Helena and Lewis & Clark National Forests

Forest Plan Assessment

Chapter 10, Infrastructure

2015

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Infrastructure

Introduction

Infrastructure is the built property created to support the management and utilization of National Forest System (NFS) lands. The categories of infrastructure covered in this report include National Forest System roads, road and trail bridges, dams, administrative facilities, and recreation facilities, such as recreation buildings, cabin rentals, water systems and waste water systems. This report does not cover trails, which is discussed in Chapter 7, recreation access. It also does not include other facilities located in the HLC planning area that are under special use permit, such as utility corridors, pipelines, water ditches and gates, communication sites, range improvements, and SNOTEL (Snow Telemetry) sites. These sites are covered in Chapter 12, land status and uses.

The geographic scale for assessing the infrastructure assets in the HLC planning area was attained at both a forest-wide and a geographic area-wide scale. Where possible the information is presented by geographic area. Appendix D of the assessment contains detailed tables about funding breakdowns by individual forest for road maintenance levels and number of miles, roads and bridge accomplishment reporting, a summary of maintenance costs and funding trends, and an inventory of infrastructure for road bridges, trail bridges, administrative building, recreational facilities, and water and waste water systems.

The information used to conduct the assessment on infrastructure comes from the INFRA database modules that hold corporate data on infrastructure. Additionally, spatial information contained in the geographic information system (GIS) data and feature classes was used to supplement the INFRA database information.

National Forest System Roads

Introduction

The transportation system for the plan area is defined as the system of National Forest System (NFS) roads, NFS trails, and NFS airfields located on NFS lands (36 CFR 212.1). The ground transportation system is made up of a network of roads and trails that provide access throughout the forests. The need for the roads and trails within the transportation system is determined through processes outlined in the Travel Management: Designated Routes and Motor Vehicle Use, Final Rule (36 CFR Parts 212, 251, 261, and 295). Implementation of the Travel Management Rule is outlined in Forest Service Manual (FSM) 7700 -Transportation System, Chapter 7730 – Transportation System Operation and Maintenance and in Forest Service Handbook (FSH) Handbook 7709.58 Transportation System Maintenance.

Existing Information

The existing information that is available to complete the analysis for the Forest Plan revision effort includes a wide range of documentation including but not limited to:

- Travel management plans completed
  - Blackfoot Winter Travel Plan (2013) (http://www.fs.usda.gov/project/?project=15664)
  - Elkhorns (1995, SIR 2007, implementation 2013), http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5352926.pdf
  - North Belts (2005) (http://www.fs.usda.gov/project/?project=1441)
  - South Belts (2008) (http://www.fs.usda.gov/project/?project=7753)
  - Rocky Mountain,
  - Highwoods,
  - Snowies (1993, 2001), and

    - Little Belts, Castles, Crazies (2007)
- Travel Management Plans under analysis
    - Divide (http://www.fs.usda.gov/project/?project=24091)
    - Blackfoot Non-Winter Travel Plan (http://www.fs.usda.gov/project/?project=30899)
- Helena NF and Lewis & Clark NF Travel Analysis Plans, to be finalized in 2015.
- GIS maps, and
- INFRA data.

Existing Condition

National Forest System roads are those roads that the Forest Service has determined necessary for the protection, administration, and utilization of NFS land and the use and development of its resources. NFS roads are under the jurisdiction of the Forest Service and are located on or provide access to National Forest lands. These NFS roads are a part of a network of an overall transportation system that is managed jointly with other public road agencies such as states, counties and municipalities. This network, when combined, provides access to NFS lands.

Within the HLC planning area, there are approximately 2,569 miles of road that are open for public use either seasonally or year round. Roughly 1,593 miles of these roads are open for high clearance vehicles and 976 miles are open for passenger cars. Additionally, there are 1,082 miles of NFS roads within the plan area that are currently in custodial care (closed to public motorized use).

