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A COMPREHENSIVE UPDATE TO THE GENERAL PLAN
AND DEVELOPMENT GUIDE

BRIDGER CANYON

BOZEMAN, MONTANA

Professional Paper

by

William R. Johnson

presented in partial fulfillment of the requirement

for the degree of

Master of Science

Rural, Town, and Regional Planning

Department of Geography

University of Montana

1988

Approved by:



Chairman, Board of Examiners



Dean, Graduate School

December 9, 1988

Date

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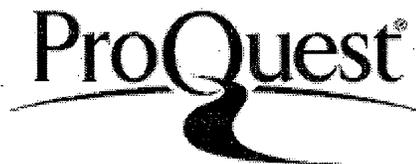


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ACKNOWLEDGEMENT

I would like to express my greatest appreciation to my father for his continued support and encouragement throughout my academic career. I would also like to thank my graduate committee--Chris Field, Paul Miller, and Paul Wilson--for their professional and technical assistance.

A special thanks is in order for Mary Kay Peck who made this project possible.

THE UNIVERSITY OF

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INTRODUCTION

With the increasing demand for desirable homesites, suburban and rural land development is rampant throughout the western United States. In Montana, not only is water-endowed land in high demand, but view-property, wooded lots, and wetlands are also undergoing significant land subdivision. Notable environmental degradation often parallels land development schemes. In order to achieve proper design and planning, an extensive resource inventory and development plan is a necessary base upon which to build.

Bridger Canyon is located along the northern edge of the Gallatin Valley, just to the northeast of the city of Bozeman (see map, figure 2). Bridger Canyon is a long and narrow valley surrounded by snow-covered mountains and carpeted with natural sage and grassy floored lowlands. It is predominantly an agricultural valley enriched with trout streams, rolling pastures and forested foothills, characteristic of mountain environments. During the last 20 years, Bridger Canyon has experienced a period of accelerated demand for a variety of land uses. In order to preserve the natural physical character of the canyon, and to ensure orderly growth, a general plan and development guide for Bridger Canyon has been established.

A development plan for Bridger Canyon was originally petitioned by area residents, who had organized the Bridger Canyon Property Owners Association. Their concerns focused primarily on the growth of the ski area and the potential traffic capacity of the canyon road. The underlying objective was to form a plan favoring the conservation of natural resources, preservation of open space and agricultural uses, and limited, controlled growth.

The General Plan and Development Guide for Bridger Canyon was officially adopted in 1971. During July of the same year, the Bridger Canyon Zoning District was created by resolution of the Board of Gallatin County Commissioners, pursuant to Montana Code Annotated 76-2-202, formerly 16-4703. The Bridger Canyon Zoning District comprises approximately 51,000 acres. The Bridger Canyon map (figure 2) outlines the jurisdictional area of the zoning district. In October 1971, the Bridger Canyon Zoning Ordinance (pursuant to Montana Code Annotated 76-2-201, formerly 16-470) was incorporated into the general plan. In accordance with Montana Code Annotated 76-2-106, the above zoning district has undergone a comprehensive amendment.

The entire Bridger Canyon Zoning District has been given a basic density right of one single-family detached dwelling

unit per forty acres, with a planned unit development (P.U.D.)¹ designation of one unit per twenty acres.²

The comprehensive update to the Bridger Canyon General Plan and Development Guide was undertaken by the author at the request of the Bridger Canyon Planning and Zoning Commission. The Commission asked that the plan reflect changes that had occurred in the 16 years since its adoption, and that various issues be clarified.

¹Planned Unit Development: An area of land, controlled by a landowner to be developed as a single entity for a number of dwelling units, the Plan for which may not correspond in lot size, bulk or type of dwelling, density, lot coverage and required open space to the regulations established in the underlying zone.

²Gallatin County, Bridger Canyon Zoning Ordinance, Gallatin County land use planning staff, Bozeman, MT, 1971, p. 6.

STATEMENT OF PROBLEM

This paper is about the revision of a general plan and development guide which was first adopted in 1971 for a small valley in Western Montana. Analysis of the updating process concludes with guidelines for the undertaking of other similar revisions. The Comprehensive Update of the Bridger Canyon General Plan and Development Guide was prepared by the author for the Bridger Canyon Planning and Zoning Commission.

The updated Bridger Canyon General Plan and Development Guide provides information to guide decision making, and sets forth policy direction to respond to the special needs, problems, and future development of Bridger Canyon. The updated plan emphasizes the conservation of natural resources, the preservation of open space and agricultural uses, and limited, controlled growth. The Plan recognizes the recreational potential of the Canyon, especially the potential of the Bridger Bowl Ski Area. A major concern of the original planners and the Bridger Canyon residents was that the existing Bridger Canyon Road could not handle the increased traffic generated by the ski area. To resolve this problem, the Plan provides for full expansion of the ski area by designating a 400-plus acre area with a P.U.D. density of one unit per half acre.³ This higher density area will allow

³Gallatin County, Bridger Bowl Base Area Plan, Gallatin County land use planning staff, Bozeman, MT, 1984, p. 7.

enough overnight facilities to maintain a low daily traffic volume on the Bridger Canyon Road.

CHAPTER I

GALLATIN COUNTY ADMINISTRATIVE STRUCTURE

This chapter explains the administrative structure of Gallatin County, and the flow of authority and political influence for each of the administrative positions relevant to the Bridger Canyon Zoning District.

