2008 YELLOWSTONE COUNTY – CITY OF BILLINGS GROWTH POLICY UPDATE

FINAL DRAFT ADOPTED BY:

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1.0 INTRODUCTION AND PURPOSE

The City of Billings and Yellowstone County have experienced significant changes in population, growth patterns and economic development since the adoption of the 2003 City/County Growth Policy. The goals, objectives, and policies outlined in the Growth Policy proved to be valuable guides for managing these changes. Most of the original 235 implementation strategies were carried out, ensuring that growth and development occurred consistent with the values of the community. Through hard work and cooperation, the City and County made considerable progress towards achieving its goals and realizing its vision.

The success of the past five years lays the foundation for even greater accomplishments in the next five years. It is the purpose the 2008 Growth Policy Update to identify how our communities have changed, and what tools are still needed to achieve our goals. For the most part, the original goals listed in Chapter 3.0: Community Goals and Objectives have not changed. However, as a result of public input, some goals were rephrased and several new goals relating to Economic Development, Transportation, Public Facilities and Cultural and Historic Resources were added. An entirely new element, Community Health, was added and includes new goals, objectives, policies and strategies. Chapter 4: Exiting Conditions/Trends has been completely updated to reflect the current conditions in the City and County. Population projections have also been adjusted to align with recent trends. A new map is included in Subchapter 4.1: Land Use that illustrates projected growth trends based on the Yellowstone County Board of Planning's understanding of future growth rates and land use needs. The map is an example of how both market forces and community planning might affect future patterns of development.

The principal revision to the 2003 Growth Policy is contained in Subchapter 5.1: Implementation Tools and Strategies. Over 30 new goals were identified through the public participation process. Also developed during this the public input process, were over 200 new implementation strategies. It is clear from the additional recommended policies and the new strategies, that the City and County are confronted with a challenging implementation program. Additionally, there are numerous other plans addressing needs in transportation, sanitation and stormwater management, water distribution and parks development that demand public resources. Combined, the plans demonstrate a public desire to ensure provision of services to existing residents and an assurance that the City and County can guarantee quality services to future residents.

An obvious trend that characterizes the new implementation strategies is a desire to improve the quality of life for all residents on multiple fronts. Concentrated growth patterns, energy and user efficient transportation systems, and accessible, environmentally sensitive and functional public lands continue to be preferred according to the public input. What is new, however, is an awareness of the value of community health, whether translated into personal objectives or into social costs concerns. Regardless, the idea that community health can be affected through comprehensive community planning, has gained considerable attention in the updated Growth Policy.

The Yellowstone County and the City of Billings 2008 Growth Policy is a guide for local officials and community members in making decisions that will affect the future of our community. The Growth Policy directs basic policy choices and provides a flexible framework for adapting to real conditions over time. It is a collection of the goals and objectives for the community. Suggested future actions, based on the goals, objectives and policies in the 2008 Growth Policy, include establishing infill incentives and updating the City Annexation Policy, revising the Unified Zoning Code to ensure developments are compatible with existing neighborhoods, preserving the environmental and visual quality of the river and the rims, protecting residents from groundwater contamination, flooding and wildfire hazards, and providing healthy alternatives for commuting and recreation. This is a summary of only a few new strategies. The complete list is provided in Chapter 5.

REGULATORY REQUIREMENTS

Montana land use laws are continually being monitored and modified by the Montana State Legislature. The intervening legislative sessions of 2005 and 2007 resulted in revisions to several chapters in Title 76, Land Resources and Use, of the Montana Code Annotated (MCA) including Chapter 1, Part 6 – Growth Policy. The most critical change from the 2003 statutes involved the required updates to a Growth Policy. The deadline for these updates changed from October 1, 2001 to October 1, 2006. The legislation also clarified that the preparation and adoption of a growth policy is optional, and the extent to which a growth policy addresses the required elements is at the full discretion of the governing body. A growth policy may now be repealed by resolution and a petition for initiative or referendum to adopt, revise or repeal a growth policy must contain the signatures of 15% of the qualified electors of the area covered by the growth policy. Very importantly, the statute now clarifies that a growth policy is not a regulatory document and does not confer any authority to regulate that is not specifically authorized by law or regulations adopted pursuant to law.

In 2007, legislation focused primarily on the issue of wildfire and how the contents of the growth policy should address that issue. A growth policy must now include an evaluation of the potential for fire and wildland fire in the jurisdictional area, including whether or not there is a need to delineate the wildland-urban interface, and adopt regulations requiring defensible space around structures, adequate ingress and egress to and from structures, developments to facilitate fire suppression activities, and adequate water supply for fire protection. Subchapter 4.6 of this update addresses the wildfire issue.

2.0 PUBLIC INVOLVEMENT

Public involvement was vital in completing the 2008 Growth Policy. The Growth Policy is a document that is made up of the vision and goals of the community, and public participation is how the vision and goals are developed. While resources and time limited the scope of drafting the 2008 Growth Policy, a great deal of public involvement was solicited through both conventional and more technologically advanced means.

Building on 2003 Input

The drafting of the 2008 Growth Policy was built on the extensive public input and participation that occurred during the completion of the 2003 Growth Policy. The 2003 Policy established 45 main goals and 235 implementation strategies to help achieve those goals. As part of the 2008 Growth Policy update process, the existing goals and strategies were extensively reviewed and analyzed for status and present-day applicability. This review demonstrated that a great deal of work was done over the past five years, and illustrated that most of the goals established in 2003 are on-going and remain applicable today. Therefore, the 2008 document does not propose extensive revisions to the main 2003 goals, and it is this past community input that serves as the foundation for this 2008 document. The information below summarizes this foundation:

- In 2001, the City-County Planning Department began the process of revising the Growth Policy with the material generated by Celebrate Billings 2000 and by compiling new baseline information on the community, including Census 2000 information as it was released.

- To identify issues of concern to the community, the City-County Planning Department held a series of meetings with area residents targeting two types of groups: special interest groups, such as environmental groups, the development community, the business community; and geographical groups represented by neighborhood task forces. The Department made presentations at 31 separate venues.

- The Department also developed an interactive computerized mapping survey that asked about land use development scenario preferences. Over 200 people took the survey. In addition, a web site was developed to allow a review of issues by neighborhood area along with a comment section available to those on line.

2008 Community Meetings

Three community-wide meetings were conducted during the 2008 Growth Policy update process. The first meeting served as a venue to reintroduce the purpose of the Growth Policy, discuss the existing 2003 Growth Policy and changes in the community since 2003, and finally outline the update process to draft the 2008 document. The second meeting was meant to engage the participants in a hands-on analysis of the existing community issues and implementation strategies in the Policy to determine how these issues and strategies should be updated and new ones added. After the public feedback was gathered at the second meeting and through other

meetings and web-based comments, a third meeting provided the community with an opportunity to provide feedback on the new proposed implementation strategies before the draft document was presented to the Board of County Commissioners, Billings City Council and Broadview Town Council for adoption. In total, more than 90 people from across the County attended the community meetings to learn and give feedback.

Information Gathering

The City-County Planning Department staff reviewed all of the background information contained in the Policy. This included data on land use, population trends, housing, economic development, public facilities and services, the natural environment, transportation, parks and open space, and cultural and historic resources. The information was updated based on input from City and County staff, the Yellowstone County Board of Planning, members of other local advisory boards and commissions, the Board of County Commissioners, Billings City Council and Broadview Town Council, local, state and federal agencies, the school districts throughout Yellowstone County, the Billings Association of Realtors, local, state and national economic data sources and community groups. These updates are found in Chapter 4 of the 2008 Growth Policy.

Internet Presence and Outreach

A 'Growth Policy Update' webpage was created for the 2008 document and included information on the update process, meeting dates, meeting presentation materials, document drafts, and other information. A "Notify Me" email system was set up to allow anyone to be notified via email of upcoming meetings and when new material was posted to the website. This list grew to more than 247 email addresses and staff received a lot of positive feedback from the community for adding this notification feature.

An electronic comment option also was incorporated on the webpage. This system enabled anyone to submit comments to the City-County Planning Department staff during the document drafting process. At last count, 27 comments were collected through this service.
An online survey also was utilized to allow the community to vote on the proposed new implementation strategies before they were presented to the Board of County Commissioners, City Council and Broadview Town Council; 271 surveys were completed. The survey results were organized by element to show the level of support for each new proposed strategy and also ordered to show the most supported to least supported new strategies. This information was provided to the Planning Board, Board of County Commissioners, City Council and Broadview Town Council to assist the governing bodies in determining the community support for the new strategies.

Governing Body Discussion and Work Session Meetings, and Public Hearings

During October and November of 2008, a draft of the 2008 Growth Policy was reviewed and refined simultaneously by the Yellowstone County Planning Board, and the governing bodies. The Planning Board discussed the draft document at several of its regular meetings, held two special meetings to review and edit the document and conducted a public hearing before making

a recommendation to the governing bodies for adoption of the Policy. Additionally, the public was invited to three work sessions of the Board of County Commissioners and two work sessions of the Billings City Council. The Broadview Town Council also reviewed a draft at one of its regular meetings before taking action. After informal review, each governing body conducted a public hearing. Throughout the drafting process, the most current version of the proposed Policy also was posted on the Planning Department's Webpage and copies were made available upon request at the Planning office.

3.0 COMMUNITY GOALS AND OBJECTIVES

INTRODUCTION

The purpose of the Yellowstone County and City of Billings 2008 Growth Policy is to guide local officials and community members in making decisions that will positively affect the future of our community. In essence, the Growth Policy is a community vision established "by the people, for the people" and once adopted becomes a commitment to the residents of Yellowstone County that the local governments shall acknowledge and attempt to achieve public goals. The community vision embodied within this policy is heavily grounded in a set of public goals and objectives established during the public participation processes in 2003 and 2008. Goals are overarching statements that try to capture public values in simple, concise language. They describe desired conditions and are achieved in degrees and by specific actions. Every goal has one or more objectives which express a preferred outcome. Objectives are also simple statements, but objectives tend to describe specific results.

Many decisions made by City and County officials will be guided by the goals expressed in this Growth Policy. Certain actions and decisions, such as land use regulation, are required to be consistent with the goals and objectives listed in the Growth Policy.[1] For that reason, goals and objectives must be easy to interpret and applicable to the decisions or actions being made. When making decisions, elected officials, advisory boards and staff should consult these goals and objectives and ask "Will this project result in…"? The last part of this sentence should be completed with the applicable goal or objective. If the answer is yes, the project is consistent with the Growth Policy. If the answer is no, it may be necessary to employ mitigating measures. In cases where a negative result cannot be mitigated, the decision to allow the action could be debated.

It is important to remember that goals are achieved by degrees, and even small decisions can move the community closer to a particular goal, or further away. These goals should be considered carefully but with common sense and an open mind; they are not regulations. They reflect community values that are subject to change, but they do provide the means to evaluate our actions and monitor our progress.

[1] 76-2-203, MCA, 76-2-304, MCA, 76-3-604(1), MCA

Land Use Element

1. **ISSUE:** *Neighborhoods are experiencing pressures from new development and land use changes.*

   GOAL: Predictable land use decisions that are consistent with neighborhood character and preferred land use patterns identified in neighborhood plans.

   OBJECTIVES: Preserve neighborhood integrity.
   Empower neighborhood groups.

2. **ISSUE:** *The current zoning ordinances and subdivision regulations do not always prevent incompatible uses in and adjacent to existing City neighborhoods and County townsites.*

   GOAL: New developments that are sensitive to and compatible with the character of adjacent City neighborhoods and County townsites[2].

   OBJECTIVES: Maintain a high quality of life for new and existing residents.
   Reduce conflicts between neighbors.
   Improve the appearance of land uses.
   Preserve property values.

3. **ISSUE:** *Rural townsites are not prepared to handle increased growth.*

   GOAL: Growth management tools available to rural townsites.

   OBJECTIVES: Empower communities to direct growth.
   Use County resources and services more efficiently.
   Create a sense of community.

4. **ISSUE:** *Urban sprawl threatens the rural character of land surrounding Billings, increases the cost of providing public services, and threatens the vitality of the city core and downtown area.*

   GOAL: Contiguous development focused in and around existing population centers separated by open space.

   OBJECTIVES: Ensure the continued functionality of natural systems.
   Use City and County resources in a cost effective manner.
   Create attractive communities.

[2] Compatibility refers to the degree of similarity between uses with respect to appearance, use, scale, and traffic volumes generated.

5. **ISSUE:** *There is a serious lack of affordable housing for low to moderate income households.*[3]

   GOAL: Affordable housing for all income levels dispersed throughout the City and County.

   OBJECTIVES: Improve the quality of life of low income people.
   Preserve and rehabilitate the existing supply of affordable housing.
   Promote social equity and diversity.
   Create more affordable housing and work towards replacing affordable housing lost during redevelopment projects.
   Provide rental and ownership housing options for the diverse workforce.

6. **ISSUE**: *There is a desire for more mixed-use neighborhoods.*

   GOAL: More housing and business choices within each neighborhood.

   OBJECTIVES: Improve quality of life.
   Encourage more live-work environments.
   Reduce commuting and subsequent drain on natural resources and traffic congestion.
   Develop more self-contained neighborhoods.

Economic Development Element

1. **ISSUE:** *We need to continue a cohesive focus in economic development.*

   GOAL: Coordinated economic development efforts that target business recruitment, retention, and expansion**.**

   OBJECTIVES: Improve the quality of life for residents.
   Strengthen area economy.
   Create living-wage jobs.

2. **ISSUE:** *Lack of living-wage jobs.*

   GOAL: Increase the median income of households and individuals.

   OBJECTIVES: Improve the quality of life for residents.
   Attract and retain businesses that offer competitive wages and benefits.
   Reduce dependency on social programs.

[3] Affordable housing for low to moderate income households means housing costs are no more than 30 percent for households making less than 80 percent of the median income (in 2007, median household income was estimated to be $48,304 in Yellowstone County).

3. **ISSUE:** *Entryways to our communities should be attractive and not present physical barriers discouraging economic development.*

   GOAL: Attractive and accessible communities.

   OBJECTIVES: Encourage new businesses to locate in Billings and gateway areas.
   Reduce travel time through town.
   Convey a business-friendly attitude.
   Increase the visual appeal of our highway and railroad corridors.

4. **ISSUE:** *Government supported programs and improvements are not sufficiently funded.*

   GOAL: Improved public services and facilities.

   OBJECTIVES: Construct safe and efficient infrastructure.
   Respond in a timely manner to public service needs.

5. **ISSUE:** *Like many other Montana cities, the economic viability of Downtown Billings is uncertain.*[4]

   GOAL: An economically and culturally vibrant Downtown Billings.

   OBJECTIVES: Preserve and promote economic development of Downtown Billings.
   Create a strong central "core" for our community.
   Establish downtown as a recognizable landmark.

6. **ISSUE:** *Safety in the Downtown Billings is an important element.*

   GOAL: A safe, attractive, economically vibrant downtown.

   OBJECTIVES: Encourage additional downtown residential and commercial development.
   Provide a safe environment for visitors and shoppers to the downtown.
   Build on the recent revitalization efforts in the downtown.

7. **ISSUE:** *Surrounding communities in the County need economic development to sustain them.*

   GOAL: Preserve and sustain the rural community centers throughout the County.

   OBJECTIVES: Preserve rural culture and living options.
   Promote business development to provide local services and less dependence on travel to Billings.

[4] The term "economic viability" means a state where business can be conducted at an acceptable profit margin.

8. **ISSUE:** *Billings needs to attract businesses that pay higher wages.*

   GOAL: Provide citizens with greater financial stability.

   OBJECTIVES: Focus on attracting skilled labor positions in clean industries.
   Improve the quality of life for residents.
   Strengthen area economy.
   Create living-wage jobs.

9. **ISSUE:** *The economic development of Billings Heights is overlooked.*

   GOAL: Business development and rejuvenation in the Heights.

   OBJECTIVES: Improve quality of life for Heights residents.
   Create more jobs near where people live to reduce commuter traffic.
   Capitalize on existing infrastructure and facilities.

10. **ISSUE:** *The quality of our schools is a determining factor for whether businesses locate in Billings.*

    GOAL: Promote excellence in education and safe and healthy school facilities.

    OBJECTIVES: Highlight educational quality as a business recruitment tool.
    Attract and retain educated citizens.
    Provide future taxpayers a quality education.

11. **ISSUE:** *Neighborhoods provide the character and strength of the community and the quality of neighborhoods should be preserved.*

    GOAL: Preserve neighborhood character and quality of life.

    OBJECTIVES: Empower neighborhoods.

12. **ISSUE:** *The Billings economy faces a severe shortage of skilled workers in a number of sectors (a problem that will worsen as the population ages).*

    GOAL: Community-wide planning and preparation of a skilled workforce to meet the diverse and growing economic development needs of the community.

    OBJECTIVES: Improve coordination between the business community, economic development agencies and school districts.
    Increase educational attainment for high-demand, well-paying jobs.
    Increase per capita income.
    Increase local workforce availability to attract new clean industry jobs.

Aesthetics Element

1. **ISSUE:** *There are areas in the City and County that are unattractive and present a poor image of the community.*

   GOAL: Visually appealing communities.

   OBJECTIVES: Improve the image of the community.
   Instill pride in the community.
   Improve the quality of life for residents.
   Preserve the community assets such as the Rimrocks, the Yellowstone River, the downtown and the major street thoroughfares.

2. **ISSUE:** *New development and signs, cell towers, power lines and other structures could reduce the visual quality of the rims.*

   GOAL: Unobstructed views of the rimrocks surrounding the City of Billings.

   OBJECTIVES: Improve the visual image of Billings.
   Protect a publicly recognized landmark.

3. **ISSUE**: *Urban interstate corridors through the County are unattractive.*

   GOAL: An inviting and attractive urban interstate corridor through the County.

   OBJECTIVES: Improve signage standards.
   Provide more aesthetic open space.
   Develop more greenspace.
   Develop attractive and well-maintained rest areas.

Natural Resources Element

1. **ISSUE:** *The quality of the Yellowstone River and the associated riparian habitat is threatened.*

   GOAL: A healthy river ecosystem system that supports multiple uses.

   OBJECTIVES: Ensure high water quality.
   Ensure continued recreational access.
   Protect wildlife and wildlife habitat.

2. **ISSUE:** *Water is an important resource and it is becoming scarcer.*

   GOAL: A sustainable supply of clean water.

OBJECTIVES: Protect public health.
Reduce the cost of groundwater remediation.

3. **ISSUE:** *Due in part to the arid nature of our environment and the remoteness of some developments, there is an increased risk to human life and property from wildfires.*

   GOAL: Minimize loss of life and property damage resulting from wildfires.

   OBJECTIVES: Save lives and property.
   Utilize fire protection resources more efficiently.
   Protect the natural environment.

4. **ISSUE:** *Weeds detract from the beauty of an area, pose a fire danger, and reduce the productivity of agricultural land.*

   GOAL: Controlled weed populations.

   OBJECTIVES: Improve range productivity.
   Preserve native vegetation.
   Reduce the risk of wildfire and potential for erosion.

5. **ISSUE:** *Human encounters with wildlife often result in a painful consequence for wildlife, pets, and humans.*

   GOAL: Reduced opportunities for negative human and wildlife encounters.

   OBJECTIVES: Reduce needless injury or death of wildlife and pets.
   Minimize property damage caused by wildlife.
   Protect human life and property.

6. **ISSUE:** *Certain development is damaging our natural resources.*

   GOAL: Protection of groundwater, surface water, riparian areas, air quality, and productive agricultural land.

   OBJECTIVES: Use City and County resources in a cost effective manner.
   Protect public health.
   Ensure the continued functionality of natural systems.

Open Space and Recreation Element

1. **ISSUE:** *Funding for park development and maintenance is tight.*

   GOAL: Equitable consideration of neighborhoods for park expenditures.

OBJECTIVES: Provide well-maintained and equipped neighborhood parks and improve undeveloped parks.
Create neighborhood parks designed to meet the needs of the neighborhood.
Empower neighborhoods to provide direction for budgetary decisions.

2. **ISSUE:** *Billings and Yellowstone County need more major recreation facilities and need to improve those we already have.*

   GOAL: Recreation facilities that serve the diverse recreational needs of Billings and Yellowstone County.

   OBJECTIVES: Meet the recreation needs of City and County residents.
   Improve the quality of life of residents.
   Encourage the development of all athletes.

3. **ISSUE:** *Private land development sometimes restricts access to public land.*

   GOAL: Accessible public lands.

   OBJECTIVES: Improve relations between users and landowners.
   Ensure the public use of public land.

4. **ISSUE:** *Billings and surrounding County townsites need more multiple use trails.*

   GOAL: A multi-purpose trail network integrated into the community infrastructure that emphasizes safety, environmental preservation, resource conservation and cost effectiveness.

   OBJECTIVES: Develop non-motorized connections between residential neighborhoods and work places.
   Provide convenient access to bicycle and pedestrian facilities.
   Improve quality of life for residents.

5. **ISSUE:** *Public access to areas above and below the rimrocks is limited and decreasing each year*.

   GOAL: Protect and increase the availability of public access to natural areas and trails near the rims.

   OBJECTIVES: Protect public use of a well-recognized and economically valuable natural resource.
   Increase recreation options for residents.
   Preserve a unique Billings' feature.

6. **ISSUE:** *Public access to areas along the Yellowstone River is limited and decreasing each year.*

   GOAL: Protect and increase the availability of public access to natural areas and trails along the River.

   OBJECTIVES: Protect public use of a well-recognized and economically valuable natural resource.
   Increase recreation options for residents.
   Preserve a unique Billings' feature.

Transportation Element

1. **ISSUE:** *Speeding in City neighborhoods and outlying communities.*

   GOAL: Safe traffic speeds consistent with the surrounding uses.

   OBJECTIVES: Decrease pedestrian-vehicle accidents.
   Promote non-motorized transportation modes.
   Promote cooperative speed enforcement.

2. **ISSUE**: *Safe and efficient traffic circulation around and through the City.*

   GOAL: Efficient cross-town and in-town traffic.

   OBJECTIVES: Reduce travel times.
   Create convenient traffic connections.
   Employ adaptable design options.
   Provide multiple intercity travel options.

3. **ISSUE:** *Lack of adequate traffic control.*

   GOAL: Improved traffic flow and reduced congestion.

   OBJECTIVES: Reduce potential harm to people and property.
   Maintain safe and efficient traffic flow.

4. **ISSUE:** *The design of roads, streets, and pedestrian facilities can be more attractive and functional.*

   GOAL: Visually appealing rights-of-way that serve the needs of all modes of travel.

   OBJECTIVES: Employ smart, cost effective designs.
   Use designs that recognize the needs of all users.
   Incorporate attractive visual elements into rights-of-way design.

5. **ISSUE:** *Obstacles to efficient and safe traffic flow.*

   GOAL: A safe and efficient transportation system characterized by convenient connections and steady traffic flow.

   OBJECTIVES: Identify obstacles to traffic flow.
   Remove or minimize impediments to traffic flow.
   Manage traffic demand.

6. **ISSUE:** *Deteriorated conditions of City streets and County roads.*

   GOAL: City streets and County roads maintained at safe standards.

   OBJECTIVES: Equitably share the cost of maintaining roadways.
   Timely response to public needs.

7. **ISSUE:** *Resources for transportation improvements should be rationally allocated throughout City neighborhoods and County townsites.*

   GOAL: Rational consideration of all City neighborhoods and County townsites when allocating transportation improvement funds.

   OBJECTIVES: Select projects based on a needs assessment.
   Reduce waste through coordination of projects.

8. **ISSUE:** *More convenient bus schedules are needed to attract MET ridership.*

   GOAL: Convenient alternative transportation modes.

   OBJECTIVES: Reduce traffic congestion in Billings.
   Elevate the status of bus riding.
   Make bus-riding convenient.
   Provide cost-effective alternative to vehicular travel.
   Reduce greenhouse gas emissions from individual vehicles.

9. **ISSUE:** *The sidewalk system in the City needs upgrading; many sidewalks are cracked and broken, several critical sections are missing, and important sidewalk routes are not adequately maintained.*

   GOAL: Well maintained network of safe and interconnected sidewalks.

   OBJECTIVES: Improved public safety.
   Promote healthy lifestyle.
   Reduce traffic.

10. **ISSUE**: *Lack of adequate bicycle facilities.*

    GOAL: Additional bicycle facilities throughout the City and the County.

    OBJECTIVES: Provide needed facilities for recreational and commuter bicyclists
    Encourage bicycling as a cost-effective, healthy alternative to driving
    Promote safe bike riding options

11. **ISSUE:** *MET Transit is underfunded.*

    GOAL: Public transportation remains economically viable.

    OBJECTIVES: Maintain and grow MET Transit ridership.
    Reduce traffic congestion.

12. **ISSUE:** *Deterioration of air quality due to vehicle emissions.*

    GOAL: Reduce carbon emissions from vehicles.

    OBJECTIVES: Maintain healthy air quality levels.
    Act locally to fight global warming.
    Support alternative transportation modes.

13. **ISSUE:** *Some bicyclists do not follow traffic laws and can cause unsafe situations.*

    GOAL: Vehicles, pedestrians and bicyclists safely and courteously sharing facilities.

    OBJECTIVES: Ensure equitable and safe use of public transportation facilities.
    Encourage alternative modes of transportation.
    Educate users of the responsibilities.

14. **ISSUE:** *There are more motorcycles, bicycles and motor scooters on the roadways.*

    GOAL: All transportation modes safely and courteously sharing facilities.

    OBJECTIVES: Ensure equitable and safe use of public transportation facilities.
    Encourage alternative modes of transportation.
    Educate users of the responsibilities.

15. **ISSUE:** *Billings needs a cross-town demonstration or pilot program to illustrate that convenient public transportation attracts riders.*

    GOAL: Promote public transportation options with predicable, convenient routes.

    OBJECTIVES: Maintain and grow MET Transit ridership.
    Reduce traffic congestion.

Public Facilities and Services Element

1. **ISSUE:** *Residents are not adequately informed of County and City projects.*

   GOAL: An effective public notification system.

   OBJECTIVES: Enhance public involvement.
   Provide timely and accurate public notification.
   Increase contact with news media.

2. **ISSUE:** *Dilapidated and unsafe properties in City neighborhoods and County townsites.*

   GOAL: Sanitary and safe properties.

   OBJECTIVES: Provide helpful and responsive public services.
   Improve the community image.
   Increase property values.

3. **ISSUE:** *Safety is a concern in neighborhoods and outlying County townsites.*

   GOAL: Protect public lives and property.

   OBJECTIVES: Ensure adequate public service to all residents.
   Utilize scarce resources wisely and employ cost effective techniques.
   Maintain acceptable levels of service in existing City neighborhoods when expanding service to new areas.

4. **ISSUE:** *There are safety and functionality issues with City streets.*

   GOAL: Safe, functional, and attractive streets for all users, including drivers, bicyclists and pedestrians.

   OBJECTIVES: Enhance public safety on the street.
   Reduce traffic accidents and congestion.

5. **ISSUE:** *Funding for community facilities and infrastructure is very limited.*

   GOAL: Equitable collection and distribution of funding for public services and facilities.

   OBJECTIVES: Ensure users pay fair share for public services and facilities.
   Ensure facilities and services are maintained in existing neighborhoods as new neighborhoods are added.
   Explore new sources of funding as appropriate.

6. **ISSUE:** *We should review the methodology used to distribute public funds throughout City neighborhoods and County townsites.*

   GOAL: Equitable consideration of all City neighborhoods and County townsites for public funds expenditures.

   OBJECTIVES: Identify and prioritize neighborhood needs.
   Empower public to provide direction on capital improvements expenditures.
   Leverage public funds with other resources.

7. **ISSUE:** *There are vacant structures around Billings and in the County that could be reused.*

   GOAL: Adaptive reuse of vacant structures.

   OBJECTIVES: Conserve resources.
   Preserve historic or cultural landmarks.
   Take advantage of economic development opportunities.
   Preserve neighborhood integrity.

8. **ISSUE:** *Community services are not always available to everyone.*

   GOAL: Equitable provision of community programs and services.

   OBJECTIVES: Enhance public access to community services and programs such as libraries, public transportation, and the like.
   Encourage civic participation.

9. **ISSUE:** *Subdivision review, zoning applications, and other development permit review are not always conducted in a streamlined and timely manner.*

   GOAL: Predictable and timely development review procedures.

   OBJECTIVES: Expedite review process.
   Actively enforce development regulations.
   Be responsive to applicants' needs.
   Provide adequate Planning Department staff for review purposes.

10. **ISSUE:** *Maintenance of existing K-12 school facilities and planning for new schools is critically important to maintaining existing communities built around the neighborhood school concept and fostering new communities surrounding school sites.*

    GOAL: Coordinated land use and facility planning among local governments, school districts and private industries.

OBJECTIVES: Shared community vision.
Increased communication and problem solving.
Encourage joint-use facilities and collocation of needs for cost-effectiveness and community building.

11. **ISSUE:** *Multiple community interests (including local government, arts organizations, and social organizations) are competing for tax dollars for facility development and maintenance, resulting in taxpayer fatigue and overall declining support for capital and maintenance projects.*

    GOAL: Adequate funding for necessary public facilities' maintenance and improvement without overburdening taxpayers.

    OBJECTIVES: Coordinated and prioritized capital improvements planning for all community interests.
    Identify shared funding sources.
    Coordinated bonding requests to balance all interests.

Cultural and Historic Resources Element

1. **ISSUE:** *Historic landmarks and structures are being lost to neglect and development.*

   GOAL: Identification and protection of the historical, archeological, and cultural resources of Yellowstone County.

   OBJECTIVES: Improve awareness of historic and cultural resources.
   Increase property values through structural rehabilitation.

2. **ISSUE:** *Cities must link economic development with quality of life. Businesses and professionals are attracted to a culturally aware city.*

   GOAL: Actively maintain existing cultural institutions in the Billings region and support additional venues and interest.

   OBJECTIVES: Promote the community's rich historical and cultural heritage.
   Capitalize on Billings' cultural assets to attract and recruit businesses.

3. **ISSUE:** *Public art is seen as an important part of the Billings landscape.*

   GOAL: A visually appealing and attractive landscape.

   OBJECTIVES: Enhance the natural and built environments with art.
   Support cultural appreciation and education.

4. **ISSUE:** *There is no requirement for surface archeological surveys to be conducted prior to many development processes, nor is there a provision for salvaging any sites that are discovered.*

   GOAL: Preservation of archeological, historic, and paleontological resources within Yellowstone County.

   OBJECTIVES: Preserve unique cultural assets.
   Support cultural appreciation and education.
   Follow State Historic Preservation Office guidelines.

Community Health Element

1. **ISSUE:** *Existing neighborhood plans lack sufficient detail to address emergency preparedness.*

   GOAL: Neighborhoods and communities prepared to react to natural disasters and other emergencies.

   OBJECTIVES: Identify and acknowledge emergency risks in the community.
   Educate neighborhoods and communities of risks and how to prepare and prevent them.
   Prepare emergency plans so that all responders and citizens know what to do.

2. **ISSUE:** *Not all neighborhoods are planned with ways to access nutritious foods.*

   GOAL: Accessible, affordable and nutritious food for everyone.

   OBJECTIVES: Reduce malnutrition, diabetes, heart disease, and other nutrition related diseases.
   Ensure equal opportunities to healthy food sources.
   Support local farm produce.

3. **ISSUE:** *Some roadways are not designed to accommodate pedestrians and therefore create inconvenient and unsafe conditions.*

   GOAL: Safe **r**oadways supportive of vehicles, bicycles and pedestrians.

   OBJECTIVES: Reduce traffic conflicts among multiple user groups.
   Support and encourage walking and bicycling for exercise and transportation.
   Provide safe walking routes to schools.
   Reduce vehicle carbon emissions.

4. **ISSUE:** *Physical activity is not seen as a viable means of getting from place to place.*

   GOAL: Physically active, healthy citizens.

   OBJECTIVES: Neighborhoods designed in ways that promote physical activity.
   Reduce healthcare costs.
   Reduce vehicle carbon emissions.

5. **ISSUE:** *Neighborhoods lack a sense of community, which is contributing to neighborhood decline.*

   GOAL: Healthy, safe neighborhoods and communities with sense of pride.

   OBJECTIVES: Citizens with a sense of belonging.
   Safe places to live and raise children.
   Local governments who are responsive to neighborhood needs.

6. **ISSUE:** *Some neighborhoods are not safe.*

   GOAL: Active, safe neighborhoods with a high quality of life.

   OBJECTIVES: Address neighborhood nuisances to promote safety.
   Adequate resources for public safety and crime prevention.

7. **ISSUE:** *Poor housing and lack of living wage jobs puts the health of residents at risk.*

   GOAL: Adequate affordable housing and living wage options for all citizens.

   OBJECTIVES: Reduce poverty related health issues.
   Provide service workers more options for housing and basic needs.

4.0 EXISTING CONDITIONS AND TRENDS

INTRODUCTION

Contained in the following ten subchapters is information on the social, economic and physical conditions of Yellowstone County and the City of Billings. This information provides the reader with an overview of the character of these jurisdictions and establishes the framework for understanding the issues raised during the public involvement process. Elected officials, staff, and the general public are encouraged to refer to these subchapters to support recommendations and decisions.

Montana statutes require a growth policy to describe the land uses, population, housing needs, economic conditions, local services, public facilities and natural resources (76-1-601(b), MCA). In addition, transportation, open space and recreation, and cultural and historic resources are also described. Each subchapter focuses on characteristics and trends that are relevant to growth and development.

A second purpose of this chapter is to create a context for understanding issues developed through public input. The issues listed in Chapter 3, Community Goals and Objectives are organized by the same elements discussed in the following subchapters. Keeping with the issue-driven theme of the Growth Policy, an attempt was made to cover information related to the issues. However, because some of the issues are based on perception rather than actual conditions, relevant background data may not be available or may support entirely different conclusions. The reader is encouraged to interpret the data and determine for themselves the relative importance of each issue.

4.1 LAND USE

INTRODUCTION

Historically, Yellowstone County land use has been dominated by agriculture and related uses. Much of the early business in Billings developed to service the surrounding ranches and farms. Today, agriculture is still a dominant land use, but residential development and commercial uses have gained considerable ground. This trend is reflected in many of the parameters discussed in this chapter, including land use trends, acres annexed, and proportion of land uses. Over the last decade, development of land has been steady, keeping pace with the population increase of approximately 1.5 percent annually. Even though this rate of growth may not seem great, development-related pressures are being felt, particularly west and northeast of Billings. This chapter provides the baseline land use information that demonstrates a steady loss of agricultural land use and an increase in urban development.

LAND OWNERSHIP

The area of Yellowstone County is approximately 1,693,751 acres. Of the total, 1,374,730 acres, or 82 percent, is under private ownership. Tribal land administered by the U.S. Bureau of Indian Affairs comprises 139,983 acres (8 percent) and is located primarily in the southeast part of the County. Other Federal agencies, including the U.S. Bureau of Land Management, the U. S. Bureau of Reclamation, and U.S. Fish & Wildlife Service administer 88,581 acres (5 percent) and state agencies administer 73,414 acres (4 percent). State land management agencies include the Department of Natural Resources, responsible mainly for State Trust Land, and the Montana Department of Fish Wildlife and Parks, which oversees State Parks and fishing accesses. Figure 1 provides a pie chart showing the percentage of land ownership in Yellowstone County. Map 4.1.1 shows the general distribution of land ownership. Land owned by the City of Billings, City of Laurel and Yellowstone County comprise less than 1 percent of Yellowstone County.

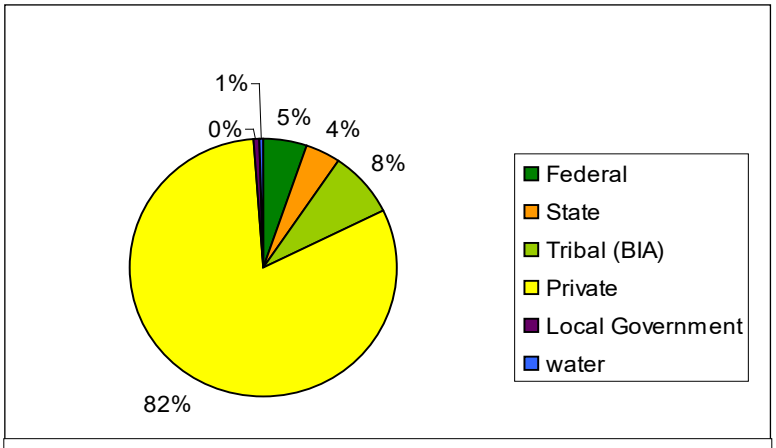
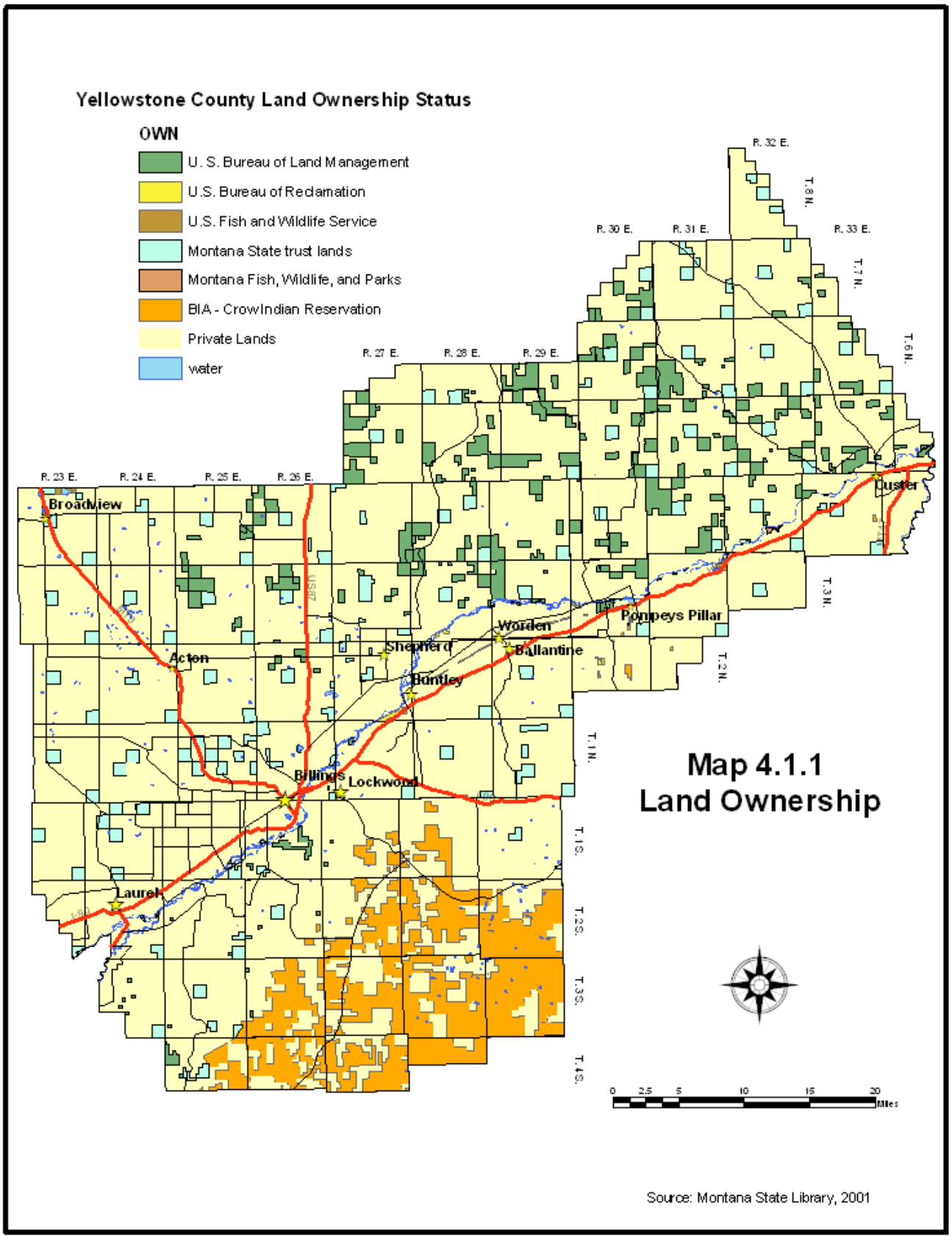


Figure 1: Percentage of land ownership in Yellowstone County. Source: Montana Department of Revenue.


Yellowstone County Land Ownership Status
OWN
U. S. Bureau of Land Management
U.S. Bureau of Reclamation
U.S. Fish and Wildlife Service
Montana State trust lands
Montana Fish, Wildlife, and Parks
BIA - Crow Indian Reservation
Private Lands
water
R. 23 E.
R. 24 E.
R. 25 E.
R. 26 E.
R. 27 E.
R. 28 E.
R. 29 E.
R. 30 E.
R. 31 E.
R. 32 E.
R. 33 E.
T. 8 N.
T. 7 N.
T. 6 N.
T. 3 N.
T. 2 N.
T. 1 N.
T. 1 S.
T. 2 S.
T. 3 S.
T. 4 S.
Broadview
Acton
Shepherd
Worden
Ballantine
Pompeys Pillar
Custer
Huntley
Billings
Lockwood
Laurel
Map 4.1.1
Land Ownership
0 2.5 5 10 15 20
Miles
Source: Montana State Library, 2001

CURRENT LAND USE AND LAND USE TRENDS

In general terms, land use in Yellowstone County falls into five main categories: agricultural, residential, commercial, industrial and recreational. The majority of the County, just under 1.25 million acres, is classified by the Montana Department of Revenue as agricultural. The primary residential and commercial centers are located in Billings, Laurel, and Lockwood and to a lesser extent, the communities of Custer, Shepherd, Huntley, Worden, Ballantine, Pompey's Pillar and Broadview. There is approximately 18,954 acres of commercially and industrially-classed property and 54,455 acres of residentially-classed property throughout the County. Industrial uses are mostly confined to Billings, Laurel and Lockwood. The remaining 370,000 acres includes land administered by the Bureau of Indian Affairs, or is not classified or is exempt[5].

City of Billings

By the end of 2007, the City of Billings contained 40.398 square miles and is the largest city in Montana. The size of Billings has nearly tripled in size since 1970 when the gross area totaled 14.717 square miles. This figure increased by 6 square miles by 1980 to 20.347 square miles. By 1990, the City added another 10 square miles bringing the total City area to 31.726 square miles. The annexation rate dropped in the 1990's during which time only one square mile was added to the City limits. However, since 2000, more than seven square miles has been annexed. The largest annexations occurred in 2002 when approximately 3,026 acres, or 4.7 square miles in the Briarwood, Cedar Park, Rehberg Ranch Estates and Yellowstone Club Estates subdivisions were annexed.

TABLE 1
CITY OF BILLINGS
ANNEXATION STATISTICS

YEAR	Gross Area (sq. mi.)	Net area (sq. mi.)	Total Miles of Streets	Total Miles of Alleys	Total Miles of Highway	Total Miles of Interstate
1970	14.717	13.084	250.681	97.304	0	0
1980	20.347	17.282	319.179	104.633	3.896	9.469
1990	31.726	27.129	437.710	120.666	7.221	9.469
2000	32.824	27.923	458.074	121.097	7.221	9.912
2002	33.634	28.526	462.95	121.06	7.705	9.912
2003	38.233	32.829	482.891	121.032	8.425	9.912
2004	38.665	33.4141	490.942	121.032	8.662	9.912
2005	38.846	33.272	495.226	121.004	9.088	9.912
2006	39.195	33.554	502.079	121.032	9.159	9.912
2007	40.398	34.632	511.519	121.985	9.365	9.912

[5] Exempt properties refer to land owned by entities not subject to property tax such as school districts, local governments, state agencies and tax-exempt non-profit organizations.

Since 2002, generally smaller vacant properties have been annexed in preparation for urban development. Table 1 shows the annexation history of Billings from 1970 to 2007, including the miles of streets, alleys, highways and interstate annexed.

Tables 2 and 3 illustrate the growth of the City of Billings relative to the growth of Yellowstone County as a whole. Figure 2 represents the change in the gross area of Billings as a percentage of the gross area of Yellowstone County. Billings currently makes up 1.5 % of the gross area of the County, a figure that has only slightly increased since 1990. Figure 3 shows the growth of the City and County in terms of population change. Since 1990, the City of Billings added over 20,000 people, while all of Yellowstone County (including the City) added approximately 26,500. That would indicate that only 6,500 people were added to the County, outside the City limits. In combination, these two tables show that higher-density urban development has been most prevalent in Yellowstone County.

TABLE 2
GROSS AREA – CITY OF BILLINGS vs. YELLOWSTONE COUNTY

Year	Billings Gross Area (sq. mi.)	Yellowstone County Gross Area (sq. mi.)	Billings Gross Area Percent of County	Billings Gross Area Percent Change
1970	14.717	2,646	0.6%	-
1980	20.347	2,646	0.8%	+0.2%
1990	31.726	2,646	1.2%	+0.4%
2000	32.824	2,646	1.3%	+0.1%
2007	40.398	2,646	1.5%	+0.2%

TABLE 3
POPULATION – CITY OF BILLINGS vs. YELLOWSTONE COUNTY

Year	Billings Total Population	Yellowstone County Total Population	Billings Total Population Percent of County	Billings Population Percent Change
1970	61,581	87,367	70.5%	-
1980	66,798	108,035	61.8%	-8.7%
1990	81,151	113,419	71.5%	+9.7%
2000	89,847	129,097	69.6%	-1.9%
2007	101,876	139,936	72.8%	+3.2%

Zoning Activity

The City of Billings and Yellowstone County share Unified Zoning Regulations but the City and the County administer their zoning separately. Each jurisdiction has a Zoning Commission and a Board of Adjustment. The City Zoning Commission reviews special reviews and zone changes and forwards recommendations to the City Council for their final action. The City Board of Adjustment is authorized to act on variances.

The annual number of zoning actions has been variable over the past decade. Zoning variance applications reached a peak between 2002-2004, while Special Reviews and Zone Changes

peaked a couple years later during 2004-2006. It is uncertain why the various applications peaked during different times, although generally, zoning applications increase during highly active growth years. A record number of Zone Changes processed in 2007 is reflective of the large number of Council-initiated zoning code text amendments completed. The following table shows the number of actions from 1997 to 2007 for the City of Billings.

TABLE 4
CITY OF BILLINGS ZONING ACTIVITY
1997 TO 2007

Year	Variances	Special Reviews	Zone Changes
1997	10	33	13
1998	11	32	19
1999	28	24	4
2000	23	34	8
2001	22	24	10
2002	28	19	22
2003	35	16	14
2004	35	26	29
2005	22	26	19
2006	22	32	24
2007	19	20	35

Subdivision Activity

The amount of subdivision activity the City experienced between 1988 and 2007 is consistent with the increase in the City's physical size as well as its growth in population (discussed in Chapter 4.2) and building permits activity. During this period, the City processed 100 commercial subdivisions and 175 residential subdivisions. In total, 486 commercial lots and 4,324 residential lots were created. Astoundingly, nearly 2,000 of the residential lots were created between 2003 and 2007. As shown in Figure 2, the number of lots created in the City since 1988 has dramatically increased overall, and can be best described as an upward trend with peaks and lulls. Presumably the peak years (1993-1994, 2002-2003, and 2004-2006) are followed by some years of slower platting trends due to absorption of the excess lots that may have been inventoried by developers and builders.

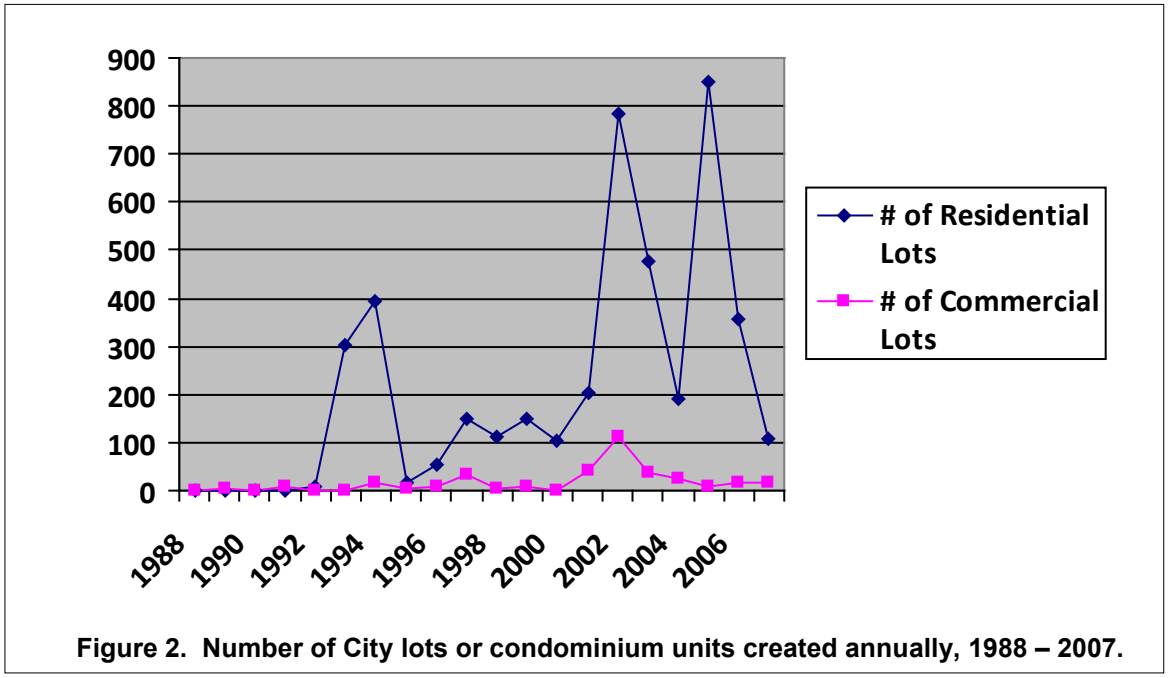


Figure 2. Number of City lots or condominium units created annually, 1988 – 2007.

Residential Land Use

The City Zoning jurisdiction includes the entire City of Billings (40.398 square miles). There are 25 zoning districts and 2 overlay districts in the City. Land zoned for residential uses comprises approximately 53 percent of the total zoning jurisdiction, which is up 3% since 2003. In order of density, the residential zoning districts allowed in the City are listed in Table 5. Also shown is the percentage of City land occupied by the district and the percentage of change in area that each district has experienced since 2003.

TABLE 5
RESIDENTIAL ZONING DISTRICTS WITHIN THE CITY OF BILLINGS

DISTRICT	% of City by Zoning District	% Change since 2003	DENSITY
Residential 9,600	27.9%	+2.69	1 d.u./9,600 s.f.
Residential 8,000	.13%	+.02	1 d.u /8,000 s.f., 2 d.u./10,000 s.f.
Residential 7,000	16.0%	+2.79	1 d.u./7,000 s.f., 2 d.u./9,600 s.f.
Residential 7,000-Restricted	Data not available	N/A	1 d.u./7,000 s.f.
Residential 6,000	4.8%	-1.4%	1 d.u./6,000 s.f., 2 d.u./8,000, 1,500 s.f. per additional unit up to 10 units.
Residential 6,000-Restricted	Data not available	N/A	1 d.u./6,000 s.f.
Residential 5,000	.50%	+.37%	1 d.u./5,000, 2 d.u./8,000 s.f.
Residential Multi-Family	.78%	-.82%	Square footage requirements increase for additional dwelling units. Minimum square footage is 6,000. 400 s.f. required for each additional unit over 8 units.

Residential Multi-Family Restricted	1.1%	+.25%	Square footage requirements increase for additional dwelling units. Minimum square footage is 6,000. 1,500 s.f. required for each additional unit over 8 units.
Residential Manufactured Home	1.7%	-.14%	Allows 1 manufactured home per 6,000 s.f.

Commercial and Industrial Land Use

Almost 9 percent of the land within the City is zoned for commercial uses and 12 percent for industrial uses. The commercial zoning districts include Residential Professional, Neighborhood Commercial, Community Commercial, Highway Commercial, Central Business District, Entryway Light Commercial, Entryway General Commercial, Entryway Mixed Use, South 27th Street Corridor and Medical Corridor Permit Zoning Districts. Three zoning districts, Entryway Light Industrial, Controlled Industrial, and Heavy Industrial, allow industrial uses in addition to all commercial uses. The City also has several properties zoned Planned Development which account for just over 10% of the land. Planned Development zoning allows for mixed use and provides for customized zoning regulations. The City currently has 24 PD zones, of these, seven are commercial, eight are residential, and nine are mixed use. These numbers reflex an increase in 3 mixed use PD zones and one residential PD zone since 2003.

Also since 2003, the City has also adopted two 'overlay districts', being the Shiloh Corridor Overlay District and the South Shiloh Corridor Overlay District. The intent of the overlay districts is to enhance the development standards of the newly developing Shiloh Corridor entryway, while not altering the uses allowed by the underlying zoning districts.

Recreational Land Use

Public zoning accounts for 14 percent of the City of Billings and includes large tracts of land such as public parks, the Billings Logan Airport and college and university properties. In Billings, there are well over 2,700 acres of public park land. Park land is acquired through subdivision dedication or through direct land acquisition. Park land ranges from undeveloped, natural parks, such as Phipps Park off of Molt Road, to fully developed, multiple use parks and sports complexes like Stewart Park near Central Avenue and 30th Street West.

Vacant Parcels

The 1990 Yellowstone Comprehensive Plan reported that there were 1,861.94 acres of vacant land in the City of Billings in 1989. This number remained relatively unchanged at 1,886 acres of vacant land in 2000 as classified by the Montana Department of Revenue (MDOR). By 2007, MDOR reports that there are 2,709 acres classified as vacant. This acreage amounts to a total of 3,848 vacant parcels. These data may potentially suggest that development of land within the City limits during the 1990's was keeping pace with annexation of vacant lands, however, since 2000, more vacant land has been annexed (approximately 900 acres) than has been developed.

Exempt Parcels

Properties exempt from state and local property taxes vary considerably in use and zoning. Tax exempt entities include government agencies, school districts, hospitals, and churches. In 2007, within the City of Billings, there were 5,077 acres of land classified as exempt by the Montana Department of Revenue, which makes up 19.6 percent of the total City acreage.

Yellowstone County and Billings Urban Area

County Zoning Activity

The County zoning jurisdiction encompasses 146 square miles and is divided into 23 zoning districts. Seventy-five percent of the land in the County's zoning jurisdiction is zoned Agricultural-Open Space (A-1), which permits 1 dwelling unit per 10 acres. Two other zoning designations that are exclusive to the County's zoning jurisdiction are Agricultural-Suburban (A-S), which encompasses only 2% of the area and Residential 15,000 (R-150), which makes up 8% of the area. A-S zoning permits limited agricultural functions and allows one dwelling unit per acre. R-150 provides for low density single-family residential with a minimum lot size of 15,000 square feet. There are 3,537 acres of industrially zoned property in the County's zoning jurisdiction, which makes up 5% of the area. Commercial zoning makes up less than 2% of the zoning in the County, with 1,232 acres.

The zoning activity in the County zoning jurisdiction has fluctuated over the past 10 years, but in general makes up around 30 percent of the combined zoning activity in the City and County. Figure 3 displays the number of annual zoning actions that occurred in the County zoning jurisdiction between 1997 and 2007.

The most notable anomaly since 2003 is a marked drop in all County zoning application types in 2004. This illustrates the significance of the 2003 State Legislation that made building permit issuance optional for County governments starting on October 1, 2003. Prior to this, residents of the County within approximately 4 ½ miles of the City limits were required to obtain building permits prior to initiating construction projects. Those building permits were then reviewed simultaneously for zoning compliance and violations were caught before construction began. Yellowstone County has not required building permits since that time and presumably the drop in zoning applications in the 2004 could be attributable to the lack of zoning compliance reviews. Picking up on this disparity, the Board of County Commissioners adopted a new Zoning Compliance permit system by resolution on August 3, 2004.

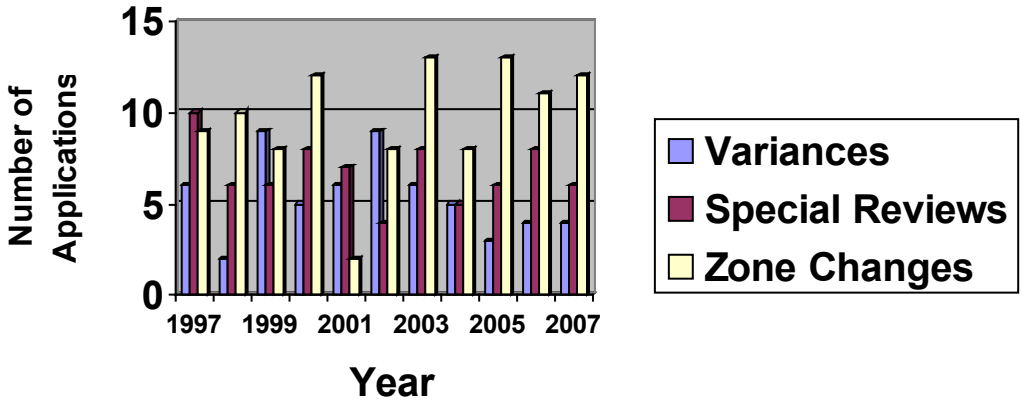


Figure 3. Zoning activity in Yellowstone County 1997 – 2007.

Subdivision Activity

Figure 4 plots the number of commercial and residential lots created between 1988 and 2007 in the County. From 1988 to 1992, subdivision activity was very limited. After 1992, the creation of lots through subdivision review increased quite dramatically. This may be attributed to a change in the Montana Subdivision and Platting Act in 1993 that required all non-exempt land splits creating parcels less than 160 acres to be reviewed as subdivisions; prior to that change, the minimum lot size was 20 acres. Between 1988 and 1992 only 5 residential subdivisions plats were filed. Between 1992 and 2002, a total of 218 plats were filed. The average for this period was 21 subdivisions per year. In terms of lot type, total of 1,087 residential lots or condominium units were created between 1988 and 2002. Commercial subdivision activity in the County was very slow between 1988 and 1998. However, after 1998, a significant increase was seen with 131 new commercial lots created between 1998 and 2002.

An even more notable increase in County subdivisions occurred from 2003 to 2007, when 145 County plats were filed, averaging 29 per year. Similar to subdivision trends in the City of Billings, over the last five years, Yellowstone County has experienced a boom in residential land development, with 1170 residential lots created. However, commercial subdivisions have gone flat with only 20 commercial lots created during this time.

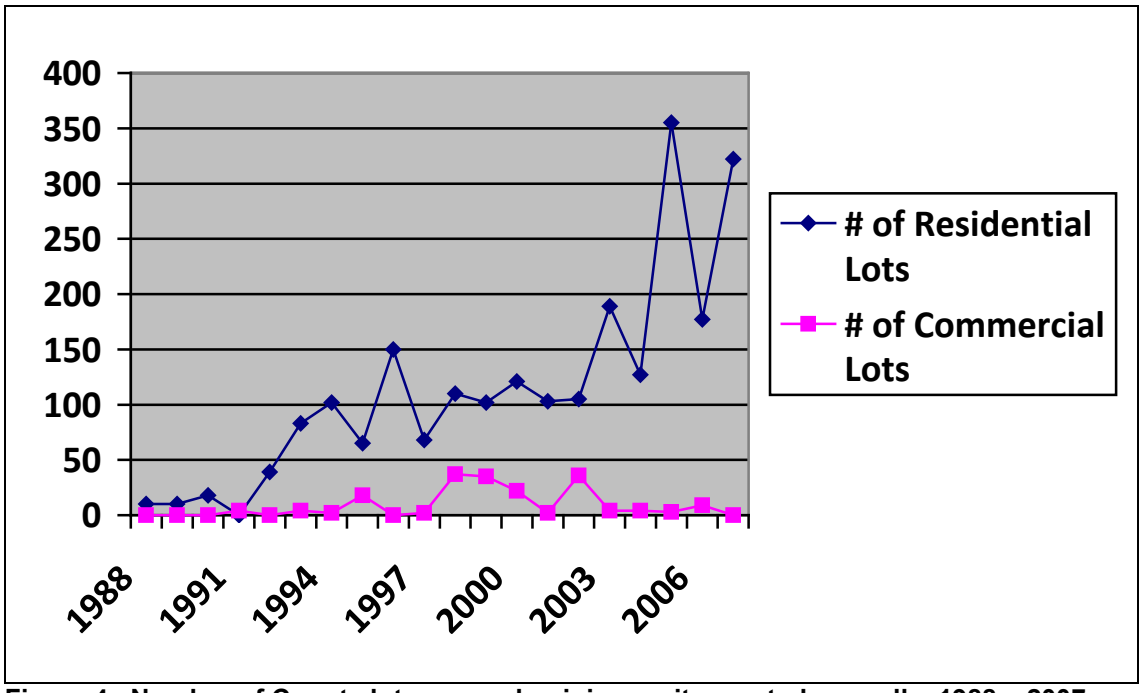


Figure 4. Number of County lots or condominium units created annually, 1988 – 2007.

Residential Land Use

The majority of residential property is located along the Yellowstone River valley, highway corridors and concentrated around Billings and other communities. The largest residential areas located outside the City of Billings are Laurel, Lockwood, and Huntley. Within the County zoning jurisdiction, immediately surrounding the City of Billings and Lockwood, approximately 18 percent of the area is zoned residential.

Commercial and Industrial Land Use

The County commercial and industrial centers are located adjacent to the City of Billings, Lockwood and Laurel. Smaller commercial uses are concentrated in the other County townsites. Within the County zoning jurisdiction, including Lockwood and the area adjacent to the City, 1,232 acres are zoned for commercial use and 3,537 acres are zoned for industrial use.

Agricultural Land Use

The 2002 Census of Agriculture reported a 2.7 percent increase in the amount of land used for agricultural purposes between 1997 and 2002 in Yellowstone County. An estimated 1,568,637 acres or 90 percent of the total County land base is used for cropland and grazing. Most of the agricultural land, 1,190,404 acres, is used for livestock grazing while 378,233 acres are cultivated for crops. Cultivated crop acres are down slightly since 1997, when there were 381,390 acres reported in this use. Also down are the number acres being used for irrigated cropland from 80,024 acres in 1997 to 77,850 acres in 2002. This decrease of 2,174 irrigated acres may indicate that the loss of irrigated land to annexations

and subdivisions was not recaptured elsewhere in the County. Within the County zoning jurisdiction, 69 percent or 100 square miles of land is zoned for agriculture.
Agricultural land is held in private, state and federal ownership. The Montana Department of Natural Resources manages 9,000 acres of land under agricultural production and 6,800 acres of grazing land. The Bureau of Land Management has approximately 76,900 acres allotted for grazing purposes.
In terms of private agricultural uses the following table shows the top crops and livestock for 2002, according to the Census of Agriculture. Note: The single-year report shows approximately only half of the total acres in production, due mainly to crop rotation.

TABLE 6: 2002 Agricultural Production for Yellowstone County

Crop	Reported Acreage Produced
Wheat	69,211
Hay	50,116
Barley	20,397
Corn for silage	13,176
Sugar beets	9,204
Corn for grain	1,212
Vegetables for sale	182
Livestock	**Reported Number of Head**
Cattle	127,980
Sheep	4,588
Pigs	3,455

Recreational and Conservation Land Use

Land accessible for recreational purposes is distributed throughout the County. The largest recreational areas are held by the U. S. Bureau of Land Management (BLM). The BLM administers almost 11,000 acres of recreational land. The Montana Fish, Wildlife and Parks Department maintains seven sportsman accesses along the Yellowstone River as well as Lake Elmo State Park and Pictograph Cave State Park. County parks make up a small fraction of the total recreation land in the County.
The Montana Natural Heritage Program (MNHP) maintains a database of general land ownership, including conservation easements. Conservation easements (CE) remove development rights from property ensuring that important conservation values of the land are protected. The land remains in private ownership, but the easement is held by private, non-profit land trusts. In 2002, the MNHP reported there were 11 CEs, totaling 18,564 acres, in Yellowstone County. Ten easements are held by the Montana Land Reliance and total 18,306 acres. The largest of these which is 13,884 acres, is located between Billings and Roundup on the Musselshell County line. The Nature Conservancy holds a CE located along the Yellowstone River just northeast of Billings. This easement is 258 acres.
Since 2002, there have been at least three more conservation easements added to the inventory within Yellowstone County. In 2003, the Canyon Cove Ranchlands CE was accepted by the Montana Land Reliance. In 2005, the Montana Land Reliance accepted

the Parks-Nunez II CE, located on the far eastern extent of the County, south of Custer. It contains approximately 200 acres, and connects to a previously preserved CE by the same name.

Also, in 2007 the Stratford Trust Overlook CE was accepted by the Mid-Yellowstone Land Trust. This parcel of land takes in the highest point within Yellowstone County, and is located south of Billings in the Blue Creek drainage.
The State also holds land in trust. State trust lands are administered by the Trust Land Management Division of the Montana Department of Natural Resources. The purpose of the Trust Land Management Division is to administer and manage the state trust timber, surface, and mineral resources for the benefit of the common schools and the other endowed institutions in Montana, under the direction of the State Board of Land Commissioners. In Yellowstone County there are approximately 74,072 acres administered by the Trust Land Management Division.

Vacant Parcels

As of 2007, there were 5,260 parcels outside of the City of Billings in the County classified as vacant by the Montana Department of Revenue. The total acreage of vacant land is approximately 30,297 acres.

Exempt Parcels

All the land administered by federal agencies, state agencies and local governments is considered exempt from property tax. Non-profit organizations exempted from property tax by state and federal laws are also in this category. Exempt parcels outside of the City of Billings, comprise approximately 17.5% of the total County area.

Acton

Acton is a small, unincorporated community northwest of Billings along Montana Highway 3. The town is located adjacent to the Burlington Northern railroad tracks and provides community services for the outlying ranches and farms.

Ballantine

When the Huntley Project was developed, the Bureau of Reclamation platted several small towns. Ballantine was platted in 1907 and originally consisted of eleven blocks situated north of the Burlington Northern railroad tracks, between the Yellowstone River and Interstate 90. The town has grown slightly since it was originally platted, but the 2000 Census reports a population of 346 and a total of 130 households. Ballantine is unincorporated and unzoned.

Broadview

The incorporated Town of Broadview, situated approximately 25 miles northwest of Billings along Montana Highway 3, is zoned. The townsite measures roughly 130 acres and is divided into two zoning districts: residential and commercial. The commercial district comprises roughly 1/3 of the townsite and the remainder is zoned residential. The residential zone permits single-family and multi-family dwellings (not to exceed three stories), churches, parks, public utility stations, schools and individual mobile homes. The commercial zone is intended to accommodate service and retail facilities only. The City-County Planning Department administers the Broadview zoning regulations. A Board of Adjustment acts on variance requests, and the Town Council decides special use and zone change applications. Broadview has a population of 150 and 64 households according to Census 2000 data, and a growth rate of 1.25%, or 2 people, annually.

Since 2003, the citizens Broadview have taken steps to analyze their town's growth potential. With the assistance of Planning staff, a Community Profile and Growth Projection analysis was done in 2004 to analyze the constraints and possibilities of growth based on two things: the development of a better water supply and the construction of a railroad spur from the Bull Mountain Mine to the Burlington Northern Santa Fe main line to the southeast of town. The analysis made it clear without a better, more reliable water supply, any additional growth is not likely. Since that time, the Bureau of Mines and the Montana Department of Natural Resources and Conservation have collaborated with the town to review the area to define and evaluate hydro-geologically favorable sites for development of additional viable ground-water sources.

Custer

Custer is situated just off of Interstate 90 on the far east edge of the County. The town is unincorporated and unzoned. The original townsite consists of 28 blocks laid out in a grid pattern. The 2000 population of Custer was reported to be 145.

Huntley

Huntley is a small town in Huntley Project that was platted by the Bureau of Reclamation in 1907. The original townsite was situated next to the Yellowstone River on both sides of the Burlington Northern / Montana Rail Link railroad tracks. Montana Highway 312 cuts through the townsite which is unincorporated and unzoned. Huntley was one of the larger townsites in the Project and was originally platted with over 50 blocks. The 2000 population was reported to be 411.

Laurel

The town of Laurel lies outside the Yellowstone County Planning Board's jurisdiction and is not covered in this Growth Policy. It is, however, the second largest municipality in the County and has an estimated 2007 population of 6,495, up from 6,255 in 2000. The town lies

on the west edge of the county along the Interstate 90 and railroad corridor. Laurel is zoned and incorporated. The zoning jurisdiction extends approximately one mile outside the city limits.

Lockwood

With a population of 4,306 according to the 2000 Census, and a "community" population of 7,200 (based on school district boundaries) Lockwood is the largest unincorporated urbanized area in Yellowstone County. Located east of Billings, it is situated along Interstate 90 just east of where it crosses the Yellowstone River. The area encompasses approximately 8.1 square miles. Lockwood lies within the Yellowstone County Zoning Jurisdiction. Most of Lockwood between the river and Interstate 90 is zoned Heavy Industrial and Controlled Industrial and comprises slightly more than half of the land area (52 percent). Approximately 3 percent of Lockwood is zoned for Commercial uses, and the remaining 45 percent of land is zoned for residential uses. While most of the land in the Lockwood area is zoned industrial, residents consider Lockwood a small rural town.[6]

Riding on enthusiasm generated from a 2002 Community Visioning Project, active participants were guided by Planning staff in creating the Lockwood Community Plan, which was subsequently incorporated into this Growth Policy. Key elements of this Community Plan include creation of critical infrastructure for sewer and storm water, transportation issues, land use issues, and community facilities such as schools, parks, enhanced entryways.

Shepherd

Shepherd is small platted townsite originally consisting of a couple of blocks. Additions to the town increased the size to six blocks. The "town" straddles the Shepherd-Acton Road and is unincorporated and unzoned. The 2000 Census reports a population of 3,059, up 48% from 2,068 in 1990. This large growth rate and an increase in community interest spurred the completion of the Shepherd Community Action Plan in 2002, which was then incorporated into this Growth Policy. Key planning issues that are discussed in this plan include the construction of a community center and a trail network, public safety issues, transportation issues, preferred land use and community organization, and community projects and events.

Worden

Worden is another Huntley Project townsite established around 1907. The original town of Worden consists of 57 blocks and has been added on to the south and north. The town is located along Montana Highway 312 and the railroad tracts. It is unzoned and unincorporated. Census 2000 reports a population of 506.

[6] Lockwood Visioning Process, Montana State University Local Government Center, February 28, 2002.

Special Zoning Districts

Yellowstone County contains six special zoning districts adopted under 76-2-101, MCA, which authorizes citizen-initiated zoning districts. The special zoning districts are administered by the Planning and Zoning Commission and regulations are enforced by the Planning Department. The Planning and Zoning Commission for these districts is composed of the County Commissioners, County Surveyor and Clerk and Recorder. The special zoning districts are shown on Map 4.1.2.

Echo Canyon Area, Special Zoning District 12

Adopted in 1970, Yellowstone County Planning and Zoning District 12 encompasses approximately 3.75 square miles and is located in Sections 15, 22, 23, and 24, Township 1 North, Range 24 East. The district regulations permit single family dwellings with accessory buildings, agricultural uses, home occupations and public parks. Restrictions are placed on building height, setbacks, as well as lot size, lot coverage, signage and parking areas.

Special Zoning District 14

Special Zoning District 14 contains approximately 31 square miles and stretches from the Yellowstone River south to the south township line of Township 2 South, Range 25 East. It is bordered on the west by the Laurel zoning jurisdiction and Special Zoning District 16 to the south. The district was adopted in 1977 and rezoned in 1991. The district permits agricultural and related uses only and is zoned for 1 dwelling unit per 20 acres. District regulations also limit building setbacks.

Special Zoning District 15

In 1985, the County adopted Special Zoning District 15 , a small 60 acre area that includes the SE¼SW¼ Section 2 and E ½NE¼SW¼ Section 2, Township 2 North, Range 27 East. The district is generally located .5 miles east of Shepherd along the Shepherd-Acton Road. Only single family dwelling on a minimum of 5 acres are permitted in this district and mobile home parks, feedlot operations, junkyards and commercial uses are not permitted. Home occupations are restricted.

