

GALLATIN COUNTY
RECREATION PLAN
1989

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INTRODUCTION

Planning Area

Gallatin County stretches 115 miles in length, sharing a third of that length with Yellowstone National Park to the southeast. The county boundary continues north from Yellowstone through the Gallatin, Madison and Hyalite mountains to the northern edge of the Bridger Range in the northeast. From east to west, the county begins on the historic Bozeman Pass, runs west the width of the Gallatin Valley and terminates just west of the confluence of the Jefferson, Madison and Gallatin Rivers near the town of Three Forks. Its western border runs southwest from Three Forks, then east again to the Madison - Gallatin divide, and south along this rugged, high mountain crest to the southern tip of the county, which lies due south of the town of West Yellowstone, Montana. All told, Gallatin County encompasses 2,510 square miles.

Population

According to The Montana Department of Commerce, the population of Gallatin County in 1986 was 47,800. Of those 47,800 people, approximately 30,470 of them lived in the cities of Bozeman, Belgrade, Three Forks, Manhattan and West Yellowstone. That means approximately 17,330 people live outside of incorporated cities and towns.

The population growth rate of Gallatin County has slowed considerably since the boom years of the 1970's and early 1980's, and is now estimated between 1-2% annually. This contrasts with a growth rate of 11.5 percent from 1980 to 1986. The Department of Commerce has projected Gallatin County's annual population growth rate from 1986 to the year 2000 will be, on the average, about 1.1 percent per year.

Recreation Planning Process

Despite a slumping economy and slower population growth, people continue to move their residences and businesses to Gallatin County. This can be attributed to the area's high quality environment and its proximity to vast amounts of public recreation lands, most of which are in Federal ownership. But most of the public lands available for recreation are undeveloped. This leaves a gap in the recreational opportunities available to Gallatin County residents. A recreation survey conducted in 1986 found that county residents desire additional developed recreational facilities. Therefore, Gallatin County has undertaken the responsibility to examine the need for additional recreation facilities, and the resources available which might be developed to provide for those needs.

Gallatin County first adopted a county-wide Recreation and Open Space Plan in 1980. Since that time, several new recreation issues have arisen, including the possibility of selling certain county subdivision parks to raise revenue for other recreation needs, along with the need to develop criteria for selecting a site for a new multi-purpose county recreational facility. These, along with other issues and concerns, have been the driving force behind this Recreation Plan Update.

However, many of the recreation issues have remained the same since 1980, such as the need for more sports playing fields, more public lands access, more cross-country ski trails, and additional developed parks. Much of the information in the 1980 Recreation Plan remains relevant today and has therefore been incorporated in this updated edition. The earlier plan explored limits to growth in Gallatin County and attempted to measure and define growth. That plan also provided an inventory of County recreation sites. The 1980 Plan laid the foundation for recreation issues, while this Plan updates the findings and inventory from 1980. This plan also documents current County recreation needs through a new recreation survey of County residents. Perhaps most importantly, this Plan identifies local recreation issues in the context of the County's physical and financial capabilities to provide better recreation opportunities, and offers alternative policies and methods to help plan for those needs.

Goals and Objectives

The primary goal of the Gallatin County Recreation and Open Space Plan is to improve and enhance the quality and quantity of recreational opportunities available to county residents and visitors to the area. Meeting the recreational needs of the county must be commensurate with its physical and financial capabilities. Therefore, it is also a goal of this plan to recommend alternative sources of funding for the County's recreational needs. The following is a list of specific objectives formulated to meet the most pressing recreation needs of Gallatin County:

1. Determine what types of park, recreation, and open space areas and facilities are needed in Gallatin County.
2. Provide a range of indoor and outdoor recreation facilities to meet the present and future needs of County residents.
3. Develop an inventory of County Recreation sources.
4. Establish a park classification and standards system

that will serve as a basis for future recreation planning efforts.

5. Establish criteria for the sale and/or exchange of County parklands.
6. Establish criteria for the location and development of County parks and County Subdivision parks.
7. Establish criteria for accepting parkland during the Subdivision review process.
8. Establish criteria for disbursing County Park Fund monies.
9. Support the development of a system of linear recreation trails and bikeways that link parks, schools and residential areas.
10. Establish and preserve natural and open space areas through zoning, acquisition, conservation easements, grants, donations, transfer of development rights, and other means to prevent undesirable land uses in ecologically sensitive areas such as riparian and wetland uses.
11. Preserve areas identified as having historic and/or archeological significance.
12. Recommend alternative sources of funding for recreation needs.
13. Provide for access and use by handicapped persons of all County park facilities.
14. Encourage volunteer participation in the creation, development, and management of County recreational facilities.
15. Support the development and use of the county fairgrounds for multi-purpose ballfields.
16. Establish regulations and adopt a lease policy for use of county parks.
17. Prepare a directory of county owned parks and identify each park with signs and boundary markers.

RECREATION NEEDS AND RESOURCES

PARK DEFINITIONS, FUNCTIONS AND STANDARDS

This section of the plan is concerned with defining, listing the functions, and establishing standards for neighborhood, community, linear, and specialty parks. Also, the chapter establishes guidelines for determining when, where, how much, and what types of parkland are desirable in the growing areas of the County.

It should be noted that these definitions and functions are for parks that have reached full development, which can take a long time. Development of parks should remain sensitive to the people who will be using them and basically provide opportunities that are needed, wanted, and affordable.

NEIGHBORHOOD PARKS/SUBDIVISION PARKS

DEFINITION:

Neighborhood parks and/or Subdivision Parks are considered to be low-key, conveniently located parks that provide residents of a fairly well defined neighborhood with a combination of active and passive recreation opportunities not available at home. The primary emphasis is to provide space for active play areas to be used by neighborhood residents. Simplicity in design and development, using natural materials and landscapes wherever possible, is part of the neighborhood park concept.

FUNCTIONS:

1. A neighborhood or subdivision park should provide a combination of active and passive recreation uses for neighborhood residents. The more important function should be to provide playfields for active recreation.
2. There should be enough space for at least one playfield or ballfield.
3. Provisions for passive forms of recreation that are attractive to adults should be of secondary consideration. These include: picnic areas, shade trees, and areas for walking.
4. Access is the most important characteristic of neighborhood parks. Users should not have to cross or travel any arterial or heavily traveled street to reach it.

