision	Acres	General Land Character	AUM's Land Use 1/	Present Land Use 1/	Land Capability Classification 3/	Principal Suitability 2/	Proposed Management
Dawson County	14	57	6	340.15	Steeply rolling to rough	166	1	VII	1	Private
			8	320.00	Steeply rolling to rough	71	1	VII	1	Private
			10	520.00	Steeply rolling to rough	114	1	200VI/320VII	1	Private
			12	320.00	Steeply rolling to rough	80	1	VI	1	Private
			14	640.00	Steep rough badlands	96	1	VII	1	Private
			18	210.35	Steeply rolling rough	38	1	VII	1	Private
			22	320.00	Steeply rolling badlands	64	1	VII	1	Private
			24	280.00	Steeply rolling badlands	42	1	VII	1	Private
			28	320.00	Steeply rolling badlands	64	1	VII	1	Private
			30	80.00	Very steeply rolling	14	1	VII	1	Private
	14	58	18	640.88	Steeply rolling rough	173	1	VI	1	Private
			20	320.00	Steeply rolling rough	90	1	VI	1	Private
			30							
	15	51	12	320.13	Steeply rolling breaks	89	1	VI	1	Private
			30	160.00	Rough badlands	26	1	VII	1	Private
			10	40.00	Rough badlands, steep	6	1	VII	1	Private
			14	40.00	Gravelly hills, steep	6	1	VII	1	Private
			2	40.00	Steeply rolling	12	1	VI	1	Private
	15	55	2	160.00	Rough broken badlands	12	1, 2, 3, 6	VII	2, 6	Federal

- Continued

Table 15. - Description, Area, Classification, Suitability and Proposed Management of Unreserved Public Domain, by Counties, Within the Lower Yellowstone River Basin, Montana and North Dakota, 1955 - Continued

Montana Principal Meridian		Twp. Range		Subdivision	Acres	General Land Character	AUM's	Present Land Use	Land Capability Classification	Principal Suitability	Proposed Management
North	East	Sec.	1/								
Dawson County											
15	55	10		SW $\frac{1}{4}$ NE $\frac{1}{4}$, W $\frac{1}{2}$ SE $\frac{1}{4}$	120.00	Rough broken badlands	14	1, 2, 3, 6	VII	2, 6	Federal
		12		All	640.00	Rough broken badlands	58	1, 2, 3, 6	VII	2, 6	Federal
		14		All	640.00	Rough broken badlands	38	1, 2, 3, 6	VII	2, 6	Federal
		22		E $\frac{1}{2}$ NE $\frac{1}{4}$, Lots 1, 3	121.85	Steeply rolling to rough	30	1	40VI/81.85VII	1	Private
		24		All	640.00	Steeply broken badlands	32	1, 2, 3, 6	VII	2, 6	Federal
		26		E $\frac{1}{2}$, E $\frac{1}{2}$ W $\frac{1}{2}$, Lots 3, 4	563.90	Rough broken badlands	68	1, 2, 3, 6	VII	2, 6	Federal
		27		Lots 1, 2, 3, 4, 5, 6, E $\frac{1}{2}$ SE $\frac{1}{4}$	323.84	Gently to steeply rolling	78	1, 2, 3, 6	243.84/VI-80/VII	2, 6	Federal
		32		Lots 1, 4	36.08	Undulating to rolling	6	1	VII	1	Private
15	56	2		Lot 4	53.74	Steeply rolling	13	1	VI	1	Private
		4		Lots 1, 4, S $\frac{1}{2}$ NW $\frac{1}{4}$	179.78	Steeply rolling to rough	40	1	80VI/99.78VII	1, 2, 3, 6	Private
		6		All	655.09	Rough broken badlands	22	1, 2, 3, 6	VIII	1, 2, 3, 6	Federal
		8		All	640.00	Rough broken badlands	26	1, 2, 3, 6	VIII	1, 2, 3, 6	Federal
		10		N $\frac{1}{2}$ NE $\frac{1}{4}$, SW $\frac{1}{4}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$, SW $\frac{1}{4}$ SE $\frac{1}{4}$	320.00	Steeply rolling to rough	50	1	120/VI-200/VII	1	Private
		12		E $\frac{1}{2}$ NE $\frac{1}{4}$	80.00	Steeply rolling to rough	20	1	VII	1	Private
		14		NW $\frac{1}{4}$ NW $\frac{1}{4}$	40.00	Steeply rolling to rough	10	1	VI	1	Private
		18		Lots 1, 2, 3, 4, NE $\frac{1}{4}$ NW $\frac{1}{4}$, S $\frac{1}{2}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$	303.76	Rough broken badlands	12	1, 2, 3, 6	VIII	1, 6	Federal
		20		N $\frac{1}{2}$, SE $\frac{1}{4}$	480.00	Rough broken badlands	20	1, 2, 3, 6	VIII	1, 6	Federal
		28		All	640.00	Rough broken badlands	40	1, 2, 3, 6	VIII	1, 6	Federal
		30		Lots 1, 2, E $\frac{1}{2}$ NW $\frac{1}{4}$, E $\frac{1}{2}$ NW $\frac{1}{4}$, E $\frac{1}{2}$ NW $\frac{1}{4}$, E $\frac{1}{2}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$, SE $\frac{1}{4}$ SE $\frac{1}{4}$	473.35	Rough broken badlands	20	1, 2, 3, 6	VIII	1, 6	Federal
		32		SE $\frac{1}{4}$ SE $\frac{1}{4}$	320.00	Rough broken badlands	43	1, 2, 3, 6	VIII	1, 6	Federal

-Continued

Table 15. - Description, Area, Classification, Suitability and Proposed Management of Unreserved Public Domain, by Counties,
Within the Lower Yellowstone River Basin, Montana and North Dakota, 1955 - Continued

Montana Principal Meridian		Twp. Range	North East Sec.	Subdivision	Acres	General Land Character	AUM's	Present Land Use 1/	Land Capability Classification 3/	Principal Suitability 2/	Proposed Management
Dawson County											
15	56	34	All	640.00	Rough broken badlands	40	1, 2, 3, 6	VIII	1, 6	Public	
15	57	6	All	715.79	Steeply rolling to rough	154	1	385.03/VI:330.76/VII	1	Private	
		8	S $\frac{1}{2}$	320.00	Steeply rolling, rough	58	1	VII	1	Private	
		20	All	640.00	Steeply rolling, rough	141	1	VII	1	Private	
		28	All	640.00	Steeply rolling, rough	115	1	VII	1	Private	
		30	Lots 2, 3, 4, E $\frac{1}{2}$ SW $\frac{1}{4}$, W $\frac{1}{2}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ SE $\frac{1}{4}$	346.14	Steeply rolling, rough	69	1	VI	1	Private	
		34	All	640.00	Steeply rolling, rough	102	1	VII	1	Private	
		4	Lots 1, 2	94.60	Steeply rolling, rough	26	1	VI	1	Private	
15	58	4	NE $\frac{1}{4}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ NE $\frac{1}{4}$,								
16	53	22	SW $\frac{1}{4}$, E $\frac{1}{2}$ SE $\frac{1}{4}$								
		2	Lots 1, 2, 3, 4, S $\frac{1}{2}$ N $\frac{1}{2}$	320.00	Steeply rolling to rough	76	1	VII	1	Private	
		4	Lot 1	349.88	Rough broken badlands	63	1	VII	1	Private	
		26	S $\frac{1}{2}$ S $\frac{1}{2}$	47.15	Rough broken badlands	12	1	VI	1	Private	
		2	Lot 1, 2, 3, 4, S $\frac{1}{2}$ N $\frac{1}{2}$,	160.00	Steeply rolling, rough	43	1	VII	1	Private	
16	55	2	N $\frac{1}{2}$ SW $\frac{1}{4}$	426.72	Steeply rolling, rough	60	1	VII	1	Private	
		4	Lot 1, 2, 3, 4, S $\frac{1}{2}$ N $\frac{1}{2}$	333.79	Steeply rolling, broken	34	1	VII	1	Private	
		24	Lot 7	36.00	Level, undulating, island	-	None	VII	1	Private	
16	56	12	SE $\frac{1}{4}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ SW $\frac{1}{4}$	320.00	Rough steep, sand, scoria	70	1	VII	1	Private	
		22	NW $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$, W $\frac{1}{2}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$	360.00	Steep to gently rolling	71	1	VII	1	Private	
		26	S $\frac{1}{2}$	320.00	Steep to gently rolling	54	1	VII	1	Private	

-Continued

Table 15. - Description, Area, Classification, Suitability and Proposed Management of Unreserved Public Domain, by Counties,
Within the Lower Yellowstone River Basin, Montana and North Dakota, 1955 - Continued

Montana Principal Meridian		Twp. Range		North East Sec.		Dawson County		Subdivision	Acres	General Land Character	AUM's Land Use 1/	Land Capability Classification 3/	Principal Suitability 2/	Proposed Management
16	56	28						SE $\frac{1}{4}$	160.00	Steeply to gently rolling	1	VII	1	Private
30								Lots 3, 4, E $\frac{1}{2}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$	34	Steeply sloping to badlands	1, 2, 3, 6	VII	1, 2, 3, 6	Federal
32								N $\frac{1}{2}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$ NW $\frac{1}{4}$						
34								NW $\frac{1}{4}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$, Lots 3, 4	398.89	Steeply sloping to badlands	1, 2, 3, 6	VII	1, 2, 3, 6	Federal
34								N $\frac{1}{2}$	320.00	Steeply rolling, rough	1	VII	1, 2, 3, 6	Federal
16	57	14						SE $\frac{1}{4}$ SE $\frac{1}{4}$	40.00	Steeply rolling	1	VI	1	Private
								W $\frac{1}{2}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ NW $\frac{1}{4}$						
18								NE $\frac{1}{4}$ SW $\frac{1}{4}$, NW $\frac{1}{4}$ SE $\frac{1}{4}$	240.00	Rough, sand and scoria hills	1	VII	1	Private
22								NE $\frac{1}{4}$ NW $\frac{1}{4}$	40.00	Rough, sand and scoria hills	1	VII	1	Private
								NW $\frac{1}{4}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NE $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$, SW $\frac{1}{4}$ SE $\frac{1}{4}$, S $\frac{1}{2}$ SW $\frac{1}{4}$,						
16	58	2						N $\frac{1}{2}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$ NW $\frac{1}{4}$	400.00	Rough sand and scoria hills	1	VII	1	Private
								Lots 1, 2, 4, SW $\frac{1}{4}$ NW $\frac{1}{4}$,						
6								W $\frac{1}{2}$ SW $\frac{1}{4}$, S $\frac{1}{2}$ SE $\frac{1}{4}$	331.18	Steeply rolling scoria hills	1	160/VI:171.18/VII	1	Private
								Lots 1, 2, 3, SE $\frac{1}{4}$ NW $\frac{1}{4}$,						
20								S $\frac{1}{2}$ SE $\frac{1}{4}$						
20								S $\frac{1}{2}$						
17	50	2						Lot 3, SW $\frac{1}{4}$ NW $\frac{1}{4}$, W $\frac{1}{2}$ SW $\frac{1}{4}$	249.63	Rough broken scoria hills	1	VII	1	Private
6								Lots 5, 6, SW $\frac{1}{4}$ SE $\frac{1}{4}$	320.00	Rough broken scoria hills	1	VII	1	Private
30								Lot 4	160.24	Gently to steeply rolling	1	VI	1	Private
17	51	2						S $\frac{1}{2}$ SW $\frac{1}{4}$	117.36	Gently to steeply rolling	1	VI	1	Private
17	54	8						SW $\frac{1}{4}$	39.74	Gently to steeply rolling	1	VI	1	Private
								N $\frac{1}{2}$, SE $\frac{1}{4}$	80.00	Gently to steeply rolling	1	VI	1	Private
20									160.00	Steeply rolling to rough	1	VII	1	Private
									480.00	Steeply rolling to rough	1	VII	1	Private

-Continued

Table 15. - Description, Area, Classification, Suitability and Proposed Management of Unreserved Public Domain, by Counties, Within the Lower Yellowstone River Basin, Montana and North Dakota, 1955 - Continued

Montana Principal Meridian		Twp. North	Range East	Sec.	Subdivision	Acres	General Land Character	AUM's	Present Land Use 1/	Land Capability Classification 3/	Principal Suitability 2/	Proposed Management
Dawson County												
17	54	22	All	640.00	Steeply rolling to rough	115	1	VII	1	Private		
		26	N $\frac{1}{2}$	320.00	Steeply rolling to rough	58	1	VII	1	Private		
		34	NE $\frac{1}{4}$, NE $\frac{1}{4}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$ SE $\frac{1}{4}$, W $\frac{1}{2}$ SW $\frac{1}{4}$	320.00	Steeply rolling to rough	54	1	VII	1	Private		
		2	NW $\frac{1}{4}$ SE $\frac{1}{4}$	40.00	Steeply rolling	6	1	VII	1	Private		
		8	All	640.00	Steeply rolling, rough	96	1	VII	1	Private		
		10	N $\frac{1}{2}$ N $\frac{1}{2}$, SE $\frac{1}{4}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ SE $\frac{1}{4}$, SW $\frac{1}{4}$ SW $\frac{1}{4}$	320.00	Steeply rolling, rough	57	1	VII	1	Private		
		20	E $\frac{1}{2}$	320.00	Steeply rolling, rough	58	1	VII	1	Private		
		22	N $\frac{1}{2}$ N $\frac{1}{2}$, SW $\frac{1}{4}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NW $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ SW $\frac{1}{4}$	400.00	Steeply rolling badlands	92	1	VII	1	Private		
		28	NW $\frac{1}{4}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$ NE $\frac{1}{4}$, S $\frac{1}{2}$ S $\frac{1}{2}$	240.00	Very steeply rolling	43	1	VII	1	Private		
		12	N $\frac{1}{2}$ NE $\frac{1}{4}$	80.00	Steeply rolling hills	16	1	VII	1	Private		
		18	Lots 2, 4, 6, 7, 8, 9	194.16	Part of River Island	-	2	VIII	2	Federal		
		20	S $\frac{1}{2}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$	160.00	Rough, broken and steep	32	1	VII	1	Private		
		4	Lots 3, 4, N $\frac{1}{2}$ SW $\frac{1}{4}$	159.20	Steeply rolling rough	38	1	VI	1	Private		
		6	Lots 2, 3, 4, 5, 6, 7, SE $\frac{1}{4}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$, W $\frac{1}{2}$ SE $\frac{1}{4}$	475.35	Steeply rolling gravel hills	120	1	VII	1	Private		
		10	S $\frac{1}{2}$ S $\frac{1}{2}$	160.00	Steeply rolling to rough	18	1	VII	1	Private		
		12	N $\frac{1}{2}$ NW $\frac{1}{4}$, E $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$	320.00	Steeply rolling to rough	64	1	VII	1	Private		

-Continued

Table 15.- Description, Area, Classification, Suitability and Proposed Management of Unreserved Public Domain, by Counties,
 Within the Lower Yellowstone River Basin, Montana and North Dakota, 1955 - Continued

Montana Principal Meridian		Twp. Range		Subdivision	Acres	General Land Character	AUM's Land Use 1/	Present Land Use 1/	Land Capability Classification 3/	Principal Suitability 2/	Proposed Management
North	East	Sec.	Sec.								
Dawson County											
17	57	14	14	All	640.00	Steeply rolling to rough	128	1	VII	1	Private
		18	18	N $\frac{1}{2}$ NE $\frac{1}{4}$	80.00	Steeply rolling to rough	12	1	VII	1	Private
		20	20	NE $\frac{1}{4}$, NE $\frac{1}{4}$ NW $\frac{1}{4}$, E $\frac{1}{2}$ SE $\frac{1}{4}$, SW $\frac{1}{4}$ SW $\frac{1}{4}$	320.00	Steeply rolling to rough	48	1	VII	1	Private
		22	22	All	640.00	Steeply rolling to rough	147	1	VII	1	Private
		24	24	W $\frac{1}{2}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$	320.00	Steeply rolling to rough	89	1	80/VI;240/VII	1	Private
		26	26	NW $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$, E $\frac{1}{2}$ NE $\frac{1}{4}$	320.00	Steeply rolling to rough	92	1	VI	1	Private
		32	32	All	640.00	Steeply rolling to rough	96	1	VII	1	Private
17	58	6	6	Lots 3, 4, 5, 6, 7, 10, 11, 12, 13, 14, E $\frac{1}{2}$ SE $\frac{1}{4}$	403.61	Very steep and rough	65	1	VII	1	Private
		18	18	Lots 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	390.64	Steeply rolling to rough	78	1	VII	1	Private
		20	20	E $\frac{1}{2}$	320.00	Steeply rolling to rough	64	1	VII	1	Private
		30	30	SE $\frac{1}{4}$ NW $\frac{1}{4}$, SE $\frac{1}{4}$ SE $\frac{1}{4}$	80.00	Gently to steeply rolling	22	1	VI	1	Private
		32	32	E $\frac{1}{2}$ NE $\frac{1}{4}$	80.00	Steeply rolling to rough	16	1	VII	1	Private
18	54	34	34	NE $\frac{1}{4}$ NE $\frac{1}{4}$	40.00	Steeply rolling, hummocky	9	1	VII	1	Private
18	55	22	22	W $\frac{1}{2}$ NW $\frac{1}{4}$	80.00	Steeply rolling rough	20	1	VII	1	Private
		26	26	NE $\frac{1}{4}$, E $\frac{1}{2}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ NW $\frac{1}{4}$	230.00	Steeply rolling rough	48	1	VII	1	Private
		34	34	N $\frac{1}{2}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ NW $\frac{1}{4}$, SE $\frac{1}{4}$ NE $\frac{1}{4}$, S $\frac{1}{2}$ S $\frac{1}{2}$	320.00	Steeply rolling rough	50	1	VII	1	Private
18	56	18	18	NE $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ NW $\frac{1}{4}$	320.00	Steep rolling gravel hills	78	1	VI	1	Private
		20	20	NE $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$, NE $\frac{1}{4}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$ SE $\frac{1}{4}$	320.00	Rough, broken badlands	48	1, 2, 3, 6	VII	1, 2, 3, 6	Federal