Special Zoning District 16

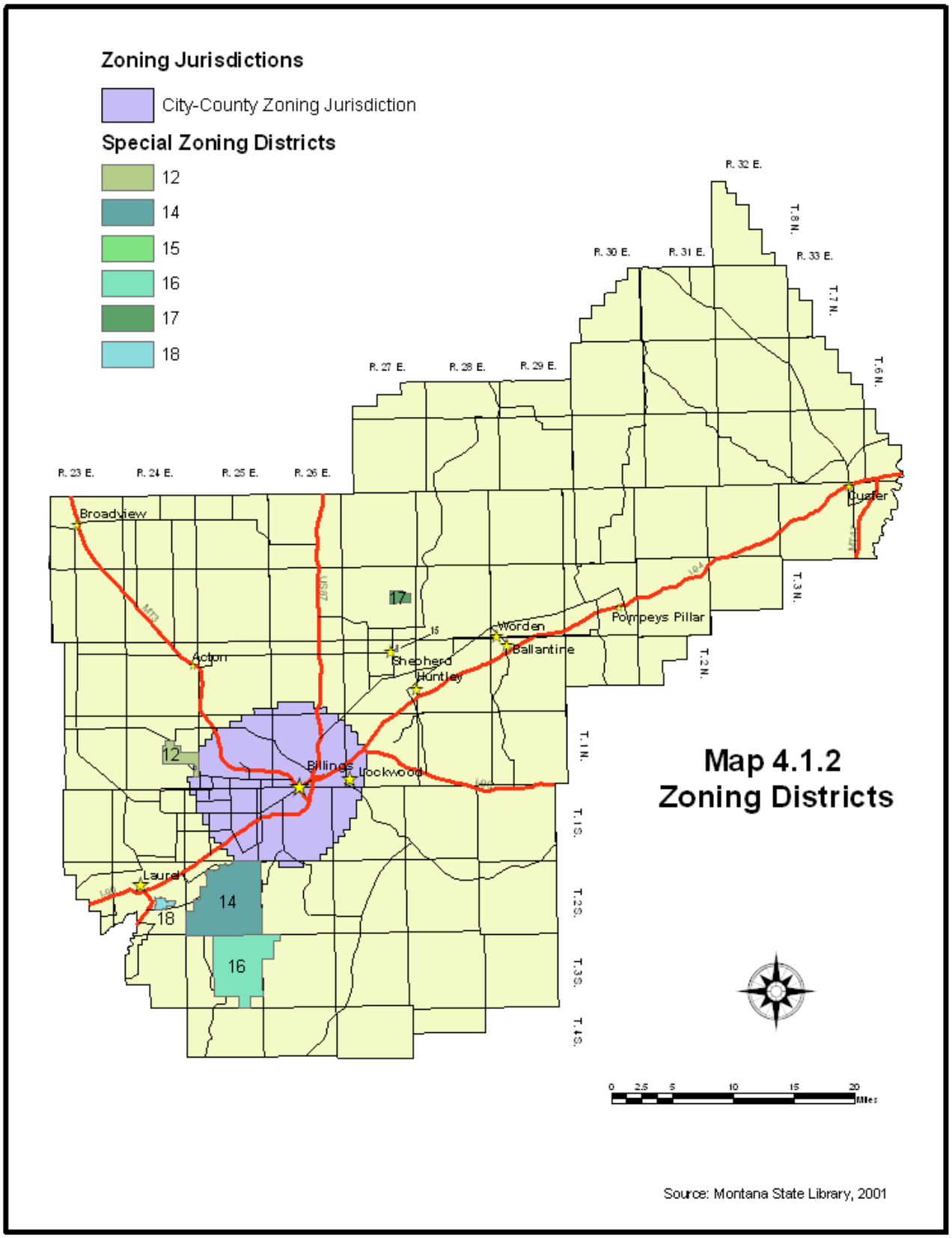
Special Zoning District 16 occupies 23.25 square miles in Township 3 South, Range 25 East. The district is zoned exclusively for agricultural purposes and allows one single family dwelling per 40 acres. The district was adopted in 1986. The district extends from the south township line of Township 2 South, Range 25 East south to the south section line of Township 3 South, Range 25 East. It is bordered on the north by Special Zoning District 14. In addition to land use, the regulations also limit building setbacks.

Pleasant Hollow Trail Area, Special Zoning District 17

Special Zoning District 17 is located in Sections 13, 14, and 15, Township 3 North, Range 27 E and encompasses 960 acres. The District is divided into 3 zoning districts: Agricultural-Residential, Residential-10 and Residential-5. The Agricultural-Residential zone allows for 1 dwelling unit per 20 acres. Agricultural uses, childcare facilities, domestic greenhouses, home occupations, and private stables are also permitted. The remaining zoning districts permit the same uses but restrict the density to 1 dwelling unit per 10 acres for the Residential-10 zone, and 1 dwelling unit per 5 acres for the Residential-5 zone.

Special Zoning District 18

Special Zoning District 18 is situated south of the Yellowstone River between Spring Creek Road and Montana Highway 212 in Sections 22 and 23, Township 2 South, Range 24 East. The district is composed of five zoning districts: Agricultural, Suburban, Residential, Recreational and Commercial. Only two properties are zoned Commercial and are located adjacent to Theil Road. The Commercial zone is intended for retail and service-oriented businesses. A single tract is zoned for recreational uses which allows single family homes and manufactured homes, as well as bed & breakfasts, campgrounds, motels, and restaurants. The Residential zone permits single family dwellings at one dwelling unit per acre. The Suburban zone is zoned for one dwelling per two acres. Most of Special Zoning District 18 is zoned for agricultural uses that permit one dwelling unit per 5 acres as well as agricultural uses, child care facilities, manufactured homes, and home occupations.


Zoning Jurisdictions
City-County Zoning Jurisdiction
Special Zoning Districts
12
14
15
16
17
18
R. 32 E.
R. 30 E.
R. 31 E.
R. 33 E.
T. 8 N.
T. 7 N.
T. 6 N.
R. 27 E.
R. 28 E.
R. 29 E.
R. 23 E.
R. 24 E.
R. 25 E.
R. 26 E.
T. 3 N.
T. 2 N.
T. 1 N.
T. 1 S.
T. 2 S.
T. 3 S.
T. 4 S.
Broadview
Custer
Worden
Ballantine
Pompeys Pillar
Acton
Shepherd
Huntley
Billings
Lockwood
Laurel
17
12
14
18
16
Map 4.1.2
Zoning Districts
0 2.5 5 10 15 20
Miles
Source: Montana State Library, 2001

Subdivision Regulations

The City and the County have separately adopted subdivision regulations, but they function similarly. The City regulations apply to subdivisions proposed within the City limits. All other subdivisions outside of the Laurel Planning Jurisdiction and the Crow Indian Reservation are regulated by the County regulations. Both the City and County regulations were significantly updated and amended in 2006 and specify the subdivision procedure for major and minor subdivisions, stipulate required improvements, and provide development standards for commercial and residential subdivisions. The subdivision regulations closely follow what is required and authorized by state law with few exceptions. In general, they are not more stringent than state law.

Zoning Regulations

The zoning jurisdiction for the City and the County extends outside the city limits approximately 4.5 miles. The City administers zoning within the city limits and the County administers the remainder. The City and the County however, share the Unified Zoning Regulations. The City Zoning Commission advises the City Council on zone changes and special reviews. The City Board of Adjustment acts on city variances. A County Zoning Commission and Board of Adjustment administer these tasks for the County.
The Town of Broadview's zoning regulations are administered by the Zoning Commission, and final zoning decisions are made by the Town Council. Appeals are made to the Board of Adjustment, whose members are appointed by the mayor.

Floodplain Regulations

Both the City and County participate in the National Flood Insurance Program which requires jurisdictions to adopt floodplain development regulations. Yellowstone County's floodplain regulations are administered by the Disaster and Emergency Services Department. The County floodplain program began in 1975, and an average of 10 permits is issued per year. The Floodplain Regulations prohibit certain uses within designated floodplains and place conditions on other uses.
The City Building Division administers the City Floodplain Regulations that were adopted in 1999. Most commercial and residential development is generally prohibited in the floodway and flood fringe unless suitably flood-proofed.
Since 2003, FEMA has adopted flood studies that delineate the flood plains for Five-Mile Creek, Unnamed Creek and Dry Creek, as well as Cove Creek as it exists north of Rimrock Road. Studies in progress include a restudy of the entire Yellowstone River and the West End of Billings to include Cove Creek (south of Rimrock Road) Little Cove Creek and Hogan's Slough.

Annexation Policy

The City of Billings adopted an Annexation Policy in 2002 which establishes review criteria to help guide annexation decisions. The purpose of the policy is to promote orderly growth of the community at urban densities (greater than 4 units per acre) with urban services/facilities,

and, control the type, quality and location of development in areas that are outside the City, but which are likely to develop at urban densities. Since that time, the Annexation Policy has been amended and refined, and a "Limits of Annexation Map" was added to when areas surrounding the existing City limits might expect support for annexation. The map shows areas immediately able to be provided City services, those out five years, and those whose future annexation is uncertain. The map considers proximity of proposed annexation to existing city limits, availability of City services, current land use, planned capital improvements, and proximity to the Yellowstone River.

Urban Planning Area

The Urban Planning Area is an area surrounding the City of Billings established for the purpose of planning for its future growth within a 10-year horizon. The UPA was initially created in 1967 under Article 20-300, BMCC, and has historically been the City's growth boundary. The UPA policy states that no City services shall be provided outside of the UPA; however, to quote a 1980 study, "the UPA is not designed to limit growth, merely limit the amount of land that is consumed and reduce the cost of services needed when this growth occurs." Expansion of the UPA requires the completion of an Urban Planning Study so that the City can determine the impacts of annexing and serving the property. City departments review UPS documents for conformance with operating policies, capital improvement plans, the Growth Policy, and other plans.

LAND USE PROJECTIONS

Based on population trends and projections, Yellowstone County is expected to grow annually by 1.5 percent. This rate would suggest an additional 2,200 people or 890 new dwelling units annually, 640 or 72% of which are located in the City of Billings (see Housing Chapter 4.3 for further housing data). According to estimated Census data, there were 2,955 more dwelling units available within the city limits between 2000 and 2006, which is an average of 426 dwellings per year. These data suggest that the steady, but exponential growth experienced with a 1.5% annual growth rate will require additional residential development in order to keep pace with housing needs.

Where the residential development would occur is controlled by several factors, including, but not limited to, zoning, availability of services and access, site conditions and market factors. Local governments can indirectly address market factors and substantially control the availability of services, access, and creation of zoning districts. Billings' recent growth has been due in part to the extension of water and sewer services. Not only has this added acreage to the City but it created a strong incentive for residents and businesses along the service extension routes to annex to the City. For that reason, it is highly probable that the highest density growth will occur along the recently extended sewer and water main routes.

Market factors may be indirectly affected by local governments by the cost of permitting and service fees. The City might influence the location of certain uses through zoning as well as through fee incentives. Public involvement has demonstrated a desire for more infill development as opposed to urban sprawl. To achieve infill, Billings may need to adopt incentives to lure developers to build on vacant city lots or rehabilitate dilapidated structures.

This strategy would make infill development more competitive than land on the edge of or outside the city.

Land use strategies that would shape the pattern of development in Yellowstone County must begin with an understanding of what the community desires. This can be accomplished through the development of more detailed area or townsite plans and City and County policies. Since 2003, Planning staff has facilitated the completion of five new neighborhood plans and three new community plans. Neighborhood plans for the Heights, North Park, Highland, South Side, and Northwest Shiloh areas are intended to provide community leaders and policy makers the ability to understand and facilitate the type of land use that these neighborhoods desire. The completed community plans for Shepherd, Lockwood and Broadview are intended to outline and strengthen the goals, priorities, and desires for land use development voiced by those community members. The annexation policy will also influence development patterns. The policy encourages the annexation of large tracts of land surrounded by or adjacent to city limits that would be developed at urban densities, and generally discourages annexation of irrigated agricultural land and large lot development. The addition of a 'limits of annexation' map to the policy in 2004 helped to further depict the City's preferred growth area.

2003 LAND USE PREFERENCE SURVEY

During the drafting of the 2003 Growth Policy, residents of Billings and Yellowstone County who attended the Billings Home Show, the Deaconess Medical Center Health Fair, or those who accessed the Growth Policy website were requested to complete a Land Use Preference Survey. The purpose of the survey was to determine which development pattern for residential, commercial, and recreational land uses, participants would prefer to see more of in Billings. The primary objective was to evaluate the current land use controls, principally subdivision and zoning regulations, and assess whether they encouraged or discouraged the preferred development pattern. A secondary objective was to determine how and where City resources should be focused. The survey consisted of three multiple choice questions: Which residential land use pattern would you like to see more of in Billings? Which commercial land use pattern would you like to see more of in Billings? And which recreational land use pattern would you like to see more of in Billings? Each question was accompanied by a graphic representing the development pattern, and a photograph exemplifying the land use. The representative graphic illustrated a generalized concept of the street network, lot size and layout for the development pattern choice. The graphic was also used to compile a graphical representation of how Billings might be transformed and grow based on the participants preferences. Each of the three questions offered a choice of three land use patterns. Where possible, examples for the patterns were selected from Billings.

Residential Land Use Patterns

Billings, like most western urban centers, was originally laid out in a rectilinear grid system. This pattern prevailed both in residential and commercial neighborhoods until the late 1960's and 1970's. During those decades, subdivision geometries changed and reflected a more suburban pattern of curvilinear streets, cul-de-sacs and large lots. This pattern became the convention and is the primary pattern repeated in contemporary subdivisions. A pattern to recently emerge in subdivision design, particularly in the more urban-rural interface, seeks to

offer open space as an amenity. Most of the open spaces are golf greens and fairways laid out amidst a natural setting, and bordered by residential lots. In the style approximating the "Rural by Design"[7] concepts, lots and streets are designed in a way to maximize the benefits of open space through conservation of natural resources. The table below describes the three land use pattern choices for residential development.

	TRADITIONAL (grid) Houses are arranged in rectilinear blocks and face the street. Sidewalks border shallow front yards. The backyards usually open onto alleys. Lot sizes are generally less than 8,000 square feet and each block may contain eight to twelve lots.
	CONVENTIONAL (curvilinear) Blocks are not uniform and streets are often curvilinear. Houses may be at angle to street frontage. Front yards are deeper than in traditional neighborhoods and there may or may not be sidewalks. Lot sizes range between 8,000 to 12,000 square feet.
	CONSERVATION (cluster) Houses are arranged in clusters separated by undeveloped or recreational greenspace. Streets are curvilinear and follow the contours of the land. Lot sizes are generally less than 8,000 square feet.

Commercial Land Use Patterns

When downtown Billings was developing in the late 19th Century, it conformed to a grid pattern established by the original plat. As the City grew, arterials stretched out from the original townsite and several developed as commercial strips. Strip development is the most prevalent commercial pattern in Billings. Modification to the strip pattern began in the 1960's with the advent of shopping malls that more or less created nodules in the commercial frontages. This pattern continued to refine and the nodules became larger and more robust. Shopping malls gave way to grand-scaled retail centers supporting grand-scaled retail cubes. The 1990's ushered in the age of the regional commercial centers and their benefactors; the big box retailers. Occurring simultaneously, and more in response to capitalizing on local consumers, neighborhood centers began emerging within or near residential areas. These commercial centers are similar to their shopping mall ancestors in scale, but do not purport to be regional attractions. Recently, the neighborhood commercial node has replaced the town center as the place to visit (McDonalds Restaurant), to be entertained (Blockbuster Video), and to grocery shop (Albertsons), all within a few minutes drive of the house. An even smaller-scaled commercial pattern is well known to dwellers of large urban areas such as

[7] Randall Arendt, 1994, "Rural by Design", Planners Press, American Planning Association, Chicago, Illinois.

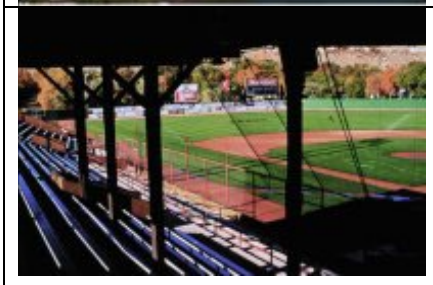
Seattle and Denver. Many Montanans may recognize it, however, as a replica of the downtowns found in the smaller towns around the state. This traditional commercial pattern is truly a neighborhood center designed to serve and be part of the surrounding residential neighborhoods. Except for the downtown, Billings has few of these traditional retail centers, and what is left might be a nonconforming use isolated by the city planners and residents, who at one time, determined that mixing residential with commercial uses was not appropriate in neighborhoods. The pattern choices offered for the commercial land use question are described below. Strip development was not listed as a choice.

	NEIGHBORHOOD (nodes) Commercial centers are located at major intersections within easy walking distance from residential neighborhoods. Stores are set back from front property lines and parking is in the front, side or rear of building. Buildings are typically one story and 15,000 to 50,000 square feet. Parking lots are landscaped.
	REGIONAL (concentrated) Big retail and service centers requiring lots of space and concentrated near the interstate and state highways. Stores are set back considerably from property lines, but may front internal streets. Buildings are very large, usually greater than 50,000 square feet. Buildings may share common walls or may be free standing. Parking lots, yards and internal street dividers are landscaped.
	TRADITIONAL (centric) Looks like small town downtowns. Located in areas central to multiple neighborhoods. Storefronts are next to wide sidewalks and most parking is on-street. Buildings are multistory and ground floors are relatively small, usually less than 7,000 square feet.

Recreational Land Use Patterns

Recreational, including open space, land use patterns are mainly a function of use. The three recreational patterns offered to the survey participant are subtly distinguished by whether the use is active, passive or simply visual. Billings is surrounded by natural features that help describe this unique place. The City is fortunate to be situated on the Yellowstone River, which runs undammed throughout its course from Yellowstone National Park to the confluence with the Missouri River. The sandstone rimrocks almost encircle the City, standing sentinel to the downtown and many of its residential neighborhoods. Stretched out south of the river are cultivated farmlands bordered in the distance by impressive mountain ranges. Unobstructed high plains expand north of the City. Slowly these landscapes encircling the City are being altered. Some residents recognize the need to protect these landscapes for their intrinsic natural values or their agricultural value. While not purely preserved for recreational purposes, open space and agricultural land use afford a quality that is visually accessible. The visual and preservation values are often accompanied by the desire

to physically experience the landscape. The recreational land use pattern that accommodates this preference is a network of linear corridors within the landscape that can be accessed on foot or bicycle. Pathways provide both access to the natural environment and connections across and around the City. The activity within these corridors is generally passive and unorganized. The recreational land use pattern that falls on the active extreme of the use spectrum are dispersed recreation facilities. Facilities are designed for active, organized sports and serves groups or organizations rather than individuals. As Billings grows, the demand for such facilities increases, not only for more, but grander, more upscale facilities. The choices in this land use pattern category were not meant to be exclusive of each other. Rather, the recreational question asked, as did the residential and commercial questions, "Which would you like to see more of in Billings?" The choices for recreational land use pattern are described below.

	OPEN SPACE & AGRICULTURE (concentric) Large swaths of land surrounding Billings are preserved for scenic, natural or agricultural values. Land set aside for open space or agricultural use controls the extent and location of future development.
	RECREATION FACILITIES (dispersed) Facilities are dispersed throughout the City within easy access of all residential neighborhoods. Size of facilities range from 1 to 20 acres depending on type. Facility types include ballparks, playgrounds, indoor gymnasiums and aquatic centers.
	BICYCLE & PEDESTRIAN CORRIDORS (linear) Narrow, linear pathways may be along developed transportation corridors or in open space corridors. Corridors connect residents with work place and recreation destinations.

Survey Results

The survey was conducted electronically using a web browser which allowed it to be placed on a website or on a personal computer. Participants were asked to take the survey and indicate their preference for residential, commercial and recreational land use patterns. Results from each survey response were recorded in a database. There were 241 responses. Results were tallied for each of the 9 patterns and for each of the 27 possible combinations of patterns.

In the Residential category, the traditional (grid) and conventional (curvilinear) patterns tied at 76 votes each. The conservation (cluster) pattern received 89 votes, a clear but not overwhelming preference. The Yellowstone County and City of Billings Subdivision Regulations or the Unified Zoning Code do not provide standards for conservation-style subdivision. The results of this category suggest that the codes should be amended to address this residential pattern. The codes were written primarily for the conventional and traditional patterns.

The survey results in the Commercial category established an obvious preference for the traditional (centric) pattern. The traditional pattern received 115 votes; the neighborhood (nodes) pattern received 80; and the regional (concentrated) pattern received 46. To encourage traditional commercial development, the Unified Zoning Code would need to be amended. While mixed use is permitted in all commercial and planned development districts, the existing standards could be modified to promote the desired intimacy and appropriate design. Furthermore, the locations of most commercial zones are not appropriate for traditional commercial centers in neighborhoods, but are more conducive to regional or neighborhood commercial centers. Residents should be involved in determining the best location for traditional land use patterns in their neighborhoods.

The votes for recreational patterns were more clustered but the bicycle and pedestrian corridor (linear) pattern was the winner with 93 votes compared with 76 for open space and agricultural (concentric) and 72 for recreation facilities (dispersed). This preference reflects the continued support for bikepaths that was initiated through the BikeNet Plan and the Heritage Trails Plan update. The other two patterns received enough votes to indicate that there is a desire for open space and agricultural protection and recreation facilities as well.

2007 CHILDREN'S 'GREAT PLACE' PROJECT

In October of 2007, in celebration of National Community Planning Month, Planning Division staff asked Yellowstone County elementary school students to describe in writing and picture their favorite place in the community and what makes it so great. The purpose was twofold: To get the youth of our communities involved in the community planning and participation process, and to help the Planning staff gain insight into the values of the future citizens and taxpayers of the community. The responses were astounding. Over 400 submittals from 10 schools were returned from students ranging from kindergarten to 6th grade. In honor of their creativity, the entries were posted on the walls of the Planning and Building Division offices on the 4th Floor of the Library and became the showcase for a Planning Division open house.

A content analysis separating City student entries from County student entries revealed some interesting results, as shown below. In general, City students submitted a greater number of entries, and had a wider range of "favorites" than those students outside of Billings. The top three City student favorites were school, amusements parks, and friendly people. County students most favored their homes, public parks and the natural environment.

2007 Yellowstone County Elementary School "Great Places" Drawing Project						
City School Entry				County School Entry		
Nature	36	9%		Nature	19	15%
Outdoor Recreation/ Open Spaces	26	6%		Outdoor Recreation	12	9%
Home	16	4%		Home/Relatives Home	31	24%
Friendly People	44	11%		Immediate Neighborhood	16	12%
School	48	12%		School	5	4%
Shopping/Eating out	31	7%		Shopping/Eating out	9	7%
Amusement Park ($)	48	12%		Amusement Park ($)	7	5%
Public Park	43	10%		Public Park	24	18%
Sporting Events	29	7%		Sporting Events	3	2%
Museum/Library	14	2%		Other	4	3%
Hospitals	15	4%				
Hotels	4	1%				
River	5	1%				
Rimrocks	11	3%				
Mountains	9	2%				
Other*	35	8%				
Total	414	99%		Total	130	99%

* "Other" category includes such things as churches, holidays, police and fire safety

YELLOWSTONE BOARD OF PLANNING GROWTH PROJECTIONS

According to state statutes, the Planning Board is responsible for encouraging "local units of government to improve the present health, safety, convenience, and welfare of its citizens and to plan for the future development of its communities to the end that highway systems be carefully planned; that new community centers grow only with adequate highway, utility, health, educational, and recreational facilities; that the needs of agriculture, industry, and business be recognized in future growth; that residential areas provide healthy surroundings for family life; and that the growth of the community be commensurate with and promotion of the efficient and economical use of public funds" (76-1-102 (a), MCA). This purpose was written into law in 1957, and is still very relevant today.

The factors that control growth are probably far more numerous and complex than 50 years ago. At same time, the technology to monitor these factors and evaluate them comprehensively has kept pace with the complexity. While the use of geographic information systems (GIS), computer modeling, and spatial analysis has expanded our abilities to project where growth may occur, the varied background and experience of a citizen advisory board is invaluable for predicting growth patterns. Map 4.1.3 presents a concept of future growth in the greater Billings area based on a combination of technology and board member's instinct.

The map illustrates the potential growth areas for a 5-, 10-, and 20- time horizon based on a moderate, annual growth rate of 1.5 percent. Board members placed colored dots, representing the different time horizons and a fixed number of people, on a map where they thought growth would occur during that time interval. The Planning Board considered existing zoning, the limits of annexation as shown in the 2008 Annexation Policy, existing and proposed subdivisions, water and wastewater master plans, and transportation plans when developing the map. These data, factored together with each board member's personal knowledge and market understanding, were used to estimate residential locations and housing densities. Using a GIS mapping program, the colored dots were converted into a dot density map with each dot representing a household containing 2.3 people, or the average household size in Yellowstone County. The Planning Board then considered where land uses other that residential would concentrate over time. The exercise involved drawing bubbles on a map depicting where community commercial, highway commercial/controlled industrial, multi-family residential and parks may develop overtime. Irregular shapes were used to depict these land uses on the GIS map.

Explanation of Map Legend

- 5 – Year Growth Area: Each red dot represents the general location of a household of in and after year 2013.10 – Year Growth Area: Each blue dot represents the general location of a household of in and after year 2018.
- 20 – Year Growth Area: Each green dot represents the general location of a household of in and after year 2028.

Community Commercial: a general area where community commercial uses may be concentrated over the 20-year time horizon. Community commercial is defined as retail,

service and office businesses offering a greater variety and would generally serve the larger community.

Highway Commercial/Controlled Industrial: a general area where highway commercial and controlled industrial uses may be concentrated over the 20-year time horizon. Highway commercial is defined as commercial and service enterprises which are intended primarily to serve the needs of the intercity motorist and the general traveling public. Areas designated as Highway commercial are typically located in the vicinity of, and accessible from interstate interchanges, intersections on limited access highways, or adjacent to primary or secondary highways. Controlled industrial means a variety of business, warehouse and light industrial uses related to wholesale. Also would include other business and light industries not compatible with other commercial zones, but which need not be restricted in industrial or general commercial zones. These uses are directly accessible to arterial and other transportation systems where they can conveniently serve the business and industrial centers of the city and county.

Industrial: a general area where industrial uses may be concentrated over the 20-year time horizon. Industrial uses refer to businesses engaged in manufacturing, processing, fabrication, and assembly of materials and products. Areas designated as industrial typically have access to two or more major transportation routes.

Park: a general area where large parks may be located over the 20-year time horizon. Parks are areas set aside exclusively for public or semi-public uses in order to preserve and provide a variety of open-space or recreational opportunities which serve the broader community.

Multi-family residential: a general area where multi-family residential uses may be concentrated over the 20-year time horizon. Multi-family is defined as a single building containing three or more dwelling units.

Single-family residential: a general area where single-family or duplex dwelling units may be concentrated over the 20-year time horizon.

City Limits: The incorporated area of the City of Billings in 2008.

100-Year Floodplain: The area designated by FEMA as having a 1 percent chance of flooding in any given year.

Publicly-Owned Land: Land that is owned and under the management of a local government, state government, or federal government entity.

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4.2 POPULATION

INTRODUCTION

The purpose of the Population Element of the Growth Policy is to provide information about the social and economic characteristics of Yellowstone County's population. This information includes population, age distribution, race characteristics, and educational attainment.

A common geographic designation used to report demographic data is census tract. There are currently 26 census tracts in Yellowstone County. Census tracts are defined by the Bureau of Census as, "small, relatively permanent statistical subdivisions of counties… for the purpose of collecting and presenting decennial census data. These neighborhoods contain between 1,000 and 8,000 people. The typical tract consists of approximately 1,700 housing units and 4,000 people. Tracts are designed to have homogenous population characteristics, economic status, and living conditions at the time they are established. Census tract boundaries normally follow visible features but may follow governmental unit boundaries and other non-visible features."

The information used in this section was found is several sources. Census data for the years 1970 through 1990 were found in various Bureau of the Census publications and on the Internet at http://www.ceic.commerce.state.mt.us/demog/historic. Information for 1990 was found on the Internet at http://www.census.gov and the data for 2000 were found at http://www.factfinder.census.gov. Information on population estimates from 2001 through 2006 was found at http://ceic.mt.gov/Demog/estimate/pop/City/place_2000_2006.htm. Additional information and charts were found in the following City/County Planning Department documents: *1990 Yellowstone County Comprehensive Plan, Population Characteristics Technical Appendix, The Data Book,* December 1986, and *Census Information for Yellowstone County, 1980 – 2000,* August 2001.

CHARACTERISTICS OF COUNTY POPULATION

Yellowstone County: Population Trends

Yellowstone County has enjoyed steady growth for the past several decades as indicated in Table 1. Growth within Billings has been gradual, especially in the last ten years. The most recent sizeable growth increase took place between 1950 and 1960. Population growth rate declined between 1970 and 1980. This slower growth rate reflects changes in the oil and gas industries and the agricultural industry. Because of the historic reliance on extractive resources, Billings and Yellowstone County have experienced repeated boom/bust economic cycles. This economic pattern is reflected in the population changes of the County.

TABLE 1
Population Of Yellowstone County And Incorporated Areas
Percent Change By Decade
1890 – 2000

Decade	Yellowstone County	Percent Change	City of Billings	Percent Change	City of Laurel	Percent Change	Town of Broadview	Percent Change
1890	2,065	*****	836	*****	No Data	*****	No Data	*****
1900	6,212	66.76	3,221	285.29	No Data	*****	No Data	*****
1910	22,944	22.49	10,031	50.53	806	*****	No Data	*****
1920	29,600	29.01	15,100	8.48	2,239	177.80	191	*****
1930	30,785	4.00	16,380	42.00	2,558	14.25	260	36.13
1940	41,182	33.77	23,261	36.85	2,754	7.66	140	-120.00
1950	55,875	35.68	31,834	66.02	3,663	33.00	164	17.14
1960	79,016	41.41	52,851	65.12	4,601	.25.60	160	-2.44
1970	87,367	10.57	61,581	16.52	4,454	-3.19	123	-23.13
1980	108,035	23.65	66,798	8.47	5,481	23.06	120	-2.44
1990	113,419	4.98	81,151	21.49	5,686	3.74	133	10.83
2000	129,352	14.04	89,847	10.72	6,255	10.00	150	12.78
2005**	136,543	5.60	98,666	9.81	6,337	1.31	150	0.0
2006**	138,114	1.15	100,148	1.50	6,421	1.32	150	0.0
2007**	139,936	1.32	101,876	1.73	6,495	1.15	150	0.0

**CEIC Annual Estimates of the Population for Counties and Cities of Montana: April 1, 2000 to July 1, 2007

Between 1970 and 1980, population increases occurred within the rural portion of the County and the Billings urban interface as shown in Table 2. Between 1980 and 1990 there was a marked decrease in the rural population. Some of the decrease may be accounted for with the large annexation of the Billings Heights area into the City of Billings as well as a slow economy. During the period between 1990 and 2000, the rural population, as a percent of the total population, increased by 4.4 percent. The area surrounding Billings saw a great deal of development between 1990 and 2000, which may account for some of the growth in the rural areas. Both Laurel and Billings had increases in their population in this time period. Since 2000, the City of Billings has seen a steady yearly growth rate of 1 to 2 percent.

TABLE 2
Rural and Urban Population Changes
by Decade
1890 – 2000

Decade	Yellowstone County	Urban Population	Percent Change	Rural Population	Percent Change	Urban Population by Percentage	Rural Population by Percentage
1890	2,065	836	*****	1,229	*****	40.84	59.16
1900	6,212	3,221	74.05	2,991	58.91	51.85	48.15
1910	22,944	10,837	70.28	12,107	80.25	47.23	52.77
1920	29,600	17,339	37.50	12,261	1.26	58.58	41.42
1930	30,785	18,938	8.44	11,847	-3.5	61.51	38.49
1940	41,182	26,015	27.20	15,167	21.89	63.17	36.83
1950	55,875	35,497	26.71	20,378	25.57	63.52	36.48
1960	79,016	57,452	38.21	21,564	55.00	72.71	27.29
1970	87,367	66,035	13.00	21,332	-1.08	75.58	24.42
1980	108,035	72,279	8.64	35,756	40.34	66.90	33.10
1990	113,419	86,837	16.76	26,582	-34.51	76.56	23.44
2000	129,352	96,102	9.64	33,250	20.05	74.30	27.70

The City of Billings lost population within its core neighborhoods (Census Tracts 1 though 6) between 1970 and 1990. This decline continued between 1990 and 2000 culminating with the combining of Census Tracts 1 and 2.

During the decade 1970 to 1980 Census Tracts 7 (Billings Heights) and 16 (southeastern Yellowstone County, more generally the South Hills to the Big Horn County line) had the most dramatic increase in population. Billing Heights gained almost 10,000 people during this ten-year period. The Heights again had the greatest amount of growth in Yellowstone County between 1980 and 1990. At the time of the 1990 census, Census Tract 7 was divided into four separate census tracts. The total population at the time of the 1990 Census was 17,883, an increase of 117 percent. The growth rate for the Billings Heights area slowed between 1990 and 2000. The increase in population was 1,830, an increase of 9.2 percent.

Census Tract 16 in the southeastern portion of the County grew by 213.7 percent between 1970 and 1980, tripling the population in that area of the county. The rate of growth decreased sharply during the period of 1980 to 1990. The rate of growth was only 6.8 percent. The decline in growth from this census tract can be attributed to the economic decline in the 1980's. As the economy became more stable and began to grow in the 1990's

this area of the county saw an increase in development. Between 1990 and 2000, Census Tract 16 had the third highest rate of growth in the county. The population grew from 4,422 in 1990 to 5,934 in 2000, an increase of 34.2 percent.

The tract that lost the most population in terms of actual numbers between 1970 and 1980 was Tract 4, located partially in the downtown core and extends west to Virginia Lane/5th Street West. The decrease was caused in part by the development of the Medical Corridor in the northeastern part of this tract. Many properties in the Medical Corridor were converted to medical related uses from traditional residential uses. Additionally, the portion of this tract that is located in the city center has seen a change in use from residential to commercial.

Census Tract 14 saw a 98 percent increase between 1970 and 1980 and a 43 percent increase between 1990 and 2000. Tract 14 is in the western portion of the county, excluding the City of Laurel and the Town of Broadview. This Tract is on the western edge of the City of Billings, where growth has been continually creeping westward into traditionally agricultural areas. This is an area of the County that has historically had a steady growth rate, regardless of the economy. Between 1980 and 1990, when there was slow economic growth in Yellowstone County, this Tract grew by 10 percent.

Both Census Tracts 17 and 18 had significant growth between 1970 and 1980. In 1990, Census Tract 17 was split into two census tracts and Tract 18 was split into four census tracts. Census Tract 17 is generally located in the southwest corner of the City of Billings. This Tract experienced substantial growth between 1980 and 1990 and moderate growth between 1990 and 2000.

Census Tract 18, generally located in the northwest corner of the City of Billings, including the Yellowstone County Club and Echo Canyon areas, experienced moderate growth between 1980 and 1990 and a more substantial growth rate between 1990 and 2000.

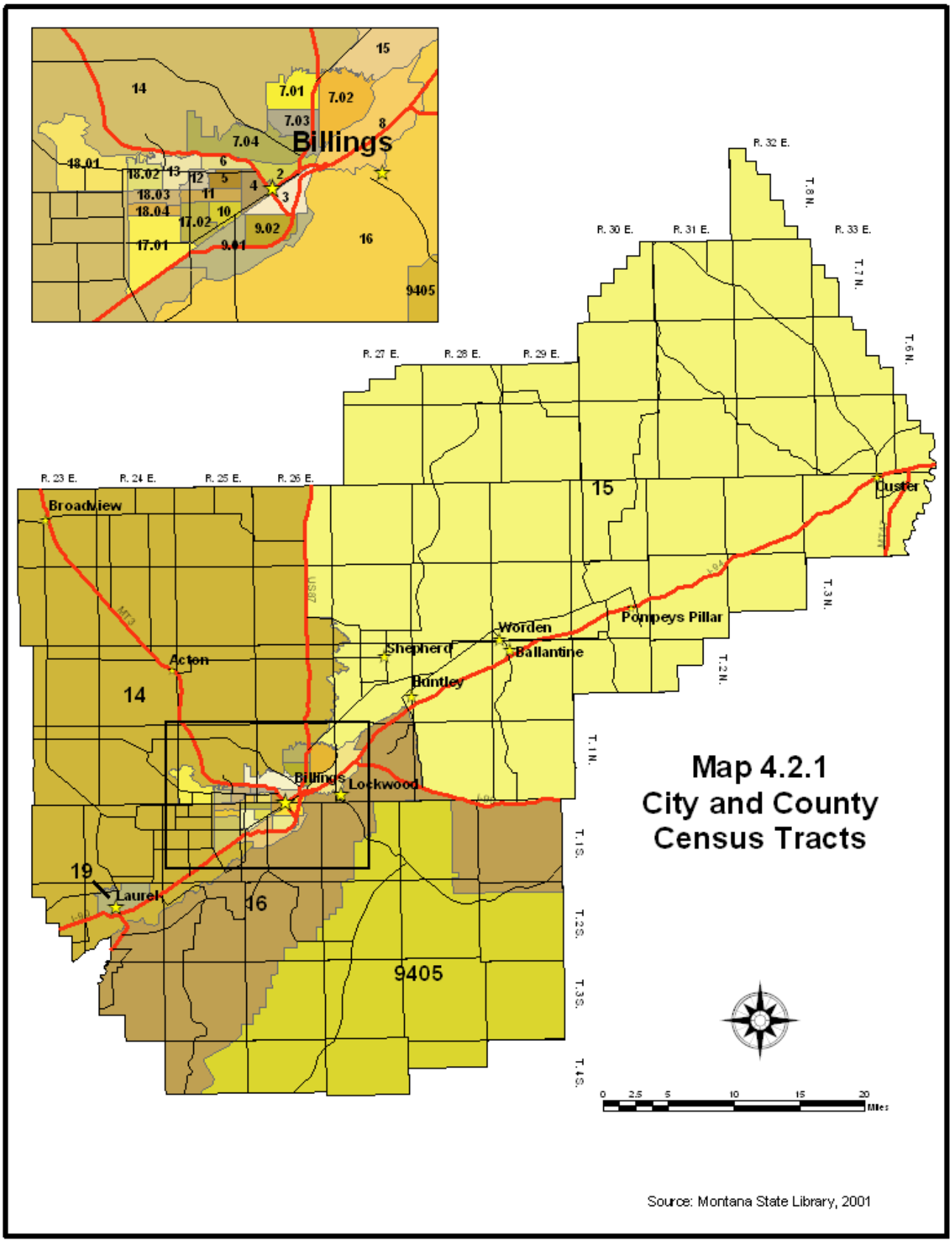
Census Tracts 1 (city center) and 4 experienced population losses from 1970 to 1990. Census Tract 1 was merged with Tract 4 for the 2000 Census, thereby showing an increase for Tract 4. Had these two tracts remained separate, the total growth for these tracts would have been 3.1 percent indicating that growth in this area is negligible.

Table 3 summarizes the change in County population by Census Tracts from 1970 to 2000. Census tracts for the City of Billings and Yellowstone County are shown in Map 4.2.1.

New population figures for census tracts will not be available until the release of the 2010 Decennial Census in 2011.

TABLE 3
Yellowstone County Change in Population
By Census Tract
1970 - 2000

Census Tract	1970	1980	Percent Change	1990	Percent Change	2000	Percent Change	Pop. Change
1	1503	1169	-22.2	788	-32.6			Tract eliminated
2	4472	3737	-16.4	3334	-10.7	3624	8.7	-848
3	4697	3894	-17.1	3300	-15.3	3592	8.9	-1105
4	7395	6189	-16.3	5237	-15.4	6214	18.7	-1181
5	5244	4464	-14.9	3971	-11.0	4119	3.72	-1125
6	4116	3696	-10.2	3055	-17.34	3136	2.7	-980
7	5496	15276	177.9		117.0			Tract split
7.01	****	****		2741		3422	24.9	681
7.02	****	****		4478		5097	13.8	619
7.03	****	****		7305		7562	3.5	257
7.04	****	****		3359		3632	8.1	273
8	2165	4152	91.8	4008	-3.5	4346	8.4	2181
9	6922	7898	14.1		-5.2			Tract split
9.01	****	****		3331		2682	-19.5	-649
9.02	****	****		4156		5069	22.0	913
10	5720	5002	-12.6	4667	-6.7	4772	2.2	-948
11	6311	5483	-13.1	5147	-6.1	5116	-0.6	-1195
12	2899	2533	-12.6	2574	1.6	2721	5.7	-178
13	5567	6182	11.0	6047	-2.2	6181	2.2	614
14	3179	6300	98.2	6981	10.8	9976	43.0	6797
15	3561	5646	58.6	6125	8.5	7834	2.8	4273
16	1320	4141	213.7	4422	6.8	5934	34.2	4614
17	5996	7182	19.7		51.3			Tract split
17.01	****	****		6379		8552	34.1	2173
17.02	****	****		4486		4345	-3.1	-141
18	6345	9634	51.8		10.9			Tract split
18.01	****	****		2669		3215	20.5	546
18.02	****	****		3097		4987	61.0	1890
18.03	****	****		2175		2178	.1	3
18.04	****	****		2736		2867	4.8	131
19	4459	5455	22.3	6851	25.6	7799	13.8	3340


Billings
7.01
7.02
7.03
7.04
8
15
14
16
9405
18.01
18.02
18.03
18.04
17.01
17.02
9.01
9.02
Broadview
Acton
Shepherd
Worden
Ballantine
Pompeys Pillar
Custer
Huntley
Billings
Lockwood
Laurel
19
R. 23 E.
R. 24 E.
R. 25 E.
R. 26 E.
R. 27 E.
R. 28 E.
R. 29 E.
R. 30 E.
R. 31 E.
R. 32 E.
R. 33 E.
T. 8 N.
T. 7 N.
T. 6 N.
T. 3 N.
T. 2 N.
T. 1 N.
T. 1 S.
T. 2 S.
T. 3 S.
T. 4 S.
Map 4.2.1
City and County
Census Tracts
0 2.5 5 10 15 20
Miles
Source: Montana State Library, 2001

CURRENT POPULATION

Yellowstone County and the City of Billings are the most populated county and city in Montana. There are only two other incorporated jurisdictions in the County: Laurel and Broadview. Laurel is the second largest incorporated community in the County and Broadview is the smallest. In addition, there are numerous, unincorporated communities, five of which are classified as Census Designated Places by the Bureau of Census. Table 4 shows the population counts based on the 2007 Annual Estimates of the Population for Incorporated Places in Montana (Cities and Towns)and population figures from the 2000 census for unincorporated areas (Census Designated Places). Please note that the below figures will not reflect increases in the Census Designated Places. The CDP figures will not be updated until the 2010 census, therefore, the numbers for the incorporated and unincorporated areas will not meet the total county population figure.

TABLE 4
Population of Yellowstone County
2007 Annual Estimates for Incorporated Places
and 2000 Census of Designated Places (CDP)

Yellowstone County	139,936
Billings (City)	101,876
Broadview (Town)	150
Custer (CDP)	145
Huntley (CDP)	411
Laurel (City)	6,495
Lockwood (CDP)	4,306
Shepherd (CDP)	193
Worden (CDP)	506

Age Distribution

Yellowstone County has experienced a shift in age distribution during the last forty years. In 1960, the median age of persons within the County was 26.6 years. The 2000 Census shows that the median age has risen to 36.9 years. The City of Billings has seen a similar increase in the median age over the last forty years. This increase in median age is a reflection of an aging population nation-wide.

Some of the general trends that have occurred are as follows:

Under 5 years old

The population of this age group decreased significantly between 1960 and 1970. Between 1970 and 1990, the 5 and under age group was fairly stable in terms of numbers of people

in this category, but showed moderate changes in the percentage of this group in respect to the total population. The 2000 Census indicates that this category is 6.62 percent of the overall population of Yellowstone County, which is a slight increase in this age group when compared to the 1990 Census numbers.

Billings experienced an increase in this population age group between 1970 and 1990 and had a small decrease between 1990 and 2000.

5 to 14 years old

In both Yellowstone County and Billings there was a moderate to significant decline in the number of children between 5 and 14, as illustrated by Tables 7 and 8, during the period between 1970 and 1980. Since 1980, both the City and the County have experienced continued growth in the number of children in this age range. This increase has resulted in a gain of population in this age group almost equal to the loss that occurred between 1970 and 1980.

15 to 24 years old

This group includes high school and college students as well as young adults entering the work force. The population of this group decreased significantly between 1980 and 1990 in both Yellowstone County and Billings. The 2000 Census shows that the population in this age group is similar to the higher 1970 Census numbers.

25 to 34 years old

While this age group represents one of the three largest age groups in Yellowstone County, it has declined since 1980. The decrease between 1980 and 1990 was slight, while the decrease between 1990 and 2000 was 15.63 percent, a significant decrease. Even with the decreases, this age group is still 12.59 percent of Yellowstone County's population. In Billings, there was a very significant increase, 62.59 percent, between 1970 and 1980 and an increase of 19.45 percent between 1980 and 1990. There was, however, a decrease of 15.80 percent between 1990 and 2000, bringing the population of this group back to the 1980 numbers. Like the County, this age group represents 13 percent of the City's total population.

35 to 54 years old

The Census breaks these ages in two groups: 35 to 44 and 45 to 54. Combined, these two groups represent 30.63 percent of Yellowstone County's population and 29.12 percent of Billings' population, according to the 2000 Census. The 35 to 44 year old age group is the larger of the two. The growth rate has been approximately 16 percent for each of the last two decennial census periods for the 35 to 44 year old group while the rate for the 45 to 54 year old group has been between 10 percent and 14 percent. It is expected that the 45 to 54 year old population will continue to increase as our population ages.

55 and older

This age group has increased steadily over the years. Currently, this group comprises 22 percent of Yellowstone County's population and is expected to increase within the next ten years as the baby boomers continue to age and people live longer. Since the 1970 Census,

when the group 75 and over was 2,950, there has been a steady and significant increase to the 2000 Census where this age group is now 6.56 percent of the population with a total of 8,463 people. The difference in numbers between the Under 5 age group and the 75 and older age group is only .06 percent with the Under 5 age group having 76 more people.

Tables 5 through 8 demonstrate the changes in our population that have occurred over the last thirty years in terms of age distribution. An aging population can present challenges in terms of the growing need to provide many types of services for senior citizens.

TABLE 5
Yellowstone County Age Distribution
by Percentage of Population
1970 – 2000

	1970		1980		1990		2000	
Age	**Total Population**	**Percent of Total**	**Total Population**	**Percent of Total**	**Total Population**	**Percent of Total**	**Total Population**	**Percent of Total**
Under 5	7,068	8.09%	9,013	8.34%	8,388	7.40%	8,539	6.62%
5 to 9	8,964	10.26%	8,491	7.86%	8,776	7.74%	9,097	7.00%
10 to 14	10,143	11.61%	8,365	7.74%	8,952	7.89%	9,538	7.39%
15 to 19	9,080	10.39%	9,781	9.05%	7,896	6.96%	9,408	7.29%
20 to 24	7,068	8.09%	10,762	9.96%	6,551	5.78%	8,366	6.48%
25 to 34	10,482	12.00%	19,476	18.03%	19,252	16.97%	16,242	12.59%
35 to 44	10,243	11.72%	12,480	11.55%	18,190	16.04%	20,900	16.20%
45 to 54	9,930	11.37%	10,476	9.70%	11,788	10.39%	18,615	14.43%
55 to 64	7,325	8.38%	9,350	8.65%	9,627	8.49%	11,149	8.64%
65 to 74	4,114	4.71%	6,168	5.71%	8,182	7.21%	8,780	6.80%
75+	2,950	3.38%	3,673	3.40%	5,817	5.13%	8,463	6.56%
Total	**87,367**	**100 %**	**108,035**	**100%**	**113,419**	**100%**	**129,097**	**100%**
Median Age	**26.6***		**28.6**		**33.5**		**36.9**	

*The 1970 Census did not give a median age for the counties. This figure was extrapolated from information contained in the 1970 Census.

TABLE 6
Billings Age Distribution
By Percentage Of Population
1970 - 2000

	1970		1980		1990		2000	
Age	**Total Population**	**Percent of Total**	**Total Population**	**Percent of Total**	**Total Population**	**Percent of Total**	**Total Population**	**Percent of Total**
Under 5	4,790	7.78%	4,907	7.35%	6,021	7.42%	5,882	6.55%
5 to 9	6,027	9.79%	4,673	7.00%	5,804	7.15%	5,985	6.66%
10 to 14	6,944	11.28%	4,635	6.94%	5,848	7.21%	6,063	6.75%
15 to 19	6,654	10.81%	6,032	9.03%	5,501	9.78%	6,290	7.00%
20 to 24	5,461	8.87%	7,377	11.04%	5,345	6.59%	6,483	7.22%
25 to 34	7,258	11.79%	11,801	17.67%	14,096	17.37%	11,869	13.21%
35 to 44	7,154	11.62%	7,071	10.59%	12,433	15.32%	13,882	15.45%
45 to 54	6,990	11.35%	6,664	9.98%	8,145	10.04%	12,284	13.67%
55 to 64	5,198	8.44%	6,401	9.58%	6,973	8.59%	7,770	8.65%
65 to 74	3,022	4.91%	4,424	6.62%	6,319	7.79%	6,464	7.19%
75+	2,083	3.38%	2,813	4.21%	4,666	5.75%	6,875	7.65%
Total	**61,581**	**100%**	**66,798**	**100%**	**81,151**	**71.55%**	**89,847**	**100%**
Median Age	**26.2***		**29.3**		**33.7**		**36.8**	

*The 1970 Census did not give a median age for the cities. This figure was extrapolated from information contained in the 1970 Census.

TABLE 7
Yellowstone County
Change In Age Distribution
By Percentage

	1970	1980	1970-1980	1990	1980-1990	2000	1990 - 2000
Age	**Total Population**	**Total Population**	**Percent Change**	**Total Population**	**Percent Change**	**Total Population**	**Percent Change**
Under 5	7,068	9,013	27.52%	8,388	-6.93%	8,539	1.80%
5 to 9	8,964	8,491	-5.28%	8,776	3.36%	9,097	3.66%
10 to 14	10,143	8,365	-17.53%	8,952	7.02%	9,538	6.55%
15 to 19	9,080	9,781	7.72%	7,896	-19.27%	9,408	19.15%
20 to 24	7,068	10,762	52.26%	6,551	-39.13%	8,366	27.71%
25 to 34	10,482	19,476	85.80%	19,252	-1.15%	16,242	-15.63%
35 to 44	10,243	12,480	21.84%	18,190	45.75%	20,900	14.90%
45 to 54	9,930	10,476	5.50%	11,788	12.52%	18,615	57.91%
55 to 64	7,325	9,350	27.65%	9,627	2.96%	11,149	15.81%
65 to 74	4,114	6,168	49.93%	8,182	32.65%	8,780	7.31%
75+	2,950	3,673	24.51%	5,817	58.37%	8,463	45.49%
Total	87,367	108,035		113,419		129,097	

TABLE 8 Billings Percent Change In Age Distribution							
Age	1970 Total Population	1980 Total Population	1970 - 1980 Percent Change	1990 Total Population	1980 - 1990 Percent Change	2000 Total Population	1990 - 2000 Percent Change
Under 5	4,790	4,907	2.44%	6,021	22.70%	5,882	-2.31%
5 to 9	6,027	4,673	-22.47%	5,804	24.20%	5,985	3.12%
10 to 14	6,944	4,635	-33.25%	5,848	26.17%	6,063	3.68%
15 to 19	6,654	6,032	-9.35%	5,501	-8.80%	6,290	14.34%
20 to 24	5,461	7,377	35.09%	5,345	-27.55%	6,483	21.29%
25 to 34	7,258	11,801	62.59%	14,096	19.45%	11,869	-15.80%
35 to 44	7,154	7,071	-1.16%	12,433	75.83%	13,882	11.65%
45 to 54	6,990	6,664	-4.66%	8,145	22.22%	12,284	50.82%
55 to 64	5,198	6,401	23.14%	6,973	8.94%	7,770	11.43%
65 to 74	3,022	4,424	46.39%	6,319	42.83%	6,464	2.29%
75+	2,083	2,813	35.05%	4,666	65.87%	6,875	47.34%
Total	61,581	66,798		81,151		89,847	

Race

The racial diversity of Yellowstone County has increased gradually over the last thirty years. In 1970, 98 percent of the County population was white and in 2000, the Census Bureau reported a decrease in the all-white population to 92.8 percent for the County. The 2000 Census also reported the percentage of the population considered white alone or in combination with one or more other races. This figure for the County was 94.5 percent.

The 2000 Census shows an increase in the Hispanic or Latino population. According to the 2000 Census, the total Hispanic population was 4,788 or 3.7 percent of the population for Yellowstone County and 3,758 or 4.2 percent for the City of Billings. This is an increase of 1,793 people or 57.24 percent since 1990 and 65.62 percent since 1980 in Yellowstone County. For the City of Billings, the increase in the Hispanic population was 1,389 people or 58.63 percent since the 1990 Census and 82.10 percent since 1980.

TABLE 9
Yellowstone County And Billings
Racial Characteristics

	Yellowstone County								Billings							
	1970	**Percent of Total**	**1980**	**Percent of Total**	**1990**	**Percent of Total**	**2000**	**Percent of Total**	**1970**	**Percent of Total**	**1980**	**Percent of Total**	**1990**	**Percent of Total**	**2000**	**Percent of Total**
One Race							126,933	98.1							87,993	97.9
White	85,765	98.17	103,546	95.84	107,921	95.15	120,014	92.7	60,329	97.97	63,537	95.14	76,738	94.56	82,539	91.8
Black/ African-American	227	0.26	289	0.27	511	.45	580	0.4	212	0.34	251	0.38	439	0.54	495	0.5
American Indian Alaska Native	1,063	1.22	2,268	2.10	3,235	2.85	3,950	3.0	832	1.35	1,560	2.34	2,569	3.16	3,088	3.4
Asian or Pacific Islander			372	.34	612	.53	755	.6			279	.42	479	0.59	533	0.5
Other Race	312	0.36	1,560	1.44	1,140	1.00	1,634	1.3	208	0.34	1,153	1.73	926	1.14	1,300	1.4
Two or more Races							2,419	1.9							1,854	2.1
Hispanic Origin (of any race)					3,158	-	4,788	-					2,481	-	3,758	4.2
Total Population	**87,367**		**108,035**		**113,419**		**129,352**		**87,367**		**66,780**		**81,151**		**89,847**	

Education

The population in Yellowstone County and Billings is becoming more educated. Since 1960, the median years of education completed among persons 25 years old and older has increased. The percentage of the population in that age group that has completed a four-year college degree and/or graduate or a professional degree has continued to increase as well.

By 1990, the percentage of people in Yellowstone County who had completed high school was 83.66 percent and the percentage of people who had completed four or more years of college was 21.51 percent. These numbers for Billings were 84.21 percent for high school graduates and 23.51 percent for those with four or more years of college.

The 25 and older population of Billings and Yellowstone County are slightly more educated than both the overall numbers for the State of Montana and the nation as a whole. For instance, the percentage of Billings' 25 and older population that graduated from high school is 88.7 and the percentage in the entire County is 88.5. This compares with Montana's percentage of 87.2, and the national percentage of 80.4. The percentage of people 25 and older with a bachelor's degree or higher in Billings is 28.5 and in the County is 26.4. For Montana and the nation the percentage is 24.4.

TABLE 10
Yellowstone County and Billings
Educational Attainment of 25 Years and Older
1970 - 2000

	Yellowstone County				Billings			
	1970	1980	1990	2000	1970	1980	1990	2000
Less than 9th Grade	10,270	8,338	5,169	3,325	6,108	5,076	3,774	2,332
9th to 12th Grade (No Diploma)	6,029	6,061	6,735	6,398	3,970	3,480	4,535	4,310
High School Graduate (Including GED)	15,335	22,727	23,519	26,153	10,380	13,731	15,820	17,304
Some College (No Degree)	6,234	12,228	17,744	21,465	6,234	8,252	13,177	15,082
A.A.			4,014	4,670			2,952	3,028
B.A.	5,098	12,228	11,591	16,053	5,032	8,579	9,144	11,982
Graduate or Professional Degree			4,084	6,169			3,230	4,796
Total Population 25 Years and Older	42,966	61,582	72,856	84,233	31,724	39,118	52,632	58,834
Percent High School Graduates	62.06	76.61	83.66	88.5	68.23	78.13	84.21	88.7
Percent Four or More Years of College/ Bachelor's degree or higher for 2000 data	11.66	19.86	21.51	26.4	15.86	21.93	23.51	28.5

Source: DP-2 Profile of Selected Social Characteristics, Census 2000 SF-3, U.S. Bureau of Census

POPULATION PROJECTIONS

The Census and Economic Information Center (CEIC) with the Montana Department of Commerce released population projections for counties up to the year 2025. The CEIC reports that Yellowstone County will maintain its rank of most populated county throughout this time period. Yellowstone County is expected to grow an average of 1 percent per year. At this rate, the County population will reach approximately 145,880 by 2010 and 162,410 by 2020. It would be consistent with historic development trends to assume that a higher percentage of growth will take place at or near the City limits than anywhere else in the county.

Population densities are decreasing from the residential core of Billings outward to the newly annexed territories. Older neighborhoods are more densely populated than neighborhoods developed in the last 30 years largely because of the lot size and street density. However, the newer neighborhoods tend to have more children per household than the older neighborhoods and a lower percent of single parent households.

Three age groups have seen dramatic increases in population over the past decade in Yellowstone County. The number of people aged 75 years and older has increased over 45 percent, reflecting the national trend of an aging population. The County has also experienced an increase in the population that constitutes a large part of the work force particularly the baby boom generation aged 45 to 54 years. This population increased almost 58 percent. The other increase in labor force population is the 20 to 24 years age bracket indicating an echo effect of the baby boomers. This population increased by half of their parents' generation, or 28 percent. The only decrease of an age group occurred in the population aged 25 to 34 years. This age group declined by 15 percent. These trends indicate, in addition to an aging population, a potential loss of an important work force component without significant immigration.

An aging population will have numerous ramifications for the level and type of public services needed. Service needs may include an increase in healthcare providers, different housing options, special transit facilities, possibly even larger traffic control signs and audible signals. At the same time, service providers will need to play a role in attracting a younger workforce to Yellowstone County and the City of Billings.

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4.3 HOUSING

INTRODUCTION

The need and availability of housing in Yellowstone County is relative to the space and income requirements of the residents. Household composition, or the characteristics of the residents, helps one to understand these requirements. Household information presented in this section, describes the number of people living in households, their income and the trends in household distributions. In order to determine if a housing deficit or surplus exists, an inventory of existing housing units is presented including information on the number and type of units and whether they are rented or owner-occupied. Housing availability is also relative to the condition and vacancy of units. Information on the housing supply is described in terms of age and condition of dwellings. Comparative construction information for the past ten years is supplied to evaluate trends. The cost of housing is also a critical factor in determining the availability of housing. Both owner-occupied and rental housing costs are examined. Information on household composition, supply, and cost help define residential needs. Projecting future conditions can help determine whether the City of Billings and Yellowstone County will adequately address these needs. Conditions that will influence the number and type of dwelling units available for future residents as well as recent initiatives to deal with homelessness are discussed at the end of this section.

HOUSEHOLDS

The Census Bureau's American Fact Finder database reported the total estimated 2006 population for Yellowstone County as 138,213, an increase of approximately 8,800 from 2000. The number of households rose from approximately 52,084 in 1999 to approximately 58,206 in 2006, and the average number of persons per household increased slightly to 2.47 in 2006 from 2.43 in 2000, but was still lower than the 1990 estimates of 2.49 persons per households. This slight increase in household size is a minor adjustment in an overall downward trend that began in 1960 when household size peaked at an average of 3.3 persons.

Composition

In Yellowstone County, the difference between household compositions is greatest between the rural and urban areas. Billings tends to have fewer people per household on average (2.40) compared to the average number of persons per household outside of the urban area (2.47). Of the total County population, 98.3 percent live in households[8]. Of the total 55,050 households county-wide, 72.3 percent are family households, up from 65.7% in 2000. ; This leaves 27.7 percent classified as non-family households, down 6.6% since 2000. In contrast, within the City of Billings, 68.4 percent of all households are families, also a sizeable increase from 2000, up from 61.7%. The percent of non-family households in Billings is 31.6 percent. The percent of persons living in group

[8] "A household includes all of the people who occupy a housing unit. A housing unit is a house, an apartment, a mobile home, a group of rooms, or a single room occupied (or if vacant, intended for occupancy) as separate living quarters. Separate living quarters are those in which the occupants live separately from any other people in the building and that have direct access from the outside of the building or through a common hall." Bureau of Census.

quarters and institutions is roughly the same for both the County and City and is less than 3 percent of the population.

Income

While income has increased in the last 10 years, housing costs have risen even more. In Yellowstone County, the median household income for 2006 is estimated at approximately $43,337, which is an 18 percent increase over the 2000 median household income of $35,360. In Billings, the median household income rose 10 percent from $36,890 to $40,923 during this same period. In contrast, the median price for a home in Billings jumped 44 percent from $107,750 in 2000 to $154,700 in 2006.

Distribution

Yellowstone County maintains the status as the most populated county in Montana. As of 2006, approximately 15 percent of the state's population of 944,632 lives in the County. Approximately 72 percent of the County population resides in the City of Billings; 5 percent live in Laurel; 5 percent live in the Shepherd-Huntley-Worden area; and 3 percent reside in Lockwood. As of 2000, the town of Broadview had a population of 150.

According to the 2006 Census estimates, the Billings urban population grew at a rate of approximately 1.8 percent per year over the previous six years.

HOUSING SUPPLY

The number of housing units within the City of Billings increased from 39,293 in 2000 to an estimated 42,248 in 2006. According to the Bureau of Census, there were 26,032 single family units, 2,224 duplex units, 8,030 multi-family units and 2,814 manufactured homes in 2000. 2006 estimates from the American Community Survey indicate a 9 percent increase in single-family units at 28,748, a 3 percent increase in duplex units at 2,297, a 2 percent increase in multi-family units at 8,161, and a 7 percent increase in manufactured homes at 3,042.

The Bureau of Census reported that the total number of housing units in the County rose from 54,563 in 2000 to 58,206 in 2006. Of these, 40,259 were single-family units, 2,516 were duplex units, 8,750 were multi-family units, and 6,705 were manufactured homes. Based on an average household composition of 2.47 people, there would be sufficient housing for approximately 143,768 people or 5,555 more than the current population. These figures are further complicated because the population is not evenly distributed among available housing and not all housing is in livable condition. Housing stock throughout the County, particularly in urban areas is old and some of it is vacant or in unlivable condition. About 6 percent of all housing stock is either vacant or in substandard condition[9].

Age of housing

[9] Substandard means the dwelling unit lacks complete plumbing facilities.

The Montana Department of Commerce (MDOC) reported that 42 percent of all single family dwellings, mobile homes and condominiums located in Billings were constructed prior to 1960. By 1980, 72 percent of the existing units were constructed while 28 percent were constructed after 1980. In comparison, 235 single family dwellings, or less than 1 percent of the total, were constructed in 2003. The pie chart in Figure 1 illustrates the age of housing stock as a percentage of total constructed.

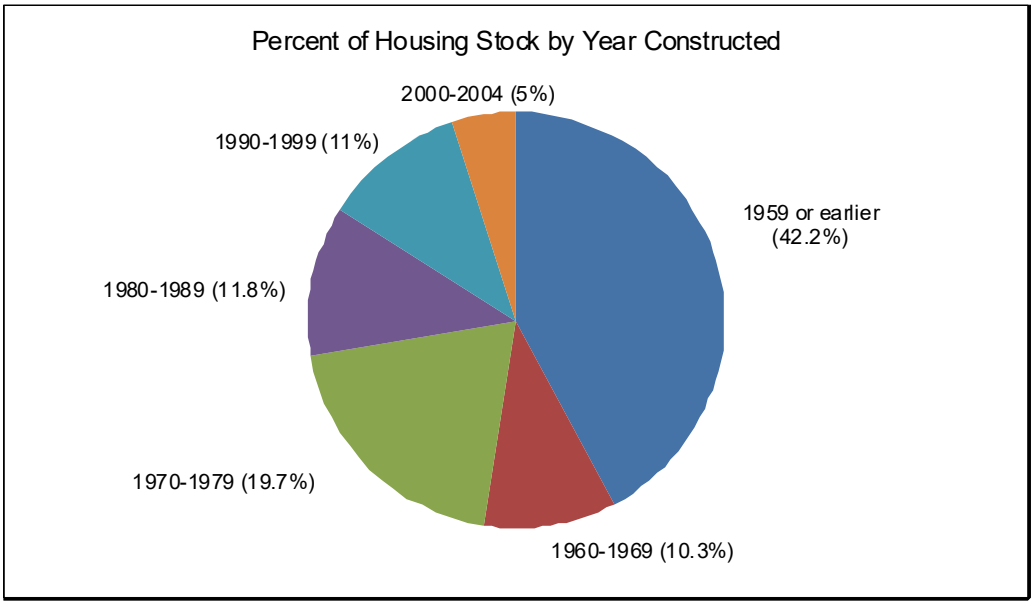

Figure 1. Percent of housing stock constructed during previous decades.

Housing vacancy and condition

5.5 percent of the total 58,230 housing units in the County were reported vacant in 2006, up from 4.5 percent in 1999. In Billings, the neighborhoods with the highest vacancies are the Downtown area and the South Billings area. These are the oldest neighborhoods in Billings and both have lost population over the past decade. The newer neighborhoods in West and Northwest Billings and Billings Heights exhibit the lowest vacancy rates.

The 2005 Montana Housing Condition Study, commissioned by MDOC, ranked condominiums, single-family dwellings and mobile homes located in Billings for quality and workmanship. The majority of condominiums and single family dwellings ranked average for these attributes while the majority of mobile homes were considered "low cost".

Substandard housing information from the 2006 American Community Survey reported 651 housing units in Billings without complete kitchen facilities, up from 260 reported by the 1990 Census. The survey also reported 44 housing units with incomplete plumbing; this number is down from 118 units as reported by the 1990 Census. Outside of Billings, the 2006 survey reported 46 housing units with incomplete kitchens and 20 with incomplete plumbing. These numbers were also down since the 1990 Census when the numbers were 112 and 104 units, respectively. The percentage of substandard houses reported in 1990 was about 1.1 percent of the total housing stock in the City and 1.7 percent in the County. These figures

have increased slightly to 1.6 percent in the City and decreased slightly to 1.3 percent in the County.

Tenure

Home ownership trends have shifted slightly in the last five years. The percentage of units occupied by owners according to the 2006 American Community Survey is 66 percent of the total units in the City, up from 64 percent since 2000. In the County, 68 percent of housing units were owner-occupied in 2006, down from 69 percent in 2000. These percentages are approximately 5 percent higher in both jurisdictions than the total owner-occupied units reported in the 1990 Census. According to the 2006 American Community survey, there are approximately 12,735 renter-occupied units in the City of Billings and 2,506 renter occupied units in the remainder of the county.

HOUSING COSTS

Owner-occupied Housing

Building costs have continued to steadily rise, and most dramatically over the past ten years. The rate of increase in new housing costs during 1990 - 1997 was approximately 1.3 percent per year based on single-family building permit valuations within the City limits. Between 1997 and 2007, the rate of increase escalated to 4.3 percent per year. In 2000, 274 building permits for single-family residential structures were issued in the City of Billings. The average cost of single family home construction reported on the permit was $117,463. In 2007, building permits issued swelled to 427 structures with an average construction cost of $170,074 reported. This increase may indicate a growing housing affordability gap. In 2000, median household income was 36% of the median home cost. In 2007, this figure had shrunk to 24%, an average decrease of 1.7% per year. The Housing Coordinating Team of the Montana Department of Commerce estimates that in 2020, median household income in Yellowstone County will account for only 14% of median home costs.

Home prices vary considerably throughout Billings and Yellowstone County. Information provided by the Billings Multiple Listing Service indicates that property located northwest of the Billings urban area is more expensive than property located in the city or smaller communities such as Laurel and Lockwood. Figure 2 shows the average sale price by area for 2007[10].

[10] Blue & Duck Creek data are based on 2003 Billings Multiple Listing Service figures.

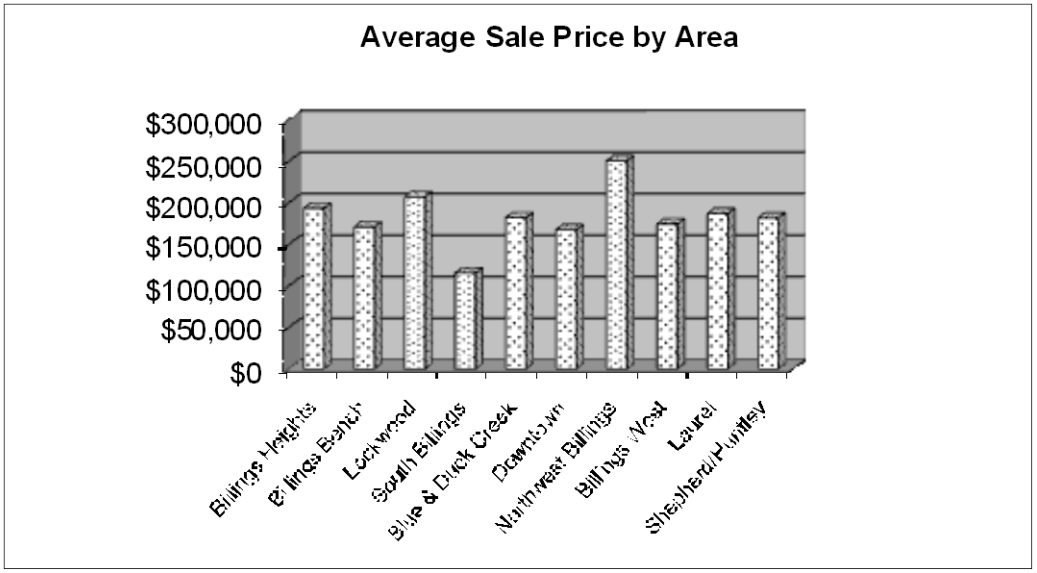

Figure 2. Average sale price by area, 2007
Source: Multiple Listing Service of the Billings Area Realtors.

The average sale price of single family homes roughly correlates with the average loan amount for each area. Shown in Figure 3 are the average loan amounts for the areas in and around Billings in 2006.

Factors affecting development costs, excluding labor and materials, include land costs, on-site and off-site infrastructure costs and mortgage rates. Land costs vary throughout the county. (Need to update these figures based on current MLS data)

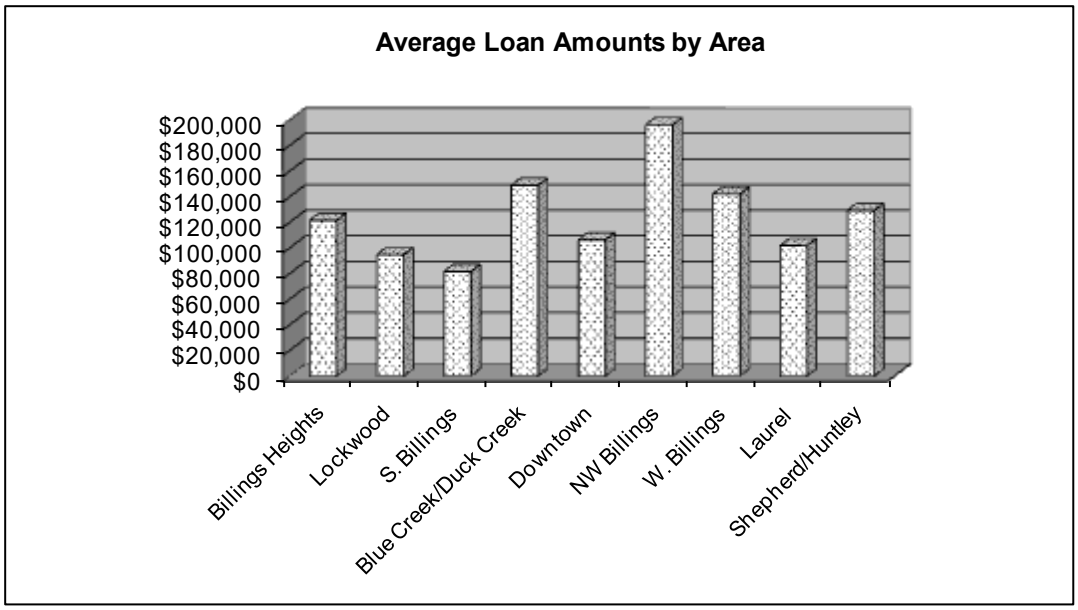

Figure 3. Average loan amounts by area, 2006.
Source: Federal Financial Institutions Examination Council, 2006 Home Mortgage Disclosure Act Data.

Subdividers are required to pay for the extension of water and sewer facilities for subdivisions located in or adjacent to the city limits. The cost of extending services is passed on to the purchaser and can add significantly to the cost of a lot. In addition to off-site improvements, on-site improvements such as curbs, gutters, sidewalks, streets and storm drainage facilities must be installed or financially guaranteed prior to recording the final plat. These costs are also passed on to the purchaser of the lot.

Rental housing

According to the 2006 American Community survey, there are approximately 12,735 renter-occupied units in the City of Billings and 2,506 renter occupied units in the remainder of the county. According to the 2005 Billings Housing Needs Assessment, rental costs have risen significantly and continue to rise. Based on this data compiled by MSU-Billings for the City's Community Development Division, the average advertized price for a 2-bedroom rental was $558 in 2004. Adding $90 allowance to the costs for utilities, an average total of $648 was needed for rental housing costs that year. Based on a standard ratio of 30% housing cost to income, the hourly wage needed to afford a 2-bedroom rental therefore was $12.46, or almost $26,000 annually.

Figure 4 shows the median advertised rent for the Billings area. The 1990 and 2000 rents were obtained from the 1990 and 2000 Census. Years 1994 through 1998 were compiled by BBC Research and Consulting. The year 2004 was presented in the City's 2005 Housing Needs Assessment.

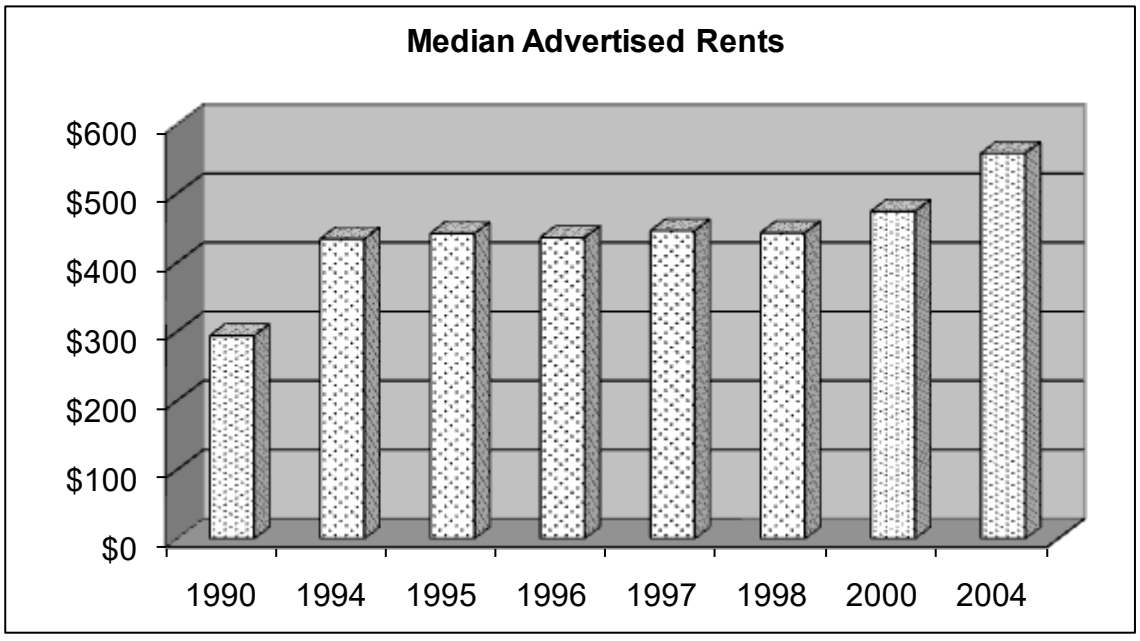

Figure 4. Median advertised rents for Billings area, 1990 - 2004.