5. Parking should not be necessary as the park serves primarily persons within walking distance.
6. It is desirable for the park to be centrally located within a developed area. Due to the gridiron system of roads surrounding the sections in the County, it seems necessary to locate the park serving a particular square mile within the same section in order for park users to avoid heavy traffic. The recommended service area, therefore, is one-half mile.
7. Full development of neighborhood parks may not be necessary from the onset. Utilization of natural materials and opportunities such as stream courses, ponds, hills, dirt piles, vegetation, etc. is encouraged.
8. A desirable size for a neighborhood park is seven acres. This size makes it possible to have one ballfield and still have ample room for passive recreation uses and buffer areas.

COMMUNITY PARKS

DEFINITION:

Community parks are sites which provide a wide range of recreational opportunities, passive and active, for the full range of age groups found in a "community".

FUNCTIONS:

1. At full development community parks should provide space for a balance of active and passive forms of recreation, serving the total spectrum of recreation needs for its service area.
2. Space for buffer zones between active recreation areas and the surrounding neighborhoods is an important part of community parks as they tend to be more intensely developed.
3. The primary access to a community park will be by automobile, therefore, a location with good highway access is necessary. There also must be ample provision for parking.
4. It is desirable for these parks to be centrally located to the populations to be served.
5. Utilization of interesting natural features, such as water courses, vegetation, rock outcroppings, topographic features, scenic views, etc., are important to the development of a park with its own identity. These features

can offer opportunities for both passive and active forms of recreation.

6. The minimum size of community park should be 20 acres, with 30 acres being desirable. At least ten acres of the site should be available exclusively for athletic playfields. This should be enough space for two or more full-sized ballfields. Additional acreage is needed for playfields or other types of active recreation. (This acreage can serve effectively as a buffer between the athletic fields and other uses.)
7. The park should be developed and maintained for intensive use. Also, some types of maintenance may be necessary to accommodate winter time activities.
8. While community parks serve many functions, these do not always have to be accommodated on the same site. More importantly, the functions of the park should be thought of as being provided within their service area.

RECREATION NEEDS BASED ON PARK STANDARDS

Because this plan is concerned with providing parks for those areas outside incorporated areas, then the parkland needs would be 61 acres of neighborhood parks, and 26 acres of community parkland. The County presently owns approximately 350 acres of neighborhood and subdivision parks that could be used for one form of recreation or another. At this time, less than 50 acres of this parkland have actually been developed for recreation purposes. Therefore, based solely on the park standards in Appendix A, Gallatin County currently lacks 10-20 acres of developed neighborhood parks. This shortage of developed parks will grow as the population increases. The County has no developed community parks outside of any incorporated area, making the need for this type of facility even more apparent. At this point, it should be noted that the park standards used in this plan are meant to be used as a general guide for determining and assessing parkland needs. These standards are not absolute and many other factors come into play when determining actual park requirements. Other factors have been listed in the Appendix E (Evaluation Guidelines for Park Development Potential).

RECREATION NEEDS BASED ON A SURVEY OF RESIDENTS

From August to September of 1986, the Gallatin County Planning Office conducted a telephone survey throughout the County to identify outdoor recreation uses and needs. The survey followed

the methodology used for the Land and Water Conservation Fund (LWCF) grants administered by the Montana Department of Fish, Wildlife and Parks. Appendix B contains the results of that survey.

The survey revealed the recreational priorities of Gallatin County residents. As might be expected, Gallatin County residents are very active participants in outdoor recreation. Most respondents were satisfied with the supply of outdoor recreation, but when asked what one kind of recreation activity/facility they would prefer if funding were available, several choices emerged. Swimming pools were the most requested by the residents of Belgrade and Manhattan. Other respondents preferred linear parks and developed parks, fishing accesses, open space, and soccer and softball fields.

An optional Gallatin County question was asked regarding the sale or exchange of county subdivision parks. Seventy-five percent (75%) of the respondents favored selling or exchanging undeveloped parks provided that any money generated would be used for recreation purposes. This proviso is assured because state law requires it. Interestingly, the survey discovered that most respondents were unaware that the county had the authority to sell parks.

When asked what they perceived as the single greatest outdoor recreation concern facing Gallatin County today, those surveyed gave a wide range of responses. Lack of funding (15%) was given most often. A group of concerns that could be addressed by a multi-purpose park was the next largest category at 10%. Lack of funding and access to public lands were given as the two greatest outdoor recreation concerns facing the state of Montana.

Phone number prefixes of the respondents indicated where in the county they lived. Belgrade (388) and Manhattan (284) numbers generally desired swimming pools and ballfields. Gallatin Gateway (763) residents were generally satisfied with recreation opportunities. Big Sky (995) residents desired more golf and fishing access. Three Forks (285) and West Yellowstone (646) respondents were generally satisfied, while Bozeman (586-587) residents indicated a whole range of desires for more recreational opportunities. Most older people throughout the county declined to participate in the survey.

Many respondents cited recreational activities that were beyond the ability and authority of the county to provide. These activities included more hunting on private land, more areas for motorized vehicle use, better maintained back country trails, and more downhill ski facilities.

Activities that are within the scope of county authority and listed most often were:

- *more fishing spots;
- *better access to public lands;
- *more swimming facilities outside Bozeman area;
- *more cross-country ski trails;
- *more soccer, baseball, and softball fields, and
- *more open space in the form of parks and linear parks.

Once the recreational demands of county residents are identified, the issue becomes that of how to best provide for these demands within a limited county budget and how to allocate those limited funds to the various recreation needs.

