NATURAL RESOURCES

PART 1: EXISTING CONDITIONS

1. Climate

Climate in the region is generally characterized by cool summers, moderately cold winters, and typically dry conditions throughout the year. July and August are the warmest months, while December and January are the coldest. The wettest months of the year are May and June. Average air temperatures in July and August reach a maximum in the range from 80 to 85 °F. During December and January the average minimum temperatures range from 15 to 20 °F. Total annual precipitation measured at Hamilton averages 12.21 inches.

Table 1: Climate Data, Hamilton, MT

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Hamilton</td>
<td>16.6—34.8 Degrees</td>
<td>50.5—84.7 Degrees</td>
<td>12.21”</td>
<td>25.7”</td>
</tr>
</tbody>
</table>

Source: Western Regional Climate Center, [http://www.wrcc.dri.edu/summary/climsmmt.html](http://www.wrcc.dri.edu/summary/climsmmt.html)

USDA, NASS Climatological Data [www.nass.usda.gov](http://www.nass.usda.gov)
2. Vegetation

A. Vegetation Types

In Hamilton and the surrounding planning area, douglas-fir and ponderosa pine forests dominate the uplands, western larch and subalpine fir are also common. Wildfires are common and can lead to dense lodgepole pine stands. Grasslands of bluebunch wheatgrass, Idaho fescue, and rough fescue are common on drier aspects. Much of the native grassland vegetation in the valley has been replaced by agricultural species, especially nonnative pasture grasses. In lower valley wetland and riparian areas, pasture grasses, smooth brome, and a variety of non-native weeds have often replaced native herbaceous species, although the woody vegetation is primarily composed of native species dominated by cottonwoods and willows. (Source: Wetlands of the Bitterroot Valley: Change and Ecological Functions, MT DEQ and MT Natural Heritage Program, January 2008)

B. Noxious Weeds

Noxious weeds are defined more specifically as non-native plants that have been introduced to Ravalli County through human actions. Due to their aggressive growth and lack of natural enemies, these species can be highly destructive, competitive, or difficult to control. Noxious weeds diminish forage, lower agricultural production, reduce water quantity and quality, lower water tables, crowd out native plant populations, degrade wilderness areas, modify habitat structures, change species interaction within ecosystems, and displace both plant and animal species. Rapid subdivision growth in Ravalli County has led to a large amount of ground disturbance, as well as a large number of second homes with absentee landowners not taking an active role in vegetation management on their property. Additionally, Ravalli County is also home to a substantial irrigation network. Water contaminated with noxious weed seeds has easy access to other irrigation canals and the Bitterroot River.

Ravalli County Weed District has a weed control plan to address these issues. Their mission is to:

“We will strive to preserve the integrity and diversity of our natural resources and agricultural lands within Ravalli County and will continue to help the people of Ravalli County through education and assistance in the control of noxious weeds.” (http://ravalli.us/223/Weed-District).

The county weed plan identifies the most common weeds and classifies them as Category 1 — Wide infestation affecting over 900,000 acres in Ravalli County or Category 2 — Species that have been introduced in the state are rapidly spreading from their current infestations.

The City of Hamilton has adopted standards and regulations for maintenance of trees and vegetation in the parkways in Chapter 12.16 of the Municipal Code.
3. Watershed and Water Quality

The watershed is the total area drained by a river and its tributaries. More frequently watersheds are the basis for managing water resources. Traditionally, water quality improvements have focused on specific sources of pollution, such as sewage discharges. While this approach may be successful in addressing specific issues, it often fails to address the chronic problems that contribute to a watershed’s decline. Watershed management addresses a wide range of factors that contribute to a healthy watershed. Statewide groups such as the Montana River Action Network and local groups coordinate watershed planning efforts.

Section 303(d) of the federal Clean Water Act requires states to identify state waters where quality is impaired (does not fully meet standards) or threatened (is likely to violate standards in the near future). Every two years the states are required to submit a list of these impaired or threatened waters to the EPA. This "303(d) List" must prioritize the water bodies in order to develop plans to bring the listed waters into compliance with water quality standards. The Bitterroot River in Ravalli County is classified as an impaired water body.

The primary use of the term Total Daily Maximum Load (TMDL) represents a plan (also called a water quality restoration plan) which has specific goals designed to achieve water quality standards. The other use of the term “TMDL” relates to the amount of a pollutant that a water body can assimilate and still meet water quality standards. The TMDL for the Bitterroot Watershed is scheduled to be completed over the next two years.

The Monitoring and Data Management Bureau (Bureau) of the Department of Environmental Quality (DEQ) has responsibility under the Federal Clean Water Act and Montana Water Quality Act to monitor and assess the quality of Montana surface waters and to identify impaired or threatened stream segments and lakes. Under House Bill 546, DEQ sets TMDLs, for each pollutant entering a body of water.

Point source pollution is from a discernible source such as a pipe, ditch, conduit, well or other precise location. “Nonpoint sources” originate from diffuse runoff, seepage, drainage, or infiltration and cannot be traced to a specific polluter. TMDL deals with both sources.

DEQ works with wastewater dischargers, local conservation districts and watershed groups, and state and federal agencies to develop plans for threatened or impaired water bodies or segments of water bodies. For point source discharges, the waste load allocation of the TMDL is incorporated into a regulatory permit. For nonpoint sources, DEQ coordinates with local agencies and land owner/managers and provides technical assistance on implementing voluntary practices to achieve the water quality goals of the TMDL.

The TMDL Plan for the Bitterroot Watershed was completed in 2014. The plan identified the following water bodies in the Hamilton planning area as having impairments.

- Bitterroot (8-mile Creek to Skalkaho Creek) - Low Flow Alterations, Sedimentation/Siltation/Temperature
- Skalkaho Creek—Low Flow Alterations
- Blodgett Creek—Low Flow Alterations
Temperature impairments are typically caused by removal of vegetation and the lack of shade as well as irrigation practices. Restoring native vegetation is a strategy to address this issue. Restoration of riparian areas also reduces sedimentation.

Flow alteration refers to a change in the flow characteristics of a waterbody relative to natural conditions. Streams are typically listed as impaired for low flow alterations when irrigation withdrawal management leads to base flows that are too low to support the beneficial uses designated for that system. This could result in dry channels or extreme low flow conditions unsupportive of fish and aquatic life. It could also result in lower flow conditions which absorb thermal radiation more readily and increase stream temperatures, which in turn creates dissolved oxygen conditions too low to support some species of fish. Improving stream flows relies on best management practices by local users, agencies, and entities to improve instream flows through water and land management, which may include irrigation efficiency improvements and/or instream water leases that result in reduced amounts of water diverted from streams, particularly during period of reduced streamflow.

(Source: http://www.deq.mt.gov/wqinfo/TMDL/finalReports.mcpx)

Map 1: Bitterroot Watershed Map
4. Groundwater

In the Bitterroot Valley, groundwater occurs within the loose soils, consisting of clay, silt, sand and gravel mixtures. Most wells in the valley center will penetrate groundwater within 10 to 25 feet from the ground surface. This groundwater occurs in an unconfined aquifer that does not have a protective cover. Spills and waste disposal onto the land surface have the potential to be washed down to the aquifer.

The groundwater is recharged from irrigation canals on the east terrace, and also from tributary streams in the Skalkaho Creek drainage and replenished by precipitation and irrigation water that infiltrates the land surface. The leakage from surface water appears to be the dominant groundwater recharge process. In certain areas, the infiltration of excess irrigation water may dominate. Throughout the Bitterroot Valley, the groundwater level will rise each spring with the onset of runoff, filling of irrigation canals, and also the application of irrigation water to the land surface. The groundwater level will then decline in elevation through the fall and winter months. In the Bitterroot Valley, groundwater flow occurs from the margins of the valley toward the center, and also downstream. At locations east of the Bitterroot River, the groundwater flow direction is primarily westerly and northerly. West of the Bitterroot River, groundwater flow direction is primarily easterly and northerly.

Water rights are an issue and are addressed in the Public Facilities Chapter.

Land use in the Hamilton area is dominated by agricultural and residential lands. Urban/commercial land use is located along Highway 93. The agricultural land use dominates the upland recharge area to the Hamilton wells. Agricultural practices can impact groundwater quality due to land application of chemicals, spills at chemical mixing stations, and concentration of animal wastes. Potential contamination from urban sources include automotive related land use, dry cleaners and other uses with chemical processes. These uses pose a substantial risk from point sources to the Hamilton area aquifer. Well No. 6 has the largest risk of contamination by point sources in comparison to the other city wells. (See also Public Facilities Element for more information.)

Stormwater management in the Hamilton area consists of dry wells that discharge directly to groundwater. In the event of spilled chemicals entering a dry well, a significant impact to groundwater may occur. Southeast of town is an area with high septic density that poses a significant threat to groundwater quality complicated by antiquated systems. (http://mslapps.mt.gov/Geographic_Information/Data/SourceWaterProtectionProgram/)

Figure 2: Septic Density in Hamilton Planning Area (Source: Montana DNRC—NRIS Database)
5. Geology

The Bitterroot Valley is a structural basin formed during the emplacement of the Idaho Batholith in the late Cretaceous or early Tertiary Period resulting from basin floor dropping along pre-existing faults or as a result of eastward block displacement of crustal material along low-angle thrust faults. The basin is on the western edge of a broad region of basin and mountain ranges.

Hamilton lies on top of the Riverside and Hamilton Terraces, which are sand and gravel deposits identified by map units Qatr and Qath.

Map 2: Geological Units in and Around Hamilton

6. Soils

Soil surveys can help planners make and substantiate the decisions that local government officials translate into zoning ordinances, building permits, authorizations for sewer extension, and other regulations that mold a growing community. Soil surveys help in determining the extent of flood prone areas, and they rate the hazards that affect use of soils in such areas. Soil surveys are used to guide municipal and other government agencies in restricting the use of flood plains for housing, septic tank absorption fields, and other forms of intensive development.

Zoning areas for housing, recreation, commercial, and other kinds of development should take account of the suitability and limitations of soils for such uses. Through use of soil surveys, roads and highways can be routed to avoid major soil hazards, and sources of borrow material needed in constructing highways can be located. Contractors can bid for work more accurately and can consider soil suitability and limitations in planning and designing specific structures. Except for floodplain and wetland areas, soils in the planning area around Hamilton are typically suitable for development.

Soil surveys provide detailed descriptions of soil properties that can be used to determine the suitability of areas for absorption fields. They indicate soil hazards that affect absorption fields, such as slow permeability caused by high clay content, the presence of a high water table, or excessive permeability that may allow effluent to pollute ground water. As indicated in Map 3, many of the soil types around Hamilton have limitations for septic absorption fields.

Map 3: Soil Rating for Septic Tank Absorption Field

Source: USDA Soil Survey
7. Sand and Gravel Resources

Sand and gravel are important natural resources found throughout Ravalli County. Sand and gravel resources provide the foundation upon which our infrastructure is built, defining where, how and to what extent development occurs. Our roads, bridges and highways are all constructed using gravel; the houses we live in, buildings we work in and sidewalks we walk on utilize the resource as well. Access to local gravel resources reduces costs associated with transportation and processing fees, thereby reducing the overall cost of development. The potential for local extraction of sand and gravel resources also affects the overall economic climate by providing jobs and serving local construction industries.

Developing an awareness of where sand and gravel resources are currently located and what types of activities (extraction, processing, and transportation) are occurring in these locations is important both to support growth and to avoid land use conflicts. In 2009, the Montana Code Annotated was amended to require communities to identify these resources in their Growth Policies. This information is intended to provide a base upon which future land use policies can be developed.