HOUSING TRENDS AND PROJECTIONS

Infill Potential

According to the most recent estimates, 72 percent of the population in Yellowstone County lived in Billings in 2006. This is slightly more than the 69 percent of the population that lived in the City in 2000. These figures suggest a slow reversal in the trend felt during the 1990's when there was an increase in development on the edges of Billings or in the County and not within the City. It may also be a result of the annexations of approximately 750 homes in the Briarwood and the Yellowstone Club Estates subdivisions into the City of Billings in 2002.

There are approximately 3,848 parcels classified by the Montana Department of Revenue as vacant residential land within the city limits, up from 3,607 in 2003. These City lots make up 2,709 acres of land or 10.5% of the land area within the City limits.

Absorption Rate

For the years of 2006 and 2007, there were more single family home building permits issued in the City than there were lots created. There were 407 building permits issued for single family home construction in 2006, and 427 permits were issued in 2007. An estimated 375 lots were created in the City in 2006 and125 in 2007. This trend indicates that, in addition to new construction occurring on newly created lots, lots created in previous years are being developed. This is particularly true for subdivisions in the Heights, including several filings of the Lake Hills Subdivision, and more recent subdivisions on the Westend held as "inventory" by individual builders.

HOUSING NEEDS

The Montana Department of Commerce (DOC) Housing Coordination Team drafted a "Housing White Paper" in April, 2008 to investigate current housing trends and to project possible implications of the current trends into the future to the year 2020. The White Paper acknowledges that housing shortages are hampering economic development and community safety and cohesion, housing development patterns affect environmental quality and levels of energy consumption in the future, and local housing development policies have far-reaching effects on the use of public resources.

In terms of housing needs, the White Paper graphically depicts a number of emerging housing affordability issues as shown in the figures below. All of the figures are based on the generally accepted standard definition of 'affordable housing' as housing costs that do not exceed 30% of income.

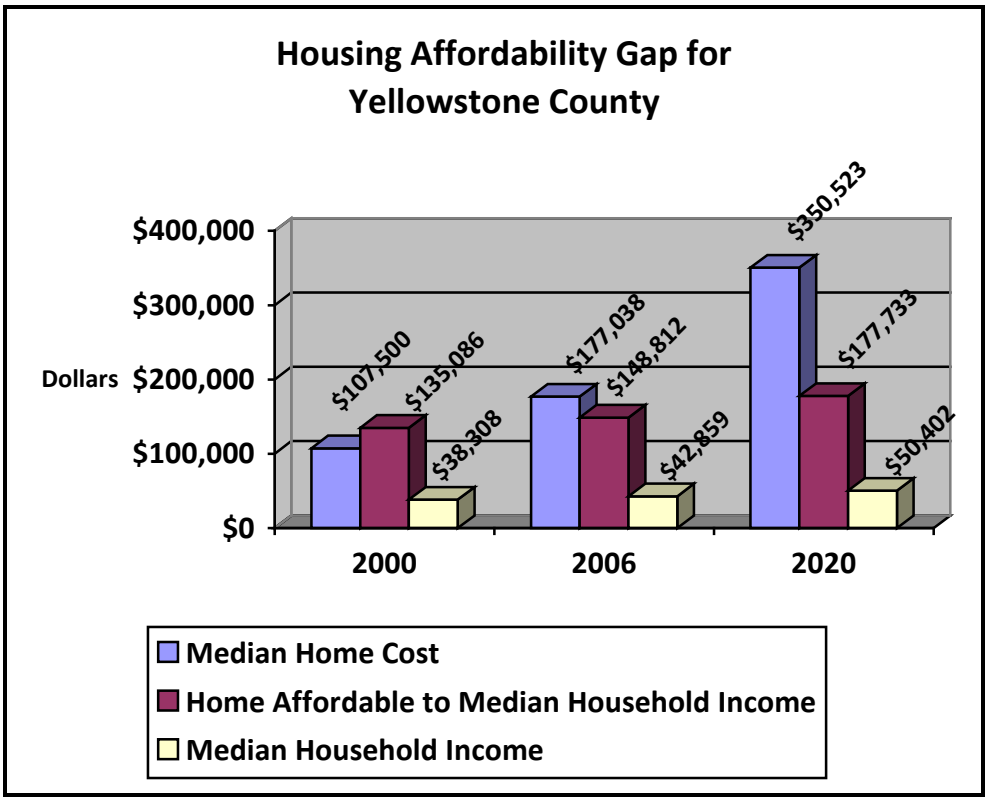

Figure 5. Median home cost, actual household income, and required household income to maintain housing affordability, 2000 – 2020 (projected).

In addition to housing affordability issues, the White Paper also presents data that estimate the number of housing units needed by the year 2020 based on current population and housing conditions and projected population growth trends. Figure 7 provides a look at housing needs from that angle. To briefly summarize the findings, the total number of new housing units needed by 2020 in Yellowstone County will be 19,084. This may be met through rehabilitation of approximately 10,000 units of existing poor condition housing stock that is estimated to be lost by 2020, coupled with the creation of new housing units. In terms of what type of housing is most needed, the DOC points out that this will be determined by whether they will be owned or rented. With the ever increasing costs to build new single-family housing, other less expensive types of housing will need to be explored.

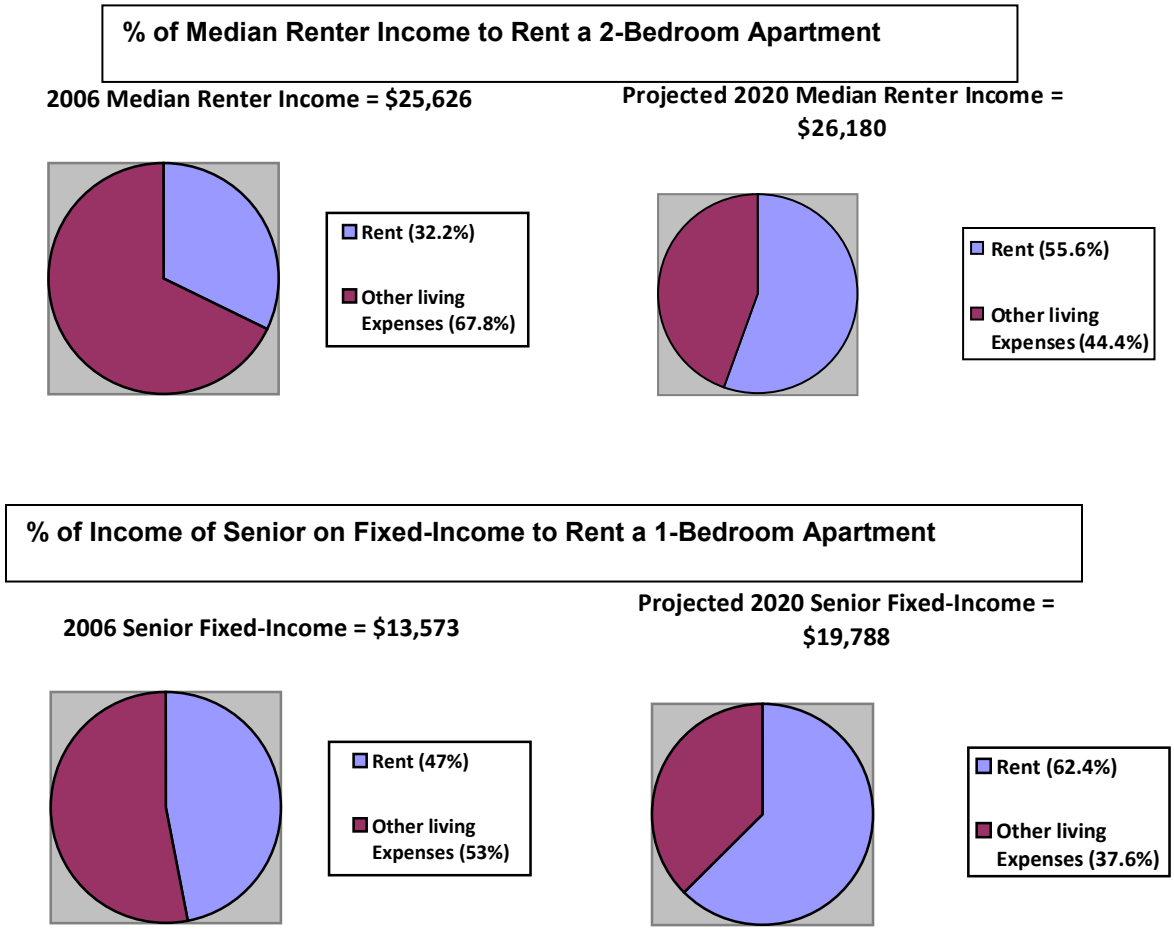

Figure 6. Percent of Income Spent on Rent for Median Renter and Fixed-Income Seniors, 2000 and 2020 (projected).

FIGURE 7: Estimated Housing Units needed by 2020 in Yellowstone County

Housing Units	Units in Poor Condition lost by 2020	Units in Good Condition Available in 2020	Total Housing Units Needed by 2020	New Housing Units that must be created by 2020
TOTAL	10,703	49,475	68,560	19,084
Single-family	4,717	36,874		?
Multi-family	1,467	9,068		?
Mobile Home	4,519	3,533		?
Assertions by Dept. of Commerce to support above assessment	Households in 2006 = 56,030 Vacancy Rate in 2000 = 4.5% % change in population, 2006 to 2020 = 14.3% % change in households, 2006 to 2020 = 17%			

HOMELESSNESS IN YELLOWSTONE COUNTY

Mayor's Committee on Homelessness

In November 2005, the Montana Council on Homelessness chose the City of Billings for a pilot project to end chronic homelessness. In June 2006, Mayor Tussing appointed a 20-member committee including representation from a broad stakeholder group of housing/service providers, civic/business leaders, economic/work force agencies, faith based/philanthropy groups, and other interested parties. The first meeting of the Committee was held on June 15th, 2006 and has been meeting frequently to develop a 10-Year Strategic Plan to impact chronic homelessness.

Over 300 cities in the United States have joined in a collective effort to develop plans to end homelessness following the guidelines established by the United States Interagency Council on Homelessness. The City of Billings is committed to inclusive participation in the effort to address chronic homelessness. Work groups are being established to assist the Committee in gathering feedback and developing specific sections of the 10-Year Plan. These groups include, but are not limited to: Service Providers – including a Continuum of Care sub-committee; Homeless Participant Advisory Group; and the Business Consortium for Social Change.

Mayor's Committee on Homelessness Accomplishments (2003-2008)

- Established the Billings Area Resource Network – a group of homeless service providers working together to increase service and grant coordination;
- Billings Addendum to the Continuum of Care point-in-time survey in January 2007;
- Understanding Homelessness in the American Indian Population: Roundtable Discussion in February 2007, the first of its kind in the nation;
- Project Homeless Connect events – March 31, 2007 and March 28, 2008;
- Cultural Competency Training: Understanding the American Indian Perspective – June 2007;
- Creation of the Mayor's Committee ten-year planning priorities; and
- Social Enterprise Conference featuring Pioneer Human Services, February 13 & 14, 2008

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4.4 ECONOMIC CONDITIONS

INTRODUCTION

The economy has a central role in determining and maintaining the quality of life in our community. A strong economy provides economic opportunity to our citizens by creating jobs and business opportunities. Earnings from these activities are recycled in our community in the form of retail purchases, housing, business and personal investments, charitable giving, spending on recreation and in many other ways. In turn, earnings and the assets that they purchase help to create a tax base that pays for schools, public safety services, parks, roads and other community services, facilities and amenities. The Economic Conditions section of this Growth Policy contains an Introduction, an Economic Profile, descriptions of the area's employment, income and cost of living, and finally, a discussion on the economic development organizations in the area and their economic development plans.

Economic development is the process of creating wealth by mobilizing human and capital resources to produce marketable goods or services. At different times in our history, economic development was principally the responsibility of the private sector or the federal government. Utilities, railroads, banks and sometimes, business organizations like chambers of commerce, had a stake in building the economy because their long-term profitability depended on expanding markets for their products or services. Later, the federal government became involved in economic development, usually concentrating resources in areas that were identified as being distressed. Starting in the 1970s, the federal government gradually withdrew its support for economic development and left the task to local and state efforts. These efforts over the past 30 years have been in the face of unprecedented changes in our economy:

- from a goods producing to a service producing economy
- from a local or national economy to a global one
- from businesses that concentrate on one product to multi-national conglomerates that produce many products and services
- from labor-intensive to capital or technology intensive

Measuring the health of an area's economy is a challenge. Yet, measuring it is essential because there is no other way to gauge the effectiveness over time of implementing plans such as this Growth Policy. Federal and state government agencies collect and distribute a huge volume of information and statistics that attempt to describe our economy. Most often the agencies focus on either business or personal characteristics.

While business information is important, it doesn't adequately describe how a local economy is performing, particularly in light of the transformations that are described above. When businesses are capital or technology intensive, they often purchase equipment elsewhere, employ fewer people in the host community and the traditionally reported job multipliers decrease. When businesses are part of large corporations whose ownership resides elsewhere, business/community involvement and charity decrease. Profit margins may be thinner and those profits don't necessarily remain in the community when marketing and other business decision

are made in the face of global competition. Many service industry jobs pay less than the manufacturing or construction jobs that they replaced.

Personal wealth statistics better describe a local economy's performance and health. The resident wealth of an area determines its ability to support new or expanding businesses and to pay for government services and facilities. Personal wealth determines a community's ability to support and enjoy amenities such as museums and the arts or the natural environment. Personal wealth is described by using factors such as per capita income, the number of jobs and types, area cost of living, and the hours and number of jobs worked. This Growth Policy will describe these factors, how they have changed over time and compare them to our state and nation. In that way we'll be able to judge the effectiveness of our past economic development efforts and form a baseline for periodic review of this plan and our future efforts to improve our economic condition.

ECONOMIC PROFILE

Yellowstone County is the most populous county in Montana with a 2007 population of 139,936. Billings is the County seat and is the State's largest city. It has one the nation's largest regional trade area of over 125,000 square miles that serves almost 400,000 people. 2002 retail sales were reported at $2.0 billion.

Resource industries and agriculture dominate the local economy. There are three oil refineries in the county, with ConocoPhillips in Billings, ExxonMobil in Lockwood and the CHS Refinery in nearby Laurel. A Western Sugar Cooperative refinery is located in Billings. About 350 Montana farmers supply sugar beets to the refinery, which has a direct impact of $50 million per year on the county's economy.

Billings is the medical and educational center for the region. The two hospitals employ over 3,400 people and have almost 560 beds. Several clinics also operate in Billings. Montana State University – Billings has over 4,200 students while its College of Technology has approximately 600. Rocky Mountain College, a private, four-year university, has almost 900 students and is the oldest college in Montana.

Employment

The number of people that are working in the community is an indicator of whether or not the local economy is growing. Particularly when historic employment figures are compared to population changes, it indicates if more of the local population is working and if workers are living elsewhere but working in the community. When categorized by industry type, it shows what industries have grown or declined over the study period. Predicted employment growth adds a different perspective and may help to predict personal wealth in the future. Finally, when job multiplier ratios are shown, it tells us which industry sectors are most valuable to the community in terms of secondary or spin-off employment. Assessing these factors and projecting their expected future trends should help guide policy makers and economic development experts to set goals for recruiting and retaining employers, help set infrastructure priorities and identify social, housing, education and training needs.

Table 1 shows the rate at which the civilian labor force has grown and how Yellowstone County's unemployment rate compares to the state and nation. It shows that the labor force has grown since 1980 and that the unemployment rate is lower than for either the State or nation. The employment growth rate equals 33 percent over the twenty-eight year period. The population grew by 30 percent over the same period. The rate of growth for the working age population nearly equals the general population growth rate. Therefore, we can conclude that the rate of employment in Yellowstone County is keeping pace with the rate of population growth. These figures bring into question why employment growth is not greater if residents from surrounding counties are commuting to Billings and Yellowstone County to work. A possible explanation may be that a proportion of Yellowstone County residents commute outside the county to work, such as employees of mining and petroleum workers. Another possibility is that surrounding communities are successful in employing residents locally and fewer individuals are commuting. 2010 Census data will help answer these questions when up to date "place of work" figures are available. The civilian labor force grew by about 9,000 workers from 2000 to 2008. In 2006, approximately 48 percent of the workforce was female.

TABLE 1
Yellowstone County Annual Average Civilian Labor Force and Unemployment Rates - 1980, 1990, 2000 and 2008

	Yellowstone County Civilian Labor Force			Unemployment rate (%)		
Year	Total	Employed	Unemployed	Yellowstone County	Montana	U.S.A.
1980	55,549	52,870	2,679	4.8	6.1	7.1
1990	61,648	58,563	3,085	5.0	6.0	5.8
2000	72,921	70,158	2,763	3.8	5.2	4.2
2008	81,922	79,090	2,832	3.5	4.1	5.5

Source: Montana Dept. of Labor and Industry, Research and Analysis Bureau, 1980-2008.
Note: "Civilian Labor Force" includes all persons age 16 or older who are employed, are employed but are temporarily not at work plus persons that are seeking employment.

Several industry sectors grew rapidly between 2000 and 2007. Table 2 shows the average annual employment by major industry sectors in Yellowstone County. In the past eight years, only the mining industry and federal government reduced total employment. The combined government employment grew by 18.5 percent primarily in the state government sector. Local government increased 2.9 percent while the federal government declined by 1.9 percent. The largest increases were in the construction industry (70.1 percent) and the agricultural sector (44.7 percent). The construction industry is recognized as having a significant impact on the area economy, which goes beyond the first year while construction is taking place. A recent study by MSU-Billings indicated that there is a ripple effect for

every single family home built. This effect manifests itself in terms of sales, service and local government tax revenue. The study estimates that for every single family home constructed, the ongoing impacts include 1.2 additional jobs and $25,315 of local income.

TABLE 2
Yellowstone County Employment by Industry, 2000 and 2007

	2000	2007	% change
Employment by Industry			
Total Private Sector	56,727	68456	20.7%
Agriculture, Forestry, Fishing & Hunting	199	288	44.7%
Mining	237	138	-41.8%
Utilities	341	369	8.2%
Construction	3,398	5,781	70.1%
Manufacturing	3,256	3,493	7.3%
Wholesale Trade	5,077	5,359	5.6%
Retail Trade	9,030	10,354	14.7%
Total Government	7,995	8,250	3.2%
Federal	1,849	1814	-1.9%
State	1,274	1421	11.5%
Local	4,872	5015	2.9%
Total full time and part time employment	64,722	76,706	18.5%

The Montana Department of Labor and Industry produces job growth projections that are based on labor force data through 2014. The projections show that many of the jobs predicted to grow by the greatest numbers are in the service and retail trade sectors. The top five jobs predicted to grow the most rapidly are social and human services assistants, computer software engineers, environmental engineers, physician assistance and milling machine operators. The occupations that are expected to increase most in terms of actual numbers include sales, administrative support, food service and management.

Statewide, the estimated annual need for employees, both due to business growth and replacement workers, is 23,400 employees per year. Yellowstone County's "share" of those needed employees/available jobs can be projected. Since Yellowstone County had about 17.5 percent of the state's total employment in the year 2006, one could predict that Yellowstone County's share of new jobs will be the same percentage of statewide new jobs per year, or about 4,065 new jobs per year through 2014. Whether there will be enough workers to fill those jobs can be predicted by calculating the present day labor force as a percentage of population and assume that the proportion will remain the same in the future. Using the 2007 population estimates and employment estimates from the Montana Department of Labor and Industry, 58.5 percent of the Yellowstone County population was in the county labor force 2007.

If that percentage is applied to the population growth estimate for Yellowstone County of 145,880 people in 2010, the total labor force would be approximately 85,444 people. That is an increase of 3,444 or 4.2 percent over 2007. Dividing that total by the three years between estimate dates equals about 1,148 new workers per year that will enter the labor force. This comparison indicates that Yellowstone County is likely to have enough new employees to satisfy the predicted available jobs.

It is conventional wisdom that when a job is created in a community, the community gains benefits that exceed the primary job. Each job requires capital investment by the employer and each job-holder spends some of his/her income within the community, thereby creating additional capital investment and additional jobs for other people. This effect of a primary job creating other jobs in the community is known as a job multiplier. Because jobs in different industries or business types require differing amounts of capital investment and have differing rates of pay, the job multiplier varies by industry. Some jobs may be more valuable than others to the community in respect to creating spin-off or secondary jobs for the community residents. Table 3 shows the spin-off effects of creating a new job in the community.

TABLE 3
Number of Jobs Created by the Creation of One New Job in Selected Industries

INDUSTRY	# JOBS CREATED
New Construction	3.27
Textiles	1.88
Primary Metals	2.24
Motor Vehicles and Equipment	2.35
Wholesale Trade	1.93
Retail Trade	1.46
Finance	2.19
Hotels and Amusements	1.89
Health Services	1.67
Eating and Drinking Places	1.41
Business Services	1.57

Source: U.S. Chamber of Commerce, What 100 New Jobs Mean to a Community, 1995.

Montana Department of Labor's projections indicate that the greatest job growth is likely to be in the industries that have the lowest job multipliers. For example, the job that is predicted to grow the most, retail salesperson, has a multiplier of 1.46, meaning that 1.46 secondary jobs will be created in the area by adding one retail salesperson job. In contrast, the job that is ranked 15th in job growth (carpenter) has a job multiplier of 3.27. This projection contrast with the current employment statistics which indicate the construction industry has the highest employment.

Income

Per Capita Income

In 1989, the annual per capita income for the Billings Metropolitan Statistical Area (MSA) was $16,352 while the per capita income for the entire County was $16,503. This relationship remained constant through the 1990s when the per capita income for the entire County population exceeded that of Billings' MSA. The U. S. Bureau of Economic Analysis reports 2000 annual per capita income for Billings MSA stood at $26,249 and for the entire County population was $26,412. By 2006, the per capita income increased in Billings to $34,923, almost on par with the County's, which was $35,021. The increase in City per capita income may have been due to the 2002 annexations of Blue Creek area and Yellowstone Club Estates Subdivision. The average per capita income of Yellowstone County exceeds that of Montana's average, which in 2006 was $30,790. However, nationally the per capita income averages $36,714. In 2006, Yellowstone County's annual per capita income was approximately 95 percent of the national average.

There are several ways to report income: per capita, per household, per family, total personal income, etc. Per capita income is perhaps the most uniform parameter and therefore good for comparative analysis.

Montana and Yellowstone County have experienced a steady, but slow increase in their real dollar per capita income. By "real dollar", we mean dollar income that is adjusted for the effects of inflation over the reporting period. In Table 4, per capita income from 1970 to 2006 is converted to 2006 constant dollars. By making this adjustment it is possible to compare today's income to income that was reported in previous years, and account for the effects of inflation on the value of money. The analysis shows that Yellowstone County's per capita income went from a high of 103.3 percent of the national average in 1980, to a low of 88.5 percent of the national average in 2000. It also shows that Yellowstone County's per capita income is about 113 percent of the statewide average and that figure has remained fairly constant over the last 20 years.

Per capita income is calculated by dividing total personal income by the number of people in the subject population. Personal income includes earnings, investment income, including rents, and transfer payments to individuals (social security, veteran's disability, etc.). Table 4 shows that Yellowstone County's per capita income was below the national average in 1970, rose to above the national average over the following ten years and has been declining as a percent of the national average since 1980. Investment income tends to accumulate and grow for the wealthier and retired members of a community. Many transfer payments, such as social security, are indexed to inflation and grow automatically over time. When calculating per capita income, children and others who don't earn or otherwise receive income are included in the calculation. Because of these factors and since most of Yellowstone County's personal income comes from earnings, earnings per job may be a better way to assess our economy's condition and how it has changed over the past decades.

TABLE 4 Yellowstone County Per Capita Income 1970-2006 Adjusted to 2006 $			
Year	Per capita income in 1996 dollars	% of National average	% of Statewide average
1970	$ 20,579	94.3	106.6
1975	$ 23,965	100.7	107.1
1980	$ 26,297	103.3	115.4
1985	$ 26,865	94.5	117.1
1990	$ 27,705	89.7	113.1
1995	$ 28,573	91.0	114.5
2000	$ 31,792	88.5	115.2
2006	$ 36,018	95.4	113.7

Source: 1969-2006: Bureau of Economic Analysis, Regional Economic Data, Local Area Personal Income, Table CA1-3, (http://www.bea.gov/bea/regional/reis/); DATE LAST UPDATED: April 29, 2008.

Looking at employment earnings shows an even more dramatic decline in relative income or wealth than does per capita income**.** Table 5 shows that Yellowstone County's average earning per job has remained relatively unchanged for 30 years, when the earnings are adjusted for inflation. At the same time, the average Yellowstone County job earning has fallen dramatically when compared to the national average. Most of the remainder of Montana must be doing even worse, since Table 5 shows that Yellowstone County's average earnings per job increased when compared to statewide averages.

TABLE 5 YELLOWSTONE COUNTY AVERAGE EARNINGS PER JOB 1970 – 2006			
Year	2006 Dollars	% of U.S. Average	% of Statewide Average
1970	33,812	91.4%	107.1%
1975	34,793	92.5%	105.0%
1980	33,806	96.0%	106.7%
1985	33,537	92.3%	111.4%
1990	29,972	81.0%	108.4%
1995	30,836	82.6%	111.7%
2000	32,071	76.7%	110.6%
2005	34,226	80.3%	110.7%
2006	34,683	80.3%	110.4%

Source: ***1969-2006: Bureau of Economic Analysis, Regional Economic Data, Local Area Personal Income, Table CA34,*** (http://www.bea.gov/bea/regional/reis/)***; DATE LAST UPDATED:***

February 7, 2008

Median Household Income

Median household income, or the amount for which exactly half of the households are above and half are below, signifies the total purchasing power of a household. This figure is highest county-wide where the 2006 annual median household income is $43,377. This compares with the 2006 Billings' median household income of $40,923. The 2007 annual median household income for Billings was estimated at $43,300.

In 2006, Yellowstone County median household income was still well below the national median, which stood at $48,451. In comparison, however, it exceeded the state median which was reported at $40,627.

Poverty Status

The Bureau of Census calculates the poverty status using a set of income thresholds that vary by family size and composition. If an individual's total income is less than the threshold, than that individual is considered poor. For the U.S., the income threshold for individuals in 2006 was $10,294 per year. Yellowstone County was at 11.3 percent and the City of Billings rate was 13.0percent. Those are the percentages of individuals that make less than the income threshold. These figures compare with the state poverty rate of 13.6 percent and the national rate of 13.3percent. The State of Montana now ranks 17th in the nation for individuals below the poverty threshold.

Cost of Living

The number and type of jobs and per capita income don't give a complete picture of a local economy's strength or of personal wealth. The cost of basic, everyday needs like shelter, food and clothing play a significant role in determining how much discretionary income is available to a person. Discretionary income is necessary to support many of the businesses that provide personal service and products. These businesses are a significant part of most U.S. local economies. If those businesses aren't prosperous, there won't be spin-off or secondary employment and income. These effects limit the health and vitality of a local economy.

Cost of living analyses are conducted to show either periodic inflationary effects or as comparisons among different locations. The Council for Community and Economic Research (C2ER) prepares annual cost of living indexes for a number of major U.S. cities, including Billings and some of our regional neighbors. C2ER's cost of living index (COLI) measures relative price levels for consumer goods and services for its participating members. The average cost for all entities equals 100, so each participant's index is read as a percentage of the average for all places. The index is a snapshot in time of what it costs to purchase normal consumer goods and services in each place, but it does not measure inflation. COLI surveys include the cost of groceries, housing, utilities, transportation, healthcare and some miscellaneous goods and services. Since there are so many variable in tax structures and rates, the index does not include taxes.

Table 6 shows C2ER's COLI indexes for Billings, several Montana cities and some regional neighbors. It shows that while Billings is not an expensive place to live in comparison to all

others, it cannot be considered to be a city where the cost of living is low. Billings' index of 97.5 indicates that, if the cost of all surveyed consumer goods and services are indexed to equal 100, those same goods and services would cost 97.5 percent of the average if purchased in Billings. It shows that the least expensive place to live among the reported cities is Fargo, North Dakota (mostly due to low housing and healthcare costs), and the most expensive is Bozeman, Montana.

Again, cost of living tells only a portion of the story about an area's economy. It may be useful to compare cost of living with income and employment earnings. Table 6 makes that comparison. Billings has a lower cost of living and higher per capita income and earnings per job than Bozeman or Kalispell. Conversely, Billings has a cost of living index higher than Cheyenne, Wyoming while per capita income and earnings per job are generally lower than that city. Again, several of the Montana cities have less favorable comparisons, but reports from Bozeman and Missoula may be skewed by the large university student population and resulting lower per capita income and more part-time jobs.

TABLE 6
Cost of Living Index, Per Capita Income and Average Wage per Job for Selected Cities

	Cost of Living Index (2007)	2006 Per Capita Income	2006 Avg. Wage Per Job (adj. To 1996 $)
Billings	97.5	$34,923	$33,339
Bozeman	105.6	$33,758	$30,135
Missoula	102.2	$31,535	$30,204
Cheyenne	100	$39,647	$36,428
Fargo/Moorhead	95.2	$34,639	$32,874
Spokane	95.1	$30,266	$35,539

Sources: ACCRA, Cost of Living Index, Third quarter, 2007. 1969-2006: Bureau of Economic Analysis, Regional Economic Data, Local Area Personal Income, Table CA34, (http://www.bea.gov/bea/regional/reis/); DATE LAST UPDATED: February 7, 2008. Bureau of Economic Analysis, US Dept. of Commerce, Local Area Personal Income, August, 2001.

The Billings and Yellowstone County economy can be summarized as follows:

- Employment grew by 11 percent between 2000 and 2007. Almost half of the workforce is female.
- Employment growth was dominated by construction, retail sales and service jobs.
- The top five jobs predicted to grow the most rapidly are social and human services assistants, computer software engineers, environmental engineers, physician assistance and milling machine operators. The occupations that are expected to

increase most in terms of actual numbers include sales, administrative support, food service and management.

> The jobs that are predicted to increase the most in numbers in the next few years have among the lowest job multipliers, thereby producing relatively low spin-off or secondary job opportunities. However, the jobs that expected to grow most rapidly have higher job multipliers.
> Supply of workers in Yellowstone County exceeds the demand.
> Per capita income has grown 13 percent from 2000. Local per capita income currently exceeds state-wide income by 13.7 percent, but still lags behind the nation-wide average by 4.6 percent.
> When adjusted for inflation, average earnings per job have increased slightly ($2,612) since 2000 but remain below the U.S. average.
> The cost of living in Billings is slightly below the national average and is about the median among surveyed cities in Montana and the region.
> When the cost of living is compared to per capita income and earnings per job, Billings has a lower cost of living and higher income/earnings than most of the surveyed Montana cities. When compared to other surveyed cities in the region, Billings is about average in terms of cost of living, per capita income and job earnings.
> Yellowstone County and Billings economies are keeping pace with surrounding States and appear to be doing better than the remainder of Montana.

ECONOMIC DEVELOPMENT ORGANIZATIONS AND PLANS

There are a number of economic development organizations in Yellowstone County. Among them are:

- Big Sky Economic Development Authority
- Billings Area Chamber of Commerce
- Downtown Billings Association and Downtown Billings Partnership
- Beartooth Resource Conservation and Development District
- Montana Department of Commerce, Regional Development Office

There are also a number of shopping area or shopping center merchant's associations and organizations that work on economic development on the Crow Indian Reservation and in the City of Laurel. Since they have a narrow geographic focus and are primarily promotional or are outside of this plan's jurisdiction, they won't be described here.

Each of the organizations listed above has its own sphere of operation and work plan. The first three operate exclusively in Billings and Yellowstone County while the Beartooth RC&D operates in a five (5) county area that includes Yellowstone County.

Big Sky Economic Development Authority/Corporation

Mission Statements

Big Sky Economic Development Authority: To facilitate the development of business that supports our community and quality of life.

Big Sky Economic Development Corporation: To recruit primary sector businesses and retain and expand existing Yellowstone County business that supports our community and quality of life.

Big Sky Economic Development Authority is Yellowstone County's lead economic development agency, established in 1989, by the Yellowstone County Commissioners. The agency serves Yellowstone County, the City of Billings and the communities of Acton, Ballantine, Broadview, Custer, Huntley, Laurel, Lockwood, Pompeys Pillar, Shepherd, and Worden. The Corporation, launched in 2002, the private business side, has 1000 member investor companies who assist with the business recruitment and retention, finance and legislative issues.

Big Sky Economic Development, the agency, is responsible for creating and implementing the strategic plan for economic development. This plan identifies and prioritizes opportunities and challenges and forms partnerships when appropriate. For example, the creation of the East Billings Tax Increment Finance District facilitated by the agency, will continue the efforts of the Framework Plan which initially focused on downtown Billings under the guidance of the Downtown Partnership. The agency helped to facilitate the formation of the Downtown Partnership and assisted in securing funds to develop the Framework Plan.

Services and Departments

- Finance & Tax Incentives
  Big Sky EDC offers both long-term fixed rate SBA 504 loan packages that typically require 10% owner equity, and revolving loan gap financing. Ask about Tax Incentive programs.
- Business Recruitment
  Big Sky EDC promotes Yellowstone County to industry sectors including medical, technology, energy, and manufacturing.
- Business Retention - BEAR
  Business Expansion And Retention helps match businesses with volunteers, who are professionals in their field, to identify challenges and solutions. It is free and confidential.
- Business Services - Small Business Development Center
  offers confidential one-on-one financial, operations and planning consulting to startup and established businesses at no cost.
- Community Development
  seeks funding on behalf of county agencies and nonprofit organizations, administers grants and facilitates projects. Free grant training offered.

- The One Hundred Member Investors
  Big Sky EDC has 100 Business Member Investors. The business sector is critical in influencing government economic policies and attracting new business.
- MT Procurement Technical Assistance Center
  helps with the process between government agencies and MT companies that want to sell products and services to government.
- MT Manufacturing Extension Center
  is a statewide manufacturing outreach and assistance center staffed by engineers with extensive experience in manufacturing.

Billings Area Chamber of Commerce

The Billings Area Chamber of Commerce is a membership organization whose core functions are to provide government affairs leadership, promote Billings as a preferred travel destination, and provide membership services. There are approximately 1,100 members of the Chamber. The organization employs a staff of nine full-time employees. A Board of Directors consisting of nineteen voting members and three ex-officio members oversees the Chambers activities. The Chamber's website (www.billingschamber.com) displays the organization's vision and mission statements:

> "Our vision is to achieve excellence in community leadership and growth."
>
> "Our mission is to develop a strong business climate and vibrant economy by serving the community in a leadership role thereby enhancing the quality of life."

Downtown Billings Association (DBA), Downtown Property Owners Committee and Downtown Billings Partnership (DBP)

These three organizations are the primary entities that promote Billings' downtown businesses and coordinate downtown redevelopment. The DBA has been in existence for over 50 years. It is a membership organization whose primary function is to promote downtown businesses and activities. The DBP is a non-profit corporation that was formed in 1998 to head the latest round of downtown revitalization. It is the clearinghouse for redevelopment grants and loans, beautification projects and efforts to increase downtown housing. The DBP coordinates the City of Billings' tax increment district spending whose funding is set to expire in 2008. The Downtown Billings Framework Plan was adopted by the Billings City Council and the Yellowstone County Board of County Commissioners in December, 1997. The Plan identifies five priorities:

1. Create the Downtown Billings Partnership to implement the Plan and its other priorities.
2. Pedestrianize the downtown core by changing parking and improving street systems and shuttle opportunities.
3. Develop a Kit of Parts that helps beautify the downtown and make it more livable.
4. Develop a system of downtown gathering spaces, such as parks, plazas and an open space network.

5. Bring housing back to the downtown so that there are people and activity during more than the 8-5 work day.

The Downtown Property Owners Committee is a committee of the DBA formed to oversee activities of the Downtown Business Improvement District (BID). The Property Owners Committee makes recommendations for assessment and use of funds for enhancing downtown public services and programs.

Beartooth Resource Conservation and Development (RC&D) District

The Beartooth RC&D started as a conservation district in 1971, was incorporated in 1990 and became an economic development district in 1995. A 22-member Board of Directors, that represents local government and conservation districts, governs it. The District covers a five county region consisting of Yellowstone, Big Horn, Stillwater, Carbon and Sweetgrass counties. Pursuing its economic development functions, the District has assisted primarily the smaller towns and counties in their region with obtaining grants and loans that support business development and employment, technical assistance and training. The District's economic development goals are listed below and each goal has a number of specific activities that are designed to implement the plan.

- Assist in the development of infrastructure to enhance the quality of life of people in the area and support future development.
- Strengthen and solidify the regional economy by supporting local industries to improve the quality of life and provide employment opportunities.
- Develop a regional forum for communication between communities and regional groups.
- Improve the standard of living by upgrading community services and their facilities.
- Assist local conservation groups in maintaining the Natural Resource Base.

Over the past five years, the community has seen greater collaboration and coordination among the various groups involved in economic development for Yellowstone County. Because several of the groups share the same goals and have established similar work priorities, continuing to work cooperatively can create a synergy that no one group may achieve on its own. Therefore, a collaborative strategic plan for economic development has become the number one goal within the economic development element of this growth policy.

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4.5 PUBLIC FACILITIES AND SERVICES

INTRODUCTION

Public facilities are the physical assets that are used to supply services to the local population. They consist of buildings, wires, equipment, pipes or treatment facilities. Many of the services that are supplied through our public facilities are considered to be essential for modern life, particularly in urban areas. Identifying the present facilities and their service capabilities will impact growth and development in the community. For example, if utility services aren't available to support a parcel of land's development, the community must decide if it is willing to help pay for facility extensions, if the development will be totally responsible for extending services, or if the development won't occur because it can't be served. Each of these scenarios can dramatically affect the way the community may grow.

This section examines publicly owned facilities and privately owned facilities used to serve the general population. The publicly owned facilities are described first, with the investor-owned utility companies, second.

PUBLIC BUILDINGS

There are four governments that own or lease real estate in Billings: federal, state, city and county. Combined, they own or operate over 2,000,000 square feet of property. Seven significant public buildings or building complexes were constructed in the 1990s. Two of them were Federal office buildings, two were State buildings, plus one was substantially remodeled, one was a City building and two were County facilities.

United States

In Billings three buildings are identified as "federal" buildings. The oldest of those, and the only one owned by the U.S. Government, is the James Batten U. S. Courthouse, located at 316 N. 26th Street. It is a five story building with approximately 200,000 square feet of space and it presently houses about 325 employees. The General Services Administration (GSA) is considering the replacement of this structure due to the discovery of widespread asbestos contamination within the existing courthouse. City, county, state and federal agencies have assembled land downtown at 26th Street East and 2nd Avenue North for this potential reconstruction.

The Wm. J. Jameson Building was constructed in 1994 at 2900 4th Avenue North, in Billings' downtown. The building houses a number of federal agencies including the Social Security Administration, Internal Revenue Service and Bureau of Indian Affairs. It is commonly referred to as the "new Federal Building," but in fact it is privately owned and leased to the U.S. government. It is a five story building with 124,000 square feet and presently houses over 500 federal employees.

In 1999 the Bureau of Land Management moved out of a leased downtown office building into a new building at 5001 Southgate Drive. The BLM building has 68,000 square feet of office space plus almost equal on-site storage space and houses about 250 employees. It is also a privately owned building that is leased to the BLM.

State of Montana

The State of Montana purchased the former Rivendell Psychiatric Hospital at 701 S. 27th Street in 1993 and converted it into the Women's Correctional Center (State Prison). The facility was expanded in 2001 to house additional inmates and add facilities such as a chapel. In the 1990s the State agreed to long term leases of two other buildings on S. 27th. The Department of Justice occupies one of the buildings at 615 S. 27th Street and the Department of Corrections' Probation and Parole Division occupies a building at 2615 4th Avenue South. While the State frequently consolidates or moves its offices, additional construction to house state employees within the next 5-10 years is unlikely.

Yellowstone County

Yellowstone County owns several significant buildings in Billings: the Courthouse, Youth Services Center, Detention Facility, Deering Clinic, Metrapark and Road Shop. The courthouse was built in 1954 and houses most of the County departments. It is located at 217 N. 27th Street. The County recently completed an almost 10 year remodeling project that improved space and equipment throughout the building, except for the 8th floor which contains the former county jail. A new County Detention Center was constructed in 1987 at 3165 King Avenue East, and was since expanded in 1997 to house up to 274 inmates. The Youth Services Center, located at 410 S. 26th Street, houses youth offenders in a residential setting. The County Sheriff's Department relocated to the "Round Building", formerly the Wells Fargo bank drive-through, located just east of the Courthouse at 219 N. 26th Street.

The MetraPark facility contains 185 acres and is located at 308 6th Avenue North. After voters approved a $10 million general obligation bond issue in 1993, Metrapark constructed several new buildings and reorganized the exposition and fairgrounds. The existing facility includes the Arena, the Expo Center, the Montana Pavilion, the Grandstands and several other outbuildings. Since 2003, the Arena has received a new roof, and Rimrock Auto purchased naming rights to it.

The Deering Clinic provides public health services to low income residents and some care to the general population. It is located at 127 S. 27th Street. The building is owned by the Big Sky Economic Development Authority, but is leased to the health service providers, many of which are County agencies or operations.

City of Billings

Prior to 2003 the City of Billings had completed a condition and value study of most of its buildings. Not studied were the airport, utilities, swimming pools, MET bus barn and the stadium. This initial study was designed to identify building conditions and form the foundation for a Citywide Master Plan for all City facilities. Olsen Architecture found that "The vast majority of the facilities could be categorized as fair to good with regard to general condition and improvements required." The City owns about 1,000,000 square feet of space in these buildings and they are valued for insurance purposes over $100 million.

The City owned Billings Logan International Airport is located on the plateau above downtown Billings. It is a 2,300 acre facility that has 3 runways, 2 instrument landing systems, two fixed base operators, a business park that provides office and operational space to

both State and Federal entities, a number of other aviation related businesses and tow areas providing space for general aviation hangars. The Billings Airport is responsible for maintaining the airfield and nearly 300,000 square feet of building space. Six passenger airlines, two large cargo airlines and four smaller cargo airlines operate from the airport. There are approximately 20 airline flights per day, enplaning approximately 440,000 people per year. The airlines and cargo carriers also move over 62 million pounds of freight and mail each year. About 150 aircraft, mostly for general aviation, are based at the airport. It is the state's largest airport, employing 56 full time airport staff and hosting 700-750 total employees on the airport. The terminal building was initially constructed in 1958, remodeled and expanded in 1972 and again in 1992 with a $19 million upgrade. The 1992 project also constructed a new Operations Center that houses the airfield maintenance and emergency services functions. In 2004, the Federal Aviation Administration (FAA) started construction on a new Air Traffic Control Tower which became operational in August 2006. Annually, numerous construction projects take place on the Airport to keep the facilities in great shape.

The City operates a public transit system called MET Transit, which operates from a facility located at 1705 Monad Road. The two MET buildings provide 5,000 square feet of administrative area, 8,000 square feet of maintenance space and 27,300 square feet of bus and material storage space. MET also operates two transfer centers, located downtown and on the west end. The MET has a FY 2009 operating budget of $ 4.5 million and a capital budget of approximately $4 million. Nearly 46% of MET's revenues come from local taxes, 35 percent from the Federal Transit Administration, and 19 percent from other sources. The system operates with 26 buses providing 660,000 rides per year. It also operates the 15-vehicle para-transit service for disabled and elderly riders, providing 62,000 rides annually. A new innovative Downtown Transfer Center will be opened in the spring of 2009. This new center will greatly enhance transit operations and public safety, as well as improve the downtown 'Civic District' environment.

The City of Billings completed a new parking structure and City Hall expansion in 1991. The Park 3 Garage has capacity for about 273 vehicles and the City Hall expansion houses the Finance and Administration Departments. Both are located at 210 North 27th Street next to the old City Hall which houses the Police Department, City Attorney's and Legal Department, and Municipal Court. The City Parking Division operates four parking garages, Park 1 through 4, and several surface parking lots in addition to enforcing parking regulations and administering parking meter revenue. Park 1, located at 2912 Third Avenue North, was built in 1977 and contains 461 spaces. Park 2 followed in 1978 with 556 spaces and is located at 2651 1st Avenue North. In 2007, Park 2 was expanded when 224 spaces were added in 4 stories above the new Wells Fargo Bank drive-through. In 1985, Park 4 garage was constructed at 515 North 31st Street and has capacity for 772 vehicles. The five surface lots are located downtown and each has capacity for approximately 150 vehicles.

Since 2003 the City of Billings purchased land at the intersection of South Billings Boulevard and Midland Road and has relocated its former operations at the old Edwards complex to the new Billings Operations Center. New facilities were completed in 2004. This project took place as a cooperative agreement with Sysco, who requested the property where the Edwards complex and City animal shelter existed adjacent to their existing Sysco operations for expansion purposes. The cost of the new Billings Operations Center on Midland Road was

reduced by the sale of the Edwards property to Sysco. The new site is 23 acres with 5 structures. It serves as the Operations center for Public Works Solid Waste and Street and Traffic Divisions, Police Operations, Training and Evidence, operations for Parks, Recreation and Public Lands, as well as the Administrative Services functions of Facilities Management and Fleet Services.

There are now seven Fire Stations in the city of Billings with the addition of Fire Station #7 in 2008 at 54th Street West and Grand Avenue. Fire Station #1 also houses Central Headquarters for the Fire Department and is located at 2305 8th Avenue North. Fire Station #2 (Maverick) is located at 501 South 28th Street. Fire Station #3 (Parkhill) is located at 1928 17th Street West. Fire Station #4 (Terry) is located at the corner of 6th Street West and Terry. Fire Station #5 is located at 605 South 24th Street West. Fire Station #6 (Heights) is located at 1601 St. Andrews Drive.

Public Works has its Public Utilities Services Center at 2251 Belknap Avenue. The site supports the operation of Public Utilities as well as the Water Treatment Facility.

Parmly Billings Library is the public library serving all of Billings and Yellowstone County from its location at 510 North Broadway, in the former Billings Hardware building. The library receives about 350,000 visitors and check out almost a million items annually. The library operates using the basement through the 2nd Floor of the building, while the 4th Floor houses the Planning and Community Services Department (Planning, Building, Community Services, and Code Enforcement Divisions). In 2008, the Public Works Administration and Engineering Division offices were relocated to the Depot facility at 2224 Montana Avenue.

The Parks, Recreation, and Public Lands Administrative offices and Community Center are located at 390 North 23rd Street in a 15,000 square foot facility that includes the Billings Senior Center. The Parks Department has various facilities at numerous parks throughout the City including two pool sites, and over 500 acres of parkland amenities. In 2008, the new ballpark, now named Dehler Park, was completed. The ballpark replaces the historic Cobb Field on the same site at 9th and 27th Streets and will accommodate four different baseball teams including the Billings Mustangs, the MSU-B Yellowjackets, and the Legion baseball teams of the Scarlets and the Royals. The new facility was also designed as a multi-use facility for use by the City of Billings.

The City began its formal capital improvements planning in 2000. The City identifies and prioritized capital improvements projects and major equipment replacement needs through its Capital Improvement Plan process. This process is described in detail in Chapter 5.2.

UTILITIES

Water supply has been critical in determining how and where development has occurred in the arid West. It is not surprising therefore that the major development in Yellowstone County has been along the primary water source, the Yellowstone River. Development in other parts of the county has been constrained in part by the availability of water. The only other major source of water in the county is from groundwater. Along the Yellowstone Valley, groundwater is relatively plentiful

and close to the surface. Outside of the valley, the ground water sources are much deeper, if ground water is available at all. The groundwater that is available may be unusable due to mineralization.

Within the State of Montana, allocation methods differ for surface water and ground water, but one principle holds true for both: "First in time, first in right." There are two basic types of surface water rights: 1) rights in existence prior to the Water Use Act of 1973, and 2) the water reservation system developed by the Act. The Act was designed to reserve water for future consumptive uses and to maintain a minimum flow level and quality of water. A claim to water under either system does not guarantee future supply in the amount of the claim because surface water rights are presently being adjudicated in Montana. Adjudication began in the 1970s and continues today. Additionally, on the Yellowstone River system, the reserved rights of Native American tribes, the federal government and the State of Wyoming have yet to be quantified. The confusion has left users unsure of the ultimate worth of their claims no matter when originally filed. The users with the most recent (junior) claims may b less likely to have water in a drought year than those with senior claims.

Groundwater has not yet been quantified in the State of Montana and rights are not being adjudicated as they are for surface water. No permits are required for wells pumping less than 35 gallons per minute (gpm) or ten acre-feet per year, but a Notice of Completion must be filed with the State. For wells pumping over 35 gpm, the user must demonstrate a ready supply and noninterference with existing wells before a permit will be issued.

Public Water Supplies

Across the State of Montana, only about four percent of the public water systems use surface water. However, these systems provide water to about seventy percent of all persons receiving water from public systems. Almost all of the public water systems described below derive their water from the Yellowstone River. The following text is not a complete survey of all public water sources in Yellowstone County. However, the majority of public water users within the County are served by the sources described below.

Municipalities

Billings

In 1915, the City of Billings purchased its waterworks from the Montana Water Company at a cost of $315,000. The original waterworks were built in 1886-1887. The source of supply is the Yellowstone River. Water is taken into the system with two intakes located at the water treatment plant, 2251 Belknap Avenue. The City has three water rights, dating as far back as 1885. The City has received water reservations through the State adjudication process that are sufficient to serve a population of at least 250,000 people. It is estimated that, as of July 1, 2007, the City serves 101,876 people.

System improvements made in 2007 brought the nominal capacity of the treatment plant up from about 50 million gallons per day (MGD) to 65 MGD. Average daily production is slightly over 23 MGD. Treatment consists of coagulation, settling, filtration, disinfection, and corrosion protection.

There is a 600 feet elevation difference between the river valley floor, where the water plant is located, and the highest service area located in the Billings Heights. That necessitates six different service areas or pressure zones to provide suitable service to customers. The most

recent pressure zone was added when service was provided to Rehberg Ranch Subdivision in 2002. The system has 14 reservoirs capable of storing 34 million gallons, 11 pumping stations and over 450 miles of distribution mains ranging in size from 4" to 42" in diameter.

The Distribution and Collection Division of the Public Works Department PW-D&C) of the City of Billings supplies water primarily within City boundaries. The City currently has a policy that prohibits the provision of water services to any customer outside of the City's official water service area. The service area is defined by City code as the area within the City boundaries, any areas presently serviced outside the City, and any subsequently approved amendments to the service area. The code specifically states that any areas to be included in the service area must be annexed or an attempt at annexation made before any service area enlargement applications will be considered. The City presently serves about 344 customers outside the City limits and about 28,000 inside the City.

The City's water operation is classified as an enterprise fund. Enterprise funds operate much like businesses in that they produce income from selling their products or services and are accounted for separately from other City funds. The City's water sales were over $13.4 million in 2007, making it a sizeable business in the Billings community. In the same year, water operating expenses were about $10.1 million. Capital expenses projected for Fiscal Year 2008 total just under $20 million, and include $4 million for water main replacements, the Zone 4 water reservoir and pump station, a low service pump station #1 upgrade, as well as numerous other repairs, upgrades and equipment replacements. As of 2008, the PW-D&C Water Division employs 62 people that manage and operate the water systems.

TABLE 1
CITY OF BILLINGS TEN LARGEST WATER CUSTOMERS DURING FY2008

Customer	Consumption – CCF
1. Billings Heights Water District*	1,216,780
2. Conoco Phillips refinery	707,186
3. St. Vincent Hospital	99,758
4. PPL Montana	84,613
5. Casa Village Mobile Home Court*	83,276
6. Montana State University – Billings	62,484
7. Billings Clinic	54,668
8. Golden Meadows Mobile Home Court*	51,582
9. City of Billings	51,130
10. Fisher Water Service	39,280

(CCF = 100 cubic feet = 748 gallons)

*The City PUD master-meters and considers these customers to be a single account. Each of these customers has many customers or sub-accounts.

Laurel

The City of Laurel provides domestic water service to the residents of Laurel and a few customers outside the City, including the CHS refinery. Delivery to the refinery includes treated domestic water supply and untreated water for the cooling system. The original treatment plant was constructed in 1956 with a major retrofit completed in 1998. The plant treats a peak demand of 4 million gallons per day.

The treatment plant is located south of town on the Yellowstone River. The River has two main channels at this location and the Laurel plant and intake are on the north channel. During low flow periods, the City has had trouble with drawing adequate water from the channel. In August 2001, the City was permitted to construct a diversion dam on the south channel so that the water intake for the City would remain covered. This is a temporary solution and the City expects to spend up to $1 million constructing a new river water intake in mid-stream or to make permanent river diversions so that the present intake is more effective.

Broadview

The Town of Broadview produces its water from two wells. It is treated with chlorine for disinfection and stored in an elevated tank. The system serves approximately 60 residences and businesses. The development of additional viable public water supplies has been of great importance to the town in recent drought years. The present water supply is inadequate for fire suppression and yard watering, resulting in high home insurance rates and low property values. In response, the Montana Bureau of Mines and Geology conducted a study between 2006 and 2007 entitled "Developing a Viable Water Supply for the Town of Broadview, South-Central Montana" to locate potential ground-water sources for development as a viable water source. The study identified potential hydro-geologically favorable sites, developed test wells, and mapped groundwater flow, recharge areas and discharge areas, to help the town understand the long-term viability of potential water supplies.

Water Districts

Lockwood

Lockwood is an unincorporated area located on Billings' eastern border. The community has been served with domestic water by the Lockwood Water Users Association, established in 1955 using multiple wells as its water source. In 1987, the Lockwood Water Treatment Plant was constructed to serve the community with a surface water treatment plant that uses the Yellowstone River as its source of supply. The treatment plant, located on the north bank of the river near the ExxonMobil Refinery has a conventional design of tri-media sand filters and chlorination. A pre-sedimentation facility was put in place in 2006 to further enhance the treatment process. Treatment consists of coagulation, settling, filtration, and disinfection. Water is stored and pressurized for the system in three storage tanks having a combined capacity of 1.8 million gallons. The nominal capacity of the water treatment plant is 3 million gallons per day.

In 2000, the Association dissolved and reformed as the Lockwood Water and Sewer District. Today, it serves about 6,000 people and peak daily consumption is 1.5 million gallons.

Worden – Ballantine

The unincorporated area is served by a combined water and sewer district. Water is pumped from an above-ground spring and clearwells to approximately 280 households. The only treatment is chlorination. There is one 40,000 gallon elevated storage tank. The system has

capacity to expand and the district is considering how to best serve land that is within the district but does not presently have service.

Groundwater – Individual Business and Residential Use

Groundwater wells are the primary source of domestic water for residents outside of Billings, Laurel and the water districts. Groundwater is readily available in the Yellowstone River Valley and is usually good quality. Outside of the valley, water is less available and the quality may be compromised by minerals or high concentrations of dissolved solids. Wells of 1,000 to 1,500 feet deep are common outside of the valley.

The Montana Bureau of Mines and Geology recently conducted groundwater characterization studies in the middle and lower Yellowstone regions. A study entitled "Hydrogeology of the West Billings Area: Impacts of Land-Use Changes on Water Resources" published in 2002, evaluates the potential impacts that residential development in the Westend area may have on groundwater quality and quantity. A second unpublished study looked at similar impacts for areas east of Billings, including Lockwood, Huntley and Shepherd.

The primary concern in the valley is Total Dissolved Solids (TDS). TDS in Yellowstone County tend to be salts that are leached from the clay topsoil and carried to underground aquifers. Areas with particularly severe problems include a pocket northwest of Laurel, Canyon Creek drainage above 72nd Street West and the Cove Creek/Hogan Slough drainage above 48th Street West. The Bureau of Mines' preliminary study shows that there are almost indistinguishable differences in nitrates between land that is used for agriculture and where there are residential subdivisions. Water well yields appear adequate for residential uses in most valley areas except along the benches that rise from the valley floor. In those areas the gravel layer is thin and water may not be readily available.

Other possible aquifers outside of the valley are the Eagle Sandstone, Judith River and Fort Union formations. Eagle Sandstone is present in approximately 80 percent of Yellowstone County. Erosion has removed the Eagle Sandstone in the southern part of the County. The formation yields relatively low volumes of water, but is usually acceptable for domestic or stock uses. The areas that have unacceptably high TDS are a 2-3 mile wide band north of 5 Mile Creek, in the Heights and around Lockwood. Shallower alluvial layers in these areas may produce small amounts of acceptable quality water. North and south of these high TDS water problem areas may produce acceptable water but it is usually 1,000+ feet below the surface.

There are to date 11,589 known wells in Yellowstone County. About 1/2 of those wells were added between 1990 and the present. Ten gallons of water per minute is considered the minimum yield for a single family house and most county wells yield less than 30 gallons per minute. About 54 percent of all wells are used for domestic purposes, with agricultural uses being the second greatest use. The following exhibits show this information in more detail and in graphic form.

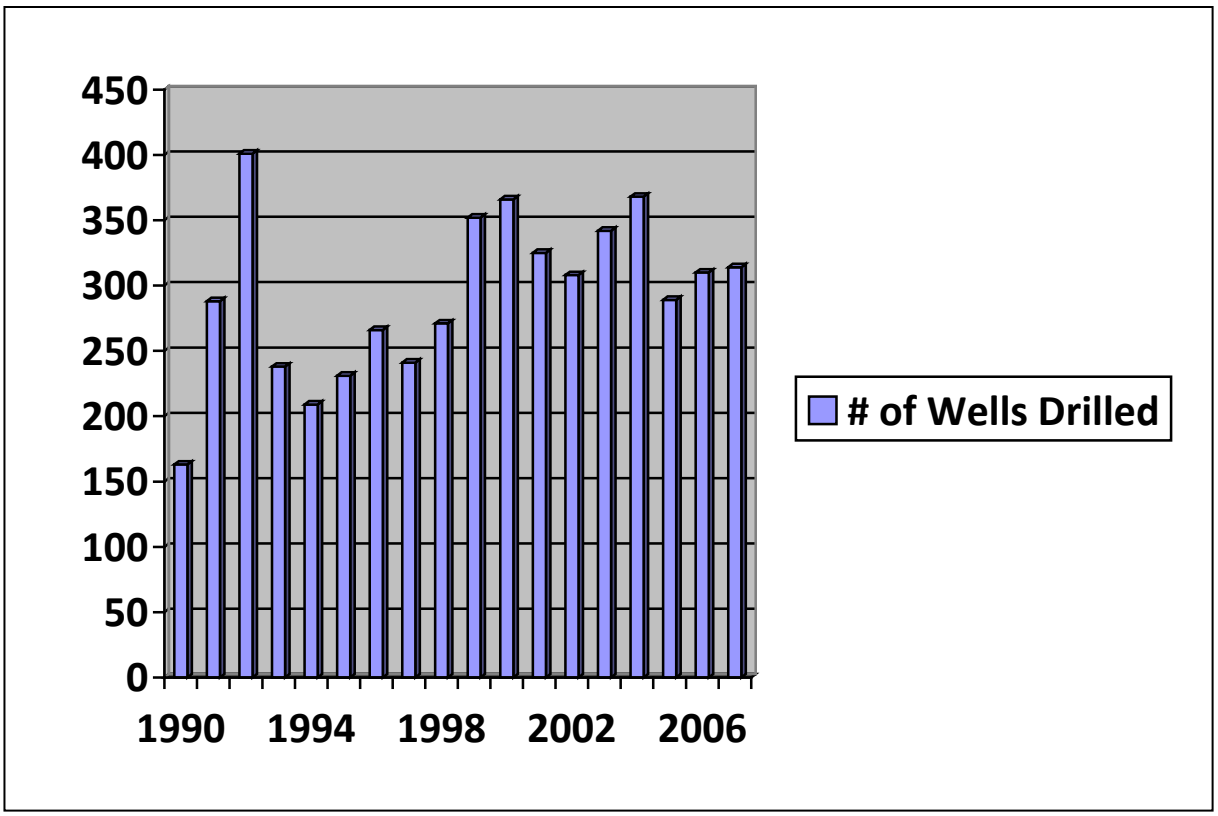


Figure 1: Wells Drilled in Yellowstone County by Year (1990-2007)
Source: Groundwater Information Center, Montana Bureau of Mines and Geology, October 2008.

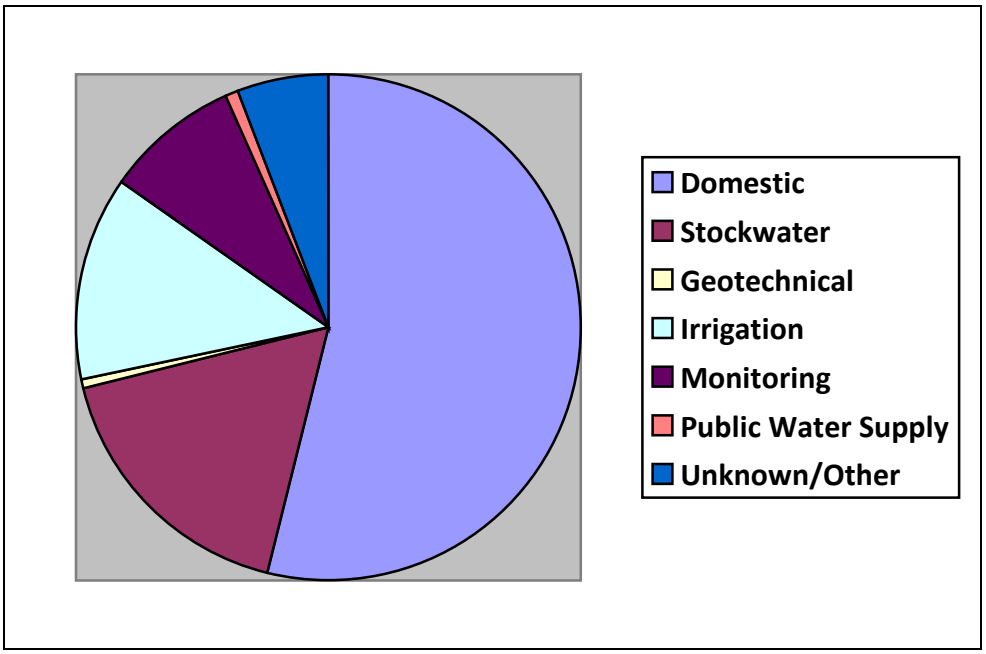
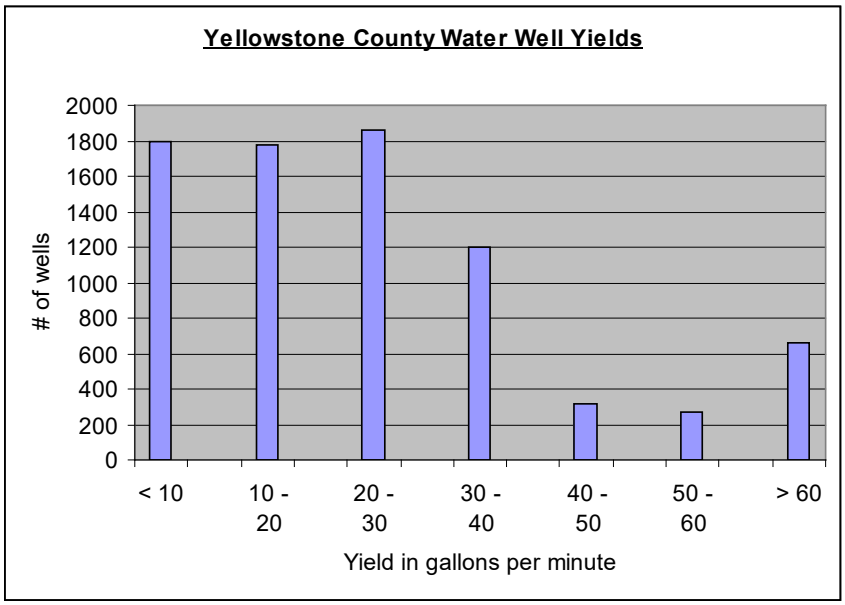


Figure 2: Reported Water Use for Wells in Yellowstone County. 2008.
Note: Well users may report more than one use for a single well – all uses are as reported by the user
Source: Groundwater Information Center, Montana Bureau of Mines and Geology, October, 2008.



Source: Luke Buckley, Groundwater Information Center, Montana Bureau of Mines and Geology, October, 2001.

Wastewater Treatment and Disposal

Once water is used by a household, business or other user, it is typically treated and returned to the hydrologic system, and is therefore recycled. Municipal treatment facilities generally discharge their effluent to surface water. Even those that do not directly discharge have some portion of their effluent seep into the ground or it evaporates and eventually returns as precipitation. Septic systems discharge their effluent to the ground where it returns to underground aquifers or evaporates to the air. Because a person's wastewater may become the next person's drinking water, wastewater discharge is highly regulated.

Municipal discharges are regulated through many federal and state laws such as the federal and state Water Quality Acts, state and federal Environmental Protection Acts, the National Pollutant Discharge Elimination System, the state's Groundwater Pollution Control System and others. The water quality and quantity are routinely monitored and must meet pre-established standards. Septic systems are regulated at both the state and local levels where the City/County Health Department becomes involved in permitting and inspecting system installation and operation.

Municipalities

Billings

The Billings Wastewater Treatment Plant (WWTP) is located on the Yellowstone River, about ¼ miles downstream from the US 87 E Highway bridge. It was constructed in 1950 and had a treatment capacity of 15 million gallons per day. It was enlarged in the mid 1970s to treat an average of 26 million gallons per day (MGD), a maximum flow of 40 MGD and secondary treatment was added. The treatment process includes screening, grit removal, primary and secondary clarification, disinfection, activated sludge, anaerobic digestion and centrifuge sludge dewatering. The treated water is discharged to the Yellowstone River and the dewatered sludge is disposed of in the municipal landfill. Average daily flow is almost 16 million gallons, meaning that Billings' customers return to the wastewater system about 70 percent of the water that they use each day.

The collection system includes about 360 miles of sewer lines ranging from 8" to 60" diameter. Five sewer lift stations lift the wastewater from areas that are at low elevation to a higher elevation so that gravity flow can be achieved for most of the wastewater's transport to the WWTP. The system serves about 31,500 customers (connections) with only 44 being outside of the City. About 3,000 of those customers are commercial accounts, so the remainder is residential.

The utility received $8.3 million in operating revenues in Fiscal Year 2007. It had about $5.7 million in operating expenses and just over $9 million in capital expenses, which helped fund construction of new and repaired lines, and improvements and enhancements to the treatment plant and equipment. Projected major capital improvements for Fiscal Year 2008 include the enhancements to the Yellowstone Country Club area, the Briarwood sewer line completion, and numerous other repairs and upgrades.
As of 2008, the PW-D&C Wastewater Division employs 62 people that manage and operate the wastewater systems. The utility's largest customers and their discharge volumes are shown below.

TABLE 2
CITY OF BILLINGS TEN LARGEST
WASTEWATER CUSTOMERS DURING FY 2008

Customer	Discharge CCF
1. St. Vincent Hospital	100,424
2. Casa Village Mobile Home Court	83,276
3. Billings Clinic	54,092
4. Golden Meadows Mobile Home Court	51,582
5. Conoco Phillips refinery	36,654
6. Crown Plaza/Sheraton Hotel	24,775
7. Shiloh Village	23,627
8. Montana State University – Billings	22,694
9. Rocky Village Association	20,426
10. Yellowstone County Jail	19,824

Laurel

Laurel built a new WWTP in 1985. It is located ¾ mile east of the Montana Hwy. 210 Yellowstone River bridge and upstream from the Clark Fork confluence. The treatment plant is a Class 2 treatment facility, one that does not use activated sludge in its treatment process. The average daily treatment capacity is .8 million gallons per day (mgd) with a peak treatment capacity of 4.75 mgd. The City is preparing a wastewater facilities plan that reviews all of WWTP facilities and collection system, particularly inflow and infiltration issues. When the study is finished, the City will start its first Capital Improvement Program to prioritize improvements and will start a sewer line rehab/ replacement program. The system serves the City's commercial and residential customers, including the CHS petroleum refinery and a small housing area outside of the City near the Montana Rail Link complex.

Ballantine

Ballantine has a sewer system that collects waste from approximately 60 customers and treats the waste in collection lagoons. There is no permitted discharge to a water course.

Sewer Districts

Worden – Ballantine

The sewer system is composed of a sewage collection system, two lift stations and a two-cell lagoon treatment system. There is an additional 13 acre lagoon that provides redundancy. It presently serves about 325 households and has capacity to serve about 450. The district doesn't have a discharge permit and has never discharged treated waste to the ground or surface water.

Lockwood

All of Lockwood uses septic tanks. Since its creation in 1999, the Lockwood Water and Sewer District has faced a series of challenges with getting support for establishing a much needed public sewer system for the community. Two options were investigated, including the construction of a sewer treatment facility and infrastructure to serve the community, or just installing infrastructure and then contracting with the City of Billings for sewer treatment services. An agreement with the City for a sanitary sewer connection was negotiated in 1999, but later expired in 2004 after a series of failed bond financing elections. Finally in 2008, the District was successful in renegotiating an agreement with the City for wastewater treatment, and got the necessary voter support for a $14 million bond to initiate construction of Phase I of their wastewater infrastructure. Construction is expected to begin in spring of 2009 on this project.

South Hills

Sewage is collected from the Briarwood subdivision through gravity mains and one lift station and is treated on-site with a mechanical plant. This treatment plant was determined to be at its capacity and at the end of its design life in 2002, which resulted in the neighborhood's decision to petition for annexation into the City of Billings. The City currently has a project underway to extend sanitary sewer to Briarwood, which will eliminate the wastewater treatment plant. The project entails 1.4 miles of new sanitary sewer main, new maintenance roads, demolition of the old water treatment facility and two miles of gravity sewer main. This project is scheduled for completion in 2009.

Custer

The town of Custer receives sewage treatment through a system created under a Rural Special Improvement District (RSID). The treatment is with a two-cell sewage lagoon that has 6.4 acres of surface area. It is permitted to discharge to the Yellowstone River, but doesn't because of the disinfection and monitoring requirements.

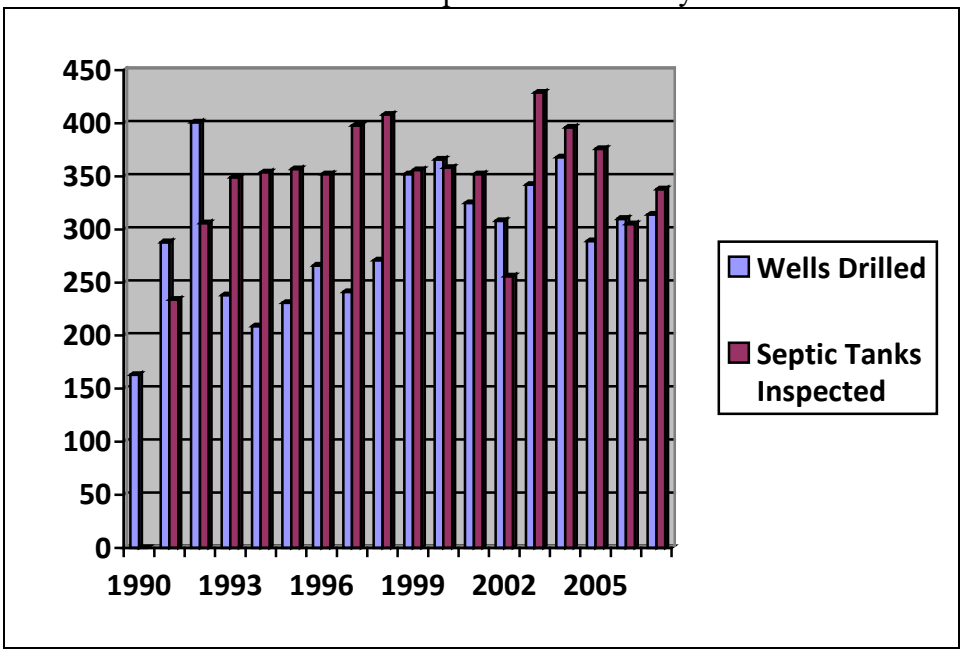
Yellowstone Club Estates

The Yellowstone Country Club and the housing area surrounding it created a sewage collection and treatment system through an RSID. Sewage is collected through a conventional gravity and force main system and is treated by an activated sludge treatment plant. The effluent is stored in two lagoons and is discharged for golf course irrigation. Yellowstone Club Estates was annexed into the City in 2002.

On-Site Underground Disposal Systems

County residents in areas not served by municipal or district systems usually rely on underground disposal systems. Most of these systems are composed of concrete septic tanks and drainfields. Biological activity in the tank provides primary treatment and the effluent is discharged to the drainfield where perforated pipe allows it to soak into the ground or be evaporated into the air. The Montana Department of Environmental Quality (MDEQ) and the City/County Health Department, now known as Riverside Health, permit and inspect septic systems. Subdivisions with lots greater than 20 acres in size, and individual systems are permitted and inspected by Riverstone Health while subdivisions that create lots less than 20 acres in size are reviewed by MDEQ. The review, permitting and inspection process ensures that the underground systems will not negatively impact groundwater quality. In general there does not appear to be a significant impact from septic drainfields on groundwater quality, but localized impacts can occur as systems age or malfunction. The creation of the Billings Heights Water District and the annexation and connection of a number of Heights neighborhoods to City sewer service in the 1980s were responses to widespread groundwater contamination of wells by septic systems.