Providing recreational opportunities to meet the needs identified by county residents can involve several approaches. In a broad sense, county recreation policy cannot possibly address all facets of "quality of life" and "open space". These concerns revolve around open vistas afforded by farmlands held privately and also by activities held on federal and state lands such as state fishing accesses and national forests. But this plan can focus on recreation concerns that arise from the following facts:

1. 85% of the population of Gallatin County is, and will be for the foreseeable future, centered in the Bozeman-Belgrade area;
2. 38% of the land in the County is held by federal or state authority;
3. Gallatin County presently has no recreation department and no recreation budget;
4. The County, at this writing, has approximately, \$43,000 in the cash-in-lieu of parkland fund.
5. There are 43 subdivision parks in Gallatin County, most of them undeveloped;
6. The prospect of higher taxes may not be popular with many County residents.
7. Agriculture is experiencing difficult economic times, but is still vitally important to the county's economy;
8. Gallatin County residents enjoy, and want to protect, the "quality of life" afforded by panoramic vistas, and the open spaces associated with adjacent farms and public lands.

If these assumptions are accepted, and are related to their respective recreation needs identified in the survey, they raise several relevant questions:

*What recreation opportunities could be provided by County government for the benefit of the greatest number of residents?

*Should the County develop a multi-sport recreation complex? If so, where should it be located? How should it be financed and maintained?

*What should be done about the 43 county-owned subdivision parks?

*Should certain subdivision parks be sold in order to raise revenue for other recreation needs in the County?

*How should future subdivision parks be located and developed?

*How should money in the cash-in-lieu of parklands fund be distributed?

*Should the County form a County Park District?

The Gallatin County recreation survey has provided much needed data concerning the recreational desires of county residents. The remainder of this plan identifies physical limits to development in Gallatin County and the principle recreational issues facing us. It also offers policy options and alternatives that could be used as solutions to the recreation problem.

Inventory of Recreation Resources

Before any recreation plan can be implemented, it is necessary to inventory the available park and recreation land which could potentially be developed to provide more recreation opportunities for County residents.

County-Owned Park and Open Space Lands

Gallatin County owns 45 parks and other recreation sites. These include 43 subdivision parks, one golf course and the County Fairgrounds. The 43 subdivision parks comprise a total of 287 acres. Table 1 is a list of these parks and facilities. A location map of county and homeowner parks is shown on Map 1).

Homeowners Association Parklands

Many subdivision parks in the County are dedicated and owned by homeowners associations. There are presently 13 subdivision parks in Gallatin County dedicated to their respective homeowners association. These parks comprise a total of 192 acres. It must be emphasized that these are private parks and are only open to the public at the discretion of the homeowner's associations. See Table 2.

State Owned Recreation Sites

The Montana Department of Fish, Wildlife, and Parks owns and maintains 15 developed recreation sites in the County, most of which are fishing access sites. They also include two state parks and one state monument. These lands total 3,092 acres. Table 3 is a listing of these sites.

Federally Owned Recreation Sites

The U.S. Forest Service maintains 19 developed recreation sites in Gallatin County. These sites include picnic areas, campgrounds, and natural-historic areas. Altogether, the Gallatin National Forest controls 605,240 acres in Gallatin County, which provides County residents with many undeveloped recreation opportunities. (Table 4)

TABLE 1
COUNTY OWNED PARKS AND OPEN SPACE
LANDS

PARK NAME	TOWNSHIP	RANGE	SECTION	ACRES	DEVELOPMENT STATUS
ANNETTE PARK	2S	6E	30	4.78	UNDEVELOPED
ARROWLEAF HILLS #3	2S	6E	21	5.00	UNDEVELOPED
BOGART #2	1S	5E	26	1.00	UNDEVELOPED
CIMARRON	2S	4E	13	3.90	UNDEVELOPED
CLOVER MEADOWS	2S	6E	16	3.59	UNDEVELOPED
COVERED WAGON PARK	2S	5E	1	5.00	DEVELOPED
EDGEWATER ACRES	2S	4E	10	2.44	UNDEVELOPED
ELK	2S	6E	14	-1.58	UNDEVELOPED
FIRST PINE VIEW	3S	5E	11	4.35	UNDEVELOPED
FOREST CREEK	3S	5E	11	5.81	UNDEVELOPED
GARDNER PARK	2S	6E	30	13.30	UNDEVELOPED
HODGEMAN CANYON	3S	5E	11	11.85	UNDEVELOPED
HYALITE HEIGHTS	2S	5E	36	11.20	UNDEVELOPED
KIRK FOOTHILLS PARK	3S	5E	1	40.00	DEVELOPED
LAKE #2	1S	5E	22	3.69	UNDEVELOPED
LAKE #3	1S	5E	22	2.01	UNDEVELOPED
LAKE PARK	2S	6E	18	0.37	UNDEVELOPED
LITTLE BEAR	3S	4E	36	15.00	UNDEVELOPED
MOUNTAIN MEADOWS	2S	6E	16	3.33	UNDEVELOPED
MOUNTAIN SHADOWS ESTATES #3	3S	5E	1	19.10	UNDEVELOPED
MOUNTAIN VIEW #4, #5	1S	5E	16	5.07	DEVELOPED
MOUNTAIN VIEW #7	1S	5E	16	4.19	UNDEVELOPED
PARKVIEW WEST	6S	4E	1	5.80	UNDEVELOPED
RANCH #'S 1,2,3	1S	5E	13	15.93	UNDEVELOPED
REA SUBDIVISION	2S	5E	16	1.20	UNDEVELOPED
RIVERSIDE MANOR	1S	5E	23	7.40	UNDEVELOPED
ROYAL VILLAGE	1S	4E	3	3.43	UNDEVELOPED
SOURDOUGH CREEK #10	2S	6E	30	4.56	UNDEVELOPED
SOURDOUGH CREEK #3	2S	6E	30	7.73	UNDEVELOPED
SOURDOUGH RIDGE #3	2S	6E	20	0.67	UNDEVELOPED
SOURDOUGH RIDGE #3	2S	6E	19	1.45	UNDEVELOPED
SPRINGHILL PARK	1S	5E	23	1.51	UNDEVELOPED
STEVENS	2S	5E	1	2.42	UNDEVELOPED
SUNSET HEIGHTS (JAMES)	1S	6E	16	1.91	UNDEVELOPED
SWEETGRASS HILLS	2S	3E		1.08	DEVELOPED
SYPES CANYON	1S	6E	17	5.12	DEVELOPED
VALLEY CENTER	1S	5E	27	6.40	UNDEVELOPED
VALLEY VISTA	1S	4E	14	2.38	UNDEVELOPED
WILDFLOWER	1S	5E	15	3.50	UNDEVELOPED
YELLOWSTONE HOLIDAY #3	1S	4E	10	6.53	UNDEVELOPED