Table 2: Open Cut Sand and Gravel Permits in Hamilton and Surrounding Area

<table>
<thead>
<tr>
<th>Permit #</th>
<th>Owner</th>
<th>General Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>1482</td>
<td>MOL LLP Partnership</td>
<td>Airport Rd.</td>
</tr>
<tr>
<td>95</td>
<td>Ravalli County Road Dept.</td>
<td>Hamilton Airport</td>
</tr>
<tr>
<td>10</td>
<td>Meuchel, Robert V.</td>
<td>Woodcrest Lane</td>
</tr>
<tr>
<td>1487</td>
<td>Brent Neuman</td>
<td>Hwy. 38 7 Sleeping Child Road</td>
</tr>
<tr>
<td>1673</td>
<td>Schellinger Construction Co.</td>
<td>Brown Rd. &amp; Orchard Dr.</td>
</tr>
</tbody>
</table>

Table Source: Montana Dept. of Environmental Quality, www.deq.mt.gov/opencut/default.mcpx

Although aggregate rock, such as sand and gravel, is an important construction and road maintenance resource for the County mining operations for sand and gravel can have environmental impacts and it is important to develop this resource without comprising the quality of the life in the County. Common issues with the locating of gravel quarries include:

- Traffic
- Noise
- Dust
- Water quality
- Restricting river, stream, and flood plain functions
- Visual buffers
- Impact on adjacent or nearby residential uses
8. Floodplain

Floodplains are lowlands adjacent to water bodies such as rivers, streams, and lakes that have been or may be inundated with water. The size of the floodplains depends largely on topography with flat terrain along major rivers resulting in wide floodplains and mountainous and hilly areas having narrow or more confined channels. Riverine flooding that occurs after prolonged periods of rain or rapid snowmelt are the most common source of flooding. Ice jams in northern climates may also result in flooding.

Floodplains perform valuable functions including wildlife habitat; recreational, aesthetic, and scientific needs; open space; groundwater recharge; water quality maintenance; and sediment control. Development in flood plains usually reduces, modifies, or eliminates their ecological functions.

The Federal Emergency Management Agency (FEMA) National Flood Insurance Program’s Flood Insurance Map shows that the Federal Government has determined that areas adjacent to the Bitterroot River are located in the Federal Insurance Agency Hazard Zone and are subject to widespread flooding. The Bitterroot River, which carries runoff from large portions of Ravalli County, provides the greatest flood hazard potential for Hamilton. Areas directly adjacent to the Bitterroot River may be expected to be flooded by water ranging from 1 to 3 feet in depth in the event of 100-year storm. Much of this area is set aside as park land and open space. (See Map 4)

Figure 3: Bitterroot River in Riverview Park at Flood Stage
9. Wetlands/Riparian Areas

The location of most wetlands in riparian corridors and on the valley floor near human developments has often resulted in a degraded ecological condition with many emergent wetlands converted to pastures with introduced grasses. Nonnative species and noxious weeds are common, especially in the riparian zone of the Bitterroot River. Higher elevation wetlands are more ecologically intact; wetlands with a saturated water regime are more common there than in most of Montana.

Wetland functions include: 1) water storage and flood peak modification, 2) stream flow maintenance, 3) ground water recharge, 4) nutrient cycling, 5) sediment retention, 6) shoreline stabilization, 7) native plant community maintenance, 8) terrestrial habitat, 9) aquatic habitat, and 10) conservation of wetland biodiversity.

The major change in wetlands in the Bitterroot valley is an 80% decrease in beaver pond numbers and acreage over the 25 year period since 1980. Beavers are a keystone species with a disproportionate effect on ecological functions compared to their numbers. Beaver activity improves water quality through sediment retention, influences on nutrient cycling and decomposition, and hydrologic modifications. Beavers create wetlands that would otherwise be rare in mountainous terrain, thus providing important habitat for many other wetland–dependent species.

The other major wetland change was a 75% increase human created Palustrine wetland acreage. The 921 newly created wetlands in the study area over the 25 year period since the early 1980’s are virtually all small ponds with standing water that were primarily constructed for their recreational amenities. While created ponds perform some wetland functions, there is a general lack of relevant research and some potentially negative ecological impacts, especially with native amphibians. If constructed wetlands do not function like natural wetlands, then landscape wetland functions may still be lost even with a gain in wetland acreage.

(Source: mtnhp.org/reports/Bitterroot_Change_Revised.pdf)

a priority of TMDL implementation in the Bitterroot Watershed Project is restoring, maintaining, and protecting riparian areas, wetlands, and floodplains. Initiatives to protect riparian areas and floodplains will help protect property, increase channel stability, and buffer waterbodies from pollutants. The restoration goals focus on restoring natural shrub cover on streambanks. Passive riparian restoration is preferable, but in areas where stream channels are unnaturally unstable or streambanks are eroding excessively, active restoration approaches, such as channel design, woody debris and log vanes, bank sloping, seeding, and shrub planting may be desired to speed up the rate of recovery. In general, riparian plantings should be designed to promote the establishment of functioning stands of native riparian species. Weed management should also be a dynamic component of managing riparian areas.
10. Fish & Wildlife

In the vicinity of Hamilton, the Bitterroot River provides a variety of game fish, including bull trout, brook trout, brown trout, rainbow trout, westslope cutthroat trout, and mountain whitefish. Brook, brown, and rainbow trout are not native to the Bitterroot River. The fauna of the valley near Hamilton is characteristic of the northern Rocky Mountains. Many species of mammals, amphibians, and reptiles may occur in the vicinity of Hamilton and RML. Also, a wide variety of birds may breed in the valley near Hamilton. Common species of mammals that may occur in or adjacent to Hamilton include white-tailed deer, mule deer, coyote, red fox, striped skunk, raccoon, badger, long-tailed weasel, deer mouse, house mouse, meadow vole, Columbian ground squirrel, yellow-bellied marmot, eastern fox squirrel, several species of bats (e.g., big brown bat), and shrews (e.g., masked shrew). Large game animals in Ravalli County include elk, moose, mountain lion, and bear. These animals periodically appear in the planning area and city.

Terrestrial garter snakes, common garter snakes, and gopher snakes may live in Hamilton. Common bird species likely to breed in the urban habitats of Hamilton include rock dove, mourning dove, great horned owl, downy woodpecker, hairy woodpecker, northern flicker, western wood-pewee, eastern kingbird, tree swallow, barn swallow, black-billed magpie, black-capped chickadee, house wren, American robin, European starling, warbling vireo, yellow warbler, western tanager, American tree sparrow, chipping sparrow, dark-eyed junco, brownheaded cowbird, house finch, American goldfinch, and house sparrow.

The Montana Natural Heritage Program does identify species of concern. The term “species of concern” includes, “… taxa that are at risk or potentially at-risk due to rarity, restricted distribution, habitat loss, and/or other factors. The term also encompasses species that have a special designation by organizations or land management agencies in Montana.” Following are species of concern identified in the townships around the City of Hamilton and planning area.

Table 3: Species of Concern in Planning Area

<table>
<thead>
<tr>
<th>Species</th>
<th>USFS Status</th>
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</thead>
<tbody>
<tr>
<td>Gray Wolf</td>
<td>Endangered</td>
</tr>
<tr>
<td>Townsends Big Ear Bat</td>
<td>Sensitive</td>
</tr>
<tr>
<td>Wolverine</td>
<td>Sensitive</td>
</tr>
<tr>
<td>Canada Lynx</td>
<td>Threatened</td>
</tr>
<tr>
<td>Peregrine Falcon</td>
<td>Sensitive</td>
</tr>
<tr>
<td>Bald Eagle</td>
<td>Threatened</td>
</tr>
<tr>
<td>Fisher</td>
<td>Sensitive</td>
</tr>
<tr>
<td>West Slope Cutthroat Trout</td>
<td>Sensitive</td>
</tr>
<tr>
<td>Bull Trout</td>
<td>Threatened</td>
</tr>
</tbody>
</table>

Source: Montana Natural Heritage Program, [http://mtnhp.org](http://mtnhp.org)
11. Air Quality

The Clean Air Act identifies six common air pollutants that are found all over the United States. These pollutants can injure health, harm the environment and cause property damage. EPA calls these pollutants criteria air pollutants because the agency has developed health-based criteria (science-based guidelines) as the basis for setting permissible levels in the air we breath. EPA establishes national ambient air quality standards for each of the criteria pollutants. These standards apply to the concentration of a pollutant in outdoor air. If the air quality in a geographic area meets or is cleaner than the national standard, it is called an attainment area; areas that don't meet the national standard are called nonattainment areas.

The six major air pollutants are monitored: sulfur dioxide (SO\textsubscript{2}), lead, ozone (O\textsubscript{3}), nitrogen dioxide (NO\textsubscript{2}), carbon monoxide (CO) and fine particulate matter (PM\textsubscript{2.5} and PM\textsubscript{10}). Ravalli County was recommended to EPA to be declared a federal non-attainment area for PM\textsubscript{2.5} in 2007. Ravalli County has not been declared a federal non-attainment areas as of April, 2009.

Particulate matter, or PM, is the term for particles found in the air, including dust, dirt, soot, smoke, and liquid droplets. Particles can be suspended in the air for long periods of time. Some particles are large or dark enough to be seen as soot or smoke. Others are so small that individually they can only be detected with an electron microscope. Many manmade and natural sources emit PM directly or emit other pollutants that react in the atmosphere to form PM. These solid and liquid particles come in a wide range of sizes.

The Montana Department of Environmental Quality (DEQ) has been collecting PM\textsubscript{2.5} data since January 1, 2000 at the Hamilton Courthouse site. According to the DEQ study, “The Hamilton, Montana PM\textsubscript{2.5} Source Apportionment Research Study”, October 2008, “new carbon” (or emissions from biomass burning) was the largest source of PM\textsubscript{2.5} in the Hamilton area air-shed. Biomass pollution should be viewed as predominantly solid fuel burning devices and outdoor burning because there are no major industrial emission. This study was conducted in the winter months of November-February only.

Biosmoke pollution should be viewed as a general source predominantly composed of solid fuel burning device emissions as well as other biomass combustion emission sources could including smoke from prescribed fires, residential open burning of biomass waste, and small industrial sources. The PM 2.5 data is also used for public health protection plans during periods of poor air quality which the community frequently experiences during summer wildfire events.

(Source: http://www.deq.mt.gov/airmonitoring/hamiltonps46.mcp)

Other sources of PM\textsubscript{2.5} in the Hamilton area were ammonium nitrate (17.4%), secondary sulfate (4.4%), and street sand (1.0%), respectively.
12. Light Pollution

Light pollution is a by-product of lighting at night, especially when there is use of inefficient luminaires and lamps and property is lighted to excessive levels. The Lighting Research Center, identifies three types of light pollution:

- **Light trespass.** Light trespass is light being cast where it is not wanted or needed, such as light from a streetlight or a floodlight that illuminates a neighbor’s property.

- **Glare.** Glare is objectionable brightness that can be disabling or discomforting. Disability glare causes a loss of visibility from stray light being scattered within the eye. Discomfort glare is the sensation of annoyance or even pain induced by overly bright sources.

- **Sky-Glow.** Sky-glow from human sources is produced by light that is either emitted directly upward by luminaires or reflected from the ground is scattered by dust and gas molecules in the atmosphere, producing a luminous background.

The Illuminating Engineering Society of North America (IESNA) has adopted environmental zones to determine the appropriate levels of lighting. The most restrictive, zone (E1 zone), includes areas with intrinsically dark landscapes such as remote rural areas and national parks with unlit roads and limited residential lighting. Urban areas with high ambient brightness and high densities are rated as the least restrictive zone (E4 zone).

To reducing sky glow, the Institution of Lighting Engineers (ILE) has suggested limits on the amount of luminaire-emitted light that goes directly into the sky. The measures to reduce sky glow include:

1. using full cutoff luminaires to minimize the amount of light emitted upward;
2. reducing light levels;
3. turning off unneeded lights;
4. limiting lighted hours of outdoor sales areas, parking areas, and signs;
5. limiting lighting installations; and
6. mandating low-pressure sodium light sources.

The City of Hamilton has regulations to require that lights be shielded in parking areas (17.100.090 Municipal Code) and design standards generally address glare issues but there is no specific dark sky ordinance.
PART 2: TRENDS

Trend 1: Source Water Protection

The Federal Safe Drinking Water Act (SDWA) requires states to develop and implement a Source Water Assessment Program (SWAP) that analyzes existing and potential threats to the quality of the drinking water of public water supplies throughout the state. The Montana SWAP was formally approved by the U.S. Environmental Protection Agency (EPA) in November of 1999.