The 1990 Yellowstone County Comprehensive Plan reported that there were 7,830 septic tank inspections for new or repaired systems since 1975. That number does not indicate the total number of septic tanks in Yellowstone County because the Health Department does not keep records of systems installed prior to 1975. Since the 1990 plan was written, there were almost 3,500 new systems installed or existing systems repaired during the 1990s and almost 2,500 more between 2001 and 2007. The number of inspections annually is shown below and is compared to new water wells that were completed in the same year.



Source: Ted Kylander, Yellowstone City-County Health Department
Note: Septic Tank inspections include all inspections including initial installation and existing system repair or replacement.

Storm Drainage

Storm drains are installed to channel runoff from storms and snow-melt. As land use becomes more urbanized, the amount of runoff increases. Also increased are the resultant problems associated with insufficient storm drainage: danger to public safety from ponded streets, health hazards from stagnant water and mosquitoes, inconvenience of detours and storm debris, and deterioration of pavement and road bases from standing water and increased erosion. Infiltration of water to the ground decreases dramatically as development occurs and a greater percentage of the area is made impervious with asphalt and concrete streets, sidewalks and parking lots and the roofs of businesses and homes. The amount of runoff depends on a number of factors including the duration and intensity of the storm, time of year, absorption of surface areas, and the slope, shape and dimensions of the drainage area.

The design of storm sewers is based on an estimated volume of runoff. In order to estimate runoff, a determination must be made of the frequency-duration-intensity relation of precipitation in the study area. Rainfall intensities are classified based upon the average frequency with which they occur. Intensities occurring on the average of once every two years are designated as two year storms. The design of the Billings City Storm Drain system is based on the "two year storm" as the baseline for residential development and the "five year storm" as the basis for commercial development. The data and calculation methods for storm drains in Billings and Yellowstone County are contained in the City's Stormwater Management Manual.

Stormwater Systems

Billings

The City of Billings provides storm drainage services most areas within the city limits. The system is financed and operated as a utility enterprise fund. Financing comes from a storm sewer maintenance tax assessed on all property in the City. The assessment is based on zoning and lot area. Currently, the City generates about $3 million each year which is expended on maintenance (30%), capital for improvement projects (40%), and debt service (30%).

The City's first Stormwater Management Master Plan was prepared in 1962 and many of the City's current trunk mains were constructed from that plan. Since the original study, approximately 15 individual studies have been performed on various sections of town. Although these studies thoroughly cover all areas of the City, each master plan identifies its top construction priorities in their specific study area without regard to other plans in adjacent basins. In 2007 and 2008, a consultant was hired to deliver a comprehensive master plan for the entire City that updates, evaluates, and consolidates each of the basin specific master plans. The goal of this effort is to develop a City-wide comprehensive prioritized list of the top storm water construction projects based on both water quantity and water quality. This study will provide a new Storm Water Management Manual which will better define the City's policy and procedures for mitigating storm water runoff, and will also evaluate the City's current rate assessment structure. The rate assessment structure is being reevaluated to

determine if the amount of assessments generated is adequate to keep up with maintenance, debt service and capital improvements costs.

Once this Master Plan is adopted by City Council, the City intends to construct a variety of projects based on the outcome of the prioritized list. As the rate study has not been completed, it is unknown at this time what projects can be built. The comprehensive master plan, updated management manual and evaluation to the rate assessment structure is anticipated to be complete by January 1, 2009.

One of the more challenging tasks facing the City is compliance with Phase 2 requirements of the Environmental Protection Agency's (EPA) stormwater program under the Federal Clean Water Act. Billings is one of seven urbanized areas in Montana under this program which met either the criteria of a population of 50,000 or a density of 1000 people per square mile. The MDEQ has primacy over this program under the General Permit for Stormwater Discharges Associated with Small Municipal Separate Storm Sewer System (MS4) as defined in Administrative Rules of Montana (ARM) 17.30.1102. On June 30, 2006, the State issued authorization MTR040001 on the City's MS4 application. The permit is up for renewal in 2009.

The City's application developed a stormwater pollution prevention plan based on the following six minimum control measures:

- Public Education and Outreach
- Public Involvement and Participation
- Illicit Discharge Detection and Elimination
- Construction Site Stormwater Runoff Control
- Post Construction Stormwater Management in New Development and Redevelopment
- Pollution Prevention/Good Housekeeping for Municipal Operations

The control measures are aimed at preventing stormwater pollution. Each of these control measures requires the City to implement best management practices, establish measurable goals, form partnerships, implement a schedule, and conduct evaluation/assessment of efforts, reporting, and recordkeeping.

Public Works staff has written a draft Ordinance for Council approval to address illicit connections to the City's stormwater system and construction site pollution prevention practices. Staff has also conducted geo-spatial surveying to both locate and to assess the condition of the stormwater outfalls throughout the City urban area. The permit also requires the City to conduct stormwater quality data monitoring for several water quality parameters with each parameter having a median concentration value. The values are based on an EPA Nationwide Urban Runoff Program.

Laurel

In the late 1970s, Laurel installed two trunk storm drains. Both accept drainage from the street system in the northern parts of the city. One runs south in 8th Avenue West to West Main Street and the other drains to the west and is in East 1st Street. Each discharges into the Laurel drain/ditch system that is an open drain for about 1 ½ miles to an outfall at the

Yellowstone River. Over the next five to ten years the City expects to expand the storm drainage system by constructing collector lines and connecting them to the trunk system. The City south of the railroad has no formal drainage system except for 1st Avenue where it intersects with Interstate 90.

Rural Systems for Storm Drainage

Subdivisions, condominium developments and mobile home parks must comply with storm drainage standards established by the State and County's subdivision regulations. The County regulations specify two alternatives for drainage: on-site and off-site. On-site drainage control consists of a system designed to collect and retain storm water rather than to discharge it into other systems such as streets, adjacent land, or other stormwater disposal facilities. Allowances are made for discharge in the event of a storm with intensity equal to or greater than a maximum 25-year storm. Traffic control devices may be required where on-site storm drainage controls are placed adjacent to streets. Off-site drainage consists of the construction of curbs and gutters to channel storm drainage to storm drains, ditches or natural drainage channels.

County regulations require that easements be provided where a subdivision is traversed by a water course, drainage way, channel, or stream. A storm water easement and/or storm sewer drainage right-of-way must conform to the water course and provide further width as will be adequate for the purpose of controlling flows. Parallel streets or parkways may be required.

State regulations for subdivisions further specify that development should include steps to prevent erosion during and after subdivision construction. If storm water runoff from a subdivision will result in a degradation of state surface waters, treatment is required. Minimum treatment consists of the removal of settle-able solids and floatable material. Plans for the treatment facility must also be approved.

With the exception of the subdivisions built in accordance with the subdivision regulation standards for storm drainage and the formal public systems described above, storm drainage in the remainder of the County consists of natural infiltration, irrigation drainage ditches, roadways, and borrow ditches along the roadsides.

Agricultural drainage ditches in Yellowstone County were developed in the first three decades of the last century as a means to drain off excess water from the practice of flood irrigation and to draw down the water table in areas where high water spots interfered with farming. These drainage ditches were not intended to convey stormwater runoff but by default, they do so in many developed areas outside of the City limits.

To date there has been no comprehensive study of the adequacy of storm drainage in areas outside of the City limits. The 1973 Areawide Facilities Plan for the Billings area did examine both the Billings Heights area, which has since been incorporated into the City, and Lockwood. An assessment of the drainage in Lockwood was made at that time. The drainage was characterized by numerous, generally parallel, drainage courses with relatively large tributary areas. It was proposed that the Lockwood area be zoned to protect the natural drainage courses and that two short storm drains be built along I-90 to discharge into natural ditches. The storm drains were not built and Lockwood currently has no formal system of storm drainage.

National Trends

Federal solid waste regulations started with the Resource Conservation and Recovery Act of 1976. Present regulations are primarily contained in Parts 257 and 258 of Title 40 of the Code of Federal Regulations. Part 258 applies to Municipal Solid Waste (MSW) Landfills, which are the focus of this section of the Growth Policy. The regulations are commonly referred to as the Subpart D regulations, even though Subpart D is only one relatively small portion of the whole. These regulations were adopted on October 9, 1991. Montana's largest landfills were required to conform by October 1993 and smaller ones by April 1994. The regulations establish minimum criteria for location, operation, design, groundwater monitoring and corrective action, closure and post-closure care and financial assurance.

Municipal Solid Waste landfills cannot be located or operated in wetlands, floodplains, fault areas, seismic impact zones or unstable areas. This restriction reversed the common practice of locating landfills in areas that had marginal development potential such as wetlands and steeply sloped lands. Among other operational limits, the Subpart D regulations require operators to identify and prohibit hazardous waste, to not burn mixed waste, to cover each day's waste with earth, to control methane gas releases and stormwater runoff and to secure the site from unauthorized dumping. Again, this changed common practices of allowing almost unlimited access to landfills and burning much of the waste. Another section deals with how landfills must be closed and the long term care and monitoring that must be done. The final section requires financial guarantees that would allow a third party to close, monitor and correct landfill problems if the municipal owner fails to complete these tasks.

The portion of the regulation that perhaps had the greatest impact on landfills nationally addresses constructing new landfills or expanding existing ones. This is the true Subpart D regulation. It requires that landfills be designed so that they encase the waste, keep it dry and collect and treat any moisture that flows from, around or through the waste area. This is the "dry tomb" approach to solid waste management. All landfills have to have an impervious barrier between the waste and groundwater, although a groundwater monitoring system is still required. When a landfill area is closed, it must be capped with a moisture barrier that has the same or greater impermeability. The type of liner and leachate collection system depend on the geologic conditions at each landfill site. These design, construction and monitoring requirements significantly increase the difficulty of siting new landfills, increase landfill construction and operating costs and have reduced the number of active landfills while increasing the size of the remaining ones. In 1988, there were almost 8,000 active landfills in the US. By 1999, there were only 2,200. These landfills accepted over 57 percent of all MSW with the remainder going to incinerators (14 percent) or recovered/recycled (28 percent).

In 1989, the EPA established a waste management priority system that emphasized the following:

- Source reduction, or waste prevention, including reuse of products and on-site or backyard composting of yard trimmings
- Recycling, including off-site or community composting
- Disposal, including waste combustion, preferable with energy recovery, and landfills

In the United States, we generated 246 million tons of MSW in 2005, a number that equates to an average of 4.5 pounds per person per day. This total is up from 230 million tons in 1999, 205 million tons in 1990, 151 million tons in 1980, 121 million tons in 1970 and 88 million tons in 1960. Although the total annual tonnage of MSW continues to rise as the population increases, the good news is that recycling rates are also steadily increasing thereby reducing the amount of MSW that was disposed of in landfills or incinerators. The amount of recovered and recycled materials in the waste stream has increased dramatically going from only 6 percent in 1960, to 16 percent in 1990, then 28 percent 1999, and now 32 percent in 2005. Most of the materials recovered or recycled were paper or paperboard, yard trimmings and metals. Non-ferrous metals had a particularly high recovery rate, largely due to recovering nearly 97 percent of the lead in lead-acid batteries.

Source reduction, meaning reducing waste production so that it never enters the waste disposal system, is the EPA's highest MSW priority. Examples of source reduction include designing and manufacturing products and packaging in ways that reduce the amount or toxicity of trash, purchasing goods that are more durable a have a longer lifespan, and reusing products, such as clothing, building materials, and containers. In 2000, source reduction had nearly as large an impact on MSW disposal as recovery and recycling. Over 55 million tons of waste was source reduced. Almost half of that waste was yard trimmings and food waste while containers and packaging were 28 percent of the total. Yard trimmings and food waste disposal declined over the past few years as more mulching mowers were used, landfills stopped accepting yard waste unless it could use it for composting / cover material and backyard composting became more popular.

State Trends

In the early 1960s, there were over 500 cities and town in Montana. Each probably had its own landfill, or more than one. By 1975, the State had established a solid waste management program and had identified 227 known municipal landfills. The State downsized its solid waste program in the 1980s, but the threat of waste importation in the late 1980s, plus the impending adoption of the Subpart D regulations, increased awareness and legislative/regulatory activity. The 1989 Legislature imposed a waste importation moratorium and ordered the Environmental Quality Council to conduct a study on the solid waste disposal system. In 1991, the Legislature approved landfill license fees to support the Montana regulatory program, part of which was to prepare an integrated waste management plan for the State. In December 1993, the EPA approved Montana's solid waste management program which allowed the State to administer the Subpart D regulations. Montana's integrated plan, approved in 1994, adopted the EPA's waste management priority system that emphasizes source reduction and recycling, including composting and finally landfilling or incineration.

The State classifies its approved landfills. Class I landfills may accept hazardous wastes. There are no licensed Class 1 landfills in the State. Class II landfills are ones that are licensed to accept MSW and non-hazardous industrial waste. Class III landfills may accept inert material such as concrete, rock, tires, dirt and untreated wood. In 1991, the last date for which data are available, disposal facilities reported receiving 743,631 tons of waste. 94 percent of the waste went to Class II landfills, 4 percent to Class III landfills and less than 2 percent was incinerated. This calculates to be 5.1 pounds of waste per person per day. Fifty-nine landfills were open and regulated by late 1993, with 20-25 of those expected to close by 1995, leaving 35-40 operating

landfills in the State. Fourteen major landfills accepted over 70 percent of the State's MSW. As of 1993, Montana's major population centers, except the Flathead Valley, had licensed disposal facilities that had life expectancies of at least 20 years.

Local Trends

The Billings Sanitary Landfill is the only licensed Class II landfill in this region of Montana. It is located south of the City in the bluffs that are south of the Yellowstone River. Access is from South Billings Boulevard and Jellison Road. The landfill is located on 707 acres owned by the City, but the original 80-acre landfill that opened in 1960 is still being filled. The land is sloped, having a base elevation of 3,200 feet on the north side and rising to 3,560 feet above mean sea level at the south end of the property. The property has limited water bearing geology, low permeability bentonite (clay) layers and horizontal stratigraphy that make it nearly ideal for waste disposal. It accepts MSW, yard, wood and inert (construction) waste, unregulated hazardous waste and non-hazardous industrial waste. It is the regional landfill and the City contracts to receive waste from Yellowstone, Carbon, Musselshell, Big Horn, Stillwater and Treasure Counties. The landfill accepts no out-of-state waste.

From 1968 to 1995, the landfill accepted approximately 3 million tons of waste. In 2002, the landfill started closing about 35 acres of the original 80-acre landfill and excavating soil from the area that will become the landfill's first lateral expansion since the Subpart D regulations were adopted. Within the 285 acres that may eventually be used for waste disposal, the site has space to receive at least 17 million more tons of waste, giving it a projected lifespan of 40 - 50 years.

Recent improvements prevent residents from accessing the landfill's working face and provide areas for recycling certain products and a yard waste/composting area. Household hazardous wastes and unregulated hazardous wastes are accepted by the landfill. Unregulated hazardous wastes are those that are generated by businesses that are classified as conditionally exempt small quantity generators. These businesses generate less than 220 pounds per month of hazardous waste. These wastes are collected at the landfill or at the City's service center and held for proper disposal. Since 1995, the City had conducted an annual household hazardous waste roundup as a method to prevent some of the hazardous or potentially hazardous waste from entering the landfill. Since it began, the program has diverted over 150,000 pounds of hazardous waste. The City and a hazardous waste disposal contractor collect the waste and dispose of it by various approved methods. 68 percent of the waste collected in 2001 was paint and consolidated fuels, followed by pesticides at 15 percent of the total.

In 2005, the Public Works-Solid Waste Division initiated a voluntary, curbside yard-waste recycling program in selected Billings neighborhoods. Due to the success of the program, curbside collection and recycling of yard waste will be expanded city wide within the next few years. Residents are provided a 96-gallon container, free of charge, for weekly pick-up. The program runs from March through November.

Another recent development at the landfill has been the development of its methane for energy. All solid waste landfills naturally produce methane gas for which the EPA and MDEQ require monitoring and proper disposal. Until recently, the Billings landfill has maintained acceptable levels of methane that have not required mitigation. In 2008, the City agreed to a contract with Montana-Dakota Utilities (MDU) for the rights to extract, clean and distribute the methane gas

naturally produced in the landfill. This agreement allows MDU to develop and sell the gas produced, while the City of Billings is able to mitigate the gas released and will receive 15% of the net revenues from the gas sales.

Needs – Future Trends

The Billings Landfill, as well as many other landfills nationally, will face a number of issues over the next ten years. Flow control or waste importation will continue to be a national issue and one that will impact Montana and Billings. The Clean Air Act makes it difficult to obtain permits for incinerators. Densely populated states and those with high rainfall or groundwater that is easily contaminated are running out of landfill space and may pursue landfilling in other states. Some of Montana's private landfills accept out-of-state waste and there may be increasing pressure for others, such as the Billings landfill, to also accept this waste.

The Subpart D regulations are being reviewed by the EPA. In particular, dry tomb landfills are being questioned. Landfills that permit some moisture penetration have greater success in reducing the volume of waste through biological activity. These bioreactive landfills may allow operators to increase the amount of waste that can be disposed of in active landfills and reduce the number of landfills that will be needed in the future.

Electronics have become a part of everyday life. When electronic equipment wears out or is replaced by more technically advanced equipment, landfills often are the last resort for disposing of the used equipment. Heavy metals in the components, video monitor gases and the waste volume cause disposal problems. Determining the best disposal method and who is responsible for it (generators or users) will be challenges.

In Montana, two special issues face regulators and operators. Most of central and eastern Montana is semi-arid and operators in those areas are questioning the need for highly impermeable closure caps. Caps that let moisture evaporate out of the landfill may be superior to the standards that are now in place. Montana has obtained a reputation for being at the center of methamphetamine manufacturing, distribution and consumption. The chemicals that are used to manufacture the drug are highly volatile and toxic. How these chemicals can be safely handled and disposed of will continue to challenge the state. Investor-Owned Utilities

Natural Gas

Montana-Dakota Utilities Company is the only natural gas provider in Yellowstone County. MDU provides natural gas and electric services in eastern Montana and in four other states, but only gas in Yellowstone County. The utility company is a subsidiary of the Montana Dakota Resources Group, Inc. based in Bismark, North Dakota. MDU Resources has over 12,000 employees and had sales of $ 4.3 billion in 2007. It owns several natural resource development companies, including Knife River Corporation that recently purchased two local highway construction and aggregate companies.

MDU is an investor-owned utility that provides natural gas to over 246,000 customers in Montana, North Dakota, South Dakota and Wyoming. The Billings Division of the operation encompasses the largest number of natural gas customers served by the utility.

MDU purchases wholesale natural gas from its sister company, WBI Holdings, Inc. Gas is delivered from the Williston Basin in eastern Montana and western North Dakota through a 4,300 mile integrated pipeline system. MDU utilizes natural underground systems in the Williston Basin and other areas to store additional natural gas purchased from various suppliers. It is aggressively purchasing utility distribution companies in the region and WBI Holdings is purchasing other gas pipeline and electric transmission companies.

Electricity

Yellowstone Valley Electric Cooperative

The Yellowstone Valley Electric Cooperative (YVEC) was formed in 1937 under the Rural Electrification Act. The YVEC serves six counties, but 92 percent of its meters are in Yellowstone County. The YVEC primarily serves the unincorporated areas of the County and has a total of 19 distribution substations, two transmission substations and over 2,300 miles of line serving over 14,500 meters.

The wholesale power contracting agent to the YVEC is the Central Montana Electric Power Cooperative. YVEC receives approximately 85 percent of its power from the Northwestern Energy and the balance comes from the Bureau of Reclamation's hydroelectric facility at Fort Smith, Montana.

Table 2 lists the percent usage of the major customers. The majority of YVEC customers are residential. Small commercial customers are convenience stores, banks and restaurants. Large commercial customers are feedlots, irrigators and agricultural product processing.

TABLE 2
YVEC Customer Profile (2007)
Percentage Based on Actual kWh Requirements

Residential	80%
Irrigation	2%
Small Commercial	10%
Large Commercial	8%

NorthWestern Energy

Northwestern Energy is a major, regional provider of electricity, natural gas and related services to approximately 650,000 customers in Montana, Nebraska and South Dakota. The foundation of NorthWestern's energy business dates back to 1923, with the start of the utility operations in a few communities in South Dakota and Nebraska. Their current energy-delivery system includes more than 26,000 miles of electrical lines and nearly 7,500 miles of gas pipelines.

The energy-delivery business expanded significantly in February 2002, with the acquisition of the former Montana Power Company's energy transmission and distribution business. The addition has allowed NorthWestern Energy and its more than 1,300 team members to

take greater advantage of decades of experience and success in the energy business. In Yellowstone County, NWE provides service to the incorporated areas of Billings, Laurel, and Broadview. Some service is extended into the urban fringe of Laurel and Billings, but outside of that area is served by YVEC. NorthWestern acquired the Montana Power Company customer base and has about 40,000 residential, 6,800 commercial and 700 other connections in its Billings area distribution system.

In November of 2004, NorthWestern Corporation emerged from a Chapter 11 bankruptcy reorganization and settlement was reached in July of 2008 for payment of their previous stockholders.

Telephone

The telephone industry is changing rapidly. The big, slow, but reliable local telephone company that for decades has handled all personal and business telephone needs is nearly extinct. With increased business and personal demand for data sharing and for access to the Internet, high speed transmission systems are in great demand. Wireless communication has blossomed and companies are attempting to offer all of the services that are now available with land-line service. Many businesses were started in the 1990s to market telephone services but the national economic downturn that began in 2000 caused many of the small companies to sell, merge or to fail. These changes are still occurring and additional ones are likely to continue for many years.

There are a number of companies that provide standard telephone services within Yellowstone County. Qwest Communications provides local dial tone and service to Billings, Laurel, Shepherd, and Pompey's Pillar and to the adjacent rural areas. Broadview, Molt and the surrounding rural areas are served by Triangle Telephone, which is headquartered in Havre, Montana. The Custer area and the rural area northeast of Shepherd are served by MidRivers Telephone Company headquartered in Circle, Montana. The Huntley-Worden area receives service from Project Telephone Company.

The Telecommunications Act of 1994 was designed to increase competition and improve service in the telephone industry. It has been marginally effective in Yellowstone County. Avista Communications, a subsidiary of the former Washington Water Power Corporation, provides competitive local dial tone and other services to the business community. There are about 24,000 business lines in Billings and Avista serves about 20 percent of that market. Cellular One also offers local dial tone for businesses, primarily in a wireless format. Several long distance or long haul companies operate in and through Billings including Sprint, MCI, Qwest, AT&T, TouchAmerica and Main. These companies use primarily fiber optic lines and equipment in their systems. Cutthroat Communication is attempting to build a nationwide point to point microwave wireless network and has a presence in Billings.

High speed wire or fiber communication may have an advantage over wireless because the transmission environment is more controlled and therefore is more reliable. However, the economic downturn early in this century has caused a decline in what was seemingly an unlimited escalating demand for telephone services. Optimism about increasing demand caused many companies, even some that don’t specialize in communications, to install what now looks like excess fiber lines. Coupled with that is a rapid expansion of the fiber-end hardware capacity that allows higher transmission speed and volume, which in turn allows companies to lease or

own fewer fiber strands. It may take several years for increasing demand to catch up to the present capacity.

Montana has good climate and topography for wireless communications and wireless companies abound in Billings. At least six companies offer local and long distance service in the Billings area and the number and names of the companies and their services change frequently. As digital service becomes the industry standard, a wider range of wireless services may become available including fully integrated voice and data transmissions, or unified messaging. Over the past few years there has been a boom in wireless communication tower construction. There are approximately 28 wireless communications towers in Billings and nearby Yellowstone County that were apparently constructed by or for wireless communication service companies. At least ten of those towers were approved for two or more antennae platforms, but few have more than one platform installed as of late 2001. This may indicate some amount of excess capacity that may take several years to absorb.

Television, Radio, and Other Media

Yellowstone County is served by the following:

Television Stations

Local Stations

- KHMT (FOX local channel 4)
- KTVQ-2 (CBS local channel 2)
- KULR-8 (NBC local channel 8)
- KSVI (ABC local channel 6)

Cable Television

- Bresnan Cable

Radio Stations

- 14 FM stations
- 5 AM stations

Newspapers

- Agri-News - weekly
- Big Sky Business Journal - biweekly
- Billings Gazette - daily
- Billings Outpost - weekly
- Billings Times - weekly
- Western Business
- Western Livestock Reporter - weekly
- Yellowstone County News - weekly
- Laurel Outlook - weekly

SCHOOL DISTRICTS AND FACILITIES

Introduction

Public school facilities in Yellowstone County provide a variety of community services in addition to education for our young citizens. Most schools provide meeting spaces for local civic and community groups, recreational play fields open for public use and in some communities the "center" of most civic activity. The 60 school facilities in Billings and Yellowstone County provide a civic and social anchor for many neighborhoods and communities.

Yellowstone County has 15 separate school districts that contain 37 elementary schools, 13 middle schools and 10 high schools. In addition, there are eight private schools serving elementary and secondary students within the County. School District #2 is the largest school district in the County by student population, as well as the largest in the state.
Grade levels served by the 15 public school districts are as follows:

Pre-Kindergarten through High School	Pre-K through Grade 8*	Pre-K through Grade 6**
#2 (Billings)	#4 (Canyon Creek)	#3 (Blue Creek)
#7 (Laurel)	#26 (Lockwood)	#17 (Morin)
#15 (Custer)	#58 (Yellowstone Acad.)	#41 (Pioneer)
#21J (Broadview)	#8 (Elder Grove)	#52 (Independent School)
#24 (Huntley Project)	#23 (Elysian)	
#37 (Shepherd)		
* Students in these schools feed into SD#2 for high school ** Students in these school feed into SD#2 for middle school and high school		

Statewide and County Enrollment Trends

In Yellowstone County, and the State in general, public school enrollment is declining. This trend is consistent with the general aging of the Montana population.

Statewide, public school enrollment (all grades) peaked at 165,390 pupils in the fall semester of the 1995-1996 school year. By fall of 2006, total enrollment was 144,418, a decline of about 20,972 students, or 12.6 percent.

In Yellowstone County, enrollment at public elementary, middle, and high schools decreased 1.9 percent between 1997 and 2007, from 22,109 pupils to 21,668 pupils. K-8 enrollment dropped during the same period by 3.8 percent and high school enrollment increased by 2.4 percent.

In comparison with State trends, Yellowstone County schools have experienced relatively stable enrollment over the past decade with minor fluctuations. However, educational standards and programs offered have been enhanced during the same time, requiring additional classroom or specialized space. School District #2 (Billings) is currently developing a long term strategy to accommodate an anticipated increase in high school enrollments during the

next decade. In addition, rural elementary school districts surrounding Billings have either added space within the last five years or plan to add classroom space in the near future.

Yellowstone County Public School Enrollment			
Grades	1997-98	2007-08	Change (1997-2007
K-8	15,599	14,999	-3.8%
9-12	6,510	6,669	+2.4%
TOTAL	22,109	21,668	-1.9%
*Data from Yellowstone County Superintendent of Schools			

School Facilities and Enrollment

The following pages present information on each school district's facilities and student enrollments since 1990.

SCHOOL DISTRICT #2 – BILLINGS

Elementary Schools (K-6)

23 Facilities (3 closed in 2001; 2 re-opened in 2007)
2007-2008 enrollment = 7,756

Middle Schools (7-8)

4 Facilities
2007-2008 enrollment = 2,281

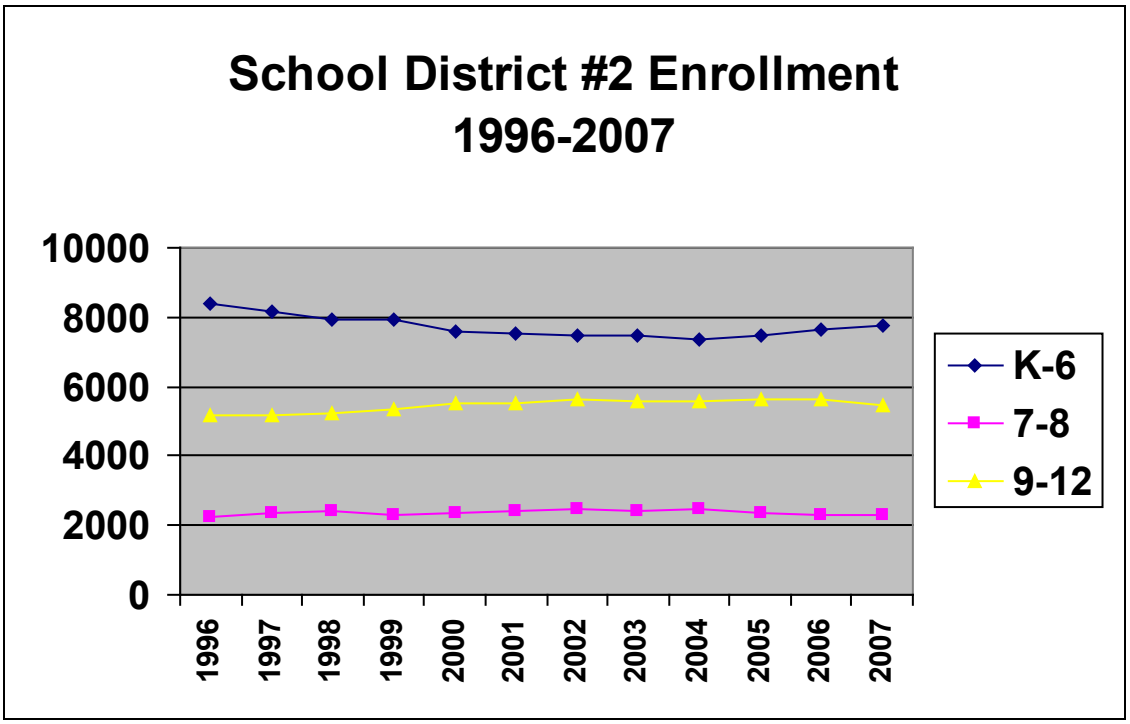
Total Elementary Enrollment

2008 = 10,037
2002 = 10,154
1990 = 10,815

High Schools (9-12)

4 Facilities
2008 enrollment = 5,466
2002 enrollment = 5,624
1990 enrollment = 4,575

SCHOOL DISTRICT #2 ENROLLMENTS 1996 THROUGH 2007												
YEAR	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**
K – 6	8,407	8,175	7,941	7,925	7,576	7,538	7,444	7,493	7,379	7,466	7,661	7,756
7-8	2,270	2,353	2,427	2,301	2,355	2,437	2,465	2,430	2,456	2,367	2,282	2,281
9-12	5,199	5,172	5,233	5,347	5,524	5,535	5,624	5,601	5,599	5,626	5,613	5,466
TOTAL	**15,876**	**15,700**	**15,601**	**15573**	**15455**	**15,510**	**15,533**	**15,548**	**15,445**	**15,459**	**15,556**	**15,503**


School District #2 Enrollment
1996-2007
10000
8000
6000
4000
2000
0
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
K-6
7-8
9-12

SCHOOL DISTRICT #2 FACILITIES						
SCHOOL NAME	**ADDRESS**	**YEAR BUILT**	**ACREAGE**	**BUILDING IMPROVE-MENTS**	**MAXIMUM STUDENT CAPACITY****	**2007 ENROLLMENT**
Alkali Creek Elementary	681 Alkali Creek	1979	9.0	1993 &1994 (roof)	425	357
Arrowhead Elementary	2510 38th St. West	1978	13.4	1994 &1995 (roof)	475	438
Beartooth Elementary	1345 Elaine	1974	9.9	1980 (addition) Closed in 2001; Reopened in 2007	425	348
Bench Elementary	505 Milton Rd.	1955	5.12	1994 (HC ramps) 2002 (roof) 1978 (addition)	400	308
Big Sky Elementary	3231 Granger Ave. East	1986	3.45	None	425	420
Bitterroot Elementary	1801 Bench Blvd.	1964	20.0	1996 (roof)	350	319
Boulder Elementary	2202 32nd St. West	1962	10.65	None	450	381
Broadwater Elementary	415 Broadwater	1910*	2.1	1995 (roof repair) 1916, 1920 & 1956 (additions)	350	325
Burlington Elementary	2135 Lewis	1956	4.26	1957 (addition)	350	328
Central Heights Elementary	120 Lexington	1962	4.4	1979 (Addition)	350	282
Eagle Cliffs Elementary	1201 Kootenai	1986	11.18	None	475	388
Highland Elementary	729 Parkhill	1947	1.32	1995 (fencing), 1956 (addition)	275	295
McKinley Elementary	820 N 31st St.	1906	1.8	2002 (roof), 1918, 1958 (additions)	350	317
Meadowlark Elementary	221 29th St. West	1964	6.06	1993 (HC ramps)	450	391
Miles Ave Elementary	1601 Miles Ave.	1955	5.01	1965 (addition) 1991 (Roof)	350	342
Newman Elementary	605 S. Billings Blvd.	1953	1.91	1957 (addition)	300	264
Orchard elementary	120 Jackson	1918	4.4	2000 (Remodel) 1999 (HVAC), 1948, 1956, 1987	450	349

Poly Dr. Elementary	2410 Poly Dr.	1952	5.0	2002 (Roof) 1955, 1960 (Additions)	325	307
Ponderosa Elementary	4188 King Ave. East	1965	16.32	None	475	369
Rimrock Elementary	2802 13th St. West	1952	5.0	1976, 1979 (additions) Closed in 2001 Reopened in 2007		
Rose Park Elementary	1812 19th St.. West	1958	6.25	1962 (addition) 1993 (roof)	325	240
Sandstone Elementary	1440 Nutter Blvd.	1978	19.5	1995 (roof)	475	435
Washington Elementary	1044 Cook Ave.	1948	3.03	1998 (HVAC) 1952, 1962 (additions)	300	252
Castle Rock Middle School	1441 Governor's Blvd.	1979	5.5	None	820	703
Lewis & Clark Middle School	1315 Lewis	1956	3.5	1996 & 2002 (roof), 2001 & 2002 (remodel) 1962 (addition)	850	542
Riverside Middle School	3700 Madison	1963	12.55	1996-1998 (roof), 1995 (addition), 1979 (addition)	540	501
Will James Middle School	1200 30th St. West	1967	21.0	1993 & 2001 (Roof), 2000 (Bleachers), 1974 (Addition)	550	540
Senior High School	425 Grand Ave.	1938	20.0	1997, 1998, 2000, 2001 (remodels), 1997 (roof), 1998 (HVAC) 1953, 1967,1974 (additions)	1600	1921
Skyview High School	1775 High Sierra Blvd.	1987	44.0	None	1600	1518
West High School	2201 St. Johns	1959	30.20	1995 &1998 (remodels), 1999 (roof & addition) 1962, 1966, 1975, 1976 (additions)	Data not available	2018 (1742 on-site)
Career Center	3723 Central Ave.	1975	21.97	2000 (remodel)		
Lincoln Center (Administration)	415 N. 30th St.	1913	5.5	1921, 1935, 1951, 1964, 1968, 1985 (additions)		

*** - Broadwater Elementary School was placed on the nationwide "12 Most Threatened School Sites" by the National Trust for Historic Preservation in 2001.**

**** - "Maximum student capacity" is measured by multiplying the maximum average class size per accreditation by the number of class rooms. This number is typically 6% higher than "educational capacity" which is the optimal capacity because it provides space for special programs and students that move into the attendance area, which preserves the attendance boundaries.**

School District #2 facilities encompass a total of 120 acres and 35 separate facilities. School District #2 has not constructed a new school facility since 1986. The average facility size for elementary schools constructed prior to 1960 is 3.5 acres. Those constructed after 1960 average 10.7 acres.

The oldest continuously used school building in School District #2 is Washington Elementary at 1044 Cook Avenue (1899). Five other school buildings were constructed in the first 20 years of the following century (1900 – 1920) including the Lincoln Center, Orchard Elementary, McKinley Elementary, Garfield Elementary and Broadwater Elementary. Beartooth, Garfield and Rimrock Elementary Schools were closed in 2001 and Eastern Elementary was closed in 1982. In 2007, with the offering of all-day kindergarten and slight re-districting, SD#2 reopened Beartooth and Rimrock Elementary Schools.

SCHOOL DISTRICT #7 LAUREL

Elementary Schools (Pre-K – 6)
3 Facilities
2002 Enrollment 746

Middle Schools (7-9)
1 Facility
2002 Enrollment 399

Total Elementary Enrollment
2002 = 1,145
1990 = 1,342

High Schools (9-12)
1 Facility
2002 = 587
1990 = 564

SCHOOL DISTRICT #7 ENROLLMENTS 1996 THROUGH 2007												
YEAR	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**
PK- 8	1,297	1,309	1,252	1,219	1,185	1,145	1,169	1,166	1,183	1,208	1,252	1,302
9 -12	642	656	623	630	586	587	596	552	551	585	582	621
TOTAL	**1,939**	**1,965**	**1,875**	**1,849**	**1,771**	**1,732**	**1,765**	**1,718**	**1,734**	**1,793**	**1,834**	**1,932**

SCHOOL DISTRICT #7 FACILITIES				
SCHOOL NAME	**ADDRESS**	**YEAR BUILT**	**ACREAGE**	**BUILDING IMPROVEMENTS**
Fred W, Graff Elementary	417 East 6th St. Laurel, MT	**Data not available**	**Data not available**	**Data not available**
West Elementary	502 8th Ave Laurel, MT	**Data not available**	**Data not available**	**Data not available**
South Elementary (PreK only)	606 SW 5th Laurel, MT	**Data not available**	**Data not available**	**Data not available**
Laurel Middle School	410 Colorado Laurel, MT	**Data not available**	**Data not available**	**Data not available**
Laurel High School	203 East 8th Laurel, MT	**Data not available**	**Data not available**	**Data not available**

SCHOOL DISTRICT #3 BLUE CREEK

Elementary Schools (Pre-K – 6)
1 Facility

Total Elementary Enrollment
2002 Enrollment = 188
1990 Enrollment = 95

SCHOOL DISTRICT #3 ENROLLMENTS 1996 THROUGH 2007												
YEAR	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**
PK – 6	143	149	158	159	173	188	190	204	200	208	229	217
TOTAL	**143**	**149**	**158**	**159**	**173**	**188**	**190**	**204**	**200**	**208**	**229**	**217**

SCHOOL DISTRICT #3 FACILITIES				
SCHOOL NAME	**ADDRESS**	**YEAR BUILT**	**ACREAGE**	**BUILDING IMPROVEMENTS**
Blue Creek Elementary	3652 Blue Creek Rd Billings, MT	**Data not available**	**Data not available**	1996 (addition)

SCHOOL DISTRICT #4 CANYON CREEK

Elementary Schools (Pre-K – 6)
1 Facility
2002 Enrollment = 209

Middle Schools (7-8)
1 Facility
2002 Enrollment = 59

Total Elementary Enrollment
2002 = 268
1990 = 195

SCHOOL DISTRICT #4 ENROLLMENTS 1996 THROUGH 2007												
YEAR	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**
PK – 8	217	233	249	250	265	268	235	248	227	210	188	180
TOTAL	**217**	**233**	**249**	**250**	**265**	**268**	**235**	**248**	**227**	**210**	**188**	**180**

SCHOOL DISTRICT #4 FACILITIES				
SCHOOL NAME	**ADDRESS**	**YEAR BUILT**	**ACREAGE**	**BUILDING IMPROVEMENTS**
Canyon Creek School	3139 Duck Creek Rd. Billings, MT	**Data not available**	**Data not available**	2002 (addition & remodel)

SCHOOL DISTRICT #8 ELDER GROVE

Elementary Schools (Pre-K- 6)
1 Facility
2002 Enrollment = 257

Middle Schools (7 -8)
1 Facility
2002 Enrollment = 71

Total Elementary Enrollment
2002 = 328
1990 = 192

SCHOOL DISTRICT #8 ENROLLMENTS 1996 THROUGH 2007												
YEAR	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**
PK-8	278	273	294	314	316	328	333	309	338	340	345	356
TOTAL	**278**	**273**	**294**	**314**	**316**	**328**	**333**	**309**	**338**	**340**	**345**	**356**

SCHOOL DISTRICT #8 FACILITIES				
SCHOOL NAME	**ADDRESS**	**YEAR BUILT**	**ACREAGE**	**BUILDING IMPROVEMENTS**
Elder Grove Elementary	1532 S. 64th St. West Billings, MT	**Data not available**	**Data not available**	1998 (addition)

SCHOOL DISTRICT #15 CUSTER SCHOOLS

Elementary Schools (pre-K – 6)
1 Facility
2002 Enrollment = 51

Middle Schools (7-8)
1 Facility
2002 Enrollment = 11

Total Elementary Enrollment
2002 = 62
1990 = 72

High Schools (9-12)
1 Facility
2002 Enrollment = 34
1990 Enrollment = 30

SCHOOL DISTRICT #15 ENROLLMENTS 1996 THROUGH 2007												
YEAR	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**
PK -8	****	****	****	****	****	62	63	56	49	54	51	41
K - 12	83	92	88	92	104	34	90	86	81	78	82	78
TOTAL	**83**	**92**	**88**	**92**	**104**	**96**	**90**	**86**	**81**	**78**	**82**	**78**

******enrollment numbers combined prior to 2001**

SCHOOL DISTRICT #15 FACILITIES				
SCHOOL NAME	**ADDRESS**	**YEAR BUILT**	**ACREAGE**	**BUILDING IMPROVEMENTS**
Custer Public Schools	304 4th Ave Custer, MT	1923	**Data not available**	2000 (boiler), 1985 (addition) 1940-1978 (addition)

SCHOOL DISTRICT #17 MORIN SCHOOLS

Elementary Schools (pre-K – 6)
1 Facility
2002 Enrollment = 41
1990 Enrollment = 27

SCHOOL DISTRICT #17 ENROLLMENTS 1996 THROUGH 2007												
YEAR	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**
PK - 6	35	29	26	32	31	41	39	45	35	27	20	28
TOTAL	**35**	**29**	**26**	**32**	**31**	**41**	**39**	**45**	**35**	**27**	**20**	**28**

SCHOOL DISTRICT #17 FACILITIES				
SCHOOL NAME	**ADDRESS**	**YEAR BUILT**	**ACREAGE**	**BUILDING IMPROVEMENTS**
Morin Elementary	8824 Pryor Rd Billings, MT	1957	3.44	Two building additions since original construction

SCHOOL DISTRICT #21J BROADVIEW SCHOOLS

Elementary Schools (pre-K – 6)
1 Facility
2002 Enrollment = 78

Middle Schools (7-8)
1 Facility
2002 Enrollment = 18

Total Elementary Enrollment
2002 = 96
1990 = 75

High Schools (9-12)
1 Facility
2002 Enrollment = 42
1990 Enrollment = 40

SCHOOL DISTRICT #21J ENROLLMENTS 1996 THROUGH 2007												
YEAR	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**
PK -8	106	106	115	116	116	96	111	132	159	130	134	120
9-12	52	57	53	55	52	42	46	47	44	54	59	56
TOTAL	**158**	**163**	**168**	**171**	**168**	**138**	**157**	**179**	**203**	**184**	**193**	**176**

SCHOOL DISTRICT #21J FACILITIES				
SCHOOL NAME	**ADDRESS**	**YEAR BUILT**	**ACREAGE**	**BUILDING IMPROVEMENTS**
Broadview Schools	13935 1st St. Broadview, MT	**Data not available**	**Data not available**	**Data not available**

SCHOOL DISTRICT #23 ELYSIAN SCHOOL

Elementary Schools (pre-K – 6)
1 Facility
2002 Enrollment = 106

Middle Schools (7-8)
1 Facility
2002 Enrollment = 27

Total Elementary Enrollment
2002 = 133
1990 = 89

SCHOOL DISTRICT #23 ENROLLMENTS 1996 THROUGH 2007												
YEAR	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**
PK–8	147	144	139	131	120	133	144	143	118	123	115	119
TOTAL	**147**	**144**	**139**	**131**	**120**	**133**	**144**	**143**	**118**	**123**	**115**	**119**

SCHOOL DISTRICT #23 FACILITIES				
SCHOOL NAME	**ADDRESS**	**YEAR BUILT**	**ACREAGE**	**BUILDING IMPROVEMENTS**
Elysian Elementary	6416 Elysian Rd. Billings, MT	**Data not available**	**Data not available**	**Data not available**

SCHOOL DISTRICT #24 HUNTLEY PROJECT SCHOOLS

Elementary Schools (pre-K – 6)
1 Facility
2002 Enrollment = 373

Middle Schools (7-8)
1 Facility
2002 Enrollment = 137

Total Elementary Enrollment
2002 = 510
1990 = 494

High Schools
1 Facility
2002 Enrollment = 262
1990 Enrollment = 180

SCHOOL DISTRICT #24 ENROLLMENTS 1996 THROUGH 2007												
YEAR	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**
PK - 8	****	****	****	****	****	510	516	508	487	478	487	494
9 - 12	794	755	742	761	782	262	255	274	269	247	253	230
TOTAL	**794**	**755**	**742**	**761**	**782**	**772**	**781**	**782**	**756**	**725**	**730**	**724**

**** enrollments combined after 1994

SCHOOL DISTRICT #24 FACILITIES				
SCHOOL NAME	**ADDRESS**	**YEAR BUILT**	**ACREAGE**	**BUILDING IMPROVMENTS**
Huntley Project School	1477 Ash St. Huntley, MT	**Data not available**	**Data not available**	**Data not available**

SCHOOL DISTRICT #26 LOCKWOOD SCHOOLS

Elementary Schools (pre-K – 2)
1 Facility
2002 Enrollment = 418

Intermediate Schools (3-5)
1 Facility
2002 Enrollment = 399

Total Elementary Enrollment
2002 = 1,194
1990 = 1,157

Middle Schools (6-8)
1 Facility
2002 Enrollment = 377

SCHOOL DISTRICT #26 ENROLLMENTS 1996 THROUGH 2007

YEAR	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
PK– 8	1,239	1,266	1,251	1,244	1,227	1,194	1200	1236	1246	1173	1173	1158
TOTAL	**1,239**	**1,266**	**1,251**	**1,244**	**1,227**	**1,194**	**1200**	**1236**	**1246**	**1173**	**1173**	**1158**

SCHOOL DISTRICT #26 FACILITIES

SCHOOL NAME	ADDRESS	YEAR BUILT	ACREAGE	BUILDING IMPROVEMENTS
Lockwood Elementary	1932 Highway 87E Billings, MT	**Data not available**	**Data not available**	1996 (HC ramps) 1998 & 1999 (additions) 1998 -2002 (remodels) 2002 (roof)
Lockwood Middle	Hwy 87 E.	**2008**		

SCHOOL DISTRICT #37 SHEPHERD PUBLIC SCHOOLS

Elementary Schools (pre-K – 6)
1 Facility
2002 Enrollment = 470

Middle Schools (7-8)
1 Facility
2002 Enrollment = 148

Total Elementary Enrollment
2002 = 618
1990 = 501

High Schools
1 Facility
2002 Enrollment = 274
1990 Enrollment = 208

SCHOOL DISTRICT #37 ENROLLMENTS 1996 THROUGH 2007

YEAR	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
PK -8	539	544	558	575	584	618	621	583	592	573	576	553
9 – 12	299	318	295	274	276	274	266	275	279	281	277	259
TOTAL	**838**	**862**	**853**	**849**	**860**	**892**	**889**	**858**	**871**	**854**	**853**	**812**

SCHOOL DISTRICT #37 FACILITIES

SCHOOL NAME	ADDRESS	YEAR BUILT	ACREAGE	BUILDING IMPROVEMENTS
Shepherd Public School	7842 Shepherd Rd Shepherd, MT	**Data not available**	**Data not available**	**Data not available**

SCHOOL DISTRICT #41 PIONEER SCHOOL

Elementary Schools (pre-K – 6)
1 Facility
2002 Enrollment = 58

Total Elementary Enrollment
2002 = 58
1990 = 67

SCHOOL DISTRICT #41 ENROLLMENTS 1996 THROUGH 2007												
YEAR	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**
PK – 6	62	53	58	71	61	58	52	60	52	62	64	66
TOTAL	**62**	**53**	**58**	**71**	**61**	**58**	**52**	**60**	**52**	**62**	**64**	**66**

SCHOOL DISTRICT #41 FACILITIES				
SCHOOL NAME	**ADDRESS**	**YEAR BUILT**	**ACREAGE**	**BUILDING IMPROVEMENTS**
Pioneer Elementary	1937 Dover Rd Billings	**Data not available**	**Data not available**	**Data not available**

SCHOOL DISTRICT #52 INDEPENDENT SCHOOL

Elementary Schools (pre-K – 6)
1 Facility
2002 Enrollment = 237

Total Elementary Enrollment
2002 = 237
1990 = 165

SCHOOL DISTRICT #52 ENROLLMENTS 1996 THROUGH 2007												
YEAR	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**
PK -6	223	226	226	231	238	237	242	244	266	259	278	261
TOTAL	**223**	**226**	**226**	**231**	**238**	**237**	**242**	**244**	**266**	**259**	**278**	**261**

SCHOOL DISTRICT #52 FACILITIES				
SCHOOL NAME	**ADDRESS**	**YEAR BUILT**	**ACREAGE**	**BUILDING IMPROVEMENTS**
Independent Elementary	2907 Roundup Rd. Billings, MT	**Data not available**	**Data not available**	1996 (roof), 1998 (addition)

SCHOOL DISTRICT #58 YELLOWSTONE ACADEMY

Elementary Schools (pre-K – 8)
1 Facility
2002 Enrollment = 63

Total Elementary Enrollment
2002 = 63
1990 = 85

SCHOOL DISTRICT #58 ENROLLMENTS 1996 THROUGH 2007												
YEAR	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**
PK -8	50	46	57	63	61	63	70	67	83	79	75	67
TOTAL	**50**	**46**	**57**	**63**	**61**	**63**	**70**	**67**	**83**	**79**	**75**	**67**

SCHOOL DISTRICT #58 FACILITIES				
SCHOOL NAME	**ADDRESS**	**YEAR BUILT**	**ACREAGE**	**BUILDING IMPROVEMENTS**
Yellowstone Academy	1732 S. 72nd St West Billings, MT	**Data not available**	**Data not available**	1999 & 2001 (additions)

YELLOWSTONE COUNTY PUBLIC SCHOOL ENROLLMENTS 1970, 1980, 1990, AND 1996 – 2007															
YEAR	**1970**	**1980**	**1990**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**
PK– 8	14,802	14,359	15,371	15,712	15,628	15,447	15,337	15,115	15,144	15,139	15,137	15,152	15,002	14,930	14,999
9 -12	7,039	6,381	5,597	6,531	6,592	6,647	6,757	6,700	6,797	6,818	6,779	6,774	6,817	6,815	6,669
TOTAL	**21,841**	**20,740**	**20,968**	**22,243**	**22,220**	**22,094**	**22,094**	**21,815**	**21,941**	**21,918**	**21,916**	**21,926**	**21,819**	**21,745**	**21,668**

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4.6 NATURAL ENVIRONMENT

INTRODUCTION

The physical environment of Yellowstone County has strongly influenced the economic, social, and physical development of the County. The following subchapters on climate, vegetation, wildlife, soil, geology, and hydrology describe the physical environment of Yellowstone County. The purpose of this section is to provide enough information on the physical conditions that future land use controls can take into account the unique constraints and opportunities presented by the natural environment.

SUMMARY OF ENVIRONMENTAL ISSUES

Climate

Yellowstone County enjoys a relatively mild climate and experiences few significant weather events during an average year. Extremely low temperatures, less than 0 degrees Fahrenheit, may prevail in the winter for short periods of time. High wind events are possible in the spring and summer and may include rare tornadic activity. Heavy rainfall is rare, but localized thunderstorms can deposit significant rainfall in a small area resulting in flashfloods. Flooding is a problem on the Yellowstone River and tributaries particularly when warmer temperatures rapidly melt snow and ice during spring breakup.

Vegetation and Wildlife

The major vegetation type in the County is grassland which supports, in addition to domestic livestock, a healthy population of deer, antelope and several small mammal species. Critical to the survival of many native species are the riparian and prairie wetland habitats. In the semi-arid terrain, access to water, forage and cover these habitats provide increase their importance to wildlife. Weeds are a threat to all vegetation types, including cultivated crops. Yellowstone County has an aggressive weed management program that focuses on noxious weed containment and eradication. Most of the conflicts between humans and wildlife occur at the urban and wildland interface. This area is most susceptible to wildlife habitat destruction and noxious weed invasion due to soil disturbance from construction. The dry grassland and uncontrolled weed populations make many areas within the county susceptible to wildfires, especially in wildland urban interface areas.

Soil

The soil units in Yellowstone County are generally derived from nearby bedrock sources, or from transported alluvial sediments. Soils formed in place tend to contain high amounts of clay, silt and sand and low amounts of organic material. These soils are located on the higher terraces and hills north and south of the Yellowstone River valley. Many of these soils are suited only for rangeland but some support dryland cultivation. The transported soils found in the valley are more loam rich and highly suited to cultivation, especially when irrigated. The Yellowstone River valley in the vicinity of Billings and Huntley Project possesses some of the most productive soil in the State. These soils are designated as Prime Agricultural Soils by the Natural Resource Conservation Service.

Geology

Much of the geology of Yellowstone County is starkly visible when viewed from the sandstone rims north of downtown Billings. To the south, the view encompasses the broad Yellowstone River valley composed of several alluvial benches. Across the valley a wide terrace underlain by early Cretaceous and Jurassic sedimentary formations ramps gently upward towards the Pryor Mountains. These formations are composed predominantly of shale. Near Billings and north of the river valley, the eye is drawn to the prominent sandstone cliffs formed by the resistant Eagle Formation. The plains north of the Yellowstone River are broken by a series of northeast trending faults which expose interbedded shale and sandstone of the Judith River Formation. The geology of the County presents both obstacles and opportunities. Shallow bedrock and unstable slopes can pose difficulties for construction. However, near surface gravel and coal deposits have contributed to the area's economic development.

Hydrology

Clean water and reliable flows are critical for human consumption, agricultural production, wildlife and recreation uses. Yellowstone County is dependent on the main source of water, the Yellowstone River, for all these reasons. While there are numerous tributaries to the Yellowstone River, few carry water year round. Because of the scarcity of surface water, early settlers to the area constructed elaborate ditch systems to carry water from the Yellowstone River to the higher benches. Ditches continue to play an important role for groundwater recharge and agricultural production. Except in the alluvial deposits within the river valley, groundwater is scarce and usually found at depths too great to be economically developed. Within the valley, groundwater can be found at very shallow depths and susceptible to contamination from surface uses.

4.6.1 CLIMATE

INTRODUCTION

Climate determines many of the economic and social activities that take place in Yellowstone County. Precipitation amounts and timing are critical for land management decision by farmers and ranchers and others directly affected by weather conditions. Temperature, snow loads and wind extremes determine housing styles and cost, and dictate the feasibility of urban activities. Climate also affects the cost of providing many public services. For the most part, climate is uncontrollable and the only available recourse is management of social and economic activities around it.

Yellowstone County's complex topography and lack of common slopes or drainage pattern result in a wide variety of local microclimates. In general, the Yellowstone River valley, where most urban settlement occurs, has the greatest range of highs and lows. The areas outside of the river valley tend to have lower temperatures. Precipitation rates vary along a west to east gradient, dropping significantly from Laurel to Custer. Winter Chinooks originating in the mountains move northeastward through the County, moderating winter temperatures. Cold fronts from the north tend to affect the eastern highlands more than they do the rest of the County. Cultivated lands usually experience little variance in the growing season, which averages 129 days, normally extending from mid-May through mid-September.

Billings, elevation 3,100 to 3,500 feet, is situated between the Great Plains and the Rocky Mountains. The climate takes on some of the characteristics of both regions. The climate is semi-arid. The favorable seasonable distribution of rainfall in the spring and fall months, along with irrigation, makes it possible to raise a variety of crops. The average annual rainfall is 15.09 inches, with an average of 57 inches of snow. Forty percent of the precipitation falls in the wet spring months of April, May and June. Winters are cold, but usually not severe. January's average maximum is 30 degrees and minimums average 12 degrees. Summers are warm with good sunshine and low humidifies, but the nights are generally cool. July's average maximum is 87 degrees and average minimum is 58 degrees.

General climatic trends can be examined in terms of precipitation, temperature and wind velocity. Two monitoring and recording stations are located in the County, one at the Billings Logan International Airport administered by the National Weather Service (NWS) and the other at the Huntley Experimental Station near Ballantine.

Temperature

Data about climatic averages was obtained from NWS. Extremes in temperature have ranged from 106° F in 1937 to -38°F in 1936. The average number of days per year with temperatures of 90° F or above is 28. The number of days with the temperatures 32°F and below is 48. The percentage of possible sunshine averages 62 percent; 48 percent in winter, 61 percent in spring, 72 percent in summer, and 59 percent in the fall.

Precipitation

Average annual precipitation is 15.09 inches, one-third occurs in May and June. Average snowfall is 57 inches. The maximum monthly rainfall recorded was in May 1981, 7.7 inches, while the maximum 24-hour rainfall was recorded at2.9 inches in June 8, 1997. Minimum monthly rainfall was a trace in July 2003. The maximum monthly snowfall was 42.3 inches in April 1955, while the maximum in 24 hours was 23.7 inches, also in April 1955.

Wind

Average wind speeds are greatest during the winter months when they range from 10.5 miles per hour to 12.5 miles per hour. The most blustery month is December when wind speeds average 12.5 miles per hour. Winds are slowest in July and August when speeds average 9.0 miles per hour. The average prevailing wind is from the southwest. In June 1968, the extreme wind speed of 79 mph was recorded. The City Building Division requires structures to comply with design standards for a wind load of 80 miles per hour, exposure C.

Snow

Snow depths are typically low in the winter months with greatest average depth of 3 inches occurring in January. Snow fall is greatest between the months of January and April.

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4.6.2 VEGETATION AND WILDLIFE

INTRODUCTION

The existence or absence of particular species of plants and animals helps define a region's geography and relative environmental health. Documenting existing conditions can help shape a regional plan to help conserve sensitive species, identify areas requiring noxious weed control, reduce conflicts in the urban and wildland interface and guide land use decisions in general. Certain plant and animal species are indigenous to this region of Montana while others have been introduced over the past century. This section defines and describes the existing conditions of both vegetation and wildlife found in Yellowstone County. Types and populations of species, their distribution throughout the region and the health and abundance of significant habitats are presented. The major categories in this section include Vegetation, Wildlife Habitat, Wildlife, and Areas of Conflict.

VEGETATION TYPES

Located in the Northern Great Plains, Yellowstone County's vegetation is shaped by the semi-arid and arid conditions that predominate the region. Soil disturbance, drought conditions and catastrophic natural events such as wildfire and flooding also influence the types of vegetation that have adapted to this region. Low moisture conditions combined with high evaporation rates limit native plants to grasses, a few native wildflowers, shrubs and several tree species. In riparian zones along natural streams and irrigation canals and in isolated wetlands, there are pockets of hydrophilic plants.

Grasses are the dominant plant species best adapted to survive the climate in Yellowstone County. Most native grasses are perennial, cool-season, short grasses such as Western wheatgrass.

Coniferous and deciduous tree species are both native to the County, but only a few can survive the climate without human assistance. The native deciduous species, including cottonwoods, are found primarily in the riparian zones throughout the County. Conifers, such as Ponderosa pine are restricted to the 12-14-inch precipitation zone and further limited in much of the County to north faces and deeper coulees and draws that provide adequate moisture and protection from drying winds. The Bull Mountains and the higher, cooler area in the northeastern portions of the County are more hospitable to coniferous tree growth than the remainder of the County.

Vegetation Classifications

For the purposes of the Growth Policy, vegetation can be divided into five broad functional classifications. These classes are 1) grasslands, 2) scrub and shrub lands, 3) woodlands, 4) riparian and prairie wetlands, 5) and human introduced species including cultivated species, noxious weeds, and urban landscape species. Grasslands and forests are important economically for livestock grazing and the timber industry. Scrub and shrub lands provide cover and nesting areas for upland birds. Riparian areas and other wetland types supply

significant habitat for migratory and native species of waterfowl and fish. In addition, wetlands help preserve the integrity of the adjacent waterways by slowing and filtering runoff and by retaining floodwaters. Introduced landscaping plants provide shade, beauty and other aesthetic values in the urban landscape but may become invasive in the natural landscape. Cultivated crops are the mainstay of the County's agricultural economy. Invasive and noxious weeds in cultivated croplands are a major economic and ecological challenge.

The U.S. Department of Agriculture, Natural Resource and Conservation Service (NRCS) range site classifications and plant list are the most comprehensive and definitive for native vegetation. The NRCS classifies the rangeland vegetative types of Montana into five broad geographic zones. These are further divided into range site types, which include riparian, woodlands, and saline-tolerant range sites. Yellowstone County is included in two broad geographic zones: the Eastern and Western sedimentary plains. These range sites are for rangeland purposes and do not include urban areas and cultivated croplands. The percent of land in Yellowstone County covered by each of the vegetation types and land use is presented in Table 1. These data were compiled in 1972 and were obtained from the NRCS.

TABLE 1
YELLOWSTONE COUNTY
LAND USE AND VEGETATION TYPE

Acres	Vegetation/Land Use Type	Percent of County Land
44,000	Urban/built	2.6%
260,618	Cropland/pasture	15.4%
1,211,708	Rangeland	71.6%
77,847	Woodland	4.6%
98,155	Irrigated lands	5.8%
1,692,330		100.0%

Grasslands

Prior to settlement by pioneers, grasslands in the County supported a complex and balanced mixture of grazing and burrowing animals and predators. The native plant communities and associated soils evolved under this natural grazing pressure. The County's grasslands have been classified in a number of different ways, but the generic name for this portion of the Northern Great Plains is the Mixed Grasslands. Generally dominant grasses are Idaho fescue, needle and thread and western wheatgrass. Grasslands provide excellent habitat for grazing wildlife species including White-tailed deer, Mule deer and Pronghorn antelope. In addition, upland game and non-game bird species, such as Sage grouse and Ring-necked pheasant prefer these grassland habitats. These intact grassland areas help support the recreation-based industries in Yellowstone County.

Scrub and Shrub lands

Range plants, primarily grasses, provide the forage necessary for raising cattle and other domestic livestock. This forage production is accomplished without the high inputs that

are required for cultivated crops and pasture and provides an inexpensive source of feed for county livestock producers.

Woodlands

Total acreage in distinct woodlands is minimal when compared to the grasslands, but some commercial timberland does exist in the County. The common timber species is Juniper, the next most abundant conifer in the County, has no commercial timber value but is an important habitat species for wildlife.

Woodlands not considered commercial timberlands do provide limited wood products for local consumption, such as firewood and fence posts. Forested lands provide wildlife habitat and add to the diversity of habitats in the County.

The deciduous woodlands in the riparian areas provide diversity in terms of wildlife habitat and aesthetics. Cottonwoods are particularly adapted to the natural flooding patterns in the Yellowstone River and its major tributaries.

Riparian and Prairie Wetlands

Riparian and wetland plant species form distinct and complex plant communities. These communities form along perennial streams and rivers, as well as some ephemeral streams, seeps and springs. Man-made canals and irrigation ditches can also promote the formation of riparian type areas but do not provide all of the wetland functions of naturally occurring riparian zones. Wetlands are composed of specific plant communities adapted to saturated soil conditions. Riparian wetlands exist where the natural flow of rivers and streams has been allowed to remain. The distribution and abundance of these areas in Yellowstone County are limited.

Plant species commonly associated with riparian areas are cottonwood, usually the dominant tree species, and willows, the dominant shrub. Numerous grasses and sedges are also found in these areas including broadleaf cattail and western wheatgrass. The Montana Natural Heritage Program recently completed an inventory of biological resources in the Upper Yellowstone River watershed from the headwaters in Yellowstone Park downstream to the northeastern boundary of Yellowstone County. Riparian vegetation has a number of critical roles including soil stabilization, transport and storage of nutrients and other chemicals in the water column and forage and habitat for numerous wildlife species. Isolated or prairie wetlands are important stopover points for migratory waterfowl.

The rarity of wetlands of all types in Yellowstone County and their critical role in maintaining and conserving water quality require close attention to land use practices in their proximity.

Cultivated Species, Weeds and Urban Landscape

A large number of plant species are cultivated as commodity crops or have been used in rangeland plantings. Included in this category are the numerous varieties of residential

and commercial landscaping plants grown throughout the County. Crop and rangeland plants are discussed in detail in the Land Use section and landscape species are discussed in the "Urbanized Landscape" subsection below.

Cultivated crop production has an impact on the environment. Native plant communities are eliminated in favor of introduced monoculture species. This monoculture technique is highly susceptible to diseases and pests and requires the application of fertilizers, pesticides, fungicides and herbicides. Wildlife species adapted to specific plant communities are dislocated to areas more suited to their habitat requirements.

A noxious weed is any plant designated by federal, state, or county government to be injurious to public health, agriculture, recreation, wildlife or any public or private property. Noxious refers to those weeds that have invasive characteristics. Noxious weed infestations throughout Montana led to the enactment of the County Noxious Weed Management Act of 1985 (7-22-2101 through 7-22-2153, MCA). Defined as weeds by this act are any exotic plant species established or that may be introduced in the state which may render land unfit for agriculture, forestry, livestock, or other beneficial uses. Species classified as noxious weeds throughout Montana are listed in Table 2. County weed control districts may add other species to this list if they are a problem in their districts.

TABLE 2
MONTANA WEED SPECIES

Category 1 (currently established and generally widespread in MT)	**Category 2** (recently introduced or rapidly spreading in MT)	**Category 3** (not yet detected in MT or found in scattered infestations only)	**County Designated Noxious Weeds**
Canada Thistle	Purple Loosestrife	Yellow Starthistle	Poison Hemlock
Field Bindweed	Tansy Ragwort	Common Crupina	Western Water Hemlock
Whitetop	Meadow Hawkweed complex	Eurasian Watermilfoil	Puncturevine
Leafy Spurge	Orange Hawkweed	Dyers Woad	Common Teasel
Spotted Knapweed	Tall Buttercup	Knotweed Complex	Common Mullein
Russian Knapweed	Tamarisk (Saltceder)	Flowering Rush	
Diffuse Knapweed	Rush Skeletonweed		
Dalmatian Toadflax	Perennial Pepperweed		
St. Johnswort	Yellow Flag Iris		
Sulfur Cinquefoil	Blueweed		
Common Tansy			
Ox-eye Daisy			
Houndstongue			
Yellow Toadflax			
Hoary Alyssum			

Source: Yellowstone County Public Works, Noxious Weed Division, 2008.

Yellowstone County has several areas with populations of Leafy Spurge and Spotted and Russian Knapweed most of these are associated with the lands along the Yellowstone River and areas of Canyon Creek and Shepherd. There are numerous areas with Field Bindweed and Canada Thistle including most urbanized areas of the County. Whitetop has been found to be a common weed in subdivisions under construction. Furthermore,

Puncturevine, or "Goathead" as it is also known as, is a recent invasive noxious weed in areas of disturbance.

Transporters of noxious weeds include domestic livestock, vehicles, contaminated seed crops, poorly managed sand and gravel extraction and contaminated fill material. The Yellowstone County Weed Control District is implementing aggressive, integrated weed control measures within the transportation corridors of Yellowstone County. Yellowstone County Weed Control is facilitating weed control on various designated public lands. The U.S. Bureau of Land Management, Montana Fish, Wildlife and Parks Department, Montana Department of Transportation, and others are working together with Yellowstone County to initiate ecologically sound weed control practices on their properties. Soil disturbance associated with development and construction, road construction, or re-construction is also largely responsible for the spread of new noxious and undesirable week infestations.

Noxious weed control requires various mechanical, chemical or biological approaches to remove the invasive plants. Current county weed control efforts are hindered by a lack of adequate funding and the incorporated cities to develop comprehensive weed management plans for financial commitments that support the efforts of the County Weed Control Board.

Urban and suburban areas within the County depend upon landscaping for aesthetic values. Urban trees provide many practical benefits such as shade, increased humidity and dissipation of heat collected on hard surfaces such as asphalt and concrete. Residential and commercial landscaping is used to screen out visual detractions and act as a buffer against urban noise. Lawns and grass swales soften and break the monotony of the urban landscape and serve as filters for stormwater runoff. Lawns maintain a semi-permeable soil surface, allowing storm water to infiltrate the soil surface and recharge local groundwater supplies.

The Billings' area has the greatest concentration of urban landscaping in the County. Most of the landscape species are not native to this region but are tolerant of the regions weather. The City of Billings Parks, Recreation and Public Lands Department is responsible for the City's urban forestry program.

WILDLIFE

Wildlife is an integral part of the native Northern Plains prairie. A complex interaction exists between wildlife, native vegetation, and, indirectly, soils. Agricultural land uses, mineral extraction, and urban uses have radically altered this interaction. Many wildlife species are not compatible with agriculture, urban development, or any intensive land use. However, various management techniques can mitigate the intensity of this incompatibility, assisting in providing adequate habitat and opportunities for diversity among wildlife species, while at the same time allowing the use and development of affected lands.

For general management purposes, wildlife is often considered in terms of habitat requirements. That approach will be used in this plan since land use affects habitat. Food and cover, the prime requirements for wildlife survival, are directly related to habitat. Habitat must be considered in terms of time and space, providing a desirable mix of food and cover through all seasons.

Basic habitat types and generic locations will be used rather than site-specific information. No attempt will be made for this element to perform counts or any type of wildlife census since such data gathering requires extensive fieldwork. Although space limitation led to an emphasis on larger game animals, all wildlife (game, non-game, vertebrates and non-vertebrates) are important.

Animal Species of Concern

Portions of Yellowstone County lie within the Greater Yellowstone Ecosystem and may support animal species that migrate from the higher elevations to the Yellowstone River. Of particular concern, though no sightings have been reported, are the gray wolf and the North American lynx. Both species require large, unfragmented habitat and would be considered rare in the County. More likely to occur within the County are species that populate grassland and shrublands such as the black-tailed prairie dog, the mountain plover, and the greater sage grouse. Two reptile species associated with drier habitats include the mild snake and western hognose snake. The riverine and associated riparian habitats are important to a variety of animal species. The sauger, a fish species, was recently added to the species of special concern list because of population declines. The bald eagle, which nests in the riparian forests, is listed as a threatened species. Other species of concern include the harlequin duck and the redheaded woodpecker. The river otter, also a species of concern, inhabits the Yellowstone River.

Grassland and Shrub Land Species

This habitat is the most common throughout the County, being found in all geographic regions. Most species can be found in grasslands and shrublands during some point in the year, although some use grasslands primarily for winter range. Antelope forage on various vegetative types, depending upon the availability and palatability, with sagebrush being their primary winter food. The Bull Mountain elk use grasslands on occasion, as do sage grouse and sharp-tailed grouse. Sage grouse use sage for their primary winter feed and cover. Sharp-tailed grouse have been observed using the upland grasslands for mating, nesting and brood raising. In the Bull Mountain region, turkeys use the grasslands during the summer months.

Woodland Species

While not an extensive habitat type, these areas are heavily used during certain seasons of the year by mule and white-tailed deer and elk for shelter. Sharp-tailed grouse use woodlands for cover and seasonal shifts in diet. Pheasants can be found in these areas, usually when they are adjacent to grain crops and weeds that are used as food sources. Ponderosa pine woodlands provide turkeys with escape cover, roosting sites and food.

Riparian/Wetland Species

Numerous species, both game and non-game, find this habitat critical for their continued survival. Waterfowl are the most dependent, as they require nesting, brooding, and feeding areas located in these habitat types. White-tailed deer depend heavily on the deciduous woodlands located in river bottomlands throughout the County, using the zones year round. Mule deer use the areas for winter range as it provides cover and food when other ranges are unusable. A large number of raptor species such as owl, hawk, and golden eagle use these riparian and wetlands for nesting and brood raising.

Fisheries

With the exception of the Big Horn River, most of the rivers and streams in Yellowstone County support warm water fisheries. The Yellowstone River contains cold water species as it enters the County from the west, but the influence of warmer water from smaller tributaries raises the temperature to the point that most cold water fisheries decline in the eastern river segments. Game fish in the cold water environment include brown trout and rainbow trout while the warmer water support channel catfish and walleye.

There are few reservoirs and lakes in Yellowstone County that support game fish, but a few such as Lake Elmo and Broadview Pond, support largemouth bass and northern pike.

AREAS OF CONFLICT

Wildland- Urban Interface (WUI)

Urban areas throughout the County provide a multitude of opportunities for various wildlife species. Houses and other buildings provide nesting sites for sparrows, starlings, pigeons and other bird species. Landscaping plants provide a wide variety of nesting and food sources not found in the "natural" environment. The urban environment is limiting because it lacks sufficient quantity and quality of vegetation. Birds appear to adapt easier to urban environments than most mammals, possibly because of their greater mobility.

While the urban landscape may prove sufficient for sustaining wildlife, often conflicts exist between urban dwellers and the species of wildlife involved. The coyote, various rodents and some birds provide ample evidence of this problem.

Agricultural lands include cultivated cropland, pastures and intensively managed rangelands. Most wildlife in the County utilize these lands at some time during the year.

Windbreaks are another distinct habitat provided by the agricultural community, and numerous species of mammals and birds utilize these areas. These lands provide an island of high quality cover for security and feed in a sea of cultivated fields.

Irrigation canals and water diversions throughout the County provide abundant habitat for various aquatic and amphibian species. These canals also provide hiding and movement cover for other wildlife.