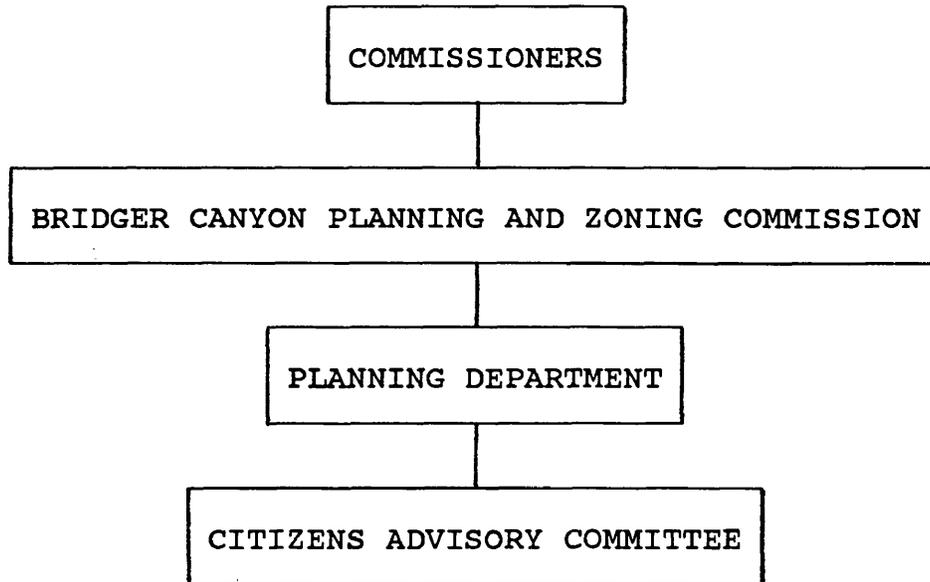


Figure 1. Bridger Canyon Administrative Structure.

Gallatin County Commissioners

Gallatin County administration is carried out by a Board of County Commissioners consisting of three members who are elected representatives of the County. As the primary County

level policy-making group, the Commissioners are responsible for law enforcement, road and bridge construction and maintenance, and land subdivision review and approval in the Bridger Canyon jurisdictional area.

In order to provide a method of amending the general plan and zoning regulations, the County Commissioners have appointed the Bridger Canyon Planning and Zoning Commission to recommend changes to the planning documents.

Bridger Canyon Planning and Zoning Commission

The Planning and Zoning Commission for the Bridger Canyon Zoning District consists of the three County Commissioners, the County Surveyor, and the County Assessor. The primary role of the commission is to assure the promotion of the public health, safety, and general welfare in the process of community development of Bridger Canyon. In general, the Bridger Canyon Planning and Zoning Commission has the authority it needs to fulfill its functions and duties to promote county planning. The Commission is required to hold a public hearing before making any change or amendments to the Bridger Canyon Zoning District.⁴

Gallatin County Planning Department

The Gallatin County Planning Department is responsible for the preparation, amending, and updating of the Bridger Canyon Zoning District's planning documents. The planning

⁴Mont. Code Ann. Sect. 76-2-106 (1987).

staff gathers data relevant to the goals and objectives, develops the operational plan, implements the operational plan, contributes to the feedback and modification of the plan, and advises the Bridger Canyon Planning and Zoning Commission. Prior to final action on any amendment, the Bridger Canyon Planning and Zoning Commission requests a report from the planning department.

Citizen Advisory Committee

Citizen advisory committees are established to encourage citizen participation in the planning process. They have no authority other than for presenting their views and opinions in order to assist policy-makers.

The Bridger Canyon Property Owners Association is the representative citizens' advisory committee in the planning process. The group consists of nine members with one chairperson. They are responsible for assessing community values and determining the goals and objectives for all residents of Bridger Canyon. The group's primary purpose is to advise the planning agency in the planning process. The property owners' association further contributes to the planning process by participating in choosing alternative designs, by participating in the approval and modification of the Bridger Canyon planning documents, and by contributing to the continuous feedback process. Through such participation, the property owners' association can ensure that the decisions made are consistent with the community's values and goals.

CHAPTER II

LEGISLATIVE BACKGROUND

Knowledge of land use law and regulations is critical to the planner and the planning process. Precise understanding of the Montana Statutes (and federal regulations where applicable) is necessary for the formulation of rural planning and zoning districts. Without this knowledge, planners may formulate public planning programs which will not receive judicial approval when tested in court, and particularly when those proposed regulatory programs limit the property owner's legal rights to the use of their land. This chapter cites the principal enabling statutes pertaining to the Bridger Canyon Planning and Zoning District. The statutes are the attempt of the legislature to solve the never-ending problems brought about by increased population and associated impacts facing the people of Montana and Bridger Canyon. The statutes cited are from the 1947 Revised Codes of Montana, which were the relevant statutes at the time the 1971 Bridger Plan was written. The revised plan recognizes the 1987 Montana Codes Annotated, so references are made to both.

Planning and Zoning Districts - Commission - Creation⁵

Whenever the public interest or convenience may require and upon petition of 60% of the freeholders affected thereby, the Board of County Commissioners is hereby authorized and empowered to order and create a planning and zoning district and to appoint a commission consisting of five members.

Development Pattern⁶

For the purpose of furthering the health, safety and general welfare of the people of the county, the county planning and zoning commission hereby is empowered, and it shall be its duty to make and adopt a development pattern for the physical and economic development of the planning and zoning district.

Adoption of Development District⁷

Adoption by the planning and zoning commission of the development district, or any change therein, may be in whole or in part, but must be by the affirmative vote of the majority of the whole commission, provided, however, that prior to any such adoption a public hearing shall have been held not less than fifteen (15) days after notice thereof shall have been posted in at least three (3) public places within the area affected. The resolution adopting the district or any part or parts covering one or more of the functional elements which may be included within the district, shall refer expressly to the maps, charts and description matters forming the pattern.

⁵Rev. Code of Mont. Sect. 16-4101 (1947), Mont. Code Ann. Sect. 76-2-101 (1987).

⁶Rev. Code of Mont. Sect. 16-4102 (1947), Mont. Code Ann. Sect. 76-2-104 (1987).

⁷Rev. Code of Mont. Sect. 16-4103 (1947), Mont. Code Ann. Sect. 76-2-106 (1987).