Source water protection is a common sense approach to guarding public health by protecting drinking water supplies at the water source, providing public health protection and reducing the treatment challenge for public water suppliers. Source Water Protection Plan (SWPP) allows a community to take an active role in working together to protect public health and the environment. Source Water Protection Planning is divided into two components: 1) a technical component that has been completed by a qualified hydrologist or hydrogeologist, and 2) a non-technical component that is developed by the community. The non-technical component includes a management plan and emergency plan.

The City of Hamilton submitted an updated source water protection plan to Montana Department of Environmental Quality in March, 2008. The City of Hamilton is working with Ravalli County Environmental Health to institute the non-technical component of the SWPP.

(Source: http://www.deq.mt.gov/wqinfo/swp/index.asp)

Trend 2: Watershed Plans

A watershed planning approach extends beyond an impaired water body and includes the entire geographic area of a watershed. The U.S. Environmental Protection Agency (EPA) recommends this approach. It defines a plan as follow:

“A watershed plan is a strategy that provides assessment and management information for a geographically defined watershed, including the analyses, actions, participants, and resources related to developing and implementing the plan.” (Source: http://www.epa.gov/owow/nps/watershed_handbook/)

Watershed planning resources Include:

- Montana Water Center—http://www.epa.gov/owow/nps/watershed_handbook/
- Bitterroot Water Forum, brwaterforum@bitterroot.net
- Ravalli County Environmental Health
Trend 3: Floodplain Management

Past floodplain policies focused on reducing flooding through structural measures to redirect flood waters and on reducing danger and property loss by imposing minimum building requirements in floodplains. Since the late 1990’s, however, the focus has shifted to protect the natural resources and functions of floodplains. The Federal Emergency Management Agency (FEMA), which administers the National Flood Insurance Program, now has a voluntary Community Rating Systems (CRS) that offers incentives in the form of discounts on flood insurance in localities that go beyond the minimum floodplain management requirements. Although the NFIP minimum standards provide a great deal of flood protection, damage can still result for many reasons:

• Estimates of flood heights are subject to various errors,
• Buildings may be damaged by floods that exceed the predicted 100-year flood;
• Urbanization and other changes in the watershed can increase the flood hazard; and
• Filling and other development in the fringe can reduce storage capacity.

Activities related to development that can result in CRS credits include, open space preservation, land development criteria and higher regulatory standards. Neither Hamilton or Ravalli County is participating in the CRS program.

Trend 4: Building with Wildlife (FWP Manual)

Developments that incorporate ecological principles and build with wildlife in mind are becoming more attractive to home buyers. Consideration of wildlife impacts should occur in the earliest planning stage, ideally before the proposal is even submitted to the local governing body for review. Many of the principles for wildlife are basic conservation practices that also have other environmental benefits. According to the National Science Foundation, “Building with Wildlife: A Guide to Conservation Oriented Development” major principles include:

1) Maintain natural habitat patterns;
2) Allow natural processes to continue;
3) Enable wildlife movement between natural areas;
4) Plan development according to the land’s capacity;
5) Maintain key plants and animals;
6) Minimize the extent of disturbance;

Large game mammals, species of concern and migratory foul are most commonly type of wildlife to be considered when planning;
PART 3: OPPORTUNITIES & PROGRAMS

1. Regulatory Framework

There are a variety of Federal, State and Local regulations that pertain to rivers, streams and ditches.


**State of Montana:** Stream Protection Act; Stormwater Discharge General Permit; Water Use Act; Natural Streambed and Land Preservation Act; Pollutant Discharge and Elimination Permit; Short-term Exemption from Montana’s Surface Quality Water Quality Standards.

**City of Hamilton:** Subdivision Regulations and Public Works Standards: The Hamilton Subdivision Regulations include surface water as an environmental assessment requirement. Public Works Standards have standards for stormwater collection.

2. Streamside Protection Zones

In the community survey, one of the top priorities was protecting water quality. While floodplain regulations provide some protection, streamside setbacks are another mechanism to guard against threats to water quality. In ranking specific policies, 61% of respondents indicated that streamside setbacks were very important with another 13% saying they were important. The function of a Streamside Protection Zone (SPZ) is to protect water quality along streams, lakes, and other water bodies. The SPZ can absorb water during the wet seasons and slowly release moisture into the stream. This minimizes the effects of peak runoff and keeps streams from drying out sooner than usual. The SPZ also provides filtering of surface runoff by trapping and blocking sediment and other debris from entering the water body. Any land disturbance close to streams, whether from residential construction, roads, or forest practice can result in increased sedimentation. It is becoming more common for localities to establish streamside setbacks through the use of zoning. The Idaho Department of Environmental Quality provides best practice guidelines for adopting such standards. Such regulations should have the following features;

- Minimum total buffer width
- Three-zone buffer system
- Vegetative buffer
- Conditions for buffer expansion or contraction
- Physical delineation requirements
- Conditions where buffer can be crossed
- Integrating storm water and storm water management within the buffer
- Buffer limit review
- Buffer education, inspection, and enforcement
- Buffer flexibility
3. Solid Fuel Burning Device Programs

The Environmental Protection Agency has certified low emission solid fuel burning devices. As incentive to convert from older models to more efficient burning models, some areas have implemented change over programs for such devices. These programs are voluntary in nature and offer incentives or rebates for homeowners to switch to new models. (http://www.epa.gov/burnwise/woodstoves.html)

Typically, such programs look for public and private partners to fund and promote the program. In Montana, Libby, MT offers a successful case study of such a study. The most successful programs contain an education element.

The State of Montana has a tax credit for homeowners who purchase and install low-emission certified devices. (http://deq.mt.gov/energy/warmhomes/taxincentives.mcpx) Additionally, the State of Montana has rules regarding outdoor burning that should be enforced on a local level. Ravalli County Environmental Health is working on an air quality program to address local control of state regulations as well as an education and outreach campaign targeted at reducing PM 2.5 pollution. In an effort to help reduce the impacts from biomass pollution, several local governments have enacted "Solid Fuel Burning Devices Curtailment Programs." These programs include a variety of strategies to reduce PM 2.5 pollution.

4. DEQ Wetland Strategic Framework

The Montana Department of Environmental Quality’s (DEQ) Technical & Financial Assistance Bureau is responsible for coordinating and providing leadership to wetland conservation activities state-wide. One activity is to staff and provide leadership to the Montana Wetland Council. The Council acts as a forum for all stakeholders to participate in wetland issues. With DEQ leadership and extensive public involvement, the Council developed “Priceless Resources: A Strategic Framework for Wetland and Riparian Area Restoration and Conservation: 2013-2017”, (http://deq.mt.gov/wqinfo/wetlands/default.mcpx) which guides the Council and all involved in wetland issues, in pursuing wetland conservation activities. The Strategic Framework was approved by the Governor and Directors of the MDEQ, DNRC, & DFWP as the state plan for wetlands and riparian areas.

Wetland projects range from an evaluation of wetland impacts in the State of Montana, developing education and information about Montana wetlands, land local partnerships composed of local government, wetland ecologist and community volunteers to inventory wetlands for restoration and management needs. Wetland grant projects are solicited each fall and for approved projects that further the goals of the Strategic Framework, funding is available the following spring.
PART 4: GOALS & POLICIES

Goals 1: Protect water quality in rivers and streams and preserve riparian areas and wetlands that are an integral part of the riparian system.

A. Coordinate with updates to the floodplain regulations to adopt regulations to adopt a streamside protection zone and vegetative buffers to preserve water quality while offering flexibility for development.

B. Encourage cluster developments, subdivision designs and incentives that preserve wetland and riparian zones.

C. Support the recommendations from the Total Daily Maximum Load plan for the Bitterroot Watershed.

D. Encourage developments that increase the ratio of vegetated, permeable surfaces to impervious surfaces or divert runoff into infiltration beds.

E. Promote stormwater management techniques that accommodate runoff in a manner that protects water quality.

F. Continue to promote Best Management Practices for construction practices to prevent soil erosion and sedimentation in water resources.

G. Educate citizens about proper use and disposal of toxic substances such as cleaner, paints, and solvents, to keep these substances out of the river, streams, ditches, abandoned wells, and the municipal sewer system.

H. Include performance standards for commercial and industrial uses so activities do not threaten water quality.

Goal 2: Protect drinking water supplies at the source by keeping groundwater free of contaminants.

A. Continue to work with State and Federal agencies to monitor point sources of pollution and clean-up those sites where leaks or spills have occurred.

B. Educate property owners and businesses on proper storage of products and chemicals.

C. Identify groundwater recharge areas and limit activities that could pose a threat to groundwater.

D. Work with the County to promote the proper septic system maintenance and safe disposal of waste.

E. Coordinate with County and state agencies on source water projection planning projects.

F. When feasible, encourage septic users to annex and connect to the city sewer and expand the city wastewater collection system to accommodate more users.

G. Work with local and State agencies to promote best management practices for agricultural users to protect groundwater.
Goal 3: Land use should reflect the suitability of the land in regards to ecological principles.

A. Adopt appropriate floodplain management practices that would preserve the functions of the floodplain and reduce flood insurance ratings in the community.
B. Promote development and building that is suitable for the soil type of the area.
C. Encourage development practices that are friendly to wildlife and preserve critical wildlife habitat.
D. New development should be encouraged in areas that are relatively free of environmental problems (e.g., steep slopes, bedrock, water table, wetlands and floodplain areas, etc...)
E. Work with other agencies to educate landowners on agricultural and building practices that promote conservation and wildlife values.
F. Provide education materials for the public on water quality issues with creeks and measures the public can take to prevent impairment of streams.
G. Notify and request input from appropriate agencies on development proposals that may impact environmental quality.
H. Adopt gravel pit regulations to control for dust and avoid land use conflicts.

Goal 4: Control for noxious weeds in the city and planning area.

A. Coordinate with County and State agencies on implementing weed control plans, enforce weed ordinances and to develop best management practices/public works standards for control on construction sites.
B. Promote early detection and eradication of small patches of weeds by monitoring high-risk areas such as transportation corridors and disturbed or bare ground.
C. Minimize disturbance of desirable vegetation along roadsides, trails, and waterways;
D. Educate land owners about building practices that maintain healthy communities of native and desirable plants to compete with weeds and the proper use of ornamental gardens.
E. Revegetate disturbed sites with desirable plants.
F. Consider demonstration programs to promote native landscapes and non-toxic control of weeds.

Goal 5: Protect air quality and clear skies for the citizens of Hamilton.

A. Coordinate with county, state and federal agencies to enforce existing outdoor burning regulations and to review impacts of proposed uses on air quality including fugitive dust from gravel roads.
B. Work with State, local and non-profit agencies to provide incentives to convert older solid fuel burning devices to low emission models and consider other regulatory measures to address the issue.
C. Encourage developments, land use patterns and transportation improvements that reduce vehicle trips and result in less carbon monoxide emissions.
D. Promote the use of public transportation, telecommuting and transportation demand management to reduce vehicle trips and traffic congestion.
E. Adopt lighting ordinances to promote the concept of dark skies.
PUBLIC FACILITIES

PART 1: EXISTING CONDITIONS

1. Street Network

A. City & County Roads

The Public Works Department maintains streets within the city limits. The City maintains a total of 27.77 miles of streets and 8.503 miles of alleys within the city limits. The streets are generally paved and the alleys mostly have a gravel surface. The street maintenance budget is primarily from the fuel tax funds with some maintenance funds coming from the general fund. There are also street maintenance districts for streets and sidewalks. Roads in the three-mile planning area that are not part of the State primary or secondary highway system are maintained by the County.

B. State & Federal Highways

The State and Federal Highway system is comprised of the National Highway System, Primary Highway System and the Secondary Highway system. Federal funding for the U.S. and State Highways come from the National Highway System Program and the Surface Transportation Program. There are no Interstate highways in the County. U.S. Highway 93 runs north-south through the City of Hamilton and is the major route in the county from the State Line to Missoula.