Wildlife Conflict

From a land use perspective, wildlife is affected primarily by the loss of habitat that occurs with development. Many times this conflict is direct, occurring with development of primary ranges. At other times the conflicts are not so clear, occurring with development of winter ranges, breeding and nesting sites and areas utilized only during a portion of the year. Secondary effects arise from changes in diet, pollutants, poisons, noise and other hazards that are associated with human settlement and use. A common and widespread problem is the effect dogs and other pets can have on wildlife. Dogs in particular are very disruptive to wildlife, especially on winter ranges.

The wildland-urban interface is where much of the conflict between wildlife and development occurs. The conversion of croplands and rangelands into urban uses reduces available habitat for some species, although it may increase habitat for other species. Conversion of land to other uses or increased activity in natural areas for energy or other mineral developments increases the potential for people-wildlife conflicts.

Utility corridors for pipelines and power lines have much the same effect, but usually temporarily. Much of this conflict arises from the construction of roads through winter ranges and security habitat, allowing increased hunting pressures to occur. Road construction can hinder as well as aid in wildlife movement. For example, there may be increased poaching of game animals and increased road kills for all species of wildlife.

However, many conflict situations are highly variable and depend upon factors such as surrounding land uses, amount and severity of development, and type of animals involved. The key issue often is whether any other suitable habitat exists for displaced wildlife to move onto. There are no set answers, and each situation must be addressed on a site-by-site basis.

Wildlife pests are identified as those wildlife that cause damage or destruction of crops. Pests such as the Columbian and Richardson ground squirrel can cause a substantial amount of damage if their populations increase with large areas being impacted. Predators are those carnivores identified as preying on domestic livestock. Predators can and often do cause extensive damage to livestock. The young of any domestic animal are especially vulnerable to coyote, eagles or wolves. This aspect of wildlife and agriculture has been a constant source of controversy for years. The basic problem is the predator-prey relationship, with domestic livestock being substituted for "natural" prey.

The grazing and browsing wildlife species common to the County do cause extensive damage to croplands and rangelands by over-utilizing plants, especially in winter and early spring. Often this occurs when wildlife winter ranges have been used for domestic livestock or development forces wildlife onto alternate range sites. Overuse causes the development of bare soil (increased erosion and compaction) and severely weakens or kills overused plants.

Increased land development usually results in increased road construction, which has proven to be a major source of sediment. This sediment alters the aquatic environment for both spawning and successful rearing of young fish. Stream obstructions such as culverts and dams alter spawning runs and migratory patterns.

A critical and potentially devastating problem for the aquatic environment is the possibility of toxic materials spills, such as oil, gas, and herbicides. Any of these materials can severely damage an aquatic environment. The loss or potential loss of streamside cover (riparian vegetation) can lead to the warming of a stream and increased sediment production from surrounding stream banks as well as the loss of hiding cover furnished by overhanging vegetation.

Wildfire

With increased development into the WUI areas of the County, wildfire has become an issue of emerging importance. This threat is especially prevalent in the County, where residential subdivisions are located within or adjacent to highly vegetated areas or grasslands. Numerous fires have been experienced over the last few years in outlying areas of the County that have put many homes and citizens in danger. In 2005, both the City and County adopted the Community Wildfire Protection Plan, which is a guide to wildfire mitigation. This plan identifies areas within the County with the most potential for wildfire and provides information on how to create defensible space around structures within subdivisions to lower the risk of wildfires.

Additionally, in 2006, the City and County adopted updated Subdivision Regulations that include requirements for adequate water supply for fire-fighting purposes, and at least two points of access for all new major and subsequent minor subdivisions. These new regulations are intended as proactive measures for mitigating and suppressing wildfires before they become a community crisis.

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4.6.3 SOIL

INTRODUCTION

The most recent version of the ”Soil Survey of Yellowstone County, Montana was published in 1972 by the U. S. Department of Agriculture Soil Conservation Service and U. S. Department of the Interior Bureau of Indian Affairs, in cooperation with Montana Agricultural Experiment Station. The general soil map included with the survey shows the soil associations for the County. Soil associations are landscapes that have a distinctive proportional pattern of soils, normally consisting of one or more major soils and at least one minor soil, and named for the major soil map units. This chapter provides a description of each soil association in the County and discussion on the suitability and limitations of individual soil units for specific applications. Some soil associations are inherently important because of special characteristics. These characteristics may increase or decrease the ability of the land to support a certain use. Soils of special importance discussed at the end of this chapter include prime agricultural soil, saline soil, and swelling clay soil.

SOILS OF SHALE AND SANDSTONE UPLANDS

The County soils found on the shale and sandstone uplands vary from shallow to moderately deep, are well drained, and located on undulating hills or steep slopes. Although most of these soils are located north of the Yellowstone River, some are also found in the southwestern and southeastern parts of the County. The eight soil associations on the shale and sandstone uplands and a description of each association and its major soils follow.

Bainville-Elso-McRae Association

These undulating to hilly soils are located on the plains north of the Yellowstone River in winding valleys and coulees separated by knolls and ridges. Streams flow intermittently, and drainage is into the Yellowstone. Vegetation includes grasses, shrubs, scattered pines and juniper trees, and a few cottonwood trees. The association encompasses 30 percent of the County, and the major soils are well drained. Between 45 and 60 percent of the association are Bainville soils, 20 to 35 percent Elso soils, 10 to 20 percent McRae soils, and the remainder are minor soils. Bainville soils are on slopes of 4 to 25 percent, and bedrock is at a depth of 20 to 40 inches. Elso soils have slopes of 20 to 35 percent, and the depth to bedrock is 10 to 20 inches. McRae soils are deep. As the soils are steep and shallow to bedrock and precipitation is low, the association is more suitable for grazing cattle than for crops. Drilled wells are the most reliable source of water.

Cushman-Bainville Association

This soil association is located on rolling and undulating uplands. The association is mostly in the northwestern part of the County, and small areas are scattered about the northern half. Bedrock is silty and loamy shale and sandstone; drainages are shallow. Vegetation is mostly grasses, forbs, and shrubs. Seven percent of the County is in this association. Cushman soils represent 45 percent of the association. Bainville is 40 percent, and minor soils comprise the rest. The major soils are well drained. Cushman soils are gently to moderately sloping. Bainville soils are sloping. Depth to the underlying shale and sandstone varies from 20 to 40

inches in the major soils. Most of the association soils have been or are used for dryland farming. No streams flow in the association, so wells and surface reservoirs supply stock water.

Worland-Bainville-Travessilla Association

Found in the northeast quarter of the County, this association consists of soils on sandstone and loamy shale in hilly upland terrain. Streams flow only when there is rapid snow melt or after hard summer rains. Grasses, sagebrush, and sumac are the main vegetation. There are also scattered pine and juniper trees and a few cottonwood trees. The association encompasses 5 percent of the County: 40 percent is Worland, 30 percent Bainville, and 15 percent Travessilla soil units. The balance of the association is in minor soil units. All soils except the Worland are well drained. Worland soils are somewhat excessively drained and are on ridges and knolls with outcrops of soft sandstone; bedrock is 20 to 40 inches. Bainville soils are on broad ridges and knolls without sandstone outcrops, and bedrock is at a depth of 20 to 40 inches. Travessilla soils are on ridges and knolls where hard sandstone outcrops and on the tops of sandstone ledges. Hard sandstone is at a depth of 10 to 20 inches. Nearly all of the association is used only for grazing cattle because of the low annual precipitation, steep slopes, and shallow soils. Wells and surface reservoirs supply stock water.

Bainville-Travessilla-Rock Land Association

This soil association includes moderately steep to steep soils on uplands northeast of Shepherd and on the south slopes of the Bull Mountains. The landscape's most prominent features are vertical ledges of sandstone 20 to 50 feet thick. Drainages are tributaries of the Yellowstone River, including the headwaters of several creeks. Vegetation consists of grasses, sagebrush, rabbit brush, skunk bush, sumac, red cedar, and ponderosa pine. Eight percent of the County is contained in this soil group. Forty percent are Bainville soils, 25 percent Travessilla, 20 percent Rock land, and the rest minor soils. Bainville soils are moderately steep, well drained, and underlain by platy shale and sandstone at a depth of around 30 inches. Travessilla soils are excessively drained and lie immediately above sandstone ledges and outcrops; hard sandstone is at a depth of 10 to 20 inches. Rock land consists of sandstone ledges and escarpments and exposed shale. The association's steep slopes, low annual precipitation, and shallow soils lead to its primary use, cattle grazing. Pumped wells are the most reliable source of livestock water.

Wormser-Lavina-Razor Association

The undulating to rolling soils on plateaus and uplands in the western part of the County are part of this association. Its drainages are mostly shallow and carry water only when rapid snowmelt occurs or when rains are heavy. Vegetation is primarily grasses, sagebrush, yucca, and a few cedar and ponderosa pine trees. Three percent of the County soils are in this association. Wormser soils include 55 percent of the association, Lavina is 15 percent, Razor is 15 percent, and the rest are minor soils. All major soils are well drained. Wormser soils have a depth to shale and sandstone bedrock of 24 to 36 inches. The Lavina soils are directly underlain by shale and sandstone at a depth of 8 to 20 inches. Razor soils have a depth to soft and semi hard shale of 20 to 40 inches. Wormser and Razor soils can be used for small grains dryfarmed in a crop-fallow system, and Lavina soils are used for range. Wells are generally drilled in the deepest valleys, as springs do not occur. Some of the wide valleys found in this association around Billings are used for homesites.

Pierre-Lismas-Kyle Association

These rolling to moderately steep soils occur on eroded uplands underlain by clay shale. Approximately one-third lies between Shepherd and Acton, while the rest is scattered in the southern part of the County and along the south side of the Yellowstone River. The intermittent drainages are tributaries of the Yellowstone and Bighorn Rivers, and vegetation is mostly grasses, sagebrush, shrubs, and a few cedars. The soil group encompasses 11 percent of the County, with 35 percent of the association in Pierre soils, 35 percent in Lismas, 20 percent in Kyle, and the remainder in minor soils. Pierre soils are on smooth, broad ridges and hills and parts of the landscape not deeply cut by drainages; depth to shale bedrock is 20 to 40 inches. Lismas soils are on narrow, steep ridges and the sides of deep drainages. The depth to shale bedrock is 10 to 20 inches. Kyle soils are in troughs between low ridges and on the sides and bottoms of valleys. It has very gravelly loam, sand, or clay shale lying below a depth of 40 inches. The association is used most for grazing cattle. A reliable source of stock water is runoff water stored in reservoirs. Some Pierre and Kyle soils can be used for wheat and barley dryfarming, although crop growth depends on the amount of precipitation received during the growing season. A lot of water is available along the southern boundary of the association when snow melts or rains are heavy.

Midway-Heldt Association

Located mostly in the southeastern part of Yellowstone County, the sloping to moderately steep soils are found on alluvial fans and terraces and on uplands underlain by clay shale. They are drained by the headwaters of East Fork and Telegraph Creeks. Vegetation consists of grasses, broom snakeweed, and sagebrush. Two percent of the County is in the association. Midway soils represent 45 percent of the association, and Heldt soils comprise an additional 30 percent. Minor soils make up the balance, with 15 percent of the minor soils classified as Work soils. The soils are well drained. Midway soils are found on the tops and steep sides of ridges and hills and have a depth to partly weathered shale of less than 20 inches. Heldt soils, on fans, terraces, and valley slopes, have a depth to bedrock of over 48 inches. Most of the association is in the Crow Indian Reservation and is used for grazing cattle. Suitable sites and sufficient runoff water are available for stock water ponds. Heldt soils and Work soils, one of the association's minor soils, are suitable for dryland crops in a summer fallow system.

Maginnis-Absarokee Association

The association has undulating to steep soils occurring on a deeply dissected plateau, underlain by hard shale and sandstone. Three-fourths of the association is in southwestern Yellowstone County, and the remainder is in the southeastern part of the County. Streams flow only when there is snowmelt or heavy rains. The main drainages are Duck, Blue, and Spring Creeks. Vegetation consists of grasses, sagebrush, cottonwoods, wild roses, and some junipers. Seven percent of the County is part of the Maginnis-Absarokee association. Maginnis soils, equaling 40 percent of the association, are stony and steep, and bedrock is at a depth of 4 to 15 inches. Absarokee soils, 25 percent of the association, are on smooth plateaus between deep drainages. Depth to hard sandstone is 20 to 40 inches. Maginnis soil is used only for cattle grazing. The Absarokee and Amherst (minor soil) soils not in the Crow Indian Reservation are used for small grains dryland farming. Absarokee soils have few suitable sites for stock water ponds, but springs and seeps in the main valleys supply adequate water for livestock on Maginnis soils.

SOILS OF RIVER TERRACES, LOW ALLUVIAL FANS, AND FLOOD PLAINS

Soils of river terraces and low alluvial fans are primarily deep, well drained or moderately well drained, and nearly level to gently sloping. Soils on flood plains are subject to overflow and have a water table that fluctuates near the surface. The soils of this entire group are found along major streams and on low river terraces throughout Yellowstone County, and the broadest area is between Billings and Laurel. Most of the area is either irrigated or used for communities. There are three soil associations in the County that are on river terraces, low alluvial fans, or flood plains.

McRae-Lohmiller-Keiser Association

These gently sloping to sloping soils are on terraces and fans built up by the large intermittent streams that flow into the Yellowstone River Valley. They are located between Billings and Laurel, and northeast of Shepherd and Huntley. Vegetation is mostly grasses, sagebrush, and rabbit brush. The association occupies seven percent of the County. McRae soils are 40 percent of the association, Lohmiller 25 percent, Keiser 20 percent, and the balance is minor soils. Major soils are well drained. McRae soils are on fans close to uplands bordering river valleys and depth to shale bedrock is 48 to 72 inches. Lohmiller soils are on low terraces and along intermittent stream channels draining the terraces. Depth to bedrock is more than 60 inches. Keiser soils are on high terraces underlain by gravel. Most of the soils are irrigated and the major soils are easily managed with good crop growth. Small grains are dryfarmed on the outer fringe of the river valleys. Cattle can graze crop residues and hay crops in winter. Some of the land west of Billings is used for housing.

Vananda-McKenzie-Arvada Association

The level to gently sloping soils of this association are on dry lake basins, terraces, and fans in the northwest corner of the County and on terraces northeast of Huntley. Distinct drainages are found at the outer edges of lake basins and on fans, and they carry water only when snowmelt or heavy rain occurs. The lake basins are undrained. Vegetation is western wheatgrass, sagebrush, and greasewood. Three percent of the County is in this association. Vananda soils comprise 50 percent of the association, McKenzie soils total 20 percent, Arvada has 20 percent, and the remainder is in minor soils. Vananda soils are well drained, level to gently sloping, and have a depth to bedrock of more than 60 inches. McKenzie soils are moderately well drained and occur in areas where water ponds, and greasewood and sagebrush do not grow. Depth to bedrock is over 60 inches. Arvada soils are moderately well drained and nearly level. Depth to bedrock is more than 40 inches. The major soils are clayey in the surface layer and subsoil and are very slowly permeable. They also contain sodium and other salts. Thus, they are better suited for range than farming.

Haverson Association

The association has level to gently sloping soils on flood plains and terraces of the Big Horn, Yellowstone, and Clarks Fork of the Yellowstone Rivers, and Pryor Creek. Sandy and gravelly soils occur along river channels and on islands, seeped and wet soils are found in oxbows and meanders. Vegetation is primarily cottonwoods, wild roses, buckbrush, and grasses. The water table is within 60 inches of the surface on flood plains, and soils are flooded during spring snowmelt. Willows, cattails, and sedges also grow along water-filled oxbows. Five percent of the County is in the association: 65 percent is Haverson soils. Haverson soils are well drained

and occur on terraces, and depth to loose sand and gravel is more than 60 inches. Soils on flood plains and islands are used mostly for cattle grazing. Terrace soils and soils found in the smaller stream valleys are irrigated or dry farmed. Dry farmed small grains and hay and pasture plants grow moderately well, while irrigated sugar beets, dry beans, corn for silage, alfalfa, and small grains grow well.

SOILS OF HIGH TERRACES AND BENCHES

These soils are moderately deep to deep, and clayey and loamy. They are well drained and vary from nearly level to steep. As their name suggests, the soils are found mostly on high terraces along rivers and on benches south of the Yellowstone River and are used for grazing, dryland farming, and irrigated crops. Three soil associations are on high terraces and benches in the County.

Bew-Allentine Association

The level to sloping soils of this association are on terraces south of Shepherd and west of Huntley. The intermittent drainages are tributaries of the Yellowstone River. Vegetation consists of grasses, sagebrush, and greasewood. This association occupies one percent of the County. Bew soils comprise 60 percent of the association, and Allentine is 20 percent. Minor soils make up the balance of the association. Major soils are well drained. Bew and Allentine soils have a depth to bedrock of over 60 inches. Nearly all of the association is in irrigated small grains, corn for silage, and hay and pasture.

Wanetta-Keiser Association

The association has level to steep soils on gravel capped sandstone and shale uplands along the Yellowstone and Bighorn Rivers, and east of Pryor Creek. Vegetation includes grasses, sagebrush, yucca, skunkbush, sumac, and Ponderosa pine and juniper. Seven percent of the County is found in this association: 35 percent Wanetta soils, 30 percent Keiser soils, and the rest hilly, gravelly land and minor soils. Major soils are well drained. Wanetta soils are on smooth terraces between deep drainages, and depth to gravel is 20 to 40 inches. Keiser soils are also on smooth terraces between deep drainages. Depth to bedrock is more than 60 inches. Wanetta and Keiser soils are used for dryland farming, irrigated crops, and range. Hilly, gravelly land found in this association is used only for range and as a source of gravel and sand. The lowest terraces along the Yellowstone are irrigated. Pumped wells are the most reliable source of water.

Danvers Association

Gently undulating to rolling soils are found in this association, located on high terraces near the headwaters of Arrow and Spring Creeks south of Ballantine and along Pryor Creek. Drainages are tributaries of the Yellowstone River and Pryor and Fly Creeks. Vegetation is mainly grasses and sagebrush, plus some shrubs. The association occupies four percent of the County. It is 50 percent Danvers soils, 20 percent Shaak, 10 percent Oburn, and 20 percent Hilly gravelly land. Danvers soils are well drained and are found on crests of low mounds, convex slopes, and along deep drainages. Depth to underlying sand and gravel is 48 to 72 inches. The association is used for range and for wheat and barley dry farming in a crop fallow system. Crop growth is good on all major soils. Cattle graze on crop residues. Seeps and springs provide water for livestock.

SOIL SUITABILITY AND LIMITATIONS

The major soils of Yellowstone County were evaluated by the Natural Resources and Conservation Service according to their suitability as a source of topsoil, sand, gravel, and road fill; their effect on land leveling, irrigation, and building sites; and their limitations for sewage disposal fields and sewage lagoons. As a source of topsoil, sand, gravel, and road fill, the soils are rated good, fair, poor, or unsuitable. Soil features affecting land leveling include slope and depth to bedrock. Soils suitable for irrigation are both well drained and contain enough fine material for good available water capacity. Building sites need soils that have a low shrink-swell potential, are stable, not flooded or ponded, and that do not have a seasonal high water table. The suitability of soils for sewage disposal fields is dependent upon permeability, slopes, seasonal high water table, and susceptibility to flooding. In the case of sewage lagoons, the soil acts as a dam and the floor for the impounded water area, so the soils need to be impervious to seepage, have little slope, and have little or no organic matter. In addition, the sealing potential of the soil material, depth to bedrock and high water table, stability, permeability, shrink-swell potential, and compactibility are important soil features to assess for sewage lagoons. Twenty-six major soils were reviewed for their suitability and limitations. The following generalizations can be made based upon the findings[11]:

Suitability of Soil for Topsoil, Sand, Gravel, and Road Fill

The suitability of each soil for use as topsoil was highly variable, with the best being Haverson and McRae, followed by Cushman, Heldt, Keiser, Lohmiller, and Wanetta soils. Few were suitable for sand or gravel use; Haverson and Wanetta are the most highly rated. Road fill potential was generally poor or fair to poor for a variety of reasons (see Table 1 for explanations), with only the Wanetta soils considered good. The Wanetta soils, found in the Wanetta-Keiser association and generally south of the Yellowstone River between Pryor Creek and Sand Creek, are the most suitable for topsoil, sand, gravel, and road fill.

Soil Features Affecting Land Leveling, Irrigation, and Building Sites

Haverson soils are generally favorable for land leveling, irrigation, and building sites and are found adjacent to the Yellowstone and Bighorn Rivers as well as several creeks. Bew, Heldt, Lohmiller, and McRae soils are mostly favorable for land leveling. Slow permeability affects the ability of several soils to accommodate irrigation: Allentine, Arvada, Bew, Kyle, and Vanada. Erosion risk is also a feature of Arvada and some Keiser soils. Over half of the soils have low bearing capacity for building sites and moderate to high shrink-swell potential.

Limitations for Sewage Disposal Fields, Detention Ponds and Sewage Lagoons

Most of the major soils in Yellowstone County have severe limitations for sewage disposal fields, due primarily to slow to moderately slow permeability and slow percolation rates. Steep slopes and depth to sandstone, shale, and siltstone are additional limitations. Some of the Haverson and Lohmiller soil series, and areas of Wanetta and McRae soils have the least limitations for sewage disposal fields. Again, Haverson soils are found adjacent to the major rivers and several creeks in the County. Lohmiller and McRae soils are found north of the

[11] Detailed information on engineering limitations can be found in Tables 4 and 5, 1972 Soil Survey of Yellowstone County.

Yellowstone River between Billings and Laurel. McRae is also contained in the Bainville-Elso-McRae association north of the Yellowstone River. Wanetta soils are mainly south of the Yellowstone, in a region bordered by Pryor and Sand Creeks. The same soil characteristics that create a problem for sewage disposal fields create drainage problems for stormwater detention ponds. Clay-rich soils, particularly those that contain swelling clays, inhibit water infiltration. Unless adequately engineered, ponds located on these soils may develop standing water, a potential breeding ground for mosquitoes. Limitations for sewage lagoons are primarily due to slopes. In a few cases, the depth to bedrock is less than 40 inches. When slope is not a factor, then Allentine, Arvada, Bew, and Keiser soils are the most suitable soils for sewage lagoons. These units are generally located around the Huntley, Shepherd, Ballantine, and Worden areas, and between Billings and Laurel.

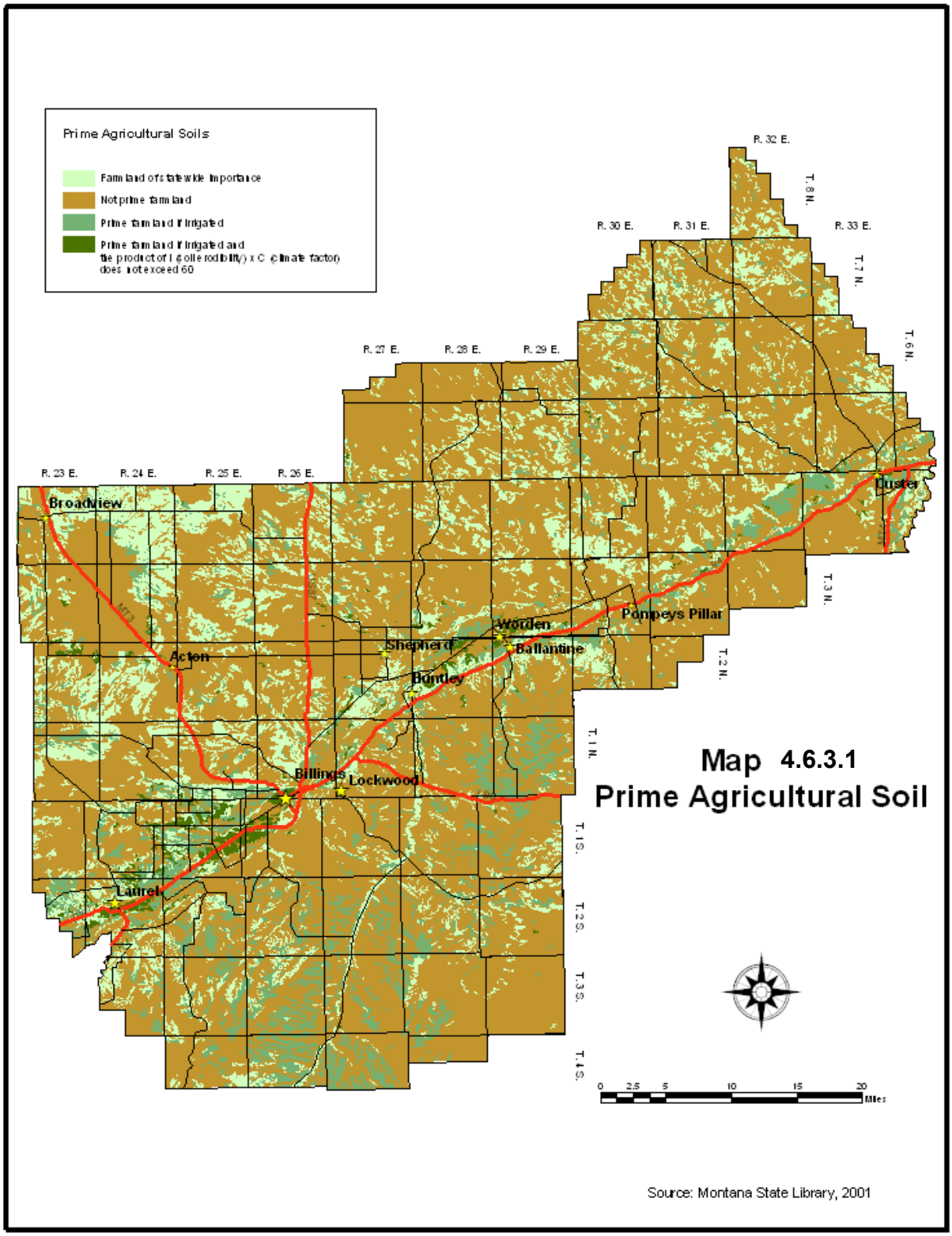
SOIL OF SPECIAL IMPORTANCE

Certain soil units have unique characteristics that lend themselves to special uses or conservation methods. The identification of these soil units is important when considering development options.

Prime Agricultural Soils

Yellowstone County contains a high percentage of soils that are classified as Prime Farmland (if irrigated) and Farmland of Statewide Importance. The Natural Resource Conservation Service assigns these classes to land that have favorable soils and a suitable environment to support commercial crops. The designation of Prime Farmland always includes the qualifier "if irrigated". This land has the best combination of physical and chemical characteristics for producing feed, food, forage, fiber, and oilseed crops, and is also available for these uses. Prime Farmland must have an adequate and dependable water source from precipitation or irrigation water. Because precipitation levels are too low in the County to support cultivation of some crops, the water must be obtained through irrigation. Other factors that are considered include temperature, growing season, acceptable acidity or alkalinity, acceptable salt and sodium content and few or no rocks. Farmland of Statewide Importance includes land that supports production of crops important to Montana, sugar beets for example. Many soil types that are considered Prime Farmland at 0 to 4% slopes are also Farmland of Statewide Importance at 4 to 7% slopes. Farmland of Statewide Importance is also less reliant on a dependable water source and much of it is dryland farmed.

Both classes of Farmland are found in soil associations of river terraces and floodplains in the Yellowstone Valley or higher terraces and benchs. Soils supporting Prime Farmland and Farmland of Statewide Importance include the McRae-Lohmiller-Keiser, Haverson, Bew-Allentine, Wanetta-Keiser and Danvers soil associations. Map 4.6.3.1 shows the distribution of Farmland of Statewide Importance and Prime Farmland ("if irrigated", and "if irrigated and the product of soil erodibility multiplied by the climate factor does not exceed 60").


Prime Agricultural Soils
Farmland of statewide importance
Not prime farmland
Prime farmland if irrigated
Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
R. 32 E.
R. 30 E.
R. 31 E.
R. 33 E.
T. 8 N.
T. 7 N.
T. 6 N.
R. 27 E.
R. 28 E.
R. 29 E.
R. 23 E.
R. 24 E.
R. 25 E.
R. 26 E.
Broadview
Custer
Pompeys Pillar
Worden
Ballantine
Shepherd
Acton
Huntley
Billings
Lockwood
Laurel
T. 3 N.
T. 2 N.
T. 1 N.
T. 1 S.
T. 2 S.
T. 3 S.
T. 4 S.
Map 4.6.3.1
Prime Agricultural Soil
0 2.5 5 10 15 20
Miles
Source: Montana State Library, 2001

Saline Soils

There are approximately 82,000 acres of saline and alkali soils in Yellowstone County. Saline soil contains soluble salts that inhibit seed germination and plant growth. Saline soils may be reclaimed by removing salts through leaching with water. Alkali soil contains exchangeable cations of sodium that can expand clay particles and reduce permeability. Alkali soils are not easily reclaimed. Typically it requires large volumes of soil amendments to adjust the alkalinity. Soil salinity is caused by salty water rising from high water tables or seeping from irrigation canals, and over-irrigation. Soil alkalinity originates from a sodium-rich parent material. Both saline and alkaline soils occur mainly in stream valleys and have slopes of less than 8 percent.

Soil salinity and alkalinity reduce agricultural productivity. Special planting and irrigation methods are required to minimize salt accumulation and maintain relatively high soil moisture in cropland. Rangeland productivity is greatly reduced because these soils do not support forage plants.

In Yellowstone County, the soil associations that are characterized by moderately high to high salinity include the Vanada-McKenzie-Arvada and the Bew-Allentine. Individual soil units characterized by high salinity are Allentine, Arvada, Bone, Laurel, McKenzie, Sage and Vananda.

Swelling Clay Soil

The shrink-swell potential of a soil indicates the volume change to be expected when moisture is added. The volume change is determined primarily by the amount and type of clay in the soil. Swelling soil can contribute to road and foundation failure and increased surface runoff. As soil swells with added moisture, pressure is increased on roadways and building foundations causing buckling, rotation or cracking. The presence of swelling clays can significantly add to maintenance costs unless the structure is appropriately engineered and constructed. Swelling clay can also inhibit water infiltration causing severe surface runoff. Surfaces down gradient from slopes containing swelling clays can experience more frequent and severe flooding events than areas down slope from more permeable soil.

Swelling clay is a product of weathering of the parent material particularly shale bedrock. One form of swelling clay is bentonite, which is an alteration product of volcanic ash. Where bentonite or shale is present, the overlying soil tends to have a greater shrink-swell potential. High swelling clays also collect in areas of deposition down slope from shale bedrock. Soil with high shrink-swell potential is found throughout the County. Soil associations with moderately high to high shrink-swell potential include; Pierre-Lismas-Kyle, Vananda-McKenzie-Arvada, Midway-Heldt, Bew-Allentine and Danvers association.

REFERENCES

USDA, Soil Conservation Service, 1972, Soil Survey of Yellowstone County.

4.6.4 GEOLOGY

INTRODUCTION

The geology of an area influences the suitability of land for development. Several geologic factors affect the ability of land to support certain uses; among these are depth and configuration of bedrock and mineral composition. This section addresses these factors and identifies areas where the geology presents certain constraints to development such as areas of shallow bedrock, unstable geology, and groundwater recharge. Also provided is an overview of the physiography or "lay of the land" to give the reader a general sense of the terrain. To appreciate how the landforms were developed, the geologic history is presented followed by an explanation of the resulting rock formations and structural elements. Finally, the geologic resources that contribute or have potential to contribute to the economic base of the County are described.

PHYSIOGRAPHY

Yellowstone County lies within the unglaciated Missouri Plateau section of the Great Plains Province. Elevation in the County ranges from 2,680 feet above sea level on the Yellowstone River near Custer to 4,971 feet at Stratford Hill in the southwest corner of the County. While the elevation differences in the County are not great, the local terrain can be quite varied ranging from broad, level plains to abrupt, vertical cliffs. Yellowstone County is divided into four distinct topographic regions; the Yellowstone River Valley, the Plains, the Lake Basin, and the Bull Mountains.

The Yellowstone River forms the dominant physiographic feature in Yellowstone County. As the river winds its way from the southwest portion of the County near Laurel to the northeast corner near Custer, it is flanked by a broad alluvial valley. Over the course of its existence, the river meandered through the valley eroding sandstone and shale formations and depositing sand and gravel. Where the river carved down through the sandstone, steep cliffs resulted. These cliffs, or rims, are as high as 300 feet in places and are prominent landforms surrounding Billings and the west part of the Yellowstone Valley. Pompey's Pillar, a prominent bluff located in the eastern part of the County, is an erosional sandstone remnant made famous by Capt. William Clark of the Corps of Discovery during his return trip from the Pacific Ocean in 1806.

The Plains Region constitutes the largest portion of the County north and south of the Yellowstone River. The topography of the plains varies with the thickness of the underlying shale and the presence of sandstone beds. Thicker shale beds translate into more gently rolling terrain cut by steep-sided coulees. Rimrocks, rough ridges and frequent outcrops occur where eroded shale layers expose the interbedded sandstone formations.

Eroded terraces that gradually increase in elevation to the south characterize the plains south of the Yellowstone River. Elevations range from 3,392 feet at the Billings landfill to 4,971 feet at Stratford Hill. The terraces are bisected by three major drainages; Pryor Creek, Blue Creek and Duck Creek. Each flows northward and drains into the Yellowstone River. The

bedrock underlying the terraces southwest of Blue Creek are primarily composed of shale with thin sandstone beds of the Cretaceous Colorado Group. Northeast of Blue Creek the rock formations belong to the Cretaceous Montana Group composed of sandstone and shale units.

Portions of the northern Plains are gently rolling with fewer steep-sided drainages where thick, flat-lying sandstone beds of the Eagle Sandstone occur near the surface. This topography is exhibited just north of Billings in the upper Alkali Creek drainage. Areas underlain by the shale formations of the Montana Group, primarily northeast of Billings, are easily eroded and tend to be more dissected with numerous small coulees and draws. The significant drainages north of the Yellowstone include Canyon, Alkali, Crooked, Razor, Pompey's Pillar, Railroad, Hibbard, and Buffalo Creeks.

Vegetation tends to be sparse grassland where the surface is underlain by shale and Ponderosa pine and juniper shrub forest in the eroded draws and coulees and areas underlain by sandstone.

In the northwest part of the County, unusual physiographic features occur where undrained or poorly drained depressions form temporary lakes of varying sizes. The depressions are filled with fine-grained Tertiary sediments. The Lake Basins region includes the area of Comanche Flats located south of Broadview. At 15,000 acres, it is the largest lake basin in the County.

The Bull Mountains, along the north boundary of the County generally create the drainage divide between the Musselshell and the Yellowstone Rivers. The Bull Mountains are rugged hills with a maximum local relief less than 2,000 feet. Intermittent stream flow carries large volumes of water during heavy rain events that scour highly erodible shale bedrock. The vegetation in the Bull Mountains is primarily open to heavily forested Ponderosa pine with an understory of grass and forbes.

GEOLOGIC HISTORY

Between 135 and 75 million years ago, an inland sea, stretching from the Gulf of Mexico to the Arctic Ocean covered much of the central United States and what is now Yellowstone County. The sea level fluctuated numerous times during this period. When the region was completely covered by the sea, dark, marine silt and mud were deposited. When the shoreline receded, the marine sediments were covered with cleaner sandstone. At the transition between the land and marine environment, swamp and beach channel sediments were deposited. The first advance of the sea occurred during the late Cretaceous period, approximately 90 million years ago. During this time, mostly marine sediments belonging to the Colorado Group were deposited. Sedimentary rocks of the Montana Group were deposited during a time of cyclic advances and retreats of the inland sea. The sediments reflect the fluctuations between marine and terrestrial environments. Inter-bedded coal beds in the Eagle and Judith River sandstone formations are evidence of swamps repeatedly formed near the shoreline. The final retreat of the sea was accompanied by the deposition of the Lance Formation in late Cretaceous and the Fort Union Formation in the Early Tertiary period. The massive amount of sand that comprises the Fort Union was derived from the

ancestral Rocky Mountains to the west. The Fort Union Formation also contains numerous swamp deposits that later fossilized into mineable coal beds.

During the Tertiary period, the crustal rocks of south central Montana were being gently warped by more intense deformation or tectonic events to the west and southwest. The warping created folds and faults in the sedimentary rocks, trapping oil and gas deposits and shaping the topography of the plains. Sediments filled the basins created by the folded and faulted Cretaceous and early Tertiary formations.

The present land surface has been shaped over the past 70 million years by continued erosional and depositional cycles. Alluvial sediments, deposited by the Yellowstone River began during the Quaternary Period, approximately 1.8 million years ago and continue today. The Lake Basin area also filled with shallow deposits of Quaternary alluvium.

GEOLOGIC FORMATIONS AND STRUCTURE

Most of the bedrock throughout the County is layered Cretaceous sandstone and shale (D. Lopez, 2000). However, the oldest surface exposure of bedrock in Yellowstone County is the Jurassic Morrison Formation (W.T. Thom, et al., 1935). Exposures of the Jurassic Morrison Formation are located near the County's southern border. The early Cretaceous Kootenai Formation (Cloverly Formation in W.T. Thom, et al., 1935; R.S. Knappen and G.F. Moulton, 1931) is also well exposed in the southern part of the County. Above that lies the Colorado Group with the Thermopolis Shale and Fall River Sandstone at the base. The Colorado Group is further divided into the Mowry Shale, Belle Fourche Shale, Greenhorn Formation (Frontier Formation in W.T. Thom, et al. 1935; R.S. Knappen and G.F. Moulton, 1931); Carlile Shale and the Niobrara Shale. Rocks of the Colorado Group are primarily exposed south of the Yellowstone River. The lat Cretaceous Montana Group is divided into the Telegraph Creek Formation, Eagle Sandstone, Claggett Shale, Judith River Formation, Bearpaw Shale, and Lance Formation. Exposures of the Montana Group are located in the central portion of the County. Bentonite beds, or beds of swelling clay altered in place from volcanic ash, are described in the Colorado and Montana Groups. In addition to the Cretaceous bedrock, the Tertiary Fort Union Formation is exposed in the northern part of Yellowstone County (D. Lopez, 2000)

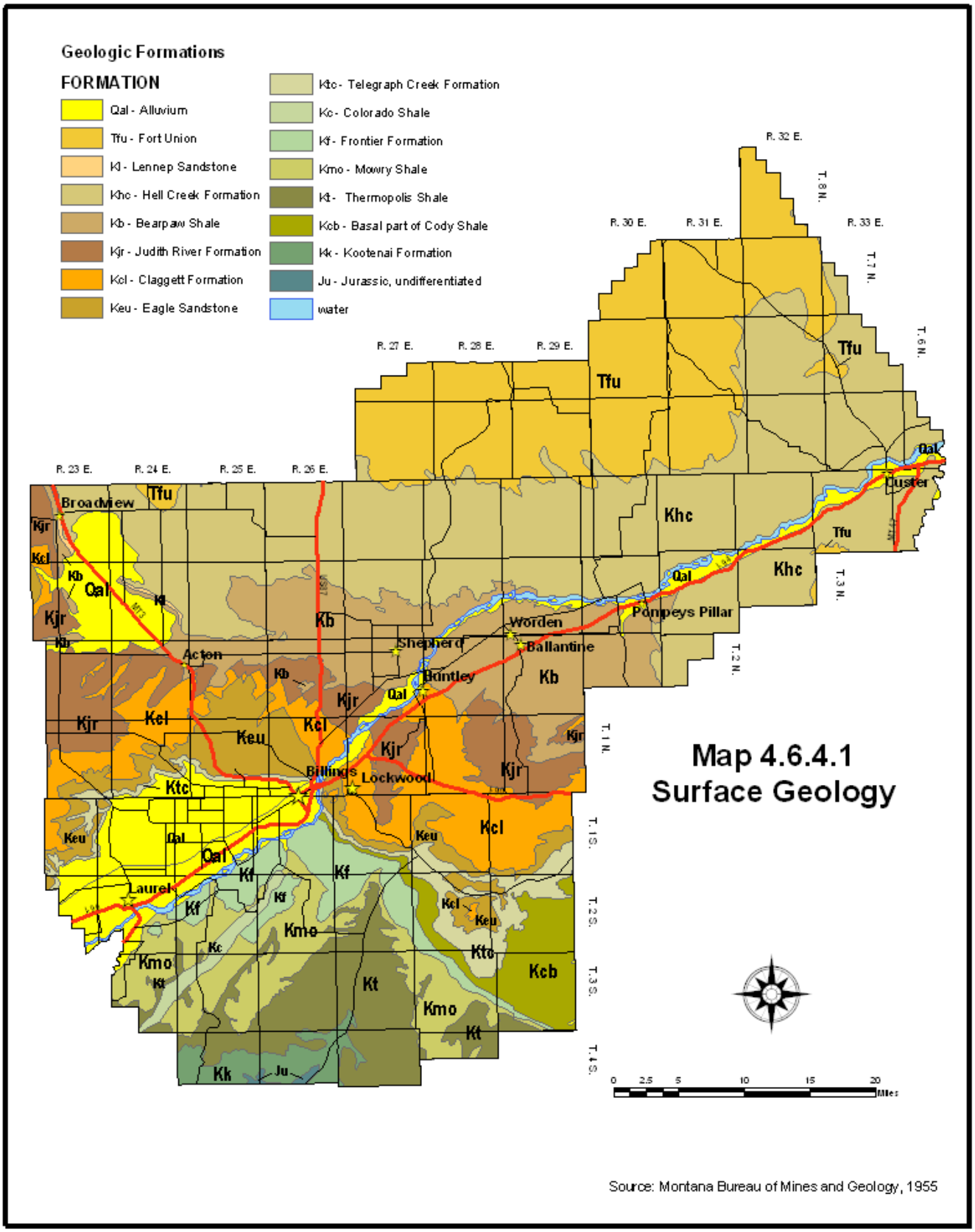
Beginning in the Late Tertiary and continuing through the Quaternary, gravel deposits accumulated on terraces, stream channels and alluvial fans. Ancient channels of the Yellowstone River deposited sand and gravel 400 to 500 feet above the present altitude of the river. The U.S. Geological Survey has mapped four alluvial terraces occurring in Yellowstone County. Most of the gravel pits in the County are located in the third alluvial terrace. The most recent alluvial deposits occur in and along the present Yellowstone River channel and in the Lake Basin region. A stratigraphic column and description of the bedrock and surface geology is provided in Table 1. The surface geology of Yellowstone County is presented in Map 4.6.4.1.

In terms of geologic structure in Yellowstone County, bedrock formations regionally dip one to seven degrees to the north and northwest from the Pryor Mountain uplift near the southern

border of the County (D. Lopez, 2000). Two of the largest fault zones in the County are the Fromberg fault zone and the Lake Basin fault zone. The Fromberg fault zone is a twenty to twenty–five mile long, one-half to three mile wide fault system, with a directional trend or strike to the northeast from the southwestern part of the County, to the Blue Creek/Bitter Creek drainage area south of the Yellowstone River (R.S. Knappen and G.F. Moulton, 1931). Fold structures including domes and anticlines, as well as steep hillsides, linear stream drainage, and hydrogeologic spring locations associated with the deformation characterize the area in and near the Fromberg fault zone. The lake Basin fault zone trends from near Acton in the west through Huntley in the central portion of the County. Sixty to seventy individual fault segments, between two to six miles in length, strike northeast and are spaced one-half to five miles apart in the County (D. Lopez, 2000). Resistant sandstone outcrops exposed by the structural movement and erosion characterize the land surface along the Lake Basin fault line.

TABLE 1
STRATIGRAPHIC COLUMN
For UNITS WITHIN YELLOWSTONE COUNTY

ERA	PERIOD		FORMATION	Range of Avg. thickness	DESCRIPTION
CENOZOIC	**QUATERNARY**		Alluvial Terrace Deposits	130' - 210'	Unconsolidated material range from fine to coarse-grained sand and gravel.
	TERTIARY		Fort Union Formation	Up to 2,500'	Sandstone and shale with mineable coal beds
MESOZOIC	CRETACEOUS	**Montana Group**	Lance Formation [Lennep Sandstone and Hell Creek Formation]	350'	Cliff-forming, thick-bedded sandstone.
			Bearpaw Shale	200 – 300'	Dark-gray shale
			Judith River Fm.	250'-350'	Interbedded fine-grained sandstone, shale and some bentonite
			Claggett Shale	100' – 400'	Shale, some bentonite and sandstone
			Eagle Sandstone	100'-350'	Cliff-forming sandstone
			Telegraph Creek Fm.	150'	Sandy shale, sandstone
		Colorado Group	Niobrara Shale [Colorado Shale]	700'	Dark shale, some calcareous sandstone and thin bentonite beds.
			Carlile Shale [Colorado Shale]	250' – 300'	Dark shale with thin sandstone beds.
			Greenhorn and Belle Fourche Shale [Frontier Formation]	400' – 475'	Dark shale with thin bed of salt and pepper sandstone [and beds of bentonite (Thom et al., 1935)]
			Mowry Shale	250'	Shale with thin sandstone beds and mineable bentonite
			Thermopolis Shale and Fall River Sandstone	600' – 650'	Shale, and interbedded shale and sandstone. Some bentonite
			Kootenai Formation [Cloverly Formation]	200' – 250'	Dark mudstones with interbedded sandstone. [Upper member of sandstone or sandy shale; middle member of variegated clays; and a basal conglomerate (Thom et al., 1935)]
	JURASSIC		Morrison Formation	0-400'	Maroon or variegated clays; some sandstones, and yellow sandy shale near base (Thom et al., 1935)


Geologic Formations
FORMATION
Qal - Alluvium
Tfu - Fort Union
Kl - Lennep Sandstone
Khc - Hell Creek Formation
Kb - Bearpaw Shale
Kjr - Judith River Formation
Kcl - Claggett Formation
Keu - Eagle Sandstone
Ktc - Telegraph Creek Formation
Kc - Colorado Shale
Kf - Frontier Formation
Kmo - Mowry Shale
Kt - Thermopolis Shale
Kcb - Basal part of Cody Shale
Kk - Kootenai Formation
Ju - Jurassic, undifferentiated
water
R. 23 E.
R. 24 E.
R. 25 E.
R. 26 E.
R. 27 E.
R. 28 E.
R. 29 E.
R. 30 E.
R. 31 E.
R. 32 E.
R. 33 E.
T. 8 N.
T. 7 N.
T. 6 N.
T. 3 N.
T. 2 N.
T. 1 N.
T. 1 S.
T. 2 S.
T. 3 S.
T. 4 S.
Broadview
Acton
Shepherd
Worden
Ballantine
Pompeys Pillar
Custer
Huntley
Billings
Lockwood
Laurel
Map 4.6.4.1
Surface Geology
0 2.5 5 10 15 20
Miles
Source: Montana Bureau of Mines and Geology, 1955

AREAS OF GEOLOGIC CONCERN

Geology has an immediate and locally relevant role in the development of the County. Discussed below are areas of concerns that can significantly affect the cost of development and public health. These factors may be considered obstacles to development, but they help define locations of suitable development sites to ensure safe and healthy communities.

Areas of Shallow Bedrock

The depth to bedrock affects development by limiting or enabling excavation of foundations, emplacement of septic drainfields, and construction of roads. While many of the barriers of shallow bedrock can be overcome, the cost of engineering acceptable structures may be prohibitive. Billings and Yellowstone County residents are familiar with the presence of thickly bedded sandstone (Eagle Sandstone) at or near the surface. Much of the County north of the Yellowstone River is underlain by shallow bedrock consisting of sandstone and shale. Throughout the County, shallow bedrock is primarily confined to the Plains and Bull Mountain physiographic regions. Soil cover is thinnest along ridgetops and steep slopes.

Areas of Unstable Geology

The greatest potential hazards associated with unstable geologic conditions are rock falls and mass failure. These potential hazards correlate with steep slopes composed of sandstone and shale bedrock. A particularly hazardous condition is created where sandstone beds overlie shale horizons on steep slopes. Natural weathering processes weaken and erode shale layers more rapidly than sandstone layers. As the shale beds weaken, gravitational forces exceed cohesional forces in the rock, resulting in slope failure.

Evidence of past landslides is an important indicator of a high probability of future hazards. Unpublished documentation of landslides in Yellowstone County identified 200 sites of slope failure. This study did not identify small events of a few cubic yards, like rock falls along the rims (Eagle Sandstone) in Billings, although they are known to occur.

Areas of Groundwater Recharge

An area of groundwater recharge is where water from precipitation or surface runoff is transmitted downward to the water table. Water will continue to migrate downward under the force of gravity, until it reaches the water table or encounters an impermeable or confining layer. When groundwater concentrates in rock or unconsolidated deposits that yield water in a usable quantity to a well or spring it is classified as an aquifer. In Yellowstone County, few rock formations yield enough water of acceptable quality for domestic use. The greatest volume of good quality water is produced from the unconsolidated alluvial deposits in the Yellowstone Valley that overlie Cretaceous bedrock.

Because the alluvium is exposed at the surface, the entire Yellowstone Valley becomes an area of potential groundwater recharge. In addition to rainfall, surface water from irrigation ditches, flood irrigation of cropland, and the Yellowstone River and its tributaries are important sources of groundwater. A recent study by the Montana Bureau of Mines and Geology provides evidence that the aquifer west of Billings is recharged to a

significant extent, by flood irrigation practices from irrigation ditches and canals. The report suggests that without irrigation water, the West Billing-East Laurel area could experience a drastic drop of the water table. Irrigation facilities in this area are the most important sources for groundwater recharge and the natural creeks and streams act as groundwater drains (J.L. Olson and J.C. Reiten, 2002).

The quality of groundwater obtained from the unconfined aquifer is largely influenced by the quality of surface water sources. Contamination of these sources from agricultural operations, septic drainfields, urban runoff, and underground storage tanks pose a serious threat to the domestic water supply in Yellowstone County. Billings, Laurel, Huntley, Worden, Ballantine, Pompey's Pillar and Custer are all communities that obtain domestic water from the alluvial aquifer either through individual or municipal wells or directly from the Yellowstone River.

Seismic Activity

According to the Seismic Zone map in the Uniform Building Code, Yellowstone County is in a Zone One (minor risk). Earthquakes originating in Yellowstone National Park, the nearest locale of frequent and intense seismic activity, have been felt in Yellowstone County.

GEOLOGIC RESOURCES

The extractive industries contribute significantly to the economic base in Yellowstone County, either directly or indirectly. There are several economic deposits of sand, gravel, oil, gas and coal located in the County, and many other deposits of oil, gas, coal and strategic minerals occur within the region.

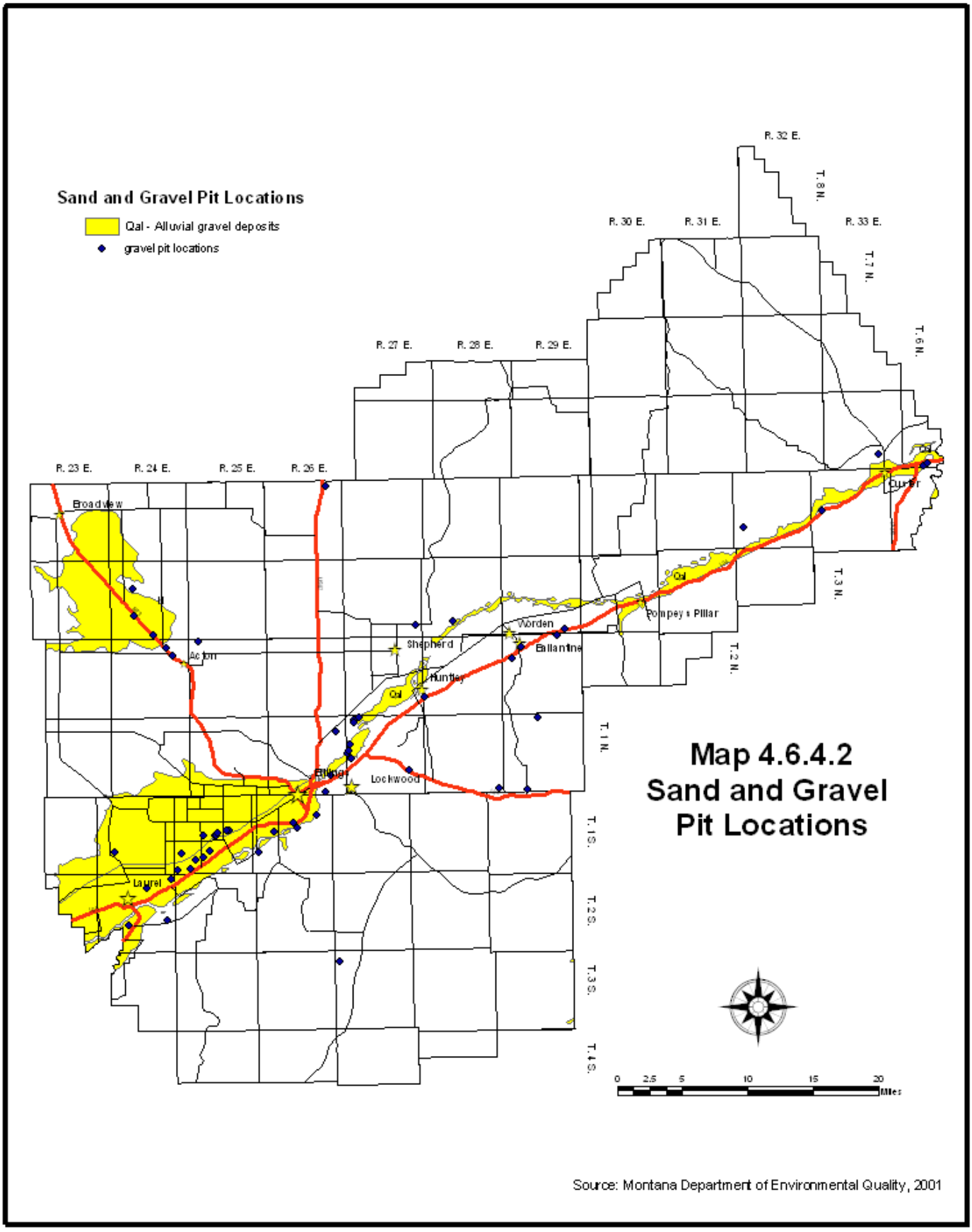
Sand and gravel

The alluvial deposits located in the Yellowstone River valley and the Lake Basin regions contain mineable deposits of sand and gravel. The primary source of economic gravel is the Qat3 deposits that parallel the Yellowstone River on the north side (D. Lopez, 2000). Sand and gravel are essential materials for construction and sand and gravel operations are significant economic contributors to the County.

As of 2008, there are approximately 52 operating gravel pits located in Yellowstone County. These pits are mostly located within the northeast trending river valley, often close to existing and expanding residential development. Transportation costs and availability of material dictate the location of sand and gravel operations. The owners and number of sand and gravel operations in Yellowstone County are listed in Table 2. The locations of sand and gravel operations are shown on Map 4.6.4.2.

Open pit mining often entails removal of material to a depth just above the water table and may affect the flow of local groundwater. Increased noise, dust and traffic are also unavoidable consequences of mining that may adversely affect adjoining properties. State law limits local government's ability to regulate sand and gravel operations, however, local governments may take measures to minimize impacts on residential property through Special Review provisions, when a proposed operation is located in a zoning jurisdiction.

TABLE 2 SAND AND GRAVEL OPERATORS IN YELLOWSTONE COUNTY	
Company	**Number of Operations**
Empire Sand & Gravel Company	3
Yellowstone County Road Department	10
Knife River	13
Jim's Excavating Service	2
Century Companies, Inc.	1
Concrete Materials of Montana	1
Emerald Hills Development	1
Exxon Billings Refinery	1
Huntley Projects Irrigation District	1
Krug Sand and Gravel	1
Myers Lee	1
Ostermiller HL Construction, Inc.	1
Quality Concrete Company	1
C and S Construction	1
David Ruff	1
DWM Builders LLC	1
Fisher Sand and Gravel Company	3
Flack N Flack Construction	1
Blain Gerhart	1
Johnson Lane Materials	2
Kenny Winkler	1
Oftedal Construction Inc	1
Riverside Contracting Inc	2
J and S Construction	1


Sand and Gravel Pit Locations
Qal - Alluvial gravel deposits
gravel pit locations
R. 32 E.
R. 30 E.
R. 31 E.
R. 33 E.
T. 8 N.
T. 7 N.
T. 6 N.
R. 27 E.
R. 28 E.
R. 29 E.
R. 23 E.
R. 24 E.
R. 25 E.
R. 26 E.
Broadview
Acton
Shepherd
Worden
Ballantine
Pompeys Pillar
Huntley
Billings
Lockwood
Laurel
Custer
Qal
T. 3 N.
T. 2 N.
T. 1 N.
T. 1 S.
T. 2 S.
T. 3 S.
T. 4 S.
Map 4.6.4.2
Sand and Gravel
Pit Locations
0 2.5 5 10 15 20
Miles
Source: Montana Department of Environmental Quality, 2001

Decorative stone

Building stone is quarried in a few locations in the County. The primary products are sandstone and river rock used for building. Gravel is also locally mined, sorted and washed for landscaping.

Oil and gas

Historically, there have been five producing oil fields located in the County. Today, only 3 fields are producing. The number of producing wells and the amount of oil and gas production has dwindled over the past twenty years. In 1990, there were 35 producing wells pumping over 66,000 barrels of oil and 749 cubic feet of gas. In 2000, only 19 wells were producing 21,000 barrels of oil. In 2007, there were 40 wells in production with variable rates of production.

The five oil fields located in the County include Weed Creek, Wolf Springs and South Wolf Springs, Crooked Creek, and the Mosser Dome. Weed Creek, Wolf Springs and South Wolf Springs, located in the northeast part of the County. Wolf Springs and South Wolf Springs were discovered in 1955 and Weed was discovered in 1966. The producing horizon in all three fields is the Amsden Formation (Pennsylvanian) at a depth of approximately 6,200 feet. These fields are primarily oil producers and are continuing to produce today. In 2000, six wells produced 20,237 barrels of oil.

The Crooked Creek field was discovered in 1985 but produced only 27,395 barrels of oil before production stopped in 1993. Crooked Creek is located in the northwest part of the County, near the Musselshell County line. The field was reopened for oil production and exploration in 2004, by Forward Energy, LLC. The field reported production of 90 barrels a month through March of 2007, and ceased production in October of 2007.

The Mosser Dome field is located south of Laurel near the Carbon County line. Mosser Dome oil field has had an inconsistent history of production beginning in 1936. The average number of barrels produced daily has ranged between 0 and 40. Wells in the Mosser Dome field produce from the early Cretaceous Greybull/Mosser sandstone in the Kootenai/Cloverly Formation, and the structural dome is truncated on the Southeast by the Fromberg fault zone (Hadley, 1985). Production in 2000 was very slight with 13 wells producing only 732 barrels of oil. In 2007, the 13 wells reported a yearly production of 10,296 barrels.

Coal and coal bed methane

The Bull Mountain field, on the Musselshell and Yellowstone County lines, is the only mineable coal field in the County. The 26 mapped coal seams are confined to the Tongue River member of the Fort Union formation. Most of these beds are thin and non-economic. Two of the beds have potential for underground and possibly surface mining methods. The area of strippable coal is estimated to be 5,640 acres. Coal reserves have been reported to be 42.6 million tons. The underground mineable reserves contain 25.5 million tons of coal. The coal seams have been mined intermittently since 1906, originally mined to fuel the steam locomotive engines. The first mine, the Klein Mine, employed 550 workers in 1927 and closed in 1956. Another mine, the PM Mine operated

from 1954 to 1992. Both of these mines are located in Musselshell County, just north of the Yellowstone County line.

In 1993, there was renewed interest to mine the coal near the old PM Mine by Meridian Minerals, a subsidiary of Burlington Northern. The mine was permitted, but the permit was transferred to Mountain, Inc. of Knoxville. Mountain, Inc. operated the Bull Mountain Coal Mine No. 1 for 2.5 years before the permit was revoked for permit violations and unpaid fees. Plans to reopen the mine emerged in August 2001 when it was reported that BMP of New York bought the mine. BMP has indicated that they plan to employ 256 workers to mine the 400 tons of reserves. The mine would ship coal via rail spur to the main line at Broadview and south to Billings. In 2008, the coal mining operation and associated railroad line are under construction.

Coal bed methane is considered an unconventional hydrocarbon fuel source but is currently experiencing a production boom in the Powder River Basin coal beds. The Montana Board of Oil and Gas Conservation has permitted 263 wells and authorized up to 200 exploration wells. None of the permitted or exploratory wells are located in Yellowstone County.

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4.6.5 HYDROLOGY

INTRODUCTION

As in most areas of the west, surface and groundwater has played a critical role in the history and development of Yellowstone County. The contemporary role water plays is equally important for the growth and sustainability of the community. Economic sustainability and community development depend on sufficient quantities of good quality water. Municipalities, agriculture and industry rely on surface water sources for continued productivity while individuals depend on groundwater sources for domestic use. The County's premier water source, the feature from which the County derives its name, is the Yellowstone River. Because of its importance, the Yellowstone River is described in detail in this section. The few perennial tributaries are noted, as are the intermittent drainages if they bear water rights. Water right ownership is important because it controls the allocation and use of a precious commodity. The possession of water rights helps ensure legal availability of water. The development of a complex network of irrigation ditches ensures that water is physically available to many parts of the County. Besides irrigation, water rights and water reservations are also held for municipal, domestic, livestock, wildlife, and habitat preservation purposes. The availability of groundwater for much of the County is influenced by natural stream flows and irrigation facilities. Both are responsible for recharging shallow aquifers in the Yellowstone Valley. Other groundwater sources lie at greater depths in sediments deposited between 165 and 75 million years ago. As the County continues to grow, the pressure on all water sources will increase along with the need to protect them.

SURFACE WATER

The entire Yellowstone County is situated in the Yellowstone River watershed. All drainages flow into the Yellowstone River, which in turn, flows into the Missouri River 340 miles to the east. The Yellowstone River originates in Yellowstone National Park, and upon reaching Billings it has drained approximately 11,795 square miles. Based on 75 years of flow data from the USGS gaging station at Billings, the mean daily flow of the Yellowstone River is 4,147 cubic feet per second (cfs). The lowest daily flow recorded was 1,550 cfs recorded in 1934 and the highest peak daily flow was 12,240 cfs recorded in 1997. Streamflow volumes peak during the month of June, largely because of snowmelt at higher elevations combined with increased rainfall. The lowest streamflow volumes are recorded during December and January. Between Laurel and Billings, the Yellowstone River is classified B-2 by the state which indicates the waters are suitably for drinking, culinary and food processing purposes only after conventional treatment. This stretch of the river is also suitable for bathing, swimming and recreation, as well as growth and propagation of salmonid fishes. Below Billings, the river is classified B-3. Salmonid populations are not supported in this stretch of the river mainly because of an increase in temperature and sediment load. The water quality of the Yellowstone River in the vicinity of Billings is generally good. Suspended sediments increase downstream from the confluence of Clark's Fork of the Yellowstone because of natural sediments and irrigation practices. The amount of suspended sediments also fluctuates with flow conditions and tends to increase substantially during spring runoff. Total dissolved-solids are also moderately low. Dissolved-solids concentrations often relate to type and amount of discharge into the river but

also are a response to soil and rock type, precipitation and vegetation coverage. Concentrations of dissolved-solids generally are inversely related to streamflow, consequently, dissolved-solids concentrations also fluctuate with seasonal flow.

At the USGS streamflow gaging station in Billings, the suspended sediment concentration measured between 9 and 500 milligrams per liter (mg/l). Total dissolved-solids concentration measured between 100 to 500 mg/l. In contrast the suspended sediment load measured at the mouth of Yellowstone Lake in Yellowstone National Park is between 5 and 145 mg/l and the total dissolved-solids is less than 100 mg/l.

The Yellowstone River is free flowing from its headwaters in Yellowstone Park to the confluence with the Missouri River. Natural streamflows prevail resulting in spring floods and summer droughts. Major floods of record on the Yellowstone River occurred in 1918, 1943, 1944, 1967, 1974, 1975 and 1997. The record flood occurred in 1997. The 1918 flood was considered a 100-year event with a discharge of 78,100 cubic feet per second. The 1997 flood exceeded that event with a peak discharge of 82,000 cubic feet per second.

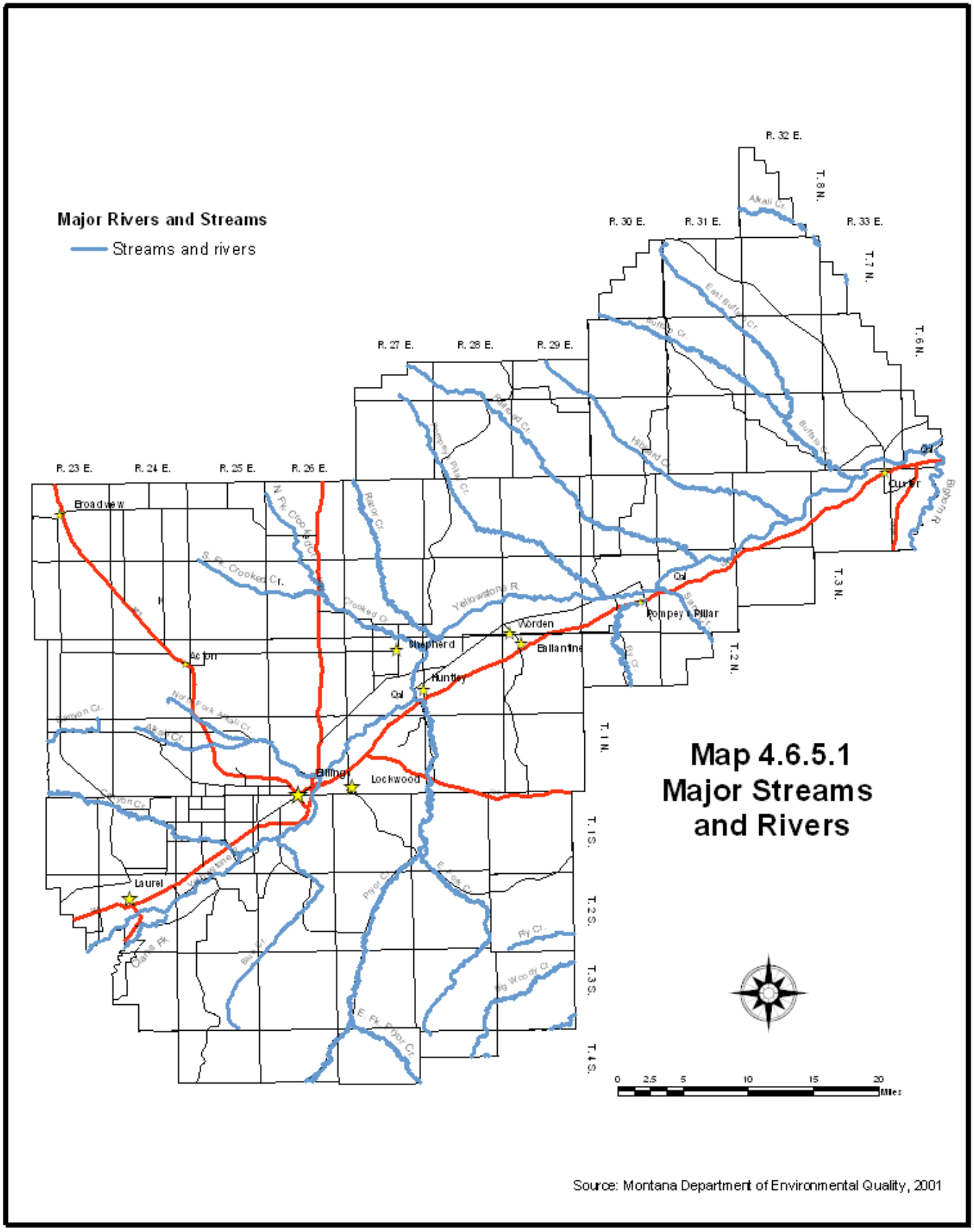
The only tributaries of the Yellowstone River to carry water year round are the Clarks Fork of the Yellowstone, Bighorn River and Pryor Creek. The Clarks Fork defines a small segment of the west County boundary while the Bighorn forms a small segment of the east County boundary. Other County drainages that flow intermittently but with some regularity include Alkali Creek, Blue Creek, and Canyon Creek. These streams and the remaining streams in the County that can be classified as intermittent or ephemeral are listed in Table 1. Stream lengths are provided for all 44 streams, and drainage areas are provided for those streams with known flooding potential.

TABLE 1
List of Streams and Rivers in Yellowstone County

Stream Name	Tributary Of	Total Length (miles)
Alkali Creek Alkali Creek downstream of Highway 3	Yellowstone R.	88.2
Allen Creek	Yellowstone R.	7.7
Antelope Creek	Buffalo Creek	25.6
Arrow Creek	Yellowstone R.	20.9
Big Woody Creek	Woody Creek	36.2
Bighorn River	Yellowstone R.	98.5
Bitter Creek	Yellowstone R.	6.9
Blue Creek	Yellowstone R.	23.5
Buffalo Creek	Yellowstone R.	36
Canyon Creek Canyon Creek, 1,275' above confluence with Yellowstone River.	Yellowstone R.	27.8
Cottonwood Creek	Clarks Fork	43.1
Cove Creek Cove Creek at the Molt Road	Canyon Creek	19.2
Cow Gulch Creek	Railroad Creek	32.9
Crooked Creek	Yellowstone R.	17.6
Crooked Creek, N. Fk.	Crooked Creek	12.1

Crooked Creek, S. Fk.	Crooked Creek	10.8
Deadman Creek	Buffalo Creek	9.8
Duck Creek	Yellowstone R.	12.5
Dry Creek	Yellowstone R.	-
E. Buffalo Creek	Buffalo Creek	26
East Fk Pryor Creek	Pryor Creek	31
Fivemile Creek	Yellowstone R.	19.6
Fly Creek	Yellowstone R.	65.5
Hay Creek	Pryor Creek	12.2
Hibbard Creek	Yellowstone R.	31.5
Horse Creek	Alkali Creek	23
Indian Creek	Pryor Creek	12.2
Indian Creek	Alkali Creek	10.1
Little Woody Creek	Woody Creek	23.0
Lostboy Creek	Fly Creek	17.7
Mill Creek	Yellowstone R.	25.5
Monument Creek	Pryor Creek	6.8
Pompey's Pillar Creek	Yellowstone R.	35.4
Pryor Creek	Yellowstone R.	103.0
Railroad Creek	Yellowstone R.	37.7
Razor Creek	Yellowstone R.	40.4
Razor Creek, W. Fk.	Razor Creek	17.3
Sand Creek	Yellowstone R.	16.7
Spring Creek	Fly Creek	11.8
Spring Creek	Clarks Fork	11.6
Telegraph Creek	Fly Creek	10.3
Twelvemile Creek	Yellowstone R.	17.9
Weed Creek	Alkali Creek	17.2
Yellowstone River	Missouri River	632.8
Clarks Fork of the Yellowstone	Yellowstone R.	77.5

Source: Montana Rivers Information System, Montana Fish, Wildlife & Parks.


Major Rivers and Streams
Streams and rivers
R. 23 E.
R. 24 E.
R. 25 E.
R. 26 E.
R. 27 E.
R. 28 E.
R. 29 E.
R. 30 E.
R. 31 E.
R. 32 E.
R. 33 E.
T. 8 N.
T. 7 N.
T. 6 N.
T. 3 N.
T. 2 N.
T. 1 N.
T. 1 S.
T. 2 S.
T. 3 S.
T. 4 S.
Broadview
Acton
Shepherd
Worden
Ballantine
Huntley
Billings
Lockwood
Laurel
Custer
Pompeys Pillar
Yellowstone R.
Crooked Cr.
S. Fk. Crooked Cr.
N. Fk. Crooked Cr.
Rapelje Cr.
Alkali Cr.
East Butte Cr.
Buffalo Cr.
Hillyard Cr.
Bighorn R.
Ry Cr.
Big Woody Cr.
E. Fk. Pryor Cr.
Pryor Cr.
Clarks Fk.
Canyon Cr.
Map 4.6.5.1
Major Streams
and Rivers
0 2.5 5 10 15 20
Miles
Source: Montana Department of Environmental Quality, 2001

FLOODING

Approximately 14,573,600 acres of land lie within the 100-year flood plain in Yellowstone County. This figure has decreased over the past 50 years as flood protection measures, such as levees, streambank stabilization, and diversion structures, increased. The effects of these actions, especially bank stabilization, have been to channel floodwaters away from the adjacent floodplain and route them downstream. As this happens, the volume of water and flow velocities increase resulting in greater damage to downstream banks and channels that are not protected. Only a few tributaries of the Yellowstone River experience significant flooding, primarily as a result of intense rain events and rapid snowmelt. In some areas, notably the mouths of Blue Creek and Duck Creek, flooding has occurred as a result of ice jams. Major floods causing significant property damage were recorded in 1923 and 1937 on Alkali Creek, Canyon Creek and Cove Creek. On June 11 and 12, 1937, Billings suffered a devastating and costly flood resulting from an intense rain and hailstorm over drainages west and northwest of Billings. Substantial overland flows, with volumes in the range of 5,000 to 13,000 cubic feet per second, developed along Canyon Creek, Cove Creek, and Alkali Creek. Railway bridges became partially clogged with flood debris west of town and floodwaters swept eastward along the railroad tracks into the City. This disaster resulted in loss of life and damage to over 2,600 dwellings and 600 businesses. Historic records show that eleven significant flooding events have occurred in these drainages.

In the 1937 Billings flood and flood events in Laurel, irrigation ditches have played an important role. In these floods, runoff resulting from heavy rains and/or rapid snowmelt, was intercepted by irrigation ditches overwhelming the ditch's' capacity while destroying the upslope and downslope banks. This situation becomes particularly severe where natural drainages have been rerouted to drain into irrigation facilities.