National Forest system roads are designated, constructed, and maintained for their intended use. Identification of intended use of a road helps to define the road design and maintenance standards for each road. Roads are generally constructed and maintained wide enough (>12 feet) for typical cars and trucks. Roads are built to grades usually less that 12 percent to allow grade-ability for most highway vehicles. The Forest Service uses five maintenance levels (ML) to define the general use and type of maintenance. In general, the five maintenance levels can be described as:

- ML 1. These are roads that have been placed in storage between intermittent uses. The period of storage must exceed one year. Basic custodial maintenance is performed on ML1 roads to prevent damage to adjacent resources and to perpetuate the road for future resource management needs. Emphasis is normally given to maintaining drainage facilities and runoff patterns. Planned road deterioration may occur at this level.
- ML 2. These are roads that are open for use by high clearance vehicles. ML2 roads are not designed for passenger car traffic, user comfort, or user convenience and warning signs and traffic control devices are generally not provided on these roads. Motorists should have no expectations of being alerted to potential hazards while driving ML2 roads. Traffic is normally minor and usually consists of a combination of administrative, permitted, dispersed recreation, or other specialized uses.
- ML 3. These are roads that are open and maintained for travel by a prudent driver in a standard passenger car; however, user comfort and convenience are not considered priorities in maintenance of the road. ML3 roads are typically designed for low vehicular speed and are relatively narrow with single lanes and turnouts to provide passage of cars.
- ML 4. These are roads that provide a moderate degree of user comfort and convenience when traveling at moderate speeds. These roads are generally designed as double lane with an aggregate surface; however, some ML4 roads may be single lane. Some ML4 roads may be paved and/or treated with dust abatement.
- ML 5. These are roads that provide a high level of user comfort and convenience. ML5 roads are normally double lane, paved facilities; however, some may be aggregate surfaced and treated with dust abatement.

Overall, ML3-5 roads are collectively maintained for travel by a prudent driver in a standard passenger car and they fall under the requirements of the National Highway Safety Act and the Manual of Uniform Traffic Control Devices. On all ML3-5 roads, warning signs and traffic control devices are provided to alert motorists of situations that may violate expectations.

Table 10.1 provides information related to the distribution of roads by maintenance level and geographic areas within the plan area. Note that some roads under the jurisdiction of the Forest Service fall outside of the geographic area boundaries. These roads are owned and/or maintained by the Forest Service on private lands, have easements in place with private land owners, or are situations where necessary easements are being pursued by the Forest Service.

Table 10.1 **Overview of NFS roads by maintenance level**

Geographic Area	ML 1 (Miles)	ML 2 (Miles)	ML 3 (Miles)	ML 4 (Miles)	ML 5 (Miles)	Total (Miles)[1]
Outside GA[2]	21	33	69	37	3	162
Big Belts	333	205	142	26	0	705
Castles	3	50	21	3	0	76
Crazies	7	26	11	0	0	45
Divide	216	201	97	38	1	554
Elkhorns	114	123	35	15	0	286
Highwoods	1	9	2	0	0	12
Little Belts	166	562	235	58	0	1,020
Rocky Mountain Range	14	53	33	26	8	134
Snowies	14	48	16	1	6	85
Upper Blackfoot	193	283	86	9	1	571
Total Miles	1,082	1,593	746	212	18	3,650

[1] All road mileages are approximate.

[2] Areas where roads under National Forest jurisdiction are not located on NFS land.

The total number of miles of NFS roads within the plan area has steadily been declining over the past ten years. Miles of road decommissioning has become an assigned accomplishment target. The miles of roads decommissioned are shown in Table 10.3 of this chapter in the Accomplishment Trends Report. The roads that have been decommissioned were routes that were no longer needed, routes that were decommissioned to eliminate resource damage, or roads that were acquired through land exchange process and are not needed for Forest Service operations. Additional routes are proposed for closure and decommissioning in the on-going travel planning process.

Travel Analysis Process (TAP)

The Forest Service is using the minimum roads assessment to verify that every road on the forest has been analyzed, including their purpose and needs. The roads travel analysis process has been completed for the entire HLC planning area and is awaiting review by the regional office. Once finalized, the roads travel analysis will list those roads that will be considered a part of the future NFS road system and those that will be eliminated or decommissioned. The opportunities identified within the process support objectives of relevant land and resource management plans. The roads travel analysis for the HLC planning area is scheduled to be finalized in 2015.