County Zoning-Authorized⁸

For the purpose of promoting the health, safety, morals and general welfare of the people in cities and towns and counties whose governing bodies have adopted a comprehensive development plan for jurisdictional areas, the board of county commissioners in such counties are authorized to adopt zoning regulations for all or parts of such jurisdictional areas in accordance with the provisions of this act.

Purposes of Regulations⁹

The zoning regulations shall be made in accordance with a comprehensive development plan, and shall be designed to lessen congestion in the streets; to secure safety from fire, panic and other dangers; to promote health and general welfare; to provide adequate light and air; to prevent the overcrowding of land; to avoid undue concentration of population; to facilitate the adequate provision of transportation, water, sewerage, schools, parks and other public requirements. Such zoning regulations shall be made with reasonable consideration to the character of the district.

Judicial Review¹⁰

All statutes and planning ordinances written and approved through legislative procedure are subject to legal challenges on various grounds. Such "planning" regulations should be sufficiently clear and unambiguous so as to warrant judicial approval if the regulation is tested in the court systems. Unfortunately, the statutes and ordinances which control the

⁸Rev. Code of Mont. Sect. 16-4701 (1947), Mont. Code Ann. Sect. 76-2-201 (1987).

⁹Rev. Code of Mont. Sect. 16-4704 (1987), Mont. Code Ann. Sect. 76-2-203 (1987).

¹⁰William E. Johnson, Attorney at Law, Interview by author, Madison, Wisconsin, 6 September 1988.

planning process cannot be detailed and complete enough to account for every situation which might arise. Therefore, like any statute or regulation, they are open to interpretation by the public, developers, or governmental planners under the varying circumstances where the planning or zoning "law" is applied.

Some "planning laws" are strictly construed and others are broadly construed. The legislative and judicial history is therefore of utmost importance to the planner or planning agency when interpreting or construing the "planning law" in question. However, since this project was a review and update of an existing plan, with few substantive changes, legal research was limited to review of existing statutes.

CHAPTER III
THE PLANNING PROCESS

This chapter explains the reason for the Bridger Canyon Plan update, the duties performed by the Bridger Canyon Property Owners Association and the Gallatin County Planning Staff, and summarizes the plan updating procedure.

As mentioned in the introduction to this paper, the comprehensive update to the Bridger Canyon General Plan and Development Guide was undertaken at the request of the Bridger Canyon Planning and Zoning Commission. The Commission, concerned about the age of the original plan, asked the planning staff for a comprehensive update reflecting the changes that had occurred since its adoption in 1971. From a legal standpoint, Montana's planning-enabling statutes are not rigid; they are written to accommodate change in land use policy. Thus, they allow for periodic amendments to statutory and regulatory land use controls which are necessary to clarify regulations and to update and change such regulations.

In the course of updating the Bridger Canyon General Plan and Development Guide, the Bridger Canyon Property Owners Association's functional assignment was to give direction to the Plan, especially since the Plan could possibly affect the quality of their lives.

The Gallatin County Planning Staff was primarily concerned with those aspects of the update that required professional skills in the review of the existing statutes and the proposed changes. During the summer of 1987, while fulfilling the requirements for the degree of Master of Science at the University of Montana, the author was an intern professional planner and assistant to the director of planning for the Gallatin County Planning Department. My responsibility as intern planner during the updating process involved investigative field work, research, data compilation and analysis of pertinent regulatory issues pertaining to the plan update. I assisted the Planning Director in scheduling, formulating programs, and monitoring the update hearings, and acted as liaison with the property owners. While interning as a professional planner, I felt I contributed not only technical knowledge but also communication skills in dealing with the property owners at the group meetings, in participating and leading discussions, assisting in resolution of conflicts arising out of proposed regulations, and providing technical information as requested by the property owners.

The Bridger Canyon General Plan and Development Guide update process began with a review of the current local planning situation and a determination of the necessary notification procedures for the property owners in order that

they would be able to fully participate in the anticipated update and changes.

An open meeting was held consisting of the 9 members of the Bridger Canyon Property Owners Association, the Gallatin County Planning Director and myself. Subsequent meetings were held for approximately two hours on a bi-monthly basis.

The update process consisted of five development stages: The Assessment stage, Modification stage, Feedback stage, Approval stage and then the final Adoption stage.

The Assessment stage of the update process consisted of a comprehensive review and critique of the 1971 Bridger Canyon Plan. This included my written comments on the organization, writing style, content and validity of the plan. The initial update meetings with the Bridger Canyon property owners focused on a page-by-page, issue-by-issue review and assessment of the 1971 plan. During these initial meetings I presented my comments on how the plan operated and how it could be improved. I encouraged the exchange of ideas and group discussions on clarifications, materials in need of updating, and the removal and addition of relevant information to the plan.

The Modification stage of the update process took place between group meetings. This involved the removal of outdated materials, clarification of issues, updating of the data, investigative field work and further research and data compilation, together with the data analysis. Additionally

and importantly, property owners' suggestions from the assessment stage were taken into consideration and valid suggestions of the property owners, as well as those changes suggested by myself, were ultimately approved by the Planning Director and incorporated into the new plan.

The Feedback stage during the update process involved a review of the modified plan which incorporated changes implemented during the Modification sequence. The "rough draft" of the new plan was reviewed and edited by the property owners during the group meetings. Again, the property owners' comments were taken into consideration and implemented into the plan to produce a finished product.

The Approval stage of the update process is the final approval of the newly drafted plan by the Bridger Canyon Property Owners Association, the Gallatin County Planning Director, and the Bridger Canyon Planning and Zoning Commission. They together recognized the new plan as a viable and legal comprehensive update to the General Plan and Development Guide for Bridger Canyon, Montana. A certification of the 1987 revised document as the official draft of the update to the Bridger Canyon Plan is entered in the Appendix.

As of the time of this writing, adoption and publication of the update to the General Plan and Development Guide for Bridger Canyon is pending the completed revision of the Bridger Canyon Zoning Ordinances.