Secondary State highways include MT Highway 269, located east of Town and known as the East Side Highway and MT Highway 531 (Main St.), an east to west highway extending west over the Bitterroot River. According to the Annual Average Daily Traffic (ADT) data for each of the segments that pass through Hamilton, U.S. 93 from Ravalli St. to Pennsylvania is the most heavily travelled.

Table 1: ADT for Segments in and Around Hamilton—2013

<table>
<thead>
<tr>
<th>Segment</th>
<th>AADT</th>
<th>Commercial Vehicles</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. 93—Pennsylvania to Riverside</td>
<td>15,410</td>
<td>241</td>
</tr>
<tr>
<td>US 93—Ravalli St. to Pennsylvania</td>
<td>16,670</td>
<td>536</td>
</tr>
<tr>
<td>US 93—Ravalli St. to Golf Course Rd.</td>
<td>14,680</td>
<td>536</td>
</tr>
<tr>
<td>US 93—Golf Course Rd. to Lost Lamb Rd.</td>
<td>8,650</td>
<td>170</td>
</tr>
<tr>
<td>Main St.—US 93 to 5th St.</td>
<td>5,340</td>
<td>54</td>
</tr>
<tr>
<td>Main St. - 5th St. to Ricketts</td>
<td>3,800</td>
<td>54</td>
</tr>
<tr>
<td>Marcus St.—US 93 to East Side Highway</td>
<td>5,980</td>
<td>135</td>
</tr>
<tr>
<td>East Side Highway—Tammany Ln. to Fairground Rd.</td>
<td>4,250</td>
<td>135</td>
</tr>
<tr>
<td>East Side Highway—Fairground Rd. to Hawker Ln.</td>
<td>6,910</td>
<td>135</td>
</tr>
</tbody>
</table>

Source: Montana Department of Transportation, Rail Transit & Planning Division
Map 1: Roadway Functional Classification Map—Hamilton Area Transportation Plan 2009 Update

Figure 2-2
Roadway Functional Classification
Inset Area
2. Functional Street Classifications

Roadway facilities are classified by a street functional classification system that specifies the level of mobility roadways must provide to users. The functional classifications are used to establish eligibility for roadway funding projects and to define appropriate street design standards and traffic operating characteristics. The following table contains the street classification system for Hamilton.

Table 2: Functional Street Classification for Hamilton

<table>
<thead>
<tr>
<th>Classification</th>
<th>Primary Function</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FHWA Classified Routes</strong></td>
<td></td>
</tr>
<tr>
<td>Principal Arterials</td>
<td>Mobility</td>
</tr>
<tr>
<td>US Highway 93</td>
<td></td>
</tr>
<tr>
<td>Major Collectors</td>
<td></td>
</tr>
<tr>
<td>S-269 (Eastside Highway)</td>
<td>Land Access / Mobility</td>
</tr>
<tr>
<td>S-531 (Main Street)</td>
<td></td>
</tr>
<tr>
<td>Minor Collectors</td>
<td>Land Access / Mobility</td>
</tr>
<tr>
<td>M-59-32 (Hope Avenue)</td>
<td></td>
</tr>
<tr>
<td><strong>City of Hamilton Classified Routes</strong></td>
<td></td>
</tr>
<tr>
<td>Minor Collectors</td>
<td>Land Access / Mobility</td>
</tr>
<tr>
<td>Adirondac Avenue</td>
<td></td>
</tr>
<tr>
<td>Pine Avenue</td>
<td></td>
</tr>
<tr>
<td>Pickney Street</td>
<td></td>
</tr>
<tr>
<td>State Street</td>
<td></td>
</tr>
<tr>
<td>Marcus Street</td>
<td></td>
</tr>
<tr>
<td>Fairgrounds Road</td>
<td></td>
</tr>
<tr>
<td>Golf Course Road</td>
<td></td>
</tr>
<tr>
<td>Ravalli Street</td>
<td></td>
</tr>
<tr>
<td>7th Street</td>
<td></td>
</tr>
<tr>
<td>4th Street</td>
<td></td>
</tr>
<tr>
<td>Daly Avenue</td>
<td></td>
</tr>
<tr>
<td>Kurtz Lane</td>
<td></td>
</tr>
<tr>
<td>Freeze Lane</td>
<td></td>
</tr>
<tr>
<td>Big Corral Road</td>
<td></td>
</tr>
<tr>
<td>Grantsdale Road</td>
<td></td>
</tr>
<tr>
<td><strong>Ravalli County Classified Routes (see note 1)</strong></td>
<td>Land Access / Mobility</td>
</tr>
<tr>
<td>Major Collectors</td>
<td></td>
</tr>
<tr>
<td>Bowman Road (Ricketts Road to US Highway 93)</td>
<td>Land Access / Mobility</td>
</tr>
<tr>
<td>Hamilton Heights Road (S-269 to Harvey Lane)</td>
<td></td>
</tr>
<tr>
<td>Fairgrounds Road (Freeze Lane to S-269)</td>
<td></td>
</tr>
<tr>
<td>Golf Course Road (US Highway 93 to Big Corral Road)</td>
<td></td>
</tr>
<tr>
<td>Grantsdale Road (S-38 to Golf Course Road)</td>
<td></td>
</tr>
<tr>
<td>Minor Collectors</td>
<td>Land Access / Mobility</td>
</tr>
<tr>
<td>West Bridge Road</td>
<td></td>
</tr>
<tr>
<td>Old Corvallis Road</td>
<td></td>
</tr>
<tr>
<td>Ricketts Road</td>
<td></td>
</tr>
<tr>
<td>Riverside Cut-off</td>
<td></td>
</tr>
<tr>
<td>Black Lane</td>
<td></td>
</tr>
<tr>
<td>Bass Lane</td>
<td></td>
</tr>
<tr>
<td>Blood Lane</td>
<td></td>
</tr>
<tr>
<td>Hamilton Heights Road (Harvey Lane to Study Area Boundary)</td>
<td>Land Access / Mobility</td>
</tr>
<tr>
<td>Bowman Road (Dutch Hill Road to Study Area Boundary)</td>
<td></td>
</tr>
<tr>
<td>Golf Course Road (Big Corral Road to Tammany Lane)</td>
<td></td>
</tr>
</tbody>
</table>

Note 1: Ravalli County roadway classifications follow the AASHTO standards for rural roadways.

Source: Hamilton Transportation Plan—2009
3. Transportation Safety Plan

In 2011, the City completed the “Hamilton Community Transportation Safety Plan” - 2011. The main goal of the plan is to “Preserve and enhance the quality of life by improving transportation safety for all users.” To accomplish the purpose of the plan took the following approach.

- Identification of Goals for Safety,
- Review and Analysis of Crash Data and Reports,
- Identification of Problems and/or Areas of Concern,
- Development of Emphasis Areas and Completion of Gap Analysis,
- Identification of New Strategies and Actions, and
- Development of Implementation Suggestions and Reporting Plan

The plan recommends a multi-faceted approach to address safety issues. This includes education, enforcement, engineering and resources for emergency medical services. The plan identified three issue areas and identified strategies for each of these areas. Community input and a review of safety procedures from other communities were the basis for developing strategies and priorities. To implement policy and procedures, the plan recommends to designate a “champion for each of the issue areas and to meet quarterly to monitor progress. The three issue areas include:

- Vulnerable Uses (Older drivers, younger drivers, bicyclist, and pedestrians)
- User Behavior (Alcohol & drug impairment, safety device use, distracted driving)
- Problem locations (Areas that lack sidewalks, railroad crossing, high risk intersections)

![Figure 1: Contributing Circumstances Involving Driver, 2005—2009](image)

4. Airport

A. General Information

The Ravalli County Airport is owned and operated by Ravalli County and serves the City of Hamilton and surrounding area. It is located approximately one mile east of the City. The airport is a general aviation (non-airline) and is one of the busiest general aviation airports in the State. As noted in the following statistics, the airport serves a variety of users.

- Elevation—3642 ft.
- Main Runway Dimensions—4200 x 75 feet
- Main Runway Surface—Asphalt/porous friction courses, in fair condition
- Aircraft Based on Field—126
- Average Aircraft Operations a day—65 (57% local & 35% Transient)
- 2012 Annual operations = 23,600
- Airport Users - Business, governmental, recreational, emergency medical, person. Bitterroot National Forest
- Total Economic Impact—$10.42 million


B. Airport Influence Area

Ravalli County has established an “Airport Influence Area” in accordance with MCA 67-4-311-314. This ordinance provides that no permit be granted which would allow the establishment of an airport hazard or that would allow non-conforming use, structure or tree to become a greater hazard that it was on the day the AIA was established. Land owners within the airport influence area must apply for a permit and indicate the height of structures or describe any operations such as lights and smoke that might interfere with the airport. The ordinance also puts nearby land owners on notice of noise, vibration and dust that may result from the operation of aircraft.

Figure 2: Airport Influence Area (Source: Ravalli County Airport Environmental Assessment—2008)
C. Future Improvements—Environmental Assessment

The airport was initially designed for small aircraft with shorter wingspans than common aircraft today. The runway is located too close to the parallel taxiway and the runway length is too short to accommodate 100% of small general aviation aircraft that currently use the airport.

In 2015, the County accepted a grant to complete an environmental assessment to evaluate alternatives for improvements to the airport. Much of the funding for airport improvements will come from FAA. The Ravalli County Airport is on the National Plan of Integrated Airport systems (NPIAS) and the Montana Airport System Plan (MASP). The alternative that would be capable of accommodating 100% of small aircraft fleet would require a 5,200’ long runway situated parallel to the existing runway. Associated actions necessary for such improvements would include:

- Acquire necessary land for improvements
- Acquire/rezone land for compatible land use
- Install wildlife fence around the airport
- Relocate a portion of Stock Farm Road out of the runway protection zone
- Convert existing runway into a arterial parallel taxiway
- Do earthwork for eventual extension of partial parallel taxiway
- Pave a portion of ultimate parallel taxiway
- Connections from new runway to partial parallel taxiway
- New MIRL system for runway
- New NAVAIDS
- New taxiway edge lighting
- Reconstruct or reconfigure aprons and aircraft parking areas
- Remove trees obstructing runway approaches
- Amend instrument approach an departure procedures

Ravalli County is considering establishing a Targeted Economic Development District (TEDD) around the airport to facilitate airport related economic development. The area in the TEDD would include the entire airport property plus two large land owners in the area.
5. Transit

Transit operations for the Hamilton area were examined in the “Transit Development Plan (TDP)” for Ravalli County. The most recent TDP included data from 2003 to 2007. The “Hamilton Area Transportation Plan” identified the following transit providers that provide services within Hamilton and the planning area.

1. Bitterroot Bus

Within the Hamilton planning area, the designated rural public transit provider is the Bitterroot Bus. The bus is operated by the Ravalli County Council on Aging under a grant from the Montana Department of Transportation. The bus operates Monday through Friday from 8:00 am to 4:30 pm with fares based on the distance traveled and frequency of stops. A 24-hour advance reservation is required for the “curb to curb service”. Every Tuesday the bus provides transportation to Missoula for the general public, including the elderly and disabled. In 2009, there were 8,560 passenger-trips on the bus. BitterRoot Bus currently has six vehicles for passenger transportation.

2. Missoula—Ravalli Transportation Management Association (MR-TMA)

The MRTMA operates out of Missoula and operates a ride van pool programs, park-and-ride sites, coordinates carpooling/ride matching and is a resource center. It serves Missoula, Ravalli, Lake, Mineral and Flathead County. There is van-pool site and park-and-ride site in Hamilton.

3. Non-profit Providers

There are a number of non-profit organizations that provide services for their residents/clients.