Both the City of Billings and Yellowstone County participate in the National Flood Insurance Program. The Department of Disaster and Emergency Services administers the County floodplain regulations and the City Building Division administers the regulations for the City. The drainages that have a designated 100-year floodplain, as mapped by the Federal Emergency Management Agency, include the Yellowstone River, Clarks Fork of the Yellowstone River, Alkali Creek, Blue Creek, Canyon Creek, Dry Creek, Duck Creek and Unnamed Creek. Proposed developments within the 100-year floodplain of these drainages require a floodplain development permit. Consultants for the County recently completed a floodplain management study for Cove Creek, Little Cove Creek and Hogan's Slough west of Billings. These drainages have had eleven recorded flood events, two of which were catastrophic. The study evaluated the existing flood storage capacity and projected retention area requirements to contain a 100-year flood event. This study, and floodplain management studies for Unnamed Creek, Dry Creek and Five Mile Creek, are currently being reviewed by the Montana Department of Natural Resources and Conservation and the Federal Land Management Agency.

The *Draft 2007 West Billings Flood Hazard Assessment* was completed by consultants for the City and County in 2007. This assessment includes a map of the 100-year floodplain and the flood fringe for Cove Creek, Little Cove Creek and Hogan's Slough west of Billings. The natural drainage for Cove Creek has been obliterated by agricultural development south of Rimrock

Road. Consequently, the flood waters tend to spread laterally along the topographic depressions as they head southward. The information contained in this study provides mitigation measures necessary for proposed developments affected by these waterways in this portion of the county.

WATER RIGHTS AND WATER RESERVATIONS

The amount of water an individual can remove from Montana waterways is based on their documented water rights. Montana water law is structured after the doctrine of prior appropriations. This doctrine is typically paraphrased as "first in time, first in right". The state adjudicates water rights according to seniority, intent of use, benefits of use, point of diversion, access priority and quantity. Individuals, businesses and agencies hold approximately 15,300 water rights to waterways in Yellowstone County. Water rights apply to specific amounts of water, based on flow rates that can be withdrawn from a waterway. However, the state also recognizes the need to retain instream flow for existing and future consumptive uses and water quality. To ensure adequate stream flow, government entities were allowed to reserve specific water quantities. The Montana Department of Fish, Wildlife and Parks hold water reservations for in-stream flow, the City of Billings for municipal use, and conservation districts for irrigation use. In Yellowstone County above Billings, municipal reservations have first priority, instream flow reservations have second priority, irrigation reservations have third priority and multipurpose storage reservations were given last priority. Below Billings, the highest priority is reserved for irrigation.

IRRIGATION FACILITIES

Irrigation in the Yellowstone Valley and upper terraces played a critical role in the settlement history of Yellowstone County. The vast network of irrigation canals and ditches throughout the valley is testament to the perseverance of government and early settlers alike to make the County an agricultural center. Yellowstone County possesses several extraordinary irrigation facilities constructed to deliver water to areas far removed from the original intake. For instance, the intake for the Billings Bench Water Association Canal is located south of Laurel and continues more than 20 miles through the City of Billings, under the Rimrocks and Alkali Creek, through Billings Heights before discharging into Fivemile Creek. A complex system of ditches, canals and drains was constructed between 1905 and 1915 by the U. S. Reclamation Service, later renamed the Bureau of Reclamation between Huntley and Pompey's Pillar. The network was developed to irrigate land opened for homesteading. The 35,000 acres in the Huntley Project were divided into 40-acre homestead tracts in 1907 and land sold for $4 an acre. Originally the Huntley Project claimed 750 second feet from the Yellowstone River and 100 second feet from Pryor Creek.

In Billings, a network of seven ditches traverse the City. These ditches carry irrigation water for agriculture, private lawns and gardens, and City parks. Many of the facilities are open waterways but several miles of culverts and pipes also carry water. The longest irrigation facility in the City is the Billings Bench Water Association Canal (BBWA) which is nearly 7.5 miles long. Hi-Line Ditch is 4.5 miles long and flows between Poly Drive and Rimrock Road until it turns toward Wisconsin Avenue at Selvig Lane and through Pioneer Park. Grey Eagle Ditch runs along the Southside for just over a mile. Big Ditch flows across northwest Billings for a

mile before discharging into a storm sewer at Nina Clare Road. In West Billings, near Rimrock Road, Cove Ditch connects into the storm sewer system west of Shiloh Road. Suburban Ditch, in the southeast part of Billings, stretches for 2,600 feet. A second network composed of two and a half miles of open ditches and three mile of covered pipe, carry excess water away. The main drains include the Arnold Drain located in between Shiloh and 24th Street north of Broadwater, Kratz Drain, City-County Drain and Yegen Drain, all located in the southside. Two miles of Hogan Slough, which is mostly located west of the City flow through the City.
There are 22 irrigation facilities in the County with organized ditch companies administering the water rights. These companies are listed in the Table 2.

TABLE 2 **Ditch and Canal Organizations**
Big Ditch Company (incl. Snow Ditch)
Big Four Ditch Company
Billings Bench Water Association
Burnstead Water Users Association
Canyon Creek Ditch Company
City High Ditch Water Users Association
Clarks Fork Ditch Company
Coulson Water Users Association
Cove Irrigation Company
Danford Ditch District
Davis Ditch
Grey Eagle Ditch
Huntley Project Irrigation District
Italian Ditch Company
Lockwood Irrigation District
Old Mill Ditch Company
Rock Creek Water Users Association
Suburban Ditch Company
Sunnyside Water Users Association
Victory Irrigation District
Waco-Custer Ditch Company
Whitehorse Canal Company

LAKES, RESERVOIRS AND WETLANDS

There are very few bodies of standing water in Yellowstone County. The largest of these bodies is Rattlesnake Reservoir located north of Billings between Montana Highways 87 and 312. Rattlesnake Reservoir is a manmade lake created for irrigation purposes. Lake Elmo, located in Billings Heights, is also a manmade lake, fed by the BBWA Canal. Lake Elmo is a State Park and allows daytime use including picnicking, swimming, fishing and boating. The only natural standing bodies of water occur in the Lake Basin region of the County. These lakes are created by shallow water tables exposed in confined depressions. The water levels in these depressions vary considerably with the level of the water table. When dry, the lakebeds are flat, grass covered areas. As moisture increases, wetland vegetation growth is present. Broadview Ponds, Twin Lakes and Comanche Lake are examples of these ephemeral lakes.

Yellowstone County has no wetlands identified by the U.S. Environmental Protection Agency (EPA), few natural wetlands, but numerous manmade areas that possess wetland values. The Montana Natural Heritage Program mapped two significant natural wetlands for the Montana Department of Environmental Quality. They are both located in Billings along the Yellowstone River in Riverfront Park and Two Moon Park. These wetlands are similar in that they occur within the riparian zone and consist of mature cottonwood stands with a mid-story of exotic Russian olive and an understory of grasses, and shrubs. The condition of both of these wetlands is poor because of weed infestations. While both areas contain stands of mature cottonwoods, the mature are being replaced by Russian olive and not actively regenerating. This study also identifies a need for weed management plans for both parks.

Natural wetlands are also located in the large shallow lake basins in the northwest corner of the County. Isolated depressions fill with water during years of above average precipitation and dry up during drier periods. When dry, they leave expansive, unvegetated, alkaline mud flats. Wet conditions produce emergent vegetation in some ponds, while others are too alkaline to support wetland vegetation.

Abandoned and reclaimed gravel pits provide favorable conditions for wetland development. Most of the gravel pits are located within the upper alluvial terraces of the Yellowstone Valley. The highest concentration of these pits is located on the west end of Billings where over 300 acres of naturalized wetlands have been identified. The reclamation plans for many active gravel pits in this area include post-mining wetland construction.

The gravel pit ponds are mainly fed by groundwater originating from leaking irrigation ditches and flood irrigation. The pit water levels fluctuate seasonally in response to irrigation practices. Over time there has been enough water available to support the growth of wetland vegetation. The wetlands provide habitat for deer, small mammals, pheasants, nesting waterfowl and a variety of other birds including Sandhill cranes and bald eagles.

GROUNDWATER

The quantity and, to some degree, the quality of groundwater in Yellowstone County are determined by the physical and geochemical properties of the subsurface rocks comprising the

aquifer. Accessible quantities of groundwater within 3,000 feet of the surface are found in Quaternary unconsolidated sediments and Cretaceous sandstone and shale formations. Deeper aquifers are present in the Pennsylvanian Tensleep sandstone and Mississippian Madison limestone but because of their depth are not used for domestic or agricultural purposes.
Most of the groundwater for domestic and agricultural uses is drawn from the Quaternary alluvial gravels in the Yellowstone Valley and major tributaries. The majority of wells in the valley reach depths less than 124 feet. Depth to groundwater increases and yields decrease towards the edges of the valley. Seasonal fluctuations have been measured as high as 8 feet annually. Yields from the alluvial aquifer generally are greater than 10 gallons per minute which is sufficient for domestic and agricultural purposes. The quality of groundwater from the alluvial aquifer is moderately high but elevated levels of salt are reported. The salts are leached from overlying clays by irrigation water. Along with high sodium and potassium levels, elevated nitrate levels are also recorded during periods of high runoff.
Cretaceous sandstone units, underlying most of the County, produce suitable quantities of groundwater for livestock and domestic use. The most favorable groundwater-yielding units include the Fort Union Formation, Lance Sandstone, and Eagle Sandstone.
Shale units of Cretaceous age also yield some poor quality groundwater but are generally unreliable sources. Shale contains minerals such as sulfur, salts and calcium that contribute to hard, unpleasant tasting and smelling water.

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4.7 TRANSPORTATION

INTRODUCTION

The transportation system hierarchy in Yellowstone County begins with the Federal Highway System, which includes Interstates 90 and 94. U.S. Routes present in the County include U.S. Highway 87, 212 and 310. Numerous State highways and secondaries traverse the County in addition to County roads and City streets. Maintaining the condition and efficiency of all these roadways is the responsibility of the Montana Department of Transportation, the County Public Works Department and the City Public Works Department. Much of the planning for these routes is accomplished through the Billings Metropolitan Planning Organization (MPO) under the jurisdiction of the Yellowstone County Board of Planning.

This chapter addresses existing conditions of roadways and motorized and non-motorized transportation planning within the Billings Urban Area and throughout the County. The greatest transportation planning effort is focused on the Billings Urban Area where most of the traffic is concentrated. Much of the information in this chapter was obtained from the 2000 and 2005 Transportation Plans which cover the urban area only. These plans are the most recent in a series of Transportation Plans dating back to 1961. Information was updated where possible.

BILLINGS URBAN AREA

Regional Network

For Transportation purposes, the Billings Urban Area includes the area within the City of Billings as well as a planning area extending approximately 4.5 miles outside the City limits and into Yellowstone County. The area encompasses approximately 146 square miles. Billings is the largest city in the state and the largest transportation hub in the central and eastern portions of the state. Key roadway linkages between Billings and other urban areas in Montana include I-90, I-94, and MT 3/US 87. Located at a key crossroads of regional transportation facilities, the City's physical location in the Yellowstone River valley also presents some physical constraints to surface transportation.

There are few roadways that cross the Yellowstone River or climb up the rimrocks to provide north-south connections. North 27th Street and Zimmerman Trail are two of only three direct connections between I-90 and MT 3. Zimmerman Trail traverses residential areas and presents significant topographic constraints. The 27th Street corridor routes traffic through the heart of downtown Billings. A third connection for north-south travel between I-90 and MT 3 is provided via US 87 (Main Street and Airport Road).

Local Road Network

All the roadways in the Billings Urban Area are classified by type or Functional Classification. Four levels of roadways are classified; Principal Arterial, Minor Arterial, Collector and local. The Functional Classification takes into account the type and distance of travel served by the roadway as well as the land access function.

Principal Arterial streets provide a high level of mobility favoring mobility functions over land access functions. Higher speeds, long distance continuity, and higher levels of service combine to efficiently serve longer distance trips. Access management is critical to preserve through-put capacity and roadway safety. Arterial streets provide connection to both higher class roadways (freeways) and lower class Collectors. There are approximately 32 existing roadways classified as Principal Arterials in the Billings Urban Area and six proposed. The proposed Principal Arterials are not yet constructed, but due to increased volume on connecting roadways, are recommended. The proposed Principal Arterials include the North Bypass, the Inner Belt Loop, the extension of 32nd Street West to Zimmerman Trail, Gabel Road and a north-south connection between Hardin Road (US 87) and Becraft Lane in Lockwood.

Minor Arterial streets are similar to Principal Arterial streets but are distinguished by lower capacity and operating speeds. Minor Arterials typically have shorter continuity than Principal Arterial streets and may serve land access to a greater degree. Forty-four existing streets or segments of existing streets are classed as Minor Arterial. Numerous Minor Arterials are proposed, especially on the Billings West End where future mid-section roads will be classed as Minor Arterials.

Collector streets collect traffic from local streets and carry it to Arterial streets. They provide the link between the local land access system and the Arterial street network. Collectors should provide access to, but not through residential neighborhoods. Collectors are generally shorter in distance and have slower speeds than Arterial streets. Approximately twenty existing streets are classified as Collectors in the Billings Urban area. The recommended Collectors are located on the west edge of Billings Heights, connecting Annadale Road with Alkali Creek and in the South Hills, connecting Blue Creek Road with Hillcrest Road.

The remaining City streets and County roads within the Billings Urban Area are considered local streets. Local streets provide the primary access to the land and individual properties. Local streets are constructed as land is subdivided and developed. In most cases, these roadways are open to the public. In some subdivisions, the street has been platted as a private road which restricts access to the general public.

Travel Demand Trends and Needs Assessment

The Billings Urban Area 2000 Transportation Plan and the 2005 Transportation Plan update analyzed the current and future travel demand using the QRS-II Travel Demand Model. This model takes into account trip generation, trip distribution, mode split and trip assignment. The modeling identified unfavorable travel conditions resulting from the projected near-term growth (1996-2000), mid-term growth (1996 – 2010) and long-term growth (1996 – 2020). For purposes of analysis, the model divided Billings and the outlying areas into general neighborhoods: Central Billings, West Central, South Central, Outlying North, Heights West, Heights East, Billings Northwest, West End, Shiloh West, Shiloh Northwest, Lockwood, External West, External East, and External Northwest.

In the near-term growth scenario, significant increases in daily trips can be expected in the Outlying North neighborhood, Heights West, Billings Northwest and West End

neighborhoods. Increased trip generation is anticipated in the mid-term growth horizon for the Heights West, Billings Northwest and West End neighborhoods. The Outlying North, Shiloh West and Shiloh Northwest neighborhoods will experience the greatest increase in trip-making in proportion to the existing trip generation levels. Long-term growth will result in the greatest proportional increase in trips in the Outlying North, Shiloh Northwest, and Shiloh West neighborhoods. In terms of raw trip-making, Heights West, Billings Northwest, and the West End will see the greatest increases.

Capacity deficiencies of the Billings Urban Area roadway system for the long-term will develop as a result of too few lanes on heavily traveled roadways or too many approaches and intersections on roads with high traffic volumes. Roadways that are expected to remain or become compromised include Main Street, Montana Avenue, Grand Avenue, North 27th Street, 24th Street West, and Shiloh Road. Increased capacity on east-west Arterial streets including King Avenue, Central Avenue, Grand Avenue and Rimrock Road will also be needed to carry traffic to the West end and Shiloh Road corridor.

The model evaluated several alternatives to address the projected system deficiencies in addition to issues identified at the regional, community and neighborhood levels. The key public issues addressed in the evaluation of alternatives were:

1. Improved north-south arterial continuity in the west area
2. Improved capacity into and out of the Heights to downtown area
3. Improved mobility from the Heights to the west side of town
4. Improved truck/commercial vehicle access to and through town
5. Reduction of physical barrier impacts to transportation (rims, river, railroad tracks, etc).

The preferred system incorporates the best elements of all alternatives as well as addressing the key public issues. The preferred model consists of five elements:

1. 32nd Street West improvements to extend/improve 32nd Street West from Broadwater Avenue to Rimrock Road as a Principal arterial.
2. Aronson Avenue connection to Alkali Creek Road.
3. Bench Blvd. extension/improvement to extend Bench Blvd. south to intersect with Main Street at 4th and 6th Avenues.
4. Extension/re-alignment of South Billings Blvd. to connect to Moore Lane, including the Monad Road extension to 8th Street West.
5. Widening of Old Hardin Road to 3 lanes as a “super collector” facility.

These facility improvements, along with other transportation project recommendations, are listed in the 2005 Billings Urban Area Transportation Plan. Components of several of these recommendations are being implemented. Transportation projects that are currently programmed in the 2007 – 2011 Transportation Improvements Plan (TIP) are listed below.

1. Airport Road reconstruction
2. Shiloh Road environmental studies

3. Midland Road/S. Billings Boulevard traffic signal
4. Grand Avenue reconstruction
5. 32nd Street West construction

High Accident Locations

Accident records for city streets and state highways are maintained by the Montana Department of Transportation. This data was used in the development of the 2005 Transportation Plan to identify locations of high accident rates. High accident locations coincide with locations with the most traffic and the most congestion. The Transportation Plan assessed 20 locations and ranked them according to accident occurrance. Of the 20 locations assessed, the top five are listed as those with at least five accidents:

1. 24th Street West and Central Avenue – 72
2. 17th Street West and Grand Avenue - 66
3. Private and Private - 62
4. 20th Street West and King Avenue West - 52
5. 19th Street West and Grand Avenue – 47

According to the Plan, recommended improvements targeted to reduce traffic volume or increase system capacity should result in accident rate reductions. The Plan recommends routine monitoring to identify indicators of correctable problems or conditions.

Airport Facilities

Billings Logan International Airport is a growing regional air traffic hub with a market area encompassing central and eastern Montana and northern Wyoming. The airport is served by seven passenger airlines: Northwest, Delta, Skywest, United, Allegiant Air, Frontier, and Horizon, with 35 scheduled flights per day. Passenger enplanements have risen from 354,722 enplanements in 2001 to approximately 450,000 in 2008. In addition to passenger service, the airport is served by approximately 12 cargo and mail carriers, including UPS and FedEx, landing over 50 million pounds of cargo annually. In 2001, there were 66,000 general aviation operations.

The facility was most recently upgraded in 2007 and has grown from a small 192 square foot facility with a single dirt runway, to a 300,000 square foot facility with three runways and associated taxiways. The first 1,820-foot unpaved runway was constructed in 1929 and has since been replaced with a full-depth asphalt, 10,500-foot runway that can accommodate any aircraft flying today. The entire complex now encompasses 2,300 acres of city property. A new FAA control tower was completed in 2007 for the Airport and several new hangars and other ground facilities have been completed in the last five years.

The City Airport Department is a self supporting enterprise fund. The costs of operations are recaptured through use and tenant rates and charges. The Department has not received general fund support since 1975. The Department and the businesses located at the airport provide approximately 700 jobs and generate an estimated $190 million local financial impact

annually. Recent changes in security regulations require increased security staff. The initial security force of 42 employees is federally employed.

Freight Movement

The Billings Urban Area relies on two major rail companies and numerous trucking firms to move freight in, out, and through the region. The geographic location and the existing infrastructure generally restrict freight movement from east to west. Rail lines in particular are oriented toward transcontinental east-west flows, while freeway routes provide some, though less convenient, north-south flow.

The two railroad operators in Billings are Burlington Northern Santa Fe and Montana Rail Link. Both move large volumes of coal and freight through the area and serve the downtown Billings intermodal facility. An estimated53 million tons of coal and freight was moved by rail through Billings in 2002 Freight originating in the region includes coal and coal products, petroleum, farm products, lumber and wood products, and stone, clay, glass and concrete products. Ninety percent of these commodities were shipped out of state. Existing rail facilities for Montana Rail Link and Burlington Northern Santa Fe are adequate and have sufficient capacity to accommodate current and anticipated freight movement demand.

The main railroad tracks bisect downtown Billings thus creating disruption of traffic flow between the downtown and southside neighborhoods. The need for one or more grade separations between downtown streets and the railroad tracks has been a serious concern for Southside residents for more than four decades. Excessive delays, long queue lengths and public safety are the primary issues. Funding is being sought by the "Over, Under and Around the Railroad Tracks" committee to develop alternatives for grade separated crossings. The goal of this committee is to "secure funding to study the feasibility of a grade separation of the railroad tracks or a combination of over, under or around the railroad tracks to improve vehicle traffic and public safety through downtown Billings". The effort to relocate or grade separate the railroad tracks was abandoned in 2007. However, a Quiet Zone project to reduce rail traffic noise and improve crossing safety through the downtown area is underway and expected to be completed in 2009.

In Montana, more than 75 percent of commodities are moved by truck. Interstate 90 carries more than 1,000 commercial vehicles per day and is the busiest truck route in the State. Interstate 94, MT 3 and US 87 are also important truck routes in and around the Billings Urban Area. There are no designated truck routes through the urban area, but preferred routes include 27th Street South, Shiloh Road, Laurel Road and Moore Lane, Main Street, Old Hardin and Hardin Roads and King Avenue.

The lack of a north-south connection with interstate routes is a national, as well as local, concern. The "Camino Real" is a conceptual north-south trade route connecting Canada, the U.S. and Mexico via I-25, I-90, I-15, MT 3 and US 87. It is in the vicinity of Billings and Yellowstone County that the concept of a 4-lane trade route is not realized. US 87 and MT 3, both of which are two lanes provide the most direct route between I-90 at Billings and I-15 at Great Falls. Moving traffic between I-90 to MT 3 and US 87 is part of the objective of a North Bypass Feasibility Study currently funded by Federal Highway Administration

(FHWA). The project is currently in the Environmental Impact Statement phase and is not funded beyond that phase at the present time. It is considered to be a very long term project.

Alternate Travel Modes

Three alternate travel modes are available in the Billings Urban Area; Pedestrian, Bicycle and Transit. The Pedestrian mode is supported by a network of sidewalks throughout the City of Billings, and to a lesser extent, into some areas of Yellowstone County. Bicycle paths also provide for pedestrian access as well as bicyclist and other non-motorized, wheeled vehicles. The Bicycle mode is also supported by an increasingly longer network of built trails and designated bicycle routes in the City and County. The City-operated Metropolitan Transit System (MET) provides service on 18 fixed routes, Monday through Friday, and nine fixed routes on Saturday.

Sidewalks

The sidewalk network in Billings is fragmented. Most sidewalks are constructed at the time of subdivision or programmed through SIDs in older neighborhoods. The City Subdivision Regulations and City Public Works standards require sidewalks to be constructed along both sides of all streets, unless waived by the City Council. In most cases, sidewalks are not required to be constructed at the time of subdivision, but may be postponed until the lot is developed. This policy results in disconnected segments of sidewalks that may or may not be completed for many years after the subdivision is platted. Sidewalks along Arterial and Collector streets are required to be 7-foot wide boulevard type. In 2006, the subdivision regulations were amended to include boulevard sidewalks in all new subdivisions.

A 1992 School Sidewalk Study prioritized sidewalk construction along school routes. The Study established priorities based on the route and scope of work needed. In 1999, the Billings City Council took action to address the existing sidewalk funding policies. The Council did not change the development/building permit policy. For new or replacement sidewalks, Community Transportation Enhancement Program (CTEP) funds will be used to construct sidewalks along arterial and collector street and priority school walking routes. Sidewalk projects are selected in accordance with the CTEP public involvement requirements. Other walking routes, not on Collector or Arterial streets, will be constructed if requested through a neighborhood petition.

The School Route Priority Study done in 2007 was initiated by the City of Billings to address improving pedestrian facilities throughout Billings, as well as further the Public Works Department's abilities to utilize its GIS as an asset management tool. With the plan in place, the Public Works Department has the capability to manage a sidewalk program as well as update the GIS and priority route listing as sidewalk construction projects are completed.

Bicycle Trail and Routes

Yellowstone County and the City of Billings adopted the BikeNet Plan in 1995. An update, now called Heritage Trails, was completed and adopted in 2004. An addendum to Chapter 8 and a revised map was adopted in 2005 to reflect changes that were made

through public meetings and work sessions. The Heritage Trail Plan is a comprehensive bicycle plan for the Billings Urban Area. This plan identifies important improvements in the pedestrian and bicycle facilities to facilitate and promote use of these two travel modes and enhance the quality of life of Billings' residents. The Heritage Trail Plan envisions a future system and recommends actions for policy, programs and physical facilities. The policy change recommendations include the following:

POLICY IMPLEMENTATION GOAL 1: Adopt local government policies, processes and standards that encourage and enhance non-motorized transportation.

Action 1: Adopt and implement the Heritage Trail Plan

Action 2: Designate City of Billings staff member(s) to be responsible for the coordination of non-motorized transportation.

Action 3: Revise and update local subdivision and site development policy to include incentive-based criteria for trail and bikeway development.

Action 4: Institutionalize funding for construction and maintenance of trails and bike-ways.

Action 5: Develop and adopt a comprehensive set of local guidelines and standards for design, construction and maintenance of trails and bikeways.

Action 6: Require that all site development projects and subdivision plats be reviewed by the City of Billings, or Yellowstone County where appropriate, for compliance with the Heritage Trail Plan.

Action 7: Require that all public infrastructure and utility projects be reviewed by the City of Billings, or Yellowstone County where appropriate, for compliance with the Heritage Trail Plan.

Action 8: Encourage cooperation between local governments and departments to plan and implement multiple-use and multiple benefit projects.

Action 9: Encourage enforcement of existing parking and traffic laws.

Action 10: Adopt revised roadway design standards to accommodate and encourage shared use of rights-of-way by bicycles, pedestrians and motorized vehicles.

Action 11: Develop public bicycle parking facilities and require the development of private bicycle parking facilities with new construction.

Action 12: Encourage development of trails in multi-use corridors, including particularly ditches, canals, utility rights-of-way and railroads.

Action 13: Monitor state and national policy, programs, and plans.

Action 14: Create a Heritage Trail Interpretive Task Force to oversee implementation of interpretive elements of the Heritage Trail Plan.

POLICY IMPLEMENTATION GOAL 2: Encourage public involvement in the planning and implementation of the Heritage Trail system.

Action 1: Work with independent trail and bicycle advocacy groups and outlying communities.

Action 2: Encourage trail advocates to serve on government boards.

Action 3: Inform the public of non-motorized transportation issues and opportunities.

Action 4: Pursue public-private partnerships in the planning and implementation of non-motorized transportation elements.

PROGRAM IMPLEMENTATION GOAL 1: Adopt a policy requiring the City of Billings and Yellowstone Count to partner with community organizations and other agencies to sponsor programs that promote and encourage the use of non-motorized transportation.

Action 1: Partner with the community on education and encouragement programs.

Action 2: Partner with the medical and health community.

Action 3: Partner with the schools.

Action 4: Partner with MET Transit.

Action 5: Partner with museums.

Action 6: Co-sponsor or coordinate bicycle events.

Action 7: Establish a consistent community-wide Heritage Trail signing and information system.

Action 8: Develop a postcard Improvement Identification Program.

Action 9: Develop corporate and service group programs.

Action 10: Work with law enforcement.

Action 11: Encourage bike shops to provide bicycle skills and repair instruction.

Action 12: Develop and maintain a program of data collection and opinion surveys on non-motorized transportation.

Action 13: Work with private businesses and public and private institutions to share parking and restroom facilities.

Action 14: Encourage entrepreneurial activities near the trails.

FACILITY IMPLEMENTATION GOAL 1: Improve non-motorized transportation facilities through planning, design and improvement projects.

Action 1: Address non-motorized transportation modes as an integral part of transportation planning.

Action 2: Involve citizens in transportation project planning.

Action 3: Adopt planning guidelines and design standards for the design, construction and maintenance of trails and bikeways.

Action 4: For all roadway classifications, adopt new roadway design standards that incorporate non-motorized transportation modes as a primary design consideration.

Action 5: Encourage the use of traffic calming and neighborhood traffic management strategies in the development of neighborhood streets.

Action 6: Adopt non-motorized facility classifications as listed in the Heritage Trail Plan.

Action 7: Implement a system of designated and signed on-street bikeways.

Action 8: Preserve potential corridors for future use.

Action 9: Complete a periodic trails and bikeways inventory and capital improvement plan similar to the plan for a citywide curb, gutter and sidewalk improvements.

Action 10: Include priority trail and bikeway projects in 5-year Capital Improvements Plan (CIP).

Action 11: Work with canal and ditch companies to construct trails along canal and ditch rights-or-way.

Action 12: Identify and improve opportunities for trail use by equestrians.

Growth of Non-Motorized Transportation

Since the adoption of the first non-motorized Billings area transportation plan, BikeNet and the subsequent Heritage Trail Plan, alternate transportation has received stronger emphasis in the community. A part-time Alternate Modes Coordinator was hired in 1999

to help implement the plan. A General Obligation Bond issue was also passed in 1999 by a 63% vote to provide $599,000 in matching dollars to draw in federal transportation dollars for trails and non-motorized facilities. A bike tour map, showing on-street and off-street routes was first published in 1995and is updated every couple of years to reflect new additions to the system and to provide a comprehensive locator for schools, colleges/universities, public centers, post offices, transportation hubs, public centers, historic and cultural sites, as well as all major parks. The map also includes a park matrix chart to identify facilities provided at each public park along with etiquette, safety tips and regulations for bicyclists on-street and users of the trail system. If needed, the Heritage Trail Plan is scheduled to be updated in 2009-2010.

In 2008, the Billings City Council and the Yellowstone County Board of Commissioners established and formed the Bicycle Pedestrian Advisory Committee to advise the City Council, Mayor, the County Commissioners, Planning Board, and all departments and boards of the City and County with regard to non-motorized transportation matters.

In the past several years, more opportunities have been created to encourage and support non-motorized travel and the use of the trail network. Since 2003, the Alternate Modes Coordinator has planned activities associated with Bike to Work Day and National Trails Day. In 2007, the National Bike to Work Week was expanded in Billings with numerous events planned throughout the week by local organizations and businesses to promote Bike, Walk, Bus Week. Businesses were encouraged to provide incentives for their employees and /or the public to promote using alternative transportation all week. One of the prominent events that gained considerable media attention was the Sneakers, Spokes and Sparkplug Challenge to show the viability of running errands in the downtown area quicker than a motorized vehicle. School District #2 and the local PTA's were also encouraged to provide incentives to their school children to bike or walk to school that week. In the fall of the year, biking or walking to school is also encouraged during National Bike to School Week.

There have been a number of opportunities for education and encouragement of active transportation in the Billings community. The Billings Go Play! Campaign was launched in March 2007 through MSUB social marketing class students. The goals of the campaign were to motivate, activate and educate the community by promoting and developing events that center on improving health through activity. The Go Play Campaign resulted in radio and television public service announcements, billboard displays, and a bike tour map with promotional information to encourage an active lifestyle. It also stimulated the creation of the Trail Trek Event in celebration of National Trails Day, so get people out and enjoying the trails.

Trails Across the Community

Since 1995, the City and County have constructed nearly 20 miles of off-street network and 5 miles of on-street bike lanes. The original Kiwanis Trail, extending from Mary Street to Yellowstone Road was completed in 1997. In 1999 an additional two miles were added extending the trail from Yellowstone Road to Coulson Park. The last 2.6 mile segment was completed in 2002 and extends from Coulson Park to Mystic Park

along the Yellowstone River. A new on-street bike route segment which would connect the river bike path with downtown was also striped along South 25th Street The final connection between the bike lanes on South 25th St. to the river trail is still incomplete due to the inability to acquire a corridor through private land holdings.. If completed, the project would provide access from the river trail to downtown. Private and public funding is now being sought to provide a pedestrian/bicycle bridge connection spanning the railroad tracks at South 25th St. to connect Montana Avenue with Minnesota Avenue. Plans are also underway to construct a bike/pedestrian underpass in the Alkali Creek corridor under Main Street which would link to the MetraPark portion of the Dutcher Trail.

Several other areas of the Billings community have also realized trail connections in the past five years including a 10 foot wide trail running through Descro Park, crossing Central with a refuge island and an additional trail section through Stewart Park to Monad. Plans are now in the works for the continuation of the trail through Lampman Strip Park, connecting to the trail along Famous Dave's Restaurant with an at-grade crossing of King Ave, W. and continuation along Pierce Flooring which will link to the east to connect to the Midland Trail by 24th St. W. Eventually this trail will also extend to the west and link with the trail section that has been built through the TransTech Center. Another segment of trail, the Big Ditch Trail has also been built in line with Colton Blvd. from 38th St. W. to 46th St. W. with links to side streets and Rimrock West Park and makes use of the pedestrian underpass at Shiloh Road.

In 2005, the first 2 miles of trail were built on the west side of Swords Park. Funding is currently being sought to construct the second phase of the Swords Park Trail which will link to an underpass at Airport Road and Alkali Creek Road during the Airport Road reconstruction project.

Complete Streets

It has become a policy of the City of Billings Public Works Department that new and rehabilitated arterial and collector streets should include multi-use paths. Street projects that have included multi-use trails are Zimmerman Trail, Alkali Creek Road and So. Billings Boulevard. Several streets have been striped with bike lanes and funding from CTEP is in place to stripe an additional 5-6 miles of bike lanes in various areas of the City that are part of the Heritage Plan where the road width will accommodate both on-street parking and a bike lane. The City of Billings currently has 5 miles of streets with bike lanes and an additional 51 miles identified in the Heritage Trail Plan. Several road projects are already in the works at various stages of development that will include multi-use trails along one side of the project, which will help make additional connections within the community. These projects include King Ave. W., Aronson Road, Rimrock Road, and Shiloh Road.

The City of Billings has also realized several trail projects that have been built as part of subdivisions development. These include trails in King's Green, Rehberg Ranch, Copper Ridge, Falcon Ridge and J&E subdivisions. The Alternate Modes Coordinator reviews all subdivision plats for their inclusion of the Heritage Trail Plan. State law requires that

all major subdivision preserve 11% of their property for parkland dedication or cash in lieu. If the Heritage Plan has identified a trail corridor within that subdivision, the developer can use that land preserved as part of their parkland dedication. The GIS system is now mapping those undeveloped corridors for future trail use.

Measuring Trail Usage

As trail projects have been constructed, it has been an important aspect to determine the amount and type of usage the trails have received. Every other year, the Planning Department conducts a physical count on the trails on a weekday and again on a weekend day with volunteers counting the total uses by walkers, runners, bikers, skaters, etc., and if users are wearing helmets when biking or skating. This information demonstrates which trails receive the highest volume and since beginning these counts in 2003, there has seen a 32% increase in the overall use on the trails. In the fall of 2007, the Alternate Modes Coordinator Office started using an infrared scanner to also track usage on the trails and this information will be compiled and linked to a trail count map for quick reference.

There are also many opportunities in the Greater Billings area to hike or mountain bike on natural surface trails. Over 40 miles of these natural trails exist along the Yellowstone Riverfront, along the rimrocks, and within the immediate bounds of the City. In close proximity to the community, are an additional 60 plus miles of natural trails on publicly owned recreational land.

Funding Options and Opportunities

Funding is a continual struggle for infrastructure projects. Most of the funding for trail projects has been realized through the Community Transportation Enhancement Program (CTEP), which provides approximately $600,000 per year to Yellowstone County. In recent years, funding has been used to support trail projects and the missing sidewalk program, which are sidewalks within the immediate vicinity of public schools. During the early years of the CTEP program, funds were utilized to refurbish the old Depot Building which is used for community events and large gatherings.

Billings and Yellowstone County have effectively used additional funds through the Transportation legislation from the Recreational Trails Program (RTP), the Land and Water Conservation Fund (LWCF), Safe Routes to School (SRTS) the Community Mitigation Air Quality Fund (CMAQ), and the Transportation, Community, and System Preservation Program (TCSP). Most of these federal programs require a local match of 13% to 50%. As noted previously, in November 1999, the City of Billings taxpayers passed a General Obligation (GO) Bond for $599,000 for local matching funds for the trail program. This was one of the first bond issues ever passed in the City. The GO Bond is almost exhausted and has helped establish numerous projects in the Billings community by providing the match for millions of dollars in federal funding.

Another large contributor for local match has been the BikeNet organization. It reorganized in 1999 and became a 501 (c) (3) organization in 2002. BikeNet's vision is for improving the quality of life by making the Billings community an inviting place for

bicycles and pedestrians. The vision includes transportation options, recreation enhancements, and improved access to resources by all populations, as well as, conservation of community resources. In 2000, BikeNet held its first fundraising effort with the Ales for Trails event which has now become one of the most enjoyed annual fundraising events in the City of Billings. BikeNet has sought sponsorship for the event from individuals and businesses and, to date has raised well over $100,000 which has been exclusively used for matching funds for the various bike/pedestrian projects.

In addition to the money raised through fundraising efforts, trail and bikeway projects have been successful in garnering matching funds through other grants from organizations and foundations, such as, Bikes Belong Coalition, the Mildred & Homer Scott Foundation, Montana Community Foundation, Fannie Mae Foundation, U.S. Bank, and St. Vincent's Healthcare. To date, we have built nearly 20 miles of hard surface multi-use trails which include bridges and underpasses, and expended approximately $5.5 million. Our non-motorized plan identifies another 74 miles of paved multi-use trails.

Multi-Use Trails Priority projects recommended in the Heritage Trail Plan include:

- Alkali Creek Trail
- BBWA Heights Trail
- BBWA Northwest Trail
- BBWA West End Trail
- Big Ditch Trail
- Blue Creek Trail
- Downtown RR Trail
- Riverfront Trail
- Senators Trail
- Zimmerman Trail

On-Street Primary Bikeways Priority projects recommended in the Heritage Trail Plan include:

- Poly Drive
- Colton Blvd.
- Lewis Avenue
- Monad Road
- 17th Street West
- Parkhill Drive
- 20th/19th Street West
- North 28th Street
- North 30th Street
- Lake Elmo Drive
- 8th Street West
- 9th Ave. North
- 1st Street West

- N.19th/N.18th St.
- South 28th Street
- South 34th Street
- 2nd Ave. South
- Mary Street
- Duck Creek Road

More information regarding funding and design of bicycle and pedestrian projects is provided in the 2004 Heritage Trail Plan and updates, as well as in the City of Billings Design Standards Trails and Bikeways Manual.

Public Transportation

MET Transit Service provides scheduled bus service within the City of Billings. MET operates a fleet of 11, 35-foot RTS buses, six 35-foot Nova Buses, two 30-foot low floor Eldorado buses, and six 35-foot Gillig buses. There are 18 fixed routes offered Monday through Friday and nine fixed routes on Saturday. The primary transfer areas are located downtown and Stewart Park.

Transportation System Management Plan (TSM)

Projects that would improve operation of the street and highway network and reduce travel delays, referred to as Transportation System Management strategies, were identified in the 2005 Transportation Plan. These strategies are low-cost opportunities to better manage and operate the existing transportation infrastructure in the near-term. The plan lists TSM projects not yet implemented from the 1990 Transportation Plan and those developed as part of the 2000 Transportation Plan. The Plan identified $13 million of improvements over the next 10 years. The projects include signalization of intersection, reconstruction of intersection, some street widening, turn lane improvements, sidewalk installation and implementation of the City Signal Priority Program. A variety of funding sources could be used to implement the TSMs, including federal and state programs, local fuel tax funds and private developers. A complete list of the TSM Plan Project Elements, along with costs and potential funding sources, is provided in the Billings Urban Area 2005 Transportation Plan.

Street Design Standards

The City and County Subdivision Regulations specify standards for street design based on functional classification. The standards were updated and changed in 2006 with other amendments to these regulations. Based on these standards, the typical street section designs requirements are shown in Tables 1 and 2.

Table 1: Design Standards by Functional Class for City Street Development								
Street Type	**Right-of-Way**	**B-B Curb Width**	**Lane Width**	**Parking Width**	**Turn lane width**	**Median Width**	**Boulevard Width**	**Sidewalk Width**
Principal Arterial	130’	64’-86’*	11’-12’**	---	14’	---	10’	5’/10’ ***
Minor Arterial	100’	42’-66’ *	12’	---	---	14’	10’	5’
Collector	74’	53’-39’	11’	8’	14’	---	5’	5’
Commercial Local Access	70’	44’-45’	13.5’	8’	14’	---	5’	5’
Residential Local Access	56’	34’ min.	n/s	n/s	---	---	5’	5’
Cul-de-Sac 100-600 feet	56’	34’ min.	n/s	n/s	---	---	5’	5’
Cul-de-Sac <100 feet	40’	29’ min.	n/s	n/s	---	---	---	---

* A traffic study is required to determine final width
** Interior lane(s) is 11’ and the outside lane is 12’
*** Sidewalk is 5’ on one side and 10’ on the other side
n/s No specific width is specified

Table 2: Design Standards by Functional Class for County Road Development							
Street Type	**Right- of-Way**	**Road Width**	**Lane Width**	**Parking Width**	**Turn lane width**	**Median Width**	**Pathway Width**
Principal Arterial							
6 lanes w/center turn-lane	120’	92’*	12’/14’**	---	14’	---	5’
4 lanes w/center turn-lane	120’	92’*	12’/14’**	---	14’	---	5’
Minor Arterial							
4 lanes w/median	100’	68’*	12’	---	---	14’	5’
2 lanes w/median	100’	52’*	12’	---	---	14’	5’
Commercial Collector							
2 lane	80’	44’*	14’	8’	---	---	5’
2 lanes w/center turn lane	80’	42’*	14’	---	14’	---	5’
Residential Collector							

2 lane	70’	40’*	12’	8’	---	---	5’
2 lanes w/center turn lane	80’	50’*	12’	8’	14’	---	5’
Residential Local Access	56’/60’***	28’	12	n/s	---	---	5’
Cul-de-Sac 100-1000 feet	56’/60’***	28’	12	n/s	---	---	5’
Cul-de-Sac <100 feet	40’	24’ min.	10	n/s	---	---	---

* Widths to be provided if warranted by a Traffic Accessibility Study.

** Interior lane(s) is 12 feet and the outside lane is 14 feet.

*** 56 feet is required for subdivisions within the zoning jurisdiction. 60 feet is required for subdivisions outside the zoning jurisdiction.

n/s No width is specified.

RURAL TRANSPORTATION

County Roads and Bridges

Yellowstone County maintains approximately 1,500 miles of public and County roads. Public roads are distinguished from County roads in that they have been expressly dedicated for public use, but were not formally petitioned and approved as in the case of County roads. The County Public Works Department maintains the County road network.

There are approximately 240 bridges in Yellowstone County and thousands of culverts. These include all bridges in the City as well as the County.

Roads in Yellowstone County may also be privately owned. These roads are generally designated as private at the time of subdivision platting. For roads to be considered private, they must restrict access to the general public. In some cases, this is accomplished by gating or signage indicating private use only.

The Bureau of Land Reclamation (BLR) is also the owner of an estimated 54 miles of public road in the Huntley Project area. These roads were originally platted in 1907 and ownership was retained by the BLR. The County and the BLR are negotiating transferring the ownership of the Huntley Project roads at this time. The primary issue to resolve is whether or not funding will be available to bring these roads up to County standards.

Funding for Maintenance

Funding for maintenance of County and public roads comes from the County Road and Bridge tax levies, gas tax funds, and from Rural Special Improvement Districts (RSIDs). The voters approved a road mill levy increase of 4.03 mills for FY01 bringing the total mills to 23.16 from 15.97 in FY00. This mill levy increased slightly in FY02 to 24.36. In FY07 the road mill levy was 32.48. City residents do not pay this mill levy but do contribute to the County Bridge Fund. The Bridge Fund mill levy was 2.80 in FY01 and 2.91 in FY02, in FY07 the bridge fund mill was 5.58. Most rural subdivisions that are serviced by internal public roads also pay an annual assessment for road maintenance through the RSID mechanism. There were approximately 170 RSIDs active in the County in 2002008. Other

sources of revenue for the Road and Bridge Department are Federal and State grants and cost sharing. The Road and Bridge Division actively promotes cost-share projects with property owners. Cost-share projects are limited to roads where the Division has had an historical maintenance responsibility.

AIR QUALITY

Based on air quality measurement collected in 1977, the City of Billings was categorized as nonattainment "Not Classified" for carbon monoxide (CO) by the U. S. Environmental Protection Agency (EPA). This meant that Billings exceeded the National Ambient Air Quality Standards mandated by the National Clean Air Act. Because of this designation, Billings was required to prepare an implementation plan to bring the area into compliance with the national air quality standards. As part of the 2000 Transportation Plan, a regional emissions analysis was performed to demonstrate the proposed plan would not adversely affect air quality.

Beginning with a baseline year of 1996, future estimates of transportation-related emissions were determined for the horizon years of 2000, 2010, 2020. The results of this analysis indicated that emissions would decrease because, by implementing the Transportation Plan, traffic congestion would decrease and future cars and trucks would be less polluting.

This analysis became the basis for redesignating the Billings "not classified" carbon monoxide nonattainment area to attainment for the carbon monoxide National Ambient Air Quality Standard (NAAQS). The EPA approved the redesignation of Billings from nonattainment for CO to attainment and approved the maintenance plan that is designed to keep the area in attainment for CO for the next 10 years.

Yellowstone County regularly monitors air pollutants at nine monitoring stations around Billings and Laurel in order to comply with regulations imposed by several authorities, including the Yellowstone County Air Pollution Control, the Montana Department of Environmental Quality, and the US Environmental Protection Agency. The regulations require monitoring sulfur dioxide, carbon monoxide, nitrogen oxides, ozone, and particulate levels from major sources and also from the cumulative effect of all sources in the region.

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4.8 OPEN SPACE AND RECREATION

INTRODUCTION

Parks and recreational facilities, as well as natural areas, are an integral part of the quality of life in the community. They provide opportunities for citizens and visitors to enjoy their surroundings and enjoy their environment through recreational and aesthetic pursuits. Open space and recreational areas are the amenities that shape a community and make it a desirable place to live and work.

Several entities within Yellowstone County administer and maintain parkland, open space and recreational sites including; the Federal government, the State, the County, the City of Billings, the Yellowstone River Parks Association, the Town of Broadview, and the City of Laurel. The City of Laurel and its surrounding Planning Jurisdiction is under a separate Growth Policy Document and its parks and open space areas are not included in this document.

FEDERAL RECREATION AREAS

The U. S. Bureau of Land Management (BLM) administers several recreational sites in Yellowstone County for public use.

Pompeys Pillar

Pompeys Pillar itself has been declared a National Monument and the area around the site is designated as a National Historic Landmark. It is located along the Yellowstone River at the site where Captain Clark stopped along his journey to etch his name in the sandstone pillar. There is an information museum on the site and the area that includes 566 acres is available for hiking, fishing and wildlife viewing. The approximate visitation for fiscal year October 2000-September 2001 was 45,000 visitors. Visitation for 2007 was 50,000 for the visitor center and 15,000 dispersed around the facilities.

Sundance Lodge Recreational Area

This area is located south of the Yellowstone River along River Road between Billings and Laurel. The primary use of this area is for hiking, horseback riding, fishing, and wildlife viewing. It contains 380 acres and the approximate visitation for fiscal year October 2000-September 2001 was 2,000 visitors. Visitation for 2007 was 3,644.

Shepherd, Ah-Nei

This area is located approximately 9 miles northeast of Shepherd on the CA Road. The primary use of this area is for environmental education, off-highway vehicles, snow play, hunting, and bicycling and contains 3,602 acres. The approximate visitation for fiscal year October 2000-September 2001 was 3,250 visitors. Visitation is separated into two areas. The OHV area is approximately 1,000 acres and is used primarily for OHV use (ATVs and motorcycles). Visitation for the OHV area for 2007 was 10,300 visitors. Dispersed use in an additional non motorized portion of the recreation area (approx. 4000 acres) is used for

hiking, horseback riding, mountain biking, picnicking, hunting, and bird watching. Visitation for 2007 recorded under "dispersed use" was 5,400.

17-Mile

This area is located approximately 14 miles north of Billings on Montana Highway 87 and west on Crooked Creek Road. 17-Mile is used for target practice, hiking, hunting (upland bird). The area contains 2,080 acres. The approximate visitation for fiscal year October 2000-September 2001 was 3,000 visitors. Visitation for 2007 was 12,149.

Acton

The Acton area is located 25 miles northwest of Billings on Montana Highway 3 and then 6 miles east on Oswald Road. The primary use of this area is for hiking, horseback riding, hunting and snow play. The area contains 3,800 acres. The visitation for fiscal year October 2000-September 2001 was approximately 2,500 visitors. 2007 visitation was 7,706.

Four Dances Natural Area

This 764 acre natural area is located south of Billings and south of the Yellowstone River off Interstate 90, Lockwood exit. The primary use is for hiking. BLM estimates visitation for fiscal year October 2000-September 2001 was 2,750 visitors. Visitation for 2007 was 6,646.

South Hills Off-Road Vehicle (OHV) Area

There are 1,270 acres located southeast off South Billings Boulevard adjacent to the Old Blue Creek Road set aside for OHV-motorcycle riding. The approximate visitation for fiscal year October 2000-September 2001 was 4,600 visitors. South Hills Motorcycle Area 2007 visitation was 2,560 visitors. South Hills dispersed use was 8,833 visitors.

Steamboat Rock

Steamboat Rock is located approximately 25 miles northeast of Shepherd. This is an open area for any recreational use. There are no visitation records kept.

The National Park Service along with the Friends of Canyon Creek manages the Canyon Creek Skirmish Site, a unit of the Nez Perce Historical Park Battlefield. This half acre site is located 16 miles north of Laurel on Buffalo Trail.

STATE PARKS AND RECREATION AREAS

The Montana Department of Fish, Wildlife, and Parks manages a number of outdoor recreation sites in Yellowstone County.

Lake Elmo

This 122 acre urban day-use park is located at 2300 Lake Elmo Drive and attracts visitors to swim, sailboat, windsurf, and fish. A 1.4 mile trail is available for visitor use. A display in the Fish, Wildlife & Parks headquarters located on site provides weekday interpretation of the park. During the summer, a concessionaire offers food and beverages. The visitor count for 2007 was 150,694, up 51,971 people from the 2000 visitation numbers. More information is available at www.fwp.mt.gov.

Pictograph Cave

This day-use site is located six miles south of Billings off the I-90 Lockwood exit at the end of Coburn Road. Pictograph Cave State Park was dedicated as a National Historic Landmark in 1964. Pictograph Cave is one of the key archaeological sites used in determining the sequence of prehistoric occupation in the northwest plains. The Pictograph, Middle and Ghost Cave complex was home to generations of prehistoric hunters. Over 30,000 artifacts have been identified from the park. A short trail allows you to view the rock paintings still visible in Pictograph Cave. A visitor center is scheduled to be constructed and open by July 2009. It will be open year round and provide an interpretive display, classroom/meeting room and gift shop. The visitor count for 2007 was 40,105. More information is available at www.pictographcave.org.

Yellowstone Wildlife Management Area/Yellowstone River State Park

This newly acquired land complex of over 4,000 acres and 5.5 miles of Yellowstone river frontage provides public recreation access to land and water-based sites for fishing, hunting, floating and other recreational activities. It is located on the north side of the Yellowstone river from a half mile downstream (east) of Gritty Stone Access to a half mile west of Bundy Bridge. This property is contiguous with property owned by BLM creating a complex of over 10,000 acres of public recreational land. Eventually the 200 acres on the east side of the property will be developed as the Yellowstone River State Park.

Sportsman Accesses

These access areas provide public recreation access to land-based and water-based sites for fishing, hunting, floating, and other recreational activities. Management of these facilities includes the protection of the on-site resources and adjacent private lands. Minimum facilities and developments are allowed consistent, with recreation use and resource protection.

The Yellowstone River flows through the length of Yellowstone County and provides many water recreational opportunities for the area. The following are the public access points along the Yellowstone River.

- Buffalo Mirage (7 miles E. of Laurel on I-90 at Park City exit, then 6 miles SE on county road) located at river mile 387.0
- Riverside Park (at Laurel on south side of the river on Hwy. 310) located at river mile 384.7
- Duck Creek (south of Billings, off 56th St.), located at river mile 374.6
- South Hills (south of Billings, off South Billings Blvd.) located at river mile 365.6
- East Bridge (Lockwood Bridge access off I-90) located south of the river at river mile 360.6
- Coulson Park (Billings' City Park) west of Interstate 90 Bridge on north side at river mile 361
- Gritty Stone (by Worden) located at river mile 337.3
- Voyagers Rest (by Ballantine) located at river mile 334.9
- Bundy Bridge (by Pompey's Pillar) located on the north side of the river at river mile 328.7
- Captain Clark (8 miles W. of Custer on the Frontage Road) located at river mile 310.6

NAVIGABLE WATERWAYS

Yellowstone River

The Yellowstone River provides a continuous, navigable waterway through Yellowstone County. It is the longest free flowing river in the lower 48 states. The river adds to the aesthetic beauty of the region and provides water for farming and municipal water supplies, as well as providing many recreational opportunities for the community including fishing, boating and other water-based activities. The river may be navigated by small non-motorized crafts such as kayaks, canoes, rafts and drift boats. Jet boats are the most common motorized craft on the river due to the variable water depths.

Bighorn

The fishing on the Big Horn River is legendary. The Bighorn River flows north out of the Bighorn Canyon Reservoir at Fort Smith. The "blue ribbon" fisheries lie predominantly in Big Horn County although the last 12 miles of the Big Horn River forms the east boundary of Yellowstone County before it enters the Yellowstone River. The river can be navigated with power jet boats up from the confluence for about 4 miles until the Manning Irrigation Dam, but most anglers prefer the non-motorized canoes and drift boats.

Clarks Fork

The Clarks Fork of the Yellowstone River enters the Yellowstone River near Laurel which is at the western end of Yellowstone County. Most of the year the river is turbid so it may not support any game fisheries in Yellowstone County. Above Yellowstone County where the water is clear there is excellent brown and rainbow trout fishing. The lower end of the Clark's Fork would be good floating, but there is limited public access.

YELLOWSTONE COUNTY PARKLAND

The County Park Board adopted the Yellowstone County Park Plan in 1984. The plan inventoried existing parks throughout Yellowstone County. Each park was classified according to size, service area and degree of development. Descriptions of the County parkland classes are listed below. There is an estimated 1,784 acres of public and private park land in Yellowstone County, according to a 2008 inventory estimate completed by the Yellowstone County GIS Department.

Parkland Classifications:

Neighborhood Park/Playground (NPP)

Day use parks of limited size providing close to home opportunities for a variety of unstructured active and passive recreation activities. Parks will serve all ages with an emphasis on ages 5 – 18.

Neighborhood Mini-Park (NMP)

Small day use parks retained to accommodate various activities desired and developed by neighborhood or special interest groups. These parks are most viable in urban areas or in the context of small lot, multiple family or mobile home residential developments.

Neighborhood Open Space (NOS)

Open space to preserve or enhance the environmental quality of the neighborhood. Parks may preserve natural features, act as buffers and provide limited recreational opportunities.

Community Natural Areas/Open Space (CNA)

Parks preserve areas of high natural resource value or special natural or environmental features. They provide opportunities for passive recreation and study of the natural environment or conserve features of community significance (i.e., rims, river).

Community Playfields (CPF)

A Community Playfield is a large outdoor recreation area developed primarily to serve the active recreational needs of the junior and senior high school ages and adults of the community. Playfields provide specialized facilities for daytime and evening programmed activities.

Community Park-Multiple Use (CMU)

Multiple Use Community parks are designed to provide a wide variety of recreational opportunities. Parks provide for day and evening use by all segments of the population. Ideally, these parks incorporate elements of community natural areas and playfields as well as less structured activities within an ornamental landscape setting. The larger size community park allows for a variety of non-conflicting uses.

Major Park (MJR)

Major Parks are considered large resource based park, designed to provide large number of people with a wide variety of recreational day and evening uses. Major Parks provide for both intensive uses and passive pursuits within a natural setting or landscape setting. Facilities are provided to serve all segments of the population.

Regional Park (R)

Regional Parks serve multi-governmental units and are usually administered by a regional body. These parks provide a wide range of day and overnight uses. Regional Parks are usually natural resource based and are developed to serve the entire population. Often large portions of the land area remain undeveloped for the purpose of preserving significant areas of the natural landscape or to provide extensive open space or greenbelt areas.

Single/Special Use Facility (SU)

Special Use Facilities provide unique recreational opportunities to a variety of age groups. Central feature may be a golf course, zoo, historic site, festival, amphitheatre or ski areas. Special Use Facilities often serve the entire region or state and may attract population from a larger base.

Recreation Corridor (RC)

Recreation Corridors are linear parks establish extensive and continuous strips of land and water dedicated to recreational travel including hiking, biking, horseback riding, cross country skiing and canoeing. Recreation Corridors serve the entire community population.

Excess Lands (EX)

The Excess Land classification qualifies lands with limited or no recreational potential for disposition or sale. Revenues generated will be used to maintain and develop existing County parks or to acquire additional, needed parklands.

Table 1. Yellowstone County Parks

PARK NAME	ACRES
AGRI-CENTER SUB PARK	2.01
ARROW ISLAND SUB 2ND PARK	24.13
ARROW ISLAND SUB PARK	15.36
BALLANTINE PARK	1.21
BEARTOOTH VIEW PARK	1.09
BEL AIRE PARK	1.19
BROOKDALE PARK	1.82
BROOKWOOD SUB PARK A	2.82
BROOKWOOD SUB PARK B	0.92
BROOKWOOD SUB PARK C	1
BROOKWOOD SUB PARK D	2.74
BROOKWOOD SUB PARK E	0.77
BROOKWOOD SUB PARK F	0.14
CARLA ISLANDS PARK	52.47
CENTURY PARK	5.7
CHARLES RUSSELL PARK	3.64
CLOVERLEAF MEADOWS PARK	7.28
CLYDESDALE PARK	6.33
COULSON NORTH	2.1
COULSON PARK	53.48
COUNTY LAND - CUSTER	4.26
COUNTY PARK	4.48
COUNTY PARK - CUSTER	0.17
COVE CREEK SUB PARK	1.58
CRYSTAL SPRINGS PARK	1.64
CS 1261 PARK	2.43
CS 704 PARK	0.96
CUSTER VOL. FIRE-CNTY PARK	0.31
DE CARLO PARK	0.64
DRIFTWOODS SUB PARK	1.8
DRIFTWOODS SUB PARK	0.84
DRY CREEK PARK	1.9
ECHO CANYON SUB PARK	15.33
EGGEBRECHT PARK	4.58
EMERALD EAGLE ESTATES SUB	2.9
EMERALD HILLS PARK	15.12
FALCON HEIGHTS PARK	9.61
GRANITE PARK SUB PARK	4.99
GROSHELLE HEIGHTS SUB PARK	0.98
GRUHLKE SUB PARK	0.92
HAKERT PARK	0.85
HARRIS PARK	2.4
HIDDEN LAKE SUB PARK	19.16
HIGH POINT PARK	9.58
HIGH POINT SUB PARK	0.65
HIGHLAND PARK ADDN SHEPHERD	0.4
HILLNER PARK	7.31
HOMESTEAD PARK	4.15
HOMEWOOD PARK	7.1
INDEPENDENCE PARK	2.05
INDIAN CLIFFS SUB 1ST PARK	3.23
INDIAN CLIFFS SUB 1ST PVT PARK	1.55
INDIAN CLIFFS SUB 2ND PARK	27.9
JOSEPHINE/BIG SKY ISLANDS PARK	58.19
KING AVE ESTATES NO.2 SUB PARK	2.48
KIWANIS TRAIL	13.81
LACKMAN SUB PARK	0.67
LAUREL RESERVOIR	14.26
LEWIS SUB PARK	0.85
LINLEE LAKE ESTATES SUB PARK	16.63
LITTLE DUDE PARK	2
LOCKWOOD	10.15
LOCKWOOD SCHOOL PARK LAND	13.16
MADSEN PARK	1.26
MCKENZIE PARK	9.87
MONTANA MEADOWS SUB PARK	10.82
MUSTANG SUB (PARK)	3.39
NAOMI PARK	16.69
NUTTING BROTHERS SUB 3RD PARK	3.25
ODONNELL PARK	3.86
OSBORN PARK	12.49
OXBOW PARK	10.42

PELICAN RV PLAZA SUB PARK	0.61
PHEASANT BROOK SUB BLK 2 PARK	1.09
PHEASANT BROOK SUB BLK 4 PARK	5.26
PHIPPS PARK	347.4
PIKE PARK	5.27
PINE HILL SUB PARK	8.31
PLENTY COUP SUB PARK	12.87
POMPEYS PILLAR PARK	0.32
PRAIRIE PARK	7.02
PRYOR CREEK ESTATES SUB PARK	6.1
PRYOR HILLS SUB 2ND FIL PARK	1.3
Q PARK	1.58
QUANTA PARK	2.41
QUANTA SUB PARK	0.57
QUARTER HORSE PARK	4.98
RIMROCK PARK (Rimrock)	0.9
RIVER VISTA TRACTS PARK	13.28
RIVERFRONT PARK	284.43
RIVERFRONT PARK (CITY LAND)	13.01
RIVERSIDE PARK	28.5
RIVERSIDE PARK HUNTLEY	4.48
RONAN COTTONWOOD PARK	9.59
SADDLEBACK RIDGE EST. 2ND PARK	5.07
SANNON PARK	2.61
SCHAUER PARK	1.87
SCHOENTHAL ISLAND	92.97
SHAMROCK ACREAGE TRTS SUB PARK	1.45
SHARON PARK	4.09
SHAWNEE PARK	1.42
SIERRA ESTATES SUB 1ST PARK	1.55
SIERRA ESTATES SUB 2ND PARK	4.82
SIERRA ESTATES SUB 3RD PARK	8.25
SLED PARK	8.77
SUN VALLEY SUB 1ST PARK	9.09
TWO MOON PARK	172.94
VALLEY PARK	3.24
WELLS GARDEN PARK	8.77
WEST MEADOWS SUB PARK	15.62
WEST PARK	6.54
WILSON PARK	14.32
WINCHESTER SUB PARK	3.21
WORDEN PARK	3.57
ZIMMERMAN PUBLIC PARK	102.31
ZIMMERMAN SUB 4TH PARK	0.99
Total Park Acreage	**1,785**

Source: Yellowstone County GIS Department, 2008

Leased County parkland is currently in the inventory of parklands, but is not being used for recreational purposes. Rather, they are leased for farming, ranching or special use. These parcels include:

- Arrow Island I (east of Shepherd)
- Arrow Island II (east of Shepherd)
- Cove Creek Park (Echo Canyon)
- Falcon Heights (for mobile home) (Blue Creek)
- River Vista (east of Shepherd)
- Sharptail (King and Shiloh)
- Valley (Blue Creek)
- West Park (west of Laurel)
- Winchester (Shepherd)
- Zimmerman (for cell tower)

Special use facilities and land, such as Oscar's Dreamland and MetraPark, are included in the City of Billings Parkland Inventory.

CITY OF BILLINGS PARKLAND

This City parkland information is derived from the Parks2020 Billings Parks, Recreation, and Open Space Master Plan that was adopted January 27, 1997 prepared for the City Parks, Recreation and Cemetery Board. The Park Board consists of nine members and is advisory only. The City Parks, Recreation, and Public Lands Department (PRPL) provides staff support to the board.

PRPL is currently working on a park inventory of all City owned land that is identified as parkland. Also included in the inventory is land owned by the City or other public agencies but managed by the PRPL. While the exact number of acres is still to be identified, conservatively PRPL has management responsibility of well over 2,700 acres of parkland.
Since the development of the Parks 2020 Billings Parks, Recreation, and Open Space Master Plan, PRPL has made minor adjustments in the description and classification of parkland in an effort to clarify and be more descriptive of nationally recognized parkland classifications and trends. The national classification system used is described in the National Recreation and Parks Association (NRPA) publication titled Park, Recreation, Open Space and Greenway Guidelines published in 1996. The adjustments appear in the Recreation Parks section below.

The mission of PRPL is twofold. First is to acquire, develop and maintain parkland for the active and passive recreational use and enjoyment of the Citizens of Billings. The second aspect of the mission is to acquire and manage lands primarily for conservation of significant physical, cultural, natural or visual resource value in an effort to preserve the special character of this Montana region. Thus the lands managed by PRPL fall into two broad categories, Recreation Parks and Natural Resource Areas.

Recreation Parks

The most easily identified parks in the system are the recreation parks which are centers of activity and host to many community and neighborhood events. Recreation parks are identified and characterized as follows:

Mini-Parks

Used to address limited, isolated or unique recreational or cultural needs. Mini-Parks are rare and usually occupy an acre or less. The service area will vary based on activities and location.

Neighborhood Park

The neighborhood park is the basic unit of the park system and serves as the recreational and social focus of the neighborhood. Their main function is for informal active and passive recreation. The main feature in this type of park is "programmable open space". This means that among other features, the park contains open space in sufficient size for a variety of recreational programs and activities; it does not have a single programmed use (i.e. a baseball field). A neighborhood park is a minimum of 5 acres in size with 5 to 10 acres considered as optimal. This type of parks should be centrally located within its service radius which encompasses a ¼ to ½ mile distance uninterrupted by non-residential roads and other physical barriers. Ease of access and walking distance are critical factors in locating this park.

School-Park

Depending on circumstances, combining the resources of two public agencies, the School-Park allows for expanding the recreation, social and educational opportunities available to the community in an efficient and cost effective manner. Depending on its size and location, this type of park may serve a number of capacities in park classification. Location of a School-Park is determined by school district property. Size of the park varies depending on function.

Community Park

A Community Park serves broader community-based recreation needs as well as preserving unique landscapes and open spaces. They allow for group activities and offer other recreational opportunities both active and passive on a city wide scale. The location of these parks are determined by quality and suitability of the site. These parks are appropriate sites for special use facilities such as aquatic facilities and activity centers. They have a service area of from ½ to 3 miles in distance. The size of a Community Park varies but should accommodate the desired uses and range from 30 to 50 acres.

Large Urban Park

These parks serve the entire community. Large Urban Parks are likely to have structures and facilities geared to large groups and events. Location becomes an important factor because of the need for participants to access major transportation corridors. The size should accommodate the desired uses and range from 50 to 75 acres or more.

Sports Complex

Are heavily programmed athletic fields and associated facilities strategically located and designed to serve the entire community. Accessibility from major transportation corridors is an important factor in location. Size is determined by projected demand and are a minimum of 25 acres with 40 to 80 acres considered optimal. Sighting of these facilities is crucial because of their intense and extended use so that activities do not interfere with adjacent property owners.

Special Use Park

This classification covers a broad range of parks and recreation facilities that are oriented to a single use. Location and size are variable depending on the use.

Private Park

These are parks and recreation facilities that are privately owned yet contribute to the public park and recreation system by providing programs and activities to the community. Consideration is given to these parks when the same or similar programs are contemplated in City owned parkland.

Natural Resource Areas

These are lands set aside and managed for preservation of significant natural resources, remnant landscapes, open space, visual aesthetics and or buffering. Natural Resource Areas are characterizes as follows:

Conservation Areas

Conservation Areas are lands set aside primarily for the conservation of natural features and sensitive habitat. These areas include flood plains, scenic resources, wetlands, and unique natural areas such as the rims, the Yellowstone River and its tributaries. Recreational pursuits are passive, including walking, nature study, interpretive activities, photography, and wildlife watching.

Special Use Facilities and Lands

Special Use facilities include cultural facilities, conservation, recreation, or open land resources, which contribute to or enhance the community's parks, open spaces, or recreational opportunities. These lands may or may not be managed by the City.

Urban Greenspace

Urban Greenspace includes landscaped parks, whose primary purpose is to provide visual relief to the built environment. Lands may include buffer strips between land uses, landscape development along transportation corridors, or landscaping at community gateways.

Multifunctional Areas

Multifunctional parks incorporate many functions, balancing scenic, cultural, and natural resource conservation with developed recreational opportunities. These parks

offer diverse resource-based recreational pursuits, including boating, river sports, hiking, climbing, fishing, and wildlife watching. Riverfront and Swords Parks are good examples of existing Multifunctional Areas.

Undeveloped Park Lands

Undeveloped lands are those parcels that have been purchased, donated or contributed to the City that are not yet developed with park facilities. Land is most commonly contributed by developers who are required by state statute and City Subdivision Regulations to make a parkland dedication (or give Cash-in Lieu) when a tract of land is developed. These lands are not formally managed and are administered by the City PRPL Department. Undeveloped park lands are banked until funding and resources become available for their development.

Greenways

Greenways are corridors of land managed to provide a variety of functions, which may include recreation, conservation, transportation, infrastructure, or community shaping. Greenways are linear corridors, comprised of private and public lands. Greenways do not necessarily include public access or recreational opportunities although ideally they would incorporate both. They would also provide connecting pathways used by cyclists, walkers, runners, skaters, and strollers. Greenways include vegetation, natural or ornamental, as an essential component to add bio-diversity and scenic value. Greenways can also include the Heritage Trail system. The Yellowstone River Greenway Master Plan is another important plan that maps out desirable greenway corridors exclusively along the Yellowstone River. These conservation corridors should be acquired as a buffer between urban development and the regions natural resources.

Open Space

Open space is defined as: "all land and water in an urban area, not covered by buildings, which has value for park and recreation purposes, conservation of land and other natural resources, or historic or scenic purposes." Park lands contribute to, but do not fully comprise, the community open space system. Similar to greenways, these lands may or may not be administered by PRPL.

Urban Forest

The Urban Forest includes trees planted on public and private lands in developed areas. Developing and maintaining the urban forest is a community responsibility. The urban forest should be developed and enhanced in the entire urbanized area. Street tree planting and maintenance should occur as a result of incentive programs and regulations.

Scenic Resources

Scenic Resources include views and landscape features which have been identified as important to the community's sense of place. These are generally noted on The Parks2020 Master Plan. A comprehensive open space study as part of a growth management plan would further refine the priorities and map important view corridors.

OTHER OPEN SPACE

Open Lands include state and federal lands, undeveloped lands, and public utility lands. Open Lands shown on the master plan illustrate the current conditions, based on zoning and ownership, rather than established community priorities for open space.

There are several agencies and groups, such as the Nature Conservancy, the Montana Land Reliance and Mid-Yellowstone Land Trust that operate within Yellowstone County and are concerned with conservation easements and preserving open spaces for the future of the community. These groups may be involved with land that is protected but does not provide any recreational opportunities for public use.

REFERENCES

City of Billings, Yellowstone County, 1998, Parks2020, the Billings Parks, Recreation, and Open Space Master Plan.

Yellowstone River Parks Association, City of Billings, Yellowstone County, 1998, The Yellowstone River Greenway Master Plan.

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4.9 CULTURAL AND HISTORIC RESOURCES

INTRODUCTION

Yellowstone County has been inhabited over the last 12,000 years and the remains of human activity can be found virtually everywhere. Approximately 450 of the more than 23,000 archaeological and historical sites identified in Montana are located in Yellowstone County. The majority of these sites are located in or near the Yellowstone River valley.

Yellowstone County and the area that is now Billings were also prominent throughout the recorded history in Montana.

A BRIEF HISTORY OF BILLINGS AND YELLOWSTONE COUNTY

Since the time when prehistoric man first inhabited the Yellowstone Valley some 12,000 years ago, the land and the people who lived here have experienced many changes. Great mammals, which have now disappeared, once roamed the area and were an important source of food for small groups of hunters and gatherers. Today farming, ranching, energy development, and providing goods and services to the region are the activities of most residents.

The earliest inhabitants lived off the land, taking their tools, clothing, shelter, and food from what nature provided for them. Their weapons, spears and atlatls, killed the mammoth, bison, and camel which were their food. Fiber from yucca plants was twisted into rope, and hide was the raw material for clothing and shelters. When large game was in short supply due to harsh winters or drought, the natives survived on berries, seeds, and small animals.

About 11,000 years ago the extinction of large prehistoric animals occurred in the Yellowstone Region. Between 6,500 and 4,000 years ago, the Yellowstone Valley experienced an extended period of warmer, drier weather that left the plains a virtual desert, which was less hospitable to mammals and humans. During this period, humans moved from the prairie to the mountains where vegetation was more varied and small animals would support the human population. As the climate moderated, they moved out of the mountains and returned to the plains. The modern bison evolved and was hunted by native populations who had developed more sophisticated weapons such as the bow and arrow, which were introduced about 2,000 to 1,500 years ago. Great migrations of humans took place during this time period.

Evidence of this journey is recorded in pictographs, petroglyphs, pottery, and vessels left behind by tribes, such as the Shoshone. The Crow, who had been sedentary farmers, moved to the Yellowstone Valley and became hunters and traders. Other tribes living in the Yellowstone area included the Assiniboine, Sioux, Cheyenne, Flathead, Blackfeet, Arapaho, and Gros Ventres. By the mid 1600s, the horse, which was gained in trade or stolen from enemies, had been introduced in Montana, and began to change the native way of life. On horseback, a person could travel farther and faster in pursuit of buffalo, the mainstay of his existence. Warriors were more able to defend the land against enemies, whether white men or other warring tribes. During the early 1800s, Captain William Clark, along with several members of the expedition, fur trappers, traders and missionaries traveled through the Yellowstone Valley. In 1853, Col. Isaac Stevens,

along with Captain John Mullan of the US Army, was assigned the task of preparing a preliminary survey of the Yellowstone Valley for the future railroad. The US Army established posts along the Yellowstone to maintain a semblance of peace and protect the use of the river for transportation.

By the mid-1800s, the area's population had increased considerably and the Army began driving the Sioux onto the reservations in South Dakota. The Crow Reservation was established in 1851 and stretched across what is now south central Montana, south of the Yellowstone River. The reservation was reduced to its current size in 1868. By 1876, skirmishes with the Sioux had reached serious proportions; Fort Pease was held under siege for nine months in 1875; Baker's Battle took place near Huntley in 1872; and the fight with the Sioux climaxed at the Battle of Little Big Horn on June 25, 1876. Following a brutal campaign, the Army succeeded in driving the Sioux and the Cheyenne on to the reservations or across the border into Canada. In an epic attempt to retreat to Canada, the Nez Perce were also pursued and skirmished on Canyon Creek, five miles north of Laurel. The Canyon Creek Battle was fought in 1877. By the 1880s, the Indian Wars ceased and the buffalo had been exterminated. Meanwhile, a small town was developing along the Yellowstone River, known by the name of Coulson.