-Continued

Table 15. - Description, Area, Classification, Suitability and Proposed Management of Unreserved Public Domain, by Counties,
 Within the Lower Yellowstone River Basin, Montana and North Dakota, 1955 Continued

Montana Principal Meridian		Twp. Range		Sec.	Subdivision	Acres	General Land Character	AUM's	Present Land Use 1/	Land Capability Classification 3/	Principal Suitability 2/	Proposed Management
North	East	North	East									
Dawson County												
18	56			28	All	640.00	Rough broken badlands	76	1, 2, 3, 6	VII	1, 2, 3, 6	Federal
				32	Lot 1, N $\frac{1}{2}$	356.07	Rough broken badlands	53	1, 2, 3, 6	VII	1, 2, 3, 6	Federal
				34	Lot 1	21.70	Rough broken badlands	-	1, 2, 3, 6	VII	1, 2, 3, 6	Federal
18	57			18	Lots 3, 4, E $\frac{1}{2}$ SW $\frac{1}{4}$	155.11	Rough broken badlands	18	1	VII	1	Private
				22	NE $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ SE $\frac{1}{4}$, SW $\frac{1}{4}$ SW $\frac{1}{4}$	320.00	Steep, rolling to rough	64	1	VII	1	Private
				26	N $\frac{1}{2}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ SE $\frac{1}{4}$	160.00	Steep, rolling to rough	32	1	VII	1	Private
				28	NE $\frac{1}{4}$, E $\frac{1}{2}$ SE $\frac{1}{4}$	240.00	Steep, rolling to rough	48	1	VII	1	Private
				32	E $\frac{1}{2}$ SE $\frac{1}{4}$	80.00	Gently to steeply rolling	21	1	VI	1	Private
19	51			2	Lot 1	39.89	Steeply rolling	8	1	VI	1	Private
				4	W $\frac{1}{2}$ SW $\frac{1}{4}$	80.00	Gently to steeply rolling	24	1	VI	1	Private
				8	SW $\frac{1}{4}$ SW $\frac{1}{4}$	40.00	Gently to steeply rolling	10	1	VI	1	Private
				10	E $\frac{1}{2}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ SE $\frac{1}{4}$, NW $\frac{1}{4}$ SW $\frac{1}{4}$, S $\frac{1}{2}$ S $\frac{1}{2}$	320.00	Steep, rolling to rough	64	1	VI	1	Private
				20	E $\frac{1}{2}$	320.00	Gently to steeply rolling	68	1	80/VI:240/VII	1	Private
				28	N $\frac{1}{2}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ SW $\frac{1}{4}$	160.00	Gently to steeply rolling	30	1	VII	1	Private
				32	NE $\frac{1}{4}$ SE $\frac{1}{4}$	40.00	Gently to steeply rolling	12	1	VI	1	Private
19	52			6	Lots 1, 2, S $\frac{1}{2}$ NE $\frac{1}{4}$	160.00	Steep, rolling badlands	32	1	VII	1	Private
19	54			32	N $\frac{1}{2}$ NE $\frac{1}{4}$	80.00	Gently to steeply rolling	28	1	VI	1	Private
19	55			22	NE $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ SE $\frac{1}{4}$	280.00	Gently to steeply rolling	48	1	VII	1	Private
19	56			18	Lots 1, 2, E $\frac{1}{2}$ NW $\frac{1}{4}$	154.25	Steeply rolling hills	26	1	VII	1	Private
				30	Lot 4, NE $\frac{1}{4}$ NW $\frac{1}{4}$, S $\frac{1}{2}$ SE $\frac{1}{4}$	157.18	Steep, rolling grassy hills	52	1	VI	1	Private

- Continued

Table 15. - Description, Area, Classification, Suitability and Proposed Management of Unreserved Public Domain, by Counties, Within the Lower Yellowstone River Basin, Montana and North Dakota, 1955 . Continued

Montana Principal Meridian		North Dakota		Acres	General Land Character	AUM's Land Use 1/	Land Capability Classification 3/	Principal Suitability 2/	Proposed Management
Twp. Range	North East	Sec.	Subdivision						
Dawson County									
20	52	32	W $\frac{1}{2}$ SW $\frac{1}{4}$	80.00	Steeply rolling badlands	18	VII	1	Private
20	55	2	SW $\frac{1}{4}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ S $\frac{1}{2}$	200.00	Gently to steeply rolling	70	VI	1	Private
		12	S $\frac{1}{2}$ SE $\frac{1}{4}$	80.00	Gently to steeply rolling	18	VI	1	Private
Fallon County									
5	55	8	NW $\frac{1}{4}$ NE $\frac{1}{4}$, NW $\frac{1}{4}$, NW $\frac{1}{4}$ SW $\frac{1}{4}$	240.00	Gently to steeply rolling	62	VI	1	Private
		18	E $\frac{1}{2}$	320.00	Gently to steeply rolling	90	VI	1	Private
		24	S $\frac{1}{2}$	320.00	Gently rolling to sloping	90	240/VI:80/VII	1	Private
		28	W $\frac{1}{2}$ NE $\frac{1}{4}$, NW $\frac{1}{4}$ SE $\frac{1}{4}$	120.00	Steeply rolling to rough	28	70/VI:50/VII	1	Private
5	56	8	SE $\frac{1}{4}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ SE $\frac{1}{4}$	80.00	Steeply rolling to sloping	18	VI	1	Private
5	57	9	NW $\frac{1}{4}$ SE $\frac{1}{4}$	40.00	Gently rolling sloping	12	V	1	Private
		30	Lot 4	40.00	Gently to steeply rolling	8	VI	1	Private
5	58	8	S $\frac{1}{2}$ NW $\frac{1}{4}$	80.00	Gently rolling, sloping	20	60/VI:20/VII	1	Private
		32	NE $\frac{1}{4}$	160.00	Steeply rolling to rough	37	VII	1	Private
6	55	4	W $\frac{1}{2}$ SW $\frac{1}{4}$	80.00	Gently to steeply rolling	16	VI	1	Private
		6	S $\frac{1}{2}$ NW $\frac{1}{4}$	80.00	Steeply rolling to rough	18	60/VI:20/VII	1	Private
		20	SE $\frac{1}{4}$ SE $\frac{1}{4}$	40.00	Gently to steeply rolling	8	VII	1	Private
		26	NW $\frac{1}{4}$, SW $\frac{1}{4}$ NE $\frac{1}{4}$, NW $\frac{1}{4}$ SE $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$	320.00	Steeply rolling to rough	83	90/VI:230/VII	1	Private
		32	SW $\frac{1}{4}$ NW $\frac{1}{4}$	40.00	Gently to steeply rolling	8	VI	1	Private
6	56	6	Lots 1, 2, 3, 4, 6, 7, 8, S $\frac{1}{2}$ SE $\frac{1}{4}$	306.44	Steeply rolling to rough	64	80/VI:226.44/VII	1	Private

-Continued

Table 15.- Description, Area, Classification, Suitability and Proposed Management of Unreserved Public Domain, by Counties,
 Within the Lower Yellowstone River Basin, Montana and North Dakota, 1955 - Continued

Montana Principal Meridian		Twp. Range		Sec.	Subdivision	Acres	General Land Character	AUM's Land Use 1/	Present Land Use 1/	Land Capability Classification 3/	Principal Suitability 2/	Proposed Management
North	East	Range	Section									
Fallon County												
6	56	20	All		640.00	Steeply rolling to broken	126	1	125/VI:515/VII	1	Private	
6	57	8	W $\frac{1}{2}$, S $\frac{1}{2}$ SE $\frac{1}{4}$		400.00	Steeply rolling to rough	88	1	VII	1	Private	
		20	All		640.00	Steeply rolling to broken	132	1	VII	1	Private	
		22	S $\frac{1}{2}$		320.00	Gently to steeply rolling	76	1	120/VI:200/VII	1	Private	
		26	All		640.00	Steeply rolling to rough	116	1	60/VI:510/VII:70/VIII	1	Private	
		28	N $\frac{1}{2}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ NW $\frac{1}{4}$		120.00	Gently to steeply rolling	26	1	90/VI:30/VII	1	Private	
6	58	12	NW $\frac{1}{4}$ NW $\frac{1}{4}$		40.00	Steeply rolling	8	1	VII	1	Private	
		18	Lot 1, NE $\frac{1}{4}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ NE $\frac{1}{4}$		114.78	Steeply rolling, hilly	24	1	VI	1	Private	
		20	SW $\frac{1}{4}$ NE $\frac{1}{4}$, W $\frac{1}{2}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ SE $\frac{1}{4}$		160.00	Gently to steeply rolling	43	1	VI	1	Private	
6	59	4	NE $\frac{1}{4}$ SE $\frac{1}{4}$		40.00	Gently rolling to sloping	10	1	VI	1	Private	
		10	W $\frac{1}{2}$ SW $\frac{1}{4}$		80.00	Gently to steeply rolling	22	1	VI	1	Private	
		20	E $\frac{1}{2}$ NE $\frac{1}{4}$, S $\frac{1}{2}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ SE $\frac{1}{4}$		200.00	Gently to steeply rolling	56	1	90/VI:110/VII	1	Private	
6	60	4	SW $\frac{1}{4}$, SW $\frac{1}{4}$ SE $\frac{1}{4}$, E $\frac{1}{2}$ SE $\frac{1}{4}$		280.00	Rolling to broken and rough	56	1	140/VI:140/VII	1	Private	
7	55	4	Lot 1, S $\frac{1}{2}$ NE $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$ SW $\frac{1}{4}$		319.80	Gently to steeply rolling	92	1	VII	1	Private	
		6	Lots 1, 2, 3, 4, 5, SE $\frac{1}{4}$ NW $\frac{1}{4}$, S $\frac{1}{2}$ NE $\frac{1}{4}$		315.27	Steeply rolling to rough	86	1	VII	1	Private	
		12	SW $\frac{1}{4}$ NE $\frac{1}{4}$, NW $\frac{1}{4}$ SW $\frac{1}{4}$		80.00	Gently rolling	18	1	40/VI:40/VII	1	Private	

-Continued

Table 15. - Description, Area, Classification, Suitability and Proposed Management of Unreserved Public Domain, by Counties,
 Within the Lower Yellowstone River Basin, Montana and North Dakota, 1955 - Continued

Montana Principal Meridian		Twp. Range		Subdivision	Acres	General Land Character	AUM's Land Use 1/	Present Land Use 1/	Land Capability Classification 3/	Principal Suitability 2/	Proposed Management
North	East	Sec.	Sec.								
Fallon County											
7	55	26		N $\frac{1}{4}$	320.00	Gently to steeply rolling	62	1	VII	1	Private
		34		E $\frac{1}{2}$ SE $\frac{1}{4}$	80.00	Gently rolling to sloping	22	1	VI	1	Private
7	56	10		N $\frac{1}{2}$	320.00	Steeply rolling rough	56	1	60/VI:260/VII	1	Private
		20		SE $\frac{1}{4}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$	200.00	Gently to steeply rolling	52	1	70/VI:130/VII	1	Private
		26		SW $\frac{1}{4}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$	80.00	Gently rolling to sloping	20	1	VI	1	Private
		30		Lot 1, NE $\frac{1}{4}$ NW $\frac{1}{4}$	76.88	Gently rolling, undulating	22	1	VI	1	Private
		34		SE $\frac{1}{4}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ SE $\frac{1}{4}$	80.00	Gently rolling, undulating	18	1	60/VI:20/VII	1	Private
7	58	18		Lots 8, 9	80.00	Undulating, to rolling	22	1	VI	1	Private
7	60	2		Lot 4	49.19	Gently rolling to rough	12	1	VII	1	Private
		32		NE $\frac{1}{4}$	160.00	Steeply rolling rough	38	5-1	VII	5-1	Federal
8	55	4		S $\frac{1}{2}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ SE $\frac{1}{4}$	120.00	Gently rolling, to steep	26	1	50/VI:70/VII	1	Private
		12		S $\frac{1}{2}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$ SE $\frac{1}{4}$	120.00	Rolling to undulating	29	1	VII	1	Private
		20		W $\frac{1}{2}$	320.00	Steeply rolling to rough	72	1	VII	1	Private
		28		N $\frac{1}{2}$ NW $\frac{1}{4}$	80.00	Gently to steeply rolling	16	1	VI	1	Private
		30		Lots 1, 2, E $\frac{1}{2}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$	316.27	Steeply rolling to rough	73	1	VII	1	Private
		32		N $\frac{1}{2}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$ NW $\frac{1}{4}$							
				SW $\frac{1}{4}$ SW $\frac{1}{4}$	160.00	Gently to steeply rolling	42	1	40/VI:120/VII	1	Private
8	56	6		Lot 2	27.69	Steeply sloping	6	1	VI	1	Private
		18		Lot 1, 3, NE $\frac{1}{4}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ NE $\frac{1}{4}$	151.23	Steeply rolling to broken	36	1	35.54/VI:115.69/VII	1	Private
		30		N $\frac{1}{2}$ NE $\frac{1}{4}$, SW $\frac{1}{4}$ NE $\frac{1}{4}$, SW $\frac{1}{4}$ SE $\frac{1}{4}$	160.00	Gently to steeply rolling	49	1	40/VI:120/VII	1	Private
8	58	22		W $\frac{1}{2}$ NW $\frac{1}{4}$	80.00	Steeply rolling, broken	18	1	30/VI:50/VII	1	Private

-Continued

Table 15. - Description, Area, Classification, Suitability and Proposed Management of Unreserved Public Domain, by Counties,
 Within the Lower Yellowstone River Basin, Montana and North Dakota, 1955 - Continued

Montana Principal Meridian	Twp. Range	North East Sec.	Subdivision	Acres	General Land Character	AUM's	Present Land Use 1/	Land Capability Classification 3/	Principal Suitability 2/	Proposed Management
Fallon County	8	59	1 All	546.00	Thin breaks and badlands	93	1, 2, 3, 5, 6	VII	1, 2, 3, 5, 6	Federal
			3 All	544.20	Thin breaks and badlands	88	1, 2, 3, 5, 6	VII	1, 2, 3, 5, 6	Federal
			5 All	545.60	Thin breaks and badlands	92	1, 2, 3, 5, 6	VII	1, 2, 3, 5, 6	Federal
			9 All	640.00	Thin breaks and badlands	114	1, 2, 3, 5, 6	430/VII:210/VIII	1, 2, 3, 5, 6	Federal
			11 All	640.00	Thin breaks and badlands	126	1, 2, 3, 5, 6	410/VII:230/VIII	1, 2, 3, 5, 6	Federal
			13 All	640.00	Thin breaks and badlands	110	1, 2, 3, 5, 6	390/VII:250/VIII	1, 2, 3, 5, 6	Federal
			15 All	640.00	Thin breaks and badlands	102	1, 2, 3, 5, 6	510/VII:130/VIII	1, 2, 3, 5, 6	Federal
			21 N $\frac{1}{2}$ NW $\frac{1}{4}$, SE $\frac{1}{4}$ NE $\frac{1}{4}$	120.00	Steeply rolling, sloping	24	1, 2, 3, 5, 6	VI	1, 2, 3, 5, 6	Federal
			23 All	640.00	Thin breaks to badlands	98	1, 2, 3, 5, 6	590/VII:50/VIII	1, 2, 3, 5, 6	Federal
			24 All	640.00	Thin breaks to badlands	106	1, 2, 3, 5, 6	540/VII:100/VIII	1, 2, 3, 5, 6	Federal
			25 All	640.00	Thin breaks to badlands	112	1, 2, 3, 5, 6	VII	1, 2, 3, 5, 6	Federal
			35 NE $\frac{1}{4}$, NE $\frac{1}{4}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ SE $\frac{1}{4}$	320.00	Thin breaks to badlands	58	1, 2, 3, 5, 6	VII	1, 2, 3, 5, 6	Federal
9	56		32 NE $\frac{1}{4}$ NE $\frac{1}{4}$, SW $\frac{1}{4}$, W $\frac{1}{2}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ SE $\frac{1}{4}$	320.00	Steeply rolling to rough	76	1, 2, 3, 5, 6	40/VI:280/VII	1, 2, 3, 5, 6	Federal
9	58		2 Lots 1, 2, S $\frac{1}{2}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$	319.17	Gently to steeply rolling	73	1, 2, 3, 5, 6	70/VI:249.17/VII	1, 2, 3, 5, 6	Federal
			22 NE $\frac{1}{4}$, W $\frac{1}{2}$ W $\frac{1}{2}$	320.00	Gently to steeply rolling	88	1, 2, 3, 5, 6	160/VI:160/VII	1, 2, 3, 5, 6	Federal
			24 N $\frac{1}{2}$	320.00	Steeply rolling to rough	92	1, 2, 3, 5, 6	90/VI:230/VII	1, 2, 3, 5, 6	Federal
			26 E $\frac{1}{2}$	320.00	Steeply rolling to rough	82	1, 2, 3, 5, 6	140/VI:180/VII	1, 2, 3, 5, 6	Federal
9	59		2 Lots 2, 3, 4, SW $\frac{1}{4}$ SE $\frac{1}{4}$	161.91	Undulating to rolling	45	1, 2, 3, 5, 6	40/VI:121.91/VII	1, 2, 3, 5, 6	Private
			10 NE $\frac{1}{4}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ NW $\frac{1}{4}$, SE $\frac{1}{4}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$	320.00	Gently to steeply rolling	84	1	140/VI:180/VII	1	Private
			14 N $\frac{1}{2}$, SE $\frac{1}{4}$	480.00	Steeply rolling to rough	112	1	245/VI:235/VII	1	Private

- Continued

Table 15. - Description, Area, Classification, Suitability and Proposed Management of Unreserved Public Domain, by Counties, Within the Lower Yellowstone River Basin, Montana and North Dakota, 1955 - Continued