TOTAL

245.58

TABLE 2
 PARKLANDS DEDICATED TO HOMEOWNERS
 ASSOCIATIONS

PARK NAME	TOWNSHIP	RANGE	SECTION	ACRES	DEVELOPMENT STATUS
MYSTIC HEIGHTS #3	3S	5E	12	6.84	UNDEVELOPED
BEAR CREEK PROPERTIES (PHASE 1)	3S	4E	22&26	12.45	UNDEVELOPED
BEAR CREEK PROPERTIES. (PHASE 2 & 3)	3S	4E	23	22.60	UNDEVELOPED
BEAVER CREEK SOUTH	7S	4E	17	7.80	UNDEVELOPED
BRIDGER HILLS	1S	7E	30	30.73	UNDEVELOPED
BRIDGER PINES	1N	7E	19	11.94	UNDEVELOPED
FISHERMAN'S VILLAGE	13S	4E	20	17.89	UNDEVELOPED
GRANDVIEW HEIGHTS	1S	6E	20	10.80	UNDEVELOPED
HEBGEN LAKE ESTATES	12S	4E	24	17.50	UNDEVELOPED
HYALITE FOOTHILLS #1	3S	5E	10	20.40	UNDEVELOPED
HYALITE FOOTHILLS #2	3S	5E	15	16.30	UNDEVELOPED
HYALITE MEADOWS	2S	5E	3	9.92	UNDEVELOPED
OUTLAW COUNTRY	1S	5E	10	19.53	UNDEVELOPED
SPRINGVALE	1S	5E	3	2.45	UNDEVELOPED
WESTFORK MEADOWS	7S	3E	2	9.30	UNDEVELOPED
WHEATLAND HILLS	1S	5E	14	30.48	UNDEVELOPED
* TOTAL***				246.93	

TABLE 3

STATE FISH, WILDLIFE, AND PARKS
RECREATION SITES

SITE NAME	TWNSHP	RANGE	SEC	ACRES	SITE TYPE
KIRK WILDLIFE REFUGE	4S	4E	8	13.54	REC AREA
KIRK F.A.E.	4S	4E	8	3.01	REC AREA
EAST GALLATIN STATE PARK	1S	6E	31	82.00	STATE PARK/LAKE
AXTELL BIG ICE FISHING ACCESS	2S	4E	35	4.00	RECREATION AREA
BLACKBIRD FISHING ACCESS	2S	4E	35	22.00	RECREATION AREA
BOZEMAN PONDS FISHING ACCESS	2S	5E	11	24.00	RECREATION AREA
CAMERON BRIDGE FISHING ACCESS	1S	4E	22	142.00	RECREATION AREA
COBBLESTONE COVE FISHING ACCESS	1N	2E	32	190.00	RECREATION AREA
DROULLIARD FISHING ACCESS	2N	1E	27	41.00	RECREATION AREA
FAIRWEATHER FISHING ACCESS	3N	2E	1	625.00	RECREATION AREA
FOUR CORNERS FISHING ACCESS	1N	3E	12	9.00	RECREATION AREA
GALLATIN FORKS FISHING ACCESS	2N	6E	26	268.00	RECREATION AREA
GREYCLIFF FISHING ACCESS	2S	2E	6	487.00	RECREATION AREA
MADISON BUFFALO JUMP STATE MONUMENT	1N	2E	34	618.00	NATURAL-HISTORIC AI
MISSOURI HEADWATERS STATE PARK	2N	2E	8	528.00	NATURAL-HISTORIC AI
THREE FORKS GRAVEL PIT FISHING ACCESS	2N	1E	25	50.00	RECREATION AREA
WILLIAMS BRIDGE FISHING ACCESS	1N	1W	26	2.00	RECREATION AREA
ERWIN F.A.S.	1S	4E	9	80.00	RECREATION AREA
*** TOTAL ***				3092.00	

TABLE 4

FEDERAL RECREATION SITES

SITE NAME	TOWNSHIP	RANGE	SECTION	ACRES	FACILITY TYPE
BAKERS HOLE	13S	5E	15	25.00	CAMPGROUND
BATTLE RIDGE	2N	7E	32	15.00	CAMPING/PICNIC AREA/HIKING
BEAVER CREEK	11S	3E	21	9.00	CAMPGROUND
BLACKMORE	4S	6E	15	2.00	CAMPGROUND/FISHING/BOATING
CABIN CREEK	11S	3E	15	5.00	CAMPGROUND
EARTHQUAKE LAKE VISITORS CENTER	11S	3E	22	1.00	PICNIC/FISHING AREA/BOATING
FAIRY LAKE	2N	6E	22	3.00	CAMPING/PICNIC/FISHING/HIKING
GREEK CREEK	5S	4E	24	5.00	CAMPING/FISHING
HOOD CREEK	4S	6E	15	14.00	CAMP/PICNIC/FISHING/BOATING/SWIMMING
HORSE BUTTE LOOKOUT	12S	4E	35	1.00	PICNIC AREA/HIKING
LANGHOR SPRINGS	3S	6E	32	8.00	CAMPING/PICNIC/FISHING
LONESOMEHUST	12S	4E	33	1.00	PICNIC/FISHING/BOATING
"M" PICNIC AREA	1S	6E	33	0.25	PICNIC AREA/HIKING
MOOSE CREEK FLAT	5S	5E	6	2.00	PICNIC/FISHING
PALISADE FALLS NAT. REC. TRAIL	4S	6E	24	0.00	PICNIC/FISHING/HIKING
RAINBOW POINT	12S	4E	24	5.00	CAMPING/FISHING/BOATING/SWIMMING
RAI LAKE	5S	4E	1	1.00	FISHING/HIKING
RED CLIFF	8S	4E	4	52.00	CAMPING/PICNIC/FISHING
SOUTH FORK	13S	4E	24	4.00	CAMPING/PICNIC/FISHING
SPANISH CREEK	4S	3E	32	1.00	CAMPING/PICNIC/FISHING/HIKING
SPIRE ROCK	5S	4E	2	5.00	CAMPING/PICNIC/FISHING
SWAN CREEK	5S	5E	30	6.00	CAMPING/FISHING
TOM MINER	8S	5E	24	3.00	CAMPING/FISHING/HIKING