- Ravalli Services Corporation
- The Discovery Care Center
- Valley View Estates
- Ravalli Head Start
- Disabled American Veterans

4. For Profit Providers

For profit providers that are licensed to provider services include:

- Medicab—Non-emergency, wheelchair accessible transportation to health care facilities.
- Bitterroot Taxi
- Majestic Bus Services—Operates 14 school buses for Hamilton School District.
- Airport Shuttle—Provides services to Missoula International Airport

The Transportation Development Plan recommended both short-term and long-term actions that are reviewed and updated by the Ravalli County Transportation Committee. Actions include coordination, expanding services, conducting outreach and working to improve funding sources.
6. Rail

Montana Rail Link (MRL) operates a single-line federal Railroad Administration Class 2 freight line runs from Missoula through Hamilton to Darby. According to the 2010 Montana State Rail Plan Update, this 65.4-mile single track branch line. Most of the line has a maximum speed of 25 mph; however, speeds are limited to 10 mph near Hamilton and Darby.

Map 2: Montana Rail Link—Missoula to Darby Route

The Hamilton Area Transportation Plan included findings from a study that examined commuter rail on Montana Rail Link line. The study concluded that the system would require costly improvements such as installing a signal system, establishing station platforms, ticket machines and passenger cars. The estimated capital cost for a train from Missoula to Stevensville would be approximately $124 million dollars and would have an implementation time frame of 15 or more years.
7. Non-Motorized Transportation Plan

In 2012 the city completed a non-motorized transportation plan. The plan included an evaluation of pedestrian and bicycle facilities and made recommendations for infrastructure improvements as well as policy recommendations. An analysis of public input indicated that issues included lack of connectivity in sidewalks and bike trails, problems crossing US 93, lack of designated bike routes, streets are only designed for automobiles, maintenance issues, railroad crossings and lack of bike parking. Following is a summary of the recommendations.

Pedestrian Projects

- Sidewalk projects—21.75 miles of new sidewalks
- Shared-Use Paths/Greenways—17.5 miles including feasibility studies for a river trail and rails-to-trails
- Crossing Improvements - Eight crossings—most to have improved signage & markings. Two pedestrian bulb-outs and a flashing light for Main & 7th
- ADA Transition - Recommends finding a funding source to bring sidewalks into compliance with ADA requirements

Bicycle Projects

- Bike lanes on roadway
- Bike routes - Designate safe routes and use signage
- Bike Boulevard - Like bike routes but with a higher level of signage and markings
- Shared-use Paths/Greenways—See description under pedestrian projects

Policy Recommendations

- Require bike parking
- Education & outreach for pedestrians, bicyclists & motorists on laws and safety
- Continue to participate in Safe Routes to Schools
- Promote bicycle tourism
- Kids bike camp or bike club
- Employer services—work with employers to promote active transportation
- Road User Report—monitor safety, road use through counts and surveys
- Bicycle & walking maps
- Include bicycling—walking info on City web site
- Adopt complete street policy
8. **Wastewater**

**A. Wastewater Collection System**

The collection system consists of approximately 20 miles of gravity sewer and 374 manholes. Sewer lines are predominately 8-inch, with collector and interceptor lines varying in size from 15-inch to 27-inch with sewers and force mains generally following the roads and alleys within the City limits. The gravity sewer collection system serving the City is in good condition with the exception of a few areas. Projects constructed within the past 15 years including the New York Avenue Interceptor, Fairgrounds Road Interceptor, and new sewer on Kurtz Lane, Skeels Avenue, and Old Corvallis Road, have reduced infiltration within the City of Hamilton system. There are still significant infiltration issues within the system, especially in older segments of sewer line in areas of high groundwater. Infiltration is known to take place at pipe joints and manholes. The City has been monitoring the flows to identify areas of rehabilitation.

Included in the collection system are six lift stations. The New York lift station is located just outside of the wastewater treatment plant site and collects the main flow by gravity from the downtown area and the discharge from the other lift stations. Stonegate lift station collects gravity flow from the east edge of the City. The GSK, SID 17, Council on Aging and Pizza Hut pump stations collect flows from the north side of the City. The Wastewater Facility Plan indicates that all stations have sufficient capacity for both near-term and projected conditions. As new development occurs the plan recommends that the City continue to evaluate the station capacities. It is likely that the New York Avenue, Stonegate, SID 17 and GSK Pumping Stations will all continue to experience growth in their respective service areas.

**B. Wastewater Treatment Plant**

The original plant was constructed in 1984 and is located at the west end of New York Avenue adjacent to the Bitterroot River. The Hamilton Wastewater Treatment Plant discharges effluent to the Bitterroot River, a major tributary of the Clark Fork River. The State of Montana Department of Environmental Quality has performed an assessment study of the Clark Fork River Basin and designated the river as a high priority for development of a total maximum daily load (TMDL) for nutrients. Similar assessment for the Bitterroot River showed no TMDLs for nutrients were required as the river is not degraded.

Currently, the City of Hamilton wastewater facility receives an average monthly influent flow of approximately 0.635 to 0.750 million gallons per day (mgd). Organic and solids loadings are relatively consistent throughout the year. During the summer months, the plant influent flow conditions increase due to groundwater infiltration into the system. The irrigation ditch system that surrounds the collection system contributes to the elevated groundwater. Current loadings are slightly less than design, implying that some available capacity remains.

**C. Improvements**

The Wastewater Facility Plan notes that effluent discharge standards are more stringent and suggest improvements to meet future requirements. The plan recommends improvements to meet current and projected flows and loadings. In 2010 phase 1 of improvements were completed to upgrade solids handling, put in a dewatering building, compost area and new pumps to improve efficiency and increase capacity. Phase 2 improvements will be undertaken in 2015 and that will include UV disinfection and expand the lab. Phase 3 improvements, to be scheduled, will expand capacity and improve treatment of nutrients.
9. Water

A. Water Supply
The City of Hamilton water supply facilities consist of seven wells that vary in capacity from 285 gallons per minute to 900 gallons per minute. This Water Facility Plan indicates the wells have adequate capacity to meet demands throughout the planning period. Fire flow capacity, however, is significantly diminished during a power outage. It would be possible to increase fire flow capacity by installing additional standby power. The existing City wells only have adequate water right capacity for the total volume per year appropriation is to approximately 2023. Additional water rights will be required for future system expansion and potentially to meet the current demands. The water supply complies with water quality standards.

B. Water Storage
The City is currently served by a 1.0 million gallon (MG) pre-stressed, post tensioned reservoir located on a parcel of land southeast of the City. This Water Facility Plan shows that the City of Hamilton currently has sufficient storage capacity until approximately year 2015. Additional booster pumps being installed in 2015 at the main booster station will extend this to 2030 to meet future need.

C. Water Distribution
The water distribution system consists of water mains ranging in size from 2-inch to 12-inch in diameter. Some of the mains still in service are over 100-years old. The water system is equipped with two booster stations. One serves Weber Estates and Hillcrest Subdivisions located off of Golf Course Road. The second receives water from the High School Well Field. The Facility Plan identified many areas within the City that do not meet the minimum desired fire flow under existing and future conditions. Dead-end lines, small diameter pipe, and the lengthy physical distance between the storage reservoir and parts of the service area are the main reason for deficiencies. As a result, the existing system requires improvements to supply the required fire flow.

D. Recommendations
- It is recommended that use of existing water rights be prioritized. Priority should be given to properties currently within the City limits and for protection of public health and safety. The City may also consider a water right acquisition fee.

- The requirement for additional storage capacity may be postponed or eliminated by developing additional firm supply capacity. If additional supply capacity is constructed, it is still recommended that storage be constructed in the future upper pressure zone to provide energy efficiency, system redundancy and stable operating pressures. The City should monitor development in the East Planning Area to determine if and when construction of storage is warranted.

- Improve water distribution system to include installation of new water mains to provide a looped system, upsizing existing water mains, the rehabilitation of old impaired pipelines, additional booster pumping, or the addition of storage.

- Major extensions of the distribution system will be required to the south, north, and east if the service area is to grow as predicted. The main backbone infrastructure must be sized adequately to meet max day and fire flow demands in these areas. Monitor growth to determine priorities for improvements.

- Update rates, connection fees and impact study.
10. Stormwater

Hamilton utilizes dry wells, or sumps, to discharge stormwater directly to the subsurface. It is presumed that many sumps exist within the inventory region of the water supply wells. A number of the sump installations are located on commercial properties. Infiltration of direct runoff through the sumps is not anticipated to contaminate groundwater. However, spills or illegal dumps into the sumps can cause a significant problem. Hamilton has addressed the use of sumps, with consideration for spill containment features, in order to reduce the risk from this source type. Fortunately, a storm sewer is located along Highway 93, which helps to protect groundwater in this area from spilled contaminants. This storm sewer discharges at two locations, to the north and west of town, outside of the source water protection areas.

11. Utilities

A. Electric and Gas

Northwestern Energy Company provides electric and gas service to the City of Hamilton. The company currently has two power substations owned by the Northwestern Energy Company. One is an older 4,160-volt substation that is being phased out. The second is a 12,470-volt, 20 MVA station that is loaded to approximately 12 MVA.

Ravalli County Electric Co-Op provides electric service in the unincorporated planning area. Their offices are located north of Corvallis. They were incorporated in 1936 and are one of the oldest co-ops in the state.

B. Telephone

CenturyLink Communications provides telephone and Internet data services to Hamilton and the surrounding area.

C. Cable Television

Charter Communications provides cable service including digital cable and broadband internet.

D. Solid Waste

Bitter Root Disposal provides curb side garbage service in Hamilton. The waste is taken to a transfer station south of Victor and then transported to a landfill in Missoula County. Ravalli Services in Hamilton provides drop-off locations for recyclables. They collect aluminum cans, newsprints, magazines, phone books, cardboard, batteries, and steel.
PART 2: TRENDS

Trend #1: Broadband

In 2010, the Federal Communications Commission (FCC) National Broadband Plan noted that, “Broadband is the great infrastructure challenge of the early 21st century.” The plan detailed how investment in broadband infrastructure promotes economic growth, increases civic participation, improves public safety and results in more efficient use of resources. In 2010, when the FCC adopted the National Broadband Plan, the definition of broadband was 4mbps download speed. In the FCC “2015-Broadband Progress Report”, the FCC adopted a new standard for broadband of 25mbps download speed. The FCC Broadband Plan calls for 100 mbps download speeds for homes and one gigabit speeds for anchor institutions by the year 2020.

As indicated by the graphic below, none of the existing providers in the Hamilton area are providing download speeds that exceed 25mbps. Statewide, 22.5% of homes have speeds greater than 25 mbps and nationwide, 85.3% of homes have access to broadband speeds that exceed 25mbps. To meet the growing demand for bandwidth, many companies are investing in fiber optic networks. According to the broadband map, 25.4% of homes, nationwide have access to fiber-to-the-home networks. This compares to 3% of homes in the state and 0% of homes in Hamilton with access to fiber networks.

Additionally, in 2011, the Montana Broadband Program conducted regional meetings to identify local issues and broadband goals. In the region covering Ravalli County, it was noted that there is a lack of redundancy in the fiber network that backhauls communication and data traffic to the main Internet backbone. A failure in this network can create service outages for the entire Hamilton area. In 2011, Ravalli County was without service for 8-hours due to a cut in fiber line that served the area.

Figure 5: Internet Providers in Hamilton

<table>
<thead>
<tr>
<th>Advertised Speeds Above 3 Mb/s</th>
<th>Data as of: 06/30/14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verizon Communications Inc.</td>
<td>10 - 25 Mb/s</td>
</tr>
<tr>
<td>Charter Communications</td>
<td>10 - 25 Mb/s</td>
</tr>
<tr>
<td>CenturyLink, Inc.</td>
<td>10 - 25 Mb/s</td>
</tr>
<tr>
<td>Cybernet1, Inc.</td>
<td>6 - 10 Mb/s</td>
</tr>
<tr>
<td></td>
<td>6 - 10 Mb/s</td>
</tr>
<tr>
<td>Rocky Mountain Internet</td>
<td>3 - 6 Mb/s</td>
</tr>
<tr>
<td>AT&amp;T Inc.</td>
<td>3 - 6 Mb/s</td>
</tr>
</tbody>
</table>

Source: http://www.broadbandmap.gov/
Trend #2: Infrastructure Planning and Smart Growth

The National Home Builders Association states that one principle of smart growth is:

“Planning and constructing new infrastructure in a timely manner to keep pace with the current and future demand for housing, and finding a fair and broad-based way to underwrite the costs of this necessary infrastructure investment.”