Montana Principal Meridian	Twp. Range	North East Sec.	Subdivision	Acres	General Land Character	AUM's Land Use 1/	Present Land Use 1/	Land Capability 3/ Classification	Principal Suitability 2/	Proposed Management
Fallon County	9	59	24	$N\frac{1}{2}NW\frac{1}{4}, SW\frac{1}{4}NE\frac{1}{4}, SE\frac{1}{2}SE\frac{1}{4}$	160.00	Steeply rolling, sloping	1	80/VI:80/VII	1	Private
	10	56	4	$W\frac{1}{2}NW\frac{1}{4}, SW\frac{1}{4}, S\frac{1}{2}SE\frac{1}{4}$	320.91	Steeply rolling to rough	1	120/VI:200.91/VII	1	Federal
			8	All	640.00	Thin breaks to rough hills	1	VII	1	Federal
			12	$N\frac{1}{2}N\frac{1}{2}, SE\frac{1}{4}NW\frac{1}{4}, S\frac{1}{2}NE\frac{1}{4}, NE\frac{1}{2}SE\frac{1}{4}$	320.00	Gently to steeply rolling	1	90/VI:230/VII	1	Federal
			10	$SW\frac{1}{4}$	160.00	Gently to steeply rolling	1	VI	1	Federal
	10	57	2	Lots 1, 2, $E\frac{1}{2}NW\frac{1}{4}, NE\frac{1}{4}$	318.00	Gently to steeply rolling	1	160/VI:158/VII	1	Federal
			8	Lot 1	40.49	Steeply rolling	1	VI	1	Private
			14	$W\frac{1}{2}NW\frac{1}{4}, NE\frac{1}{4}NE\frac{1}{4}, SE\frac{1}{4}SE\frac{1}{4}$	320.00	Steeply rolling rough	1	VII	1	Private
			20	$N\frac{1}{2}N\frac{1}{2}, S\frac{1}{2}NE\frac{1}{4}, SE\frac{1}{4}NW\frac{1}{4}, NW\frac{1}{4}SE\frac{1}{4}$	160.00	Gently to steeply rolling	1	VI	1	Private
			22	$SE\frac{1}{4}SE\frac{1}{4}$	320.00	Steeply rolling to rough	1	VII	1	Private
			24	$N\frac{1}{2}NW\frac{1}{4}, NE\frac{1}{4}, E\frac{1}{2}SE\frac{1}{4}$	40.00	Rolling to undulating	1	VI	1	Private
	10	58	4	$NW\frac{1}{4}NW\frac{1}{4}, S\frac{1}{2}NW\frac{1}{4}, SW\frac{1}{4}, SW\frac{1}{4}SE\frac{1}{4}$	320.00	Steeply rolling to rough	1	110/VI:210/VII	1	Private
			12	$E\frac{1}{2}SE\frac{1}{4}$	320.78	Steeply rolling to rough	1	VII	1	Private
			8	$W\frac{1}{2}NW\frac{1}{4}, S\frac{1}{2}SW\frac{1}{4}$	80.00	Gently to steeply rolling	1	VI	1	Private
	10	59	14	$NE\frac{1}{4}SW\frac{1}{4}$	160.00	Thin breaks to rolling	1	60/VI:100/VII	1	Private
			20	$NE\frac{1}{4}NE\frac{1}{4}$	40.00	Steeply rolling, to sloping	1	VII	1	Private
			28	$E\frac{1}{2}NE\frac{1}{4}, SE\frac{1}{4}, E\frac{1}{2}SW\frac{1}{4}$	40.00	Gently to steeply rolling	1	VI	1	Private
	11	57	26	$N\frac{1}{2}$	320.00	Steeply rolling to rough	1	70/VI:230/VII:20/VIII	1	Private
					320.00	Steeply rolling to rough	1, 2, 3, 5, 6	VII	1, 2, 3, 5, 6	Federal

-Continued

Table 15. - Description, Area, Classification, Suitability and Proposed Management of Unreserved Public Domain, by Counties,
 Within the Lower Yellowstone River Basin, Montana and North Dakota, 1955 - Continued

Montana Principal Meridian	Twp. Range	North East Sec.	Subdivision	Acres	General Land Character	AUM's	Present Land Use 1/	Land Capability Classification 3/	Principal Suitability 2/	Proposed Management	
Fallon County	11	58	30	Lots 1, 2, 3, 4, E $\frac{1}{2}$ W $\frac{1}{2}$	313.20	Steeply rolling sand hills	62	1, 2, 3, 5, 6	VII	1, 2, 3, 5, 6	Federal
Prairie County	10	53	30	Lot 3	52.93	Steeply rolling to rough	13	1	VI	1	Private
	10	54	2	Lot 4	40.54	Steeply rolling to rough	10	1	VI	1	Private
			10	SW $\frac{1}{4}$ SW $\frac{1}{4}$	40.00	Steeply rolling to rough	10	1	VI	1	Private
			18	Lot 1	37.25	Steeply rolling to rough	9	1	VI	1	Private
			32	NE $\frac{1}{4}$, N $\frac{1}{2}$ NW $\frac{1}{4}$, SE $\frac{1}{4}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$ SE $\frac{1}{4}$	320.00	Steeply rolling to broken	72	1	40/VI:280/VII	1	Private
			34	All	640.00	Steeply rolling to rough	128	1	VII	1	Private
	11	49	2	All	643.28	Broken badlands, thin break	116	1	VII	1	Federal
	11	51	10	NE $\frac{1}{4}$ SE $\frac{1}{4}$	40.00	Gently sloping to rolling	14	1	VI	1	Private
	11	52	2	All	638.00	Steeply rolling to rough	170	1	240/VI:398/VII	1	Federal
			12	NW $\frac{1}{4}$, S $\frac{1}{2}$ S $\frac{1}{2}$	320.00	Gently to steeply rolling	80	1	VI	1	Federal
			14	N $\frac{1}{2}$ N $\frac{1}{2}$	160.00	Gently to steeply rolling	40	1	VI	1	Federal
	11	53	2	All	707.80	Steep, rough and broken	153	1	VII	1	Federal
			8	E $\frac{1}{2}$ E $\frac{1}{2}$	160.00	Sloping to steeply rolling	32	1	VII	1	Federal
			10	SW $\frac{1}{4}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ SW $\frac{1}{4}$, S $\frac{1}{2}$ SW $\frac{1}{4}$	160.00	Gently to steeply rolling	27	1	VII	1	Federal
			12	SE $\frac{1}{4}$ SE $\frac{1}{4}$	40.00	Gently to steeply rolling	8	1	VII	1	Federal
			14	S $\frac{1}{2}$	320.00	Rolling to rough, broken	48	1	VII	1	Federal
			18	Lot 1	45.94	Steeply rolling, rough	10	1	VII	1	Federal
			24	NW $\frac{1}{4}$	160.00	Steeply rolling, broken	24	1	VII	1	Federal

- Continued

Table 15. - Description, Area, Classification, Suitability and Proposed Management of Unreserved Public Domain, by Counties,
 Within the Lower Yellowstone River Basin, Montana and North Dakota, 1955 - Continued

Montana Principal Meridian		Twp. Range		Subdivision	Acres	General Land Character	AUM's	Present Land Use 1/	Land Capability Classification 3/	Principal Suitability 2/	Proposed Management
North	East	Sec.	Sec.								
Prairie County											
11	53	30		NE $\frac{1}{4}$ NW $\frac{1}{4}$	40.00	Gently sloping to rolling	10	1	VI	1	Federal
		34		W $\frac{1}{2}$ SW $\frac{1}{4}$	80.00	Gently to steeply rolling	16	1	VII	1	Federal
11	54	8		E $\frac{1}{2}$ NE $\frac{1}{4}$	80.00	Gently sloping to rolling	19	1	40/VI:40/VII	1	Federal
		18		SW $\frac{1}{4}$ SE $\frac{1}{4}$	40.00	Gently rolling to sloping	11	1	VI	1	Federal
		24		All	640.00	Mostly scoria hills	128	1	VII	1	Federal
		28		NW $\frac{1}{4}$ NE $\frac{1}{4}$	40.00	Steeply rolling to rough	10	1	VII	1	Federal
11	55	10		E $\frac{1}{2}$	320.00	Gently to steeply rolling	83	1	VI	1	Federal
		26		S $\frac{1}{2}$	320.00	Steeply rolling to rough	70	1	VII	1	Federal
		28		N $\frac{1}{2}$ N $\frac{1}{2}$	160.00	Steeply rolling to broken	32	1	VII	1	Federal
11	56	12		NE $\frac{1}{4}$ NE $\frac{1}{4}$, NW $\frac{1}{4}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ SW $\frac{1}{4}$	120.00	Gently sloping to rolling	30	1	VI	1	Federal
		24		SE $\frac{1}{4}$ SE $\frac{1}{4}$, NW $\frac{1}{4}$ SW $\frac{1}{4}$	80.00	Gently sloping to rolling	28	1	IV	1	Private
		30		SE $\frac{1}{4}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ SE $\frac{1}{4}$	80.00	Gently sloping to rolling	20	1	VI	1	Federal
12	49	2		All	648.24	Badlands to thin breaks	117	1, 2, 3, 6	VII	1, 2, 3, 6	Federal
		4		SW $\frac{1}{4}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NE $\frac{1}{4}$, SW $\frac{1}{4}$, W $\frac{1}{2}$ SE $\frac{1}{4}$	320.00	Thin breaks to badlands	48	1, 2, 3, 6	VII	1, 2, 3, 6	Federal
		6		Lots 1, 4, SE $\frac{1}{4}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ SE $\frac{1}{4}$, Lot 7, SE $\frac{1}{4}$ SW $\frac{1}{4}$, S $\frac{1}{2}$ SE $\frac{1}{4}$	314.41	Badlands and thin breaks	50	1, 2, 3, 6	VII	1, 2, 3, 6	Federal
		8		All	640.00	Badlands and thin breaks	96	1, 2, 3, 6	VII	1, 2, 3, 6	Federal
		10		All	640.00	Badlands and thin breaks	83	1, 2, 3, 6	VII	1, 2, 3, 6	Federal
		12		All	640.00	Badlands and thin breaks	96	1, 2, 3, 6	VII	1, 2, 3, 6	Federal
		14		All	640.00	Badlands and thin breaks	96	1, 2, 3, 6	VII	1, 2, 3, 6	Federal
		18		All	621.52	Badlands and thin breaks	75	1, 2, 3, 6	VII	1, 2, 3, 6	Federal

- Continued

Table 15.- Description, Area, Classification, Suitability and Proposed Management of Unreserved Public Domain, by Counties,
 Within the Lower Yellowstone River Basin, Montana and North Dakota, 1955 - Continued

Montana Principal Meridian	Twp. Range	North East Sec.	Subdivision	Acres	General Land Character	AUM's	Present Land Use	Land Capability Classification	Principal Suitability	Proposed Management	
						1/	2/	3/	2/		
Prairie County	12	49	20	All	640.00	Badlands and thin breaks	96	2, 3, 6	VII	2, 3, 6	Federal
			22	All	640.00	Badlands and thin breaks	96	2, 3, 6	VII	2, 3, 6	Federal
			24	All	640.00	Badlands and thin breaks	96	2, 3, 6	VII	2, 3, 6	Federal
			26	N $\frac{1}{2}$	320.00	Badlands and thin breaks	57	2, 3, 6	VII	2, 3, 6	Federal
			28	N $\frac{1}{2}$	320.00	Badlands and thin breaks	54	2, 3, 6	VII	2, 3, 6	Federal
			32	All	640.00	Badlands and thin breaks	126	2, 3, 6	VII	2, 3, 6	Federal
			34	All	640.00	Badlands and thin breaks	78	2, 3, 6	VII	2, 3, 6	Federal
	12	50	2	All	649.88	Badlands and thin breaks	34	2, 3, 6	VIII	2, 3, 6	Federal
			4	All	645.20	Badlands and thin breaks	65	2, 3, 6	VII	2, 3, 6	Federal
			6	All	646.40	Badlands and thin breaks	65	2, 3, 6	400/VII:246.40/VIII	2, 3, 6	Federal
			8	All	661.36	Badlands and thin breaks	80	2, 3, 6	550/VII:111.36/VIII	2, 3, 6	Federal
			10	All	642.76	Badlands and thin breaks	52	2, 3, 6	512.76/VII:130/VIII	2, 3, 6	Federal
			12	All	619.65	Badlands and thin breaks	62	2, 3, 6	399.65/VII:220/VIII	2, 3, 6	Federal
			14	N $\frac{1}{2}$ N $\frac{1}{2}$, Lots 5, 6, 7, 8	213.95	Badlands and thin breaks	22	2, 3, 6	148.95/VII:65/VIII	2, 3, 6	Federal
			14	SE $\frac{1}{4}$ SE $\frac{1}{4}$	40.00	Gently to steeply rolling	10	1	VI	1	Private
			18	All	631.84	Badlands and thin breaks	95	1, 2, 3	VII	1, 2, 3	Federal
			20	All	640.00	Badlands and thin breaks	96	1, 2, 3	VII	1, 2, 3	Federal
			24	NW $\frac{1}{4}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ NW $\frac{1}{4}$, W $\frac{1}{2}$ NW $\frac{1}{4}$	160.00	Gently to steeply rolling	24	1	VII	1	Private
			26	Lots 4, 7	54.76	Gently sloping and rolling	13	1	43.37/VI:11.39/VII	1	Private
			28	NE $\frac{1}{4}$ NW $\frac{1}{4}$, W $\frac{1}{2}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ SW $\frac{1}{4}$	160.00	Gently to steeply rolling	32	1	VII	1	Private
		30	All	632.50	Thin breaks to badlands	95	1	90/VI:542.50/VII	1	Private	

- Continued

Table 15. - Description, Area, Classification, Suitability and Proposed Management of Unreserved Public Domain, by Counties, Within the Lower Yellowstone River Basin, Montana and North Dakota, 1955 - Continued

Montana Principal Meridian	Twp. Range	North East	Sec.	Subdivision	Acres	General Land Character	AUM's Land Use 1/	Present Land Use 1/	Land Capability Classification 3/	Principal Suitability 2/	Proposed Management
Prairie County	12	51	2	Lot 1, SE $\frac{1}{4}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ SE $\frac{1}{4}$	164.18	Gently sloping to rolling	41	1	44.18/IV:80/VI:40/VII	1	Federal
	8			N $\frac{1}{2}$	316.92	Rough badlands	15	2, 3, 6	235/VII:81.92/VIII	2, 3, 6	Federal
	6			All	644.23	Rough badlands	64	2, 3, 6	155/VII:489.23/VIII	2, 3, 6	Federal
	10			SW $\frac{1}{4}$ NW $\frac{1}{4}$	40.00	Rough badlands	5	2, 3, 6	15/VII:25/VIII	2, 3, 6	Federal
	26			W $\frac{1}{2}$ SE $\frac{1}{4}$	80.00	Steeply rolling rough	16	1	VI	1	Private
	34			E $\frac{1}{2}$	320.00	Steeply rolling rough	106	1	VI	1	Private
	8			Lots 1, 2, 3, SE $\frac{1}{4}$ SE $\frac{1}{4}$	94.72	Undulating to rolling	26	1	54.72/V:40/VII	1	Private
	10			SE $\frac{1}{4}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ SE $\frac{1}{4}$	80.00	Rough and broken, breaks	16	1	VII	1	Private
	18			Lot 1, 4, E $\frac{1}{2}$ SW $\frac{1}{4}$	152.12	Rough, broken thin breaks	17	1	VII	1	Private
	24			N $\frac{1}{2}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$ SW $\frac{1}{4}$	160.00	Steeply rolling to rough	30	1	VII	1	Private
	32			SE $\frac{1}{4}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ SE $\frac{1}{4}$	80.00	Sloping to gently rolling	16	1	VI	1	Private
	34			All	640.00	Rough, broken thin breaks	96	1	VII	1	Private
	2			Lots 1, 2, 3, 4	79.93	Rough, broken thin breaks	16	1	VII	1	Federal
	4			Lots 1, 2, 3, 4	81.52	Rough, broken thin breaks	16	1	VII	1	Federal
	10			All	640.00	Rough, broken thin breaks	128	1	VII	1	Federal
	34			S $\frac{1}{2}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$, S $\frac{1}{2}$ SE $\frac{1}{4}$	320.00	Gently to steeply rolling	80	1	VII	1	Private
	4			Lots 4, 5, W $\frac{1}{2}$ SW $\frac{1}{4}$	141.09	Gently to steeply rolling	25	1	VII	1	Federal
	6			Lots 1, 2, 3, 7, 8, 9, SE $\frac{1}{4}$	381.95	Gently to steeply rolling	70	1	VII	1	Federal
	10			E $\frac{1}{2}$ SE $\frac{1}{4}$	80.00	Steeply rolling to rough	16	1	VII	1	Federal
	12			All	640.00	Steeply rolling to rough	128	1	VII	1	Federal
	22			SE $\frac{1}{4}$ SE $\frac{1}{4}$	40.00	Steeply rolling to broken	10	1	VII	1	Federal
	26			N $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ SE $\frac{1}{4}$, S $\frac{1}{2}$ S $\frac{1}{2}$	320.00	Gently to steeply rolling	96	1	VI	1	Federal

-Continued

Table 15. - Description, Area, Classification, Suitability and Proposed Management of Unreserved Public Domain, by Counties, Within the Lower Yellowstone River Basin, Montana and North Dakota, 1955 - Continued