Roads and Trails Travel Planning Process

The travel planning process is used to determine which roads and trails will be considered open and available for public use. It also determines which routes across the forest will be motorized and non-motorized. This process

includes extensive public scoping and public involvement throughout the process. As of March 2015, travel planning within the HLC planning area is approximately 85% complete and the remaining 15% is very close to completion. The completed and draft travel plans are listed in the literature portion of this report. For additional information, please see Chapter 7 and the discussion on recreation access.

Road Maintenance Practices and Policies

The maintenance level of roads as well as the amount of attention the roads receive annually varies widely. Some of the roads are in poor locations, which increase maintenance needs and the risk that sediment from the road surface could enter the adjacent streams. The Forest Service works to prioritize road maintenance in annual maintenance plans. These plans are based on projected budgets, the amount of traffic individual roads receive, and damage created by environmental factors such as flooding and erosion.

The Forest Service uses the best science available when implementing construction and maintenance activities. All maintenance and improvement activities comply with the procedures outlined in the National Best Management Practices for Water Quality Management on National Forest System land dated April 2012. Additionally, road maintenance guidelines are described in Forest Service Handbook 7709.58 Transportation System Maintenance Handbook and Forest Service Manual 7700 -Transportation System, Chapter 7730 – Transportation System Operation and Maintenance.

Road Maintenance Funding

Road maintenance dollars are allocated to each forest based on the national model with each forest getting their weighted share based on roaded land area and recreation visitor use. Each forest is given targets for passenger car and high clearance miles of maintenance and is expected to meet those targets with the allocated funds. Within the forest, funds are allocated each year based on targets and by priorities set by the line officers in conjunction with the engineering staff. Additional maintenance can be accomplished using other funding such as funding allocated for watershed improvements and funding through partnerships (although limited) and special project work. There is no separate funding source allocated for decommissioning.

Types of funds available for road-related project work include:

- Appropriations such as for the Southwest Crown of the Continent,
- Capital Investment Projects,
- Legacy Roads and Trails funding for implementing road best management practices,
- American Recovery and Reinvestment Act funds
- Providing aquatic organism passage, and replacing bridges,
- Stewardship retained receipts for implementing road best management practices and providing aquatic organism passage,
- Federal Lands Highway Funds,
- Resource advisory committee (RAC) funding, and
- Cooperator deferred maintenance funds.

The Capital Investment Project funding and the Resource Advisory Committee funds are awarded through a competitive process and, as such, are not a stable source of funding. The American Recovery and Reinvestment Act funds were awarded on a competitive basis and were only available from 2009 to 2010. The funding for the Southwest Crown is limited to the Lincoln Ranger District and is considered a short-term source of funding.

Table 10.2 is a summary of the total funding received within the HLC NFs from 2007 to 2014.

Table 10.2 **Roads maintenance funding from 2007 to 2014 (in thousands)**[1]

Fund Type	2007	2008	2009	2010	2011	2012	2013	2014
Operations and Maintenance	$987	$1,049	$1,029	$1,018	$863	$951	$407	$914
Capital Investment Projects	$560	$582	$365	$402	$529	$58	$513	$152
Road Maintenance/Improvements-Stewardship Timber	$0	$0	$100	$1,135	$0	$0	$0	$0
Road-Related Collections Stewardship-Timber	$0	$0	$0	$0	$0	$260	$261	$0
Congressional Budget Line Items	$48	$63	$752	$2,003	$537	$4,880	$6,102	$1,000
American Reinvestment and Recovery Act	$0	$0	$1,085	$1,027	$0	$0	$0	$0
Southwest Crown of the Continent	$0	$0	$0	$0	$1,169	$0	$0	$499
Federal Highways Funding	$0	$0	$0	$24	$23	$175	$0	$0
Total Funding	$1,595	$1,694	$3,331	$5,609	$3,120	$6,323	$7,283	$2,565

[1]Budget figures represent a combination of funding dollars from multiple source codes.

Trends and Drivers

Road appropriations and road-related maintenance and collections from timber/stewardship sales are the primary sources for annual road maintenance. The remaining funds go towards road reconstruction and capital improvement type projects with road maintenance and improvements occurring in conjunction with the improvement activity. For example, a bridge or culvert replacement project will necessarily include a short segment of road maintenance and improvements on both sides of the crossing.