CHAPTER IV

METHODOLOGY

The 1987 revised Bridger Canyon Plan incorporates a comprehensive reorganization and rewrite of the original 1971 Bridger Canyon Plan. General information retained from the 1971 plan includes goals and objectives, population and economic factors, residential and commercial criteria, recreation overview, utilities, public services, design concepts and data on physical resources and associated maps, i.e. geology, soils, topography, hydrology, timber, wildlife, etc. Existing land ownership and general plan maps were also retained from the 1971 Plan.

Information added to the new Plan includes the following: introduction, jurisdictional area map, historical and development background, expanded soil information, snowfall data, extended information on water, logging standards, weed control, mineral extractions, existing land uses and associated maps, population growth and future estimates, vacant homesite assessment, Bridger Bowl data, traffic update figures, road maintenance and fire protection. The following chapter details those new developments incorporated into the revised plan.

The underlying source of information for the Bridger Canyon Plan update is the original 1971 Bridger Canyon Plan.

The Bridger Canyon Zoning Ordinance, adopted in October 1971, regulates and promotes the orderly development, and establishes the housing density zones of the area. Other legal documents used in the formation of the new Bridger Canyon Plan include the Bridger Bowl Base Area Plan, the Bozeman Master Plan, and the Gallatin National Forest Plan. Numerous public governmental and local documents were used as information sources throughout the formulation of the Plan's basic elements. Selected personal interviews yielded information pertaining to mineral rights, water rights, highways, property owners' goals, fire protection, etc. All sources of information used in the 1987 revised Plan are entered in the bibliography of this document.

Field work conducted during the project included a reconnaissance survey of the study area and a building permit analysis to determine growth rates and the identification of vacant homesites. Base maps used in the preparation of the 1987 revised Plan include those provided by the Gallatin National Forest, Gallatin County, and the 1971 Bridger Canyon General Plan.

CHAPTER V

NEW DEVELOPMENTS TO THE BRIDGER CANYON PLAN

This chapter gives exclusive attention to those new developments by the author which have been incorporated into the 1987 revised Bridger Canyon General Plan and Development Guide. Only significant changes and additions will be cited and referenced. Numerous minor changes to the plan, such as sentence restructuring, word and phrase substitutions, update of figures, and basic editing will not be discussed. The format of this chapter follows the revised Plan's topic headings as outlined in the Table of Contents (Table 1).

The 1987 revised and 1971 original Plan's table of contents are included in this paper (Tables 1 and 2) to show organizational changes that took place during the update.

Table 1

1987 REVISED PLAN TABLE OF CONTENTS

JURISDICTIONAL AREA MAP

INTRODUCTION

OBJECTIVES TO THE GENERAL PLAN

HISTORY AND DEVELOPMENT

PHYSICAL DETERMINANTS

- Landform
- Topography
- Slope Analysis
- Vegetative Cover
- Geology
- Soil Interpretations
- Climatic Conditions
- Precipitation
- Snowfall
- Temperature
- Winds

WATER RESOURCES

- General Provisions
- Water Rights
- Surface Water Resources
- Ground Water Resources
- Water Quality
- Water Quality Standards
- Water Management Practices

LAND RESOURCES

- Visual Resources
- Forest Lands
- Weed Control
- Mineral Extractions
- Fish and Wildlife

CULTURAL RESOURCES

- Existing Land Uses
- Land Ownership
- Existing Zoning

DEMOGRAPHIC AND ECONOMIC CHARACTERISTICS

- Population Growth
- Population Allocations
- Population Densities
- Economic Constituents

Table 1 (Continued)

RESIDENTIAL AND COMMERCIAL DEVELOPMENT

- Residential
- Residential Development Criteria
- Neighborhood Commercial Facilities
- Commercial Development Criteria
- Circulation System
- Vacant Homesite Assessment

RECREATION

- Recreation Assessment
- Recreation Standards

UTILITIES, TRANSPORTATION AND WASTE DISPOSAL

- Utilities
- Traffic Generation
- Road Standards
- Road Maintenance
- Sewage Disposal Standards
- Solid Waste Disposal Standards

PUBLIC SERVICES

- Law Enforcement
- Fire Protection
- Educational Facilities
- School Site Standards
- Additional Services

DESIGN CONCEPTS

- Community Design
- Environmental Design
- Design Guides

APPENDICES

- A. Detailed Soil Descriptions for Bridger Canyon
- B. Estimated Soil Limitations or Suitability for Selected Uses
- C. Soil Development Guidelines
- D. Average Annual Snowfall Map
- E. Maximum Snowloads Map
- F. Water Quality for Bridger Creek
- G. Water Management Practices
- H. Best Management Practices for Forestry Land
- I. Land Use Maps
- J. Land Ownership Map
- K. Agencies for Additional Information

FOOTNOTES

Table 2

1971 ORIGINAL PLAN TABLE OF CONTENTS

INTRODUCTION

Zoning Map

GENERAL PLAN AND DEVELOPMENT GUIDE

BACKGROUND MATERIAL

History and Development

Physical Determinants

Landform

Topography

Slope Analysis

Vegetative Cover

Geology

Soil Interpretations

Climatic Conditions

Precipitation

Temperature and Humidity

Winds

Land Resources

Water Supply

Surface Water Resources

Ground Water Resources

Sun Chart

Water Quality

Forest Lands

Fish and Wildlife

Cultural Resources

Existing Land Uses

Traffic Generation

Utilities

Land Ownership and Existing Zoning

Economic and Demographic Characteristics

Population Growth

Economic Factors

Agricultural Values

Recreation

Public Services

OBJECTIVES OF THE GENERAL PLAN

Table 2 (Continued)