There is increasing recognition that decisions regarding new development must take into account the provision of infrastructure such as roads, water, and sewer so that it does not exceed the capacity of the community to provide services. It is also important that upgrades to infrastructure due to growth are funded by the proposed development and do not create an undue cost burden on existing residents. The Montana Environmental Quality Council notes that one benefit of Growth Policies is that they allow for the efficient extension of infrastructure.

The City of Hamilton recently adopted impact fees for transportation, water and wastewater facilities. The city also has policies for cost recovery, oversizing and extension of utilities. It is becoming more common for cities to work with the county, state and federal agencies to develop joint solutions infrastructure issues.

Trend #3: Water Quality Standards

A primary environmental feature of western Montana, north Idaho, and eastern Washington is the Clark Fork River/Lake Pend Oreille/Pend Oreille River watershed, of which the Bitterroot River is a tributary. In recent years, there has been public concern about water quality degradation in the basin, particularly eutrophication (enrichment), which is exhibited as excessive growth of nuisance attached algae that impair recreational uses and decrease water clarity.

In 1987, Congress responded to the public concerns by authorizing the U.S. Environmental Protection Agency (EPA) to evaluate the sources of cultural pollution within impaired drainage basins and develop recommendations for reducing pollution. As a result of point source discharges, the Bitterroot River will be required to meet more stringent permit requirements for wastewater discharge permits.

Septic tanks drainfields in the south and west portions of the Missoula Valley have been determined to be a significant source of the nitrogen loading to the Bitterroot River and Clark Fork River Basin. Septic tank effluent, which is rich in nitrogen, flows to the aquifer and is carried laterally to discharge along the lower reaches of the Bitterroot River. (See Natural Resources Chapter for Bitterroot watershed information and recommendations from the Total Maximum Daily Load Plan.)
PART 4: GOALS & POLICIES

Goal 1: Provide a safe, efficient and economical system of roads that enhances the community.

A. Adopt city design standards for construction of roads and streets in the planning area.

B. Ensure that roads in new development efficiently connect to the existing road network.

C. Design access points to minimize traffic conflicts.

D. Evaluate the impact of new development on the transportation network and require mitigation when necessary.

E. Coordinate with county and state agencies to implement the recommendations of the Transportation Plan.

F. Ensure adequate right-of-way is dedicated for future improvements.

G. Enhance east-west traffic circulation across US 93.

H. Prioritize intersection improvements based on congestion and safety needs.

Goal 2: Transportation should be designed to improve quality of life as well as move traffic.

A. Support alternative modes of transportation such as transit and trails.

B. Include pedestrian safety crossing features particularly on Highway 93 when making improvements to the road network.

C. Incorporate accessibility components to accommodate disabled residents into the design of transportation features.

D. Work with MDT and community groups to develop gateway signage and landscaped areas for the entrances to Hamilton.

E. Control signage along Highway 93 to reduce clutter and promote clear views of the natural surroundings and enhance the community’s image.

F. Land use decisions should take into consideration impacts on the airport and support economic development efforts related to the city.
Goal 3: New developments should pay for the impacts of their projects on infrastructure and services.

A. Explore methods such as annexation policies, adequate facility ordinances and exactions to recover the cost of infrastructure upgrades caused by the need to provide service to the development.

B. Encourage development where there is existing infrastructure or where facilities can cost effectively be expanded for new growth.

C. Encourage partnerships and innovative approaches to improve facilities when necessary.

D. Regularly review and update utility main extension policies for oversizing lines, recapture agreements and plant investment hook-up fees.

E. Analyze impact of new development on existing infrastructure to determine if there is capacity and examine the fiscal impact of upgrades.

F. Use financing mechanisms such as tax increment financing, grants, and special improvement districts to fund infrastructure projects.

Goal 4: Promote the provision of adequate infrastructure and services in support of existing and future development in a manner that is fiscally efficient and environmentally sound.

A. Require developers to meet state and local sewage disposal and water supply standards for new developments.

B. Provide incentive for owners of aging and potentially failing septic systems to either connect to public facilities or replace their individual ones.

C. Require storm water management plans during the review phase of development projects and ensure that storm water is not degrading water quality.

D. Upgrade water and wastewater systems as necessary to comply with environmental and health standards and provide adequate capacity.

E. Emphasize that the waste water plant be a “good neighbor” and pay careful attention to odors, noise, night lighting, hazardous materials handling and vehicle access concerns.

F. New annexation should provide water rights adequate to serve proposed development of the property.
Goal 5: Ensure that businesses, institutions and residents have affordable access to broadband services to meet current and future needs.

A. Work with local public agencies, schools, health care providers, economic development officials, utilities and service providers to develop a broadband vision and plan for the area.

B. Require new residential subdivisions and commercial development projects to include broadband infrastructure components necessary to support next generation broadband.

C. Support efforts to provide community anchor institutions such as the library, schools, hospital and government buildings with next generation broadband infrastructure.

D. Adopt policies, regulations and construction standards to coordinate deployment of broadband infrastructure with road, water and sewer construction projects in order to achieve cost efficiencies.
LOCAL SERVICES

PART 1: EXISTING CONDITIONS

1. City Government

Hamilton is the county seat of Ravalli County and is the largest of four incorporated municipalities in the county. Hamilton has a Commission/Executive governance structure. The city is divided into three wards with two members elected from each ward and Mayor elected at-large.

The city is classified as a City of the third Class under section 7-1-4111 of the Montana Code Annotated and has general powers. If the city population exceeds 5000 people in the future it will be classified as a city of the second class.

The primary source of general fund tax revenue for local governments is property taxes. The general fund mill levy for Hamilton was lower than Stevensville and comparable to Darby. Although the general fund mill levy increased from 2009 to 2013, it is still considerably lower than the 2004 general fund levy of $147.43.

The taxable value for Hamilton increased by 26.9% from 2009 to 2013. Of the four cities in the county, Hamilton had the highest rate of increase in taxable value.

In addition to the mill levy, the City budget also includes water and wastewater enterprise funds as well as Motor Fuel Tax funds and revenue from casinos. Streets, water, and sewer improvements are funded through a variety of mechanisms.

Table 1: Mill Levy and Taxable Value for selected cities in Montana

<table>
<thead>
<tr>
<th></th>
<th>Hamilton 2013</th>
<th>% change 09-13</th>
<th>2013</th>
<th>% change 09-13</th>
<th>2013</th>
<th>% change 09-13</th>
<th>2013</th>
<th>% change 09-13</th>
<th>2013</th>
<th>% change 09-13</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taxable Valuation</td>
<td>$13,505,070</td>
<td>26.9%</td>
<td>$2,522,740</td>
<td>13.2%</td>
<td>$908,780</td>
<td>6.7%</td>
<td>$279,330</td>
<td>11.7%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Fund Levy</td>
<td>$90.08</td>
<td>18.1%</td>
<td>$100.04</td>
<td>0%</td>
<td>$90.67</td>
<td>2.6%</td>
<td>$82.00</td>
<td>0%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Montana State University—Local Government Center
2. **City Organization**

The City had 48 full-time employees in 2013. The City has the following appointed boards and commissions:

- Zoning Board of Adjustments
- Police Commission
- Library Board (Joint Board with County)
- Planning Board
- Zoning Commission
- Downtown Business Improvement District

3. **County Government**

Ravalli County was created by Montana Legislature on March 3, 1893. It is 2,394 square miles and is surrounded by the State of Idaho to the west, Beaverhead County to the south, Granite County to the east and Missoula County to the north. Hamilton is the county seat and Stevensville, Darby and Pinesdale are the three other incorporated municipalities in the County. With a total population in the county of 40,212 people in 2010, the county has an average of 16.8 persons per square mile compared to the state average of 6.8 persons per square mile.

The County is governed by five commissioners, one from each commission district. The commissioners are elected to serve four-year terms, which are staggered so that one commissioner stands for election every two years. Each commissioner is nominated from the district in which they reside but is elected by the voters of the entire county. Following are the various Ravalli County departments and services:

- Commissioners
- Environmental Health
- Planning Department
- Public Health
- Schools
- Weed Department
- Clerk & Recorder
- Sheriff’s Office
- Treasurer’s Office
- Adult Detention Center
- City Courts
- County Attorney
- DUI Task Force
- Juvenile Detention
- Disaster & Emergency
- Fire Information & Evacuations
- Human Resources
- Road Department
- GIS Department
- Ravalli County Airport
- Elections
- Extension Office
- 911 Dispatch Center
- Animal Protection & Control
- Clerk Of Court
- District Court
- Justice Court
4. Fire Protection

The Hamilton Volunteer Fire Department (HVFD) is a combination of the City of Hamilton Fire Department and the Hamilton Rural Fire District (HRFD). The HVFD is governed by the City Council of Hamilton, while the HRFD is governed by an elected Board of Trustees consisting of 5 members. The Hamilton Rural Fire District contracts for firefighting services with the City of Hamilton.

The Hamilton Fire Department serves an area of approximately 110 square miles with two fire stations: Station #1, the main fire station, located at 175 South 3rd street in downtown Hamilton and Station #2, the Charlos Heights station, located South of Hamilton. In 2011, a new station was constructed on Skalkaho Highway.

Currently, Hamilton Volunteer Fire Department serves an estimated population base between 10,000 and 15,000. There are between 25 to 30 volunteer firefighters that answer an average of 200 to 250 emergency calls per year.

Long-term plans for the Hamilton Volunteer Fire Department consist of a 20 year equipment purchase plan. The HVFD is part of the Ravalli County Fire Council. This cooperative organization has representatives from each of the volunteer departments and works to resolve issues common to all of the members. The elected president of the Fire Council acts as the County Fire Warden and the main coordinating agent between the volunteer fire departments, county officials, and other fire agencies.

Table 2: Hamilton Volunteer Fire Department Equipment

<table>
<thead>
<tr>
<th>Station 1</th>
<th>Station 2</th>
<th>Station 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>175 S. 3rd St.</td>
<td>Charlo Heights 1687 Highway 93 South</td>
<td>365 Skalkaho Hwy</td>
</tr>
<tr>
<td>Equipment</td>
<td>Equipment</td>
<td>Equipment</td>
</tr>
<tr>
<td>1 Fire Chief Car</td>
<td>1 Engine</td>
<td>1 Engine</td>
</tr>
<tr>
<td>3 Fire Engines</td>
<td>1 Tender Truck</td>
<td>1 Tender Truck</td>
</tr>
<tr>
<td>1 Aerial/Elevated Stream Engine</td>
<td>1 Type 6 Wildland Fire Truck</td>
<td></td>
</tr>
<tr>
<td>1 Engine—Tender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Tender Trucks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Command Car</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: www.hamiltonfire.net/home.html
Map 2: Hamilton Volunteer Fire District Service Boundary
5. Urban-Wildland Interface

A. Urban-Wildlife Interface Defined

The urban-wildland interface (UWI) is the zone where structures and other human development meet or intermingle with undeveloped wildland and forest fuels. In western Montana the UWI is typically where the edge of local communities is immediately adjacent to forest lands and where suburban development and single-family homes are surrounded by forest. The combination of increased fuel loads in second growth forest and increased residential development in and near forested areas makes wildfire a high priority hazard issue. In the planning area, the UWI is located primarily west of Hamilton.

The Hamilton VFD participated in the developing the county-wide “Bitterroot Community Wildfire Protection Plan—2006”. The Plan notes the following risk for wildfires:

“Fires originating in relatively remote areas can be driven by winds for long distances in a short time. The east-west orientation of many of the drainages in the Valley coupled with the prevailing westerly winds and the historic lightning patterns often support fires that start on National Forest lands and, when the conditions are right, move into the wildland-urban interface where they may threaten private property. Reference Appendix D Maps #2 and #3 to see patterns of fire starts and historic, large fires.