Based on the information provided by the roads maintenance cost estimate template, the estimated funding needed to maintain all roads within the plan area to standard is approximately $2.25 million annually. In 2014, the HLC NFs plan area received $2.5 million for roads maintenance. These funds were used to meet actual road maintenance targets as well as provide funding for forest personnel who provide support to the roads program, through travel planning, contract preparation, National Environmental Policy Act analysis, field review, and contract administration.

The typical maintenance items for NFS roads are: regulatory and warning signage, surface blading, road side brushing, and maintenance of drainage structures. Maintenance of closure devices, such as gates, is also consistent maintenance need across the plan area.

Table 10.3 provides a summary of the accomplishment trends from 2007 and 2014. There has been a steady increase in the emphasis on decommissioning of both system and non-system roads over the past several years. The emphasis on decommissioning roads for specific resource concerns is expected to continue.

Table 10.3 **2007-2014 Road maintenance accomplishments (miles)**

Accomplishment Item		FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
Road Maintenance	High Clearance Roads	319	333	407	461	340	20	0	4
	Passenger Car Roads	394	335	417	625	390	217	162	143
Road Improvements	High Clearance Roads	5	0	0	8	1	14	2	0
	Passenger Car Roads	16	22	6	21	2	8	0	13
Road Reconstruction	Passenger Car Roads	0	0	0	0	0	0	2	0
Road Decommissioning	All roads	25	57	59	79	59	138	69	180

[1] All road miles are approximate and are rounded to the nearest mile.

The overall trend affecting the transportation system is that funding for repairs and maintenance are expected to continue to decrease while national requirements and efforts for planning and maintenance continue to increase. During the past two decades, appropriated funding for road construction and maintenance has decreased while the forest is spending more funds to meet safety standards, implement resource protection measures, and complete agency-required planning efforts.

Off-road impacts are being addressed through site specific travel planning processes with restrictions imposed based on the sensitivity of the land and the level of resource damage that is taking place. Routes suitable for motorized mixed use are evaluated through an engineering analysis conducted by the forest engineer and are completed independent of the travel planning efforts.

The Continental Divide National Scenic Trail (CDNST) is managed as a combination of motorized and non-motorized use. This type of use has been designated as part of the travel planning efforts.

Road Bridges

Existing Information

There are approximately 138 road bridges under the jurisdiction of the Forest Service within the HLC planning area. The majority of these structures meets or exceeds the minimum criteria for bridge condition. Only a handful of these bridges (approximately 11) are at intolerable or at a minimum tolerable limit for condition. Management of the bridge program and inspection responsibilities and authorities are given for this program under FSM 7730, FSM 7709 and 23 CFR 650.

Forest Service policy requires two-year inspections on every bridge under Forest Service jurisdiction. Bridges must be repaired and replaced with road maintenance funding with a small number of structures being replaced through the capital investment program.

Existing Condition

Many bridges within the planning area were constructed to support the timber program and are over 30 years old. Older bridges were often built with the abutments at the very edge of streams and often encroach on the stream, and are no longer in compliance with best management practices. Table 10.4 describes the number of bridges within the planning area, the GA in which they are located, and information concerning the condition of these structures.

Table 10.4 **Road Bridge Location and Condition in the HLC Planning Area**

GA	2 Intolerable: Requires High Priority Replacement	4 Meets Minimum Tolerable Limit	5 Somewhat better than Minimum Adequacy	6 Equal to Minimum Criteria	7 Better than Minimum Criteria	8 Equal to Desirable Criteria	9 Superior to Desirable Criteria	Totals
Big Belts			1	4	1	7		13
Castles			2		1			3
Crazies				3	1			4
Divide		1	1	4	3	4		13
Elkhorns				1	1	3		5
Highwoods		1	1	1	1	2		6
Little Belts	1	6	13	16	5	5		46
Rocky Mountain Range		2	5	2	11	2		22
Snowies			1	2				3
Upper Blackfoot			2	4	9	6	2	23
Totals	1	10	26	37	33	29	2	138

Trends and Drivers

The HLC planning area has an active bridge replacement program. This program aims to replace under-sized culverts and bridges with new and different structures that allow for aquatic organism passage. In many instances, safe design practices, that also meet best management practices, dictate that the only suitable replacement structure for a site is a bridge. The result is a steadily increasing inventory of bridges in need of maintenance.