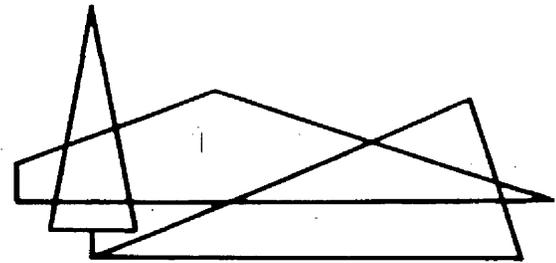
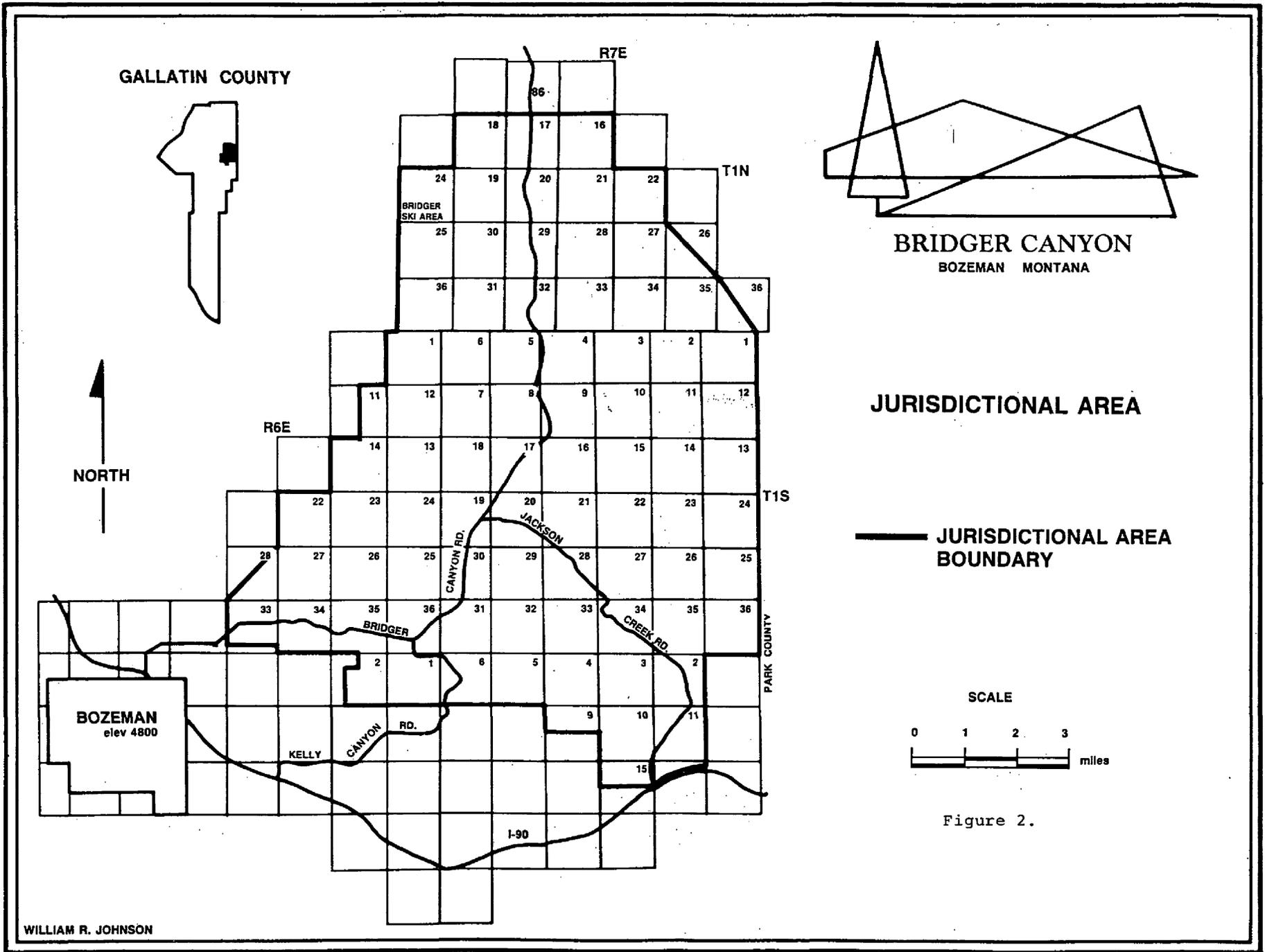
ELEMENTS OF THE GENERAL PLAN

- Residential
- Commercial Facilities
- Circulation System
- Utilities
- Educational Facilities
- Recreational
- Community Design
- Environmental Quality
- Citizen Goals
- Standards
 - Population Allocations
 - Population Densities
 - Residential Development Criteria
 - Commercial Development
 - Road Standards
 - Recreation Standards
 - School Site Standards
 - Public Service Facility Standards
 - Water Quality Standards
 - Suggested Logging Standards
 - Sewage Disposal Standards
 - Solid Waste Disposal Standards
 - Design Guides

The revision of the Table of Contents reflects the reorganization of the Plan. The objective is to make the plan more presentable and comprehensible by individuals and public and private agencies as well. The structure of the original Plan had logical mistakes, such as placing the objectives of the Plan in the center of the document, when in reality they should be near the beginning. Additionally, segments of the same subject appear in different places throughout the Plan. Few people read the whole Plan, they could miss important information. For these reasons the revised Plan was restructured. Minor categories under the original Plan, such as water resources, residential and commercial development, recreation, transportation, public services, and design concepts were placed in the revised Plan as major category headings. This may appear as only a visual change, however, it reflects the value placed on these categories.

Jurisdictional Area Map

A jurisdictional area map of the Bridger Canyon planning district has been incorporated at the beginning of the 1987 revised Bridger Canyon Plan (see figure 2). Although absent from the original Bridger Canyon Plan, any general land use plan should have a map outlining its jurisdictional area. The jurisdictional area map of Bridger Canyon illustrates the spatial setting of the planning district with respect to Gallatin County and the City of Bozeman, and identifies land



BRIDGER CANYON
BOZEMAN MONTANA

JURISDICTIONAL AREA

— JURISDICTIONAL AREA BOUNDARY

SCALE

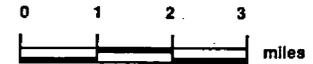


Figure 2.

parcels which are within the Bridger Canyon planning district. The map also shows the major roads servicing Bridger Canyon.