Montana Principal Meridian		Twp. Range		Subdivision	Acres	General Land Character	AUM's	Present		Land Capability Classification	Proposed	
North	East	Sec.	North					East	Use 1/		Suitability 2/	Management
Prairie County												
13	47	18		Lots 1, 3, 4, NE $\frac{1}{4}$, NW $\frac{1}{4}$ SE $\frac{1}{4}$	320.42	Badlands to thin breaks	52	1		200.42/VII:120/VIII	1	Federal
		20		NW $\frac{1}{4}$, E $\frac{1}{2}$ NE $\frac{1}{4}$, W $\frac{1}{2}$ SW $\frac{1}{4}$	320.00	Thin breaks to bad lands	51	1		VII	1	Federal
		22		N $\frac{1}{2}$ N $\frac{1}{2}$	160.00	Thin breaks, steep, rolling	40	1		VI	1	Federal
13	48	6		Lots 1, 2, SE $\frac{1}{4}$ NE $\frac{1}{4}$	118.50	Gently to steeply rolling	38	1		VI	1	Federal
13	49	4		Lots 1, 2, 3, 4, S $\frac{1}{2}$ N $\frac{1}{2}$	316.84	Steeply rolling to rough	70	1		VII	1	Federal
		24		S $\frac{1}{2}$	320.00	Steeply rolling to rough	70	1		VII	1	Federal
		26		S $\frac{1}{2}$	320.00	Steeply rolling, broken	58	1		VII	1	Federal
		30		SW $\frac{1}{4}$ SE $\frac{1}{4}$	40.00	Steep, sharp sand hills	8	1		VII	1	Federal
		34		All	640.00	Choppy and hills, rough	96	1		VII	1	Federal
13	50	14		E $\frac{1}{2}$	320.00	Gently rolling to sloping	90	1		VI	1	Federal
		26		S $\frac{1}{2}$, S $\frac{1}{2}$ N $\frac{1}{2}$	480.00	Rough badlands and breaks	67	1		VII	1	Federal
		32		All	640.00	Rough badlands and breaks	64	1		465/VII:175/VIII	1	Federal
		34		All	640.00	Rough badlands, thin breaks	64	1		435/VII:205/VIII	1	Federal
13	51	4		W $\frac{1}{2}$, W $\frac{1}{2}$ SE $\frac{1}{4}$	400.00	Gently to steeply rolling	88	1		VII	1	Federal
		6		All	662.04	Steeply rolling to broken	132	1		VII	1	Federal
		10		W $\frac{1}{2}$ SE $\frac{1}{4}$	80.00	Steeply rolling to rough	14	1		VII	1	Federal
		12		W $\frac{1}{2}$	320.00	Gently to steeply rolling	80	1		VI	1	Federal
		14		S $\frac{1}{2}$	320.00	Steeply rolling, rough	58	1		VI	1	Federal
		18		Lot 4, E $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$, NE $\frac{1}{4}$ SW $\frac{1}{4}$	364.97	Steeply rolling to rough	78	1		VII	1	Federal
		22		E $\frac{1}{2}$ SE $\frac{1}{4}$	80.00	Steeply rolling, broken	12	1		VII	1	Federal
		24		SW $\frac{1}{4}$	160.00	Gently to steeply rolling	20	1		VII	1	Federal
		30		NE $\frac{1}{4}$ NE $\frac{1}{4}$	40.00	Gently rolling, sloping	10	1		VI	1	Federal

- Continued

Table 15. - Description, Area, Classification, Suitability and Proposed Management of Unreserved Public Domain, by Counties,
 Within the Lower Yellowstone River Basin, Montana and North Dakota, 1955 - Continued

Montana Principal Meridian	Twp. Range	North East Sec.	Subdivision	Acres	General Land Character	AUM's Land Use 1/	Present Land Use 1/	Land Capability Classification 3/	Principal Suitability 2/	Proposed Management		
Prairie County	13	52	6	All	640.00	Gently to steeply rolling	128	1	VII	1	Federal	
			8	All	640.00	Gently to steeply rolling	161	1	160/VI:480/VII	1	Federal	
			18	All	640.00	Steeply rolling to rough	140	1	VII	1	Federal	
			20	All	640.00	Thin breaks, badlands	128	1	VII	1	Federal	
			28	Lots 4, 5, 6, 7, NE $\frac{1}{4}$, NW $\frac{1}{4}$ NE $\frac{1}{4}$	295.31	Badlands to thin breaks	44	1	VII	1	Federal	
			30	W $\frac{1}{2}$ NW $\frac{1}{4}$, S $\frac{1}{2}$ NE $\frac{1}{4}$	160.00	Thin breaks, to rolling	38	1	VII	1	Federal	
			24	W $\frac{1}{2}$ SW $\frac{1}{4}$	80.00	Gently to steeply rolling	28	1	VI	1	Federal	
			26	N $\frac{1}{2}$ N $\frac{1}{2}$	160.00	Gently to steeply rolling	52	1	VI	1	Federal	
		13	53	28	Lots 3, 4, 5, SE $\frac{1}{4}$ NE $\frac{1}{4}$, SW $\frac{1}{4}$	270.83	Steeply rolling to rough	68	1	VII	1	Federal
				32	E $\frac{1}{2}$ NE $\frac{1}{4}$, SW $\frac{1}{4}$ NE $\frac{1}{4}$	120.00	Steeply rolling to rough	27	1	VII	1	Federal
Prairie County	13	55	25	NE $\frac{1}{4}$ NE $\frac{1}{4}$	40.00	Gently to steeply rolling	10	1	VI	1	Federal	
			26	All	640.00	Rough and broken	115	1	VII	1	Federal	
			34	N $\frac{1}{2}$	320.00	Steeply rolling to rough	56	1	VII	1	Federal	
		13	56	27	All	640.00	Rough sand breaks	128	1	VII	1	Federal
			28	All	640.00	Rough broken sand breaks	115	1	VII	1	Federal	
			29	All	640.00	Rough and steep sand breaks	128	1	VII	1	Federal	
			30	Lots 1, 2, E $\frac{1}{2}$ NW $\frac{1}{4}$, E $\frac{1}{2}$ E $\frac{1}{2}$	320.85	Choppy sand hills, broken	64	1	VII	1	Federal	
			31	NE $\frac{1}{4}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ SE $\frac{1}{4}$	320.00	Choppy sand hills, rough	80	1	VII	1	Federal	
			33	All	640.00	Choppy sand hills, steep	128	1	VII	1	Federal	
			34	W $\frac{1}{2}$, W $\frac{1}{2}$ E $\frac{1}{2}$	480.00	Steeply rolling to rough	72	1	VII	1	Federal	

-Continued

Table 15.- Description, Area, Classification, Suitability and Proposed Management of Unreserved Public Domain, by Counties,
 Within the Lower Yellowstone River Basin, Montana and North Dakota, 1955 - Continued

Montana Principal Meridian	Twp. Range	North East Sec.	Subdivision	Acres	General Land Character	AUM's Land Use 1/	Present Land Use 1/	Land Capability Classification 3/	Principal Suitability 2/	Proposed Management
Prairie County	14	46	26	S $\frac{1}{2}$	320.00	Gently to steeply rolling	1	VII	1	Federal
	14	47	2	Lots 1, 2, 3, 4, S $\frac{1}{2}$ N $\frac{1}{2}$	321.52	Rough broken sand hills	1	VII	1	Federal
			6	Lots 2, 3, 6, 7, SW $\frac{1}{4}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NW $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$	474.86	Rolling sand hills	1	VII	1	Federal
	14	48	8	N $\frac{1}{2}$	320.00	Gently rolling sand hills	1	VI	1	Federal
			14	NE $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$	240.00	Gently to steeply rolling	1	VII	1	Private
	14	49	28	Lot 4, NE $\frac{1}{4}$ SE $\frac{1}{4}$	80.35	Gently to steeply rolling	1	VII	1	Private
			34	NW $\frac{1}{4}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$ SW $\frac{1}{4}$, NW $\frac{1}{4}$ NW $\frac{1}{4}$, S $\frac{1}{2}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$ NE $\frac{1}{4}$, S $\frac{1}{2}$	80.00	Gently rolling to sloping	1	VI	1	Federal
	14	50	2	SE $\frac{1}{4}$ NW $\frac{1}{4}$	480.00	Steeply rolling to broken	1	VII	1	Federal
			6	Lots 2, 3, 4, 5, 6, 7, SW $\frac{1}{4}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$ NE $\frac{1}{4}$	40.00	Steeply rolling, broken	1	VII	1	Private
			8	NE $\frac{1}{4}$ NE $\frac{1}{4}$	328.80	Gently to steeply rolling	1	VI	1	Federal
			18	Lots 1, 2, E $\frac{1}{2}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$	40.00	Gently rolling to sloping	1	VI	1	Federal
			32	E $\frac{1}{2}$	323.30	Gently to steeply rolling	1	VI	1	Federal
			30	Lot 4	320.00	Gently rolling to sloping	1	VI	1	Federal
	15	46	24	W $\frac{1}{2}$	46.01	Very rough and broken badlands	1	VII	1	Federal
15	47	26	E $\frac{1}{2}$ NE $\frac{1}{4}$, S $\frac{1}{2}$	320.00	Steeply rolling to rough	1	VII	1	Federal	
		34	W $\frac{1}{2}$ W $\frac{1}{2}$, E $\frac{1}{2}$ E $\frac{1}{2}$	400.99	Gently to steeply rolling	1	VII	1	Federal	
15	48	18	NE $\frac{1}{4}$ NE $\frac{1}{4}$	320.00	Gently to steeply rolling	1	VII	1	Federal	
		30	Lot 3	40.00	Gently to steeply rolling	1	VII	1	Federal	
15	49	8	SW $\frac{1}{4}$	33.12	Gently to steeply rolling	1	VII	1	Federal	
		26	N $\frac{1}{2}$	160.00	Steeply rolling, rough	1	VII	1	Federal	
				320.00	Steeply rolling, rough	1	VII	1	Federal	

-Continued

Table 15. - Description, Area, Classification, Suitability and Proposed Management of Unreserved Public Domain, by Counties, Within the Lower Yellowstone River Basin, Montana and North Dakota, 1955 - Continued

Montana Principal Meridian		Twp. Range		Sec.	Subdivision	Acres	General Land Character	AUM's	Present Land Use 1/	Land Capability Classification 3/	Principal Suitability 2/	Proposed Management
North	East	North	East									
Prairie County												
15	49	34			NW $\frac{1}{4}$ NW $\frac{1}{4}$	40.00	Steeply rolling, broken	10	1	VII	1	Federal
15	50	20			E $\frac{1}{2}$	320.00	Steeply rolling to rough	64	1	VII	1	Private
		28			N $\frac{1}{2}$	320.00	Broken thin breaks	64	1	VII	1	Private
	16	49			Lots 3, 4, E $\frac{1}{2}$ SW $\frac{1}{4}$	165.45	Thin breaks, rough, steep	26	1	VII	1	Private
		2			SW $\frac{1}{4}$ NW $\frac{1}{4}$	40.00	Gently to steeply rolling	14	1	VI	1	Private
		4			SW $\frac{1}{4}$ NW $\frac{1}{4}$	40.00	Gently rolling to sloping	9	1	VI	1	Private
		28			NW $\frac{1}{4}$ SW $\frac{1}{4}$	40.00	Gently rolling to sloping	11	1	VI	1	Private
		32			SW $\frac{1}{4}$ SW $\frac{1}{4}$	40.00	Gently to steeply rolling	12	1	VI	1	Private
	16	50			SW $\frac{1}{4}$ NE $\frac{1}{4}$	40.00	Gently to steeply rolling	14	1	VI	1	Private
Richland County												
19	57	30			E $\frac{1}{2}$ SE $\frac{1}{4}$	80.00	Rough, rolling and broken	24	1	VI	1	Private
		34			NW $\frac{1}{4}$ NE $\frac{1}{4}$	40.00	Gently to steeply rolling	14	1	VI	1	Private
19	58	14			SE $\frac{1}{4}$, SW $\frac{1}{4}$ SW $\frac{1}{4}$	200.00	Rough rolling badlands	42	1	40/VI:160/VII	1	Private
		20			Lots 1, 5, 6, 8, 9, 10,							
					SE $\frac{1}{4}$ SE $\frac{1}{4}$	191.62	Rough rolling badlands	38	1	VII	1	Private
		22			NE $\frac{1}{4}$ NW $\frac{1}{4}$, SE $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$,							
					SW $\frac{1}{4}$ SW $\frac{1}{4}$	320.00	Rough rolling badlands	82	1	VI	1	Private
		24			E $\frac{1}{2}$ NE $\frac{1}{4}$, NW $\frac{1}{4}$ NW $\frac{1}{4}$,							
					SW $\frac{1}{4}$ SW $\frac{1}{4}$	160.00	Rough rolling badlands	38	1	40/VI:120/VII	1	Private
		26			All	640.00	Rough, broken badlands	160	1	VII	1	Private
		28			All	640.00	Rough, broken badlands	160	1	VII	1	Private
		34			All	640.00	Rough, broken badlands	160	1	VII	1	Private

-Continued

Table 15. - Description, Area, Classification, Suitability and Proposed Management of Unreserved Public Domain, by Counties, Within the Lower Yellowstone River Basin, Montana and North Dakota, 1955 - Continued

Montana Principal Meridian		Twp. Range		Subdivision	Acres	General Land Character	AUM's		Land Capability Classification 3/	Principal Suitability 2/	Proposed Management
North	East	Sec.	Range				Use 1/	Suitability 2/			
Richland County											
19	59	6	All		619.40	Rough, rolling, broken	145	1	VII	1	Private
		18	All		620.08	Rough, rolling, broken	186	1	VII	1	Private
		20	N $\frac{1}{2}$ N $\frac{1}{2}$, SW $\frac{1}{4}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ SW $\frac{1}{4}$, E $\frac{1}{2}$ SE $\frac{1}{4}$								
		24	N $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NE $\frac{1}{4}$, NW $\frac{1}{4}$ NW $\frac{1}{4}$, W $\frac{1}{2}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$ SE $\frac{1}{4}$		320.00	Steeply rolling	96	1	VI	1	Private
		30	E $\frac{1}{2}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$		320.00	Rough and broken	74	1	200/VI:120/VII	1	Private
		32	E $\frac{1}{2}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$, SE $\frac{1}{4}$ NW $\frac{1}{4}$, S $\frac{1}{2}$ NE $\frac{1}{4}$		150.62	Gently to steeply rolling	38	1	VII	1	Private
19	60	6	All		360.00	Gently to steeply rolling	108	1	VI	1	Private
		8	NW $\frac{1}{4}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$ SW $\frac{1}{4}$		644.00	Steeply rolling sand hills	97	1	VII	1	Private
		24	Lots 1, 2, 4, 5, E $\frac{1}{2}$		80.00	Steeply rolling sand hills	24	1	40/VI:40/VII	1	Private
		26	Lots 1, 2, 3		473.38	Steeply rolling sand hills	95	1	160/VI:313.38/VII	1	Private
		34	Lots 1, 2, 3		119.49	Level, undulating drift	16	1	VII	1	Private
20	59	2	Lots 2, 3, S $\frac{1}{2}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$		39.52	Steeply rolling hills	11	1	23.69/VI:15.83/VII	1	Private
		14	N $\frac{1}{2}$		320.15	Steeply rolling hills	64	1	VII	1	Private
		18	All		320.00	Steeply rolling hills	64	1	VII	1	Private
		20	All		610.35	Steeply rolling hills	111	1	40/VI:570.35/VII	1	Private
		22	NE $\frac{1}{4}$ NE $\frac{1}{4}$, S $\frac{1}{2}$ NW $\frac{1}{4}$, S $\frac{1}{2}$		640.00	Steeply rolling hills	160	1	VII	1	Private
		26	W $\frac{1}{2}$		440.00	Steeply rolling hills	81	1	40/VI:400/VII	1	Private
		28	All		320.00	Rough, broken hills	58	1	VII	1	Private
		30	E $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$, Lot 4		640.00	Rough broken hills	88	1	VII	1	Private
					316.03	Steeply rolling hills	80	1	VII	1	Private

- Continued

Table 15. - Description, Area, Classification, Suitability and Proposed Management of Unreserved Public Domain, by Counties, Within the Lower Yellowstone River Basin, Montana and North Dakota, 1955 - Continued

Montana Principal Meridian		Twp. Range		Subdivision	Acres	General Land Character	AUM's Land Use 1/	Present Land Use 1/	Land Capability Classification 3/	Principal Suitability 2/	Proposed Management
North	East	Sec.	Sec.								
Richland County											
20	59	32		W $\frac{1}{2}$	320.00	Steeply rolling hills	80	1	VII	1	Private
20	60	8		SW $\frac{1}{4}$ SW $\frac{1}{4}$	40.00	Gently to steeply rolling	14	1	VI	1	Private
		10		Lot 4	53.93	Gently to steeply rolling	18	1	VI	1	Private
21	56	32		N $\frac{1}{2}$	320.00	Gently to steeply rolling	74	1	VII	1	Private
21	58	26		Lot 1, 2	90.92	Mostly under water, barren	-	None	VIII	None	Federal
21	59	2		Lots 1, 2, S $\frac{1}{2}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ SW $\frac{1}{4}$	228.68	Rough, broken hills	70	1	VI	1	Private
		14		E $\frac{1}{2}$ NE $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$	160.00	Steeply rolling hills	48	1	VI	1	Private
		20		E $\frac{1}{2}$ SE $\frac{1}{4}$, SW $\frac{1}{4}$ SE $\frac{1}{4}$	120.00	Steeply rolling hills	30	1	VII	1	Private
		26		W $\frac{1}{2}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ SE $\frac{1}{4}$	160.00	Steeply rolling to rough	30	1	40/VI:120/VII	1	Private
		32		All	640.00	Steeply rolling to rough	96	1	VII	1	Private
		34		All	640.00	Steeply rolling to rough	128	1	VII	1	Private
21	60	6		S $\frac{1}{2}$ SE $\frac{1}{4}$	80.00	Very steeply rolling	28	1	VI	1	Private
		8		Lots 1, 2, 3, 4, W $\frac{1}{2}$	456.48	Very steeply rolling	160	1	VI	1	Private
		20		Lots 1, 2, 3, 4	132.80	Very steeply rolling	40	1	VI	1	Private
22	54	30		Lot 1	38.44	Very steeply rolling	10	1	VII	1	Private
		34		W $\frac{1}{2}$ NE $\frac{1}{4}$	80.00	Very steeply rolling	16	1	VII	1	Private
22	55	10		S $\frac{1}{2}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$	160.00	Under water	-	2	VIII	2	Federal
22	56	6		NE $\frac{1}{4}$ SW $\frac{1}{4}$	40.00	Gently rolling to level	14	1	VI	1	Private
22	57	24		NE $\frac{1}{4}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ SE $\frac{1}{4}$	80.00	Gently to steeply rolling	26	1	VI	1	Private
		34		NW $\frac{1}{4}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$ SE $\frac{1}{4}$	80.00	Gently to steeply rolling	20	1	VI	1	Private
22	58	26		N $\frac{1}{2}$ N $\frac{1}{2}$, S $\frac{1}{2}$ NW $\frac{1}{4}$	240.00	Gently to steeply rolling	68	1	VI	1	Private
		28		SW $\frac{1}{4}$ SW $\frac{1}{4}$	40.00	Gently to steeply rolling	10	1	VII	1	Private
		30		Lot 4, SE $\frac{1}{4}$ SW $\frac{1}{4}$	79.13	Gently to steeply rolling	26	1	VI	1	Private