Census data from 2000 establish that Ravalli County is the fastest growing county in Montana. Many of the new homes in the County are being constructed in the wildland-urban interface and as more people move into the interface, the potential impacts from wildland fires increase, as does the complexity of protection issues faced by fire protection agencies.”

Map 3: Areas near Hamilton at Risk for Wildfires.

Source: “Bitterroot Community Wildfire Protection Plan”, 2006

B. Community Wildfire Protection Plan Recommendations

Local Service ——5
Issues and actions in the “Bitterroot Community Wildfire Protection Plan” fit into one or more of four primary areas of emphasis. These four primary areas of emphasis are also the main emphasis items identified in the National Fire Plan 10 year Comprehensive Strategy and in the Healthy Forest Restoration Act of 2004:

- Fire Prevention and Suppression
- Hazardous Fuel Treatment
- Restoration of Fire-adapted Ecosystems
- Community Assistance

C. Development Standards in the UWI

The Ravalli County Subdivision regulations require high hazard fire management plans to mitigate the potential for wildfire within designated wildfire hazard areas. The fire management plans must address egress/ingress issues, defensible space requirements, and water supply for fire flow, and tree thinning along access roads.

D. Other Hazards Associated with Wildfires

In addition to structure prevention, another concern with wildfires is erosion and flooding due to run-off. This is phenomenon known as “Hydrophobic soil condition.” This is a process of the fire which makes the soil repel water and prevents water from seeping into the dirt. Severely burned area on very steep slopes in the mid to upper elevations of canyons and drainages may have little vegetation or duff plus exposed erodible soils and rocks, water repellent soils and large drainage areas covered with ash and debris points. This creates the potential for floods when moderate to heavy rains fall in those canyons and drainage basins. Moderate rains may move large volumes of the ash cover from much of the fire area. That initial flush of ash can fill streams and rivers with ash and debris, which adversely effected municipal water supplies as well as private domestic water supplies for subdivisions and private property owners. (http://www.laplataoem.org/Mud/Mud.htm)
6. Law Enforcement

A. Hamilton Police

The Hamilton Police Department provides services 24 hours a day, 7 days a week. In 2008, the Department currently employs 15 sworn officers, including the Chief of Police, a Lieutenant, a Patrol Sergeant, 2 Detectives, 9 Patrol Officers and a code enforcement officer. The Police station is housed at City Hall at 223 South 2nd Street. As the Police Department has grown over the years to meet the needs of a growing population it has created a need for more office space. According to the impact fee report for fire and police services the space needs analysis showed a need for 2,310 square feet of new office space.

B. Crime Rate

The crime rate for the City of Hamilton is significantly higher than the county crime rate or state rate. This is due, in large part, to a higher concentration of people and businesses in the city that draw people from other parts of the county. Compared to Missoula, and cities of comparable size, Hamilton has a higher crime rate.

Table 3: Index Crime Rate—2014

<table>
<thead>
<tr>
<th></th>
<th>Crime Rate per 1000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hamilton</td>
<td>153.24</td>
</tr>
<tr>
<td>Ravalli County</td>
<td>36.39</td>
</tr>
<tr>
<td>Missoula</td>
<td>107.76</td>
</tr>
<tr>
<td>State of Montana</td>
<td>60.91</td>
</tr>
<tr>
<td>Polson</td>
<td>162.55</td>
</tr>
<tr>
<td>Whitefish</td>
<td>114.38</td>
</tr>
<tr>
<td>Red Lodge</td>
<td>81.37</td>
</tr>
</tbody>
</table>

Index Crimes = Homicide, Rape, Robbery, Aggravated Assault, Burglary, Larceny, Motor Vehicle Theft
CRIME RATE - The rate of the seven index crimes per 100,000 people.

C. County Services

Ravalli County Sheriff’s Department is primarily responsible for law enforcement services and patrol in the unincorporated planning area. The Sheriff’s Department and City have entered into a mutual aid agreement. The Ravalli County Adult Detention Center is responsible for the care and custody of persons who are temporarily incarcerated as required by law. Since the Detention Center stopped accepting Federal prisoners, it now has the capacity to meet the future needs of both the City and County.

The 911 Center is housed at the County and serves the city and county. It is open 24 hours a day, 7 days a week and is staffed by one to three operators at a time. Operators answer all incoming 911 and non-emergency calls. The center has enhanced 911 and is also Phase II Wireless as well. When fully staffed, the center has 14 full time operators (including the director) and 3 part time operators on call. Also on staff is one Critical Incident Stress Intervention trained dispatcher and the Director. Operators work a minimum of 40 hours a week.
7. Library & Museums

A. Library
The Bitterroot Public Library service area includes the school districts of Hamilton, Corvallis and Victor. It is funded through a library district levy. The Library Board is a joint board with members appointed by both the County and the City. This Board consists of five members: two each appointed by the City and County, and one being appointed jointly by the Board. This Board governs the total operation of the Library, has final decision authority, and has the authority to make loans and grants.

The number of library users per week has tripled in the last seven years. This is due primarily to the increase in users who are access the Internet and other electronic materials at the library. Although the physical collection size has slightly decreased, the number of Internet users per week has almost doubled. The library has more offerings for e-books and on-line databases. In 2007, the State Library did not even collect statistics regarding participation in technology classes. In 2014, 113 people were taking classes at the library. The library is part of the Montana Shared Catalog system—a cooperative project involving 90+ libraries who have pooled their resources together to purchase and operate a automated, on-line catalog service.

<table>
<thead>
<tr>
<th>Library Facts</th>
<th>2007</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Area Population</td>
<td>23,844</td>
<td>25,577</td>
</tr>
<tr>
<td>Users Per Week</td>
<td>1,286</td>
<td>3,856</td>
</tr>
<tr>
<td>Circulation</td>
<td>109,300</td>
<td>110,425</td>
</tr>
<tr>
<td>Collection Size (Books, Audio, Video)</td>
<td>54,336</td>
<td>48,646</td>
</tr>
<tr>
<td>Public PCs</td>
<td>10</td>
<td>14</td>
</tr>
<tr>
<td>Public Internet Users in a Week</td>
<td>261</td>
<td>492</td>
</tr>
<tr>
<td>Total attendees at Technology Classes</td>
<td>Na</td>
<td>113</td>
</tr>
</tbody>
</table>

* Figures are the average for Montana libraries with a service area population between 10,000—24,999

B. Museums and Cultural Resources
Hamilton currently boasts two museums. In 1887, the wife of Marcus Daly, a copper mining magnate who developed the local timber industry to supply framing timbers to his mines, completed the Daly Mansion. The mansion was closed following Mrs. Daly’s death in 1941 until 1987 when it was reopened to the public as a museum. The second museum, the Ravalli County Museum, is housed in the former Ravalli County Courthouse. This museum was built in 1900 and has among other exhibits the Ricketts Museum which commemorates the development of Rocky Mountain Lab.
8. Education

A. Enrollments K-12 — Public School

Overall, over the last 10 years, school enrollment for the schools serving the Hamilton areas, has fluctuated. From a high of 1,614 students in FY12, school enrollment declined for two years but as of Fall 2015, it has increased to 1,549.

Table 5: Public School Enrollment Trends

<table>
<thead>
<tr>
<th></th>
<th>FY07</th>
<th>FY08</th>
<th>FY09</th>
<th>FY10</th>
<th>FY11</th>
<th>FY12</th>
<th>FY13</th>
<th>FY14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hamilton K-12</td>
<td>1625</td>
<td>1616</td>
<td>1607</td>
<td>1572</td>
<td>1610</td>
<td>1641</td>
<td>1592</td>
<td>1524</td>
</tr>
</tbody>
</table>


B. Public School Facilities

The school District has 168 employees divided between five campuses.

- District Office, 217 Daly
- Hamilton High School, 327 Fairgrounds Road
- Hamilton Middle School, 209 S. Fifth
- Daly Elementary School, 217 Daly
- Grantsdale Elementary School, 778 Grantsdale Road
- Washington, Elementary School, 225 N. 5th Street
- Hamilton Alternative School, 109 S. 9th Street

C. Other Education Resources

- Bitterroot College
- Bitterroot Literacy—GED Services
- Bitterroot Workforce Center
- Pines Academy (Private School—Pinesdale)
- Hamilton Christian Academy
- Pre-school (Ravalli Head Start, Evergreen Montessori, Sunny Spot Montessori, Assembly of God,

A local community college has been proposed in Hamilton but requires approval from the State legislature before it can be established.

Montana Office of Public Instruction

“Montana enrollment peaked in the 1995-96 school year. Since then, enrollment has decreased by more than 20,000 students. The enrollment decrease is due to the decrease in Montana live births. After declining for seven years, kindergarten enrollment began increasing again in 2003-04 and has increased by 1,891 students from 2003-04 to 2013-14.

Montana (Pk-12) showed an increase in enrollment in 2013-14 of 0.9%. Elementary grades (Pk-8) are showing an increase in enrollment (1.2%). High school enrollment increased for the first time since 1998-99 (0.1%).”

Map 4: Hamilton School District Service Area
9. Health Care

A. Hospital

Marcus Daly Memorial Hospital was incorporated in 1929. The present hospital on Westwood Drive was built in 1975 and now employs over 400 employees. Over the years, several additions have been made to the original 50,000 square-foot facility including the addition of an administration wing, transitional care unit, and hospice unit. In 2003, the surgery department was expanded and renovated. Clinics throughout the valley are operated in conjunction with the hospital. The hospital is a not-for-profit, general medical and surgical care facility. It has 25 acute care beds and 6 transitional care beds. Key services include:

- General Medical and Surgical Care
- General Intensive Care
- Pediatric Medical and Surgical Care
- Obstetrics
- Orthopedics Department
- Palliative Care
- Emergency Care
- Physical Therapy
- Other Specialized Services

B. County Health Profile

Other health providers in Hamilton include the Community Health Center and Western Montana Mental Health Center. There are also private practitioners that provide a variety of health services in the County. According to the Montana Department of Public Health and Human Services, Ravalli County has a shortage of dental and primary care health professionals.

The leading causes of death are cancer and heart disease. The county has a slightly lower rate of heart disease compared to the statewide average but has a higher rate of cancer deaths compared to the rest of the state. Infant mortality is higher in the County compared to the states. Rates of chronic diseases such as asthma and diabetes are comparable to state averages.

Table 6: Ravalli County Health Profile—Selected Statistics

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Ravalli County</th>
<th>Montana</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infant Mortality (per 1000 live births)</td>
<td>7.2</td>
<td>6.1</td>
</tr>
<tr>
<td>Median age at time of death</td>
<td>79</td>
<td>78</td>
</tr>
<tr>
<td>Cancer Mortality Rate per 100,000 deaths</td>
<td>228.7</td>
<td>200.9</td>
</tr>
<tr>
<td>Heart Disease Mortality per 100,000 deaths</td>
<td>184.5</td>
<td>198.0</td>
</tr>
<tr>
<td>Chronic Lower Respiratory disease per 100,000 deaths</td>
<td>66.3</td>
<td>63.9</td>
</tr>
<tr>
<td>Cerebrovascular Disease (including stroke) per 100,000 deaths</td>
<td>53.3</td>
<td>49.7</td>
</tr>
<tr>
<td>Chronic Disease—Diabetes (% of population)</td>
<td>6.3%</td>
<td>6.2%</td>
</tr>
<tr>
<td>Chronic Disease—Asthma (% of population)</td>
<td>8.9%</td>
<td>8.7%</td>
</tr>
<tr>
<td>Primary Care Health Professional Shortage</td>
<td>Yes</td>
<td>n/a</td>
</tr>
<tr>
<td>Dental Health Professional Shortage</td>
<td>Yes</td>
<td>n/a</td>
</tr>
</tbody>
</table>

Source: http://dphhs.mt.gov/publichealth/Epidemiology/OESS-CHD
10. Social Services

A. Ravalli County Public Health—County-wide health services, including immunization clinics, school nursing, handicapped children’s program, communicable disease control, emergency preparedness services, and preventable health problems, are administered by the Ravalli County Public Health Department. Community health nurses also plan and coordinate community and school health programs.