Introduction

The 1987 revised Bridger Canyon Plan required an updated introduction to explain the changes made in the 1971 Bridger Canyon Plan.¹¹ The introduction points out the need for planning; gives a physical description of Bridger Canyon; reflects concerns of the local residents and the formation of a property owners association; and explains the creation of the Bridger Canyon Zoning Ordinance, the adoption of the 1971 original Plan, and the scope of the 1987 Bridger Canyon Plan.

History and Development

The History and Development section of the revised Plan focuses on the physical and historical background of Bridger Canyon and the implementation of a general plan.¹² The purpose is to draw attention to the rich heritage and cultural evolution of Bridger Canyon. It became imperative during meetings with the property owners that the preservation of historical and cultural background was an important value to guide future development.

Sources of information used in the compilation of this section include writings by John Alwin and the Bridger Canyon

¹¹Gallatin County, Bridger Canyon General Plan and Development Guide, Gallatin County Land Use Planning Staff, Bozeman, MT. 1987, p. 1.

¹²Ibid., p. 5.

Woman's Club, both of which are fully cited in the bibliography.

Physical Determinants

The Physical Determinants section of the revised Plan delineates constraints on development by selected categories (see Table 1). The Soil Interpretations category was expanded to include detailed soil descriptions for the Bridger Canyon area.¹³ Estimated soil limitations or suitability for selected uses within Bridger Canyon were also added to the 1987 Plan.¹⁴

Detailed descriptions of Bridger Canyon soils are intended to aid property owners in selecting the best use of the soil, i.e., small grains, hay, pasture or wildlife. The estimated soil limitations or suitability for selected uses will benefit property owners in evaluating the soils for selected uses, such as cropping, road and street location, foundations with basements, landscaping, parking areas, septic tank filter fields, sewage lagoons, pond reservoir areas, fill material, etc. Soils rated as slight are relatively free of limitations. Soils rated as moderate have limitations that need to be recognized but can be overcome with good management and careful design. A severe rating indicates limitations that are difficult or costly to overcome.

¹³Ibid., pp. 9, 10.

¹⁴Ibid.

Information used in preparation of this study was based on 1931 and 1970 United States Department of Agriculture (U.S.D.A.) Soil Conservation Service (S.C.S.) publications (see Bibliography).

A supplementary physical determinant incorporated into the 1987 revised Plan is data on snowfall in the Bridger Canyon area.¹⁵ The original plan lacked any significant data on this subject.

Bridger Canyon is a high snowfall area. Data on snowfall is desired by homeowners, developers and managers of winter sports areas because snowfall affects wintering areas for wildlife, snow removal costs on highways, streets and parking lots, and suitability for housing developments. A map of the Gallatin River Drainage displaying the Average Snowfall in the Bridger Canyon area has been entered into the revised Bridger Canyon Plan.

With expanding population pressures in Bridger Canyon, construction activity is increasing in the foothill and mountain areas. These areas receive heavy snowfall during the winter season and it is imperative that homes, bridges, recreation facilities, and other structures be designed to withstand the heavy snow loads. For this reason, a Ground Snow Loads map of the Gallatin River Drainage, including Bridger Canyon, has also been incorporated into the 1987

¹⁵Ibid., pp. 11, 12.

revised Plan.¹⁶ The map is intended to assist with the location and design of structures in the area.

References used in the preparation of the study were provided by the U.S.D.A. S.C.S. publications, and Terry Abelin, Manager, Bridger Bowl Ski Area (see Bibliography).

Water Resources

A common objective of the Bridger Canyon property owners is to promote the conservation, development, and beneficial use of the area's water resources. Since the 1971 original Plan lacked specific information on this issue, the property owners requested that the revision include an expanded report on water resources within Bridger Canyon.

The Water Resources section of the 1987 revised Plan includes information about State provisions and objectives for water resource use in Bridger Canyon, a review of Montana's water right appropriations and administration, and an analysis of the area's available ground water supply systems, depths and yields.¹⁷ Extensive data on water quality was incorporated to include: updated water quality test results for Bridger Creek, nonpoint and point water source assessment summaries, water quality standards in accordance with the 1965

¹⁶Ibid.

¹⁷Ibid., pp. 13-18.

Clean Water Act, and water management practices encompassing control measures for the protection of water quality.¹⁸

All of the foregoing information and policies under this section are aimed at informing property owners, developers and the public on the administration, conservation and development of water resources within Bridger Canyon.

Publications used in the preparation of this report were provided by the following agencies: the United States Geological Survey, Morrison-Mairle, Inc., the Montana Department of Natural Resources and Conservation; and Blue Ribbons of the Big Sky Country Areawide Planning Organization (see Bibliography for full citations).

Land Resources

Visual Resources, Weed Control, and Mineral Extractions were incorporated into the 1987 Revised Plan at the request of the Bridger Canyon Property Owners Association. The 1971 Plan lacked any information on these subjects under the Land Resources category.

The Visual Resources category defines the natural beauty of Bridger Canyon and the need to preserve its character and quality.¹⁹ This section is similar to the History and Development section and reflects values articulated by the Bridger Canyon property owners.

¹⁸Ibid.

¹⁹Ibid., p. 19.