PHYSICAL LIMITATIONS TO DEVELOPMENT IN GALLATIN COUNTY

To be effective, this plan should consider current population densities and projected future concentrations. In this fashion, parks can be reserved and located appropriately. The plan should also consider lands that are unsuited for development by virtue of ownership or environmental constraints. Some of these lands may be better suited for parkland or conservation areas. (See Figures 4.1, 4.2, 13, 4.3, 4.4, 4.5). By observing the constraints of the physical setting in the County, much can be learned about where not to expect growth, and conversely where growth will necessarily be channeled.

Public Land

One of the most noticeable deterrents to growth is the presence of public land. Approximately one-third of Gallatin County is public land, and most of this Forest Service. Obviously, this land is off limits to development. Figures 4.1 (A & B) show public lands in Gallatin County.

Topography

Topography (slope) is another useful measure of the potential of a landscape for development. Figures 4.2 (A & B) show the slopes in Gallatin County divided into three general classes: steep slopes over 25 percent; moderate slopes from 15 to 25 percent; and rolling to flat slopes of less than 15 percent.

Areas having steep slopes are generally considered "off limits" to development. Building sites are hard to find and access is always a problem. Even though homesites can be found in areas with steep slopes, high population densities will never occur.

Moderate slopes dictate great care must be exercised in development. These areas can be developed to some extent, but cost more to build on than flatter ground. Some very attractive homesites are found in areas of moderate slopes, for the topography tends to be "broken" and rolling, offering scenic views in many directions. In general, areas with moderate slopes cannot be developed to high population densities unless there is no other choice for location of additional growth.

Flat ground offers the least resistance to development and will be the first to be developed unless other factors outweigh the advantages. Shown in Figures 4.2 (A & B) are the remaining portions of the county having level slopes. While flat areas are generally the most susceptible to development pressure, they

offer some disadvantages, too. They are generally the best agricultural lands, often have high water tables, can be located in floodplains, and can have soils ill-suited for construction. However, many of these problems can be overcome by good building practices or technology. For example, in areas where septic systems cannot be used for sewage disposal because of high groundwater, extension of a municipal sewage system would solve the problem. Although extending sewer and water lines to areas outside cities and towns is not always economically feasible as many taxpayers do not want to shoulder the burden of paying for these extensions.

Groundwater

Groundwater concerns can place constraints on development. Many parts of Gallatin County face limitations for septic waste disposal (see Figure 13), especially Gallatin Valley, where most future growth will probably occur. (Data was collected from a sample of area wells and used to update this map, which displays areas in the Gallatin Valley where groundwater reaches to within 10 feet of the surface of the ground. The map can be used as a primary assessment for the suitability of septic tank drainfield installations. This map has been combined with another map which displays soil type suitability for septic tank installation (Figure 13, p. 45, Blue Ribbon).) The Blue Ribbon 208 Study (1979) found that individual septic tanks were not much of a threat to groundwater yet, but could be if open areas adjacent to large one acre lot subdivisions were developed in small tracts.

Because most future growth in the county is projected to occur in the Gallatin Valley, it is important from a groundwater perspective that a recreation plan be coordinated with future development patterns. Open space and recreation land adjacent to higher density subdivisions in the valley, in addition to their value as parkland, can also serve to protect the county's groundwater resource. Should growth occur as projected, the alternative to using open space to protect groundwater would be to provide central sewage collection to all the lots. Such an option would be very expensive, and would not serve the multiple purposes of open spaces and recreation areas.

Floodplains are also a disadvantage, or deterrent to development on land with level slopes. Within Gallatin County there are a number of defined "flood hazard" areas. Figure 4.3 shows the streams having identified "flood hazard" zones.

Although most of these flood hazard zones cannot legally be used for commercial and residential development, they can be used for certain recreational purposes. Such uses include, but are not limited to, parks, golf courses, driving ranges, picnic areas, boat launching ramps, swimming areas, wildlife and nature

preserves, fish hatcheries, target ranges, hunting and fishing areas, along with hiking and horseback trails.

Finally, a factor which is not a deterrent to development, but a very important inducement, is access and proximity to existing growth areas. Figure 4.4 gives an indication of areas in the County having reasonable access to recreational opportunities already, and within approximately 20 minutes driving time of Bozeman and Belgrade. The 20 minute figure was arbitrarily chosen as roughly the areas surrounding Bozeman and Belgrade which are likely to feel the pressures of residential growth.

When all these inducements and deterrents are put together, the result shown in Figure 4.5 illustrates the composite potential in Gallatin County for population growth in the near future. This represents the areas where residential development in the county will have the highest probability of occurring in the near future. The significance of this to the Outdoor Recreation-Open Space Plan is that it points out areas where parklands may be most needed in the future.