- Continued

Table 15. - Description, Area, Classification, Suitability and Proposed Management of Unreserved Public Domain, by Counties,
 Within the Lower Yellowstone River Basin, Montana and North Dakota, 1955 - Continued

Montana Principal Meridian		North Range		Sec.	Subdivision	Acres	General Land Character	AUM's	Present Land Use	Land Capability Classification	Principal Suitability	Proposed Management
Twp.	Range	East	Sec.									
Richland County												
22	59	22	NE $\frac{1}{4}$		160.00	Very rough and broken	27	1	1	40/VI:120/VIII	1	Private
22	60	6	All		643.36	Rough, broken, steep, rolling	130	1	1	VII	1	Private
		8	NE $\frac{1}{4}$ NW $\frac{1}{4}$		40.00	Steeply rolling, rough	8	1	1	VII	1	Private
		20	W $\frac{1}{2}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$, Lot 4		132.16	Gently to steeply rolling	40	1	1	VI	1	Private
		32	Lots 1, 2, 3, 4, W $\frac{1}{2}$		374.72	Broken sand and clay hills	94	1	1	VII	1	Private
23	56	6	SW $\frac{1}{4}$ NE $\frac{1}{4}$		40.00	Steeply rolling	14	1	1	VI	1	Private
23	59	3	Lots 1, 2		80.00	Gently to steeply rolling	24	1	1	VI	1	Private
		6	Lots 3, 4		75.22	Gently rolling	26	1	1	VI	1	Private
23	60	8	Lots 3, 4		79.76	Gently undulating	11	1	1	VI	1	Private
		17	Lot 3		2.92	Gently undulating	1	1	1	VI	1	Private
		30	N $\frac{1}{2}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$		120.00	Steeply rolling, rough	28	1	1	40/VI:80/VII	1	Private
		32	Lots 1, 2, 3, 4, W $\frac{1}{2}$		374.92	Steeply rolling, rough	94	1	1	VII	1	Private
24	57	6	Lot 2		52.55	Gently rolling	18	1	1	VI	1	Private
		24	NE $\frac{1}{4}$ NW $\frac{1}{4}$		40.00	Steeply rolling	12	1	1	VI	1	Private
24	59	34	E $\frac{1}{2}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$		280.00	Gently to steeply rolling	84	1	1	VI	1	Private
		35	SW $\frac{1}{4}$ NW $\frac{1}{4}$		40.00	Gently to steeply rolling	12	1	1	VI	1	Private
25	57	4	SW $\frac{1}{4}$ SW $\frac{1}{4}$		40.00	Steeply rolling	14	1	1	VI	1	Private
		8	N $\frac{1}{2}$ NW $\frac{1}{4}$		80.00	Gently to steeply rolling	24	1	1	VII	1	Private
		10	SW $\frac{1}{4}$ NW $\frac{1}{4}$		40.00	Gently to steeply rolling	14	1	1	VI	1	Private
25	58	5	Lot 4		40.29	Gently to steeply rolling	8	1	1	VII	1	Private
		30	NE $\frac{1}{4}$ SE $\frac{1}{4}$		40.00	Gently to steeply rolling	14	1	1	VI	1	Private
25	59	28	SE $\frac{1}{4}$ NE $\frac{1}{4}$		40.00	Gently to steeply rolling	6	1	1	VII	1	Private
		34	NW $\frac{1}{4}$ SE $\frac{1}{4}$		40.00	Gently to steeply rolling	12	1	1	VI	1	Private

-Continued

Table 15. - Description, Area, Classification, Suitability and Proposed Management of Unreserved Public Domain, by Counties, Within the Lower Yellowstone River Basin, Montana and North Dakota, 1955 - Continued

Montana Principal Meridian		Twp. Range North East Sec.	Subdivision	Acres	General Land Character	AUM's	Present Land Use 1/	Land Capability Classification 3/	Principal Suitability 2/	Proposed Management
Wibaux County	Wibaux County									
10	59	6	SE $\frac{1}{4}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$ SW $\frac{1}{4}$, S $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$	320.00	Rough broken badlands	32	1	VII	1	Private
11	57	2	All	630.24	Steeply rolling to rough	126	1, 2, 3, 5, 6	VII	1, 2, 3, 5, 6	Federal
		4	All	636.24	Steeply rolling to rough	96	1, 2, 3, 5, 6	VII	1, 2, 3, 5, 6	Federal
		8	SW $\frac{1}{4}$ SW $\frac{1}{4}$	40.00	Steeply rolling to rough	14	1, 2, 3, 5, 6	VI	1, 2, 3, 5, 6	Federal
		10	All	640.00	Steeply rolling to rough	96	1, 2, 3, 5, 6	VII	1, 2, 3, 5, 6	Federal
		14	All	640.00	Steeply rolling to rough	128	1, 2, 3, 5, 6	VII	1, 2, 3, 5, 6	Federal
		22	All	640.00	Steeply rolling to rough	96	1, 2, 3, 5, 6	VII	1, 2, 3, 5, 6	Federal
11	58	6	Lots 1, 2, 3, 4, 5, S $\frac{1}{2}$ NW $\frac{1}{4}$, SE $\frac{1}{4}$ NW $\frac{1}{4}$	314.28	Rough sand hills	63	1	VII	1	Private
		8	NW $\frac{1}{4}$ NW $\frac{1}{4}$, E $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$, SW $\frac{1}{4}$ SW $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$	400.00	Rough broken sand hills	80	1	VII	1	Private
		10	S $\frac{1}{2}$	320.00	Steeply rolling sand hills	64	1	VII	1	Private
		24	S $\frac{1}{2}$	320.00	Steeply rolling sand hills	48	1	VII	1	Private
		26	N $\frac{1}{2}$ N $\frac{1}{2}$, E $\frac{1}{2}$ SE $\frac{1}{4}$, SW $\frac{1}{4}$ SE $\frac{1}{4}$	280.00	Steeply rolling sand hills	56	1	VII	1	Private
11	59	30	Lots 1, 2, 3, 4, E $\frac{1}{2}$ W $\frac{1}{2}$, W $\frac{1}{2}$ E $\frac{1}{2}$	468.80	Steeply rolling rough	84	1	VII	1	Private
12	57	2	SW $\frac{1}{4}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NW $\frac{1}{4}$, Lot 3	103.41	Rough broken badlands	31	1	VI	1	Private
		4	All	733.40	Steeply rolling to rough	147	1, 2, 3, 6	VII	1, 2, 3, 6	Federal
		6	Lots 6, 8, 9, 10, 11, 12, 13, 14, E $\frac{1}{2}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$	546.49	Steeply rolling rough	148	1, 2, 3, 6	80/VI:466.49/VII	1, 2, 3, 6	Federal
		8	All	640.00	Steeply rolling rough	128	1, 2, 3, 6	VII	1, 2, 3, 6	Federal
		10	All	640.00	Steeply rolling to rough	160	1, 2, 3, 6	VII	1, 2, 3, 6	Federal
		14	W $\frac{1}{2}$	320.00	Steeply rolling to rough	64	1, 2, 3, 6	VII	1, 2, 3, 6	Federal

-Continued

Table 15. - Description, Area, Classification, Suitability and Proposed Management of Unreserved Public Domain, by Counties,
 Within the Lower Yellowstone River Basin, Montana and North Dakota, 1955 - Continued

Montana Principal Meridian		Twp. Range		North East Sec.		Subdivision	Acres	General Land Character	AUM's	Present Land Use 1/	Land Capability Classification 3/	Principal Suitability 2/	Proposed Management
Wibaux County													
12	57	18	All	All	623.80	Steeply rolling to rough	108	1, 2, 3, 6	VII	1, 2, 3, 6	Federal		
		20	All	All	640.00	Steeply rolling to rough	98	1, 2, 3, 6	VII	1, 2, 3, 6	Federal		
		22	All	All	640.00	Steeply rolling to rough	96	1, 2, 3, 6	VII	1, 2, 3, 6	Federal		
		26	N $\frac{1}{2}$	All	320.00	Steeply rolling to rough	64	1, 2, 3, 6	VII	1, 2, 3, 6	Federal		
		28	All	All	640.00	Steeply rolling to rough	128	1, 2, 3, 6	VII	1, 2, 3, 6	Federal		
		30	E $\frac{1}{2}$ N $\frac{1}{4}$, SE $\frac{1}{4}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$, Lot 4		316.37	Steeply rolling badlands	48	1, 2, 3, 6	VII	1, 2, 3, 6	Federal		
		32	N $\frac{1}{2}$, SE $\frac{1}{4}$		480.00	Steeply rolling badlands	72	1, 2, 3, 6	VII	1, 2, 3, 6	Federal		
		34	S $\frac{1}{2}$		320.00	Steeply rolling badlands	48	1, 2, 3, 6	VII	1, 2, 3, 6	Federal		
12	58	22	W $\frac{1}{2}$		320.00	Rough badlands breaks	48	1	VII	1	Private		
		28	E $\frac{1}{2}$ N $\frac{1}{4}$, NE $\frac{1}{4}$ SE $\frac{1}{4}$		120.00	Steeply rolling	18	1	VII	1	Private		
		6	Lot 4		48.28	Steeply rolling, undulating	15	1	VI	1	Private		
12	59	25	All		640.00	Steeply rolling to rough	141	1, 2, 3, 6	VII	1, 2, 3, 6	Federal		
13	56	26	All		640.00	Steeply rolling to rough	122	1, 2, 3, 6	VII	1, 2, 3, 6	Federal		
		35	All		640.00	Steeply rolling to rough	171	1, 2, 3, 6	160/VI:480/VII	1, 2, 3, 6	Federal		
13	57	14	SE $\frac{1}{4}$ SE $\frac{1}{4}$		40.00	Gently to steeply rolling	10	1	VI	1	Private		
		22	NE $\frac{1}{4}$		160.00	Gently to steeply rolling	40	1	VI	1	Private		
		28	NW $\frac{1}{4}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ E $\frac{1}{2}$, NW $\frac{1}{4}$ SW $\frac{1}{4}$, S $\frac{1}{2}$ SW $\frac{1}{4}$		320.00	Steeply rolling badlands	70	1	VII	1	Private		
		30	Lots 1, 2, NE $\frac{1}{4}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$ SE $\frac{1}{4}$, S $\frac{1}{2}$ S $\frac{1}{2}$		352.44	Steeply rolling to rough	77	1	VII	1	Private		
		31	All		684.20	Steeply rolling to rough	151	1	VII	1	Private		
		32	N $\frac{1}{2}$		320.00	Steeply rolling to rough	70	1	VII	1	Private		
13	58	8	NW $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$, E $\frac{1}{2}$ SE $\frac{1}{4}$		320.00	Steeply rolling to rough	80	1	VI	1	Private		

- Continued

Table 15. - Description, Area, Classification, Suitability and Proposed Management of Unreserved Public Domain, by Counties, Within the Lower Yellowstone River Basin, Montana and North Dakota, 1955 - Continued

Montana Principal Meridian		Subdivision	Acres	General Land Character	Present		Proposed		
Twp. Range	North East Sec.				AUM's Land Use 1/	Land Capability Classification 3/		Principal Suitability 2/	Management
Wibaux County									
13	58	14	E $\frac{1}{2}$ E $\frac{1}{4}$, NW $\frac{1}{4}$ NE $\frac{1}{4}$, S SW $\frac{1}{4}$ SE $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$	320.00	Very steeply rolling hills	1	VII	1	Private
		24	N $\frac{1}{2}$ NW $\frac{1}{4}$, SE $\frac{1}{4}$ NW $\frac{1}{4}$, E $\frac{1}{2}$ SE $\frac{1}{4}$	200.00	Very steeply rolling hills	1	VII	1	Private
		26	S $\frac{1}{2}$ SW $\frac{1}{4}$	80.00	Steeply rolling, rough	1	VI	1	Private
		32	E $\frac{1}{2}$	320.00	Steeply rolling, rough	1	VII	1	Private
		34	NW $\frac{1}{4}$, NW $\frac{1}{4}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ SE $\frac{1}{4}$, E $\frac{1}{2}$ SE $\frac{1}{4}$	320.00	Very steeply rolling hills	1	VII	1	Private
13	59	18	Lots 1, 2, E $\frac{1}{2}$ NE $\frac{1}{4}$	160.00	Gently rolling, undulating	1	VI	1	Private
14	58	22	NW $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ NE $\frac{1}{4}$, NW $\frac{1}{4}$ SE $\frac{1}{4}$	320.00	Very steeply rolling hills	1	VI	1	Private
		32	E $\frac{1}{2}$ SE $\frac{1}{4}$	80.00	Very steeply rolling hills	1	VI	1	Private
		34	NW $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$, W $\frac{1}{2}$ NE $\frac{1}{4}$	320.00	Very steeply rolling hills	1	VII	1	Private
14	59	20	NW $\frac{1}{4}$ NW $\frac{1}{4}$	40.00	Very rough and broken	1	VII	1	Private
16	59	4	Lot 4	42.37	Steeply rolling to rough	1	VI	1	Private
		6	Lots 9, 10	82.44	Steeply rolling to rough	1	VI	1	Private
		10	NE $\frac{1}{4}$ SE $\frac{1}{4}$, S $\frac{1}{2}$ SE $\frac{1}{4}$	120.00	Steeply rolling to rough	1	VI	1	Private
17	58	10	NE $\frac{1}{4}$ NE $\frac{1}{4}$, SW $\frac{1}{4}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$, SW $\frac{1}{4}$ SE $\frac{1}{4}$	280.00	Very steeply rolling hills	1	VI	1	Private
		24	W $\frac{1}{2}$ NW $\frac{1}{4}$	80.00	Steeply rolling to rough	1	VI	1	Private
		34	NW $\frac{1}{4}$ NW $\frac{1}{4}$	40.00	Steeply rolling to rough	1	VI	1	Private
17	59	10	NE $\frac{1}{4}$, E $\frac{1}{2}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$ SE $\frac{1}{4}$	320.00	Gently to steeply rolling	1	120/VI:200/VII	1	Private
		12	E $\frac{1}{2}$ NE $\frac{1}{4}$, NW $\frac{1}{4}$	240.00	Gently to steeply rolling	1	VI	1	Private
		18	Lots 3, 4, E $\frac{1}{2}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$	318.18	Gently to steeply rolling	1	VII	1	Private

-Continued

Table 15. - Description, Area, Classification, Suitability and Proposed Management of Unreserved Public Domain, by Counties, Within the Lower Yellowstone River Basin, Montana and North Dakota, 1955 - Continued

Montana Principal Meridian		Twp. Range		Subdivision	Acres	General Land Character	AUM's Land Use 1/	Land Capability Classification 3/	Principal Suitability 2/	Proposed Management
North	East	Sec.	Sec.							
Wibaux County										
17	60	4		SW $\frac{1}{4}$ SW $\frac{1}{4}$	40.00	Gently to steeply rolling	1	VII	1	Private
18	57	2		Lots 1, 2, 3, 4, 5, 6, 7, 8	258.50	Level to undulating	1	210.54/VII:47.96/VIII	1	Private
		10		Lot 4	48.10	Gently to steeply rolling	1	VI	1	Private
		14		NE $\frac{1}{4}$ NE $\frac{1}{4}$	40.00	Gently to steeply rolling	1	VII	1	Private
		24		SW $\frac{1}{4}$ NW $\frac{1}{4}$, W $\frac{1}{2}$ SW $\frac{1}{4}$	120.00	Gently to steeply rolling	1	40/VI:80/VII	1	Private
18	58	2		S $\frac{1}{2}$ SW $\frac{1}{4}$, NW $\frac{1}{4}$ SW $\frac{1}{4}$						
				Lots 1, 2, 3, 4, NE $\frac{1}{4}$ SE $\frac{1}{4}$	299.36	Rough, broken badlands	1	160/VI:139.36/VII	1	Private
		4		All	619.04	Gently to steeply rolling	1	VII	1	Private
		6		All	680.76	Gently to steeply rolling	1	VII	1	Private
		8		N $\frac{1}{2}$ N $\frac{1}{2}$	160.00	Rough and broken badlands	1	VI	1	Private
		10		All	640.00	Rough, broken badlands	1	VI	1	Private
		18		Lots 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, N $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ SE $\frac{1}{4}$	414.14	Steeply rolling to rough	1	VII	1	Private
		22		N $\frac{1}{2}$	320.00	Steeply rolling to rough	1	VII	1	Private
		28		N $\frac{1}{2}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ SW $\frac{1}{4}$	160.00	Steeply to gently rolling	1	VII	1	Private
		30		E $\frac{1}{2}$, Lots 1, 10, 11	428.69	Steeply to gently rolling	1	VII	1	Private
18	59	2		Lots 1, 2, S $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$	320.96	Gently to steeply rolling	1	VI	1	Private
		6		Lots 2, 3, 4, 5, 6, 7, SE $\frac{1}{4}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$, W $\frac{1}{2}$ SE $\frac{1}{4}$						
		12		All	447.98	Gently to steeply rolling	1	VII	1	Private
		24		N $\frac{1}{2}$ N $\frac{1}{2}$, NE $\frac{1}{4}$ SE $\frac{1}{4}$, S $\frac{1}{2}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$	640.00	Gently to steeply rolling	1	VI	1	Private
					320.00	Gently to steeply rolling	1	120/VI:200/VII	1	Private

- Continued

Table 15. - Description, Area, Classification, Suitability and Proposed Management of Unreserved Public Domain, by Counties, Within the Lower Yellowstone River Basin, Montana and North Dakota, 1955

Montana Principal Meridian	Twp. Range	North East Sec.	Subdivision	Acres	General Land Character	AUM's Land Use 1/	Present Land Use 1/	Land Capability Classification 3/	Principal Suitability 2/	Proposed Management
Wibaux County										
18	60	6	Lot 1	43.48	Gently to steeply rolling	15	1	VI	1	Private
20			NW $\frac{1}{4}$ NE $\frac{1}{4}$	40.00	Gently to steeply rolling	14	1	VI	1	Private
22			N $\frac{1}{2}$ NE $\frac{1}{4}$, NW $\frac{1}{4}$	240.00	Gently to steeply rolling	60	1	VI	1	Private
19	60	22	NW $\frac{1}{4}$ NE $\frac{1}{4}$, Lots 1, 2, 3	187.84	Very steeply rolling	56	1	VI	1	Private
North Dakota										
North West										
McKenzie County										
149	102	17	NE $\frac{1}{4}$ SE $\frac{1}{4}$	40.00	Steeply rolling	12	1	VII	1	Private
150	104	17	Lot 2	33.00	Undulating rolling	6	1	VI	1	Private
20			Lot 1	5.00	Undulating rolling	-	1	VI	1	Private
21			Lot 2	2.12	Undulating rolling	-	1	VI	1	Private
151	104	26	Lot 1, 4	40.70	Rough and steep	7	1	VII	1	Private
35			Lot 3	10.75	Rough and steep	-	None	VIII	None	Private
152	104	19	Lot 4, W $\frac{1}{2}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$	59.58	Sharply rolling	16	1	25.48/VII:34.10/VIII	1	Private
21			SE $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$	17.50	Undulating	-	-	VII	-	Federal
22			Lots 3, 4	16.60	Undulating	-	-	VII	-	Federal
Golden Valley County										
143	105	4	SE $\frac{1}{4}$ SE $\frac{1}{4}$	40.00	Gently rolling, undulating	12	1	VI	1	Private
18			SE $\frac{1}{4}$ SE $\frac{1}{4}$	40.00	Gently rolling, undulating	10	1	VI	1	Private

1/ & 2/ Symbols denote land use and suitability: 1. Grazing; 2. Wildlife; 3. Watershed; 5. Mining; 6. Recreation; 7. Timber; 9. Airport Lease; 10. Stock Driveway.