The section on Weed Control was added because Bridger Canyon hosts a variety of noxious weeds. Successful control of noxious weeds requires cooperation between private landowners, public land users and governmental agencies. The Weed Control Section of the 1987 Revised Plan identifies recommended control measures to be adhered to by property owners, and informs residents of assistance programs administered by the Gallatin County Weed Control District.²⁰

Historically, only a limited number of mineral extractions in Bridger Canyon have taken place. Those operations have been gravel pits used primarily for private purposes. However, the Bridger Canyon area lies in the energy-rich overthrust belt of the Northern Rocky Mountain region, and in recent years, oil and gas leasing activity in the Canyon has increased. The Mineral Extractions category informs Canyon residents and other agencies of the state laws and policies regarding mineral, oil and gas extractions, mineral rights, mining claims, and provisions outlined in the Bridger Canyon Zoning Ordinance.²¹

The Forest Lands category from the 1971 Plan was expanded to include knowledge of the Gallatin National Forest Plan and recommendations for private landowners on logging practices.²² A substantial amount of land within the Bridger Canyon

²⁰Ibid., p. 21.

²¹Ibid., pp. 21, 22.

²²Ibid., pp. 19-21.

jurisdictional area is managed by the United States Department of Agriculture and is included in the Gallatin National Forest Plan and Management Area Map. Therefore, it is necessary to educate property owners, developers and the public about the role and importance of the Gallatin National Forest Federal administration. As an example, the forest plan sets out guidelines pertaining to ownership adjustments, access and easements, non-recreating special use grants, roads and trails, and other standards.

References used in the preparation of the above categories were provided by: Cooperative Extension Service, Montana State University; Gallatin County Weed Control District; Joel A. Shouse; Bureau of Land Management; U.S.D.A., Forest Service; and the Montana Department of State Lands (see Bibliography for complete citations).

Cultural Resources

The sections on existing land uses and zoning regulations were modified under this section of the 1987 revised Plan. The Existing Land Uses category gives a general overview of the variety of land uses within the jurisdictional area.²³ The category was modified to accommodate changes in allowable land uses that have occurred since the adoption of the 1971 Bridger Canyon Plan. Additionally, a summary of commercial ventures existing in the Canyon was included. Land use maps

²³Ibid., p. 24.

of the Bridger Canyon Zoning District were inserted in the appendix of the 1987 revised Plan. Used as a general reference, the land use maps display all state and county roads, land subdivision, subdivision roads, residences, public facility structures, and agricultural uses.

At the time of the compilation of the 1971 Bridger Canyon Plan, no zoning regulations were adopted for the jurisdictional area. Under the 1987 revised Plan, the Existing Zoning Category defines the intent, goals and stipulations of the adopted Bridger Canyon Zoning Ordinance.²⁴

References used in the preparation of the above categories were provided by the Gallatin County Surveyor's office and the Bridger Canyon Zoning Ordinance (see Bibliography for complete citations).

Demographic and Economic Characteristics

New demographic data used in the compilation of the 1987 revised Plan utilizes conservative growth rates and population projections for the Bridger Canyon study area. The 1971 Plan's analysis of economic characteristics was found to be adequate and sufficiently broad in scope so as to not require modification.

²⁴Ibid., pp. 24, 25.

Based on past trends and current development, the population of Bozeman and Gallatin County is expected to increase at a two percent annual growth rate.²⁵ Growth should be evenly distributed through the year 2000. If a major boost in the economy occurs and a major industry locates in Bozeman, an upswing in population could occur, adding pressure for increased land development in Bridger Canyon. A table included in the 1987 revised Plan depicts population projections for Gallatin County and the City of Bozeman from 1985 through the year 2000.²⁶

Population projections are included in the 1987 revised Plan to estimate what Bridger Canyon's population might be at a future date. In 1971 the population of the Bridger Canyon study area was approximately 300 persons. The 1971 Plan estimated a population of 1,000 by 1985, and 1,500 by 1990. Current research established the present population within the planning area at approximately 600 people.

For the most accurate determination of population growth in the area, a building permit analysis was conducted, tabulating the number of dwelling units and population added each year since 1972.²⁷ Estimations for future growth in Bridger Canyon can be most accurately based on the average number of new dwelling units since 1980. By referring to

²⁵Ibid., p. 26.

²⁶Ibid.

²⁷Ibid., p. 27.

previous data, an average of five dwelling units and twelve residents per year are added to the Bridger Canyon planning area. A table was constructed showing the estimated population of Bridger Canyon through the year 2000.²⁸

References used in the preparation of the above study were provided by: the 1980 population census, the Bozeman Master Plan, and Gallatin County building permits for Bridger Canyon (see Bibliography for full citations).

Residential and Commercial Development

The only significant modification under this section of the plan was the incorporation of a Vacant Homesite Assessment of the Bridger Canyon jurisdictional area.²⁹

The Vacant Homesite Assessment in simple terms is an inventory of all vacant lots and their sizes within the planning area. Data for the study was compiled from a field reconnaissance survey of the planning area, including an analysis of recent building permits and county plat maps. The study identifies vacant land parcels in the less-than-five-acre range, five-to-twenty-acre range³⁰, and greater-than-twenty-acre range.

The results of the assessment are for the purpose of informing Canyon residents, developers, realtors, and

²⁸Ibid.

²⁹Ibid., p. 33.

³⁰Lots less than twenty acres were platted prior to the 1971 Zoning Ordinance.

prospective buyers of available homesites within the planning area.

Recreation

Alterations incorporated into the Recreation section of the 1987 revised Plan include primarily updated figures referring to the Bridger Bowl Ski area.³¹ Since the adoption of the 1971 plan, Bridger Bowl has experienced considerable increases in skier recreational use. In 1985, a separate base area plan was adopted to promote the orderly development and construction of the ski base area. The 1987 revised Bridger Canyon plan addresses the maximum capacity of skiers at Bridger Bowl, day user expansion potentials, parking capacities and future expansion, and overnight accommodations including future expansion potentials.

References used in the preparation of the Bridger Bowl update were provided by the Bridger Bowl Base Area Plan and Terry Abelin, Manager of Bridger Bowl.

Utilities, Transportation and Waste Disposal

Updated traffic generation data and new information on road maintenance were the only significant changes incorporated into this section of the 1987 revised Plan.