By 1883, Coulson was a thriving burg containing a telegraph office, store, saloon, hotel, and sawmill. It was near this site where the steamboat Josephine, commanded by Captain Grant Marsh, landed in June 1875. On his way up the Yellowstone River, Capt. Marsh engraved the name of his vessel in Pompeys Pillar, alongside the inscription made by Captain William Clark in 1806. The Northern Pacific Railroad, unfortunately, bypassed Coulson, preferring the higher bench land. Seizing the opportunity, the Minnesota and Montana Land and Improvement Company purchased 800 acres 2 miles north of Coulson and platted the townsite of Billings in 1882. As if by magic, Billings, named after the past president of the Northern Pacific Railroad, sprang from open prairie to flourishing town overnight. Within four weeks of platting, the land company sold 5,000 lots in the original townsite. Billings incorporated in 1885. Montana became the 41st state in the Union in 1889.

Yellowstone County's early development was less than magical. The County was formed in 1883, but its boundary went through several relocations before settling on its final configuration. Originally carved from a large section of Custer County, the boundaries of Yellowstone County were rearranged by the formation of Sweet Grass, Musselshell, Carbon, Bighorn and Stillwater Counties. The County, however, did benefit from the number of large, productive farms and ranches and established a strong agricultural-based economy. Only through hard work and the introduction of new farming methods and drought resistant crops and livestock could agriculture flourish in the semi-arid conditions. Probably most important to cultivating the Yellowstone Valley was the construction of an extensive irrigation system. The Billings Bench Water Association was instrumental in bringing irrigation water to the high benches north of Alkali Creek. It was the Bureau of Reclamation that brought irrigation to the Huntley Project area in 1907, making it feasible for people to own small, productive parcels of land.

Agriculture, while still an important industry in Yellowstone County, has taken its place among more important economic sectors. The County has benefited from coal development in Musselshell, Carbon and Rosebud County, from palladium-platinum mining in Stillwater County

and oil and gas development throughout the Powder River Basin. Billings and Yellowstone County continue to be the regional economic hub, although the main economic sectors today are commercial retail and wholesale, and private and government services.

CULTURAL SITES

The history of Yellowstone County is documented by the scattered remnants of prehistoric and historic cultures. From artifacts and evidence of earlier inhabitants, Yellowstone County can document a long period of human occupation. Key cultural and historic sites in the County are listed below.

Prehistoric Sites

Rock Art Sites

Yellowstone County contains numerous rock art sites, dating as early as 750 A.D., which provide important information on the symbols of Native American religious life as well as on the historical patterns of use on the land. An example of a Rock Art Site is Pictograph Caves State Park. The Montana Fish, Wildlife, and Parks Department describes the site as follows:

"*Located just 6 miles south of Billings, the Pictograph, Middle and Ghost cave complex was home to generations of prehistoric hunters. Over 30,000 artifacts have been identified from the park. A short paved trail allows you to view the rock paintings, known as pictographs that are still visible in Pictograph Cave, the largest of the three. Interpretive signs tell the story of Montana's first professional archaeological studies and excavations. This site is listed as a National Historic Landmark*".

Prehistoric Structures

The most common form of prehistoric structure found in the County is the tipi ring, consisting of a circle of rocks used to hold down a hide lodge in windy conditions. Far less common is the wooden lodge. Both provide important information about Native American family and community patterns and activities.

Native American Religious Sites

Small rock cairns, vision quest structures, and eagle trapping pits are found on high points. All have religious value to Native American groups.

Battlement Sites

A few rifle pit or battlement sites, dating after 1750 A.D., are also known to exist in Yellowstone County.

Rockshelters

Shallow caves and rock overhangs like those at the "Indian Caves" were used by prehistoric peoples in Yellowstone County.

Burial Sites

Most early historic and prehistoric human burials are located outside of registered cemeteries. Modern Native Americans feel a strong spiritual connection to ancient Indian burials.

Camp Sites

Some early human occupation sites are identified by the presence of "lithic scatter", i.e., scatters of discarded tools and flakes of various rock types which result from the manufacture or resharpening of stone tools. These sites can provide information on the age and use of an area, as well as on the human movement, activities, and trade that took place at the location.

Bison Kill Sites

Occasionally, Native Americans killed large numbers of big game at one event, either in a bison jump or a bison trap. Kill sites provide significant information on the date and season of the kill, and the pattern of use of the animals from butchering marks present.

Historic Sites

Homestead Sites and Schools

Homesteads, barns, sheds, and school houses, in their varying architectural styles, reflect the changing patterns of historic utilization of the land.

Remaining Historic Sites

The range of types of historic structures in Yellowstone County is varied. All sites may not possess the characteristics required to qualify for the National Register of Historic Places, however, they may still be regarded as having historic or cultural value by the community.

To date, the primary method by which information is gathered on historic resources in the County has been through federally mandated surveys, which occurs usually in areas of development. Underdeveloped areas of the County have received substantially less scientific investigation.

RECOGNIZED HISTORIC SITES IN YELLOWSTONE COUNTY

A number of the prehistoric and historic sites in Yellowstone County have been formally recognized for their local, regional, and national significance. Of these tributes, placement on the National Park Service's National Register of Historic Places is perhaps the most important since selected sites must meet established criteria and receive a thorough evaluation of their historical value.

There are 25 properties listed on the National Register of Historic Places in Yellowstone County. Some sites may also be identified as meeting the minimum criteria used to determine eligibility for the National Register. Several structures, two neighborhood districts and numerous prehistoric and historic sites have been listed with the National Park Service as eligible for the National Register. Sites listed on the National Register of Historic Places are shown in Table 1.

TABLE 1
YELLOWSTONE COUNTY PROPERTIES LISTED IN THE NATIONAL REGISTER

Name	Location	Listing Date	Reference Number
Acme Building	109-111 N Broadway, Billings	11/09/2005	24YL1620
Antelope Stage Station	E. of Broadview, Broadview	01/19/1983	24YL257
Abraham and Carrie Erb House	110 4th Avenue, Laurel	06/09/2005	Not assigned
Armour Cold Storage	1 South Broadway, Billings	07/07/2004	24YL1583
Billings Chamber of Commerce Building	303 N. 27th St., Billings	01/20/1972	24YL259
Billings Historic District	Roughly bounded by N. 23rd and N. 25th Sts., 1st and Montana Aves., Billings	03/13/1979	24YL752
Billings Townsite Historic District Boundary Increase	2600(2528), 2604-2606, 2608, 2610-2614, and 2624 Montana Avenue, Billings	04/21/2006	24YL0752
Billings West Side School – also called Broadwater School	415 Broadwater Ave, Billings	03/20/2002	24YL196
Black Otter Trail	Black Otter Trail	01/05/2007	24YL1580
Boothill Cemetery	6th Ave. and Main St., Billings	04/17/1979	24YL755
Electric Building	113-115 Broadway, Billings	03/01/2002	24YL1539
Fire House No. 2	201 S. 30th St., Billings	02/29/1980	24YL261
Hoskins Basin Archeological District	Address Restricted	11/20/1974	24YL1031
Masonic Temple	2806 Third Ave. N, Billings	04/17/1986	24YL260
Moss, Preston B., House – also called the Moss Mansion.	914 Division, Billings,	04/30/1982	24YL263
North, Austin, House	622 N. 29th St., Billings	11/23/1977	24YL258
O'Donnell, I. D., House	105 Clark Ave, Billings	11/23/1977	24YL265
Parmly Billings Memorial Library – also called the Western Heritage Center	2822 Montana Ave., Billings	10/26/1972	24YL756
Pictograph Cave*	7 mi. SE of Billings in Indian Caves Park, Billings	10/15/1966	24YL1

Pompeys Pillar*	W. of Pompey, Pompeys Pillar	10/15/1966	24YL176
Prescott Commons	Rimrock Rd., Billings,	04/30/1982	24YL264
Ruth, Harold and Marion, Residence	111 Emerald Drive, Billings	06/21/2007	24YL1630
US Post Office and Courthouse-Billings	2602 First Ave. N., Billings	03/14/1986	24YL754
Yegen, Christian, House	208 S. 35th St., Billings	10/01/1979	24YL262
Yegen, Peter, House	209 S. 35th St., Billings	04/16/1980	24YL266

* designated as National Historic Landmarks by the National Park Service.
Source: State Historic Preservation Office, Montana Historical Society, 2008.

The majority of historic sites in Yellowstone County have not received National Register designation. The reason for this is that much of the survey work and research required for placement on the National Register has not been completed for potential sites. More than 20 other sites in Yellowstone County have been recognized locally for their historic value.

BILLINGS TOWNSITE HISTORIC DISTRICT

In 1977, the Billings City Council passed an ordinance creating the Billings Townsite Historic District and establishing the Historic Design Review Board. The purpose of the District is to restore and preserve a significant element of Billings' history, as well as providing for "a mix of the old and the new"[12]. The District began as a four block area along Montana Avenue between North 26th Street and North 22nd Street. The district now encompasses eight blocks between North 30th Street and North 22nd. In recent years, the Historic District has gone through a major transformation with the restoration of the Billings Depot and the construction of new sidewalks, planters and pedestrian crosswalks. Several new businesses have located on Montana Avenue and many have expanded. The property owners of the Historic District levied a special improvement assessment on themselves to pay for the public infrastructure improvements and leveraged these funds with Downtown Tax Increment District financing and federal grants.

The District also imposed special sign standards that are administered by the City-County Planning Department and reviewed by the Montana Avenue sign review committee. This district was expanded in 2006 to include the 2600 block of Montana Avenue.

CULTURAL AMENITIES

As the largest city in Montana and Wyoming, Billings has reached the population numbers that determine a city's ability to build and support professional-quality, cultural institutions. Businesses and professionals are attracted to culturally aware cities that provide quality of life amenities such as the arts and cultural entertainment. These amenities should not be undervalued and cannot be overlooked in order to hold a position of regional economic and civic leadership,

[12] Allen McMath Hawkins Architects, 1978, Billings Townsite Historic District Development Program.

The Billings Cultural Partners, an organization formed to preserve and promote Billings' cultural resources, developed the Billings Cultural Plan in 2002. The plan outlines strategies to continue and expand cooperation among the individual arts, cultural and historic organization, improve access to the arts and culture, increase educational opportunities, strengthen the existing cultural institutions and enhance Downtown. The partners represent the major cultural, arts and historic institutions in Billings. Descriptions of these institutions taken from the Billings Cultural Partners website[13] and are listed below:

Alberta Bair Theatre: "The Alberta Bair Theater brings the excitement of every discipline in the performing arts to the Northern Rockies. With a 1,450 seating capacity, it attracts national and international renowned and culturally diverse entertainment. The Theater also provides a home for local cultural and civic groups. The ABT usually has walk in tickets available. It's as easy and often as inexpensive as going to the movies! 2801 3rd Avenue North.

Billings Depot: "This historic building was the center for railroad travel which opened the West for settlement. The Billings Depot compliments the spirit of revitalization within the Historic District. The Passenger Station Event Center accommodates conferences, receptions, public open house events, children's theater and a variety of entertainment and community events. The "Horse of Course" benefit was hosted by the Depot with the funds dedicated to continued restoration". 2310 Montana Avenue.

Billings Studio Theatre: "The largest community theatre within 500 miles, the Billings Studio Theatre showcases local talent, staging, sets, equipment, and costumes. Pre-teens, teens, and adults participate in a dozen theater productions year-round. Volunteers from northern Wyoming and eastern Montana fill all acting and production roles at the theatre, which celebrated its fiftieth anniversary in 2000." 1500 Rimrock Road.

Billings Symphony Society: Music Director Anne Harrigan and the musicians of the Billings Symphony Orchestra and Chorale invite you to join them for live symphonic music with internationally recognized guest artists. While most of their performances are at the Alberta Bair Theater, the Symphony performs in schools, offers workshops for students and celebrates Billings each year at Symphony in Pioneer Park."

Channel 7 – Public Access TV: "Channel 7 is a true friend to the community with its commitment to air community events and contribute to cultural awareness. Visit Channel 7's website to get information about programs and scheduling for the week."

Moss Mansion: "Step into history with a one-hour guided tour of the Moss Mansion Historic House Museum. The tour captures early turn-of-the-century life as the Preston Boyd Moss family lived it. Visitors see original draperies, fixtures, furniture, Persian carpets and artifacts displayed in the 1903 red sandstone structure." 914 Division Street.

MetraPark: "MetraPark, a public facility located in Billings, Montana, is an enterprise of Yellowstone County, Montana. MetraPark consists of a substantial acreage along the

[13] **http://www.downtownbillings.com/PARTNERSHIP/bcpartners/cultural.htm**

Yellowstone River. The site is located in the Billings city limits, is within sight of the interstate highway, one mile from downtown, and one and one half miles from Logan International Airport."

"The facility offers a 10,000 seat arena, 6,500 seat grandstand, two major heated and air conditioned exhibit buildings, a half mile track used for both horse racing and motor sports, and an assortment of horse barns and smaller buildings. Landscaped parks and paved, lighted parking comprise the rest of the site." 308 6th Avenue North.

Peter Yegen Junior Yellowstone County Museum: "The Peter Yegen Jr. Yellowstone County Museum is located on the Rims by Logan International Airport. It contains over 5,000 objects from the Yellowstone Valley, including a large collection of Native American artifacts and a Lewis and Clark Fur Trading Post exhibit. There is a gift shop and changing contemporary exhibits. The museum is open throughout the entire year and free to the public." 1950 Terminal Circle.

Rimrock Opera Company: "The Rimrock Opera Company enhances cultural life in Billings and the surrounding areas with their excellent productions. It is their goal to make opera available to everyone through community outreach and educational programs."

Venture Theatre: "With its stage in a defunct automotive repair garage, Venture Theatre is true community theatre. Venture performs multiple productions of six plays, children's theatre and teaches grade school and high school classes." 1410 Central Avenue.

Western Heritage Center: "The Western Heritage Center features interactive exhibits exploring "Our Place in the West." It is located in the historic Parmly Billings Library. The Center is open year round and is free of charge. The Center also offers historic site interpretation through its "Museum Without Walls" program." 2822 Montana Avenue.

Yellowstone Art Museum: "Contemporary and historic work from nationally and internationally acclaimed artists are featured in changing exhibitions at the largest and most comprehensive art museum in Montana. A first-class Montana collection showcases Russell Chatham, Deborah Butterfield and more. View the largest public collection of cowboy artist and writer Will James." Visit the YAM at 401 North 27th Street.

Yellowstone Public Radio: "Montana's public broadcasting station at 91.7 in Billings Montana. It is a culturally rich station with public arts and community events broadcast daily."

ZooMontana: "A walk on the Wild Side? Visit ZooMontana, where you'll see a diversity of wild animals from Montana and many other countries. The zoo features northern temperate climate species, and is a wonderful new home for Siberian Tigers, North American River Otters, Sika Deer, Eastern Grey Wolf, Great Horned Owls and Lesser Spot-Nosed Guenon." ZooMontana recently completed a new 2-acre exhibit

called Bear Meadow. This attraction currently houses Bruno the brown bear. ZooMontana is located at 2100 South Shiloh Road.

4.10 COMMUNITY HEALTH

INTRODUCTION

In 2006, the Alliance, an affiliated partnership consisting of Billings Clinic, St. Vincent Healthcare, and RiverStone Health, sponsored a comprehensive Community Health Assessment (CHA). The CHA used national (Healthy People 2010) and state benchmarks to identify opportunities for community health improvement. The CHA was conducted by Professional Resource Consultants, Inc. The Community Health Survey developed for this assessment gave a remarkably complete and accurate view of the health status of Yellowstone County residents through a randomized telephone survey of the health and behaviors of 400 community members. The sample drawn for this survey was representative of the Yellowstone County population in terms of socioeconomic characteristics and geographical location. Existing vital statistics and other health related data were also incorporated into this assessment for Yellowstone County. To further gain perspective from community members, five focus groups were conducted in Yellowstone County, including groups among: community leaders; social service providers; physicians and health professionals; employers; and educators and public service professionals.

The Community Health Assessment provides information for consideration when developing effective interventions. This information ensures the issues of greatest concern for Yellowstone County are identified and considered when decision to commit resources are made, thereby making the greatest possible impact on the status of the community's health. The 2006 CHA serves as a tool toward reaching three basic goals:

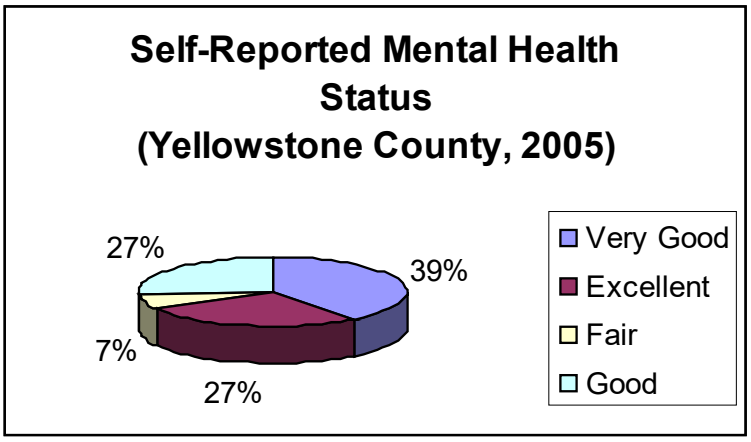
- To improve residents' health status, increase their life spans, and elevate their overall quality of life. A health community is not only one where its residents suffer little from physical and mental illness, but also one where its residents enjoy a high quality of life.
- To reduce the health disparities among residents. By gathering demographic information along with health status and behavior data, it is possible to identify population segments that are most at-risk for various diseases and injuries. Intervention plans aimed at targeting these individuals may then be developed to combat some of the socio-economic factors which have historically had a negative impact on residents' health.
- To increase accessibility to preventive services for all community residents. More accessible preventive services will prove beneficial in accomplishing the first goal (improving health status, increasing life spans, and elevating the quality of life), as well as lowering the costs associated with caring for late-stage diseases resulting from a lack of preventive care.

While no single health issue emerged as critical, the CHA identified mental health, unintentional injury, heart disease, physical activity, and nutrition as areas that warranted improvement. From this data, significant opportunities for health improvement exist in Yellowstone County with regard to the aforementioned health areas. These areas of concern have been presented in no particular order, and are subject to the discretion of the area providers, the steering committee, or other local organizations and community leaders as to actionability and priority.

MENTAL HEALTH

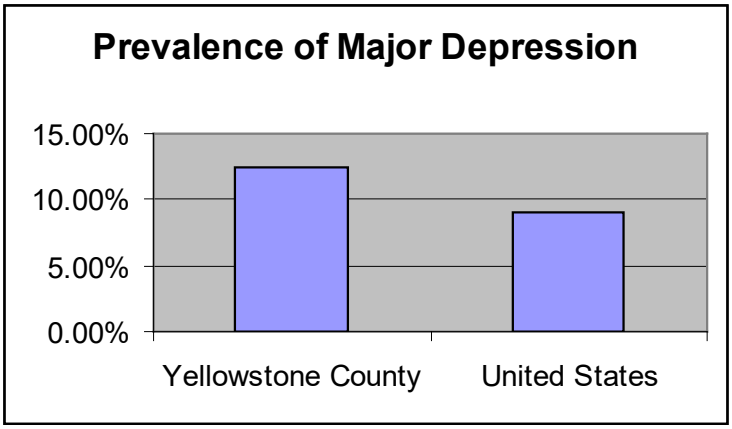
Mental health is a state of successful performance of mental function, resulting in productive activities, and fulfilling relationships with other people. Mental health is indispensible to personal well-being, family and interpersonal relationships, and contributions to community and society. Mental disorders are health conditions that are characterized by alterations in thinking, mood, or behavior (or some combination thereof) which are associated with distress and/or impaired functioning that spawn a host of human problems that may include disability, pain, or death. Mental illness is the term that refers collectively to all mental disorders. Mental disorders generate an immense public health burden of disability. In established market economies such as the United States, mental illness is on par with heart disease and cancer as a cause of disability. Suicide, a major public health problem in the United States—occurs most frequently as a consequence of a mental disorder.

The majority of Yellowstone County adults (66.3%) rate their overall mental health as "excellent" or "very good." However, 6.9% of Yellowstone County adults believe that their overall mental health is "fair" or "poor." Yellowstone County results more favorable than national findings that state 11.7% of adults believe that their overall mental health is "fair" or "poor."



Source: 2005 PRC Community Health Survey, Professional Research Consultants

Women are more likely than men to report "fair" or "poor" mental health status. Across Yellowstone County, 12.4% of adults report that they have been diagnosed with major depression by a physician at some point in their lives. This is slightly higher than national findings (9.1%).



Source: 2005 PRC Community Health Survey, Professional Research Consultants
Source: 2005 PRC National Health Survey, Professional Research Consultants

Key demographic characteristics of Yellowstone County note the following:

- Women report a higher prevalence of major depression than do men.
- Adults aged 18 to 64 more often report a diagnosis of major depression than do older adults.
- Low-income adults report a much higher prevalence of diagnosed major depression.

Nearly one out of four Yellowstone County adults (25.7%) report that they have had two or more years in their lives when they felt depressed or sad on most days, although they may have felt okay sometimes. This represents roughly 25,757 adults in Yellowstone County who have faced or are facing prolonged bouts with depression. This is similar to the national report of 24.9%.

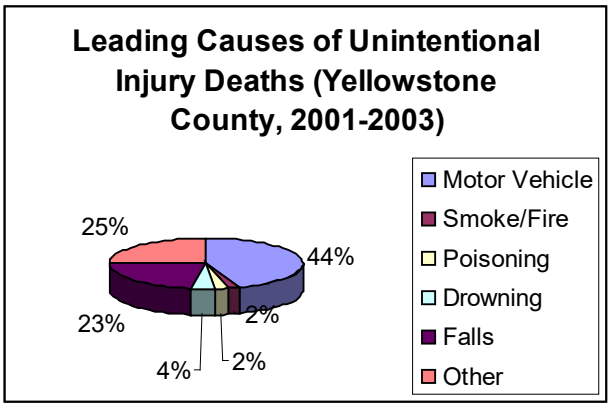
Community health panelists in Yellowstone County discussed the mental health of the residents in the community. One major concern expressed by panelists was the lack of mental health education as it pertains to prevention and care. Panelists are concerned that community residents don't seek mental healthcare until it is a crisis situation. Community members, one panelist feels, do not feel as comfortable as they should seeking out help early in an illness. Further education for the support of mental health problems could help individuals seek the help they need before their illness progresses. One panelist suggested the high prevalence of mental illness in the area may be due to the fact that the community has more mental health services than surrounding communities. Among Yellowstone County respondents reporting major or chronic depression, 59.5% acknowledge that they have sought professional help for a mental or emotional problem.

UNINTENTIONAL INJURIES

The risk of injury is so great that most persons sustain a significant injury at some time during their lives. Nevertheless, this widespread human damage too often is taken for granted, in the erroneous belief that injuries happen by chance and are the result of unpreventable "accidents." In fact, many injuries are not "accidents" or random, uncontrollable acts of fate; rather, most injuries are predictable and preventable. For ages 1 through 44 years, [United States] deaths

from injuries far surpass those from cancer—the overall leading natural cause of death at these ages—by about three to one.

Motor vehicle crashes account for nearly one-half of all accidental deaths in Yellowstone County.



Source: Montana Department of Public Health and Human Services
Source: Office of Vital Statistics

Between 2000 and 2002, the annual average age-adjusted unintentional injury death rate in Yellowstone County was 40.7 per 100,000 population. This is lower than the Montana rate for the same period (53.0%); however, it is higher than the rate reported for the United States (35.8%).

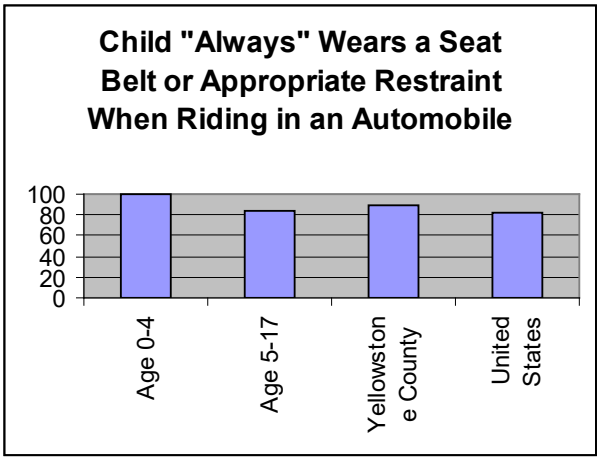
Motor Vehicle Accidents

Over the past several years, the Yellowstone County age-adjusted motor vehicle accident death rate has trended upward. Between 2000 and 2002, the annual average age-adjusted motor vehicle accident death rate in Yellowstone County was 17.8 per 100,000 populations. This is lower than the Montana rate of 25.5 for the same period and higher than the United States' rate of 15.5.

Seat Belt Use

76.8% of Yellowstone County adults report "always" wearing a seat belt when driving or riding in an automobile. This is statistically similar to national findings (78.3%); both fail to satisfy the Healthy People 2010 target (92% or higher). In Yellowstone County, men are much less likely to report "always" wearing a seat belt than are women. There is a strong positive correlation of seat belt use with age in Yellowstone County. Only three-fourths of adults under age 65 "always" wear a seat belt, compared to 86.0% of those aged 65 and older. Lower-income respondents are much more likely to report consistent seat belt use than middle to high-income respondents.

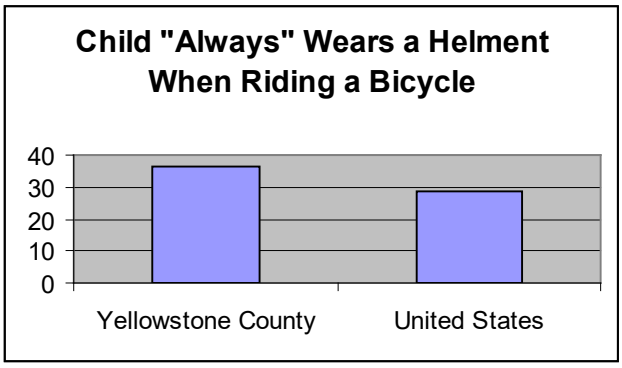
89.3% of Yellowstone County parents of young children report that their child "always" wears an appropriate child restraint (e.g., safety seat or seat belt) when riding in an automobile. This is more favorable than national findings (81.3%).



Source: 2005 PRC Community Health Survey, Professional Research Consultants
Source: 2005 PRC National Health Survey, Profession Research Consultants
Source: Healthy People 2010, 2nd Edition. U.S. Department of Health and Human Services. Washington, DC: U.S. Government Printing Office, November 2000.

Bicycle Helmet Usage

36.2 % of Yellowstone County parents of children aged 5 to 17 report that their child "always" wears a helmet when riding a bicycle. This is statistically similar to national findings (28.8%).

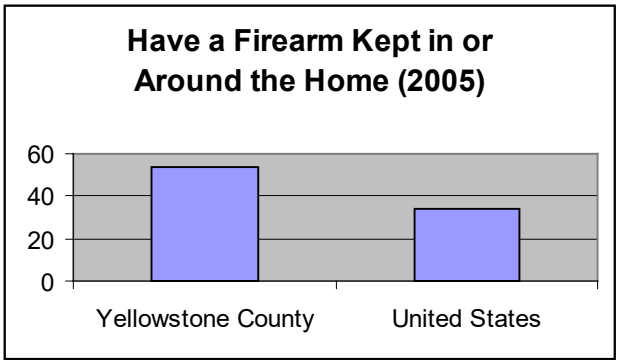


Source: 2005 PRC Community Health Survey, Professional Research Consultants
Source: 2005 PRC National Health Survey, Professional Research Consultants

Firearms

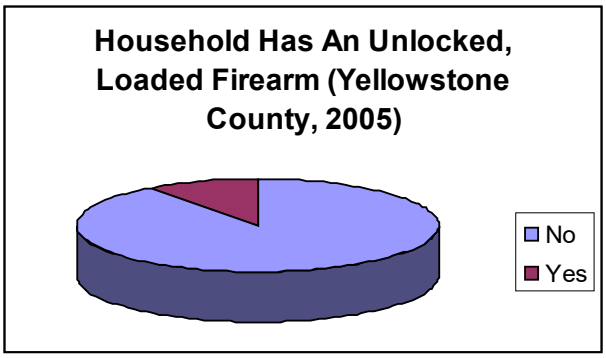
53.5% of Yellowstone County adults have a firearm kept in or around their home. This is statistically much higher than the national rate of 34.1%.

55.0% of Yellowstone County households with children have a firearm in or around the home. Reports of firearms in or around the home are more prevalent among men, especially those in middle-to-high-income households.



Source: 2005 PRC Community Health Survey, Professional Research Consultants
Source: 2005 PRC National Health Survey, Professional Health Consultants

Among Yellowstone County households with firearms, 9.9% report that there is at least one weapon that is kept unlocked and loaded. This is statistically similar to national findings that report 7.6%.



Source: 2005 PRC Community Health Survey, Professional Research Consultants
Source: 2005 PRC National Health Survey, Professional Research Consultants
Source: Healthy People 2010, 2nd Edition. U.S. Department of Health and Human Services. Washington, DC: U.S. Government Printing Office, November 2000.

Violence

Violence claims the lives of many of the Nation's young persons and threatens the health and well-being of persons of all ages in the United States. Violent crime rates in Yellowstone County appear to be increasing during the period between 1994 and 2003. 4.0% of Yellowstone County adults report that they have been the victim of a violent crime in the area in the past five years. This is less favorable than national findings (1.5%). In Yellowstone County:

- Women much more often report experiencing violent crime than do men.
- Adults under age 65 much more often report experiencing violent crime than older adults.

Family Violence

3.2 % of Yellowstone County adults acknowledge being the victim of domestic violence in the past five years. This is statistically similar to national findings that report 2.7%. In Yellowstone County, reports of domestic violence are greater among adults under the age of 65 years as well as person in the low-income category.

HEART DISEASE

Heart disease and stroke—the principal components of cardiovascular disease—are the first and third leading cause of death in the United States respectively, accounting for more than 40% of all deaths.

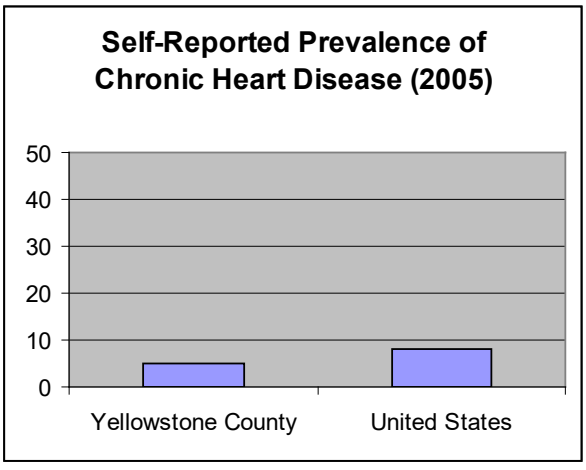
- About 950,000 Americans die of heart disease or stroke each year, which amounts to one death every 33 seconds.
- Although heart disease and stroke are often thought to affect men and older people primarily, it is also a major killer of women and people in the prime of life. More than half of those who die of heart disease or stoke each year are women.
- Each year, about 63 of every 100,000 deaths are due to stroke.

Looking at only deaths due to heart disease or stroke, however, understates the health effects of these two conditions:

- About 61 million American (almost one-fourth of the population) live with the effects of stroke or heart disease.
- Heart disease is leading cause of disability among working adults.
- Stroke alone accounts for the disability of more than 1 million Americans.
- Almost 6 million hospitalizations each year are due to heart disease or stroke.
- About 4.5 million stroke survivors are alive today.

The economic effects of heart disease and stroke on the U.S. healthcare system grow larger as the population ages. In 2001, the nationwide cost for heart disease was $105 billion; for stroke, $28 billion. Lost productivity due to stroke and heart disease cost more than $129 billion.

5.1% of Yellowstone County adults report that they suffer from or have been diagnosed with heart disease, such as coronary heart disease, angina, or heart attack. This represents approximately 5,100 adults in Yellowstone County. This report is more favorable than national findings (8.2%).



Source: 2005 PRC Community Health Survey, Professional Research Consultants
Source: 2005 PRC National Health Survey, Professional Health Consultants

3.3% of Yellowstone County adults report that they suffer from or have been diagnosed with cerebrovascular disease (a stroke). These findings are slightly higher than statewide findings (1.8%) as well as nationwide findings (2.4%).

Hypertension (High Blood Pressure)

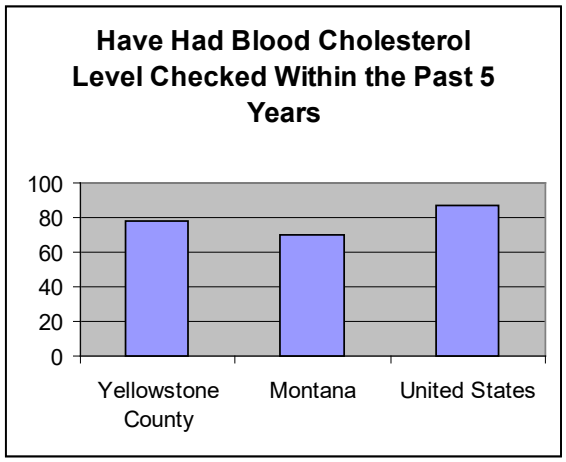
High blood pressure is known as the "silent killer" and remains a major risk factor for coronary heart disease, stroke, and heart failure. About 50 million adults in the United States have high blood pressure.

94.6% of adults in Yellowstone County have had their blood pressure tested within the past two years. This is identical to national findings, and very close to the Healthy People 2010 target of 95%. 26.1% of Yellowstone County adults have been told at some point that their blood pressure was high; an additional 2.1% have not been tested in the past five years. The prevalence of high blood pressure in Yellowstone County is less favorable than Montana findings (21.3%) and more favorable than national findings (34.2%). Nearly nine out of 10 Yellowstone County adults (88.9%) who have been told that their blood pressure was high report that they are currently taking actions (medication, diet, and/or exercise) to control their condition.

High Blood Cholesterol

High blood cholesterol is a major risk factor for coronary heart disease that can be modified. More than 50 million United States adults have blood cholesterol levels that require medical advice and treatment. More than 90 million adults have cholesterol levels that are higher than desirable. Experts recommend that all adults aged 20 years and older have their cholesterol checked at least once every 5 years to help them take action to prevent or lower their risk of coronary heart disease. Lifestyle changes that prevent or lower high cholesterol include eating a diet low in saturated fat and cholesterol, increasing physical activity, and reducing excess weight.

77.7% of Yellowstone County adults have had their blood cholesterol checked within the past five years. This is more favorable than Montana findings (70.1%) and less favorable than national findings (86.6%).



Source: 2005 PRC Community Health Survey, Professional Research Consultants

Source: Behavioral Risk Factor Surveillance System Survey Data. Atlanta Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): 2003 Montana data.
Source: 2005 PRC National Health Survey, Professional Research Consultants
Source: Healthy People 2010, 2nd Edition. U.S. Department of Health and Human Services. Washington, DC: U.S. Government Printing Office, November 2000.

28.5% of Yellowstone County adults have been told by a health professional that their cholesterol level was high. This is similar to both the statewide (29.8%) and national findings (32.9%). In addition, 26.1% of Yellowstone County adults who have been told that their cholesterol level was high have not had their cholesterol checked in the last five years. Further, nearly 35% of low income respondents and close to 45% of young adults have not been tested in the past five years.

Nine out of 10 Yellowstone County adults (83.6%) who have been told that their blood cholesterol was high report that they are currently taking actions to control their condition, such as through medication, diet, and/or exercise.

Total Heart Disease Risk Factors

Individual level risk factors which put people at risk for cardiovascular diseases include:

- High Blood Pressure
- High Blood Cholesterol
- Tobacco Use
- Physical Inactivity
- Poor Nutrition
- Overweight/Obesity
- Diabetes

Nine out of 10 Yellowstone County adults (89.1%) report having one or more cardiovascular risk factors. Yellowstone County demographics show that men more often present one or more cardiovascular risk factors than do women, adults aged 65 and older are at a much greater risk than young adults, and lower-income adults more often report one-or more cardiovascular risk factors.

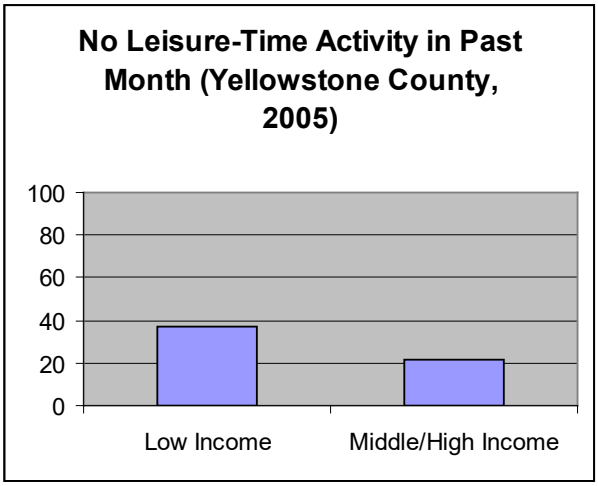
Three health-related behaviors contribute distinctly to cardiovascular disease:

- Poor Nutrition: People who have poor nutrition are more likely to be overweight; people who are overweight have a higher risk for cardiovascular disease. Almost 60% of United States adults are overweight or obese.
- Lack of Physical Activity: People who are not physically active have twice the risk for heart disease of those who are active. More than half of United States adults do no achieve recommended levels of physical activity.
- Tobacco Use: Smokers have twice the risk for heart attack of nonsmokers. Nearly one-fifth of all deaths from cardiovascular disease, or about 190,000 deaths a year nationally, are smoking related.

PHYSICAL ACTIVITY

Research has demonstrated that virtually all individuals will benefit from regular physical activity. A Surgeon General's report on physical activity and health concluded that moderate physical activity can substantially reduce the risk of developing or dying from heart disease, diabetes, colon cancer, and high blood pressure. Physical activity also may protect against lower back pain and some forms of cancer. On average, physically active people outlive those who are inactive. Regular physical activity also helps to maintain the functional independence of older adults and enhanced the quality of life for people of all ages.

26.3% of Yellowstone County adults report no leisure-time physical activity in the past month. This report is significantly less favorable than Montana findings (18.8%). There is a strong negative correlation with income in Yellowstone County—persons living at low income levels more often report not getting any physical activity(37.5%) in their leisure time in the past month than do middle to high income persons (21.9%).



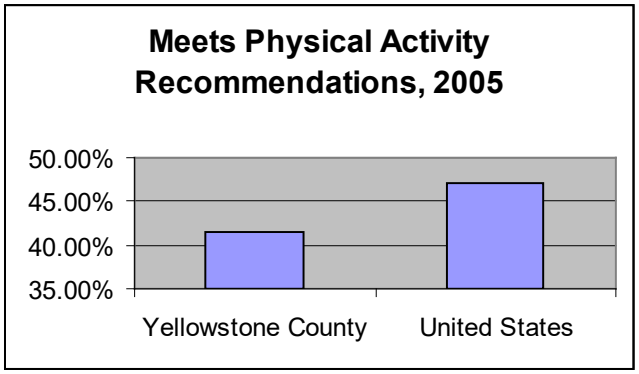
Source: 2005 PRC, Community Health Survey, Professional Research Consultants
Source: Healthy People 2010, 2nd Edition. U.S. Department of Health and Human Services. Washington, DC: U.S. Government Printing Office, November 2000.

In the United States, poor diet and physical inactivity lead to 300,000 deaths each year—second only to tobacco. People who are overweight or obese increase their risk for heart disease, diabetes, high blood pressure, arthritis-related disabilities, and some cancers. Not getting an adequate amount of exercise is associated with needing more medication, visiting a physician more often, and being hospitalized more often. The direct medical cost associated with physical inactivity was $29 billion in 1987 and nearly $76.6 billion in 2000. The annual cost of obesity is the United States is about $100 billion.

Adults should strive to meet either of the following physical activity recommendations:

- Moderate-intensity physical activities for at least 30 minutes on five or more days of the week, or
- Vigorous-intensity physical activity three or more days per week for 20 or more minutes per occasion.

In Yellowstone County, less than half of adults (41.4%) participate in regular, sustained moderate or vigorous physical activity. This data is less favorable than national findings (47.2%).

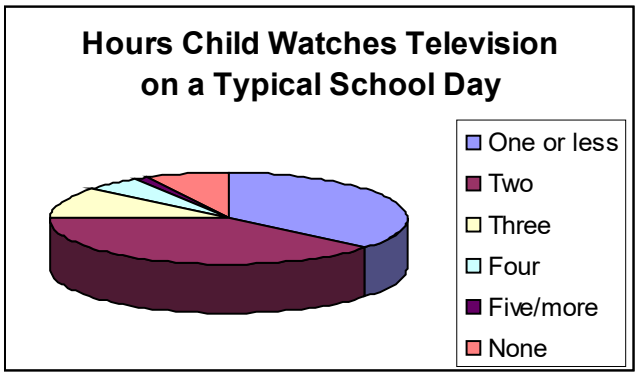


Source: 2005 PRC Community Health Survey, Professional Research Consultants

Adults aged 40 to 64 and adults living at lower income levels are the two demographic groups in Yellowstone County least likely to meet the physical activity recommendations.
36.8% of Yellowstone County adults report that their physician has asked about or given advice to them about physical activity in the past year. Nearly one-fourth of Yellowstone County community members participate in a regular fitness program or center. Most (76.4%), however, do not. Of those not participating, 22.9% cite not having enough time to exercise and 21.4% cite the expense of the programs/centers as reasons why they don't regularly participate in a fitness program or center. Nearly all of Yellowstone County area residents are aware of exercise and fitness opportunities available in the area (93.5%). When asked what could be done in the community to help them exercise more frequently one in ten Yellowstone County respondents mentioned that more convenient exercise facilities would help them to exercise more frequently. Other less mentioned attributes that would help respondents exercise more frequently include more walking trails and more convenient biking trails, free or subsidized exercise programs, and lower costs.

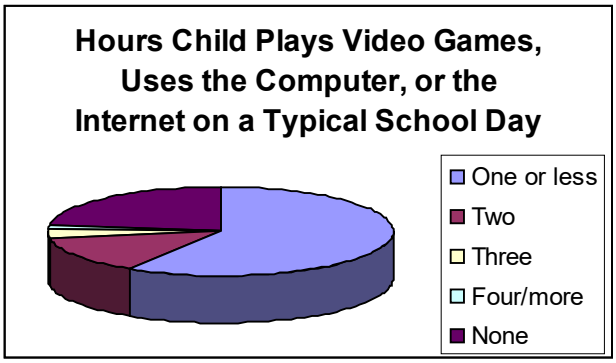
Sedentary Activities for Children

Only 7.4% of Yellowstone County parents report that their child does not watch any television on a typical school day; and 17.6% indicate that their child watches three or more hours of television per typical school day.



Sources: 2005 PRC Community Health Survey, Professional Research Consultants.

A total of 18.3% of Yellowstone County parents indicate that their child plays video games, uses the computer, or uses the Internet for two or more hours in a typical school day.

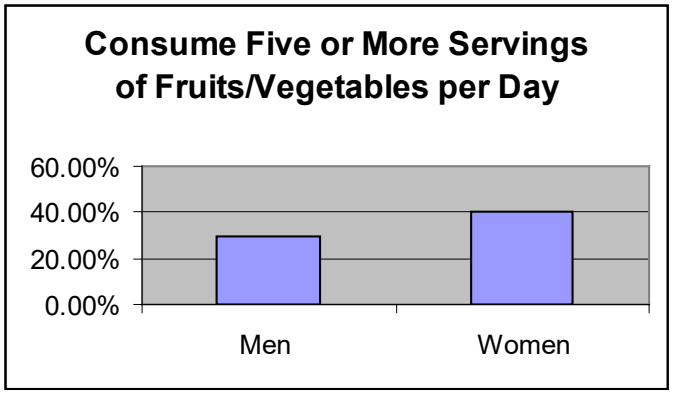


Source: 2005 PRC Community Health Survey, Professional Research Consultants.

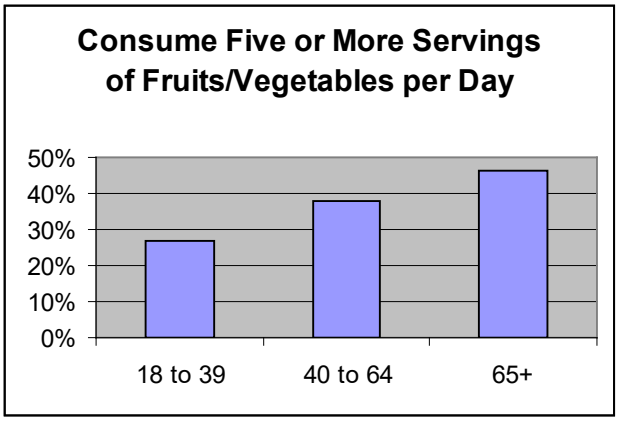
Nutrition

The benefits of good nutrition are multiple. Besides helping you maintain a healthy weight, good nutrition is essential for the body and all of its systems to function optimally for a lifetime. In fact, the benefits of good nutrition can be found in physical and mental health because a healthy diet provides energy, promotes good sleep, and gives the body what it needs to stay healthy.

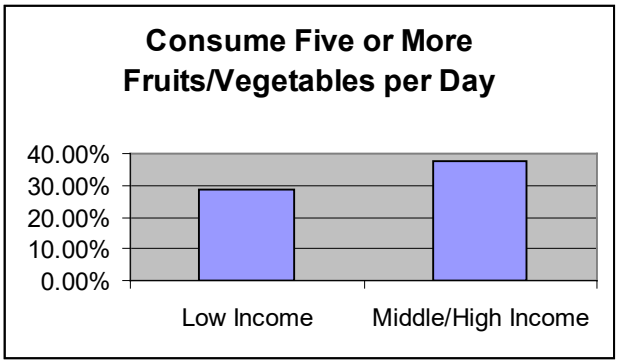
The U.S. Department Agriculture recommends that Americans consume at least five servings of fruit and vegetables per day. A slim 34.9% of Yellowstone County adults report eating five or more servings of fruits and/or vegetables per day. Survey respondents less likely to consume five or more fruits/vegetables per day are men and adults aged 18 to 39. The following charts further examine fruit/vegetable consumption by various demographic characteristics.



Source: 2005 PRC Community Health Survey, Professional Research Consultants.

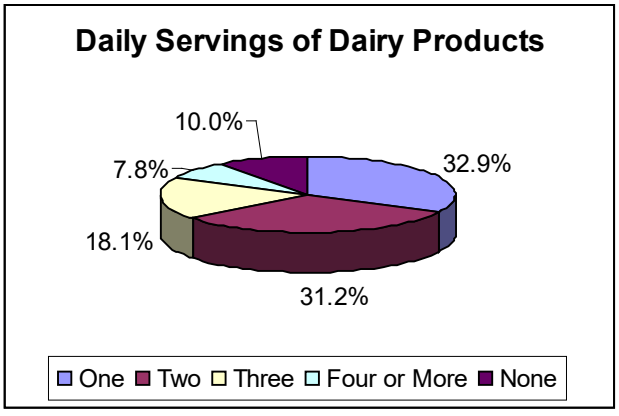


Source: 2005 PRC Community Health Survey, Professional Research Consultants.



Source: 2005 PRC Community Health Survey, Professional Research Consultants.

U.S. Department of Agriculture guidelines encourage the consumption of two to three dairy servings per day. One-fourth of Yellowstone County adults report eating three or more servings of dairy per day; a total of 10% report eating zero servings of dairy per day.



Source: 2005 PRC Community Health Survey, Profession Research Consultants.

The preceding data gives an overall glance of the health status of Yellowstone County residents. There is a reasonable relationship between the built environment and health. Perhaps the most easily understood link relates to the occurrence of overweight and obesity. The built environment affects weight management by affecting both food intake and energy expenditure

through physical activity. The built environment may also play a role in controlling weight by shaping food access and availability. Our built environment can contribute to individual mental health as well as population-wide well-being. In addition, the built environment affects vehicle usage; with more driving comes more vehicle crashes as well as pedestrian injuries and fatalities. Moreover, increased vehicle usage contributes to overall releases of air pollutants which are associated with numerous adverse health outcomes.

As we begin to recognize and understand the health consequences associated with the built environment, we can begin to design effective and coordinated regional planning. Many of the health related benefits that could flow from the "smart growth" approach—less air pollution, increased access to nutritious foods, more physical activity, fewer motor vehicle crashes—would also yield economic benefits, such as less emergency room visits and more marketable communities.

5.0 IMPLEMENTATION

INTRODUCTION

The five subchapters in this chapter provide detailed guidelines for implementing the goals and objectives listed in Chapter 3. Each subchapter outlines a proposed or existing approach to the subjects mandated by the Montana Growth Policy statutes, 76-1-601 *et seq*., MCA. These subjects include:

1. "A description of policies, regulations, and other measures to be implemented in order to achieve the goals and objectives…" (76-1-601(d), MCA). The implementation strategies are contained in Subchapter 5.1.
2. "A strategy for development, maintenance, and replacement of public infrastructure, including drinking water systems, wastewater treatment facilities, sewer systems, solid waste facilities, fire protection facilities, roads, and bridges" (76-1-601(e), MCA). The City and County capital improvements strategies are described in Subchapter 5.2.
3. "An implementation strategy that includes a timetable for implementing the growth policy, a list of conditions that will lead to a revision of the growth policy, and a timetable for reviewing the growth policy at least once every five years and revising the policy if necessary" (76-1-601(f), MCA). Subchapter 5.3 presents a timeline for implementing and evaluating the growth policy and lists conditions that may lead to a revision.
4. "A statement of how the governing bodies will coordinate and cooperate with other jurisdictions … on matters related to the growth policy" (76-1-601(g). Subchapter 5.4 discusses how the governing bodies of Yellowstone County and the City of Billings will coordinate and cooperate on matters related to the growth policy.
5. A statement explaining how the governing bodies will define, evaluate, and make decisions regarding proposed subdivisions with respect to the criteria listed in 76-3-608(3)(a), MCA [the subdivision review criteria] as required by 76-1-601(h), MCA. The definition and evaluation criteria are presented in Subchapter 5.5 along with "a statement explaining how public hearings regarding proposed subdivisions will be conducted" (76-1-601(i), MCA).

5.1 IMPLEMENTATION TOOLS AND STRATEGIES

INTRODUCTION

The tools available to implement a Growth Policy are limited by legal authority, by administrative cost, and to some degree, political acceptance. Implementation tools may be enforced through regulations, adopted as policy by governing bodies or emplaced voluntarily by landowners. They may be mandated by state law or authorized by City Code or County Ordinances. Some tools are simply policies, without the force and effect of law, while others are purely educational. There is a wide variety of tools currently used in Yellowstone County and the City of Billings. The first part of Section 5.1 briefly describes the existing and recommended implementation tools available to the City and County to achieve the Goals and Objectives of this Growth Policy. How these tools are to be applied is described in the second part of this section under Implementation Strategies. This section is a critical part of the Yellowstone County Growth Policy in that it specifies the actions recommended to achieve the Goals and Objectives listed in Chapter 3.

Implementation Tools

This section provides general information on a range of planning tools that can be used to implement a growth policy. It includes brief definitions or descriptions for each tool. Some tools are already in use in Billings and Yellowstone County and others are suggested for further consideration. This list is not intended to be comprehensive of all planning tools available to local jurisdictions.

The implementation tools are organized into the following descriptive categories: Regulatory, Planning and Programming, Financial, Educational, and Cooperative. **Regulatory tools** are enforced by regulations and are authorized by state statute. Governing bodies adopt **Planning and Programming** tools to demonstrate a commitment to a particular direction or course of action, and can be employed with discretion. **Financial tools** require a financial commitment to appropriate funds for specific projects. **Educational tools** include a broad range of items used to inform governing bodies, policy makers, and the public on key planning and community development issues. **Cooperative tools** describe partnerships between departments and agencies to develop joint policies or action plans. These may serve as the basis for creating, reviewing, and revising policies and regulations. Cooperative tools are generally enforced or administered at the discretion of cooperating agencies.

Regulatory Tools

Subdivision Regulations

Counties and incorporated municipalities must adopt subdivision regulations that comply with the Montana Subdivision and Platting Act (76-3-101 *et seq*., MCA). Subdivision regulations control the creation of new parcels by imposing design and infrastructure standards and by establishing procedures for local governmental and public review. Regulating the division of land ensures that development can be adequately served without adversely impacting public services and natural resources.

Both the City and County have adopted subdivision regulations. Section 5.5 provides more detailed information on the relationship between subdivision regulations and this Growth Policy. Subdivision regulations are among the most effective tools available for implementation of a growth policy, particularly in areas of the County where zoning, building permits, and other tools may be unavailable and/or infeasible.

Design Standards

Design standards are typically part of subdivision regulations or incorporated into the municipal code to preserve community character, protect property values, and ensure public safety. The Montana Subdivision and Platting Act authorizes the adoption of design standards, and self-chartered municipalities may include them in their municipal code.

Design standards can significantly affect the appearance and functionality of a development. For these reasons, they are often employed to address a variety of issues including land use, aesthetics, transportation, and public service. Flexible design standards may help reduce costs to the developer. Development costs can also increase if design standards are complex and rigid. Both the City and the County have adopted the Entryway/Interchange zoning regulations, which require a higher level of landscaping and building design in the Entryway/Interchange zoning districts. Additional design standards have been adopted by the City for the Zoo Drive-Shiloh Road Corridor as zoning 'overlay districts'. These districts are at major entryways into the community and are intended to be developed in an attractive and appealing manner.

Zoning Regulations

Zoning is another commonly used tool for implementing land use policy. The historical rationale for zoning was to separate incompatible land uses. Zoning ordinances generally address type of use, intensity of use, and space and bulk requirements. Development and design standards for such things as signage, parking, landscaping, noise, lighting, buildings, and site layout can also be addressed through zoning regulations. A zoning map and the descriptive text of districts are the two critical components of zoning regulations. Municipal or County zoning must comply with the Growth Policy and its amendments.

The Billings-Yellowstone County Unified Zoning Regulations govern zoning in the City and County. Most of the County is not zoned. Billings, Laurel, and Broadview all maintain their own zoning within their corporate boundaries. Laurel has extraterritorial zoning jurisdiction that extends approximately one mile outside of the city limits. Yellowstone County has a zoning jurisdiction that extends out from the Billings city limits approximately 4-1/2 miles. The majority of the zoned property within Yellowstone County is located in and around the Billings and Laurel urban areas. Additionally, there are a number of citizen-initiated zoning districts located throughout the County as described in the Land Use Element chapter.

The City of Billings Zoning Ordinance #1099, originally adopted on July 15, 1930, governs zoning within the municipal limits of the City of Billings. Yellowstone County adopted a zoning jurisdiction and regulations by Resolution #34723 on November 6, 1973.

In addition to the more traditional form of zoning, jurisdictions may explore other zoning approaches that can be used to regulate development of property. Some of these alternatives are described below.

Citizen Initiated Zoning
The County Commissioners are authorized to create a planning and zoning district for an area at the request of at least 60 percent of the landowners (76-2-101 et seq., MCA). The area of the district must be over 40 acres and must not have been previously zoned. This type of zoning, conventionally referred to as "citizen-initiated", allows landowners to plan for and zone an area based on their land use preferences. In Yellowstone County, there are five citizen-initiated or "Special Zoning Districts" administered by the Planning and Zoning Commission. The Commission consists of the Board of County Commissioners, the County Surveyor and the County Clerk and Recorder. It is the responsibility of this Commission to prepare and adopt a development pattern for the physical and economic development of the district. In practice, the development pattern, which resembles a land use plan, is usually prepared by the landowners. The Commission may adopt zoning or other land use regulations to implement the development pattern. As a practicality, the City-County Planning Department takes over the responsibility to administer the districts' zoning regulations.

Performance Zoning
Performance zoning is an alternative to traditional "Euclidian" zoning because it uses measurable standards to regulate the impact a land use may have on its surroundings instead of separating uses by zoning districts. Performance zoning for residential uses can be used to protect natural resources and provide flexibility in the development design. Common performance thresholds established through performance zoning include minimum amount open space, maximum density, and maximum percent of impervious surface.

Performance zoning has also been used to address commercial and industrial uses by requiring more intense uses to meet higher standards for site and building design. For example, the City has adopted the Medical Corridor Permit Zoning District. In this district, a proposal is evaluated for compliance with absolute standards and a point system is used to determine compliance against a set of relative standards. All projects have to meet the absolute standards; then, the more intense the use, the greater the number of relative standards must be met.

Interim Zoning
Interim zoning may be employed by the City or County as an emergency measure to protect the public health, safety and under the County's authority, morals (76-2-206 and 76-2-306, MCA). A jurisdiction may use interim zoning to prohibit uses that may conflict with a "contemplated zoning proposal" which the governing body is considering. The interim zoning in the County may be effective for one year, but the City can implement it initially for only six months, with an extension up to one year. Interim zoning has been used by the City of Billings and Yellowstone County to implement the

Entryway/Interchange zoning regulations until permanent regulations could be adopted and more recently to implement buffering standards for sexually oriented businesses.

Transfer of Development Rights

Transfer of Development Rights (TDR) uses zoning to allow owners of land in areas called "sending districts" to sever the development rights from their property and sell, or otherwise legally transfer those rights to owners of property located in specified "receiving districts", where higher intensity of development is preferred. There are several components essential to a TDR program: a designated protection/preservation area (sending zone), a designated growth area (receiving zone), development rights that can be severed from the land, and a procedure for transferring development rights between properties. TDR procedures have not been established in Yellowstone County.

Building Permits

The City Building Division administers building codes for the City of Billings only. In 2003, state legislative changes took away the authority of the City Building Division to review building permits outside the City Limits. . Previous to that, the City Building Division had administered the County's building permit jurisdiction which was generally a 4.5 mile jurisdiction surrounding the City and within the Unified Zoning Jurisdiction. Now permitting of building construction in the County falls under the Montana Building Codes Division at the State. The Building Codes that are adopted by the State, including building, plumbing, mechanical, and electrical, are also required to be adopted by the City. The Code provides the City with minimum standards to safeguard life and property by regulating building construction. They also serve to create an enjoyable and aesthetically pleasing place to live while preserving property values. A building permit is required for almost any type of construction on private property. Several Departments are involved in the review process, including Fire, Engineering, Planning and Community Services and Public Utilities to ensure compliance with their associated codes.

Floodplain Regulations

The purpose of floodplain regulations is to protect the watercourses and their flood storage areas, as well as the public health, safety, and welfare. Montana state law requires local governments to adopt and enforce floodplain management regulations. The City and the County administer separate floodplain regulations.

Planning and Programming Tools

Long-Range Planning

Critical implementation tools for this Growth Policy are more detailed neighborhood or area plans, and plans to address a particular issue such as transportation, parks and recreation, economic development, infrastructure or housing. This Growth Policy establishes a framework for future plans by specifying public values through Goals and Objectives. With the adoption of this Growth Policy, plans may be developed that provide a higher level of detail and include content specific to an area or issue. Since 2003, five neighborhood plans within the City and three community plans within the County have

been written and adopted as part of this Growth Policy. More information on those plans can be found in Chapter 4.

In addition to the development of new plans, existing plans which presently have a role in decision making may need to be revised and updated. These include the 2005 Urban Area Transportation Plan, 2004 Heritage Trail Plan, Parks2020, and several neighborhood plans. Updates to these plans could be simple additions or modifications or may require a new approach to become more consistent with the Growth Policy Goals and Objectives.

Annexation Policy

A city expands its boundaries and its jurisdictional authority through the process of annexation. State statute authorizes six separate methods for annexation. Adjacent land may be annexed as described in Parts 42 through 44 of Title 7, Chapter 2, Montana Code Annotated (MCA). Property that is wholly surrounded by a city may be annexed under Part 45 with the exception of land used for agricultural, mining, smelting, refining, transportation, industrial or manufacturing purposes, golf course, cemeteries, or outdoor entertainment uses. Private property owners can petition for annexation as described in Part 46. When property owners petition for annexation, the City of Billings' Annexation Policy requires them to enter into an annexation agreement and comply with the other conditions under which annexation will occur. The Annexation Policy is used to help plan for expansion and provision of municipal services. In 2004, a 'Limits of Annexation' map was added to the policy indicating which areas surrounding the City limits could be reasonably supported for annexation if requested by the property owner. This map was developed based on expected and potential capital improvements the City has planned and is updated annually in coordination with the City's Capital Improvements Plan.

Urban Planning Area

The Urban Planning Area is an area surrounding the City of Billings established for the purpose of planning for its future growth within a 10-year horizon. The UPA was initially created in 1967 under Article 20-300, BMCC, and has historically been the City's growth boundary. The UPA policy states that no City services shall be provided outside of the UPA; however, to quote a 1980 study, "the UPA is not designed to limit growth, merely limit the amount of land that is consumed and reduce the cost of services needed when this growth occurs." Expansion of the UPA requires the completion of an Urban Planning Study so that the City can determine the impacts of annexing and serving the property. City departments review UPS documents for conformance with operating policies, capital improvement plans, the Growth Policy, and other plans. A property must be within the Urban Planning area before it can be annexed into the City limits.

Urban Renewal Districts

Title 7, Chapter 15, Part 42 of MCA, otherwise known as the Urban Renewal Law, gives municipalities the authority to redevelop and rehabilitate "blighted" areas. State law specifies requirements for preparing Urban Renewal Plans and also authorizes the expenditure of funds on Urban Renewal Districts, including tax increment funds. Urban Renewal Plans have been most recently prepared in 2006 for the 'East Billings Urban Renewal District' located east of downtown to MetraPark, and in 2008 for the 'South

Billings Boulevard Urban Renewal Area' located near the South Billings Boulevard interchange.

Departmental Work Plans

Every City and County department develops annual work plans to assist them in their budgeting process. Work plans establish a list of priority projects that the department can implement within the year, in addition to their regular work duties. For some departments, such as the Planning and Community Services and Parks, Recreation and Public Lands Departments, the annual work plan is reviewed and approved by their citizen advisory boards. Work plans are also programming tools that establish the timeframes for completion of priority tasks and projects.

Financial Tools

Capital Improvements Programs

The City of Billings adopts an annual Capital Improvements Plan (CIP) which identifies all capital projects that are in excess of $25,000 and equipment needs in excess of $5,000. The projects and equipment needs are then prioritized and budgeted over a five year period. The City undertakes a comprehensive review of the Capital Improvements Plan every two years. The importance of a CIP for land use planning is the critical connection between where and when infrastructure is provided and what the desired land use pattern is for a community or neighborhood. Proposals included in the CIP are reviewed for compliance with adopted land use and transportation planning policies.

Fee Incentives

Some City and County departments are authorized to charge fees for their services and facility maintenance. The most common fees are for solid waste service, storm drainage, water and sewer service. The location of development can be influenced by tying the location to a fee increase or decrease. Municipalities, particularly, have the ability to develop a utility fee structure that can be used as an incentive for directing growth.

Purchase of Development Rights

A Purchase of Development Rights (PDR) program involves the outright purchase of development rights from a private property owner by local or state governments to preserve resource land. Funding for PDRs can come from sources such as bond initiatives, grants, and public matching funds programs. The difference between PDRs and land acquisition is that a property owner in a PDR program can continue to use this land in ways that are consistent with the objectives of the PDR program. PDR procedures have not been developed in Yellowstone County.

Land Acquisition

Land acquisition programs involve a jurisdiction or organization purchasing land usually for some public benefit. Some communities and organizations have used this tool to purchase land to be used for affordable housing development; others have used it to purchase property for its open space or agricultural value.

Impact Fees

An impact fee is a charge on new development assessed by a governmental entity at the time of the development approval process to pay for the construction or expansion of off-site capital improvements that are necessitated by and benefit the new development. In 2005, the state legislature passed enabling legislation known as the "Montana Impact Fee Act" (7-6-1601, et seq., MCA) to allow local governments to establish impact fees provided certain requirements are met. In general, the collection and expenditure of impacts fees must be reasonably related to and reasonably attributed to the development's share of the cost of infrastructure improvements made necessary by the new development.

Educational Tools

Inventories and Planning Studies

Land use policies and decisions can be better informed if supported by studies and inventories. Typically, these studies help identify and rank critical social, environmental, historic and cultural resources. Studies and inventories can also provide the rational nexus required for exactions and other dedications. The information obtained from these studies must be well organized, accurate and easy to understand. Maps and databases developed using Geographic Information Systems can satisfy these criteria.

Land Evaluation and Site Assessment System (LESA)

The Land Evaluation and Site Assessment (LESA) system helps state and local officials make sound decisions about land use by providing a technical framework to numerically rank land parcels based on local resource evaluation and site considerations. The results of land evaluation programs can be incorporated into zoning regulations.

Health Impact Assessments (HIA)

The built environment can have substantial effects on the health of the community. By using a new tool known as the Health Impact Assessment, or HIA, one can research the potential health effects of an anticipated policy, program or project and offer recommendations to increase positive health outcomes and minimize potential adverse health effects. HIAs are similar in some ways to Environmental Impact Assessments (EIAs), which are mandated processes that focus on potential environmental outcomes of a proposed project, such as changes in air and water quality. However, unlike EIAs, HIAs are currently voluntary assessments that can be used to focus on possible community health outcomes of a proposal and subsequently highlight proactive measures to improve individual or community health. For example, an HIA may identify that a project or policy may inadvertently cause physical inactivity and lead to obesity, or that it may negatively impact air quality which may increase asthma occurrences, or even that it may promote inefficiencies in design that may lead to increased injuries. In these cases, the HIA would then recommend project alterations in order to help resolve these detrimental health impacts before they occur. HIAs are being increasingly used to proactively promote social equity and improve the health of many growing communities.

Cooperative Tools

Interjurisdictional Coordination and Partnerships

The City and County must coordinate their efforts on several levels to provide safe and dependable services to the public. The Metropolitan Planning Organization (MPO) is an important mechanism for ensuring that transportation projects are coordinated between the City and the County. Both jurisdictions have representation in the MPO and jurisdictional interests are further represented by members from the joint City-County Planning Board. The Planning Board is composed of City and County residents and is advisory to both the City Council and the County Commissioners. The Billings Fire Department also cooperates with the County and other Fire District to provide services outside the City. Many quasi-governmental boards also have cooperative agreements with the City and County such as the Billings Downtown Partnership and Big Sky Economic Development Authority. It is through these partnerships that the interest of all jurisdictions are discussed and addressed.

Interagency Coordination

Some federal, state and local government land management agencies share similar responsibilities for the same resources. In some cases, these agencies are not well informed of other agencies' proposed plans or tasks. This lack of communication can result in ineffective policies or inconsistent regulations if agencies do not coordinate their planning and implementation efforts. Opportunities for interagency coordination are particularly possible in land and water conservation areas because the resources overlap agency jurisdictions.

Conservation Easements

Conservation easements are cooperative tools whereby a landowner voluntarily severs the development rights from the property and sells or donates them to a third party. The landowner is able to retain title to property and use it for resource purposes and at the same time help preserve critical resources such as wildlife habitat, wetlands or riparian areas, agricultural lands, forested lands or land with other scenic or natural resources. The severance of development rights can be done through purchase or donation and may result in a tax benefit to the property owner.

Conservation Reserve Program

In cooperation with the Natural Resource and Conservation Service, eligible farmers and ranchers may participate in the Conservation Reserve Program (CRP) to address soil, water, and related natural resource concerns on their lands in an environmentally beneficial and cost-effective manner. The Conservation Reserve Program reduces soil erosion, protects the Nation's ability to produce food and fiber, reduces sedimentation in streams and lakes, improves water quality, establishes wildlife habitat, and enhances forest and wetland resources. It encourages farmers and ranchers to convert highly erodible cropland and rangeland or other environmentally sensitive acreage to vegetative cover, such as tame or native grasses, wildlife plantings, trees, filterstrips, or riparian buffers. Farmers and

ranchers receive an annual rental payment for the term of the multi-year contract. Cost sharing is provided to establish the vegetative cover practices.

IMPLEMENTATION STRATEGIES

As a result of the public involvement process during the 2003 preparation of the Growth Policy, 45 City and County issues were identified and categorized into eight 'Elements'. As part of this 2008 Growth Policy, these elements will continue to be used, and a new 'Community Health' element has been added. The 9 Elements include: Land Use, Economic Development, Aesthetics, Natural Resources, Open Space and Recreation, Transportation, Public Facilities and Services, Cultural and Historic Resources, and Community Health. Under each element, issues are restated as a goal or positive outcome, and strategies for implementing or achieving the goals are listed. Since 2003, a number of issues have been addressed and resolved; some issues involve on-going implementation, while others have not yet been addressed.

2008 Updates:

A major goal of the 2008 Growth Policy is to evaluate which issues identified in the 2003 Growth Policy have been addressed, and what implementation strategies were used in addressing the issues. Coupled with this 'status report' goal, is the goal to update the issues and strategies by adding new ones, deleting those that are complete or no longer relevant or change them to make them relevant. To this end, an evaluation by Planning staff indicated that of the 45 issues and 235 implementation strategies identified in the 2003 Growth Policy, the community has taken some form of action on all of the issues and 203 of the possible implementation strategies. This equates to an 85% action rate. In terms of what remains as issues, goals, and implementation strategies for this 2008 Growth Policy, many issues and strategies are on-going and will remain. However, new growth concerns and trends have emerged over the past five years that have resulted in the addition of a number of new issues and strategies to this 2008 policy. In total, this document presents 74 issues, and 400 implementation strategies for consideration.

IMPLEMENTATION STRATEGIES: LAND USE ELEMENT

ISSUE I: Neighborhoods are experiencing pressures from new development and land use changes.

POLICY I: Preserve neighborhood integrity by creating neighborhood plans that specifically address land use issues.

1. When funding sources become available, develop more neighborhood plans that:
    a. Make recommendations for land use that may include areas suitable for multi-family housing, manufactured home parks, condominiums and basement apartments
    b. Develop goals for transit and multi-modal paths and trails
    c. Identify desired capital improvement projects for the neighborhood
    d. Identify neighborhood assets that are important to preserve and celebrate
    e. Assess the adequacy of parks and open space in the neighborhood
    f. Make recommendations for the maintenance and use of neighborhood schools
    g. Support a full range of housing opportunities
    h. Minimize through traffic on local streets
    i. Discourage parking on local streets for non-residential purposes.

OR The Planning Board may annually assess the needs of neighborhoods to identify the residents' preference for land use and capital improvement. The assessment shall be conducted in a formally structured process to ensure a representative and reliable indication of residents' preferences.

2. The City and County may prioritize neighborhoods for urban renewal plans (7-15-4206(18), MCA) to address:
    a. Any land acquisition, demolition and removal of structures, redevelopment, improvements and rehabilitation that is proposed to be carried out
    b. Land uses, maximum and minimum densities, building requirements
    c. The plan's relationship to definite local objectives respecting appropriate land uses, improved traffic, public transportation, public utilities, recreation and community facilities, and other public improvements, service, and facility needs
3. During the neighborhood planning process each neighborhood may develop its own recommendations to establish:
    a. Minimum or maximum development densities
    b. Height of structures
    c. Maximum and minimum parking standards
    d. Appropriate regulations for allowed uses
    e. Architectural design standards
4. Each neighborhood may define its boundary.
5. Increase enforcement of zoning and building permit requirements.
6. When considering land use applications support existing neighborhood plans.
7. Encourage neighborhoods to review their plans annually and report implementation progress to the City and County.
8. Educate the public on how capital improvement projects are prioritized and funded.

ISSUE II: The current zoning ordinances and subdivision regulations do not always prevent incompatible uses in and adjacent to existing City neighborhoods and County townsites.

POLICY II: Ensure that development is compatible with the character of the neighborhood or townsite in which it is occurring.

1. When revising the zoning ordinance consider the following:
    a. Reduce uses permitted in Neighborhood Commercial districts that are inappropriate for residential neighborhoods, such as tattoo parlors and some types of drive-through businesses
    b. Review existing commercial zoning district uses, specifically those adjacent to residential uses, to identify potential incompatible uses and conflicts with surrounding properties.
    c. Further restrict or condition gaming and casino licenses
    d. Concentrations of corrections facilities in any one neighborhood should be discouraged
    e. Allow for additional business uses on a limited basis that act as business incubators
    f. Support mixed use developments that exhibits elements of compatibility
    g. Neighborhood plans should be considered during zoning review processes
2. When revising the zoning ordinance consider requiring commercial development to:
    a. Use shared service areas including driveways, parking, and service areas
    b. Consolidate width of driveways and curb cuts across public sidewalks
    c. Shield service and utility functions
    d. Limit surface parking between the front of the building and the sidewalk
    e. Orient new development in a similar fashion as existing development
    f. Provide a reasonable transition in scale, including height of structure and density
    g. Explore requiring architectural standards for buildings to create attractive streetscapes
    h. Provide landscaped edges in developed areas to define the edges and visually screen automobile or other service uses
3. County officials may consider extending zoning across the entire county to prevent incompatible uses adjacent to existing residential and agricultural properties. Existing Special Zoning Districts should be kept intact.
4. Consider creating standards to include in the zoning ordinance that define compatibility and consider such factors as:
    a. Residential development would be no more than one story difference to adjoining uses
    b. Create similar vehicular trip generation
    c. Have no greater lot coverage
    d. Contain proportionally no more parking spaces, out buildings or garages than neighboring development
    e. Setbacks would deviate no more than 10%
    f. Use of similar building materials
5. The City and County may adopt interim zoning as an emergency measure to address incompatible uses.
6. Encourage the use of private covenants, conditions and restrictions for subdivisions, while acknowledging that these restrictions are not enforced by local government.

ISSUE III: Rural townsites are not prepared to handle increased growth.

POLICY III: Equip rural townsites with tools to plan for increased population or to plan to increase population.