FIG. 4.1 (A)
PUBLIC LANDS IN GALLATIN COUNTY

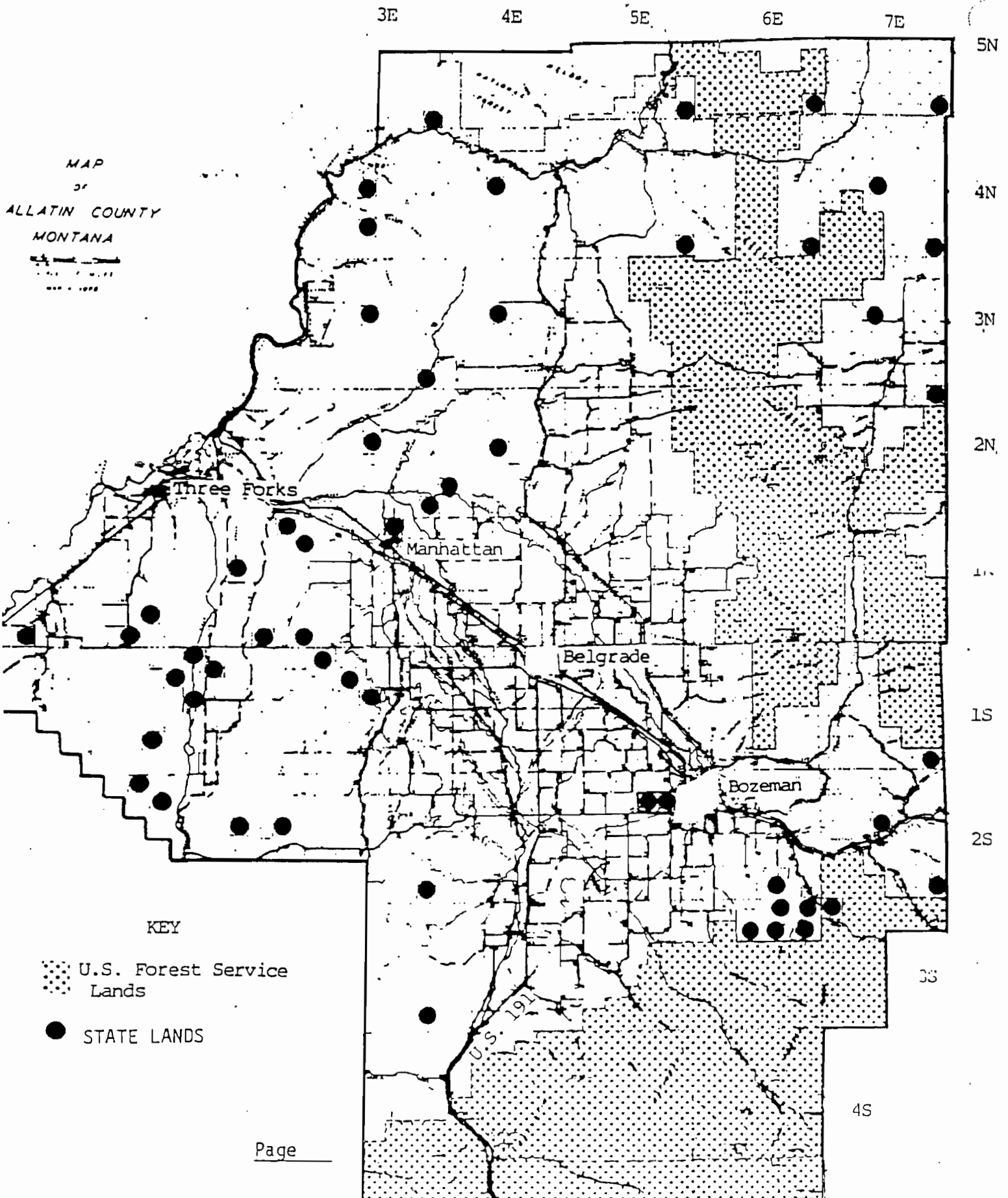


FIG. 4.1(B)
PUBLIC LANDS
IN GALLATIN COUNTY

KEY

U.S. Forest Service
Lands

STATE LANDS

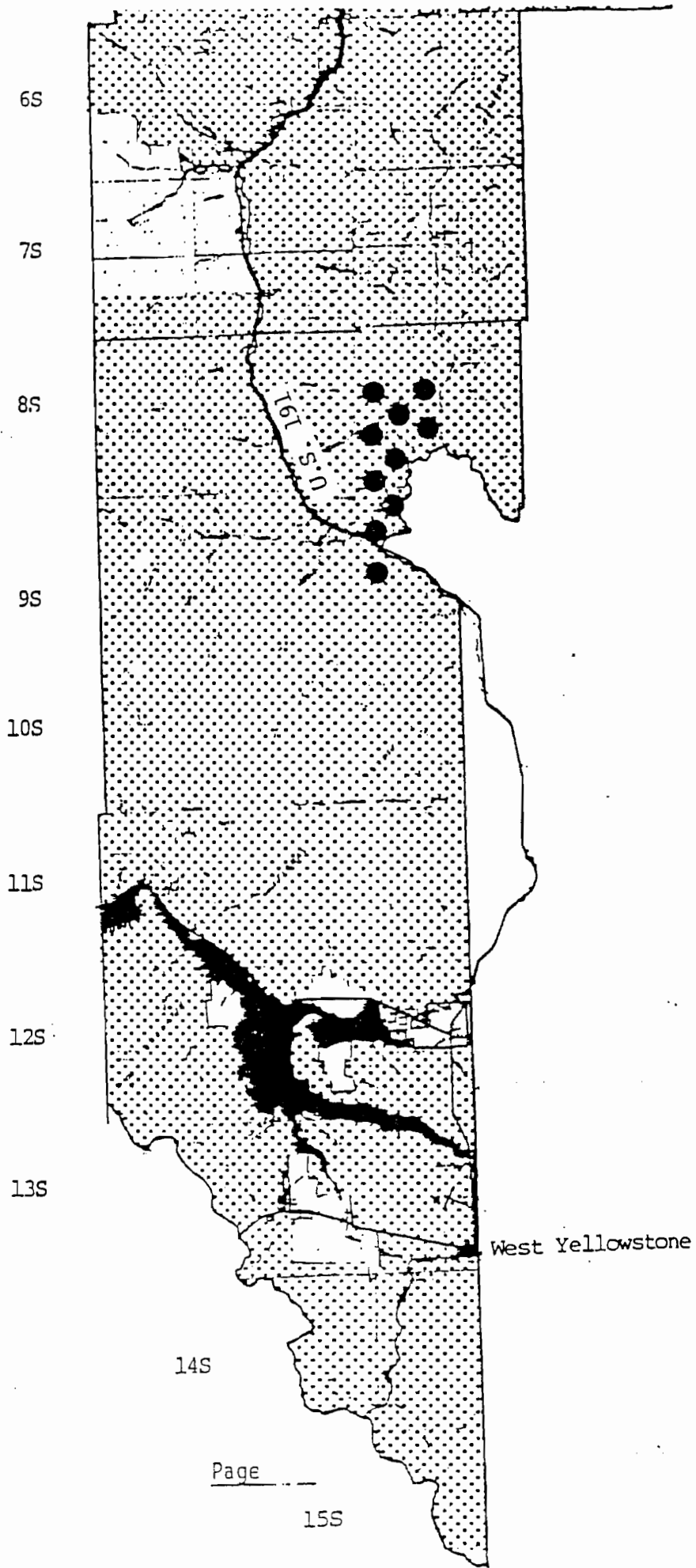


FIG. 4.2(A)
 TOPOGRAPHIC