3/ See appendix C for detailed description of land use capability classification.

Compiled from the individual tract classification reports, form 4-1090 of the Bureau of Land Management, (see appendix B) These reports are filed at the Montana State Office, Bureau of Land Management, Billings, Montana.

Appendix A

Principal plants growing on range lands of the Lower Yellowstone River Basin, Montana and North Dakota.

<u>Scientific Name</u>	<u>Common Name</u>
<u>Grass</u>	
Agropyron cristatum	Crested wheatgrass
Agropyron smithi	Bluestem wheatgrass
Agropyron spicatum	Bearded bluebunch wheatgrass
Agrostis alba	Redtop
Andropogon scoparius	Little bluestem
Aristida longiseta	Red threeawn
Beckmannia syzigachne	American sloughgrass
Blepharoneuron tricholepis	Pine dropseed
Bouteloua curtipendula	Sideoats grama
Bouteloua gracilis	Blue grama
Bromus ciliatus	Fringed brome
Bromus inermis	Smooth brome
Bromus tectorum	Cheatgrass brome
Buchloe dactyloides	Buffalograss
Calamagrostis canadensis	Bluejoint reedgrass
Calamovilfa longifolia	Prairie sandreed
Distichlis stricta	Inland saltgrass
Echinochloa crusgalli	Barnyardgrass
Elymus canadensis	Canada wildrye
Festuca octoflora	Six-week fescue
Hordeum jubatum	Foxtail barley
Koeleria cristata	Prairie junegrass
Oryzopsis hymenoides	Indian ricegrass
Panicum virgatum	Switchgrass
Phleum pratense	Timothy
Poa pratensis	Kentucky bluegrass
Poa secunda	Sandberg bluegrass

Scientific Name

Appendix A

Common Name

Schedonnardus paniculatus
Sporobolus airoides
Stipa comata
Stipa viridula

Tumblegrass
Alkali sacaton
Needleandthread
Green needlegrass

Sedge

Carex filifolia

Threadleaf sedge

Forbs

Achillea lanulosa

Western yarrow

Allium spp.

Onion

Antennaria spp.

Pussytoes

Aplopappus acaulis

Goldenweed

Aster spp.

Aster

Balsamorhiza sagittata

Arrowleaf balsamroot

Calochortus nuttalli

Segolily mariposa

Chenopodium spp.

Goosefoot

Cirsium spp.

Thistle

Cruciferae spp.

Mustard

Equisetum spp.

Horsetail

Erigeron spp.

Fleabane

Eriogonum spp.

Eriogonum

Euphorbia marginata

Euphorbia

Eurotia lanata

Common winterfat

Glycyrrhiza lepidota

American licorice

Grindelia squarrosa

Curlycup gumweed

Iris spp.

Iris

Lappula spp.

Stickseed

Lupinus spp.

Lupine

Penstemon spp.

Penstemon

Phlox spp.

Phlox

Plantago spp.

Plantain

Potentilla spp.

Cinquefoil

Scientific NameCommon Name

Rumex spp.

Dock

Salsola kali tenuifolia

Tumbling Russianthistle

Senico spp.

Groundsel

Solidago spp.

Goldenrod

Vica spp.

Vetch

Shrubs

Amelanchier alnifolia

Saskatoon serviceberry

Artemisia cana

Silver sagebrush

Artemisia frigida

Fringed sagebrush

Artemisia tridentata

Big sagebrush

Atriplex confertifolia

Shadscale saltbrush

Atriplex nuttallii

Gardner saltbrush

Chrysothamnus spp.

Rabbitbrush

Gutierrezia sarothrae

Broom snakeweed

Opuntia spp.

Pricklypear

Prunus spp.

Chokecherry

Purshia tridentata

Antelope bitterbrush

Rhus trilobata

Skunkbush sumac

Rosa spp.

Rose

Salix spp.

Willow

Sarcobatus vermiculatus

Black greasewood

Symphoricarpos albus

Common snowberry

Tetradymia nuttalli

Nuttall horse-brush

Yucca glauca

Small soapweed

Scientific Name

Common Name

Trees

Acer negundo

Boxelder

Fraxinus lanceolata

Green ash

Juniperus scopulorum

Rocky Mountain juniper

Populus deltoides

Eastern poplar

Poisonous Plants

Asclepias spp.

Milkweed

Aster xylorrhiza

Common woody aster

Delphinium spp.

Larkspur

Zigadenus venenosus

Meadow deathcamus

Nomenclature from "Standard Plant Names", H. P. Kelsey and W. A. Dayton: published by Horace McFarland Company, Harrisburg, Pennsylvania, 1942.

APPENDIX B
UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

LAND USE FACTORS
A. LAND USE FACTORS

LAND CLASSIFICATION REPORT

_____, 19____
(Date of field examination)

I. SUMMARY

- 1. Region _____ State _____ County _____ Serial _____
- 2. Type of application _____ Applicant _____
- 3. Land description: T. _____ R. _____ Mer. _____ Acres _____
- 4. Location and accessibility _____
- 5. Elevation _____ 6. Annual precipitation _____
- 7. Topography _____
- 8. Soil _____
- 9. Vegetation _____
- 10. Type and extent of erosion _____
- 11. Present land uses _____
- 12. Potential land uses _____
- 13. Present improvements _____
- 14. Needed improvements _____
- 15. (a) Value of land, \$ _____ (b) Value of _____, \$ _____
(c) Value of _____, \$ _____ Total value, \$ _____
- 16. Conflicts _____
- 17. Does the land contain: (a) Mineral _____ (b) Hot springs _____ (c) Water needed by public? _____
(d) Is it occupied by natives (Alaska)? _____
- 18. Findings and recommendations: _____

Prepared by _____ (Title) _____ (Date)

Approved _____ (Title) _____ (Date)

Approved _____ (Title) _____ (Date)

19. Classification

Signed _____ (Title) _____ (Date)

II. LAND USE FACTORS

A. CROP FACTORS:

- 20. Soil
- 21. Precipitation
- 22. Growing season
- 23. Area adaptable for crop production: Total acres
 (a) By irrigation (b) By dry-farming
- 24. Principal crops and average yields on similar lands in locality
- 25. Crop failures in locality
 (a) Frequency (b) Causes
- 26. Extent of farm land abandonment in locality
- 27. Water supply:
 (a) Source (b) Quality
- (c) Adequacy (d) Dependability
- 28. Feasibility of irrigation development (construction of facilities, water rights, costs, and returns):

- 29. Minimum acreage required for average farm family unit
- 30. Agricultural rating: (a) Good (b) Fair (c) Poor
- 31. Comments:

B. GRAZING FACTORS:

- 32. Vegetation (type association)
- 33. (a) Density (b) Condition
- 34. Principal forage plants
- 35. Nonforage plants
- 36. Present grazing capacity (AUMs); Potential grazing capacity (AUMs)
- 37. Stock water available: Stream Spring Well Pond Other
- 38. Is this water needed by public? If so, explain
- 39. Treatment, structures, or other changes or improvements necessary for best use and management
- 40. Name and address of lessee
- 41. Comments:

C. TIMBER :

42. Acres timbered :

43.	SPECIES	UNIT	VOLUME	UNIT VALUE	VALUE

44. Total value of timber _____
45. Quality and condition _____
46. Accessibility _____
47. Demand _____
48. Comments: _____

D. MINERALS :

49. (a) Metallic _____
(b) Nonmetallic _____
50. Extent of development, leases and claims _____

51. Comments: _____

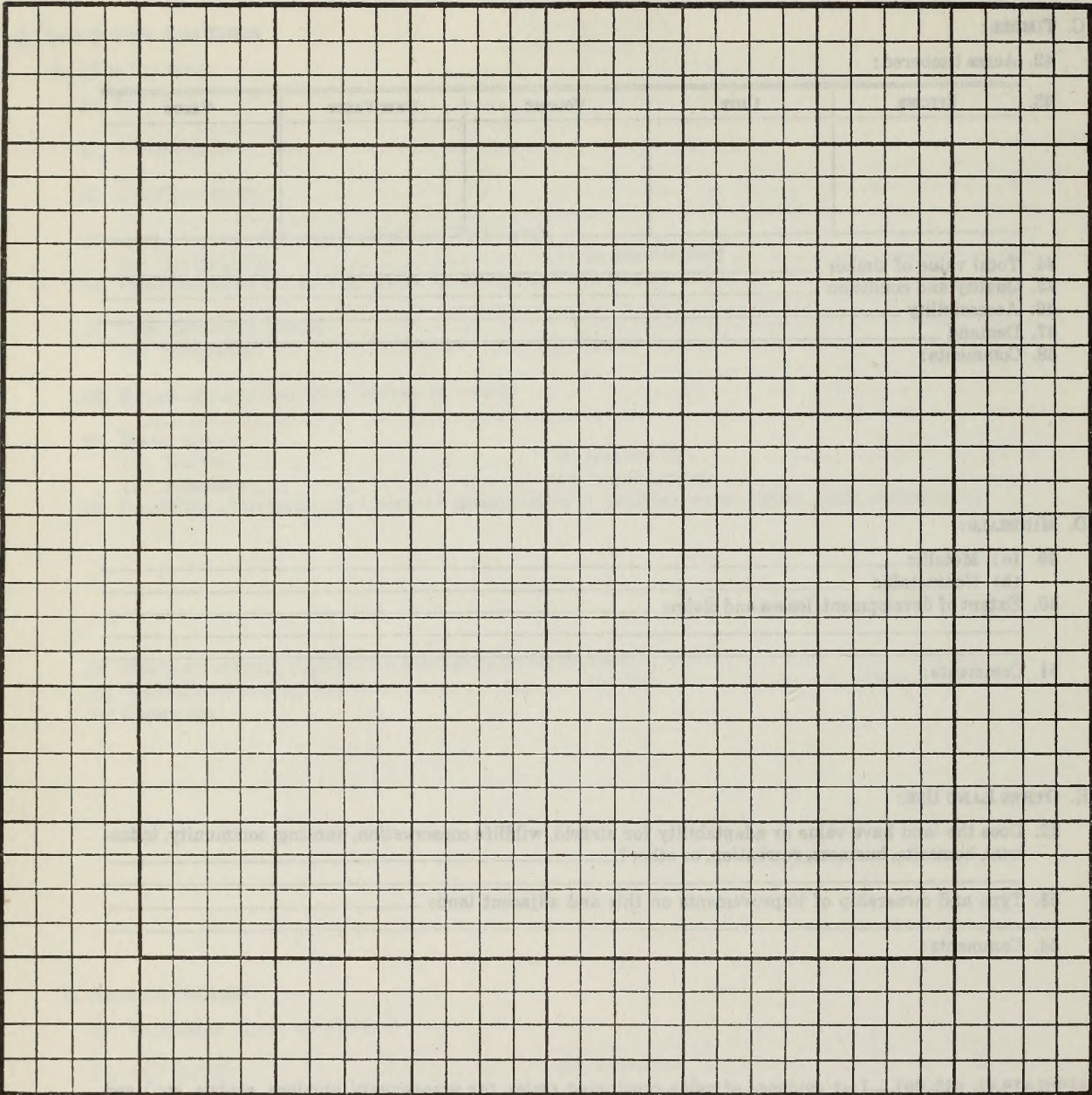
E. OTHER LAND USE :

52. Does the land have value or adaptability for airfield, wildlife conservation, hunting, community, industrial, homesite, business, recreation, or other? _____

53. Type and ownership of improvements on this and adjacent lands _____

54. Comments: _____

III. APPRAISAL (55-60).—List evidence of value considered (sales, tax assessments, opinions, rentals, etc.) and state conclusions. Improvements should be appraised separately.



Scale:

Symbols:

Names and addresses of adjoining owners:

Comments: (This diagram may also be used for a wide variety of larger or smaller scales than the one inch equals one mile as implied. The examiner making the inventory and appraisal selects a scale adapted to the tract or tracts being examined. Data exterior to the tract which is usually shown consists of access, drainage, water supply, adjacent ownership, use and lease or operating unit information. Pertinent adjacent features affecting the use, location or value of the tract are also shown on this diagram.)

(DO NOT WRITE BELOW THIS LINE)

Appendix C - Description and definitions of land-use capability classes 1/

Class	Suitable for	Topography:		Characteristic Native Vegetation	Texture	Soil Characteristics			Drainage	Vulnerability to Erosion	Requisite Special Practices
		Slope (percent)	Character of Surface			Depth	Relative Salinity	Fertility			
I	Best type of farming land	0 to 2	Level or nearly level	Tall and mid-grasses, thrifty sagebrush, deciduous trees	Medium; Friable	12" or more; sub-soil 36" or more	Negligible	High	Good to Excellent	Low	None to minor
II	Farming with simple conservation practices	0 to 10	Irregular	Tall, mid, and short grasses; big sagebrush, deciduous trees	Light to Heavy; Friable	3" or more; sub-soil 36" or more	Negligible to slight	Good to High	Good	Slight to moderate	Minor to simple practices
III	Farming with complex conservation practices	0 to 10	Irregular	Tall, mid, and short grasses; big sagebrush, rabbitbrush, greasewood, coniferous, and deciduous trees	Light to Heavy; Friable	6" or more; sub-soil 24" or more	Slight to moderate	Moderate to High with management	Often poor; may be needed	Moderate to High	Complex practices essential
IV	Limited or occasional cultivation; best for permanent hay or pasture	0 to 15	Irregular or stony	Tall, mid, and short grasses; big sagebrush, rabbitbrush, greasewood, coniferous, deciduous trees, saltbush, winterfat	Sandy to Clay; porous or tight	6" or more; may have shallow hardpan	Negligible to critical	Poor for row crops; best for hay and pasture	Not justifiable if needed	Moderate to High or nil	Complex and intensive practices with good management
V	Range or woodland; farming only if irrigation water becomes available	0 to 5	Smooth to irregular; may be stony or wet	Tall, mid, and short grasses; big sagebrush, rabbitbrush, greasewood, coniferous, and deciduous trees	Light to Heavy; Friable	Good permeability to 24" depth	Negligible to moderate	Moderate to High	Usually not a problem	Low	None to minor or drainage
VI	Range and woodland only	0 to 20 (greater only on good soils)	Irregular to rough or rocky	Tall, mid, and short grasses; big sagebrush, rabbitbrush, greasewood, coniferous, deciduous trees, saltbush, winterfat	Very light to Heavy	Shallow to moderate; permeability excessive to poor	Negligible to moderate	Light to Moderate;	Not practicable if a problem	Moderate	Proper management with simple restrictions
VII	Range and woodland with severe restrictions	0 to 100	Rough, rocky, or eroded	Tall, mid, and short grasses; big sagebrush, rabbitbrush, greasewood, coniferous, deciduous trees, saltbush, winterfat, mountain browse and annuals	Any: May be tight clay or open sand or gravel	Often shallow, poorly developed	Negligible to critical	Poor to Light	Seldom a problem or not practicable	High	Proper management with complex restrictions and intensive practices
VIII	Watershed, wildlife and recreation	Generally steep or swampy	Extremely rough, barren or inaccessible	Often only annuals or scanty perennials; may be dense coniferous timber	Usually poorly developed	Very shallow or nil	May be excessive for plant growth	Usually very low	Often poor; not justifiable if a problem	High (unless a swamp)	Complete protection

1/ Adapted from Soil Conservation Service Standards, U. S. Department of Agriculture. Any one of the factors listed may classify a soil, factors determining classification singly, not necessarily in combination.