1. When funding sources become available, prepare community plans (similar to neighborhood plans) for Broadview, Acton, Lockwood, Shepherd, Huntley Project (Huntley, Worden and Ballantine) and Custer. The community plan may:
    a. Make recommendations for land use that include areas suitable for a variety of housing types, commercial, and industrial uses
    b. Identify desired capital improvement projects for the community
    c. Identify community assets such as agricultural and mineral resources that are important to preserve and celebrate
    d. Assess the adequacy of parks and recreation facilities in the community
    e. Support a full range of housing opportunities
    f. Minimize through traffic on local streets, improve safety of intersections with state highways and improve safety of state secondary routes and county section line roads
2. Involve rural school districts and fire districts in community plan development and implementation.
3. Each community may develop its own recommendations to establish:
    a. Appropriate land use tools to guide development, such as zoning
    b. Capital improvement and facility priorities
    c. A community planning committee that will oversee implementation of the plan
    d. A water and/or sewer district
    e. Funding sources including Community Development Block Grants and Human Resources Development Council grants
4. Each community may define its boundary.
5. As funding is available, provide technical and funding assistance to help implement community plans.
6. Encourage community planning committees to review community plans annually and report progress to the County Commissioners.
7. Continue to implement County community decay ordinance.
8. Encourage the use of citizen-initiated zoning for unzoned, County communities and subdivisions (76-2-101 et seq., MCA).

ISSUE IV: Urban sprawl threatens the rural character of land surrounding Billings, increases the cost of providing public services, and threatens the vitality of the city core and Downtown.

POLICY IV: Coordinate efforts to concentrate development in and adjacent to the existing City limits.

1. Define urban sprawl within subdivision and zoning regulations in order to identify solutions to the issue.
2. Define "neighborhood" within subdivision and zoning regulations based on land use and transportation criteria such as walking distance from edge to edge, housing density, connectivity, lot sizes and proximity to community amenities and centers of commerce.

3. Encourage the development of neighborhoods, not just housing developments.
4. Provide incentives for urban redevelopment. Strategies may include:
    a. Fee waivers
    b. Tax Increment Finance Districts (TIFD)
    c. Tiered cost of service districts
5. Provide fee and development standard incentives for urban infill development and low to moderate income housing. Strategies may include:
    a. Fee zones based on distance to water and wastewater treatment plants
    b. Prorated charge for service extensions
    c. Fee waivers
    d. Density and open space incentives offered to developers
    e. Phased tax relief and City development subsidies
    f. Tiered cost of service districts
    g. Impact fees (City only)
    h. Encourage special zoning for developments that provide for mixed uses
    i. Tax relief for developments that reduce vehicular traffic and encourage "green" building practices such as attention to energy efficiency, use of local or recycled materials, use of trees for shade and wind breaks, and water conservation practices
6. Encourage environmentally responsible and sustainable development through enabling building codes and development regulations.
7. Support construction of community facilities for each neighborhood to create a sense of community (technical support, not necessarily financial).
8. Implement the West Billings Plan by adopting recommended changes to the zoning ordinances and subdivision regulations and expanding the County Zoning jurisdiction
9. Evaluate and recommend appropriate rural growth management techniques designed to concentrate development while preserving agricultural land, sensitive natural environments and open space. Techniques may include:
    a. A program to transfer development rights or purchase development rights
    b. Cluster or conservation-style development
    c. Performance zoning designed to limit large lot subdivisions and encourage mixed use
    d. A performance evaluation for development proposals based on the Land Evaluation and Site Assessment (LESA) system developed by the U.S. Department of Agriculture, Soil Conservation Service
10. Consider revising zoning code to increase the lot size required for land used for agricultural purposes.
11. Update City annexation policy to require contiguous annexation to the city. Annexation of entire properties should be required, not just piece by piece.

ISSUE V: There is a serious lack of affordable housing for low to moderate income households.

POLICY V: Enable the development of affordable housing in appropriate areas throughout the City and County.

1. Define Affordable Housing versus Workforce Housing in subdivision and zoning regulations.
2. Direct staff to evaluate the alternatives available for affordable housing and bring them to the governing bodies for consideration.
3. Provide incentives for affordable housing projects by reducing infrastructure and permitting

requirements where appropriate.
4. Identify and rezone appropriate areas for new manufactured home parks with strict design standards.
5. Develop Downtown housing strategies.
6. Encourage mixed use developments, specifically in the downtown with commercial offices and retail on the ground floor and apartments above.
7. Support the City's Affordable Housing strategies by training code enforcement, police, and County Health personnel on housing rehabilitation and homebuyer assistance programs.
8. Ensure that multi-family units are compatible with surrounding land use.
9. Continue County's involvement with the various community groups to support strategies to develop and maintain affordable housing, provide equal housing opportunity and to revitalize neighborhoods.

ISSUE VI: There is a desire for more mixed-use neighborhoods.

POLICY VI: Create diverse and vibrant neighborhoods that offer convenient places to work, learn, and shop within walking distance of residences.

1. Consider modifying zoning regulations to include:
   a. Mixed-use development zones
   b. "Urban village overlay zones"
   c. Performance-based zoning codes[14] for major corridors throughout the city to create quality mixed use developments
2. Consider adding mixed-use or planned unit development design standards in subdivision regulations.
3. Encourage and provide incentives for developments that have mass transit services or alternative transportation options within walking or biking distance to promote community health.
4. Evaluate the potential to rezone portions of commercial strips to allow for mixed-use, especially vacant shopping malls.
5. Formulate more types of single family zoning districts.
6. Rehabilitate older residences along arterial streets into mixed uses with both commercial and residential elements.
7. Assess impact fees and higher cost of service fees for previously undeveloped land far from the city center (City only).
8. Increase streetscape attractiveness through landscaping and architectural standards for developments.

[14] Performance-based zoning is an alternative to traditional zoning. Whereas traditional land use zoning specifies what land uses are allowed within specified districts, performance zoning specifies the intensity of land use that is acceptable. It deals not with the land use, but the performance of a parcel, and how it impacts surrounding properties. Mitigation of impacts may be achieved through design features, hours of operations, enhanced landscaping, etc.

IMPLEMENTATION STRATEGIES: ECONOMIC DEVELOPMENT ELEMENT

ISSUE I: We need to continue a cohesive focus in economic development.

POLICY I: Collaborate on the development of a strategic plan for economic development.

1. Support efforts to revitalize Downtown by increasing investment and capital improvements in Downtown Billings.
2. Attract better paying jobs.
3. Target employment clusters using public and private partnerships.
4. Encourage existing businesses to expand.
5. Support business linkages that locate close to support services.
6. Facilitate the development of vacant infill parcels.
7. Utilize targeted employment clusters when developing public/private partnerships.
8. The Planning and Community Services Department should take a greater role in economic development with regard to land use information resources.
9. Inventory infill opportunities and explore the creation of a Transfer of Development Rights system for infill incentives.
10. Consider a beneficial use tax or other special assessments such as public safety districts so that all service users, including tax exempt properties, contribute for services rendered.
11. Improve and coordinate community-wide adult education opportunities.
12. Facilitate the coordination of economic development groups, local businesses, and K-12 education to ensure preparation of a qualified workforce.

ISSUE II: Lack of living wage jobs.

POLICY II: Attract businesses with a minimum average annual wage equal to the living annual wage[15].

1. Report regularly to public on how economic development dollars are spent.
2. Coordinate efforts among City, County, schools and major businesses.
3. Support the goals identified by Big Sky Economic Development Authority to attract new businesses and retain existing businesses by providing them with economic development resources.
4. Develop collaborative partnerships with various economic development efforts throughout Yellowstone County.
5. Provide community information and permitting assistance to businesses looking to relocate to Yellowstone County or existing businesses wishing to expand.
6. Improve marketing of our community to employers paying a living wage.
7. Encourage retention and recruitment of businesses that offer competitive wages and benefits.

ISSUE III: The entryways to our communities should be attractive and not present physical barriers discouraging economic development.

POLICY III: Encourage good design, create attractive entryways and rights-of-way, and improve access to and through Billings and Yellowstone County.

[15] In 2008, this was $13,390 for 1 adult, $27,973 for 1 adult and 1 child.

1. Provide incentives for businesses in the areas of design, landscaping, etc.
2. Designate areas within the zoning jurisdiction as "Business Parks". Design traffic circulation within these Business Parks and truck routes to these Business Parks to accommodate existing businesses and minimize conflicts with adjacent neighborhoods.
3. Consider committing City and County resources, where appropriate, to maintain attractive and welcoming infrastructure at all entryways to Billings and Lockwood.
4. Construct and maintain attractive rest areas in the urban interstate corridor in conjunction with Montana Department of Transportation.
5. Expand the wayfinding signage to direct people to great destinations in Billings and Yellowstone County.
6. Public facilities, including City, County, and Federal buildings, and university and college campuses, should be attractive and inviting.
7. Infrastructure, particularly rights-of-way and parks should be maintained and enhanced.
8. Consider regulating building design by implementing design standards and review, limited to certain high-visibility districts.
9. Enforce Community Decay Ordinance along Interstate Corridor and other highly visible rights-of-way.

ISSUE IV: Government supported programs and improvements are not sufficiently funded.

POLICY IV: Find better ways to fund government services.

1. Mitigate insurance and assessed value increases on property.
2. Consider implementing some form of City service funding through sales tax or local option tax if tied to property tax reduction.
3. Seek HUD Section 108 loans for low income neighborhoods, coupled with brownfield economic development projects to fund infrastructure projects.

Consider all costs and benefits, including possible alternative revenue streams, before considering sale of city property (like PARK 4, Library)

ISSUE V: Like many other Montana cities, the economic viability of Downtown Billings is uncertain.

POLICY V: Support private and public initiatives to strengthen the economic viability of Downtown Billings.

1. Create new tax increment finance districts if, after analysis, the existing TIF was demonstrated to be effective.
2. Support economic development efforts that would encourage a sustainable Downtown economy.
3. Facilitate programs that would encourage property renovation in the Downtown.
4. Foster partnerships between major employers to encourage them to remain or move Downtown.
5. Increase parking, considering alternatives to surface parking, in the Downtown to encourage economic development.
6. Seek financial assistance for building rehabilitation.

7. Encourage the improved appearance of storefronts.
8. Encourage the development and expansion of educational opportunities at the high school and post-secondary levels to bring people into the Downtown.

ISSUE VI: Safety Downtown is an important element.

POLICY VI: Create and maintain a safe, attractive, vibrant downtown.

1. Create a downtown police officer position similar to a school "Resource Officer."
2. Build on the energy MSU-B downtown campus has brought to Downtown by providing more forms of recreation and gathering places for students.
3. Encourage Downtown residential development for all incomes, including student housing, by promoting mixed use.
4. Encourage extended hours for businesses to promote more activity Downtown.
5. Facilitate the development more pedestrian-friendly facilities Downtown such as:
   - pedestrian mall
   - greenspace or parks
   - bus stops to support businesses
   - Free (or low cost) bus fares for Downtown destinations
6. Ensure safe parking downtown.
7. Address and enforce the homelessness and loitering issue in the Downtown and adjacent neighborhoods.

ISSUE VII: Surrounding communities in the County need economic development to sustain them.

POLICY VII: Provide economic development assistance to rural communities.

1. Provide technical assistance to rural community groups when requested for establishing community foundations, and other grant seeking entities.
2. Promote business development in rural communities by supporting the activities of Big Sky EDA and Beartooth RC&D.
3. Explore the coordination of existing public transportation options from rural communities to Billings for para-transit and encourage organized commuter and car-pooling options.

ISSUE VIII: Billings needs to attract businesses that pay higher wages.

POLICY VIII: Promote high value businesses such as technology and extractive industries.

1. Accelerate environmental review of large development projects.
2. Focus on recruiting environmentally and socially responsible industries.
3. Provide and promote 'quality of life' amenities to attract new high value businesses including open space and recreation opportunities and access, improved library facilities, increased community-wide cultural activities like museum exhibits, community concerts and street markets or craft fairs.
4. Work with the State to promote and recognize Billings industry as safe and responsible, hence lowering workers' compensation premiums for potential high value employers.

ISSUE IX: The economic development of Billings Heights is overlooked.

POLICY IX: Promote business development in Billings Heights.

1. Explore the creation of a Tax Increment Finance District in the Heights.
2. Develop "Bench Boulevard Connector" to reduce traffic pressure on Main Street.
3. Develop "Inner Belt Loop" to connect Heights with the rest of the City, and develop a detailed land use plan to Master Plan commercial and residential development along it.

ISSUE X: The quality and focus of our schools is a determining factor for whether businesses locate in Billings.

POLICY X: The Billings and Yellowstone County School Districts will provide high quality K-12 education.

1. Provide for school improvement and ongoing facility maintenance.
2. Evaluate and celebrate student achievement.
3. Enhance community relationships and involvement in the school districts.
4. Address financial resource needs at the state and local level.
5. Encourage cooperative school and community planning.
6. Engage the schools to address local workforce needs.

ISSUE XI: Neighborhoods provide the character and strength of the community and the quality of neighborhoods should be preserved.

POLICY XI: Create self-sustaining neighborhoods by preserving the character and enhancing the quality of life in our neighborhoods.

1. Ensure interconnections between neighborhoods while maintaining a cohesive neighborhood character.
2. Provide focal points in neighborhoods by adding value to spaces and making spaces into places.
3. Provide neighborhood amenities that serve the residents, including:
   - Theatres
   - Parks
   - Work places
4. Community leaders should bring neighborhoods together by supporting mutually beneficial projects.
5. Consider preserving the character of older neighborhoods by establishing design standards.
6. Support neighborhood efforts to preserve historic value by facilitating National Register of Historic Preservation entries.
7. Preserve and maintain neighborhood schools.
8. Integrate neighborhood schools into neighborhood life for all ages.

ISSUE XII: The Billings economy faces a severe shortage of skilled workers in a number of sectors (a problem that will worsen as the population ages).

POLICY XII: Facilitate community-wide long-range planning for workforce development, with special emphasis on engaging the cooperation of local public schools and institutions of higher education.

1. Improve communication between the business community and educational institutions.
2. Facilitate coordination between the business community, economic development agencies, and the school districts to:
   a. Develop a comprehensive community plan for workforce development.
   b. Increase enrollment in high school career education at the Billings Career Center.
   c. Expand the curriculum at the Billings Career Center to address local workforce needs.
   d. Support efforts to improve the coordination of curricula between the Billings Career Center and MSU-B College of Technology.
   e. Educate K-12 students and parents about workforce needs and local education opportunities.
   f. Reduce the high school dropout rate.
3. Improve and coordinate community-wide adult education opportunities.

IMPLEMENTATION STRATEGIES: AESTHETICS ELEMENT

ISSUE I: There are areas in the City and County that are unattractive and present a poor image of the community.

POLICY I: Certain areas have been targeted to increase the aesthetic or visual quality of the community: the Rimrocks, the Yellowstone River, Downtown Billings and urban streetscapes.

1. **Rimrocks.** The face of the rimrocks has the advantage of being unbuildable due to topography. Strategies to preserve the view corridor created by the rimrocks may include:

   a. Prepare a detailed study on the status and location of billboards along N. 27th and 6th Avenue N. and work with sign owners to cure nonconformities.
   b. Develop safe trails along the base or top of the rimrocks to allow for public access.
   c. Limit antennas, towers, and utility and communication lines in the vicinity of the rimrocks.
   d. Publicly acquire rimrock property.
   e. Explore the creation of an overlay district along the rims to require more restrictive setbacks, landscape, building design standards, and building heights.

2. **Yellowstone River.** The river is the front door of Yellowstone County. Strategies to protect the river may include:

   a. Restrict further industrial zoning adjacent to the Yellowstone River.
   b. Implement the recreational plans in Parks 2020 and Yellowstone River Greenway Master Plan and include historical and cultural resources of Yellowstone River.
   c. Extend public open space and access along the riverfront.

d. Strict enforcement of building restrictions in the floodway and floodplain.
e. Expand noxious weed removal program along river banks.
f. Revegetate degraded areas with native species.
g. Explore the creation of an overlay district along the river and Interstate 90 to require more restrictive setbacks, landscape, building design standards, and building separation from river.
h. Encourage local groups to organize an annual river bank cleanup day choosing a different problem area each time.
i. Encourage more recreational use of the Yellowstone River and use the river as a selling point to travelers to the Billings area.
j. Enhance trails along the river with interpretive signs to explain habitat and items of interest.

3. **Downtown.** Recent streetscape improvements have made a big difference in the aesthetics of Downtown. Strategies to further improve the visual experience in the Downtown are:

a. Expand the Downtown Historic District with property owner involvement.
b. Require street trees to be planted along all streets coming into Billings from I-90.
c. Consider adding center median landscape plantings funded by arterial fee increase.

4. **Streetscape.** Pedestrian friendly streets and neighborhoods result in a high quality of life. Strategies to improve the urban streetscape may include:

a. Consider requiring street trees to be planted along boulevard walks.
b. Permit special street signage to identify neighborhoods.
c. Require boulevard sidewalks in residential developments.
d. Narrower streets in new residential developments to reduce traffic speed with the requirement for street trees.

ISSUE II: New development and signs, cell towers, power lines and other structures could reduce the visual quality of the rims.

POLICY II: Maintain an undeveloped buffer zone along the Rimrocks surrounding Billings.

1. Prepare a Visual Resource Preservation Plan that includes an inventory of important visual resources and recommended plan of action to preserve those resources. Involve all stakeholders in the planning process and arrive at consensus.
2. Adopt subdivision regulations that favor park land dedication along the face and top of rimrocks.
3. Publicly acquire land along the face and top of the rimrocks to eliminate the potential of inappropriate development.
4. Consider adopting an overlay district along the rims that restrict building heights, have building design criteria, landscape requirements to be like what grows on the rims.
5. Encourage the creation of contiguous public space across the rims.

ISSUE III: Urban interstate corridors through the County are unattractive.

POLICY III: Create a visually appealing urban interstate corridor.

1. Reevaluate the need for appropriate sign standards for the corridor.
2. When corridor improvement projects are planned, consider landscaping and irrigating major intersections through Billings.

3. Negotiate with MDT for better clean up and maintenance of interstate right-of-way.
4. Explore the creation of an overlay district along Interstate 90 to require more restrictive setbacks, landscaping and buffering enhancements, and building design standards.
6. Screen outdoor storage within the corridor.
7. Encourage the continuation of planted berms adjacent to the refinery areas.
8. Construct attractive interchange signs to welcome visitors to Billings.

IMPLEMENTATION STRATEGIES: NATURAL RESOURCES ELEMENT

ISSUE I: The quality of the Yellowstone River and the associated riparian habitat is threatened.

POLICY I: Strive to protect the Yellowstone River so that wildlife, wildlife habitat, water quality and quantity, recreational activities and aesthetic values will be preserved.

1. Coordinate planning and management efforts with other land management agencies in efforts to protect and preserve stream banks, floodplains and riparian habitats.
2. Support river protection measures by establishing a conservation corridor along the Yellowstone River. Provide incentives as improvement requirements in subdivision regulations.
3. Monitor the amount of development activity in and adjacent to the Yellowstone River to detect negative trends. Consider adjusting zoning and floodplain regulations to minimize or eliminate development pressure on the natural system.
4. Complete floodplain mapping on the Yellowstone, Clarks Fork and Big Horn Rivers.
5. Promote best management practices to ensure compatible and suitable land development in the river valley.
6. Encourage coordination and collaboration among all of the existing river conservation groups to focus mutual efforts for the benefit of all.

ISSUE II: Water is an important resource and it is becoming scarcer.

POLICY II: Policy: Protect groundwater quality and conserve existing water supplies.

1. Implement Phase II Stormwater Regulations in the City of Billings and Yellowstone County.
2. Identify areas of groundwater recharge and shallow groundwater, including wetland mapping, and ensure protective land use controls are followed.
3. Encourage native, drought resistant landscape where possible.
4. Explore options for storm water management that recharge ground water rather than discharge into storm sewers.

ISSUE III: Due in part to the arid nature of our environment and the remoteness of some developments, there is an increased risk to human life and property from wildfires.

POLICY III: Reduce the risk of wildfire and limit the amount of property damage resulting from wildfires.

1. Encourage in-fill development to eliminate sprawl by providing development incentives.

2. Increase fire prevention education, including training on creating defensible space around structures.

ISSUE IV: Weeds detract from the beauty of an area, pose a fire danger, and reduce the productivity of agricultural land.

POLICY IV: Control the existing infestation of noxious weeds with the goal of eradication and prevent the introduction of new noxious weed species.

1. Continue ongoing state and local efforts to educate landowners, County departments and other agencies on weed control.
2. Adopt a City Weed Management Plan in compliance with State law and revise subdivision regulations to require compliance with the plan.
3. Implement "weed free" gravel mine requirements in Yellowstone County.
4. Aggressively pursue multi-treatment techniques including, biological, chemical, and land use techniques to reduce or eliminate the spread of noxious weeds. Emphasize biological controls.
5. Take care when using chemical weed control to limit human contact and consumption.
6. Develop a cooperative weed management agreement between the City of Billings and Yellowstone County to ensure County weed plans are implemented.

ISSUE V: Human encounters with wildlife often result in a painful consequence for wildlife, pets and humans.

POLICY V: Minimize conflicts between wildlife and residential development.

1. Identify and map areas of important wildlife habitat.
2. Promote and enforce conservation style subdivisions in areas of important wildlife habitat that concentrate development away from sensitive habitat.
3. Install traffic control signs that alert motorist to the presence of wildlife.

ISSUE VI: Certain development is damaging our natural resources.

POLICY VI: Preserve environmentally sensitive areas.

1. Define, identify and map environmentally sensitive resources throughout the County.
2. Using floodplain mapping information, river meander analyses, and examples from other communities, consider developing local subdivision, zoning or site development regulations to limit commercial and industrial land uses along the Yellowstone River and establish species and/or ecosystem-based requirements for river setbacks for uses and structures.
3. Consider floating a County-wide permissive levy for public land acquisition of open space.
4. Introduce landowners and developers to voluntary open space preservation programs such as the Conservation Reserve Program, wetland banking and conservation easements.
5. Develop a network of greenway corridors that connect the Yellowstone River and other drainages with City neighborhoods and outlying communities.
6. Expand on the Bureau of Mines and Geology's mapping of geologic hazards in the Billings vicinity, to further study of landslide and rockfall potential in the greater County area.

7. Map flood prone areas in Yellowstone County in accordance with the Federal Emergency Management Agency (FEMA) program, and state and local standards.
8. As development along waterways occurs, identify floodplain areas that may be utilized for parks, greenways, multi-purpose trail networks, and other recreational uses.
9. Consider utilizing Natural Resource Conservation Service's Ecological Site Information System (ESIS)[16] to analyze land for potential public acquisition for open space. The ESIS provides an inventory land based on soil, plant, wildlife, surface and groundwater and other conditions.
10. Consider floating a City levy for 75 to 100 acre land purchases for regional parks.

IMPLEMENTATION STRATEGIES: OPEN SPACE AND RECREATION ELEMENT

ISSUE I: Funding for park development and maintenance is tight.

POLICY I: Provide for the equitable distribution of parks and recreation facilities among neighborhoods and outlying communities.

1. Encourage the County to develop and maintain County parkland.
2. Retain and maintain parks in existing neighborhoods.
3. Explore the implementation of a Park District or Maintenance District to include the City and surrounding County properties. The new District should be managed by a single board that is a collaboration between the City and County.
4. Enable neighborhoods and communities to make choices on park funding mechanisms.
5. Solicit neighborhood and community involvement in the preparation of park improvement planning and programming, to include a community volunteer program to utilize retired persons and other community members in the maintenance and development of parks.
6. Consult Parks2020 and Yellowstone River Greenway Master Plan when exploring parkland acquisition recommendations.
7. Consider the sale of unusable County park land to fund other County park improvements and utilize land swaps with other agencies or property owners to consolidate county and city public parks and open space.
8. Investigate whether new commercial development would consider sponsoring park and open space development, maintenance and acquisition in the vicinity of the community where the commercial development is located or moves to.

ISSUE II: Billings and Yellowstone County need more major recreation facilities and need to improve those we already have.

POLICY II: Prioritize and program the construction and maintenance of major recreational facilities.

1. Develop a proposal for a City-County Park Maintenance District or Park District. Consider asking the voters within the City and County Planning Jurisdiction the question of whether or not the District(s) should be created.

[16] http://esis.sc.egov.usda.gov/ESIS/About.aspx

2. Acquire private donations and grants through Billings Park, Recreation and Preservation Fund.
3. Consider utilizing the Capital Improvements Planning process to support construction of an Aquatic Center.
4. The County Commission would welcome a constituent initiated county-wide Open Space mill levy to be placed on the ballot to provide funding for acquisition of open space.
5. Address transient and homeless abuse of neighborhood parks.

ISSUE III: Private land development sometimes restricts access to public land.

POLICY III: Ensure continued access to public lands managed for recreational purposes.

1. Identify and map existing access to public recreational land.
2. Seek private funding sources and private easements.
3. Acquire public right-of-way for recreational purposes through existing and proposed development that is acceptable to adjoining residence.
4. Facilitate public access to the Yellowstone River and public lands in the community by exploring access options across public roads and rights-of-way and where appropriate and safe open closed or blocked roads.

ISSUE IV: Billings and surrounding County townsites need more multiple use trails.

POLICY IV: Continue to integrate a multi-purpose trail network into the community infrastructure that emphasizes safety, environmental preservation, resource conservation and cost effectiveness.

1. Sustain efforts to use the canal systems for trail corridors.
2. Consider providing shoulders or bike lane improvements on City streets and County roads.
3. Consider continuing to use CTEP and other transportation funding sources to maintain and construct trails.
4. If a City-County Park Improvement and Park Maintenance District is created, it could consider including provisions to improve and maintain trails.
5. Enable neighborhoods and the community to be a part of the trail placement and design as sections of the trail are developed.
6. Consider adopting bicycle and pedestrian-friendly development review procedures and design standards.
7. Actively pursue easements for multiple use trails.
8. Acquire and maintain public access above and below the rimrocks.
9. Prior to the acquisition of open space, ensure that a long range funding mechanism is in place to control weed infestation on the acquired property.
10. In coordination with the school districts encourage ‘safe routes to school’ infrastructure improvements to promote safety and reduction of vehicular traffic at/near schools.

ISSUE V: Public access to areas above and below the rimrocks is limited and decreasing each year.

POLCY V: Preserve existing and develop new opportunities for public access to the rimrocks.

1. Acquire dedicated land or easements through the subdivision process that ensure public access above and below the rims.
2. Encourage land owners to grant recreational easements that provide access above and below the rims.

ISSUE VI: Public access to area along the Yellowstone River is limited and decreasing each year.

POLICY VI: Preserve existing and develop new opportunities for public access to the Yellowstone River.

1. Encourage the dedication of land or easements through the subdivision process that ensure public access to the Yellowstone River as identified by the Yellowstone River Greenway Master Plan and the Heritage Trail Plan.
2. Encourage land owners to grant recreational easements that provide access to the Yellowstone River.
3. Explore creative opportunities to create new areas open to public access along the Yellowstone River, such as:
   a. Removing fences restricting access to public right-of-way at bridges
   b. Wetland banks
   c. Land trades
   d. Conservation easements

IMPLEMENTATION STRATEGIES: TRANSPORTATION ELEMENT

ISSUE I: Speeding in City neighborhoods and outlying communities.

POLICY I: Ensure traffic speeds in neighborhoods and townsites are maintained at safe levels.

1. Use traffic calming devices when approved by neighborhood or community residents.
2. Enforce speed limits.
3. Educate public about safety aspects of speeding in residential areas by posting informational signage.
4. Work with the Montana Department of Transportation and Highway Commission to implement desired speed limits on State routes.
5. Utilize speed display equipment.
6. Police and Sheriff should become more vested in neighborhoods and townsites through increased presence.
7. Increase traffic calming measures near schools.
8. Consider and mitigate the impacts on traffic through existing neighborhoods when approving new developments.

9. Work with existing neighborhoods experiencing traffic speed and volume concerns to develop and fund mitigation strategies.

ISSUE II: Safe and efficient traffic circulation around and through the City.

POLICY II: Improve traffic circulation throughout the urbanized area.

1. Give higher priority to small traffic control projects such as striping, signing and signaling.
2. Continue to seek Federal funding for the North By-Pass route.
3. Designate truck routes on appropriately designed roads and streets and improve truck route signage.
4. When funding is available and needs arise prepare Transportation Plans for rural townsites.
5. Plan for and consider new north-south connections to alleviate congestion on existing connections and cut-through traffic in neighborhoods.
6. Use traffic calming devices in residential neighborhoods to discourage cut-through traffic and ensure pedestrian safety
7. Consider impacts on traffic circulation when planning for new schools.
8. Consider re-routing the eastbound leg of the I-90 Business Loop from Montana Avenue to 1st Avenue S. to reduce traffic and enhance revitalization of historic Montana Ave., and offer development potential to 1st Ave. S.

ISSUE III: Lack of adequate traffic control.

POLICY III: Standardize traffic control to improve traffic flow and alleviate congestion.

1. Analyze and upgrade traffic signals to improve level of service ratings at intersections.
2. Consider 'real time' traffic volumes to make traffic control devices function more efficiently and to reduce emissions from idling vehicles.
3. Coordinate road construction projects with public utility projects.
4. Institute a standardized public information system for road construction and other public infrastructure projects.
5. Closely monitor accident rates at unsignalized intersections and develop appropriate safety projects to reduce these rates.
6. Coordinate road construction projects to ensure efficient traffic flow.
7. Bring traffic controls in school zones into compliance with State law.
8. Place signage on bicycle routes to increase citizen awareness.
9. Provide school districts and Bike and Pedestrian Advisory Committee annual reports on accident data.

ISSUE IV: The design of roads, streets and pedestrian facilities can be more attractive and functional.

POLICY IV: Update design standards for roadways, streets and sidewalks.

1. Design road segments to include clear vision triangles, landscaped boulevards and medians, and safe pedestrian crossings, especially in urban growth areas.
2. Consider pedestrian safety and education for navigating roundabouts.

3. Use context sensitive design[17] to control traffic and improve aesthetics.
4. Adopt context sensitive design standards for major travel corridors such as Laurel Road, Main Street, Shiloh Road, North and South 27th Street, and Highway 87 near MetraPark.
5. Adopt sidewalk standards based on a rational approach that considers street hierarchy, land use, connectivity and population densities.
6. Annex all roadways between proposed annexations and existing City limits.

ISSUE V: Obstacles to efficient and safe traffic flow.

POLICY V: Eliminate transportation barriers between neighborhoods and institute programs to ensure convenient and safe access to neighborhoods.

1. Coordinate traffic signals.
2. Complete and implement the Quiet Zone Study to address train traffic in the Downtown.
3. Develop and fund the Bench Connector project.
4. Develop a program for situating employment centers in the Heights to reduce commuter traffic.
5. Eliminate barriers to public funding for street improvements.

ISSUE VI: Deteriorated conditions of City streets and County roads.

POLICY VI: Provide City and County residents with well-maintained streets and roads through a scheduled maintenance and replacement program.

1. Continue programming City street improvements through the City's Capital Improvements Plan.
2. Continue the ongoing City program of maintaining pavement markings, signals, signs and street lights.
3. Continue to cost-share road improvements with County residents to address immediate concerns.

ISSUE VII: Resources for transportation improvements should be rationally allocated throughout City neighborhoods and County townsites.

POLICY VII: Ensure that programmed transportation projects are rationally distributed among neighborhoods and outlying communities.

1. Meet with the neighborhood task forces and County townsite residents regularly to establish priorities.
2. Give small neighborhood and rural townsite projects funding consideration.
3. Coordinate street and traffic projects with public utility projects.

[17] In contrast to conventional roadway design standards which define features such as minimum lane width, design speed and minimum parking supply, context sensitive design takes a more flexible approach in an attempt to balance safety, mobility, community, and environmental goals. CSD allows narrower lanes, lower design speeds, sharper turns and special features not included in generic road design guidelines to help create a more balanced and efficient transportation system and meet community land use objectives (Online Transportation Demand Management Encyclopedia, http://www.vtpi.org/tdm/tdm57.htm).

ISSUE VIII: More convenient bus schedules are needed to attract MET ridership.

POLICY VIII: Encourage the use of alternative transportation modes.

1. Increase the "Buses and Bikes" program.
2. Consider the use of smaller buses when replacing existing buses.
3. Continue to implement existing and consider additional programs to encourage bus ridership including extended hours, new or extended bus routes to recently annexed areas, and promotional events.
4. The City and County are encouraged to consider instituting alternative modes incentive programs for their employees.
5. The Alternative Modes Coordinator shall work with community employers to assist with establishing alternative modes incentive programs.
6. The City and County are encouraged to consider allowing employees to flex their work schedules to coincide with bus arrival and departure times.
7. Implement strategies identified in the MET Transit study.
8. Adjust bus schedules to serve more user groups including middle schools, high schools and MetraPark, and extend bus service to Lockwood, the Airport, and newly annexed areas.
9. Consider adjusting bus schedules to accommodate shift and commuter workers by expanding hours that include late night and early morning.
10. Consider adding a bus only lane on principal arterial routes to help eliminate schedule delays due to traffic congestion.

ISSUE IX: The sidewalk system in the City needs upgrading; many sidewalks are cracked and broken, several critical sections are missing, and important sidewalk routes are not adequately maintained.

POLICY IX: Maintain and replace sidewalks when necessary.

1. Where appropriate, sidewalk policies should address alternatives to pedestrian facilities such as multi-purpose improved trails, undeveloped pathways, and shared roadways.
2. Sidewalk Construction Standards should address the need, location, timing and design of sidewalks that are consistent with a comprehensive sidewalk plan.
3. Utilize the sidewalk inventory to develop a comprehensive sidewalk plan for the City and immediately adjacent County areas, including Lockwood.
4. The City should periodically update its School Sidewalks Improvement Study including an inventory of existing conditions, ranking priority routes according to need, and identifying funding for replacement and installation.

ISSUE X: Lack of adequate bicycle facilities.

POLICY X: Develop additional bicycle facilities throughout the City and County.

1. To expand bicycle facilities, consider the following:
   a. Develop additional signage such as "Share the Road" and "Bicycle Route".
   b. Prohibit parking in marked bicycle lanes or incorporate both parking and bicycle lanes.
   c. Utilize Air Quality funds for the development of more bicycle facilities.

d. Require bike rack installation as part of the commercial development standards.
e. Provide downtown bike rentals to ease traffic circulation and to increase the availability of parking.

ISSUE XI: MET Transit is underfunded.

POLICY XI: Identify and develop additional revenue sources for MET Transit.

1. Consider incorporating public/private partnerships to finance public transportation.

ISSUE XII: The deterioration of the air quality due to vehicle emissions.

POLICY XII: Develop incentives to promote alternative forms of transportation.

1. Educate residents on the impact of emissions on air quality and options for alternate transportation.
2. Explore the development of a light rail system.
3. Explore the expansion of a southern route of Amtrak.
4. Explore the development of a trolley/pedestrian link between Montana State University-Billings, St. Vincent Health Care and Billings Clinic, Dehler Park, MetraPark and the downtown.
5. Encourage and support neighborhood schools and centrally located high-density residential development as a means to reduce driving to schools and school busing.

ISSUE XIII: Some bicyclists do not follow traffic laws and can cause unsafe situations.

POLICY XIII: Develop more educational opportunities and enforcement of traffic laws.

1. Increased education of bike laws for drivers, bicyclists, and the parents of school-aged children.
2. More police enforcement of bike laws.
3. Explore the option of requiring the licensing of bicycles.

ISSUE XIV: There are more motorcycles, bicycles, and motor scooters on the roadways.

POLICY XIV: Develop additional education of motorcycle, bicycle, and motor scooter awareness.

1. Increase the publication and broadcast of Public Service Announcements on safety and awareness.
2. Increase the education and awareness of non-motorized usage on roadways, especially at the teenage driver education course level.

ISSUE XV: Billings needs a cross-town demonstration or pilot program to illustrate that convenient public transportation attracts riders.

POLICY XV: The MET should consider the development of one continuous route that extends from the Heights to the West End making stops at both bus transfer centers for pick-up and drop-off.

1. Consider funding a pilot program to accommodate an East-West Quick Line across the City at 15-minute intervals, from west Grand Avenue to the new transit center and the Heights Wicks route to the transit center.

IMPLEMENTATION STRATEGIES: PUBLIC FACILITIES AND SERVICES ELEMENT

ISSUE I: Residents are not adequately informed of County and City projects.

POLICY I: The public shall be informed of applications, plans and programs in a manner that is timely and accessible.

1. Advertise incentive or assistance programs.
2. The City and County shall promote accurate and timely media coverage of projects being considered by the City Council or County Commissioners.
3. Seek ways to more effectively and consistently communicate information on annexations, zoning applications and subdivision applications via the website and other methods.
4. Notify neighborhoods and broader areas of infrastructure projects prior to the beginning of the project.
5. Key City and County contacts shall be knowledgeable of how to access information on scheduled public meetings and hearings.

ISSUE II: Dilapidated and unsafe properties in City neighborhoods and County townsites.

POLICY II: Commit resources to abating deteriorated and unsafe buildings, junk vehicles and unsightly garbage accumulation on private property.

1. City and County Departments may assist homeowners to improve the appearance of their properties when it has been determined that the homeowner is financially or physically incapable of meeting regulations through existing programs. Programs available, such as the Tree Removal, Minor Home Repair and Paint programs, should be advertised.
2. Prior to undertaking an urban renewal project, the City shall prepare an Urban Renewal Plan in accordance with 7-15-4206, MCA and considering this Growth Policy and any adopted neighborhood or area plan that includes the area of the proposed urban renewal project.
3. Code enforcement shall be a priority responsibility of the City and the County.
4. The County could consider implementing an "Amnesty Program" that assists violators with licensing and other paper work to bring their business into compliance with State law and local regulations.
5. The City may explore regulations to ensure that houses or buildings under construction are completed within a certain time (i.e. one year) to prevent unsafe structures and decline in neighborhood property values.

6. City and County may explore regulations to ensure that houses being relocated are done so in a timely manner and replaced on foundations within a certain period of time (i.e. 3 months) to prevent unsafe structures and decline in neighborhood property values.

ISSUE III: Safety is a concern in neighborhoods and outlying County townsites.

POLICY III: Protect the lives and properties of all citizens and visitors and improve the quality of life in our communities.

1. Encourage infill through incentive programs to concentrate City services.
2. Ensure adequate resources (more people) for public safety, especially as City annexes.
3. Utilize neighborhood task forces or councils and townsite committees to inform residents of Police or Sheriff activity in their communities.
4. As funding allows, maintain acceptable levels of fire protection.
5. As funding allows, maintain acceptable levels of police protection.
6. Increase fire prevention education and programs creating defensible spaces around structures.
7. Educate the public on incorporating principles of crime prevention through environmental design:
   a. Natural surveillance (the use of natural materials to facilitate open views to doors and windows)
   b. Natural access control (the use of natural materials to enhance or discourage access to buildings)
   c. Territorial reinforcement (the use of natural and architectural elements to describe boundaries of private property)
8. As City annexes, maintain sufficient levels of public safety services for existing City residents.
9. Continue to establish Neighborhood Watch programs.
10. Continue the use of interlocal agreements with adjoining jurisdictions to share law enforcement services.
11. Establish and support safe routes to school.

ISSUE IV: There are safety and functionality issues with City streets.

POLICY IV: Strive to provide safe, functional, and attractive streets for all users including drivers, bicyclists, and pedestrians. Additional funding will have to be found.

1. Entryway streets (i.e. Laurel Road, Main Street, 27th St. north of 3rd Ave.) should be made safer and more attractive and inviting with landscaping.
2. Medians where no turning movements are possible should be landscaped where appropriate.
3. Mailboxes and street light poles should be removed from highly traveled sidewalks to provide unhindered access for all pedestrians.
4. Gravel left from winter road treatments should be removed from streets and sidewalks as soon as possible.
5. Weeds should be sprayed along sidewalks and rights-of-way.

ISSUE V: Funding for community facilities and infrastructure is very limited.

POLICY V: Seek new ways to ensure users are equitably paying for the services and facilities they demand.

1. To fund park development and maintenance, a City-wide or County-wide park maintenance district could be considered.
2. Expand the City street maintenance fee to include sidewalk maintenance for major thoroughfares.
3. Explore the establishment of Public Safety Districts that would capture funding from all benefited properties, including tax exempt properties such as schools, colleges, medical facilities, etc.
4. After the City's Cost of Services analyses are complete, consider increasing fees where applicable or establishing impact fees.
5. Support state legislation to allow a Local Option Sales tax.
6. Reduce costs by reducing unnecessary requirements (i.e. narrower streets, use of stormwater swales in lieu of curb and gutter, alternative parking lot surfacing to reduce stormwater mitigation costs)
7. Provide cost-saving incentives for higher density development within areas already served by City infrastructure and services.

ISSUE VI: We should review the methodology used to distribute public funds throughout City neighborhoods and County townsites.

POLICY VI: Strive to meet the needs of neighborhoods and townsites in a timely and fair manner.

1. As part of neighborhood and area plans, inventory and map public improvements completed in neighborhoods and townsites in the past five years.
2. The City and County should work with neighborhood and townsite residents to identify and prioritize public improvements through a capital improvement planning process.
3. The City and County should involve neighborhood and townsite residents in decision of capital improvement expenditures through a capital improvement planning process.
4. The City and County should coordinate with school districts and residents to reduce the likelihood of school closures or minimize the impacts of school closures.
5. Improve knowledge of and access to grant funds but do not let Community Development Block Grant funds entirely supplant General Funds for eligible neighborhoods and townsites.
6. Ensure that projects in the Capital Improvements Plan are consistent with this Growth Policy, neighborhood plans, and other approved plans.
7. Simplify the development process and clarify ordinances.

ISSUE VII: There are vacant structures around Billings and in the County that could be reused.

POLICY VII: Cooperate with preservationists, developers, school districts and residents to seek appropriate reuse of public and private facilities.

1. Inventory and assess the condition of existing vacant buildings.

2. Implement more flexible or alternative building codes that encourage reuse.
3. Distribute the inventory to organizations involved in real estate marketing, economic development and housing.
4. Examine and revise zoning ordinance as necessary to allow appropriate reuse of structures.
5. Seek funding for rehabilitation and reuse of vacant structures.
6. Provide alternative building code solutions to firms or organizations seeking to revitalize vacant structures.
7. Establish policy to allow for pre-demolition salvage of public buildings to encourage reuse of materials.
8. The City should support the initiation of a glass recycling program for the community.

ISSUE VIII: Community services are not always available to everyone.

POLICY VIII: The City and County may consider community programs and services.

1. Community Television (Channel 7) should be made more readily available to everyone, without subscribing to cable TV.
2. Continue support for the creation of branch libraries in the Westend and the Heights.
3. MET Transit bus routes should be made simpler and more accessible by offering predictable regular routes on major thoroughfares.

ISSUE IX: Subdivision review, zoning applications, and other development permit review are not always conducted in a streamlined and timely manner.

POLICY IX: The City and County shall provide a streamlined, timely and consistent review of all applications.

1. Revision to zoning ordinances and subdivision regulations shall give consideration to this Growth Policy. New ordinances and regulations shall give consideration to the preferences of the development community and the general public.
2. Through the Development Process Advisory Review Board (DPARB), the City and County will continue an open dialogue with developers and applicants to address concerns about submittal, review, and approval procedures and standards.

ISSUE X: Maintenance of existing K-12 school facilities and planning for new schools is critically important to maintaining existing communities built around the neighborhood school concept and fostering new communities surrounding school sites.

POLICY X: Establish a process for coordination of ongoing City/County, neighborhood, and school planning efforts.

1. Establish a protocol for the sharing of objective data about future development and school enrollment.
2. Formalize a system of regular meetings and communication between local government and school districts to discuss intersecting concerns related to funding, planning, transportation, safety, and development and demographic trends.

3. Ensure that school capacity and school transportation are considered in the review process for residential developments.
4. Create incentives to encourage co-location and joint use of school and community facilities to reduce facility costs and redundancy.
5. Provide the school district and the public information about the direct and indirect costs and impacts to the community when considering school siting decisions (i.e. infrastructure development and improvement costs, community health costs, transportation costs, etc.)
6. Encourage renovation of existing school facilities.
7. Consider the schools in coordinated capital improvements planning for the community.
8. Work in cooperation with the schools, the Chamber of Commerce and other civic organizations to promote an understanding of schools as important community assets.
9. Educate local government officials on the impacts of school siting on development patterns related to land use, public health, transportation, and neighborhood integrity.

ISSUE XI: Multiple community interests (including local government, schools, arts organizations, and social organizations) are competing for tax dollars for facility development and maintenance, resulting in taxpayer fatigue and overall declining support for capital and maintenance projects.

POLICY XI: Coordinated short-term and long-range capital and maintenance planning for all community facilities.

1. Develop a comprehensive community needs inventory for public facilities (schools, parks, libraries, etc.) along with a strategic plan for meeting those needs. The inventory process should include:
   a. Involvement of all stakeholders
   b. Prioritization of projects
   c. Identification of opportunities for resource sharing through joint-use of facilities
   d. Identification of opportunities for shared funding
   e. Coordination of the timing and amount of bonding requests made by involved organizations

IMPLEMENTATION STRATEGIES: CULTURAL AND HISTORIC RESOURCES ELEMENT

ISSUE I: Historic landmarks and structures are being lost to neglect and development.

POLICY I: Enable the Yellowstone Historic Preservation Board to coordinate preservation activities throughout the County.

1. The City and County may assist the Board in implementing their annual work plans.
2. Maintain a detailed inventory of historic properties and cultural resources, including schools.
3. Encourage the placement of historic public buildings on The National Register.
4. Create a local registry that allows historic buildings to be locally recognized and protected.
5. Encourage the preservation and continued use of historic schools.

ISSUE II: Cities must link economic development with quality of life. Businesses and professionals are attracted to a culturally aware city.

POLICY II: The community should recognize and use its cultural institutions as assets and opportunities for attracting and generating additional economic activity.

1. Promote the rich cultural life of the region wherever possible in publications, advertising, and other promotion efforts.
2. Stress the quality of the community's cultural institutions as they relate to other cities, especially in region-wide publications.
3. Encourage the community's colleges, hospitals, and businesses to feature the cultural institutions in their recruiting efforts. The Chamber of Commerce is an excellent example of one source for this information.
4. Maintain the beauty of our park system and the cultural institutions that the community currently has, i.e. a large regional art museum, three history museums, a major performing arts theater, a large performing venue, two community theaters, a symphony orchestra, an opera company, a city/county library, two college libraries, historic sites, and a zoo.

ISSUE III: Public art is seen as an important part of the landscape.

POLICY III: Carefully selected works of public art should be put on display to enhance the beauty and visual excitement of the city.

1. Encourage promotional events that incorporate public art throughout the City.
2. Inventory private and public properties where public art can be viewed and donate space to local organizations and artists for approved public art displays.
3. Create public spaces for public gatherings, i.e. outdoor walking plazas, that would also allow for public art display, art shows, craft fairs, outdoor markets etc.
4. Consider contacting other cities such as Boise, Idaho for the plans and procedures they have used for creating a very successful public art program.
5. Explore and consider the Percent for Art[18] strategies that have been used in other states and cities.

ISSUE IV: There is no requirement for surface archeological surveys to be conducted prior to many development processes, nor is there a provision for salvaging any sites that are discovered.

POLICY IV: Develop a process for protecting archeological, historical, and paleontological resources during earth-disturbing construction activities.

1. Work with the State Historic Preservation Office (SHPO) to identify and map areas in the rapidly developing areas of the County and around Billings where archeological surveys have already been conducted or where there is a high probability such of sites. Make these data available to

[18] "Percent for Art" programs have been established in 27 states to facilitate the placement of permanent art of the highest possible quality where it is accessible to the general public during new public construction projects. For example, Oregon Revised Statutes requires "not less than 1% of the direct construction funds of new or remodeled state buildings with construction budgets of $100,000 or greater for the acquisition of art work which may be an integral part of the building, attached thereto, or capable of display in other State Buildings". http://www.oregonartscommission.org/public_art/percent_for_public_art_program.php

developers and contractors.
2. Consider appropriate surveys be done as a condition of subdivision or construction permits.
3. Work with SHPO and local museums to provide curation of resulting cultural or historical artifacts.

IMPLEMENTATION STRATEGIES: COMMUNITY HEALTH ELEMENT

ISSUE I: Existing neighborhood plans lack sufficient detail to address emergency preparedness.

POLICY I: Create neighborhood plans that encourage emergency preparedness.

1. Involve the fire department and other local emergency responders to educate citizens on emergency preparedness and prevention.
2. Support neighborhood development that provides more than one entrance and/or exit for residents.
3. Ensure neighborhoods with cul-de-sacs and dead-end streets have adequate access for emergency service providers.
4. Plan neighborhoods that foster disaster and evacuation routes.
5. Identify floodplain areas that may be utilized for open space and park corridors to provide natural buffer areas from waterways, protect lives and property, and prevent land use conflicts when development occurs.
6. Encourage subdivision design, building placement, and landscaping that minimizes wildfire risk.
7. Identify and map areas of wildfire risk.
8. Create ways to mitigate problems that could potentially pose vector-borne and rodent-associated health threats, e.g., West Nile Virus and Hantavirus.
    a. Eradicate standing water to limit the number of place for mosquitoes to reproduce.
    b. Encourage removal of dilapidated and unsafe properties in City neighborhoods and County townsites.
        c. Educate residents on the advantages and disadvantages of special purpose districts such as weed and mosquito control districts.

ISSUE II: Not all neighborhoods are planned with ways to access nutritious foods.

POLICY II: Strive to increase access to nutritious foods for residents in all neighborhoods.

1. Encourage the presence of grocers within mixed-use neighborhoods.
2. Improve ways to access existing grocers.
    a. Offer viable alternative transportation methods such as MET Transit.
    b. Consider altering MET Transit routes.
3. Support table/community gardens.
4. Promote the operation and expansion of local farmers' markets.
5. Promote healthy eating in schools.
6. Consider providing incentives to providers for grocery delivery services.

ISSUE III: Some roadways are not designed to accommodate pedestrians and therefore create inconvenient and unsafe conditions.

POLICY III: Design roadways to safely accommodate pedestrians and promote physical activity.

1. Install traffic calming devices in residential neighborhoods to discourage cut-through traffic and ensure pedestrian safety.
2. Maintain routine upkeep of pedestrian walkways, e.g., removal of gravel on sidewalks, etc.
3. Provide wide shoulders on roadways where sidewalks do not exist.
4. Encourage subdivisions to incorporate safe routes to school during the planning process; create opportunities for existing communities to identify safe routes to school.
5. Require subdivisions to provide for the continuation of pedestrian and bicycle access as identified by Heritage Trails Plan
6. Educate all commuters: automobile, bicycle, etc. on bicycle right-of-way, traffic laws, and round-about navigation.

ISSUE IV: Physical activity is not seen as a viable means of getting from place to place.

POLICY IV: Promote physical activity as part of everyday living.

1. Create mixed use developments that offer convenient places to work and shop within walking distance of residences.
2. Encourage physical activity for school-aged children by providing safe routes to school and maintaining the neighborhood school concept.
3. Develop trails that can be utilized for transportation to destinations, e.g., downtown.
4. Identify and map new and existing trails—see Heritage Trail map.
5. Continue to promote the "Buses and Bikes" program.

ISSUE V: Neighborhoods lack a sense of community, which is contributing to neighborhood decline.

POLICY V: Provide neighborhoods with the tools necessary to become successful communities.

1. Encourage community gathering places.
2. Prioritize construction of Aquatic Center/Community center in Heights.
3. Promote the organization of community gardens.
4. Encourage neighborhoods to give back to the community through activities such as annual cleanup day.
5. Amend Public Nuisance Ordinance to address the removal of boarded up and abandoned houses in neighborhoods.
6. Support neighborhood schools as centers of community.

ISSUE VI: Some neighborhoods are not safe.

POLICY VI: Protect the lives and properties of all citizens and visitors to improve the quality of life in our communities.

1. Encourage kids to play in parks to keep them off the streets.
2. Encourage neighborhoods to provide adequate street lighting.
3. Encourage Neighborhood Watch programs and resources for public safety and crime prevention.
4. Provide adequate traffic control.
5. Provide a safe and secure environment in neighborhood parks by preventing illegal activities and use by transient and homeless populations as camping areas.

ISSUE VII: Poor housing and lack of living wage jobs puts the health of residents at risk.

POLICY VII: Increase the amount of affordable housing and availability of jobs that pay a living wage.

1. Enable the development of affordable housing, particularly near work centers and existing neighborhood schools, by providing development incentives.
2. Make recommendations for land use that may include rehabilitation and redevelopment.
3. Attract businesses with a minimum average annual wage equal to the living wage index.
4. Continue to improve marketing of our community to employers pay a living wage.

5.2 CAPITAL IMPROVEMENT STRATEGY

INTRODUCTION

Capital improvements are considered development, maintenance or replacement projects that are in excess of $25,000. They include, but are not limited to water and sewer systems, wastewater treatment facilities, park improvements, solid waste facilities, fire protection facilities, roads and bridges. The City of Billings and Yellowstone County differ in their strategies to plan for capital improvements. The City's capital improvement strategy focuses on a public involvement process to identify and prioritize projects. The result of this process is an annually updated Capital Improvements Plan. The County's strategy is less formal and relies on internal input from departments to identify capital projects that may be funded for the current year. There are other entities within the County that are responsible for public capital improvements and each have its own funding sources and capital improvement planning process.

CITY OF BILLINGS

The City adopted its current approach to capital improvements planning in 2001. The approach relies on public input to identify capital projects, internal review and analysis, and City Council approval. The procedure generally begins in the beginning of the current fiscal year (fiscal years run from July 1st through June 30th) and the Capital Improvements Plan (CIP) is finalized at the end of the budgeting process for the following year. The full public participation process for the CIP is run every other year, with off-years being reserved for minor internal modifications. For example, the full public hearing process for the FY08-12 CIP began in late 2006 and was adopted by City Council in February of 2007. . A year later, in the fall of 2007, City Department heads made minor amendments and adjustments to the FY08-12 CIP, which were then adopted in February of 2008 by City Council as the FY 09-13 CIP.

In addition to public input on capital project preferences, each City Department must submit a list and identify funding sources available for capital projects. The CIP is to be fiscally constrained to present a realistic depiction of which projects may be accomplished within the 5-year planning period.

In conjunction with the CIP process, the City also programs funds for technical equipment and vehicle equipment replacement. The Technical Replacement Plan (TRP) identifies the replacement schedule and costs for staff computers and other electronic equipment. The Equipment Replacement Plan (ERP), identifies replacement and funding guidelines for vehicles and equipment with a value of more than $5,000 and a useful life of 3 years or longer. These two plans are incorporated into the CIP as separate subsets.

A current version of the CIP can be found within the City Budget on the City of Billings' Finance Department website.

YELLOWSTONE COUNTY

The County Commissioners evaluate and prioritize capital improvement requests received from County departments during their budgeting process. Other than the road and bridge projects, capital improvements are funded through the Capital Projects Fund. Funds are usually accumulated to provide funding for replacement or major maintenance of buildings or equipment. The County Public Works Department is responsible for scheduling major road and bridge projects. Other public entities throughout the County are responsible for community sewer, water, fire and school capital improvements.

The County has one water district (County Water District of Billings Heights), one sewer district (Custer), and two combined sewer and water districts (Lockwood, and Worden-Ballantine). Districts are administered by boards and have the authority to assess users for needed construction, repairs and maintenance. Other districts with taxing authority include schools, fire districts, and the Lockwood Transportation District. These entities prepare capital improvement plans for their facilities and equipment.

5.3 EVALUATION TIMELINE

YEARLY ACTIVITY REVIEW

One of the key elements to the Growth Policy is implementing the recommendations to meet the goals and objectives. Since the document is required to be updated every five years, having a guideline for implementation over that period is essential. Some of the goals and objectives will be addressed as part of the ongoing Work Program of the Planning and Community Services Department. For example, the Land Use Element goal of affordable housing is within the strategic plan of the Community Services Division, and the transportation goals will be included in the 2008 update of the Transportation Plan. Some of the goals and objectives will be addressed with existing resources. For example, the position of an Alternative Modes Coordinator is focused on the trail goals in the Open Space and Recreation Element and the City and County Public Works Departments are developing a plan to decrease contamination in stormwater runoff that addresses the clean water goal in the Natural Resources Element.

It is anticipated that the yearly work programs and resources of all City and County departments will reflect activities directed toward implementing the Growth Policy. Each year during the budget cycle, the Planning and Community Services Department will review those work programs for implementation strategies and make a report to the governing bodies.

FIVE YEAR REVIEW AND TIMELINE

As noted, communities are required to review their Growth Policies every five years. The purpose of the review is to determine what changes need to be made to the document to keep it current, and to make sure it continues to reflect community goals and objectives. However, the Growth Policy can be amended at any time in the five-year period if major changes take place in the community such as a citizen-initiated amendment, a significant budgetary change, or a considerable change in policies of the governing body.

Any revision to the Growth Policy must be directed by criteria for review. Whether this occurs at the formal review every five years, or within the five year time frame, the review criteria must be consistently applied. The following criteria for review will be used to warrant and guide revisions:

- Major changes in existing conditions or projected trends
- Basic alterations of best practice standards
- Modifications in the legal requirements a Growth Policy must meet
- Successful completion of a strategy meeting goals and objectives
- Citizens desire for changes to the Growth Policy
- Changes in community direction and goals
- Adoption of a plan inconsistent with the Growth Policy

PROCESS

Based on the review criteria, if the City and County conclude a Growth Policy revision is warranted, the staff will conduct research and prepare draft revisions. An assessment of the proposed revisions should be prepared including the impacts of the revisions, a timeline for implementation of any new goals and objectives and a list of strategies for implementation.

In order for revisions to be consistent with state statute, a public hearing before the Planning Board is required. The degree of public involvement will depend on the scope of the proposed revisions. After the public hearing, the Planning Board will make recommendations to the governing bodies regarding the revisions. The governing bodies will then act to adopt revisions or amendments.

5.4 INTER-JURISDICTIONAL COORDINATION AND COOPERATION

INTRODUCTION

State law requires that this Growth Policy include a statement on how the governing bodies will coordinate and cooperate with other jurisdictions in matters related to the growth policy[19]. Coordination of planning matters between Yellowstone County and the City of Billings is facilitated primarily through the Yellowstone County Planning Board. The jurisdiction of this board is the entire County, including the City of Billings and Town of Broadview but not including the City of Laurel planning jurisdiction. This countywide jurisdiction enables the Planning Board to coordinate policies with the County Commissioners and the City Council.

COORDINATED PLANNING IN YELLOWSTONE COUNTY

The history of coordinated planning in Yellowstone County goes back approximately sixty years. Based on records kept in the Planning Department, there has been some form of a joint planning board since the early 1940s. The most recent Planning Board structure was authorized through an interlocal agreement adopted in 1984 and amended in 1990 and again in 1995. The interlocal agreement establishes the administrative and financing responsibilities of each jurisdiction, the relationship of the Planning Board to the governing bodies and the relationship of the Planning Board and Planning Department Director and staff.

There are fifteen members on the County Planning Board; seven are appointed by the County Commissioners, five are appointed by the Mayor of Billings, one member is appointed by the County Commissioners from the governing board of the Yellowstone County Conservation District, and two members are ex-officio non-voting representative of School District No. 2 and the County Superintendent of Schools. Board members serve 2-year terms. The duties and responsibilities of the Planning Board are described in the By-Laws, last amended in 2002. In addition to other duties, the Board is responsible for developing a Growth Policy for the Board's jurisdiction.

In 1991, the City of Billings, Town of Broadview, and Yellowstone County adopted the first countywide comprehensive plan: The 1990 Yellowstone County Comprehensive Plan. Until then, the City and County developed separate planning documents. The Comprehensive Plan established goals and objectives and addressed separate City and County issues, as well as joint issues that involved both the City and County. In 2003, the Comprehensive Plan was updated, and renamed the 2003 Yellowstone County and City of Billings Growth Policy.

The Yellowstone County Planning Board, as the designated Metropolitan Planning Organization, is also charged with the responsibility for transportation planning for the Billings Urban Area. To accomplish this, the Board prepares a Unified Planning Work Program (UPWP) each year that contains a description of projects to undertake during the upcoming program year. It also contains appropriate funding information, staffing information, and a schedule for each project. The UPWP is supplemented by a 5-year Transportation Improvements Plan (TIP). The TIP is a

[19] 76-1-601 (2)(f), MCA.

fiscal planning program for federally assisted highway and transit improvements for the Billings urban area. Approximately every ten years, the MPO is responsible for drafting a Transportation Plan that assesses the transportation needs of the Billings Urban Area and recommends actions to address those needs. The most recent Transportation Plan was adopted in 2005.

The City and County conduct transportation planning together for the Billings urban area. Two committees, the Policy Coordinating Committee (PCC) and Technical Advisory Committee (TAC), were created through a Memorandum of Agreement signed by the City, County, County Planning Board, and the Montana Department of Transportation. The PCC is responsible for directing transportation policy for the study area and the TAC provides technical advice to the PCC.

In addition to the 1990 Comprehensive Plan, the 2003 Growth Policy and the 2005 Transportation Plan, there have been a number of other plans adopted by both the City and County to address common issues. These plans include the South Billings Boulevard Master Plan and entryway zoning regulations (1993), Yellowstone River Greenway Master Plan (1994), 1995 BikeNet Plan (1995), and the West Billings Master Plan (2001), 2004 Heritage Trails Plan, and a number of neighborhood and community plans. With the exception of the 1990 Yellowstone County Comprehensive Plan, and the 2003 Growth Policy, this growth policy does not supercede existing plans or their updates, unless otherwise stated. The 2008 Yellowstone County – City of Billings Growth Policy refers to and is consistent with the plans listed above.

ONGOING CITY AND COUNTY PLANNING COORDINATION

There are a number of other coordinated efforts to address common issues, primarily for the Billings urban area. As a joint City-County office, the Planning and Community Services Department administers all planning programs for both jurisdictions. Additional city-county coordination on planning issues includes the following:

- Subdivision proposals adjacent to the City limits are reviewed by both City and County agencies. Subdivision proposals are also reviewed by state agencies when applicable for such issues as impacts on wildlife and wildlife habitat, wildfire hazards, transportation, as well as other issues.

- The City and County have a joint Health Department that is responsible for public and environmental health programs in both jurisdictions. RiverStone Health's water quality and sanitation programs have strong links to land use and transportation planning in Yellowstone County.

- The City of Billings, City of Laurel, Yellowstone County, and the Crow Indian Tribe entered into an interlocal agreement for historic preservation. This agreement created the Yellowstone Historic Preservation Board and Certified Local Government. This board reviews and implements various policies for historic, archeological, and cultural preservation issues throughout Yellowstone County. Each governmental agency has representation on this board.

- The Yellowstone County Air Quality Board serves both the City and County through a Memorandum of Agreement to address local air quality issues.

- The City Fire Department has a contractual agreement with the Billing Urban Fire Service Area (BUFSA) to provide fire suppression and first response services. The Department also contracts equipment and labor to the Montana Department of Natural Resources for wildfire suppression in times of need. The Department also has mutual aid agreements with Cenex Refinery, ConocoPhilips Refinery, ExxonMobile Refinery, Lockwood Fire Department, Billings Logan International Airport Aircraft Rescue Firefighting, and the Laurel Volunteer Fire Department.

- Subdivision, zoning, floodplain administration, permitting, and enforcement programs rely on strong collaborative efforts with other departments in the city and county, as well as with state and federal agencies.

- The City, County and State share Geographic Information System Resources pursuant to a Memorandum of Understanding. Based on this agreement, the Montana Department of Revenue shares property ownership and tax information with the Yellowstone County Information Systems Department. In return, the County maintains the City and County parcel coverage with the assistance of the City of Billings.

STRATEGY FOR FUTURE COOPERATION

The City and the County will continue to improve their cooperative relationships by maintaining a joint City-County Planning Board and continuing the existing cooperative agreements. The Planning Board and existing coordinating organizations will strive to implement this Growth Policy equitably, openly, and for the benefit of all residents.

5.5 SUBDIVISION REVIEW

POLICY AND SUBDIVISION REVIEW

Every county, city and town is required to adopt and enforce subdivision regulations that provide for the orderly development of their jurisdictional areas[20]. The Montana Subdivision and Platting Act (Title 76, Chapter 3, MCA) specifies the purpose and minimum requirements of the subdivision regulations. It is incumbent on the local governing body to adopt regulations consistent with this law and to review subdivision applications in accordance with the criteria provided in 76-3-608(3)(a):

1. The effect on agriculture
2. The effect on agricultural water user's facilities
3. The effect on local services
4. The effect on the natural environment
5. The effect on wildlife and wildlife habitat
6. The effect on public health and safety

This chapter presents both definitions of the review criteria and describes how these criteria are to be used to review subdivisions.

PRIMARY REVIEW CRITERIA

A growth policy is required to include a statement explaining how the governing bodies will define agriculture, agricultural water user facilities, local services, the natural environment, wildlife and wildlife habitat, and public health and safety and describe how these items will be used in the evaluation and decisions of a subdivision proposal (76-1-601(3)(h), MCA). The following section provides detailed definitions of the primary review criteria and how the criteria will be applied in subdivision review.

Each subdivision proposal shall be evaluated based on its effect on certain factors expressed in this Growth Policy and implemented through the City and County Subdivision Regulations. The evaluation factors specify what effects should be considered at the time of subdivision review. The degree to which these effects play a role in subdivision approval and denial will be dependent on 1) whether the effects are allowed by existing laws and regulations, and 2) whether the effects can be reasonably mitigated.

Agriculture

Definition

Agriculture means the use of land for growing, raising, or marketing of plants or animals to produce food, feed, and fiber commodities. Examples of agricultural activities include, but are not limited to, cultivation and tillage of the soil; dairying; growing and harvesting of agricultural or horticultural commodities; and the raising of livestock, bees, fur-bearing animals, or poultry. Agriculture does not include gardening for personal use, keeping of house pets, kenneling, or landscaping for aesthetic purposes. The definition of

[20] MCA 76-3-501.

agricultural land also includes land considered by the Natural Resources Conservation Service to have a soil of agricultural importance and lands devoted to a soil conservation or rangeland management program.

Evaluation Factors

1. The amount of agricultural land removed from production shall be considered.
2. The amount of agricultural land with soil considered prime or having statewide or local importance by the Natural Resources and Conservation Service shall be considered.
3. Subdivision review shall consider the potential conflicts between the proposed subdivision and adjacent agricultural operations, including:
    a. Interference with the movement of livestock or farm machinery
    b. Maintenance of fences
    c. Proliferation of weeds
    d. Harassment of livestock by pets
    e. Odors
    f. Visual quality
4. It shall be determined whether the proposal is located within the Urban Planning Area or in the "Limits of Annexation" as defined by the City's Annexation Policy.

Agricultural Water User Facilities

Definition

Agricultural water user facilities shall mean those facilities which provide water for agricultural land or provide water for the production of agricultural products. These facilities include, but are not limited to ditches, canals, pipes, head gates, tanks, drains, reservoirs, ponds and developed springs used for agricultural purposes.

Evaluation Factors

1. The location and proximity of an agricultural water user facility shall be considered.
2. Potential conflicts between facility users and subdivision residents shall be evaluated.
3. The rights of all water right owners and users of the facility shall be considered.

Local Services

Definition

Local services means any and all services provided to the public by local government entities or public utilities such as transportation systems, including non-motorized facilities, parking, law enforcement, fire protection, drainage structures, water supply, sanitary sewage disposal, solid waste disposal, recreation, parks, libraries, or schools.

Evaluation Factors

1. Subdivision review shall consider the goals and objectives of existing plans.
2. Subdivision review shall consider increased demand on services and need to expand services as a result of the proposal. Lack of adequate service capacity and capability of a local service may be grounds for denial if the situation cannot be mitigated by the applicant.
3. The cost of providing services shall be evaluated by determining the per capita or per lot cost of services and current and anticipated tax and fee revenue.

Natural Environment

Definition

The natural environment means the physical, chemical, and biological factors that exist within or influence a geographic area or community. These factors include, but are not limited to, geology, soils, topography, climate, surface water, groundwater, floodplain, vegetation, and objects or places of cultural, historic, or aesthetic significance.

Evaluation Factors

1. Review of the subdivision shall consider the degree of impact to the following environmental features:
    a. Riparian or wetland areas
    b. Vegetation cover or type
    c. Noxious weeds
    d. Important or sensitive natural habitats
    e. Surface and groundwater quality
    f. Stream bank stability
    g. Erodible soils
    h. Cultural and historic landmarks
2. The amount of appropriate open space preserved for natural resource conservation shall be considered.
3. Results of water and sanitary facility inspection for all lots shall be considered.
4. Subdivision review shall also evaluate the amount of cuts and fill on slopes as a result of road or building construction.

Wildlife and Wildlife Habitat

Definition

Wildlife means animals that are not domesticated or tamed. Wildlife habitat means an area containing the complex of environmental conditions essential to wildlife for feeding and forage, cover, migration, breeding, rearing, nesting, or buffers from those areas. It also includes areas essential to the conservation of species protected by the Endangered Species Act or of special interest or concern to the State of Montana.

Evaluation Factors

1. The presence and potential destruction of wildlife and wildlife habitat shall be considered in subdivision review.
2. Subdivision review shall consider the potential for human-wildlife conflicts or unhealthy encounters.

3. The amount of wildlife-friendly amenities, such as preserved open space, enhanced habitat or wildlife protection devices shall be considered in subdivision review.

Public Health and Safety

Definition

Allowable standards established by Federal, State and local policies, codes, and regulations shall be the primary means for defining the limits of acceptable public health and safety. Any variance from these standards shall be reasonably mitigated and approved by the governing body.

Evaluation Factors

1. The subdivision review shall consider all potential hazards to residents of the subdivision from high voltage lines, high-pressure gas lines, highways, railroads or railroad crossing and nearby industrial or mining activity.
2. Any creation of public health or safety hazards by the subdivision, such as traffic or fire conditions, contamination or depletion of groundwater supplies, accelerated stormwater runoff, widening or existing floodplain or flood hazard area, or existence within the Wildland-Urban Interface, must be considered in subdivision review.

PUBLIC HEARING PROCESS

As part of the major subdivision preliminary plat review process, a public hearing is required. The requirement for a public hearing is not applicable to the first minor subdivision of a tract of record. State law requires the governing body or its authorized agent to conduct the public hearing. Both the Board of County Commissioners and the City Council have relinquished that task to the County Planning Board. An outline of the public hearing process adopted by the Planning Board can be found in the By-Laws of Yellowstone County Board of Planning, as amended. The following hearing process is reproduced in its entirety from Section 5 of the By-Laws.

SECTION 5 PUBLIC HEARINGS

The Board shall cause to be published a Notice of Public Hearing containing the date, time, location and purpose pursuant to statutory requirements in a newspaper of general circulation for each hearing held by the Board.

A. Public Hearing for Subdivisions

(1) When a preliminary plat application is set for a public hearing pursuant to a public notice, the matter shall be heard even though no one in favor or in opposition to the application appears at the hearing, unless the Board has received a written request from the subdivider, twenty-four (24) hours prior to the public hearing, to continue such hearing at a later time due to good and sufficient reason, or to withdraw or postpone the application for reasons approved by the Board.

(2) Each person who speaks at the public hearing shall stand and furnish his/her name and address to the Board and shall thereby become a part of the record.

(3) Each preliminary plat application shall be heard in the following order:

(a) A Planning Department staff member shall summarize pertinent data and present or amplify the recommendations of staff and department heads.

(b) The applicant, or his/her representative shall present the application to the Board and summarize the proposed subdivision and, if applicable, provide information on the following criteria of public interest:

1. Effects on Agriculture
2. Effects on Local Services
3. Effects on Natural Environment
4. Effects on Wildlife and Wildlife Habitat
5. Effects on Public Health and Safety

In addition, the Board shall determine compliance with local regulations and the Transportation Plan and Yellowstone County Comprehensive Plan.

(c) Persons in favor or opposed to the application shall be heard or written comments received up and until the time of the close of the public hearing.

B. Other Public Hearings

(1) All other public hearings shall be conducted in accordance with the following procedure unless the Board determines by majority vote to follow some different procedure:

(a) The Board shall first hear a report on the subject item from the Planning Department staff, which report may include a recommendation as to the action to be taken by the Board.

(b) The Board shall then hear and/or receive written or oral statements from the public, in the following order:

1. Proponents of the proposal.
2. Opponents of the proposal.
3. Members of the public who, being neither proponents nor opponents of the proposal, wish to make a general statement or comment regarding the same.
4. The Board shall then hear any brief rebuttal to previous comments, testimony or statements.
5. The Board shall then hear brief final comments, statements or recommendations, if any, from the Planning Department staff.
6. Any person wishing to speak a second time may do so only during the proper course of the proceedings, only after all

persons wishing to speak have been heard and only with the permission of the President or the approval of the majority of the Board members.

(2) Prior to hearing and/or oral statements, comments, or testimony from the public, the Board may, by majority vote, impose reasonable and prudent limitations of the time allotted for each person's oral statement, comment, or testimony.

(3) The Board or any member thereof, may at any time question any person about his/her statements, comments, or testimony.

(4) After hearing any and all statements, comments and testimony as above-provided, the President shall close the public testimony portion of the hearing. After closure, and after such discussion as may be appropriate, the Board may vote upon a recommendation for the item under consideration.

(5) Subject to any time constraints imposed by law, the Board may, at any stage of a public hearing or proceeding, continue the same to a later date in order to allow or facilitate full public participation, to obtain additional information, to properly consider or deliberate any matter, or for any other lawful reason. The case of such continuance, the time and place of all further proceedings in regard thereto shall be immediately fixed and announced to the Planning Department staff and the public, in which case no further legal notice of hearing need be given.

C. Informal Hearings

The Board may, by majority vote, follow some other procedures for the conduct of hearings.