B. The Human Resource Council (HRC) - HRC is a non-profit corporation established as a result of the Economic Opportunity Act of 1964. Ravalli County is located in District 11 which is made of Mineral, Missoula and Ravalli Counties. The main office is in Missoula with a branch office at 316 N. Third St. in Hamilton. Services at the Hamilton office include housing, food and employment programs. The website has a database of social service resources and services in the county. (http://www.hrcxi.org/)

C. State of Montana— State of Montana offices in Hamilton include:
   • Child and Family Services— 108 Pinckney St.
   • Disability Services/Vocational Rehabilitation Services —316 N. 3rd St. Hamilton
   • Ravalli County Public Assistance—310 N. 3rd St.
   • Job Service—Old Corvallis Road (RCEDA building)

D. Aging Services - Services for Montana residents who are age 60 or older are primarily delivered by a network of 10 Area Agencies on Aging which reach all geographic areas of the state. Ravalli County is in the Missoula Area Agency District. The Ravalli County Council on Aging is responsible for planning, coordinating, and delivering services in Ravalli County, from Florence to Sula. (http://www.ravallicoa.org/index.html) Programs include Meals on Wheels, Supplemental Food Programs, Homemaker services, Information, Assistance and Referral, and Long-term care Ombudsman. The Council on Aging also operates the Bitterroot Transportation (See Transportation Section in Public Facilities Chapter) and the Hamilton Senior Center at 820 North 4th Street to serve lunch three days a week.

E. Other Social Services
   • Ravalli Services Corporation -Services for Disabled Population. 905 N. First St. 363-5400
   • Shelters & Homeless Resources —S.A.F. E, Salvation Army, Montana Council of Homelessness (See Housing Chapter)
   • Haven House Emergency food - (316 N. Third Suite 162 - 363-2450)
   • Youth Home Inc. (http://youthhomesmt.org/)
   • RSVP Volunteer Center—363-1102
   • United Way of Ravalli County—375-0937
   • WIC - Ravalli County—Supplemental foods, nutrition education and referrals for health and social services for pregnant and nursing women and children under 5. (205 Bedford, Suite P -375-6685)
   • Riverside Christian Center—Food pantry. Emergency gas vouchers. (390 Fairgrounds Rd., Hamilton—363-4148)
   • Assisted Housing—See Housing Chapter
   • Council on Aging—310 Old Corvallis Rd.
PART 2: TRENDS

Trend 1: Sustainability

Building resiliency is about making people communities and systems better prepared to withstand catastrophic events—both natural and manmade—and able to bounce back more quickly and emerge stronger from these shocks and stresses. Communities must plan for resiliency—to protect themselves, limit the impact of future disasters, and address underlying community needs.

National Association of Counties

“Resilient communities recover faster and better and ultimately even if you never experience a disaster, fostering resilience makes for a better community and a thriving county. It builds the capacity of a system — your county — to maintain its core purpose and integrity in the face of drastically changed circumstances.”

(Linda Langston, NACO President)

Trend 2: Leadership - Volunteer Development

The City of Hamilton has five volunteer boards ranging from the Planning Board to the Police Board. Community members expressed concern about filling vacancies on these Boards and expanding the pool of volunteers. There are a variety of ways to engage citizens and businesses in the community to participate in civic affairs. For example, more communities are relying on partnerships with civic organizations to promote community projects and assist with fundraising for civic improvements. Youth leadership development to cultivate the community volunteers of tomorrow offers another strategy to address the need for engaging citizens.
**Trend 3: Intergovernmental Cooperation**

With increasing demands and limited resources, local governments are partnering to address common concerns. Section 7-11 of the Montana Code Annotated allows municipalities to enter into intergovernmental agreements. Below are some advantages to this approach.

1. Increased efficiency by identifying best function for each agency.
2. Share underutilized and expensive equipment, facilities and manpower.
3. Pool resources to obtain services that would have prohibitively high cost for individual government.
4. Eliminate duplication of services.
5. Solve problem without changing the basic structure of the local government system.
6. Provide specialized services to residents that they may not otherwise be able to afford.
7. Avoid start-up costs of purchasing new equipment or hiring staff to provide a particular service.

**Trend 4: Community Health Needs Assessment**

In 2012, Marcus Daly Memorial Hospital participated in the Community Health Services Development (CHSD) project administrated by the Montana Office of Rural Health and National Rural Health Resource Center (NRHDC). The CHSD project is a process to help communities understand what health services they need to engage the community in strengthening the healthcare system. The process included use of focus groups and a community survey to assess community health needs. Below are the priorities expressed in the survey.

<table>
<thead>
<tr>
<th>Top 3 Community Health Concerns</th>
<th>Top 3 Most Utilized Community Health Resources (Besides Marcus Daly Hospital)</th>
<th>Top 3 Ways to improve Community’s Access to Health Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol/Substance Abuse 66.3%</td>
<td>Pharmacy 88.2%</td>
<td>Awareness of Services 36.5%</td>
</tr>
<tr>
<td>Overweight/Obesity 39.9%</td>
<td>Dentist 74.2%</td>
<td>Improved Quality of Care 31.5%</td>
</tr>
<tr>
<td>Cancer 37.6%</td>
<td>Health Club 24.7%</td>
<td>Greater Health Education 30.9%</td>
</tr>
</tbody>
</table>


The Health Needs Assessment includes strategies for the following areas to address community concerns.

- Address need for primary care providers
- Quality of care
- Health education and awareness services
- Identify physician specialist recruitment needs
- Address substance abuse
- Decrease incidence of overweight/obese residents
- Improve cancer care

(Note: As of June, 2015 the hospital was conducting another survey. Results will be available later in the year.)
PART 3: OPPORTUNITIES & BEST PRACTICES

1. Technical Assistance and Training

A number of organizations provide technical assistance and training to assist local governments on a number of issues. Some of the more common ones include:

- Montana State University - Local Government Center (http://www.montana.edu/wwwlgc/)
- Montana League of Cities and Towns (http://www.mlct.org/)
- Montana Association of Counties (http://maco.cog.mt.us/)
- Montana Department of Commerce, Community Technical Assistance Program (http://comdev.mt.gov/CDD_ctap.asp)
- National League of Cities (http://www.nlc.org/)
- International City Management Association (http://www.icma.org/)
- American Planning Association (www.planning.org)

2. Disaster Planning

In the past, federal legislation has provided funding for disaster relief, recovery, and hazard mitigation planning. The Disaster Mitigation Act of 2000 is the latest legislation and reinforces the importance of mitigation planning and emphasizes planning for disasters before they occur.

The Disaster Mitigation Act is intended to facilitate cooperation between state and local authorities and to encourage coordinated efforts between jurisdictions. Disaster Mitigation Act 2000 (DMA 2000) sets policies for “disaster mitigation plans”—plans designed to avoid disasters such as fires and floods. DMA 2000 requires 4 elements in these plans:

1. A planning process.
3. A mitigation strategy (action plan).
4. A plan maintenance and updating process.

Ravalli County has a disaster mitigation plan that was updated in 2012. Mitigation strategies address the following high priority concerns.

- Reduce wildland fire risk in the wildland-urban interface
- Reduce exposure to flooding
- Enhance communication for hazard warning
- Reduce vulnerability to high winds and heavy snow
- Develop greater resistance and responsiveness to disasters

Some hazards that are evaluated in a Pre-Disaster Mitigation Plan include:

- Earthquake
- Flood
- Weather—Storms
- Mass Casualty Incident
- Conflagration – Structure Fire
- Contagious Disease
- Airplane Crash
- Tactical Law Enforcement Incident
- Hazmat Incident

Additionally, the National Institute of Health Rocky Mountain Lab has a biosafety level 4 (BSL-4) lab which requires the highest level of safety and security measures for the handling of highly hazardous bio-agents.
3. Fire Wise

“The National Firewise Communities program is a multi-agency effort designed to reach beyond the fire service by involving homeowners, community leaders, planners, developers, and others in the effort to protect people, property, and natural resources from the risk of wildland fire - before a fire starts. The Firewise Communities approach emphasizes community responsibility for planning in the design of a safe community as well as effective emergency response, and individual responsibility for safer home construction and design, landscaping, and maintenance. “ (Source: www.firewise.org)

Figure 3: Home Ignition Zone

4. Fiscal Impact Analysis

Specific development can effect the fiscal well-being of the community. If increased tax revenues do not cover the costs of providing services to the development, it may result in increased taxes for the rest of the community. The purpose of fiscal impact analysis is to estimate the cost to serve of a development or a land use change versus the revenues the development will generate for governmental units serving the development. The analysis is generally based on the fiscal characteristics of the community such as revenues, expenditures, land values and characteristics of the development. Land use change, type of land use, and distance from central facilities are also factors.

“...
PART 4: GOALS & POLICIES

Goal 1: Promote sustainable building practices, resiliency and environmentally friendly policies in Hamilton.

A. Incorporate energy efficient design and technologies into public buildings and facilities.
B. Coordinate with the State of Montana to investigate building code amendments that encourage energy efficiency.
C. Encourage subdivision design and new development that promotes transportation efficiencies in the amount of vehicle miles traveled.
D. Promote landscaping and reduction of impervious surfaces to minimize the effects of heat islands.
E. Consider procurement policies for recycled goods and fleets of clean energy vehicles.
F. Support efforts to develop renewable energy (solar, wind, biogas) sources to reduce use of fossil fuels.
G. Encourage technologies and designs that conserve water.
H. Promote energy efficiency and water conservation at public and private buildings.

Goal 2: Enhance fire fighting capabilities and promote practices to reduce fire risks in the Urban-Wildland Interface.

A. Work with Ravalli County to identify and develop additional water sources in the Hamilton VFD to protect water resources for firefighting needs.
B. Improve VFD wildland fire and structural training opportunities and develop a strategy to recruit additional volunteer fire fighters.
C. Upgrade VFD firefighting equipment per the recommendations of the Community Wildfire Protection Plan.
D. Work with VFD’s, State, and Federal agencies and private land owners to identify hazardous fuels reduction projects in high-risk areas within the valley.
E. Encourage homeowners living in the Urban-Wildland Interface to conduct a wildland fuel assessments and adopt the FIREWISE practices to protect their homes.
F. Expand awareness of need for hazardous fuels treatment and defensible space programs, and encourage engagement of community leaders and landowners, especially in high-risk areas.
G. Coordinate with the County Department of Emergency Services to plan for adequate police, fire and emergency services.
H. Require new subdivisions to have adequate access and emergency routes for evacuation in the event of a wildfire.
I. Discourage construction on steep slopes in the Urban-Wildland Interface.
Goal 3: Create a healthy community through land use decisions and cooperation with service providers.

A. Promote air quality to improve respiratory health.

B. Design streets, open space and developments to promote physical activity.

C. Design pedestrian friendly facilities that minimize potential for pedestrian—auto conflicts and reduce accidents.

D. Improve mobility and quality of life for elderly and disabled residents.

E. Consider how land use decisions will affect water quality, sanitation and incidence of disease outbreaks.

F. Generate awareness of the homelessness and work with local agencies to develop coordinated response to address the needs of this population.

Goal 4: Build community capacity through volunteerism, leadership development and leveraging of outside resources.

A. Identify training opportunities for city staff, local officials and community leaders to increase capacity within the community to initiate and administer programs.

B. Investigate mentoring with regional colleges and universities to establish pilot projects that would bring resources to the community.

C. Identify and promote state and federal programs for rural and small town development.

D. Support community volunteerism and youth leadership programs to engage residents in civic affairs.

E. Investigate training and research and writing assistance to the Volunteer Fire Department and other community organizations.

F. Conduct fiscal impact studies for large development proposals so new development does not overextend the ability of the community to provide services.

Goal 5: Promote intergovernmental coordination with agencies that have jurisdiction around Hamilton or provide services to the community.

A. Circulate planning documents for review to interested agencies.

B. Schedule periodic meetings or presentation to other governing bodies to update each other on activities in and around Hamilton.

C. Coordinate planning efforts to promote common goals.

D. Work with the county government and social service agencies to identify areas for joint programs to assist seniors and citizens in Hamilton.