Appendix D

Lower Yellowstone and Buffalo Rapids Irrigation Projects

Bureau of Reclamation has developed two irrigation projects in the Lower Yellowstone Area covering 79,108 acres. Lower Yellowstone is a gravity project of 56,170 acres, built in 1905-1909, extending from Intake to the mouth of the Yellowstone River in Montana and North Dakota. Main canal and area of this project are shown on the Lower Yellowstone Area Map with this report. Buffalo Rapids is a pumping project of 22,938 acres near Terry, Montana, started in 1937. Two pumping projects have recently been completed in the area by the Bureau of Reclamation. Both pump water from the Lower Yellowstone main canal. Savage Unit, serving 2,215 acres, commenced delivery of water in 1952. Intake Unit was completed in 1946 to serve 881 acres with two low lifts. These projects are described in the irrigated lands section of this report and their value to the area is emphasized in the Economic and Land Use Sections of this report. Additional tabular detailed information is presented in this appendix for these two projects to further bring out their importance to the area for their production of livestock and livestock feed; as a tremendous force for fiscal and production stability and for their economic value to the area, to the State of Montana and to the Nation.

Table 16 shows the crops produced on both the Lower Yellowstone and Buffalo Rapids projects in 1955, both singly and in total. Yield, area and values are shown per acre and in total for all crops. Relative importance of crops by area and value are shown. Lower Yellowstone project produced crops valued at 2,556,435 dollars, and Buffalo Rapids project produced 1,021,103 dollars worth, a total of 3,577,538 dollars. Sugar beets are the most valuable crop, followed by alfalfa and wheat. Alfalfa covers the largest acreage, sugar beets being second. Potatoes produced the greatest value per acre, followed by sugar beets. Crop yields of these two projects in 1955 are shown graphically in figure 5.

Table 17 shows the area and percent of the total of crops produced on the Lower Yellowstone project during the years 1946-1955. Average area of each crop for the period and average yields are also given. Total areas, values, and average values per acre for each year are also given. Over the period production value averaged 2,956,683 dollars annually for the project or 60.74 dollars per acre. Alfalfa is the leading crop followed by sugar beets.

Table 18 presents areas and percentile portions of the total area of crops produced on the Buffalo Rapids project from 1950 to 1955. Averages of these and total areas are also shown. Alfalfa, the principal crop, covered 25 percent of the project. On an average for the period of six years, miscellaneous crops used 17 percent and wheat occupied 15 percent of the total area on the project.

Table 19 presents an inventory of livestock and poultry on the Lower Yellowstone Reclamation project for each of the years 1948-1955. Numbers of livestock fattened are also given. Numbers of calves, pigs, lambs, chickens and turkeys raised each year from 1952 through 1955 are also shown. Dairy cattle have steadily increased in number from 958 to 1,269. Other cattle increased from 1,183 in 1948 to 3,025 in 1955.

Table 20 shows the numbers of livestock and poultry on both the Lower Yellowstone and Buffalo Rapids projects in 1955. Numbers of farms reporting and the number of animals reported is given for each project and for the totals of both projects. Numbers of livestock fattened and raised during the year are also presented for each project along with the totals for both projects. This table shows that feeding is an important enterprise on both projects. Livestock fattened for market included 10,651 cattle and calves and 141,669 lambs and sheep. On an animal unit basis, lambs lead cattle for feeding nearly three to one.

Table 16. - Area, value and yield of crops produced on the Lower Yellowstone and Buffalo Rapids reclamation projects, Montana, 1955

Crop	LOWER YELLOWSTONE 1 & 2										BUFFALO RAPIDS 1 & 2										TOTAL LOWER YELLOWSTONE & BUFFALO RAPIDS	
	Area Acres	Value of Production		Per Acre Dollars	Units Per Acre	Unit of Measure	Area Acres	Value of Production		Per Acre Dollars	Units Per Acre	Area Acres	Value of Production		Per Acre Dollars	Units Per Acre	Production Dollars	Production Units				
		Dollars	Units					Dollars	Units				Dollars	Units					Dollars	Units		
Barley	3,393	97,318	28.68	39.80	bu.	1,295	33,146	25.60	36.00	+	4,688	130,464	27.83	38.79	181,838							
Corn	710	29,215	41.14	32.90	bu.	1,053	42,459	40.32	33.10	1,763	71,674	40.65	33.00	58,175								
Oats	5,085	126,137	24.81	49.60	bu.	2,854	84,708	29.68	52.10	7,939	210,845	26.56	50.50	400,881								
Wheat	6,405	405,612	63.32	33.70	bu.	1,349	71,055	52.67	25.70	7,754	476,667	61.47	32.29	250,412								
Sralt	172	4,780	27.79	50.50	bu.	37	1,560	42.16	70.30	209	6,340	34.02	54.02	11,290								
Alfalfa	12,475	260,488	20.88	2.61	ton	5,961	218,008	36.57	2.61	18,436	478,496	25.95	2.61	48,132								
Other hay	626	3,796	6.06	1.10	ton	482	10,153	21.06	1.91	1,108	13,949	12.59	1.46	1,613								
Corn fodder	222	3,736	16.82	2.10	ton	540	26,213	48.54	4.41	762	29,949	39.30	3.74	2,850								
Corn stover					ton	1,053	5,056	4.80	2.40	1,053	5,056	4.80	2.40	2,528								
Beet tops	9,844	26,201	2.66	14.79	ton	2,392	48,996	12.12	16.16	12,236	55,197	4.51	15.06	184,222								
Irrigated pasture	3,204	32,040	10.00	1/ 5.50	AUM	1,963	44,432	22.63	6.47	5,167	76,472	14.80	5.87	30,317								
Corn silage	2,307	62,269	26.99	8.43	ton	1,036	52,356	50.54	8.42	3,343	114,625	34.29	8.43	28,185								
Oat silage	18	256	14.22	4.44	ton					18	256	14.22	4.44	86								
Sugar beets	9,844	1,346,431	136.77	14.79	ton	2,392	357,624	149.51	16.16	12,236	1,704,055	139.27	15.06	184,222								
Beans	2,521	119,551	47.42	8.78	cwt.	645	21,713	33.66	4.25	3,166	141,264	44.62	8.61	27,248								
Alfalfa seed	187	2,958	15.82	90	cwt.	207	4,960	23.96	1.50	394	7,918	20.10	1.22	479								
Clover seed	14	234	16.71	1.86	cwt.					14	234	16.71	1.86	26								
Flax					cwt.	15	62	4.13	1.00	15	26,62	4.13	1.00	15								
Potatoes	79	15,238	192.88	167.70	bu.	48	11,502	239.63	177.50	127	26,740	210.55	171.42	21,770								
Garden	269	20,175	75.00			71	7,100	100.00		340	27,275	80.22										
Total all crops	57,375					23,393				80,768												
Less multiple cropped	187					207				394							379					
Less residue crops	9,844					3,445				13,289							163					
Net total	47,344	2,556,435	54.00			19,741	1,021,103	51.72		67,085	3,577,538	53.33					542					
Returns from sugar program	9,844	563,126	57.20			2,392	148,877	62.24		12,236	712,003	58.19										
Sugar beets, all income	9,844	1,909,557	193.98			2,392	506,501	211.75		12,236	2,416,058	197.45										
Total returns	47,344	3,119,561	65.89			19,741	1,169,980	56.65		67,085	4,289,541	63.94										

1/ Estimate by Bureau of Land Management, Missouri River Basin Investigations Section.

Project History, 1955, Buffalo Rapids project; Project History, 1955, Lower Yellowstone Project, Bureau of Reclamation, Region 6.

Table 17—Crops produced on the Lower Yellowstone Project, Montana and North Dakota, 1946-1955

Crop	Year										Average yield per acre	
	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955		Average
Alfalfa, acres	8,980	6,848	9,278	10,554	10,476	11,219	11,898	12,412	12,355	12,475	10,649	2.3
percent	18.9	14.1	19.0	21.5	21.3	24.0	25.2	26.8	25.9	26.3	22.3	
Other hay, acres	466	575	170	477	286	383	698	295	659	626	463	1.2
percent	1.0	1.2	.3	1.0	.6	.8	1.5	.6	1.4	1.3	1.0	
Wheat, acres	5,710	6,637	10,516	10,606	8,806	12,080	10,470	7,993	7,305	6,577	8,670	27.0
percent	12.1	13.7	21.5	21.6	17.9	25.9	22.1	17.2	15.3	13.9	18.1	
Oats, acres	5,924	8,381	7,385	5,426	7,252	5,334	5,473	5,142	5,311	5,085	6,071	49.0
percent	12.5	17.3	15.1	11.1	14.8	11.5	11.6	11.1	11.2	10.7	12.7	
Barley, acres	3,744	3,149	4,255	1,988	2,153	2,179	2,367	2,334	2,406	3,393	2,797	34.9
percent	7.9	6.5	8.7	4.1	4.4	4.7	5.0	5.0	5.1	7.2	5.8	
Corn, acres	444	571	842	849	275	445	363	401	477	710	538	33.3
percent	.9	1.2	1.7	1.7	.6	1.0	.8	.9	.9	1.5	1.1	
Flax, acres	142	1,114	587	277	220	291	7	336	67	-	304	
percent	.3	2.3	1.2	.6	.4	.6	.0	.7	.1	-	.6	
Beans, acres	78	432	375	424	260	446	554	966	2,335	2,521	839	13.6
percent	.2	.9	.8	.9	.5	1.0	1.2	2.1	4.9	5.3	1.8	
Sugar beets, acres	14,753	15,273	9,195	10,695	10,830	7,579	7,731	9,928	10,609	9,844	10,644	11.8
percent	31.1	31.5	18.8	21.8	22.1	16.3	16.3	21.4	22.3	20.8	22.3	
Garden, acres	349	318	478	315	332	303	315	298	290	269	327	75.7
percent	.7	.7	.9	.6	.7	.6	.7	.7	.6	.6	.7	
Cornfodder & silage, acres	1,833	1,722	2,187	2,422	2,961	2,253	2,687	1,963	2,319	2,547	2,289	2.4 & 6.9
percent	3.9	3.6	4.5	4.9	6.0	4.8	5.7	4.2	4.9	5.4	4.8	
Potatoes, acres	934	486	782	736	690	262	344	253	211	79	478	133
percent	2.0	1.0	1.6	1.4	1.4	.6	.7	.6	.4	.2	1.0	
Pasture, acres	1,558	1,417	1,797	2,135	3,216	3,808	4,352	4,037	3,295	3,204	2,882	AUM
percent	3.3	2.9	3.7	4.4	6.5	8.2	9.2	8.7	6.9	6.8	6.0	
Miscellaneous, acres	2,475	1,522	1,062	2,166	1,357	2	2	2	14	14	860	
percent	5.2	3.1	2.2	4.4	2.8	.0	.0	.0	.0	.0	1.8	
Total crops, acres	47,390	48,445	48,909	49,070	49,114	46,582	47,261	46,358	47,639	47,344	47,811	
Total crop value, \$	3,019,860	3,883,775	2,765,307	2,859,166	2,776,052	2,777,873	3,089,887	2,625,272	2,650,078	3,119,561	2,956,683	
Value per acre, \$	63.72	80.17	56.54	58.27	56.52	59.43	62.75	54.51	54.20	64.30	60.74	

Compiled from Project History, 1955, Lower Yellowstone Project, Bureau of Reclamation, Region 6, Billings, Montana.

Figure 5.— Total yield of crops produced on the Lower Yellowstone and Buffalo Rapids Reclamation Projects, Montana, 1955.

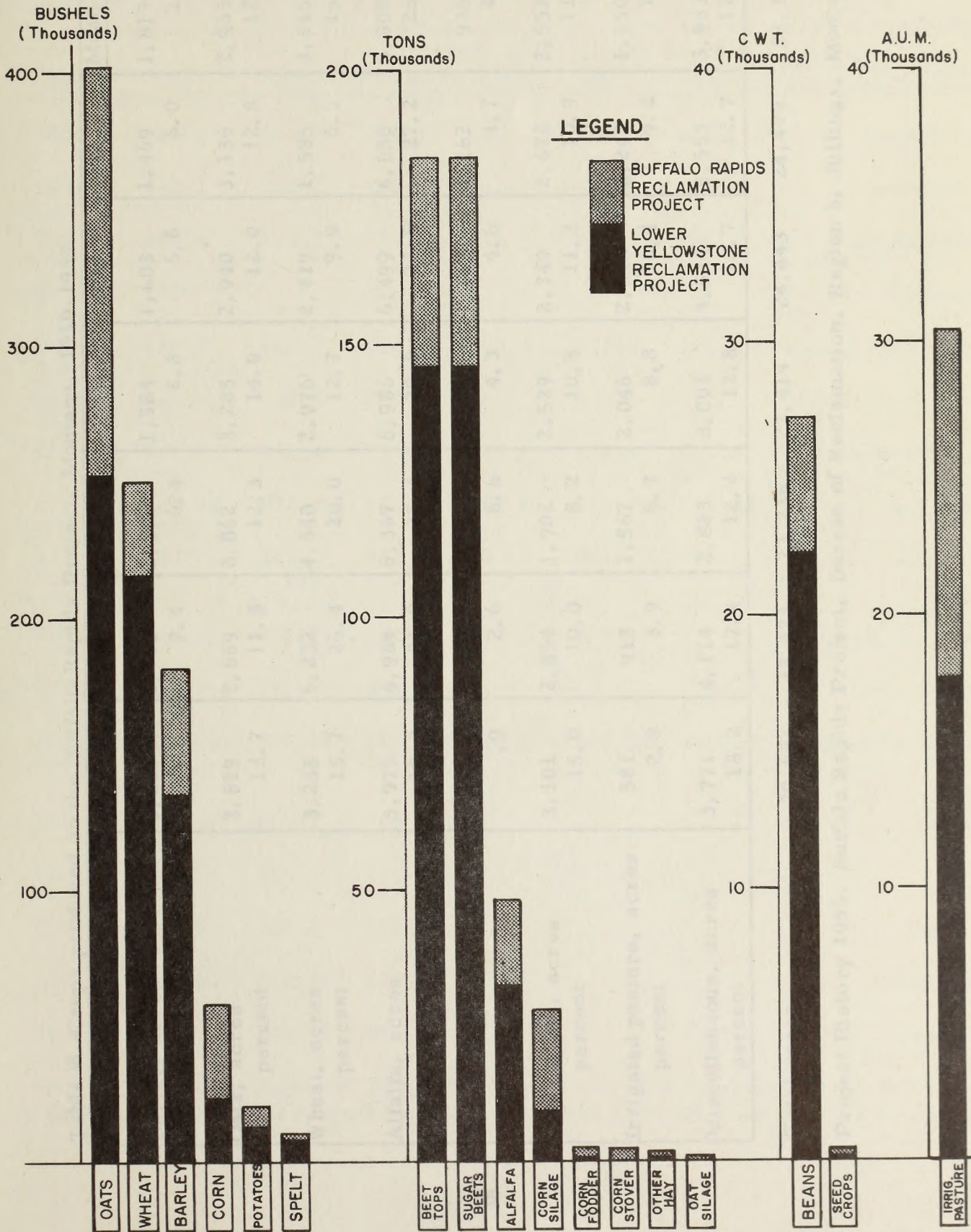


Table 18.-Crops produced on the Buffalo Rapids Project, Montana, 1950-1955

Crop	1950	1951	1952	1953	1954	1955	Mean
Barley, acres percent	3,006 14.5	1,753 7.4	1,486 6.4	1,584 6.8	1,603 6.6	1,469 6.0	1,817 7.9
Oats, acres percent	2,829 13.7	2,669 11.3	2,862 12.3	3,285 14.0	2,940 12.0	3,135 12.8	2,953 12.7
Wheat, acres percent	3,238 15.7	6,232 26.4	4,640 20.0	2,976 12.7	2,419 9.9	1,585 6.5	3,515 15.2
Alfalfa, acres percent	3,975 19.2	4,964 21.0	6,367 27.4	6,986 29.8	6,499 26.6	6,656 27.2	5,908 25.2
Corn silage, acres percent	180 .9	624 2.6	1,529 6.6	1,007 4.3	1,113 4.6	1,162 4.7	936 4.0
Sugar beets, acres percent	3,101 15.0	2,354 10.0	1,902 8.2	2,529 10.8	2,749 11.2	2,672 10.9	2,551 11.0
Irrigated pasture, acres percent	581 2.8	913 3.9	1,567 6.7	2,046 8.8	2,546 10.4	2,245 9.2	1,650 7.0
Miscellaneous, acres percent	3,771 18.2	4,114 17.4	2,883 12.4	3,001 12.8	4,574 18.7	5,555 22.7	3,983 17.0
Total acres	20,681	23,623	23,236	23,414	24,443	24,479	23,313

Project History 1955, Buffalo Rapids Project, Bureau of Reclamation, Region 6, Billings, Montana.

Table 19.-Livestock and poultry on the Lower Yellowstone Reclamation Project, Montana and North Dakota, 1946-1955

Inventories	1948	1949	1950	1952	1953	1954	1955
Dairy cows	958	831	985	1,122	1,220	1,208	1,269
Beef cows	527	888	631	1,687	2,992	1,398	1,609
Other cattle	1,183	1,417	1,486	3,057	1,643	2,974	3,025
Sows				123		141	38
Other hogs & pigs	2,436	2,173	1,693	1,597	1,164	1,163	1,178
Ewes 1 yr. & +				10,032	7,377	4,431	4,200
Other sheep	8,251	1,891	9,781	7,158	4,318	3,390	1,231
Chickens	24,327	26,818	20,473	15,172	16,370	16,790	14,908
Turkeys	497	160	40	549	331	793	414
<u>Fattened</u> Cattle & calves	7,113	4,047	4,601	5,734	5,377	6,396	7,900
Pigs & hogs				508	1,252	120	75
Lambs & sheep	103,204	82,053	78,512	108,720	92,461	105,885	133,844
<u>Raised</u> Calves				1,809	1,559	1,413	962
Pigs				391	266	294	403
Lambs				5,824	4,481	3,060	1,956
Chickens				15,714	18,652	18,354	11,115
Turkeys				18	802	743	43

Annual Project Reports, Lower Yellowstone Project, Montana and North Dakota; Bureau of Reclamation, Department of the Interior, Region 6, Billings, Montana.