 LIMITATIONS TO DEVELOPMENT

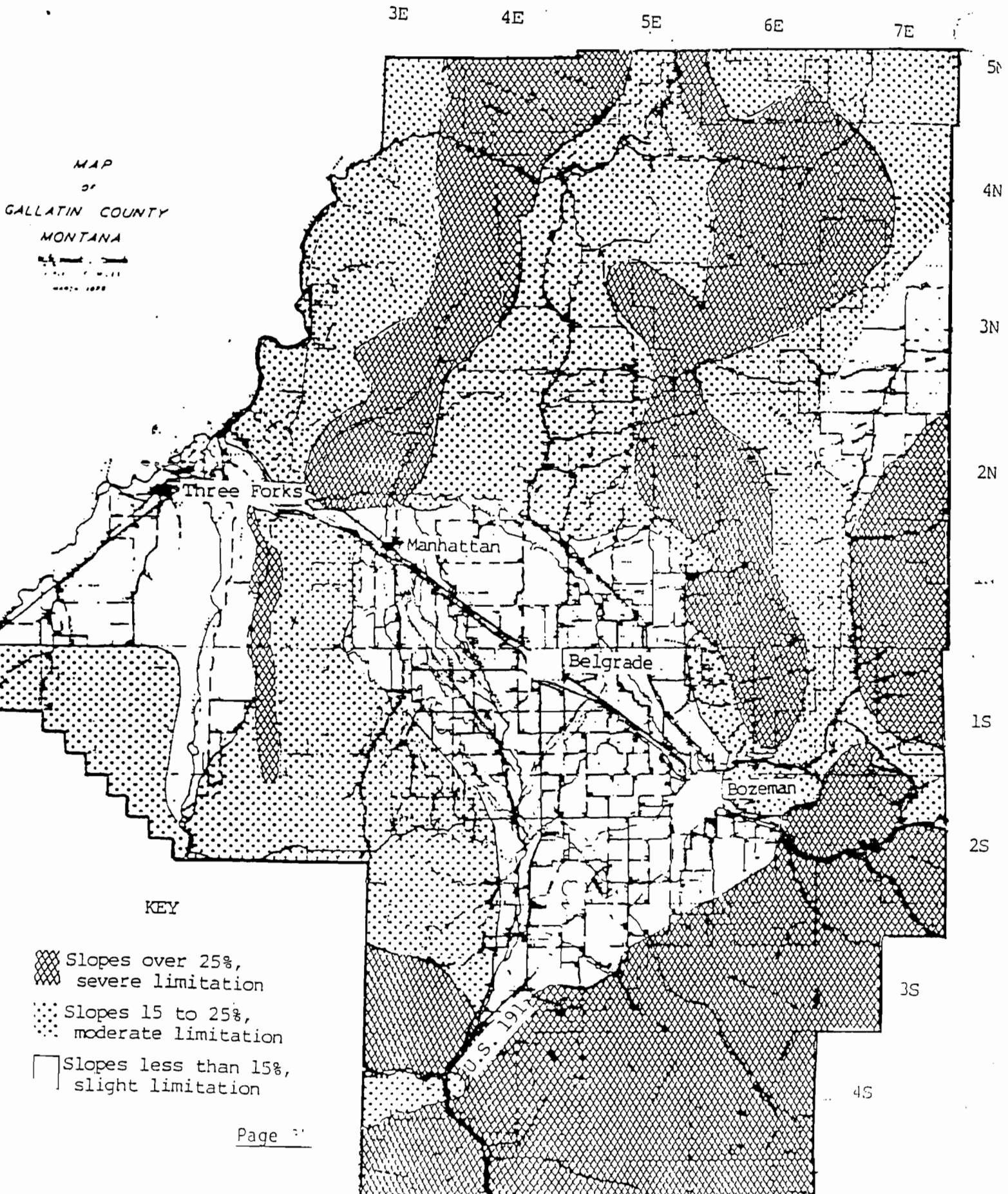



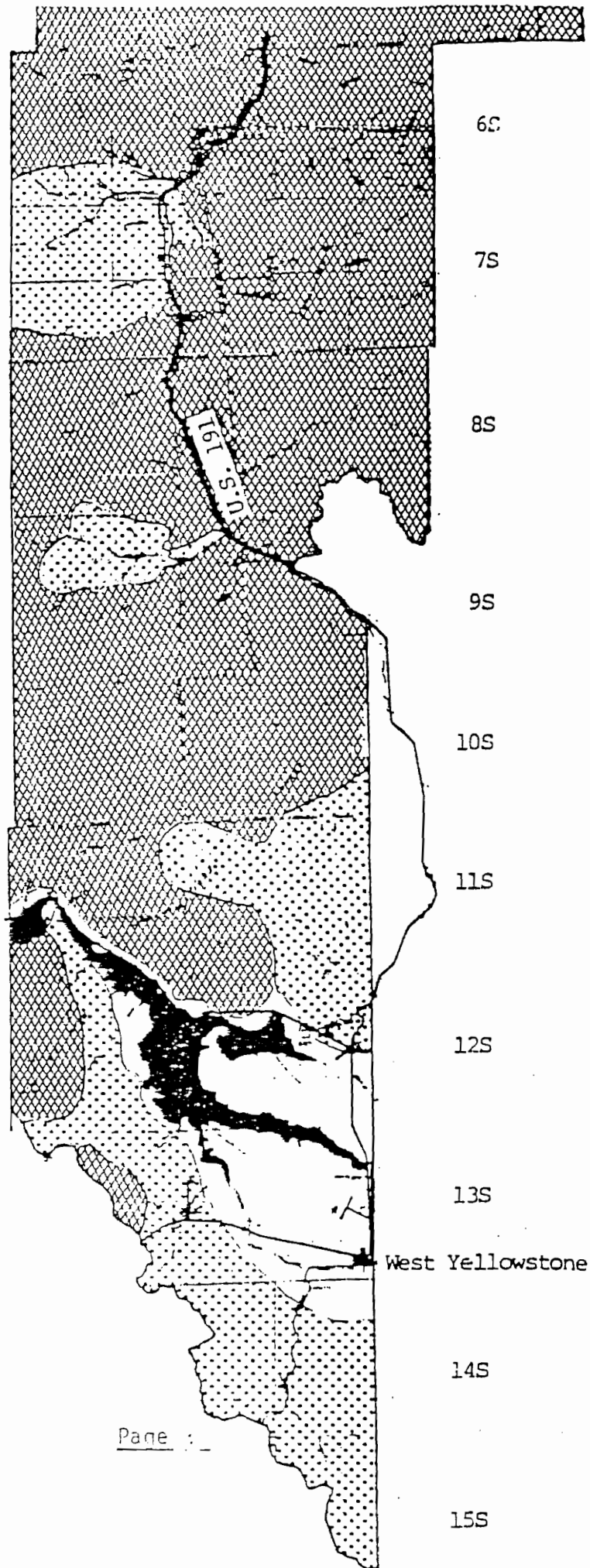
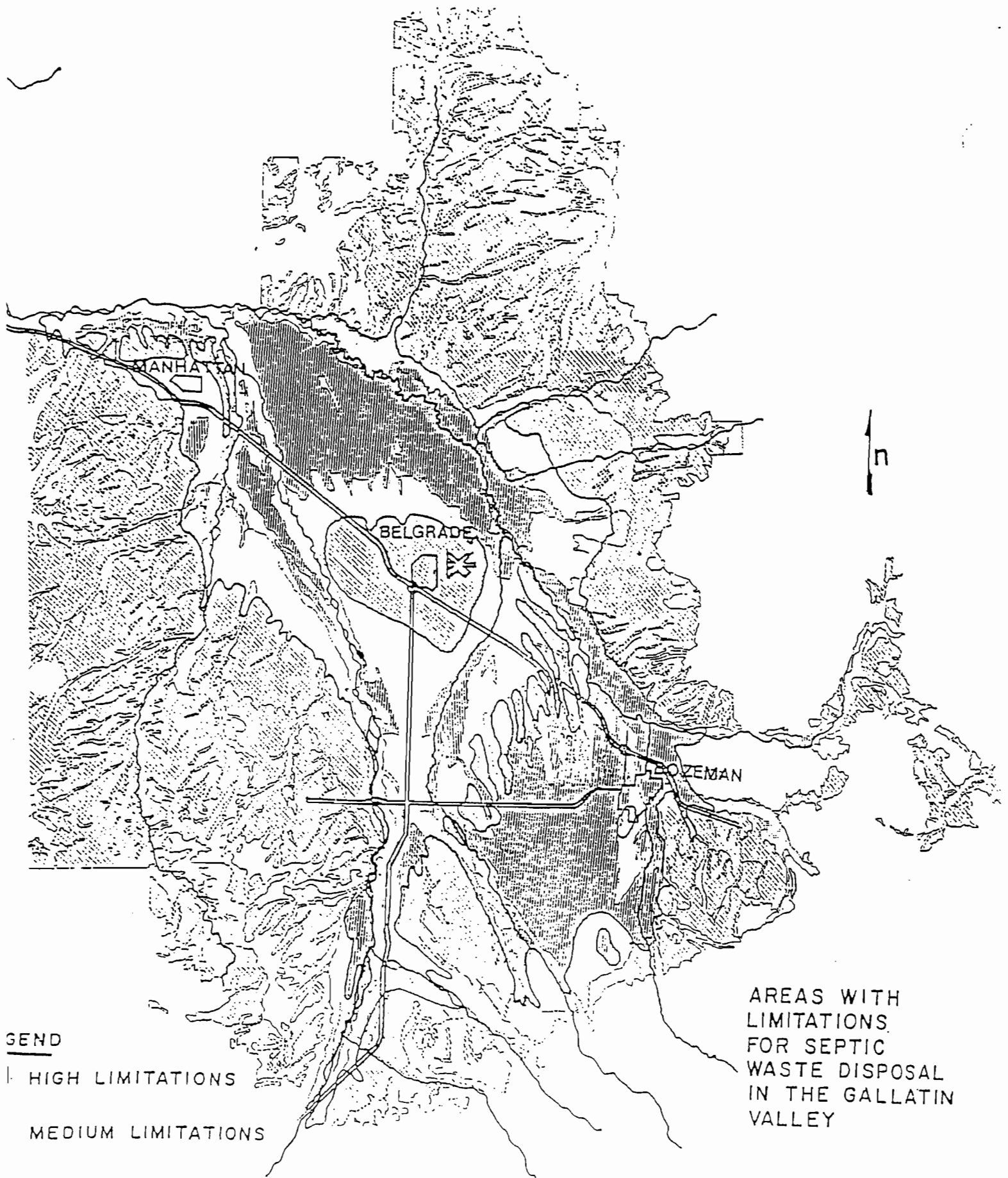


FIG. 4.2(B)
TOPOGRAPHIC
IMITATIONS TO DEVELOPMENT

KEY

-  Slopes over 25%,
severe limitation
-  Slopes 15 to 25%,
moderate limitation
-  Slopes less than 15%,
slight limitation





LEGEND
 HIGH LIMITATIONS
 MEDIUM LIMITATIONS
 LOW LIMITATIONS

AREAS WITH
 LIMITATIONS
 FOR SEPTIC
 WASTE DISPOSAL
 IN THE GALLATIN
 VALLEY

FIGURE 13