Table 10.5 lists the bridges maintenance accomplishments that have occurred in the past 8 years within the plan area.

Table 10.5 **2007-2014 Bridge maintenance accomplishments**

Accomplishment Item	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
Construction/Reconstruction	0	1	1	5	0	6	1	6

Trail Bridges and Structures

Existing Information

A trail bridge is a trail structure, including supports, erected over a depression or obstruction such as water, roadway, trail or railway that provides a continuous pathway and has a deck for carrying traffic or other loads. There are currently 49 trail bridges within the HLC planning area. Trail Bridges are divided into three classifications for inspection purposes: Complex Trail Bridges, Major Trail Bridges, and Minor Trail Bridges.

Complex Trail Bridges: All trusses, suspension, multiple-span, and non-timber/log trail bridges with a span greater than 20 feet and a vertical distance greater than 5 feet are considered to be complex trail bridges.

Major Trail Bridges: All single-span timber/log trail bridges with a span greater than 20 feet and a vertical distance greater than 5 feet are considered major trail bridges.

Minor Trail Bridges: All trail bridges that do not meet the definition of a Complex or Major Trail Bridge, and that have a span less than 20 feet or a vertical distance less than 5 feet are considered a minor trail bridge.

Existing Condition

Table 10.6 lists the trail bridges located within the HLC planning area and the geographic areas that each are located within.

Table 10.6 **Trail bridges by category and geographic area**

Geographical Area	Complex Trail Bridge	Major Trail Bridge	Minor Trail Bridge	Totals
Big Belts		3		3
Castles				0
Crazies				0
Divide		3		3
Elkhorns		4	1	5
Highwoods				0
Little Belts	1	13	18	32
Rocky Mountain Range	5			5
Snowies				0
Upper Blackfoot		1		1
Total	**6**	**24**	**19**	**49**

There are other built structures along trails that are considered to be a part of the infrastructure of the trail systems. Constructed features on trails such as puncheon, boardwalk, retaining walls, water bars, etc. are located along within the profile of the trail. Other structures such as fishing docks, viewing platforms, etc. are built structures located on or adjacent to trails. These larger features are often engineered similarly to a bridge, and often involve moderate-to-high risk to users in the event of structural failure. They do not meet the definition of a continuous pathway, however, and are often considered destination points instead.

Trail bridges and structures within the HLC planning area are in various conditions and detailed inspections regarding these conditions are stored in Forest Service files at district offices. Trail bridge structures are inspected on a five-year cycle by qualified personnel.

Trends and Drivers

Maintenance funding for trail bridges and structures comes from within the trails budget. As those budgets flex, so does the ability to properly maintain trail bridges and structures. To stretch budget dollars, the Forest Service has been successful in utilizing partner groups in the maintenance of many of their minor trail bridges and structures, such as puncheons, boardwalks, water bars and retaining walls.

Administrative Facilities

Existing Information

The management of buildings and other structures is held under FSM 7310. The forests are mandated to develop a facilities master plan as a guide to facilities planning. These documents are continuously updated.

Each National Forest, National Grassland, and Research Station must have a facilities master plan depicting facility locations (FSM 1241), unit standards (FSM 1243), existing and proposed buildings, and related improvements. Detailed requirements are listed in FSH 7309.11, section 22. Use Engineering Management (EM) publication, EM-7310-4, "Facilities Planning," as a guide in facilities planning. This publication is available in electronic format and may be retrieved from the Forest Service National Headquarters, Engineering Staff web page on the FS Web/Intranet.

Administrative facilities are typically buildings and their appurtenances necessary to support the employees, equipment, and activities necessary for the management of the National Forests. These are commonly called fire, administrative and other (FA&O). Administrative facilities are separate from recreation facilities. Administrative facilities include fire stations, offices, warehouses, and shops as well as living quarters such as barrack and individual residences. Living quarters are partially supported by rental receipts, while administrative facilities and other facilities are financially supported through annual budget appropriations. A list of leased and Forest Service owned FAO structures within the plan area can be found in appendix D.