The Traffic Generation category embodies new data on the average daily traffic on Bridger Canyon Road, identifies current and future traffic trends, and addresses the need to

³¹Ibid., p. 34.

keep low vehicular loads on the circulation system within the Canyon.³²

A new category on Road Maintenance was incorporated into the 1987 revised Plan.³³ The objective is to explain the administration, improvement policies, and cost sharing program for all roads within the Bridger Canyon jurisdictional area.

This information is intended to act as a general guide for Canyon residents, developers, realtors and prospective property buyers.

Sources of information for the above report were supplied by the Montana Department of Highways and the Gallatin County Road office (see Bibliography for full citations).

Public Services

The Public Services section of the 1987 revised Plan summarizes all services provided by Gallatin County for the Bridger Canyon Zoning District, including law enforcement, fire protection, education, health, public works, recording, taxation, property assessment, and planning and zoning.³⁴

At the time of the compilation of the 1971 Bridger Canyon Plan, the jurisdictional area had no organized fire protection, and hence no reference in the plan. Presently, as outlined in the 1987 revised Plan, the Bridger Canyon

³²Ibid., p. 36.

³³Ibid., p. 38.

³⁴Ibid., pp. 40, 41.

jurisdictional area has created its own rural fire district. All real estate within the area is protected by the Bridger Canyon Volunteer Fire Department.

Information for the above report was provided by Arnold Jacobs, Chief of the Bridger Canyon Rural Fire District.

Design Concepts

Revisions incorporated into the Design Concepts category of the 1987 Bridger Canyon Plan include views and objectives of the property owners concerning community and environmental design concepts.³⁵

Planning suggestions and design guides outlined in the 1987 revised Plan are offered only as a general guide for proposed developments. They are not intended to be strict limitations on the type of development permissible.

³⁵Ibid., pp. 42, 44.

CHAPTER VI

CONCLUSION

Bridger Canyon has been experiencing a period of intensive demand for a wide variety of land uses. The effects of an increasing number of people on the natural environment of the area required that a plan be initiated to provide for the conservation of natural resources, preservation of open space, and orderly growth. The Plan sets out to offer guidelines that address the impacts on the natural surroundings of Bridger Canyon. The General Plan and Development Guide for Bridger Canyon was officially adopted in 1971. The comprehensive update to the Plan was undertaken at the request of the Bridger Canyon Planning and Zoning Commission. The Commission asked for the Plan to reflect changes that had occurred in the 16 years since its adoption, and that various issues be added or clarified.

The purpose of this paper has been to present in its entirety the comprehensive update of the Bridger Canyon General Plan and Development Guide. This included a synopsis of the administration of the Bridger Canyon Zoning District, a look at the relevant planning enabling statutes, a review of the planning process and updating procedure, and an examination of the significant modifications incorporated into the revised Plan.

The comprehensive update of the Bridger Canyon General Plan and Development Guide has been a result of the efforts put forth by the Bridger Canyon Property Owners Association and the Gallatin County Planning Staff. The updated plan is intended to guide those involved in the development process of Bridger Canyon, including area residents, interested citizens, developers, and governing bodies. A policy direction is set forth in the 1987 revised Plan which reflects the special needs of the Canyon.

The population and needs of the residents of Bridger Canyon will undoubtedly grow in the future. With this growth will come increased pressures on the surrounding landscape, including greater demands for homesites, utilities, services, recreation and open space. As these needs change, it will be necessary for an additional review and update of the Bridger Canyon Plan. Until that time, adherence to the basic concepts of the Plan will promote the orderly and beneficial development of Bridger Canyon.

This presentation of the steps taken in reviewing and updating an existing land-use plan is intended to perform as a guide for planners associated with similar projects. The following summary recommendations are offered as advice to planners involved in the process of reviewing and updating land-use plans.

- A. Prior to review and amendment of plans, have a working knowledge of all relevant planning laws and regulations.
- B. Review the current local planning environment.

- C. Determine the necessary notification procedures for the property owners in order that they are able to fully participate in the anticipated reviews and changes.
- D. Schedule regular workshops with the property owners association and the planning staff.
- E. The review and update process can be efficiently accomplished by following five development stages:
 - 1. Assessment Stage. Review the structure and language of the existing plan to make sure that it is logical, comprehensible and consistent. Write comments on how the plan could be improved.
 - 2. Modification Stage. Remove outdated material, clarify issues, update relevant data, and incorporate new developments pertinent to the plan since its adoption. Make policies and guidelines reflect non-market values of the area.
 - 3. Feedback Stage. Review and make appropriate corrections to the new draft plan.
 - 4. Approval Stage. This is the final approval of the newly drafted plan by governing body, property owners, and the planning staff.
 - 5. Adoption Stage. The important factor after adoption of the plan is to implement a timetable for future review and update.
- F. It is recommended that review and update of plans be undertaken on a five-year basis.

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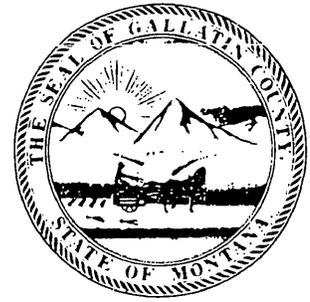
APPENDIX

Certification of the 1987 revised Bridger Canyon Plan as the official update to the 1971 original Bridger Canyon General Plan and Development Guide.

State of Montana

County of Gallatin

Bozeman



August 1, 1988

TO WHOM IT MAY CONCERN:

This is to certify that this is the official draft of the Update to the Bridger Canyon General Plan. This Plan will be considered for adoption by the Bridger Canyon Planning Commission as soon as the draft of the Updated Bridger Canyon Zoning Ordinance is completed. It is anticipated that public hearings for the Updated Plan and Ordinance will be held no later than December of 1988.

Sincerely,

A handwritten signature in cursive script that reads "Mary Kay Peck". The signature is written in black ink and is positioned above the typed name and title.

Mary Kay Peck
Gallatin County Planning Director

MKP:rlrj