Table 20. - Livestock and poultry on Buffalo Rapids and Lower Yellowstone reclamation projects, Montana and North Dakota, 1955

	Buffalo Rapids		Lower Yellowstone		Total Both Projects	
	No. Farms Reporting	No. Head Reported	No. Farms Reporting	No. Head Reported	No. Farms Reporting	No. Head Reported
Dairy cows	111	964	320	1,269	431	2,233
Beef cows	89	3,946	108	1,609	197	5,555
Other cattle	87	2,859	293	3,025	380	5,884
Sows	34	163	24	38	58	201
Other hogs & pigs	38	1,087	126	1,178	164	2,265
Ewes 1 yr. & older	18	5,251	62	4,200	80	9,451
Other sheep	27	1,781	39	1,231	66	3,012
All hens & pullets	84	6,196	270	14,908	354	21,104
Turkeys	6	257	6	414	12	671
<u>Fattened for market</u>						
Cattle & calves	57	2,751	129	7,900	186	10,651
Pigs & hogs	16	300	15	75	31	375
Lambs & sheep	12	7,825	126	133,844	138	141,669
<u>Raised during year</u>						
Calves	87	2,586	106	962	193	3,548
Pigs	20	396	26	403	46	799
Lambs	10	2,188	14	1,956	24	4,144
Chickens	47	5,268	201	11,115	248	16,383
Turkeys	3	49	1	43	4	92

Project History, 1955, Buffalo Rapids project; Project History 1955, Lower Yellowstone project, Bureau of Reclamation, Region 6, Billings, Montana, 1957.

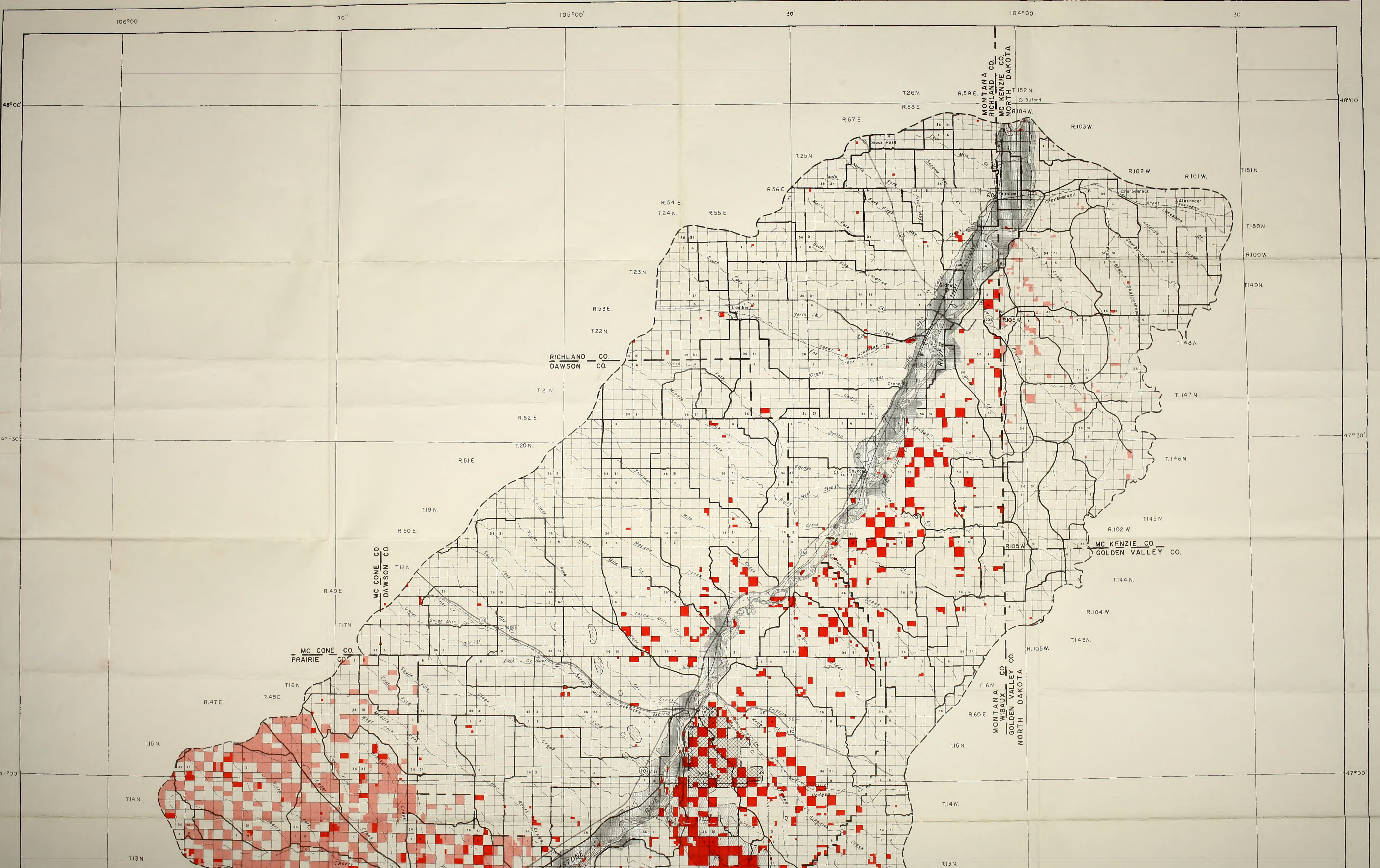
Table 10 - Liveborn and stillborn on Indian Reservations and Alaska, 1955

Race	Liveborn		Stillborn		Total
	No.	Value	No.	Value	
Dairy cows	111	1,309	136	982	2,291
Beef cows	102	1,909	108	2,048	3,957
Other cattle	81	2,052	207	5,829	7,881
Other horses & pigs	38	1,178	130	1,003	2,181
Other sheep	57	1,211	79	1,200	2,411
Other swine	84	14,908	270	14,908	29,816
Turkeys	2	414	0	0	414
Total	555	27,311	623	27,311	54,622
<u>Raised during year</u>					
Cattle & calves	87	2,907	149	2,907	5,814
Pigs & hogs	16	7,028	18	7,028	14,056
Lambs & sheep	12	133,784	158	133,784	267,568
Total	115	143,723	325	143,723	287,446
<u>Exported for market</u>					
Cattle & calves	24	1,000	105	1,000	2,000
Pigs & hogs	46	407	20	407	814
Lambs & sheep	24	1,000	18	1,000	2,000
Chickens	4	11,115	201	11,115	22,230
Turkeys	0	0	1	0	0
Total	98	13,422	350	13,422	26,844

BLM LIBRARY
 RS 150A BLDG. 50
 DENVER FEDERAL CENTER
 P.O. BOX 25047
 DENVER, CO 80225

46°00'

BLM LIBRARY
RS 150A BLDG. 50
DENVER FEDERAL CENTER
P.O. BOX 25047
DENVER, CO 80225



106°00' 30" 105°00' 30' 104°00' 30'

48°00'

48°00'

47°30'

47°30'

47°00'

47°00'

MONTANA CO.
RICHLAND CO.
MC KENZIE CO.
NORTH DAKOTA

RICHLAND CO.
DAWSON CO.

MC CONE CO.
DAWSON CO.

MC CONE CO.
PRAIRIE CO.

MC KENZIE CO.
GOLDEN VALLEY CO.

MONTANA CO.
WIBAUX CO.
GOLDEN VALLEY CO.
NORTH DAKOTA

T.26N. R.59E. T.152N.

R.58E. R.57E. R.104W.

T.25N. T.24N. R.55E. R.103W.

R.56E. R.102W. R.101W.

T.23N. T.22N. R.53E. R.105W.

T.21N. T.20N. R.52E. R.104W.

R.51E. T.19N. R.50E. T.18N.

R.49E. T.17N. R.48E. T.16N.

R.47E. T.15N. R.46E. T.14N.

T.13N.

T.14N. T.13N.

T.14N. T.13N.

T.14N. T.13N.

T.14N. T.13N.

T.14N. T.13N.

T.14N. T.13N.

T.14N. T.13N.

T.14N. T.13N.

T.14N. T.13N.

T.14N. T.13N.

T.14N. T.13N.

T.14N. T.13N.

T.14N. T.13N.

T.14N. T.13N.

T.14N. T.13N.

T.14N. T.13N.

T.14N. T.13N.

T.14N. T.13N.

T.14N. T.13N.

T.14N. T.13N.

T.14N. T.13N.

T.14N. T.13N.

T.14N. T.13N.

T.14N. T.13N.

T.14N. T.13N.

T.14N. T.13N.

T.14N. T.13N.

T.14N. T.13N.

T.14N. T.13N.

T.14N. T.13N.

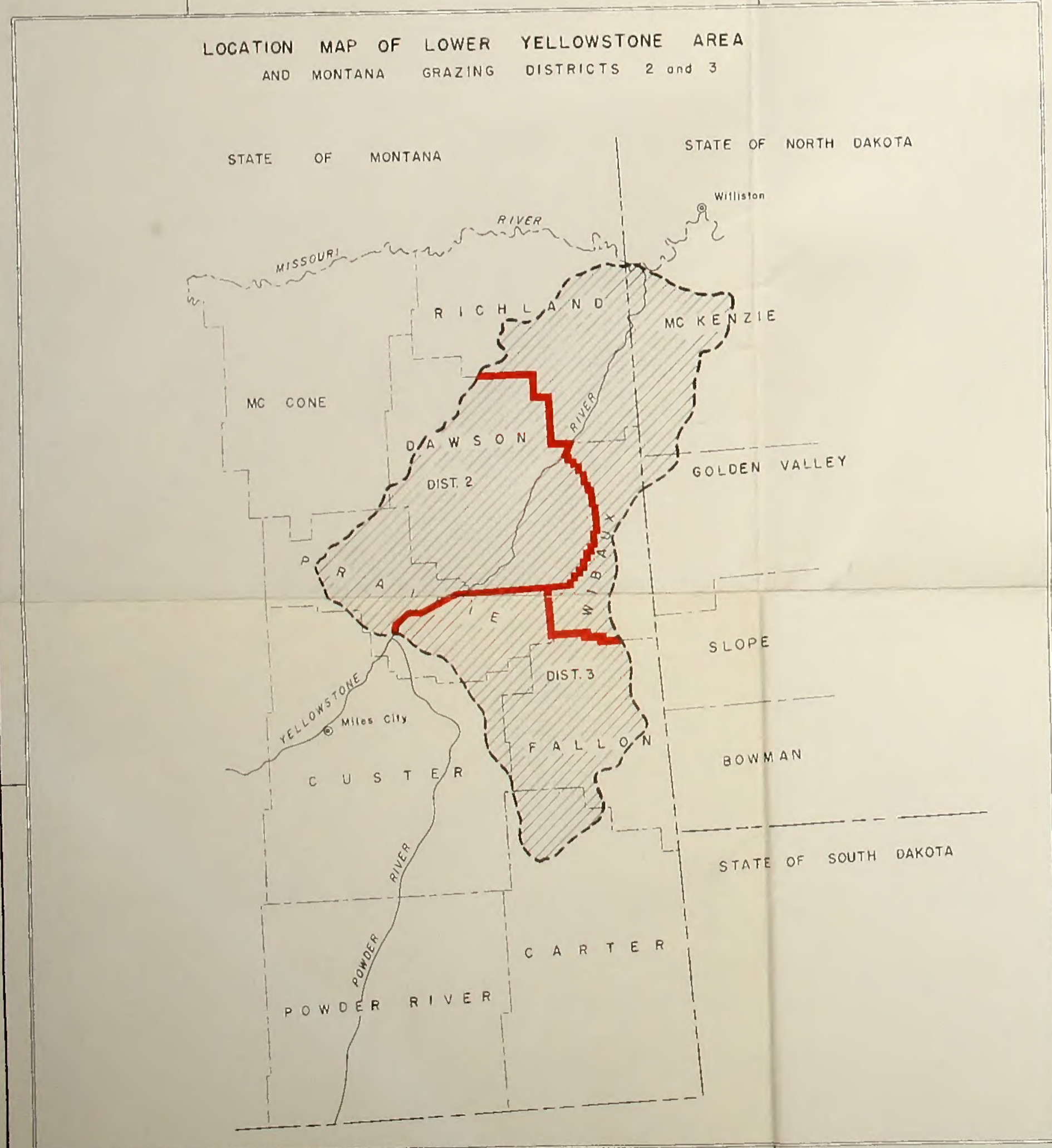
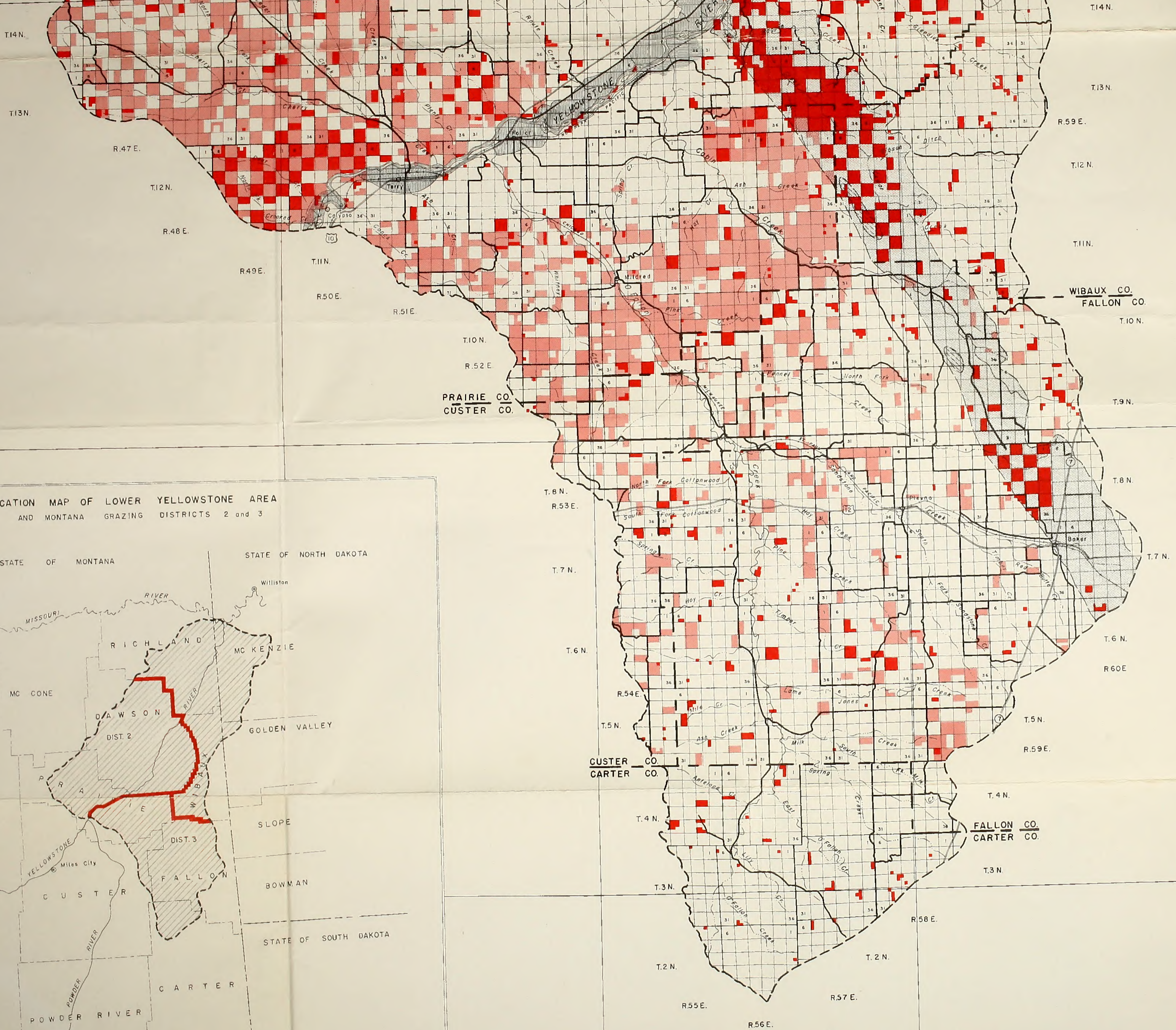
T.14N. T.13N.

T.14N. T.13N.

T.14N. T.13N.

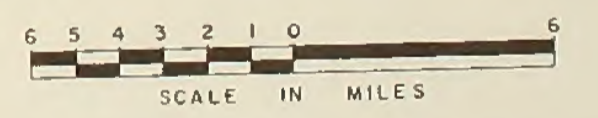
T.14N. T.13N.

T.14N. T.13N.



LEGEND

- PUBLIC DOMAIN
- LAND UTILIZATION
- IRRIGATED LANDS
- IRRIGATED LANDS (PROPOSED)
- STATE PARK (PROPOSED)
- CEDAR CREEK GEOLOGICAL STRUCTURE
- GAS and OIL FIELDS
- HIGHWAYS and ROADS
- FEDERAL and STATE
- ALL OTHER ROADS



NOTE: LANDS NOT SHOWN IN COLOR OR SYMBOL ARE EITHER PRIVATE, STATE, OR CONTROLLED BY OTHER AGENCIES

DEPARTMENT OF THE INTERIOR
 BUREAU OF LAND MANAGEMENT
 MISSOURI RIVER BASIN INVESTIGATIONS
LOWER YELLOWSTONE AREA
 LAND OWNERSHIP and LAND USE MAP

46000'

PLM LIBRARY
RS 150A BLDG. 50
DENVER FEDERAL CENTER
P.O. BOX 25047
DENVER, CO 80225

R'S CARD

958

Land Classification
Report. Lower Yellowstone Area.
Montana and North Dakota

OFFICE	DATE RETURNED

(Continued on reverse)

HD 243 .M9 L363 1958
Land Planning and Classification
Report. Lower Yellowstone Area.
Montana and North Dakota

BLM LIBRARY
RS 150A BLDG. 50
DENVER FEDERAL CENTER
P.O. BOX 25047
DENVER, CO 80225