Existing Condition

There are two supervisor offices which serve the HLC planning area; one is located in Helena, Montana and the other one is located in Great Falls, Montana. Both of these administrated offices are leased facilities. There are eight ranger district offices dispersed throughout the forests as well as the Lewis and Clark Interpretive Center and the Augusta Information Station. The Helena Ranger District which is co-located with the Helena National Forest Supervisor's Office and the Townsend Ranger District Office and Warehouse, the Judith Ranger Station, the Musselshell Ranger District, the Rocky Mountain Ranger District and Augusta Information Station are leased facilities. The Lincoln Ranger District, Belt Creek Ranger District, White Sulfur Spring Ranger District and the Lewis and Clark Interpretive Center are Forest Service owned facilities.

The current building inventory as of January 2014, documents that there are 245 Forest Service-owned Fire Administrative & Operations (FA&O) buildings. The focus of the forests is the rehabilitation or replacement of existing forest facilities that do not meet current operational standards, and the disposal of those facilities that are considered surplus to the forest FA&O operational needs. Deferred maintenance needs for these buildings are in excess of $11 million. Currently funding levels for maintenance equal approximately $200,000 annually, thus the funding continues to falls short of the actual maintenance needs.

Existing Excess Administrative Facilities

Tables identifying buildings that have been identified as excess can be found in Appendix D. There are actions underway to remove these facilities from the forest and from the inventory. There are a total of 20 structures that have been identified as excess across the forests.

Funding for Administrative Facilities

Table 10.7 shows the annual facility maintenance funding trend over the past five years.

Table 10.7 **Annual facility maintenance funding trends from 2010 to 2015**

FY Year	Helena	Lewis and Clark	Combined Funding
2010	$147,806	$200,000	$347,806
2011	$172,000	$157,500	$329,500
2012	$121,202	$172,500	$293702
2013	$109,900	$175,000	$284,900
2014	$118,583	$232,100	$350,683

FY Year	Helena	Lewis and Clark	Combined Funding
2015	$113,000	$157,100	$270,100

Trends and Drivers

The backlog of building deferred maintenance exceeds the funding available. Currently the forests are working aggressively to reduce deferred maintenance. Use of partnerships is a beneficial strategy for completing necessary work on structures; however, partner contributions rarely make up for budget short fall.

Information Needs

There are noted data gaps in the structures area in the National Resource Management database such as latitude and longitude for structures. Efforts are underway to obtain the necessary information to fill in the missing data. The data base and facility master plans are continuously updated. There are no known additional needs for the analysis portion of the forest plan revision.

Recreation Facilities

Existing Information

Recreation facilities are buildings, cabins, water, and wastewater systems that are operated and maintained specifically to support public recreational use. These recreation facilities are often located at developed recreation sites, such as campgrounds, day use areas, and interpretive sites, where recreation use requires a management investment in order to operate and/or maintain the site to health and safety standards.

The inventory of developed recreation sites and recreational structures is held in the INFRA database. Condition surveys are completed on every structure and within every developed recreation sites on a five year cycle. Those condition surveys are recorded in the INFRA database.

Existing Condition

As summarized in Chapter 7, Recreation Settings, Opportunities, Access and Scenic Character, there are 215 developed recreation sites within the planning area. These sites range in size and category from developed campgrounds and picnic areas, to small interpretive sites with signs and interpretation. These developed sites may contain site features such as signs, tables, fire rings, and parking barriers.

Larger infrastructure elements such as toilet buildings, picnic shelters, cabins, lookouts, and water and wastewater systems are also located within these developed recreation sites. There are 238 buildings that are classified as recreation facilities across the planning area. There are 18 buildings used for cabin rentals, 189 toilet buildings, and 31 other buildings such as picnic shelters, barns, and pump houses. This assessment includes information on these recreation facilities but does not include information on the minor infrastructure features identified above.

Recreation Buildings

Cabin Rentals

There are 18 cabin and lookout rentals within the planning area (Table 10.8). These are available through the National Recreation Reservation System and have a varying degree of popularity. The following table lists these cabins and the GA's in which they are located. These buildings are inspected on a five year rotation to determine condition and to ensure public health and safety standards are being met. Details regarding these inspections may be found at Forest Service supervisor offices.

Table 10.8 **Cabin and Lookout Rentals within the Planning Area.**[1]

Geographic Area	Cabin	Lookout	Totals
Big Belts	6	1	7
Castles			0
Crazies			0
Divide	1		1
Elkhorns			0
Highwoods			0
Little Belts	5	1	6
Rocky Mountain Range	2		2
Snowies	1		1
Upper Blackfoot	1		1
Totals	**16**	**2**	**18**

[1]Information is derived from INFRA

Toilet Buildings

Toilet buildings make up the largest percentage of recreation facilities in the planning area, roughly 79%. These buildings are primarily located within developed recreation sites; however, a growing percentage of them are being placed in heavily used dispersed recreation sites to take care of sanitation issues that are occurring in these heavily used areas. Over half of the toilet buildings are located within two GA's: Rocky Mountain Range and the Little Belts (Table 10.9).

Table 10.9 **. Toilet Buildings within the Planning Area.**[1]

Geographic Area	Toilet Buildings
Big Belts	19
Castles	4
Crazies	1
Divide	15
Elkhorns	3
Highwoods	4
Little Belts	53
Rocky Mountain Range	61
Snowies	10
Upper Blackfoot	19
Total	**189**

[1]Information is derived from INFRA

Other Recreation Buildings

There are a variety of other buildings across the planning area that also support recreation opportunities, both within developed sites as well as at dispersed locations. Many of these buildings (61%) simply provide storage for equipment used for the maintenance of the recreation sites they are located within or nearby. Table 10.10 shows the distribution of these building across the GAs.

Table 10.10 **Other Recreation Buildings within the Planning Area**[1]

Geographic Area	Pavilion	Barn	Garage-Equipment Shed	Shelter	Pump House	Total
Big Belts	1		6			7
Castles						0
Crazies						0
Divide			3	1	1	5
Elkhorns			1			1
Highwoods						0
Little Belts		1	4	5		10
Rocky Mountain Range		1			1	2
Snowies			2			2
Upper Blackfoot			3		1	4
Totals	**1**	**2**	**19**	**6**	**3**	**31**

[1]Information is derived from INFRA

Water and Waste Water Systems

The HLC maintains 58 water systems (Campgrounds: 37, Cabins: 2, Guard Stations: 8, and Admin/misc.: 11) across the planning area. There are also 20 waste water systems maintained by the FS across the planning area (Guard Stations: 6, Cabins: 2, and Admin/misc.: 12).

Recreational Facilities Funding

Recreation facility maintenance is funded from a variety of sources. Traditionally, maintenance of recreation facilities is funded by facilities construction and maintenance appropriated funds. These allocations to the forests have been decreasing over the past several years. The deferred maintenance on recreation facilities exceeds the funding available. The forests are using the limited funds for repairs using priorities established by the forests. For more details on the funding stream for recreation please see, Chapter 7, Recreation Settings, Opportunities, Access and Scenic Character. Table 10.11 shows the amount of funding received for the past five years for recreational facilities:

Table 10.11 **Recreation facilities funding (in thousands)**

Funding Type	2010	2011	2012	2013	2014
Recreation Facility Maintenance	$245	$310	$265	$170	$195
Rec Capital Investment Projects	$68	$386	$0	$0	$0
Total Recreation Funding	$313	$696	$265	$170	$195

Trends and Drivers

As recreational use increases within the plan area the forests make every effort to keep recreational facilities in operating condition and eliminating structures that are not necessary. Recreational facilities are inventoried and inspected on a five year cycle and deferred maintenance items identified and documented in the IRM database.

Occupancy Levels and Use

One way of determining trends is to look at the use and occupancy at developed recreation sites. Use and occupancy rates were collected and analyzed during the Recreation Facility Analysis (RFA) that was completed in fiscal year 2006 for both the Helena and the Lewis and Clark National Forests.

In general, occupancy levels are defined as High, Moderate, and Low. A rating of High is given to those sites whose occupancy rate is > 40%. Moderate occupancy rates range between 15-40% and Low occupancy rates are less than 15%. The average occupancy rate for developed recreation sites on the Helena National Forest is 33% or moderate. The average occupancy for developed recreation sites on the Lewis and Clark is 25%, also moderate. Of the developed recreation sites within the planning area, approximately 22% have low occupancy rates, 52% have moderate occupancy rates, and 26% have high occupancy rates.

Campgrounds generally receive MODERATE (29% on the L&C, and 34% on the Helena) use (occupancy), with horse camps receiving HIGH use (55%) and group sites receiving very LOW use (8%). Cabins on the Helena receive HIGH use (43%) while cabins on the L&C only get 16% occupancy

Deferred Maintenance

There is a deferred maintenance backlog on recreation facilities within the planning area of approximately $1.67 million dollars ($1.3 million on the Helena and $370,000 on the Lewis and Clark). Much of the deferred maintenance on the Helena National Forest is associated with lookouts/cabins, picnic areas, and campgrounds and the deferred maintenance on the Lewis and Clark National Forest is associated with lookouts/cabins and campgrounds.

Facilities, Dams

Existing Information

There are six dams in the HLC planning area identified in the INFRA database. These dams are inspected by the Forest Service or by private contractor. The Forest Service policy for the operations and maintenance of dams is held under FSM 7500-Water Storage and Transmission.

Existing Condition

Table 10.12 shows the list of dams that are located within the HLC planning area. These dams are maintained and operated by the Forest Service, the City of Helena or by private entities. There is one privately owned dam, Teague, in the Big Belt GA and this dam has not been inspected recently because it falls below the Forest Service capacity requirements of retaining greater than 13 acre-feet of water. The records for these dams are held at the supervisor's office and in the INFRA database.

Table 10.12 **List of dams by geographic area**

Geographic Area	Dam Name	Operation Condition	Owner/Operator	Hazard Classification
Big Belts	Gipsy Lake Dam	Limited Operations	Forest Service	Low
Big Belts	Teague	Fully Operational	Private	Low (<12 acre feet)
Divide	Chessman Dam	Fully Operational	City of Helena	Medium
Divide	Park Lake Dam	Fully Operational	Forest Service	High
Rocky Mountain Range	Wood Lake Dam	Fully Operational	Forest Service	Low
Upper Blackfoot	Mike Horse Dam	Fully Operational	Forest Service	Low

The following information about these dams shows the relative condition of each of them. More specific information is located in the INFRA database and in files at district offices:

- Gipsy Lake Dam is in poor condition with an under designed spillway and substantial vegetation growing over 100% of the structure. There is substantial leakage around the outlet works.
- Teague Dam is a private dam that holds back less than 13 acre feet.
- Park Lake dam is in very good condition, having been recently rebuilt. There is an early warning system in place for this structure.
- Chessman Dam, located within the Divide GA, is operated by the City of Helena.
- Park Lake Dam has an early warning system in place which is inspected and monitored by a private engineering firm located in Helena.
- Wood Lake Dam is in good condition with maintenance required on the gate controls and brushing of the embankments needed.
- Mike Horse Dam holds back mine tailings and will be removed as soon as the tailings are removed from behind the dam.

Funding

There is no specific funding set aside for maintenance of dams. Maintenance is completed as part of normal operations and also with project specific funding.

Trends and Drivers

The Forest Service will continue to maintain these structures in working condition and will continue to work with other agencies regarding their operations. The Forest Service will continue to inspect these structures in compliance with the designated frequency.

Aviation

Existing Condition

There are three landing strips located within the planning area. The Russian Flats Air Strip is located in the Little Belts GA; the Benchmark Airfield is located in the Rocky Mountain Range GA; and, the Lincoln Air Strip is located within the upper Blackfoot GA. The Lincoln Air Strip is held in a special use permit by the Montana Department of Transportation, Aeronautics Division until July 2035. There is no funding associated with the operation of air fields and landing strips within the plan area.

Public input at the initial forest plan revision open houses indicates that there is interest in developing additional and maintaining current landing strips within the planning area.

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